

**June 2006**  
**FACT SHEET**  
**BUREAU OF INDIAN AFFAIRS (BIA) -Ti'is Nas Baz Community School**  
**(formerly Teec Nos Pos School)**  
**NPDES Permit No. NN 0110094**

**I. Introduction**

On December 16, 2000, the U.S. Bureau of Indian Affairs -Shiprock Navajo Agency ("BIA") of the Department of the Interior was issued an NPDES Permit (AZ0110094) for the BIA Ti'is Nas Baz (formerly Teec Nos Pos) Community School wastewater treatment lagoon facility. The permit became effective December 16, 2000 and will expire at midnight December 17, 2005. The BIA reapplied for reissuance on August 26, 2005. The facility is not considered a publicly-owned treatment works ("POTW") because it is a federal facility.

The NPDES permit number for this facility has been changed to NN0110094. EPA Region 9 has implemented a change to the NPDES permit identification issued in the Navajo Nation. The two-letter prefix of the permit number identifying the AZ state code for Arizona is being replaced with NN for Navajo Nation to provide for more efficient data management. Effective January 2006, the new NN prefix will be used in the USEPA data systems to identify all NPDES permits in the Navajo Nation.

Applicant address: U.S. Department of the Interior  
Bureau of Indian Affairs - Shiprock Navajo Agency  
P.O. Box 966  
Shiprock, New Mexico 87420

Applicant contact: Jean Romancito, Environmental Protection Specialist  
(505) 863-8330

Facility address: Ti'is Nas Baz Community School  
P.O. Box 2002  
Teec Nos Pos, Arizona 86514

Facility contact: Herbert Dee, Facility Manager  
(928) 656-3252

**II. Background**

The BIA Ti'is Nas Baz Community School wastewater treatment lagoon system is located in Teec Nos Pos, Apache County, Arizona, within the Northern portion of the Navajo Nation. The sewage lagoon is located 0.5 mile northeast of the Ti'is Nas Baz

school. The facility serves a population of approximately 348, receiving only domestic sewage, with an design flow of 0.08 million gallons per day (MGD). The school maintains 43 housing quarters but only 21 are now occupied. In addition, the Ti'is Nas Baz Indian Health Service (I.H.S.) Clinic is also connected to the system and has 10 staff. This I.H.S facility will be disconnected from the system late 2006 when the new Red Mesa Hospital is opened.

The treatment facility is a four-cell total retention evaporation pond with aeration capabilities. The wastewater from the collection system flows by gravity directly into the lagoon, where transfer piping allows wastewater to flow in succession from Cell #1 to Cell #4. Currently, there are 3 inoperable aerators in Cell #2, and Cell #4 is not being utilized. Chlorination will be used to disinfect the wastewater before any discharge. Effluent will be intermittently discharged from Outfall No. 001 through a 12-inch pipe into Teec Nos Pos Wash, a tributary to Toh Dahstini Wash, a tributary to San Juan River. Toh Dahstini was previously identified as Todastoni wash in the previous permit fact sheets and permit applications. Any sampling and monitoring under the proposed permit shall be performed at Outfall No. 001.

The Endangered Species Act requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) if their actions could beneficially or adversely affect any threatened or endangered species. Due to the continued low quantity and intermittent nature of the discharge, EPA is again making a preliminary determination that effluent released in compliance with this permit will have no effect on any threatened or endangered species that may be present in the area. No requirements specific to the protection of endangered species are proposed in the permit. A copy of the permit and fact sheet is being sent to the USFWS and the Navajo NHP for review during the public comment period.

### **III. Navajo Nation Surface Water Quality Standards**

The Navajo Nation has received Treatment as a State ("TAS") for Sections 106 and 303 of the Clean Water Act ("CWA"). In January 2006, the Navajo Nation received TAS to administer the water quality standards and certification programs under Sections 303 and 401 of the CWA.

Section 106 grant money was used to develop water quality standards and use designations, which must be approved under Section 303 by EPA Region 9. In March 2006, EPA approved the 1999 Navajo Nation Surface Water Quality Standards ("NNSWQS") that were promulgated on November 9, 1999 and submitted along with the TAS application under Section 303. A revision to the NNSWQS was approved by the Navajo Nation Council on July 30, 2004. The approved 1999 Navajo Nation water quality standards and 2004 revisions will be used on a best professional judgment

(“BPJ”) basis for purposes of developing water quality based effluent limitations.

