

Permit Fact Sheet

General Information

Permit Number:	WI-0036064-07-01 *Modification	
Permittee Name:	CHRISTMAS MOUNTAIN SANITARY DISTRICT	
Address:	P.O. Box 207 Wisconsin Dells WI 53965	
Discharge Location:	SW ¼ of the NW ¼ of Section 13, T13N, R5E, Town of Dellona	
Receiving Water:	Groundwater and wetland adjacent to Spring Brook of the Lower Wisconsin River Basin (Dell Creek Watershed, LW26 – Lower Wisconsin River Basin) in Sauk County.	
StreamFlow (Q _{7,10}):	N/A	
Stream Classification:	N/A Wetland	
Design Flow:	Annual Average	0.142 MGD
Significant Industrial Loading?	No	
Operator at Proper Grade?	A1, B, C, D, P required of operator. No current operator, consulting firm operating plant.	
Approved Pretreatment Program?	N/A	

Facility Description

Christmas Mountain Sanitary District, an existing discharger, operates a sequencing batch reactor (SBR) wastewater treatment plant providing secondary treatment and nitrogen removal for domestic wastewater received from the resort and sanitary district. Treated, disinfected secondary effluent is spray irrigated from a holding pond on designated golf course fairways during warm weather months (March through November) and/or subsurface applied via a drip irrigation system year-round, but particularly during winter. Samples are taken after the holding pond for wastewater discharged to outfall 001 for spray irrigation.

Discharge to a wetland and drip irrigation system within the Christmas Mountain Sanitary District provides alternate discharge outfall. Wastewater discharged to the wetland flows through the effluent discharge from SBR #1 and #2 to the EQ Tank and sampling is completed in a manhole after the EQ Tank. At this time, the permittee does not have the ability to chlorinate water discharged to the wetland. However, this permit requires disinfection during May through September. No discharge to the wetland may occur May through September until both *E. coli* and/or chlorine limits, if chlorine is used for disinfection, are met. Wastewater is then directed to Outfall 006 (the wetlands) via the same piping as the wastewater discharge to the Drip Irrigation (Outfall 003). At this time, the Drip Irrigation system is out of service and the department plans to inactivate Outfall 003 until the permittee notifies the department of use of Outfall 003. The wastewater discharged to the wetland must be disinfected May through September. The WWTP is designed to treat an average daily flow of 0.142 MGD and presently receives an average of 0.065 MGD for treatment.

Previous permits required the wetlands (Outfall 006) to be evaluated on a monthly and annual basis. These evaluations have found no ponding or channelization of flow or adverse impacts to the wetland. The proposed permit continues with only the annual wetland evaluation.

Groundwater monitoring wells around the spray irrigation system monitor groundwater quality. Sludge has typically been handled by a licensed sanitary pumper and stored and land applied off site following department regulations.

Permit modification -01 completed to update the fecal coliform limit for Outfall 001 spray irrigation. The permittee requested reevaluation of the fecal coliform limit for Outfall 001 following the updated data and facility capacity for disinfection. Following further evaluation, the department determined that 400 CFU/100ml geometric mean monthly average is the appropriate standard limitation for wastewater reuse discharged to groundwater and land treatment outfalls when there is recreational use or public access to the land treatment area. Changes the modification made are in grey highlight.

Substantial Compliance Determination

After a desktop review of all discharge monitoring reports, annual reports, and a site visit on 07/06/2022, this facility has been found to be in substantial compliance with their current permit.

Sample Point Designation		
Sample Point Number	Discharge Flow, Units, and Averaging Period	Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)
701	0.086 MGD (2018-2021)	Representative influent samples shall be collected just prior to the EQ basin.
001	0.076 MGD (2018-2021)	Representative effluent grab samples of discharge to the spray irrigation system shall be collected from the pump station wet well after the holding pond prior to spray irrigation (March 1 through November 30). Permitted spray irrigation sites are limited to fairways #3, #6, #7, #8 and #9.
002	17.8 dry US Ton	Aerobically digested, Liquid, Class B. Representative sludge samples shall be collected from the sludge storage tanks.
003	0.00013 MGD (2018-2021)	Representative 24-Hr flow proportional composite effluent samples taken prior to the drip irrigation system shall be collected at the effluent manhole prior to chlorination and the EQ Tank.
006	37,424.716 gpd (2018-2021)	Representative effluent samples prior to discharge to the wetland discharge system shall be collected at the effluent manhole prior to the EQ Tank post chlorination. Discharge to the wetland requires disinfection May through September.
007	0.0689 MGD (2018-2021)	The Daily Flow from Outfalls 001 (spray irrigation), 003 (drip irrigation) & 006 (wetland discharge) shall be combined and recorded for CMAR use.

