NPDES Inspection Report – POTW

National Database Information	
Inspection Date: July 1, 2021	**Inspection Type:** CEI – Minor POTW
Entry / Exit Time: 10:45 am / 12:00 pm	**NPDES ID Number:** WYG589102
NAICS Code: 22132 (Sewage Treatment Facilities)	**Inspection ID:** 202107_WYG589102
Lead inspector and affiliation: Kristin Ratajczak / U.S. EPA Region 8	
Inspector and affiliation: Jessica Duggan / U.S. EPA Region 8	

Facility Location Information	
Site/Facility Name & Location: Arapaho Community Lagoon Wind River Reservation, Wyoming 42.9741° N, 108.477° W	**Email Report to:** Mike Quiver, Director Northern Arapaho Utilities (b) (6) [redacted] mike.quiver@northernarapaho.com

Contact Information	
	Name(s)/Title
Facility Contacts	Mike Quiver, Director, Northern Arapaho Utilities
	Flora Dewey, Operator, Northern Arapaho Utilities
Tribal Environmental Contacts	Dean Goggles, Environmental Director, Northern Arapaho Tribe Natural Resource Office
	Steve Babits, Environmental Scientist, Northern Arapaho Tribe Natural Resource Office
Owner	Northern Arapaho Tribe
Operator	Northern Arapaho Utilities
Responsible Official(s)	Mike Quiver, Director, Northern Arapaho Utilities

Permit Information	
Is the permit on site and available? On July 1, 2021, Northern Arapaho Utilities (NAU) obtained a copy of the general permit for maintenance in the main office.	**Individual or General Permit:** General
Lagoon Category: No discharge	**Monitoring Frequency:** N/A
Effective Date: April 23, 2018	**Expiration Date:** December 31, 2020 (administratively continued)
Receiving Water(s): Little Wind River	
Inspector's source of information: EPA records, compliance information from EPA's Integrated Compliance Information System (ICIS), aerial imagery, facility personnel, and site review.	

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

Report Review and Signature		
Drafter Name	**Address/Phone Number**	**Date**
Kristin Ratajczak	U.S. EPA Region 8 1595 Wynkoop St 8ENF-W-NW Denver, Colorado 80202 303-312-6310	9/2/2021
Reviewer Name	**Address/Phone Number**	**Date**
Jessica Duggan	U.S. EPA Region 8 1595 Wynkoop Street 8ENF-W-NW Denver, Colorado 80202 303-312-6195	9/2/2021
Supervisor Name/Signature	**Address/Phone Number**	**Date**
MICHAEL BOEGLIN Digitally signed by MICHAEL BOEGLIN Date: 2021.09.07 23:10:09 -06'00'	U.S. EPA Region 8 1595 Wynkoop Street 8ENF-W-NW Denver, Colorado 80202 303-312-6250	9/7/2021
Michael Boeglin, Section Chief, NPDES & Wetlands Enforcement		

Inspection Narrative and Site Description

Introduction

On Thursday, July 1, 2021, U.S. Environmental Protection Agency (EPA) conducted a compliance evaluation inspection at the Arapaho Community Lagoon, which is also known as the Great Plains Hall Lagoon (the facility or lagoon), located on the Wind River Reservation, 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 Wyoming. The Northern Arapaho Tribe was notified of the inspection in a letter sent June 7, 2021 and the inspection was announced to the facility two weeks prior to the inspection, to coordinate logistics.

At approximately 10:45 am, EPA inspectors Kristin Ratajczak and Jessica Duggan (jointly referred to as inspectors) met with Mike Quiver, NAU Director; Flora Dewey, NAU Operator; Dean Goggles, Northern Arapaho Tribe Resource Office Environmental Director; and Steve Babits, Northern Arapaho Tribe Resource Office Environmental Scientist. Inspectors presented their credentials and held an opening conference to explain the purpose of the inspection. Inspectors proceeded to ask questions to the facility representatives to evaluate compliance with the facility's permit. Mr. Quiver and Ms. Dewey provided an overview of the lagoon's service area, collection system, and wastewater operations & maintenance (O&M). Throughout the inspection, the inspectors noted their observations in a bound checklist. Photographs taken during the inspection are included in the attached photo log.

