

NPDES Inspection Report – Wastewater Treatment Facility

National Database Information	
Inspection Date: August 21, 2024	Inspection Type: CEI – Wastewater Treatment Facility
Entry/Exit Time: Opening Conference: 9:15 a.m.-1:30 p.m. on 8/19/2024 Site Review: 10:30 a.m.-11:20 a.m. on 8/21/2024	NPDES ID Number: SDG589510
NAICS Code: 221320	Inspection ID: 202408_SDG589510
Lead inspector and affiliation: Jennifer Ferrando / EPA Region 8	
Inspector and affiliation: Brit Rustad / EPA Region 8	

Facility Location Information	
Site/Facility Name & Location: Sharps Corner Lagoon Lat/Long: 43°23'19.21"N, 102°23'48.31"W Intersection of BIA Hwy 2 and BIA Hwy 27 Porcupine, SD 57772	Email Report to: Ernie Abold, Director, Oglala Sioux Tribe (OST) Water & Sewer h20sewer@gwtc.net

Contact Information	
	Name(s)/Title
Facility Contacts:	Ernie Abold / Director / OST Water & Sewer / present during the opening and closing conferences as well as the inspection
	James Begeman / Tribal Utility Consultant / Indian Health Service (IHS) / present during the opening and closing conferences as well as the inspection
Person/Company meeting definition of "Operator"	Oglala Sioux Tribe, Water and Sewer (OST Water & Sewer)
Authorized Official(s)	Ernie Abold / Director / OST Water & Sewer

Permit Information		
Is the permit on site and available? Yes, digitally	Lagoon Category: Potential to discharge but no discharge authorized, according to the authorization of coverage letter.	Monitoring Frequency: N/A
Effective Date: 04/05/2016	Expiration Date: 12/31/2020 (administratively continued)	Is the Facility under a compliance schedule? No
Is correct contact information indicated on ICIS? Yes	Indicate correct contact information: N/A	
Receiving Water(s): unnamed tributary of Porcupine Creek		
Regulatory Inspector's source of information: Notice of Intent for the permit, ICIS, ECHO and facility representatives		

Areas Evaluated During Inspection		
<u>Permit</u>	<u>Self-Monitoring Program</u>	Pretreatment
<u>Records</u>	Compliance Schedule	Pollution Prevention
<u>Facility Site Review</u>	Laboratory	Stormwater
<u>Effluent/Receiving Waters</u>	<u>Operations and Maintenance</u>	Combined Sewer Overflow
Flow Measurement	Sludge Handling/Disposal	Sanitary Sewer Overflow

Report Review and Signature		
Drafter Name	Draft Date	Contact Information
Jennifer Ferrando  Digitally signed by JENNIFER FERRANDO Date: 2024.11.05 15:49:27 -07'00'	10/15/2024	U.S. EPA Region 8 Denver, Colorado ferrando.jennifer@epa.gov (303) 312-6601
Reviewer Name	Draft Date	Contact Information
Brit Rustad	10/16/2024	U.S. EPA Region 8 Denver, Colorado rustad.brit@epa.gov (303) 312-6885
Management Reviewer Name/Signature/Date		Contact Information
EMILIO LLAMOZAS  Digitally signed by EMILIO LLAMOZAS Date: 2024.11.05 14:50:12 -07'00'		U.S. EPA Region 8 Denver, Colorado llamozas.emilio@epa.gov (303) 312-6407
Emilio Llamozas, NPDES and Wetlands Enforcement Section Supervisor		

Inspection Narrative and Site Description
<u>1.0 Introduction</u> The inspection was conducted at the Sharps Corner Lagoon wastewater treatment facility (facility; WWTF) located in Porcupine, Oglala Lakota County, South Dakota, to evaluate compliance with the facility's National Pollutant Discharge Elimination System (NPDES) permit. The EPA is responsible for implementing the NPDES program in Indian Country within the State of South Dakota. The inspection was announced approximately one month prior to the inspection to coordinate logistics for the inspection. On the morning of August 19, 2024, U.S. Environmental Protection Agency (EPA) inspectors Brit Rustad and Jennifer Ferrando (collectively, "we") met with Oglala Sioux Tribe Water & Sewer (OST Water & Sewer) Director, Ernie Abold. We were also joined by Indian Health Service (IHS)

representative James Begeman, Tribal Utility Consultant. We presented our credentials and had an opening conference in the OST Water & Sewer office where we explained the purpose of the inspection and discussed the design, operation, and Clean Water Act and NPDES compliance of multiple WWTFs operated by the OST Water & Sewer, including the subject facility. After the opening conference, we proceeded to conduct site reviews of the WWTFs operated by OST Water & Sewer, including the subject facility, for the remainder of August 19, 2024, through August 22, 2024. Throughout the inspection, we noted our observations in a checklist. Photographs taken during the inspection are included in the attached photo log.

