Permit Fact Sheet

General Information

Permit Number	WI-0031623-10-0
Permittee Name and Address	VILLAGE OF EXELAND 11045 W. 5TH STREET, EXELAND, WI 54835
Permitted Facility Name and Address	Village of Exeland NWQ, SEQ, SECTION 28, T37N-R7W
Permit Term	July 01, 2026 to June 30, 2031
Discharge Location	Exeland Wastewater Treatment Facility located at the end of Elm Park Drive (NW 1/4, SE 1/4, Section 28, T37N-R7W), South of Balsam Lake, Exeland, Wisconsin
Receiving Water	Groundwater in Weirgor Creek and Brunet River Watershed of Upper Chippewa River Basin in Sawyer County
Discharge Type	Existing continuous
Annual Average Design Flow (MGD)	0.0273 MGD
Industrial or Commercial Contributors	No
Plant Classification	A4 - Ponds, Lagoons and Natural Systems; SS - Sanitary Sewage Collection System
Approved Pretreatment Program?	N/A

Facility Description

The Village of Exeland owns and operates a wastewater system to treat waste generated from homes and businesses in the community. The system is designed to treat 27,300 gallons per day currently treats an average of 10,000 gallons per day (2021-2025 data). The facility consists of two primary stabilization ponds, followed by a storage pond and two seepage cells. In the ponds naturally occurring bacteria metabolize organic matter in the waste. Treated water (effluent) is discharged to the seepage cells where it is filtered through the soil eventually reaches the groundwater. There are three monitoring wells around the perimeter of the system to measure impacts to the groundwater.

Substantial Compliance Determination

After a desktop review of all discharge monitoring reports, CMARs, land app reports, compliance schedule items, and a site visit on February 27, 2025, by Arthur Ryzak, this facility has been found to be in substantial compliance with their current permit.

Arthur Ryzak reviewed the recent compliance history of Exeland WWTF on April 3, 2026 and found that the findings of the February 27, 2025, inspection still hold true, in particular that the facility is in substantial compliance with the terms of their current WPDES 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)**

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 0.01 MGD (2021 – 2025 data)	24-hr flow proportional composite samples shall be taken at the main lift station.
001	EFFLUENT An average of 0.537 MGD during periods of discharge (average of 8 days per year in October) (2021 – 2025 data)	Grab samples shall be taken at the outlet control structure following the secondary stabilization pond.
002	SLUDGE Biosolids have not been removed from the facility	Representative samples shall be collected from the accumulated sludge in the primary pond at various locations and depths that are composited for analysis.

Sample Point Designation For Groundwater Monitoring Systems		
Sample Pt Number	**Well Name**	**Comments**
801	MW 801	Upgradient well used to measure background quality and to evaluate and calculate Preventative Action Limits (PALs) located northwest of the storage pond.
802	MW 802	Down gradient non-point of standard well located southwest of seepage cells at the property boundary.
803	MW 803	Down gradient non-point of standard well located southeast of pond 1 at the property boundary.

Permit Requirements

1 Influent – Monitoring Requirements

1.1 Sample Point Number: 701- INFLUENT TO PLANT

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
BOD5, Total		mg/L	2/Month	24-Hr Flow Prop Comp	
Suspended Solids, Total		mg/L	2/Month	24-Hr Flow Prop Comp	
Nitrogen, Total		mg/L	Monthly	24-Hr Flow	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Kjeldahl				Prop Comp	
Nitrogen, Nitrite + Nitrate Total		mg/L	Monthly	24-Hr Flow Prop Comp	
Nitrogen, Organic Total		mg/L	Monthly	Calculated	Organic Nitrogen = TKN (mg/L) - Ammonia Nitrogen (mg/L)
Nitrogen, Ammonia (NH3-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.

Flow- The sample frequency for flow has been changed from "continuous" to "daily" for eDMR reporting purposes.

