

U.S. EPA Region 8 NPDES Inspection Report

National Database Information	
Inspection Date: August 11, 2022	Inspection Type: Reconnaissance Inspection
Entry / Exit Time: 13:25 PM / 16:00 PM	NPDES ID: MT0021890
Major / Non-Major Facility: Non-Major	Program Sector(s): Publicly-Owned Treatment Works (POTW)
NAICS Code: 221320 (Sewage Treatment Facilities)	Inspection ID: 202208_MT0021890
Inspector and affiliation: Akash Johnson / U.S. EPA Region 8	

Facility Location Information	
Site/Facility Name & Location: Town of Lodge Grass WWTF Lodge Grass (Big Horn County), Montana 45.325367, -107.365034	Email Report to: The Honorable Quincy Dabney, Mayor Town of Lodge Grass quincy.dabney@townoflodgegrass.com

Contact Information	
	Name(s)/Title
Facility Contacts	The Honorable Quincy Dabney / Mayor / Town of Lodge Grass (present for opening conference only)
	Joe Lovato / Interim Public Works Director / Town of Lodge Grass (present)
	Hannah Phelan / Treasurer / Town of Lodge Grass (intermittently present for opening conference)
	Darren Charges Strong / Operator-in-Training / Town of Lodge Grass (not present)
	Stephanie Seymanski / Senior Civil Engineer / Morrison-Maierle (not present)
Indian Health Service Contacts	Jason Schneider / Tribal Utility Consultant / Indian Health Service (present for opening conference only)
Tribal Government Contacts	Marvin Stops / Environmental Director / Crow Tribe (not present)
Person/Company meeting definition of "Owner"	Town of Lodge Grass
Person/Company meeting definition of "Operator"	Town of Lodge Grass

Responsible Official(s)	The Honorable Quincy Dabney / Mayor / Town of Lodge Grass (present for opening conference only)
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Permit / Facility Information	
Permit on site and available: Not evaluated (accessible electronically)	Permit Application Date: Received March 15, 2016 (renewal application received March 31, 2022; renewed permit not issued at time of inspection or report issuance)
Permit Effective Date: May 1, 2017	Permit Expiration Date: March 31, 2022 (administratively continued at time of inspection)
Facility Latitude and Longitude: 45.325367, -107.365034	
Receiving Water(s): Unnamed slough to the Little Bighorn River	
Weather Conditions: Partly cloudy	
Inspector's source of information: Facility representatives, Indian Health Service representatives, EPA records and databases, and inspection observations	

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

Report Review and Signature		
Lead Inspector Name/Signature/Final Date	Draft Date	Contact Information
AKASH JOHNSON Digitally signed by AKASH JOHNSON Date: 2023.01.30 08:48:45 -07'00'	January 14, 2023	U.S. EPA Region 8 Denver, Colorado johnson.akash@epa.gov (303) 312-6067
NPDES and Wetlands Enforcement Section		
Reviewer Name	Review Date	Contact Information
Lisa-kay Prideaux	January 20, 2023	U.S. EPA Region 8 Helena, Montana prideaux.lisakay@epa.gov (406) 457-5022
NPDES and Wetlands Enforcement Section		
Supervisor Reviewer Name/Signature/Approval Date		Contact Information
MICHAEL BOEGLIN Digitally signed by MICHAEL BOEGLIN Date: 2023.01.30 07:12:38 -07'00'		U.S. EPA Region 8 Denver, Colorado boeglin.michael@epa.gov (303) 312-6250
NPDES and Wetlands Enforcement Section Supervisor		

Inspection Narrative and Facility Description

1.0 Introduction

On Thursday, August 11, 2022, I, U.S. Environmental Protection Agency (EPA) inspector Akash Johnson, conducted a reconnaissance inspection of the Town of Lodge Grass (Town) wastewater treatment facility (WWTF; facility), located in Big Horn County, Montana, within the exterior boundaries of the Crow Reservation. I was accompanied by Town representative Joe Lovato, Interim Public Works Director, for the entirety of the inspection, and Town representative Quincy Dabney, Mayor, and Indian Health Service (IHS) representative Jason Schneider, Tribal Utility Consultant, for the opening conference portion of the inspection. Town representative Hannah Phelan, Treasurer, was also intermittently present during the opening conference. The inspection was coordinated with the Town and Crow Tribe Environmental Protection Office 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 and National Pollutant Discharge Elimination System (NPDES) requirements. Throughout the inspection, I took notes on discussions and observations in a bound logbook. Photographs taken during the inspection are included in the enclosed photo log.

2.0 General Background

2.1 Facility Ownership and Operatorship

The Town and facility are located within the exterior boundaries of the Crow Reservation. The Town is an incorporated community in Montana. The facility is owned and operated by the Town. Ownership and Tribal land status of the land parcels on which the facility was located was not evaluated during the inspection.

