Public Noticed United Energy Necedah Draft Permit Fact Sheet

General Information

Permit Number	WI-0066508-02-0
Permittee Name and Address	United Energy Necedah, LLC N9589 State Rd 80, Necedah, WI 54646
Permitted Facility Name and Address	United Energy Necedah, LLC N9589 State Rd 80, Necedah, WI 54646
Permit Term	April 01, 2025 to March 31, 2030
Discharge Location	groundwater via infiltration by way of seepage cells located in the E ½ of the NE ¼ of Section 36, T18N, R03E, Town of Necedah
Receiving Water	groundwaters in the Town of Necedah located in Juneau county
Stream Flow ($Q_{7,10}$)	N/A
Stream Classification	N/A
Discharge Type	Existing, continuous

Facility Description

United Energy – Necedah LLC (UEN) is an ethanol production facility with byproducts of dried distiller's grains with solubles and corn oil. The facility is supplied water from the Village of Necedah and their onsite groundwater well. The groundwater supplied from the well is high in iron and manganese. For the raw well water to be utilized at the facility, the raw well water is treated using a greensand iron filtration system. The filtered well water is then mixed with municipal water from the Village of Necedah and either goes into the cooling tower or further treated through a reverse osmosis (RO) unit where the permeate will be used in their production or boiler system. The iron filter backwash from cleaning the system is discharged into a seepage cell system. The backwash is conveyed into either the south seepage bed (Outfall 001) or the north seepage bed (Outfall 002). The RO reject water and cooling tower blowdown are mixed together before being discharged into the north infiltration basin (Outfall 003). When the water level within the north infiltration basin gets too high, effluent overflows into the south infiltration basin (Outfall 005). The seepage cell system is monitored by a series of groundwater monitoring wells MW-1 through MW-6. Changes in monitoring and/or limits from the previous permit include: 1) new groundwater well limits for organic nitrogen, total dissolved solids, chemical oxygen demand (COD), 2) lower groundwater well pH limit range, 3) exemption of groundwater well limits for iron and manganese per NR 140.28 Wis. Adm. Code, 4) MW-7 was determined to not be needed and therefore not constructed and dropped from the permit, 5) a new nitrogen reduction study requirement, and 6) a requirement for a land treatment management plan per NR 214.12(5)(b) Wis. Adm. Code.

Substantial Compliance Determination

Enforcement During Last Permit: No enforcement actions were taken during the last permit term.
After a desk top review of all: discharge monitoring reports, and a site visit on 7/02/2024, this facility has been found to be in substantial compliance with their current permit.
Compliance determination made by Michael Chang on 7/02/2024.

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)**
001	No flow during 2023.	Iron filter backwash into the south seepage beds
002	~23,500 gpd during 2023.	Iron filter backwash into the north seepage beds
003	~64,000 gpd during 2023.	Noncontact cooling tower blowdown and RO reject water into the north infiltration basin
005	No flow during 2023.	Overflow from the north infiltration into the south infiltration basin.

Groundwater Well Sample Point Descriptions

Sample Point Designation For Groundwater Monitoring Systems			
System	**Sample Pt Number**	**Well Name**	**Comments**
Filter backwash seepage beds	801	MW-1	Down-gradient, Non-Point of Standard
Filter backwash seepage beds	802	MW-2	Up-gradient, Background
Filter backwash seepage beds	803	MW-3	Down-gradient, Point of Standard
NCCT blowdown and RO reject basins	804	MW-4	Down-gradient, Non-Point of Standard
NCCT blowdown and RO reject basins	805	MW-5	Up-gradient, Background
NCCT blowdown and RO reject basins	806	MW-6	Down-gradient, Non-Point of Standard

1 Land Treatment – Monitoring and Limitations

1.1 Sample Point Number: 001- South Seepage Beds; 002- North Seepage Beds

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		gpd	Daily	Calculated	
Chloride		mg/L	Quarterly	Grab	
Nitrogen, Nitrite + Nitrate Total		mg/L	Quarterly	Grab	
Nitrogen, Ammonia (NH3-N) Total		mg/L	Quarterly	Grab	
Nitrogen, Organic Total		mg/L	Quarterly	Grab	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Nitrogen, Total Kjeldahl		mg/L	Quarterly	Grab	
pH Field		su	Quarterly	Grab	
Solids, Total Dissolved		mg/L	Quarterly	Grab	
Iron, Total Recoverable		mg/L	Quarterly	Grab	
Manganese, Total Recoverable		ug/L	Quarterly	Grab	
COD		mg/L	Quarterly	Grab	

1.1.1 Changes from Previous Permit:

No changes.

1.1.2 Explanation of Limits and Monitoring Requirements

Flow and loading time monitoring are required to determine compliance with par NR 214.12(4)(a), Wis. Adm. Code, which requires total daily discharge monitoring and par. NR 214.12(5)(a), Wis. Adm. Code, which requires the loading to be intermittent to maintain the absorptive capacity of the soil. The same monitoring is being required for both the effluent and groundwater. Departmental authority to monitor parameters in the discharge to the pond system comes from par. NR 214.12(4)(b), Wis. Adm. Code.
More information on the limitations can be found in the **Groundwater Evaluation Report by Woody Myers, dated November 8, 2024**.

1.2 Sample Point Number: 003- North Infiltration Basin

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		gpd	Daily	Continuous	
Chloride		mg/L	Quarterly	Grab	
Nitrogen, Nitrite + Nitrate Total		mg/L	Quarterly	Grab	
Nitrogen, Ammonia (NH3-N) Total		mg/L	Quarterly	Grab	
Nitrogen, Organic Total		mg/L	Quarterly	Grab	
Nitrogen, Total Kjeldahl		mg/L	Quarterly	Grab	
pH Field		su	Quarterly	Grab	
Solids, Total Dissolved		mg/L	Quarterly	Grab	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Iron, Total Recoverable		ug/L	Quarterly	Grab	
Manganese, Total Recoverable		ug/L	Quarterly	Grab	
COD		mg/L	Quarterly	Grab	

1.2.1 Changes from Previous Permit:

No changes.

1.2.2 Explanation of Limits and Monitoring Requirements

Flow and loading time monitoring are required to determine compliance with par NR 214.12(4)(a), Wis. Adm. Code, which requires total daily discharge monitoring and par. NR 214.12(5)(a), Wis. Adm. Code, which requires the loading to be intermittent to maintain the absorptive capacity of the soil. The same monitoring is being required for both the effluent and groundwater. Departmental authority to monitor parameters in the discharge to the pond system comes from par. NR 214.12(4)(b), Wis. Adm. Code.
More information on the limitations can be found in the Groundwater Evaluation Report by Woody Myers, dated November 8, 2024.

1.3 Sample Point Number: 005- South Infiltration Basin

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		gpd	Daily	Calculated	

1.3.1 Changes from Previous Permit:

No changes.

1.3.2 Explanation of Limits and Monitoring Requirements

Par. NR 214.12(4)(a), Wis. Adm. Code, requires that the discharge to each cell be monitored for total daily discharge.
More information on the limitations can be found in the Groundwater Evaluation Report by Woody Myers, dated November 8, 2024.

2 Groundwater – Monitoring and Limitations

2.1 Groundwater Monitoring System for Filter backwash seepage beds

Location of Monitoring system: Filter backwash seepage beds

Groundwater Monitoring Well(s) to be Sampled: MW-1, MW-2, MW-3

Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality: MW-1

Groundwater Monitoring Well(s) Used for Point of Standards Application: MW-3

Parameter	Units	Preventative Action Limit	Enforcement Standard	Frequency
Depth To Groundwater	feet	N/A	N/A	Quarterly
Groundwater Elevation	feet	N/A	N/A	Quarterly
Chloride Dissolved	mg/L	125	250	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	2.0	10	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Organic Dissolved	mg/L	2.3	N/A	Quarterly
Nitrogen, Total Kjeldahl Dissolved	mg/L	N/A	N/A	Quarterly
pH Field	su	8.0	N/A	Quarterly
Solids, Total Dissolved	mg/L	240	N/A	Quarterly
Iron Dissolved	mg/L	N/A	N/A	Quarterly
Manganese Dissolved	ug/L	N/A	N/A	Quarterly
COD	mg/L	26	N/A	Quarterly

2.1.1 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. 1) new groundwater well limits for organic nitrogen, total dissolved solids, chemical oxygen demand (COD), 2) lower groundwater well pH limit range, 3) exemption of groundwater well limits for iron and manganese per NR 140.28 Wis. Adm. Code, and 4) MW-7 was determined to not be needed and therefore not constructed and dropped from the permit.

2.1.2 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.
More information on the limitations can be found in the Groundwater Evaluation Report by Woody Myers, dated November 8, 2024.

2.2 Groundwater Monitoring System for NCCT blowdown and RO reject basins

Location of Monitoring system: North and south infiltration basins

Groundwater Monitoring Well(s) to be Sampled: MW-4, MW-5, MW-6

Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality: MW-5

Groundwater Monitoring Well(s) Used for Point of Standards Application: None

Parameter	Units	Preventative Action Limit	Enforcement Standard	Frequency
Depth To Groundwater	feet	N/A	N/A	Quarterly
Groundwater Elevation	feet	N/A	N/A	Quarterly
Chloride Dissolved	mg/L	125	250	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	2.0	10	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Organic Dissolved	mg/L	2.3	N/A	Quarterly
Nitrogen, Total Kjeldahl Dissolved	mg/L	N/A	N/A	Quarterly
pH Field	su	8.0	N/A	Quarterly
Solids, Total Dissolved	mg/L	240	N/A	Quarterly
Iron Dissolved	mg/L	N/A	N/A	Quarterly
Manganese Dissolved	ug/L	N/A	N/A	Quarterly
COD	mg/L	26	N/A	Quarterly

2.2.1 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. 1) new groundwater well limits for organic nitrogen, total dissolved solids, chemical oxygen demand (COD), 2) lower groundwater well pH limit range, 3) exemption of groundwater well limits for iron and manganese per NR 140.28 Wis. Adm. Code, and 4) MW-7 was determined to not be needed and therefore not constructed and dropped from the permit.

2.2.2 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.
More information on the limitations can be found in the Groundwater Evaluation Report by Woody Myers, dated November 8, 2024.

3 Schedules

3.1 Land Treatment Management Plan

A management plan is required for the land treatment system.

Required Action	Due Date
Land Treatment Management Plan: Submit management plan to optimize the land treatment system performance and demonstrate compliance with Wisconsin Administrative Code NR 214. The groundwater monitoring well latitude/longitude need to be provided in decimal degrees as part of the plan.	07/31/2025

3.1.1 Explanation of Schedule

Land Treatment Management Plan (industrial)- An up-to-date Land Treatment Management plan is a standard requirement in reissued industrial permits per ch. NR 214, Wis. Adm. Code.

3.2 Nitrogen Reduction Plan

Required Action	Due Date
Submit Plan: Submit a nitrogen (nitrite + nitrate) reduction plan for the facility.	03/31/2026

3.2.1 Explanation of Schedule

Nitrogen reduction plan – needed to assess nitrogen reduction efforts.

Other Comments

None

Attachments

NR 140 Groundwater Evaluation Report - by Woody Myers, dated November 8, 2024.