Sample Point Designation For Groundwater Monitoring Systems			
System	Sample Pt Number	Well Name	Comments
spray irrigation monitoring system	802	MW-2A (802 DOWNGRADIEN T WELL)	Point of Standard Well

Sample Point Designation For Groundwater Monitoring Systems

System	Sample Pt Number	Well Name	Comments
	805	MW-5 (805 DOWNGRADIEN T WELL)	Point of Standard Well
	806	MW-6 (806 DOWNGRADIEN T WELL)	Point of Standard Well
	807	MW-7 (807 background well)	Non-Point of Standard Well

1 Influent - Proposed Monitoring

Sample Point Number: 701- INFLUENT

Monitoring Requirements and Limitations

Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Continuous	
BOD5, Total		mg/L	2/Week	24-Hr Comp	
Suspended Solids, Total		mg/L	2/Week	24-Hr Comp	
Nitrogen, Total Kjeldahl		mg/L	Monthly	24-Hr Comp	
Nitrogen, Organic Total		mg/L	Monthly	Calculated	
Nitrogen, Ammonia (NH3-N) Total		mg/L	Monthly	24-Hr Comp	

Changes from Previous Permit:

Flow sample frequency changed to daily from continuous for eDMR reporting purposes. No other changes required.

Explanation of Limits and Monitoring Requirements

Standard minor mechanical municipal WWTP with land treatment monitoring requirements.

2 Surface Water - Proposed Monitoring and Limitations

Sample Point Number: 006- Wetland Discharge

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate	Annual Avg	36,650 gpd	Daily	Continuous	
BOD5, Total	Weekly Avg	30 mg/L	Weekly	24-Hr Flow Prop Comp	
BOD5, Total	Monthly Avg	20 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total	Weekly Avg	30 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	20 mg/L	Weekly	24-Hr Flow Prop Comp	
pH Field	Daily Max	9.0 su	Weekly	Grab	
pH Field	Daily Min	6.0 su	Weekly	Grab	
Dissolved Oxygen	Daily Min	4.0 mg/L	Weekly	Grab	
Nitrogen, Ammonia (NH3-N) Total	Daily Max	21 mg/L	Weekly	24-Hr Flow Prop Comp	November through April
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	17 mg/L	Weekly	24-Hr Flow Prop Comp	May through October
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	6.7 mg/L	Weekly	24-Hr Flow Prop Comp	May through October
Chlorine, Total Residual	Daily Max	19 ug/L	Weekly	Grab	May through September
Chlorine, Total Residual	Weekly Avg	7.3 ug/L	Weekly	Grab	May through September
E. coli	Geometric Mean - Monthly	126 #/100 ml	Weekly	Grab	May through September
E. coli	% Exceedance	10 Percent	Monthly	Calculated	Limit effective May through September annually. See the E. coli Percent Limit section. Enter the result in the DMR on the last day of the month.
Phosphorus, Total	Monthly Avg	1.0 mg/L	Weekly	24-Hr Flow Prop Comp	
Chloride		mg/L	Monthly	24-Hr Flow Prop Comp	Monitoring in 2026 only.

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Copper, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	Monitoring in 2026 only.
Nitrogen, Total Kjeldahl		mg/L	See Listed Qtr(s)	24-Hr Flow Prop Comp	Annual in rotating quarters. See Nitrogen Series Monitoring section below.
Nitrogen, Nitrite + Nitrate Total		mg/L	See Listed Qtr(s)	24-Hr Flow Prop Comp	Annual in rotating quarters. See Nitrogen Series Monitoring section below.
Nitrogen, Total		mg/L	See Listed Qtr(s)	Calculated	Annual in rotating quarters. See Nitrogen Series Monitoring section below. Total Nitrogen shall be calculated as the sum of reported values for Total Kjeldahl Nitrogen and Total Nitrite + Nitrate Nitrogen.
Temperature		deg F	Monthly	Continuous	Monitoring in 2026 only.

