

February 2012
FACT SHEET
Authorization to Discharge under the
National Pollutant Discharge Elimination System
for the
Navajo Tribal Utility Authority – Chinle Wastewater Treatment Lagoons
NPDES Permit No. NN0020265

Applicant address: Navajo Tribal Utility Authority (“NTUA”)
P.O. Box 549
Chinle, Arizona 86503

Applicant Contact: Harry L. Begaye, EPA Technical Assistant
(928) 729-6208

Facility Address: NTUA Chinle Wastewater Treatment Facility
P.O. Box 549
Chinle, Arizona 86503

Facility Contact: Rubianne Dugi, District Manager
(928) 729-4781

I. Summary

The NTUA was issued a National Pollutant Discharge Elimination System (“NPDES”) Permit (No. NN0020265) on December 20, 2006, for its Chinle wastewater treatment lagoon facility, pursuant to the U.S. Environmental Protection Agency (“U.S. EPA”) regulations set forth in Title 40, Code of Federal Regulations (“CFR”) Part 122.21. The permit was effective December 23, 2006, through midnight, December 22, 2011. NTUA applied to U.S. EPA Region 9 for reissuance on July 26, 2011. All the terms and conditions of the 2006 permit are in effect until the reissuance of a new permit. This fact sheet is based on information provided by the applicant through its application and discharge data submittal, along with the appropriate laws and regulations.

Pursuant to Section 402 of the Clean Water Act (“CWA”), the U.S. EPA is proposing issuance of the NPDES permit renewal to NTUA (permittee) for the discharge of treated domestic wastewater to receiving waters named Nazlini Wash, a tributary to Chinle Wash, an eventual tributary to San Juan River, all waters of the United States.

II. Description of Facility

The NTUA Chinle wastewater treatment facility is located in Chinle, Apache County, Arizona; or, in the central portion of the Navajo Nation. The distance between the facility and the NTUA Chinle District Office is approximately 1.8 miles apart or about 300 feet east of the US Highway 191, northbound. The facility serves approximately 5,400 customers. The facility receives only domestic sewage with a design flow rate of 0.78 million gallons per day (“MGD”). Based on the NTUA’s 2011 permit application, the maximum daily flow rate in 2008, 2009, and

2010 average 0.54 MGD respectively, yielding a 3-year maximum daily flow of 0.50 MGD. The 2006 permit limit calculations were based on higher historical 3-year maximum daily flows of 0.78 MGD. For consistency purposes, EPA continues to apply the 0.78 MGD maximum flow for this period cycle.

The lagoon facility consists of four facultative cells that have gravity flow evaporation system with aerators. The primary treatment consists of a 1-inch bar screen, grit chamber, and a 9-inch Parshall flume with a flow meter. The facility consists of four cells: Cell #1 is an aeration pond with baffles and 4 aerators; Cell #2 is a stabilization pond; Cell #3 and #4 are designed as disposal pits. Disinfection consists of a chlorine contact chamber with continuously-fed chlorine gas from gas injector that is manually operated, a Parshall flume, dechlorination done with sodium sulfite gas injector that is manually operated, and an 8-inch pipe that discharges effluent from Outfall No. 001 to Nazlini Wash, a tributary to Chinle Wash, a tributary to the San Juan River. Any sampling and monitoring under the proposed permit shall be performed at the pipe coming out of the Outfall No. 001.

The Navajo Nation EPA's ("NNEPA") conducted a compliance evaluation inspection on December 29, 2010, and noted operating problems at the cells such as sludge transferring from Cell #1 into Cell #2 with no plans underway for sludge removal from the facility. NTUA personnel stated that they would "play" with the system using all four cells to see if the effluent quality would improve. NNEPA observed snow conditions and the effluent flow meter recording 0.40 MGD on the day of inspection.

NNEPA is informed that the chlorine contact chamber is being cleaned twice a year, in April and September, by the NTUA Headquarters of Fort Defiance personnel. NNEPA observed that the crew was cleaning the contact chamber on the day of inspection as a truck was found parked in the area. The grit chamber is also reportedly cleaned by the NTUA Headquarters personnel on a quarterly basis but it is up to the Fort Defiance personnel to set the cleaning frequency. NNEPA believes that it may be less frequent than quarterly.