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- EFFLUENT

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Total Daily	
BOD5, Total	Monthly Avg	50 mg/L	2/Month	Grab	
Suspended Solids, Total		mg/L	2/Month	Grab	
pH Field		su	2/Month	Grab	
Nitrogen, Total Kjeldahl		mg/L	Monthly	Grab	
Nitrogen, Organic Total		mg/L	Monthly	Calculated	Organic Nitrogen = TKN (mg/L) - Ammonia Nitrogen (mg/L)
Nitrogen, Ammonia		mg/L	Monthly	Grab	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
(NH3-N) Total					
Nitrogen, Nitrite + Nitrate Total		mg/L	Monthly	Grab	
Solids, Total Dissolved		mg/L	Monthly	Grab	
Chloride		mg/L	Monthly	Grab	
Nitrogen, Total		mg/L	Monthly	Calculated	Total Nitrogen = TKN (mg/L) + (Nitrite + Nitrate) Nitrogen (mg/L)

Changes from Previous Permit:

Effluent limitations and monitoring requirements were evaluated for this 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 the Village of Exeland dated February 27, 2026.

3 Groundwater – Monitoring and Limitations

3.1 Groundwater Monitoring System for Monitoring Well System

Location of Monitoring system: Around perimeter of seepage cells

Groundwater Monitoring Well(s) to be Sampled: MW 801, MW 802, MW 803

Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality: MW 801

Groundwater Monitoring Well(s) Used for Point of Standards Application: There are no wells that meet this designation. For more information, please refer to the Groundwater Evaluation for Village of Exeland memo dated February 27, 2026.

Parameter	**Units**	**Preventative Action Limit**	**Enforcement Standard**	**Frequency**
Depth To Groundwater	feet	N/A	N/A	1/ 6 Months
Groundwater Elevation	feet	N/A	N/A	1/ 6 Months
pH Field	su	7.9	N/A	1/ 6 Months
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	2.0	10	1/ 6 Months
Chloride Dissolved	mg/L	125	250	1/ 6 Months

Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	1/ 6 Months
Nitrogen, Organic Dissolved	mg/L	2.5	N/A	1/ 6 Months
Solids, Total Dissolved	mg/L	310	N/A	1/ 6 Months

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.

- PAL values for Organic Dissolved Nitrogen and Total Dissolved Solids were increased.
- PAL for Field pH was calculated.

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.

For more information, please refer to the Groundwater Evaluation for Village of Exeland memo dated February 27, 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 removal is not anticipated this permit term. If removal is needed see the land application and schedule sections 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 samples (September 2020) were below the level of detection.						
Is a priority pollutant scan required? No						

4.1 Sample Point Number: 002- Municipal 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	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
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 Extractable		% of Tot P	Per Application	Composite	
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	Report the sum of PFOA and PFOS. See PFAS permit sections for more information.
PFAS Dry Wt			Once	Grab	Perfluoroalkyl and

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
					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 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.

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).

List 2 Nutrient monitoring – Monitoring for List 2 (nutrients) is highly recommended at the same time as the monitoring of List 1 (metals) in 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 section below 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 2028 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 indicting 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 Land Treatment Management Plan

A management plan is required for the land treatment system.

Required Action	Due Date
Land Treatment Management Plan Submittal: Submit an update to the 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.	09/30/2026

5.1.1 Explanation of Schedule

Land Treatment Management Plan - An up-to-date Land Treatment Management plan is a standard requirement in reissued industrial permits per ch. NR 204, Wis. Adm. Code.

5.2 Sludge 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.	

5.2.1 Explanation of Schedule

Sludge Management Plan - If the lagoons are to be de-sludged 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 February 2010

Groundwater Evaluation for Village of Exeland memo dated February 27, 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:** April 3, 2026

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: February 27, 2026

TO: File

FROM: Woody Myers - WCR

SUBJECT: Groundwater Evaluation for Village of Exeland, WI-0031623

Site Information

The Village of Exeland Wastewater Treatment Facility, a municipal facility, is located at the south end of Dump Road, Exeland, Sawyer County. Wastewater is currently treated via settling lagoons and discharged to groundwater via infiltration by way of absorption ponds (seepage cells) located in the NW ¼ of the SE ¼ of Section 28, T37N, R07W, Town of Weirgor.