Changes from Previous Permit

Fecal Coliform and *E. coli*: Fecal coliform monitoring and limits have been replaced with *Escherichia coli* (*E. coli*) monitoring and limits. *E. coli* monitoring is required at the permit effective date. An interim fecal coliform limit of 400 #/100 ml as a monthly geometric mean will apply from the permit effective date through the end of a compliance schedule. At the end of the compliance schedule, *E. coli* limits of 126 #/100 ml as a monthly geometric mean that may not be exceeded and 410 #/100 ml as a daily maximum that may not be exceeded more than 10 percent of the time in any calendar month will apply.

Chloride, Copper and Temperature: Monitoring year updated.

Nitrogen Series: Nitrogen series added annually on rotating basis.

Explanation of Limits and Monitoring Requirements

Categorical Limits

BOD₅, Total Suspended Solids, pH, and Dissolved Oxygen: Standard municipal wastewater requirements for BOD₅, total suspended solids, dissolved oxygen, and pH are included based on ch. NR 210, Wis. Adm. Code ‘Sewage Treatment Works’ requirements for discharges to fish and aquatic life streams. Chapter NR 102, Wis. Adm. Code ‘Water Quality Standards for Surface Waters’ also specifies requirements for pH for fish and aquatic life streams.

Water Quality Based Limits and WET Requirements and Disinfection

Refer to the Water Quality-Based Effluent Limitations (WQBELs) memo for Christmas Mountain Sanitary District, prepared by Sarah Luck dated October 25, 2022 and updated on January 11, 2023, and used for this reissuance.

Nitrogen, Ammonia: Current acute and chronic ammonia toxicity criteria for the protection of aquatic life are included in Table 2C and Table 4B of ch. NR 105, Wis. Adm. Code (effective March 1, 2004). Subchapter IV of ch. NR 106

establishes procedures for calculating water quality-based effluent limitations (WQBELs) for ammonia (effective March 1, 2004). The current daily maximum, weekly average, and monthly average ammonia limits are retained in the proposed permit. Expression of limits requirements in s. NR 106.07, Wis. Adm Code, are not included due to the non-continuous nature of the discharge from Outfall 006.

Phosphorus, Total: Outfall 006 discharges to a wetland which is classified as limited aquatic life water. As a result, the recommended water quality-based limit is 1.0 mg/L as a monthly average to be protective of downstream use.

Chlorine: The permittee requested the ability to discharge to the wetland year-round including during the disinfection season of May through September. The permittee shall maintain a record of when effluent is chlorinated and report periods of non-chlorination on the monthly eDMR unless otherwise approved by the Department. Section NR 210.06(2)(b), Wis. Adm. Code, states, “When chlorine is used for disinfection, the daily maximum total residual chlorine concentration of the discharge may not exceed 0.10 mg/L.” Since the calculated water quality-based effluent limitations for chlorine are more restrictive, the water quality-based limits are retained in the proposed permit. Due to the recent changes to the limit expression requirements in s. NR 106.07, Wis. Adm. Code a weekly average limit of 7.3 ug/L is also included. Expression of limits requirements in s. NR 106.07, Wis. Adm Code, are not included due to the non-continuous nature of the discharge from Outfall 006.

E. Coli: The permittee requested the ability to discharge to the wetland year-round including during the disinfection season of May through September. To allow discharge year round this permit includes E. coli limits effective May through September. However, the permittee currently is unable to chlorinate discharge to the wetland therefore may not discharge May through September until *E. coli* limits can be met.

Revisions to bacteria surface water quality criteria to protect recreational uses and accompanying E. coli WPDES permit implementation procedures became effective May 1, 2020. The new rule requires that WPDES permits for facilities with required disinfection include monitoring for *E. coli* while facilities are disinfecting during the recreation period, and establish effluent limitations for E. coli established in s. NR 210.06 (2), Wis. Adm Code. The administrative code rule changes included the following actions: revised the bacteria water quality criteria from fecal coliform to *E. coli* to protect recreation in ch. NR 102, Wis. Adm. Code.; removed fecal coliform criteria for certain individual waters from ch. NR 104, Wis. Adm. Code.; revised permit requirements for publicly and privately owned sewage treatment works in ch. NR 210, Wis. Adm. Code.; and, updated approved analytical methods for bacteria in ch. NR 219, Wis. Adm. Code.

Chloride: Monitoring added for the 4th year of the permit term to ensure adequate data for analysis for permit reissuance.