#### **IV. Basis of Proposed Permit Requirements**

The proposed discharge limitations are based on:

- A. Secondary Treatment Regulations contained in 40 CFR Part 133, Sections 133.101 through 133.105, promulgated September 20, 1984, and most recently amended on January 27, 1989. EPA used these regulations and its BPJ to develop limits for this facility.
- B. Approved 1999 Navajo Nation Surface Water Quality Standards; 2004 NNSWQS revisions, promulgated on July 30, 2004.

#### **V. Designated Uses of the Receiving Water**

The designated uses of the receiving waters (Teec Nos Pos Wash, Toh Dahstini Wash *nonperennials*, in the Lower San Juan River) as defined by the NNSWQS are secondary human contact, aquatic habitat, and livestock and wildlife watering (Table 204.1, page 21.)

#### **VI. Determination of Effluent Limitations, Monitoring, and Reporting Requirements**

##### **A. Flow Rates**

Under the proposed permit, there is no flow limit but the monthly and daily maximum flows must be monitored and reported. The monitoring frequency is once/month. This is consistent with the previous permit.

##### **B. Five-Day Biochemical Oxygen Demand (BOD<sub>5</sub>)**

Under the proposed permit, the discharge shall not exceed a weekly average of 45 mg/l and a monthly average of 30 mg/l BOD<sub>5</sub>, and shall achieve no less than a monthly average rate of 85% removal. These limits are required under 40 CFR Part 133.102(a).

Under 40 CFR Part 122.45(f), mass limits are required for BOD<sub>5</sub>. Based upon the maximum daily flow of 0.32 MGD flow, the mass limits for BOD<sub>5</sub> are based on the following calculations:

Weekly average

$$\frac{0.08 \text{ MG}}{\text{day}} \times \frac{45 \text{ mg}}{\text{l}} \times \frac{8.345 \text{ lb/MG}}{1 \text{ mg/l}} \times \frac{0.45 \text{ kg}}{\text{lb}} = 13.5 \text{ kg/day}$$

Monthly average

$$\frac{0.08 \text{ MG}}{\text{day}} \times \frac{30 \text{ mg}}{\text{l}} \times \frac{8.345 \text{ lb/MG}}{1 \text{ mg/l}} \times \frac{0.45 \text{ kg}}{\text{lb}} = 9 \text{ kg/day}$$

The monitoring frequency is once/month. Sampling and monitoring shall be performed at the final discharge prior to chlorination. These limits are same as those in the previous permit.

C. Total Suspended Solids (TSS)

Under the proposed permit, the discharge shall not exceed a weekly average of 45 mg/l and a monthly average of 30 mg/l TSS, and shall achieve no less than a monthly average rate of 85% removal. These limitations (Alternative State Requirements) are consistent with 40 CFR Parts 133.101(f), 133.102(b) and 133.103(c). Mass limit requirements in accordance with 40 CFR 122.45(f) have also been proposed and are based upon the same calculation shown above for BOD<sub>5</sub>. The weekly average is 13.5 kg/day and the monthly average is 9 kg/day. The monitoring frequency is once per month. Sampling and monitoring shall be performed prior to chlorination. These limits are same as those in the previous permit.

D. Determination of Effluent Limitation for *Escherichia coli* (*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. These limits are based on the NNSWQS for secondary human contact (p.26). The previous permit utilized fecal coliform bacteria (FCB) values but the amended NNSWQS replaced FCB with *E. coli*. The monitoring frequency is once/month.

E. Total Residual Chlorine (TRC)

The permit requires chlorination of the effluent before discharge. The discharge shall not exceed a monthly average of 5 :g/l and 11 :g/l as an instantaneous maximum if chlorination is used for disinfection of the

effluent before discharge. These limits are based on Best Professional Judgment and should assure that the Navajo Nation Surface Water Quality Standards for protection of aquatic habitat for Teec Nos Pos Wash are met in the receiving water when aquatic life is present (Table 205B.2, page 30.) The monitoring frequency is once per month for both the effluent and in the receiving water.

F. Total Dissolved Solids (TDS)

The proposed permit requires monitoring and reporting of both the influent and effluent TDS. The regulations at 40 CFR 122.44(i) allow requirements for monitoring as determined to be necessary. The monitoring frequency is once/quarter.

