NPDES Stormwater Inspection Report

National Database Information	
Inspection Date: **July 24, 2024**	Inspection Type: **CEI, Minor POTW**
Entry/Exit Time: **0800 / 1050**	NPDES ID Number: **MT0030597**
NAICS Code: **221320 (Sewage Treatment Facilities)**	Inspection ID: **202407_MT0030597**
Lead inspector and affiliation: **Lisa-kay Prideaux, U.S. EPA Region 8, Montana Office**	

Facility Location Information (*Name/Location/ Mailing Address*)	
Facility Name & Location: **Poplar Wastewater Treatment Plant** 500 Burlington Road Poplar, Montana 59255	E-mail Report to: **Mayor John Grainger** (b) (6)

Contact Information	
	Name(s)/Title
Facility Contacts:	**Shane Halverson, Public Works Director (present)**
Person/Company meeting definition of "Operator" per the Permit:	**Shane Halverson, Public Works Director (present)**
Authorized Official(s):	**Shane Halverson, Public Works Director (present)**
Tribal Representative(s):	**Bill McDonald, Assiniboine and Sioux Tribes, Office of Environmental Protection (present)**
Other Contacts:	**Ryan Kopp, Project Manager, Interstate Engineering (present)**

Permit Information	
Is the permit on site and available? **Yes**	
Effective Date: **July 1, 2020**	Expiration Date: **June 30, 2025**
Facility Latitude: **48.105867°N**	Facility Longitude: **105.188551°W**
Receiving Water(s): **Unnamed ditch to the Missouri River**	
Regulatory Inspector's source of information: **Permit, Statement of Basis, previous inspection, Integrated Compliance Information Systems (ICIS), Enforcement & Compliance History Online (ECHO), facility representatives, and field observations.**	

Areas Evaluated During Inspection		
Permit	***Effluent/Receiving Waters***	*Compliance Schedule*
Records/Reports	***Flow Measurement***	*Pollution Prevention*
Facility Review	***Self-Monitoring Program***	***Laboratory***

Report Review and Signature		
Drafter: Lisa-kay Prideaux	Address/Phone Number	Date
Prideaux, LisaKay Digitally signed by Prideaux, LisaKay Date: 2025.01.17 11:01:34 -07'00'	**U.S. EPA Region 8, Montana Operations Office** **10 West 15th Street, Suite 3200** **Helena, Montana 59626** **406-457-5022**	12.27.2024
Reviewer Name:	Address/Phone Number	Date
Monica Crosby	**U.S. EPA Region 8** **1595 Wynkoop Street** **Denver, Colorado 80202** **303-312-6320**	12.30.2024
Management Signature/Name	Address/Phone Number	Date
EMILIO LLAMOZAS Digitally signed by EMILIO LLAMOZAS Date: 2025.01.17 10:55:16 -07'00'	**U.S. EPA Region 8** **1595 Wynkoop Street** **Denver, Colorado 80202**	01/16/2025
Emilio Llamozas	**303-312-6407**	

Inspection Narrative and Facility Description

Entry/Introduction

The City of Poplar's wastewater treatment facility and its discharge are located within the boundaries of the Fort Peck Indian Reservation, which is home to the Assiniboine and Sioux Tribes ("Tribes"). The Tribes were granted treatment in a manner similar to a state (TAS) on August 29, 1996, for Water Quality Standards (WQS). The U.S. Environmental Protection Agency (EPA) has not approved the Tribes to implement the Clean Water Act (CWA) NPDES program in Indian country within the state of Montana. The EPA directly implements the CWA NPDES program on Indian country lands within the state of Montana.

On Wednesday, July 24, 2024, I, EPA inspector Lisa-kay Prideaux, along with Bill MacDonald of the Assiniboine and Sioux Tribes, conducted a compliance evaluation inspection of the Poplar Wastewater Treatment Plant ("facility"), located in Poplar, Montana, to evaluate compliance with the facility's National Pollutant Discharge Elimination System (NPDES) Permit No. MT0030579 ("Permit"). The facility was owned and operated by the City of Poplar ("City"). The EPA notified the Tribes of the inspection in a letter sent July 1, 2024, and I coordinated the inspection with the Public Works Director, Shane

Halverson, several weeks in advance. Throughout the inspection, I noted observations in bound notebooks and checklists which reflected conditions of the Permit. Photographs taken during the inspection are included in the attached photo log and are maintained by EPA in accordance with the Quality Assurance Field Activities Procedure and Standard Operating Procedure.