Public Notice - Juneau County Star Times, PO Box 220, Mauston, WI 53948

Justification Of Any Waivers From Permit Application Requirements

N/A

Prepared By: Angela Parkhurst Wastewater Specialist Date: 02/06/2025

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: November 8, 2024

TO: File

FROM: Woody Myers - WCR

SUBJECT: Groundwater Evaluation Report for United Energy Necedah, LLC WI-0066508

Site Information

United Energy Necedah, LLC. (formerly Marquis Energy) is regulated as an industrial facility and is located at N9589 STR 80, Necedah, Juneau County. The facility produces ethanol with Dried Distillers' Grains and Corn Oil as byproducts. Wastewater generated consists of iron filter backwash, cooling tower blowdown, and RO reject water. The Wastewater is currently discharged to groundwater via infiltration by way of absorption ponds traditional and modified (seepage beds) located in the E ½ of the NE ¼ of Section 36, T18N, R03E, Town of Necedah.

Land Treatment Effluent & Groundwater Evaluation Summary

Table 1 Land Treatment Outfall Sampling Point Parameters and Limits
Outfall 001 South Seepage Beds and Outfall 002 North Seepage Beds/ Absorption Pond

	Current Permit WI-0066508-01-1		Proposed Permit WI-0066508-02	
Parameter	Limits and Units	Limit Type	Limits and Units	Limit Type
Flow Rate	- gpd		- gpd	
Chloride	- 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 Kjeldahl	- mg/l		- mg/l	
pH, Field	- su		- su	
Total Dissolved Solids	- mg/l		- mg/l	
Iron, Total Recoverable	- mg/l		- mg/l	
Manganese, Total Recoverable	- mg/l		- mg/l	
COD	- mg/l		- mg/l	

No proposed permit changes

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Table 2 Land Treatment Outfall Sampling Point Parameters and Limits
Outfall 003 North Infiltration Basin / Absorption Pond

Parameter	Current Permit WI-0066508-01-1		Proposed Permit WI-0066508-02	
	Limits and Units	Limit Type	Limits and Units	Limit Type
Flow Rate	- gpd		- gpd	
Total Dissolved Solids	- mg/l		- mg/l	
Nitrogen. Ammonia	- mg/l		- mg/l	
Nitrogen, Nitrite + Nitrate	- mg/l		- mg/l	
*Nitrogen, Organic	- mg/l		- mg/l	
*Nitrogen, Total Kjeldahl	- mg/l		- mg/l	
Chloride	- mg/l		- mg/l	
pH, Field	- su		- su	
Iron, Total Recoverable	- mg/l		- mg/l	
Manganese, Total Recoverable	- mg/l		- mg/l	
COD	- mg/l		- mg/l	

No proposed permit changes

Table 3 Land Treatment Outfall Sampling Point Parameters and Limits
Outfall 005 South Infiltration Basin / Absorption Pond

Parameter	Current Permit WI-0066508-01-1		Proposed Permit WI-0066508-02	
	Limits and Units	Limit Type	Limits and Units	Limit Type
Flow Rate	- gpd		- gpd	

No proposed permit changes

Table 4 Monitoring Wells

Well	Current Permit WI-0066508-01-1		Proposed Permit WI-0066508-02	
	Well Location	Well Designation	Well Location	Well Designation
801 MW-1	Not Determined		***Down-gradient**	***Non-Point of Standard**
802 MW-2	Not Determined		***Up-gradient**	***Background**
803 MW-3	Not Determined		***Down-gradient**	***Point of Standard**
804 MW-4	Not Determined		***Down-gradient**	***Non-Point of Standard**
805 MW-5	Not Determined		***Up-gradient**	***Background**
806 MW-6	Not Determined		***Down-gradient**	***Non-Point of Standard**
807 MW-7	Not Determined		****Not Constructed**	

* Proposed permit changes

** Groundwater monitoring well 807 (MW-7) has not been installed and is not needed. It can be deleted from the list of wells.

Table 5 Groundwater Quality Standards - Filter Backwash Beds

Parameter	Current Permit WI-0066508-01-1		Proposed WI-0066508-02	
	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
Chloride	125 mg/l	250 mg/l	125 mg/l	250 mg/l
Nitrogen, Nitrite + Nitrate	2.0 mg/l	10.0 mg/l	2.0 mg/l	10.0 mg/l
Nitrogen, Ammonia	0.97 mg/l	9.7 mg/l	0.97 mg/l	9.7 mg/l
Nitrogen, Organic	- mg/l	N/A	***2.3** mg/l	N/A
Nitrogen Total Kjeldahl	N/A	N/A	N/A	N/A
pH, Field	5.0-9.0 su	N/A	***6.0-8.0** su	N/A
Total Dissolved Solids	820 mg/l	N/A	***240** mg/l	N/A
Iron, Dissolved	0.15 mg/l	0.3 mg/l	***Exempt**	
Manganese, Dissolved	60 µg/l	300 µg/l	***Exempt**	
COD	N/A	N/A	***26** mg/l	N/A

* Proposed permit changes

Table 6 Groundwater Quality Standards NCCW Blowdown and RO Reject Basins

Parameter	Current Permit WI-0066508-01-1		Proposed WI-0066508-02	
	PAL	ES	PAL	ES
Depth to Groundwater	N/A	N/A	Parameters and Limits consolidated for both systems – See Table 10	
Groundwater Elevation	N/A	N/A		
Chloride	125 mg/l	250 mg/l		
Nitrogen, Nitrite + Nitrate	2.0 mg/l	10.0 mg/l		
Nitrogen, Ammonia	0.97 mg/l	9.7 mg/l		
Nitrogen, Organic	- mg/l	N/A		
Nitrogen Total Kjeldahl	N/A	N/A		
pH, Field	5.0-9.0 su	N/A		
Total Dissolved Solids	820 mg/l	N/A		
Iron, Dissolved	0.15 mg/l	0.3 mg/l		
Manganese, Dissolved	60 µg/l	0.3 mg/l		
COD	N/A	N/A		

* Proposed permit changes

Geology

The bedrock under this facility is the undivided Trempealeau, Tunnel City and Elk Mound Groups. The Trempealeau Group includes the Jordan and St. Lawrence Formations, the Tunnel City Group includes the Lone Rock Formation, and the Elk Mound Group includes the Wonewoc, Eau Claire and Mount Simon Formations. These groups are comprised of sandstone with minor occurrences of dolomite (*Bedrock Geologic Map of Wisconsin*, Wisconsin Geological and Natural History Survey (WGNHS), 1982). Bedrock is anticipated to be between 100 and 200 feet below ground surface (bgs) (*Depth to Bedrock in Wisconsin,* WGNHS, 1973). The regolith consists of material ranging from coarse sand to silt. Surface soil primarily consists of the Majik, Cool-Pony Creek Complex (USDA NRCS Web Soil Survey).

Hydrogeology

Calculated groundwater elevation ranges between 890 and 895 feet above mean sea level (msl). Depth to groundwater was reported to be between 8 and 15 feet bgs. The groundwater flow direction was calculated to be predominantly to the east. Regional groundwater flow is to the east in this area of Juneau County (*Water Table Elevation*, Map, WGNHS, 1981). The site is approximately 4,600 feet west of Yellow River. There are eight wells (municipal, other than municipal, private and high-capacity) within a 1,500-foot range of this facility's groundwater discharge.

Land Treatment Effluent Quality and Loading Rates

The following tables are the average flow (hydraulic loading), total manganese, total iron and nitrate + nitrate loading summations for the land treatment systems.

Table 7 Land Treatment Loading Averages
Outfall 002

Year	Flow (gpd)	Manganese (µg/l)	Iron (µg/l)	Nitrite + Nitrate (mg/l)
2024#	26,431	270.0	5.1	0.62
2023	23,417	359.3	6.0	0.76
2022	15,023	198.0	3.0	0.71
2021	29,089	590.0	6.9	0.75

# Indicates partial year

Table 8 Land Treatment Loading Averages
Outfall 003

Year	Flow (gpd)	Manganese (µg/l)	Iron (µg/l)	Nitrite + Nitrate (mg/l)
2024#	62,928	13.4	116.8	2.73
2023	64,062	13.0	240.1	3.53
2022	64,442	6.3	107.5	3.85
2021	69,403	98.7	473.3	1.88

# Indicates partial year

Groundwater Monitoring System and Sampling Frequency

Groundwater samples were collected quarterly from all of the wells. All of the groundwater sampling parameters were analyzed for the dissolved phase in groundwater. Established groundwater quality standards are found in Table 1 Public Health Groundwater Quality Standards s. NR 140.10 Wis. Adm. Code, and Table 2 Public Welfare 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 9 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	MW-1	903.46	901.4	893.4	883.4	10.0	18.5	WT
802	MW-2	902.94	900.7	897.7	887.7	10.0	13.5	WT
803	MW-3	905.15	903.3	895.3	885.3	10.0	18.5	WT
804	MW-4	904.96	902.2	898.2	888.2	10.0	15.0	WT
805	MW-5	901.93	899.1	894.8	884.8	10.0	15.0	WT
806	MW-6	901.90	899.1	895.8	885.8	10.0	14.0	WT
807	MW-7	**Not Constructed**						

All measurements in feet
WT-Water table Observation P-Piezometer O-Other

Effluent Quality

The effluent is expected to be high in manganese (Mn) and iron (Fe) given the discharge is a filter backwash for Mn/Fe. The nitrite + nitrate is slightly elevated compared to the groundwater quality standard for this compound. The effluent trends for Outfall 002 were stable and the effluent trends for Outfall 003 were erratic.

Groundwater Sampling Results

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 June 30, 2020 – May 8, 2024.

Background Groundwater Quality

There are two background groundwater monitoring wells associated with the land treatment systems. Well 802 (MW-2) was used to calculate the indicator parameter PALs and ACLs because the results were the higher of the two wells. There were no significantly elevated sample results in the background results.

Down-gradient Groundwater Quality

The three compounds with exceedances in the down-gradient well samples are Mn, Fe and nitrite + nitrate. The source of the Mn/Fe is native from the local aquifer. It is removed through filtration and is discharged as filter backwash. The mass of these compounds does not change, although it appears to be concentrated due to the filtering process. There is nitrite + nitrate observed in the down-gradient groundwater samples. There are no ES exceedances. Nitrite + nitrate is observed frequently in wells 801, 803 and 804 and the trends are overall stable.

Land Treatment System Impact to Groundwater Quality

Concentrations and trends in the groundwater monitoring data were compared to the loading data for the land treatment system. There is a direct correlation between the effluent loading levels and the groundwater monitoring results.

