

Permit Fact Sheet

General Information

Permit Number	WI-0024686-09-0
Permittee Name and Address	Fox West Regional Sewerage Commission 1965 W Butte Des Morts Road, Neenah, WI 54956
Permitted Facility Name and Address	Fox West Regional Sewerage Commission 1965 W. Butte des Morts Beach Road, Neenah, Wisconsin
Permit Term	January 01, 2026 to December 31, 2030
Discharge Location	West Shore of Little Lake Butte des Morts NW 1/4 of the NW 1/4 of Sec. 10, T20N-R17E, Village of Fox Crossing, Winnebago County
Receiving Water	Little Lake Butte des Morts in Little Lake Butte des Morts of Fox River (lower) in Winnebago County
Stream Flow (Q _{7,10})	930 cfs
Stream Classification	Warm Water Sport Fish (WWSF), Public Water Supply
Discharge Type	Existing, Continuous
Annual Average Design Flow (MGD)	8.2 MGD
Industrial or Commercial Contributors	4 categorical industries and 2 other significant (non-categorical) industrial users
Plant Classification	A1 - Suspended Growth Processes; B - Solids Separation; C - Biological Solids/Sludges; P - Total Phosphorus; D - Disinfection; L - Laboratory; SS - Sanitary Sewage Collection System
Approved Pretreatment Program?	Yes

Facility Description

Domestic, commercial, and industrial wastewaters are received at the plant from the Village of Fox Crossing, the Town of Grand Chute, the Village of Greenville, and the Town of Clayton. Along with wastewater, hauled in waste (holding tanks, septic waste) is also received for treatment at this facility. The wastewater passes through fine screens, grit removal, and primary clarification prior to entering one of three trains of IFAS (Integrated Fixed Film Activated Sludge) aeration basins. Ferric chloride is added for phosphorus removal. After secondary clarification in one of five final clarifiers, effluent passes through Ultraviolet (UV) lights for disinfection and is discharged into Little Lake Butte des Morts.

Solids (primary sludge, waste activated sludge) are treated using ATAD (autothermo thermophilic aerobic digestion) digesters. Solids are stored in a sludge storage tank prior to being fed into one of two ThermAir digesters. Following the ThermAir digesters, sludge is moved through the SNDR (storage nitrification denitrification reactor) tanks prior to being

sent to a sludge storage tank. Following the storage tank, sludge is dewatered with one of two belt filter presses and is then stored in the sludge storage barn prior to land application on Department approved fields.

Substantial Compliance Determination

After a desk top review of all discharge monitoring reports, CMARs, land app reports, compliance schedule items, and a site visit on November 14, 2023, this facility has been found to be in substantial compliance with their current permit.

Compliance determination made by Mark Stanek on November 14, 2023.

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	6.05 MGD (August 2022-August 2025)	INFLUENT: Representative influent samples shall be collected from the composite sampling device drawing samples from the combined influent channel after the fine screens and before all sidestreams.
111	N/A	IN-PLANT: 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.
001	6.49 MGD (August 2022-August 2025)	EFFLUENT: Representative samples shall be collected from the composite sampling device following the UV channels in the UV building. Flow meter is located in the manhole following the UV building prior to outfall 001.
601	N/A	RIVER MONITORING: Lower Fox River data collected at the Appleton Lutz Park-USGS/ACOE Gauge Station as reported by the Lower Fox River Discharger's Association shall be used in the determination of the daily BOD5 wasteload allocation.
003	2,760 cu yards (2024)	LAND APPLICATION: (Cake Sludge) Representative samples of the cake sludge shall be collected from the sludge storage building. Compliance with Class A fecal coliform or salmonella requirements shall be demonstrated immediately after the treatment process and again prior to land application if that is more than three weeks later. See also Standard Requirements section for "Class A Fecal Coliform". Cake sludge is produced through the following process. Liquid sludge is treated through Auto Thermal Aerobic Digestion (ATAD) then held in a Post-ATAD cooling tank. The liquid sludge post digestion is dewatered on belt presses with the aid of a polymer. The resulting cake sludge (sample point/outfall 003) is then stored on-site until disposal by land application.
006	N/A	LAND APPLICATION: (In-Plant) Sample from tap located in the digester building following the SNDR tanks but prior to digested sludge storage tank, post digestion.