Land Disposal Effluent & Groundwater Evaluation Summary

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

Parameter	Current Permit WI-0031623-09		Proposed Permit WI-0031623-10	
	Limits and Units	Limit Type	Limits and Units	Limit Type
Flow Rate	- MGD		- MGD	
BOD_5	50 mg/l	Monthly Avg	50 mg/l	Monthly Avg
Total Suspended Solids	- mg/l		- mg/l	
pH, Field	- su		- su	
Nitrogen, Total Kjeldahl	- mg/l		- mg/l	
Nitrogen, Organic	- mg/l		- mg/l	
Nitrogen. Ammonia	- mg/l		- mg/l	
Nitrogen, Nitrite + Nitrate	- mg/l		- mg/l	
Total Dissolved Solids	- mg/l		- mg/l	
Chloride	- mg/l		- mg/l	
Nitrogen, Total	- mg/l		- mg/l	

No proposed permit changes

Table 2 Monitoring Wells

Well	Current Permit WI-0031623-09		Proposed Permit WI-0031623-10	
	Well Location	Well Designation	Well Location	Well Designation
801 (MW801)	Up-gradient	Background	Up-gradient	Background
802 (MW802)	Down-gradient	Point of Standard	Down-gradient	***Non-Point of Standard**
803 (MW803)	Down-gradient	Point of Standard	Down-gradient	***Non-Point of Standard**

*Proposed permit changes

Table 3 Groundwater Quality Standards

Parameter	Current Permit WI-0031623-09		Proposed WI-0031623-10	
	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
pH, Field	su	N/A	***5.9-7.9 su**	N/A
Nitrogen, Nitrite + Nitrate	2.0 mg/l	10.0 mg/l	2.0 mg/l	10.0 mg/l
Chloride	125 mg/l	250 mg/l	125 mg/l	250 mg/l
Nitrogen, Ammonia	0.97 mg/l	9.7 mg/l	0.97 mg/l	9.7 mg/l
Nitrogen, Organic	2.3 mg/l	N/A	***2.5 mg/l**	N/A
Total Dissolved Solids	280 mg/l	N/A	***310 mg/l**	N/A

* Proposed permit changes

Geology

The bedrock under this facility consists of a mafic, intermediate metavolcanic with interbedded metatuff and greywacke of amphibolite (*Bedrock Geology of Wisconsin, Regional Map Series Northwest Sheet*, Wisconsin Geological and Natural History Survey (WGNHS), 1987). Bedrock is anticipated to be between 25 and 50 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 Antigo silt loam (USDA NRCS Web Soil Survey).

Hydrogeology

Calculated groundwater elevations range between 1175 and 1178 feet above mean sea level (msl). Depth to groundwater was reported to be between 23 and 25 feet bgs. Groundwater flow direction was calculated to be consistently to the southeast. Regional groundwater is to the east in this area of Sawyer County (*Mean Elevation of Water Table*, Map, United States Department of Interior, 1968). The site is bound on the north by Balsam Lake. There is one well (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 BOD_5 loading summations for the land disposal system.

Table 5 Land Treatment Disposal Loading Averages

Year	Flow (MGD)	Nitrogen (mg/l)	Chloride (mg/l)	BOD5 (mg/l)
2025	0.515	13.25	43	14
2024	0549	14.51	38	21
2023	0.522	15.89	37	13
2022	0.458	10.50	36	10
2021	0.600	12.10	38	21

# Indicates partial year

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 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 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	1200.44					30.5	
802	MW802	1201.49					31.0	
803	MW803	1200.15					28.0	

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 June 21, 2021 – October 27, 2025.

Background Groundwater Quality

There were no PAL exceedances observed in the background groundwater quality and the trends for the results were stable.

Down-Gradient Groundwater Quality

There were no ES or PAL exceedances observed in the down-gradient groundwater quality results and the trends for the results were stable.

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 are no correlations between the effluent loading levels and the groundwater monitoring results.