Proposed Groundwater Monitoring Requirements Permit WI-0066508-02

Table 10 Groundwater Quality Sampling Frequency and Limits
Filter Backwash Beds and North and South Infiltration Basins, All Wells

Sample Point	Well Name	Sample Frequency	Well Designation
801	MW-1	Quarterly	*Background
802	MW-2	Quarterly	*Non-Point of Standard
803	MW-3	Quarterly	*Point of Standard
804	MW-4	Quarterly	*Non-Point of Standard
805	MW-5	Quarterly	*Background
806	MW-6	Quarterly	*Non-Point of Standard
Parameter	PAL	ES	Source
Depth to Groundwater	N/A	N/A	Measured
Groundwater Elevation	N/A	N/A	Measured
Chloride	125 mg/l	250 mg/l	NR 140 Table 2
Nitrogen, Nitrite + Nitrate	2.0 mg/l	10.0 mg/l	NR 140 Table 1
Nitrogen, Ammonia	0.97 mg/l	9.7 mg/l	NR 140 Table 1
Nitrogen, Organic	***2.3** mg/l	N/A	Calculated
Nitrogen, Kjeldahl	N/A	N/A	Measured
pH, Field	***6.0-8.0** su	N/A	Calculated
Total Dissolved Solids	***240** mg/l	N/A	Calculated
Iron, Dissolved	***Exempt**		
Manganese, Dissolved	***Exempt**		
COD	***26** 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 were no changes in the land treatment effluent sampling parameters or limits for existing parameters.

The groundwater monitoring well systems were combined using 802 as the primary background well for calculation of the indicator parameter PALs and ACLs.

Groundwater monitoring well 807 (MW-7) was listed on the previous permit as a potential need. However, the well has not been installed and is not needed. It can be deleted from the list of required groundwater monitoring points.

A s. NR 140.28 Wis. Adm. Code exemption has been granted for the compounds of manganese and iron. The exemption is conditional. The exemption is only for the groundwater monitoring wells associated with this facility and that the discharge adds no additional sources of these compounds other than the Mn/Fe from the local aquifer. The exemption will be re-evaluated during the next permit reissuance.

Indicator parameter PALs were calculated based on the background groundwater sampling results. The compounds: are organic nitrogen, TDS and COD. A pH range was calculated based on the background groundwater sampling results.

Ground water monitoring well 803, a point of standards application well, had frequent PAL exceedances of nitrite + nitrate. These down-gradient results were not observed in the background groundwater samples. The facility should identify the source of the nitrite + nitrate in the effluent and investigate options to reduce these compounds as a s. NR 140.24 Wis. Adm. Code response action.

Compliance Schedule Recommendations

The facility should perform a nitrogen (nitrite + nitrate) reduction plan for the facility within one year of the permit reissuance.

The s. NR 214.12 (5)(b) 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.

The groundwater monitoring well latitude/longitude need to be provided in decimal degrees. These should be provided to the department within 90 days after the permit reissuance.

APPENDIX

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

well	param	parm_unit_	sample_date	resu	result_amt
801 MW-1	Chloride Dissolved	mg/L	06/30/2020		1.2
801 MW-1	Chloride Dissolved	mg/L	09/29/2020		1.2
801 MW-1	Chloride Dissolved	mg/L	12/15/2020		0.77
801 MW-1	Chloride Dissolved	mg/L	03/24/2021		1.1
801 MW-1	Chloride Dissolved	mg/L	06/10/2021		1.2
801 MW-1	Chloride Dissolved	mg/L	09/17/2021		2.6
801 MW-1	Chloride Dissolved	mg/L	11/18/2021		4.3
801 MW-1	Chloride Dissolved	mg/L	02/08/2022		5
801 MW-1	Chloride Dissolved	mg/L	04/05/2022		5.7
801 MW-1	Chloride Dissolved	mg/L	08/18/2022		4.5
801 MW-1	Chloride Dissolved	mg/L	11/17/2022		5.1
801 MW-1	Chloride Dissolved	mg/L	03/01/2023		4.7
801 MW-1	Chloride Dissolved	mg/L	05/30/2023		10
801 MW-1	Chloride Dissolved	mg/L	08/01/2023		2.9
801 MW-1	Chloride Dissolved	mg/L	11/09/2023		3.3
801 MW-1	Chloride Dissolved	mg/L	02/06/2024		2.5
801 MW-1	Chloride Dissolved	mg/L	05/08/2024		4.6
801 MW-1	COD	mg/L	06/30/2020		29
801 MW-1	COD	mg/L	09/29/2020	<	15.5
801 MW-1	COD	mg/L	12/15/2020		17.9
801 MW-1	COD	mg/L	03/24/2021	<	15.5
801 MW-1	COD	mg/L	06/10/2021	<	14.7
801 MW-1	COD	mg/L	09/17/2021		46.3
801 MW-1	COD	mg/L	11/18/2021	<	15.5
801 MW-1	COD	mg/L	02/08/2022	<	15.5
801 MW-1	COD	mg/L	04/05/2022		14.9
801 MW-1	COD	mg/L	08/18/2022		19.3
801 MW-1	COD	mg/L	11/17/2022		17.8
801 MW-1	COD	mg/L	03/01/2023		29.9
801 MW-1	COD	mg/L	05/30/2023	<	18
801 MW-1	COD	mg/L	08/01/2023	<	18
801 MW-1	COD	mg/L	11/09/2023	<	18
801 MW-1	COD	mg/L	02/06/2024	<	18
801 MW-1	COD	mg/L	05/08/2024	<	18

well		param	parm_unit_	sample_date	resu	result_amt
801	MW-1	Iron Dissolved	mg/L	06/30/2020	<	0.035
801	MW-1	Iron Dissolved	mg/L	09/29/2020	<	0.057
801	MW-1	Iron Dissolved	mg/L	12/15/2020	<	0.057
801	MW-1	Iron Dissolved	mg/L	03/24/2021	<	0.057
801	MW-1	Iron Dissolved	mg/L	06/10/2021	<	0.057
801	MW-1	Iron Dissolved	mg/L	09/17/2021	<	0.057
801	MW-1	Iron Dissolved	mg/L	11/18/2021	<	0.057
801	MW-1	Iron Dissolved	mg/L	02/08/2022	<	0.057
801	MW-1	Iron Dissolved	mg/L	04/05/2022	<	0.057
801	MW-1	Iron Dissolved	mg/L	08/18/2022	<	0.057
801	MW-1	Iron Dissolved	mg/L	11/17/2022	<	0.057
801	MW-1	Iron Dissolved	mg/L	03/01/2023	<	0.057
801	MW-1	Iron Dissolved	mg/L	05/30/2023		0.319
801	MW-1	Iron Dissolved	mg/L	08/01/2023	<	0.025
801	MW-1	Iron Dissolved	mg/L	11/09/2023		0.551
801	MW-1	Iron Dissolved	mg/L	02/06/2024	<	0.025
801	MW-1	Iron Dissolved	mg/L	05/08/2024	<	0.025
801	MW-1	Manganese Dissolved	ug/L	06/30/2020		22.3
801	MW-1	Manganese Dissolved	ug/L	09/29/2020		42.9
801	MW-1	Manganese Dissolved	ug/L	12/15/2020		31.3
801	MW-1	Manganese Dissolved	ug/L	03/24/2021		30.7
801	MW-1	Manganese Dissolved	ug/L	06/10/2021		31.5
801	MW-1	Manganese Dissolved	ug/L	09/17/2021		35.2
801	MW-1	Manganese Dissolved	ug/L	11/18/2021		18.4
801	MW-1	Manganese Dissolved	ug/L	02/08/2022		10
801	MW-1	Manganese Dissolved	ug/L	04/05/2022		14.8
801	MW-1	Manganese Dissolved	ug/L	08/18/2022		19.2
801	MW-1	Manganese Dissolved	ug/L	11/17/2022		13
801	MW-1	Manganese Dissolved	ug/L	03/01/2023		8.9
801	MW-1	Manganese Dissolved	ug/L	05/30/2023		26.3
801	MW-1	Manganese Dissolved	ug/L	08/01/2023		12.2
801	MW-1	Manganese Dissolved	ug/L	11/09/2023		12.9
801	MW-1	Manganese Dissolved	ug/L	02/06/2024		12.4
801	MW-1	Manganese Dissolved	ug/L	05/08/2024		15.2

well		param	parm_unit_	sample_date	resu	result_amt
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	06/30/2020	<	0.26
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	09/29/2020	<	0.26
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	12/15/2020	<	0.26
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	03/24/2021	<	0.14
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	06/10/2021	<	0.14
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	09/17/2021	<	0.14
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	11/18/2021	<	0.14
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	02/08/2022	<	0.14
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	04/05/2022	<	0.14
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	08/18/2022	<	0.14
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	11/17/2022	<	0.14
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	03/01/2023	<	0.14
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	05/30/2023	<	0.13
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	08/01/2023	<	0.13
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	11/09/2023	<	0.13
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	02/06/2024	<	0.13
801	MW-1	Nitrogen, Ammonia Dissolved	mg/L	05/08/2024	<	0.13
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	06/30/2020	<	0.21
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	09/29/2020	<	0.21
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	12/15/2020	<	0.21
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	03/24/2021	<	0.21
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	06/10/2021		0.28
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	09/17/2021		0.25
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/18/2021	<	0.21
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	02/08/2022	<	0.21
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	04/05/2022	<	0.21
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	08/18/2022	<	0.21
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/17/2022	<	0.21
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	03/01/2023	<	0.21
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	05/30/2023	<	0.39
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	08/01/2023	<	0.39
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/09/2023	<	0.39
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	02/06/2024	<	0.39
801	MW-1	Nitrogen, Total Kjeldahl Dissolved	mg/L	05/08/2024	<	0.39

well		param	parm_unit_	sample_date	resu	result_amt
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/30/2020		2.6
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/29/2020		5
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	12/15/2020		2.6
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/24/2021		4.4
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/10/2021		3.8
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/17/2021		3.9
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/18/2021		0.99
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	02/08/2022		2
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	04/05/2022		2
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	08/18/2022		3.1
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/17/2022		2
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/01/2023		3
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	05/30/2023		5.8
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	08/01/2023		3.3
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/09/2023		3.8
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	02/06/2024		5.3
801	MW-1	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	05/08/2024		2.8
801	MW-1	Nitrogen, Organic Dissolved	mg/L	06/30/2020	<	0.21
801	MW-1	Nitrogen, Organic Dissolved	mg/L	09/29/2020	<	0.21
801	MW-1	Nitrogen, Organic Dissolved	mg/L	12/15/2020	<	0.21
801	MW-1	Nitrogen, Organic Dissolved	mg/L	03/24/2021	<	0.21
801	MW-1	Nitrogen, Organic Dissolved	mg/L	06/10/2021		0.28
801	MW-1	Nitrogen, Organic Dissolved	mg/L	09/17/2021		0.25
801	MW-1	Nitrogen, Organic Dissolved	mg/L	11/18/2021	<	0.21
801	MW-1	Nitrogen, Organic Dissolved	mg/L	02/08/2022	<	0.21
801	MW-1	Nitrogen, Organic Dissolved	mg/L	04/05/2022	<	0.21
801	MW-1	Nitrogen, Organic Dissolved	mg/L	08/18/2022	<	0.21
801	MW-1	Nitrogen, Organic Dissolved	mg/L	11/17/2022	<	0.21
801	MW-1	Nitrogen, Organic Dissolved	mg/L	03/01/2023	<	0.21
801	MW-1	Nitrogen, Organic Dissolved	mg/L	05/30/2023	<	0.39
801	MW-1	Nitrogen, Organic Dissolved	mg/L	08/01/2023	<	0.39
801	MW-1	Nitrogen, Organic Dissolved	mg/L	11/09/2023	<	0.39
801	MW-1	Nitrogen, Organic Dissolved	mg/L	02/06/2024	<	0.39
801	MW-1	Nitrogen, Organic Dissolved	mg/L	05/08/2024	<	0.39

well	param	parm_unit_	sample_date	resu	result_amt
801 MW-1	pH Field	su	06/30/2020		5.59
801 MW-1	pH Field	su	09/29/2020		4.85
801 MW-1	pH Field	su	12/15/2020		5.2
801 MW-1	pH Field	su	03/24/2021		5.094
801 MW-1	pH Field	su	06/10/2021		9.41
801 MW-1	pH Field	su	09/17/2021		5.49
801 MW-1	pH Field	su	11/18/2021		5.51
801 MW-1	pH Field	su	02/08/2022		6.58
801 MW-1	pH Field	su	04/05/2022		4.73
801 MW-1	pH Field	su	08/18/2022		5.35
801 MW-1	pH Field	su	11/17/2022		5.46
801 MW-1	pH Field	su	03/01/2023		5.06
801 MW-1	pH Field	su	05/30/2023		5.87
801 MW-1	pH Field	su	08/01/2023		5.27
801 MW-1	pH Field	su	11/09/2023		5.87
801 MW-1	pH Field	su	02/06/2024		6.1
801 MW-1	pH Field	su	05/08/2024		6.25

