WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

Fontana Walworth Water Pollution Control Commission

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility located at
N840 Chilson Road, Walworth, WI
to
Piscasaw Creek (Piscasaw Creek Watershed, Kishwaukee River Basin)
in Walworth 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 _____
Bryan Hartsook
Wastewater Field Supervisor

_____
Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - January 01, 2019 **EXPIRATION DATE - December 31, 2023**

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1 Influent Requirements

1.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
701	INFLUENT: 24-hour flow proportional composite sampler intake located in the influent channel downstream of the bar screen in the screening building. Sidestream or recycled flows not included in influent samples.

1.2 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

1.2.1 Sampling Point 701 - INFLUENT TO PLANT

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	
Mercury, Total Recoverable		ng/L	Quarterly	24-Hr Flow Prop Comp	See Section

1.2.1.1 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.

2 In-Plant Requirements

2.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
104	FIELD BLANK: collect total recoverable mercury field blanks using standard sampling handling procedures

2.2 Monitoring Requirements and Limitations

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

2.2.1 Sampling Point 104 - Field Blanks

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Mercury, Total Recoverable		ng/L	Quarterly	Blank	See Mercury section 2.2.1.1

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, WasteType/Sample Contents and Treatment Description (as applicable)**
001	EFFLUENT: 24-hour flow proportional composite sampler intake located upstream of ultraviolet (UV) light disinfection system. Grab samples and composite samples for whole effluent toxicity (WET) testing shall be collected downstream of UV light disinfection, following cascade aeration.

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 TO PISCASAW CREEK

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Continuous	Continuous	
BOD_5, Total	Weekly Avg	10 mg/L	5/Week	24-Hr Flow Prop Comp	Effective October - April
BOD_5, Total	Weekly Avg	8.8 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in May
BOD_5, Total	Weekly Avg	7.3 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in June
BOD_5, Total	Weekly Avg	7.2 mg/L	5/Week	24-Hr Flow Prop Comp	Effective July - August
BOD_5, Total	Weekly Avg	7.9 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in September
BOD_5, Total	Monthly Avg	10 mg/L	5/Week	24-Hr Flow Prop Comp	Effective October - April
BOD_5, Total	Monthly Avg	8.8 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in May
BOD_5, Total	Monthly Avg	7.3 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in June
BOD_5, Total	Monthly Avg	7.2 mg/L	5/Week	24-Hr Flow Prop Comp	Effective July - August
BOD_5, Total	Monthly Avg	7.9 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in September
Suspended Solids, Total	Weekly Avg	10 mg/L	5/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	10 mg/L	5/Week	24-Hr Flow Prop Comp	
pH Field	Daily Max	9.0 su	5/Week	Grab	
pH Field	Daily Min	6.0 su	5/Week	Grab	

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Dissolved Oxygen	Daily Min	7.0 mg/L	5/Week	Grab	
Fecal Coliform	Geometric Mean - Wkly	656 #/100 ml	2/Week	Grab	Effective May - September
Fecal Coliform	Geometric Mean - Monthly	400 #/100 ml	2/Week	Grab	Effective May - September
Nitrogen, Ammonia (NH_3-N) Total	Daily Max	17 mg/L	5/Week	24-Hr Flow Prop Comp	Year round limit
Nitrogen, Ammonia (NH_3-N) Total	Weekly Avg	11 mg/L	5/Week	24-Hr Flow Prop Comp	Effective November - March
Nitrogen, Ammonia (NH_3-N) Total	Weekly Avg	6.9 mg/L	5/Week	24-Hr Flow Prop Comp	Effective April
Nitrogen, Ammonia (NH_3-N) Total	Weekly Avg	5.2 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in May
Nitrogen, Ammonia (NH_3-N) Total	Weekly Avg	4.0 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in June
Nitrogen, Ammonia (NH_3-N) Total	Weekly Avg	3.4 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in July
Nitrogen, Ammonia (NH_3-N) Total	Weekly Avg	3.5 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in August
Nitrogen, Ammonia (NH_3-N) Total	Weekly Avg	4.9 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in September
Nitrogen, Ammonia (NH_3-N) Total	Weekly Avg	9.7 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in October
Nitrogen, Ammonia (NH_3-N) Total	Monthly Avg	4.5 mg/L	5/Week	24-Hr Flow Prop Comp	Effective December - January
Nitrogen, Ammonia (NH_3-N) Total	Monthly Avg	4.6 mg/L	5/Week	24-Hr Flow Prop Comp	Effective February, March and November
Nitrogen, Ammonia (NH_3-N) Total	Monthly Avg	2.9 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in April
Nitrogen, Ammonia (NH_3-N) Total	Monthly Avg	2.4 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in May
Nitrogen, Ammonia (NH_3-N) Total	Monthly Avg	2.0 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in June
Nitrogen, Ammonia (NH_3-N) Total	Monthly Avg	1.6 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in July
Nitrogen, Ammonia (NH_3-N) Total	Monthly Avg	1.5 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in August
Nitrogen, Ammonia (NH_3-N) Total	Monthly Avg	2.3 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in September
Nitrogen, Ammonia (NH_3-N) Total	Monthly Avg	4.0 mg/L	5/Week	24-Hr Flow Prop Comp	Effective in October

