

Permit Fact Sheet

General Information

Permit Number	WI-0060283-11-0
Permittee Name and Address	Village of Centuria PO Box 280 305 Wisconsin Ave, Centuria, WI 54824
Permitted Facility Name and Address	Village of Centuria Old County Highway "I" East of Centuria, Wisconsin
Permit Term	January 01, 2027 to December 31, 2031
Discharge Location	NE ¼ SW ¼ of Section 1; T34N-R18W, Polk County Old County Highway "I" East of Centuria, Wisconsin
Receiving Water	The Groundwater of The Balsam Branch Watershed Within the St. Croix River Drainage Basin in Polk County
Discharge Type	Existing continuous
Annual Average Design Flow (MGD)	0.095 MGD
Industrial or Commercial Contributors	None
Plant Classification	A4 - Ponds, Lagoons and Natural Systems; SS - Sanitary Sewage Collection System
Approved Pretreatment Program?	N/A

Facility Description

The village of Centuria owns and operates a domestic wastewater treatment system. The plant designed to treat 95,000 gallons per day, currently treats an average of 38,000 gallons per day (2021-2025 data). The system consists of two aerated ponds operated in parallel. In each pond naturally occurring bacteria already in the wastewater treat the waste stream by metabolizing organic matter. From the ponds the treated water (effluent) is discharged to four seepage cells. The sandy soil in the bottom of the seepage cells help treat the water further as it percolates through the soil eventually reaching groundwater. There are four monitoring wells located around the seepage cells to assess any groundwater impacts of the discharge.

Substantial Compliance Determination

After a desktop review of all discharge monitoring reports, CMARs, land app reports, compliance schedule items, and a site visit on June 3, 2026 by Amy Garbe, WDNR, this facility has been found to be in substantial compliance with their current permit.

Sample Point Descriptions

Sample Point Designation		
Sample Point Number	Discharge Flow, Units, and Averaging Period	Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
701	INFLUENT An average of 0.037 MGD	24-hr flow proportional composite samples shall be taken in the control building at the Parshall flume where the force main ends.

Sample Point Designation		
Sample Point Number	Discharge Flow, Units, and Averaging Period	Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
	(2021-2025 data)	
001	EFFLUENT An average of 0.038 MGD (2021-2025 data)	Grab samples shall be taken in the control structure at the Parshall flume immediately prior to discharge to the seepage cells.
002	SLUDGE Removal is not expected this permit term. Sludge was last removed in 2005	Representative samples shall be collected from the accumulated sludge in the aerated lagoons at various locations and depths that are combined for analysis.

Sample Point Designation For Groundwater Monitoring Systems	
Well Name	Comments
MW 801 (South Well)	Side gradient non-point of standard well located south of the seepage cells.
MW 803 (North Well)	Side gradient non-point of standard well located east of aerated pond 2.
MW 804 (West Well)	Down gradient, point of standard well located west of the seepage cells.
MW 805 (East Well)	Up gradient well used to calculate preventative action limits (PALs) located east of the seepage cells.

Permit Requirements

1 Influent – Monitoring Requirements

1.1 Sample Point Number: 701- Influent

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Continuous	
BOD5, Total		mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total		mg/L	Weekly	24-Hr Flow Prop Comp	
Nitrogen, Total Kjeldahl		mg/L	Monthly	24-Hr Flow Prop Comp	
Nitrogen, Organic Total		mg/L	Monthly	Calculated	Organic Nitrogen = Total Kjeldahl Nitrogen -

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
					Ammonia Nitrogen
Nitrogen, Ammonia (NH ₃ -N) Total		mg/L	Monthly	24-Hr Flow Prop Comp	

Changes from Previous Permit:

Influent limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under “Explanation of Limits and Monitoring Requirements” below.

- The **Flow Rate** sample frequency was changed from “Continuous” to “Daily” to reflect currently acceptable practices at the facility.
- **CBOD** monitoring has been removed. Paired monitoring isn’t required this permit term.

Explanation of Limits and Monitoring Requirements

Influent monitoring is needed to assess loading to the facility and treatment performance. The required parameters and sampling frequency are appropriate for a land treatment system as outlined in ch NR 206, Wis. Adm. Code.

2 Land Treatment – Monitoring and Limitations

2.1 Sample Point Number: 001- Land Disposal Effluent

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Continuous	
CBOD ₅	Monthly Avg	45 mg/L	Weekly	Grab	
Suspended Solids, Total		mg/L	Weekly	Grab	
pH Field		su	Weekly	Grab	
Nitrogen, Total Kjeldahl		mg/L	Monthly	Grab	
Nitrogen, Nitrite + Nitrate Total		mg/L	Monthly	Grab	
Nitrogen, Ammonia (NH ₃ -N) Total		mg/L	Monthly	Grab	
Nitrogen, Organic Total		mg/L	Monthly	Calculated	Organic Nitrogen = Total Kjeldahl Nitrogen- Ammonia Nitrogen

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total		mg/L	Monthly	Calculated	Total Nitrogen = Total Kjeldahl Nitrogen + Nitrite Nitrate
Solids, Total Dissolved		mg/L	Monthly	Grab	
Chloride		mg/L	Monthly	Grab	

Changes from Previous Permit:

Effluent limitations and monitoring requirements were re-evaluated for the proposed permit term and no changes were required in this permit section. .

Explanation of Limits and Monitoring Requirements

All requirements for land treatment of municipal wastewater are determined in accordance with ch. NR 206, Wis. Adm. Code. All categorical limits are based on s. NR 206.08(1) Wis. Adm. Code. More information on the limitations can be found in the Groundwater Evaluation for Village of Centuria, WI-0060283 memo dated April 15, 2026.

Monitoring Frequencies- The Monitoring Frequencies for Individual Wastewater Permits guidance (April 12, 2021) recommends that standard monitoring frequencies be included in individual wastewater permits based on the size and type of the facility, in order to characterize effluent quality and variability, to detect events of noncompliance, and to ensure consistency in permits issued across the state. Guidance and requirements in administrative code were considered when determining the appropriate monitoring frequencies for pollutants that have final effluent limits in effect during this permit term.

Previously permitted monitoring frequencies for CBOD5 fall below the standard monitoring frequency outlined in guidance. This monitoring frequency was previously based on available data and the lack of non-domestic sources.] Since data submitted during the previous permit term shows consistent compliance with permit limitations, and the set monitoring frequency is consistent with requirements of state code, the reduced monitoring frequency is continued in the proposed permit. If performance levels begin to vary during the permitted term, the department may re-evaluate current sampling frequencies and implement more frequent monitoring via permit modification or at permit reissuance.

3 Groundwater – Monitoring and Limitations

3.1 Groundwater Monitoring System for Seepage Cells

Location of Monitoring system: Seepage System Perimeter

Groundwater Monitoring Well(s) to be Sampled: MW 801 (South Well), MW 803 (North Well), MW 804 (West Well), MW 805 (East Well)

Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality: MW 805 (East Well)

Groundwater Monitoring Well(s) Used for Point of Standards Application: MW 804 (West Well)

Parameter	Units	Preventative Action Limit	Enforcement Standard	Frequency
Depth To Groundwater	feet	N/A	N/A	Quarterly

Groundwater Elevation	feet MSL	N/A	N/A	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	N/A	N/A	Quarterly
Chloride Dissolved	mg/L	125	250	Quarterly
pH Field	su	8.3	N/A	Quarterly
Nitrogen, Total Kjeldahl	mg/L	N/A	N/A	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	6.1	9.7	Quarterly
Nitrogen, Organic Dissolved	mg/L	3.1	N/A	Quarterly
Solids, Total Dissolved	mg/L	820	N/A	Quarterly

Changes from Previous Permit:

Groundwater limitations and monitoring requirements were evaluated for this permit term, and the following changes were made from the previous permit. See additional explanation of limits under “Explanation of Limits and Monitoring Requirements” below.

Dissolved Nitrite + Nitrate Nitrogen - An exemption has been granted for the Nitrite + Nitrate Enforcement Standard at this site.

Field pH -The pH range of 5.8 to 7.8 s.u. has been adjusted to 6.3 to 8.3 s.u.

Dissolved Ammonia Nitrogen - An alternative concentration limit (ACL) of 6.1 mg/L has been established for the Nitrogen Ammonia Preventive Action Limit at this site.

Explanation of Limits and Monitoring Requirements

Groundwater limits and requirements are determined in accordance with ch. NR 140, Wis. Adm. Code. Indicator parameter Preventive Action Limit (PAL) values are established per s. NR 140.20, Wis. Adm. Code. Alternative Concentration Limits as allowed under s. NR 140.28, Wis. Adm. Code, are established on a case-by-case basis.

For more information, please refer to the Groundwater Evaluation for Village of Centuria, WI-0060283 memo dated April 15, 2026.

