State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
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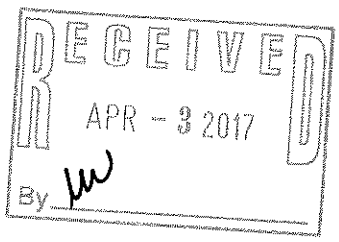

Chris Shaw
Utilities Director
City of Appleton
2006 East Newberry Street
Appleton, WI 54915-3128

SUBJECT: WPDES Permit Reissuance No. WI-0023221-08-0
Appleton Wastewater Treatment Facility, 2006 East Newberry Street, Appleton, Wisconsin

Dear Permittee:

Your Wisconsin Pollutant Discharge Elimination System (WPDES) Permit is enclosed. The conditions of the enclosed permit reissuance were determined using the permit application, information from your WPDES permit file, other information available to the Department, comments received during the public notice period, and applicable Wisconsin Administrative Codes. All discharges from this facility and actions or reports relating thereto shall be in accordance with the terms and conditions of the enclosed permit.

This enclosed permit requires you to submit monitoring results to the Department on a periodic basis. Monitoring forms, which must be submitted electronically, are available on the Department's web page. Go to the DNR Switchboard page at http://dnr.wi.gov/topic/switchboard/ to log in and access your monitoring forms. For your convenience, there is a 'Summary of Reports Due' at the end of the enclosed permit that shows a synopsis of the required reports and monitoring forms.

The WPDES permit program has been approved by the Administrator of the U.S. Environmental Protection Agency pursuant to Section 402(b) of the Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. Section 1342 (b)). The terms and conditions of the enclosed permit are accordingly subject to enforcement under ss. 283.89 and 283.91, Stats., and Section 309 of the Federal Act (33 U.S.C. Section 1319).

The Department has the authority under chs. 160 and 283, Wis. Stats., to establish effluent limitations, monitoring requirements, and other permit conditions for discharges to groundwater and surface waters of the State. The Department also has the authority to issue, reissue, modify, terminate, or revoke and reissue WPDES permits under ch. 283, Wis. Stats.

The enclosed permit contains water quality-based effluent limitations that are necessary to ensure the water quality standards for the Lower Fox River (WBIC=117900) are met. You may apply for a variance from the water quality standard used to derive the limitations pursuant to s. 283.15, Stats., by submitting an application to the Director of the Bureau of Water Quality, P.O. Box 7921, Madison, Wisconsin 53707 within 60 days of the date the permit was issued (see "Date Permit Signed/Issued" after the signature on the front page of the enclosed permit). This statute also allows the permittee to apply for a variance to the water quality standard when applying for reissuance of the permit. Subchapter III of ch. NR 200, Wis. Adm. Code, specifies the procedures that must be followed and the information that must be included when submitting an application for a variance.

If your permit contains a stringent Water Quality Based Effluent Limit for Phosphorus, there is a Compliance Schedule requirement to complete a Phosphorus Operational Evaluation and Optimization Report. To streamline the Report preparation and review process the Department has prepared a Worksheet which should be used to develop the report. The worksheet may be found at : http://dnr.wi.gov/topic/surfacewater/phosphorus.html.

To challenge the reasonableness of or necessity for any term or condition of the enclosed permit, s. 283.63, Stats., and ch. NR 203, Wis. Adm. Code, require that you file a verified petition for review with the Secretary of the Department of Natural Resources within 60 days of the date the permit was issued (see "Date Permit Signed/Issued" after the signature on the front page of the enclosed permit). For permit-related decisions that are not reviewable pursuant to s. 283.63, Stats., it may be possible for permittees or other persons to obtain an administrative review pursuant to s. 227.42, Stats., and s. NR 2.05(5), Wis. Adm. Code, or a judicial review pursuant to s. 227.52, Stats. If you choose to pursue one of these options, you should know that Wisconsin Statutes and Administrative Code establish time periods within which requests to review Department decisions must be filed.

Sincerely,

Kelley O'Connor

Kelley O'Connor
Wastewater Supervisor, Northeast Region

Dated: March 29, 2017

cc: Legal Permit File
Cyndi Barr, WT/3
U.S. Fish and Wildlife Service (Electronic Copy via Email)
Mark Corbett
EPA – Region V (Electronic Copy via Email)

WISCONSIN
DEPT. OF NATURAL RESOURCES

WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

City of Appleton

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility located at
2006 East Newberry Street, Appleton, Wisconsin
to
the Fox River (WBIC 117900) in the Fox River/Appleton watershed (LF04) of the Lower Fox River Basin in Outagamie County

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

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

State of Wisconsin Department of Natural Resources
For the Secretary

By Kelley O'Connor
Kelley O'Connor
Wastewater Supervisor, Northeast Region
March 29, 2017
Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - April 01, 2017 **EXPIRATION DATE - March 31, 2022**

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1 Influent Requirements

1.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
701	Influent samples shall be collected from the influent channel prior to primary clarification. These samples shall be representative of the total influent loading to the facility from all points in the collection system.

1.2 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

1.2.1 Sampling Point 701 - Total Influent

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
BOD_5, Total		mg/L	5/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total		mg/L	5/Week	24-Hr Flow Prop Comp	
Cadmium, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	
Chromium, Total Recoverable		µg/L	Monthly	24-Hr Comp	
Copper, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	
Lead, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	
Nickel, Total Recoverable		µg/L	Monthly	24-Hr Comp	
Zinc, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	
Mercury, Total Recoverable		ng/L	Monthly	24-Hr Flow Prop Comp	

1.2.1.1 Total Metals Analyses

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

1.2.1.2 Sample Analysis

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

1.2.1.3 Mercury Monitoring

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

2 In-Plant Requirements

2.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
111	Field Blank - Sample point for reporting results of Mercury field blanks collected 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 111 - Field Blank

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

2.2.1.1 Mercury Monitoring

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

3 Surface Water Requirements

3.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
001	Effluent samples shall be taken from the sampling device located in building J. The sampling device shall draw samples from the effluent channel, after Pumping Station # 1, prior to discharge to the Fox River.
601	Lower Fox River data collected at the Appleton Lutz Park-USGS/ACOE Gauge Station - and/or other alternative method or site approved by the Department - as reported by the Lower Fox River Discharger's Association shall be used in the determination of the daily CBOD5 wasteload allocation.
008	Reporting requirements for determination of compliance with CBOD5 wasteload allocation. These requirements are applicable from May 1 through October 31, each year.

3.2 Monitoring Requirements and Effluent Limitations

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

3.2.1 Sampling Point (Outfall) 001 - Effluent

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
$CBOD_5$	Monthly Avg	25 mg/L	5/Week	24-Hr Flow Prop Comp	Applies November 1 through April 30, each year
$CBOD_5$	Weekly Avg	40 mg/L	5/Week	24-Hr Flow Prop Comp	Applies November 1 through April 30, each year
$CBOD_5$	Monthly Avg	25 mg/L	Daily	24-Hr Flow Prop Comp	Applies May 1 through October 31, each year.
$CBOD_5$	Weekly Avg	40 mg/L	Daily	24-Hr Flow Prop Comp	Applies May 1 through October 31, each year.
pH Field	Daily Max	9.0 su	Daily	Continuous	
pH Field	Daily Min	6.0 su	Daily	Continuous	
Fecal Coliform	Geometric Mean - Monthly	400 #/100 ml	Weekly	Grab	Applies May 1 through September 30, each year
Fecal Coliform	Geometric Mean- Weekly	656 #/100 ml	Weekly	Grab	Applies May 1 through September 30, each year. Limit needed to conform to the requirements of 40 CFR 122.45(d).
Chlorine, Total Residual	Daily Max	38 µg/L	5/Week	Grab	Applies May 1 through September 30, each year, and whenever chlorinating

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Chlorine, Total Residual	Weekly Avg	38 µg/L	5/Week	Grab	Applies May 1 through September 30, each year, and whenever chlorinating. Limit needed to comply with 40 CFR 122.45(d).
Chlorine, Total Residual	Monthly Avg	38 µg/L	5/Week	Grab	Applies May 1 through September 30, each year, and whenever chlorinating. Limit needed to comply with 40 CFR 122.45(d).
Suspended Solids, Total	Monthly Avg	30 mg/L	5/Week	24-Hr Flow Prop Comp	This is a technology-based effluent limit.
Suspended Solids, Total	Weekly Avg	45 mg/L	5/Week	24-Hr Flow Prop Comp	This is a technology-based effluent limit.
Suspended Solids, Total	Monthly Avg	1,322 lbs/day	5/Week	Calculated	This limit is based on Appleton's TSS wasteload allocation (WLA) specified in the Lower Fox TMDL. See TMDL subsection below.
Suspended Solids, Total	Weekly Avg	2,434 lbs/day	5/Week	Calculated	This limit is based on Appleton's TSS wasteload allocation (WLA) specified in the Lower Fox TMDL. See TMDL subsection below.
Phosphorus, Total	Monthly Avg	1.0 mg/L	5/Week	24-Hr Flow Prop Comp	This is an interim phosphorus limit. This limit is effective throughout the permit. See phosphorus footnote below.
Phosphorus, Total		lbs/day	5/Week	Calculated	See phosphorus subsection below.
Nitrogen, Ammonia (NH_3-N) Total	Daily Max	29 mg/L	5/Week	24-Hr Flow Prop Comp	Applies year-round
Nitrogen, Ammonia (NH_3-N) Total	Weekly Avg	28 mg/L	5/Week	24-Hr Flow Prop Comp	Applies January 1 through March 31, each year
Nitrogen, Ammonia (NH_3-N) Total	Weekly Avg	29 mg/L	5/Week	24-Hr Flow Prop Comp	Applies April only, each year
Nitrogen, Ammonia (NH_3-N) Total	Weekly Avg	11 mg/L	5/Week	24-Hr Flow Prop Comp	Applies June 1 through September 30, each year
Nitrogen, Ammonia (NH_3-N) Total	Monthly Avg	10 mg/L	5/Week	24-Hr Flow Prop Comp	Applies January 1 through March 31, each year
Nitrogen, Ammonia (NH_3-N) Total	Monthly Avg	11 mg/L	5/Week	24-Hr Flow Prop Comp	Applies April 1 through May 31, each year
Nitrogen, Ammonia (NH_3-N) Total	Monthly Avg	4.4 mg/L	5/Week	24-Hr Flow Prop Comp	Applies June 1 through September 30, each year

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Nitrogen, Ammonia (NH_3-N) Total	Monthly Avg	18 mg/L	5/Week	24-Hr Flow Prop Comp	Applies October 1 through December 31, each year
Mercury, Total Recoverable	Daily Max	3.4 ng/L	Monthly	Grab	Alternative effluent limit. See Mercury subsection below and Section 5.1 for pollutant minimization program implementation requirements.
Cadmium, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	
Chromium, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	
Copper, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	
Lead, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	
Nickel, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	
Zinc, Total Recoverable		µg/L	Monthly	24-Hr Flow Prop Comp	
Acute WET	Daily Max	1.0 TU_a	See Listed Qtr(s)	24-Hr Flow Prop Comp	See WET subsection below for WET testing requirements and schedules.
Chronic WET		rTU_c	See Listed Qtr(s)	24-Hr Flow Prop Comp	See WET subsection below for WET testing requirements and schedules.

3.2.1.1 Annual Average Design Flow

The annual average design flow of the permittee's wastewater treatment facility is 15.5 MGD.

3.2.1.2 Total Metals Analyses

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

3.2.1.3 Sample Analysis

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

3.2.1.4 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), 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.

3.2.1.5 Phosphorus Water Quality Based Effluent Limitation(s)

See the Schedules section of this permit for more information on phosphorus effluent limitations.

Interim Phosphorus Limitation: An interim phosphorus limit is set equal to 1 mg/L expressed as a monthly average in this permit. This limit is effective immediately upon permit reissuance.

Final Phosphorus Limitations: The final water quality based effluent limit for phosphorus is 23 lbs/day expressed as a six-month average and 69 lbs/day expressed as a monthly average and will take effect per the Compliance Schedule unless:

(A) As part of the application for the next reissuance, or prior to filing the application, the permittee submits either: 1.) a watershed adaptive management plan and a completed Watershed Adaptive Management Request Form 3200-139; or 2.) an application for water quality trading; or 3.) an application for a variance; or 4.) new information or additional data that supports a recalculation of the numeric limitation; and

(B) The Department modifies, revokes and reissues, or reissues the permit to incorporate a revised limitation before the expiration of the compliance schedule*.

Note: The permittee may also submit an application for a variance within 60 days of this permit reissuance, as noted in the permit cover letter, in accordance with s. 283.15, Stats.

If Adaptive Management or Water Quality Trading is approved as part of the permit application for the next reissuance or as part of an application for a modification or revocation and reissuance, the plan and specifications submittal, construction, and final effective dates for compliance with the total phosphorus WQBEL may change in the reissued or modified permit. In addition, the numeric value of the water quality based effluent limit may change based on new information or additional data. If a variance is approved for the next reissuance, interim limits and conditions will be imposed in the reissued permit in accordance with s. 283.15, Stats., and applicable regulations. A permittee may apply for a variance to the phosphorus WQBEL at the next reissuance even if the permittee did not apply for a phosphorus variance as part of this permit reissuance.

Additional Requirements: If a water quality based effluent limit has taken effect in a permit, any increase in the limit is subject to s. NR 102.05(1) and ch. NR 207, Wis. Adm. Code. When a six-month average effluent limit is specified for Total Phosphorus the applicable averaging periods are May through October and November through April.

*Note: The Department will prioritize reissuances and revocations, modifications, and reissuances of permits to allow permittees the opportunity to implement adaptive management or nutrient trading in a timely and effective manner.

