Public Noticed Nekoosa Draft Permit Fact Sheet

General Information

Permit Number	WI-0020613-10-0
Permittee Name and Address	City of Nekoosa 951 Market St, Nekoosa, WI 54457
Permitted Facility Name and Address	Nekoosa Wastewater Treatment Facility 1348 Basse Ave, Nekoosa, WI
Permit Term	November 01, 2025 to September 30, 2030
Discharge Location	Nekoosa Wastewater Treatment Facility, 1348 Point Basse Ave, Nekoosa, WI 54457
Receiving Water	Wisconsin River in Wisconsin Rapids Watershed of Wisconsin River (upper) basin in Wood County
Stream Flow ($Q_{7,10}$)	999 cfs
Stream Classification	Warmwater Sport Fish, Non-public water supply
Discharge Type	Existing, Continous
Annual Average Design Flow (MGD)	0.43 MGD
Industrial or Commercial Contributors	N/A
Plant Classification	A2 - Attached 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 Nekoosa Wastewater Treatment Facility treats domestic wastewater from the City of Nekoosa and the Ho-Chunk Nation Cex' Ha Ci development. The facility has an annual average design flow of 0.43 million gallons per day (MGD) and had an actual annual average flow of 0.406 MGD in 2024. The plant is an activated sludge type wastewater treatment facility. It has grit removal, mechanical screening, primary clarification, solids contact tanks, trickling filters, an anaerobic digester, final clarification and chemical phosphorus removal by addition of ferric chloride with a polymer. Effluent is disinfected seasonally via chlorination (and then dechlorination) prior to discharge to the Wisconsin River. Sludge is stored onsite and then hauled to another permitted storage facility or landspread. Significant effluent monitoring and/or limitation changes proposed for the upcoming permit term are as follows: 1) influent flow monitoring has been added, 2) effluent fecal coliform monitoring and limits are replaced with Escherechia coli (E. coli) monitoring and limits, 3) additional copper and chlorine weekly and monthly average limits to comply with the expression of limits requirements in ss. NR 106.07 and NR 205.065(7), Wis. Adm. Codes, 4) multi-discharger variance (MDV) effluent phosphorus limits have been replaced with WI River Total Maximum Daily Load (TMDL) phosphorus limits, 5) additional sludge requirements were added when sludge is landspread, 6) PFAS sludge sampling has been included in the WPDES permit

pursuant to ss. NR 214.18(5)(b) and NR 204.06(2)(b)9., Wis. Adm. Code to quantitate risk, and 7) a sludge management plan update is required prior to the start of any sludge landpreading activities.

Substantial Compliance Determination

Enforcement During Last Permit: 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 8/7/2024 the Nekoosa Wastewater Treatment Facility has been found to be in substantial compliance with their current permit.

Compliance determination entered by Logan Rubeck on 2/5/2025.

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	No flow monitoring (added this permit term)	Representative influent samples of Nekoosa wastewater shall be collected in the influent sampler room from the Nekoosa sewer prior to the grit chamber.
702	No flow monitoring (added this permit term)	Representative influent samples of Ho-Chunk Nation wastewater shall be collected in the influent sampler room from the Ho-Chunk Nation forcemain prior to the grit chamber.
001	0.406 MGD (2024)	Representative effluent flow and composite samples shall be collected after the final clarifiers prior to the chlorination contact pipe. Effluent grab samples shall be collected after the dechlorination pipe and prior to discharge.
002	24 U.S. dry tons (2024)	If sludge is hauled offsite by a contracted hauler, representative sludge samples shall be collected annually and monitored for List 1 and PFAS, and once for PCBs. Sludge samples shall be collected prior to hauling and test results shall be reported on Form 3400-49 "Waste Characteristics Report". Hauled sludge reports shall be submitted on Form 3400-52 "Other Methods of Disposal or Distribution Report" following each year that sludge is hauled. If sludge is landspread, representative sludge samples shall be monitored for the same as when hauled, but also be monitored for Lists 2, 3, and 4 parameters prior to landspreading.
601	n/a	Temperature and flow of the Wisconsin River shall be monitored for determination of Wasteload Allocated (WLA) limits at Outfall 001. See subsections below for specific monitoring information.

Permit Requirements

1 Influent – Monitoring Requirements

1.1 Sample Point Number: 701- INFLUENT from NEKOOSA and 702- INFLUENT from HO-CHUNK NATION

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
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 the following changes were made from the previous permit: flow monitoring was added to each influent sample point. See additional explanation of limits under "Explanation of Limits and Monitoring Requirements" below.