Facility Description and Process Overview

The facility is a four-cell lagoon system that serves a housing community of approximately 80 homes, health clinic, community center, senior center, and two schools. Twenty additional homes are planned for construction. The facility consists of a primary cell (Cell 1), secondary cell (Cell 2), and two wetlands, one rectangular (Cell 3) and one circular (Cell 4, also known as the Duck Pond). The facility was designed to allow influent wastewater to flow by gravity southeast to a lift station located on the northwest corner of the Cell 1. Following primary treatment, wastewater was intended to flow north to the Cell 2 before being routed east to the Cell 3 and south to Cell 4, consecutively. Discharge from the lagoon system would occur from Cell 4 and flow to an unnamed ditch prior to reaching the Little Wind River. However, NAU representatives indicated the lift station pump broke in 2017 and has not been repaired or replaced. Since that time, lagoon influent has been directed to Cell 2. Instead of routing wastewater from Cell 2 to Cell 3 in the lagoon system, NAU has elected to pump wastewater out of Cell 2 via vac truck and discharge it into another lagoon system operated by NAU on a weekly basis: the Arapaho Industrial Park Lagoon.

NAU representatives indicated no discharge had occurred from the lagoon system in over 10 years.

Facility Review

During the inspection, NAU representatives indicated sanitary sewer overflows (SSOs) had occurred in December 2020 and March 2021. The SSOs were caused by blockages in the collection system and required jetting to resolve the overflows. On both occasions, the raw sewage flowed to a drainage ditch, before crossing Left Hand Ditch Road, towards the Little Wind River. NAU representatives indicated they did not know if sewage reached the river. The EPA was not notified of either SSO.

Inspectors and facility representatives began walking around the perimeter of the cells to evaluate berm integrity and the overall condition of the lagoon system. Solids were present in the influent and NAU representatives indicated the material had to be manually pushed into Cell 2 (photo 95). Inspectors walked along the perimeter of Cells 1 and 2 and confirmed Cell 1 was dry at the time of the inspection (photo 96). Vegetation, including cattails and trees were present in both cells and animal burrows were observed on the berm on the north side of Cell 2 (photos 96, 97, 98, 99, and 104). Additionally, there was evidence of erosion on the berm of Cell 2, possibly caused by a nearby irrigation ditch (photo 100 and 101).

Inspectors were unable to walk the entire the lagoon system perimeter due to vegetation overgrowth making it impassable (photos 102 and 103). In order to access Cells 3 and 4, inspectors drove to a secondary entrance to the facility; however, NAU representatives had to saw through thick shrubbery in order to open the secondary gate. Once inspectors were able to reenter the lagoon system perimeter, they walked towards the two wetlands, both of which were dry at the time of the inspection (photos 107, 108, and 109). Further, Cell 4 appeared abandoned and there was no evidence to suggest a recent discharge had occurred (photos 111 and 112). Inspectors attempted to view the outfall, but were unable

to locate it, due to overgrown vegetation (photo 113).

Records Review and Closing

Inspectors planned to evaluate records including weekly inspection logs and an O&M manual; however, NAU representatives indicated that while the lagoon was visited daily, complete inspections were not performed, and no inspection logs were maintained. Additionally, no O&M manual was available for the facility or collection system.

Inspectors held a closing conference on Thursday, July 1, 2021 with Mr. Quiver and Ms. Flora Dewey, NAU Operator, during which preliminary findings for all inspected NAU facilities were presented. Additionally, preliminary findings were transmitted to Mr. Quiver, Mr. Little Bear, Ms. Dewey, Mr. Goggles, and Mr. Babits via email on July 17, 2021. As of the date of this report, no additional information has been received from the facility. Findings identified pursuant to the inspection are discussed in the Findings, Corrective Actions, and Recommendations section, below.

Findings, Corrective Actions, and Recommendations

Finding 1: Proper O&M was not being completed at the lagoon system.

Overgrown vegetation and abundant cattails were present in and around all lagoon cells, which reduced lagoon system capacity and made walking the complete perimeter and locating the outfall impossible (photos 96, 97, 98, 103, 111, 112, and 113). Additionally, trees were present in Cell 2 (photo 97).

In addition to the abundant vegetation, animal burrows and evidence of erosion were present on the north berm of Cell 2 (photos 99, 100, and 101).

Also, SSOs occurred from the manhole upstream from the lift station due to a blockage in the sewer line in December 2020 and March 2021. NAU representatives indicated each SSO lasted approximately one day, and the wastewater flowed to a nearby drainage ditch before crossing the road and flowing towards the Little Wind River. NAU jetted the line to clear the blockage in the sewer line. Because SSOs comprise raw sewage, they typically contain bacteria, viruses, protozoa (parasitic organisms), helminths (intestinal worms), and inhaled molds and fungi. As a result, they may cause diseases ranging in severity from mild gastroenteritis (causing stomach cramps and diarrhea) to life-threatening ailments such as cholera, dysentery, infections, hepatitis, and severe gastroenteritis.

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:
Complete proper O&M to remove the overgrown vegetation and trees growing in and around the lagoon system, remove burrowing animals and repair damage to cell berms, mitigate erosion, and prevent SSOs from occuring. Provide the EPA with photos and a description of the corrective actions taken to address this finding.