3.2.1.6 Alternative Approaches to Phosphorus WQBEL Compliance

Rather than upgrading its wastewater treatment facility to comply with WQBELs for total phosphorus, the permittee may use Water Quality Trading or the Watershed Adaptive Management Option, to achieve compliance under ch. NR 217, Wis. Adm. Code, provided that the permit is modified, revoked and reissued, or reissued to incorporate any such alternative approach. The permittee may also implement an upgrade to its wastewater treatment facility in combination with Water Quality Trading or the Watershed Adaptive Management Option to achieve compliance, provided that the permit is modified, revoked and reissued, or reissued to incorporate any such alternative approach. If the Final Compliance Alternatives Plan concludes that a variance will be pursued, the Plan shall provide information regarding the basis for the variance.

3.2.1.7 Submittal of Permit Application for Next Reissuance and Adaptive Management or Pollutant Trading Plan or Variance Application

The permittee shall submit the permit application for the next reissuance at least 6 months prior to expiration of this permit. If the permittee intends to pursue adaptive management to achieve compliance with the phosphorus water

quality based effluent limitation, the permittee shall submit with the application for the next reissuance: a completed Watershed Adaptive Management Request Form 3200-139, the completed Adaptive Management Plan and final plans for any system upgrades necessary to meet interim limits pursuant to s. NR 217.18, Wis. Adm. Code. If the permittee intends to pursue pollutant trading to achieve compliance, the permittee shall submit an application for water quality trading with the application for the next reissuance. If system upgrades will be used in combination with pollutant trading to achieve compliance with the final water quality-based limit, the reissued permit will specify a schedule for the necessary upgrades. If the permittee intends to seek a variance, the permittee shall submit an application for a variance with the application for the next reissuance.

3.2.1.8 Whole Effluent Toxicity (WET) Testing

Primary Control Water: sample collected from the Fox River upstream and out of the influence of the permittee's discharge and any other known discharge- unless the use of a different control water source is approved by the Department prior to use.

Instream Waste Concentration (IWC): 9.0%

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

- **Acute:** 100, 50, 25, 12.5, 6.25% and any additional selected by the permittee.
- **Chronic:** 100, 30, 10, 3, 1% (if the IWC $\leq$30%) or 100, 75, 50, 25, 12.5% (if the IWC >30%) 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:**
  - April 1, 2017 – June 30, 2017
  - July 1, 2018 – September 30, 2018
  - October 1, 2019 – December 31, 2019
  - January 1, 2020 – March 31, 2020
  - April 1, 2021 – June 30, 2021

  Acute WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the fourth calendar year of this permit. For example, the next test would be required in January 1, 2022 – March 31, 2022.

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

- **Chronic:**
  - April 1, 2017 – June 30, 2017
  - July 1, 2018 – September 30, 2018
  - October 1, 2019 – December 31, 2019
  - January 1, 2020 – March 31, 2020
  - April 1, 2021 – June 30, 2021

Chronic WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the fourth calendar year of this permit. For example, the next test would be required in January 1, 2022 – March 31, 2022.

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

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

Determination of Positive Results: An acute toxicity test shall be considered positive if the Toxic Unit - Acute (TU_a) is greater than 1.0 for either species. The TU_a shall be calculated as follows: If $LC_{50} \geq 100$, then $TU_a = 1.0$. If LC_{50} is < 100, then $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Relative Toxic Unit - Chronic (rTU_c) is greater than 1.0 for either species. The rTU_c shall be calculated as follows: If $IC_{25} \geq$ IWC, then $rTU_c = 1.0$. If $IC_{25} <$ IWC, then $rTU_c =$ IWC $\div IC_{25}$.

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).

3.2.1.9 Total Maximum Daily Load (TMDL) Limitations

The Lower Fox River TMDL Waste Load Allocation (WLA) for Total Phosphorus and Total Suspended Solids was approved by the U.S. Environmental Protection Agency on May 18, 2012. The approved TMDL WLA limits for the City of Appleton are:

- *Total Phosphorus:* 23 lbs/day expressed as a six-month average and 69 lbs/day expressed as a monthly average.
- *Total Suspended Solids:* 1,322 lbs/day expressed as a monthly average and 2,434 lbs/day expressed as a weekly average.

The TSS limits are effective immediately upon permit reissuance. Refer to the compliance schedule for compliance dates for total phosphorus.

3.2.2 Sampling Point 601 - River Monitoring

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow River		cfs	Daily	Gauge Station	Applies May 1 through October 31, each year.
WLA Previous 4 Day Avg River Flow		cfs	Daily	Calculated	Applies May 1 through October 31, each year.
WLA Previous Day River Temp		deg F	Daily	Calculated	Applies May 1 through October 31, each year.

3.2.3 Sampling Point (Outfall) 008 - WLA CBOD5 Reporting

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
WLA $CBOD_5$ Value		lbs/day	Daily	See Table	Applies May 1 through October 31, each year.
WLA Adjusted $CBOD_5$ Value		lbs/day	Daily	Calculated	Applies May 1 through October 31, each year.
WLA $CBOD_5$ Discharged (Net)	Daily Max - Variable	lbs/day	Daily	Calculated	Applies May 1 through October 31, each year.
WLA 7 Day Sum Of WLA $CBOD_5$ Values		lbs/day	Daily	Calculated	Applies May 1 through October 31, each year.
WLA 7 Day Sum of $CBOD_5$ Discharged (Net)	Daily Max - Variable	lbs/day	Daily	Calculated	Applies May 1 through October 31, each year.

3.2.3.1 Waste Load Allocation Requirements

3.2.3.1.1 Definitions:

- *$CBOD_5$ Allocation*: The allocation of $CBOD_5$ (pounds per day $CBOD_5$), as listed in Tables 1 through 5 for Appleton, represents water quality related effluent limitations. The flow and temperature conditions used to determine the $CBOD_5$ allocation for a given day is defined below.
- *Flow*: A representative measurement of flow is the previous four-day average flow value derived daily from continuous river flow monitoring data for the Fox River. These daily measurements of river flow are collected at the Appleton Lutz Park- USGS/ACOE Gauge Station – or other alternative method or site approved by the Department –and reported by the Lower Fox River Dischargers Association.
- *Temperature*: A representative measurement of temperature is the daily average temperature value of the previous day derived from continuous river temperature monitoring data for the Fox River as reported by the Lower Fox River Dischargers Association.

3.2.3.1.2 Determination of Effluent Limitation:

For purposes of determining compliance with the wasteload allocated water quality related $CBOD_5$ effluent limitations, the following conditions shall be met:

- The sum of the net daily discharges of $CBOD_5$ for any 7-consecutive-day period shall not exceed the sum of the daily $CBOD_5$ allocation values from Tables 1 through 5 for the same 7-consecutive-day period.
- For any one-day period, the net discharge of $CBOD_5$ shall not exceed 1.20 times the $CBOD_5$ allocation value from Tables 1 through 5 for that day.

3.2.3.1.3 Monitoring Requirements:

The same 24-hour period shall be used for the collection of composite and continuous samples for river flow and temperature and all effluent characteristics listed in Table 3.2.1, including effluent flow and $CBOD_5$.

3.2.3.1.4 Reporting Requirements:

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

- The daily average river flow value (cfs);
- The daily average river temperature value (°F);
- The average of the previous 4 days of river flow values (cfs);
- The daily $CBOD_5$ allocation value (lbs. $CBOD_5$ per day from Tables 1 through 5;
- The net discharge value of $CBOD_5$ (lbs/$CBOD_5$ per day);
- The sum of the net daily discharge values of $CBOD_5$ (lbs/$CBOD_5$per day) for each 7-consecutive day period (present day discharge plus the 6 previous days of discharge);
- The sum of the daily $CBOD_5$ allocation values (lbs/$CBOD_5$ per day) for each 7-consecutive day period (present day allocation plus the allocations for the 6 previous days); and
- The daily adjusted $CBOD_5$ allocation value (1.20 x daily $CBOD_5$ allocation value).

3.2.3.2 Wasteload Allocation Tables 1 through 5

Table 1. Wasteload Allocated Effluent Values (lbs per day of $CBOD_5$)
(River mile 32.4 to 19.2)
MAY – JUNE

River Temperature (previous day average in °F)	Flow at Appleton Lutz Park (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
86 OR MORE	2471	2583	2793	3041	3307	3575	3836	4080	4341	4599	5010	5598	6453	8085	9301
82 TO 85	2457	2585	2810	3086	3373	3655	3926	4175	4456	4810	5263	5902	6806	8605	10076
78 TO 81	2423	2582	2850	3168	3487	3791	4109	4483	4903	5222	5676	6461	7491	9511	11553
74 TO 77	2387	2578	2905	3261	3600	4027	4470	4902	5251	5597	6172	6996	8064	10632	12724
70 TO 73	2361	2588	2969	3366	3856	4361	4847	5215	5616	6032	6667	7665	8677	12032	12724
66 TO 69	2363	2644	3070	3619	4189	4753	5178	5611	6107	6576	7292	8310	9537	12724	12724
62 TO 65	2410	2735	3339	3990	4652	5151	5670	6222	6759	7302	8219	9176	10822	12724	12724
58 TO 61	2521	3017	3776	4568	5178	5823	6486	7083	7783	8482	9303	10646	12724	12724	12724
54 TO 57	2852	3500	4483	5250	6081	6863	7668	8573	9249	9997	11220	12724	12724	12724	12724
50 TO 53	3431	4324	5346	6437	7426	8576	9536	10501	11574	12724	12724	12724	12724	12724	12724
46 TO 49	4451	5402	6797	8227	9770	11068	12517	12724	12724	12724	12724	12724	12724	12724	12724
42 TO 45	5852	7153	9231	11401	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724
41 OR LESS	8092	10298	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724

Table 2. Wasteload Allocated Effluent Values (lbs per day of $CBOD_5$)
(River mile 32.4 to 19.2)
JULY

River Temperature (previous day average in °F)	Flow at Appleton Lutz Park (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
86 OR MORE	2456	2558	2783	3035	3253	3311	3413	3565	3699	3767	3964	4322	4867	6437	7520
82 TO 85	2476	2598	2807	3074	3325	3476	3585	3680	3778	3988	4290	4668	5415	7041	8380
78 TO 81	2458	2619	2860	3136	3394	3619	3809	4017	4271	4492	4809	5444	6255	8155	9995
74 TO 77	2462	2617	2903	3194	3460	3783	4181	4480	4749	5006	5515	6172	6987	9425	11842
70 TO 73	2438	2639	2936	3247	3661	4156	4644	4952	5284	5664	6190	6833	7779	10938	12724
66 TO 69	2433	2671	2997	3465	4039	4616	5053	5501	5945	6349	6820	7555	8776	12724	12724
62 TO 65	2467	2729	3222	3874	4571	5095	5633	6209	6620	6991	7601	8563	10155	12724	12724
61 OR LESS	2548	2946	3692	4533	5177	5859	6527	6961	7444	7961	8810	10126	12323	12724	12724

Table 3. Wasteload Allocated Effluent Values (lbs per day of $CBOD_5$)
(River mile 32.4 to 19.2)
AUGUST

River Temperature (previous day average in °F)	Flow at Appleton Lutz Park (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
86 OR MORE	2163	2254	2473	2740	3005	3242	3447	3626	3789	3938	4141	4327	4750	6066	6947
82 TO 85	2163	2275	2509	2790	3056	3299	3513	3695	3875	4020	4304	4568	5265	6666	7736
78 TO 81	2163	2309	2567	2864	3148	3401	3626	3827	4132	4438	4701	5297	5981	7640	9264
74 TO 77	2163	2332	2624	2940	3237	3506	3841	4241	4559	4857	5342	5913	6687	8808	11001
70 TO 73	2163	2356	2681	3013	3334	3808	4257	4611	4971	5354	5909	6548	7369	10252	12724
66 TO 69	2165	2414	2765	3159	3707	4237	4657	5067	5533	6031	6542	7201	8298	12011	12724
62 TO 65	2221	2499	2938	3566	4198	4697	5202	5740	6362	6704	7250	8126	9616	12724	12724
61 OR LESS	2319	2685	3402	4161	4778	5425	6110	6690	7125	7596	8370	9611	11684	12724	12724

Table 4. Wasteload Allocated Effluent Values (lbs per day of $CBOD_5$)
(River mile 32.4 to 19.2)
SEPTEMBER

River	Flow at Appleton Lutz Park (previous four-day average in cfs)

Temperature (previous day average in °F)	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
86 OR MORE	2163	2163	2163	2397	2692	2964	3218	3452	3674	3877	4146	4420	4845	6093	6986
82 TO 85	2163	2163	2163	2458	2759	3037	3288	3518	3754	3965	4136	4557	5279	6649	7740
78 TO 81	2163	2163	2229	2558	2872	3165	3433	3675	3894	4069	4463	5167	5888	7548	9264
74 TO 77	2163	2163	2309	2652	2978	3282	3560	3836	4156	4471	4981	5751	6549	8691	10992
70 TO 73	2163	2163	2385	2744	3079	3480	3829	4176	4556	4936	5612	6363	7169	10133	12724
66 TO 69	2163	2163	2491	2867	3377	3804	4217	4642	5105	5611	6310	6977	8059	11902	12724
62 TO 65	2163	2216	2623	3237	3759	4249	4764	5294	5927	6457	6990	7864	9387	12724	12724
58 TO 61	2163	2367	3067	3709	4315	4962	5642	6386	6844	7301	8064	9322	11429	12724	12724
54 TO 57	2240	2834	3638	4405	5236	6142	6863	7427	8064	8771	9925	11751	12724	12724	12724
50 TO 53	2784	3506	4494	5607	6740	7542	8350	9271	10289	11387	12724	12724	12724	12724	12724
46 TO 49	3584	4519	6027	7494	8573	9802	11180	12708	12724	12724	12724	12724	12724	12724	12724
42 TO 45	4900	6390	8415	10088	12004	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724
41 OR LESS	7203	9360	12179	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724

Table 5. Wasteload Allocated Effluent Values (lbs per day of $CBOD_5$)
(River mile 32.4 to 19.2)

OCTOBER

River Temperature (previous day average in °F)	Flow at Appleton Lutz Park (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
66 OR MORE	2163	2163	2195	2576	2919	3298	3712	4152	4633	5164	6084	6844	8033	12165	12724
62 TO 65	2163	2163	2313	2800	3250	3737	4268	4804	5465	6181	6805	7735	9340	12724	12724
58 TO 61	2163	2163	2645	3189	3786	4442	5130	5902	6613	7078	7870	9183	11414	12724	12724
54 TO 57	2163	2395	3094	3846	4681	5587	6546	7153	7801	8519	9711	11619	12724	12724	12724
50 TO 53	2300	2924	3890	4995	6219	7210	8021	8942	9979	11099	12724	12724	12724	12724	12724
46 TO 49	2943	3846	5331	6910	8153	9383	10767	12303	12724	12724	12724	12724	12724	12724	12724
42 TO 45	4127	5585	7698	9549	11449	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724
41 OR LESS	6394	8457	11476	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724

4 Land Application Requirements

4.1 Sampling Point(s)

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

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
003	Anaerobically digested cake sludge samples shall be collected after the belt filter presses and from the storage building.
009	Final class B compost resulting from biosolids mixed with yard waste and/or wood chips.
010	Final class A compost resulting from biosolids mixed with yard waste and/or wood chips.