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Phosphorus, Total	Monthly Avg	1.0 mg/L	4/Week	24-Hr Flow Prop Comp	This is an interim limit. Final limits become effective November 1, 2020 but this limit will remain as it represents the minimum level of control. See phosphorous compliance schedule and Sections 3.2.1.5, 3.2.1.6, and 3.2.1.7 below.
Phosphorus, Total		lbs/day	Monthly	Calculated	Report lbs/day of phosphorus discharged. See Standard Requirement 6.4.2 for calculation.
WQT TP Credits		lbs/day	4/Week	Calculated	Report WQT TP Credits used. See "Water Quality Trading (WQT)" subsections for more information.
WQT TP Credits		lbs/month	Monthly	Calculated	Report WQT TP Credits used. See "Water Quality Trading (WQT)" subsections for more information. Available TP Credits for the calendar year are specified in the approved Water Quality Trading Plan.
WQT TP Computed Compliance	6-Month Avg	0.075 mg/L	4/Week	Calculated	Limit is effective November 1, 2020. Report the WQT TP Computed Compliance value. See "Water Quality Trading (WQT)" subsections for more information. 6-month average limit compliance is evaluated at the end of each six-month period on June 30 & December 31.
WQT TP Computed Compliance	Monthly Avg	0.225 mg/L	4/Week	Calculated	Limit is effective November 1, 2020. Report the WQT TP Computed Compliance value. See "Water Quality Trading (WQT)" subsections for more information.

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Chloride	Weekly Avg	560 mg/L	4/Month	24-Hr Flow Prop Comp	This is an interim limit. Sampling shall be done on four consecutive days one week per month. See Chloride Variance section below and the Schedules section for applicable chloride target value
Chloride		lbs/day	4/Month	Calculated	Chloride mass = daily concentration (mg/L) x daily flow (MGD) x 8.34
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	
Acute WET		TU_a	Annual	24-Hr Flow Prop Comp	Annual in rotating quarters. See WET section below
Chronic WET	Monthly Avg	1.2 TUc	Annual	24-Hr Flow Prop Comp	Annual in rotating quarters. See WET section below
Mercury, Total Recoverable		ng/L	Quarterly	Grab	See Mercury section below
Temperature Maximum		deg F	Weekly	Continuous	Monitoring required in calendar year 2022 (January 1 - December 31)

3.2.1.1 Annual Average Design Flow

The annual average design flow of the permittee's wastewater treatment facility is 1.774 MGD.

3.2.1.2 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.

3.2.1.3 Phosphorus Water Quality Trading (WQT)

The permittee may use water quality trading to demonstrate compliance with WQBELs for total phosphorus (TP) of 0.225 mg/L monthly average and 0.075 mg/L 6-month average beginning November 1, 2020. Pollutant reduction credits are available as specified in Water Quality Trading Plan (WQT-2018-0002) or approved amendments thereof.

Table 3.2.1.5. Available Phosphorus Credits per WQT-2018-0002

Year	Available TP Credits (lbs/yr)
2020	1,874
2021	2,281
2022	1,829
2023	2,509
2024*	1,635

*In the event this permit is not reissued prior to the expiration date, the Available TP Credits presented in the above table shall repeat the annual cycle until the permit is reissued starting with 1,874 lbs/yr of available phosphorus credits in year 2025, 2,281 lbs/yr in 2026, etc.

Only those pollutant reduction credits established by a water quality trading plan approved by the Department may be used by the permittee to demonstrate compliance with the WQBELs identified in this subsection. If the permittee wishes to use pollutant reduction credits not identified in an approved water quality trading plan, the permittee must amend the plan or develop a new plan and obtain Department approval of the amended or new plan prior to use of the new pollutant reduction credits. Prior to Department approval, the amended or new water quality trading plan will be subject to notice and opportunity for public comment.

In the event pollutant reduction credits as defined in an approved water quality trading plan are no longer generated, the permittee shall comply with the WQBELs for TP of 0.225 mg/L monthly average and 0.075 mg/L 6-month average beginning November 1, 2020.

3.2.1.4 Demonstrating Compliance with TP WQBELs Using Water Quality Trading

Use the following methods to demonstrate compliance with the TP WQBELs contained in the Water Quality Trading subsection above.

