

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: 9:20 a.m. – 10:20 a.m. on 8/21/2024	NPDES ID Number: SDG589502
NAICS Code: 221320	Inspection ID: 202408_SDG589502
Lead inspector and affiliation: Jennifer Ferrando / EPA Region 8	
Inspector and affiliation: Brit Rustad / EPA Region 8	

Facility Location Information	
Site/Facility Name & Location: Evergreen Lagoon Lat/Long: 43.314569, - 102.364717 18 Evergreen Rd. W, Porcupine, SD 57772	Email Report to: Ernie Abold, Director, Oglala Sioux Tribe (OST) Water & Sewer h2osewer@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: Discharge. Sub-category C, according to the authorization of coverage letter.	Monitoring Frequency: Semi annual for effluent and receiving stream with quarterly influent monitoring
Effective Date: 07/01/2024	Expiration Date: 03/31/2027	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	<u>Sanitary Sewer Overflow</u>

Report Review and Signature		
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Inspection Narrative and Site Description
<u>1.0 Introduction</u> The inspection was conducted at the Evergreen 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 discharge facility under the EPA Region 8 General Permit for Wastewater Lagoon Systems in Indian Country in South Dakota (Permit) issued in 2022. According to the facility

representatives the facility serves roughly 430 people in the Evergreen Housing community. The facility accepts hauled waste from pumped septic tanks in the surrounding communities. The hauled waste is dumped directly into Cell 1. The facility is a three-cell lagoon system. Wastewater flows to a diversion manhole located on the east side of Cell 2 and can be diverted to Cell 2 or to Cell 1 via a second manhole. Wastewater within the lagoon can overflow from Cell 1 to Cell 2 and from Cell 2 to Cell 3 via transfer piping between the lagoons. A single outfall is located on the west berm of Cell 3, near the southwest corner of the lagoon. The facility representatives stated that Cell 3 is never used and has not held liquid or discharged for more than 20 years. Jim Begeman speculated that this is due to excessive percolation rates in the lagoon and that wastewater would flow to Cell 3 if the cells were properly lined. The facility representatives indicated plans to request a change in permit coverage to reflect that the facility does not discharge.

When we arrived, the gate was open (photo 1); a lock was present, but it had been cut. Approaching the gate, we observed septage on the berms of Cell 1, near the facility gate (photos 2 and 4) and north of the gate. Cells 1 and 2 contained wastewater at the time of the inspection and Cell 3 was dry. Excessive vegetation, exceeding 6 inches in height, was present on the inside slopes and tops of the berms of all three cells and trees were growing in Cell 3 (photos 3, 5, and 7). Although heavy vegetation prevented close inspection of the berms, no animal burrows or significant erosion or rodent damage were observed.

Warning signs were posted in 2 or 3 locations around the lagoon, but a sign was not present on or near the gate. The perimeter fence was damaged and down in several locations (photo 6 shows one example).

The manhole located south of Cell 1, near the northeast corner of Cell 2, was uncovered at the time of the inspection. Ernie Abold stated that this manhole is used for jetting the line between the diversion manhole and Cell 1. The diversion manhole on the east side of Cell 2, near the southeast corner of the cell, was overflowing at the time of the inspection (photo 8). Wastewater was flowing west from the manhole toward the eastern berm of Cell 2. Some of the wastewater extended north along the berm, terminating at a point approximately 80 feet northwest of the manhole. The majority of wastewater flowed south and southeast along the eastern berms of Cell 2 and Cell 3. The surface flow of wastewater from the manhole appeared to terminate approximately 500 feet southeast of the manhole, north of the southeast corner of Cell 3 (photos 9 and 10).

The outfall, located outside the perimeter fence on the west berm of Cell 3, was approximately 50 percent obstructed with soil and vegetation (photo 11).

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, a lagoon troubleshooting guide, and a lift station standard operating procedures template.

On August 29, 2024, OST Water & Sewer submitted a Sanitary Sewer Overflow (SSO) Incident Report Form notifying EPA of the overflow from the Evergreen Lagoon influent manhole located on the east side of Cell 2 (photos 8 - 10), and the spill response activities and corrective actions taken. The report indicates that OST Water & Sewer has added the SSO location to the preventive maintenance program and adjusted its schedule or method of preventive maintenance to prevent future SSOs at this location.