4.2 Monitoring Requirements and Limitations

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

4.2.1 Sampling Point (Outfall) 003 - Cake Sludge

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

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Phosphorus, Water Extractable		% of Tot P	1/ 2 Months	Composite	
Potassium, Total Recoverable		Percent	1/ 2 Months	Composite	
PCB Total Dry Wt	Ceiling	50 mg/kg	Once	Composite	Analysis required in 2018. See PCB and Priority Pollutant Scan subsection below for details.
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	Analysis required in 2018. See PCB and Priority Pollutant Scan subsection below for details.
Municipal Sludge Priority Pollutant Scan			Once	Composite	As specified in ch. NR 215.03 (1-4), Wis. Adm. Code

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

4.2.1.1 List 2 Analysis

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

4.2.1.2 Changes in Feed Sludge Characteristics

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

4.2.1.3 Multiple Sludge Sample Points (Outfalls)

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

4.2.1.4 Sludge Which Exceeds the High Quality Limit

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

[(Pollutant concentration (mg/kg) x dry tons applied/ac) ÷ 500] + previous loading (lbs/acre) = cumulative lbs pollutant per acre

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

4.2.1.5 Sludge Analysis for PCBs

The permittee shall analyze the sludge for Total PCBs one time during **2018**. The results shall be reported as "PCB Total Dry Wt". Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with Table EM in s. NR 219.04, Wis. Adm. Code and the conditions specified in Standard Requirements of this permit. PCB results shall be submitted by January 31, following the specified year of analysis.

4.2.1.6 Lists 1, 2, 3, and 4

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

List 2 **NUTRIENTS** See the Monitoring Requirements and Limitations table above for monitoring frequency for the List 2 parameters
Solids, Total (percent)
Nitrogen Total Kjeldahl (percent)
Nitrogen Ammonium (NH4-N) Total (percent)
Phosphorus Total as P (percent)
Phosphorus, Water Extractable (as percent of Total P)
Potassium Total Recoverable (percent)

List 3
PATHOGEN CONTROL FOR CLASS B SLUDGE

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

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

Parameter	Unit	Limit
Fecal Coliform*	MPN/gTS or CFU/gTS	2,000,000
OR, ONE OF THE FOLLOWING PROCESS OPTIONS		
Aerobic Digestion	Air Drying	
Anaerobic Digestion	Composting	
Alkaline Stabilization	PSRP Equivalent Process	

* The Fecal Coliform limit shall be reported as the geometric mean of 7 discrete samples on a dry weight basis.

List 4
VECTOR ATTRACTION REDUCTION

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

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

Option	Limit	Where/When it Shall be Met
Volatile Solids Reduction	≥38%	Across the process
Specific Oxygen Uptake Rate	≤1.5 mg O_2/hr/g TS	On aerobic stabilized sludge
Anaerobic bench-scale test	<17 % VS reduction	On anaerobic digested sludge
Aerobic bench-scale test	<15 % VS reduction	On aerobic digested sludge
Aerobic Process	>14 days, Temp >40°C and Avg. Temp > 45°C	On composted sludge
pH adjustment	>12 S.U. (for 2 hours) and >11.5 (for an additional 22 hours)	During the process
Drying without primary solids	>75 % TS	When applied or bagged
Drying with primary solids	>90 % TS	When applied or bagged
Equivalent Process	Approved by the Department	Varies with process
Injection	-	When applied
Incorporation	-	Within 6 hours of application

4.2.1.7 Daily Land Application Log

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

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

4.2.2 Sampling Point (Outfall) 009 - Biosolids- Compost Class B

Compost created from mixing biosolids with yard waste and/or wood chips is subject to the requirements listed in the tables below. The compost is considered an alternative use of sludge, and its uses are managed in accordance with s. NR 204.09, Wis. Adm. Code.

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	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Zinc Dry Wt	High Quality	2,800 mg/kg	Quarterly	Composite	
Nitrogen, Total Kjeldahl		Percent	Quarterly	Composite	
Nitrogen, Ammonium (NH_4-N) Total		Percent	Quarterly	Composite	
Phosphorus, Total		Percent	Quarterly	Composite	
Phosphorus, Water Extractable		% of Tot P	Quarterly	Composite	
Potassium, Total Recoverable		Percent	Quarterly	Composite	

4.2.2.1 Lists 1, 2, 3, and 4

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

List 2 **NUTRIENTS** See the Monitoring Requirements and Limitations table above for monitoring frequency for the List 2 parameters
Solids, Total (percent)
Nitrogen Total Kjeldahl (percent)
Nitrogen Ammonium (NH4-N) Total (percent)
Phosphorus Total as P (percent)
Phosphorus, Water Extractable (as percent of Total P)
Potassium Total Recoverable (percent)

List 3
PATHOGEN CONTROL FOR CLASS B SLUDGE

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

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

Parameter	Unit	Limit
Fecal Coliform*	MPN/gTS or CFU/gTS	2,000,000
OR, ONE OF THE FOLLOWING PROCESS OPTIONS		
Aerobic Digestion	Air Drying	
Anaerobic Digestion	Composting	
Alkaline Stabilization	PSRP Equivalent Process	

* The Fecal Coliform limit shall be reported as the geometric mean of 7 discrete samples on a dry weight basis.

List 4
VECTOR ATTRACTION REDUCTION

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

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

Option	Limit	Where/When it Shall be Met
Volatile Solids Reduction	≥38%	Across the process
Specific Oxygen Uptake Rate	≤1.5 mg O_2/hr/g TS	On aerobic stabilized sludge
Anaerobic bench-scale test	<17 % VS reduction	On anaerobic digested sludge
Aerobic bench-scale test	<15 % VS reduction	On aerobic digested sludge
Aerobic Process	>14 days, Temp >40°C and Avg. Temp > 45°C	On composted sludge
pH adjustment	>12 S.U. (for 2 hours) and >11.5 (for an additional 22 hours)	During the process
Drying without primary solids	>75 % TS	When applied or bagged
Drying with primary solids	>90 % TS	When applied or bagged
Equivalent Process	Approved by the Department	Varies with process
Injection	-	When applied
Incorporation	-	Within 6 hours of application

4.2.3 Sampling Point (Outfall) 010 - Biosolids- Compost Class A

Compost created from mixing biosolids with yard waste and/or wood chips is subject to the requirements listed in the tables below. The compost is considered an alternative use of sludge, and its uses are managed in accordance with s. NR 204.09, Wis. Adm. Code.

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

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

4.2.3.1 Lists 1, 2, 3, and 4

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

List 2 NUTRIENTS See the Monitoring Requirements and Limitations table above for monitoring frequency for the List 2 parameters
Solids, Total (percent)
Nitrogen Total Kjeldahl (percent)
Nitrogen Ammonium (NH4-N) Total (percent)
Phosphorus Total as P (percent)
Phosphorus, Water Extractable (as percent of Total P)
Potassium Total Recoverable (percent)

List 3
PATHOGEN CONTROL FOR CLASS A SLUDGE

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

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

Parameter	Unit	Limit
Fecal Coliform*	MPN/gTS	1000
OR		
Salmonella	MPN/4gTS	3
AND, ONE OF THE FOLLOWING PROCESS OPTIONS		
Temp/Time based on % Solids	Alkaline Treatment	
Prior test for Enteric Virus/Viable Helminth Ova	Post test for Enteric Virus/Viable Helminth Ova	
Composting	Heat Drying	
Heat Treatment	Thermophilic Aerobic Digestion	
Beta Ray Irradiation	Gamma Ray Irradiation	
Pasteurization	PFRP Equivalent Process	
* The Fecal Coliform limit shall be reported as the geometric mean of 7 discrete samples on a dry weight basis.		

List 3
PATHOGEN CONTROL FOR CLASS B SLUDGE

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

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

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

List 4
VECTOR ATTRACTION REDUCTION

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

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

Option	Limit	Where/When it Shall be Met
Volatile Solids Reduction	≥38%	Across the process
Specific Oxygen Uptake Rate	≤1.5 mg O_2/hr/g TS	On aerobic stabilized sludge
Anaerobic bench-scale test	<17 % VS reduction	On anaerobic digested sludge
Aerobic bench-scale test	<15 % VS reduction	On aerobic digested sludge
Aerobic Process	>14 days, Temp >40°C and Avg. Temp > 45°C	On composted sludge
pH adjustment	>12 S.U. (for 2 hours) and >11.5 (for an additional 22 hours)	During the process
Drying without primary solids	>75 % TS	When applied or bagged
Drying with primary solids	>90 % TS	When applied or bagged
Equivalent Process	Approved by the Department	Varies with process
Injection	-	When applied
Incorporation	-	Within 6 hours of application

5 Schedules

5.1 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
Year 1 Annual Mercury Progress Report: The permittee shall submit an annual mercury progress report by the due date which documents the activities conducted under its Mercury PMP Plan during the period since the submittal of the previous Mercury Progress Report. The annual mercury progress report shall include a summary of recent analytical data of the WWTF's influent, effluent and sludge.	09/30/2017
Year 2 Annual Mercury Progress Report: The permittee shall submit an annual mercury progress report by the due date which documents the activities conducted under its Mercury PMP Plan during the previous year. The annual mercury progress report shall include a summary of recent analytical data of the WWTF's influent, effluent and sludge.	09/30/2018
Year 3 Annual Mercury Progress Report: The permittee shall submit an annual mercury progress report by the due date which documents the activities conducted under its Mercury PMP Plan during the previous year. The annual mercury progress report shall include a summary of recent analytical data of the WWTF's influent, effluent and sludge. The annual progress report shall also include an analysis of the feasibility for lowering the pretreatment mercury limitations to reduce the influent mercury loading to the treatment facility. If it is feasible to lower the mercury limits, a schedule shall be included to implement these lower limits.	09/30/2019
Year 4 Annual Mercury Progress Report: The permittee shall submit an annual mercury progress report by the due date which documents the activities conducted under its Mercury PMP Plan during the previous year. The annual mercury progress report shall include a summary of recent analytical data of the WWTF's influent, effluent and sludge.	09/30/2020
Year 5 Annual Mercury Progress Report: The permittee shall submit an annual mercury progress report by the due date which documents the activities conducted under its Mercury PMP Plan during the previous year. The annual mercury progress report shall include a summary of recent analytical data of the WWTF's influent, effluent and sludge. If the permittee seeks a renewed mercury variance under s. NR 106.145, Wis. Adm. Code, in the next issuance of this permit, this report shall also 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 Mercury PMP Plan were not pursued and why. The report shall include an analysis of trends in mercury concentrations of the influent, effluent and sludge based on monitoring conducted during the current permit term. The report shall include a proposed variance limit for next permit term under a renewed mercury variance. Additionally, if the permittee seeks a renewed mercury variance in the next issuance of this permit, the permittee shall update its Mercury PMP Plan; including updating the inventories of potential contributors in each of the sectors identified in the Plan, updating mercury reduction activities conducted by the permittee and in collaboration with other entities, updating the activities planned to be conducted within each sector during the next permit term, providing plans for the inspection of all dental facilities in the permittee's sewer service area during the next permit term to verify installation and on-going maintenance of amalgam separators, referencing mercury reduction activities required by the permittee's pretreatment program, and specifying any other planned mercury minimization/source reduction activities to be conducted during the next permit term. The updated	09/30/2021

PMP Plan shall be submitted to the Department for approval, and shall be submitted with the Year 5 Annual Mercury Progress Report.	
Annual Mercury Reports After Permit Expiration: In the event that this permit is not reissued by its expiration date, the permittee shall continue to submit annual mercury reports each year which document the activities conducted under its Mercury PMP Plan during the previous year. The annual mercury progress reports shall include a summary of recent analytical data of the WWTF's influent, effluent and sludge. These reports are due at 12 month intervals following the due date of the Year 5 Annual Mercury Progress Report.	

5.2 Phosphorus Water Quality-Based Effluent Limitations

No later than 14 days following each compliance date, the permittee shall notify the Department in writing of its compliance or noncompliance with the required action. If a submittal is part of the required action then a timely submittal fulfills the written notification requirement.