801 MW-1	Solids, Total Dissolved	mg/L	06/30/2020		52
801 MW-1	Solids, Total Dissolved	mg/L	09/29/2020		196
801 MW-1	Solids, Total Dissolved	mg/L	12/15/2020		64
801 MW-1	Solids, Total Dissolved	mg/L	03/24/2021		54
801 MW-1	Solids, Total Dissolved	mg/L	06/10/2021		86
801 MW-1	Solids, Total Dissolved	mg/L	09/17/2021		42
801 MW-1	Solids, Total Dissolved	mg/L	11/18/2021		60
801 MW-1	Solids, Total Dissolved	mg/L	02/08/2022		56
801 MW-1	Solids, Total Dissolved	mg/L	04/05/2022		74
801 MW-1	Solids, Total Dissolved	mg/L	08/18/2022		70
801 MW-1	Solids, Total Dissolved	mg/L	11/17/2022		64
801 MW-1	Solids, Total Dissolved	mg/L	03/01/2023		112
801 MW-1	Solids, Total Dissolved	mg/L	05/30/2023		56
801 MW-1	Solids, Total Dissolved	mg/L	08/01/2023		29
801 MW-1	Solids, Total Dissolved	mg/L	11/09/2023		190
801 MW-1	Solids, Total Dissolved	mg/L	02/06/2024		54
801 MW-1	Solids, Total Dissolved	mg/L	05/08/2024		26

well		param	parm_unit_	sample_date	resu	result_amt
802	MW-2	Chloride Dissolved	mg/L	06/30/2020		1.1
802	MW-2	Chloride Dissolved	mg/L	09/29/2020		1.3
802	MW-2	Chloride Dissolved	mg/L	12/15/2020		1
802	MW-2	Chloride Dissolved	mg/L	03/24/2021		0.81
802	MW-2	Chloride Dissolved	mg/L	06/10/2021		2.3
802	MW-2	Chloride Dissolved	mg/L	09/17/2021		0.48
802	MW-2	Chloride Dissolved	mg/L	11/18/2021		1.3
802	MW-2	Chloride Dissolved	mg/L	02/08/2022		0.53
802	MW-2	Chloride Dissolved	mg/L	04/05/2022		0.98
802	MW-2	Chloride Dissolved	mg/L	08/18/2022		0.8
802	MW-2	Chloride Dissolved	mg/L	11/17/2022		1.5
802	MW-2	Chloride Dissolved	mg/L	03/01/2023		0.93
802	MW-2	Chloride Dissolved	mg/L	05/30/2023		1.1
802	MW-2	Chloride Dissolved	mg/L	08/01/2023		1.1
802	MW-2	Chloride Dissolved	mg/L	11/09/2023		1.1
802	MW-2	Chloride Dissolved	mg/L	02/06/2024		1
802	MW-2	Chloride Dissolved	mg/L	05/08/2024		1.1
				Mean		1.084118
				Standard Dev		0.392759
802	MW-2	COD	mg/L	06/30/2020		46.2
802	MW-2	COD	mg/L	09/29/2020		64.5
802	MW-2	COD	mg/L	12/15/2020		34.4
802	MW-2	COD	mg/L	03/24/2021		43.9
802	MW-2	COD	mg/L	06/10/2021		21.5
802	MW-2	COD	mg/L	09/17/2021		32.7
802	MW-2	COD	mg/L	11/18/2021		23.7
802	MW-2	COD	mg/L	02/08/2022		41.3
802	MW-2	COD	mg/L	04/05/2022		29.6
802	MW-2	COD	mg/L	08/18/2022		41.3
802	MW-2	COD	mg/L	11/17/2022	<	14.7
802	MW-2	COD	mg/L	03/01/2023	<	14.7
802	MW-2	COD	mg/L	05/30/2023	<	18
802	MW-2	COD	mg/L	08/01/2023	<	18
802	MW-2	COD	mg/L	11/09/2023	<	18
802	MW-2	COD	mg/L	02/06/2024	<	18
802	MW-2	COD	mg/L	05/08/2024	<	18
				Mean		29.32353
				Standard Dev		13.76361

well		param	parm_unit_	sample_date	resu	result_amt
802	MW-2	Iron Dissolved	mg/L	06/30/2020	<	0.035
802	MW-2	Iron Dissolved	mg/L	09/29/2020	<	0.057
802	MW-2	Iron Dissolved	mg/L	12/15/2020	<	0.057
802	MW-2	Iron Dissolved	mg/L	03/24/2021	<	0.057
802	MW-2	Iron Dissolved	mg/L	06/10/2021	<	0.057
802	MW-2	Iron Dissolved	mg/L	09/17/2021	<	0.057
802	MW-2	Iron Dissolved	mg/L	11/18/2021	<	0.057
802	MW-2	Iron Dissolved	mg/L	02/08/2022	<	0.057
802	MW-2	Iron Dissolved	mg/L	04/05/2022	<	0.057
802	MW-2	Iron Dissolved	mg/L	08/18/2022	<	0.057
802	MW-2	Iron Dissolved	mg/L	11/17/2022	<	0.057
802	MW-2	Iron Dissolved	mg/L	03/01/2023	<	0.057
802	MW-2	Iron Dissolved	mg/L	05/30/2023		0.046
802	MW-2	Iron Dissolved	mg/L	08/01/2023	<	0.025
802	MW-2	Iron Dissolved	mg/L	11/09/2023	<	0.025
802	MW-2	Iron Dissolved	mg/L	02/06/2024		0.398
802	MW-2	Iron Dissolved	mg/L	05/08/2024	<	0.025
				Mean		0.069471
				Standard Dev		0.083071

802	MW-2	Manganese Dissolved	ug/L	06/30/2020		5.2
802	MW-2	Manganese Dissolved	ug/L	09/29/2020		5.3
802	MW-2	Manganese Dissolved	ug/L	12/15/2020		5.6
802	MW-2	Manganese Dissolved	ug/L	03/24/2021		4.5
802	MW-2	Manganese Dissolved	ug/L	06/10/2021		5
802	MW-2	Manganese Dissolved	ug/L	09/17/2021		6.2
802	MW-2	Manganese Dissolved	ug/L	11/18/2021		6.2
802	MW-2	Manganese Dissolved	ug/L	02/08/2022		7
802	MW-2	Manganese Dissolved	ug/L	04/05/2022		7.6
802	MW-2	Manganese Dissolved	ug/L	08/18/2022		8.4
802	MW-2	Manganese Dissolved	ug/L	11/17/2022		7.3
802	MW-2	Manganese Dissolved	ug/L	03/01/2023		8.6
802	MW-2	Manganese Dissolved	ug/L	05/30/2023		8.9
802	MW-2	Manganese Dissolved	ug/L	08/01/2023		6.9
802	MW-2	Manganese Dissolved	ug/L	11/09/2023		8.4
802	MW-2	Manganese Dissolved	ug/L	02/06/2024		13.1
802	MW-2	Manganese Dissolved	ug/L	05/08/2024		9.5
				Mean		7.276471
				Standard Dev		2.062702

well		param	parm_unit_	sample_date	resu	result_amt
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	06/30/2020	<	0.26
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	09/29/2020	<	0.26
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	12/15/2020	<	0.26
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	03/24/2021	<	0.14
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	06/10/2021	<	0.14
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	09/17/2021	<	0.14
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	11/18/2021	<	0.14
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	02/08/2022	<	0.14
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	04/05/2022	<	0.14
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	08/18/2022	<	0.14
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	11/17/2022	<	0.14
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	03/01/2023	<	0.14
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	05/30/2023	<	0.13
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	08/01/2023	<	0.13
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	11/09/2023	<	0.13
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	02/06/2024	<	0.13
802	MW-2	Nitrogen, Ammonia Dissolved	mg/L	05/08/2024	<	0.13
				Mean		0.158235
				Standard Dev		0.047308
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	06/30/2020	<	0.21
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	09/29/2020	<	0.21
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	12/15/2020	<	0.21
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	03/24/2021	<	0.21
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	06/10/2021	<	0.21
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	09/17/2021	<	0.21
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/18/2021	<	0.21
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	02/08/2022	<	0.21
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	04/05/2022	<	0.21
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	08/18/2022	<	0.21
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/17/2022	<	0.21
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	03/01/2023	<	0.21
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	05/30/2023	<	0.39
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	08/01/2023	<	0.39
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/09/2023	<	0.39
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	02/06/2024	<	0.39
802	MW-2	Nitrogen, Total Kjeldahl Dissolved	mg/L	05/08/2024	<	0.39
				Mean		0.262941

well		param	parm_unit	sample_date	resu	result_amt
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/30/2020	<	0.059
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/29/2020		0.13
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	12/15/2020		0.11
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/24/2021		0.35
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/10/2021		0.11
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/17/2021		0.13
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/18/2021		0.16
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	02/08/2022		0.3
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	04/05/2022		0.34
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	08/18/2022		1.2
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/17/2022		0.2
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/01/2023		0.43
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	05/30/2023		0.68
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	08/01/2023		0.65
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/09/2023		0.59
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	02/06/2024		0.55
802	MW-2	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	05/08/2024		0.73
				Mean		0.395235
				Standard Dev		0.29634
802	MW-2	Nitrogen, Organic Dissolved	mg/L	06/30/2020	<	0.21
802	MW-2	Nitrogen, Organic Dissolved	mg/L	09/29/2020	<	0.21
802	MW-2	Nitrogen, Organic Dissolved	mg/L	12/15/2020	<	0.21
802	MW-2	Nitrogen, Organic Dissolved	mg/L	03/24/2021	<	0.21
802	MW-2	Nitrogen, Organic Dissolved	mg/L	06/10/2021	<	0.21
802	MW-2	Nitrogen, Organic Dissolved	mg/L	09/17/2021	<	0.21
802	MW-2	Nitrogen, Organic Dissolved	mg/L	11/18/2021	<	0.21
802	MW-2	Nitrogen, Organic Dissolved	mg/L	02/08/2022	<	0.21
802	MW-2	Nitrogen, Organic Dissolved	mg/L	04/05/2022	<	0.21
802	MW-2	Nitrogen, Organic Dissolved	mg/L	08/18/2022	<	0.21
802	MW-2	Nitrogen, Organic Dissolved	mg/L	11/17/2022	<	0.21
802	MW-2	Nitrogen, Organic Dissolved	mg/L	03/01/2023	<	0.21
802	MW-2	Nitrogen, Organic Dissolved	mg/L	05/30/2023	<	0.13
802	MW-2	Nitrogen, Organic Dissolved	mg/L	08/01/2023	<	0.39
802	MW-2	Nitrogen, Organic Dissolved	mg/L	11/09/2023	<	0.39
802	MW-2	Nitrogen, Organic Dissolved	mg/L	02/06/2024	<	0.39
802	MW-2	Nitrogen, Organic Dissolved	mg/L	05/08/2024	<	0.39
				Mean		0.247647
				Standard Dev		0.081134