WQT TP CREDITS

Use the following method to calculate the credits to be used expressed as a mass in lbs/day:

• Select and report as "WQT TP Credits" the TP pollutant reduction credits (in lbs/day) that will be used for each day that discharge is monitored for TP.

• Recommendation: When the TP discharge for a given day is greater than 0.075 mg/L report the following value as the "WQT TP Credits" for that day:

○ WQT TP Credits (in lbs/day) = TP discharged (in lbs/day) – [the day's flow in MGD × 0.075 mg/L × 8.34]

Note: When the TP discharge is less than 0.075 mg/L for a given day, report 0 (zero) as the "WQT TP Credits" for that day.

Use the following method to calculate the credits to be used expressed as a mass in lbs/month:

• On a monthly basis, average the reported daily TP credits used for the month, then multiply the average by the number of days of discharge during the month and report the product as "WQT TP Credits" (in lbs/month) for the last day of the month on the DMR.

WQT TP Credits (in lbs/month) = Average of daily WQT TP Credits (in lbs/day) × Number of days of discharge/month

Note: The total number of TP credits selected for the twelve months of a calendar year shall not exceed that specified in the Water Quality Trading Plan approved by the Department.

WQT TP COMPUTED COMPLIANCE

Use the following method to demonstrate compliance with TP WQBELs expressed as a concentration in mg/L:

• Convert the TP credits selected for the day to an equivalent concentration using the following formula:

TP credits (in mg/L) = [TP credits in lbs/day] ÷ [the day's flow in MGD × 8.34]

- Subtract the TP credits (in mg/L) for the day from the day's TP discharge (in mg/L) and report the difference as "WQT TP Computed Compliance" in mg/L.

3.2.1.5 Additional Water Quality Trading Requirements

When using water quality trading to demonstrate compliance with WQBELs for TP, the permittee shall comply with the following:

1. Failure to implement any of the terms or conditions of the approved water quality trading plan is a violation of this permit.
2. Each month the permittee shall certify that the nonpoint source management practices installed to generate pollutant reduction credits are operated and maintained in a manner consistent with that specified in the approved water quality trading plan. Such a certification may be made by including the following statement as a comment on the monthly discharge monitoring report:

   I certify that management practices identified in the approved water quality trading plan as the source of pollutant reduction credits are installed, established and properly maintained.
3. At least once a year the permittee or the permittee's agent shall inspect each nonpoint source management practice that generates pollutant reduction credits to confirm the implementation of the management practice and their appropriate operation and adequate maintenance.
4. The permittee shall notify WDNR by telephone within 24 hours or next business day of becoming aware that pollutant reduction credits used or intended for use by the permittee are not being implemented or generated as defined in the approved trading plan. A written notification shall be submitted to the Department within 5 days regarding the status of the permittee's pollutant reduction credits.
5. The permittee shall provide WDNR written notice within 7 days of the trade agreement upon which the approved water quality trading plan is based being amended, modified, or revoked. This notification shall include the details of any amendment or modification in addition to the justification for the changes.
6. The permittee shall not use pollutant reduction credits for the demonstration of compliance when pollutant reduction credits are not being generated.

3.2.1.6 Annual Water Quality Trading Report

When using water quality trading to demonstrate compliance with WQBELs, the permittee shall report by January 31st each year the following information:

1. The number of pollutant reduction credits (lbs/month) used each month of the previous year to demonstrate compliance;
2. The source of each month's pollutant reduction credits by identifying the approved water quality trading plan that details the source;

3. A summary of the annual inspection of each nonpoint source management practice that generated any of the pollutant reduction credits used during the previous year; and
4. Identification of noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading that have not been reported in discharge monitoring reports.

3.2.1.7 Water Quality Trading Reopener Clause

Under any of the following conditions as provided by s. 283.53(2), Wis. Stats. and Wis. Code NR 203.135 and 203.136, the Department may modify or revoke and reissue this permit to modify or eliminate permit terms and conditions related to water quality trading:

1. The permittee fails to implement the water quality trading plan as approved;
2. The permittee fails to comply with permit terms and conditions related to water quality trading;

New information becomes available that would change the number of credits available for the water quality trade or would change the Department's determinations that water quality trading is an acceptable option.

3.2.1.8 Alternative Approaches to Phosphorus WQBEL Compliance

The permittee may implement an upgrade to its wastewater treatment facility in combination with Water Quality Trading to achieve compliance, provided that the permit is modified, revoked and reissued, or reissued to incorporate any such alternative approach.

3.2.1.9 Submittal of Permit Application for Reissuance and Pollutant Trading Plan

The permittee shall submit the permit application for the next reissuance at least 6 months prior to expiration of this permit.