The inspection commenced at approximately 0800, when the inspectors arrived at the facility and met with facility representatives Shane Halverson, Poplar Public Works Director and Ryan Kopp, project manager, Interstate Engineering. The group convened in the control building where I presented my credentials and outlined the intended format and scope of the inspection. We then began the discussion portion of the inspection, where facility representatives provided an overview of the wastewater operations, their Operation and Maintenance (O&M) Program, monitoring procedures, lift stations, collection systems, and active and planned projects within the collection system and at the wastewater treatment system.

The facility was originally constructed in 1978 with periodic upgrades, the latest being in 2020. The facility treats the residences and businesses of the city of Poplar with a population of approximately 758 people (2020 census), as well as the surrounding homes on the reservation for a total population of 2,350. Facility representatives stated the facility does not treat any industrial wastewater, only domestic.

According to facility personnel, the current facility consists of a headworks, oxidation ditch, clarifiers, and disinfection. Influent enters the facility through the headworks, which consists of a mechanical bar screen (waste collected is brought to the Wolf Point landfill for disposal approximately once per month) and a grit chamber (waste collected is disposed of in one of the on-site drying beds). Wastewater then flows through a Parshall flume and is either diverted into a lagoon system (overflow) or into an oxidation ditch. From the oxidation ditch, wastewater flows to a clarifier for settling prior to flowing through UV disinfection. Treated wastewater flows through an ultrasonic flow meter and out a pipe (Outfall 001) to an unnamed ditch connected to the Missouri River. The facility returns most of the activated sludge and scum from the clarifier back to the oxidation ditch. A small portion of the sludge wasted from the clarifier flows to the aerobic digester. The digester aerates sludge for approximately 30 days before pumping the sludge to one of four drying beds. The facility is a continuous discharger with a design flow of approximately 0.6 million gallons per day (MGD) and an average flow of approximately 0.35 MGD. The pipe for Outfall 001 discharges to a naturally occurring surface water channel that runs approximately 1,300 feet into the Missouri River.

The City operates one lift station in the collection system. Facility staff stated the lift station is checked daily. The City also has several siphon stations; however, they do not require pumps. Mr. Halverson explained that siphon stations are used to transport wastewater without suction, in place of the use of pumps. The collection system is comprised of approximately 50% PVC piping, with the rest a variety of asbestos/cement or clay/tile piping. Representatives indicated a phased upgrade of the collection system is underway, with phase 1 consisting of approximately 4,000 feet of sewer main and 25 manhole replacements in 2021; phase 2 consists of approximately 5,800 feet of sewer main and 35 manholes to be replaced in 2025. Representatives indicated the entirety of the collection system is cleaned each year.

Records Review

The following records were requested for review in an email dated July 3, 2024, prior to the inspection. Records were made available to review on-site, as well as copies made with a review of the records off-site on August 6, 2024.

- Copy of NPDES permit #MT0030597.
- Effluent flow values for monitoring periods ending January 31, 2024, February 29, 2024, and March 31, 2024.
  - Evaluated records for required reporting values, and percent removal calculations for biochemical oxygen demand and total suspended solids.
- In-house results for pH for monitoring periods ending January 31, 2024, February 29, 2024, and March 31, 2024.
  - Evaluated records for reported minimum and maximum concentration values.
- Laboratory analytical results for biochemical oxygen demand, total suspended solids, nitrate + nitrite, total ammonia, total kjeldahl nitrogen, total phosphorus, and *Escherichia coli* (*E. coli*) bacteria for monitoring periods ending January 31, 2024, February 29, 2024, and March 31, 2024.
  - Evaluated records for reported concentration values.
- Chain of Custody and Laboratory Analytical Reports for monitoring periods ending January 31, 2024, February 29, 2024, and March 31, 2024.
  - Evaluated records for proper sample relinquish methods, analytical methods, and required reporting limits.
- Records of Laboratory Equipment and Controls, including records of equipment calibration.
- O&M program records, to include Operations & Maintenance Manuals, Standard Operating Procedures, and maintenance logs.
- Permit required documents to include an Industrial Waste Survey and weekly treatment system inspections.