2.2 NPDES Permitting

The EPA is the primary Clean Water Act regulatory authority for the facility. At the time of the inspection, the Town was authorized to discharge treated wastewater from the facility into an unnamed slough to the Little Bighorn River in accordance with the conditions of NPDES Permit No. MT0021890 (Permit), issued by the EPA. The Permit became effective May 1, 2017 and expired on March 31, 2022, but Permit coverage for the facility was administratively continued by the EPA at the time of the inspection and remains in effect as of this report issuance. The Permit and Statement of Basis are accessible online at www.epa.gov/npdes-permits/npdes-permit-town-lodge-grass-wastewater-treatment-facility-montana.

2.3 Enforcement

At the time of the inspection, the Town was subject to two open EPA administrative enforcement actions, an Administrative Order on Consent (Docket No. CWA-08-2015-0014), entered into voluntarily by the Town and the EPA, filed April 6, 2015 (2015 AOC), and an Administrative Order (Docket No. CWA-08-2019-0004), issued unilaterally to the Town by the EPA, filed August 2, 2019 (2019 AO). The 2015 AOC and 2019 AO can be accessed online by searching the EPA Administrative Enforcement Dockets database at yosemite.epa.gov/oa/rhc/epaadmin.nsf. Both enforcement actions remain in-effect as of this report issuance.

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2.4 Previous Compliance Monitoring Activities

Prior to the inspection, the most recent EPA compliance monitoring activity of the facility was desk audit conducted in December 2021 and January 2022 (2021-2022 desk audit), summarized in a January 27, 2022 Desk Audit Report (2022 Desk Audit Report) and accompanied by a January 27, 2022 Warning Letter (2022 Warning Letter). Dates of some additional previous compliance monitoring activities and associated reports are included in Section 2.5.

2.5 Notable Records

A thorough review of facility records was not conducted during the inspection; however, during the 2021-2022 desk audit, I conducted an in-depth review of numerous facility records, and much of the information included in Sections 3.0-3.7 was sourced from the 2022 Desk Audit Report. A list of facility records reviewed during the 2021-2022 desk audit, along with several more recently-located or recently-generated records reviewed during preparation of this report, is included below:

- Inspection Report Re: the EPA's September 14, 2004 compliance evaluation inspection of the facility, prepared by the EPA, October 25, 2004
- "Lodge Grass, MT, Manhole Inspection Study," prepared by the Indian Health Service (IHS), July 2006 (2006 Manhole Inspection Study)
- Inspection Report Re: the EPA's January 13, 2009 compliance evaluation inspection of the facility, prepared by the EPA, February 23, 2009
- "Town of Lodge Grass, Montana, Wastewater Preliminary Engineering Report," prepared by Morrison-Maierle, April 2012 (2012 PER), including various other reports and documents in appendices
- Inspection Report Re: the EPA's January 13, 2014 compliance evaluation inspection of the facility, prepared by the EPA, February 28, 2014
- Administrative Order on Consent (Docket No. CWA-08-2015-0014), entered into voluntarily by the Town and the EPA, filed April 6, 2015 (2015 AOC)
- Statement of Basis, NPDES Permit No. MT0021890, prepared by the EPA, revised March 16, 2017 (Statement of Basis)
- NPDES Permit No. MT0021890, effective May 1, 2017, expiring March 31, 2022, issued to the Town by the EPA (Permit)
- Inspection Report Re: the EPA's September 15, 2017 compliance evaluation inspection of the facility, prepared by the EPA, April 16, 2018 (2018 Inspection Report)
- "Warning Letter, Re: Town of Lodge Grass Wastewater Treatment Facility, NPDES Permit No. MT0021890," issued to the Town by the EPA, November 7, 2018 (2018 Warning Letter)
- "Administrative Order" (Docket No. CWA-08-2019-0004), issued to the Town by the EPA, filed August 2, 2019 (2019 AO)
- Inspection Report Re: the EPA's September 11, 2019 compliance evaluation inspection of the facility, prepared by the EPA, October 31, 2019 (2019 Inspection Report)
- Desk Audit Report Re: the EPA's 2020 desk audit of the facility, prepared by the EPA, April 23, 2020 (2020 Desk Audit Report)
- Reminder Letter to Submit a NPDES Permit Renewal Application, issued to the Town by the EPA, June 30, 2021 (2021 Reminder Letter), enclosed with this report
- "Town of Lodge Grass, Montana, 2021 Wastewater Preliminary Engineering Report Update," prepared by Morrison-Maierle, October 2021 (2021 PER Update), including various other reports and documents in appendices

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- “Warning Letter, Re: Notice of NPDES Noncompliance and Findings from the EPA’s Desk Audit of the Town of Lodge Grass Wastewater Treatment Facility, NPDES Permit No. MT-0021890,” issued to the Town by the EPA, January 27, 2022 (2022 Warning Letter)
- Desk Audit Report Re: the EPA’s 2021-2022 desk audit of the facility, prepared by the EPA, January 27, 2022 (2022 Desk Audit Report)
- NPDES permit renewal application for the Town of Lodge Grass WWTF, NPDES Permit No. MT-0021890, prepared by the Town of Lodge Grass, received by the EPA on and prior to March 31, 2022 (2022 permit application)
- Miscellaneous correspondence, discharge monitoring reports (DMRs), other information in EPA files and databases

The 2012 PER and 2021 PER Update provide extensive background on the facility, including information on construction, condition assessments, performance, flow monitoring, effluent monitoring, design alternative evaluations, completed improvements, planned improvements, utility service rates, and external funding sources. The Town’s wastewater operating costs, budget, and rate structure are discussed at-length in the 2021 PER Update.