well		param	parm_unit_	sample_date	resu	result_amt
802	MW-2	pH Field	su	06/30/2020		6.414
802	MW-2	pH Field	su	09/29/2020		6.87
802	MW-2	pH Field	su	12/15/2020		6.07
802	MW-2	pH Field	su	03/24/2021		5.38
802	MW-2	pH Field	su	06/10/2021		10.12
802	MW-2	pH Field	su	09/17/2021		5.36
802	MW-2	pH Field	su	11/18/2021		5.536
802	MW-2	pH Field	su	02/08/2022		4.61
802	MW-2	pH Field	su	04/05/2022		4.44
802	MW-2	pH Field	su	08/18/2022		5.89
802	MW-2	pH Field	su	11/17/2022		5.44
802	MW-2	pH Field	su	03/01/2023		4.77
802	MW-2	pH Field	su	05/30/2023		5.65
802	MW-2	pH Field	su	08/01/2023		5.64
802	MW-2	pH Field	su	11/09/2023		5.82
802	MW-2	pH Field	su	02/06/2024		5.97
802	MW-2	pH Field	su	05/08/2024		6.1
				Mean		5.887059

802	MW-2	Solids, Total Dissolved	mg/L	06/30/2020		38
802	MW-2	Solids, Total Dissolved	mg/L	09/29/2020		40
802	MW-2	Solids, Total Dissolved	mg/L	12/15/2020		46
802	MW-2	Solids, Total Dissolved	mg/L	03/24/2021		22
802	MW-2	Solids, Total Dissolved	mg/L	06/10/2021		26
802	MW-2	Solids, Total Dissolved	mg/L	09/17/2021	<	8.7
802	MW-2	Solids, Total Dissolved	mg/L	11/18/2021		40
802	MW-2	Solids, Total Dissolved	mg/L	02/08/2022	<	8.7
802	MW-2	Solids, Total Dissolved	mg/L	04/05/2022		28
802	MW-2	Solids, Total Dissolved	mg/L	08/18/2022		20
802	MW-2	Solids, Total Dissolved	mg/L	11/17/2022		36
802	MW-2	Solids, Total Dissolved	mg/L	03/01/2023		32
802	MW-2	Solids, Total Dissolved	mg/L	05/30/2023	<	10
802	MW-2	Solids, Total Dissolved	mg/L	08/01/2023		57
802	MW-2	Solids, Total Dissolved	mg/L	11/09/2023		160
802	MW-2	Solids, Total Dissolved	mg/L	02/06/2024		31
802	MW-2	Solids, Total Dissolved	mg/L	05/08/2024		74
				Mean		39.84706
				Standard Dev		34.27311

well		param	parm_unit	sample_date	resu	result_amt
803	MW-3	Chloride Dissolved	mg/L	06/30/2020		5.7
803	MW-3	Chloride Dissolved	mg/L	09/29/2020		7.6
803	MW-3	Chloride Dissolved	mg/L	12/15/2020		7.3
803	MW-3	Chloride Dissolved	mg/L	03/24/2021		7.6
803	MW-3	Chloride Dissolved	mg/L	06/10/2021		6.6
803	MW-3	Chloride Dissolved	mg/L	09/17/2021		5.5
803	MW-3	Chloride Dissolved	mg/L	11/18/2021		5.6
803	MW-3	Chloride Dissolved	mg/L	02/08/2022		5.6
803	MW-3	Chloride Dissolved	mg/L	04/05/2022		6.4
803	MW-3	Chloride Dissolved	mg/L	08/18/2022		5.5
803	MW-3	Chloride Dissolved	mg/L	11/17/2022		9
803	MW-3	Chloride Dissolved	mg/L	03/01/2023		6.5
803	MW-3	Chloride Dissolved	mg/L	05/30/2023		4.2
803	MW-3	Chloride Dissolved	mg/L	08/01/2023		4.8
803	MW-3	Chloride Dissolved	mg/L	11/09/2023		2.9
803	MW-3	Chloride Dissolved	mg/L	02/06/2024		2.8
803	MW-3	Chloride Dissolved	mg/L	05/08/2024		2.2
803	MW-3	COD	mg/L	06/30/2020		72.1
803	MW-3	COD	mg/L	09/29/2020		128
803	MW-3	COD	mg/L	12/15/2020		57.4
803	MW-3	COD	mg/L	03/24/2021		77.6
803	MW-3	COD	mg/L	06/10/2021		49.6
803	MW-3	COD	mg/L	09/17/2021		32.7
803	MW-3	COD	mg/L	11/18/2021		28.1
803	MW-3	COD	mg/L	02/08/2022	<	14.7
803	MW-3	COD	mg/L	04/05/2022	<	14.7
803	MW-3	COD	mg/L	08/18/2022		25.9
803	MW-3	COD	mg/L	11/17/2022	<	14.7
803	MW-3	COD	mg/L	03/01/2023	<	14.7
803	MW-3	COD	mg/L	05/30/2023		18
803	MW-3	COD	mg/L	08/01/2023	<	18
803	MW-3	COD	mg/L	11/09/2023	<	18
803	MW-3	COD	mg/L	02/06/2024	<	18
803	MW-3	COD	mg/L	05/08/2024	<	18

well		param	parm_unit_	sample_date	resu	result_amt
803	MW-3	Iron Dissolved	mg/L	06/30/2020		3.7
803	MW-3	Iron Dissolved	mg/L	09/29/2020		2.6
803	MW-3	Iron Dissolved	mg/L	12/15/2020		3
803	MW-3	Iron Dissolved	mg/L	03/24/2021		1.3
803	MW-3	Iron Dissolved	mg/L	06/10/2021		2.5
803	MW-3	Iron Dissolved	mg/L	09/17/2021		0.7
803	MW-3	Iron Dissolved	mg/L	11/18/2021		0.69
803	MW-3	Iron Dissolved	mg/L	02/08/2022		0.73
803	MW-3	Iron Dissolved	mg/L	04/05/2022		0.56
803	MW-3	Iron Dissolved	mg/L	08/18/2022		0.26
803	MW-3	Iron Dissolved	mg/L	11/17/2022	<	0.057
803	MW-3	Iron Dissolved	mg/L	03/01/2023		0.068
803	MW-3	Iron Dissolved	mg/L	05/30/2023		0.479
803	MW-3	Iron Dissolved	mg/L	08/01/2023	<	0.025
803	MW-3	Iron Dissolved	mg/L	11/09/2023		0.117
803	MW-3	Iron Dissolved	mg/L	02/06/2024		0.847
803	MW-3	Iron Dissolved	mg/L	05/08/2024		0.041
803	MW-3	Manganese Dissolved	ug/L	06/30/2020		4900
803	MW-3	Manganese Dissolved	ug/L	09/29/2020		5250
803	MW-3	Manganese Dissolved	ug/L	12/15/2020		5600
803	MW-3	Manganese Dissolved	ug/L	03/24/2021		4750
803	MW-3	Manganese Dissolved	ug/L	06/10/2021		6260
803	MW-3	Manganese Dissolved	ug/L	09/17/2021		5080
803	MW-3	Manganese Dissolved	ug/L	11/18/2021		5270
803	MW-3	Manganese Dissolved	ug/L	02/08/2022		6100
803	MW-3	Manganese Dissolved	ug/L	04/05/2022		5910
803	MW-3	Manganese Dissolved	ug/L	08/18/2022		5050
803	MW-3	Manganese Dissolved	ug/L	11/17/2022		3010
803	MW-3	Manganese Dissolved	ug/L	03/01/2023		5160
803	MW-3	Manganese Dissolved	ug/L	05/30/2023		4760
803	MW-3	Manganese Dissolved	ug/L	08/01/2023		3720
803	MW-3	Manganese Dissolved	ug/L	11/09/2023		2410
803	MW-3	Manganese Dissolved	ug/L	02/06/2024		3890
803	MW-3	Manganese Dissolved	ug/L	05/08/2024		4080

well		param	parm_unit_	sample_date	resu	result_amt
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	06/30/2020	<	0.26
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	09/29/2020	<	0.26
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	12/15/2020	<	0.26
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	03/24/2021	<	0.14
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	06/10/2021	<	0.14
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	09/17/2021	<	0.14
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	11/18/2021	<	0.14
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	02/08/2022	<	0.14
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	04/05/2022	<	0.14
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	08/18/2022	<	0.14
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	11/17/2022	<	0.14
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	03/01/2023	<	0.14
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	05/30/2023	<	0.13
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	08/01/2023	<	0.13
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	11/09/2023	<	0.13
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	02/06/2024	<	0.13
803	MW-3	Nitrogen, Ammonia Dissolved	mg/L	05/08/2024	<	0.13
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	06/30/2020	<	0.21
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	09/29/2020		0.21
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	12/15/2020	<	0.21
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	03/24/2021	<	0.21
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	06/10/2021		0.3
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	09/17/2021		0.26
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/18/2021	<	0.21
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	02/08/2022	<	0.21
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	04/05/2022	<	0.21
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	08/18/2022	<	0.21
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/17/2022	<	0.21
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	03/01/2023	<	0.21
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	05/30/2023	<	0.39
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	08/01/2023	<	0.39
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/09/2023	<	0.39
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	02/06/2024	<	0.39
803	MW-3	Nitrogen, Total Kjeldahl Dissolved	mg/L	05/08/2024	<	0.39

