

Public Noticed Draft Port Edwards WWTF Permit Fact Sheet

General Information

Permit Number	WI-0020451-11-0
Permittee Name and Address	Village of Port Edwards 201 Market Avenue P O Box 10, Port Edwards, WI 54469
Permitted Facility Name and Address	Port Edwards Wastewater Treatment Facility 691 Old Hwy 73, Port Edwards, WI
Permit Term	April 01, 2026 to March 31, 2031
Discharge Location	691 Old Hwy 73, Port Edwards, WI 54469
Receiving Water	Wisconsin River in Fourmile and Fivemile Creek Watershed of Central Wisconsin River Basin in Wood County
Stream Flow (Q _{7,10})	999 cfs
Stream Classification	Warm water sport fish, non-public water supply
Discharge Type	Existing, continuous
Annual Average Design Flow (MGD)	0.538 MGD
Industrial or Commercial Contributors	No
Plant Classification	A1 - Suspended Growth Processes; B - Solids Separation; C - Biological Solids/Sludges; P - Total Phosphorus; D - Disinfection; SS - Sanitary Sewage Collection System
Approved Pretreatment Program?	N/A

Facility Description

The Village of Port Edwards owns and operates a wastewater treatment facility with discharge to the Wisconsin River. The annual average design flow is 0.538 million gallons per day (MGD) and treated an average influent flow of 0.288 MGD in 2025. The treatment process consists of a fine screen and grit removal followed by an oxidation ditch and a final clarifier. Disinfection via UV light prior is done prior to discharge during disinfection season. Sludge is treated in an aerobic digester before being transferred to a sludge storage tank. Sludge is land applied on Department approved fields. The facility has two oxidation ditches and two final clarifiers of which only one of each operates at a time. Monitoring changes for this permit issuance include 1) the addition of monitoring for effluent PFOS and PFOA once every two months and an associated determination of need schedule in accordance with s. NR 106.98(2)(b), Wis. Adm. Code., and 2) new 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 to quantitate risk.

Substantial Compliance Determination

Enforcement During Last Permit:

No enforcement actions were taken against the permittee in the previous permit term.

After a desktop review of all discharge monitoring reports, CMARs, land application reports and a site visit on 4/16/2025, the Port Edwards Wastewater Treatment Facility has been found to be in substantial compliance with their current permit.

Compliance determination entered by Logan Rubeck on 4/28/2025.

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	0.288 MGD (2025)	Representative influent samples shall be collected at the headworks after the fine screen prior to grit removal
001	0.304 MGD (2025)	Representative effluent samples shall be collected at the flume outlet before disinfection, except for E. coli samples which shall be taken after disinfection.
003	41 dry metric tons	Representative sludge samples shall be collected annually from the sludge storage tank (while mixing) and monitored for List 1, 2, 3, 4, PFAS, and once in 2027 for PCBs.
601	N/A	Wisconsin River data collected at the Wisconsin Rapids Dam - or other alternative method or site approved by the Department - and reported by the Wisconsin Valley Improvement Company shall be used in the determination of the daily BOD5 wasteload allocation.

Permit Requirements

1 Influent – Monitoring Requirements

1.1 Sample Point Number: 701- INFLUENT PLANT

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Total Daily	
BOD5, Total		mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total		mg/L	3/Week	24-Hr Flow Prop Comp	

1.1.1 Changes from Previous Permit:

Influent limitations and monitoring requirements were evaluated for this permit term and no changes were required in this permit section.

