

U.S. EPA Region 8 NPDES Inspection Report

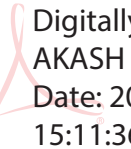
National Database Information	
Inspection Date: August 9, 2022	Inspection Type: Compliance Evaluation Inspection
Entry / Exit Time: 09:10 AM / 10:30 AM	NPDES ID: MTU000059
Major / Non-Major Facility: Non-Major	Program Sector(s): Publicly-Owned Treatment Works (POTW)
NAICS Code: 221320 (Sewage Treatment Facilities)	Inspection ID: 202208_MTU000059
Inspector and affiliation: Akash Johnson / U.S. EPA Region 8	

Facility Location Information	
Site/Facility Name & Location: Pryor WWTF Pryor (Big Horn County), Montana 45.438221, -108.533487	Email Report to: Emery Three Irons, Director Apsaalooke Water and Wastewater Authority emery.threearons@crow-nsn.gov

Contact Information	
	Name(s)/Title
Facility Contacts	Emery Three Irons / Director / Apsaalooke Water and Wastewater Authority (not present)
	Chris Dillon / Head Operator / Apsaalooke Water and Wastewater Authority (not present)
	James Bell Rock Jr. / Operator / Apsaalooke Water and Wastewater Authority (present)
	Antone Lopez / Operator / Apsaalooke Water and Wastewater Authority (present)
Indian Health Service Contacts	Jason Schneider / Tribal Utility Consultant / Indian Health Service (present)
Tribal Government Contacts	Marvin “Wes” Stops, Jr. / Director / Crow Tribe Environmental Protection Program (not present)
Person/Company meeting definition of “Owner”	Crow Tribe
Person/Company meeting definition of “Operator”	Apsaalooke Water and Wastewater Authority

Permit / Facility Information	
Permit on site and available: N/A – unpermitted	Permit Application Date: N/A – unpermitted
Permit Effective Date: N/A – unpermitted	Permit Expiration Date: N/A – unpermitted
Facility Latitude and Longitude: 45.438221, -108.533487 (lagoon)	
Receiving Water(s): N/A – non-discharging	
Weather Conditions: Partly cloudy	
Inspector's sources of information: AWWWA representatives, IHS representatives, EPA records and databases, IHS records and databases, and inspection observations	

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

Report Review and Signature		
Lead Inspector Name/Signature/Final Date	Draft Date	Contact Information
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NPDES and Wetlands Enforcement Section		
Reviewer Name	Review Date	Contact Information
Emilio Llamozas	March 8, 2023	U.S. EPA Region 8 Denver, Colorado llamozas.emilio@epa.gov (303) 312-6407
NPDES and Wetlands Enforcement Section		
Supervisor Reviewer Name/Signature/Approval Date		Contact Information
MICHAEL BOEGLIN  Digitally signed by MICHAEL BOEGLIN Date: 2023.03.13 13:32:18 -06'00'		U.S. EPA Region 8 Denver, Colorado boeglin.michael@epa.gov (303) 312-6250
NPDES and Wetlands Enforcement Section Supervisor		

Report Narrative

1.0 Introduction

On Tuesday, August 9, 2022, I, U.S. Environmental Protection Agency (EPA) inspector Akash Johnson, conducted a compliance evaluation inspection of the Pryor wastewater treatment facility (facility), a publicly-owned treatment works (POTW). The facility serves the unincorporated community of Pryor, Montana. Both Pryor and the facility are located within the exterior boundaries of the Crow Reservation (Reservation). For the entirety of the inspection, I was accompanied by Apsaalooke Water and Wastewater Authority (AWWWA) representatives James Bell Rock Jr. and Antone Lopez, Operators, and Indian Health Service (IHS) representative Jason Schneider, Tribal Utility Consultant. The inspection was coordinated with the AWWWA, Crow Tribe Environmental Protection Program, and IHS several weeks in advance, and an inspection notification letter was sent to the Crow Tribe on July 6, 2022. The purpose of the inspection was to evaluate compliance with applicable Clean Water Act requirements. Throughout the inspection, I took notes on discussions and observations in a bound inspection checklist. Photographs taken during the inspection are included in the enclosed photo log.

2.0 Facility Overview

2.1 Facility Ownership and Operatorship

The facility is owned by the Crow Tribe. Rights-of-way, ownership, and Tribal land status of the land parcels on which the facility is located were not evaluated during the inspection.