PER updates were also completed in 2013 and 2014 but were not reviewed during the 2021-2022 desk audit or the inspection.

3.0 Facility Description and Improvement Projects

As stated in Section 2.5, much of the information throughout this section and subsections was sourced from the 2022 Desk Audit Report.

At the time of the inspection and for at least several decades prior, the facility comprised a gravity-flow collection system, with no lift stations, and a generally continuously discharging lagoon. According to the 2012 PER, the majority of the collection system was originally constructed in the 1940s, one lagoon cell was constructed in 1958, and a second lagoon cell was constructed in 1970. At the time of the inspection, the facility was in the midst of a multi-year, multi-phase series of improvement projects, discussed further in Sections 3.3, 3.5, and 3.6. The scope of work planned and completed in various phases of improvement projects has changed over time. In this report, nomenclature pertaining to project phases and associated work aligns with nomenclature used in the 2021 PER Update, superseding some nomenclature used in the 2012 PER, subsequent PER updates, and other historical documents.

Various reasons were identified for completing the initial 2012 PER, including, but not limited to:

- The facility did not consistently meet NPDES permit effluent limits (ongoing at the time of the inspection)
- The facility did not meet engineering design standards set-forth by the state of Montana or generally recognized by industry (ongoing at the time of the inspection)
- In 2011, the lagoon experienced overtopping, bank erosion, and significant stormwater influx as a result of an extreme flooding event
- Portions of the collection system reached or surpassed their expected life, including an extensive amount of vitrified clay pipe (VCP) dating back to the 1940s (ongoing at the time of the inspection)
- Collection system assessments identified structural deficiencies in piping and manholes, due at least in-part to construction anomalies and degradation (ongoing at the time of the inspection)

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- Infiltration and inflow (I&I) was present in the collection system, due at least in-part to construction anomalies in piping and manholes and degradation (ongoing at the time of the inspection)

The 2012 PER and 2021 PER Update include detailed discussions and copies of prior facility assessments through which some of the above concerns were identified.

3.1 Historical Collection System Assessments

Existing facility collection system assessments may be considered dated and limited in scope. Historical collection system assessments in EPA records include:

- 1982 cleaning and TV inspection, which encompassed 13,769 feet of the 6 inch, 8 inch, 10 inch, and 12 inch sewer mains (approximately 50% of the collection system, including most or all of the VCP sewer mains). This work was conducted by Guildner Water & Sewer, Inc. and is documented in a series of July 1982 reports included as Appendix 5.2 of the 2012 PER. According to the 2012 PER, this assessment informed subsequent sliplining and replacement of some sewer pipes, not discussed further in this report.
- 2006 Manhole Inspection Study, which surveyed and inspected all accessible manholes and cleanouts (approximately 80 manholes and 1 cleanout). This work was conducted by the IHS and is documented in a July 2006 report included as Appendix 5.3 of the 2012 PER.
- 2010 cleaning of approximately 5,229 feet of sewer mains and TV inspection of approximately 2,246 feet (approximately 8%) of sewer mains. This work was conducted by Lakeside Excavation and is documented in a series of September 2010 reports included as Appendix 5.1 of the 2012 PER.
- 2011 and 2012 flow monitoring, which measured and evaluated collection system flows at Manhole 220, an approximation of lagoon influent flow, and lagoon effluent flows at the lagoon discharge structure, identified as “Outfall 001” in the Permit. This evaluation also included water production and usage data. This work was conducted by the IHS and the Midwest Assistance Program (MAP) and is documented in notes and a January 19, 2012 letter and enclosures included as Appendix 4.6 of the 2012 PER.

Historical collection system assessments and improvements are discussed at-length in the 2012 PER and 2021 PER Update, and copies of some historical collection assessments are included in the appendices of the 2012 PER. The 2006 Manhole Inspection Study also includes a limited narrative history of collection system construction, expansion, improvements, and issues. Facility improvements completed prior to issuance of the 2012 PER are not discussed at-length in this report.

3.2 Completed Phase 1A Improvements

The Phase 1A project was completed in 2017, replacing approximately 2,811 feet of VCP sewer main with polyvinyl chloride (PVC) pipe. This project upgraded approximately 23% of the Town’s previously-VCP sewer main. This project prioritized sections of sewer main with the most significant structural and health and safety concerns, identified in-part through the historical collection system assessments discussed in Section 3.1. The project also replaced 705 feet of service lines (3 service lines up to private property boundaries) with PVC.