Permit Requirements

1 Influent – Monitoring Requirements

1.1 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	
Phosphorus, Total		mg/L	5/Week	24-Hr Flow Prop Comp	
Cadmium, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Chromium, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Copper, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Lead, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Nickel, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Zinc, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Mercury, Total Recoverable		ng/L	Quarterly	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 Inplant - Monitoring and Limitations

2.1 Sample Point Number: 111- Field Blank

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

2.1.1 Changes from Previous Permit:

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

2.1.2 Explanation of Limits and Monitoring Requirements

Mercury Field Blank- Monitoring is included in the permit pursuant to s. NR 106.145, Wis. Adm. Code. Field blanks must meet the requirements under s. NR 106.145(9) and (10), Wis. Adm. Code. The permittee shall collect a mercury field blank for each set of mercury samples (a set of samples may include a combination of influent, effluent or other samples all collected on the same day). Field blanks are required to verify a sample has not been contaminated during collection, transportation or analysis.

3 Surface Water - Monitoring and Limitations

3.1 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	
CBOD ₅	Weekly Avg	40 mg/L	5/Week	24-Hr Flow Prop Comp	Interim limit effective November through April through April 2029. See 'Effluent Limitations for BOD' schedule.
CBOD ₅	Monthly Avg	25 mg/L	5/Week	24-Hr Flow Prop Comp	Interim limit effective November through April through April 2029. See 'Effluent Limitations for BOD' schedule.
CBOD ₅	Weekly Avg	40 mg/L	Daily	24-Hr Flow Prop Comp	Interim limit effective May through October through 2028. See 'Effluent Limitations for BOD' schedule.
CBOD ₅	Monthly Avg	25 mg/L	Daily	24-Hr Flow	Interim limit effective May

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
				Prop Comp	through October annually until the BOD limit goes into effect per the 'Effluent Limitations for BOD' schedule.
BOD ₅ , Total	Weekly Avg	45 mg/L	5/Week	24-Hr Flow Prop Comp	Limit Effective November through April starting November 2029 per the 'Effluent Limitations for BOD' schedule.
BOD ₅ , Total	Monthly Avg	30 mg/L	5/Week	24-Hr Flow Prop Comp	Limit Effective November through April starting November 2029 per the 'Effluent Limitations for BOD' schedule.
BOD ₅ , Total	Weekly Avg	45 mg/L	Daily	24-Hr Flow Prop Comp	Limit Effective May through October starting May 2029 per the 'Effluent Limitations for BOD' schedule.
BOD ₅ , Total	Monthly Avg	30 mg/L	Daily	24-Hr Flow Prop Comp	Limit Effective May through October starting May 2029 per the 'Effluent Limitations for BOD' schedule.
pH Field	Daily Max	9.0 su	5/Week	Grab	
pH Field	Daily Min	6.0 su	5/Week	Grab	
E. coli	Monthly Avg	126 #/100 ml	2/Week	Grab	Effective May through September, annually.
E. coli	% Exceedance	10 Percent	Monthly	Calculated	Effective May through September, annually.
Phosphorus, Total	Monthly Avg	0.7 mg/L	5/Week	24-Hr Flow Prop Comp	Existing concentration limits that are already in effect will be maintained to prevent backsliding.
Phosphorus, Total	Monthly Avg	29 lbs/day	5/Week	Calculated	
Phosphorus, Total	6-Month Avg	9.6 lbs/day	5/Week	Calculated	
Phosphorus, Total		lbs/month	Monthly	Calculated	Calculate the Total Monthly Discharge of phosphorus and report on