The facility is currently operated by the AWWWA, which performs water and wastewater operations in the communities of Pryor, Wyola, and Crow Agency. The AWWWA was created in 2004 and presumably began operating the facility shortly thereafter. Several IHS records indicate the facility may have previously been operated by the Pryor Water Board, which, to my knowledge, is now defunct. Based on conversations I have had with AWWWA representatives prior to, during, and following the inspection, no ordinances governing usage of the facility are in effect.

During the inspection, AWWWA was planning to hire an operator local to the Pryor area to have primary responsibility for managing the water and wastewater systems in the community. During a March 2, 2023 phone conversation with me, James confirmed a local operator had been hired and was visiting the lagoon at least weekly to perform an inspection and routine maintenance. As of this report issuance, I understand the AWWWA retains eight water and wastewater operators.

2.2 Users Served

Various estimates have been developed for the population of Pryor and the number of residential users, non-residential users, and population served by the facility. A comprehensive evaluation of these estimates was not performed during the inspection and only a limited number of the most recent estimates are discussed in this report. The 2020 U.S. Census estimated the population of Pryor as 637. A May 16, 2022 Technical Memorandum, "Pryor Sanitary Sewer and Water Systems Memo", prepared by Morrison-Maierle (2022 Tech Memo), referencing 2015-2019 American Communities Survey data, estimated the population of Pryor as 539. During the inspection, James and Antone indicated they thought the facility served approximately forty residences, plus several non-residential users, including an elementary school, junior and senior high school, and an IHS clinic. Various IHS records generated between 1996 and 2020 estimate the number of residential units served by the facility as between 77 and 101, with the population served estimated around 400. Exact figures for community population, active

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users, and population served are difficult to determine because they are always in-flux due to residents and businesses moving in and out of the community, new users being connected to the facility, etc.

2.3 Billing and Collection

Based on limited information included in some IHS records from the 1990s, the Pryor Water Board may have historically assessed water and sewer fees for the facility. However, based on various facility records I have reviewed and discussions I have had with AWWWA and Crow Tribe representatives over the past several years, including during the subject inspection, with the exception of the IHS clinic in Pryor, no AWWWA representatives can recall residential or non-residential user fees being assessed or collected for water or sewer services in Pryor during the AWWWA's operation of the facility.

In 2019, the IHS reminded the Crow Tribe and AWWWA of unbilled water and wastewater services relating to a billing agreement between the IHS and the AWWWA for services provided to the IHS's Pryor clinic. An August 8, 2019 letter invoice from the Crow Tribe requesting this payment references an agreement for the IHS to pay the AWWWA \$250 per month for water and wastewater service to the Pryor clinic. On August 21, 2019, the IHS paid the AWWWA \$12,000 for approximately four years of previously unbilled services relating to this agreement. As of this report issuance, I am not aware whether this agreement remains in effect or if any billing or payment relating to this agreement has occurred since the August 21, 2019 payment.

2.4 Facility Description

The facility comprises a collection system and multi-cell facultative lagoon. According to the 2022 Tech Memo, the facility was originally constructed in the late 1970s. IHS records and databases indicate lagoon renovations were completed on at least two occasions, with one project concluding around 2000 (IHS Project No. BI96791) and another around 2014 (IHS Project No. BI11M77). EPA funding was contributed towards both of these renovations. I am not aware of any other renovations completed at the lagoon.

With the exception of one lift station serving solely the Pryor clinic and operated by the IHS, all sewage is conveyed through the collection system and into the lagoon via gravity. According to the 2022 Tech Memo, the collection system comprises approximately 12,000 feet of 8 inch sewer main, including an aerial crossing of Pryor Creek.

Previous EPA inspection reports may have misidentified the number of cells designed to be operational in the lagoon system. Six cell-like structures are present at the lagoon, but IHS project narratives and engineering drawings from the renovations completed around 2014 (IHS Project No. BI11M77) indicate only four of these structures are intended to be placed into operation as lagoon cells, with wastewater intended to flow through Cells 1 and 2 in parallel, then through Cells 3 and 4 in series. The drawings also indicate an outfall structure was installed from Cell 4 to Pryor Creek. The drawings indicate the current northern-most cell-like structure (constructed within the footprint of a once-larger cell) was reserved for disposal of excess fill material, and the southeastern-most cell-like structure was reserved for temporary disposal of sludge. Project documents for IHS Project No. BI11M77 indicate a bentonite liner was constructed in Cells 1-4. I have not evaluated whether any liner material may be present in the other two cell-like structures.