NNEPA noted that since 2009, the U.S. EPA pre-printed DMR reporting forms do not include a parameter for influent monthly average or maximum flow to be recorded. In addition, there is not a monthly average parameter for effluent flow nor is there a parameter for effluent flow nor is there a parameter for BOD₅ and TSS weekly average influent. Review of the Discharge Monitoring Reports ("DMRs") from January 2007 to June 2011 indicated numerous exceedances of discharge limits and violations of reporting requirements. The facility compliance history is discussed further in details in Section IV.B.4.

III. Basis of Proposed Permit Requirements

A. Applicable Technology-Based Effluent Limitations

Section 301 of the CWA established a required performance level, referred to as "secondary treatment," that all POTWs were required to meet by July 1, 1977. Federal secondary treatment effluent standards for POTWs are contained in Section 301(b)(1)(B) of the CWA. Implementing regulations for Section 301(b)(1)(B) are found at 40 CFR Part 133. The CWA requires POTWs to meet performance-based requirements based on

available wastewater treatment technology. These technology-based effluent limits apply to all municipal wastewater treatment plants, and identify the minimum level of effluent quality attainable by secondary treatment in terms of BOD₅ and TSS. The requirements contained in the draft permit are necessary to prevent violations of applicable treatment standards.

B. Navajo Nation Surface Water Quality Standards

In accordance with 40 CFR 122.44(d), the need for discharge limitations for all pollutants that may impact applicable water quality criteria and water quality standards must be evaluated. As part of this evaluation, discharge limitations are based on application of the water quality standards. USEPA approved the 1999 Navajo Nation Surface Water Quality Standards (“NNSWQS”), on March 23, 2006. The NNSWQS were revised in 2007 and approved by the EPA on March 26, 2009. A 2010 *draft* NNSWQS revision is currently under review by NNEPA and USEPA. The approved 1999 Navajo Nation water quality standards, the 2007 revision and the 2010 *draft* revisions will be used on a best professional judgment (“BPJ”) basis for purposes of developing water quality based effluent limitations. The requirements contained in the proposed permit are necessary to prevent violations of applicable water quality standards.

IV. Determination of Effluent Limitations, Monitoring, and Reporting Requirements

A. Federal Secondary Treatment Effluent Discharge Limitations

The proposed permit contains discharge limitations for biochemical oxygen demand (BOD₅), total suspended solids (TSS) and priority toxic pollutants. For both BOD₅ and TSS, the arithmetic means of values, by weight, for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 35 percent of the arithmetic mean of values, by weight, for influent samples collected at approximately the same times during the same period. These BOD₅ and TSS limits are identical to those of the previous permit.

Discharge Limitations					
Discharge Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Monitoring Frequency
Flow ¹	GPD	-- ²	n/a	-- ²	Instantaneous
BOD ₅ ³	mg/l	45	65	--	Monthly
	kg/day	68	98	--	
TSS ³	mg/l	90	135	--	Monthly
	kg/day	136	203	--	
Priority Pollutants ⁴	µg/l	n/a	n/a	-- ²	Once/1 st Quarter during Year 5

NOTES:

1. No flow limit is set at this time but influent and effluent flows must be monitored and reported. The monitoring frequency is once/month.

2. Monitoring and reporting required. No limitation is set at this time.
3. Under 40 CFR Section 122.45(f), mass limits are required for BOD₅ and TSS. The concentration limits for BOD₅ shall not exceed a monthly average of 45 mg/l and a weekly average of 65 mg/l. And the concentration limits for TSS shall not exceed a monthly average of 90 mg/l and a weekly average of 135 mg/l. These limitations (Alternative State Requirements) are consistent with 40 CFR 133.101(f), 133.103(c), 133.105(b) and (d). The mass limits are calculated based upon the 0.78 MGD design flow.
4. Priority Pollutants: During Year 5 of the permit, the permittee shall monitor for the full list of priority pollutants in the Code of Federal Register (CFR) at 40 CFR Part 423, Appendix A. No limit is set at this time.

