

North Bend SD #1 Public Noticed Permit Fact Sheet

General Information

Permit Number	WI-0031453-11-0
Permittee	North Bend Sanitary District #1, N576 N Bend Dr, Melrose, WI 54642-8442
Permitted Facility	North Bend Sanitary District #1, N576 North Bend Drive, Melrose, WI
Permit Term	October 01, 2026 to September 30, 2031
Discharge Location	North Bend Sanitary District #1 WWTF, NW ¼ NW ¼, Section 32, T19N R06W, Town of North Bend, Jackson County, WI
Receiving Water	groundwaters of the Big and Douglas Creeks in Big and Douglas Creeks Watershed of Black River River Basin in Jackson County
Annual Average Design Flow (MGD)	0.00975 MGD
Industrial or Commercial Contributors	None
Plant Classification	A4 - Ponds, Lagoons and Natural Systems; SS - Sanitary Sewage Collection System
Approved Pretreatment Program?	N/A

Facility Description

Domestic wastewater from North Bend is treated at the North Bend Sanitary District's wastewater treatment facility. The facility has an annual average design flow of 0.00975 million gallons per day (MGD). In 2025 the facility had an actual annual average influent flow of approximately 0.0054 MGD. The facility consists of a gravity collection system discharging to a lift station with a force main to one holding pond and two seepage cells. Discharge of treated effluent is to groundwater via seepage. Sludge has not been removed from the holding pond since 1975, but in the event it is needed, it would be land applied on Department approved fields. No major operational changes occurred during the last permit term.

Substantial Compliance Determination

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

After a desktop review of all discharge monitoring reports, and a site visit on 4/22/2025, this facility has been found to be in substantial compliance with their current permit. Compliance Schedules for submitting updated facility schematics and maps, a spill response plan, and holding pond piping investigation/repair will be included in the next permit

Compliance determination made by Mike Chang on 05/06/2026.

Sample Point Descriptions

Sample Point Designation		
Sample Point Number	Discharge Flow, Units, and Averaging Period	Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
701	0.0054 MGD (2025)	Representative influent grab samples and flow measurements shall be taken at the lift station manhole.
001	0.0052 MGD (2025)	Representative effluent grab samples shall be taken from the manhole between the ponds.
002	Sludge has not been removed from the ponds and land applied since 1975.	Representative composited lagoon sludge samples shall be collected in 2027 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 and PFAS 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 land application sites must be completed prior to sludge removal.

Permit Requirements

1 Influent – Monitoring Requirements

1.1 Sample Point Number: 701- LIFT STATION MANHOLE

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Continuous	
BOD5, Total		mg/L	Monthly	Grab	
Suspended Solids, Total		mg/L	Monthly	Grab	
Nitrogen, Total Kjeldahl		mg/L	Monthly	Grab	Required in 2028
Nitrogen, Ammonia (NH3-N) Total		mg/L	Monthly	Grab	Required in 2028
Nitrogen, Organic Total		mg/L	Monthly	Calculated	Required in 2028

Changes from Previous Permit:

Influent limitations and monitoring requirements were evaluated for this permit term and the only change is an increase in monitoring frequency from quarterly to monthly for BOD5, TKN, ammonia and organic nitrogen to better determine compliance.

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 to PONDS

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	Monthly	Grab	
pH Field		su	5/Week	Grab	
Nitrogen, Total Kjeldahl		mg/L	Monthly	Grab	
Nitrogen, Organic Total		mg/L	Monthly	Calculated	
Nitrogen, Ammonia (NH3-N) Total		mg/L	Monthly	Grab	
Nitrogen, Nitrite + Nitrate Total		mg/L	Monthly	Grab	
Nitrogen, Total		mg/L	Monthly	Calculated	

Changes from Previous Permit:

Effluent limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit: the sample frequency for pH was increased from weekly to 5/week to better track compliance.

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(2) Wis. Adm. Code.

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	Sludge was not removed from the pond last permit term and is not anticipated 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						

3.1 Sample Point Number: 002- POND SLUDGE

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

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total Kjeldahl		Percent	Per Application	Composite	
Nitrogen, Ammonium (NH ₄ -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	
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:

Sludge limitations and monitoring requirements were evaluated for this permit term and the following changes described below were made from the previous permit:

List 2 Nutrient monitoring – Monitoring for list 2 (nutrients) is highly recommended at the same time as the monitoring of List 1 (metals) in year 2 of the permit. Results will assist in the determination of the acres needed for land application of sludge should it be necessary.

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.

PFAS – Monitoring for PFAS has been added once during the permit term pursuant s. NR 204.06(2)(b)9., Wis. Adm. Code.

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.

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.

4 Schedules

4.1 Lagoon Sludge Management Plan

Required Action	Due Date
Submit a Lagoon Sludge Management Plan (SMP): 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.	

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 that clearly explains how the 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.

4.2 Facility Schematic and Maps

Required Action	Due Date
Submit Updated Facility Schematics and Maps: The permittee shall submit updated facility	06/30/2027

schematics and maps.	
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Explanation of Schedule: The facility schematics/maps are out of date or missing and the permittee shall submit updated versions pursuant to NR 205.07(1)(t).

4.3 Submit Spill Response Plan

Required Action	Due Date
Submit Spill Response Plan: The permittee shall submit a spill response plan for the facility.	06/30/2027

Explanation of Schedule: The permittee shall submit a basic spill response plan to ensure proper operation and maintenance of the facility pursuant to NR 205.07(1)(j).

4.4 Investigate and Address Leakage Between the Holding Pond and the Seepage Cells

Required Action	Due Date
Submit Results of Leakage Investigation: Permittee shall submit the results of the Leakage Investigation to the department. The report shall include the cause of the leakage and recommendations to address the leakage found in the system, as well as funding sources to address the leakage if an upgrade or construction is required. If it's determined that a plant upgrade is needed, permittee shall submit a facility plan to address the leakage by 09/30/2027.	6/30/2027
Submit Facility Plan or Leakage Progress Report #1: If the Leakage Investigation concludes that the permittee must upgrade the treatment plant, the permittee shall submit a Facility Plan per s. NR 110.09. Wis. Adm. Code. If an upgrade to the treatment plant is not needed, but other options are required to address leakage, the permittee shall submit a progress report detailing the steps taken and/or that need to be taken to repair the leakage.	09/30/2027
Final Plans and Specifications: If it's determined that a facility upgrade is needed to address the leakage between the holding pond and the seepage cells, the permittee shall submit final construction plans to the department for final approval pursuant to ch. NR 108. Wis. Adm. Code specifying treatment plant upgrades to address leakage of the pond system.	12/31/2027
Treatment Plant Upgrade to Address Leakage between Holding Pond and Seepage Cells: If it's determined that a facility upgrade is needed to address leakage between the holding pond and the seepage cells, the permittee shall initiate bidding, procurement, and/or construction of the project. The permittee shall obtain approval of the final construction plans and schedule from the Department pursuant to s. 281.41. Stats., prior to initiating activities defined as construction under ch. NR 108, Wis. Adm. Code. Upon approval of the final construction plans and schedule by the Department pursuant to s. 281.41, Stats., the permittee shall construct the treatment plant upgrades in accordance with the approved plans and specifications.	6/30/2028

Explanation of Schedule: The permittee shall investigate and repair the leakage between the holding pond and the seepage cells to ensure proper operation and maintenance of the facility pursuant to NR 205.07(1)(j).

Other Comments

None

Attachments

None

Justification Of Any Waivers From Permit Application Requirements

No waivers requested or granted as part of this permit reissuance

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Date: 07/16/2026