4 Land Application - Monitoring and Limitations

Municipal Sludge Description						
Sample Point	Sludge Class (A or B)	Sludge Type (Liquid or Cake)	Pathogen Reduction Method	Vector Attraction Method	Reuse Option	Amount Reused/Disposed (Dry Tons/Year)
002	B	Liquid	Sludge was last removed in 2005, and removal is not anticipated this permit term. If removal is needed see the sludge management schedule of the permit for more information.			
Does sludge management demonstrate compliance? Yes						
Is additional sludge storage required? No						
Is Radium-226 present in the water supply at a level greater than 2 pCi/liter? No, the most recent sample 0.936 pCi/liter (2020) is below 2 pCi/liter.						

Municipal Sludge Description						
Sample Point	Sludge Class (A or B)	Sludge Type (Liquid or Cake)	Pathogen Reduction Method	Vector Attraction Method	Reuse Option	Amount Reused/Disposed (Dry Tons/Year)
Is a priority pollutant scan required? No						

4.1 Sample Point Number: 002- LAGOON SLUDGE

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Solids, Total		Percent	Once	Composite	
Arsenic Dry Wt	Ceiling	75 mg/kg	Once	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	Once	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	Once	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	Once	Composite	
Copper Dry Wt	Ceiling	4,300 mg/kg	Once	Composite	
Copper Dry Wt	High Quality	1,500 mg/kg	Once	Composite	
Lead Dry Wt	Ceiling	840 mg/kg	Once	Composite	
Lead Dry Wt	High Quality	300 mg/kg	Once	Composite	
Mercury Dry Wt	Ceiling	57 mg/kg	Once	Composite	
Mercury Dry Wt	High Quality	17 mg/kg	Once	Composite	
Molybdenum Dry Wt	Ceiling	75 mg/kg	Once	Composite	
Nickel Dry Wt	Ceiling	420 mg/kg	Once	Composite	
Nickel Dry Wt	High Quality	420 mg/kg	Once	Composite	
Selenium Dry Wt	Ceiling	100 mg/kg	Once	Composite	
Selenium Dry Wt	High Quality	100 mg/kg	Once	Composite	
Zinc Dry Wt	Ceiling	7,500 mg/kg	Once	Composite	
Zinc Dry Wt	High Quality	2,800 mg/kg	Once	Composite	
Nitrogen, Total Kjeldahl		Percent	Per Application	Composite	
Nitrogen, Ammonium (NH4-N) Total		Percent	Per Application	Composite	
Phosphorus, Total		Percent	Per Application	Composite	
Phosphorus, Water		% of Tot P	Per	Composite	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Extractable			Application		
Potassium, Total Recoverable		Percent	Per Application	Composite	
PCB Total Dry Wt	Ceiling	50 mg/kg	Once	Composite	See the Sludge Analysis for PCBs permit section.
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	See the Sludge Analysis for PCBs permit section.
PFOA + PFOS		ug/kg	Once	Calculated	Monitor for PFOA + PFOS between 01/01/2027 - 06/30/2027 to meet the requirements of PFAS General Permit (WI-0012345-0). Report the sum of PFOA and PFOS. See PFAS permit sections for more information.
PFAS Dry Wt			Once	Grab	Perfluoroalkyl and Polyfluoroalkyl Substances based on updated DNR PFAS List. See PFAS Permit Sections for more information.

Changes from Previous Permit:

Sludge limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under “Explanation of Limits and Monitoring Requirements” below.

- **List 1** (Metals), **PCBs** and **PFAS** monitoring is required during the second year of the permit term (2028).
- Because it’s recommended that **List 2** (Nutrients) are monitored with List 1 monitoring, they have been added to the table.
- Due to changes within the land application forms, the 3400-049 (“Characteristics Report”), 3400-052 (“Other Methods of Disposal”) and 3400-055 (Annual Land Application”) will need to be submitted each year.
- Monitoring for **PFAS** is required pursuant to s. NR 204.06(2)(b)9., Wis. Adm. Code. To maintain compliance with General Permit, WI-0012345-0, “PFAS Monitoring for Sewage Sludge (Biosolids) Generators” language has been added to the permit to restate that monitoring for PFOA+PFOS is required by June 30, 2027. If the PFOA+PFOS result is under 20 ug/kg General Permit, WI-0012345-0, “PFAS Monitoring for Sewage Sludge (Biosolids) Generators” will be discontinued. If the results are over 20 ug/kg, General Permit section 5.4 must be followed (See link <https://dnr.wisconsin.gov/sites/default/files/topic/Wastewater/PFASMonitoringforSewageSludgeGenerators-GeneralPermit.pdf>). Based on the requirements of this section the Individual Permit WI-0029033-12-0 for the City of Park Falls may be modified to include additional sludge PFAS conditions.

Explanation of Limits and Monitoring Requirements

Requirements for disposal, including land application of municipal sludge, are determined in accordance with ch. NR 204, Wis. Adm. Code. Ceiling and high-quality limits for metals in sludge are specified in s. NR 204.07(5). Requirements for pathogens are specified in s. NR 204.07(6) and in s. NR 204.07 (7) for vector attraction requirements. Limitations for PCBs are addressed in s. NR 204.07(3)(k). Radium requirements are addressed in s. NR 204.07(3)(n).

List 2 Nutrient monitoring – Monitoring for list 2 (nutrients) is highly recommended at the same time as the monitoring of List 1 (metals) in year 2 of the permit (2028). Results will assist in the determination of the acres needed for land application of sludge should it be necessary. The number of acres needed is also required for the Sludge Management Schedule (see schedules for more information).

Change in form submittal – In prior permit reissuances when it has been noted in the application that sludge would not be removed during the permit term, the department required sampling during the second year of the permit term and the sludge characteristic report (3400-049) would be generated only during that year. Due to moving to electronic submittal of forms via Switchboard, forms 3400-049 (“Characteristics Report”), 3400-052 (“Other Methods of Disposal”) and 3400-055 (“Annual Land Application”) will now be generated by the department and the permittee will be required to submit all three reports each year of the permit term. This change was adopted to provide the permittee flexibility because many lagoon desludging projects can be unexpected, are delayed or staggered over multiple years. Additionally, it is used to officially report that no land application of sludge has occurred, and annual submittal of the forms is required per the standard requirements section.

- Sludge analysis during the second year of the permit term has been included. There are check boxes available on the electronic forms to identify if desludging didn’t occur.
- Sludge characteristics report (3400-049) – at the top of the form check “yes” or “no” in the box identifying if any land application occurred that year. Complete the form if required or identify the year samples will be or have been taken in the comments section.
- 3400-052 (“Other Methods of Disposal”) and 3400-055 (“Annual Land Application”) - The reports are technically 2 separate forms that are now combined in one location but separated onto two different tabs. If you answer “No” to both listed questions the forms are complete. If you need to answer “Yes” to either question the corresponding form tabs will go from gray to blue indicating information can be entered on the report.

PFAS- The presence and fate of PFAS in municipal and industrial sludges is an emerging public health concern. EPA has developed a draft risk assessment to determine future land application rates and released this risk assessment in January of 2025. The department is evaluating this new information. Until a decision is made, the “Interim Strategy for Land Application of Biosolids and Industrial Sludges Containing PFAS” should be followed

Collecting sludge data on PFAS concentrations from a wide range of wastewater treatment facilities will help protect public health from exposure to elevated levels of PFAS and determine the department’s implementation of EPA’s recommendations. To quantitate this risk, PFAS sampling has been included in this WPDES permit pursuant to ss. NR 214.18(5)(b) and NR 204.06(2)(b)9., Wis. Adm. Code.

5 Schedules

5.1 Optimization and Land Treatment Management Plans

Required Action	Due Date
Land Treatment Management Plan: Submit a management plan to optimize the land treatment system performance and demonstrate compliance with ch. NR 206, Wis. Adm. Code. The land treatment system shall be operated in accordance with the approved management plan.	03/31/2027

Loading and Resting Records: Review and update the facility loading and resting logs as needed. These logs shall be made available to the department upon request. Begin keeping accurate information on the absorption pond loading during a normal operation.	04/30/2027
Load Rest Cycles: Submit a report on potential adjustments of the load rest cycles to increase nitrification/denitrification.	06/30/2028
Optimization Update: Submit a report on the adjustments implemented over the previous year, any changes in nitrification/denitrification and potential adjustments that will be implemented in the next year.	06/30/2029
Final Land Treatment Management Plan: Submit a final report on adjustments implemented to the load rest cycles and summary of changes to nitrification/denitrification. Submit a management plan incorporating changes made to optimize the land treatment system performance and demonstrate compliance with ch. NR 206, Wis. Adm. Code. The land treatment system shall be operated in accordance with the approved management plan.	06/30/2030

Explanation of Schedule

Land Treatment Optimization – There were ACL exceedances of nitrite + nitrate in wells 802 and 806. The ACL exceedance requires a response action per s. NR 140.26, Wis. Adm. Code. At the end of the schedule an up-to-date Land Treatment Management plan is required per ch. NR 206, Wis. Adm. Code.