B. Water Quality Based Effluent Limitations (“WQBELs”)

Water quality-based effluent limitations, or WQBELS, are required in NPDES permits when the permitting authority determines that a discharge causes, has the reasonable potential to cause, or contributes to an excursion above any water quality standard. [40 CFR 122.44(d)(1)].

When determining whether an effluent discharge causes, has the reasonable potential to cause, or contributes to an excursion above narrative or numeric criteria, the permitting authority shall use procedures which account for existing controls on point and non point sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity) and where appropriate, the dilution of the effluent in the receiving water [40 CFR 122.44 (d)(1)(ii)].

EPA evaluated the reasonable potential to discharge toxic pollutants according to guidance provided in the *Technical Support Document for Water Quality-Based Toxics Control* (TSD) (Office of Water Enforcement and Permits, U.S. EPA, March 1991) and the *U.S. EPA NPDES Permit Writers Manual* (Office of Water, U.S. EPA, December 1996). These factors include:

1. Applicable standards, designated uses and impairments of receiving water
2. Dilution in the receiving water
3. Type of industry
4. History of compliance problems and toxic impacts
5. Existing data on toxic pollutants - Reasonable Potential analysis

1. Applicable standards, designated uses and impairments of receiving water

The designated uses of the receiving water (Nazlini Wash, Chinle Wash, the San Juan River) as defined by the 2007 NNSWQS and *draft* 2010 NNSWQS revisions, are domestic water supply, primary and secondary human contact, fish consumption, aquatic & wildlife habitat, and livestock watering (Table 205.1, page 24 and 27).

2. Dilution in the receiving water

Discharge from Outfall 001 is to Nazlini Wash, which may have no natural flow during certain times of the year. Therefore, no dilution of the effluent has been considered in the development of water quality based effluent limits applicable to the discharge.

3. Type of industry

Typical pollutants of concern in untreated and treated domestic wastewater include ammonia, nitrate, oxygen demand, pathogens, temperature, pH, oil and grease, and solids. Chlorine may also be of concern due to treatment plant disinfection operations and therefore, dechlorination may be necessary to minimize impact on water quality based effluent limits.

4. History of compliance problems and toxic impacts

Review of the discharge monitoring reports (DMRs) from January 2007 to September 2011 showed numerous exceedances of BOD₅ concentration limits and *E. coli*; and BOD₅ and TSS percent removal efficiencies. In addition, lab errors led to a reporting of no discharge (NODI) for BOD₅ during instances of failure of quality control. EPA noted in cover letters of DMRs that elevated chlorine levels *E. coli* concentrations were found due to equipment malfunction such as chlorine pump failure or chlorination pipe icing up (frozen). Elevated TRC levels found in the DMRs could also be due to erroneous reporting. A table of the permit limit exceedances is provided on pages 10 to 17 of this fact sheet.

5. Existing data on toxic pollutants

No existing data is available on toxic pollutants.

C. Rationale for WQBELs

Effluent Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Monitoring Frequency
Total Residual Chlorine ¹	µg/l	--	--	11	Monthly
<i>E. Coli</i> ²	CFU/100 ml	126	--	576	Monthly
Total Ammonia ³ (as N)	mg/l	--	--	--	Monthly
TDS ⁴	mg/l	--	--	--	Quarterly
pH ⁵	std unit	between 6.5 to 9.0			Monthly
Temperature ⁶	deg F	--	--	--	Monthly
Whole Effluent Toxicity Testing ⁷	--	--	--	--	Monthly

NOTES:

1. **Total Residual Chlorine.** If chlorination is used for disinfection of the effluent, dechlorination is also necessary prior to discharge. No single sample shall exceed 11 µg/l based on the NNSWQS for protection of aquatic & wildlife habitat and livestock watering (Table 206.1, page 32 of the 2007 NNSWQS and 2010 *draft* NNSWQS revisions.)
2. ***E. coli*.** In the proposed permit, the monthly geometric mean of *E. coli* bacteria shall not exceed 126/100 ml and 576/100 ml as a single sample maximum. The limits reflect the more stringent standards for protection of primary human contact (page 14 of 2007 NNSWQS and 2010 *draft* NNSWQS revisions.)
3. **Total Ammonia.** In accordance with the 2007 NNSWQS and 2010 *draft* NNSWQS revisions for acute and chronic ammonia limits for protection of aquatic and wildlife habitat, the proposed permit contains effluent limitations for total ammonia. The ammonia limits are temperature and pH dependent and are listed in Table 206.2 and Table 206.3, pages 36-37 of 2007 NNSWQS and 2010 *draft* NNSWQS revisions. The monitoring frequency is set at monthly.
4. **Total Dissolved Solids.** No limit is proposed but the regulations at 40 CFR 122.44(i) set forth requirements for monitoring as determined to be necessary. This requirement is consistent with the previous permit.
5. **pH.** To ensure adherence to the minimum and maximum pH levels designated by the Navajo Nation for the receiving water, monthly pH monitoring is required in the permit for protection of primary and secondary human contact, and aquatic & wildlife habitat and livestock watering (page 14 of 2007 NNSWQS and 2010 *draft* NNSWQS revisions.) In order to support the Navajo Nation's established ammonia standards, which vary with the pH of the effluent, pH monitoring is to be performed concurrently with ammonia monitoring.
6. **Temperature.** Also to support the Navajo Nation's established ammonia standards and their dependence on temperature, monthly monitoring for temperature is to be performed concurrently with ammonia monitoring.
7. **Whole Effluent Toxicity (WET).** It is U.S. EPA Region 9's policy that all continuous dischargers be required to perform WET testing. WET testing is intended to demonstrate that there are no unexpected toxic components of the discharge escaping to the receiving water undetected, and to prompt a response if they are present. The proposed permit therefore requires chronic toxicity testing to be conducted **monthly** using a 24-hour composite sample of the treated effluent for fathead minnow (*Pimephales promela*), daphnid (*Ceriodaphnia dubia*) and an alga species (*Selenastrum capricornutum*). This is a new requirement for this permit. If no toxicity is found in the test results during the first 12 monthly test results, the testing frequency is reduced to a quarterly basis thereafter.

V. Reporting

The proposed permit requires discharge data obtained during the previous three months to be summarized on monthly DMR forms and reported quarterly. If there is no discharge for the month, report "C" in the No Discharge box on the DMR form for that month. These reports are due January 28, April 28, July 28, and October 28 of each year. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the U.S. EPA and the Navajo Nation EPA.

VI. General Standards

The proposed permit sets general standards that are narrative water quality standards contained in the Navajo Nation Water Quality Standards, Section 203. These general standards are set forth in Section B. General Discharge Specifications of the permit.

VII. Permit Reopeners

- A. At this time, there is no reasonable potential to establish any other water quality-based limits. Should any monitoring indicate that the discharge cause, has the reasonable potential to cause, or contributes to excursion above a water quality criterion, the permit may be reopened for the imposition of water quality-based limits and/or whole effluent toxicity limits. The proposed permit may be modified, in accordance with 40 CFR 122 and 124, to include appropriate conditions or effluent limits, monitoring, or other conditions to implement new regulations, including U.S. EPA-approved new Tribal water quality standards; or to address new information indicating the presence of effluent toxicity or the reasonable potential for the discharge to cause or contribute to exceedances of water quality standards.
- B. In accordance with 40 CFR 122.44(c), EPA may promptly modify or revoke and reissue any permit issued to a treatment works treating domestic sewage (including "sludge only facilities") to incorporate any applicable standard for sewage sludge use or disposal promulgated under section 405(d) of the CWA, if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or controls a pollutant or practice not limited in the permit.

VIII. Biosolids Requirements

The permittee shall submit a report 60 days prior to disposal of biosolids. The report shall discuss the quantity of biosolids produced, the treatment applied to biosolids including process parameters, disposal methods, and, if land applied, analyses for Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Zinc, and Selenium, and organic-N, ammonium-N, and nitrate-N, all expressed in mg/kg biosolids on a 100% dry weight basis. The permittee shall comply with all standards for biosolids use and disposal at Section 405(d) of the CWA, and 40 CFR Parts 257, 258 and 503.

X. Threatened and Endangered Species and Critical Habitat

A. Background:

Section 7 of the Endangered Species Act (ESA) of 1973 requires Federal agencies such as EPA to ensure, in consultation with the U.S. Fish and Wildlife Service (FWS), that any actions authorized, funded or carried out by the Agency are not likely to jeopardize the continued existence of any Federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species.