1.1.2 Explanation of Limits and Monitoring Requirements

Monitoring of influent flow, BOD5 and total suspended solids is required by s. NR 210.04(2), 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 Surface Water - Monitoring and Limitations

2.1 Sample Point Number: 001- PRIOR TO DISCHARGE

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Continuous	Continuous	
BOD5, Total	Monthly Avg	30 mg/L	3/Week	24-Hr Flow Prop Comp	
BOD5, Total	Weekly Avg	45 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Weekly Avg	45 mg/L	3/Week	24-Hr Flow Prop Comp	
pH Field	Daily Max	9.0 su	Daily	Grab	
pH Field	Daily Min	6.0 su	Daily	Grab	
WLA BOD5 Value		lbs/day	3/Week	See Table	Limit applies May-Oct annually. See BOD WLA section in permit for limit.
WLA BOD5 Discharged	Daily Max - Variable	lbs/day	3/Week	Calculated	Limit applies May-Oct annually. See BOD WLA section in permit for limit.
E. coli	Geometric Mean - Monthly	126 #/100 ml	2/Week	Grab	Limit applies May-Sept annually.
E. coli	% Exceedance	10 Percent	Monthly	Calculated	Limit Effective May - September annually. See the E. coli Percent Limit section below. Enter the result in the DMR on the last day of the month.
PFOS		ng/L	1/ 2 Months	Grab	Monitoring only. See PFOS/PFOA Minimization

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
					Plan Determination of Need schedule.
PFOA		ng/L	1/ 2 Months	Grab	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.
Phosphorus, Total	Monthly Avg	1.0 mg/L	3/Week	24-Hr Flow Prop Comp	
Phosphorus, Total	Monthly Avg	4.7 lbs/day	3/Week	Calculated	See TMDL section below.
Phosphorus, Total		lbs/month	Monthly	Calculated	Calculate the Total Monthly Discharge of phosphorus and report on the last day of the month on the DMR. See TMDL section.
Phosphorus, Total		lbs/yr	Monthly	Calculated	Calculate the 12-month rolling sum of total monthly mass of phosphorus discharged and report on the last day of the month on the DMR. See TMDL section.
Nitrogen, Total Kjeldahl		mg/L	See Listed Qtr(s)	24-Hr Flow Prop Comp	Annual in rotating quarters. See Nitrogen Series Monitoring section.
Nitrogen, Nitrite + Nitrate Total		mg/L	See Listed Qtr(s)	24-Hr Flow Prop Comp	Annual in rotating quarters. See Nitrogen Series Monitoring section.
Nitrogen, Total		mg/L	See Listed Qtr(s)	Calculated	Annual in rotating quarters. See Nitrogen Series Monitoring section. Total Nitrogen shall be calculated as the sum of reported values for Total Kjeldahl Nitrogen and Total Nitrite + Nitrate Nitrogen.

2.1.1 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. See additional explanation of limits under “Explanation of Limits and Monitoring Requirements” below.

PFOS and PFOA – addition of once every two months monitoring and an associated determination of need schedule in accordance with s. NR 106.98(2)(b), Wis. Adm. Code.

2.1.2 Explanation of Limits and Monitoring Requirements

Detailed discussions of limits and monitoring requirements can be found in the attached water quality-based effluent limits (WQBEL) memo dated October 27, 2025 and titled ‘Water Quality-Based Effluent Limitations for the Port Edwards Wastewater Treatment Facility WPDES Permit No. WI-0020451’

Monitoring Frequencies- 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 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.

BOD₅ Waste Load Allocation (WLA): The BOD₅ mass limit of 240 lbs/day daily max for outfall 001 applies May-October, depending on the Wisconsin River temperature and flow conditions. The river temperature and flow will be monitored & reported at Sample Point 601. See the table in the permit titled “WASTELOAD ALLOCATION TABLES FOR BOD₅” for more information.

Phosphorus: Phosphorus requirements are based on the Phosphorus Rules that became effective December 1, 2010 as detailed in chs. NR 102, Water Quality Standards and NR 217, Effluent Standards and Limitations for Phosphorus, Wis. Adm. Code. Chapter NR 217, Wis. Adm. Code, addresses point source dischargers of phosphorus to surface waters.

Discharge effluent concentration (mg/L) shall be reported three times per week upon permit reissuance and will be used to calculate amounts reported for mass-based parameters. An additional reporting requirement for lbs/month will be used to calculate the facility’s annual total discharge, which can be compared directly to the facility’s designated WLA. Final TMDL WLA-based effluent limit of 599 lbs/yr as an annual total is effective at permit reissuance.

