



# WPDES PERMIT

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

**City of Tomah**

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

520 Industrial Ave., Tomah, WI

NW ¼ of NW ¼ of Section 35, T18N, R1W

to

**The South Fork of the Lemonweir River (Little Lemonweir Watershed, LR29 – Lower Wisconsin  
River Basin in) Monroe County**

(Outfall: Lat: 43.99865° N / Lon: -90.47555° W)

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

  
Lacey Hillman  
Wastewater Field Supervisor

March 21, 2019  
Date Permit Signed/Issued

**PERMIT TERM: EFFECTIVE DATE - April 01, 2019**

**EXPIRATION DATE - March 31, 2024**

## TABLE OF CONTENTS

<b>1 INFLUENT REQUIREMENTS</b>	<b>1</b>
1.1 SAMPLING POINT(S)	1
1.2 MONITORING REQUIREMENTS	1
1.2.1 <i>Sampling Point 701 - INFLUENT</i>	1
<b>2 IN-PLANT REQUIREMENTS</b>	<b>2</b>
2.1 SAMPLING POINT(S)	2
2.2 MONITORING REQUIREMENTS AND LIMITATIONS	2
2.2.1 <i>Sampling Point 102 - FIELD BLANK</i>	2
<b>3 SURFACE WATER REQUIREMENTS</b>	<b>3</b>
3.1 SAMPLING POINT(S)	3
3.2 MONITORING REQUIREMENTS AND EFFLUENT LIMITATIONS	3
3.2.1 <i>Sampling Point (Outfall) 001 - EFFLUENT</i>	3
3.2.2 <i>Sampling Point 602 - IN-STREAM DOWNSTREAM; 603 - IN-STREAM UPSTREAM, and 604 - IN-STREAM UPSTREAM</i>	9
<b>4 LAND APPLICATION REQUIREMENTS</b>	<b>12</b>
4.1 SAMPLING POINT(S)	12
4.2 MONITORING REQUIREMENTS AND LIMITATIONS	12
4.2.1 <i>Sampling Point (Outfall) 005 - SLUDGE</i>	12
<b>5 SCHEDULES</b>	<b>16</b>
5.1 WATERSHED ADAPTIVE MANAGEMENT OPTION ANNUAL REPORT SUBMITTALS	16
5.2 MERCURY POLLUTANT MINIMIZATION PROGRAM	17
<b>6 STANDARD REQUIREMENTS</b>	<b>18</b>
6.1 REPORTING AND MONITORING REQUIREMENTS	18
6.1.1 <i>Monitoring Results</i>	18
6.1.2 <i>Sampling and Testing Procedures</i>	18
6.1.3 <i>Recording of Results</i>	18
6.1.4 <i>Reporting of Monitoring Results</i>	19
6.1.5 <i>Compliance Maintenance Annual Reports</i>	19
6.1.6 <i>Records Retention</i>	19
6.1.7 <i>Other Information</i>	19
6.1.8 <i>Reporting Requirements – Alterations or Additions</i>	20
6.2 SYSTEM OPERATING REQUIREMENTS	20
6.2.1 <i>Noncompliance Reporting</i>	20
6.2.2 <i>Flow Meters</i>	20
6.2.3 <i>Raw Grit and Screenings</i>	21
6.2.4 <i>Sludge Management</i>	21
6.2.5 <i>Prohibited Wastes</i>	21
6.2.6 <i>Bypass</i>	21
6.2.7 <i>Scheduled Bypass</i>	21
6.2.8 <i>Controlled Diversions</i>	22
6.2.9 <i>Proper Operation and Maintenance</i>	22
6.2.10 <i>Operator Certification</i>	22
6.3 SEWAGE COLLECTION SYSTEMS	22
6.3.1 <i>Sanitary Sewage Overflows and Sewage Treatment Facility Overflows</i>	22
6.3.2 <i>Capacity, Management, Operation and Maintenance (CMOM) Program</i>	24
6.3.3 <i>Sewer Cleaning Debris and Materials</i>	24
6.4 SURFACE WATER REQUIREMENTS	25
6.4.1 <i>Permittee-Determined Limit of Quantitation Incorporated into this Permit</i>	25