Based on information known to me, including EPA and IHS records, personal observations of the lagoon made during the subject inspection and a 2019 inspection (discussed in Section 3.1), and

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discussions with IHS and AWWWA representatives spanning several years, I understand that, at least since completion of IHS Project No BI11M77, the lagoon has never discharged to Pryor Creek, wastewater is generally directed solely into Cell 1, and wastewater rarely, if ever, exceeds the hydraulic storage capacity of Cell 1.

2.5 Septage

Hauled septage is accepted at the lagoon, predominantly in the southwest corner of Cell 2, the closest point to the entrance of the lagoon enclosure. On several occasions since 2018, previous AWWWA representatives have expressed concern to me over septage haulers potentially dumping septage in collection system manholes instead of the lagoon, allegedly because haulers were reluctant to drive their trucks across the bridge over Pryor Creek along Faith Baptist Drive to access the lagoon. The suspected dumping of septage into collection system manholes was identified by the AWWWA as a potential cause of a SSO which occurred in 2018, discussed further in Section 3.2. During the inspection, James and Antone indicated they had not witnessed or heard of septage dumping occurring into manholes. The AWWWA does not assess fees from septage haulers using the facility.

2.6 Planned Projects

At the request of Big Horn County (County), the 2022 Tech Memo was prepared to recommend a course of action for applying for and utilizing American Rescue Plan Act (ARPA) funds to potentially help improve water and sewer systems in Pryor. The 2022 Tech Memo recommends a preliminary engineering report (PER) be prepared for the facility and a collection system cleaning, inspection, and evaluation be conducted, and also provides estimated costs and possible funding strategies for these activities. While not mentioned in the 2022 Tech Memo, some IHS records indicate the IHS published a PER for the facility in 2010. As of this report issuance, I have not been able to identify a copy of the 2010 PER or any other PERs for the facility.

The IHS is currently managing an ongoing facility collection system improvement project (IHS Project No. MT02007-0401). In September 2022, the IHS completed a cleaning and closed-circuit television (CCTV) inspection of the facility's collection system. As of this report issuance, the IHS is evaluating the CCTV footage and prioritizing areas of sewer main for potential repair or replacement. Based on information I reviewed in IHS databases, I understand this collection system improvement project is funded primarily by the IHS, with contributions from the EPA.

3.0 Compliance History and EPA Involvement

3.1 Previous Compliance Monitoring Activities

Prior to the inspection, the most recent EPA compliance monitoring activity of the facility was a compliance evaluation inspection conducted on September 10, 2019, documented in an October 17, 2019 inspection report (2019 Inspection Report). Dates of other historical compliance monitoring activities and associated reports are indicated in EPA records and databases.

3.2 Sanitary Sewer Overflows

Over several days in September 2018, a sanitary sewer overflow (SSO) occurred from a collection system located along Pryor Creek Road (also known as Pryor Road, Makpua Avenue, and State Secondary Highway 418), between town and the lagoon, and raw sewage may have flowed into Pryor

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Creek. IHS records indicate the SSO primarily flowed from the second manhole above the aerial sewer main crossing of Pryor Creek. Nomenclature identifying this specific manhole, as well as other manholes in the collection system and lagoon enclosure, appears to be inconsistent across various EPA and IHS records. The IHS assisted the AWWWA in evaluating the situation and the sewer main was eventually jetted, resolving the SSO. The suspected cause of the SSO was a sewer main blockage, potentially resulting from suspected unsanctioned dumping of septage waste into collection system manholes, or a lack of collection system preventative maintenance. On December 19, 2018, the EPA issued the AWWWA a Warning Letter regarding the September 2018 SSO. Based on the AWWWA's response to the Warning Letter (a December 19, 2018 phone call to the EPA), the AWWWA's limited financial resources could not support preventative maintenance of the collection system at that time.

In July 2020, the EPA received unconfirmed reports of a SSO in Pryor. To date, the EPA has not received any additional information on the location, cause, or duration of this SSO, but understands it was resolved.