Temperature: Requirements for thermal (temperature) limits are included in ch. NR 102, Subchapter II Water Quality Standards for Temperature and ch. NR 106, Subchapter V Effluent Limitations for Temperature. After evaluation of data from January 2011 to May 2012 it was determined no limits are required however sampling monthly for one year is recommended for permit reissuance purposes.

PFOS and PFOA: NR 106 Subchapter VIII – Permit Requirements for PFOS and PFOA Dischargers became effective on August 1, 2022. Pursuant to s. NR 106.98(3)(b), Wis. Adm. Code, the department evaluated the need for PFOS and PFOA monitoring taking into consideration the presence of potential PFOS or PFOA industrial wastes, remediation sites and other potential sources of PFOS or PFOA. Based on information available at the time the proposed permit was drafted, the department has determined the permittee does not need to sample for PFOS or PFOA as part of this permit reissuance. The department may re-evaluate the need for sampling at the next permit reissuance if new information becomes available that suggests PFOS or PFOA may be present in the discharge.

Total Nitrogen Monitoring (NO₂+NO₃, TKN and Total N): The Department has included effluent monitoring for Total Nitrogen in the permit through the authority under §§ 283.55(1)(e), Wis. Stats., which allows the department to require the permittee to submit information necessary to identify the type and quantity of any pollutants discharged from the point source, and through s. NR 200.065(1)(h), Wis. Adm. Code, which allows for this monitoring to be collected during the permit term. More information on the justification to include total nitrogen monitoring in wastewater permits can be found in the “Guidance for Total Nitrogen Monitoring in Wastewater Permits” dated October 1, 2019.

Acute and Chronic WET: No WET testing is required because information related to the discharge indicates low risk for toxicity.

Monitoring Frequency - The Monitoring Frequencies for Individual Wastewater Permits guidance (April 12, 2021) recommends that standard monitoring frequencies be included in individual wastewater permits based on the size and type of the facility, in order to characterize effluent quality and variability, to detect events of noncompliance, and to ensure fairness and consistency in permits issued across the state. Guidance and requirements in administrative code were considered when determining the appropriate monitoring frequencies for pollutants that have final effluent limits in effect during this permit term. After a review of the operations, the department determined no change in sampling frequency is warranted.

3 Land Treatment – Proposed Monitoring and Limitations

Sample Point Number: 001- EFFLUENT - SPRAY IRRIGATION

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Total Daily	Mar 1 through Nov 30
Hydraulic Application Rate	Monthly Avg	10,000 gal/ac/day	Monthly	Calculated	Mar 1 through Nov 30
BOD5, Total	Monthly Avg	50 mg/L	Weekly	Grab	Mar 1 through Nov 30
Suspended Solids, Total		mg/L	Weekly	Grab	Mar 1 through Nov 30
pH Field		su	Weekly	Grab	Mar 1 through Nov 30
Fecal Coliform	Geometric Mean - Monthly	400 #/100 ml	Weekly	Grab	
Nitrogen, Total Kjeldahl		mg/L	Monthly	Grab	Mar 1 through Nov 30
Nitrogen, Ammonia (NH3-N) Total		mg/L	Monthly	Grab	Mar 1 through Nov 30
Nitrogen, Organic Total		mg/L	Monthly	Calculated	Mar 1 through Nov 30
Nitrogen, Nitrite + Nitrate Total		mg/L	Monthly	Grab	Mar 1 through Nov 30
Nitrogen, Total		mg/L	Monthly	Calculated	Mar 1 through Nov 30
Chloride		mg/L	Monthly	Grab	Mar 1 through Nov 30
Solids, Total Dissolved		mg/L	Monthly	Grab	Mar 1 through Nov 30
Nitrogen, Max Applied On Any Zone	Annual Total	100 lbs/ac/yr	Annual	Total Annual	

Changes from Previous Permit:

No changes were required.

Permit modification -01 changed the fecal coliform geometric mean monthly average limit from 0 #/ml to 400 #/ml.

Explanation of Limits and Monitoring Requirements

Standard municipal minor spray irrigation effluent monitoring requirements and limitations in accordance with ch. NR 206, Wis. Adm. Code. Annual reporting of “Nitrogen, Max Applied On Any Zone” to the land treatment system tracks the total Nitrogen applied to any zone in the land treatment system. Fecal limits are included for protection of public health as the wastewater is discharged to a public golf course per s. NR 206.08(2)(b)(4), Wis. Adm. Code. The permittee has been reporting no detects for fecal coliform and is expected to continue for this outfall. The permittee requested reevaluation of the fecal limit due to updated testing protocol and data that indicated no detect results are not attainable. After evaluation the department determined that a limit of 400 #/ml geometric mean monthly average is appropriate.

