



WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
**PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE
ELIMINATION SYSTEM**

Fox West Regional Sewerage Commission

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility
located at

1965 W. Butte des Morts Beach Road, Neenah, Wisconsin
to

**Little Lake Butte des Morts, in the Little Lake Butte des Morts Watershed (LF06) of the Lower Fox River
Basin, in Winnebago County**

in accordance with the effluent limitations, monitoring requirements and other conditions set
forth in this permit.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date an application shall be filed for reissuance of this permit, according to Chapter NR 200, Wis. Adm. Code, at least 180 days prior to the expiration date given below.

State of Wisconsin Department of Natural Resources
For the Secretary

By _____
Heidi Schmitt Marquez
Wastewater Field Supervisor

Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - January 01, 2026

EXPIRATION DATE - December 31, 2030

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1 Influent Requirements

1.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
701	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.

1.2 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

1.2.1 Sampling Point 701 - Influent

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Continuous	
BOD ₅ , 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		µg/L	Monthly	24-Hr Flow Prop Comp	
Chromium, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	
Copper, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	
Lead, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	
Nickel, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	
Zinc, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	
Mercury, Total Recoverable		ng/L	Quarterly	24-Hr Flow Prop Comp	

1.2.1.1 Total Metals Analyses

Measurements of total metals and total recoverable metals shall be considered as equivalent.

1.2.1.2 Sample Analysis

Samples shall be analyzed using a method which provides adequate sensitivity so that results can be quantified at a level of quantitation below the calculated/potential effluent limit, unless not possible using the most sensitive approved method.

1.2.1.3 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), Wisconsin Administrative Code. The limit of quantitation (LOQ) used for the effluent and field blank shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

2 In-Plant Requirements

2.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
111	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.

2.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

2.2.1 Sampling Point 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	

2.2.1.1 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), Wisconsin Administrative Code. The limit of quantitation (LOQ) used for the effluent and field blank shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

3 Surface Water Requirements

3.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
001	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	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.

3.2 Monitoring Requirements and Effluent Limitations

The permittee shall comply with the following monitoring requirements and limitations.

3.2.1 Sampling Point (Outfall) 001 - Effluent

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Continuous	
BOD ₅ , Total	Monthly Avg	30 mg/L	5/Week	24-Hr Flow Prop Comp	Applies November - April, each year.
BOD ₅ , Total	Weekly Avg	45 mg/L	5/Week	24-Hr Flow Prop Comp	Applies November - April, each year.
BOD ₅ , Total	Monthly Avg	30 mg/L	Daily	24-Hr Flow Prop Comp	Applies May - October, each year.
BOD ₅ , Total	Weekly Avg	45 mg/L	Daily	24-Hr Flow Prop Comp	Applies May - October, each year.
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	
E. coli	% Exceedance	10 Percent	Monthly	Calculated	
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	

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
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 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 (NH ₃ -N) Total	Daily Max	20 mg/L	5/Week	24-Hr Flow Prop Comp	
Nitrogen, Ammonia (NH ₃ -N) Total	Weekly Avg	20 mg/L	5/Week	24-Hr Flow Prop Comp	Applies October - May.
Nitrogen, Ammonia (NH ₃ -N) Total	Weekly Avg	11 mg/L	5/Week	24-Hr Flow Prop Comp	Applies June - September.
Nitrogen, Ammonia (NH ₃ -N) Total	Monthly Avg	10 mg/L	5/Week	24-Hr Flow Prop Comp	Applies January - March.

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Ammonia (NH ₃ -N) Total	Monthly Avg	11 mg/L	5/Week	24-Hr Flow Prop Comp	Applies April - May.
Nitrogen, Ammonia (NH ₃ -N) Total	Monthly Avg	4.4 mg/L	5/Week	24-Hr Flow Prop Comp	Applies June - September.
Nitrogen, Ammonia (NH ₃ -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	
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 reported values for Total Kjeldahl Nitrogen and Total Nitrite + Nitrate Nitrogen.
Acute WET		TU _a	See Listed Qtr(s)	24-Hr Flow Prop Comp	
Chronic WET		TU _a	See Listed Qtr(s)	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.
WLA BOD ₅ Value		lbs/day	Daily	See Table	Applies May - October, each year.

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
WLA Adjusted Value		lbs/day	Daily	Calculated	Applies May - October, each year.
WLA BOD ₅ Discharged	Daily Max - Variable	lbs/day	Daily	24-Hr Comp	Applies May - October, each year.
WLA 7 Day Sum Of WLA Values		lbs/day	Daily	Calculated	Applies May - October, each year.
WLA 7 Day Sum Of BOD ₅ Discharged	Daily Max - Variable	lbs/day	Daily	Calculated	Applies May - October, each year.

3.2.1.1 *E. coli* Percent Limit

No more than 10 percent of *E. coli* bacteria samples collected in any calendar month may exceed 410 #/100 ml. Bacteria samples may be collected more frequently than required. All samples shall be reported on the monthly discharge monitoring reports (DMRs). The following calculation should be used to calculate percent exceedances.

$$\frac{\text{\# of Samples greater than 410 \#/100 mL}}{\text{Total \# of samples}} \times 100 = \% \text{ Exceedance}$$

3.2.1.2 Total Metals Analyses

Measurements of total metals and total recoverable metals shall be considered as equivalent.

3.2.1.3 Sample Analysis

Samples shall be analyzed using a method which provides adequate sensitivity so that results can be quantified at a level of quantitation below the calculated/potential effluent limit, unless not possible using the most sensitive approved method.

3.2.1.4 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), Wis. Adm. Code. The limit of quantitation (LOQ) used for the effluent and field blank shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

3.2.1.5 Total Maximum Daily Load (TMDL) Limitations

Approved TMDL: The Lower Fox River TMDL Waste Load Allocation (WLA) for Total Phosphorus and Total Suspended Solids was approved by the U.S. Environmental Protection Agency on May 18, 2012. TMDL total lbs/month and lbs/yr effluent results shall be calculated as follows:

Total Monthly Discharge (lbs/month): = monthly average concentration (mg/L) x total flow for the month (MG/month) x 8.34.

12-Month Rolling Sum of Total Monthly Discharge (lbs/yr): = the sum of the most recent 12 consecutive months of Total Monthly Discharges.

3.2.1.6 TMDL Limitations for Total Phosphorus

The approved TMDL phosphorus WLA for this permittee is 3,110 lbs/year, which results in calculated phosphorus mass limits of 9.6 lbs/day 6-month average and 29 lbs/day monthly average. The 6-month average limit is expressed as a seasonal average with averaging periods occurring from May through October and November through April. Compliance with the 6-month average limit is evaluated at the end of each 6-month period on April 30th and October

31st annually. The 12-month rolling sum of total monthly phosphorus (lbs/yr) shall be reported each month for direct comparison to the facility's WLA.

3.2.1.7 TMDL Limitations for Total Suspended Solids

The approved TMDL TSS WLA for this permittee is 225,925 lbs/year, and results in calculated TSS mass limits of 2,382 lbs/day monthly average and 4,355 lbs/day weekly average. The 12-month rolling sum of total monthly TSS (lbs/yr) shall be reported each month for direct comparison to the facility's WLA.

3.2.1.8 Nitrogen Series Monitoring

Monitoring for Total Kjeldahl Nitrogen (TKN), Nitrite + Nitrate Nitrogen, and Total Nitrogen shall be conducted quarterly in order to collect seasonal information about the discharge.

Nitrogen Series monitoring shall continue after the permit expiration date (until the permit is reissued) in accordance with the monitoring requirements specified in the last full calendar year of this permit.

Testing: Monitoring shall be performed during normal operating conditions. Permittees are not allowed to turn off or otherwise modify treatment systems, production processes, or change other operating or treatment conditions during testing.

3.2.1.9 PFOS/PFOA Sampling and Reporting Requirements

For grab samples, as defined per s. NR 218.04(10), Wis. Adm. Code, a single sample at a location as defined by the sample point description shall be taken during the time of the day most representative to capture all potential discharges. If extra equipment besides the sample bottle is used to collect the sample, it is recommended that a one-time equipment blank is collected with the first sample. An equipment blank would be collected by passing laboratory-verified PFAS-free water over or through field sampling equipment before the collection of a grab sample to evaluate potential contamination from the equipment used during sample.

If any equipment blanks are performed, these results shall be reported in the comments section of the eDMR and shall also documented in the reports submitted as part of the PFOS/PFOA Minimization Plan Determination of Need schedule of the permit.

3.2.1.10 PFOS/PFOA Minimization Plan Determination of Need

The permittee shall monitor PFOS and PFOA as specified in the table above and report on the effluent concentrations including trends in monthly and annual average PFOS and PFOA concentrations as specified in the PFOS/PFOA Minimization Plan Determination of Need Schedule.