The permittee has submitted a Water Quality Trading Plan that was approved by WDNR in July 2018. If the permittee intends to pursue pollutant trading to achieve compliance in a manner that differs from that allowed in this permit, the permittee shall submit a new application for water quality trading with the application for the next reissuance. If system upgrades will be used in combination with pollutant trading the permittee shall submit plans for any system upgrade.

3.2.1.10 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Piscasaw Creek, upstream and outside of the mixing zone of the discharge.

Instream Waste Concentration (IWC): 81%

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, 75, 50, 25, 12.5% and any additional selected by the permittee.

WET Testing Frequency:

Acute tests shall be conducted <u>once each year</u>, in rotating quarters in order to collect seasonal information about the discharge. Tests are required during the following quarters.

- **Acute:** April – June 2019; July – September 2020; October – December 2021; April – June 2022; January – March 2023

Acute 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 2024.

Chronic tests shall be conducted once each year, in rotating quarters in order to collect seasonal information about the discharge. Tests are required during the following quarters.

- **Chronic:** April – June 2019; July – September 2020; October – December 2021; April – June 2022; January – March 2023

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 January – March 2024.

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 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. 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 1.2 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).

3.2.1.11 Chloride Variance – Implement Source Reduction Measures

This permit contains a variance to the water quality-based effluent limit (WQBEL) for chloride granted in accordance with s. NR 106.83(2), Wis. Adm. Code. As conditions of this variance the permittee shall (a) maintain effluent quality at or below the interim effluent limitation specified in the table above, (b) implement the chloride source reduction measures specified below, (c) follow the approved Source Reduction Plan and (d) perform the actions listed in the schedule. (See the Schedules section herein.):

1. Education
    a. Educate permanent and seasonal residential community on sources of chlorides, impacts of chloride pollution, and best management practices to minimize residential sources. Education programs shall include, but are not limited to, winter snow and ice removal practices leading to reduced salt use; setting optimization and maintenance of water softeners with emphasis on disabling automatic regeneration while home is not in use for prolonged periods of time out of season and other “vacation mode” settings; environmental benefits of demand-based systems, and any updates on incentive program development. Outreach materials made available to the public shall be updated within the first year of the permit term and uploaded to the Village of Fontana and Village of Walworth websites.
    b. Present to Fontana-on-Geneva Lake’s Village Board at least annually on chloride source reduction measures.
2. Ordinance Amendments

a. Develop amendment to sewer use ordinance mandating Demand Initiated Regeneration (DIR) water softeners for new installations and replacements and present to Village Board for adoption by year three of the permit.

b. Develop amendment to sewer use ordinance mandating bypass of water softener systems for outside hose-bib use such as for landscape irrigation and present to Village Board for adoption by year four of the permit.

c. Work with the appropriate village inspector to add a section on the existing cross-connection inspection form to determine if the water softener has timer-based regeneration, volumetric-based regeneration, or demand-initiated regeneration during the routine cross-connection inspection. Village inspector will provide information to the property owner on water softener maintenance and system settings that reduce overall salt use. Provide information to the property owner of a timer-based softener unit about the advantages of switching to a demand-initiated regeneration unit. Gather softener type data from the inspected properties and provide, in the final annual report, recommendations on how best to reduce chlorides based on the data collected.

d. Develop and implement tracking, inspection and enforcement procedures for ensuring compliance with sewer use ordinance amendment(s), if adopted.

3. Source Monitoring

a. Meet at least semi-annually with Kikkoman Foods, Inc. and annually with all other high-users and new businesses to update contacts, inspect and document operating conditions of water softening systems, and provide recommendations as needed. Meeting documentation and inspection records shall be maintained and submitted with annual progress reports.

b. Continue to monitor effluent from high-users and provide mass balance updates in annual progress reports. Collect monthly composite samples from the Villages of Walworth and Fontana-on- Geneva Lake collection system influent and Kikkoman Foods Inc. effluent and analyze for chloride concentration. Calculate chloride mass loading from each user's influent daily average flows.

c. Conduct survey of residential community to extend knowledge base of existing water softener systems and operating conditions. Survey results, conclusions and recommendations shall be provided in year four of the permit.

4. Source Reduction

a. By end of year 1 of the permit, Review CMOM program and identify a priority order for raising, replacing, and repairing as necessary low-lying manholes in the Commission's collection system to reduce inflow and infiltration into the system.

b. By end of year 4 of the permit, complete all modifications to low-lying priority manholes in 4.a.

c. The permittee shall implement a program that meets <u>EITHER</u> of the following:

i. In working with Kikkoman Foods Inc. (KFI), reduce the maximum chloride concentrations from KFI to the Commission's collection system to 1,000 mg/L by year 4 with a goal of demonstrating stable to decreasing trends in monthly chloride concentrations from KFI through the permit term. Assess the impact of chloride source reduction measures implemented by KFI in meeting the weekly average chloride limit in the annual progress reports.

ii. Adopt an amendment to the sewer use ordinance to establish and enforce a local limit for chlorides pursuant to NR 211.10(3)(a), Wis. Code by year 4 of the permit.

d. Report source reduction measures implemented by Kikkoman Foods, Inc. in annual progress reports.