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3.3 Completed Phase 1B Improvements

Prior to commencing the wastewater improvement projects that were ongoing at the time of the inspection, the lagoon comprised two cells, an aerated Cell 1 and a quiescent Cell 2. Around 2017-2018, the Phase 1B project re-routed influent directly to Cell 2 and replaced Cell 1 with two newly-constructed, synthetically-lined, baffled cells, Cell 1A/B and Cell 2A/B, located in the approximate footprint of the previous Cell 1. The final design and construction of the two baffled Cells 1A/B and 2A/B superseded a previous design of three cells recommended in the 2012 PER. The Phase 1B project originally intended to complete the construction of the new lagoon and all appurtenances, place Cells 1A/B and 2A/B into service, and decommission Cell 2; however, due to unanticipated circumstances (legal disputes involving the Town and a contractor), around 2017-2018, the Phase 1B project was terminated prior to completion. At the time of the inspection, influent continued to be routed directly into Cell 2 and Cells 1A/B and 2A/B remained offline, discussed further in Section 3.5.

According to the 2021 PER Update, work completed during the Phase 1B project prior to termination included:

- Sludge removal from Cell 1
- Earthwork for Cells 1A/B and 2A/B
- Installation of synthetic lagoon liner in Cells 1A/B and 2A/B
- Partially-complete installation of gravity sewer piping, including some influent lines, overflow and connecting piping, effluent lines, bypass, and associated manholes
- Construction of influent metering manhole
- Construction of blower building foundation

To my knowledge, sludge removal, handling, and disposal procedures that occurred during the Phase 1B project have not been evaluated by the EPA. Major work that was intended to be part of the Phase 1B project but was not completed prior to termination has been included in the scope of the ongoing Phase 2 project, discussed further in Section 3.6.

3.4 Current Status of Collection System

The facility service area generally includes the incorporated limits of the Town, the northern adjacent Johnny Wilson Acres housing development, and a commercial area east of the Town. Maps of the wastewater service area and collection system are available in Appendix C of the 2021 PER Update. Additional collection system maps may be maintained by the Town, their consultants, the IHS, or other entities. According to the 2021 PER Update, the facility has approximately 188 sewer connections, 183 of which are residential and 5 of which are commercial, which reflects a decrease in sewer connections since issuance of the 2012 PER, which identified 230 sewer connections. Table 5-1 of the 2021 PER Update, copied and displayed below, provides a summary of available information on collection system piping diameter, lengths, and materials (VCP, PVC, and reinforced concrete pipe [RCP]).

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**TABLE 5-1
SANITARY SEWER GRAVITY COLLECTION SYSTEM SUMMARY OF LENGTHS BY PIPE
DIAMETER**

Size (Inches)	Length		Material
	(Feet)	(Miles)	
4	105	0.02	VCP
6	4,521	0.86	VCP
8	2,349	0.44	VCP
8	13,568	2.57	PVC
10	1,391	0.26	PVC
12	2,754	0.52	VCP
12	3,282	0.62	PVC
12	331	0.06	RCP
Total	28,301	5.35	

*“Table 5-1, Sanitary Sewer Gravity Collection System Summary of Lengths by Pipe Diameter,”
as displayed in the 2021 PER Update*

The 2021 PER Update acknowledges that, due to the lack of comprehensive recent collection system assessment, inaccuracies may exist in some of the information identified in the report, including the table displayed above, and recommends closed-circuit television video (TV) inspection of the collection system to provide more information on pipe materials and conditions.

The 2012 PER and 2021 PER Update include a discussion of I&I estimates based on the limited information available from prior collection system assessments, discussed in Section 3.1. In summary, the 2012 PER characterizes I&I as “present, but not excessive.” Since issuance of the 2012 PER, some I&I may have been mitigated by completion of the Phase 1A collection system improvements in 2017, although I&I in other areas may have increased due to continued collection system ageing. Additionally, the 2010 TV inspection identified several sections of VCP sewer main not replaced during the Phase 1A project were experiencing structural issues. As discussed in the 2021 PER Update, based on the condition of the limited amount of VCP sewer main inspected in 2010, it is possible other VCP sewer mains that have not been inspected since 1982, or ever, could be experiencing structural problems or will start experiencing structural problems as they continue to age. Both the 2012 PER and 2021 PER Update recommend performing an updated collection system assessment, including TV inspection and flow monitoring, to assess the current status of I&I and overall condition of sewer piping.

The 2021 PER Update also briefly discusses the potential for exfiltration from the collection system. Sewer mains with structural deficiencies, such as those identified in VCP sections of the Town’s sewer system, can potentially exfiltrate sewage from the collection system into soils and groundwater. The 2021 PER Update indicates some residents of the Town use private wells for potable water and recommends identification and repair of structural issues in the collection system to help prevent potential contamination of groundwater from sewage exfiltration.

According to the 2021 PER Update, in addition to the Phase 1A improvements completed in 2017, notable changes in the Town’s collection system since completion of the 2012 PER include:

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- The Town identified at least five additional service lines are experiencing problems. Two of these service lines are on Harding Avenue, one is on Hill Street, one is on Taft Avenue, and one is on Main Street.
- The Town identified several manholes that were inundated during major flood events, including Manholes 225, 224, 223, 220, 206, 200, 199, and 188. Manholes 225, 224, 223, and 220 are located between the Burlington Northern Santa Fe Railroad and Medicine Horse Road, and Manholes 206, 200, 199, and 188 are located on Main Street and within a designated 100 year floodplain.
- In general, service line failures and problems have been increasing in frequency and magnitude in areas of the Town with older VCP sewer mains. In some instances, service line problems have caused sewage backups into residences. Town staff indicate that service lines in these areas are often constructed of bituminized fiber pipe, also known as “Orangeburg pipe,” which is composed of compressed ground wood pulp fiber, water-resistant adhesive, and coal tar pitch. Bituminized fiber pipe was widely used between the 1940s and 1970s and typically exhibits a 30-50 year lifespan. It is no longer used as sewer service line pipe material due to its fragile nature and susceptibility to damage.