Required Action	Due Date
Operational Evaluation Report: The permittee shall prepare an operational evaluation study report and submit it for Department approval. The report shall evaluate collected effluent data, possible source reduction measures, operational improvements or other minor facility modifications that would enable compliance with the final phosphorus WQBEL (water quality based effluent limit) or some improved level of effluent quality using the existing treatment system. Also, the operational evaluation report shall include a phosphorus discharge optimization plan for the current operation. If the report concludes that the facility can achieve the final phosphorus WQBEL, the study shall contain a schedule for implementation of any improvements or other study recommendations. The implementation schedule shall be based on providing compliance with the final phosphorus WQBEL as soon as possible. Once the operational evaluation report is approved by the Department, the permittee shall take the steps called for in the operational evaluation report and optimization plan and follow the implementation schedule as approved. If the Department approved operational evaluation report concludes that the facility cannot achieve the phosphorus limit, the permittee shall initiate a Facilities Planning Study and implementation of the phosphorus discharge optimization plan for the current operation.	12/31/2017
Progress Report #1: Submit a progress report on meeting the final WQBEL for phosphorus. This report shall discuss the feasibility of watershed compliance options including Watershed Adaptive Management and water quality trading, and summarize potential partners, meetings, and other work efforts completed to investigate these options.	06/30/2018
Preliminary Compliance Alternatives Plan: The permittee shall submit a preliminary compliance alternatives plan to the Department. If the plan concludes upgrading is necessary to achieve compliance with the final phosphorus WQBELs, the submittal shall include a preliminary engineering design report. If the plan concludes Adaptive Management will be used, the submittal shall include a completed Watershed Adaptive Management Request Form 3200-139 without the Adaptive Management Plan. If water quality trading will be undertaken, the submittal shall include a completed Notice of Intent to Trade Form 3400-206.	06/30/2019
Facility Plan: Submit a Facility Plan that evaluates feasible alternatives for meeting the final phosphorus WQBEL (water quality based effluent limit) which may include: facility upgrading, consolidation with other sewerage systems, alternative effluent discharge locations, the Watershed Adaptive Management Option, Water Quality Trading Plan or a water quality standards variance.	06/30/2020

Construction Plans and Specifications: Submit construction plans and specifications for approval if the approved Facility Plan calls for upgrading the treatment facility. Submit final water quality trading plan or adaptive management plan if the Facility Plan calls for one of these watershed approaches.	06/30/2021
Progress Report #2: Submit a progress report on meeting the final WQBEL for phosphorus.	06/30/2022
Complete Actions: Complete actions to meet the final WQBEL for phosphorus. Comply with the new phosphorus final limits.	12/31/2022
Phosphorus WQBELs Effective: The phosphorus WQBELs become effective. Comply with the new phosphorus limits.	01/01/2023

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 principal executive officer, a ranking elected official or other duly authorized representative. 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 Pretreatment Sampling Requirements

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

6.1.4 Recording of Results

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

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;

- the analytical techniques or methods used; and
- the results of the analysis.

6.1.5 Reporting of Monitoring Results

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

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.

- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.

- For purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD_5 and Total Suspended Solids shall be considered to be limits of quantitation

- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a 0 (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

6.1.6 Compliance Maintenance Annual Reports

Compliance Maintenance Annual Reports (CMAR) shall be completed using information obtained over each calendar year regarding the wastewater conveyance and treatment system. The CMAR shall be submitted 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.

A separate CMAR certification document, that is not part of the electronic report form, shall be mailed to the Department at the time of electronic submittal of the CMAR. The CMAR certification shall be signed and submitted by an authorized representative of the permittee. The certification shall be submitted by mail. The certification shall verify the electronic report is complete, accurate and contains information from the owner's treatment works.

6.1.7 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application. All pertinent sludge information, including permit application information and other documents specified in this permit or s. NR 204.06(9), Wis. Adm. Code shall be retained for a minimum of 5 years.

6.1.8 Other Information

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

6.2 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 500-536, 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. The wastewater treatment facility shall be under the direct supervision of a state certified operator as required in s. NR 108.06(2), Wis. Adm. Code. 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.

6.3 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 verify that a CMOM program for the sewage collection system has been developed which is consistent with the requirements of NR 210.23, Wis. Adm. Code.
- The permittee shall develop and maintain written documentation of the CMOM program components, and shall verify each year with the submittal of the Compliance Maintenance Annual Report required under the 'Compliance Maintenance Annual Reports' section of this permit that the CMOM program documentation is current and meets the requirements in NR 210.23, Wis. Adm. Code.
- The permittee shall implement a CMOM program consistent with the permittee's program documentation and with the requirements of NR 210.23, Wis. Adm. Code.
- The permittee shall annually conduct a self-audit of activities to ensure the CMOM program is being implemented as necessary to meet the requirements contained in the CMOM program documentation.
- The permittee shall make available CMOM program documentation, a record of implementation activities and the results of the self-audit to the Department on request.

6.3.3 Sewer Cleaning Debris and Materials

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

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

6.4 Surface Water Requirements

6.4.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit

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

6.4.2 Appropriate Formulas for Effluent Calculations

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

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

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

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

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

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

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

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

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

6.4.3 Effluent Temperature Requirements

Weekly Average Temperature – The permittee shall use the following formula for calculating effluent results to determine compliance with the weekly average temperature limit (as applicable): Weekly Average Temperature = the sum of all daily maximum results for that week divided by the number of daily maximum results during that time period.

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

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

6.4.4 Visible Foam or Floating Solids

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

6.4.5 Surface Water Uses and Criteria

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

a) Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state.

b) Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the state.

c) Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state.

d) Substances in concentrations or in combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

6.4.6 Percent Removal

During any 30 consecutive days, the average effluent concentrations of BOD_5 and of total suspended solids shall not exceed 15% of the average influent concentrations, respectively. This requirement does not apply to removal of total suspended solids if the permittee operates a lagoon system and has received a variance for suspended solids granted under NR 210.07(2), Wis. Adm. Code.

6.4.7 Fecal Coliforms

The limit for fecal coliforms shall be expressed as a monthly 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 Total Residual Chlorine Requirements (When De-Chlorinating Effluent)

Test methods for total residual chlorine, approved in ch. NR 219 - Table B, Wis. Adm. Code, normally achieve a limit of detection of about 20 to 50 micrograms per liter and a limit of quantitation of about 100 micrograms per liter. Reporting of test results and compliance with effluent limitations for chlorine residual and total residual halogens shall be as follows:

- Sample results which show no detectable levels are in compliance with the limit. These test results shall be reported on Wastewater Discharge Monitoring Report Forms as "< 100 µg/L". (Note: 0.1 mg/L converts to 100 µg/L)

- Samples showing detectable traces of chlorine are in compliance if measured at less than 100 µg/L, unless there is a consistent pattern of detectable values in this range. These values shall also be reported on Wastewater Discharge Monitoring Report Forms as "<100 µg/L." The facility operating staff shall record actual readings on logs maintained at the plant, shall take action to determine the reliability of detected results (such as re-sampling and/or calculating dosages), and shall adjust the chemical feed system if necessary to reduce the chances of detects.

- Samples showing detectable levels greater than 100 µg/L shall be considered as exceedances, and shall be reported as measured.

- To calculate average or mass discharge values, a "0" (zero) may be substituted for any test result less than 100 µg/L. Calculated values shall then be compared directly to the average or mass limitations to determine compliance.

6.4.10 Whole Effluent Toxicity (WET) Monitoring Requirements

In order to determine the potential impact of the discharge on aquatic organisms, static-renewal toxicity tests shall be performed on the effluent in accordance with the procedures specified in the *"State of Wisconsin Aquatic Life Toxicity*

Testing Methods Manual, 2nd Edition" (PUB-WT-797, November 2004) as required by NR 219.04, Table A, Wis. Adm. Code). All of the WET tests required in this permit, including any required retests, shall be conducted on the *Ceriodaphnia dubia* and fathead minnow species. Receiving water samples shall not be collected from any point in contact with the permittee's mixing zone and every attempt shall be made to avoid contact with any other discharge's mixing zone.

6.4.11 Whole Effluent Toxicity (WET) Identification and Reduction

This standard requirement applies only to acute or chronic WET monitoring that is not accompanied by a WET limit. 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.

6.4.12 Exceedance of a Whole Effluent Toxicity (WET) Limit

This standard requirement applies only to acute or chronic WET monitoring that is accompanied by a WET limit. Within 30 days of a WET limit exceedance, the permittee shall submit the following. The 30 day period shall begin the day after the test which showed a positive result.

- The findings of a toxicity reduction evaluation (TRE) or other investigation to identify the cause(s) of the toxicity;

- Actions the permittee has taken or will take to mitigate the impact of the discharge, to correct the noncompliance, and to prevent the recurrence of toxicity;

- Where corrective actions including a TRE have not been completed, an expeditious schedule under which corrective actions will be implemented; and

- If no actions have been taken, the reason for not taking action.

1.4.13 Reopener Clause

Pursuant to s. 283.53(2)(b), Wis. Stat. and 40 CFR 132 Appendix F Procedure 2F, 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 for mercury.

6.5 Pretreatment Program Requirements

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

6.5.1 Inventories

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

6.5.2 Regulation of Industrial Users

6.5.2.1 Limitations for Industrial Users:

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

6.5.2.2 Control Documents for Industrial Users (IUs)

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

6.5.2.3 Review of Industrial User Reports, Inspections and Compliance Monitoring

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

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

6.5.2.4 Enforcement and Industrial User Compliance Evaluation & Violation Reports

The permittee shall enforce the industrial pretreatment requirements including the industrial user discharge limitations of the permittee's sewer use ordinance. The permittee shall investigate instances of noncompliance by collecting and analyzing samples and collecting other information with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions. Investigation and response to instances of noncompliance shall be in accordance with the permittee's sewer use ordinance and approved Enforcement Response Plan.

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

6.5.2.5 Publication of Violations

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

6.5.2.6 Multijurisdictional Agreements

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

6.5.3 Annual Pretreatment Program Report

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

6.5.4 Pretreatment Program Modifications

- Future Modifications: The permittee shall within one year of any revisions to federal or state General Pretreatment Regulations submit an application to the Department in duplicate to modify and update its approved pretreatment program to incorporate such regulatory changes as applicable to the permittee. Additionally, the Department or the permittee may request an application for program modification at any time where necessary to improve program effectiveness based on program experience to date.

- Modifications Subject to Department Approval: The permittee shall submit all proposed pretreatment program modifications to the Department for determination of significance and opportunity for comment in accordance with the requirements and conditions of s. NR 211.27, Wis. Adm. Code. Any substantial proposed program modification shall be subject to Department public noticing and formal approval prior to implementation. A substantial program modification includes, but is not limited to, changes in enabling legal authority to administer and enforce pretreatment conditions and requirements; significant changes in program administrative or operational procedures; significant reductions in monitoring frequencies; significant reductions in program resources including personnel commitments, equipment, and funding levels; changes (including any relaxation) in the local limitations for substances enforced and applied to users of the sewerage treatment works; changes in treatment works sludge disposal or management practices which impact the pretreatment program; or program modifications which increase pollutant loadings to the treatment works. The Department shall use the procedures outlined in s. NR 211.30, Wis. Adm. Code for review and approval/denial of proposed pretreatment program modifications. The permittee shall comply with local public participation requirements when implementing the pretreatment program.

6.5.5 Program Resources

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

6.6 Land Application Requirements

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

In the event that new federal 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.

6.6.2 General Sludge Management Information

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

6.6.3 Sludge Samples

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

6.6.4 Land Application Characteristic Report

Each report shall consist of a Characteristic Form 3400-49 and Lab Report. The Characteristic Report Form 3400-49 shall be submitted electronically by January 31 following each year 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 principal executive officer, ranking elected official or duly authorized representative. The 'eReport Certify' page certifies that the electronic report is true, accurate and complete. The Lab Report must be sent directly to the facility's DNR sludge representative or basin engineer unless approval for not submitting the lab reports has been given.

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

All results shall be reported on a dry weight basis.

6.6.5 Calculation of Water Extractable Phosphorus

When sludge analysis for Water Extractable Phosphorus is required by this permit, the permittee shall use the following formula to calculate and report Water Extractable Phosphorus:
Water Extractable Phosphorus (% of Total P) =
[Water Extractable Phosphorus (mg/kg, dry wt) ÷ Total Phosphorus (mg/kg, dry wt)] x 100

6.6.6 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

6.6.7 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 principal executive officer, ranking elected official or duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

6.6.8 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 principal executive officer, ranking elected official or duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

6.6.9 Approval to Land Apply

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

6.6.10 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.

6.6.11 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.

6.6.12 Class A Sludge: Composting Process

Compost the sludge using either within-vessel or static aerated pile composting methods and maintain the temperature of the sludge at 55° C or higher for 3 days, or compost the sludge using windrow composting methods and maintain the temperature of the sewage sludge at 55° C or higher for 15 days or longer. During this period, a minimum of 5 windrow turnings are required.

6.6.13 Class B Sludge: Fecal Coliform Limitation

Compliance with the fecal coliform limitation for Class B sludge shall be demonstrated by calculating the geometric mean of at least 7 separate samples. (Note that a Total Solids analysis must be done on each sample). The geometric

mean shall be less than 2,000,000 MPN or CFU/g TS. Calculation of the geometric mean can be done using one of the following 2 methods.

Method 1:

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

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

Method 2:

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

Where X = $\log_{10}$ of Coliform Density value of the sludge sample, and where n = number of samples (at least 7)

Example for Method 2

Sample Number	Coliform Density of Sludge Sample	$\log_{10}$
1	6.0×10^5	5.78
2	4.2×10^6	6.62
3	1.6×10^6	6.20
4	9.0×10^5	5.95
5	4.0×10^5	5.60
6	1.0×10^6	6.00
7	5.1×10^5	5.71

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

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

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

6.6.14 Class B Sludge: Anaerobic Digestion

Treat the sludge in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 15 days at 35° C to 55° C and 60 days at 20° C. Straight-line interpolation to calculate mean cell residence time is allowable when the temperature falls between 35° C and 20° C.