Proposed Groundwater Monitoring Requirements Permit WI-0031623-10

Table 7 Groundwater Quality Sampling Frequency and Limits
Outfall 001

Sample Point	Well Name	Sample Frequency	Well Designation
801	MW 801	1/6 Months	Background
802	MW 802	1/6 Months	***Non-Point of Standard**
803	MW 803	1/6 Months	***Non-Point of Standard**
Parameter	PAL	ES	Source
Depth to Groundwater	N/A	N/A	Measured
Groundwater Elevation	N/A	N/A	Measured
pH, Field	***5.9-7.9 su**	N/A	Calculated
Nitrogen, Nitrite + Nitrate	2.0 mg/l	10.0 mg/l	NR 140 Table 1
Chloride	125 mg/l	250 mg/l	NR 140 Table 2
Nitrogen, Ammonia	0.97 mg/l	9.7 mg/l	NR 140 Table 1
Nitrogen, Organic	***2.5 mg/l**	N/A	Calculated
Total Dissolved Solids	***310 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:

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

And for pH:

$\sum$ [Mean of the background groundwater quality $\pm$ 1 su] = 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:

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

Conclusions

There are no recommended changes to the sampling point 001 parameters or associated limits.

Based on the location of the groundwater monitoring wells with respect to the land disposal system, these wells should be designated as non-point of standard wells per s. NR 140.20, Wis. Adm. Code.

Based on the background groundwater quality results the indicator parameter PALs for organic nitrogen and TDS have been increased and a pH range limit has been calculated.

There were no exceedances in the groundwater quality standards for the past permit term.

Compliance Schedule Recommendations

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 A

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	06/21/2021		2
801 MW 801	Chloride Dissolved	mg/L	10/25/2021		2
801 MW 801	Chloride Dissolved	mg/L	06/27/2022	<	2
801 MW 801	Chloride Dissolved	mg/L	10/25/2022		2
801 MW 801	Chloride Dissolved	mg/L	06/29/2023		4
801 MW 801	Chloride Dissolved	mg/L	10/19/2023		2
801 MW 801	Chloride Dissolved	mg/L	06/26/2024	<	2
801 MW 801	Chloride Dissolved	mg/L	10/18/2024	<	2
801 MW 801	Chloride Dissolved	mg/L	10/27/2025		2
				Mean	2.2222
				St. Dev.	0.6285
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	06/21/2021		0.7
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	10/25/2021		1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	06/27/2022		0.9
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	10/25/2022		1.3
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	06/29/2023		1.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	10/19/2023		1.1
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	06/26/2024		1.4
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	10/18/2024		1.3
801 MW 801	Nitrogen, Ammonia Dissolved	mg/L	10/27/2025		1.6
				Mean	1.1556
				St. Dev.	0.2587
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/21/2021	<	0.1
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10/25/2021		0.2
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/27/2022	<	0.1
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10/25/2022	<	0.1
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/29/2023	<	0.05
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10/19/2023	<	0.05
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/26/2024	<	0.02
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10/18/2024	<	0.02
801 MW 801	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10/27/2025		0.03
				Mean	0.0744
				St. Dev.	0.0546
801 MW 801	Nitrogen, Organic Dissolved	mg/L	06/21/2021	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	10/25/2021	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	06/27/2022	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	10/25/2022	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	06/29/2023	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	10/19/2023	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	06/26/2024	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	10/18/2024	<	0.5
801 MW 801	Nitrogen, Organic Dissolved	mg/L	10/27/2025		0.3
				Mean	0.4778