Maintenance of a service line from a sewer main to a residence or business is typically the responsibility of the private property owner served. According to the 2021 PER Update, residents in Lodge Grass typically have limited resources to repair or replace service lines. When feasible, the Town tries to assist with service line problems, but its resources are also limited. The portion of a service line between a sewer main and a private property boundary may be replaced in a publicly-funded improvement project because it is located in the public right-of-way.

Since no additional flow monitoring has been completed in the collection system since the 2012 PER, the estimated wastewater loading rates and projections developed in the 2012 PER are still being used for improvement project design and planning purposes.

3.5 Current Status of Lagoon

As discussed in Section 3.3, around 2017-2018, the Phase 1B project re-routed influent directly to Cell 2. Since the premature termination of the Phase 1B project, the lagoon has continued operating at reduced capacity, with only one cell, Cell 2, providing treatment. Although Cell 2 was previously a quiescent cell, it currently features limited aeration. At the time of the inspection, two floating aerators were installed in Cell 2 but only one was functional (Photograph 229), a reduction from the two functional aerators observed during the EPA’s September 11, 2019 inspection. At present, effluent is discharged directly from Cell 2 through Outfall 001 without disinfection (Photographs 231 and 232).

According to the 2012 PER, the staff gage in the Parshall flume at Outfall 001 (Photograph 231) is generally not capable of measuring flows below approximately 35,000 gallons per day (gpd) or above approximately 2,500,000 gpd. Typical effluent flows fall within the measurable range at Outfall 001. The Town plans to replace Outfall 001 with a new outfall, identified as “Outfall 002” in the Permit and other documents, from Cell 2B as part of the Phase 2 project, discussed in Section 3.6.

As discussed in the 2022 Desk Audit Report and various other facility records, for approximately a decade or more prior to the inspection, the facility has not consistently met applicable NPDES permit effluent limits. A summary of effluent quality data from January 2017 through November 2020 is available in Appendix E of the 2021 PER Update. Limited monitoring data is also available in EPA

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records and databases. A discussion of available monitoring information is included in the 2022 Desk Audit Report and Finding 2.

3.6 Planned Phase 2 Improvements

Due to funding constraints, the Phase 2 project scope will likely be modified from the description included in the 2021 PER Update and 2022 Desk Audit Report. Notably, some collection system improvements may be removed from the project, discussed further in Section 3.7, and a sewer main study may be added. In January 2023, Morrison-Maierle provided the following updated tentative planned scope of work for the Phase 2 project:

- Cleaning and TV inspection of all VCP sewer mains and PVC and RCP sewer trunk mains and sewer main study
- Liner integrity testing of Cells 1A/B and 2A/B
- Installation of baffle curtains
- Installation of a fine-bubble diffused aeration system
- Installation of a non-contact ultraviolet (UV) disinfection system, designed to treat an annual average flow of 185,000 gpd
- Installation of a new discharge structure, Outfall 002, from Cell 2B, comprising a v-notch weir and an ultrasonic flow meter
- Installation of piping and all other appurtenances required to complete lagoon renovations
- Re-routing of influent from Cell 2 to Cells 1A/B and 2A/B and removal of Cell 2 from service
- Miscellaneous site improvements, including fencing, a new access, gravel surface road around the lagoon cells, and site restoration
- Decommissioning of Cell 2

Due to delays and potential changes in project scope, the Phase 2 preliminary implementation schedule included in the 2021 PER Update is no longer accurate. As of this report issuance, much of the Phase 2 project schedule is dependent on the Town meeting financial requirements of Phase 2 project funders and obtaining sufficient funding to complete the project. As of this report issuance, the Phase 2 project schedule is in-flux.

An opinion of probable cost for the Phase 2 project is included in the 2021 PER Update, based on estimated 2022 construction costs. However, this estimate may no longer be reliable due to changes in construction costs and project scope. Additionally, since issuance of the 2022 Desk Audit Report, approximately \$39,039 of funding previously awarded to the project expired and is no longer available to the project. An updated opinion of probable cost will be prepared in conjunction with ongoing Phase 2 design to ascertain whether additional funding will be needed.

Ongoing for at least several years prior to the inspection and as of this report issuance, The Town, Morrison-Maierle, and various federal, state, and community funders and partners, including myself as a representative of the EPA, have been participating in regularly occurring (generally once or twice per month) virtual meetings to track the status of the Phase 2 project, including design, the Town's progress towards meeting financial requirements and other conditions necessary to retain existing funding, obtain additional funding, and meet funder start-up conditions, and, eventually, commence and complete project construction (Phase 2 calls). Phase 2 call participants have also expressed interest in supporting long-term financial and operational viability of the Town's Public Works program, including achieving

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and maintaining Clean Water Act and NPDES compliance at the facility, but the primary focus of the Phase 2 calls thus far has generally been completion of the Phase 2 project.