6.4.2 <i>Appropriate Formulas for Effluent Calculations</i>	25
6.4.3 <i>Effluent Temperature Requirements</i>	25
6.4.4 <i>Visible Foam or Floating Solids</i>	26
6.4.5 <i>Surface Water Uses and Criteria</i>	26
6.4.6 <i>Percent Removal</i>	26
6.4.7 <i>Fecal Coliforms</i>	26
6.4.8 <i>Seasonal Disinfection</i>	26
6.4.9 <i>Whole Effluent Toxicity (WET) Monitoring Requirements</i>	26
6.4.10 <i>Whole Effluent Toxicity (WET) Identification and Reduction</i>	27
6.4.11 <i>Reopener Clause</i>	27
6.5 <b>LAND APPLICATION REQUIREMENTS</b>	27
6.5.1 <i>Sludge Management Program Standards And Requirements Based Upon Federally Promulgated Regulations</i>	27
6.5.2 <i>General Sludge Management Information</i>	27
6.5.3 <i>Sludge Samples</i>	27
6.5.4 <i>Land Application Characteristic Report</i>	28
6.5.5 <i>Calculation of Water Extractable Phosphorus</i>	28
6.5.6 <i>Monitoring and Calculating PCB Concentrations in Sludge</i>	28
6.5.7 <i>Annual Land Application Report</i>	29
6.5.8 <i>Other Methods of Disposal or Distribution Report</i>	29
6.5.9 <i>Approval to Land Apply</i>	29
6.5.10 <i>Soil Analysis Requirements</i>	29
6.5.11 <i>Land Application Site Evaluation</i>	29
6.5.12 <i>Class A Sludge: Fecal Coliform Density Requirement</i>	30
6.5.13 <i>Class A Sludge: Pasteurization Process</i>	30
6.5.14 <i>Class A Sludge: Alkaline Treatment Process</i>	30
6.5.15 <i>Vector Control: pH Adjustment</i>	30
6.5.16 <i>Land Application of Sludge Which Contains Elevated Levels of Radium-226</i>	30
<b>7 SUMMARY OF REPORTS DUE</b>	<b>31</b>

# 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-Hr flow proportional composite sampler intake located prior to the influent Parshall flume in the influent wetwell.

## 1.2 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

### 1.2.1 Sampling Point 701 - INFLUENT

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Continuous	Continuous	
BOD <sub>5</sub> , 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	Grab	See subsection 1.2.1.1 for mercury monitoring requirements.

#### 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, Waste Type/Sample Contents and Treatment Description (as applicable)
102	In-Plant: Collect mercury field blank using standard sample handling procedures.

### 2.2 Monitoring Requirements and Limitations

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

#### 2.2.1 Sampling Point 102 - FIELD BLANK

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Mercury, Total Recoverable		ng/L	Quarterly	Blank	See subsection 2.2.1.1 for mercury monitoring requirements.

##### 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-Hr Flow Proportional Composite sampler intake located at the beginning of the post-aeration tank. Flow monitor and grab sample intake located at the exit of the post-aeration tank.
602	In-stream Sampling Point 602: representative water samples shall be collected from the South Fork of the Lemonweir. Sample point 602 is located downstream of the Tomah WWTP Outfall, at the Forbes Road Bridge (44.00082, -90.46973). Sample point 602 correlates with the sample locations described in the approved AM Plan No. WQT-2017-0001.
603	In-stream Sampling Point 603: representative water samples shall be collected from the South Fork of the Lemonweir. Sample point 603 is located upstream of the Tomah WWTP Outfall, at the North Glendale Avenue Bridge (43.99776, -90.49475). Sample point 603 correlates with the sample locations described in the approved AM Plan No. WQT-2017-0001.
604	In-stream Sampling Point 604: representative water samples shall be collected from Council Creek. Sample point 604 is located upstream of the Tomah WWTP Outfall, at the Townline Road Bridge (43.98658, -90.49604). Sample point 604 correlates with the sample locations described in the approved AM Plan No. WQT-2017-0001.

#### 3.2 Monitoring Requirements and Effluent Limitations

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

##### 3.2.1 Sampling Point (Outfall) 001 - EFFLUENT

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Continuous	Continuous	
BOD <sub>5</sub> , Total	Weekly Avg	25 mg/L	5/Week	24-Hr Flow Prop Comp	Limit in effect November 1 through April 30.
BOD <sub>5</sub> , Total	Weekly Avg	15 mg/L	5/Week	24-Hr Flow Prop Comp	Limit in effect May 1 through June 30 and September 1 through October 31.
BOD <sub>5</sub> , Total	Weekly Avg	13 mg/L	5/Week	24-Hr Flow Prop Comp	Limit in effect July 1 through August 31.
BOD <sub>5</sub> , Total	Monthly Avg	25 mg/L	5/Week	24-Hr Flow Prop Comp	Limit in effect November 1 through April 30.
BOD <sub>5</sub> , Total	Monthly Avg	15 mg/L	5/Week	24-Hr Flow Prop Comp	Limit in effect May 1 through June 30 and September 1 through October 31.