If, after reviewing the data, the Department determines that a minimization plan for PFOS and PFOA is necessary based on the procedures in s. NR 106.98(4), Wis. Adm. Code, the Department will notify the permittee in writing that a PFOS and PFOA minimization plan that satisfies the requirements in s. NR 106.99, Wis. Adm. Code, is required. The permittee shall submit an initial plan for Department approval no later than 90 days after written notification was sent from the Department in accordance with s. NR 106.985(2)(a), Wis. Adm. Code. Pursuant to s. NR 106.985(2)(b), Wis. Adm. Code, as soon as possible after Department approval of the PFOS and PFOA minimization plan, the Department will modify or revoke and reissue the permit in accordance with public notice procedures under ch. 283, Wis. Stats., and ch. NR 203, Wis. Adm. Code, to include the PFOS and PFOA minimization plan and other related terms and condition.

If, however, the Department determines that a PFOS and PFOA minimization plan is unnecessary based on the procedures in s. NR 106.98(4), Wis. Adm. Code, the Department shall notify the permittee that no further action is required. Per s. NR 106.98(3)(a), Wis. Adm. Code, the Department may reduce monitoring frequency to once every 3 months (quarterly) on a case-by-case basis, but only after at least 12 representative results have been generated. If the permittee requests a reduction in monitoring and the Department agrees a reduction would be appropriate, the permit may be modified in accordance with public notice procedures under ch. 283, Wis. Stats., and ch. NR 203, Wis. Adm. Code, to incorporate this change.

3.2.1.11 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Grab sample collected from Little Lake Butte des Morts (or Lake Winnebago), upstream and/or out of the influence of, the permittee's outfall and the mixing zone of any other discharge (outfalls to Little Lake Butte des Morts) – unless the use of a different control water source is approved by the Department prior to use.

Instream Waste Concentration (IWC): 5%

Dilution Series: At least five effluent concentrations and dual controls must be included in each test.

- **Acute:** 100, 50, 25, 12.5, 6.25% and any additional selected by the permittee.
- **Chronic:** 100, 30, 10, 3, 1% and any additional selected by the permittee.

WET Testing Frequency:

Acute and Chronic tests are required during the following quarters:

- **Acute:** October – December 2026; January – March 2027; April – June 2028; July – September 2029; October – December 2030

Acute and Chronic WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the last full calendar year of this permit. For example, the next test would be required in January – March 2031.

Testing: WET testing shall be performed during normal operating conditions. Permittees are not allowed to turn off or otherwise modify treatment systems, production processes, or change other operating or treatment conditions during WET tests.

Reporting: The permittee shall report test results on the Discharge Monitoring Report form, and also complete the "Whole Effluent Toxicity Test Report Form" (Section 6, "*State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition*"), for each test. The original, complete, signed version of the Whole Effluent Toxicity Test Report Form shall be sent to the Biomonitoring Coordinator, Bureau of Water Quality, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921, within 45 days of test completion. The Discharge Monitoring Report (DMR) form shall be submitted electronically by the required deadline.

Determination of Positive Results: An acute toxicity test shall be considered positive if the Toxic Unit - Acute (TU_a) is greater than 1.0 for either species (fathead minnow (*Pimephales promelas*) and waterflea (*Ceriodaphnia dubia*)). The TU_a shall be calculated as follows: $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Toxic Unit - Chronic (TU_c) is greater than 20.0 for either species. The TU_c shall be calculated as follows: $TU_c = 100 \div IC_{25}$.

Additional Testing Requirements: Within 90 days of a test which showed positive results, the permittee shall submit the results of at least 2 retests to the Biomonitoring Coordinator on "Whole Effluent Toxicity Test Report Forms". The 90-day reporting period shall begin the day after the test which showed a positive result. The retests shall be completed using the same species and test methods specified for the original test (see the Standard Requirements section herein).

3.2.1.1 Waste Load Allocation (WLA) Requirements

Each year during the months of May through October, the discharge of BOD₅ from Outfall 001 is limited to the following waste load allocated water quality related effluent limitations in additions to the effluent limitations contained in section 3.2.1.

3.2.1.1.1 Definitions:

- **BOD₅ Allocation:** The Fox West Regional Sewerage Commission allocation of BOD₅ (pounds per day BOD₅), as listed in Tables 1 through 5, represent water quality related effluent limitations. The flow and temperature conditions used to determine the BOD₅ allocation for a given day are defined below.
- **Flow:** A representative measurement of flow is the previous four-days average flow value derived daily from continuous river flow monitoring data for the Fox River. These daily measurements of river flow are collected at the Appleton Lutz Park - USGS/ACOE Gauge Station- or other alternative method or site approved by the Department- and reported by the Lower Fox River Discharge Association.

- **Temperature:** A representative measurement of temperature is the daily average temperature value of the previous day derived from continuous river temperature monitoring data for the Fox River as reported by the Lower Fox River Discharge Association.

3.2.1.1.2 Determination of Effluent Limitation:

For purposes of determining compliance with the waste load allocated water quality related BOD₅ effluent limitations, the following conditions shall be met:

- For any one-day period, the actual discharge of BOD₅ shall not exceed 1.38 times the BOD₅ allocation value from Tables 1 through 5 for that day (the “WLA Adjusted Value”).
- The sum of the actual daily discharges of BOD₅ for any 7-consecutive-day period (the “WLA 7 Day Sum of WLA Values”) shall not exceed the sum of the daily BOD₅ allocation values from Tables 1 through 5 for the same 7-consecutive-day period (the “WLA 7 Day Sum of BOD₅ Discharged”).
- The sum of values for a 7-consecutive-day period as referenced in section 3.2.1 equals the sum of the present day value and the 6 previous day's values.

3.2.1.1.3 Monitoring Requirements

The same 24-hour period shall be used for the collection of composite and continuous samples for river flow and temperature and all effluent characteristics listed in Table 3.2.1, including effluent flow and BOD₅.

In determining the "WLA BOD₅ Value", utilize the previous four-day average river flow ("WLA Previous 4 Day Avg River Flow") and previous day's temperature values ("WLA Previous Day River Temp") as reported under Sampling Point 601 - River Monitoring.

3.2.1.1.4 Reporting Requirements

During the months of May through October inclusive the permittee shall report, the following information:

- The daily average river flow in cfs (“WLA Previous Day River Flow”)
- The average of the previous 4 day’s river flow in cfs (“WLA Previous 4 Day Avg River Flow”)
- The previous day’s river temperature in °F (“WLA Previous Day River Temp”)
- The daily BOD₅ allocation in pounds of BOD₅ per day from Tables 1 through 4 (“WLA BOD₅ Value”)
- The daily adjusted BOD₅ allocation (“WLA Adjusted Value”)
- The discharge of BOD₅ in pounds of BOD₅ per day from Outfall 001 (“WLA BOD₅ Discharged”)
- The sum of the daily BOD₅ allocations in pounds of BOD₅ for each 7-consecutive-day period (“WLA 7 Day Sum of WLA Values”)
- The sum of the daily discharge of BOD₅ in pounds of BOD₅ for each 7-consecutive-day period (“WLA 7 Day Sum of BOD₅ Discharged”)

3.2.1.1.5 Wasteload Allocation Tables 1 through 5

**Table 1. Point Source Wasteload Allocated Values (lbs per day of BOD₅)
(River mile 40.0 to 32.4)
MAY – JUNE**

River Temperature (previous day average in °F)	Flow at Appleton Lutz Park (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
≥86	680	719	774	822	869	915	969	1030	1107	1194	1322	1403	1529	2223	2670
82 TO 85	729	776	838	894	952	1016	1090	1175	1272	1303	1368	1434	1694	2416	2954

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78 TO 81	808	862	933	1002	1082	1175	1248	1269	1311	1362	1407	1531	1988	2768	2970
74 TO 77	886	945	1025	1116	1226	1245	1270	1337	1364	1397	1462	1766	2236	2970	2970
70 TO 73	962	1026	1126	1233	1237	1262	1332	1358	1398	1445	1617	2031	2482	2970	2970
66 TO 69	1040	1115	1236	1233	1252	1325	1356	1396	1453	1577	1860	2322	2785	2970	2970
62 TO 65	1135	1238	1227	1239	1316	1352	1402	1467	1648	1857	2270	2626	2970	2970	2970
58 TO 61	1253	1224	1226	1307	1351	1418	1536	1763	2015	2350	2637	2970	2970	2970	2970
54 TO 57	1213	1208	1296	1356	1448	1679	1961	2362	2593	2832	2970	2970	2970	2970	2970
50 TO 53	1195	1239	1362	1515	1870	2236	2667	2960	2970	2970	2970	2970	2970	2970	2970
46 TO 49	1242	1365	1649	2118	2731	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970
42 TO 45	1417	1770	2412	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970
≤41	2072	2711	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970