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 Permit) that the facility representatives could use to document the weekly lagoon inspections.

Permit Requirement:

Section 6.5.1 of the Permit states, "On at least a weekly basis, unless otherwise modified by written approval from EPA, the Permittee shall inspect its wastewater treatment facility. Permission for less frequent inspections must be requested in writing by the Permittee and may be granted on a case-by-case basis where appropriate (e.g. a lagoon located in a remote area where access is a problem during the winter and compliance issues are not present), at the discretion of EPA. The Permittee shall maintain a notebook/logbook recording all information obtained during the inspection using indelible ink pens (or inspection logs may be kept in electronic format in accordance with proper record-keeping procedures) and in sufficient detail so that decision logic may be traced back, once reviewed. At a minimum, the notebook/logbook shall include the following (see Appendix D of this Permit for an Example Lagoon Inspection Form):

- 6.5.1.1. Name of facility and permit number;
- 6.5.1.2. Date and time of the inspection;
- 6.5.1.3. Name of the inspector(s);
- 6.5.1.4. The facility's discharge status;
- 6.5.1.5. The flow rate of the discharge, if occurring;
- 6.5.1.6. Determine 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 Sections 3 and 5.4 of this Permit if not already done.);
- 6.5.1.7. If there is any leakage through the dikes;
- 6.5.1.8. If there are any animal burrows in the dike;
- 6.5.1.9. If there is any erosion of the dikes (e.g., rills, cracks or other structural indications of erosion);
- 6.5.1.10. If there are any rooted plants, including weeds or trees growing in the water;
- 6.5.1.11. If the vegetative growth on the dikes need mowing (i.e. no greater than 6" tall or any height that may interfere with monitoring, operation and maintenance of the system);
- 6.5.1.12. Visual observation for visible sheen, floating oil, floating solids and foam;
- 6.5.1.13. Visual observation to check for evidence of illicit septic dumping;

- 6.5.1.14. List the date scheduled for operation and maintenance procedures to be undertaken at the wastewater treatment facility;
- 6.5.1.15. Identification of operational and/or maintenance problems, and a determination of whether proper operation and maintenance procedures are being undertaken at the frequency necessary to maintain working operations and the overall treatment and collection systems of the wastewater treatment lagoon system;
- 6.5.1.16. Recommendations, as appropriate, to remedy identified problems;
- 6.5.1.17. A brief description of any actions taken with regard to problems identified;
- 6.5.1.18. Overall visual observations to identify potential concerns with the “health” of the lagoon system (e.g., water is cloudy, water coloration concerns (e.g. red, black, grey, dark blue-green and cloudy), etc.); and
- 6.5.1.19. Other information, problems identified, or observations, as appropriate.

The Permittee shall maintain the notebook/logbook 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(s) (see Appendix A for list of Tribes).

Problems identified during the inspection (including, but not limited to, those associated with this section of the Permit) shall be corrected at the time of inspection, if possible. If they cannot be corrected at the time of the inspection, the inspector must identify a corrective action to remedy the problem(s), as well as a timeline for completion of the remedy. Corrective actions to remedy problem(s) shall be in line with (and addressed through) proper operation and maintenance (Section 6.6 of this Permit.). All problems identified during inspections, as well as associated corrective actions and timelines, shall be documented in the inspection log.”

Section 5.9 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 the Permit, for a period of at least three years from the date of the sample, measurement, report or application. Records of monitoring required by the Permit related to sludge use and disposal activities must be kept at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the EPA at any time. Data collected on site, data used to prepare the DMR, copies of DMRs, and a copy of this NPDES Permit 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: No O&M manuals or logs were available.

The Permittee did not have copies of operations and maintenance (O&M) manuals for the lagoon and were not properly tracking O&M activities.