5.2 Groundwater Monitoring Well Site Map Submittal

Required Action	Due Date
Conduct Well Survey: The permittee shall survey the groundwater monitoring well network. The survey shall include the top of casing (TOC) for each groundwater monitoring well verified within 0.1 feet above msl. The height of the TOC above ground surface shall to be measured in tenths of feet.	03/31/2027
Submit Survey Results and Monitoring Well Site Map: Per s. NR 141.065, Wis. Adm. Code, the permittee shall submit a map of the land treatment system. All monitoring well locations shall be reported to the department on a plan map drawn to a specific scale. The map shall indicate structural boundaries, property boundaries, any nearby surface waters and a north arrow. The plan shall show the wells in relation to each other, to property and structural boundaries and to a common reference point on a horizontal grid system. The origin of the grid system shall be located according to latitude and longitude or according to the state plane coordinate system. The exact vertical location of the top of the well casing shall be referenced to the nearest benchmark for the national geodetic survey datum. This map shall show the exact location of the installed wells on a horizontal grid system which is accurate to within 1 foot.	12/31/2027

Explanation of Schedule

Groundwater Monitoring Well Site Map Submittal - Accurate well information is needed to ensure the requirements of NR 140 Wis. Adm. Code are met.

5.3 Submit Management Plan

Required Action	Due Date
Submit a Sludge Management Plan: The permittee shall submit an update to the management plan	

for approval if removal of sludge will occur during this permit term. The plan shall demonstrate compliance with ch. NR 204 Wis. Adm. Code and at minimum address 1) How and where is sludge sampled; 2) Available sludge storage details and location(s); 3) How will the sludge be removed with details on volume, characterization and how will the treatment plant continue to function during the drawdown; 4) Describe the type of transportation and spreading vehicles and loading and unloading practices; 5) Identify approved land application sites, apply for needed sites, site limitations, total acres needed and vegetative cover management; 6) Specify record keeping procedures including site loading; 7) Address contingency plans for adverse weather and odor/nuisance abatement; and 8) Include any other pertinent information such as other disposal options that may be used or specifications of any pretreatment processes Once approved, all sludge management activities shall be conducted in accordance with the plan. Any changes to the plan must be approved by the Department prior to implementing the changes. No desludging may occur unless approval from the Department is obtained. Daily logs shall be kept that record where the sludge has been disposed. The plan is due at least 60 days prior to desludging.	
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Explanation of Schedule

Sludge Management Plan - If the lagoons are to be desludged during this permit term a management plan is needed to show compliance with ch NR 204, Wis. Adm. Code. There are outlines available to assist in plan development.

Attachments

Water Flow Schematic created in 2015

NR 140 Groundwater Evaluation Report dated April 15, 2026

Justification Of Any Waivers From Permit Application Requirements

No waivers requested or granted as part of this permit reissuance

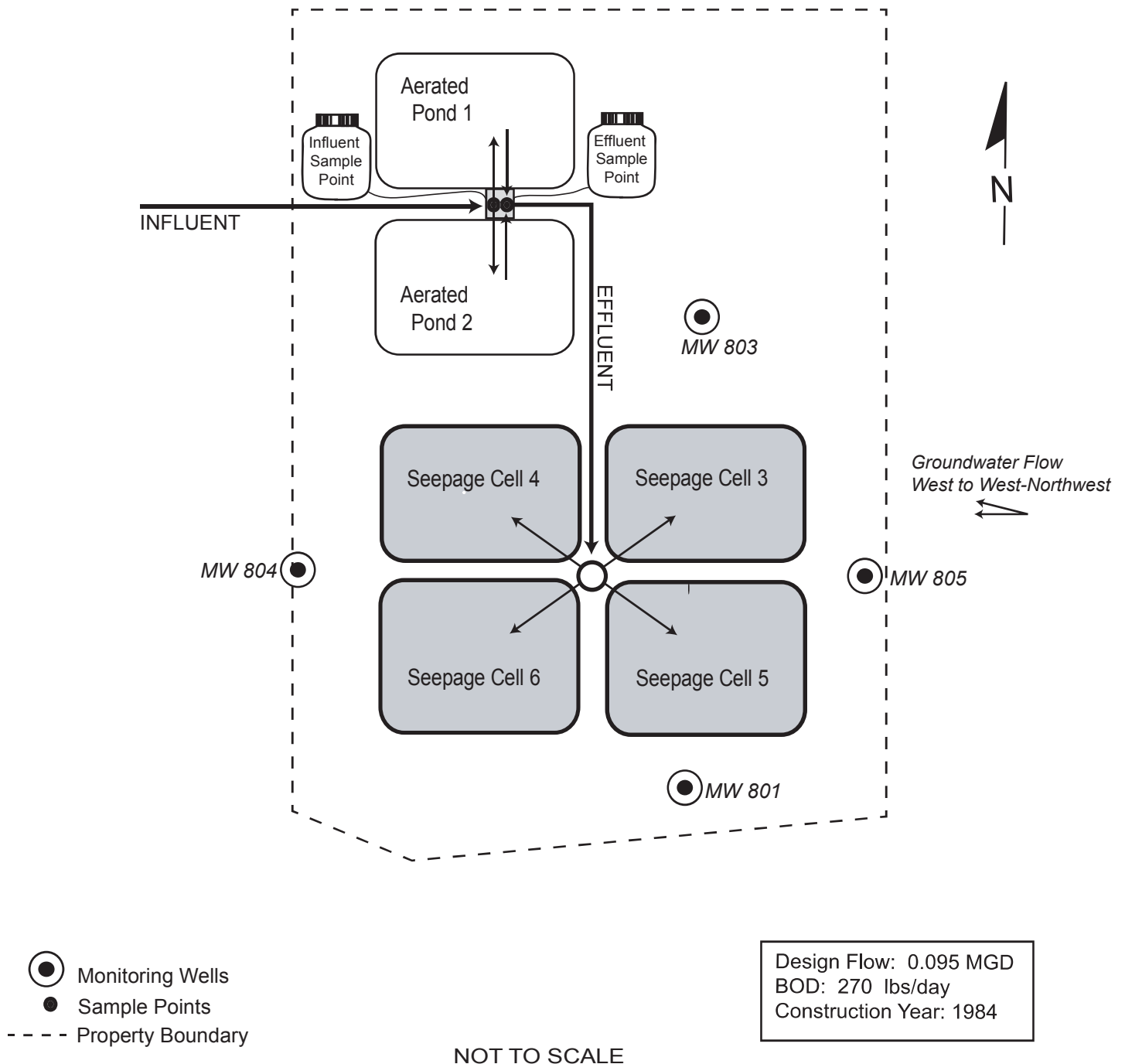
Prepared By: Sheri A. Snowbank

Wastewater Specialist

Date: July 29, 2026

VILLAGE OF CENTURIA Wastewater Treatment Facility

The Centuria wastewater treatment facility consists of two aerated ponds followed by four seepage cells. There are four groundwater monitoring wells adjacent to the seepage cells. The diagram below shows the treatment units and sampling locations.



DATE: April 15, 2026

TO: File

FROM: Woody Myers - WCR 

SUBJECT: Groundwater Evaluation for Village of Centuria, WI-0060283

Site Information

The Village of Centuria is a municipal wastewater treatment facility (WWTF) and is located off old County Highway I, east of Centuria, Polk County. Wastewater is currently treated via aerated ponds and discharged to groundwater via infiltration by way of absorption ponds (seepage cells) located in the NE ¼ of the SW ¼ of Section 1, T34N, R18W, Town of St. Croix.