<b>Monitoring Requirements and Effluent Limitations</b>					
<b>Parameter</b>	<b>Limit Type</b>	<b>Limit and Units</b>	<b>Sample Frequency</b>	<b>Sample Type</b>	<b>Notes</b>
BOD <sub>5</sub> , Total	Monthly Avg	13 mg/L	5/Week	24-Hr Flow Prop Comp	Limit in effect July 1 through August 31.
BOD <sub>5</sub> , Total	Weekly Avg	479 lbs/day	5/Week	Calculated	Limit in effect November 1 through April 30.
BOD <sub>5</sub> , Total	Weekly Avg	288 lbs/day	5/Week	Calculated	Limit in effect May 1 through June 30 and September 1 through October 31.
BOD <sub>5</sub> , Total	Weekly Avg	249 lbs/day	5/Week	Calculated	Limit in effect July 1 through August 31.
Suspended Solids, Total	Weekly Avg	15 mg/L	5/Week	24-Hr Flow Prop Comp	Limit in effect May 1 through October 31.
Suspended Solids, Total	Weekly Avg	25 mg/L	5/Week	24-Hr Flow Prop Comp	Limit in effect November 1 through April 30.
Suspended Solids, Total	Monthly Avg	15 mg/L	5/Week	24-Hr Flow Prop Comp	Limit in effect May 1 through October 31.
Suspended Solids, Total	Monthly Avg	25 mg/L	5/Week	24-Hr Flow Prop Comp	Limit in effect November 1 through April 30.
Suspended Solids, Total	Weekly Avg	288 lbs/day	5/Week	Calculated	Limit in effect May 1 through October 31.
Suspended Solids, Total	Weekly Avg	479 lbs/day	5/Week	Calculated	Limit in effect November 1 through April 30.
pH Field	Daily Max	9.0 su	Daily	Grab	
pH Field	Daily Min	6.0 su	Daily	Grab	
Dissolved Oxygen	Daily Min	7.5 mg/L	Daily	Grab	Limit in effect July 1 through August 31.
Dissolved Oxygen	Daily Min	8.5 mg/L	Daily	Grab	Limit in effect September 1 through June 30.
Nitrogen, Ammonia (NH <sub>3</sub> -N) Total	Daily Max	9.4 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect October 1 through May 31.
Nitrogen, Ammonia (NH <sub>3</sub> -N) Total	Daily Max	5.3 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect June 1 through September 30.
Nitrogen, Ammonia (NH <sub>3</sub> -N) Total	Weekly Avg	9.4 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect October 1 through May 31.
Nitrogen, Ammonia (NH <sub>3</sub> -N) Total	Weekly Avg	5.3 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect June 1 through September 30.
Nitrogen, Ammonia (NH <sub>3</sub> -N) Total	Monthly Avg	7.3 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect April 1 through May 31.
Nitrogen, Ammonia (NH <sub>3</sub> -N) Total	Monthly Avg	4.7 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect June 1 through September 30.
Nitrogen, Ammonia (NH <sub>3</sub> -N) Total	Monthly Avg	9.4 mg/L	3/Week	24-Hr Flow Prop Comp	Limit in effect October 1 through March 31.
Fecal Coliform	Geometric Mean - Wkly	780 #/100 ml	2/Week	Grab	Monitoring required and limit in effect May 1 through September 30.

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Fecal Coliform	Geometric Mean - Monthly	400 #/100 ml	2/Week	Grab	Monitoring required and limit in effect May 1 through September 30.
Phosphorus, Total	Monthly Avg	1.0 mg/L	5/Week	24-Hr Flow Prop Comp	
Phosphorus, Total	6-Month Avg	0.6 mg/L	5/Week	24-Hr Flow Prop Comp	This is an adaptive management interim limit that will go into effect beginning May 1, 2019. See subsection 3.2.1.2 for "Total Phosphorus Interim Limit, Averaging Periods and Compliance Determination".
Phosphorus, Total		lbs/day	5/Week	Calculated	Calculate the daily mass discharge of phosphorus in lbs/day on the same days phosphorus sampling occurs. Daily mass (lbs/day) = daily concentration (mg/L) x daily flow (MGD) x 8.34.
Mercury, Total Recoverable	Daily Max	3.8 ng/L	Quarterly	Grab	This is an Alternative Mercury Effluent Limit. See subsections 3.2.1.7 for Mercury Variance information, 3.2.1.8 for Mercury Monitoring requirements and 5.2 for the Mercury PMP compliance schedule.
Acute WET		TU <sub>a</sub>	See Listed Qtr(s)	24-Hr Flow Prop Comp	See subsection 3.2.1.9 for Whole Effluent Toxicity (WET) testing dates and WET requirements.
Chronic WET		TU <sub>c</sub>	See Listed Qtr(s)	24-Hr Flow Prop Comp	See subsection 3.2.1.9 for Whole Effluent Toxicity (WET) testing dates and WET requirements.
Copper, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	Monitor Only - January 1, 2022 through December 31, 2022. See subsection 3.2.1.10 for information on Total Metals Analyses.