Permit Requirement:

Section 6.6.1 of the Permit states, "For Permittees not previously covered under the Region 8 General Permit for Wastewater Lagoon Systems in Indian Country, the Permittee shall, as soon as reasonable and practicable, but no later than six (6) months after the effective date of this Permit, do the following as part of the operation and maintenance program for the wastewater treatment facility:

- 6.6.1.1. Have a current O & M Manual(s) that describes the proper operational procedures and maintenance requirements of the wastewater treatment facility;
- 6.6.1.2. Have the O & M Manual(s) readily available to the operator of the wastewater treatment facility and require that the operator become familiar with the manual(s) and any updates;
- 6.6.1.3. Have a schedule(s) for routine operation and maintenance activities at the wastewater treatment facility; and,
- 6.6.1.4. Require the operator to perform the routine operation and maintenance requirements in accordance with the schedule(s).

For Permittees renewing coverage under this Permit, the Permittee is expected to have the above listed items (Sections 6.6.1.1. thru 6.6.1.4., which were part of the requirements under the previous Region 8 General Permit for Wastewater Lagoon Systems in Indian Country) completed prior to the coverage date under this Permit. These Permittees shall ensure that each of the items listed above are updated and maintained as part of the operation and maintenance program for the wastewater treatment facility.

In addition to the operation and maintenance items in the manual for the lagoon system, ALL Permittees shall do the following maintenance, at a minimum:

The Permittee shall maintain a log in either paper (e.g. bound notebook) or electronic format containing a summary record of any daily operation and maintenance activities at the wastewater treatment lagoon facility and collection system, that is to be updated on each day operation and maintenance activities are performed. At a minimum, the log shall include the following information:

- 6.6.1.5. Date and time;
- 6.6.1.6. Name and title of person(s) making the log entry;
- 6.6.1.7. Name of the persons(s) performing the activity;
- 6.6.1.8. A brief description of any operations and maintenance activity performed on the wastewater treatment lagoon system;
- 6.6.1.9. The Permittee shall ensure that necessary action to promptly correct the problem of leakage through the dikes is taken and documented in the maintenance log;
- 6.6.1.10. The Permittee shall ensure that necessary action to promptly remove burrowing animals from the dikes is taken and documented in the maintenance log;
- 6.6.1.11. The Permittee shall ensure prompt repair of damage to dikes caused by burrowing animals and/or erosion and documentation of all actions in the maintenance log;
- 6.6.1.12. The Permittee shall ensure removal of rooted plants, including weeds and trees, from the water on a regular basis or as needed and documentation of all actions in the maintenance log; and
- 6.6.1.13. The Permittee shall ensure that the dikes are kept mowed on a regular basis during the

growing season or as needed (i.e., vegetation not greater than 6" tall or any height that may interfere with monitoring, operation and maintenance of the system) and that documentation of all actions taken are recorded in the maintenance log.

6.6.1.14. Other information, as appropriate."

Corrective Action:

Implement an operations and maintenance program including developing an O&M manual in accordance with the permit. Maintain maintenance logs in accordance with the recordkeeping requirements of the permit. Provide the EPA and the Oglala Sioux Tribe Environmental Department with a description of the corrective actions taken to address this finding as well as relevant O&M documents from sections 6.6.1.1. through 6.6.1.4.

Finding #3: Excessive vegetation was present throughout the lagoon and trees were growing in Cell 3.

Vegetation more than six inches in height was present on the inside and tops of the berms of all three cells. Cattails were growing around the edges of Cells 1 and 2, and trees were growing inside Cell 3 (photos 3, 5, and 7).

Permit Requirement:

Section 6.6 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 this Permit.

The Permittee shall do the following as part of the operation and maintenance program for the wastewater treatment facility...

6.6.1.10. The Permittee shall ensure that necessary action to promptly remove burrowing animals from the dikes is taken and documented in the maintenance log;

6.6.1.11. The Permittee shall ensure prompt repair of damage to dikes caused by burrowing animals and/or erosion and documentation of all actions in the maintenance log;

6.6.1.12. The Permittee shall ensure removal of rooted plants, including weeds and trees, from the water on a regular basis or as needed and documentation of all actions in the maintenance log; and

6.6.1.13. The Permittee shall ensure that the dikes are kept mowed on a regular basis during the growing season or as needed (i.e., vegetation not greater than 6" tall or any height that may interfere with monitoring, operation and maintenance of the system) and that documentation of all actions taken are recorded in the maintenance log..."