Land Disposal Effluent & Groundwater Evaluation Summary

Table 1 Land Disposal Outfall Sampling Point Parameters and Limits
Outfall 001 Absorption Ponds

Parameter	Current Permit WI-0060283-10		Proposed Permit WI-0060283-11	
	Limits and Units	Limit Type	Limits and Units	Limit Type
Flow Rate	- MGD		- MGD	
CBOD ₅	45 mg/l	Monthly Avg	45 mg/l	Monthly Avg
Total Suspended Solids	- mg/l		- mg/l	
pH, Field	- su		- su	
Nitrogen, Total Kjeldahl	- mg/l		- mg/l	
Nitrogen, Nitrite + Nitrate	- mg/l		- mg/l	
Nitrogen, Ammonia	- mg/l		- mg/l	
Nitrogen, Organic	- mg/l		- mg/l	
Nitrogen, Total	- mg/l		- mg/l	
Total Dissolved Solids	- mg/l		- mg/l	
Chloride	- mg/l		- mg/l	

No proposed permit changes

Table 2 Monitoring Wells

Well	Current Permit WI-0060283-10		Proposed Permit WI-0060283-11	
	Well Location	Well Designation	Well Location	Well Designation
801 (MW801)	Side-gradient	Non-Point of Standard	Side-gradient	Non-Point of Standard
803 (MW803)	Down-gradient	Non-Point of Standard	Down-gradient	Non-Point of Standard
804 (MW804)	Down-gradient	Point of Standard	Down-gradient	Point of Standard
805 (MW805)	Up-gradient	Background	Up-gradient	Background

No proposed permit changes

Table 3 Groundwater Quality Standards

Parameter	Current Permit WI-0060283-10		Proposed WI-0060283-11	
	PAL	ES	PAL	ES
Depth to Groundwater	N/A	N/A	N/A	N/A
Groundwater Elevation	N/A	N/A	N/A	N/A
Nitrogen, Nitrite + Nitrate	*****	13.6 mg/l (ACL)	*Exempt	
Chloride	125 mg/l	250 mg/l	125 mg/l	250 mg/l
pH, Field	5.8-7.8 su	N/A	*6.3-8.3 su	N/A
Nitrogen Total Kjeldahl	N/A	N/A	N/A	N/A
Nitrogen, Ammonia	0.97 mg/l	9.7 mg/l	*6.1 mg/l(ACL)	9.7 mg/l
Nitrogen, Organic	3.1 mg/l	N/A	3.1 mg/l	N/A
Total Dissolved Solids	820 mg/l	N/A	820 mg/l	N/A

* Proposed permit changes

Geology

The bedrock under this facility is the Wonewoc Formation. The Wonewoc Formation is comprised of the Ironston and Galesville members. Both the Ironston and Galesville members are sandstone (*Bedrock Geology of Wisconsin, Regional Map Series Northwest Sheet*, Wisconsin Geological and Natural History Survey (WGNHS), 1987). Bedrock is anticipated to be 150 feet below ground surface (bgs) (*Depth to Bedrock in Wisconsin*, WGNHS, 1973). The regolith consists of mostly sand. Surface soil primarily consists of the Antigo silt loam and the Rosholt sandy loam (USDA NRCS Web Soil Survey).

Hydrogeology

Calculated groundwater elevation ranges between 1140 and 1148 feet above mean sea level (msl). Depth to groundwater was reported to be between 40 and 70 feet bgs. Groundwater flow direction was calculated to be predominantly to the west northwest. Regional groundwater is to the west northwest in this area of Polk County (*Generalized Water-Table Elevation Map of Polk County, Wisconsin*, Map, WGNHS, 2000). The site is approximately 4,500 feet west of Long Lake. There are four wells (municipal, other than municipal, private and high-capacity) within a 1,500-foot range of this facility's groundwater discharge.

Land Disposal Effluent Quality and Loading Rates

The following table is the average flow (hydraulic loading), total nitrogen, chloride and BOD₅ loading summations for the land disposal system.

Table 5 Land Treatment Disposal Loading Averages

Year	Flow (MGD)	Nitrogen (mg/l)	Chloride (mg/l)	CBOD5 (mg/l)
2025	0.037	35.3	161	13
2024	0.039	32.0	150	10
2023	0.037	33.0	164	14
2022	0.039	32.5	180	13
2021	0.038	26.9	166	8

Groundwater Monitoring System and Sampling Frequency

All parameters are analyzed for the dissolved phase in groundwater. Established groundwater quality standards are found in Table 1 Public Health Related Groundwater Standards s. NR 140.10 Wis. Adm. Code, and Table 2 Public Welfare Related Groundwater Standards s. NR 140.12 Wis. Adm. Code. The thresholds of these standards are the Enforcement Standard (ES) and the Preventative Action Limit (PAL).

Table 6 Groundwater Monitoring Well Data

Sample Point	Well Name	Elevation (feet above msl)				Length (feet)		Well Type
		Casing Top	Ground Surface	Screen Top	Screen Bottom	Screen Length	Well Depth	
801	MW801	1184.50	1180.5				69.0	WT
803	MW803	1211.96	1209.6	1143.6	1133.6	10.0	77.0	WT
804	MW804	1194.53	1192.2	1142.7	1132.7	10.0	60.0	WT
805	MW805	1196.92	1194.5	1145.0	1135.0	10.0	60.0	WT

All measurements in feet

WT-Water table Observation P-Piezometer O-Other

Groundwater sampling results from this facility have been analyzed for each well to evaluate trends of the regulated compounds in groundwater and to calculate PALs for s. NR 140.22 Wis. Adm. Code Indicator Parameters and to evaluate potential exemptions under s. NR 140.28 Wis. Adm. Code. The groundwater was evaluated by looking at the groundwater data from March 23, 2021 – November 18, 2025.

Background Groundwater Quality

Two compounds in the up-gradient (background) groundwater monitoring well were observed to be at or above the s. NR140.10, Wis. Adm. Code groundwater quality standards, nitrite + nitrate and ammonia. The nitrite + nitrate sample results were consistently in excess of the PAL and frequently in excess of the ES. The trends were overall stable with some fluctuation. The ammonia sample results were consistently in excess of the PAL (no ES exceedances) in the samples collected and analyzed starting in late 2023 to current results. The trends for ammonia are increasing over time.

Down-Gradient Groundwater Quality

The only compounds that exceeded the PAL or ACL were nitrite + nitrate and ammonia. The nitrite + nitrate exceedances were observed in all of the groundwater monitoring wells. These exceedances (ACL) were sporadic in magnitude and without a clear trend. Ammonia exceeded the PAL occasionally in groundwater monitoring well 804 from 2021 to 2023. There were no other significant groundwater quality exceedances.

Land Disposal System Impact to Groundwater Quality

Concentrations and trends in the groundwater monitoring data were compared to the loading data for the land disposal system. There is not a clear correlation between the effluent loading levels of nitrogen (nitrite + nitrate or ammonia) and the groundwater monitoring results.

Proposed Groundwater Monitoring Requirements Permit WI-0060283-11

**Table 7 Groundwater Quality Sampling Frequency and Limits
Outfall 001**

Sample Point	Well Name	Sample Frequency	Well Designation
801	MW801	Quarterly	Non-Point of Standard
803	MW803	Quarterly	Non-Point of Standard
804	MW804	Quarterly	Point of Standard
805	MW805	Quarterly	Background
Parameter	PAL	ES	Source
Depth to Groundwater	N/A	N/A	Measured
Groundwater Elevation	N/A	N/A	Measured
Nitrogen, Nitrite + Nitrate	*Exempt		NR 140.28
Chloride	125 mg/l	250 mg/l	NR 140 Table 2
pH, Field	*6.3-8.3 su	N/A	Calculated
Nitrogen, Kjeldahl	N/A	N/A	Measured
Nitrogen, Ammonia	*6.1 mg/l (ACL)	9.7 mg/l	NR 140 Table 1
Nitrogen, Organic	3.1 mg/l	N/A	Calculated
Total Dissolved Solids	820 mg/l	N/A	Calculated

* Proposed permit changes

Indicator Parameter PALs

Indicator Parameter PALs are developed following the procedures described in s. NR 140.20(2), Wis. Adm. Code. Indicator parameters do not have Enforcement Standards. The PAL for an indicator parameter is a benchmark for evaluating site specific trends. When significant increases in the trends are observed, the facility and the department's response action under s. NR 140.24 Wis. Adm. Code should be to investigate the source of the compound. The following equations were used to calculate the indicator parameter PALs:

$$\sum [\text{Mean of the background groundwater quality} + \text{Minimum Increase (NR 140.20 Table 3)}] = \text{PAL}$$

And for pH:

$$\sum [\text{Mean of the background groundwater quality} \pm 1 \text{ su}] = \text{upper and lower PAL}$$

Alternative Concentration Limits

Alternative concentration Limits (ACLs) can be developed and provided for a groundwater monitoring system utilizing the procedures described in s. NR 140.28, Wis. Adm. Code. ACLs were calculated using the following equation:

$$\sum [\text{Mean of the background groundwater quality} + (2) \times \text{Standard Deviation of Results}] = \text{ACL}$$

Conclusions

There are no recommended changes in Outfall 001's effluent parameters or associated limits. The s. NR214.06, Wis. Adm. Code alternate requirement for the facility to use CBOD₅ in place of BOD₅ will be continued.

The groundwater elevations are suspect, so the top of casing elevations for each groundwater monitoring well needs to be verified.

There were consistent ACL exceedances of nitrite + nitrate in the side and down-gradient groundwater monitoring wells. Only groundwater monitoring well 804 is a point of standards application well. The ACL is in excess of the s. NR 140.10, Wis. Adm. Code PAL and ES, therefore any ACL exceedance is the same as an ES exceedance. Because of these exceedances a s. NR140.26, Wis. Adm. Code response action is required. The first required response action is for the facility to investigate the absorption pond load and rest cycles with the intent to optimize the nitrification/denitrification in these land disposal systems.