3.2.1.12 Chloride and WET Testing

This permit includes whole effluent toxicity (WET) testing. Since WET failures are sometimes associated with elevated chloride levels, the permittee shall coordinate chloride monitoring with required WET testing.

3.2.1.13 Effluent Temperature Monitoring

For monitoring temperature continuously, collect measurements in accordance with s. NR218.04(13), Wis. Adm. Code. This means that discrete measurements shall be recorded at intervals of not more than 15 minutes during the 24-hour period. Report the maximum temperature measured during the day on the DMR.

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, WasteType/Sample Contents and Treatment Description (as applicable)**
002	Class B, Aerobically digested, gravity thickened liquid sludge. Sample collected at the end pipe off the storage tank.

4.2 Monitoring Requirements and Limitations

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

4.2.1 Sampling Point (Outfall) 002 - Aerobic Digestion

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Annual	Composite	
Arsenic Dry Wt	Ceiling	75 mg/kg	Annual	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	Annual	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	Annual	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	Annual	Composite	
Copper Dry Wt	Ceiling	4,300 mg/kg	Annual	Composite	
Copper Dry Wt	High Quality	1,500 mg/kg	Annual	Composite	
Lead Dry Wt	Ceiling	840 mg/kg	Annual	Composite	
Lead Dry Wt	High Quality	300 mg/kg	Annual	Composite	
Mercury Dry Wt	Ceiling	57 mg/kg	Annual	Composite	
Mercury Dry Wt	High Quality	17 mg/kg	Annual	Composite	
Molybdenum Dry Wt	Ceiling	75 mg/kg	Annual	Composite	
Nickel Dry Wt	Ceiling	420 mg/kg	Annual	Composite	
Nickel Dry Wt	High Quality	420 mg/kg	Annual	Composite	
Selenium Dry Wt	Ceiling	100 mg/kg	Annual	Composite	
Selenium Dry Wt	High Quality	100 mg/kg	Annual	Composite	
Zinc Dry Wt	Ceiling	7,500 mg/kg	Annual	Composite	
Zinc Dry Wt	High Quality	2,800 mg/kg	Annual	Composite	
Nitrogen, Total Kjeldahl		Percent	Annual	Composite	
Nitrogen, Ammonium (NH_4-N) Total		Percent	Annual	Composite	
Phosphorus, Total		Percent	Annual	Composite	
Phosphorus, Water Extractable		% of Tot P	Annual	Composite	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Potassium, Total Recoverable		Percent	Annual	Composite	
PCB Total Dry Wt	Ceiling	50 mg/kg	Once	Composite	Once in 2019. See PCB section below.
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	Once in 2019. See PCB section below.

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.	**Annual**
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.	**Annual**

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), 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:

[(Pollutant concentration (mg/kg) x dry tons applied/ac) ÷ 500] + previous loading (lbs/acre) = 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), 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 Sludge Analysis for PCBs

The permittee shall analyze the sludge for Total PCBs one time during **2019**. The results shall be reported as "PCB Total Dry Wt". Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with Table EM in s. NR 219.04, Wis. Adm. Code and the conditions specified in Standard Requirements of this permit. PCB results shall be submitted by January 31, following the specified year of analysis.

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)
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 (NH4-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 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

5 Schedules

5.1 Chloride Target Value

As a condition of the variance to the water quality based effluent limitation(s) for chloride granted in accordance with s. NR 106.83(2), Wis. Adm. Code, the permittee shall perform the following compliance schedule actions.