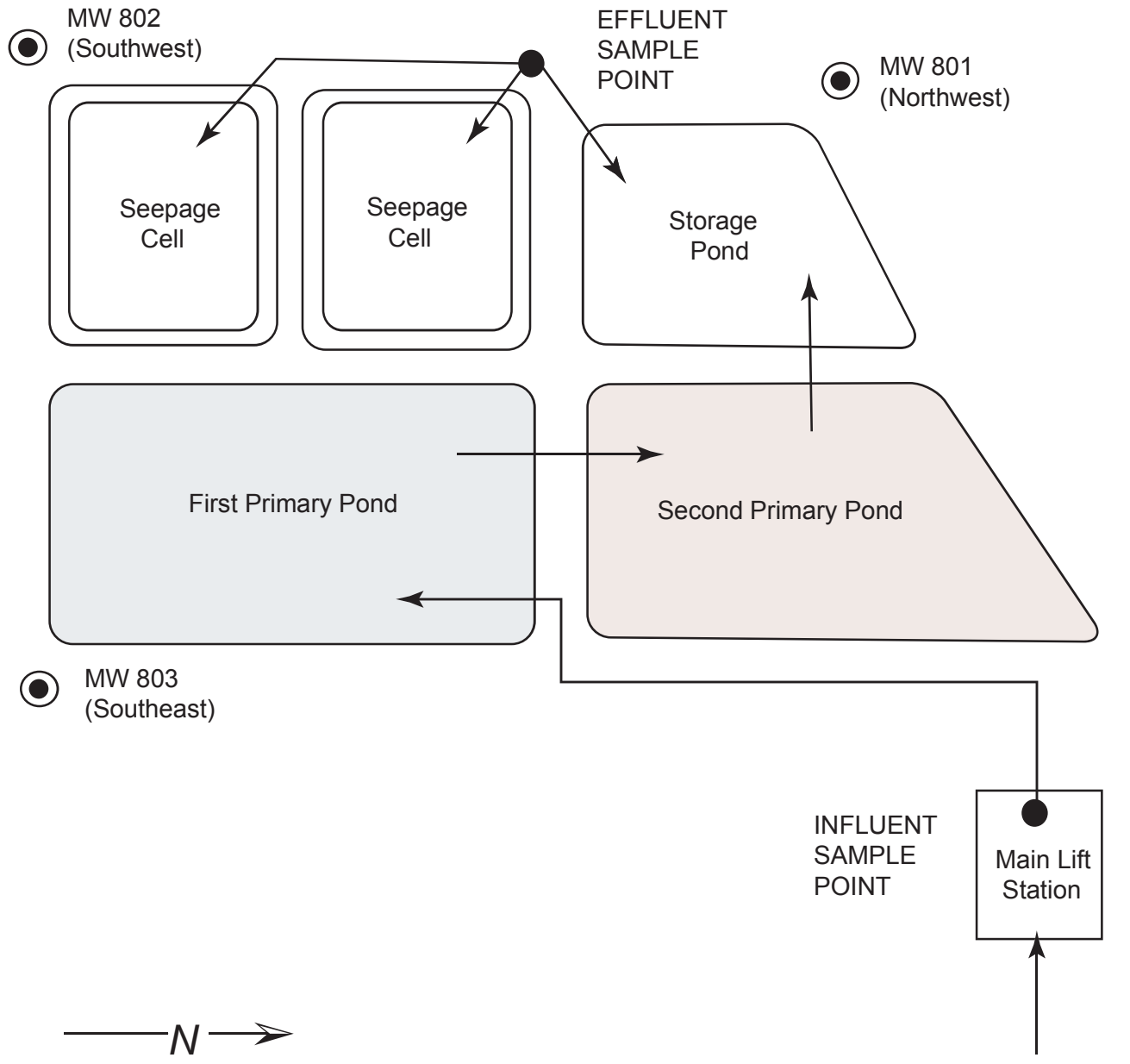
well	param	unit	date	code	result
801 MW 801	pH Field	su	06/27/2022		6.54
801 MW 801	pH Field	su	06/29/2023		7.7
801 MW 801	pH Field	su	10/19/2023		6.63
801 MW 801	pH Field	su	06/26/2024		6.67
801 MW 801	pH Field	su	10/18/2024		6.69
801 MW 801	pH Field	su	10/27/2025		6.68
				Mean	6.8183
801 MW 801	Solids, Total Dissolved	mg/L	06/21/2021		88
801 MW 801	Solids, Total Dissolved	mg/L	10/25/2021		67
801 MW 801	Solids, Total Dissolved	mg/L	06/27/2022		55
801 MW 801	Solids, Total Dissolved	mg/L	10/25/2022		88
801 MW 801	Solids, Total Dissolved	mg/L	06/29/2023		101
801 MW 801	Solids, Total Dissolved	mg/L	10/19/2023		92
801 MW 801	Solids, Total Dissolved	mg/L	06/26/2024		65
801 MW 801	Solids, Total Dissolved	mg/L	10/18/2024		267
801 MW 801	Solids, Total Dissolved	mg/L	10/27/2025		85
				Mean	100.89
802 MW 802	Chloride Dissolved	mg/L	06/21/2021		2
802 MW 802	Chloride Dissolved	mg/L	10/25/2021	<	2
802 MW 802	Chloride Dissolved	mg/L	06/27/2022	<	2
802 MW 802	Chloride Dissolved	mg/L	10/25/2022		2
802 MW 802	Chloride Dissolved	mg/L	06/29/2023	<	2
802 MW 802	Chloride Dissolved	mg/L	10/19/2023	<	2
802 MW 802	Chloride Dissolved	mg/L	06/26/2024		2
802 MW 802	Chloride Dissolved	mg/L	10/18/2024		2
802 MW 802	Chloride Dissolved	mg/L	10/27/2025		2
802 MW 802	Nitrogen, Ammonia Dissolved	mg/L	06/21/2021	<	0.1
802 MW 802	Nitrogen, Ammonia Dissolved	mg/L	10/25/2021	<	0.1
802 MW 802	Nitrogen, Ammonia Dissolved	mg/L	06/27/2022	<	0.1
802 MW 802	Nitrogen, Ammonia Dissolved	mg/L	10/25/2022	<	0.1
802 MW 802	Nitrogen, Ammonia Dissolved	mg/L	06/29/2023	<	0.1
802 MW 802	Nitrogen, Ammonia Dissolved	mg/L	10/19/2023	<	0.1
802 MW 802	Nitrogen, Ammonia Dissolved	mg/L	06/26/2024		0.2
802 MW 802	Nitrogen, Ammonia Dissolved	mg/L	10/18/2024	<	0.1
802 MW 802	Nitrogen, Ammonia Dissolved	mg/L	10/27/2025		0.3