**Table 2. Point Source Wasteload Allocated Values (lbs per day of BOD₅)
(River mile 40.0 to 32.4)
JULY**

River Temperature (previous day average in °F)	Flow at Appleton Lutz Park (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
≥86	669	669	669	669	669	669	759	874	1015	1170	1260	1272	1325	1517	1952
82 TO 85	669	669	669	669	693	806	933	1072	1239	1265	1275	1318	1376	1767	2282
78 TO 81	669	669	669	767	897	1043	1206	1282	1297	1299	1333	1382	1472	2215	2839
74 TO 77	669	691	806	947	1113	1220	1295	1314	1318	1351	1391	1463	1761	2697	2970
70 TO 73	728	814	966	1148	1217	1239	1312	1340	1375	1408	1465	1695	2095	2970	2970
66 TO 69	840	953	1147	1218	1236	1311	1342	1383	1439	1484	1691	1998	2473	2970	2970
62 TO 65	977	1129	1217	1227	1308	1345	1398	1466	1603	1764	2009	2378	2936	2970	2970
≤61	1165	1218	1217	1304	1351	1422	1562	1748	1942	2137	2444	2898	2970	2970	2970

**Table 3. Point Source Wasteload Allocated Values (lbs per day of BOD₅)
(River mile 40.0 to 32.4)
AUGUST**

River Temperature (previous day average in °F)	Flow at Appleton Lutz Park (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
≥86	669	669	669	669	669	669	669	673	776	895	1085	1272	1313	1448	1721
82 TO 85	669	669	669	669	669	669	756	857	985	1130	1276	1308	1359	1611	2028
78 TO 81	669	669	669	679	773	882	1008	1146	1219	1277	1322	1366	1440	2006	2566

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74 TO 77	669	669	737	843	971	1117	1199	1225	1289	1312	1372	1433	1629	2452	2970
70 TO 73	699	766	884	1026	1185	1200	1272	1292	1322	1365	1433	1568	1919	2935	2970
66 TO 69	806	895	1049	1190	1200	1274	1298	1332	1383	1443	1566	1845	2277	2970	2970
62 TO 65	934	1057	1193	1195	1272	1302	1347	1406	1485	1637	1861	2200	2730	2970	2970
≤61	1108	1197	1188	1267	1306	1368	1452	1630	1807	1989	2271	2704	2970	2970	2970

**Table 4. Point Source Wasteload Allocated Values (lbs per day of BOD₅)
(River mile 40.0 to 32.4)
SEPTEMBER**

River Temperature (previous day average in °F)	Flow at Appleton Lutz Park (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
≥86	669	669	669	669	669	669	669	669	669	713	865	1092	1323	1451	1736
82 TO 85	669	669	669	669	669	669	669	724	824	940	1136	1285	1361	1604	2030
78 TO 81	669	669	669	669	703	780	876	989	1136	1238	1270	1345	1429	1968	2566
74 TO 77	669	669	707	779	876	994	1135	1229	1245	1268	1319	1413	1568	2407	2970
70 TO 73	707	747	827	938	1079	1163	1229	1244	1274	1315	1391	1486	1833	2891	2970
66 TO 69	792	853	973	1130	1165	1230	1251	1281	1330	1390	1479	1749	2180	2970	2970
62 TO 65	898	994	1166	1161	1228	1253	1294	1349	1427	1527	1750	2094	2642	2970	2970
58 TO 61	1049	1172	1154	1222	1254	1311	1390	1494	1688	1868	2151	2596	2970	2970	2970
54 TO 57	1166	1144	1211	1257	1338	1454	1694	1907	2138	2377	2762	2970	2970	2970	2970
50 TO 53	1130	1195	1258	1381	1622	1945	2225	2521	2845	2970	2970	2970	2970	2970	2970
46 TO 49	1187	1254	1436	1870	2293	2679	2970	2970	2970	2970	2970	2970	2970	2970	2970
42 TO 45	1289	1495	2148	2767	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970
≤41	1770	2419	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970

**Table 5. Point Source Wasteload Allocated Values (lbs per day of BOD₅)
(River mile 40.0 to 32.4)
OCTOBER**

River Temperature (previous day average in °F)	Flow at Appleton Lutz Park (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
≥66	724	765	861	1001	1175	1180	1195	1224	1272	1333	1451	1692	2169	2970	2970
62 TO 65	808	887	1047	1176	1178	1197	1235	1287	1366	1460	1672	2041	2624	2970	2970
58 TO 61	939	1079	1171	1171	1194	1247	1322	1420	1591	1777	2075	2544	2970	2970	2970
54 TO 57	1134	1102	1156	1192	1266	1376	1552	1799	2037	2284	2685	2970	2970	2970	2970

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50 TO 53	1083	1136	1185	1297	1463	1816	2103	2404	2738	2970	2970	2970	2970	2970	2970
46 TO 49	1118	1170	1335	1671	2140	2534	2958	2970	2970	2970	2970	2970	2970	2970	2970
42 TO 45	1186	1367	1916	2581	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970
≤41	1495	2138	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970	2970

3.2.2 Sampling Point 601 - River Monitoring

Monitoring Requirements and Effluent 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.

4 Land Application Requirements

4.1 Sampling Point(s)

The discharge(s) shall be limited to land application of the waste type(s) designated for the listed sampling point(s) on Department approved land spreading sites or by hauling to another facility.

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
003	LAND APPLICATION: (Cake Sludge from storage) 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	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.

4.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

4.2.1 Sampling Point (Outfall) 003 - Cake Sludge

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

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
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 (NH ₄ -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		µg/kg	Annual	Calculated	
PFAS Dry Wt			Annual	Grab	Perfluoroalkyl and Polyfluoroalkyl Substances based on updated DNR PFAS List. See PFAS Permit Sections for more information.

Other Sludge Requirements	
Sludge Requirements	Sample Frequency
List 3 Requirements – Pathogen Control: The requirements in List 3 shall be met prior to land application of sludge.	Quarterly
List 4 Requirements – Vector Attraction Reduction: The vector attraction reduction shall be satisfied prior to, or at the time of land application as specified in List 4.	Quarterly

4.2.1.1 List 2 Analysis

If the monitoring frequency for List 2 parameters is more frequent than "Annual" then the sludge may be analyzed for the List 2 parameters just prior to each land application season rather than at the more frequent interval specified.

4.2.1.2 Changes in Feed Sludge Characteristics

If a change in feed sludge characteristics, treatment process, or operational procedures occurs which may result in a significant shift in sludge characteristics, the permittee shall reanalyze the sludge for List 1, 2, 3 and 4 parameters each time such change occurs.

4.2.1.3 Multiple Sludge Sample Points (Outfalls)

If there are multiple sludge sample points (outfalls), but the sludges are not subject to different sludge treatment processes, then a separate List 2 analysis shall be conducted for each sludge type which is land applied, just prior to land application, and the application rate shall be calculated for each sludge type. In this case, List 1, 3, and 4 and PCBs need only be analyzed on a single sludge type, at the specified frequency. If there are multiple sludge sample points (outfalls), due to multiple treatment processes, List 1, 2, 3 and 4 and PCBs shall be analyzed for each sludge type at the specified frequency.

4.2.1.4 Sludge Which Exceeds the High Quality Limit

Cumulative pollutant loading records shall be kept for all bulk land application of sludge which does not meet the high quality limit for any parameter. This requirement applies for the entire calendar year in which any exceedance of Table 3 of s. NR 204.07(5)(c), Wis. Adm. Code, is experienced. Such loading records shall be kept for all List 1 parameters for each site land applied in that calendar year. The formula to be used for calculating cumulative loading is as follows:

$$[(\text{Pollutant concentration (mg/kg)} \times \text{dry tons applied/ac}) \div 500] + \text{previous loading (lbs/acre)} = \text{cumulative lbs pollutant per acre}$$

When a site reaches 90% of the allowable cumulative loading for any metal established in Table 2 of s. NR 204.07(5)(b), Wis. Adm. Code, the Department shall be so notified through letter or in the comment section of the annual land application report (3400-55).

4.2.1.5 Reduced Monitoring and Reporting for Sludge when Landfilled

If sludge from this outfall is only landfilled during the monitoring period, monitoring and reporting for Lists 2, 3 and 4 may be omitted for this outfall. All other required monitoring and reporting shall be continued. Additional requirements may be required for acceptance by department approved landfill. All disposal shall conform to Ch. NR 204, Wis. Adm. Code and other administrative chapters.