Corrective Action:

Remove the overgrown vegetation and trees on the inside and around the berms in all cells in accordance with section 6.6 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.

Finding #4: The Permittee was not conducting influent monitoring.

As of the date of the inspection, the required quarterly influent monitoring had not been conducted per the Permit. According to the authorization of coverage letter, the facility is covered under Discharge Sub-category C, which requires quarterly influent monitoring. The facility's first DMR, covering the monitoring period of July 1, 2024, to December 31, 2024, is due January 28, 2025.

The facility representatives indicated plans to request a change in permit coverage to reflect that the facility does not discharge. If the facility is reclassified as a "potential to discharge but no discharge authorized" under the general permit, quarterly influent monitoring would no longer be required.

Permit Requirement:

Section 3.1.2 of the Permit states, "...

Table 4. Baseline Influent Monitoring Requirements

Influent Characteristic	Sub-category A Frequency b/	Sub-category B Frequency b/	Sub-category C Frequency b/	Sample Type a/
BOD5, mg/L	Monthly	Twice per Quarter c/	Quarterly, d/	Grab
TSS, mg/L	Monthly	Twice per Quarter c/	Quarterly, d/	Grab

a/ See Definitions, Section 1.1. of this Permit, for definition of terms.

b/ See Section VI. Monitoring Requirements of the Fact Sheet and Section 3.1.4. of this Permit, for additional information on the discharging sub-categories. A Permittee's sub-category will be clearly identified in the authorization of coverage letter.

c/ At least two samples will be taken each calendar quarter and will be used in the calculation for the 30-day averages for the month in which they are performed. Samples are to be taken during different months within the quarter to provide information for possible variations in influent that may occur during the quarter. Additional samples may be taken at the Permittee's discretion if a large amount of variability is anticipated in the influent within a quarter. Any additional sample results must be included in the 30-day average influent DMR reporting for the month in which it is performed. If only one sample is taken within a month, that result will be the 30-average for the month.

d/ A sample will be taken at least once each calendar quarter and will be used in the calculation for the 30-day averages for the month in which they are performed. Additional samples may be taken at the Permittee's discretion if a large amount of variability is anticipated in the influent within a quarter. Any additional sample results must be included in the 30-day average influent DMR reporting for the month in which it is performed. If only one sample is taken within a month, that result will be the 30-average for the month."

Part 3.1.4.3 of the Permit states, "...Influent monitoring sampling will consist of a single grab sample at a location representative of the influent flow entering the wastewater lagoon treatment system prior to treatment (e.g. an influent structure, upstream manhole that contains flow from the entire service area, or any other representative location), unless otherwise indicated in the facility's permit coverage letter. Influent sample monitoring shall be required quarterly to allow characterization of influent flow with regard to BOD5, TSS, and flow, and calculation of BOD5 and TSS percent removal values."

Corrective Action:

Monitor the influent for appropriate characteristics, frequency, and sample type specified in the Permit. Additionally, monitor the effluent and receiving stream per the permit requirements if/ when a discharge occurs. Provide the EPA and the Oglala Sioux Tribe Environmental Department with a response indicating how the facility will implement influent monitoring as required by the Permit as well as documentation proving that the next quarterly influent sample has been gathered and analyzed per permit requirements. Alternatively, if the facility plans to request coverage under the General Permit as a “potential to discharge but no discharge authorized” (NODIS) facility, a new notice of intent (NOI) for permit coverage will need to be submitted in accordance with section 2 of the Permit.

Finding #5: The Permittee was not calibrating the pH meter.

The facility representative stated that the pH meter that is used to measure the effluent and receiving water pH had never been calibrated.

Permit Requirement:

Section 5.9 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 the Permit, for a period of at least three years from the date of the sample, measurement, report or application...”