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Zinc, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	Monitor Only - January 1, 2022 through December 31, 2022. See subsection 3.2.1.10 for information on Total Metals Analyses.
Chloride		mg/L	Monthly	24-Hr Flow Prop Comp	Monitor Only - January 1, 2022 through December 31, 2022.
Temperature Maximum		deg F	Continuous	Continuous	Monitor Only - January 1, 2022 through December 31, 2022. See subsection 3.2.1.11 for temperature monitoring requirements.
Nitrogen, Total Kjeldahl		mg/L	Quarterly	24-Hr Flow Prop Comp	Monitor Only
Nitrogen, Nitrite + Nitrate Total		mg/L	Quarterly	24-Hr Flow Prop Comp	Monitor Only
Nitrogen, Total		mg/L	Quarterly	Calculated	Monitor Only

### 3.2.1.1 Annual Average Design Flow

The annual average design flow of the permittee's wastewater treatment facility is 2.28 MGD.

### 3.2.1.2 Total Phosphorus Interim Limit, Averaging Periods and Compliance Determination

The adaptive management total phosphorus interim limit of 0.6 mg/L goes into effect May 1, 2019 beginning the averaging period from May 1, 2019 through October 31, 2019. The averaging periods are May through October and November through April. Compliance with the 6-month average limit is evaluated at the end of each 6-month period on April 30<sup>th</sup> and October 31<sup>st</sup> annually.

### 3.2.1.3 Phosphorus Limitation(s) and Adaptive Management Requirements

Tomah has requested and the Department has approved a plan to implement a watershed adaptive management approach under s. NR 217.18, Wis. Adm. Code, as a means for Tomah to achieve compliance with the phosphorus water quality standard in s. NR 102.06, Wis. Adm. Code. The phosphorus limitations and conditions in this permit reflect the approved adaptive management plan WQT-2017-0001. Failure to implement terms and conditions of this section is a violation of this permit. The permittee shall design and implement the actions identified in AM Plan No. WQT-2017-0001 in accordance with the goals and measures identified in the approved plan. If total phosphorus loadings within the South Fork of the Lemonweir River action area, as identified in WQT-2017-0001, are not reduced by at least 497 pounds per year by March 31, 2024 the watershed adaptive management option may not be available to the permittee upon permit reissuance.

Pursuant to s. NR 217.18(3)(e)2, Wis. Adm. Code, the adaptive management interim limitation is 0.6 mg/L, expressed as a six-month average. Additionally, a 1.0 mg/L limitation expressed as a monthly average is required. The final calculated water quality based effluent limitations for phosphorus are a six-month seasonal average limitation of 0.075 mg/L (1.4 lbs/day) and a monthly average limitation of 0.225 mg/L based on current in-stream phosphorus data. These limitations may be recalculated based on changes in the in-stream data at the time of permit reissuance. These limits will become effective at the end of four permit terms unless the adaptive

management project is terminated per s. NR 217.18(3)(g), Wis. Adm. Code, in which case the limits may be imposed at an earlier date, or the phosphorus reductions specified in the adaptive management plan have been achieved.

### **3.2.1.4 Adaptive Management Reopener Clause**

Per s. NR 217.18(3)(g), Wis. Adm. Code, the Department may terminate the adaptive management option for a permittee through permit modification or at permit reissuance and require compliance with a phosphorus effluent limitation calculated under s. NR 217.13, Wis. Adm. Code, or a US EPA approved TMDL based on any of the following reasons:

1. Failure to implement the adaptive management actions in accordance with the approved adaptive management plan and compliance schedule established in the permit.
2. New information becomes available that changes the Department's determinations made under s. NR 217.18(2), Wis. Adm. Code.
3. Circumstances beyond the permittee's control have made compliance with the applicable phosphorus criterion in s. NR 102.06, Wis. Adm. Code, pursuant to the plan's goals and measures infeasible.
4. A determination by the Department that sufficient reductions have not been achieved to timely reduce the amount of total phosphorus to meet the criteria in s. NR 102.06, Wis. Adm. Code.

