

NPDES Inspection Report – Wastewater

National Database Information	
Inspection Date: July 13, 2022	Inspection Type: CEI - Wastewater Treatment Facility
Entry/Exit Time: 10:14 am / 10:40 am	NPDES ID Number: NDG589313
NAICS Code: 221320	Inspection ID: 202207 NDG589313
Lead inspector and affiliation: Emilio Llamozas / EPA Region 8	
Inspector and affiliation: Stephanie Meyers / EPA Region 8	

Facility Location Information (Name/Location/ Mailing Address)	
Site/Facility Name & Location: Bear Soldier Lagoon S7 T21N R27E Fort Yates, North Dakota 58538	Mail Report to: Randez Bailey rbailey@standingrock.org Leon Spotted Bull leon.spottedbull@standingrock.org

Contact Information	
	Name(s)/Title
Facility Contacts: <i>(indicate primary lead and present during inspection)</i>	Randez Bailey / Rural Water System Director / Standing Rock Municipal, Rural & Industrial (MR&I) Program / present during opening and closing conferences
	Leon Spotted Bull / Wastewater Supervisor / Standing Rock MR&I Program / primary lead during the inspection
	Wyatt Red Tomahawk / Wastewater Operator / Standing Rock MR&I Program / present during opening and closing conference
	Jake Luger / Acting Environmental Director / Standing Rock Sioux Tribe Environmental Program / present during opening conference
	Tyler Timmons / Tribal Utility Consultant / IHS / present during the inspections
Person/Company meeting definition of “Operator”	Standing Rock Sioux Tribe
Authorized Official(s) (Per NOI)	Randez Bailey / Rural Water System Director / Standing Rock Municipal, Rural & Industrial (MR&I) Program

Permit Information		
Is the permit on site and available? Yes	Lagoon Category: No Discharge	Monitoring Frequency: N/A
Effective Date: February 8, 2016	Expiration Date: December 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 to Oak Creek		
Discharge point location (longitude, latitude): There is one emergency outfall (small lift station) at the southwest corner of the constructed wetland. Lat. 45.80199° N, Long. -100.81900° W		
Regulatory Inspector’s source of information: Notice of Intent for the permit, ICIS database, permit, facility representatives and facility observations.		

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		
Drafter Name	Address/Phone Number	Date
Emilio Llamozas	U.S. EPA Region 8 1595 Wynkoop Street 8ENF-W-NW Denver, Colorado 80202	07/28/2022
	303-312-6407	
Reviewer Name	Address/Phone Number	Date
Stephanie Meyers	U.S. EPA Region 8 1595 Wynkoop Street 8ENF-W-NW Denver, Colorado 80202	08/01/2022
	303-312-6938	
Supervisor Signature/Name	Address/Phone Number	Date
 Digitally signed by Boeglin, Michael Date: 2022.08.03 16:11:21 -06'00'	U.S. EPA Region 8 1595 Wynkoop Street 8ENF-W-NW Denver, Colorado 80202	08/03/2022
	303-312-6250	
Micheal Boeglin		

Inspection Narrative and Site Description

The inspection was conducted at the Bear Soldier Lagoon System (facility) located on the Standing Rock Sioux Reservation, in McLaughlin, South Dakota to evaluate compliance with its 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 a month prior to the inspection, to coordinate logistics for the inspection. On July 13, 2022, U.S. Environmental Protection Agency (EPA) inspectors Emilio Llamozas and Stephanie Meyers met with Leon Spotted Bull with the MR&I Program in McLaughlin. The EPA inspectors had previously presented their credentials and had an opening conference to explain the purpose of the inspection on July 12, 2022 at the MR&I's main office for all the MR&I facilities that were inspected during this inspection trip. The inspectors proceeded to inspect the facility and asked questions to the facility representatives to help the inspectors evaluate compliance with the facility's permit. Throughout the inspection, the inspectors noted their observations in a checklist. Photographs taken during the inspection are included in the attached photo log.

The Bear Soldier Lagoon System serves the communities of Bear Soldier and the southwest blocks of the City of McLaughlin located in the Standing Rock Sioux Reservation. The facility serves approximately 450 people. The facility is permitted as a no discharge facility, under the Lagoon General Permit for the Standing Rock Reservation. Any discharge from the facility is expected to be under emergency circumstances. In 2014, the Bear Soldier Lagoon system was modified to add the new Bear Soldier Lift Station, expand cell 1 and add the constructed wetland. The average design flow to the facility is 0.04 million gallons per day (MGD) and the peak design flow is 0.054 MGD. The average design organic treatment capacity is 195 lbs BOD₅ per day and the peak design organic treatment capacity is 244 lbs BOD₅ per day. The facility does not accept hauled septic waste.

The wastewater from the southwest side of the City of McLaughlin (north of the lagoon) is collected in the lift station and sent to the lagoon system via a force main that can be directed to cell 1 or cell 2. Wastewater from the Community of Bear Soldier (south of the lagoon) flows into cell 1 or cell 2 via gravity flow. During the inspection, wastewater was being sent to cell 1 (See the enclosed facility schematic and flow diagram).

The inspectors observed the Bear Soldier lift station (photos 100-102). The operators were keeping track of the lift station's pump hours (photo 101). There was some grease on the ground at the lift station from cleaning the lift station's trash basket (photo 102). The inspectors indicated that grease should be collected and disposed at the landfill. Below are the coordinates for the Bear Soldier Lift Station and the Constructed Wetland Discharge Lift Station. The Constructed Wetland Discharge Lift Station will be described in more detail below.