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
					the last day of the month on the DMR. See TMDL Calculations 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 Calculations section below.
Suspended Solids, Total	Weekly Avg	45 mg/L	5/Week	24-Hr Flow Prop Comp	Existing concentration limits that are already in effect will be maintained to prevent backsliding
Suspended Solids, Total	Monthly Avg	30 mg/L	5/Week	24-Hr Flow Prop Comp	Existing concentration limits that are already in effect will be maintained to prevent backsliding
Suspended Solids, Total	Weekly Avg	4,355 lbs/day	5/Week	Calculated	
Suspended Solids, Total	Monthly Avg	2,382 lbs/day	5/Week	Calculated	
Suspended Solids, Total		lbs/month	Monthly	Calculated	Calculate the Total Monthly Discharge of TSS and report on the last day of the month on the DMR. See TMDL Calculations section.
Suspended Solids, Total		lbs/yr	Monthly	Calculated	Calculate the 12-month rolling sum of total monthly mass of TSS discharged and report on the last day of the month on the DMR. See TMDL Calculations section.
Nitrogen, Ammonia (NH3-N) Total	Daily Max	20 mg/L	5/Week	24-Hr Flow Prop Comp	
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	20 mg/L	5/Week	24-Hr Flow Prop Comp	Applies October - May.
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	11 mg/L	5/Week	24-Hr Flow Prop Comp	Applies June - September.

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	10 mg/L	5/Week	24-Hr Flow Prop Comp	Applies January - March.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	11 mg/L	5/Week	24-Hr Flow Prop Comp	Applies April - May.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	4.4 mg/L	5/Week	24-Hr Flow Prop Comp	Applies June - September.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	18 mg/L	5/Week	24-Hr Flow Prop Comp	Applies October - December.
Mercury, Total Recoverable		ng/L	Quarterly	Grab	
Cadmium, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Chromium, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Copper, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Lead, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Nickel, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Zinc, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
PFOS		ng/L	Monthly	Grab	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.
PFOA		ng/L	Monthly	Grab	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.
Chloride		mg/L	Monthly	24-Hr Flow Prop Comp	Monthly monitoring in 2027.
Nitrogen, Total Kjeldahl		mg/L	Quarterly	24-Hr Flow Prop Comp	
Nitrogen, Nitrite + Nitrate Total		mg/L	Quarterly	24-Hr Flow Prop Comp	
Nitrogen, Total		mg/L	Quarterly	Calculated	Total Nitrogen shall be calculated as the sum of

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
					reported values for Total Kjeldahl Nitrogen and Total Nitrite + Nitrate Nitrogen.
Acute WET		TUa	See Listed Qtr(s)	24-Hr Flow Prop Comp	
Chronic WET		TUa	See Listed Qtr(s)	24-Hr Flow Prop Comp	
WLA CBOD ₅ Value		lbs/day	Daily	See Table	Applies May - October, each year, upon permit reissuance until completion of the BOD WQBEL Compliance Schedule.
WLA BOD ₅ Value		lbs/day	Daily	See Table	Applies May - October, each year following the BOD WQBEL Compliance Schedule.
WLA Adjusted Value		lbs/day	Daily	Calculated	Applies May - October, each year.
WLA CBOD ₅ Discharged		lbs/day	Daily	24-Hr Comp	Applies May - October, each year, upon permit reissuance until completion of the BOD WQBEL Compliance Schedule.
WLA BOD ₅ Discharged		lbs/day	Daily	24-Hr Comp	Applies May - October, each year following the BOD WQBEL Compliance Schedule.
WLA 7 Day Sum Of WLA Values		lbs/day	Daily	Calculated	Applies May - October, each year.
WLA 7 Day Sum Of CBOD ₅ Discharged	Daily Max - Variable	lbs/day	Daily	Calculated	Applies May - October, each year, upon permit reissuance until completion of the BOD WQBEL Compliance Schedule.
WLA 7 Day Sum Of BOD ₅ Discharged	Daily Max - Variable	lbs/day	Daily	Calculated	Applies May - October, each year following the BOD WQBEL Compliance Schedule.

3.1.1 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.