Since the issuance of NPDES permits by EPA is a Federal action, consideration of a permitted discharge and its effect on any federally-listed species is appropriate. The proposed NPDES permit authorizes the discharge of treated domestic wastewater to Nazlini Wash, a tributary to Chinle Wash, an eventual tributary to San Juan River, all waters of the United States.

The information below is listed in the Navajo Nation's Department of Fish & Wildlife Natural Heritage Program (NHP) database. The FWS has deferred all of its survey and information collection in the Navajo Nation to the Navajo Nation NHP.

Based on information provided by the Navajo Nation NHP on September 30, 2011, NHP identified no federally-listed species or threatened species are known to occur on or near the project site. For species of concern with potential to occur on the 7.5 minute Chinle, Arizona quadrangle containing the project boundary, NHP identified federally-listed species as follows.

- Mountain Flower (*Charadrius montanus*), ESA threatened
- Yellow-billed Cuckoo (*Coccyzus americanus*), ESA candidate
- Mexican Spotted Owl (*Strix occidentalis lucida*), ESA endangered
- Black-footed Ferret (*Mustela nigripes*), ESA endangered
- Southwestern Willow Flycatcher (*Empidonax traillii extimus*), ESA endangered
- Navajo sedge (*Carex specuicola*), ESA threatened

B. EPA's Finding:

This permit authorizes the discharge of treated wastewater in conformance with the federal secondary treatment regulations and the Navajo Nation Surface Water Quality Standards. These standards are applied in the permit both as numeric and narrative limits. The standards are designed to protect aquatic species, including threatened and endangered species, and any discharge in compliance with these standards should not adversely impact any threatened and endangered species.

EPA believes that effluent released in compliance with this permit will have no effect on any federally-listed threatened or endangered species or its critical habitat that may be present in the vicinity of the discharge. The treatment facility has been in existence for some time, and no new construction or modifications will be made to it due to the proposed NPDES permit. Therefore, no requirements specific to the protection of

endangered species are proposed in the permit. EPA may decide that changes to the permit may be warranted based on receipt of new information. A re-opener clause has been included should new information become available to indicate that the requirements of the permit need to be changed.

XI. Administrative Information -- Public Notice, Public Comments, and Requests for Public Hearings

In accordance with 40 CFR 124.10, public notice shall be given by the U.S. EPA Director that a draft NPDES permit has been prepared by mailing a copy of the notice to the permit applicant and other Federal and State agencies, and through publication of a notice in a daily or weekly newspaper within the area affected by the facility. The public notice shall allow at least 30 days for public comment on the draft permit.

In accordance with 40 CFR 124.11 and 12, during the public comment period, any interested person may submit written comments on the draft permit, and may request a public hearing if no hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. In accordance with 40 CFR 124.13, all persons must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position within thirty (30) days from the date of the public notice. Comments may be received either in person or mailed to:

U.S. Environmental Protection Agency, Region 9
NPDES Permits Office (WTR-5)
Attn: Linh Tran
75 Hawthorne Street
San Francisco, CA 94105
Telephone: (415) 972-3511

Interested persons may obtain further information, including copies of the draft permit, fact sheet/statement of basis, and the permit application, by contacting Linh Tran (WTR-5) at the U.S. EPA address, above. Copies of the administrative record (other than those which U.S. EPA maintains as confidential) are available for public inspection between 8:00 a.m. and 4:30 p.m., Monday through Friday (excluding federal holidays).

In accordance with 40 CFR 124.12, the U.S. EPA Director shall hold a public hearing when, on the basis of requests, a significant degree of public interest in the draft permit exists. The Director may also hold a public hearing when, for instance, such a hearing might clarify one or more issues involved in the permit decision. Public notice of such hearing shall be given as specified in 40 CFR 124.10.