Corrective Action:

Ensure the pH meter is calibrated in accordance with the manufacturer’s recommendations using current (un-expired) buffer solutions before the meter is used for effluent monitoring in accordance with the Permit requirements. Retain calibration records, in accordance with requirements of the Permit. Provide the EPA and the Oglala Sioux Tribe Environmental Department with a description of the corrective actions taken to address this finding, including a copy of the procedures that will be followed to calibrate the meter and an example log sheet that will be used to document the calibration.

Finding #6: 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 6.6.2 of the Permit states, “Staffing and Funding: The Permittee shall provide adequate staff and funding to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this Permit. The level of staffing needed, in numbers,

training and experience, shall be determined taking into account the work involved in operating the system, conducting maintenance, and complying with this Permit.”

Corrective Action:

Develop 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. The plan should include deadlines for accomplishing each of the items listed in the plan. Provide the EPA and the Oglala Sioux Tribe Environmental Department with a copy of the plan.

Finding #7: The facility was experiencing an active sanitary sewer overflow.

Raw sewage was overflowing from the diversion manhole on the east side of Cell 2, near the southeast corner of the cell, at the time of the inspection (photo 8). Wastewater was flowing west from the manhole toward the eastern berm of Cell 2. Some of the wastewater extended north along the berm, terminating at a point approximately 80 feet northwest of the manhole. The majority of wastewater flowed south and southeast along the eastern berms of Cell 2 and Cell 3. The surface flow of wastewater from the manhole appeared to terminate approximately 500 feet southeast of the manhole, north of the southeast corner of Cell 3 (photos 9 and 10).

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 9-11 that:

“Maintaining an aerobic pond in good condition requires full-time operator attention. These activities should be performed on a daily basis, on a regular schedule and as needed:

- Maintain mechanical equipment
- Keep pipelines, diversion boxes and screens clean
- Collecting samples
- Run lab tests
- Perform housekeeping”

And on page 9-12 that:

“9.4.2.3 Maintenance General maintenance guidelines:

- Inlet and outlet structures should be cleaned regularly to remove any floating debris, caked scum, or other trash that might produce odors or be unsightly.”

The following resources may assist OST Water & Sewer in preventing future SSOs:

- Wastewater Collection System Toolbox: <https://www3.epa.gov/region1/sso/toolbox.html>
- Collection System Operation and Maintenance Fact Sheet
<https://www3.epa.gov/npdes/pubs/sewcl.pdf>

- Condition Assessment of Underground Pipes: <https://www3.epa.gov/region1/sso/pdfs/condition-assessment-underground-pipes.pdf>
- Guide for Evaluating Capacity, Management, Operation, and Maintenance Programs at Sanitary Sewer Systems: https://www3.epa.gov/npdes/pubs/cmom_guide_for_collection_systems.pdf
- Small and Rural Wastewater Systems: <https://www.epa.gov/small-and-rural-wastewater-systems>
- NPDES SSO fact sheets: <https://www.epa.gov/npdes/npdes-ssso-fact-sheets>

Permit Requirement:

Section 5.6 of the Permit states, “Prior to December 21, 2025, legible copies of all other reports required herein, as well as combined sewer overflows, sanitary sewer overflows, or bypass events reports, shall be signed and certified in accordance with the Signatory Requirements (see Section 7.7 of this Permit), and submitted to EPA Region 8 Enforcement and Compliance Assurance Division Water Enforcement Branch and the Tribe(s) as indicated below:

Original to:

EPA Region 8 Enforcement and Compliance Assurance Division Water Enforcement Branch address:

U.S. Environmental Protection Agency, Region 8
(8ENF-W-NW)
Attention: NPDES and Wetlands Enforcement Section Chief
1595 Wynkoop Street
Denver, Colorado 80202-1129

Copy to:

Applicable Tribe(s) (see Appendix A for list of Tribes)”

Section 5.10.1 of the Permit states, “The Permittee shall report any noncompliance which may endanger health or the environment (including sanitary sewer overflows) as soon as possible, but no later than twenty-four (24) hours from the time the Permittee first became aware of the circumstances. The report shall be made to EPA, Region 8, Superfund & Emergency Management Division (EPA Region 8 24-hr. Emergency Response line) at (303) 293-1788 and the applicable Tribe(s) (see Appendix A for list of Tribes and telephone numbers).”