Lift Station Name	Latitude	Longitude
Bear Soldier Lift Station	45.81371° N	-100.81745° W
Constructed Wetland Discharge Lift Station	45.80199° N	-100.81900° W

The inspectors then went to inspect the lagoon cells. The facility is a two cell lagoon system followed by a constructed wetland. The table below has the operating volume for the two cells and the constructed wetland.

Cell ID	Area (acres)	Operating Depth (feet)	Operating Volume (MG)
Cell 1	6.5	5	10.6
Cell 2	3.0	5	4.5
Constructed wetland	1.5	2	1.0
Total	11.0	-	16.1

During the inspection, wastewater was flowing into cell 1 for treatment (photo 103). The wastewater is then routed to cell 2 (photo 104). The wastewater can then be sent to the constructed wetland (photo 105) which is located south of cell 2, if needed. Wastewater was not flowing into the constructed wetland at the time of the inspection. The water seen in the constructed wetland was from a recent storm event. The constructed wetland has a lift station on the southwest corner (photo 106) that can discharge the effluent, if needed during an emergency discharge. The facility representative indicated that they have not had to discharge from the constructed wetland. If there was a discharge, it would flow in the ditch towards the north (photo 107). The Notice of Intent (NOI) indicated that the receiving water for any discharge was an unnamed tributary to Oak Creek.

The inspectors and facility representatives drove around the lagoons to evaluate berm integrity and the facility's discharge status. Vegetation had reached a height greater than six inches on the inside berm (riprap) of cell 1 and cell 2 (photos 103-104). There were also small trees growing on the inside berms of cells 1 and 2.

At the end of the day on July 13, 2022, the inspectors returned to the MR&I main office and held a closing conference with Ms. Bailey, Mr. Spotted Bull and Mr. Red Tomahawk where preliminary findings were discussed. On July 18, 2022, Ms. Bailey sent photos of the Operation and Maintenance Manual for the Bear Soldier Lift Station. On July 22, 2022, the EPA sent an email to Ms. Bailey with the preliminary findings from the inspection.

Findings, Corrective Actions and Recommendations

Finding #1: There was grease on the ground at the Bear Soldier lift station from the cleaning of the lift station's trash basket.

There was some grease on the ground at the Bear Soldier lift station from cleaning the lift station's trash basket (photo 102). The inspectors indicated that grease collected from the lift station should be collected and disposed at the landfill.

Permit requirements:

Part 6.5 of the Lagoon General Permit (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."

Corrective Action:

Clean and remove grease off the ground at the Bear Soldier lift station. Ensure that grease and trash removed from the lift station trash basket is collected and disposed of at the landfill. Properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) including the lift station, which are installed or used by the permittee to achieve compliance with the conditions of the permit. Provide the EPA, the Standing Rock Sioux Tribe Environmental Program (Tribe) and Indian Health Service (IHS) with photos and a description of the corrective actions taken to address this finding.

Finding #2: There was vegetation and trees growing on the inside riprap berms of cells 1 and 2.

Vegetation had reached greater than six inches in height on the inside berm (riprap) of cells 1 and 2 that needed to be cut (photos 103-104). There were also small trees growing on the inside berms of cells 1 and 2 that needed to be cut.

Permit Requirement:

Part 6.5 of the Permit states, "Proper Operation and Maintenance. 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 growing on the inside berms of cells 1 and 2. Submit to the EPA, the Tribe and IHS photos of the cells after the vegetation and trees have been removed.

Finding #3: Weekly lagoon inspections were not being conducted.

Weekly lagoon inspections were not being conducted. The inspectors provided the facility representatives with a lagoon inspection report template form that the facility representatives could use to document the weekly lagoon inspections.

Permit requirement:

Part 4.3.1 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:

- 4.3.1.1. Name of facility and permit number;
- 4.3.1.2. Date and time of the inspection;
- 4.3.1.3. Name of the inspector(s);
- 4.3.1.4. The facility's discharge status;
- 4.3.1.5. The flow rate of the discharge if occurring;
- 4.3.1.6. 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.);
- 4.3.1.7. Is there is any leakage through the dikes;
- 4.3.1.8. Are there are any animal burrows in the dike;
- 4.3.1.9. Is there any erosion of the dikes (e.g., rills, cracks or other structural indications of erosion);
- 4.3.1.10. Are there are any rooted plants, including weeds growing in the water;
- 4.3.1.11. Does the vegetation growth on the dikes needs mowing (e.g. greater than 6" tall);
- 4.3.1.12. List the date scheduled for operation and maintenance procedures to be undertaken at the wastewater treatment facility.
- 4.3.1.13. Identification of operational problems and/or maintenance problems;
- 4.3.1.14. Recommendations, as appropriate, to remedy identified problems;
- 4.3.1.15. A brief description of any actions taken with regard to problems identified; and,
- 4.3.1.16. 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)."

Part 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 inspections are conducted on a weekly basis and documented in accordance with the permit. Ensure that inspection reports are kept in accordance with the recordkeeping requirements of the permit. Provide the EPA, the Tribe and IHS with a description of the corrective actions taken to address this finding.