4.2.1.6 Lists 1, 2, 3, and 4

List 1 TOTAL SOLIDS AND METALS	
See the Monitoring Requirements and Limitations table above for monitoring frequency and limitations for the List 1 parameters	
Solids, Total (percent)	
Arsenic, mg/kg (dry weight)	
Cadmium, mg/kg (dry weight)	
Copper, mg/kg (dry weight)	
Lead, mg/kg (dry weight)	
Mercury, mg/kg (dry weight)	
Molybdenum, mg/kg (dry weight)	
Nickel, mg/kg (dry weight)	
Selenium, mg/kg (dry weight)	

List 1 TOTAL SOLIDS AND METALS See the Monitoring Requirements and Limitations table above for monitoring frequency and limitations for the List 1 parameters
Zinc, mg/kg (dry weight)

List 2 NUTRIENTS See the Monitoring Requirements and Limitations table above for monitoring frequency for the List 2 parameters
Solids, Total (percent)
Nitrogen Total Kjeldahl (percent)
Nitrogen Ammonium (NH ₄ -N) Total (percent)
Phosphorus Total as P (percent)
Phosphorus, Water Extractable (as percent of Total P)
Potassium Total Recoverable (percent)

List 3 PATHOGEN CONTROL FOR CLASS A SLUDGE The permittee shall implement pathogen control as listed in List 3. The Department shall be notified of the pathogen control utilized and shall be notified when the permittee decides to utilize alternative pathogen control. The following requirements shall be met prior to land application of sludge.		
Parameter	Unit	Limit
Fecal Coliform *	MPN/gTS	1000
OR		
Salmonella	MPN/4gTS	3
AND, ONE OF THE FOLLOWING PROCESS OPTIONS		
Temp/Time based on % Solids	Alkaline Treatment	
Prior test for Enteric Virus/Viable Helminth Ova	Post test for Enteric Virus/Viable Helminth Ova	
Composting	Heat Drying	
Heat Treatment	Thermophilic Aerobic Digestion	
Beta Ray Irradiation	Gamma Ray Irradiation	
Pasteurization	PFRP Equivalent Process	

List 3

PATHOGEN CONTROL FOR CLASS B SLUDGE

The permittee shall implement pathogen control as listed in List 3. The Department shall be notified of the pathogen control utilized and shall be notified when the permittee decides to utilize alternative pathogen control.

The following requirements shall be met prior to land application of sludge.

Parameter	Unit	Limit
Fecal Coliform*	MPN/gTS or CFU/gTS	2,000,000
OR, ONE OF THE FOLLOWING PROCESS OPTIONS		
Aerobic Digestion	Air Drying	
Anaerobic Digestion	Composting	
Alkaline Stabilization	PSRP Equivalent Process	
* The Fecal Coliform limit shall be reported as the geometric mean of 7 discrete samples on a dry weight basis.		

List 4

VECTOR ATTRACTION REDUCTION

The permittee shall implement any one of the vector attraction reduction options specified in List 4. The Department shall be notified of the option utilized and shall be notified when the permittee decides to utilize an alternative option.

One of the following shall be satisfied prior to, or at the time of land application as specified in List 4.

Option	Limit	Where/When it Shall be Met
Volatile Solids Reduction	≥38%	Across the process
Specific Oxygen Uptake Rate	≤1.5 mg O ₂ /hr/g TS	On aerobic stabilized sludge
Anaerobic bench-scale test	<17 % VS reduction	On anaerobic digested sludge
Aerobic bench-scale test	<15 % VS reduction	On aerobic digested sludge
Aerobic Process	>14 days, Temp >40°C and Avg. Temp > 45°C	On composted sludge
pH adjustment	>12 S.U. (for 2 hours) and >11.5 (for an additional 22 hours)	During the process
Drying without primary solids	>75 % TS	When applied or bagged
Drying with primary solids	>90 % TS	When applied or bagged
Equivalent Process	Approved by the Department	Varies with process
Injection	-	When applied
Incorporation	-	Within 6 hours of application

4.2.1.7 Daily Land Application Log

Daily Land Application Log		
Discharge Monitoring Requirements and Limitations The permittee shall maintain a daily land application log for biosolids land applied each day when land application occurs. The following minimum records must be kept, in addition to all analytical results for the biosolids land applied. The log book records shall form the basis for the annual land application report requirements.		
Parameters	Units	Sample Frequency
DNR Site Number(s)	Number	Daily as used
Outfall number applied	Number	Daily as used
Acres applied	Acres	Daily as used
Amount applied	As appropriate * /day	Daily as used
Application rate per acre	unit */acre	Daily as used
Nitrogen applied per acre	lb/acre	Daily as used
Method of Application	Injection, Incorporation, or surface applied	Daily as used

*gallons, cubic yards, dry US Tons or dry Metric Tons

4.2.2 Sampling Point (Outfall) 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	

5 Schedules

5.1 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 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.	10/01/2029

5.2 PFOS/PFOA Minimization Plan Determination of Need

Required Action	Due Date
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. 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.	01/01/2027
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. 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. The permittee shall also submit a request to the department to evaluate the need for a PFOS/PFOA minimization plan. 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. 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.	01/01/2028

5.3 Sludge Management Plan

A sludge management plan is required.

Required Action	Due Date
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. The SMP shall provide standardized information for communication to operators and the department including but not limited to the following: 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: 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;	01/01/2027

14) Specific the availability of storage for sludge; 15) Describe the type of transportation and spreading vehicles; 16) Track site loadings to facility's land application sites; 17) Address contingency plans for adverse weather and odor/nuisance abatement; 18) Address construction contingencies when treatment equipment is out of service; and 19) 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. 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.	
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6 Standard Requirements

Chapter NR 205, Wisconsin Administrative Code: The conditions in ss. NR 205.07(1) and NR 205.07(2), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in ss. NR 205.07(1) and NR 205.07(2), Wis. Adm. Code.

6.1 Reporting and Monitoring Requirements

6.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report. The report may require reporting of any or all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

Monitoring results shall be reported on an electronic discharge monitoring report (eDMR). The eDMR shall be certified electronically by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

6.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code, and completed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sampling shall be performed in accordance with procedures contained in s. NR 140.16, Wis. Adm. Code, and the WDNR publications, Groundwater Sampling Desk Reference (PUBL-DG-037-96) and Groundwater Sampling Field Manual (PUBL-DG-038-96). The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation and/or groundwater standard. If the required level cannot be met by any of the methods available in ch. NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

6.1.3 Pretreatment Sampling Requirements

Sampling for pretreatment parameters (cadmium, chromium, copper, lead, nickel, zinc, and mercury) shall be done during a day each month when industrial discharges are occurring at normal to maximum levels. The sampling of the influent and effluent for these parameters shall be coordinated. All 24 hour composite samples shall be flow proportional.

6.1.4 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- The date, exact place, method and time of sampling or measurements;

- The individual who performed the sampling or measurements;
- The date the analysis was performed;
- The individual who performed the analysis;
- The analytical techniques or methods used; and
- The results of the analysis.

6.1.5 Reporting of Monitoring Results

The permittee shall use the following conventions when reporting effluent monitoring results:

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.
- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.
- For purposes of calculating fees under ch. NR 101, Wis. Adm. Code, a reporting limit of 2.0 mg/L for BOD₅ and 2.5 mg/L Total Suspended Solids shall be considered to be limits of quantitation.
- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a “0” (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.
- If no discharge occurs through an outfall, flow related parameters (e.g. flow rate, hydraulic application rate, volume, etc.) should be reported as “0” (zero) at the required sample frequency specified for the outfall. For example: if the sample frequency is daily, “0” would be reported for any day during the month that no discharge occurred.

6.1.6 Compliance Maintenance Annual Reports

Compliance Maintenance Annual Reports (CMAR) shall be completed using information obtained over each calendar year regarding the wastewater conveyance and treatment system. The CMAR shall be submitted and certified by the permittee in accordance with ch. NR 208, Wis. Adm. Code, by June 30, each year on an electronic report form provided by the Department.

In the case of a publicly owned treatment works, a resolution shall be passed by the governing body and submitted as part of the CMAR, verifying its review of the report and providing responses as required. Private owners of wastewater treatment works are not required to pass a resolution; but they must provide an Owner Statement and responses as required, as part of the CMAR submittal.

The CMAR shall be certified electronically by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The certification verifies that the electronic report is true, accurate and complete.

6.1.7 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings or electronic data records for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application. All pertinent sludge information,

including permit application information and other documents specified in this permit or s. NR 204.06(9), Wis. Adm. Code shall be retained for a minimum of 5 years.

6.1.8 Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or correct information to the Department.

6.1.9 Reporting Requirements – Alterations or Additions

The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is only required when:

- The alteration or addition to the permitted facility may meet one of the criteria for determining whether a facility is a new source.
- The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification requirement applies to pollutants which are not subject to effluent limitations in the existing permit.
- The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use of disposal sites not reported during the permit application process nor reported pursuant to an approved land application plan. Additional sites may not be used for the land application of sludge until department approval is received.

6.2 System Operating Requirements

6.2.1 Noncompliance Reporting

Sanitary sewer overflows and sewage treatment facility overflows shall be reported according to the 'Sanitary Sewer Overflows and Sewage Treatment Facility Overflows' section of this permit.

The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance:

- Any noncompliance which may endanger health or the environment;
- Any violation of an effluent limitation resulting from a bypass;
- Any violation of an effluent limitation resulting from an upset; and
- Any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit, either for effluent or sludge.

A written report describing the noncompliance shall also be submitted to the Department's regional office within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

A scheduled bypass approved by the Department under the 'Scheduled Bypass' section of this permit shall not be subject to the reporting required under this section.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources

immediately of any discharge not authorized by the permit. **The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at 1-800-943-0003.**

6.2.2 Flow Meters

Flow meters shall be calibrated annually, as per s. NR 218.06, Wis. Adm. Code.