well		param	parm_unit_	sample_date	resu	result_amt
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/30/2020		1.2
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/29/2020		0.32
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	12/15/2020		1
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/24/2021		0.36
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/10/2021		5
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/17/2021		3.7
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/18/2021		8.6
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	02/08/2022		5.6
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	04/05/2022		1.3
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	08/18/2022		3.6
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/17/2022		9.6
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/01/2023		2.5
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	05/30/2023		4.7
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	08/01/2023		8.4
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/09/2023		4.5
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	02/06/2024		4.5
803	MW-3	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	05/08/2024		6
803	MW-3	Nitrogen, Organic Dissolved	mg/L	06/30/2020	<	0.21
803	MW-3	Nitrogen, Organic Dissolved	mg/L	09/29/2020		0.21
803	MW-3	Nitrogen, Organic Dissolved	mg/L	12/15/2020	<	0.21
803	MW-3	Nitrogen, Organic Dissolved	mg/L	03/24/2021	<	0.21
803	MW-3	Nitrogen, Organic Dissolved	mg/L	06/10/2021		0.3
803	MW-3	Nitrogen, Organic Dissolved	mg/L	09/17/2021		0.26
803	MW-3	Nitrogen, Organic Dissolved	mg/L	11/18/2021	<	0.21
803	MW-3	Nitrogen, Organic Dissolved	mg/L	02/08/2022	<	0.21
803	MW-3	Nitrogen, Organic Dissolved	mg/L	04/05/2022	<	0.21
803	MW-3	Nitrogen, Organic Dissolved	mg/L	08/18/2022	<	0.21
803	MW-3	Nitrogen, Organic Dissolved	mg/L	11/17/2022	<	0.21
803	MW-3	Nitrogen, Organic Dissolved	mg/L	03/01/2023	<	0.21
803	MW-3	Nitrogen, Organic Dissolved	mg/L	05/30/2023	<	0.39
803	MW-3	Nitrogen, Organic Dissolved	mg/L	08/01/2023	<	0.39
803	MW-3	Nitrogen, Organic Dissolved	mg/L	11/09/2023	<	0.39
803	MW-3	Nitrogen, Organic Dissolved	mg/L	02/06/2024	<	0.39
803	MW-3	Nitrogen, Organic Dissolved	mg/L	05/08/2024	<	0.39

well		param	parm_unit_	sample_date	resu	result_amt
803	MW-3	pH Field	su	06/30/2020		6.876
803	MW-3	pH Field	su	09/29/2020		5.25
803	MW-3	pH Field	su	12/15/2020		5.22
803	MW-3	pH Field	su	03/24/2021		5.36
803	MW-3	pH Field	su	06/10/2021		9.08
803	MW-3	pH Field	su	09/17/2021		5.88
803	MW-3	pH Field	su	11/18/2021		5.8
803	MW-3	pH Field	su	02/08/2022		5.37
803	MW-3	pH Field	su	04/05/2022		4.64
803	MW-3	pH Field	su	08/18/2022		6.32
803	MW-3	pH Field	su	11/17/2022		5.94
803	MW-3	pH Field	su	03/01/2023		4.74
803	MW-3	pH Field	su	05/30/2023		5.53
803	MW-3	pH Field	su	08/01/2023		5.19
803	MW-3	pH Field	su	11/09/2023		6.02
803	MW-3	pH Field	su	02/06/2024		5.82
803	MW-3	pH Field	su	05/08/2024		5.51
803	MW-3	Solids, Total Dissolved	mg/L	06/30/2020		80
803	MW-3	Solids, Total Dissolved	mg/L	09/29/2020		80
803	MW-3	Solids, Total Dissolved	mg/L	12/15/2020		86
803	MW-3	Solids, Total Dissolved	mg/L	03/24/2021		74
803	MW-3	Solids, Total Dissolved	mg/L	06/10/2021		66
803	MW-3	Solids, Total Dissolved	mg/L	09/17/2021		68
803	MW-3	Solids, Total Dissolved	mg/L	11/18/2021		82
803	MW-3	Solids, Total Dissolved	mg/L	02/08/2022		62
803	MW-3	Solids, Total Dissolved	mg/L	04/05/2022		80
803	MW-3	Solids, Total Dissolved	mg/L	08/18/2022		94
803	MW-3	Solids, Total Dissolved	mg/L	11/17/2022		136
803	MW-3	Solids, Total Dissolved	mg/L	03/01/2023		60
803	MW-3	Solids, Total Dissolved	mg/L	05/30/2023		59
803	MW-3	Solids, Total Dissolved	mg/L	08/01/2023		50
803	MW-3	Solids, Total Dissolved	mg/L	11/09/2023		120
803	MW-3	Solids, Total Dissolved	mg/L	02/06/2024		76
803	MW-3	Solids, Total Dissolved	mg/L	05/08/2024		41
804	MW-4	Chloride Dissolved	mg/L	09/17/2021		16.1
804	MW-4	Chloride Dissolved	mg/L	11/18/2021		14.9
804	MW-4	Chloride Dissolved	mg/L	02/08/2022		19.3
804	MW-4	Chloride Dissolved	mg/L	04/07/2022		21.6
804	MW-4	Chloride Dissolved	mg/L	08/18/2022		21.2
804	MW-4	Chloride Dissolved	mg/L	11/17/2022		3.2
804	MW-4	Chloride Dissolved	mg/L	03/01/2023		0.8
804	MW-4	Chloride Dissolved	mg/L	05/30/2023		2.7
804	MW-4	Chloride Dissolved	mg/L	08/01/2023		8.2
804	MW-4	Chloride Dissolved	mg/L	11/09/2023		21
804	MW-4	Chloride Dissolved	mg/L	02/06/2024		50
804	MW-4	Chloride Dissolved	mg/L	05/08/2024		21

well		param	parm_unit_	sample_date	resu	result_amt
804	MW-4	COD	mg/L	09/17/2021		37.2
804	MW-4	COD	mg/L	11/18/2021		28.1
804	MW-4	COD	mg/L	02/08/2022	<	14.7
804	MW-4	COD	mg/L	04/07/2022		14.9
804	MW-4	COD	mg/L	08/18/2022	<	14.7
804	MW-4	COD	mg/L	11/17/2022	<	14.7
804	MW-4	COD	mg/L	03/01/2023	<	14.7
804	MW-4	COD	mg/L	05/30/2023		30
804	MW-4	COD	mg/L	08/01/2023	<	18
804	MW-4	COD	mg/L	11/09/2023		18
804	MW-4	COD	mg/L	02/06/2024	<	18
804	MW-4	COD	mg/L	05/08/2024		23
804	MW-4	Iron Dissolved	mg/L	09/17/2021	<	0.057
804	MW-4	Iron Dissolved	mg/L	11/18/2021	<	0.057
804	MW-4	Iron Dissolved	mg/L	02/08/2022	<	0.057
804	MW-4	Iron Dissolved	mg/L	04/07/2022	<	0.057
804	MW-4	Iron Dissolved	mg/L	08/18/2022		0.17
804	MW-4	Iron Dissolved	mg/L	11/17/2022	<	0.057
804	MW-4	Iron Dissolved	mg/L	03/01/2023	<	0.057
804	MW-4	Iron Dissolved	mg/L	05/30/2023		0.129
804	MW-4	Iron Dissolved	mg/L	08/01/2023	<	0.025
804	MW-4	Iron Dissolved	mg/L	11/09/2023	<	0.025
804	MW-4	Iron Dissolved	mg/L	02/06/2024	<	0.025
804	MW-4	Iron Dissolved	mg/L	05/08/2024	<	0.025
804	MW-4	Manganese Dissolved	ug/L	09/17/2021		733
804	MW-4	Manganese Dissolved	ug/L	11/18/2021		811
804	MW-4	Manganese Dissolved	ug/L	02/08/2022		729
804	MW-4	Manganese Dissolved	ug/L	04/07/2022		638
804	MW-4	Manganese Dissolved	ug/L	08/18/2022		1370
804	MW-4	Manganese Dissolved	ug/L	11/17/2022		584
804	MW-4	Manganese Dissolved	ug/L	03/01/2023		1570
804	MW-4	Manganese Dissolved	ug/L	05/30/2023		411
804	MW-4	Manganese Dissolved	ug/L	08/01/2023		178
804	MW-4	Manganese Dissolved	ug/L	11/09/2023		59.5
804	MW-4	Manganese Dissolved	ug/L	02/06/2024		570
804	MW-4	Manganese Dissolved	ug/L	05/08/2024		143

well		param	parm_unit_	sample_date	resu	result_amt
804	MW-4	Nitrogen, Ammonia Dissolved	mg/L	09/17/2021		0.22
804	MW-4	Nitrogen, Ammonia Dissolved	mg/L	11/18/2021		0.2
804	MW-4	Nitrogen, Ammonia Dissolved	mg/L	02/08/2022		0.3
804	MW-4	Nitrogen, Ammonia Dissolved	mg/L	04/07/2022		0.22
804	MW-4	Nitrogen, Ammonia Dissolved	mg/L	08/18/2022		0.23
804	MW-4	Nitrogen, Ammonia Dissolved	mg/L	11/17/2022	<	0.14
804	MW-4	Nitrogen, Ammonia Dissolved	mg/L	03/01/2023	<	0.14
804	MW-4	Nitrogen, Ammonia Dissolved	mg/L	05/30/2023	<	0.13
804	MW-4	Nitrogen, Ammonia Dissolved	mg/L	08/01/2023	<	0.13
804	MW-4	Nitrogen, Ammonia Dissolved	mg/L	11/09/2023	<	0.13
804	MW-4	Nitrogen, Ammonia Dissolved	mg/L	02/06/2024	<	0.13
804	MW-4	Nitrogen, Ammonia Dissolved	mg/L	05/08/2024	<	0.13
804	MW-4	Nitrogen, Total Kjeldahl Dissolved	mg/L	09/17/2021		0.88
804	MW-4	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/18/2021		0.66
804	MW-4	Nitrogen, Total Kjeldahl Dissolved	mg/L	02/08/2022		0.78
804	MW-4	Nitrogen, Total Kjeldahl Dissolved	mg/L	04/07/2022		0.42
804	MW-4	Nitrogen, Total Kjeldahl Dissolved	mg/L	08/18/2022		0.85
804	MW-4	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/17/2022		0.27
804	MW-4	Nitrogen, Total Kjeldahl Dissolved	mg/L	03/01/2023		0.31
804	MW-4	Nitrogen, Total Kjeldahl Dissolved	mg/L	05/30/2023	<	0.39
804	MW-4	Nitrogen, Total Kjeldahl Dissolved	mg/L	08/01/2023		0.4
804	MW-4	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/09/2023		0.58
804	MW-4	Nitrogen, Total Kjeldahl Dissolved	mg/L	02/06/2024	<	0.39
804	MW-4	Nitrogen, Total Kjeldahl Dissolved	mg/L	05/08/2024		2.9
804	MW-4	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/17/2021		3.3
804	MW-4	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/18/2021		3.3
804	MW-4	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	02/08/2022		2.6
804	MW-4	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	04/07/2022		2.5
804	MW-4	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	08/18/2022		5.8
804	MW-4	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/17/2022		4.9
804	MW-4	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/01/2023		4.5
804	MW-4	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	05/30/2023		1.9
804	MW-4	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	08/01/2023		2.4
804	MW-4	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/09/2023		1.4
804	MW-4	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	02/06/2024		0.58
804	MW-4	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	05/08/2024		2.3