6.6.15 Class B Sludge: Composting

Compost the sludge using either within-vessel, static aerated pile or windrow composting methods and raise the temperature of the sludge to 40° C or higher for 5 days. For 4 hours at some point during each of the 5 days, the temperature in the compost pile shall exceed 55°C.

6.6.16 Vector Control: Volatile Solids Reduction

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

$$VSR\% = \frac{VS_{IN} - VS_{OUT}}{VS_{IN} - (VS_{OUT} \times VS_{IN})} \times 100$$

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

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

VSR% = Volatile Solids Reduction, (Percent)

6.6.17 Class B Sludge - Vector Control: Incorporation

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

6.6.18 Landfilling of Sludge

General: Sewage sludge may not be disposed of in a municipal solid waste landfill unless the landfill meets the requirements of chs. NR 500 to 536, Wis. Adm. Code, and is an approved facility as defined in s. 289.01(3), Wis. Stats. Any facility accepting sewage sludge shall be approved by the Department in writing to accept sewage sludge. Disposal of sewage sludge in a municipal solid waste landfill shall be in accordance with ss. NR 506.13 and 506.14. Sewage sludge may not be disposed of in a surface disposal unit as defined in s. NR 204.03(62).

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

6.6.19 Sludge Landfilling Reports

The permittee shall report the volume of sludge disposed of at any landfill facility on Form 3400-52. The permittee shall include the name and address of the landfill, the Department license number or other state's designation or license number for all landfills used during the report period and a letter of acceptability from the landfill owner. In addition, any permittee utilizing landfills as a disposal method shall submit to the Department any test results used to indicate acceptability of the sludge at a landfill. Form 3400-52 shall be submitted annually by January 31, following each year sludge is landfilled.

7 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Mercury Pollutant Minimization Program -Year 1 Annual Mercury Progress Report	September 30, 2017	24
Mercury Pollutant Minimization Program -Year 2 Annual Mercury Progress Report	September 30, 2018	24
Mercury Pollutant Minimization Program -Year 3 Annual Mercury Progress Report	September 30, 2019	24
Mercury Pollutant Minimization Program -Year 4 Annual Mercury Progress Report	September 30, 2020	24
Mercury Pollutant Minimization Program -Year 5 Annual Mercury Progress Report	September 30, 2021	24
Mercury Pollutant Minimization Program -Annual Mercury Reports After Permit Expiration	See Permit	25
Phosphorus Water Quality-Based Effluent Limitations -Operational Evaluation Report	December 31, 2017	25
Phosphorus Water Quality-Based Effluent Limitations -Progress Report #1	June 30, 2018	25
Phosphorus Water Quality-Based Effluent Limitations -Preliminary Compliance Alternatives Plan	June 30, 2019	25
Phosphorus Water Quality-Based Effluent Limitations -Facility Plan	June 30, 2020	25
Phosphorus Water Quality-Based Effluent Limitations -Construction Plans and Specifications	June 30, 2021	26
Phosphorus Water Quality-Based Effluent Limitations -Progress Report #2	June 30, 2022	26
Phosphorus Water Quality-Based Effluent Limitations -Complete Actions	December 31, 2022	26
Phosphorus Water Quality-Based Effluent Limitations -Phosphorus WQBELs Effective	January 1, 2023	26
Compliance Maintenance Annual Reports (CMAR)	by June 30, each year	28
Industrial User Compliance Evaluation and Violation Reports	Semiannual	38
Pretreatment Program Report	Annually	38
General Sludge Management Form 3400-48	prior to any significant sludge management changes	39
Characteristic Form 3400-49 and Lab Report	by January 31 following each year of analysis	39
Land Application Report Form 3400-55	by January 31, each year whether or not non-exceptional	41

	quality sludge is land applied	
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	41
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	27

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to:
Northeast Region - Oshkosh, 625 E. CTY RD Y, Suite 700, Oshkosh, WI 54901

Permit Fact Sheet

1 General Information

Permit Number:	WI-0023221-08-0	
Permittee Name:	City of Appleton	
Address:	2006 East Newberry Street	
City/State/Zip:	Appleton WI 54915-2758	
Discharge Location:	NW1/4, SE1/4. Sec25, T21N, R17E, Outagamie County	
Receiving Water:	Fox River, WBIC=117900	
StreamFlow ($Q_{7,10}$):	970 cfs	
Stream Classification:	Warmwater Sport Fish- Full Fish and Aquatic Life subcategory; Non-public water supply	
Design Flow(s)	Daily Maximum	60 MGD
	Weekly Maximum	34.5 MGD
	Monthly Maximum	23.7 MGD
	Annual Average	15.5 MGD
Significant Industrial Loading?	Yes. The facility design flow is >5 MGD, therefore it's classified as a pretreatment-EPA Delegated Facility. The facility permits, monitors, and inspects approximately 4 categorical industrial uses and six significant industrial users.	
Operator at Proper Grade?	Yes, the facility is rated as an Advanced level facility in subclasses A1, Suspended Growth Processes; B, Solids Separation; C, Biological Solids/Sludge Processing; D, Disinfection; P, Phosphorus Removal; and L, Laboratory. The Operator-In-Charge, Robert Kennedy, has Advanced level certification in all the above subclasses.	
Pretreatment Program Approval Date:	October 5, 1984	

2 Facility Description

The City of Appleton owns and operates an advanced, secondary, biological activated sludge wastewater treatment facility (WWTF). The facility is designed for a hydraulic, annual average flow of 15.5 million gallons per day (MGD). Actual flows for the past 3 years (2013-2015) have been approximately 12.0 MGD. The system has a design capacity of 40,900 pounds of Biochemical Oxygen Demand (BOD) per day. Treatment processes consist of fine screening, grit removal, primary clarification, activated sludge-contact stabilization, and final clarification. Seasonal disinfection is achieved with liquid Sodium Hypochlorite addition in 2 chlorine contact chambers. Dechlorination is accomplished by the addition of liquid Sodium Bisulfite. Phosphorus is precipitated chemically with the addition of ferric chloride.

During typical operating conditions, effluent is discharged by gravity through outfall 001 (60" diffuser) to the Fox River. However, during periods when high river flows prevent gravity discharge, three effluent screw pumps at pump station #1, convey effluent to the outfall chamber. This then flows by gravity to the 60" diffuser. If flows continue to be excessive, the outfall chamber surcharges into the outfall relief structure. That effluent volume discharges by gravity to the River, through a separate 48" outfall main, adjacent to the diffuser. If flows are still unmanageable for the first two outfall pipes,

three centrifugal pumps at pump station #2, draw from the effluent end of chlorine contact tank #2. These discharge to the River through a 36" outfall main. This pipe is situated 400 feet upstream from station #1.

Polymer is added to the waste activated sludge (WAS), which is then conditioned by one of two dissolved air flotation thickeners (DAF). Primary sludge, WAS and hauled waste from the facility Receiving Station are then mixed and pre-heated and sent to one of two egg-shaped primary anaerobic digesters, for pathogen and volatile solids destruction. Digested solids are then pumped to one of three belt filter presses for final dewatering, with the resultant cake is stored in the onsite storage facility. Hauling and land application, are performed by private contract. Land application sites are approved by facility staff. The facility has also developed and operates a successful, Department approved, biosolids-compost program. The biosolids-compost product is available for public use.

The City of Appleton wastewater collection system consists of 322 miles of sanitary sewer, two main interceptor sewers, two interceptor sewer Fox River siphon-crossings and 14 sanitary sewer lift stations. None of the collection system consists of "combined" sanitary sewers.

Sample Point Designation		
Sample Point Number	**Discharge Flow, Units, and Averaging Period**	**Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)**
701	12.0 MGD (2010-2015)	Influent samples shall be collected from the influent channel prior to primary clarification. These samples shall be representative of the total influent loading to the facility from all points in the collection system.
001	12.0 MGD (2010-2015)	Effluent samples shall be taken from the sampling device located in building J. The sampling device shall draw samples from the effluent channel, after Pumping Station # 1, prior to discharge to the Fox River.
003	23,000 metric tons	Anaerobically digested cake sludge samples shall be collected after the belt filter presses and from the storage building.
008	N/A	Reporting requirements for determination of compliance with CBOD5 wasteload allocation. These requirements are applicable from May 1 through October 31, each year.
009	N/A	Final class B compost resulting from biosolids mixed with yard waste and/or wood chips.
010	N/A	Final class A compost resulting from biosolids mixed with yard waste and/or wood chips.
111	N/A	Field Blank - Sample point for reporting results of Mercury field blanks collected using standard sample handling procedures.
601	N/A	Lower Fox River data collected at the Appleton Lutz Park-USGS/ACOE Gauge Station - or other alternative method or site approved by the Department - as reported by the Lower Fox River Discharger's Association shall be used in the determination of the daily CBOD5 wasteload allocation.

3 Influent - Proposed Monitoring

3.1 Sample Point Number:701- Total Influent

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
CBOD5		mg/L	5/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total		mg/L	5/Week	24-Hr Flow Prop Comp	
Cadmium, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Chromium, Total Recoverable		ug/L	Monthly	24-Hr Comp	
Copper, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Lead, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Nickel, Total Recoverable		ug/L	Monthly	24-Hr Comp	
Zinc, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Mercury, Total Recoverable		ng/L	Monthly	24-Hr Flow Prop Comp	

3.1.1 Changes from Previous Permit:

None.

3.1.2 Explanation of Limits and Monitoring Requirements

Pretreatment Program: The Appleton WWTF discharges more than 5 MGD and is currently required to administer a pretreatment program. Monthly monitoring is required for cadmium, chromium, copper, lead, nickel, and zinc.

Mercury Monitoring: As a condition of reissuing this permit with an alternative mercury effluent limitation, influent monitoring for mercury monitoring is required, per ch. NR 106.145(6), Wis. Adm. Code.

4 Inplant - Proposed Monitoring and Limitations

4.1 Sample Point Number: 111- Field Blank

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

4.1.1 Changes from Previous Permit:

None.

4.1.2 Explanation of Limits and Monitoring Requirements

Field blanks accompany required influent and effluent mercury monitoring per. ss. NR 1-6.145(9) and (10), Wis. Adm. Codes.

5 Surface Water - Proposed Monitoring and Limitations

5.1 Sample Point Number: 001- Effluent

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
CBOD5	Monthly Avg	25 mg/L	5/Week	24-Hr Flow Prop Comp	
CBOD5	Weekly Avg	40 mg/L	5/Week	24-Hr Flow Prop Comp	
CBOD5	Monthly Avg	25 mg/L	Daily	24-Hr Flow Prop Comp	
CBOD5	Weekly Avg	40 mg/L	Daily	24-Hr Flow Prop Comp	
pH Field	Daily Max	9.0 su	Daily	Continuous	
pH Field	Daily Min	6.0 su	Daily	Continuous	
Fecal Coliform	Geometric Mean-Monthly	400 #/100 ml	Weekly	Grab	Applies May 1 through September 30, each year
Fecal Coliform	Geometric Mean-Weekly	656 #/100 ml	Weekly	Grab	Applies May 1 through September 30, each year. Limit needed to comply with 122.45(d).
Chlorine, Total Residual	Daily Max	38 ug/L	5/Week	Grab	Applies May 1 through September 30, each year,

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
					and whenever chlorinating
Chlorine, Total Residual	Weekly Avg	38 ug/L	5/Week	Grab	Applies May 1 through September 30, each year, and whenever chlorinating. Limit needed to comply with 40 CFR 122.45(d).
Chlorine, Total Residual	Monthly Avg	38 ug/L	5/Week	Grab	Applies May 1 through September 30, each year, and whenever chlorinating. Limit needed to comply with 40 CFR 122.45(d).
Suspended Solids, Total	Monthly Avg	30 mg/L	5/Week	24-Hr Flow Prop Comp	This is a technology-based limit.
Suspended Solids, Total	Weekly Avg	45 mg/L	5/Week	24-Hr Flow Prop Comp	This is a technology-based limit.
Suspended Solids, Total	Monthly Avg	1,322 lbs/day	5/Week	Calculated	This limit is based on Appleton's TSS WLA specified in the Lower Fox TMDL. See phosphorus subsection in the permit.
Suspended Solids, Total	Weekly Avg	2,434 lbs/day	5/Week	Calculated	This limit is based on Appleton's TSS WLA specified in the Lower Fox TMDL. See phosphorus subsection in the permit.
Phosphorus, Total	Monthly Avg	1.0 mg/L	5/Week	24-Hr Flow Prop Comp	This is an interim phosphorus limit. This limit is effective throughout the permit. See phosphorus subsection in the permit.
Phosphorus, Total		lbs/day	5/Week	Calculated	See phosphorus subsection in the permit.
Nitrogen, Ammonia (NH3-N) Total	Daily Max	29 mg/L	5/Week	24-Hr Flow Prop Comp	Applies year-round
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	28 mg/L	5/Week	24-Hr Flow Prop Comp	Applies January 1 through March 31, each year
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	29 mg/L	5/Week	24-Hr Flow Prop Comp	Applies April only, each year
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	11 mg/L	5/Week	24-Hr Flow Prop Comp	Applies June 1 through September 30, each year

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	10 mg/L	5/Week	24-Hr Flow Prop Comp	Applies January 1 through March 31, each year
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	11 mg/L	5/Week	24-Hr Flow Prop Comp	Applies April 1 through May 31, each year
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	4.4 mg/L	5/Week	24-Hr Flow Prop Comp	Applies June 1 through September 30, each year
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	18 mg/L	5/Week	24-Hr Flow Prop Comp	Applies October 1 through December 31, each year
Mercury, Total Recoverable	Daily Max	3.4 ng/L	Monthly	Grab	Alternative effluent limit. See Mercury subsection in the permit for pollutant minimization program implementation requirements.
Cadmium, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Chromium, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Copper, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Lead, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Nickel, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Zinc, Total Recoverable		ug/L	Monthly	24-Hr Flow Prop Comp	
Acute WET	Daily Max	TUa	See Listed Qtr(s)	24-Hr Flow Prop Comp	See WET subsection in the permit for WET testing requirements and schedules.
Chronic WET		rTUc	See Listed Qtr(s)	24-Hr Flow Prop Comp	See WET subsection in the permit for WET testing requirements and schedules.