In June 2022, a SSO occurred from a manhole located west of the intersection of Makpua Avenue and Epkarisch Street, in town. According to information provided in a July 29, 2022 email from AWWWA representative Chris Dillon, Head Operator, no raw sewage from this SSO reached surface waters, and the line was jetted to resolve the SSO. The cause of the SSO was not determined, but was suspected to potentially be a sewer main blockage (grease, towels and paper products were removed during the jetting), structural pipe damage (heavy machinery had recently been run over the area overlying the pipe and a piece of broken pipe was recovered during the jetting), or bellied or chronically deficient pipe (during the subject inspection, James indicated this portion of the collection system had experienced SSOs approximately three or four times over the past 10 or so years). The area of the June 2022 SSO was observed during the subject September 2022 inspection, discussed further in Section 4.0.

4.0 Inspection Narrative

The inspection began when I arrived at the lagoon at approximately 09:10 AM and met with James, Antone, and Jason. I presented my inspector credentials and we proceeded to walk around the lagoon enclosure, discussing AWWWA and facility operations and observing various components of the lagoon, including manhole interiors, valves, berms, and perimeter fencing (Photographs 164-170). We then drove into town and observed the manhole from which the June 2022 SSO occurred (Photograph 171). We then drove back towards the lagoon and stopped along Pryor Creek Road to observe the aerial sewer main crossing of Pryor Creek conveying all sewage from the collection system to the lagoon (Photograph 172), and the interior of the collection system manhole immediately above the aerial crossing (Photograph 173). The inspection concluded when we left Pryor at approximately 10:30 AM.

5.0 Post-Inspection Activities and Conclusion

Since the inspection, I have been engaged in ongoing regular communications with various AWWWA and Crow Tribe representatives regarding the subject facility, other WWTFs operated by the AWWWA, and AWWWA operations in general.

Findings and recommendations identified during the inspection are included in the section below. No responses are requested pursuant to the recommendations included this report.

Findings and Recommendations

Finding 1:

As discussed in Section 3.2, the facility's collection system has experienced SSOs from multiple locations over the past 10 or so years. The specific cause of each SSO has not been confirmed, but contributing factors are suspected to include improper use of the collection system, lacking preventative maintenance, and ageing or damaged infrastructure.

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.

An SSO into a water of the U.S. is an unpermitted discharge and a violation of the Clean Water Act. In response to such violations, the EPA is authorized by Section 309 of the Clean Water Act to issue an order to the facility requiring compliance and to issue penalties.

Recommendation:

Continue to work with the IHS to complete the ongoing facility collection system improvement project in Pryor.

Recommendation:

Develop, implement, and enforce a sewer use ordinance for the facility. Upon request, the EPA and technical assistance providers can assist this effort by providing example ordinance language, draft ordinance review and recommendations, etc. Some technical assistance resources are provided in Enclosure 3 and 4.

Recommendation:

Develop and implement a preventative maintenance program for the facility's collection system. The following resources may assist the AWWWA in developing a preventative maintenance program. Additional resources are provided in Enclosures 3 and 4.

- 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>

Findings and Recommendations

Finding 2:

Access to the lagoon enclosure was unrestricted to animals and people. Fencing was down along the northern side of Cell 4 (Photograph 167) and the gate to the lagoon enclosure was unlocked. During a March 2, 2023 phone conversation with me, James indicated that, following the inspection, a lock had been installed on the gate and AWWWA operators and authorized septic haulers had been given keys.

Recommendation:

To minimize animal entry in the lagoon enclosure, the EPA recommends repairing downed fencing around the lagoon enclosure.

Finding 3:

The integrity of the bentonite liner in Cell 1 (active) and Cells 2-4 (inactive) was not known. It is possible for bentonite lagoon liners to shrink and crack if not hydrated, potentially creating pathways for wastewater to seep into the subsurface.

Recommendation:

The EPA recommends evaluating the integrity of the liner in Cells 1-4 and the sizing and operation of the existing lagoon in relation to its current and expected future usage. This evaluation may be accomplished through development of a PER or other engineering evaluation.

Finding 4:

There was little to no insulation on the pipe comprising the aerial sewer main crossing of Pryor Creek (Photograph 172).

Recommendation:

The EPA recommends evaluating whether insulation should be installed on the pipe crossing Pryor Creek to minimize the potential for freezing and breakage, which could potentially result in a SSO near or into Pryor Creek.