well		param	parm_unit_	sample_date	resu	result_amt
804	MW-4	Nitrogen, Organic Dissolved	mg/L	09/17/2021		0.66
804	MW-4	Nitrogen, Organic Dissolved	mg/L	11/18/2021		0.46
804	MW-4	Nitrogen, Organic Dissolved	mg/L	02/08/2022		0.48
804	MW-4	Nitrogen, Organic Dissolved	mg/L	04/07/2022	<	0.21
804	MW-4	Nitrogen, Organic Dissolved	mg/L	08/18/2022		0.62
804	MW-4	Nitrogen, Organic Dissolved	mg/L	11/17/2022		0.27
804	MW-4	Nitrogen, Organic Dissolved	mg/L	03/01/2023		0.31
804	MW-4	Nitrogen, Organic Dissolved	mg/L	05/30/2023	<	0.39
804	MW-4	Nitrogen, Organic Dissolved	mg/L	08/01/2023	<	0.39
804	MW-4	Nitrogen, Organic Dissolved	mg/L	11/09/2023		0.58
804	MW-4	Nitrogen, Organic Dissolved	mg/L	02/06/2024	<	0.39
804	MW-4	Nitrogen, Organic Dissolved	mg/L	05/08/2024		2.9
804	MW-4	pH Field	su	09/17/2021		7.63
804	MW-4	pH Field	su	11/18/2021		7.126
804	MW-4	pH Field	su	02/08/2022		6.87
804	MW-4	pH Field	su	04/07/2022		6.51
804	MW-4	pH Field	su	08/18/2022		6.58
804	MW-4	pH Field	su	11/17/2022		6.78
804	MW-4	pH Field	su	03/01/2023		5.81
804	MW-4	pH Field	su	05/30/2023		6.51
804	MW-4	pH Field	su	08/01/2023		6.29
804	MW-4	pH Field	su	11/09/2023		6.81
804	MW-4	pH Field	su	02/06/2024		6.62
804	MW-4	pH Field	su	05/08/2024		6.62
804	MW-4	Solids, Total Dissolved	mg/L	09/17/2021		392
804	MW-4	Solids, Total Dissolved	mg/L	11/18/2021		228
804	MW-4	Solids, Total Dissolved	mg/L	02/08/2022		224
804	MW-4	Solids, Total Dissolved	mg/L	04/07/2022		230
804	MW-4	Solids, Total Dissolved	mg/L	08/18/2022		222
804	MW-4	Solids, Total Dissolved	mg/L	11/17/2022		182
804	MW-4	Solids, Total Dissolved	mg/L	03/01/2023		164
804	MW-4	Solids, Total Dissolved	mg/L	05/30/2023		66
804	MW-4	Solids, Total Dissolved	mg/L	08/01/2023		96
804	MW-4	Solids, Total Dissolved	mg/L	11/09/2023		270
804	MW-4	Solids, Total Dissolved	mg/L	02/06/2024		410
804	MW-4	Solids, Total Dissolved	mg/L	05/08/2024		190

well		param	parm_unit_	sample_date	resu	result_amt
805	MW-5	Chloride Dissolved	mg/L	09/17/2021		0.66
805	MW-5	Chloride Dissolved	mg/L	11/18/2021		1.2
805	MW-5	Chloride Dissolved	mg/L	02/08/2022		0.68
805	MW-5	Chloride Dissolved	mg/L	04/05/2022		0.74
805	MW-5	Chloride Dissolved	mg/L	08/18/2022		0.64
805	MW-5	Chloride Dissolved	mg/L	11/17/2022		0.81
805	MW-5	Chloride Dissolved	mg/L	03/01/2023		12.9
805	MW-5	Chloride Dissolved	mg/L	05/30/2023	<	1
805	MW-5	Chloride Dissolved	mg/L	08/01/2023	<	1
805	MW-5	Chloride Dissolved	mg/L	11/09/2023	<	1
805	MW-5	Chloride Dissolved	mg/L	02/06/2024	<	1
805	MW-5	Chloride Dissolved	mg/L	05/08/2024	<	1
				Mean		1.885833
				Standard Dev		3.325218
805	MW-5	COD	mg/L	09/17/2021		17
805	MW-5	COD	mg/L	11/18/2021	<	14.7
805	MW-5	COD	mg/L	02/08/2022	<	14.7
805	MW-5	COD	mg/L	04/05/2022	<	14.7
805	MW-5	COD	mg/L	08/18/2022	<	14.7
805	MW-5	COD	mg/L	11/17/2022	<	14.7
805	MW-5	COD	mg/L	03/01/2023	<	14.7
805	MW-5	COD	mg/L	05/30/2023	<	18
805	MW-5	COD	mg/L	08/01/2023	<	18
805	MW-5	COD	mg/L	11/09/2023	<	18
805	MW-5	COD	mg/L	02/06/2024	<	18
805	MW-5	COD	mg/L	05/08/2024	<	18
				Mean		16.26667
				Standard Dev		1.588675
805	MW-5	Iron Dissolved	mg/L	09/17/2021	<	0.057
805	MW-5	Iron Dissolved	mg/L	11/18/2021		0.094
805	MW-5	Iron Dissolved	mg/L	02/08/2022	<	0.057
805	MW-5	Iron Dissolved	mg/L	04/05/2022	<	0.057
805	MW-5	Iron Dissolved	mg/L	08/18/2022		0.19
805	MW-5	Iron Dissolved	mg/L	11/17/2022	<	0.057
805	MW-5	Iron Dissolved	mg/L	03/01/2023	<	0.057
805	MW-5	Iron Dissolved	mg/L	05/30/2023	<	0.025
805	MW-5	Iron Dissolved	mg/L	08/01/2023		0.0894
805	MW-5	Iron Dissolved	mg/L	11/09/2023		0.0399
805	MW-5	Iron Dissolved	mg/L	02/06/2024		0.185
805	MW-5	Iron Dissolved	mg/L	05/08/2024	<	0.025
				Mean		0.077775
				Standard Dev		0.052957

well		param	parm_unit_	sample_date	resu	result_amt
805	MW-5	Manganese Dissolved	ug/L	09/17/2021		96.2
805	MW-5	Manganese Dissolved	ug/L	11/18/2021		68
805	MW-5	Manganese Dissolved	ug/L	02/08/2022		22.8
805	MW-5	Manganese Dissolved	ug/L	04/05/2022		16
805	MW-5	Manganese Dissolved	ug/L	08/18/2022		15.2
805	MW-5	Manganese Dissolved	ug/L	11/17/2022		7.9
805	MW-5	Manganese Dissolved	ug/L	03/01/2023		4.5
805	MW-5	Manganese Dissolved	ug/L	05/30/2023		7.6
805	MW-5	Manganese Dissolved	ug/L	08/01/2023		6.8
805	MW-5	Manganese Dissolved	ug/L	11/09/2023		8.8
805	MW-5	Manganese Dissolved	ug/L	02/06/2024		8.8
805	MW-5	Manganese Dissolved	ug/L	05/08/2024		8.2
				Mean		22.56667
				Standard Dev		27.66322
805	MW-5	Nitrogen, Ammonia Dissolved	mg/L	09/17/2021	<	0.14
805	MW-5	Nitrogen, Ammonia Dissolved	mg/L	11/18/2021	<	0.14
805	MW-5	Nitrogen, Ammonia Dissolved	mg/L	02/08/2022	<	0.14
805	MW-5	Nitrogen, Ammonia Dissolved	mg/L	04/05/2022	<	0.14
805	MW-5	Nitrogen, Ammonia Dissolved	mg/L	08/18/2022	<	0.14
805	MW-5	Nitrogen, Ammonia Dissolved	mg/L	11/17/2022	<	0.14
805	MW-5	Nitrogen, Ammonia Dissolved	mg/L	03/01/2023	<	0.14
805	MW-5	Nitrogen, Ammonia Dissolved	mg/L	05/30/2023	<	0.13
805	MW-5	Nitrogen, Ammonia Dissolved	mg/L	08/01/2023	<	0.13
805	MW-5	Nitrogen, Ammonia Dissolved	mg/L	11/09/2023	<	0.13
805	MW-5	Nitrogen, Ammonia Dissolved	mg/L	02/06/2024	<	0.13
805	MW-5	Nitrogen, Ammonia Dissolved	mg/L	05/08/2024	<	0.13
				Mean		0.135833
				Standard Dev		0.00493
805	MW-5	Nitrogen, Total Kjeldahl Dissolved	mg/L	09/17/2021		0.35
805	MW-5	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/18/2021	<	0.21
805	MW-5	Nitrogen, Total Kjeldahl Dissolved	mg/L	02/08/2022	<	0.21
805	MW-5	Nitrogen, Total Kjeldahl Dissolved	mg/L	04/05/2022	<	0.21
805	MW-5	Nitrogen, Total Kjeldahl Dissolved	mg/L	08/18/2022	<	0.21
805	MW-5	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/17/2022	<	0.21
805	MW-5	Nitrogen, Total Kjeldahl Dissolved	mg/L	03/01/2023	<	0.21
805	MW-5	Nitrogen, Total Kjeldahl Dissolved	mg/L	05/30/2023	<	0.39
805	MW-5	Nitrogen, Total Kjeldahl Dissolved	mg/L	08/01/2023	<	0.39
805	MW-5	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/09/2023	<	0.39
805	MW-5	Nitrogen, Total Kjeldahl Dissolved	mg/L	02/06/2024	<	0.39
805	MW-5	Nitrogen, Total Kjeldahl Dissolved	mg/L	05/08/2024	<	0.39
				Mean		0.296667
				Standard Dev		0.087305

well		param	parm_unit_	sample_date	resu	result_amt
805	MW-5	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/17/2021		0.18
805	MW-5	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/18/2021		0.13
805	MW-5	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	02/08/2022		0.18
805	MW-5	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	04/05/2022		0.22
805	MW-5	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	08/18/2022		0.24
805	MW-5	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/17/2022		0.23
805	MW-5	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/01/2023		0.38
805	MW-5	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	05/30/2023		0.29
805	MW-5	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	08/01/2023		0.13
805	MW-5	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/09/2023		0.22
805	MW-5	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	02/06/2024		0.36
805	MW-5	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	05/08/2024		0.23
				Mean		0.2325
				Standard Dev		0.075402
805	MW-5	Nitrogen, Organic Dissolved	mg/L	09/17/2021		0.35
805	MW-5	Nitrogen, Organic Dissolved	mg/L	11/18/2021	<	0.21
805	MW-5	Nitrogen, Organic Dissolved	mg/L	02/08/2022	<	0.21
805	MW-5	Nitrogen, Organic Dissolved	mg/L	04/05/2022	<	0.21
805	MW-5	Nitrogen, Organic Dissolved	mg/L	08/18/2022	<	0.21
805	MW-5	Nitrogen, Organic Dissolved	mg/L	11/17/2022	<	0.21
805	MW-5	Nitrogen, Organic Dissolved	mg/L	03/01/2023	<	0.21
805	MW-5	Nitrogen, Organic Dissolved	mg/L	05/30/2023	<	0.39
805	MW-5	Nitrogen, Organic Dissolved	mg/L	08/01/2023	<	0.39
805	MW-5	Nitrogen, Organic Dissolved	mg/L	11/09/2023	<	0.39
805	MW-5	Nitrogen, Organic Dissolved	mg/L	02/06/2024	<	0.39
805	MW-5	Nitrogen, Organic Dissolved	mg/L	05/08/2024	<	0.39
				Mean		0.296667
				Standard Dev		0.087305
805	MW-5	pH Field	su	09/17/2021		6.24
805	MW-5	pH Field	su	11/18/2021		5.9
805	MW-5	pH Field	su	02/08/2022		5.66
805	MW-5	pH Field	su	04/05/2022		4.86
805	MW-5	pH Field	su	08/18/2022		6.46
805	MW-5	pH Field	su	11/17/2022		5.76
805	MW-5	pH Field	su	03/01/2023		6.15
805	MW-5	pH Field	su	05/30/2023		5.94
805	MW-5	pH Field	su	08/01/2023		6.2
805	MW-5	pH Field	su	11/09/2023		6.21
805	MW-5	pH Field	su	02/06/2024		6.31
805	MW-5	pH Field	su	05/08/2024		6.59
				Mean		6.023333

