Village of Cochrane Public Noticed Permit Fact Sheet

General Information

Permit Number:	WI-0020214-11-0
Permittee Name:	Village of Cochrane, Village Hall, PO Box 222, Cochrane, WI 54622-0222
Discharge Location:	Cochrane Wastewater Treatment Facility, 311 Michaels St., Cochrane, WI 54622 NE ¼ of the SW ¼ of Section 8, T20N, R12W, Town of Milton, Buffalo County
Receiving Water:	the groundwater of the Trempealeau River Drainage Basin in Buffalo County
Discharge Type:	Existing, seasonal fill & draw
Design Flow	0.0722 MGD Annual Average
Significant Industrial Loading?	None
Operator at Proper Grade?	Yes. Distribution Grade 1, Groundwater Grade 1, Wastewater Operator Certification - Biological Treatment: Ponds, Lagoons and Natural Systems - Basic
Approved Pretreatment Program?	N/A

Facility Description

The Cochrane Wastewater Treatment Facility treats domestic wastewater from the Village of Cochrane and Pleasant Valley Mobile Home Park. The facility has an annual average design flow of 0.0722 million gallons per day (MGD) and an actual average discharge flow of 0.0311 MGD in 2022. The treatment system is operated on a seasonal basis (fill and draw) and consists of two stabilization ponds and two seepage cells. A groundwater monitoring system exists onsite to monitor any possible groundwater impact from the effluent discharged to the seepage cells. Significant monitoring and/or limit changes proposed in the upcoming permit term are as follows: 1) the alternate concentration limit (ACL) for nitrite + nitrate nitrogen decreased, 2) the preventative action limit (PAL) for total dissolved solids decreased, 3) the PAL range for pH increased, 4) influent total nitrogen monitoring has been added, and 5) the influent flow sample frequency has been changed from “continuous” to “daily”. Clarification language has been added notifying the permittee they must monitor sludge for List 2 nutrients and meet the requirements of List 3 (Pathogen Control) and List 4 (Vector Attraction Reduction) prior to landspreading if they remove sludge from the lagoon(s). Additionally, to quantitate the risk, PFAS sludge sampling has been included in the permit pursuant to ss. NR 214.18(5)(b) and NR 204.06(2)(b)9., Wis. Adm. Code. A schedule has been included requiring the permittee submit a sludge management plan prior to removal and land application of sludge from the pond(s). A schedule has also been included that requires submittal of updated Land Treatment Management plan.

Substantial Compliance Determination

Enforcement During Last Permit: No enforcement actions were taken during the last permit term.

After a desk top review of discharge monitoring reports and a site visit on 4/30/2024, this facility has been found to be in substantial compliance with their current permit.

Compliance determination entered by Michael Chang on 05/13/2024.

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	0.0463 MGD annual average (Data logger was down during part of 2023, so 2022 data provided as it's more accurate.)	Representative influent samples of the combined influent from the Village of Cochrane and Pleasant Valley Mobile Home Park shall be collected at manhole A prior to discharge to the stabilization ponds.
001	0.0311 MGD annual average (Data logger was down during part of 2023, so 2022 data provided as it's more accurate.)	Representative effluent samples shall be collected at Manhole B, after the ponds and prior to discharge to the seepage cells.
002	Sludge was last removed from the pond 01/10/2011. Permittee does not intend to remove sludge this permit term.	Representative composite sludge samples shall be collected in 2026 from the stabilization pond at various locations and depths and monitored for the parameters as listed in the table below. If the permittee plans to remove sludge, they shall monitor sludge for Lists 1, 2, 3 & 4 prior to land application. The Department shall be notified at least 30 days in advance of sludge removal so that appropriate monitoring forms can be provided. Approval of landspreading sites must be completed prior to sludge removal.