The PAL and ES for nitrite + nitrate are conditionally exempt for Outfall 001 wells 801, 803 and 804. The collection of groundwater samples for nitrite + nitrate continues to be required, but there will be no limits (PAL/ACL/ES). The exemption is in place under the following conditions:

- There are no significant increases in the nitrogen effluent concentration to the absorption ponds
- The exemption is in place for the term of this permit
- The facility remains in compliance with the other restrictions and limits for this Outfall.

An ACL has been approved for ammonia. This ACL of 6.1 mg/l replaces the s. NR140.10, Wis. Adm. Code PAL of 0.97 mg/l. This ACL was calculated based on the background groundwater quality data.

The PAL range for pH has been increased from 5.3-7.3 su to 6.3-8.3 su based on the background groundwater quality data.

Compliance Schedule Recommendations

The top of casing (TOC) for each groundwater monitoring well needs to be verified within 0.1 feet above msl. The high of the TOC above ground surface needs to be measured (in tenths of feet). The two measurements for each well need to be reported to the department within 90 days of the permit reissuance.

The facility needs to develop an absorption pond optimization plan. The first phase should be completed within 90 days of permit reissuance. This phase includes reviewing and possibly updating the facilities loading and resting logs. The second phase is during normal operation keeping accurate information on the absorption pond loading. The final phase is potential adjustment of the load rest cycles to increase nitrification/denitrification.

A map is required of the land treatment system per ch. NR141.065 Wis. Admin Code.

“All monitoring well locations shall be reported to the department on a plan map drawn to a specific scale. The map shall indicate structure boundaries, property boundaries, any nearby surface waters and a north arrow. The plan shall show the wells in relation to each other, to property and structure boundaries and to a common reference point on a horizontal grid system. The origin of the grid system shall be located according to latitude and longitude or according to the state plane coordinate system. The exact vertical location of the top of the well casing shall be referenced to the nearest benchmark for the national geodetic survey datum to an accuracy of 0.01 feet. This plan map shall show the exact location of the installed well on a horizontal grid system which is accurate to within 1 foot.”

The s. NR 206.07 (2)(h) 1. Wis. Adm. Code requires a land disposal management plan for facilities with land disposal systems. The facility should review their plan within 90 days of permit reissuance and any revisions should be submitted to the department for approval.

Appendix

The preceding results were provided by the facility or their agent. The mean and standard deviation were calculated electronically.

well	param	unit	date	code	result
801 MW 801	Chloride Dissolved	mg/L	03/23/2021		5
801 MW 801	Chloride Dissolved	mg/L	06/08/2021		5
801 MW 801	Chloride Dissolved	mg/L	09/07/2021		4
801 MW 801	Chloride Dissolved	mg/L	12/14/2021		4
801 MW 801	Chloride Dissolved	mg/L	03/15/2022		4
801 MW 801	Chloride Dissolved	mg/L	06/21/2022		51
801 MW 801	Chloride Dissolved	mg/L	09/20/2022		6
801 MW 801	Chloride Dissolved	mg/L	12/06/2022		7
801 MW 801	Chloride Dissolved	mg/L	03/21/2023		5
801 MW 801	Chloride Dissolved	mg/L	06/13/2023		5
801 MW 801	Chloride Dissolved	mg/L	09/19/2023		28
801 MW 801	Chloride Dissolved	mg/L	12/19/2023		6
801 MW 801	Chloride Dissolved	mg/L	03/05/2024		4
801 MW 801	Chloride Dissolved	mg/L	06/25/2024		5
801 MW 801	Chloride Dissolved	mg/L	09/17/2024		7
801 MW 801	Chloride Dissolved	mg/L	11/12/2024		10
801 MW 801	Chloride Dissolved	mg/L	03/18/2025		12
801 MW 801	Chloride Dissolved	mg/L	06/17/2025		13
801 MW 801	Chloride Dissolved	mg/L	09/09/2025		11
801 MW 801	Chloride Dissolved	mg/L	11/18/2025		10
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	03/23/2021	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	06/08/2021		0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	09/07/2021	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	12/14/2021	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	03/15/2022	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	06/21/2022	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	09/20/2022	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	12/06/2022	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	03/21/2023	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	06/13/2023	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	09/19/2023	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	12/19/2023	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	03/05/2024	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	06/25/2024	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	09/17/2024	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	11/12/2024	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	03/18/2025	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	06/17/2025	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	09/09/2025	<	0.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	11/18/2025	<	0.1

well	param	unit	date	code	result
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/23/2021		4.5
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/08/2021		4.3
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/07/2021		3.9
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	12/14/2021		3.4
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/15/2022		3
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/21/2022		14.6
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/20/2022		4.9
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	12/06/2022		5.4
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/21/2023		4.3
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/13/2023		4.84
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/19/2023		5.56
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	12/19/2023		5.17
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/05/2024		4.35
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/25/2024		4.29
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/17/2024		4.52
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/12/2024		5.26
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/18/2025		5.03
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/17/2025		5.23
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/09/2025		4.72
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/18/2025		4.8

801 MW 801	Nitrogen, Organic Dissolved	mg/L	03/23/2021		0.7
801 MW 801	Nitrogen, Organic Dissolved	mg/L	06/08/2021	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	09/07/2021	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	12/14/2021	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	03/15/2022	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	06/21/2022		0.8
801 MW 801	Nitrogen, Organic Dissolved	mg/L	09/20/2022		0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	12/06/2022	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	03/21/2023	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	06/13/2023	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	09/19/2023		0.8
801 MW 801	Nitrogen, Organic Dissolved	mg/L	12/19/2023		0.9
801 MW 801	Nitrogen, Organic Dissolved	mg/L	03/05/2024		0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	06/25/2024		0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	09/17/2024	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	11/12/2024		1.1
801 MW 801	Nitrogen, Organic Dissolved	mg/L	03/18/2025		0.9
801 MW 801	Nitrogen, Organic Dissolved	mg/L	06/17/2025		0.9
801 MW 801	Nitrogen, Organic Dissolved	mg/L	09/09/2025	<	0.1
801 MW 801	Nitrogen, Organic Dissolved	mg/L	11/18/2025	<	0.1

well	param	unit	date	code	result
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	03/23/2021		0.7
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	06/08/2021	<	0.5
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	09/07/2021	<	0.5
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	12/14/2021	<	0.5
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	03/15/2022	<	0.5
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	06/21/2022		0.8
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	09/20/2022		0.5
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	12/06/2022	<	0.5
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	03/21/2023	<	0.5
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	06/13/2023	<	0.1
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	09/19/2023		0.8
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	12/19/2023		0.9
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	03/05/2024		0.5
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	06/25/2024		0.5
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	09/17/2024	<	0.1
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	11/12/2024		1.1
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	03/18/2025		0.9
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	06/17/2025		0.9
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	09/09/2025	<	0.1
801 MW 801	Nitrogen, Total Kjeldahl	mg/L	11/18/2025	<	0.1

801 MW 801	pH Field	su	03/23/2021		8.06
801 MW 801	pH Field	su	06/08/2021		6.41
801 MW 801	pH Field	su	09/07/2021		7.85
801 MW 801	pH Field	su	12/14/2021		7.89
801 MW 801	pH Field	su	03/15/2022		7.51
801 MW 801	pH Field	su	06/21/2022		8.6
801 MW 801	pH Field	su	09/20/2022		8.5
801 MW 801	pH Field	su	12/06/2022		8.5
801 MW 801	pH Field	su	03/21/2023		7.74
801 MW 801	pH Field	su	06/13/2023		8.21
801 MW 801	pH Field	su	09/19/2023		7.89
801 MW 801	pH Field	su	12/19/2023		7.23
801 MW 801	pH Field	su	03/05/2024		6.45
801 MW 801	pH Field	su	06/25/2024		6.91
801 MW 801	pH Field	su	09/17/2024		7.56
801 MW 801	pH Field	su	11/12/2024		8.79
801 MW 801	pH Field	su	03/18/2025		7.86
801 MW 801	pH Field	su	06/17/2025		7.86
801 MW 801	pH Field	su	09/09/2025		8.88
801 MW 801	pH Field	su	11/18/2025		8.31

well	param	unit	date	code	result
801 MW 801	Solids, Total Dissolved	mg/L	03/23/2021		110
801 MW 801	Solids, Total Dissolved	mg/L	06/08/2021		125
801 MW 801	Solids, Total Dissolved	mg/L	09/07/2021		130
801 MW 801	Solids, Total Dissolved	mg/L	12/14/2021		114
801 MW 801	Solids, Total Dissolved	mg/L	03/15/2022		96
801 MW 801	Solids, Total Dissolved	mg/L	06/21/2022		373
801 MW 801	Solids, Total Dissolved	mg/L	09/20/2022		154
801 MW 801	Solids, Total Dissolved	mg/L	12/06/2022		147
801 MW 801	Solids, Total Dissolved	mg/L	03/21/2023		126
801 MW 801	Solids, Total Dissolved	mg/L	06/13/2023		122
801 MW 801	Solids, Total Dissolved	mg/L	09/19/2023		143
801 MW 801	Solids, Total Dissolved	mg/L	12/19/2023		146
801 MW 801	Solids, Total Dissolved	mg/L	03/05/2024		117
801 MW 801	Solids, Total Dissolved	mg/L	06/25/2024		120
801 MW 801	Solids, Total Dissolved	mg/L	09/17/2024		122
801 MW 801	Solids, Total Dissolved	mg/L	11/12/2024		143
801 MW 801	Solids, Total Dissolved	mg/L	03/18/2025		125
801 MW 801	Solids, Total Dissolved	mg/L	06/17/2025		147
801 MW 801	Solids, Total Dissolved	mg/L	09/09/2025		152
801 MW 801	Solids, Total Dissolved	mg/L	11/18/2025		133