### **3.2.1.5 Adaptive Management Requirements – Optimization**

The permittee shall continue to optimize performance to control phosphorus discharges in accordance with s. NR 217.18(3)(c), Wis. Adm. Code.

### **3.2.1.6 Phosphorus Limits and The Wisconsin River TMDL**

A Total Maximum Daily Load (TMDL) is being developed for Wisconsin River to address total phosphorus water quality impairments within the TMDL area. This TMDL will likely result in limitations for total phosphorus that must be included in WPDES permits, which may be different than those calculated for this reissuance. TMDL-derived limits may be included in lieu of or in addition to the calculated limits upon permit reissuance or modification once the TMDL has been approved by U.S. EPA, according to s. NR 217.16, Wis. Adm. Code.

### **3.2.1.7 Mercury Variance – Implement Pollutant Minimization Plan**

This permit contains a variance to the water quality-based effluent limit (WQBEL) for mercury granted in accordance with s. 283.15, Stats. 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 mercury pollutant minimization measures specified below, (c) follow the Pollutant Minimization Plan titled “City of Tomah Mercury Pollutant Minimization Plan (PMP)/Source Reduction Measures (SRM) Plan” dated August 2018 and (d) perform the actions listed in the compliance schedule. (See the Schedules section herein.):

- Comply with required mercury testing procedures and frequency as outlined in the WPDES permit;
- Explore possible operational influences on mercury levels, such as process chemicals. Examine the difference between influent and effluent mercury values through research and sampling;
- Conduct additional influent and/or collection system monitoring to identify variation in mercury levels based on time, location in the collection system or other factors annually;
- Review scientific literature and case studies from other POTWs to draw ideas from successful source identification/reduction activities elsewhere;
- Communicate safe mercury disposal messages to City Residents;

- Discuss mercury management in direct meeting with users in healthcare, schools and industrial dischargers to identify any remaining mercury sources and provide information about disposal/alternatives;
- Implement other outreach and/or regulatory approaches as may be informed by research and analysis;
- Enforce EPA requirements for all dental offices to install and maintain amalgam separators at all chairs in each dental office;
- Continued enforcement of sewer use ordinance;
- Explore whether revisions to the sewer use ordinances would be helpful in advancing the City of Tomah's objectives toward mercury; and
- Publicize options for residential and commercial disposal of mercury, particularly the Monroe County Clean Sweep semi-annual hazardous waste collection program.

### 3.2.1.8 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.

### 3.2.1.9 Whole Effluent Toxicity (WET) Testing

**Primary Control Water:** South Fork of the Lemonweir River

**Instream Waste Concentration (IWC):** 54%

**Acute Mixing Zone Concentration:** N/A

**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 once each year in rotating quarters in order to collect seasonal information about the discharge. Tests are required during the following quarters.

- **Acute:** 4<sup>th</sup> quarter (Oct-Dec) 2019  
3<sup>rd</sup> quarter (July-Sep) 2020  
2<sup>nd</sup> quarter (April-June) 2021  
1<sup>st</sup> quarter (Jan-March) 2022  
3<sup>rd</sup> quarter (July-Sep) 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 3rd quarter (July-Sep) 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:** 4<sup>th</sup> quarter (Oct-Dec) 2019  
3<sup>rd</sup> quarter (July-Sep) 2020  
2<sup>nd</sup> quarter (April-June) 2021  
1<sup>st</sup> quarter (Jan-March) 2022  
3<sup>rd</sup> quarter (July-Sep) 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 in 3rd quarter (July-Sep) 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 also complete the "Whole Effluent Toxicity Test Report Form" (Section 6, "*State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2<sup>nd</sup> 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 1.8 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).

### 3.2.1.10 Total Metals Analyses

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

### 3.2.1.11 Effluent Temperature Monitoring

For monitoring temperature continuously, collect measurements in accordance with s. NR 218.04(13). This means that discrete measurements shall be recorded at intervals of not more than 15 minutes during the 24-hour period. In either case, report the maximum temperature measured during the day on the DMR.

### 3.2.2 Sampling Point 602 - IN-STREAM DOWNSTREAM; 603 - IN-STREAM UPSTREAM, and 604 - IN-STREAM UPSTREAM

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	1/ 2 Weeks	Measure	Provide measurement of river flow for each day that in-stream phosphorus monitoring is performed.

