Permit Fact Sheet Modification

This permit was modified to correct the due dates listed under permit Section 5.2 Mercury Pollutant Minimization Program and also removed the variance language in the Final Mercury Report section. Changes associated with the modification are highlighted in gray.

General Information

Permit Number:	WI-0030651-09-1	
Permittee Name:	City of Peshtigo	
Address:	331 French St. Suite A Peshtigo, WI 54157 (Mailing) N1890 Harbor Road, Peshtigo, WI 54157 (Site)	
City/State/Zip:	Peshtigo WI 54157-0100	
Discharge Location:	Lower Peshtigo River Watershed, Upper Green Bay Basin (GB07) SE ¼ of the NW ¼ Sec. 32, T30N-R23E, Marinette County	
Receiving Water:	Peshtigo River	
StreamFlow ($Q_{7,10}$):	214 cfs	
Stream Classification:	Warmwater sportfish community, not classifies as a public water supply	
Design Flow(s)	Annual Average	2.474 MGD
Significant Industrial Loading?	No	
Operator at Proper Grade?	Yes, the facility is rated as an Advanced level facility in subclasses A1, Suspended Growth Processes; B, Solids Separation; C, Biological Solids/Sludge Processing; D, Disinfection; L, Laboratory P, Phosphorus Removal, and SS, Sanitary Sewage Collection System; The Operator-In-Charge, Rich Sparks, has Advanced level certification in A1, B, C, P, D, and L subclasses. Mark Madden has basic certification for SS.	
Approved Pretreatment Program?	N/A	

Facility Description

Municipal secondary wastewater facility that treats wastewater from residential sources. The City provides treatment using an activated sludge system which is operated in the extended aeration mode. Processes include two manual bar screens, two aeration basins, three final clarifiers, a chlorine contact tank, and one gravity thickener. Disinfection is accomplished using chlorine gas. Approximately 3 years of sludge storage has been provided. Sludge is land applied to agricultural fields by a contact hauler.

Substantial Compliance Determination

Enforcement During Last Permit: On March 22, 2022, the facility was sent a letter regarding non-compliance of Sanitary Sewer Overflows (SSOs), which has been occurring since 2016. The letter outlines the steps and time frame to get into compliance. The river crossing project to get the City back into compliance is expected to be completed by the summer of 2024.

Sample Point Designation		
Sample Point Number	**Discharge Flow, Units, and Averaging Period**	**Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)**
701	N/A	Influent - Representative samples shall be collected from the influent flume in the metering building.
001	2.474 MGD	Effluent - Representative composite samples of the effluent shall be collected at the sample tap on the makeup water feed line prior to the chlorine contact tank. Representative grab samples shall be collected at the effluent manhole following the chlorine contact tank.
005	154 dry US tons	Liquid Sludge - Representative samples of the aerobically digested, gravity thickened liquid shall be collected from the sludge storage tank after complete mixing.
111	N/A	Field Blank Effluent: Sample point for reporting analysis results of field blanks collected using standard sample handling procedures for grab type effluent samples for Total Recoverable Mercury at sample point 001.
601	N/A	Peshtigo River - Sample point for reporting water quality characteristics of the Peshtigo River. Monitoring and reporting under this sample point is voluntary on the part of the permittee and is not required by this permit.

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	5/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total		mg/L	5/Week	24-Hr Flow Prop Comp	
Mercury, Total Recoverable		ng/L	Quarterly	24-Hr Flow Prop Comp	

Changes from Previous Permit:

No changes.

Explanation of Limits and Monitoring Requirements

As a condition of reissuing this permit with an alternative mercury effluent limitation, influent monitoring for mercury is required, per s. NR 106.145(6), Wis. Adm. Code. Monthly sampling is recommended pursuant to s. NR 106.145, Wis. Adm. Code.

2 Inplant - Proposed Monitoring and Limitations

Sample Point Number: 111- Field Blank - Effluent

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Mercury, Total Recoverable		ng/L	Quarterly	Blank	

Changes from Previous Permit:

No changes.

Explanation of Limits and Monitoring Requirements

Collection of Field Blanks is required under s. NR 106.145(9) whenever samples are collected for "low-level" mercury analysis as a quality control measure.