Sample Point Designation For Groundwater Monitoring Systems			
System	**Sample Pt Number**	**Well Name**	**Comments**
Ponds/seepage-Quarterly Monitoring	806	MW-4	Up-gradient, Non-Point of Standard
	808	MP-1	Up-gradient, Background
	809	MP-2	Down-gradient, Point of Standard
	810	MP-3	Down-gradient, Point of Standard
Ponds/seepage-Semiannual Monitoring	803	MW-1	Mid-gradient, Non-Point of Standard
	804	MW-2	Mid-gradient, Non-Point of Standard
	805	MW-3	Mid-gradient, Non-Point of Standard
	811	MP-4	Side-gradient, Non-Point of Standard

1 Influent – Monitoring Requirements

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 Kjeldahl		mg/L	2/Month	24-Hr Flow Prop Comp	
Nitrogen, Organic Total		mg/L	2/Month	Calculated	
Nitrogen, Ammonia (NH3-N) Total		mg/L	2/Month	24-Hr Flow Prop Comp	
Nitrogen, Total		mg/L	2/Month	Calculated	

Changes from Previous Permit:

The sample frequency for flow has been changed from “continuous” to “daily” for eDMR reporting purposes, The addition of total nitrogen to aid in determining the source of the elevated nitrite + nitrate nitrogen levels in groundwater monitoring well 809. For more information see the memo written by Woody Myers dated July 10, 2024 titled “Cochrane Wastewater Treatment Facility – Land Disposal System Evaluation Report, WPDES Permit #WI-0020214”.

Explanation of Limits and Monitoring Requirements

Influent monitoring is required by NR 210 Wis. Adm. Code, to assess wastewater strengths and volumes and to demonstrate the percent removal requirements in s. NR 210.05, Wis. Adm. Code, and in the Standard Requirements section of the permit.

2 Land Treatment – Monitoring and Limitations

Sample Point Number: 001- EFFLUENT TO SEEPAGE CELLS

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	2/Month	Grab	
Nitrogen, Organic Total		mg/L	2/Month	Calculated	
Nitrogen, Ammonia (NH3-N) Total		mg/L	2/Month	Grab	
Nitrogen, Nitrite + Nitrate Total		mg/L	2/Month	Grab	
Nitrogen, Total		mg/L	2/Month	Calculated	
Solids, Total Dissolved		mg/L	2/Month	Grab	
Chloride		mg/L	2/Month	Grab	

Changes from Previous Permit:

No changes

Explanation of Limits and Monitoring Requirements

Requirements for land treatment of municipal wastewater are determined in accordance with ch. NR 206 Wis. Adm. Code.

The effluent monitoring frequency for all parameters with limits were considered. Monitoring frequencies are based on the size and type of the facility and are established to best characterize effluent quality and variability, to detect events of noncompliance, and to ensure fairness and consistency in permits issued across the state. Requirements in administrative code (NR 108, 205, 210 and 214 Wis. Adm. Code) and Section 283.55, Wis. Stats. were considered, where applicable, when determining the appropriate monitoring frequencies for pollutants that have final effluent limits in effect during this permit term. For more information see the March 22, 2021 version of the Bureau of Water Quality Program Guidance Document “Monitoring Frequencies for Individual Wastewater Permits”. After consideration of the above factors, no changes were made to the monitoring frequencies.

Groundwater – Monitoring and Limitations

2.1 Groundwater Monitoring System for Ponds/seepage- Semiannual Monitoring

Location of Monitoring system: NE1/4 of the SW1/4, Section 8, T20N R12W, Town of Milton

Groundwater Monitoring Well(s) to be Sampled: MW-1 (803), MW-2 (804), MW-3 (805), MP-4 (811)

Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality: MP-1 (808)

Groundwater Monitoring Well(s) Used for Point of Standards Application: MP-1 (808) and MP-2 (809)

Parameter	Units	Preventative Action Limit	Enforcement Standard	Frequency
Depth To Groundwater	feet	N/A	N/A	1/ 6 Months
Groundwater Elevation	feet MSL	N/A	N/A	1/ 6 Months
Chloride Dissolved	mg/L	125	250	1/ 6 Months
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	5.8	10	1/ 6 Months
pH Field	su	8.7	N/A	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	425	N/A	1/ 6 Months

2.2 Groundwater Monitoring System for Ponds/seepage- Quarterly Monitoring

Location of Monitoring system: NE1/4 of the SW1/4, Section 8, T20N R12W, Town of Milton

Groundwater Monitoring Well(s) to be Sampled: MW-4 (806), MP-1 (808), MP-2 (809), MP-3 (810)

Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality: MP-1 (808)

Groundwater Monitoring Well(s) Used for Point of Standards Application: MP-1 (808) and MP-2 (809)

Parameter	Units	Preventative Action Limit	Enforcement Standard	Frequency
Depth To Groundwater	feet	N/A	N/A	Quarterly
Groundwater Elevation	feet MSL	N/A	N/A	Quarterly
Chloride Dissolved	mg/L	125	250	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	5.8	10	Quarterly
pH Field	su	8.7	N/A	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Organic Dissolved	mg/L	2.5	N/A	Quarterly
Solids, Total Dissolved	mg/L	425	N/A	Quarterly

Changes from Previous Permit:

1) the alternate concentration limit (ACL) for nitrite + nitrate nitrogen has decreased, 2) the preventative action limit (PAL) for total dissolved solids has decreased, and 3) the PAL range for pH increased.

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. Groundwater limits and requirements are determined in accordance with ch. NR 140, Wis. Adm. Code.

For more information see the memo written by Woody Myers dated July 10, 2024 titled "Cochrane Wastewater Treatment Facility – Land Disposal System Evaluation Report, WPDES Permit #WI-0020214".

3 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	Fecal Coliform	Incorporation	Land Application	Lagoon sludge has not been removed from the pond since 01/10/2011. Permittee does not plan to remove sludge this permit term.
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						
Is a priority pollutant scan required? No						

Sample Point Number: 002- LAGOON SLUDGE

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Once	Composite	
Arsenic Dry Wt	Ceiling	75 mg/kg	Once	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	Once	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	Once	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	Once	Composite	
Copper Dry Wt	Ceiling	4,300 mg/kg	Once	Composite	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
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, Ammonia (NH3-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	
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	
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 Polyfluoroalkyl Substances based on updated DNR PFAS List. See PFAS Permit Sections for more information.

Changes from Previous Permit:

Clarification has been added notifying the permittee that they must monitor for List 2 nutrients and meet the requirements of List 3 (Pathogen Control for Class B sludge) and List 4 (Vector Attraction Reduction) prior to landspreading. 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. PFAS monitoring once during the permit term is included in the permit pursuant to s. NR 204.06(2)(b)9., Wis. Adm. Code.

Explanation of Limits and Monitoring Requirements

Requirements for 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 2025. Results will assist in the determination of the acres needed for land application of sludge, should it be necessary. The number of acres needed is also required for the Sludge Management Schedule (see schedules for more information).

Change in form submittal – In prior permit reissuances when it had 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.

PFAS: The presence and fate of PFAS in municipal and industrial sludges is an emerging public health concern. EPA is currently developing a risk assessment to determine future land application rates and expects to release this risk assessment by the end of 2024. In the interim, the department has developed the "Interim Strategy for Land Application of Biosolids and Industrial Sludges Containing PFAS".

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 the proposed WPDES permit pursuant to ss. NR 214.18(5)(b) and NR 204.06(2)(b)9., Wis. Adm. Code.

4 Schedules

4.1 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.	03/31/2025

Explanation of Schedule: The permittee is required to have an updated and approved management plan per NR 206.07(2)(h)1 Wis. Adm. Code.

4.2 Sludge Management Plan

Required Action	Due Date
Submit a Sludge Management Plan: The permittee shall submit a 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.	

Explanation of Schedule: 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 by clearly explaining how sludge will be safely removed, what contingencies are in place, the type of equipment that will be used and how the sludge will be land applied to ensure the proper precautions are in place to prevent any negative impacts to surface water or groundwater.

Special Reporting Requirements: None

Other Comments: Public Notice Newspaper: Cochrane-Fountain City Recorder, PO Box 40, Cochrane, WI 54622-0040

Attachments: NR 140 Groundwater Evaluation Report memo written by Woody Myers dated July 10, 2024 titled "Cochrane Wastewater Treatment Facility – Land Disposal System Evaluation Report, WPDES Permit #WI-0020214"

Expiration Date: December 31, 2029

Justification Of Any Waivers From Permit Application Requirements

N/A

Prepared By: Holly Heldstab, Wastewater Specialist **Date:** October 9, 2024