<u>NPDES Permit Effluent Limitation Exceedences</u> <u>January 2007 to September 2011</u>				
DATE	PARAMETER	LIMIT	RESULT	UNIT
January 2007	TRC, monthly	5.0	705	µg/l
January 2007	TRC, maximum	11.0	1000	µg/l
January 2007	<i>E. coli</i> , geometric mean	126	1366	#/100 ml
January 2007	<i>E. coli</i> , daily maximum	576	2419	#/100 ml
February 2007	TRC, monthly	5.0	800	µg/l
February 2007	TRC, maximum	11.0	800	µg/l
February 2007	BOD ₅ , monthly average, quality	45	76.2	mg/l
February 2007	BOD ₅ , weekly average	65	81.8	mg/l
March 2007	BOD ₅ , monthly average, quality	45	45.3	mg/l
March 2007	TRC, monthly	5.0	800	µg/l
March 2007	TRC, maximum	11.0	800	µg/l
April 2007	TRC, monthly	5.0	600	µg/l
April 2007	TRC, maximum	11.0	600	µg/l
May 2007	TRC, monthly	5.0	866.67	µg/l
May 2007	TRC, maximum	11.0	1000	µg/l
May 2007	BOD ₅ , monthly average, quality	45	45.8	mg/l
May 2007	TSS, monthly average	90	104	mg/l
May 2007	TSS, percent removal	>65	63.38	%
June 2007	BOD ₅ , monthly average, quality	45	48.4	mg/l
June 2007	BOD ₅ , weekly average	65	76.2	mg/l

<u>NPDES Permit Effluent Limitation Exceedences</u> <u>January 2007 to September 2011 (continued)</u>				
June 2007	TRC, monthly	5.0	600	µg/l
June 2007	TRC, maximum	11.0	600	µg/l
July 2007	TRC, monthly	5.0	600	µg/l
July 2007	TRC, maximum	11.0	600	µg/l
August 2007	TRC, monthly	5.0	330	µg/l
August 2007	TRC, maximum	11.0	600	µg/l
August 2007	BOD ₅ , monthly average, quality	45	invalidated	mg/l
August 2007	BOD ₅ , weekly average	65	invalidated	mg/l
August 2007	BOD, percent removal	>65	invalidated	%
September 2007	TRC, monthly	5.0	600	µg/l
September 2007	TRC, maximum	11.0	600	µg/l
October 2007	TSS, monthly average	90	98	mg/l
October 2007	TRC, monthly	5.0	600	µg/l
October 2007	TRC, maximum	11.0	600	µg/l
November 2007	BOD ₅ , monthly average, quality	45	invalidated	mg/l
November 2007	BOD ₅ , weekly average	65	invalidated	mg/l
November 2007	BOD, percent removal	>65	invalidated	%
November 2007	TSS, percent removal	>65	50.07	%
November 2007	TRC, monthly	5.0	600	µg/l
November 2007	TRC, maximum	11.0	600	µg/l
November 2007	<i>E. coli</i> , daily maximum	576	1553	#/100 ml
December 2007	BOD ₅ , monthly average, quality	45	invalidated	mg/l

<u>NPDES Permit Effluent Limitation Exceedences</u> <u>January 2007 to September 2011 (continued)</u>				
December 2007	BOD ₅ , weekly average	65	invalidated	mg/l
December 2007	BOD, percent removal	>65	invalidated	%
December 2007	TRC, monthly	5.0	600	µg/l
December 2007	TRC, maximum	11.0	600	µg/l
January 2008	BOD ₅ , monthly average, quality	45	invalidated/ QC failure	mg/l
January 2008	BOD ₅ , weekly average	65	invalidated	mg/l
January 2008	BOD, percent removal	>65	invalidated	%
January 2008	TRC, monthly	5.0	600	µg/l
January 2008	TRC, maximum	11.0	600	µg/l
February 2008	BOD ₅ , monthly average, quality	45	invalidated/ QC failure	mg/l
February 2008	BOD ₅ , weekly average	65	invalidated	mg/l
February 2008	BOD, percent removal	>65	invalidated	%
February 2008	TRC, monthly	5.0	600	µg/l
February 2008	TRC, maximum	11.0	600	µg/l
February 2008	<i>E. coli</i> , geometric mean	126	2420	#/100 ml
February 2008	<i>E. coli</i> , daily maximum	576	<2420	#/100 ml
March 2008	BOD ₅ , monthly average, quality	45	invalidated/ QC failure	mg/l
March 2008	BOD ₅ , weekly average	65	invalidated	mg/l
March 2008	BOD, percent removal	>65	invalidated	%
March 2008	TRC, monthly	5.0	350	µg/l
March 2008	TRC, maximum	11.0	350	µg/l
March 2008	<i>E. coli</i> , geometric mean	126	159	#/100 ml