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Phosphorus, Total		mg/L	1/ 2 Weeks	Grab	Sample as outlined in the approved adaptive management plan (May through October).
Phosphorus, Total		lbs/month	Monthly	Total Monthly	See subsection 3.2.2.4 for Total Monthly TP Loads and the standard requirements section calculation of total monthly loads.

### 3.2.2.1 Surface Water Sampling for Total Phosphorus

When sampling surface waters for total phosphorus, sample collection and handling protocol as specified in Chapter 5 of the “Guidance for Implementing Wisconsin’s Phosphorus Water Quality Standards for Point Source Discharges” shall be followed. (Available at [dnr.wi.gov](http://dnr.wi.gov); search for “phosphorus guidance”).

When testing for total phosphorus in surface water samples, use the test procedures specified by Standard Requirement 6.1.2. Analytical methods used shall enable the laboratory to quantitate total phosphorus at levels below the water quality criterion of 0.075 mg/L. If the required level of quantitation cannot be met by any of the methods available in ch. NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected.

When surface water samples are collected by Water Action Volunteers, the “The Volunteer Monitor’s Guide To Quality Assurance Project Plans” shall be implemented. (Available at [www.epa.gov](http://www.epa.gov); search for “The Volunteer Monitor’s Guide To Quality Assurance Project Plans”).

### 3.2.2.2 Voluntary Surface Water Sampling for Total Phosphorus

River flow and total phosphorus may voluntarily be performed from November 1 through April 30 annually. When voluntary in-stream monitoring is completed monitoring results shall be reported on the monthly eDMR. Report river flow measurements for each day phosphorus monitoring is performed.

### 3.2.2.3 Reporting Surface Water Sampling Results for Total Phosphorus and Flow

The permittee shall report total phosphorus monitoring and river flow measurements results for surface waters samples collected at Sampling Point 602, 603 and 604 along with the river flow measurements at Sampling Points 602, 603 and 604 on monthly eDMRs. The monitoring results shall be submitted by the date specified on the eDMR.

In addition, all total phosphorus test results for surface water samples collected at Sampling Points 602, 603 and 604 and all other surface water sampling points identified in Adaptive Management Plan No. WQT-2017-0001 shall be reported to the Department using the Department’s Laboratory Data Entry System (LDES). Test results for the year shall be submitted by January 21<sup>st</sup> of the following year. (Available at [dnr.wi.gov](http://dnr.wi.gov); search “Laboratory Data Entry System”).

### 3.2.2.4 Total Monthly Total Phosphorus (TP) Loads

Use the following methods to calculate the total monthly phosphorus loading in the South Fork of the Lemonweir River up-stream and downstream of the treatment plant and in Council Creek upstream of the treatment plant expressed as a mass in lbs/month:

- 1) Convert mg/L to lbs/day using the following equation:

$$\text{Daily TP loading (lbs/day)} = \text{TP concentration (mg/L)} \times [\text{Daily Flow (cfs)} \div 1.55] \times 8.34$$

- 2) On a monthly basis, average the reported daily TP loading, then multiply the average by the number of days during the month and report the product as "Phosphorus, Total" (in lbs/month) for the last day of the month on the eDMR.

$$\text{Phosphorus, Total (lbs/month)} = \text{Average of daily TP loading (lbs/day)} \times \text{Number of days/month}$$

## 4 Land Application Requirements

### 4.1 Sampling Point(s)

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

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
005	Class A Alkaline Stabilized Cake, representative composite sludge samples shall be collected quarterly and monitored for Lists 1, 2, 3 and 4, annually for Radium-226 and once in 2020 for PCBs.

### 4.2 Monitoring Requirements and Limitations

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

#### 4.2.1 Sampling Point (Outfall) 005 - SLUDGE

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

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Potassium, Total Recoverable		Percent	Quarterly	Composite	
Radium 226 Dry Wt		pCi/g	Annual	Composite	
PCB Total Dry Wt	Ceiling	50 mg/kg	Once	Composite	Jan 1, 2020 - Dec 31, 2020
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	Jan 1, 2020 - Dec 31, 2020

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

#### 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 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:

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

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

#### 4.2.1.4 Sludge Analysis for PCBs

The permittee shall analyze the sludge for Total PCBs one time during **2020**. 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.

