

NPDES Inspection Report – Wastewater

National Database Information	
Inspection Date: July 13, 2022	Inspection Type: CEI - Wastewater Treatment Facility
Entry/Exit Time: 11:01 am / 11:46 am	NPDES ID Number: NDG589308
NAICS Code: 221320	Inspection ID: 202207 NDG589308
Lead inspector and affiliation: Stephanie Meyers / EPA Region 8	
Inspector and affiliation: Emilio Llamozas / EPA Region 8	

Facility Location Information (Name/Location/ Mailing Address)	
Site/Facility Name & Location: Rock Creek Community Lagoon (Also known as Bullhead) S4 T9N R25E Bullhead, South Dakota	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, and 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 the inspection
	Jake Luger / Acting Environmental Director / Standing Rock Sioux Tribe Environmental Program / present during opening conference
	Tyler Timmons / Tribal Utility Consultant / Indian Health Service (IHS) / present during the inspection
Person/Company meeting definition of "Operator"	Standing Rock Sioux Tribe
Authorized Official(s) (Per NOI)	Randez Bailey / Rural Water System Director / Standing Rock 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): Grand River		
Discharge point location (longitude, latitude): There is one emergency outfall at the southwest corner of cell 2. Lat. 45.762531°N, -101.089875°W		
Regulatory Inspector's source of information: Notice of Intent for the permit, 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
Stephanie Meyers	U.S. EPA Region 8 1595 Wynkoop Street 8ENF-W-NW Denver, Colorado 80202 303-312-6938	08/04/2022
Reviewer Name	Address/Phone Number	Date
Emilio Llamozas	U.S. EPA Region 8 1595 Wynkoop Street 8ENF-W-NW Denver, Colorado 80202 303-312-6407	08/05/2022
Supervisor Signature/Name	Address/Phone Number	Date
Boeglin, Michael Digitally signed by Boeglin, Michael Date: 2022.08.09 17:01:07 -06'00'	U.S. EPA Region 8 1595 Wynkoop Street 8ENF-W-NW Denver, Colorado 80202 303-312-6250	08/09/2022
Michael Boeglin		

Inspection Narrative and Site Description

The inspection was conducted at the Rock Creek Community Lagoon (facility) also known as Bullhead located on the Standing Rock Sioux Reservation, in Bullhead, 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 approximately one 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 and Wyatt Red Tomahawk with the MR&I Program in Bullhead. 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 Rock Creek Community Lagoon System serves the Rock Creek/Bullhead Community located on the Standing Rock Sioux Reservation. The facility serves approximately 350 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. The lagoon system was originally constructed in 1969, and in 2004 the two cells were made larger. The average design flow to the facility is 0.045 million gallons per day (MGD) and the peak design flow is 0.056 MGD. The average design organic treatment capacity is 150 lbs BOD₅ per day and the peak design organic treatment capacity is 187.5 lbs BOD₅ per day. The facility does not accept hauled septic waste.

The wastewater from the Rock Creek/Bullhead Community (northeast of the lagoon) is collected in the two lift stations (East and West). The East Lift Station pumps the wastewater to the West Lift Station. The West Lift Station pumps the wastewater to the lagoon system to either cell 1 or cell 2 via a splitter box (photo 108). Wastewater that is collected in cell 1 flows to cell 2. During the inspection, wastewater was being diverted to cell 2 and cell 1 was not receiving wastewater (See the enclosed facility schematic and flow diagram). Facility representatives indicated the reason they were diverting wastewater to cell 2 was so they could empty cell 1 to remove the cattails and address the biosolids inside of the cell.

The inspectors first inspected the lagoon cells. The facility is a two-cell lagoon system, and the table below has the operating volume for the two cells.

Cell ID	Area (acres)	Operating Volume (MG)
Cell 1	5.0	8.15
Cell 2	5.7	9.29
Total	10.7	17.44

The inspectors and facility representatives drove around the lagoons to evaluate berm integrity and the facility's discharge status. During the inspection, wastewater was flowing into cell 2 for treatment (photo 111). Facility representatives were diverting wastewater to cell 2 and allowing cell 1 to empty

into cell 2 in order to be able to remove the cattails growing inside and around cell 1 (photos 109-110) and to also potentially remove the biosolids. Vegetation had reached a height greater than six inches around the berms and inside of each of the two cells (photos 109-112). There is a discharge pipe in the southwest corner of cell 2 that can emergency discharge wastewater to the outfall from cell 2 (photo 113), if needed. The facility was not discharging at the time of the inspection. Facility representatives informed inspectors that they have had to emergency discharge from the facility in November of 2019 due to inflow and infiltration issues and had stated they may need to emergency discharge again later this year for the same reason. Facility representatives notified EPA of the need to discharge in 2019, and reported sampling results for E.coli. Inspectors then observed the manhole on Hunkpapa Street that had experienced inflow and infiltration issues (photo 114). Facility representatives informed inspectors that this manhole receives a large amount of stormwater during storm events, and that the pipes around it are also cracked.

The inspectors then inspected the West Lift Station (photos 115 and 116). After inspecting the West Lift Station, inspectors inspected the East Lift Station (photos 117 and 118). Some grease was observed outside of the East Lift Station (photo 118). The operators were keeping track of the lift stations' pump hours. Below are the coordinates for the West and East Lift Stations.

Lift Station Name	Latitude	Longitude
East Lift Station	45.763385° N	-101.082860° W
West Lift Station	45.763902 ° N	-101.081015 ° W

At the end of the day on July 13, 2022, the inspectors returned to the MR&I office and held a closing conference with Ms. Bailey, Mr. Spotted Bull, and Mr. Red Tomahawk where they discussed preliminary findings. On July 22, 2022, the EPA sent an email to Ms. Bailey, Mr. Spotted Bull, and Mr. Red Tomahawk with the preliminary findings from the inspection.