Facility Evaluation

After the facility records review, we walked through the wastewater treatment process. We started with the on-site laboratory located in the control house. We proceeded to the headworks building to see the on-site siphon station and manual bar screen outside the building (photos 38 & 39). Inside the headworks building we observed the influent flow meter (photo 42), automatic bar screen (photo 40), and cyclone grit removal system (photo 41). We followed the flowpath of the wastewater and went to the oxidation ditch next, observing the aerators (photos 43 & 44), flow into and out of the oxidation ditch (photo 48), and locations where clarifier scum (photos 45 & 48) and return activated sludge (RAS) (photo 46) enters the oxidation ditch. We then walked to the aerobic digester (photo 47) before following the wastewater flow to the clarifier (photo 50). We observed the inflow from the oxidation ditch (photo 51) and the scum pit (photo 52). We then observed the effluent from the clarifier (photo 49), which heads back to the control house. In the control house we observed the UV disinfection system (photo 53) and the effluent flow measuring device. At the time of the inspection, facility representatives stated only an ultrasonic meter (photo 54) was present to measure effluent flow; however, in an email from Mr. Kopp dated August 5, 2024, Mr. Kopp stated the facility does have a sharp-crested weir as a primary effluent flow measuring device and provided schematics of its location. The weir is located in the same location as the ultrasonic meter, but was not observed at the time of the inspection. In Mr. Kopp's email, he stated there currently is no measuring gauge installed, but one was on order and would

be installed within the month. We continued the facility tour by viewing the drying bed complex (photo 55) and the overflow lagoon (photo 56). We then walked to the influent structure, which is the location where influent is collected from the lift station and siphon stations and either directed to the headworks building or to the overflow lagoons (photo 57). At the time of the inspection, all influent was being directed to the headworks, and Mr. Halverson stated they have not used the lagoon since construction of the new headworks was completed (2020). We then drove to view the effluent pipe (photo 58) and the ditch complex (photo 59), which is connected to the Missouri River. We did not observe any off-site lift stations or siphon stations during the inspection.

Closing Conference

A closing conference was held on-site with Mr. Halverson and Mr. Kopp, during which I discussed preliminary findings, as well as the process for the inspection report. The inspection concluded at approximately 1050. Preliminary findings were emailed to Mr. Halverson on August 2, 2024.

Findings, Corrective Actions and Recommendations

Finding #1: Inspections were not being completed and/or documented.

Specifically, inspections were not being conducted and/or documented.

Permit requirement:

Part 7.5.1 of the NPDES permit #MT0030597 states, "On at least a weekly basis, unless otherwise approved by the EPA, the Permittee shall inspect its wastewater treatment facility. The inspection shall entail, at a minimum, a "walk-through" and visual observation of all process treatment units, sampling and flow monitoring equipment, outfalls, and the receiving stream."

Part 7.5.2 of the NPDES permit #MT0030597 states, "The Permittee shall maintain a log in either paper or electronic format recording information obtained during inspection activities. At a minimum, the notebook shall include the following:

7.5.2.1. Date and time of the inspection;
7.5.2.2. Name of the inspector(s);
7.5.2.3. Identification of operational problems and/or maintenance problems;
7.5.2.4. Recommendations, as appropriate, to remedy identified problems;
7.5.2.5. A brief description of any actions taken with regard to problems identified; and,
7.5.2.6. Other information, as appropriate."

40 C.F.R. §122.41(a) and Part 7.1 of NPDES permit # MT0030597 states, "The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application."

Corrective Action:

Ensure on-site inspections are being conducted at the required frequency and are being documented and retained as required. Identify and implement any corrective actions identified during inspections within the required timeframe. In the response to this report, provide EPA and the Tribes with one month of weekly inspection reports in accordance with permit requirements.

Finding #2: Failure to properly preserve samples.

The facility is not properly preserving biochemical oxygen demand, total suspended solids, nitrate + nitrite, total ammonia, total kjeldahl nitrogen, and total phosphorus samples. Specifically, the samples collected on January 25, 2024, were received by the laboratory at a temperature of 8.6°C and a comment of 'melted ice' on the chain of custody form.

Permit requirement:

Part 4 of NPDES permit #MT0030597 states "…sampling and test procedures for pollutants listed in this part shall be in accordance with guidelines promulgated by the Administrator in 40 CFR Part 136, as required in 40 CFR Part 122.41(j)."

40 C.F.R. §122.41(J)(4) and Part 6.2 of the NPDES permit #MT0030597 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." 40 C.F.R. Part 136 describes approved analytical methods which in turn describes additional requirements to include preservation. The preservation method for the above indicated parameters includes cooling the sample to ≤6°C."

40 C.F.R. §122.41(a) and Part 7.1 of NPDES permit # MT0030597 states, "The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application."

Corrective Action:

Ensure samples collected are appropriately preserved until laboratory delivery. Records of the temperature of samples received are included on the chain of custody. The facility should retain a copy to verify preservation temperatures are being achieved. In the response to this report, provide EPA and the Tribes, with a description of the corrective actions taken to address this finding.