**4.2.1.5 Lists 1, 2, 3, and 4**

<b>List 1</b>	
<b>TOTAL SOLIDS AND METALS</b>	
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)	

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

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

<b>Option</b>	<b>Limit</b>	<b>Where/When it Shall be Met</b>
Volatile Solids Reduction	≥38%	Across the process
Specific Oxygen Uptake Rate	≤1.5 mg O <sub>2</sub> /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

**4.2.1.6 Daily Land Application Log**

<b>Daily Land Application Log</b>		
<b>Discharge Monitoring Requirements and Limitations</b>		
<p>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.</p>		
<b>Parameters</b>	<b>Units</b>	<b>Sample Frequency</b>
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 Watershed Adaptive Management Option Annual Report Submittals

The permittee shall submit annual reports on the implementation of AM Plan No. WQT-2017-0001.

Required Action	Due Date
<p><b>Annual Adaptive Management Report:</b> Submit an annual adaptive management progress report. The annual adaptive management progress report shall:</p> <ul style="list-style-type: none"> <li>o Identify those actions from the approved adaptive management plan that were completed during the previous calendar year and those actions that are in progress;</li> <li>o Evaluate collected monitoring data;</li> <li>o Document progress in achieving the goals and measures identified in the approved adaptive management plan;</li> <li>o Describe the outreach and education efforts that occurred during the past calendar year;</li> <li>o Identify any corrections or adjustments to the adaptive management plan that are needed to achieve compliance with the phosphorus water quality standards specified in s. NR 102.06, Wis. Adm. Code;</li> <li>o Describe any updates needed to Tomah's approved phosphorus optimization plan; and</li> <li>o Submit results from all sample points outlined in AM plan WQT-2017-0001 to the Department using the Department's Laboratory Data Entry System (LDES).</li> </ul>	01/31/2020
<p><b>Annual Adaptive Management Report #2:</b> Submit an adaptive management progress report as defined above.</p>	01/31/2021
<p><b>Annual Adaptive Management Report #3:</b> Submit an adaptive management progress report as defined above.</p>	01/31/2022
<p><b>Annual Adaptive Management Report #4:</b> Submit an adaptive management progress report as defined above.</p>	01/31/2023
<p><b>Final Adaptive Management Report:</b> Submit the final adaptive management report documenting the success in meeting the watershed phosphorus reduction target of 497 lbs/yr, as well as the anticipated future reduction in phosphorus sources and phosphorus effluent concentrations. The report shall summarize adaptive management activities that have been implemented during the current permit term and state which, if any, actions from the approved adaptive management plan WQT-2017-0001 were not pursued and why. The report shall include an analysis of trends in effluent and in-stream monthly and six-month average phosphorus concentrations and total mass of phosphorus based on phosphorus sampling and flow data of effluent and the South Fork of the Lemonweir River during the current permit term. The report shall also include an analysis of how effluent phosphorus varies with time and with significant loadings of phosphorus such as loads from large storm events.</p> <p>Additionally the report shall include proposed AM goals and actions for negotiations with the department if the permittee intends to seek a renewed AM plan per s. NR 217.18, Wis. Adm. Code, for the reissued permit.</p>	01/31/2024
<p><b>Annual Adaptive Management Reports After Permit Expiration:</b> In the event that this permit is not reissued on time, the permittee shall continue to submit annual adaptive management reports each year covering AM activities implemented and phosphorus concentration trends.</p>	

## 5.2 Mercury Pollutant Minimization Program

As a condition of the variance to the water quality based effluent limitation(s) for mercury granted in accordance with s. NR 106.145(6), Wis. Adm. Code, the permittee shall perform the following actions.

Required Action	Due Date
<p><b>Annual Mercury Progress Reports:</b> Submit an annual mercury progress report. The annual mercury progress report shall:</p> <p>Indicate which mercury pollutant minimization activities or activities outlined in the approved Pollutant Minimization Plan, “City of Tomah Mercury Pollutant Minimization Plan (PMP)/Source Reduction Measures (SRM) Plan” dated August 2018 have been implemented;</p> <p>Include an analysis of trends in quarterly and annual total effluent mercury concentrations based on mercury sampling; and</p> <p>Include an analysis of how influent and effluent mercury varies with time and with significant loading of mercury such as loads from industries into the collection system.</p> <p>The first annual mercury progress report is to be submitted by the Due Date.</p>	01/31/2020
<p><b>Annual Mercury Progress Report #2:</b> Submit a mercury progress report as defined above.</p>	01/31/2021
<p><b>Annual Mercury Progress Report #3:</b> Submit a mercury progress report as defined above.</p>	01/31/2022
<p><b>Annual Mercury Progress Report #4:</b> Submit a mercury progress report as defined above.</p>	01/31/2023
<p><b>Final Mercury Report:</b> Submit a final report documenting the success in reducing mercury concentrations in the effluent, as well as the anticipated future reduction in mercury sources and mercury effluent concentrations. The report shall summarize mercury pollutant minimization activities that have been implemented during the current permit term and state which, if any, pollutant minimization activities from the approved pollutant minimization plan were not pursued and why. The report shall include an analysis of trends in quarterly and annual total effluent mercury concentrations based on mercury sampling during the current permit term. The report shall also include an analysis of how influent and effluent mercury varies with time and with significant loading of mercury such as loads from industries into the collection system.</p> <p>If the permittee intends to reapply for a mercury variance per s. NR 106.145, Wis. Adm. Code, for the reissued permit, a detailed pollutant minimization plan outlining the pollutant minimization activities proposed for the upcoming permit term shall be submitted along with the final report.</p>	09/30/2023
<p><b>Annual Mercury Reports After Permit Expiration:</b> In the event that this permit is not reissued on time, the permittee shall continue to submit annual mercury reports each year covering pollutant minimization activities implemented and mercury concentration trends.</p>	