2.0 OST Water & Sewer Operations

During the opening conference when discussing all facilities, Ernie Abold indicated that over the course of a week all WWTFs, including four lift stations, are checked. OST Water & Sewer is not keeping weekly inspection logs for these checks or any operations or maintenance logs. Only two of the four lift stations currently have Supervisory Control and Data Acquisition (SCADA) capabilities, which creates a burden for the limited staff to physically go check the two remaining lift stations several times per week to ensure they are operating properly. Ernie Abold stated that OST Water & Sewer performs jetting of the collection system for all WWTFs twice a year, in the spring and fall. Lastly, sludge has not been removed from any WWTFs; according to the tribal utility consultant, sludge accumulation has not been an issue with any of the lagoons on Pine Ridge based on previous depth testing and observations.

OST Water & Sewer operates both the water distribution as well as sewer collections systems across the Pine Ridge Reservation, which encompasses just over 2 million acres. According to Ernie Abold there are approximately 48,000 tribal members with half of these being served by the sewer collections system and the other half being primarily on septic systems. Septage from the majority of these septic systems is pumped and hauled to OST Water & Sewer's WWTFs throughout the reservation. At the time of the inspection, OST Water & Sewer employed 3 operators, in addition to the Director, and various managerial and administrative support staff. Only one of the three operators held any certifications.

OST Water & Sewer customers, rates, and finances were briefly discussed during the opening conference. Users are billed a single, monthly water and wastewater fee. Ernie Abold stated that OST Water & Sewer's budget is not supplemented by any other resources. OST Water & Sewer recently began a 5-year rate increase, as the last rate increase was in 2009. Additionally, according to the OST Water & Sewer representative, the utility is owed over \$1 million in outstanding user fees. This is in part a result of OST Water & Sewer's limited ability to discontinue service for customers who do not pay their bill.

3.0 Facility Description and Site Review

The facility is permitted as a no discharge facility under the EPA Region 8 General Permit for Wastewater Lagoon Systems in Indian Country in South Dakota (Permit) issued in 2016. A Notice of

Intent (NOI) was submitted on September 30, 2024, for coverage under the 2022 Lagoon General Permit. The NPDES Permits Section is currently processing the NOI. According to the facility representatives the facility serves roughly 85 people in the Sharps Corner community. The facility accepts hauled waste from pumped septic tanks in the surrounding communities. The hauled waste is dumped directly into the primary cell or into a manhole immediately upstream of the lagoon. The facility is a two-cell lagoon system. Wastewater flows into the primary cell (Cell 1) and then to the secondary cell (Cell 2) via a level control structure in the berm between the two cells. The facility can discharge via an outfall that extends eastward from Cell 2 to the bank of an unnamed tributary to Porcupine Creek (photo 5).

When we arrived, the gate was closed and locked, and warning signs were posted (photo 1). Cell 1 contained wastewater at the time of the inspection; cattails and duckweed were present in the northern end of cell and the wastewater in the cell had a brownish coloring (photos 1 and 2). Cell 2 contained minimal wastewater at the time of the inspection. Excessive vegetation, exceeding 6 inches in height, was present on the inside slopes of the berms of both cells and throughout Cell 2 and trees were growing in Cell 2 (photos 2 - 4). Although heavy vegetation prevented close inspection of the berms, no significant erosion was observed; some animal burrows and rodent damage were present.

The inspectors observed damage to the perimeter fence in several areas and several of the warning signs had become detached from the fence. The presence of manure throughout the facility indicated that cattle have access to the lagoon. The outfall is located approximately 100 yards east of Cell 2 on a streambank in a cow pasture and the area immediately surrounding the outfall structure was trampled and eroded (photo 5).