Required Action	Due Date
Annual Chloride Progress Report: Submit an annual chloride progress report. The annual chloride progress report shall: Indicate which chloride source reduction measures or activities in the approved Source Reduction Plan have been implemented; Include an analysis of trends in weekly, monthly and annual average chloride concentrations and total mass discharge of chloride based on chloride sampling and flow data; and Include an analysis of how influent and effluent chloride varies with time and with significant loadings of chloride such as loads from industries and road salt intrusion into the collection system. The first annual chloride progress report is to be submitted by the Date Due.	09/30/2019
Annual Chloride Progress Report #2: Submit the chloride progress report as defined above.	09/30/2020
Annual Chloride Progress Report #3: Submit the chloride progress report as defined above.	09/30/2021
Annual Chloride Progress Report #4: Submit the chloride progress report as defined above.	09/30/2022
Final Chloride Report: Submit a final chloride report documenting the success in meeting the chloride target value of 510 mg/L, as well as the anticipated future reduction in chloride sources and chloride effluent concentrations. The report shall summarize chloride source reduction measures that have been implemented during the current permit term and state which, if any, source reduction measures from the approved Source Reduction Plan were not pursued and why. The report shall include an analysis of trends in weekly, monthly and annual average chloride concentrations and total mass discharge of chloride based on chloride sampling and flow data covering the current permit term. The report shall also include an analysis of how influent and effluent chloride varies with time and with significant loadings of chloride such as loads from industries or road salt intrusion into the collection system. Additionally, the report shall include proposed target values and source reduction measures for negotiations with the department if the permittee intends to seek a renewed chloride variance per NR 106.83, Wis. Adm. Code, for the reissued permit. Note that the target value is the benchmark for evaluating the effectiveness of the chloride source reduction measures but is not an enforceable limitation under the terms of this permit.	06/30/2023
Annual Chloride Reports After Permit Expiration: In the event that this permit is not reissued on time, the permittee shall continue to submit annual chloride reports each year covering source reduction measures implemented and chloride concentration and mass discharge trends.	

5.2 Water Quality Trading (WQT) Management Plan

Required Action	Due Date

Submit Progress Report on Management Practices Installation: Submit a progress report on the installation of management practices as identified in the Water Quality Management Plan WQT-2018-0002 as approved by the Department. If the permittee determines as part of the "Progress Report on Management Practices Installation" that the appropriate trade agreements are not in place, the permittee shall initiate an upgrade at the wastewater treatment plant to achieve compliance with the calculated total phosphorus limits in accordance with section 5.4. The Department will then modify or revoke and reissue this permit to modify or eliminate permit terms and conditions related to water quality trading.	09/30/2019
Complete Installation of Management Practices: Complete the installation of management practices as identified in the Water Quality Management Plan WQT-2018-0002 as approved by the Department.	06/30/2020
Management Practices: The Management Practices as identified in the Water Quality Trading Plan shall become effective and the permittee shall submit a completed Management Practice Registration Form 3400-207 for each site.	09/30/2020
Comply with Total Phosphorus Limits: Comply with the TP limits as specified in Table 3.2.1.	11/01/2020

5.3 Annual Water Quality Trading (WQT) Report

As specified in the Surface Water section of the permit, the permittee shall submit annual Water Quality Trading Reports in accordance with the following schedule.

Required Action	Due Date
Annual WQT Report: Submit an annual WQT report that shall cover the first year of trading within the permit term (November 1, 2020 - December 31, 2021). The WQT shall include the total number of pollutant credits used, the source of the pollution reduction credits, a summary of annual inspections performed, and identification of noncompliance or failure to implement any terms or conditions of the approved water quality trading plan.	01/31/2021
Annual WQT Report #2: Submit an annual WQT report that shall cover the previous year.	01/31/2022
Annual WQT Report #3: Submit an annual WQT report that shall cover the previous year.	01/31/2023
Annual WQT Report Required After Permit Expiration: In the event that this permit is not reissued by the expiration date, the permittee shall continue to submit annual WQT reports by January 31 each year covering the total number of pollutant credits used, the source of the pollution reduction credits, a summary of annual inspection reports performed, and identification on noncompliance or failure to implement any terms or conditions of the approved water quality trading plan for the previous calendar year.	

5.4 Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus

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

Required Action	Due Date
Initiate Treatment Plant Upgrade to Meet Total Phosphorus Limits: If the permittee determines as part of the "Progress Report on Management Practices Installation" that the appropriate trade agreements are not in place, the permittee shall initiate an upgrade at the wastewater treatment plant	09/30/2019

to achieve compliance with the calculated total phosphorus limits.	
Submit Facility Plan: The permittee shall submit a Facility Plan per s. NR 110.09, Wis. Adm. Code.	03/31/2020
Final Plans and Specifications: The permittee shall submit final construction plans to the Department for approval pursuant to s. 281.41, Stats., specifying treatment plant upgrades that must be constructed to achieve compliance with final phosphorus WQBELs, and a schedule for completing construction of the upgrades by the complete construction date specified below.	09/30/2020
Treatment Plant Upgrade to Meet WQBELs: The permittee shall initiate construction of the upgrades. The permittee shall obtain approval of the final construction plans and schedule from the Department pursuant to s. 281.41. Stats. Upon approval of the final construction plans and schedule by the Department pursuant to s. 281.41, Stats., the permittee shall construct the treatment plant upgrades in accordance with the approved plans and specifications.	03/31/2021
Complete Construction: The permittee shall complete construction of wastewater treatment system upgrades. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	03/31/2022
Achieve Compliance: The permittee shall achieve compliance with final phosphorus WQBELs. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	05/01/2022

5.5 Land Application Management Plan

A management plan is required for the land application system.