3 Surface Water - Proposed Monitoring and Limitations

Sample Point Number: 001- Effluent

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
BOD5, Total	Monthly Avg	30 mg/L	5/Week	24-Hr Flow Prop Comp	
BOD5, Total	Weekly Avg	45 mg/L	5/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	5/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Weekly Avg	45 mg/L	5/Week	24-Hr Flow Prop Comp	
pH Field	Daily Max	9.0 su	5/Week	Grab	
pH Field	Daily Min	6.0 su	5/Week	Grab	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Phosphorus, Total	Monthly Avg	1.0 mg/L	5/Week	24-Hr Flow Prop Comp	
E. coli	Geometric Mean - Monthly	126 #/100 ml	Weekly	Grab	Effective May through September annually.
E. coli	% Exceedance	10 Percent	Monthly	Calculated	Effective May through September annually.
Chlorine, Total Residual	Daily Max	38 ug/L	Daily	Grab	Effective May through September annually.
Chlorine, Total Residual	Weekly Avg	38 ug/L	Daily	Grab	Effective May through September annually.
Chlorine, Total Residual	Monthly Avg	38 ug/L	Daily	Grab	Effective May through September annually.
Mercury, Total Recoverable		ng/L	Quarterly	Grab	PMP efforts are required to maintain effluent quality at or below current levels.
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)	24-Hr Flow Prop Comp	Annual in rotating quarters. See Nitrogen Series Monitoring section below.
Acute WET		TUa	See Listed Qtr(s)	24-Hr Flow Prop Comp	See Whole Effluent Toxicity (WET) section below for testing requirements and the WET testing schedule.
Chronic WET		TUc	See Listed Qtr(s)	24-Hr Flow Prop Comp	See Whole Effluent Toxicity (WET) section below for testing requirements and the WET testing schedule.
PFOS		ng/L	1/ 2 Months	Grab	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
PFOA		ng/L	1/ 2 Months	Grab	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.

Changes from Previous Permit

Changes from the previous permit include:

- Addition of E. coli monitoring & limits, removal of Fecal Coliform testing requirement.
- Addition of Nitrogen, Ammonia Variable Limit monitoring.
- Addition of TKN, Nitrate+Nitrite, and Total Nitrogen monitoring.
- Addition of Daily Flow Rate Monitoring to the Table.
- The limit for mercury was removed, but quarterly monitoring for mercury is still required
- Chronic WET monitoring change from rTUc to TUc.

Explanation of Limits and Monitoring Requirements

Categorical limits are required per Ch. NR 210, Wis. Adm. Code, (sewage treatment works).

BOD5, TSS and pH

The effluent limitations for BOD5, TSS and pH are carried over into this permit. These limitations are not subject to change at this time because the receiving water characteristics have not changed.

E. Coli

On May 1, 2020, revisions to chs. NR 102 and NR 210, Wis. Adm. Code, became effective and replace fecal coliform limits with new Escherichia coli (E. coli) limits for protection of recreation uses. Since the facility is required to disinfect the following limits are included in the proposed permit in accordance with s. NR 210.06(2)(a)1, Wis. Adm. Code. The existing fecal coliform limit of 400 #/100 ml as a monthly geometric mean is replaced with E. coli limit of 126 #/100 ml as a monthly geometric mean and no more than 10 percent of E. coli bacteria samples collected in any calendar month may exceed 410 #/100 ml. The permittee indicated to the department that the permittee will be in compliance with E. coli limits immediately.

Disinfection

Disinfection is required because the receiving water is classified for recreational use. Seasonal disinfection from May through September is required to coincide with the typical timeframe for recreational activities in Wisconsin's waters.

Phosphorus

Chapter NR 217 of the Wis. Adm. Code addresses point source dischargers of phosphorus to surface waters. Subchapter II of that code limits municipal dischargers of more than 150 pounds of phosphorus per month to an effluent limit of 1.0 mg/L total phosphorus – unless an alternative limit is approved.

Chapter NR 217 was revised on December 1, 2010, with the addition of Subchapter III, which includes WQBELs for phosphorus, based upon criteria contained in Chapter NR 102. The June 22, 2022 WQBEL memo presents recommendations for phosphorus WQBELs for the operation of the permittee's WWTF under a continuous discharge mode of operation, derived according to the procedure specified under s. NR 217.13, Wis. Adm. Code.

Mercury

Quarterly monitoring and PMP efforts are recommended to continue during the reissued permit term to maintain effluent quality at or below current levels.

Water Quality-Based Limits

Phosphorous and other available data were evaluated by Department staff and recommendations for water quality-based effluent limitations (WQBELs) and Whole Effluent Toxicity testing are presented in the June 22, 2022 memo, "Water Quality-Based Effluent Limitations for the Peshtigo Wastewater Treatment Facility WPDES Permit No. WI-0030651-09-0.

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. Annual tests are scheduled in the following rotating quarters: 2nd Quarter: (April – June) 2024, 3rd Quarter: (July – September) 2025; 4th Quarter (October – December) 2026, 1st Quarter: (Jan – March) 2027; 2nd Quarter (April – June) 2028.

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 proposed permit was drafted, it was identified that the discharge may be a potential source of PFOS/PFOA. Therefore, monitoring once every two months is included. 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. See the Schedules section for the PFOS/PFOA Minimization Plan Determination of Need schedule.

Whole Effluent Toxicity

Whole effluent toxicity (WET) testing requirements and limits (if applicable) are determined in accordance with ss. NR 106.08 and NR 106.09 Wis. Adm. Code, as revised August 2016. (See the current version of the Whole Effluent Toxicity Program Guidance Document and checklist and WET information, guidance and test methods at http://dnr.wi.gov/topic/wastewater/wet.html). Acute WET testing twice in the permit term in rotating quarters is required as listed in the permit.