*Note discharge is not allowed from Outfall 001 from December 1 to February 28 (frozen ground). Requirements for land treatment of municipal wastewater are determined in accordance with ch. NR 206, Wis. Adm. Code.

Sample Point Number: 003- EFFLUENT - DRIP IRRIGATION

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Continuous	Total Daily	
BOD5, Total	Monthly Avg	50 mg/L	2/Month	24-Hr Flow Prop Comp	
Suspended Solids, Total		mg/L	2/Month	24-Hr Flow Prop Comp	
pH Field		su	Weekly	Grab	
Nitrogen, Total Kjeldahl		mg/L	Monthly	24-Hr Flow Prop Comp	
Nitrogen, Ammonia (NH3-N) Total		mg/L	Monthly	24-Hr Flow Prop Comp	
Nitrogen, Organic Total		mg/L	Monthly	Calculated	
Nitrogen, Nitrite + Nitrate Total		mg/L	Monthly	24-Hr Flow Prop Comp	
Nitrogen, Total	Monthly Avg	10 mg/L	Monthly	Calculated	
Solids, Total Dissolved		mg/L	Monthly	24-Hr Flow Prop Comp	
Chloride	Daily Max	250 mg/L	Monthly	24-Hr Flow Prop Comp	

Changes from Previous Permit:

No changes were required.

Explanation of Limits and Monitoring Requirements

Standard municipal minor spray irrigation effluent monitoring requirements and limitations in accordance with ch. NR 206, Wis. Adm. Code.

Sample Point Number: 007- Combined Outfalls 001-003-006

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Monthly	Calculated	See Section 3.2.3.1.

Changes from Previous Permit:

No changes were required.

Explanation of Limits and Monitoring Requirements

This outfall reporting is for the CMAR annual reporting requirements.

4 Groundwater – Proposed Monitoring and Limitations

4.1 Groundwater Monitoring System for spray irrigation monitoring system

Location of Monitoring system: NEQ, NWQ, SEC. 13, T13N, R5E

Wells to be Monitored: MW-2A (802 DOWNGRADIANT WELL), MW-5 (805 DOWNGRADIANT WELL), MW-6 (806 DOWNGRADIANT WELL), MW-7 (807 background well)

Well Used To Calculate PALs: MW-7 (807 background well)

Point of Standards Application Well(s): MW-2A (802 DOWNGRADIANT WELL), MW-5 (805 DOWNGRADIANT WELL), MW-6 (806 DOWNGRADIANT WELL)

Parameter	Units	Preventative Action Limit	Enforcement Standard	Frequency
Depth To Groundwater *	feet	*****	N/A	Quarterly
Groundwater Elevation*	feet MSL	*****	N/A	Quarterly
Depth To Groundwater	feet	*****	N/A	Quarterly
Groundwater Elevation	feet MSL	*****	N/A	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	2.0	10	Quarterly
Chloride Dissolved	mg/L	125	250	Quarterly
pH Field	su	5.8 - 7.8	N/A	Quarterly
Nitrogen, Total Kjeldahl Dissolved	mg/L	*****	N/A	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Organic Dissolved	mg/L	1.7	N/A	Quarterly

Solids, Total Dissolved	mg/L	505	N/A	Quarterly
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*Sampling at MW-7 will occur annually during the third quarter of 2023 for depth to water and groundwater elevation. A new monitoring well (WDNR Point ID 808) shall be constructed to serve as the background monitoring well utilized for the characterization of background groundwater quality and for the development of Indicator Parameter PALs and Alternative Concentration Limits. Monitoring of MW-7 for depth to water and groundwater elevation will cease following completion of the new background monitoring well. Monitoring of the new background monitoring well 808 will include all of the parameters listed in section 4.1.1 of the permit.

Parameter	Units	Preventative Action Limit	Enforcement Standard	Frequency
Depth To Groundwater	feet	*****	N/A	Annual
Groundwater Elevation	feet MSL	*****	N/A	Annual

Changes from Previous Permit:

PAL limitations were updated for pH Field, Ammonia, Organic Nitrogen and Total Dissolved Solids. Sampling for depth to groundwater and groundwater elevation is changed to annually in the third quarter of the year.