G. Total Ammonia Nitrogen ( NH<sub>3</sub>-N)

The proposed permit establishes a monitoring and reporting requirement for total ammonia nitrogen, which includes the ammonium ion (NH<sub>4</sub><sup>+</sup>) and free ammonia (NH<sub>3</sub>). The monitoring frequency is once per quarter. If analytical results for the first four quarters reveal ammonia levels are below EPA's National Water Quality Criteria for ammonia, the monitoring frequency will decrease to once per year. The regulations at 40 CFR Part 122.44(i) allow requirements for monitoring as determined to be necessary. The criteria for ammonia are pH and temperature dependent.

H. pH

The proposed permit requires that effluent pH not fall below 6.5 or above 9.0 standard pH units, based on the Navajo Nation numeric water quality standards for secondary human contact, and for aquatic habitat (Table 205A.1, page 26 and Table 205B.1, page 30.) The monitoring frequency is once per month.

I. Temperature

The proposed permit establishes a monitoring requirement for temperature. The monitoring frequency is once/quarter.

## **VII. 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 EPA Regional Administrator and the Navajo Nation EPA.

### **VIII. 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.

### **IX. Permit Reopener**

At this time, there is no reasonable potential to establish any other water quality-based limits. Should any monitoring indicate that the discharge causes, has the reasonable potential to cause, or contributes to excursions above water quality criteria, 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 the requirements set forth at 40 CFR 122 and 124, to include conditions or limits to address demonstrated effluent toxicity based on newly available information, or to implement any new EPA-approved Tribal water quality standards.

### **X. 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.

### **XI. 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 (USFWS), 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 listed species is appropriate.

EPA sent a letter to the USFWS with a copy to the Department of Fish and Wildlife of Navajo Natural Heritage Program (Navajo NHP) on September 16, 2005, requesting species listing information for the subject area. EPA received a response from Navajo NHP on November 28, 2005. The FWS has deferred all of its survey and information collection in the Navajo Nation to the Navajo NHP.

EPA reviewed the information on USFWS Southwest Region 2's Arizona Ecological Services Field Office website for Endangered and Threatened Species in Navajo County (Apache), dated October 20, 2005, as well as the list of federally threatened and endangered species identified by the Navajo NHP. Navajo NHP stated that although it has no record of species of concern occurring on or near the project site at this time, the potential for certain species of concern to occur needs to be evaluated. In addition, NHP has identified 6 Federally-listed species of concern with potential to occur in the 7.5-minute quadrangle(s) containing the project boundaries, as follows: Charadrius montanus (Mountain Plover), *ESA proposed threatened*; Empidonax traillii extimus (Southwestern Willow Flycatcher), *ESA endangered*; Mustela nigripes (Black-footed Ferret), *ESA endangered*; Ptychocheilus lucius (Colorado Pikeminnow), *ESA threatened*; Xyrauchen texanus (Razorback sucker), *ESA threatened*; and Asclepias welshii (Welsh's Milkweed), *ESA threatened*.

The proposed NPDES permit authorizes the discharge of treated municipal wastewater into Teec Nos Pos Wash, a tributary to Toh Dahstini Wash, a tributary to San Juan River, a water of the United States. The proposed permit contains provisions for monitoring conventional, toxic chemicals, and nonconventional pollutants in compliance with the Navajo Nation Surface Water Quality standards, to ensure an appropriate level of quality of water discharged by the facility. Re-opener clauses have been included should new information become available to indicate that the requirements of the permit need to be changed.

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. Therefore, since the standards themselves are designed to protect aquatic species, including threatened and endangered species, any discharge in compliance with these standards should not adversely impact any threatened and endangered species. Furthermore, the water course into which the effluent is discharged is an ephemeral river bed, which without the discharge of effluent would be dry.

For the majority of the year, the discharge never reaches a perennial stream capable of supporting aquatic habitat.

EPA has determined that due to the low quantity and the intermittent of the discharge, effluent released in compliance with this permit will have “No Effect” on any above Federally-listed threatened or endangered species or its critical habitat that may be present in the area. 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. No requirements specific to the protection of endangered species are proposed in the permit.

## **XII. Information and Copying**

The Administrative Record, which contains the draft NPDES permit, the fact sheet, comments received, and other relevant documents, is available for review and may be obtained by calling or writing to the above address.

All comments or objections received within thirty (30) days from the date of the Public Notice, will be retained and considered in the formulation of the final determination regarding the permit issuance.

## **XIII. 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 IX  
CWA Standards and 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 she finds, on the basis of requests, a significant degree of public interest in the draft permit. 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.