5.1.1 Changes from Previous Permit

The effluent limitations for total phosphorus and total suspended solids (TSS) have changed to reflect the U.S. EPA approved TMDL for the Lower Fox River. This TMDL was approved on May 18, 2012. Changes include the addition of

mass limitations for phosphorus and TSS. TMDL-derived limits for TSS are expressed as weekly average and monthly average limits, and TMDL-derived limits for TP are expressed as monthly average and six-month average.

An alternative effluent limitation for mercury has been modified to reflect pollution minimization measures that occurred during the previous permit term. This limit is set equal to 3.4 ng/L, expressed as a monthly average, and is accompanied with quarterly monitoring.

An acute WET limitation is necessary due to an acute WET test failure. The acute WET limitation is a daily maximum limit expressed as 1.0 TUa and is accompanied with annual monitoring that occurs on rotating quarters specified in the permit. Chronic WET monitoring shall occur on the same quarters.

5.1.2 Explanation of Limits and Monitoring Requirements

Categorical Limits

Categorical limits are required per ch. NR 210, Wis. Adm. Code.

$CBOD_5$, pH, and Fecal Coliform

The effluent limitations for $CBOD_5$, pH, and Fecal Coliform as included in the table above and are carried over from the previous permit. These limitations are not subject to change because the receiving water characteristics and effluent design flow rates have not substantially changed. $CBOD_5$ is further limited by waste load allocations from May through October.

Weekly geomean fecal coliform limitations were added to comply with 40 CFR 122.45(d) and NR 205.065(7), Wis. Adm. Code. New regulations became effective on September 1, 2015, affecting NR 106 and NR 205, Wis. Adm. Code. These new regulations align Wisconsin's effluent limitations to 40 CFR 122.45(d), which requires, whenever practicable to express effluent limitations as weekly average and monthly average limitations for municipal POTWs like Appleton WWTF. For this reason, additional fecal coliform limitations were added to the permit.

Disinfection

Disinfection is required because the receiving water is classified for recreational use. Seasonal disinfection from May through September is required to coincide with the typical timeframe for recreational activities in Wisconsin's waters. Additional weekly and monthly average chlorine limitations were added to the permit to comply with 40 CFR 122.45(d) and NR 205.065(7), Wis. Adm. Code.

TMDL (Total Maximum Daily Load) Derived Limits

Revisions to the administrative rules for phosphorus discharges took effect on December 1, 2010. Details may be found at: http://dnr.wi.gov/topic/surfacewater/phosphorus.html. Mass limits were calculated to comply with the Lower Fox River TMDL, and were derived consistent with the assumptions and requirements of the EPA-approved WLA for the Lower Fox River. The Lower Fox River TMDL was developed to determine the maximum amounts of phosphorus and sediment that can be discharged to protect and improve water quality. The Lower Fox River TMDL was approved by the Environmental Protection Agency (EPA) in May 2012. These final effluent limits were derived from and comply with the applicable water quality criterion and are consistent with the assumptions and requirements of the EPA-approved Waste Load Allocation (WLA) for the Lower Fox Basin. The entire report can be found at: http://dnr.wi.gov/topic/TMDLs/documents/lowerfox/LowerFoxRiverTMDLReport2012.pdf. The proposed permit includes limitations and requirements necessary to implement the recommendations of the TMDL. Because the Appleton WWTF discharges directly to the Lower Fox River, which is listed on the 303(d) impaired waters list, the TMDL-derived mass limits are protect of the immediate receiving water and downstream waters.

Limits for the permit were determined using the code changes and the provision of the TMDL. For the reasons explained in the April 30, 2012 paper entitled 'Justification for Use of Monthly, Growing Season and Annual Average Periods for Expression of WPDES Permit Limits for Phosphorus Discharges in Wisconsin', WDNR has determined that it is impracticable to express the phosphorus WQBELs for the permittee as daily maximum or weekly average values. The final TMDL mass limits for phosphorus are expressed as monthly averages. A limit of 23 lbs/day as a six-month average

is recommended along with a monthly average limit of 69 lbs/day, based on s. NR 217.14(2). A six-month average limit should be averaged during the months of May – October and November – April. There is no applicable impracticability determination for TSS limitations. Therefore, TSS WQBELs are set equal to 2,434 lbs/day, expressed as a weekly average limit, and 1,322 lbs/day, expressed as a monthly average limit. There are no changes proposed in concentration limits for TSS.

The facility currently treats for phosphorus but cannot meet proposed mass limits. Since Appleton WWTF is unable to immediately achieve the proposed WQBELs based on existing operation, a schedule of compliance is appropriate and necessary pursuant to s. NR 217.17, Wis. Adm. Code. The overall compliance schedule takes place over approximately 5 years, and ensures that compliance will be achieved prior to permit expiration. Please see compliance schedule specifics in the Schedules section. Because a phosphorus compliance schedule was granted, an interim phosphorus limit was also calculated to prevent backsliding during the term of the permit, and to ensure that the facility continues to operate the facility at a level representing good management and operation. The interim limitation is set equal to the technology-based phosphorus limitation, 1 mg/L expressed as a monthly average, and is accompanied by optimization requirements (see schedules section of the permit).

Ammonia

Current acute and chronic ammonia toxicity criteria for the protection of aquatic life are included in Tables 2C and 4B of ch. NR 105, Wis. Adm. Code (effective March 1, 2004). Subchapter III of ch. NR 106 establishes the procedure for calculating water quality based effluent limitations (WQBELs) for ammonia (effective March 1, 2004). No changes were made to the ammonia limitations from the previous permit.

Mercury

Effluent limitations for mercury are necessary based on the reasonable potential analysis present in the WQBEL memo "Water Quality-Based Effluent Limitations for Appleton WWTF WPDES Permit No. WI-0023221 in Outagamie County". The calculated WQBEL is 1.3 ng/L, expressed as a monthly average.

The Appleton WWTF has requested the continuation of a water quality standard variance from the previous permit term under the provisions of ch. NR 106.145. The permittee submitted an application for an alternative effluent limitation for mercury to support this request. The application includes: (i) the bases for concluding that wastewater treatment is impractical for mercury (s. NR 106.145(1), Wis. Adm. Code), (ii) representative effluent monitoring data, and (iii) a pollutant minimization plan for mercury.

The Department has reviewed the variance application, and finds that alternative effluent limitation for mercury should be set equal to 3.4 ng/L, expressed as a monthly average. This is a substantial reduction from the previously applicable alternative limitation (6.9 ng/L) and reflects the pollution minimization measures that occurred during the previous permit term. This limitation is accompanied with continued implementation of the pollution minimization plan and submittal of annual progress reports.

Pretreatment Program

The Appleton WWTF discharges more than 5 MGD and is currently required to administer a pretreatment program. Monthly monitoring is required for cadmium, chromium, copper, lead, nickel, and zinc.

Whole Effluent Toxicity (WET)-

The results of WET testing were evaluated by the Department and recommendations were made in the WQBEL memo. On 11/18/2014 an acute WET test failure occurred, which warrants inclusion of an acute toxicity limit in the permit. The acute WET limit, expressed as 1.0 TUa daily maximum limit, ensures that substances are not present in amounts which are harmful to aquatic life.

Based upon the point totals generated by the WET Checklist and Chapter 1.3 of the WET Guidance Document, annual acute and chronic WET testing is included in this permit. Tests should be done in rotating quarters in order to collect seasonal information about this discharge. Once per year testing corresponds to the minimum requirements for major municipal discharges, meaning additional testing based on the checklist is not necessary at this time.

5.2 Sample Point Number: 008- WLA CBOD5 Reporting

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
WLA CBOD5 Value		lbs/day	Daily	See Table	Applies May 1 through October 31, each year.
WLA Adjusted Value		lbs/day	Daily	Calculated	Applies May 1 through October 31, each year.
WLA CBOD5 Discharged (Net)	Daily Max - Variable	lbs/day	Daily	Calculated	Applies May 1 through October 31, each year.
WLA 7 Day Sum Of WLA Values		lbs/day	Daily	Calculated	Applies May 1 through October 31, each year.
WLA 7 Day Sum of CBOD5 Discharged (Net)	Daily Max - Variable	lbs/day	Daily	Calculated	Applies May 1 through October 31, each year.

5.2.1 Changes from Previous Permit

No changes in the reporting requirements or allocation.

5.2.2 Explanation of Limits and Monitoring Requirements

Wasteload Allocation for $CBOD_5$

Applies May through October. Wasteload allocation for this facility is in accordance with ch. NR 212, Wis. Adm. Code.

5.2.3 Wasteload Allocation for Appleton WWTF

Definitions:

- *$CBOD_5$ Allocation*: The allocation of $CBOD_5$ (pounds per day $CBOD_5$), as listed in Tables 1 through 5 for Appleton, represents water quality related effluent limitations. The flow and temperature conditions used to determine the $CBOD_5$ allocation for a given day is defined below.
- *Flow*: A representative measurement of flow is the previous four-day average flow value derived daily from continuous river flow monitoring data for the Fox River. These daily measurements of river flow are collected at the Appleton Lutz Park-USGS/ACOE Gauge Station– or other alternative method or site approved by the Department – and reported by the Lower Fox River Discharge Association.
- *Temperature*: A representative measurement of temperature is the daily average temperature value of the previous day derived from continuous river temperature monitoring data for the Fox River. These daily measurements of temperature are collected at the Appleton Lutz Park-USGS/ACOE Gauge Station – or other alternative method or site approved by the Department – and reported by the Lower Fox River Discharge Association.

Determination of Effluent Limitation: For purposes of determining compliance with the wasteload allocated water quality related $CBOD_5$ effluent limitations, the following conditions shall be met:

- The sum of the net daily discharges of $CBOD_5$ for any 7-consecutive-day period shall not exceed the sum of the daily $CBOD_5$ allocation values from Tables 1 through 5 for the same 7-consecutive-day period.
- For any one-day period, the net discharge of $CBOD_5$ shall not exceed 1.20 times the $CBOD_5$ allocation value from Tables 1 through 5 for that day.

Monitoring Requirements: The same 24-hour period shall be used for the collection of composite and continuous samples for river flow and temperature and all effluent characteristics listed in Table 3.2.1, including effluent flow and $CBOD_5$.

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

- The daily average river flow value (cfs);
- The daily average river temperature value (°F);
- The average of the previous 4 days of river flow values (cfs);
- The daily $CBOD_5$ allocation value (lbs. $CBOD_5$ per day from Tables 1 through 5;
- The net discharge value of $CBOD_5$ (lbs/$CBOD_5$ per day);
- The sum of the net daily discharge values of $CBOD_5$ (lbs/$CBOD_5$per day) for each 7-consecutive day period (present day discharge plus the 6 previous days of discharge);
- The sum of the daily $CBOD_5$ allocation values (lbs/$CBOD_5$ per day) for each 7-consecutive day period (present day allocation plus the allocations for the 6 previous days); and
- The daily adjusted $CBOD_5$ allocation value (1.20 x daily $CBOD_5$ allocation value).

5.2.4 Wasteload Allocation Tables 1 through 5 for the Appleton WWTF

Table 1. Wasteload Allocated Effluent Values (lbs per day of $CBOD_5$)
(River mile 32.4 to 19.2)
MAY – JUNE

River Temperature (previous day average in °F)	Flow at Appleton Lutz Park (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
86 OR MORE	2471	2583	2793	3041	3307	3575	3836	4080	4341	4599	5010	5598	6453	8085	9301
82 TO 85	2457	2585	2810	3086	3373	3655	3926	4175	4456	4810	5263	5902	6806	8605	10076
78 TO 81	2423	2582	2850	3168	3487	3791	4109	4483	4903	5222	5676	6461	7491	9511	11553
74 TO 77	2387	2578	2905	3261	3600	4027	4470	4902	5251	5597	6172	6996	8064	10632	12724
70 TO 73	2361	2588	2969	3366	3856	4361	4847	5215	5616	6032	6667	7665	8677	12032	12724
66 TO 69	2363	2644	3070	3619	4189	4753	5178	5611	6107	6576	7292	8310	9537	12724	12724
62 TO 65	2410	2735	3339	3990	4652	5151	5670	6222	6759	7302	8219	9176	10822	12724	12724

58 TO 61	2521	3017	3776	4568	5178	5823	6486	7083	7783	8482	9303	10646	12724	12724	12724
54 TO 57	2852	3500	4483	5250	6081	6863	7668	8573	9249	9997	11220	12724	12724	12724	12724
50 TO 53	3431	4324	5346	6437	7426	8576	9536	10501	11574	12724	12724	12724	12724	12724	12724
46 TO 49	4451	5402	6797	8227	9770	11068	12517	12724	12724	12724	12724	12724	12724	12724	12724
42 TO 45	5852	7153	9231	11401	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724
41 OR LESS	8092	10298	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724

Table 2. Wasteload Allocated Effluent Values (lbs per day of $CBOD_5$)
(River mile 32.4 to 19.2)
JULY