Explanation of Limits and Monitoring Requirements

Standard ch. NR 140, Wis. Adm. Code, groundwater monitoring requirements and limitations. New PAL limits were calculated. For more information, see the November 2, 202 Groundwater Evaluation memo from Zach Watson.

Well MW-7 (807 Background Well) is a potable water well. As such there is risk of contamination when sampling groundwater elevation parameters that requires opening the well. Sampling at MW-7 will occur annually during the third quarter of 2023 for depth to water and groundwater elevation. A new monitoring well (WDNR Point ID 808) shall be constructed to serve as the background monitoring well utilized for the characterization of background groundwater quality and for the development of Indicator Parameter PALs and Alternative Concentration Limits. Monitoring of MW-7 for depth to water and groundwater elevation will cease following completion of the new background monitoring well. Monitoring of the new background monitoring well 808 will include all of the parameters listed in section 4.1.1 of the permit.

5 Land Application - Proposed 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	Aerobic Digestion	Inject, pH, SOUR	Land Application	17.8
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						
If yes, special monitoring and recycling conditions will be included in the permit to track any potential problems in landapplying sludge from this facility						

Municipal Sludge Description						
Sample Point	Sludge Class (A or B)	Sludge Type (Liquid or Cake)	Pathogen Reduction Method	Vector Attraction Method	Reuse Option	Amount Reused/Disposed (Dry Tons/Year)
Is a priority pollutant scan required? No						
Priority pollutant scans are required once every 10 years at facilities with design flows between 5 MGD and 40 MGD, and once every 5 years if design flow is greater than 40 MGD.						

Sample Point Number: 002- SLUDGE

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

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Phosphorus, Total		Percent	Annual	Composite	
Phosphorus, Water Extractable		% of Tot P	Annual	Composite	
Potassium, Total Recoverable		Percent	Annual	Composite	
PCB Total Dry Wt	Ceiling	50 mg/kg	Once	Composite	Once in 2024
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	Once in 2024

Changes from Previous Permit:

No changes were required other than PCB sampling year updated.

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), Wis. Adm. Code. Requirements for pathogens are specified in s. NR 204.07(6) and in s. NR 204.07(7), Wis. Adm. Code for vector attraction requirements. Limitations for PCBs are addressed in s. NR 204.07(3)(k), Wis. Adm. Code. Radium requirements are addressed in s. NR 204.07(3)(n), Wis. Adm. Code.

6 Schedules

6.1 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.	05/01/2024

Explanation of Compliance Schedules

Standard requirement to provide an updated Land Treatment Management Plan to optimize the land treatment system performance and demonstrates compliance with ch. NR 206, Wis. Adm. Code.

6.2 Groundwater Monitoring Well - Installation

Required Action	Due Date
Plans and Specifications: Submit plans and specifications consistent with the requirements in ch. NR 141, Wis. Adm. Code for the installation of a monitoring wells to replace Background Well 807 Well MW.	08/01/2023

Installation: Complete well installation in accordance with ch. NR 141, Wisconsin Administrative Code. (Note: Documentation of well construction must be submitted to the Department within 60 days of well installation.)	04/01/2024
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Explanation of Compliance Schedules

Background well MW-7 (807) is inadequate as a background monitoring well. The permittee is required to have installed a new background monitoring well by April 1, 2024 for the purposes of characterizing background groundwater quality, developing Indicator Parameter PALs and Alternative Concentration Limits and assessing the impact of the treatment system to groundwater quality.

Special Reporting Requirements

None required

Other Comments:

None required

Attachments:

- Water Quality Based Effluent Limits with Map(s) dated October 25, 2022, updated January 11, 2023
- NR 140 Groundwater Evaluation Report dated November 3, 2022
- Public Notice

Proposed Expiration Date:

December 31, 2027

Justification Of Any Waivers From Permit Application Requirements

None

Prepared By: Jennifer Jerich, Wastewater Specialist

Date: 11/2/2022, 12/8/2022

Updated (based on fact check comments): 12/21/2022, no changes made

Updated (based on public notice comments): 1/30/2023, updated sample location description, changes made to the chlorine and fecal/E. Coli monitoring and sampling for the wetland discharge to reflect the permittees current chlorination.

Modification Date: 9/4/2024