Section 5.10.3 of the permit states, “For any noncompliance notification required under Sections 5.10.1 or 5.10.2 of this Permit (above), a written submission shall also be provided to EPA Office of Enforcement and Compliance Assurance Division, Water Enforcement Branch, and to the applicable Tribe(s) within five days of the time that the Permittee becomes aware of the circumstances. The written submission shall be submitted to the addresses indicated in Section 5.6 of this Permit and contain:

- 5.10.3.1. A description of the noncompliance and its cause;
 - 5.10.3.2. The period of noncompliance, including exact dates and times;
 - 5.10.3.3. The estimated time noncompliance is expected to continue if it has not been corrected;
- and,

5.10.3.4. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

5.10.3.5. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above as well as the type of event (i.e. combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (e.g., manhole, combine sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the noncompliance was related to wet weather.

5.10.3.6. The signed certification statement required by the Signatory Requirements (see Section 7.7 of this Permit).”

Section 6.6 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 this Permit...”

Corrective Action:

Ensure the collection system is maintained to prevent SSOs and any unauthorized discharges of raw sewage. Ensure future SSOs and any unauthorized releases that may endanger human health and the environment are reported to the EPA per Permit requirements. In a response to the EPA and the Oglala Sioux Tribe Environmental Department, provide a description of the procedures that will be followed to prevent SSOs and to detect and mitigate as soon as possible any SSOs that do occur.

On August 29, 2024, OST Water & Sewer submitted an SSO Incident Report Form notifying EPA of the overflow from the Evergreen Lagoon influent manhole observed during the inspection, and the spill response activities and corrective actions taken.

Finding #8: The gate to the lagoon was open, a warning sign was not posted at the gate, and the perimeter fence was damaged.

The gate was open at the time of the inspection and the lock had been cut (photo 1). Horse manure was observed on the berms throughout the lagoon. Warning signs were posted in 2 or 3 locations around the lagoon, but a sign was not present on or near the gate. The perimeter fence was damaged and down in several locations (photo 6 shows one example).

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 6.6 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 this Permit.”

Recommendation:

Ensure the lagoon gate is maintained and locked to prevent unauthorized access and entrance as well as potential damage from horses on the berms. EPA recommends providing a combination key to septage haulers that are authorized by the OST Water & Sewer to discharge septage to the facility so that they can access the lagoon without breaking the lock. Ensure the lagoon fencing is intact and signs posted to prevent unauthorized access.

Finding #9: Hauled septage was being discharged to the berm of Cell 1.

Septage was observed on the top of the berm of Cell 1, near the gate (photos 2 and 4) and north of the gate. It appeared that septage haulers were not getting close enough to the lagoon before dumping. This may have been due to the excess vegetation near the edge of the lagoon, preventing trucks from getting closer.

Permit Requirement:

Section 6.6 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 this Permit...”

6.6.1.13. The Permittee shall ensure that the dikes are kept mowed on a regular basis during the growing season or as needed (i.e., vegetation not greater than 6” tall or any height that may interfere with monitoring, operation and maintenance of the system) and that documentation of all actions taken are recorded in the maintenance log.”

Recommendation:

Cut down vegetation at the septage dumping location so that trucks can get closer to the lagoon to dump septage. Additionally, ensure that dumping is not causing erosion at the edge of the berm or consider constructing a concrete receiving pad or similar structure where septage can be dumped

into the lagoon without damaging the berms. Educate septage haulers on appropriate and expected procedures for off-loading septage to the lagoon.

Finding #10: The outfall pipe was obstructed.

The outfall from Cell 3 was approximately 50 percent obstructed with soil and vegetation (photo 11). The obstruction could lead to erosion and prevent proper sample collection in the event of a discharge.

Permit Requirement:

Section 6.6 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 this Permit..."

Corrective Action:

Clear the outfall of soil and vegetation. In a response to the EPA and the Oglala Sioux Tribe Environmental Department, provide photos showing the location of the outfall cleared of obstructions.