well		param	parm_unit_	sample_date	resu	result_amt
805	MW-5	Solids, Total Dissolved	mg/L	09/17/2021		44
805	MW-5	Solids, Total Dissolved	mg/L	11/18/2021		52
805	MW-5	Solids, Total Dissolved	mg/L	02/08/2022		18
805	MW-5	Solids, Total Dissolved	mg/L	04/05/2022		34
805	MW-5	Solids, Total Dissolved	mg/L	08/18/2022		20
805	MW-5	Solids, Total Dissolved	mg/L	11/17/2022		44
805	MW-5	Solids, Total Dissolved	mg/L	03/01/2023		32
805	MW-5	Solids, Total Dissolved	mg/L	05/30/2023		35
805	MW-5	Solids, Total Dissolved	mg/L	08/01/2023		47
805	MW-5	Solids, Total Dissolved	mg/L	11/09/2023		160
805	MW-5	Solids, Total Dissolved	mg/L	02/06/2024		55
805	MW-5	Solids, Total Dissolved	mg/L	05/08/2024		82
				Mean		51.91667
				Standard Dev		36.4222
806	MW-6	Chloride Dissolved	mg/L	09/17/2021		5.4
806	MW-6	Chloride Dissolved	mg/L	11/18/2021		6.6
806	MW-6	Chloride Dissolved	mg/L	02/08/2022		5.3
806	MW-6	Chloride Dissolved	mg/L	04/05/2022		4.8
806	MW-6	Chloride Dissolved	mg/L	08/18/2022		7
806	MW-6	Chloride Dissolved	mg/L	11/17/2022		6.7
806	MW-6	Chloride Dissolved	mg/L	03/01/2023		6.4
806	MW-6	Chloride Dissolved	mg/L	05/30/2023		6.8
806	MW-6	Chloride Dissolved	mg/L	08/01/2023		7.4
806	MW-6	Chloride Dissolved	mg/L	11/09/2023		5.7
806	MW-6	Chloride Dissolved	mg/L	02/06/2024		5.9
806	MW-6	Chloride Dissolved	mg/L	05/08/2024		6.6
806	MW-6	COD	mg/L	09/17/2021		17
806	MW-6	COD	mg/L	11/18/2021	<	14.7
806	MW-6	COD	mg/L	02/08/2022	<	14.7
806	MW-6	COD	mg/L	04/05/2022	<	14.7
806	MW-6	COD	mg/L	08/18/2022		17.1
806	MW-6	COD	mg/L	11/17/2022		17.8
806	MW-6	COD	mg/L	03/01/2023	<	14.7
806	MW-6	COD	mg/L	05/30/2023		18
806	MW-6	COD	mg/L	08/01/2023		24
806	MW-6	COD	mg/L	11/09/2023		18
806	MW-6	COD	mg/L	02/06/2024	<	18
806	MW-6	COD	mg/L	05/08/2024	<	18

well		param	parm_unit_	sample_date	resu	result_amt
806	MW-6	Iron Dissolved	mg/L	09/17/2021		0.91
806	MW-6	Iron Dissolved	mg/L	11/18/2021		0.93
806	MW-6	Iron Dissolved	mg/L	02/08/2022		1.9
806	MW-6	Iron Dissolved	mg/L	04/05/2022		1.6
806	MW-6	Iron Dissolved	mg/L	08/18/2022		0.52
806	MW-6	Iron Dissolved	mg/L	11/17/2022		1.5
806	MW-6	Iron Dissolved	mg/L	03/01/2023		1.4
806	MW-6	Iron Dissolved	mg/L	05/30/2023		0.278
806	MW-6	Iron Dissolved	mg/L	08/01/2023		2.04
806	MW-6	Iron Dissolved	mg/L	11/09/2023		2.28
806	MW-6	Iron Dissolved	mg/L	02/06/2024		4.41
806	MW-6	Iron Dissolved	mg/L	05/08/2024		6.69
806	MW-6	Manganese Dissolved	ug/L	09/17/2021		1020
806	MW-6	Manganese Dissolved	ug/L	11/18/2021		1070
806	MW-6	Manganese Dissolved	ug/L	02/08/2022		1010
806	MW-6	Manganese Dissolved	ug/L	04/05/2022		825
806	MW-6	Manganese Dissolved	ug/L	08/18/2022		638
806	MW-6	Manganese Dissolved	ug/L	11/17/2022		1370
806	MW-6	Manganese Dissolved	ug/L	03/01/2023		1090
806	MW-6	Manganese Dissolved	ug/L	05/30/2023		406
806	MW-6	Manganese Dissolved	ug/L	08/01/2023		546
806	MW-6	Manganese Dissolved	ug/L	11/09/2023		1750
806	MW-6	Manganese Dissolved	ug/L	02/06/2024		1890
806	MW-6	Manganese Dissolved	ug/L	05/08/2024		1460
806	MW-6	Nitrogen, Ammonia Dissolved	mg/L	09/17/2021	<	0.14
806	MW-6	Nitrogen, Ammonia Dissolved	mg/L	11/18/2021	<	0.14
806	MW-6	Nitrogen, Ammonia Dissolved	mg/L	02/08/2022	<	0.14
806	MW-6	Nitrogen, Ammonia Dissolved	mg/L	04/05/2022	<	0.14
806	MW-6	Nitrogen, Ammonia Dissolved	mg/L	08/18/2022	<	0.14
806	MW-6	Nitrogen, Ammonia Dissolved	mg/L	11/17/2022		0.16
806	MW-6	Nitrogen, Ammonia Dissolved	mg/L	03/01/2023		0.17
806	MW-6	Nitrogen, Ammonia Dissolved	mg/L	05/30/2023	<	0.13
806	MW-6	Nitrogen, Ammonia Dissolved	mg/L	08/01/2023	<	0.13
806	MW-6	Nitrogen, Ammonia Dissolved	mg/L	11/09/2023		0.13
806	MW-6	Nitrogen, Ammonia Dissolved	mg/L	02/06/2024	<	0.13
806	MW-6	Nitrogen, Ammonia Dissolved	mg/L	05/08/2024	<	0.13

well		param	parm_unit_	sample_date	resu	result_amt
806	MW-6	Nitrogen, Total Kjeldahl Dissolved	mg/L	09/17/2021		0.63
806	MW-6	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/18/2021	<	0.21
806	MW-6	Nitrogen, Total Kjeldahl Dissolved	mg/L	02/08/2022		0.26
806	MW-6	Nitrogen, Total Kjeldahl Dissolved	mg/L	04/05/2022	<	0.21
806	MW-6	Nitrogen, Total Kjeldahl Dissolved	mg/L	08/18/2022		0.34
806	MW-6	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/17/2022		0.3
806	MW-6	Nitrogen, Total Kjeldahl Dissolved	mg/L	03/01/2023		0.22
806	MW-6	Nitrogen, Total Kjeldahl Dissolved	mg/L	05/30/2023	<	0.39
806	MW-6	Nitrogen, Total Kjeldahl Dissolved	mg/L	08/01/2023	<	0.39
806	MW-6	Nitrogen, Total Kjeldahl Dissolved	mg/L	11/09/2023		0.44
806	MW-6	Nitrogen, Total Kjeldahl Dissolved	mg/L	02/06/2024		0.52
806	MW-6	Nitrogen, Total Kjeldahl Dissolved	mg/L	05/08/2024		1.7
806	MW-6	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	09/17/2021	<	0.059
806	MW-6	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/18/2021	<	0.059
806	MW-6	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	02/08/2022	<	0.059
806	MW-6	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	04/05/2022		0.21
806	MW-6	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	08/18/2022	<	0.059
806	MW-6	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/17/2022		0.065
806	MW-6	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	03/01/2023	<	0.059
806	MW-6	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	05/30/2023	<	0.05
806	MW-6	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	08/01/2023	<	0.05
806	MW-6	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	11/09/2023	<	0.05
806	MW-6	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	02/06/2024	<	0.05
806	MW-6	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	05/08/2024		0.1
806	MW-6	Nitrogen, Organic Dissolved	mg/L	09/17/2021		0.63
806	MW-6	Nitrogen, Organic Dissolved	mg/L	11/18/2021	<	0.21
806	MW-6	Nitrogen, Organic Dissolved	mg/L	02/08/2022		0.26
806	MW-6	Nitrogen, Organic Dissolved	mg/L	04/05/2022	<	0.21
806	MW-6	Nitrogen, Organic Dissolved	mg/L	08/18/2022		0.34
806	MW-6	Nitrogen, Organic Dissolved	mg/L	11/17/2022	<	0.21
806	MW-6	Nitrogen, Organic Dissolved	mg/L	03/01/2023	<	0.21
806	MW-6	Nitrogen, Organic Dissolved	mg/L	05/30/2023	<	0.39
806	MW-6	Nitrogen, Organic Dissolved	mg/L	08/01/2023	<	0.39
806	MW-6	Nitrogen, Organic Dissolved	mg/L	11/09/2023	<	0.39
806	MW-6	Nitrogen, Organic Dissolved	mg/L	02/06/2024		0.52
806	MW-6	Nitrogen, Organic Dissolved	mg/L	05/08/2024		1.7

well		param	parm_unit_	sample_date	resu	result_amt
806	MW-6	pH Field	su	09/17/2021		6.94
806	MW-6	pH Field	su	11/18/2021		7.213
806	MW-6	pH Field	su	02/08/2022		6.55
806	MW-6	pH Field	su	04/05/2022		6.72
806	MW-6	pH Field	su	08/18/2022		6.62
806	MW-6	pH Field	su	11/17/2022		7.13
806	MW-6	pH Field	su	03/01/2023		6.94
806	MW-6	pH Field	su	05/30/2023		6.84
806	MW-6	pH Field	su	08/01/2023		6.92
806	MW-6	pH Field	su	11/09/2023		7.53
806	MW-6	pH Field	su	02/06/2024		7.39
806	MW-6	pH Field	su	05/08/2024		6.69
806	MW-6	Solids, Total Dissolved	mg/L	09/17/2021		42
806	MW-6	Solids, Total Dissolved	mg/L	11/18/2021		96
806	MW-6	Solids, Total Dissolved	mg/L	02/08/2022		62
806	MW-6	Solids, Total Dissolved	mg/L	04/05/2022		110
806	MW-6	Solids, Total Dissolved	mg/L	08/18/2022		56
806	MW-6	Solids, Total Dissolved	mg/L	11/17/2022		134
806	MW-6	Solids, Total Dissolved	mg/L	03/01/2023		114
806	MW-6	Solids, Total Dissolved	mg/L	05/30/2023		69
806	MW-6	Solids, Total Dissolved	mg/L	08/01/2023		48
806	MW-6	Solids, Total Dissolved	mg/L	11/09/2023		330
806	MW-6	Solids, Total Dissolved	mg/L	02/06/2024		83
806	MW-6	Solids, Total Dissolved	mg/L	05/08/2024		69