River Temperature (previous day average in °F)	Flow at Appleton Lutz Park (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
86 OR MORE	2456	2558	2783	3035	3253	3311	3413	3565	3699	3767	3964	4322	4867	6437	7520
82 TO 85	2476	2598	2807	3074	3325	3476	3585	3680	3778	3988	4290	4668	5415	7041	8380
78 TO 81	2458	2619	2860	3136	3394	3619	3809	4017	4271	4492	4809	5444	6255	8155	9995
74 TO 77	2462	2617	2903	3194	3460	3783	4181	4480	4749	5006	5515	6172	6987	9425	11842
70 TO 73	2438	2639	2936	3247	3661	4156	4644	4952	5284	5664	6190	6833	7779	10938	12724
66 TO 69	2433	2671	2997	3465	4039	4616	5053	5501	5945	6349	6820	7555	8776	12724	12724
62 TO 65	2467	2729	3222	3874	4571	5095	5633	6209	6620	6991	7601	8563	10155	12724	12724
61 OR LESS	2548	2946	3692	4533	5177	5859	6527	6961	7444	7961	8810	10126	12323	12724	12724

Table 3. Wasteload Allocated Effluent Values (lbs per day of $CBOD_5$)
(River mile 32.4 to 19.2)
AUGUST

River Temperature (previous day average in °F)	Flow at Appleton Lutz Park (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
86 OR MORE	2163	2254	2473	2740	3005	3242	3447	3626	3789	3938	4141	4327	4750	6066	6947
82 TO 85	2163	2275	2509	2790	3056	3299	3513	3695	3875	4020	4304	4568	5265	6666	7736
78 TO 81	2163	2309	2567	2864	3148	3401	3626	3827	4132	4438	4701	5297	5981	7640	9264
74 TO 77	2163	2332	2624	2940	3237	3506	3841	4241	4559	4857	5342	5913	6687	8808	11001

70 TO 73	2163	2356	2681	3013	3334	3808	4257	4611	4971	5354	5909	6548	7369	10252	12724
66 TO 69	2165	2414	2765	3159	3707	4237	4657	5067	5533	6031	6542	7201	8298	12011	12724
62 TO 65	2221	2499	2938	3566	4198	4697	5202	5740	6362	6704	7250	8126	9616	12724	12724
61 OR LESS	2319	2685	3402	4161	4778	5425	6110	6690	7125	7596	8370	9611	11684	12724	12724

Table 4. Wasteload Allocated Effluent Values (lbs per day of $CBOD_5$)
(River mile 32.4 to 19.2)
SEPTEMBER

River Temperature (previous day average in °F)	Flow at Appleton Lutz Park (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
86 OR MORE	2163	2163	2163	2397	2692	2964	3218	3452	3674	3877	4146	4420	4845	6093	6986
82 TO 85	2163	2163	2163	2458	2759	3037	3288	3518	3754	3965	4136	4557	5279	6649	7740
78 TO 81	2163	2163	2229	2558	2872	3165	3433	3675	3894	4069	4463	5167	5888	7548	9264
74 TO 77	2163	2163	2309	2652	2978	3282	3560	3836	4156	4471	4981	5751	6549	8691	10992
70 TO 73	2163	2163	2385	2744	3079	3480	3829	4176	4556	4936	5612	6363	7169	10133	12724
66 TO 69	2163	2163	2491	2867	3377	3804	4217	4642	5105	5611	6310	6977	8059	11902	12724
62 TO 65	2163	2216	2623	3237	3759	4249	4764	5294	5927	6457	6990	7864	9387	12724	12724
58 TO 61	2163	2367	3067	3709	4315	4962	5642	6386	6844	7301	8064	9322	11429	12724	12724
54 TO 57	2240	2834	3638	4405	5236	6142	6863	7427	8064	8771	9925	11751	12724	12724	12724
50 TO 53	2784	3506	4494	5607	6740	7542	8350	9271	10289	11387	12724	12724	12724	12724	12724
46 TO 49	3584	4519	6027	7494	8573	9802	11180	12708	12724	12724	12724	12724	12724	12724	12724
42 TO 45	4900	6390	8415	10088	12004	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724
41 OR LESS	7203	9360	12179	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724

Table 5. Wasteload Allocated Effluent Values (lbs per day of $CBOD_5$)
(River mile 32.4 to 19.2)
OCTOBER

River Temperature (previous day average in °F)	Flow at Appleton Lutz Park (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
66 OR MORE	2163	2163	2195	2576	2919	3298	3712	4152	4633	5164	6084	6844	8033	12165	12724
62 TO 65	2163	2163	2313	2800	3250	3737	4268	4804	5465	6181	6805	7735	9340	12724	12724
58 TO 61	2163	2163	2645	3189	3786	4442	5130	5902	6613	7078	7870	9183	11414	12724	12724
54 TO 57	2163	2395	3094	3846	4681	5587	6546	7153	7801	8519	9711	11619	12724	12724	12724

50 TO 53	2300	2924	3890	4995	6219	7210	8021	8942	9979	11099	12724	12724	12724	12724	12724
46 TO 49	2943	3846	5331	6910	8153	9383	10767	12303	12724	12724	12724	12724	12724	12724	12724
42 TO 45	4127	5585	7698	9549	11449	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724
41 OR LESS	6394	8457	11476	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724	12724

5.3 Sample Point Number: 601 - River Monitoring

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow River		cfs	Daily	Gauge Station	Applies May 1 through October 31, each year.
WLA Previous 4 Day Avg River Flow		cfs	Daily	Calculated	Applies May 1 through October 31, each year.
WLA Previous Day River Temp		deg F	Daily	Calculated	Applies May 1 through October 31, each year.

5.3.1 Changes from Previous Permit

No changes in the reporting requirements.

5.3.2 Explanation of Limits and Monitoring Requirements

Required May through October. The monitoring required at this sample point is used to determine the daily wasteload allocation for $CBOD_5$.

6 Land Application - Proposed Monitoring and Limitations

Municipal Sludge Description						
Sample Point	**Sludge Class (A or B)**	**Sludge Type (Liquid or Cake)**	**Pathogen Reduction Method**	**Vector Attraction Method**	**Reuse Option**	**Amount Reused/Disposed (Dry Tons/Year)**
003	B	Cake	Fecal coliform	Incorporation	Land application-contract hauling	7116
009	B	Cake			Compost	710
010	A	Cake			Compost	710
Does sludge management demonstrate compliance? Yes. Facility sludge program is exceptional.						

Municipal Sludge Description						
Sample Point	**Sludge Class (A or B)**	**Sludge Type (Liquid or Cake)**	**Pathogen Reduction Method**	**Vector Attraction Method**	**Reuse Option**	**Amount Reused/Disposed (Dry Tons/Year)**
Is additional sludge storage required? No.						
Is Radium-226 present in the water supply at a level greater than 2 pCi/liter? No.						
Is a priority pollutant scan required? Yes, during 2018. Priority pollutant scan of the sludge was last conducted in 2011.						

6.1 Sample Point Number:003- Cake Sludge

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	1/ 2 Months	Composite	
Arsenic Dry Wt	Ceiling	75 mg/kg	1/ 2 Months	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	1/ 2 Months	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	1/ 2 Months	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	1/ 2 Months	Composite	
Copper Dry Wt	Ceiling	4,300 mg/kg	1/ 2 Months	Composite	
Copper Dry Wt	High Quality	1,500 mg/kg	1/ 2 Months	Composite	
Lead Dry Wt	Ceiling	840 mg/kg	1/ 2 Months	Composite	
Lead Dry Wt	High Quality	300 mg/kg	1/ 2 Months	Composite	
Mercury Dry Wt	Ceiling	57 mg/kg	1/ 2 Months	Composite	
Mercury Dry Wt	High Quality	17 mg/kg	1/ 2 Months	Composite	
Molybdenum Dry Wt	Ceiling	75 mg/kg	1/ 2 Months	Composite	
Nickel Dry Wt	Ceiling	420 mg/kg	1/ 2 Months	Composite	
Nickel Dry Wt	High Quality	420 mg/kg	1/ 2 Months	Composite	
Selenium Dry Wt	Ceiling	100 mg/kg	1/ 2 Months	Composite	
Selenium Dry Wt	High Quality	100 mg/kg	1/ 2 Months	Composite	
Zinc Dry Wt	Ceiling	7,500 mg/kg	1/ 2 Months	Composite	
Zinc Dry Wt	High Quality	2,800 mg/kg	1/ 2 Months	Composite	
Nitrogen, Total Kjeldahl		Percent	1/ 2 Months	Composite	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Nitrogen, Ammonium (NH4-N) Total		Percent	1/ 2 Months	Composite	
Phosphorus, Total		Percent	1/ 2 Months	Composite	
Phosphorus, Water Extractable		% of Tot P	1/ 2 Months	Composite	
Potassium, Total Recoverable		Percent	1/ 2 Months	Composite	
PCB Total Dry Wt	Ceiling	50 mg/kg	Once	Composite	Analysis required in 2018. See PCB footnote in the permit for details.
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	Analysis required in 2018. See PCB footnote in the permit for details.

6.1.1 Changes from Previous Permit:

A priority pollutant scan is required during this permit term in 2018.

6.1.2 Explanation of Limits and Monitoring Requirements

Requirements for land application of municipal sludge are determined in accordance with ch. NR 204 Wis. Adm. Code. Ceiling and high quality limits for metals in sludge are specified in s. NR 204.07(5). Requirements for pathogens are specified in s. NR 204.07(6) and in s. NR 204.07 (7) for vector attraction requirements. Limitations for PCBs are addressed in s. NR 204.07(3)(k).

6.2 Sample Point Number: 009- Biosolids- Compost Class B

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	

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

6.2.1 Changes from Previous Permit:

Sample point 009 was added during this permit term. Appleton WWTF has developed and operates a successful, Department approved, biosolids-compost Class B recycling program. The biosolid-compost product is available for public use and is comprised of biosolids cake, yard waste, and wood chips. This outfall is assigned to monitoring the composted material.

6.3 Sample Point Number: 010- Biosolids- Compost Class A

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	

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

6.3.1 Changes from Previous Permit:

Sample point 010 was added during this permit term. Appleton WWTF has the potential to generate biosolids-compost Class A so long as proper compost temperatures are maintained. This outfall has been added to ensure that Appleton can utilize the biolsolids as Class A in accordance with Depatment approval. The biosolid-compost product is available for public use and is comprised of biosolids cake, yard waste, and wood chips. This outfall is assigned to monitoring the composted material.

6.3.2 Explanation of Limits and Monitoring Requirements

Requirements for land application of municipal sludge are determined in accordance with ch. NR 204 Wis. Adm. Code. Ceiling and high quality limits for metals in sludge are specified in s. NR 204.07(5).

7 Compliance Schedules

7.1 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
Year 1 Annual Mercury Progress Report: The permittee shall submit an annual mercury progress report by the due date which documents the activities conducted under its Mercury PMP Plan during the period since the submittal of the previous Mercury Progress Report. The annual mercury progress report shall include a summary of recent analytical data of the WWTF's influent, effluent and sludge.	9/30/2017
Year 2 Annual Mercury Progress Report: The permittee shall submit an annual mercury progress report by the due date which documents the activities conducted under its Mercury PMP Plan during the previous year. The annual mercury progress report shall include a summary of recent analytical data of the WWTF's influent, effluent and sludge.	9/30/2018
Year 3 Annual Mercury Progress Report: The permittee shall submit an annual mercury progress report by the due date which documents the activities conducted under its Mercury PMP Plan during the previous year. The annual mercury progress report shall include a summary of recent analytical data of the WWTF's influent, effluent and sludge. The annual progress report shall also include an analysis of the feasibility for lowering the pretreatment mercury limitations to reduce the influent mercury loading to the treatment facility. If it is feasible to lower the mercury limits, a schedule shall be included to implement these lower limits.	9/30/2019
Year 4 Annual Mercury Progress Report: The permittee shall submit an annual mercury progress report by the due date which documents the activities conducted under its Mercury PMP Plan during the previous year. The annual mercury progress report shall include a summary of recent analytical data of the WWTF's influent, effluent and sludge.	9/30/2020
Year 5 Annual Mercury Progress Report: The permittee shall submit an annual mercury progress report by the due date which documents the activities conducted under its Mercury PMP Plan during the previous year. The annual mercury progress report shall include a summary of recent analytical data of the WWTF's influent, effluent and sludge. If the permittee seeks a renewed mercury variance under s. NR 106.145, Wis. Adm. Code, in the next issuance of this permit, this report shall also 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 Mercury PMP Plan were not pursued and why. The report shall include an analysis of trends in mercury concentrations of the influent, effluent and sludge based on monitoring conducted during the current permit term. The report shall include a proposed variance limit for next permit term under a renewed mercury variance. Additionally, if the permittee seeks a renewed mercury variance in the next issuance of this permit, the permittee shall update its Mercury PMP Plan; including updating the inventories of potential contributors in each of the sectors identified in the Plan, updating mercury reduction activities conducted by the permittee and in collaboration with other entities, updating the activities planned to be conducted within each sector during the next permit term, providing plans for the inspection of all dental facilities in the permittee's sewer service area during the next permit term to verify installation and on-going maintenance of amalgam separators, referencing mercury reduction activities required by the permittee's pretreatment program, and specifying any other planned mercury minimization/source reduction activities to be conducted during the next permit term. The updated PMP Plan shall be submitted to the Department for approval, and shall be submitted with the Year 5 Annual Mercury Progress Report.	9/30/2021

Annual Mercury Reports After Permit Expiration: In the event that this permit is not reissued by its expiration date, the permittee shall continue to submit annual mercury reports each year which document the activities conducted under its Mercury PMP Plan during the previous year. The annual mercury progress reports shall include a summary of recent analytical data of the WWTF's influent, effluent and sludge. These reports are due at 12 month intervals following the due date of the Year 5 Annual Mercury Progress Report.	