6.2.3 Raw Grit and Screenings

All raw grit and screenings shall be disposed of at a properly licensed solid waste facility or picked up by a licensed waste hauler. If the facility or hauler are located in Wisconsin, then they shall be licensed under chs. NR 500-555, Wis. Adm. Code.

6.2.4 Sludge Management

All sludge management activities shall be conducted in compliance with ch. NR 204 "Domestic Sewage Sludge Management", Wis. Adm. Code.

6.2.5 Prohibited Wastes

Under no circumstances may the introduction of wastes prohibited by s. NR 211.10, Wis. Adm. Code, be allowed into the waste treatment system. Prohibited wastes include those:

- Which create a fire or explosion hazard in the treatment work;
- Which will cause corrosive structural damage to the treatment work;
- Solid or viscous substances in amounts which cause obstructions to the flow in sewers or interference with the proper operation of the treatment work;
- Wastewaters at a flow rate or pollutant loading which are excessive over relatively short time periods so as to cause a loss of treatment efficiency; and
- Changes in discharge volume or composition from contributing industries which overload the treatment works or cause a loss of treatment efficiency.

6.2.6 Bypass

This condition applies only to bypassing at a sewage treatment facility that is not a scheduled bypass, approved blending as a specific condition of this permit, a sewage treatment facility overflow or a controlled diversion as provided in the sections titled 'Scheduled Bypass', 'Blending' (if approved), 'SSO's and Sewage Treatment Facility Overflows' and 'Controlled Diversions' of this permit. Any other bypass at the sewage treatment facility is prohibited and the Department may take enforcement action against a permittee for such occurrences under s. 283.89, Wis. Stats. The Department may approve a bypass if the permittee demonstrates all the following conditions apply:

- The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance. When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, costs and affordability of implementation and risks to public health, the environment and, where the permittee is a municipality, the welfare of the community served; and
- The bypass was reported in accordance with the Noncompliance Reporting section of this permit.

6.2.7 Scheduled Bypass

Whenever the permittee anticipates the need to bypass for purposes of efficient operations and maintenance and the permittee may not meet the conditions for controlled diversions in the ‘Controlled Diversions’ section of this permit, the permittee shall obtain prior written approval from the Department for the scheduled bypass. A permittee’s written request for Department approval of a scheduled bypass shall demonstrate that the conditions for bypassing specified in the above section titled ‘Bypass’ are met and include the proposed date and reason for the bypass, estimated volume and duration of the bypass, alternatives to bypassing and measures to mitigate environmental harm caused by the bypass. The department may require the permittee to provide public notification for a scheduled bypass if it is determined there is significant public interest in the proposed action and may recommend mitigation measures to minimize the impact of such bypass.

6.2.8 Controlled Diversions

Controlled diversions are allowed only when necessary for essential maintenance to assure efficient operation. Sewage treatment facilities that have multiple treatment units to treat variable or seasonal loading conditions may shut down redundant treatment units when necessary for efficient operation. The following requirements shall be met during controlled diversions:

- Effluent from the sewage treatment facility shall meet the effluent limitations established in the permit. Wastewater that is diverted around a treatment unit or treatment process during a controlled diversion shall be recombined with wastewater that is not diverted prior to the effluent sampling location and prior to effluent discharge;
- A controlled diversion does not include blending as defined in s. NR 210.03(2e), Wis. Adm. Code, and as may only be approved under s. NR 210.12. A controlled diversion may not occur during periods of excessive flow or other abnormal wastewater characteristics;
- A controlled diversion may not result in a wastewater treatment facility overflow; and
- All instances of controlled diversions shall be documented in sewage treatment facility records and such records shall be available to the department on request.

6.2.9 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

6.2.10 Operator Certification

The wastewater treatment facility shall be under the direct supervision of a state certified operator. In accordance with s. NR 114.53, Wis. Adm. Code, every WPDES permitted treatment plant shall have a designated operator-in-charge holding a current and valid certificate. The designated operator-in-charge shall be certified at the level and in all subclasses of the treatment plant, except laboratory. Treatment plant owners shall notify the department of any changes in the operator-in-charge within 30 days. Note that s. NR 114.52(22), Wis. Adm. Code, lists types of facilities that are excluded from operator certification requirements (i.e. private sewage systems, pretreatment facilities discharging to public sewers, industrial wastewater treatment that consists solely of land disposal, agricultural digesters and concentrated aquatic production facilities with no biological treatment).

6.3 Sewage Collection Systems

6.3.1 Sanitary Sewage Overflows and Sewage Treatment Facility Overflows

6.3.1.1 Overflows Prohibited

Any overflow or discharge of wastewater from the sewage collection system or at the sewage treatment facility, other than from permitted outfalls, is prohibited. The permittee shall provide information on whether any of the following conditions existed when an overflow occurred:

- The sanitary sewer overflow or sewage treatment facility overflow was unavoidable to prevent loss of life, personal injury or severe property damage;
- There were no feasible alternatives to the sanitary sewer overflow or sewage treatment facility overflow such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or preventive maintenance activities;
- The sanitary sewer overflow or the sewage treatment facility overflow was caused by unusual or severe weather-related conditions such as large or successive precipitation events, snowmelt, saturated soil conditions, or severe weather occurring in the area served by the sewage collection system or sewage treatment facility; and
- The sanitary sewer overflow or the sewage treatment facility overflow was unintentional, temporary, and caused by an accident or other factors beyond the reasonable control of the permittee.

6.3.1.2 Permittee Response to Overflows

Whenever a sanitary sewer overflow or sewage treatment facility overflow occurs, the permittee shall take all feasible steps to control or limit the volume of untreated or partially treated wastewater discharged, and terminate the discharge as soon as practicable. Remedial actions, including those in s. NR 210.21 (3), Wis. Adm. Code, shall be implemented consistent with an emergency response plan developed under the CMOM program.

6.3.1.3 Permittee Reporting

Permittees shall report all sanitary sewer overflows and sewage treatment overflows as follows:

- The permittee shall notify the department by telephone, fax or email as soon as practicable, but no later than 24 hours from the time the permittee becomes aware of the overflow;
- The permittee shall, no later than five days from the time the permittee becomes aware of the overflow, provide to the department the information identified in this paragraph using department form number 3400-184. If an overflow lasts for more than five days, an initial report shall be submitted within 5 days as required in this paragraph and an updated report submitted following cessation of the overflow. At a minimum, the following information shall be included in the report:
 - a) The date and location of the overflow;
 - b) The surface water to which the discharge occurred, if any;
 - c) The duration of the overflow and an estimate of the volume of the overflow;
 - d) A description of the sewer system or treatment facility component from which the discharge occurred such as manhole, lift station, constructed overflow pipe, or crack or other opening in a pipe;
 - e) The estimated date and time when the overflow began and stopped or will be stopped;
 - f) The cause or suspected cause of the overflow including, if appropriate, precipitation, runoff conditions, areas of flooding, soil moisture and other relevant information;
 - g) Steps taken or planned to reduce, eliminate and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
 - h) A description of the actual or potential for human exposure and contact with the wastewater from the overflow;

- i) Steps taken or planned to mitigate the impacts of the overflow and a schedule of major milestones for those steps;
- j) To the extent known at the time of reporting, the number and location of building backups caused by excessive flow or other hydraulic constraints in the sewage collection system that occurred concurrently with the sanitary sewer overflow and that were within the same area of the sewage collection system as the sanitary sewer overflow; and
- k) The reason the overflow occurred or explanation of other contributing circumstances that resulted in the overflow event. This includes any information available including whether the overflow was unavoidable to prevent loss of life, personal injury, or severe property damage and whether there were feasible alternatives to the overflow.

NOTE: A copy of form 3400-184 for reporting sanitary sewer overflows and sewage treatment facility overflows may be obtained from the department or accessed on the department's web site at <http://dnr.wi.gov/topic/wastewater/SSOreport.html>. As indicated on the form, additional information may be submitted to supplement the information required by the form.

- The permittee shall identify each specific location and each day on which a sanitary sewer overflow or sewage treatment facility overflow occurs as a discrete sanitary sewer overflow or sewage treatment facility overflow occurrence. An occurrence may be more than one day if the circumstances causing the sanitary sewer overflow or sewage treatment facility overflow results in a discharge duration of greater than 24 hours. If there is a stop and restart of the overflow at the same location within 24 hours and the overflow is caused by the same circumstance, it may be reported as one occurrence. Sanitary sewer overflow occurrences at a specific location that are separated by more than 24 hours shall be reported as separate occurrences; and
- A permittee that is required to submit wastewater discharge monitoring reports under s. NR 205.07 (1) (r), Wis. Adm. Code, shall also report all sanitary sewer overflows and sewage treatment facility overflows on that report.

6.3.1.4 Public Notification

The permittee shall notify the public of any sanitary sewer and sewage treatment facility overflows consistent with its emergency response plan required under the CMOM (Capacity, Management, Operation and Maintenance) section of this permit and s. NR 210.23 (4) (f), Wis. Adm. Code. Such public notification shall occur promptly following any overflow event using the most effective and efficient communications available in the community. At minimum, a daily newspaper of general circulation in the county(s) and municipality whose waters may be affected by the overflow shall be notified by written or electronic communication.