803 MW 803	Chloride Dissolved	mg/L	03/23/2021		32
803 MW 803	Chloride Dissolved	mg/L	06/08/2021		31
803 MW 803	Chloride Dissolved	mg/L	09/07/2021		36
803 MW 803	Chloride Dissolved	mg/L	12/14/2021		33
803 MW 803	Chloride Dissolved	mg/L	03/15/2022		31
803 MW 803	Chloride Dissolved	mg/L	06/21/2022		135
803 MW 803	Chloride Dissolved	mg/L	09/20/2022		29
803 MW 803	Chloride Dissolved	mg/L	12/06/2022		29
803 MW 803	Chloride Dissolved	mg/L	03/21/2023		28
803 MW 803	Chloride Dissolved	mg/L	06/13/2023		26
803 MW 803	Chloride Dissolved	mg/L	09/19/2023		28
803 MW 803	Chloride Dissolved	mg/L	12/19/2023		29
803 MW 803	Chloride Dissolved	mg/L	03/05/2024		28
803 MW 803	Chloride Dissolved	mg/L	06/25/2024		26
803 MW 803	Chloride Dissolved	mg/L	09/17/2024		25
803 MW 803	Chloride Dissolved	mg/L	11/12/2024		26
803 MW 803	Chloride Dissolved	mg/L	03/18/2025		26
803 MW 803	Chloride Dissolved	mg/L	06/17/2025		27
803 MW 803	Chloride Dissolved	mg/L	09/09/2025		26
803 MW 803	Chloride Dissolved	mg/L	11/18/2025		27

well	param	unit	date	code	result
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	03/23/2021	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	06/08/2021	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	09/07/2021		0.2
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	12/14/2021	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	03/15/2022	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	06/21/2022		1.8
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	09/20/2022	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	12/06/2022	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	03/21/2023	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	06/13/2023		77
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	09/19/2023	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	12/19/2023	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	03/05/2024	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	06/25/2024	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	09/17/2024	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	11/12/2024	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	03/18/2025	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	06/17/2025	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	09/09/2025	<	0.1
803 MW 803	Nitrogen, Ammonia Dissolved	mg/L	11/18/2025	<	0.1

803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/23/2021		18.5
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/08/2021		18.5
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/07/2021		18.9
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	12/14/2021		16.2
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/15/2022		17
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/21/2022		6.3
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/20/2022		16.7
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	12/06/2022		18.8
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/21/2023		18
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/13/2023		15.4
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/19/2023		17.6
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	12/19/2023		16.3
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/05/2024		16.1
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/25/2024		15.8
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/17/2024		15.1
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/12/2024		17.4
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/18/2025		17.2
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/17/2025		18
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/09/2025		17.93
803 MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/18/2025		18.9

well	param	unit	date	code	result
803 MW 803	Nitrogen, Organic Dissolved	mg/L	03/23/2021		1
803 MW 803	Nitrogen, Organic Dissolved	mg/L	06/08/2021		1.1
803 MW 803	Nitrogen, Organic Dissolved	mg/L	09/07/2021		0.9
803 MW 803	Nitrogen, Organic Dissolved	mg/L	12/14/2021		1.1
803 MW 803	Nitrogen, Organic Dissolved	mg/L	03/15/2022		2.1
803 MW 803	Nitrogen, Organic Dissolved	mg/L	06/21/2022		1.1
803 MW 803	Nitrogen, Organic Dissolved	mg/L	09/20/2022		1.3
803 MW 803	Nitrogen, Organic Dissolved	mg/L	12/06/2022		1.6
803 MW 803	Nitrogen, Organic Dissolved	mg/L	03/21/2023		1.2
803 MW 803	Nitrogen, Organic Dissolved	mg/L	06/13/2023		0.9
803 MW 803	Nitrogen, Organic Dissolved	mg/L	09/19/2023		1.5
803 MW 803	Nitrogen, Organic Dissolved	mg/L	12/19/2023		1
803 MW 803	Nitrogen, Organic Dissolved	mg/L	03/05/2024		1.1
803 MW 803	Nitrogen, Organic Dissolved	mg/L	06/25/2024		1.5
803 MW 803	Nitrogen, Organic Dissolved	mg/L	09/17/2024		1.1
803 MW 803	Nitrogen, Organic Dissolved	mg/L	11/12/2024		1.4
803 MW 803	Nitrogen, Organic Dissolved	mg/L	03/18/2025		1.1
803 MW 803	Nitrogen, Organic Dissolved	mg/L	06/17/2025		1.6
803 MW 803	Nitrogen, Organic Dissolved	mg/L	09/09/2025		1.3
803 MW 803	Nitrogen, Organic Dissolved	mg/L	11/18/2025	<	0.1

803 MW 803	Nitrogen, Total Kjeldahl	mg/L	03/23/2021		1
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	06/08/2021		1.1
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	09/07/2021		1.1
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	12/14/2021		1.1
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	03/15/2022		2.1
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	06/21/2022		2.9
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	09/20/2022		1.3
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	12/06/2022		1.6
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	03/21/2023		1.2
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	06/13/2023		0.9
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	09/19/2023		1.5
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	12/19/2023		1
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	03/05/2024		1.1
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	06/25/2024		1.5
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	09/17/2024		1.1
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	11/12/2024		1.4
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	03/18/2025		1.1
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	06/17/2025		1.5
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	09/09/2025		1.3
803 MW 803	Nitrogen, Total Kjeldahl	mg/L	11/18/2025	<	0.1

well	param	unit	date	code	result
803 MW 803	pH Field	su	03/23/2021		7.68
803 MW 803	pH Field	su	06/08/2021		6.18
803 MW 803	pH Field	su	09/07/2021		7.48
803 MW 803	pH Field	su	12/14/2021		7.86
803 MW 803	pH Field	su	03/15/2022		7.7
803 MW 803	pH Field	su	06/21/2022		7.89
803 MW 803	pH Field	su	09/20/2022		8.19
803 MW 803	pH Field	su	12/06/2022		7.52
803 MW 803	pH Field	su	03/21/2023		7.45
803 MW 803	pH Field	su	06/13/2023		7.48
803 MW 803	pH Field	su	09/19/2023		7.6
803 MW 803	pH Field	su	12/19/2023		7.53
803 MW 803	pH Field	su	03/05/2024		6.93
803 MW 803	pH Field	su	06/25/2024		6.9
803 MW 803	pH Field	su	09/17/2024		7.39
803 MW 803	pH Field	su	11/12/2024		8.73
803 MW 803	pH Field	su	03/18/2025		8
803 MW 803	pH Field	su	06/17/2025		8
803 MW 803	pH Field	su	09/09/2025		9.48
803 MW 803	pH Field	su	11/18/2025		8.81