Finding #3: Buffer solutions for pH calibration were expired.

Specifically, the City of Poplar's Wastewater Treatment Plant's buffer solutions for calibrating the pH meter are expired. The facility uses buffer solutions 7 (expired August 2023) and 10 (expired August 2022).

Permit requirement:

Parts 3 and 4 and Tables 2 and 3 of NPDES permit #MT0030597 indicate the sample type and monitoring frequency.

40 C.F.R. §122.41(J)(4) and Part 6.2 of NPDES permit #MT0030759 requires monitoring to be conducted according to test procedures approved under 40 C.F.R. Part 136.

40 C.F.R. Part 136 lists test procedures and sample collection requirements. Standard method procedures for pH include calibrating the pH probe with buffer solutions.

40 C.F.R. §122.41(a) and Part 7.1 of NPDES permit # MT0030597 states, "The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water

Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application."

Corrective Action:
Laboratory equipment is required to be calibrated by Standard Methods or Part 136, Title 40 of the Code of Federal Regulations. Ensure buffer solutions used in the calibration of all monitoring equipment (pH meter) are within the expiration date. In the response to this report, provide the EPA and the Tribes with a description of the corrective actions taken to address this finding.

Finding #4: Failure to have an effluent primary flow meter.
Specifically, the facility currently only has an ultrasonic meter to record effluent flow. Ultrasonic meters are considered secondary recording devices as they can frequently require calibration. A primary device such as a weir or a flume is required as a primary device to ensure the secondary recording device is calibrated and accurately recording effluent flow. In an email from Ryan Kopp dated August 5, 2024, Mr. Kopp stated the facility does have a sharp-crested weir as a primary effluent flow measuring device and provided schematics of its location. In Mr. Kopp's email, he stated there currently is no measuring gauge installed, but one was on order and would be installed within the month.

Permit Requirements:
Part 4, Table 3, footnote b/ of NPDES permit #MT0030597 states, "Flow measurements of effluent volume shall be made in such a manner that the Permittee can affirmatively demonstrate that representative values are being obtained."

40 C.F.R. §122.41(a) and Part 7.1 of NPDES permit # MT0030597 states, "The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application."

Corrective Action:
According to Mr. Kopp's email a sharp-crested weir exists on-site, and a measuring gauge was being ordered and installed. In response to this report, provide the EPA and the Tribes with photographic evidence of the weir with gauge installed.

Finding #5: Samples were not analyzed within the required timeframes.
Specifically, BOD samples collected on January 25, 2024, at 14:51, were not analyzed until January 31, 2024, at 08:45 (5 days, 18 hours), which is past the required holding time of 48 hours.

Permit Requirement:
Parts 3 and 4 and Tables 2 and 3 of NPDES permit #MT0030597 indicate the sample type and monitoring frequency.

40 C.F.R. §122.41(J)(4) and Part 6.2 of NPDES permit #MT0030759 requires monitoring to be conducted according to test procedures approved under 40 C.F.R. Part 136.

40 C.F.R. Part 136 lists test procedures and sample collection requirements. Standard method procedures for pH include calibrating the pH probe with buffer solutions.

40 C.F.R. Part 136.3(e), Table II (9) states the maximum holding time[4] for Biochemical Oxygen Demand is 48 hours. Footnote 4 states, "Samples should be analyzed as soon as possible after collection. The times listed are the maximum times that samples may be held before the start of analysis and still be considered valid... For a grab sample, the holding time begins at the time of collection…."

40 C.F.R. §122.41(a) and Part 7.1 of NPDES permit # MT0030597 states, "The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application."

Corrective Action:
Samples are required to be collected and analyzed as described in 40 C.F.R. Part 136. Ensure laboratories are analyzing all analytes within the required timeframes. In the response to this report, provide the EPA and the Tribes with a description of the corrective actions taken to address this finding.

Finding #6: Failure to report laboratory results correctly.
Specifically, the facility is reporting a '0' where a non-detect (ND) value was reported on the analytical report. The facility reported a '0' for Total Suspended Solids (TSS) 30-day and 7-day averages when the laboratory analytical report reported a ND for the following sample collection dates: January 25, 2024, February 20, 2024, and March 20, 2024. The facility reported a '0' for Total Ammonia daily maximum when the laboratory analytical report reported a ND for the following sample collection dates: January 25, 2024, and February 20, 2024. When entering a single sample value for the monitoring period with a ND or less-than (<) value from the laboratory analytical report, verify the detection limit, and report in one of two ways: 1) report the detection limit value with a '<' symbol prior to the number; or 2) report a no data indicator (NODI) code 'B' (Below Detection Limit/No Detection).