- **BOD & CBOD:** All limits and monitoring previously reported as CBOD₅ will be changed to BOD₅ following the compliance schedule. This permit includes BOD WLA limits that were reported at Outfall 004. The Department has determined that it is appropriate for all BOD WLA to be reported at the main effluent outfall, in this case Outfall 001.
- **E. coli:** Fecal coliform monitoring and limits have been replaced with Escherichia coli (E. coli) monitoring and limits.
- **Total Nitrogen Monitoring (TKN, N02+N03 and Total N):** Quarterly monitoring is required.
- **Nitrogen, Ammonia:** Daily limits and weekly average limits have changed.
- **Mercury:** Quarterly monitoring only, variance limit has been removed.
- **Chloride:** Monthly chloride monitoring has been added.
- **Nitrogen, Total:** Quarterly monitoring has been added.
- **Nitrogen, Nitrite + Nitrate Total:** Quarterly monitoring has been added.
- **PFOS/PFOA:** Monthly monitoring has been added.
- **Waste Load Allocation:** Waste load allocation sampling parameter has changed from “CBOD” to “BOD”. WLA parameters have been added to Outfall 001 instead of previous Outfall 004.

3.1.2 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 14, 2025.

- **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.
- **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 and monthly average limits whenever practicable.
- **CBOD/BOD:** The previous permit included CBOD limitations instead of BOD due to an effluent limitation variance pursuant s. NR 210.07(4), Wis. Adm. Code. However, that variance is only applicable to limitations under s. NR 210.05(1) to (3), Wis. Adm. code. The variance is not applicable to water quality-based waste load allocations under ch. NR 212, Wis. Adm. Code. This permit includes a compliance schedule to allow time to meet the final BOD limits.

In addition, the Department determined that the BOD categorical limitations under s. NR 210.05(1), Wis. Adm. Code are able to be met, therefore a CBOD variance under s. NR 210.07(4), Wis. Adm. Code is no longer needed or included.

- **Lower Fox River Basin Total Maximum Daily Load (TMDL):** The permitted facility is located within the Lower Fox River Basin Total Maximum Daily Load (LFRB TMDL), which was approved by EPA in March 2012. The TMDL establishes Waste Load Allocations (WLAs) for point source dischargers and determines the maximum amounts of phosphorus and total suspended solids 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 WLAs in the TMDL, which are 3,110 lbs/yr for phosphorus and 225,925 lbs/yr for TSS for the permitted facility.

The approved TMDL expresses WLAs as lbs/year and lbs/day (maximum annual load divided by 365 days). As outlined in Section 4.6 of the department's 2020 TMDL Implementation Guidance for Wastewater Permits, TMDL limits must be given in the permit that are consistent with the TMDL WLA permit limits derived from the TMDL and need to be expressed as specified by 40 CFR 122.45 (d), s. NR 212.76 (4), and s. NR 205.065 (7), Wis. Adm. Code, unless determined to be impracticable. Impracticability has already been determined for phosphorus limits as laid out in the phosphorus impracticability agreement that was approved by USEPA in 2012 (see NPDES MOA Addendum dated July 12, 2012 at <https://apps.dnr.wi.gov/swims/Documents/DownloadDocument?id=167886175>).

For phosphorus, continuously discharging facilities covered by the LFRB TMDL are given monthly average mass limits. If the equivalent effluent concentration is less than or equal to 0.3 mg/L, six-month average mass limits (averaging period of May through October and November through April) are also included. The equivalent effluent concentration of 0.7 mg/L was calculated for the facility, thus, TMDL based mass limits are expressed as a six-month average and a monthly average equal to three times the six-month average limits.

For TSS, continuously discharging municipal/industrial facilities covered by the LFRB TMDL are given monthly average and weekly average mass limits.

Facilities with LFRB TMDL based effluent limits for phosphorus and TSS must report the 12-month rolling sum of total monthly discharge (lbs/yr). If reported 12-month rolling sums exceed the facility's max annual WLA, the facility's mass limits (monthly average and six-month average) may be recalculated using more appropriate CVs or monitoring frequencies when the permit is reissued to bring discharge levels into compliance with the facility's given WLA.