6.3.2 Capacity, Management, Operation and Maintenance (CMOM) Program

- The permittee shall have written documentation of the Capacity, Management, Operation and Maintenance (CMOM) program components in accordance with s. NR 210.23(4), Wis. Adm. Code. Such documentation shall be available for Department review upon request. The Department may request that the permittee provide this documentation or prepare a summary of the permittee's CMOM program at the time of application for reissuance of the WPDES permit.
- The permittee shall implement a CMOM program in accordance with s. NR 210.23, Wis. Adm. Code.
- The permittee shall at least annually conduct a self-audit of activities conducted under the permittee's CMOM program to ensure CMOM components are being implemented as necessary to meet the general standards of s. NR 210.23(3), Wis. Adm. Code.

6.3.3 Sewer Cleaning Debris and Materials

All debris and material removed from cleaning sanitary sewers shall be managed to prevent nuisances, run-off, ground infiltration or prohibited discharges.

- Debris and solid waste shall be dewatered, dried and then disposed of at a licensed solid waste facility.

- Liquid waste from the cleaning and dewatering operations shall be collected and disposed of at a permitted wastewater treatment facility.
- Combination waste including liquid waste along with debris and solid waste may be disposed of at a licensed solid waste facility or wastewater treatment facility willing to accept the waste.

6.4 Surface Water Requirements

6.4.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit

For pollutants with water quality-based effluent limits below the Limit of Quantitation (LOQ) in this permit, the LOQ calculated by the permittee and reported on the Discharge Monitoring Reports (DMRs) is incorporated by reference into this permit. The LOQ shall be reported on the DMRs, shall be the lowest quantifiable level practicable, and shall be no greater than the minimum level (ML) specified in or approved under 40 CFR Part 136 for the pollutant at the time this permit was issued, unless this permit specifies a higher LOQ.

6.4.2 Appropriate Formulas for Effluent Calculations

The permittee shall use the following formulas for calculating effluent results to determine compliance with average concentration limits and mass limits and total load limits:

Weekly/Monthly/Six-Month/Annual Average Concentration = the sum of all daily results for that week/month/six-month/year, divided by the number of results during that time period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April, except in cases of Water Quality Trading, wherein the applicable periods are January through June and July through December.]

Weekly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the week.

Monthly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the month.

Six-Month Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the six-month period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Annual Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the entire year.

Total Monthly Discharge: = monthly average concentration (mg/L) x total flow for the month (MG/month) x 8.34.

Total Annual Discharge: = sum of total monthly discharges for the calendar year.

12-Month Rolling Sum of Total Monthly Discharge: = the sum of the most recent 12 consecutive months of Total Monthly Discharges.

6.4.3 Effluent Temperature Requirements

Weekly Average Temperature – If temperature limits are included in this permit, Weekly Average Temperature shall be calculated as the sum of all daily maximum results for that week divided by the number of daily maximum results during that time period.

Cold Shock Standard – Water temperatures of the discharge shall be controlled in a manner as to protect fish and aquatic life uses from the deleterious effects of cold shock pursuant to Wis. Adm. Code, s. NR 102.28. ‘Cold Shock’ means exposure of aquatic organisms to a rapid decrease in temperature and a sustained exposure to low temperature that induces abnormal behavior or physiological performance and may lead to death.

Rate of Temperature Change Standard – Temperature of a water of the state or discharge to a water of the state may not be artificially raised or lowered at such a rate that it causes detrimental health or reproductive effects to fish or aquatic life of the water of the state pursuant to Wis. Adm. Code, s. NR 102.29.

6.4.4 Visible Foam or Floating Solids

There shall be no discharge of floating solids or visible foam in other than trace amounts.

6.4.5 Surface Water Uses and Criteria

In accordance with NR 102.04, Wis. Adm. Code, surface water uses and criteria are established to govern water management decisions. Practices attributable to municipal, industrial, commercial, domestic, agricultural, land development or other activities shall be controlled so that all surface waters including the mixing zone meet the following conditions at all times and under all flow and water level conditions:

- Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state.
- Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the state.
- Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state.
- Substances in concentrations or in combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

6.4.6 Percent Removal

During any 30 consecutive days, the average effluent concentrations of BOD₅ and of total suspended solids shall not exceed 15% of the average influent concentrations, respectively. This requirement does not apply to removal of total suspended solids if the permittee operates a lagoon system and has received a variance for suspended solids granted under NR 210.07(2), Wis. Adm. Code.

6.4.7 Chloride Notification

The permittee shall notify the Department in writing of any proposed changes which may affect the characteristics of the wastewater, which results in an increase in the concentration of chloride, under the authority of sections 283.31(4)(b) and 283.59(1), Stats. This notification shall include a description of the proposed source of chlorides and the anticipated increase in concentration. Following receipt of the notification, the Department may propose a modification to the permit.

6.4.8 *E. coli*

The monthly limit for *E. coli* shall be expressed as a geometric mean. In calculating the geometric mean, a value of 1 is used for any result of 0.

6.4.9 Seasonal Disinfection

Disinfection shall be provided from May 1 through September 30 of each year. Monitoring requirements and the limitations for Fecal Coliform (interim) and *E. coli* apply only during the period in which disinfection is required. Whenever chlorine is used for disinfection or other uses, the limitations and monitoring requirements for residual chlorine shall apply. A dechlorination process shall be in operation whenever chlorine is used.

6.4.10 Whole Effluent Toxicity (WET) Monitoring Requirements

In order to determine the potential impact of the discharge on aquatic organisms, static-renewal toxicity tests shall be performed on the effluent in accordance with the procedures specified in the "*State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition*" (PUB-WT-797, November 2004) as required by NR 219.04, Table A, Wis. Adm. Code). All of the WET tests required in this permit, including any required retests, shall be conducted on the *Ceriodaphnia dubia* and fathead minnow species. Receiving water samples shall not be collected from any point in contact with the permittee's mixing zone and every attempt shall be made to avoid contact with any other discharge's mixing zone.

6.4.11 Whole Effluent Toxicity (WET) Identification and Reduction

Within 60 days of a retest which showed positive results, the permittee shall submit a written report to the Biomonitoring Coordinator, Bureau of Water Quality, 101 S. Webster St., PO Box 7921, Madison, WI 53707-7921, which details the following:

- A description of actions the permittee has taken or will take to remove toxicity and to prevent the recurrence of toxicity;
- A description of toxicity reduction evaluation (TRE) investigations that have been or will be done to identify potential sources of toxicity, including the following actions:
 - a) Evaluate the performance of the treatment system to identify deficiencies contributing to effluent toxicity (e.g., operational problems, chemical additives, incomplete treatment)
 - b) Identify the compound(s) causing toxicity. Conduct toxicity screening tests on the effluent at a minimum of once per month for six months to determine if toxicity recurs. Screening tests are WET tests using fewer effluent concentrations conducted on the most sensitive species. If any of the screening tests contain toxicity, conduct a toxicity identification evaluation (TIE) to determine the cause. TIE methods are available from USEPA "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures (EPA/600/6-91/003) and "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA/600/6-91/005F).
 - c) Trace the compound(s) causing toxicity to their sources (e.g., industrial, commercial, domestic)
 - d) Evaluate, select, and implement methods or technologies to control effluent toxicity (e.g., in-plant or pretreatment controls, source reduction or removal)
- Where corrective actions including a TRE have not been completed, an expeditious schedule under which corrective actions will be implemented;
- If no actions have been taken, the reason for not taking action.

The permittee may also request approval from the Department to postpone additional retests in order to investigate the source(s) of toxicity. Postponed retests must be completed after toxicity is believed to have been removed.

6.4.12 Reopener Clause

Pursuant to s. 283.15(11), Wis. Stat. and 40 CFR 131.20, the Department may modify or revoke and reissue this permit if, through the triennial standard review process, the Department determines that the terms and conditions of this permit need to be updated to reflect the highest attainable condition of the receiving water.

6.4.13 PFOS and PFOA Requirements

The laboratory performing the analysis on any samples shall be certified for the applicable PFAS compounds in the aqueous matrix by the Wisconsin Laboratory Certification Program established under s. 299.11, Wis. Stats., in accordance with s. NR 149.41, Wis. Adm. Code. All laboratories are required to utilize EPA Method 1633A for sampling PFAS in sludge.

The Department may reject any sample results if results are produced by a laboratory that is not in compliance with certification requirements under ch. NR 149, Wis. Adm. Code.

6.5 Pretreatment Program Requirements

The permittee is required to operate an industrial pretreatment program as described in the program initially approved by the Department of Natural Resources including any subsequent program modifications approved by the Department, and including commitments to program implementation activities provided in the permittee's annual pretreatment program report, and that complies with the requirements set forth in 40 CFR Part 403 and ch. NR 211, Wis. Adm. Code. To ensure that the program is operated in accordance with these requirements, the following general conditions and requirements are hereby established:

6.5.1 Inventories

The permittee shall implement methods to maintain a current inventory of the general character and volume of wastewater that industrial users discharge to the treatment works and shall provide an updated industrial user listing annually and report any changes in the listing to the Department by March 31 of each year as part of the annual pretreatment program report required herein.