Municipal Effluent Limits – In accordance with the federal regulation 40 CFR 122.45(d), limits in this permit are to be expressed as weekly average and monthly average limits whenever practicable. No additional limits were required to comply with the regulation.

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 evaluation no changes to sampling frequency were warranted as they are at the minimum recommended sampling frequency.

Sample Point Number: 601- Peshtigo River

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Mercury, Total Recoverable		ng/L	Per Occurrence	Grab	Voluntary monitoring of Peshtigo River, see mercury section.

Changes from Previous Permit

No changes.

Explanation of Limits and Monitoring Requirements

This is voluntary monitoring to help determine the background mercury levels in the river.

4 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)**
005	B	Liquid	Fecal coliform	Injection or incorporation	Land Application	154 dry US tons
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? **Yes** If yes, special monitoring and recycling conditions will be included in the permit to track any potential problems in landapplying sludge from this facility						
Is a priority pollutant scan required? **N/A**						

Sample Point Number: 005- 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	
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	
Radium 226 Dry Wt		pCi/g	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	PCB monitoring required in 2024 only. See PCB subsection below.

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	PCB monitoring required in 2024 only. See PCB subsection below.
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.

Changes from Previous Permit:

PFAS – Annual/Once monitoring is included in the permit pursuant 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). 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 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.

5 Schedules

5.1 Land Application Management Plan

A management plan is required for the land application system.

Required Action	Due Date
Land Application Management Plan Submittal: Submit an update to the management plan to optimize the land application system performance and demonstrate compliance with ch. NR 204, Wis. Adm. Code, by the Due Date. This management plan shall 1) specify information on pretreatment processes (if any); 2) identify land application sites; 3) describe site limitations; 4) address vegetative cover management and removal; 5) specify availability of storage; 6) describe the type of transporting and	01/01/2025

spreading vehicle(s); 7) specify monitoring procedures; 8) track site loading; 9) address contingency plans for adverse weather and odor/nuisance abatement; and 10) include any other pertinent information. Once approved, all landspreading 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.	

5.2 Mercury Pollutant Minimization Program

Required Action	Due Date
Annual Mercury Progress Reports: Submit an annual mercury progress report related to the pollutant minimization activities for the previous year. The annual mercury progress report shall: Indicate which mercury pollutant minimization activities or activities outlined in the Pollutant Minimization Program Plan have been implemented and state which, if any, activities from the Pollutant Minimization Program Plan were not pursued and why; Include an assessment of whether each implemented pollutant minimization activity appears to be effective or ineffective at reducing pollutant discharge concentrations and identify actions planned for the upcoming year; Identification of barriers that have limited program effectiveness and adjustments to the program that will be implemented during the next year to help address these barriers; Include an analysis of trends in total effluent mercury concentrations based on mercury sampling; and Include an analysis of how influent and effluent mercury varies with time and with significant loading of mercury. The first annual mercury progress report is to be submitted by the Due Date.	12/31/2024
Annual Mercury Progress Report #2: Submit a mercury progress report, related to the pollutant minimization activities for the previous year, as defined above.	12/31/2025
Annual Mercury Progress Report #3: Submit a mercury progress report, related to the pollutant minimization activities for the previous year, as defined above.	12/31/2026
Annual Mercury Progress Report #4: Submit a mercury progress report, related to the pollutant minimization activities for the previous year, as defined above.	12/31/2027
Final Mercury Report: Submit a final report documenting the success in reducing mercury concentrations in the effluent, as well as the anticipated future reduction in mercury sources and mercury effluent concentrations. The report shall: Summarize mercury pollutant minimization activities that have been implemented during the current permit term and state which, if any, activities from the Pollutant Minimization Program Plan were not pursued and why; Include an assessment of which pollutant minimization activities appear to have been effective or ineffective. Evaluate any needed changes to the pollutant reduction strategy accordingly; Identification of barriers that have limited program effectiveness and adjustments to the program to help address these barriers; Include an analysis of trends in mercury concentrations based on sampling and data during the	12/31/2028

current permit term; and Include an analysis of how influent and effluent mercury varies with time and with significant loadings of mercury.	
Annual Mercury Reports After Permit Expiration: In the event that this permit is not reissued by the date the permit expires, the permittee shall continue to submit annual mercury reports for the previous year following the due date of Annual Mercury Progress Reports listed above. Annual Mercury Progress reports shall include the information as defined above.	

Explanation of Schedules

The compliance schedule regarding the mercury pollutant minimization program will ensure that the permittee maintains compliance with the requirements of the alternative mercury effluent limitation and will continue to work towards compliance with the final mercury limitation.

Attachments:

Water Quality-Based Effluent Limitations for the Peshtigo Wastewater Treatment Facility WPDES Permit No. WI-0030651-09-0

Proposed Expiration Date:

December 31, 2028

Justification Of Any Waivers From Permit Application Requirements:

No waivers from permit application requirements granted.

Prepared By: Sarah Adkins, Wastewater Specialist

Date: May 28, 2024