Permit Requirement:
Part 3, Table 2, footnote b/ of NPDES permit #MT0030597 indicates the sample type and monitoring frequency.

Within NetDMR, a tip sheet for 'Submitting Timely, Accurate, and Complete NPDES Discharge Monitoring Reports' is available under the 'help' tab. In this tip sheet, under frequently asked questions, it states, "NetDMR allows you to use a the less-than (<) symbol if your regulatory authority or permit requires a value to be reported. You may also use NODI code "B – Below Detection Level/No Detection" to report a parameter or value below the detection level or had no detection."

40 C.F.R. §122.41(a) and Part 8.1 of NPDES permit # MT0030759 states, "The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application."

Corrective Action:
Data is required to be reported in the NetDMR system as it is reported on the laboratory analytical data reports or with the use of approved NODI codes. The facility must re-enter and submit corrected values in NetDMR for all 2024 reporting periods. In the response to this report, provide the EPA and the Tribes with a description of the corrective actions taken to address this finding.

Finding #7: Calculation records do not use the correct data to complete calculations.
Specifically, the facility is using a '0' in calculations where a non-detect (ND) or less-than (<) value was reported on the analytical report. The facility used a '0' in Total Suspended Solids (TSS) percent removal calculations for the following sample collection dates: January 25, 2024, February 20, 2024, and March 20, 2024. When using a reported non-detect or less-than value in a calculation of any kind (including averages), verify the detection limit is correct, and complete the calculation by using the detection limit value in place of the non-detect or less-than value. Report the calculated result with a '<' symbol prior to the number in the appropriate location on the discharge monitoring report (DMR). Due to the use of a '0' in the calculations on the above dates, the percent removal calculations reported are inaccurate; the calculations should be reported as follows:

Monitoring Period end date	Influent TSS result (mg/L)	Effluent TSS result (mg/L)	Calculation	Reported value	Corrected value
01/31/2024	173	ND(RL=10)	(173-10) / 173 x 100 = 94.2	100%	<94.2%
02/29/2024	88	ND(RL=10)	(88-10) / 88 x 100 = 88.6	100%	<88.6%
03/31/2024	102	ND(RL=10)	(102-10) / 102 x 100 = 90.2	100%	<90.2%

No effluent exceedances would have occurred as a result of the corrected value, if reported.

Permit Requirement:
Part 3, Table 2, footnote b/ of NPDES permit #MT0030597 indicates the sample type and monitoring frequency, as well as the requirements set for percent removal.

40 C.F.R. §122.41(a) and Part 8.1 of NPDES permit # MT0030759 states, "The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application."

Corrective Action:
The facility must calculate reportable results by using the verified detection limit in place of a non-detect or less-than value. The facility must recalculate and submit corrected TSS percent removal values in NetDMR for all 2024 reporting periods. In the response to this report, provide the EPA and the Tribes with a description of the corrective actions taken to address this finding.

Finding #8: Samples were not collected and reported correctly.
Specifically, the facility did not collect samples for total ammonia or total phosphorus for monitoring period ending March 31, 2024. The facility correctly reported a NODI code E–Analysis Not Conducted/ No Sample for the total phosphorus daily maximum; however, reported a '0' for the total ammonia daily maximum result instead of NODI code E.

Permit Requirement:
Part 4 of NPDES permit #MT0030597 states, "…At a minimum, the following constituents shall be monitored at the frequency and with the type of measurement indicated; samples or measurements shall be representative of the volume and nature of the monitored discharge."

Part 4, Table 3 of NPDES permit #MT0030597 indicates the sample type and self-monitoring frequency to include total ammonia and total phosphorus.

40 C.F.R. §122.41(a) and Part 8.1 of NPDES permit # MT0030759 states, "The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application."

Corrective Action:
Data is required to be reported in the NetDMR system as it is reported on the laboratory analytical data reports or with the use of approved NODI codes. If no sample is collected for analysis, the facility must report that no sample was collected with the use of NODI codes. The facility must re-enter and submit corrected representation of parameters where samples were not collected, in NetDMR for all 2024 reporting periods. In the response to this report, provide the EPA and the Tribes with a description of the corrective actions taken to address this finding.

Recommendation: Blower motor needs repair/replacement.
Specifically, both aerators within the oxidation ditch are running off one blower motor. Repair/replace the second motor to create redundancy and to avoid the potential shut down of aerators in the oxidation ditch if the existing motor were to fail.