803 MW 803	Solids, Total Dissolved	mg/L	03/23/2021		298
803 MW 803	Solids, Total Dissolved	mg/L	06/08/2021		358
803 MW 803	Solids, Total Dissolved	mg/L	09/07/2021		395
803 MW 803	Solids, Total Dissolved	mg/L	12/14/2021		291
803 MW 803	Solids, Total Dissolved	mg/L	03/15/2022		306
803 MW 803	Solids, Total Dissolved	mg/L	06/21/2022		496
803 MW 803	Solids, Total Dissolved	mg/L	09/20/2022		348
803 MW 803	Solids, Total Dissolved	mg/L	12/06/2022		305
803 MW 803	Solids, Total Dissolved	mg/L	03/21/2023		293
803 MW 803	Solids, Total Dissolved	mg/L	06/13/2023		292
803 MW 803	Solids, Total Dissolved	mg/L	09/19/2023		331
803 MW 803	Solids, Total Dissolved	mg/L	12/19/2023		300
803 MW 803	Solids, Total Dissolved	mg/L	03/05/2024		275
803 MW 803	Solids, Total Dissolved	mg/L	06/25/2024		305
803 MW 803	Solids, Total Dissolved	mg/L	09/17/2024		260
803 MW 803	Solids, Total Dissolved	mg/L	11/12/2024		280
803 MW 803	Solids, Total Dissolved	mg/L	03/18/2025		269
803 MW 803	Solids, Total Dissolved	mg/L	06/17/2025		307
803 MW 803	Solids, Total Dissolved	mg/L	09/09/2025		324
803 MW 803	Solids, Total Dissolved	mg/L	11/18/2025		278

well	param	unit	date	code	result
804 MW 804	Chloride Dissolved	mg/L	03/23/2021		55
804 MW 804	Chloride Dissolved	mg/L	06/08/2021		91
804 MW 804	Chloride Dissolved	mg/L	09/07/2021		48
804 MW 804	Chloride Dissolved	mg/L	12/14/2021		60
804 MW 804	Chloride Dissolved	mg/L	03/15/2022		94
804 MW 804	Chloride Dissolved	mg/L	06/21/2022		31
804 MW 804	Chloride Dissolved	mg/L	09/20/2022		57
804 MW 804	Chloride Dissolved	mg/L	12/06/2022		32
804 MW 804	Chloride Dissolved	mg/L	03/21/2023		54
804 MW 804	Chloride Dissolved	mg/L	06/13/2023		97
804 MW 804	Chloride Dissolved	mg/L	09/19/2023		127
804 MW 804	Chloride Dissolved	mg/L	12/19/2023		42
804 MW 804	Chloride Dissolved	mg/L	03/05/2024		37
804 MW 804	Chloride Dissolved	mg/L	06/25/2024		35
804 MW 804	Chloride Dissolved	mg/L	09/17/2024		37
804 MW 804	Chloride Dissolved	mg/L	11/12/2024		36
804 MW 804	Chloride Dissolved	mg/L	03/18/2025		35
804 MW 804	Chloride Dissolved	mg/L	06/17/2025		36
804 MW 804	Chloride Dissolved	mg/L	09/09/2025		120
804 MW 804	Chloride Dissolved	mg/L	11/18/2025		36

804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	03/23/2021		1.2
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	06/08/2021		1.1
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	09/07/2021		0.7
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	12/14/2021		0.9
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	03/15/2022		1.1
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	06/21/2022	<	0.1
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	09/20/2022		1.5
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	12/06/2022		1.5
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	03/21/2023		2.8
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	06/13/2023		3.8
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	09/19/2023		3.7
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	12/19/2023	<	0.1
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	03/05/2024	<	0.1
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	06/25/2024	<	0.1
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	09/17/2024	<	0.1
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	11/12/2024	<	0.1
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	03/18/2025	<	0.1
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	06/17/2025	<	0.1
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	09/09/2025		6.6
804 MW 804	Nitrogen, Ammonia Dissolved	mg/L	11/18/2025	<	0.1

well	param	unit	date	code	result
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/23/2021		12.2
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/08/2021		7.1
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/07/2021		12.2
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	12/14/2021		15.1
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/15/2022		10.7
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/21/2022		18.1
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/20/2022		7.1
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	12/06/2022		7.1
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/21/2023		18.4
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/13/2023		21.8
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/19/2023		4.79
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	12/19/2023		14
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/05/2024		14.3
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/25/2024		13.7
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/17/2024		15.3
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/12/2024		15.2
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/18/2025		14.5
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/17/2025		15.2
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/09/2025		3.97
804 MW 804	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/18/2025		15.5
804 MW 804	Nitrogen, Organic Dissolved	mg/L	03/23/2021		1.2
804 MW 804	Nitrogen, Organic Dissolved	mg/L	06/08/2021		0.8
804 MW 804	Nitrogen, Organic Dissolved	mg/L	09/07/2021		1.2
804 MW 804	Nitrogen, Organic Dissolved	mg/L	12/14/2021		1
804 MW 804	Nitrogen, Organic Dissolved	mg/L	03/15/2022		1
804 MW 804	Nitrogen, Organic Dissolved	mg/L	06/21/2022		0.6
804 MW 804	Nitrogen, Organic Dissolved	mg/L	09/20/2022		1.2
804 MW 804	Nitrogen, Organic Dissolved	mg/L	12/06/2022		0.8
804 MW 804	Nitrogen, Organic Dissolved	mg/L	03/21/2023		1.5
804 MW 804	Nitrogen, Organic Dissolved	mg/L	06/13/2023		1.1
804 MW 804	Nitrogen, Organic Dissolved	mg/L	09/19/2023		1.2
804 MW 804	Nitrogen, Organic Dissolved	mg/L	12/19/2023		1.1
804 MW 804	Nitrogen, Organic Dissolved	mg/L	03/05/2024		1.2
804 MW 804	Nitrogen, Organic Dissolved	mg/L	06/25/2024		1.6
804 MW 804	Nitrogen, Organic Dissolved	mg/L	09/17/2024		1
804 MW 804	Nitrogen, Organic Dissolved	mg/L	11/12/2024		1.4
804 MW 804	Nitrogen, Organic Dissolved	mg/L	03/18/2025		1.2
804 MW 804	Nitrogen, Organic Dissolved	mg/L	06/17/2025		1
804 MW 804	Nitrogen, Organic Dissolved	mg/L	09/09/2025		1.6
804 MW 804	Nitrogen, Organic Dissolved	mg/L	11/18/2025	<	0.1

well	param	unit	date	code	result
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	03/23/2021		2.4
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	06/08/2021		1.9
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	09/07/2021		1.9
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	12/14/2021		1.9
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	03/15/2022		2.1
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	06/21/2022		0.6
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	09/20/2022		2.7
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	12/06/2022		2.3
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	03/21/2023		4.3
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	06/13/2023		4.9
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	09/19/2023		4.9
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	12/19/2023		14
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	03/05/2024		1.2
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	06/25/2024		1.6
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	09/17/2024		1
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	11/12/2024		1.4
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	03/18/2025		1.2
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	06/17/2025		1
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	09/09/2025		8.2
804 MW 804	Nitrogen, Total Kjeldahl	mg/L	11/18/2025		0.1

804 MW 804	pH Field	su	03/23/2021		7.97
804 MW 804	pH Field	su	06/08/2021		6.46
804 MW 804	pH Field	su	09/07/2021		7.79
804 MW 804	pH Field	su	12/14/2021		7.89
804 MW 804	pH Field	su	03/15/2022		7.24
804 MW 804	pH Field	su	06/21/2022		7.28
804 MW 804	pH Field	su	09/20/2022		7.61
804 MW 804	pH Field	su	12/06/2022		7.2
804 MW 804	pH Field	su	03/21/2023		7.02
804 MW 804	pH Field	su	06/13/2023		6.95
804 MW 804	pH Field	su	09/19/2023		7.22
804 MW 804	pH Field	su	12/19/2023		6.76
804 MW 804	pH Field	su	03/05/2024		6.9
804 MW 804	pH Field	su	06/25/2024		6.81
804 MW 804	pH Field	su	09/17/2024		7.39
804 MW 804	pH Field	su	11/12/2024		8.28
804 MW 804	pH Field	su	03/18/2025		7.63
804 MW 804	pH Field	su	06/17/2025		7.63
804 MW 804	pH Field	su	09/09/2025		8.51
804 MW 804	pH Field	su	11/18/2025		8.43

well	param	unit	date	code	result
804 MW 804	Solids, Total Dissolved	mg/L	03/23/2021		429
804 MW 804	Solids, Total Dissolved	mg/L	06/08/2021		537
804 MW 804	Solids, Total Dissolved	mg/L	09/07/2021		348
804 MW 804	Solids, Total Dissolved	mg/L	12/14/2021		393
804 MW 804	Solids, Total Dissolved	mg/L	03/15/2022		430
804 MW 804	Solids, Total Dissolved	mg/L	06/21/2022		325
804 MW 804	Solids, Total Dissolved	mg/L	09/20/2022		362
804 MW 804	Solids, Total Dissolved	mg/L	12/06/2022		299
804 MW 804	Solids, Total Dissolved	mg/L	03/21/2023		388
804 MW 804	Solids, Total Dissolved	mg/L	06/13/2023		541
804 MW 804	Solids, Total Dissolved	mg/L	09/19/2023		486
804 MW 804	Solids, Total Dissolved	mg/L	12/19/2023		327
804 MW 804	Solids, Total Dissolved	mg/L	03/05/2024		295
804 MW 804	Solids, Total Dissolved	mg/L	06/25/2024		342
804 MW 804	Solids, Total Dissolved	mg/L	09/17/2024		313
804 MW 804	Solids, Total Dissolved	mg/L	11/12/2024		327
804 MW 804	Solids, Total Dissolved	mg/L	03/18/2025		280
804 MW 804	Solids, Total Dissolved	mg/L	06/17/2025		332
804 MW 804	Solids, Total Dissolved	mg/L	09/09/2025		485
804 MW 804	Solids, Total Dissolved	mg/L	11/18/2025		309