## 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<sub>5</sub> 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<sub>5</sub> 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 Seasonal Disinfection**

Disinfection shall be provided from May 1 through September 30 of each year. Monitoring requirements and the limitation for fecal coliforms apply only during the period in which disinfection is required. Whenever chlorine is used for disinfection or other uses, the limitations and monitoring requirements for residual chlorine shall apply. A dechlorination process shall be in operation whenever chlorine is used.

#### **6.4.9 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, 2<sup>nd</sup> 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.

#### **6.4.10 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.

#### **6.4.11 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.

### **6.5 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) =

$$[\text{Water Extractable Phosphorus (mg/kg, dry wt)} \div \text{Total Phosphorus (mg/kg, dry wt)}] \times 100$$

#### 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) (I), 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 A Sludge: Fecal Coliform Density Requirement**

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

#### **6.5.13 Class A Sludge: Pasteurization Process**

Maintain the temperature of the sludge at 70° Celsius or higher for 30 minutes or longer.

#### **6.5.14 Class A Sludge: Alkaline Treatment Process**

The pH of the sewage sludge shall be raised to greater than 12 for at least 72 hours. During this time, the temperature of the sewage sludge shall be greater than 52° C for at least 12 hours. In addition, after the 72 hour period, the sewage sludge shall be air dried to at least 50% total solids.

#### **6.5.15 Vector Control: pH Adjustment**

The pH of the sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 2 hours and then at 11.5 or higher for an additional 22 hours.

#### **6.5.16 Land Application of Sludge Which Contains Elevated Levels of Radium-226**

When contributory water supplies exceed 2 pci per liter of Radium 226, monitoring for Radium 226 in sludge is required. Sludge containing Radium 226 shall be land applied in accordance with the requirements in s. NR 204.07(3)(n), Wis. Adm. Code.

## 7 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Watershed Adaptive Management Option Annual Report Submittals - Annual Adaptive Management Report	January 31, 2020	17
Watershed Adaptive Management Option Annual Report Submittals - Annual Adaptive Management Report #2	January 31, 2021	17
Watershed Adaptive Management Option Annual Report Submittals - Annual Adaptive Management Report #3	January 31, 2022	17
Watershed Adaptive Management Option Annual Report Submittals - Annual Adaptive Management Report #4	January 31, 2023	17
Watershed Adaptive Management Option Annual Report Submittals -Final Adaptive Management Report	January 31, 2024	17
Watershed Adaptive Management Option Annual Report Submittals - Annual Adaptive Management Reports After Permit Expiration	See Permit	17
Mercury Pollutant Minimization Program -Annual Mercury Progress Reports	January 31, 2020	18
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #2	January 31, 2021	18
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #3	January 31, 2022	18
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #4	January 31, 2023	18
Mercury Pollutant Minimization Program -Final Mercury Report	September 30, 2023	18
Mercury Pollutant Minimization Program -Annual Mercury Reports After Permit Expiration	See Permit	18
Compliance Maintenance Annual Reports (CMAR)	by June 30, each year	19
General Sludge Management Form 3400-48	prior to any significant sludge management changes	27
Characteristic Form 3400-49 and Lab Report	by January 31 following each year of analysis	28
Land Application Report Form 3400-55	by January 31, each year whether or not non-exceptional quality sludge is land applied	29
Other Methods of Disposal or Distribution Report Form 3400-52	by January 31, each year whether or not	29

	sludge is hauled, landfilled, incinerated, or exceptional quality sludge is distributed or land applied	
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	18

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:

West Central Region - LaCrosse, 3550 Mormon Coulee Road, La Crosse, WI 54601