<u>NPDES Permit Effluent Limitation Exceedences</u> <u>January 2007 to September 2011 (continued)</u>				
April 2008	BOD ₅ , monthly average, quality	45	49.8	mg/l
April 2008	TSS, monthly average	90	122	mg/l
April 2008	TRC, monthly	5.0	500	µg/l
April 2008	TRC, maximum	11.0	500	µg/l
April 2008	<i>E. coli</i> , geometric mean	126	344	#/100 ml
April 2008	<i>E. coli</i> , daily maximum	576	2420	#/100 ml
May 2008	TRC, monthly	5.0	90	µg/l
May 2008	TRC, maximum	11.0	90	µg/l
May 2008	<i>E. coli</i> , geometric mean	126	180	#/100 ml
May 2008	<i>E. coli</i> , daily maximum	576	<2420	#/100 ml
June 2008	BOD ₅ , monthly average, quality	45	49.8	mg/l
June 2008	TRC, monthly	5.0	700	µg/l
June 2008	TRC, maximum	11.0	700	µg/l
June 2008	<i>E. coli</i> , geometric mean	126	1733	#/100 ml
June 2008	<i>E. coli</i> , daily maximum	576	1733	#/100 ml
July 2008	BOD ₅ , monthly average, quality	45	85	mg/l
July 2008	BOD ₅ , weekly average	65	85	mg/l
July 2008	TRC, monthly	5.0	600	µg/l
July 2008	TRC, maximum	11.0	600	µg/l
July 2008	BOD, percent removal	>65	59.54	%
August 2008	BOD ₅ , monthly average, quality	45	invalidated/ QC failure	mg/l
August 2008	BOD ₅ , weekly average	65	invalidated	mg/l

<u>NPDES Permit Effluent Limitation Exceedences</u> <u>January 2007 to September 2011 (continued)</u>				
August 2008	BOD, percent removal	>65	invalidated	%
August 2008	TRC, monthly	5.0	600	µg/l
August 2008	TRC, maximum	11.0	600	µg/l
August 2008	<i>E. coli</i> , daily maximum	576	1986	#/100 ml
September 2008	BOD ₅ , monthly average, quality	45	invalidated/ QC failure	mg/l
September 2008	BOD ₅ , weekly average	65	invalidated	mg/l
September 2008	BOD, percent removal	>65	invalidated	%
September 2008	TRC, monthly	5.0	120	µg/l
September 2008	TRC, maximum	11.0	120	µg/l
September 2008	<i>E. coli</i> , geometric mean	126	451	#/100 ml
September 2008	<i>E. coli</i> , daily maximum	576	1733	#/100 ml
October 2008	BOD ₅ , monthly average, quality	45	138	mg/l
October 2008	BOD ₅ , weekly average	65	248	mg/l
October 2008	BOD, percent removal	>65	29.95	%
October 2008	<i>E. coli</i> , geometric mean	126	451	#/100 ml
October 2008	<i>E. coli</i> , daily maximum	576	1733	#/100 ml
November 2008	TRC, monthly	5.0	250	µg/l
November 2008	TRC, maximum	11.0	250	µg/l
November 2008	<i>E. coli</i> , geometric mean	126	1300	#/100 ml
November 2008	<i>E. coli</i> , daily maximum	576	>2420	#/100 ml
December 2008	TRC, monthly	5.0	1000	µg/l
December 2008	TRC, maximum	11.0	1000	µg/l