Findings, Corrective Actions and Recommendations

Finding #1: 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 Lagoon General Permit (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 Standing Rock Sioux Tribe Environmental Program (Tribe) and Indian Health Service (IHS) with a description of the corrective actions taken to address this finding.

Finding #2: There were cattails growing in and around the berms of both cells.

There was heavy vegetation over six inches in height and cattails growing around the berms and inside of cells 1 and 2 that needed to be cut (photos 109-112).

Permit requirement:

Part 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 cattails inside and around cells 1 and 2. Submit to the EPA, the Tribe, and IHS photos of the cells after the vegetation and cattails have been removed.

Finding #3: There was grease on the ground outside the East lift station.

There was some grease on the ground at the East lift station from cleaning the lift station's trash basket (photo 118). 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 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 East 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 Tribe, and IHS with photos and a description of the corrective actions taken to address this finding.

Finding 4: Excessive inflow and infiltration at one of the facility’s manholes has contributed to the facility needing to emergency discharge.

A facility representative indicated there were inflow and infiltration issues at the manhole on Hunkpapa Street (photo 114), and that there were cracks in the pipes around this manhole as well. When the area receives significant rain, the inflow and infiltration create issues with the capacity of the lagoons. These issues have led the facility to emergency discharge in November of 2019. It was stated that the facility may need to discharge this fall if the area continues to receive significant rain.

Permit Requirement:

Part 4.1 of the Permit states, “No Discharge Requirement: Effective immediately and lasting through the life of this permit, there shall be no discharge except in accordance with the bypass provisions of this permit. If an unauthorized release occurs or is expected to occur, the permittee shall take the appropriate measures to minimize the discharge of pollutants (see Part 6.7).”

Part 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.”

Corrective Action:

Address the inflow and infiltration deficiencies at the manhole on Hunkpapa Street. Properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) including manholes, which are installed or used by the permittee to achieve compliance with the conditions of the permit. Provide the EPA, the Tribe, and IHS with photos and a description of the corrective actions taken to address this finding.

Finding #5: In November of 2019, the Rock Creek Community Lagoon System had an unauthorized release, and effluent was not properly sampled.

In November of 2019, the Rock Creek Community Lagoon System had an unauthorized release. According to records, E. coli was the only parameter sampled for; all other parameters required to be

sampled for were not analyzed. The parameters that were not sampled for include 5-day Biochemical Oxygen Demand (BOD), pH, Total Suspended Solids (TSS), Total Nitrogen Ammonia, Total Nitrogen, Total Phosphorous, and Oil and Grease. Sampling is required three times in the first week of the discharge event, but according to records, sampling only occurred on November 12, 2019, November 18, 2019, and November 25, 2019. The sampling events on November 12, 18, and 25, 2019 did not meet the 8-hour holding time for E. coli per 40 C.F.R. 136.

Permit requirements:

Part 4.1 of the Permit states, “No Discharge Requirement: Effective immediately and lasting through the life of this permit, there shall be no discharge except in accordance with the bypass provisions of this permit. If an unauthorized release occurs or is expected to occur, the permittee shall take the appropriate measures to minimize the discharge of pollutants (see Part 6.7).”

Part 4.2 of the Permit states, “Self-Monitoring Requirements: If an unauthorized release is discovered or expected to occur, the discharge shall be monitored as shown below:

Effluent Characteristic	Frequency	Sample Type <u>a/</u>
Total Flow, gpm <u>c/</u>	<u>b/</u>	Instantaneous
5-day Biochemical Oxygen Demand (BOD ₅), mg/L	<u>b/</u>	Grab
pH, standard units	<u>b/</u>	Grab
Total Suspended Solids (TSS), mg/L	<u>b/</u>	Grab
Total Ammonia Nitrogen (as N), mg/L	<u>b/</u>	Grab
Total Nitrogen (N), mg/L	<u>b/</u>	Grab
Total Phosphorus (P), mg/L	<u>b/</u>	Grab
Oil and grease, Visual <u>d/</u>	<u>b/</u>	Observation
Oil and Grease, mg/L <u>d/</u>	<u>d/</u>	Grab

a/ See Definitions, Part 8, for definition of terms.

b/ The discharge shall be monitored three times per week for the first week of discharge (sample taken and flow rate measured), including once as soon as practical after the unauthorized release is discovered or when an expected unauthorized release begins, and at weekly intervals thereafter until the unauthorized release stops. If the discharge lasts less than one week in duration, monitoring shall be performed at the beginning, middle, and end of the discharge event. The permittee shall report the monitoring results using the format on the last page of this permit in accordance with the instructions in Part 5.4.2. A photocopy of the page of Part 9 may be used.

c/ If it is not possible to measure the rate of discharge, the rate of discharge shall be estimated. In addition, the permittee shall monitor the duration and approximate volume of each discharge.

d/ In the event that an oil sheen or floating oil is observed in the discharge, a grab sample shall be taken immediately and analyzed in accordance with the requirements of 40 C.F.R. Part 136. If no grab sample was taken because no visible sheen was observed, enter “No Visible sheen observed, so no grab sample required.” or similar verbiage when reporting the monitoring data.”

Part 5.2 of the Permit states, "Monitoring must be conducted according to test procedures approved under 40 C.F.R. Part 136, unless other test procedures have been specified in this permit."

Corrective Action:

Ensure that there is no discharge from the Rock Creek Lagoon. Ensure that unauthorized releases are sampled for all required pollutants. Ensure that monitoring is conducted in accordance with 40 C.F.R. 136. Provide the EPA, the Tribe, and IHS with a description of the corrective actions taken to address this finding.