well	param	unit	date	code	result
802 MW 802	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/21/2021		0.1
802 MW 802	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10/25/2021		0.2
802 MW 802	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/27/2022		0.2
802 MW 802	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10/25/2022		0.2
802 MW 802	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/29/2023		0.14
802 MW 802	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10/19/2023		0.15
802 MW 802	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/26/2024		0.2
802 MW 802	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10/18/2024		0.18
802 MW 802	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10/27/2025		0.09
802 MW 802	Nitrogen, Organic Dissolved	mg/L	06/21/2021	<	0.5
802 MW 802	Nitrogen, Organic Dissolved	mg/L	10/25/2021	<	0.5
802 MW 802	Nitrogen, Organic Dissolved	mg/L	06/27/2022	<	0.5
802 MW 802	Nitrogen, Organic Dissolved	mg/L	10/25/2022	<	0.5
802 MW 802	Nitrogen, Organic Dissolved	mg/L	06/29/2023	<	0.5
802 MW 802	Nitrogen, Organic Dissolved	mg/L	10/19/2023	<	0.5
802 MW 802	Nitrogen, Organic Dissolved	mg/L	06/26/2024	<	0.5
802 MW 802	Nitrogen, Organic Dissolved	mg/L	10/18/2024	<	0.5
802 MW 802	Nitrogen, Organic Dissolved	mg/L	10/27/2025	<	0.1
802 MW 802	pH Field	su	06/27/2022		7.13
802 MW 802	pH Field	su	06/29/2023		7.05
802 MW 802	pH Field	su	10/19/2023		7.18
802 MW 802	pH Field	su	06/26/2024		6.98
802 MW 802	pH Field	su	10/18/2024		6.88
802 MW 802	pH Field	su	10/27/2025		6.87
802 MW 802	Solids, Total Dissolved	mg/L	06/21/2021		63
802 MW 802	Solids, Total Dissolved	mg/L	10/25/2021		54
802 MW 802	Solids, Total Dissolved	mg/L	06/27/2022		32
802 MW 802	Solids, Total Dissolved	mg/L	10/25/2022		67
802 MW 802	Solids, Total Dissolved	mg/L	06/29/2023		49
802 MW 802	Solids, Total Dissolved	mg/L	10/19/2023		72
802 MW 802	Solids, Total Dissolved	mg/L	06/26/2024		52
802 MW 802	Solids, Total Dissolved	mg/L	10/18/2024		503
802 MW 802	Solids, Total Dissolved	mg/L	10/27/2025		76
803 MW 803	Chloride Dissolved	mg/L	06/21/2021		2
803 MW 803	Chloride Dissolved	mg/L	10/25/2021		5
803 MW 803	Chloride Dissolved	mg/L	06/27/2022		4
803 MW 803	Chloride Dissolved	mg/L	10/25/2022		2
803 MW 803	Chloride Dissolved	mg/L	06/29/2023		6
803 MW 803	Chloride Dissolved	mg/L	10/19/2023		2
803 MW 803	Chloride Dissolved	mg/L	06/26/2024		2
803 MW 803	Chloride Dissolved	mg/L	10/18/2024	<	2
803 MW 803	Chloride Dissolved	mg/L	10/27/2025		2