Wisconsin River Total Maximum Daily Load (TMDL): Port Edwards is located within the Wisconsin River Basin Total Maximum Daily Load (TMDL), which was approved by EPA April 26, 2019. The TMDL establishes Waste Load Allocations (WLAs) for point source dischargers and determines the maximum amounts of phosphorus that can be discharged and still protect water quality.

Total phosphorus (TP) effluent limits in lbs/day are calculated as recommended in the *TMDL Development and Implementation Guidance: Integrating the WPDES and Impaired Waters Programs (April 2020)* and are based on the annual phosphorus wasteload allocation (WLA) given in lbs/yr. This WLA is found in appendix K of the *Wisconsin River TMDL Report (April 2019)* and is expressed as a maximum annual load (lbs/yr). For the Port Edwards Wastewater Treatment Facility, this WLA is 599 lbs/yr and 1.64 lbs/day.

The monthly average limit of 4.7 lbs/day was determined in the previous limit evaluation. The monthly multiplier of 2.87 was chosen using a coefficient of variation (CV) of 1.95 and a thrice weekly effluent monitoring frequency. The TMDL-based phosphorus WQBEL(s) will be re-evaluated if the annual phosphorus WLA is not being met as described in the prior stated guidance. This is done by comparing each rolling sum of 12 consecutive months of total monthly mass phosphorus discharges over the current permit term directly against the annual WLA.

In this case, the Port Edwards Wastewater Treatment Facility has been 100% compliant in meeting the Annual WLA of 599 lbs/yr. None of the 47 available rolling sums have exceeded the annual WLA during November 2020 – August 2025. The Port Edwards Wastewater Treatment Facility is considered to be meeting their annual WLA. Therefore, the monthly average limit of 4.70 lbs/day remains unchanged during the reissued permit term.

Total Nitrogen Monitoring (NO₂+NO₃, TKN and Total N)- The Department has included effluent monitoring for Total Nitrogen through the authority under s. 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. Annual monitoring in rotating quarters is required as specified in the permit.

Disinfection/E. Coli--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. Monitoring and limits for E. Coli are required seasonally May-September throughout the permit term.

PFOS and PFOA - NR 106 Subchapter VIII – Permit Requirements for PFOS and PFOA Dischargers became effective on August 1, 2022. At the first reissuance of a WPDES permit after August 1, 2022, the new rule requires WPDES permits for municipal dischargers with an average flow rate less than 1 MGD, to be evaluated on a case-by-case basis to determine if monitoring is required pursuant to s. NR 106.98(2)(c), 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 permit was drafted, PFOS/PFOA monitoring is required based on presence in drinking water samples and previously reported effluent samples.

A sample frequency of 1/2 months means one sample is taken during any two-month period. Examples of 1/2 month sample would be every other month (Jan, March, May, etc.) or back-to-back months with a break in between (February & March, May & June, Aug & Sept, etc.). DMR Short Forms will be generated for the following time periods: January-February, March-April, May-June, July-August, September-October, and November-December. At a minimum one sample result will be present on each form.

The initial determination of the need for sampling shall be conducted for up to two years in order to determine if the permitted discharge has the reasonable potential to cause or contribute to an exceedance of the PFOS or PFOA standards under s. NR 102.04(8)(d)1, Wis. Adm. Code.

2.2 Sample Point Number: 601- WI RIVER @ DAM

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
WLA Previous Day River Temp		deg F	3/Week	Measure	See Receiving Water Monitoring Requirements section.
WLA Previous Day River Flow		cfs	3/Week	Measure	See Receiving Water Monitoring Requirements section.

2.2.1 Changes from Previous Permit

Effluent limitations and monitoring requirements were evaluated for this permit term and no changes were required in this permit section. Sampling requirements and frequencies are the same as the previous permit.