Required Action	Due Date
Land Application Management Plan Submittal: Submit a management plan to optimize the land application system performance and demonstrate compliance with ch. NR 204, Wis. Adm. Code, by the Due Date. This management plan shall 1) specify information on pretreatment processes (if any); 2) identify land application sites; 3) describe site limitations; 4) address vegetative cover management and removal; 5) specify availability of storage; 6) describe the type of transporting and spreading vehicle(s); 7) specify monitoring procedures; 8) track site loading; 9) address contingency plans for adverse weather and odor/nuisance abatement; and 10) include any other pertinent information. Once approved, all landspreading activities shall be conducted in accordance with the plan. Any changes to the plan must be approved by the Department prior to implementing the changes.	01/31/2020

6 Standard Requirements

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).

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 shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in 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 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.

6.1.4 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 NR 101 fees, the 2 mg/l lower reporting limits for BOD_5 and 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.

6.1.5 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.

6.1.6 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.

6.1.7 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.

6.1.8 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 preventative 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 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:

  ◦The date and location of the overflow;
  ◦The surface water to which the discharge occurred, if any;
  ◦The duration of the overflow and an estimate of the volume of the overflow;
  ◦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;
  ◦The estimated date and time when the overflow began and stopped or will be stopped;
  ◦The cause or suspected cause of the overflow including, if appropriate, precipitation, runoff conditions, areas of flooding, soil moisture and other relevant information;
  ◦Steps taken or planned to reduce, eliminate and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
  ◦A description of the actual or potential for human exposure and contact with the wastewater from the overflow;
  ◦Steps taken or planned to mitigate the impacts of the overflow and a schedule of major milestones for those steps;
  ◦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
◦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 NR 205.07 (1) (r) 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.]

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 – The permittee shall use the following formula for calculating effluent results to determine compliance with the weekly average temperature limit (as applicable): Weekly Average Temperature = 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. '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.

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:

a) 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.

b) 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.

c) 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.

d) 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 BOD_5 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 Fecal Coliforms

The weekly and monthly limit(s) for fecal coliforms shall be expressed as a geometric mean.

6.4.8 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.

6.4.9 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 some or all of 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
  (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.

6.4.10 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.

6.4.11 Whole Effluent Toxicity (WET) and Chloride Source Reduction Measures

Section NR 106.89, Wis. Adm. Code, states that chloride limitations can be used in the permit in lieu of whole effluent toxicity testing requirements and limitations until chloride source reduction actions are completed, under the following conditions.

When an acute chloride limitation is included in the permit, acute whole effluent toxicity testing and limitations may be discontinued until chloride source reduction actions are completed, according to s. NR 106.89, Wis. Adm. Code, if either:

- The permittee can demonstrate to the satisfaction of the department that the effluent concentration of chloride exceeds 2,500 mg/l, or
- The permittee can demonstrate to the satisfaction of the department that the effluent concentration of chloride is less than 2,500 mg/l, but in excess of the calculated acute water quality-based effluent limitation, and additional data are submitted which demonstrate that chloride is the sole source of acute toxicity.

When a chronic chloride limitation is included in the permit, chronic whole effluent toxicity testing and limitations may be discontinued until chloride source reduction actions are completed, according to s. NR 106.89, Wis. Adm. Code, if either:

- The permittee can demonstrate to the satisfaction of the department that the effluent concentration of chloride exceeds 2 times the calculated chronic water quality-based effluent limitation, or
- The permittee can demonstrate to the satisfaction of the department that the effluent concentration of chloride is less than 2 times the calculated chronic water quality-based effluent limitation, but in excess of the calculated chronic water quality-based effluent limitation, and additional data are submitted which demonstrate that chloride is the sole source of chronic toxicity.

Following the completion of chloride source reduction activities, the department shall evaluate the need for whole effluent toxicity monitoring and limitation.

6.5 Land Application Requirements

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

In the event that new federal sludge standards or regulations are promulgated, the permittee shall comply with the new 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.

6.5.2 General Sludge Management Information

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

6.5.3 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.

6.5.4 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 of analysis.

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.

6.5.5 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

6.5.6 Monitoring and Calculating PCB Concentrations in Sludge

When sludge analysis for "PCB, Total Dry Wt" is required by this permit, the PCB concentration in the sludge shall be determined as follows.

Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with the following provisions and Table EM in s. NR 219.04, Wis. Adm. Code.