805 MW 805	Chloride Dissolved	mg/L	03/23/2021		55
805 MW 805	Chloride Dissolved	mg/L	06/08/2021		53
805 MW 805	Chloride Dissolved	mg/L	09/07/2021		56
805 MW 805	Chloride Dissolved	mg/L	12/14/2021		42
805 MW 805	Chloride Dissolved	mg/L	03/15/2022		50
805 MW 805	Chloride Dissolved	mg/L	06/21/2022		6
805 MW 805	Chloride Dissolved	mg/L	09/20/2022		47
805 MW 805	Chloride Dissolved	mg/L	12/06/2022		45
805 MW 805	Chloride Dissolved	mg/L	03/21/2023		47
805 MW 805	Chloride Dissolved	mg/L	06/13/2023		26
805 MW 805	Chloride Dissolved	mg/L	09/19/2023		43
805 MW 805	Chloride Dissolved	mg/L	12/19/2023		108
805 MW 805	Chloride Dissolved	mg/L	03/05/2024		117
805 MW 805	Chloride Dissolved	mg/L	06/25/2024		66
805 MW 805	Chloride Dissolved	mg/L	09/17/2024		38
805 MW 805	Chloride Dissolved	mg/L	11/12/2024		22
805 MW 805	Chloride Dissolved	mg/L	03/18/2025		74
805 MW 805	Chloride Dissolved	mg/L	06/17/2025		119
805 MW 805	Chloride Dissolved	mg/L	09/09/2025		35
805 MW 805	Chloride Dissolved	mg/L	11/18/2025		110

Mean 57.95
St. Dev. 31.36316

well	param	unit	date	code	result
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	03/23/2021	<	0.1
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	06/08/2021	<	0.1
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	09/07/2021	<	0.1
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	12/14/2021	<	0.1
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	03/15/2022	<	0.1
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	06/21/2022	<	0.1
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	09/20/2022	<	0.1
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	12/06/2022	<	0.1
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	03/21/2023	<	0.1
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	06/13/2023	<	0.1
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	09/19/2023	<	0.1
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	12/19/2023		3.7
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	03/05/2024		4.2
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	06/25/2024		3.2
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	09/17/2024		2.4
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	11/12/2024		1.9
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	03/18/2025		4.3
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	06/17/2025		6.9
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	09/09/2025	<	0.1
805 MW 805	Nitrogen, Ammonia Dissolved	mg/L	11/18/2025		6.5
Mean					1.715
St. Dev.					2.242605

805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/23/2021		12.5
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/08/2021		11.9
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/07/2021		12.9
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	12/14/2021		12
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/15/2022		13
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/21/2022		3.6
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/20/2022		15.5
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	12/06/2022		15.8
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/21/2023		15.3
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/13/2023		8.92
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/19/2023		14.3
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	12/19/2023		2.22
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/05/2024		2.27
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/25/2024		7.29
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/17/2024		12.4
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/12/2024		6.43
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/18/2025		28
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/17/2025		11.8
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/09/2025		14.67
805 MW 805	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/18/2025		1.75
Mean					11.1275
St. Dev.					6.007008

well	param	unit	date	code	result
805 MW 805	Nitrogen, Organic Dissolved	mg/L	03/23/2021		0.9
805 MW 805	Nitrogen, Organic Dissolved	mg/L	06/08/2021		0.8
805 MW 805	Nitrogen, Organic Dissolved	mg/L	09/07/2021		0.9
805 MW 805	Nitrogen, Organic Dissolved	mg/L	12/14/2021		1
805 MW 805	Nitrogen, Organic Dissolved	mg/L	03/15/2022		1
805 MW 805	Nitrogen, Organic Dissolved	mg/L	06/21/2022	<	0.5
805 MW 805	Nitrogen, Organic Dissolved	mg/L	09/20/2022		1.6
805 MW 805	Nitrogen, Organic Dissolved	mg/L	12/06/2022		0.7
805 MW 805	Nitrogen, Organic Dissolved	mg/L	03/21/2023		0.8
805 MW 805	Nitrogen, Organic Dissolved	mg/L	06/13/2023		1.3
805 MW 805	Nitrogen, Organic Dissolved	mg/L	09/19/2023		0.7
805 MW 805	Nitrogen, Organic Dissolved	mg/L	12/19/2023		1.4
805 MW 805	Nitrogen, Organic Dissolved	mg/L	03/05/2024		2.2
805 MW 805	Nitrogen, Organic Dissolved	mg/L	06/25/2024		1.5
805 MW 805	Nitrogen, Organic Dissolved	mg/L	09/17/2024		1.4
805 MW 805	Nitrogen, Organic Dissolved	mg/L	11/12/2024		0.7
805 MW 805	Nitrogen, Organic Dissolved	mg/L	03/18/2025		2.2
805 MW 805	Nitrogen, Organic Dissolved	mg/L	06/17/2025		1.6
805 MW 805	Nitrogen, Organic Dissolved	mg/L	09/09/2025		1.1
805 MW 805	Nitrogen, Organic Dissolved	mg/L	11/18/2025		1.3
Mean					1.18

805 MW 805	Nitrogen, Total Kjeldahl	mg/L	03/23/2021		0.9
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	06/08/2021		0.8
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	09/07/2021		0.9
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	12/14/2021		1
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	03/15/2022		1
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	06/21/2022	<	0.5
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	09/20/2022		1.6
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	12/06/2022		0.7
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	03/21/2023		0.8
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	06/13/2023		1.3
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	09/19/2023		0.7
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	12/19/2023		5.1
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	03/05/2024		6.4
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	06/25/2024		4.7
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	09/17/2024		3.8
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	11/12/2024		2.6
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	03/18/2025		6.5
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	06/17/2025		8.5
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	09/09/2025		1.1
805 MW 805	Nitrogen, Total Kjeldahl	mg/L	11/18/2025		7.8
Mean					2.835

well	param	unit	date	code	result
805 MW 805	pH Field	su	03/23/2021		7.47
805 MW 805	pH Field	su	06/08/2021		6.18
805 MW 805	pH Field	su	09/07/2021		7.28
805 MW 805	pH Field	su	12/14/2021		7.78
805 MW 805	pH Field	su	03/15/2022		7.19
805 MW 805	pH Field	su	06/21/2022		7.66
805 MW 805	pH Field	su	09/20/2022		7.82
805 MW 805	pH Field	su	12/06/2022		7.29
805 MW 805	pH Field	su	03/21/2023		7.09
805 MW 805	pH Field	su	06/13/2023		7.37
805 MW 805	pH Field	su	09/19/2023		7.26
805 MW 805	pH Field	su	12/19/2023		6.7
805 MW 805	pH Field	su	03/05/2024		7.37
805 MW 805	pH Field	su	06/25/2024		6.63
805 MW 805	pH Field	su	09/17/2024		7.32
805 MW 805	pH Field	su	11/12/2024		8.5
805 MW 805	pH Field	su	03/18/2025		7.31
805 MW 805	pH Field	su	06/17/2025		7.31
805 MW 805	pH Field	su	09/09/2025		7.51
805 MW 805	pH Field	su	11/18/2025		7.85
Mean					7.3445

805 MW 805	Solids, Total Dissolved	mg/L	03/23/2021		325
805 MW 805	Solids, Total Dissolved	mg/L	06/08/2021		375
805 MW 805	Solids, Total Dissolved	mg/L	09/07/2021		415
805 MW 805	Solids, Total Dissolved	mg/L	12/14/2021		310
805 MW 805	Solids, Total Dissolved	mg/L	03/15/2022		331
805 MW 805	Solids, Total Dissolved	mg/L	06/21/2022		109
805 MW 805	Solids, Total Dissolved	mg/L	09/20/2022		385
805 MW 805	Solids, Total Dissolved	mg/L	12/06/2022		347
805 MW 805	Solids, Total Dissolved	mg/L	03/21/2023		333
805 MW 805	Solids, Total Dissolved	mg/L	06/13/2023		256
805 MW 805	Solids, Total Dissolved	mg/L	09/19/2023		365
805 MW 805	Solids, Total Dissolved	mg/L	12/19/2023		467
805 MW 805	Solids, Total Dissolved	mg/L	03/05/2024		498
805 MW 805	Solids, Total Dissolved	mg/L	06/25/2024		378
805 MW 805	Solids, Total Dissolved	mg/L	09/17/2024		306
805 MW 805	Solids, Total Dissolved	mg/L	11/12/2024		250
805 MW 805	Solids, Total Dissolved	mg/L	03/18/2025		472
805 MW 805	Solids, Total Dissolved	mg/L	06/17/2025		493
805 MW 805	Solids, Total Dissolved	mg/L	09/09/2025		318
805 MW 805	Solids, Total Dissolved	mg/L	11/18/2025		460
Mean					359.65