The EPA has provided the Town grant funding for facility improvement projects in the past. In January 2023, I was informed by a representative of the EPA's Region 8 Technical and Financial Services (TFS) Unit the EPA was not currently funding any facility improvement projects. Based on information provided by the EPA's TFS Unit during the 2021-2022 desk audit, the most recent EPA funding for facility improvements was allocated through the IHS in 2013 and the project was closed in 2016; presumably, this funding supported the Phase 1A or Phase 1B projects.

3.7 Planned Phase 3, 4, 5 and 6 Improvements

The 2021 PER Update outlines a tentative planned scope of work for four additional phases of wastewater improvement projects comprising prioritized collection system and service line upgrades, referred to as the Phase 3, 4, 5, and 6 projects. As discussed in Section 3.6, some collection system improvements may be removed from the scope of the Phase 2 project as described in the 2021 PER Update, notably:

- Upgrades to existing 6 inch VCP sewer main on Main Street between Hester and Harding by replacement with larger diameter PVC pipe or sliplining of existing pipe

If this work is not completed as part of the Phase 2 project, it is likely to be moved to Phase 3 or a subsequent phase. Aside from the proposed collection system improvements outlined above, the Town is not currently considering any schedule or funding strategy for the Phase 3-6 improvement projects, and they are not discussed further in this report.

4.0 DMR Submittals

DMRs were not reviewed during the inspection, but based on information gathered during the inspection, the 2021-2022 desk audit, and my ongoing communications with the Town, I am generally familiar with the status of the Town's DMR submittals.

Throughout the duration of the Permit, the Town consistently failed to submit DMRs via the EPA's electronic NetDMR reporting platform as required by the Permit. As discussed in the 2022 Desk Audit Report, the Town mailed hard-copy DMRs to the EPA although no NetDMR waiver was granted. As also discussed in the 2022 Desk Audit Report, while it appeared the Town was generally conducting monitoring in accordance with the requirements of the Permit, information submitted by the Town on hard-copy DMRs was not consistent with the monitoring and reporting requirements of the Permit, as pre-populated fields of the hard-copy DMRs being used by the Town appeared to reflect historical monitoring and reporting requirements of a previous, expired, NPDES permit for the facility. The DMR forms in NetDMR display current monitoring and reporting requirements of the Permit,

The EPA and technical assistance providers have provided extensive compliance assistance to the Town in attempts to aid Town representatives in registering for and utilizing NetDMR. This issue and associated compliance assistance has been communicated to the Town through various EPA correspondence and other communications, including:

- 2018 Inspection Report
- 2018 Warning Letter
- 2019 AO

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- 2019 Inspection Report
- 2020 Desk Audit Report
- 2022 Desk Audit Report
- Various phone calls, emails, and in-person discussions spanning several years

During the 2021-2022 desk audit, Town representatives indicated the Town did not employ a permanent Public Works Director, wastewater operator, or sufficient other managerial or administrative staff familiar with computer use such that they would be capable of registering for or regularly using NetDMR. The Town has made similar claims throughout the duration of the Permit. In response to Finding 1 in the 2022 Desk Audit Report, in March 2022, the Town submitted to the EPA an Application for Region 8 NetDMR Reporting Temporary Waiver; however, during a May 2022 call with me, Mayor Dabney verbally retracted the Town's intent to pursue this waiver, indicating the Town intended to train a new operator to assist in completing and submitting DMRs electronically via NetDMR. During the inspection, Mayor Dabney reiterated the Town's intent to utilize NetDMR and we developed a plan to provide NetDMR training to the Town, discussed in Section 5.0 and Finding 1.

5.0 Inspection Narrative

The inspection began when Jason Schneider and I arrived at the Lodge Grass City Hall building at approximately 13:25 PM and convened with Joe, Hannah, and Mayor Dabney in an office area. I presented my inspector credentials and proceeded to conduct an opening conference. I explained the inspection would be more limited in scope than some previous inspections because I was generally familiar with the status of the Phase 2 project and the facility's NPDES compliance through my completion of the 2021-2022 desk audit earlier in the year, and my various ongoing communications with the Town, including my participation in the ongoing Phase 2 calls.

We first discussed a plan for the Town to begin submitting DMRs via NetDMR. During the discussion, Mayor Dabney and I developed and agreed on the following general plan to ensure the provision of NetDMR training to the Town:

1. The Town will designate individuals to receive NetDMR training and be responsible for completing and submitting DMRs via NetDMR.
2. The Town and the EPA will work together to ensure NetDMR accounts are created for the designated Town representatives.
3. The Town and the EPA will schedule a time for the Town to receive NetDMR training. The EPA will provide the Town virtual training on how to use NetDMR, to be conducted via screensharing on Microsoft Teams or a similar platform. The training will be recorded and a copy of the recording will be shared with the Town.
4. After the training, the Town will have sufficient knowledge of NetDMR to regularly complete and submit DMRs electronically. The EPA will remain available to provide follow-up training and assistance, as appropriate.