Finding 2: The EPA was not notified of the SSOs that occurred in December 2020 and March 2021.
The SSOs described in Finding 1 were not reported to the EPA.

Permit Requirement:
Part 5.8.2 of the Permit states, "The following occurrences of noncompliance shall be reported by telephone to the EPA, Region 8, NPDES Enforcement Unit at (800) 227-8917 (8:00 a.m. - 4:30 p.m. Mountain Time) and the applicable Tribe (see Appendix A for list of Tribes and telephone numbers) (8:00 a.m. - 4:30 p.m. local time) by the first workday following the day the permittee became aware of the circumstances:
5.8.2.1. Any unanticipated bypass which exceeds any effluent limitation in the permit (See Part 6.7, Bypass of Treatment Facilities.);
5.8.2.2. Any unauthorized release, including sanitary sewer overflows;
5.8.2.3. Any upset which exceeds any effluent limitation in the permit (See Part 6.8, Upset Conditions.); or,
5.8.2.4. Any violation of a discharge limitation for any of the pollutants listed in the permit to be reported within 24 hours.
5.8.3. A written submission shall also be provided to the EPA and to the applicable Tribe within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:
5.8.3.1. A description of the noncompliance and its cause;
5.8.3.2. The period of noncompliance, including exact dates and times;
5.8.3.3. The estimated time noncompliance is expected to continue if it has not been corrected; and,
5.8.3.4. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
The written submission shall be submitted to the following addresses:
Original to: U.S. EPA, Region 8
Policy, Information Management & Environmental Justice Program (8ENF-PJ)
Attention: Director
1595 Wynkoop Street
Denver, Colorado 80202-1129
Copy to: Applicable Tribe (see Appendix A for list of Tribes)
5.8.4. The Director may waive the written report on a case-by-case basis for an occurrence of noncompliance listed under Part 5.8.2 above, if the incident has been orally reported in accordance with the requirements of Part 5.8.2."

Corrective Action:
Ensure the NAU reports all occurrences of noncompliance to the EPA within 24 hours of becoming aware of the violation. Also, ensure that follow-up reports are submitted to the EPA within five days of becoming aware of the violation. Provide the EPA with a description of how noncompliance notifications and follow-up reports will be submitted to the EPA in the future in accordance with the permit.

Finding 3: The lagoon system was not being operated as designed. The EPA was not notified of substantial changes to the operation of the existing facility.
The lift station pump directing lagoon influent broke in 2017 and NAU began routing influent to Cell 2. Additionally, solids collecting in the lift station were being manually pushed into Cell 2. The pump had not been fixed or replaced at the time of the inspection; instead, NAU elected to pump wastewater out of Cell 2 via vac truck and discharge it into another lagoon system operated by NAU on a weekly basis: the Arapaho Industrial Park Lagoon. It was unclear at the time of the inspection why NAU did not route wastewater from Cell 2 to Cell 3 for onsite treatment.

Permit Requirements:
Part 6.5 of the General Permit (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)."

Part 7.1 of the Permit states, "7.1. Planned Changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:…

7.1.2. There are any planned substantial changes to the existing sewage sludge facilities, the manner of its operation, or to current sewage sludge management practices of storage and disposal. The permittee shall give the Director notice of any planned changes at least 30 days prior to their implementation."

Corrective Action:
Fix or replace the lift station pump(s). Ensure the EPA is notified of planned changes as required by the Permit. Provide the EPA with a description of the corrective actions taken to address this finding.

Finding 4: Weekly inspections were not being conducted and inspection logs were not maintained. During the inspection, NAU representatives indicated comprehensive weekly inspections were not completed at the facility and inspection logs were not maintained.

Permit requirement:

Part 4.3of the permit states, "Inspection Requirements
4.3.1. 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 information: (see Appendix D for Example Lagoon Inspection Form)
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 facilities 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 4.2 and 5.4.3 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;
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.
4.3.2. 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).
4.3.3. 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.)"

Corrective Action:

Inspect the facility on at least a weekly basis, unless otherwise modified by written approval from the EPA. Provide the EPA with a description of the corrective actions taken to address this finding and submit a copy of a recent inspection report.

Finding 5: No O&M manual was maintained for the lagoon system.

The facility did not have an O&M manual for the facility or collection system, nor were records of O&M activities maintained.

EPA Guidance:
The EPA 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), available at https://www.epa.gov/sites/production/files/2014-09/documents/lagoon-pond-treatment-2011.pdf.

Recommendation:
The EPA recommends an O&M manual be developed for the facility. No response to the EPA is requested pursuant to this recommendation.