<u>NPDES Permit Effluent Limitation Exceedences</u> <u>January 2007 to September 2011 (continued)</u>				
December 2008	<i>E. coli</i> , geometric mean	126	1016	#/100 ml
December 2008	<i>E. coli</i> , daily maximum	576	2419.6	#/100 ml
January 2009	TRC, monthly	5.0	not reported	µg/l
January 2009	TRC, maximum	11.0	not reported	µg/l
February 2009	TRC, monthly	5.0	1000	µg/l
February 2009	TRC, maximum	11.0	1000	µg/l
April 2009	TRC, monthly	5.0	1000	µg/l
April 2009	TRC, maximum	11.0	1000	µg/l
May 2009	<i>E. coli</i> , geometric mean	126	1254	#/100 ml
May 2009	<i>E. coli</i> , daily maximum	576	1485	#/100 ml
June 2009	<i>E. coli</i> , geometric mean	126	not reported	#/100 ml
July 2009	<i>E. coli</i> , geometric mean	126	312	#/100 ml
July 2009	<i>E. coli</i> , daily maximum	576	2419.6	#/100 ml
August 2009	<i>E. coli</i> , daily maximum	576	>2420	#/100 ml
January 2010	TRC, monthly	5.0	1000	µg/l
January 2010	TRC, maximum	11.0	1000	µg/l
January 2010	<i>E. coli</i> , daily maximum	576	2420	#/100 ml
February 2010	<i>E. coli</i> , daily maximum	576	2419.6	#/100 ml
March 2010	TSS, monthly average	90	126	mg/l
March 2010	TSS, percent removal	>65	51.54	%
March 2010	<i>E. coli</i> , daily maximum	576	2420	#/100 ml
April 2010	TSS, monthly average	90	107.4	mg/l

<u>NPDES Permit Effluent Limitation Exceedences</u> <u>January 2007 to September 2011 (continued)</u>				
April 2010	TSS, maximum	135	146	mg/l
May 2010	TSS, monthly average	90	117	mg/l
June 2010	BOD ₅ , monthly average, quality	45	74.2	mg/l
June 2010	BOD ₅ , weekly average	65	78.2	mg/l
June 2010	TSS percent removal	>65	57.2	%
June 2010	<i>E. coli</i> , geometric mean	126	776.5	#/100 ml
June 2010	<i>E. coli</i> , daily maximum	576	1553	#/100 ml
July 2010	BOD ₅ , monthly average, quality	45	63	mg/l
August 2010	BOD ₅ , monthly average, quality	45	48.6	mg/l
August 2010	BOD ₅ , weekly average	65	84.0	mg/l
August 2010	TSS, weekly average	65	64.78	mg/l
October 2010	TRC, monthly	5.0	1000	µg/l
October 2010	TRC, maximum	11.0	1000	µg/l
February 2011	BOD ₅ , monthly average, quality	45	121.5	mg/l
February 2011	BOD ₅ , weekly average	65	121.5	mg/l
February 2011	BOD, percent removal	>65	61.02	%
February 2011	TRC, monthly	5.0	1000	µg/l
February 2011	TRC, maximum	11.0	1000	µg/l
March 2011	BOD ₅ , monthly average, quality	45	107.4	mg/l
March 2011	BOD ₅ , weekly average	65	107.4	mg/l
March 2011	BOD, percent removal	>65	44.5	%
March 2011	TRC, monthly	5.0	1000	µg/l

<u>NPDES Permit Effluent Limitation Exceedences</u> <u>January 2007 to September 2011 (continued)</u>				
March 2011	TRC, maximum	11.0	1000	µg/l
March 2011	<i>E. coli</i> , geometric mean	126	1773	#/100 ml
March 2011	<i>E. coli</i> , daily maximum	576	>2419.6	#/100 ml
April 2011	BOD ₅ , monthly average, quality	45	57.4	mg/l
April 2011	TRC, monthly	5.0	1000	µg/l
April 2011	TRC, maximum	11.0	1000	µg/l
April 2011	<i>E. coli</i> , geometric mean	126	2419.6	#/100 ml
April 2011	<i>E. coli</i> , daily maximum	576	>2420	#/100 ml
May 2011	TRC, monthly	5.0	1000	µg/l
May 2011	TRC, maximum	11.0	1000	µg/l
June 2011	TRC, monthly	5.0	1000	µg/l
June 2011	TRC, maximum	11.0	1000	µg/l
July 2011	BOD ₅ , monthly average, quality	45	49.6	mg/l