- EPA Method 1668 may be used to test for all PCB congeners. If this method is employed, all PCB congeners shall be delineated. Non-detects shall be treated as zero. The values that are between the limit of detection and the limit of quantitation shall be used when calculating the total value of all congeners. All results shall be added together and the total PCB concentration by dry weight reported. **Note**: It is recognized that a number of the congeners will co-elute with others, so there will not be 209 results to sum.
- EPA Method 8082A shall be used for PCB-Aroclor analysis and may be used for congener specific analysis as well. If congener specific analysis is performed using Method 8082A, the list of congeners tested shall include at least congener numbers 5, 18, 31, 44, 52, 66, 87, 101, 110, 138, 141, 151, 153, 170, 180, 183, 187, and 206 plus any other additional congeners which might be reasonably expected to occur in the particular sample. For either type of analysis, the sample shall be extracted using the Soxhlet extraction (EPA Method 3540C) (or the Soxhlet Dean-Stark modification) or the pressurized fluid extraction (EPA Method 3545A). If Aroclor analysis is performed using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.11 mg/kg as possible. Reporting protocol, consistent with s. NR 106.07(6)(e), should be as follows: If all Aroclors are less than the LOD, then the Total PCB Dry Wt result should be reported as less than the highest LOD. If a single Aroclor is detected then that is what should be reported for the Total PCB result. If multiple Aroclors are detected, they should be summed and reported as Total PCBs. If congener specific analysis is done using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.003 mg/kg as possible for each congener. If the aforementioned limits of detection cannot be achieved after using the appropriate clean up techniques, a reporting limit that is achievable for the Aroclors or each congener for the sample shall be determined. This reporting limit shall be reported and qualified indicating the presence of an interference. The lab conducting the analysis shall perform as many of the following methods as necessary to remove interference:

3620C – Florisil	3611B - Alumina
3640A - Gel Permeation	3660B - Sulfur Clean Up (using copper shot instead of powder)
3630C - Silica Gel	3665A - Sulfuric Acid Clean Up

6.5.7 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.

6.5.8 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.

6.5.9 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.

6.5.10 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.

6.5.11 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.

6.5.12 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:

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

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

Method 2:

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

Where X = $\log_{10}$ 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	6.0×10^5	5.78
2	4.2×10^6	6.62
3	1.6×10^6	6.20
4	9.0×10^5	5.95
5	4.0×10^5	5.60
6	1.0×10^6	6.00
7	5.1×10^5	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) ÷ 7 = 5.98
The antilog of 5.98 = 9.5×10^5

6.5.13 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.

6.5.14 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.

7 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Chloride Target Value -Annual Chloride Progress Report	September 30, 2019	18
Chloride Target Value -Annual Chloride Progress Report #2	September 30, 2020	18
Chloride Target Value -Annual Chloride Progress Report #3	September 30, 2021	18
Chloride Target Value -Annual Chloride Progress Report #4	September 30, 2022	18
Chloride Target Value -Final Chloride Report	June 30, 2023	18
Chloride Target Value -Annual Chloride Reports After Permit Expiration	See Permit	18
Water Quality Trading (WQT) Management Plan -Submit Progress Report on Management Practices Installation	September 30, 2019	19
Water Quality Trading (WQT) Management Plan -Complete Installation of Management Practices	June 30, 2020	19
Water Quality Trading (WQT) Management Plan -Management Practices	September 30, 2020	19
Water Quality Trading (WQT) Management Plan -Comply with Total Phosphorus Limits	November 1, 2020	19
Annual Water Quality Trading (WQT) Report -Annual WQT Report	January 31, 2021	19
Annual Water Quality Trading (WQT) Report -Annual WQT Report #2	January 31, 2022	19
Annual Water Quality Trading (WQT) Report -Annual WQT Report #3	January 31, 2023	19
Annual Water Quality Trading (WQT) Report -Annual WQT Report Required After Permit Expiration	See Permit	19
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Initiate Treatment Plant Upgrade to Meet Total Phosphorus Limits	September 30, 2019	20
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Submit Facility Plan	March 31, 2020	20
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Final Plans and Specifications	September 30, 2020	20
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Treatment Plant Upgrade to Meet WQBELs	March 31, 2021	20
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Complete Construction	March 31, 2022	20
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Achieve Compliance	May 1, 2022	20
Land Application Management Plan -Land Application Management Plan Submittal	January 31, 2020	20
Compliance Maintenance Annual Reports (CMAR)	by June 30, each year	22
General Sludge Management Form 3400-48	prior to any	31

	significant sludge management changes	
Characteristic Form 3400-49 and Lab Report	by January 31 following each year of analysis	31
Land Application Report Form 3400-55	by January 31, each year whether or not non-exceptional quality sludge is land applied	32
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	32
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	21

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:
Southeast Region, 2300 N Dr ML King Drive, Milwaukee, WI 53212