7.2 Phosphorus Water Quality-Based Effluent Limitations

No later than 14 days following each compliance date, the permittee shall notify the Department in writing of its compliance or noncompliance with the required action. If a submittal is part of the required action then a timely submittal fulfills the written notification requirement.

Required Action	Due Date
Operational Evaluation Report: The permittee shall prepare an operational evaluation study report and submit it for Department approval. The report shall evaluate collected effluent data, possible source reduction measures, operational improvements or other minor facility modifications that would enable compliance with the final phosphorus WQBEL (water quality based effluent limit) or some improved level of effluent quality using the existing treatment system. Also, the operational evaluation report shall include a phosphorus discharge optimization plan for the current operation. If the report concludes that the facility can achieve the final phosphorus WQBEL, the study shall contain a schedule for implementation of any improvements or other study recommendations. The implementation schedule shall be based on providing compliance with the final phosphorus WQBEL as soon as possible. Once the operational evaluation report is approved by the Department, the permittee shall take the steps called for in the operational evaluation report and optimization plan and follow the implementation schedule as approved. If the Department approved operational evaluation report concludes that the facility cannot achieve the phosphorus limit, the permittee shall initiate a Facilities Planning Study and implementation of the phosphorus discharge optimization plan for the current operation.	12/31/2017
Progress Report #1: Submit a progress report on meeting the final WQBEL for phosphorus. This report shall discuss the feasibility of watershed compliance options including Watershed Adaptive Management and water quality trading, and summarize potential partners, meetings, and other work efforts completed to investigate these options.	06/30/2018
Preliminary Compliance Alternatives Plan: The permittee shall submit a preliminary compliance alternatives plan to the Department. If the plan concludes upgrading is necessary to achieve compliance with the final phosphorus WQBELs, the submittal shall include a preliminary engineering design report. If the plan concludes Adaptive Management will be used, the submittal shall include a completed Watershed Adaptive Management Request Form 3200-139 without the Adaptive Management Plan. If water quality trading will be undertaken, the submittal shall include a completed Notice of Intent to Trade Form 3400-206.	06/30/2019
Facility Plan: Submit a Facility Plan that evaluates feasible alternatives for meeting the final	06/30/2020

phosphorus WQBEL (water quality based effluent limit) which may include: facility upgrading, consolidation with other sewerage systems, alternative effluent discharge locations, the Watershed Adaptive Management Option, Water Quality Trading Plan or a water quality standards variance.	
Construction Plans and Specifications: Submit construction plans and specifications for approval if the approved Facility Plan calls for upgrading the treatment facility. Submit the final water quality trading or adaptive management plan if the Facility Plan calls for one of these watershed approaches.	06/30/2021
Progress Report #2: Submit a progress report on meeting the final WQBEL for phosphorus.	06/30/2022
Complete Actions: Complete actions to meet the final WQBEL for phosphorus. Comply with the new phosphorus final limits.	12/31/2022
Phosphorus WQBELs Effective: The permittee shall achieve compliance with final phosphorus WQBELs.	01/01/2023

7.3 Explanation of Compliance Schedules

Mercury

The compliance schedule regarding the mercury pollutant minimization program will insure that the permittee maintains compliance with the requirements of the alternative mercury effluent limitation and will continue to work towards compliance with the final mercury limitation.

Phosphorus

Subsection NR 217.17, Wis. Adm. Code, allows the department to provide a schedule of compliance for water quality based phosphorus limits where the permittee cannot immediately achieve compliance. This compliance schedule requires the permittee to comply with the final water quality based phosphorus limits within approximately 7 years. As part of the compliance schedule the permittee is required to submit:

- An Operational Evaluation Report to optimize reductions in phosphorus and proceed with implementation of the plans for reduction;
- A Facility Plan to select a preferred compliance option for meeting final phosphorus WQBELs; and
- Assuming that facility upgrades will be made to comply with the final phosphorus WQBELs, the last steps of the phosphorus compliance schedule are to: submit final plans and specifications for construction, initiate construction, submit construction progress reports, and, finally, complete construction and comply with final phosphorus WQBELs. If an alternative compliance option is selected such as water quality trading or adaptive management, the compliance schedule will be amended to reflect these compliance options through permit modification.

The permittee may be required to meet the final phosphorus WQBEL sooner than January 1, 2023 (less than seven years) if the required "Operational Evaluation Report" concludes that the phosphorus WQBEL can be met using the existing treatment system with only source reduction measures, operational improvements and minor facility modifications. Also, as part of the "Facility Plan" the permittee may determine whether Water Quality Trading or Adaptive Management, either alone or in combination with plant upgrades will allow the plant to meet the phosphorus WQBELs.

It is probable that, in order to consistently comply with the phosphorus mass limits, Appleton WWTF will need to evaluate and implement any number of the following approaches:

--Plant optimization;
--Phosphorus source reduction;
--Additional treatment processes;
--Obtaining financing for construction; or

--Potential for adaptive management and/or pollutant trading with upstream contributors, and implementation of such trades.

The Department believes that the compliance schedule suggested in the draft permit (7 years) provides the appropriate length of time for the permittee to evaluate these options, implement the chosen option and meet the final phosphorus limits (WQBELs). This compliance schedule is similar to other schedules within the Lower Fox Basin to support a watershed permitting approach, and the investigation of watershed compliance options including water quality trading and adaptive management.

8 Special Reporting Requirements

None.

9 Other Comments:

None.

10 Attachments:

Water Quality Based Effluent Limits- "Water Quality-Based Effluent Limitations for the Appleton WWTF WPDES Permit No. WI-0023221 in Outagamie County", March 31, 2015, by Jim Schmidt and "Alternative Approach for Calculating TMDL-Based Mass Limits for Total Suspended Solids at Appleton WWTF (WPDES Permit # WI-0023221)", May 18, 2016, by Jim Schmidt

Map- October 30, 2009

Mercury Variance Application submitted by the Appleton WWTF- September 29, 2014

Substantial Compliance Determination, by Mark Corbett, Basin Engineer- May 9, 2016

11 Proposed Expiration Date:

03/31/2021

Prepared By: Amanda Minks

Kelley O'Connor **Wastewater Supervisor, Northeast Region**

Date: November 14, 2016

cc: **Richard Sachs, Regional Permit Drafter**

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

NOTICE OF FINAL DETERMINATION TO REISSUE A WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM (WPDES) PERMIT No. WI-0023221-08-0

Permittee: City of Appleton, 2006 East Newberry Street, Appleton, WI, 54915-2758

Facility Where Discharge Occurs: Appleton Wastewater Treatment Facility, 2006 East Newberry Street, Appleton, Wisconsin

Receiving Water And Location: Lower Fox River in the Lower Fox River Basin in Outagamie County

Brief Facility Description: The permittee owns and operates an advanced secondary activated sludge wastewater treatment facility (WWTF) that treats domestic wastewater as well as waste loads from various industrial contributors. The permittee administers a delegated pretreatment program, which regulates the discharges of categorical and other significant industrial users that contribute wastewater to the WWTF. Discharges of carbonaceous biochemical oxygen demand (CBOD) are subject to a wasteload allocation between the months of May through October, based on stream flow and temperature conditions in the Fox River. The facility is designed to treat an annual average flow of 15.5 million gallons per day (MGD) and currently treats an average of 12 MGD. Phosphorus removal and seasonal disinfection are provided. Sludge is anaerobically digested and thickened prior to land application.

Permit Drafter's Name, Address and Phone: Amanda Minks, 101 S. Webster St. PO Box 7921, , Madison, WI, 53707, (608) 264-9223

Basin Engineer's Name, Address, and Phone: Mark Corbett, 625 E County Road Y, Suite 700, , Oshkosh, WI 54901, (920) 424-4403

Date Permit Signed/Issued: Target: 1/1/2016
Date of Effectiveness: Target: 1/1/2016
Date of Expiration: Target: 12/31/2021

Following the public informational hearing the Department has made a final determination to reissue the WPDES permit for the above-named permittee for this existing discharge. The permit application information from the WPDES permit file, comments received on the proposed permit and applicable Wis. Adm. Codes were used as a basis for this final determination.

The Department has the authority to issue, modify, suspend, revoke and reissue or terminate WPDES permits and to establish effluent limitations and permit conditions under ch. 283, Stats.

Following is a summary of significant comments and any significant changes which have been made in the terms and conditions set forth in the draft permit:

Comments Received from the Applicant, Individuals or Groups and Any Permit Changes as Applicable
Comments were received from the Appleton WWTF. No other comments were made from other groups or individuals. Appleton WWTF and their consultant were the sole attendees of the informational hearing.

Appleton WWTF commented that compliance with the final phosphorous limits would require a major facility upgrade, and that additional time in the compliance schedule is needed to adequately consider the phosphorus compliance options.

Department response: The Department understand that considering alternative phosphorus compliance options like water quality trading and adaptive management can take additional time. End-of-pipe technology solutions are within Appleton WWTF's direct control. However, watershed compliance approaches will take strong partnerships and communication with several groups. The Department supports the investigation of all of the compliance options available to Appleton WWTF, and has initiated a watershed permitting approach in the Lower Fox Basin to help foster communication among the municipal WWTFs in the area. For these reasons, the Department has determined that it is appropriate to extend the Appleton compliance schedule to seven years, leading to TP compliance January 1, 2023. The Department also notes that there was a mathematical error in the phosphorus limits presented in the public noticed permit. The final WPDES permit includes corrected limits that are slightly more restrictive.

Appleton WWTF commented that DNR does not have the authority to include more restrictive fecal coliform limits in the WPDES permit.

Department response: New regulations became effective throughout the state of Wisconsin on September 1, 2016 affecting chapters NR 106 and 205 of the Wisconsin Administrative Code. These new regulations align Wisconsin's effluent limitations with 40 CFR 122.45(d), which requires, whenever practicable, to express effluent limitations as

weekly average and monthly average limitations for publically owned treatment works (POTWs) like the City of Appleton. For this reason, a weekly geomean limitation was added to the final WPDES permit. This limit is calculated based the methods provided in the "Technical Support Document for Water Quality-based Toxics Control" (EPA/505/2-90-001), and is not meant to increase the restrictiveness of the limit, but rather account for statistical variability within the dataset to establish an appropriate limitation to comply with 40 CFR 122.45(d). Additional discussion was added to the permit factsheet to help explain this limit.

Appleton commented that a single WET test faily in 2014 should not warrant the need for a WET limit included in the permit retroactively.

Department Response: The Department utilized standard methods for establishing WET limitations in permits pursuant to s. NR 106.08, Wis. Adm. Code. Although a WET limitation is necessary in the permit, the Department determined that annual WET testing was sufficient given the isolated incident in 2014. Additional WET testing conducted in this permit term may be used to demonstrate that the 2014 sample was not representative, and may be used to help make future reasonable potential determinations for WET limitations. No changes were made as a result of this comment.

Appleton commented that an additional sample point should be added to the permit to reflect Class A biosolids generated through their Department-Approved compost program.

Department Response: On October 26, 2016, DNR compliance staff and the statewide land spreading and septage coordinator completed a site visit of Appleton's compost. At that site visit they confirmed that Class A biosolids may be generated through their compost program so long as they follow proper operation and maintenance techniques including maintaining an adequate temperature within the compost material. Sample point 010 was added to provide Appleton WWTF the opportunity to monitor and comply with Class A biosolids during the permit term.

Comments Received from EPA or Other Government Agencies and Any Permit Changes as Applicable

EPA commented that the notification time period in the phosphorus compliance schedule should be shortened to 14 days pursuant to 40 CFR 122.47(a)(4).

Department Response: This change has been made.

EPA commented that the type of collection system should be listed in the fact sheet as well as the percent combined versus separation of the system.

Department Response: The following language has been added to the permit factsheet: "The City of Appleton wastewater collection system consists of 322 miles of sanitary sewer, two main interceptor sewers, two interceptor sewer Fox River siphon-crossings and 14 sanitary sewer lift stations. None of the collection system consists of "combined" sanitary sewers."

EPA commented that the identification of the biosolids land application sites or where the list can be viewed should be listed in the fact sheet.

Department Response: The Department is currently working to improve databases related to land application. Given this transition period, the Department did not incorporate this comment at this time.

EPA commented that a sketch or detailed description of the location of the discharge should be included in the permit or the fact sheet.

Department Response: A map (dated Map- October 30, 2009) in attached to the permit factsheet illustrating the outfall location.

EPA identified an error in the permit relating to CBOD and BOD requirements.

Department Response: Thank you for identifying this discrepancy. The permit and factsheet have been updated to refer to CBOD only.

EPA commented that the fact sheet states the number of categorical industrial users (CIUs) in the approved pretreatment program as 12 while the permit application lists four CIUs and six significant industrial users. Please review and revise this discrepancy between the two documents.

Department Response: The factsheet has been updated to reflect the permit application information.

As provided by s. 283.63, Stats., and ch. 203, Wis. Adm. Code, persons desiring further adjudicative review of this final determination may request a public adjudicatory hearing. A request shall be made by filing a verified petition for review with the Secretary of the Department of Natural Resources within 60 days of the date the permit was signed (see permit signature date above). Further information regarding the conduct and nature of public adjudicatory hearings may be found by reviewing ch. NR 203, Wis. Adm. Code, s. 283.63 Stats., and other applicable law, including s. 227.42, Stats.

Information on file for this permit action may be inspected and copied at either the above named permit drafter's address or the above named basin engineer's address, Monday through Friday (except holidays), between 9:00 a.m. and 3:30 p.m. Information on this permit action may also be obtained by calling the permit drafter at (608) 264-9223 or by writing to the Department. Reasonable costs (usually 20 cents per page) will be charged for copies of information in the file other than the public notice and fact sheet. Pursuant to the Americans with Disabilities Act, reasonable accommodation, including the provision of informational material in an alternative format, will be made to qualified individuals upon request.