Implementation of a detailed version of this plan is requested as Corrective Action 1 of this report.

We then discussed the Town's wastewater operator staffing. As discussed in Section 4.0, at the time of the inspection, the Town did not employ a permanent Public Works Director or wastewater operator. Joe retired from Public Works Director position several years prior and occupied the Interim Public Works Director role in a contract capacity. The Town had engaged an operator-in-training in a contract capacity, but it was unclear to what extent their responsibilities involved wastewater operations or how

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long their employment with the Town would continue. At the time of the inspection, Joe retained primary operator responsibilities for both water and wastewater operations in the Town. During the inspection, Mayor Dabney indicated the Town hoped to hire a new operator-in-training to be trained by Joe. Changes to the Town's wastewater operator staffing that have occurred since the inspection are discussed in Section 6.0.

Following the opening conference, Mayor Dabney, Hannah, and Jason concluded their participation in the inspection and Joe and I drove to the lagoon. We walked around the lagoon area and observed Cells 1A/B and 2A/B (Photographs 228 and 230, respectively), Cell 2 (Photograph 229), Outfall 001 (Photographs 231 and 232), and the receiving water, an unnamed slough to the Little Bighorn River (Photograph 233).

Joe and I then drove to the location where the receiving slough intersected with the Little Bighorn River (Photographs 234-237). It appeared surface water could flow between the slough and the Little Bighorn River under unmaintained access road, located at approximately latitude 45.327545, longitude -107.356511. It was difficult to access and observe the area due to dense vegetation, and I was not able to visually confirm the presence of a culvert or other conveyance under the access road; however, a distinct surface channel was visible on either side of the road, and some surface water and moist soil was visible in the channel (Photographs 234-236). It was not apparent whether the channel was constructed or naturally occurring. Joe indicated, during spring months, due to snowmelt and runoff, water level in the channel could be several feet higher than was observed at the time of the inspection, and a direct surface water connection between the receiving slough and the Little Bighorn River was easily discernable.

Joe and I then drove back to main surface roads and the inspection concluded at approximately 16:00.

6.0 Post-Inspection Activities and Conclusion

Since the inspection, I continued to attend the ongoing Phase 2 calls discussed in Section 3.6. During a January 12, 2023 phone call, Hannah informed me the Town had recently hired Darren Charges Strong as an operator-in-training and was planning to re-hire Joe as the Public Works Director, in-part to provide training to Darren.

Findings, requested corrective actions, and recommendations identified pursuant to the inspection are included in the section below.

Findings, Corrective Actions, and Recommendations

Finding 1:

Throughout the duration of the Permit, the Town has consistently failed to submit DMRs via the EPA's electronic NetDMR reporting platform as required by the Permit. In May 2022 and again during the inspection, the Town declined a NetDMR waiver, indicating they would like to receive NetDMR training and utilize NetDMR. During the inspection, Mayor Dabney and I developed and agreed on the following general plan to ensure the provision of NetDMR training to the Town:

1. The Town will designate individuals to receive NetDMR training and be responsible for completing and submitting DMRs via NetDMR.
2. The Town and the EPA will work together to ensure NetDMR accounts are created for the designated Town representatives.
3. The Town and the EPA will schedule a time for the Town to receive NetDMR training. The EPA will provide the Town virtual training on how to use NetDMR, to be conducted via screensharing on Microsoft Teams or a similar platform. The training will be recorded and a copy of the recording will be shared with the Town.
4. After the training, the Town will have sufficient knowledge of NetDMR to regularly complete and submit DMRs electronically. The EPA will remain available to provide follow-up training and assistance, as appropriate.

Implementation of a detailed version of this plan is requested as Corrective Action 1.

Permit Requirements:

Part 2.4 of the Permit (Reporting of Monitoring Results) states:

With the effective date of this Permit the Permittee must electronically report DMRs using NetDMR. The Permittee shall request permission from the EPA to use NetDMR and after the EPA has approved the Permittee's request, the Permittee can complete DMRs via a secure Internet connection. For more information on getting started, please visit: https://netdmr.epa.gov/netdmr/public/getting_started.htm. Electronic submissions by permittees must be sent to the EPA Region 8 no later than the 28th of the month following the completed reporting period. If no discharge occurs during the reporting period, "no discharge" shall be reported. The Permittee must sign and certify all electronic submissions in accordance with the Signatory Requirements (see Part 4.7).

Corrective Action 1:

1. **Within 30 days of receiving this report**, submit to the EPA names, titles, email addresses, and phone numbers for up to two Town representatives to be designated signatory authority accounts (review, edit, and certification privileges) in NetDMR. The EPA will coordinate with the designated representative(s) to set-up signatory authority accounts in NetDMR. Once established, a signatory authority account can add additional non-signatory accounts (review and edit privileges only), if desired.
2. **Within 30 days of receiving this report**, contact me via phone or email to schedule a NetDMR training appointment. The training will be conducted virtually via Microsoft Teams or similar platform, it will take 1-2 hours, and it will ideally be scheduled on a Monday, Wednesday, or Friday in March 2023, pending Town and EPA availability. The training will be recorded and a copy of the recording will be provided to the Town.
3. **Within 30 days of receiving this report**, email me scanned images of completed hard-copy

Findings, Corrective Actions, and Recommendations

DMRs and copies of supporting analytical data for the January 2023 reporting period. These materials will be utilized during the NetDMR training when, via screensharing, the EPA will virtually assist the Town with entering this data into NetDMR.