At the end of our inspections of OST Water & Sewer-operated WWTFs on August 22, 2024, we held a brief closing conference with Ernie Abold and James Begeman where we discussed preliminary findings. The following week on August 29, 2024, the EPA sent an email to Ernie Abold with the preliminary findings from the inspection and resources for documenting inspections, and a lagoon troubleshooting guide.

Findings, Corrective Actions and Recommendations

Finding #1: The Permittee was not documenting weekly lagoon inspections.

The facility representative stated that OST Water & Sewer staff visit each lagoon and lift station weekly but did not maintain records of the inspections. The inspectors provided the facility representatives with a lagoon inspection report template form (Appendix D of the 2022 Lagoon General Permit) that the facility representatives could use to document the weekly lagoon inspections.

Permit Requirement:

Section 3.3.1 of the Permit states, "On at least a weekly basis, unless otherwise modified by written approval from the EPA, the permittee shall inspect its wastewater treatment facility. The permittee

shall maintain a notebook recording all information obtained during the inspection. At a minimum, the notebook shall include the following:

- 3.3.1.1. Name of facility and permit number;
- 3.3.1.2. Date and time of the inspection;
- 3.3.1.3. Name of the inspector(s);
- 3.3.1.4. The facility's discharge status;
- 3.3.1.5. The flow rate of the discharge if occurring;
- 3.3.1.6. If a discharge is occurring, has occurred since the previous inspection, and/or if a discharge is likely to occur before the next inspection. (Note: If a discharge has occurred or is likely to occur before the next inspection, perform the appropriate monitoring and reporting requirements in Parts 3.2 and 5.4 of this permit if not already done.);
- 3.3.1.7. Is there is any leakage through the dikes;
- 3.3.1.8. Are there are any animal burrows in the dike;
- 3.3.1.9. Is there any erosion of the dikes (e.g., rills, cracks or other structural indications of erosion);
- 3.3.1.10. Are there are any rooted plants, including weeds growing in the water;
- 3.3.1.11. Does the vegetation growth on the dikes needs mowing (e.g. greater than 6" tall);
- 3.3.1.12. List the date scheduled for operation and maintenance procedures to be undertaken at the wastewater treatment facility.
- 3.3.1.13. Identification of operational problems and/or maintenance problems;
- 3.3.1.14. Recommendations, as appropriate, to remedy identified problems;
- 3.3.1.15. A brief description of any actions taken with regard to problems identified; and,
- 3.3.1.16. Other information, as appropriate.

The permittee shall maintain the notebook in accordance with required record-keeping items listed above and shall make the log available for inspection, upon request, by authorized representatives of the U.S. Environmental Protection Agency or the applicable Tribe (see Part 5.10 of this permit)."

Section 3.3.3 of the Permit states, "Problems identified during the inspection shall be listed with corrective action and a time frame to correct the issue. Example: repair cracks in North berm, remove animal and repair burrow, within 7 days. (See Part 6.5 of this permit.)"

Section 5.7 of the Permit states, "The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, inspection records, notifications to the EPA per this permit, and DMRs, for a period of at least five years from the date of the sample, measurement, report, application or submittal. Records of monitoring required by this permit related to sludge use and disposal activities must be kept at least five years (or longer as required by 40 C.F.R. Part 503). This period may be extended by request of the Director at any time. Data collected on site, data used

to prepare the DMR, copies of DMRs, a copy of this NPDES permit, and the notice of intent for permit coverage, must be maintained on site.”

Corrective Action:

Ensure that lagoon inspections are conducted weekly and documented in accordance with the Permit. Ensure that weekly lagoon inspection reports are retained in accordance with the recordkeeping requirements of the Permit. Provide the EPA and the Oglala Sioux Tribe Environmental Department with 1 month’s worth of weekly inspection reports.

Finding #2: Excessive vegetation was present throughout the lagoon and trees were growing in Cell 2; animal burrows and minor rodent damage were present.

Vegetation more than 6 inches in height was present on the inside berms of both cells and throughout Cell 2. Cattails were growing along the northern berm of Cell 1, and trees were growing inside Cell 2 (photos 1 - 4). The inspectors observed several animal burrows and rodent holes around the lagoon.

Permit Requirement:

Section 6.5 of the Permit states, “The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. However, the permittee shall operate, at a minimum, one complete set of each main line unit treatment process whether or not this process is needed to achieve permit effluent compliance.