well		param	unit	date	code	result
803	MW 803	Nitrogen, Ammonia Dissolved	mg/L	06/21/2021		0.3
803	MW 803	Nitrogen, Ammonia Dissolved	mg/L	10/25/2021		7
803	MW 803	Nitrogen, Ammonia Dissolved	mg/L	06/27/2022		0.3
803	MW 803	Nitrogen, Ammonia Dissolved	mg/L	10/25/2022		0.5
803	MW 803	Nitrogen, Ammonia Dissolved	mg/L	06/29/2023		0.4
803	MW 803	Nitrogen, Ammonia Dissolved	mg/L	10/19/2023		0.6
803	MW 803	Nitrogen, Ammonia Dissolved	mg/L	06/26/2024		1.1
803	MW 803	Nitrogen, Ammonia Dissolved	mg/L	10/18/2024		0.7
803	MW 803	Nitrogen, Ammonia Dissolved	mg/L	10/27/2025		1.1
803	MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/21/2021	<	0.1
803	MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10/25/2021		0.2
803	MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/27/2022	<	0.1
803	MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10/25/2022	<	0.1
803	MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/29/2023		0.07
803	MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10/19/2023		0.08
803	MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	06/26/2024		0.06
803	MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10/18/2024		0.1
803	MW 803	Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10/27/2025		0.06
803	MW 803	Nitrogen, Organic Dissolved	mg/L	06/21/2021	<	0.5
803	MW 803	Nitrogen, Organic Dissolved	mg/L	10/25/2021		0.7
803	MW 803	Nitrogen, Organic Dissolved	mg/L	06/27/2022	<	0.5
803	MW 803	Nitrogen, Organic Dissolved	mg/L	10/25/2022	<	0.5
803	MW 803	Nitrogen, Organic Dissolved	mg/L	06/29/2023	<	0.5
803	MW 803	Nitrogen, Organic Dissolved	mg/L	10/19/2023	<	0.5
803	MW 803	Nitrogen, Organic Dissolved	mg/L	06/26/2024	<	0.5
803	MW 803	Nitrogen, Organic Dissolved	mg/L	10/18/2024	<	0.5
803	MW 803	Nitrogen, Organic Dissolved	mg/L	10/27/2025		0.2
803	MW 803	pH Field	su	06/27/2022		6.73
803	MW 803	pH Field	su	06/29/2023		7.82
803	MW 803	pH Field	su	10/19/2023		6.89
803	MW 803	pH Field	su	06/26/2024		6.83
803	MW 803	pH Field	su	10/18/2024		6.79
803	MW 803	pH Field	su	10/27/2025		6.77
803	MW 803	Solids, Total Dissolved	mg/L	06/21/2021		74
803	MW 803	Solids, Total Dissolved	mg/L	10/25/2021		88
803	MW 803	Solids, Total Dissolved	mg/L	06/27/2022		55
803	MW 803	Solids, Total Dissolved	mg/L	10/25/2022		73
803	MW 803	Solids, Total Dissolved	mg/L	06/29/2023		65
803	MW 803	Solids, Total Dissolved	mg/L	10/19/2023		87
803	MW 803	Solids, Total Dissolved	mg/L	06/26/2024		63
803	MW 803	Solids, Total Dissolved	mg/L	10/18/2024		364
803	MW 803	Solids, Total Dissolved	mg/L	10/27/2025		86

Village of Exeland
Wastewater Treatment Plant

The Exeland wastewater treatment facility consists of two primary ponds operated in series, followed by a secondeary pond and two seepage cells. The seepage cells are loaded on a fill and draw basis, usually with a fall discharge. There are three monitoring wells around the perimeter of the system. The diagram below shows the treatment units and sampling locations.



● represents sample locations

NOT TO SCALE

Flow: 0.0273MGD
BOD: 53 pounds/day
Construction year: 1981