6.5.2 Regulation of Industrial Users

6.5.2.1 Limitations for Industrial Users:

The permittee shall develop, maintain, enforce and revise as necessary local limits to implement the general and specific prohibitions of the state and federal General Pretreatment Regulations.

6.5.2.2 Control Documents for Industrial Users (IUs)

The permittee shall control the discharge from each significant industrial user through individual discharge permits as required by s. NR 211.235, Wis. Adm. Code and in accordance with the approved pretreatment program procedures and the permittee's sewer use ordinance. The discharge permits shall be modified in a timely manner during the stated term of the discharge permits according to the sewer use ordinance as conditions warrant. The discharge permits shall include at a minimum the elements found in s. NR 211.235(1), Wis. Adm. Code and references to the approved pretreatment program procedures and the sewer use ordinance.

6.5.2.3 Review of Industrial User Reports, Inspections and Compliance Monitoring

The permittee shall require the submission of, receive, and review self-monitoring reports and other notices from industrial users in accordance with the approved pretreatment program procedures. The permittee shall randomly sample and analyze industrial user discharges and conduct surveillance activities to determine independent of information supplied by the industrial users, whether the industrial users are in compliance with pretreatment standards and requirements. The inspections and monitoring shall also be conducted to maintain accurate knowledge of local industrial processes, including changes in the discharge, pretreatment equipment operation, spill prevention control plans, slug control plans, and implementation of solvent management plans.

The permittee shall inspect and sample the discharge from each significant industrial user as specified in the permittee's approved pretreatment program or as specified in NR 211.235(3). The permittee shall evaluate whether industrial users identified as significant need a slug control plan according to the requirements of NR 211.235(4). If a slug control plan is needed, the plan shall contain at a minimum the elements specified in s. NR 211.235(4)(b), Wis. Adm. Code.

6.5.2.4 Enforcement and Industrial User Compliance Evaluation & Violation Reports

The permittee shall enforce the industrial pretreatment requirements including the industrial user discharge limitations of the permittee's sewer use ordinance. The permittee shall investigate instances of noncompliance by collecting and analyzing samples and collecting other information with sufficient care to produce evidence admissible in

enforcement proceedings or in judicial actions. Investigation and response to instances of noncompliance shall be in accordance with the permittee's sewer use ordinance and approved Enforcement Response Plan.

The permittee shall make a semiannual report on forms provided or approved by the Department. The semiannual report shall include an analysis of industrial user significant noncompliance (i.e. the Industrial User Compliance Evaluation, also known as the SNC Analysis) as outlined in s.NR 211.23(1)(j), Wis. Adm. Code, and a summary of the permittee's response to all industrial noncompliance (i.e. the Industrial User Violation Report). The Industrial User Compliance Evaluation Report shall include monitoring results received from industrial users pursuant to s. NR 211.15(1)-(5), Wis. Adm. Code. The Industrial User Violation Report shall include copies of all notices of noncompliance, notices of violation and other enforcement correspondence sent by the permittee to industrial users, together with the industrial user's response. The Industrial User Compliance Evaluation and Violation Reports for the period January through June shall be provided to the Department by September 30 of each year and for the period July through December shall be provided to the Department by March 31 of the succeeding year, unless alternate submittal dates are approved.

6.5.2.5 Publication of Violations

The permittee shall publish a list of industrial users that have significantly violated the municipal sewer use ordinance during the calendar year, in the largest daily newspaper in the area by March 31 of the following year pursuant to s. NR 211.23(1)(j), Wis. Adm. Code. A copy of the newspaper publication shall be provided as part of the annual pretreatment report specified herein.

6.5.2.6 Multijurisdictional Agreements

The permittee shall establish agreements with all contributing jurisdictions as necessary to ensure compliance with pretreatment standards and requirements by all industrial users discharging to the permittee's wastewater treatment system. Any such agreement shall identify who will be responsible for maintaining the industrial user inventory, issuance of industrial user control mechanisms, inspections and sampling, pretreatment program implementation, and enforcement.

6.5.3 Annual Pretreatment Program Report

The permittee shall evaluate the pretreatment program, and submit the Pretreatment Program Report to the Department on forms provided or approved by the Department by March 31 annually, unless an alternate submittal date is approved. The report shall include a brief summary of the work performed during the preceding calendar year, including the numbers of discharge permits issued and in effect, pollution prevention activities, number of inspections and monitoring surveys conducted, budget and personnel assigned to the program, a general discussion of program progress in meeting the objectives of the permittee's pretreatment program together with summary comments and recommendations.

6.5.4 Pretreatment Program Modifications

- **Future Modifications:** The permittee shall within one year of any revisions to federal or state General Pretreatment Regulations submit an application to the Department in duplicate to modify and update its approved pretreatment program to incorporate such regulatory changes as applicable to the permittee. Additionally, the Department or the permittee may request an application for program modification at any time where necessary to improve program effectiveness based on program experience to date.
- **Modifications Subject to Department Approval:** The permittee shall submit all proposed pretreatment program modifications to the Department for determination of significance and opportunity for comment in accordance with the requirements and conditions of s. NR 211.27, Wis. Adm. Code. Any substantial proposed program modification shall be subject to Department public noticing and formal approval prior to implementation. A substantial program modification includes, but is not limited to, changes in enabling legal authority to administer and enforce pretreatment conditions and requirements; significant changes in program administrative or operational procedures; significant reductions in monitoring frequencies; significant reductions in program resources including personnel commitments, equipment, and funding levels; changes

(including any relaxation) in the local limitations for substances enforced and applied to users of the sewerage treatment works; changes in treatment works sludge disposal or management practices which impact the pretreatment program; or program modifications which increase pollutant loadings to the treatment works. The Department shall use the procedures outlined in s. NR 211.30, Wis. Adm. Code for review and approval/denial of proposed pretreatment program modifications. The permittee shall comply with local public participation requirements when implementing the pretreatment program.

6.5.5 Program Resources

The permittee shall have sufficient resources and qualified personnel to carry out the pretreatment program responsibilities as listed in ss. NR 211.22 and NR 211.23, Wis. Adm. Code.

6.6 Land Application Requirements

6.6.1 Sludge Management Program Standards And Requirements Based Upon Federally Promulgated Regulations

In the event that new federal sewage sludge standards or regulations are promulgated, the permittee shall comply with the new sewage sludge requirements by the dates established in the regulations, if required by federal law, even if the permit has not yet been modified to incorporate the new federal regulations.

6.6.2 General Sludge Management Information

The General Sludge Management Form 3400-48 shall be completed and submitted prior to any significant sludge management changes.

6.6.3 Sludge Samples

All sludge samples shall be collected at a point and in a manner which will yield sample results which are representative of the sludge being tested, and collected at the time which is appropriate for the specific test.

6.6.4 Land Application Characteristic Report

Each report shall consist of a Characteristic Form 3400-49 and Lab Report. The Characteristic Report Form 3400-49 shall be submitted electronically by January 31 following each year whether or not samples are analyzed. In years in which monitoring does not occur, the report shall be completed by checking on the form that monitoring/land application did not occur.

Following submittal of the electronic Characteristic Report Form 3400-49, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report is true, accurate and complete. The Lab Report must be sent directly to the facility's DNR sludge representative or basin engineer unless approval for not submitting the lab reports has been given.

The permittee shall use the following convention when reporting sludge monitoring results: Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 1.0 mg/kg, report the pollutant concentration as < 1.0 mg/kg .

All results shall be reported on a dry weight basis.

6.6.5 Calculation of Water Extractable Phosphorus

When sludge analysis for Water Extractable Phosphorus is required by this permit, the permittee shall use the following formula to calculate and report Water Extractable Phosphorus:

Water Extractable Phosphorus (% of Total P) =
[Water Extractable Phosphorus (mg/kg, dry wt) ÷ Total Phosphorus (mg/kg, dry wt)] x 100

6.6.6 Annual Land Application Report

Land Application Report Form 3400-55 shall be submitted electronically by January 31, each year whether or not non-exceptional quality sludge is land applied. Non-exceptional quality sludge is defined in s. NR 204.07(4), Wis. Adm. Code. Following submittal of the electronic Annual Land Application Report Form 3400-55, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

6.6.7 Other Methods of Disposal or Distribution Report

The permittee shall submit electronically the Other Methods of Disposal or Distribution Report Form 3400-52 by January 31, each year whether or not sludge is hauled, landfilled, incinerated, or exceptional quality sludge is distributed or land applied. Following submittal of the electronic Report Form 3400-52, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

6.6.8 Approval to Land Apply

Bulk non-exceptional quality sludge as defined in s. NR 204.07(4), Wis. Adm. Code, may not be applied to land without a written approval letter or Form 3400-122 from the Department unless the Permittee has obtained permission from the Department to self-approve sites in accordance with s. NR 204.06(6), Wis. Adm. Code. Analysis of sludge characteristics is required prior to land application. Application on frozen or snow-covered ground is restricted to the extent specified in s. NR 204.07(3)(l), Wis. Adm. Code.