In addition to the operation and maintenance items in the manual for the lagoon system, the permittee shall do the following maintenance:

- 6.5.1. Take necessary action to promptly correct the problem of leakage through the dikes;
- 6.5.2. Take necessary action to promptly remove burrowing animals from the dikes;
- 6.5.3. Promptly repair damage to dikes caused by burrowing animals and/or erosion;
- 6.5.4. Remove rooted plants, including weeds, from the water on a regular basis or as needed; and
- 6.5.5. Keep the dikes mowed on a regular basis during the growing season or as needed (e.g., keep growth below 6" in height).”

Corrective Action:

Remove the overgrown vegetation and trees on the inside and around the berms and remove burrowing animals and make repairs where burrowing animals have damaged berms, in accordance with Section 6.5 and relevant subparts of the Permit. Submit to the EPA and the Oglala Sioux Tribe Environmental Department photos once the vegetation and trees have been removed and animal burrows have been repaired.

Finding #3: The facility does not have enough staff or funding.

During the opening conference, staffing and funding resources were discussed. The facility representatives estimated that six operators would be needed, in addition to the Director, to operate the WWTFs in compliance with the permit requirements; however, at the time of the inspection, only three operators were employed by OST Water & Sewer. In addition, the utility does not have sufficient revenue and is not able to collect unpaid user fees to fund necessary operation and maintenance activities. It is apparent based on that conversation as well as field observations that this facility does not have adequate staff or funding to fully comply with the permit.

Permit Requirement:

Section 6.1 of the Permit states, "The permittee must comply with all conditions of this permit. Any failure to comply with the permit may constitute a violation of the Clean Water Act and may be grounds for enforcement action, including, but not limited to permit termination, revocation and reissuance, modification, or denial of a permit renewal application. The permittee shall give the director advance notice of any planned changes at the permitted facility that will change any discharge from the facility, or of any activity that may result in failure to comply with permit conditions."

Recommendation:

EPA recommends developing a staffing and funding plan (plan) that includes the number of staff needed to comply with the permit, staff retention plan (competitive pay and proper training), SOPs for collection of outstanding fees, and evaluation of alternative funding sources. EPA also recommends that the plan include deadlines for accomplishing each of the items listed in the plan.

Finding #4: Several warning signs were down and the perimeter fence was damaged.

A warning sign was posted near the gate but several other signs around the lagoon had fallen off the fence. The perimeter fence was damaged in several locations and cow manure was observed on the berms throughout the lagoon indicating that cattle have access to the lagoon.

EPA Guidance:

EPA has developed guidance manuals on the proper operation and maintenance of lagoons. One of the guidance materials is called "Principles of Design and Operations of Wastewater Treatment Pond Systems for Plant Operators, Engineers, and Managers" (August 2011, EPA/600/R-11/088).

<https://www.epa.gov/sites/production/files/2014-09/documents/lagoon-pond-treatment-2011.pdf>

This guidance manual indicates on page 9-20 that:

"To discourage use of the ponds for recreation, the entire area should be fenced and warning signs displayed."

Permit Requirement:

Section 6.5 of the Permit states, "The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance

procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. However, the permittee shall operate, at a minimum, one complete set of each main line unit treatment process whether or not this process is needed to achieve permit effluent compliance.”

Recommendation:

Ensure the lagoon fencing is intact and signs posted to prevent unauthorized access. Ensure the lagoon gate remains closed and fencing is maintained in adequate condition to exclude cattle that could damage the berms.

Finding #5: The area around the outfall pipe was trampled and eroded.

The outfall from Cell 2 is located in a cow pasture on the bank of an unnamed tributary to Porcupine creek. The soil around the outfall was trampled and eroded. An emergency discharge from the outfall could exacerbate erosion on the streambank. In addition, the condition of the area surrounding the outfall could prevent proper sample collection in the event of a discharge.

Permit Requirement:

Section 6.5 of the Permit states, “The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. However, the permittee shall operate, at a minimum, one complete set of each main line unit treatment process whether or not this process is needed to achieve permit effluent compliance.”

Section 6.5.3 of the Permit states, “Promptly repair damage to dikes caused by burrowing animals and/or erosion.”

Recommendation:

Consider restoring or reinforcing the area surrounding the outfall to prevent further erosion and allow for proper sample collection in the event of an emergency discharge.