4. **At the scheduled time**, ensure all relevant Town representatives participate in the NetDMR training.
5. **Within 14 days of the completing the NetDMR training**, submit all required DMRs for concluded monthly reporting periods since January 2023 via NetDMR, and continue to submit DMRs via NetDMR as required by the Permit and future NPDES permits on an ongoing basis.

Finding 2:

The facility has not consistently met interim or final effluent limits or associated compliance schedule requirements in the Permit. Interim effluent limits in the Permit were intended to be effective from May 1, 2017 through November 31, 2018 for any discharges from Outfalls 001 or 002. Final effluent limits in the Permit were intended to become effective December 1, 2018 for all parameters excepting *E. coli*, for which final effluent limits were intended to become effective June 30, 2021. Final effluent limits in the Permit were intended to apply to Outfall 002 of the new lagoon. According to the Permit and Statement of Basis, at the time of permit issuance, construction of the new lagoon was expected to be complete in autumn of 2017 and the addition of a disinfection system was expected to be complete by June 30, 2021. As discussed throughout this report, construction of the new lagoon and UV disinfection system has yet to be completed and the schedule for completing these improvements is in-flux.

As discussed in Findings 1 and 3 of the 2022 Desk Audit, a summary of effluent quality data from January 2017 through November 2020 comprising DMRs and laboratory analytical reports is available in Appendix E of the 2021 PER Update. While no monitoring data was reviewed during this inspection, during the 2021-2022 desk audit, I performed a limited review of the DMRs submitted by the Town and DMRs and analytical reports included in the 2021 PER Update. As discussed in the 2022 Desk Audit Report, based on my cursory review of monitoring information, the facility has not consistently met interim or final effluent limitations for 5 Day Biochemical Oxygen Demand, Total Suspended Solids, and *E. coli* throughout the duration of the Permit.

The facility's consistent failure to meet NPDES permit limits is also discussed in the 2012 PER and 2021 PER Update and is a primary reason the Phase 1B and Phase 2 projects were initiated.

Permit Requirements:

Part 1.3.1 of the Permit (Interim Effluent Limitations – Outfalls 001 and 002) states, “Effective immediately, the quality of effluent discharged by the facility through Outfall 001 or 002 shall, at a minimum, meet the limitations as set forth below:

Findings, Corrective Actions, and Recommendations

Effluent Characteristic	Effluent Limitation		
	30-Day Average a/	7-Day Average a/	Daily Maximum a/
BOD ₅ , mg/L	45	65	N/A
Total Suspended Solids, mg/L	100	135	N/A
Oil and Grease, mg/L	N/A	N/A	10
The pH of the discharge shall not be less than 6.5 s.u. or greater than 9.0 s.u. at any time.			
There shall be no discharge which causes a visible oil sheen, floating solids, or foam in other than trace amounts in the receiving water.			

a/ See Definitions, Part 1.1, for definition of terms.

Part 1.3.2 of the Permit (Final Effluent Limitations – Outfall 002) states, “Effective December 1, 2018, unless noted otherwise in the footnotes, and continuing for the duration of the Permit cycle, the effluent quality discharged by the WWTF through Outfall 002 shall at a minimum, meet the limitations as set forth below:

Effluent Characteristic	Effluent Limitation		
	30-Day Average a/	7-Day Average a/	Daily Maximum a/
BOD ₅ , mg/L	30	45	N/A
Total Suspended Solids, mg/L	100	135	N/A
Oil and Grease, mg/L	--	--	10
<i>E. coli</i> , #/100 ml b/	126	--	410
The pH of the discharge shall not be less than 6.5 s.u. or greater than 9.0 s.u. at any time.			
There shall be no discharge which causes a visible oil sheen, floating solids, or foam in other than trace amounts in the receiving water.			

a/ See Definitions, Part 1.1, for definition of terms.

b/ Effective June 30, 2021.

Part 1.3.5 of the Permit (Compliance Schedule) contains compliance schedule requirements pursuant to facility upgrades and the Final Effluent Limitations provided in Part 1.3.2 of the Permit. The dates of all compliance schedule milestones had passed prior to the inspection and compliance with Part 1.3.5 of the Permit was not evaluated during the inspection.

Corrective Actions 2:

As soon as possible, complete the lagoon upgrades included in the updated tentatively planned scope of work for the Phase 2 project, then operate and maintain the new lagoon to comply with final effluent limits in the Permit or any subsequent NPDES permit.

Corrective Action 3:

In the interim, optimize treatment at the existing lagoon to meet the final effluent limits in the Permit or applicable effluent limits in any subsequent NPDES permit.

Findings, Corrective Actions, and Recommendations
The EPA will remain updated on this status of these actions through continued participation in the ongoing Phase 2 calls. No response is requested pursuant to Corrective Actions 2 and 3.