6.6.9 Soil Analysis Requirements

Each site requested for approval for land application must have the soil tested prior to use. Each approved site used for land application must subsequently be soil tested such that there is at least one valid soil test in the four years prior to land application. All soil sampling and submittal of information to the testing laboratory shall be done in accordance with UW Extension Bulletin A-2100. The testing shall be done by the UW Soils Lab in Madison or Marshfield, WI or at a lab approved by UW. The test results including the crop recommendations shall be submitted to the DNR contact listed for this permit, as they are available. Application rates shall be determined based on the crop nitrogen recommendations and with consideration for other sources of nitrogen applied to the site.

6.6.10 Land Application Site Evaluation

For non-exceptional quality sludge, as defined in s. NR 204.07(4), Wis. Adm. Code, a Land Application Site Request Form 3400-053 shall be submitted to the Department for the proposed land application site. The Department will evaluate the proposed site for acceptability and will either approve or deny use of the proposed site. The permittee may obtain permission to approve their own sites in accordance with s. NR 204.06(6), Wis. Adm. Code.

6.6.11 Class A Sludge: Fecal Coliform Density Requirement

The fecal coliform density which must be < 1000 MPN/g TS as required in s. NR 204.07, Wis. Adm. Code, shall be satisfied immediately after the treatment process is completed. If the material is bagged or distributed at that time, no re-testing is required. If the material is bagged, distributed or land applied at a later time, the sludge shall be re-tested and this requirement satisfied at that time also, to ensure that regrowth of bacteria has not occurred. See Municipal Wastewater Sludge Guidance Memo #3 (Fecal Coliform Monitoring - Sampling and Analytical Procedures).

6.6.12 Class A Sludge: PFRP Equivalent Process

Treat the sludge in a process that is equivalent to a process to further reduce pathogens as approved by the Department.

6.6.13 Class A Sludge: Temperature/Time Process

An increased sewage sludge temperature shall be maintained for a prescribed period of time according to the following guidelines:

TOTAL SOLIDS	TEMP	TIME	EQUATION Where: D = time in days t = temp in °C	NOTES
≥7%	≥50° C	≥20 min.	$D = \frac{131,700,000}{10^{0.14t}}$	No heating of small particles by warmed gases or immiscible liquid.
≥7%	≥50° C	≥15 sec.	$D = \frac{131,700,000}{10^{0.14t}}$	Small particles heated by warmed gases or immiscible liquid.
<7%	>50° C	≥15 sec. To <30 min.	$D = \frac{131,700,000}{10^{0.14t}}$	
<7%	≥50° C	≥30 min.	$D = \frac{50,070,000}{10^{0.14t}}$	

In no case shall temperatures calculated using the appropriate equation be less than 50°C.

6.6.14 Class A Sludge: Thermophilic Aerobic Digestion Process

Agitate liquid sludge with air or oxygen to maintain aerobic conditions. The mean cell residence time for the sludge shall be 10 days at 55 to 60 degrees Celsius.

6.6.15 Class B Sludge: Fecal Coliform Limitation

Compliance with the fecal coliform limitation for Class B sludge shall be demonstrated by calculating the geometric mean of at least 7 separate samples. (Note that a Total Solids analysis must be done on each sample). The geometric mean shall be less than 2,000,000 MPN or CFU/g TS. Calculation of the geometric mean can be done using one of the following 2 methods.

Method 1:

$$\text{Geometric Mean} = (X_1 \times X_2 \times X_3 \dots \times X_n)^{1/n}$$

Where X = Coliform Density value of the sludge sample, and where n = number of samples (at least 7)

Method 2:

$$\text{Geometric Mean} = \text{antilog}[(X_1 + X_2 + X_3 \dots + X_n) \div n]$$

Where X = log₁₀ of Coliform Density value of the sludge sample, and where n = number of samples (at least 7)

Example for Method 2

Sample Number	Coliform Density of Sludge Sample	log ₁₀
1	6.0 x 10 ⁵	5.78
2	4.2 x 10 ⁶	6.62
3	1.6 x 10 ⁶	6.20
4	9.0 x 10 ⁵	5.95
5	4.0 x 10 ⁵	5.60
6	1.0 x 10 ⁶	6.00
7	5.1 x 10 ⁵	5.71

The geometric mean for the seven samples is determined by averaging the $\log_{10}$ values of the coliform density and taking the antilog of that value.

$$(5.78 + 6.62 + 6.20 + 5.95 + 5.60 + 6.00 + 5.71) \div 7 = 5.98$$

$$\text{The antilog of } 5.98 = 9.5 \times 10^5$$

6.6.16 Class B Sludge: Aerobic Digestion

Agitate the sludge with air or oxygen to maintain an aerobic condition for a mean cell residence time and temperature between 40 days at 20° C and 60 days at 15° C.

6.6.17 Vector Control: Volatile Solids Reduction

The mass of volatile solids in the sludge shall be reduced by a minimum of 38% between the time the sludge enters the digestion process and the time it either exits the digester or a storage facility. For calculation of volatile solids reduction, the permittee shall use the Van Kleeck equation or one of the other methods described in "Determination of Volatile Solids Reduction in Digestion" by J.B. Farrell, which is Appendix C of EPA's *Control of Pathogens in Municipal Wastewater Sludge* (EPA/625/R-92/013). The Van Kleeck equation is:

$$\text{VSR}\% = \frac{\text{VS}_{\text{IN}} - \text{VS}_{\text{OUT}}}{\text{VS}_{\text{IN}} - (\text{VS}_{\text{OUT}} \times \text{VS}_{\text{IN}})} \times 100$$

Where: VS_{IN} = Volatile Solids in Feed Sludge (g VS/g TS)

VS_{OUT} = Volatile Solids in Final Sludge (g VS/g TS)

VSR% = Volatile Solids Reduction, (Percent)

6.6.18 Class A Sludge - Vector Control: Injection

The sludge shall be injected within 8 hours after being discharged from the pathogen treatment process. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sludge is injected.

6.6.19 Class B Sludge - Vector Control: Injection

No significant amount of the sewage sludge shall be present on the land surface within one hour after the sludge is injected.

6.6.20 Class A Sludge - Vector Control: Incorporation

Class A sludge shall be surface applied within 8 hours after being discharged from a pathogen treatment process and then be incorporated within 6 hours of surface application.

6.6.21 Class B Sludge - Vector Control: Incorporation

Class B sludge shall be incorporated within 6 hours of surface application, or as approved by the Department.

6.6.22 Landfilling of Sludge

General: Sewage sludge may not be disposed of in a municipal solid waste landfill unless the landfill meets the requirements of chs. NR 500 to 536, Wis. Adm. Code, and is an approved facility as defined in s. 289.01(3), Wis. Stats. Any facility accepting sewage sludge shall be approved by the Department in writing to accept sewage sludge. Disposal of sewage sludge in a municipal solid waste landfill shall be in accordance with ss. NR 506.13 and 506.14. Sewage sludge may not be disposed of in a surface disposal unit as defined in s. NR 204.03(63).

Approval: The permittee shall obtain approval from the Department prior to the disposal of sludge at a Wisconsin licensed landfill.

6.6.23 Sludge Landfilling Reports

The permittee shall report the volume of sludge disposed of at any landfill facility on Form 3400-52. The permittee shall include the name and address of the landfill, the Department license number or other state's designation or license number for all landfills used during the report period and a letter of acceptability from the landfill owner. In addition, any permittee utilizing landfills as a disposal method shall submit to the Department any test results used to indicate acceptability of the sludge at a landfill. Form 3400-52 shall be submitted annually by January 31, each year whether or not sludge is landfilled.

7 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Mercury Pollutant Minimization Program -Mercury Report	October 1, 2029	20
PFOS/PFOA Minimization Plan Determination of Need -Report on Effluent Discharge	January 1, 2027	20
PFOS/PFOA Minimization Plan Determination of Need -Report on Effluent Discharge and Evaluation of Need	January 1, 2028	20
Sludge Management Plan Submittal	January 1, 2027	21
Compliance Maintenance Annual Reports (CMAR)	by June 30, each year	24
Industrial User Compliance Evaluation and Violation Reports	Semiannual	34
Pretreatment Program Report	Annually	34
General Sludge Management Form 3400-48	prior to any significant sludge management changes	35
Characteristic Form 3400-49 and Lab Report	by January 31 following each year whether or not samples are analyzed	35
Land Application Report Form 3400-55	by January 31, each year whether or not non-exceptional quality sludge is land applied	36
Other Methods of Disposal or Distribution Report Form 3400-52	by January 31, each year whether or not sludge is hauled, landfilled, incinerated, or exceptional quality sludge is distributed or land applied	36
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	23

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to:

Northeast Region, 2984 Shawano Ave, Green Bay, WI 54313-6727