- **Mercury:** The permittee is coming off a mercury variance and limits are not recommended during the reissued permit term. Quarterly monitoring and PMP monitoring efforts are recommended to continue during the reissued permit term to maintain effluent quality at or below current levels.
- **Chloride:** Chloride monitoring is recommended to ensure that 11 sample results are available at the next permit issuance to meet the data requirements of s. NR 106.85, Wis. Adm. Code.
- **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. Quarterly effluent monitoring for Total Nitrogen is included in the permit because of the potential for higher nitrogen loading resulting from higher flows (major facilities), higher concentrations, or both. 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.
- **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 major municipal dischargers, with an average flow rate greater than or equal to 5 MGD, at a minimum sample effluent on a monthly basis for PFOS and PFOA pursuant s. NR 106.98(2)(a), Wis. Adm. Code. 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.

3.2 Sample Point Number: 601- River Monitoring

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
WLA Previous Day River Flow		cfs	Daily	Measure	Applies May - October, each year.
WLA Previous 4 Day Avg River Flow		cfs	Daily	Calculated	Applies May - October, each year.
WLA Previous Day River Temp		deg F	Daily	Calculated	Applies May - October, each year.

3.2.1 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.

4 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	A	Cake	Fecal Coliform Testing	Volatile Solids Reduction	Land Application	1150 dry 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.						
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? 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.						

4.1 Sample Point Number: 003- Cake Sludge

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Solids, Total		Percent	Quarterly	Composite	

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

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
					Permit Sections for more information.

4.1.1 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. 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.

PCB: Monitoring removed.

4.1.2 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.

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.

4.2 Sample Point Number: 006- In-Plant SNDR Sample Tap

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Volatile Solids Reduction		Percent	Quarterly	Calculated	
Fecal Coliform		MPN/g TS	Quarterly	Grab	

4.2.1 Changes from Previous Permit:

N/A – New sample point

4.2.2 Explanation of Limits and Monitoring Requirements

Outfall 006 has been added to the permit to demonstrate compliance with Class A biosolids requirements.

5 Schedules

5.1 Water Quality Based Effluent Limits (WQBELs) for BOD

The permittee shall comply with the WQBELs for BOD as specified. No later than 14 days following each compliance date, the permittee shall notify the Department in writing of its compliance or noncompliance. If a submittal is required, a timely submittal fulfills the notification requirement.

Required Action	Due Date
Operational Evaluation Report: The permittee shall prepare and submit to the Department for approval an operational evaluation report. The report shall include an evaluation of collected effluent data, possible source reduction measures, operational improvements or other minor facility modifications that will optimize reductions in BOD discharges from the treatment plant during the period prior to complying with final BOD WQBELs and, where possible, enable compliance with final BOD WQBELs by May 1, 2029. The report shall provide a plan and schedule for implementation of the measures, improvements, and modifications as soon as possible and state whether the measures, improvements, and modifications will enable compliance with final BOD WQBELs.	10/01/2026
Compliance Alternatives Plan: The permittee shall submit a compliance alternatives plan to the Department. If the plan concludes upgrading of the permittee's wastewater treatment is necessary to meet final BOD WQBELs, the submittal shall include a final engineering design report addressing the treatment plant upgrades, and a facility plan if required pursuant to ch. NR 110, Wis. Adm. Code.	04/01/2027
Progress Report #1: Submit progress report regarding the progress of actions taken to meet final BOD WQBEL limits.	10/01/2027
Progress Report #2: Submit progress report regarding the progress of actions taken to meet final BOD WQBEL limits.	04/01/2028
Progress Report #3: Submit progress report regarding the progress of actions taken to meet final BOD WQBEL limits.	10/01/2028
Achieve Compliance: The permittee shall achieve compliance with final phosphorus WQBELs. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	05/01/2029

5.1.1 Explanation of Schedule

The previous permit included CBOD limitations instead of BOD due to an effluent limitation variance pursuant s. NR 210.07(4), Wis. Adm. Code. However, that variance is only applicable to limitations under s. NR 210.05(1) to (3), Wis. Adm. code. The variance is not applicable to water quality-based waste load allocations under ch. NR 212, Wis. Adm. Code. This schedule allows time to meet the final Effluent Limits for BOD.