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- EFFLUENT TO WISCONSIN RIVER

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	3/Week	24-Hr Flow Prop Comp	
BOD5, Total	Weekly Avg	45 mg/L	3/Week	24-Hr Flow Prop Comp	
WLA BOD5 Value		lbs/day	3/Week	See Table	Applies May-Oct. See BOD WLA subsection below
WLA BOD5 Discharged	Daily Max - Variable	lbs/day	3/Week	Calculated	Applies May-Oct. See BOD WLA subsection below
Suspended Solids, Total	Monthly Avg	30 mg/L	3/Week	24-Hr Flow Prop Comp	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
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	
Nitrogen, Ammonia (NH3-N) Total		mg/L	Quarterly	24-Hr Flow Prop Comp	
E. coli	Geometric Mean - Monthly	126 #/100 ml	2/Week	Grab	Limit effective May through September 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.
Copper, Total Recoverable	Daily Max	32 ug/L	Monthly	24-Hr Flow Prop Comp	
Copper, Total Recoverable	Monthly Avg	32 ug/L	Monthly	24-Hr Flow Prop Comp	
Copper, Total Recoverable	Weekly Avg	32 ug/L	Monthly	24-Hr Flow Prop Comp	
Copper, Total Recoverable	Daily Max	0.28 lbs/day	Monthly	Calculated	
Hardness, Total as CaCO3		mg/L	Quarterly	24-Hr Flow Prop Comp	Sample concurrently with copper sampling.
Phosphorus, Total		mg/L	3/Week	24-Hr Flow Prop Comp	
Phosphorus, Total	Monthly Avg	1.95 lbs/day	3/Week	Calculated	See TMDL section.
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

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
					the DMR. See TMDL section.
Chlorine, Total Residual	Daily Max	38 ug/L	Daily	Grab	Limit effective May through September annually
Chlorine, Total Residual	Monthly Avg	38 ug/L	Daily	Grab	Limit effective May through September annually
Chlorine, Total Residual	Weekly Avg	38 ug/L	Daily	Grab	Limit effective May through September annually
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: 1) effluent fecal coliform monitoring and limits are replaced with Escherechia coli (E. coli) monitoring and limits, 2) additional copper and chlorine weekly and monthly average limits to comply with the expression of limits requirements in ss. NR 106.07 and NR 205.065(7), Wis. Adm. Codes, 3) multi-discharger variance (MDV) effluent phosphorus limits have been replaced with WI River Total Maximum Daily Load (TMDL) phosphorus limits. See additional explanation of limits under "Explanation of Limits and Monitoring Requirements" below.

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 May 22, 2025 and titled 'Water Quality-Based Effluent Limitations for the Nekoosa Wastewater Treatment Facility WPDES Permit No. WI-0020613'.

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. No changes were made this permit term.

Expression of Limits- In accordance with the federal regulation 40 CFR 122.45(d) and s. NR 205.065, Wis. Adm. Code, limits in this permit are to be expressed as weekly average and monthly average limits whenever practicable. Minor changes have been made to both chlorine and copper limits.

BOD_5 Waste Load Allocation (WLA): The BOD_5 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 BOD_5**"** 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 477 lbs/yr as an annual total is effective at permit reissuance.

Wisconsin River Total Maximum Daily Load (TMDL): Nekoosa 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. The final effluent limits and monitoring expressed in the permit were derived from and comply with the applicable water quality criterion and are consistent with the assumptions and requirements of the EPA-approved WLA in the TMDL, which is 477 lbs/year for the city of Nekoosa's WLA. This translates to a permit monthly average Total Phosphorus mass limit of 1.95 lbs/day.

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 are 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.

2.2 Sample Point Number: 601- WISCONSIN RIVER

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

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 May 22, 2025 and titled 'Water Quality-Based Effluent Limitations for the Nekoosa Wastewater Treatment Facility WPDES Permit No. WI-0020613'.

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	Anaerobic Digestion or Fecal Coliform	Volatile solids reduction or incorporation	Hauled/ landspread	35 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? no						
Is a priority pollutant scan required? no						

3.1 Sample Point Number: 002- 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	
PCB Total Dry Wt	Ceiling	50 mg/kg	Once	Composite	Sample once in 2027
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	Sample once in 2027
Nitrogen, Total Kjeldahl		Percent	Per Application	Composite	Sample prior to first landspreading event during the year.
Nitrogen, Ammonia (NH3-N) Total		Percent	Per Application	Composite	Sample prior to first landspreading event during the year.
Phosphorus, Total		Percent	Per Application	Composite	Sample prior to first landspreading event during the year.
Phosphorus, Water Extractable		% of Tot P	Per Application	Composite	Sample prior to first landspreading event during the year.

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Potassium, Total Recoverable		Percent	Per Application	Composite	Sample prior to first landspreading event during the year.
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: additional lists 2,3,and 4 sampling is required if sludge is landspread, and 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 Land Application Management Plan

A management plan is required for the land application system.

Required Action	Due Date

Land Application Management Plan Submittal: Submit a 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 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 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 landspreading 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 any landspreading activities.	

4.1.1 Explanation of Schedule

Land Application Management Plan (municipal)- An up-to-date Land Application Management Plan is required that documents how the permittee will manage the land application of biosolids consistent with ch. NR 204, Wis. Adm. Code

Other Comments

None

Attachments

Water Quality Based Effluent Limits memo dated May 22, 2025 and titled 'Water Quality-Based Effluent Limitations for the Nekoosa Wastewater Treatment Facility WPDES Permit No. WI-0020613'

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: September 10, 2025