2.2.2 Explanation of Limits and Monitoring Requirements

Detailed discussions of limits and monitoring requirements can be found in the attached water quality-based effluent limits (WQBEL) memo dated October 27, 2025 and titled 'Water Quality-Based Effluent Limitations for the Port Edwards Wastewater Treatment Facility WPDES Permit No. WI-0020451'.

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)
003	B	Liquid	Aerobic digestion	Injection	Land Applied	B
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? N/A						

3.1 Sample Point Number: 003- LIQUID 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	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
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	
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	Sample in 2027
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	Sample in 2027
PFOA + PFOS		ug/kg	Annual	Calculated	Report the sum of PFOA and PFOS. See PFAS Permit Sections for more information.
PFAS Dry Wt			Annual	Grab	Perfluoroalkyl and Polyfluoroalkyl Substances based on updated DNR PFAS List. See PFAS Permit Sections for more information.

3.1.1 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: new PFAS sludge sampling added. See additional explanation of limits under “Explanation of Limits and Monitoring Requirements” below.

PFAS –Monitoring is required annually pursuant to s. NR 204.06(2)(b)9., Wis. Adm. Code.

3.1.2 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). Radium requirements are addressed in s. NR 204.07(3)(n).

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 PFOS/PFOA Minimization Plan Determination of Need

Required Action	Due Date
<p>Report on Effluent Discharge: Submit a report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations. This analysis should also include a comparison to the applicable narrative standard in s. NR 102.04(8)(d), Wis. Adm. Code.</p> <p>This report shall include all additional PFOS and PFOA data that may be collected including any influent, intake, in-plant, collection system sampling, and blank sample results.</p>	04/01/2027
<p>Report on Effluent Discharge and Evaluation of Need: Submit a final report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations of data collected over the last 24 months. The report shall also provide a comparison on the likelihood of the facility needing to develop a PFOS/PFOA minimization plan.</p> <p>This report shall include all additional PFOS and PFOA data that may be collected including any influent, intake, in-plant, collection system sampling, and blank sample results.</p> <p>The permittee shall also submit a request to the department to evaluate the need for a PFOS/PFOA minimization plan.</p> <p>If the Department determines a PFOS/PFOA minimization plan is needed based on a reasonable potential evaluation, the permittee will be required to develop a minimization plan for Department approval no later than 90 days after written notification was sent from the Department. The Department will modify or revoke and reissue the permit to include PFOS/PFOA minimization plan reporting requirements along with a schedule of compliance to meet WQBELs. Effluent monitoring of PFOS and PFOA shall continue as specified in the permit until the modified permit is issued.</p> <p>If, however, the Department determines there is no reasonable potential for the facility to discharge PFOS or PFOA above the narrative standard in s. NR 102.04(8)(d), Wis. Adm. Code, no further</p>	04/01/2028

action is required and effluent monitoring of PFOS and PFOA shall continue as specified in the permit.	
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4.1.1 Explanation of Schedule

PFOS/PFOA Minimization Plan Determination of Need- As stated above, ch. NR 106 Subchapter VIII – Permit Requirements for PFOS and PFOA Dischargers became effective on August 1, 2022. Section NR 106.98, Wis. Adm. Code, specifies steps to generate data in order to determine the need for reducing PFOS and PFOA in the discharge. Data generated per the effluent monitoring requirements will be used to determine the need for developing a PFOS/PFOA minimization plan. As part of the schedule, the permittee is required to submit two annual Reports on Effluent Discharge.

If the Department determines that a minimization plan is needed, the permit will be modified or revoked/reissued to include additional requirements.

Other Comments

None

Attachments

Water Quality-Based Effluent Limitations for the Port Edwards Wastewater Treatment Facility WPDES Permit No. WI-0020451, dated October 27, 2025

Public Notice: Daily Tribune, 220 1st Ave S, Wisconsin Rapids, WI 54494-8090

Justification Of Any Waivers From Permit Application Requirements

No waivers requested or granted as part of this permit reissuance

Prepared By: Angela Parkhurst Wastewater Specialist Date: January 28, 2026