5.2 Mercury Pollutant Minimization Program

Required Action	Due Date
Mercury Report: Submit a 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. The report shall include an analysis of trends in quarterly and annual	10/01/2029

total effluent mercury concentrations based on mercury sampling during the current permit term. The report shall also include an analysis of how influent and effluent mercury varies with time and with significant loading of mercury such as loads from industries into the collection system.	
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5.2.1 Explanation of Schedule

The permittee is required to continue the actions in the pollutant minimization plan to maintain effluent quality at or below current levels. This schedule requires a report once prior to permit reissuance documenting the continued measures.

5.3 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 action is required and effluent monitoring of PFOS and PFOA shall continue as specified in the permit.</p>	04/01/2028

5.3.1 Explanation of Schedule

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.

5.4 Sludge Management Plan

A sludge management plan is required.

Required Action	Due Date
<p>Sludge Management Plan Submittal: Submit a sludge management plan (SMP) to optimize the sludge management performance and demonstrate compliance with Ch. NR 204, Wis. Adm. Code, by the Due Date. This management plan shall include sufficient detail of the sludge management program for the facility. The plan shall include separate sections for each type of sewage sludge included in this permit.</p> <p>The SMP shall provide standardized information for communication to operators and the department including but not limited to the following:</p> <ol style="list-style-type: none"> 1) Specify information on the sludge treatment processes for each sampling point and outfall; 2) Show and describe sample point and outfall monitoring locations on a schematic and provide photos of the specific sampling points; 3) Show, describe and tabulate the monitoring requirements at each sampling point and outfall locations; 4) Show, describe and explain sampling protocols for each location listing parameters to be monitored including: <ol style="list-style-type: none"> a) Pollutants, b) Nutrients, c) Pathogen treatment process requirements including treatment temperature, moisture content (total solids) and pathogen densities (fecal concentrations), d) Vector Reduction appropriate for the pathogen treatment process such as but not limited to temperatures, volatile solids reduction, moisture content, etc. as required by the WPDES permit and Ch. NR 204, Wis. Adm. Code; 5) Monitoring frequencies at each sample point and outfall; 6) Analytical methods with appropriate hold times and chain of custody procedures; 7) Documentation relating to temperature monitoring data recording, retrieval and printing out the data when requested; 8) Storage, verification monitoring, loading, transportation and discharge details associated with all outfalls; 9) Collection, storage, disposal information for sludge detailing pickups including loading and similar details; 10) Collection, storage and disposal processes of sludge when the sludge does not meet minimum requires to meet Class A and EQ requirements. [Note: EQ and Class A are similar, but are different. Explain.] 11) Identify land application sites; 12) Describe site limitations; 13) Address vegetative cover management and removal including loading to crop needs, crop harvesting; 	<p>04/01/2027</p>

<p>14) Specific the availability of storage for sludge;</p> <p>15) Describe the type of transportation and spreading vehicles;</p> <p>16) Track site loadings to facility’s land application sites;</p> <p>17) Address contingency plans for adverse weather and odor/nuisance abatement;</p> <p>18) Address construction contingencies when treatment equipment is out of service; and</p> <p>19) Include any other pertinent information.</p> <p>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.</p> <p>Note: The SMP is a living document and should be designed and constructed to allow for future updates. Consider providing an overview to explain the facilities solids flow processes, then using sections and appendices to provide more details. The use of appendices to explain start up, operation and shutdown of the sludge treatment units is encouraged to show that all sludge particles meet Class A requirements.</p>	
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5.4.1 Explanation of Schedule

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

Attachments

Water Quality Based Effluent Limitations for Fox West Regional Sewerage Commission WPDES Permit No. 0024686-09, Nicole Krueger, dated March 20, 2022, updated January 21, 2026

Justification Of Any Waivers From Permit Application Requirements

No waivers requested or granted as part of this permit reissuance

Prepared By: Ashley Clark, Wastewater Specialist

Date: January 27, 2026