



WPDES PERMIT

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

Superior Fresh, LLC

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility
located at
W15506 Superior Fresh Drive
to

**An Unnamed Tributary to the Pigeon Creek
in the Pigeon Creek Watershed of the Trempealeau River Basin in Jackson 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 _____
Sharon L. Gayan, MPA
Director, Bureau of Water Quality

Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - April 01, 2018

EXPIRATION DATE - March 31, 2023

TABLE OF CONTENTS

| | |
|---|-----------|
| 1 SURFACE WATER REQUIREMENTS | 1 |
| 1.1 SAMPLING POINT(S) | 1 |
| 1.2 MONITORING REQUIREMENTS AND EFFLUENT LIMITATIONS | 1 |
| 1.2.1 <i>Sampling Point (Outfall) 001 - Effluent</i> | 1 |
| 2 BEST MANAGEMENT PRACTICES REQUIREMENTS | 5 |
| 2.1 BEST MANAGEMENT PRACTICES AND REPORTING | 5 |
| 2.1.1 <i>Definitions</i> | 5 |
| 2.1.2 <i>Best Management Practices (BMP) Plan</i> | 6 |
| 2.1.3 <i>Additional Reporting Requirements</i> | 7 |
| 3 LAND TREATMENT REQUIREMENTS | 9 |
| 3.1 SAMPLING POINT(S) | 9 |
| 3.2 MONITORING REQUIREMENTS AND LIMITATIONS | 9 |
| 3.2.1 <i>Sampling Point (Outfall) 002 - Spray Irrigation</i> | 9 |
| 4 LAND APPLICATION REQUIREMENTS | 12 |
| 4.1 SAMPLING POINT(S) | 12 |
| 4.2 MONITORING REQUIREMENTS AND LIMITATIONS | 12 |
| 4.2.1 <i>Sampling Point (Outfall) 003 – Sand Bed Sludge</i> | 12 |
| 5 SCHEDULES | 14 |
| 5.1 ANNUAL WATER QUALITY TRADING (WQT) REPORT | 14 |
| 5.2 LAND TREATMENT MANAGEMENT PLAN | 14 |
| 5.3 LAND APPLICATION MANAGEMENT PLAN | 14 |
| 5.4 SAND BED SLUDGE REMOVAL PLAN | 15 |
| 5.5 BEST MANAGEMENT PRACTICES PLAN | 15 |
| 6 STANDARD REQUIREMENTS | 16 |
| 6.1 REPORTING AND MONITORING REQUIREMENTS | 16 |
| 6.1.1 <i>Monitoring Results</i> | 16 |
| 6.1.2 <i>Sampling and Testing Procedures</i> | 16 |
| 6.1.3 <i>Recording of Results</i> | 16 |
| 6.1.4 <i>Reporting of Monitoring Results</i> | 17 |
| 6.1.5 <i>Records Retention</i> | 17 |
| 6.1.6 <i>Other Information</i> | 17 |
| 6.1.7 <i>Reporting Requirements – Alterations or Additions</i> | 17 |
| 6.2 SYSTEM OPERATING REQUIREMENTS | 17 |
| 6.2.1 <i>Noncompliance Reporting</i> | 18 |
| 6.2.2 <i>Bypass</i> | 18 |
| 6.2.3 <i>Scheduled Bypass</i> | 18 |
| 6.2.4 <i>Controlled Diversions</i> | 19 |
| 6.2.5 <i>Proper Operation and Maintenance</i> | 19 |
| 6.2.6 <i>Operator Certification</i> | 19 |
| 6.2.7 <i>Spill Reporting</i> | 19 |
| 6.2.8 <i>Planned Changes</i> | 19 |
| 6.2.9 <i>Duty to Halt or Reduce Activity</i> | 20 |
| 6.3 SURFACE WATER REQUIREMENTS | 20 |
| 6.3.1 <i>Permittee-Determined Limit of Quantitation Incorporated into this Permit</i> | 20 |
| 6.3.2 <i>Appropriate Formulas for Effluent Calculations</i> | 20 |
| 6.3.3 <i>Effluent Temperature Requirements</i> | 20 |
| 6.3.4 <i>Visible Foam or Floating Solids</i> | 21 |
| 6.3.5 <i>Surface Water Uses and Criteria</i> | 21 |

| | |
|--|-----------|
| 6.3.6 <i>Compliance with Phosphorus Limitation</i> | 21 |
| 6.3.7 <i>Additives</i> | 21 |
| 6.4 LAND TREATMENT REQUIREMENTS FOR INDUSTRIAL DISCHARGES | 22 |
| 6.4.1 <i>Formulas for Land Treatment Calculations</i> | 22 |
| 6.4.2 <i>Land Treatment Annual Report</i> | 22 |
| 6.4.3 <i>Chloride Requirements for Land Treatment Systems</i> | 22 |
| 6.4.4 <i>Nitrogen Loading Requirements for Spray Irrigation</i> | 22 |
| 6.4.5 <i>Ponding</i> | 23 |
| 6.4.6 <i>Runoff</i> | 23 |
| 6.4.7 <i>Seasonal Irrigation Restriction</i> | 23 |
| 6.4.8 <i>Irrigation Management Plan</i> | 23 |
| 6.5 LAND APPLICATION REQUIREMENTS | 23 |
| 6.5.1 <i>General Sludge Management Information</i> | 23 |
| 6.5.2 <i>Land Application Characteristic Report</i> | 23 |
| 6.5.3 <i>Monitoring and Calculating PCB Concentrations in Sludge</i> | 23 |
| 6.5.4 <i>Annual Land Application Report</i> | 24 |
| 6.5.5 <i>Other Methods of Disposal or Distribution Report</i> | 24 |
| 6.5.6 <i>Land Application Site Approval</i> | 25 |
| 6.5.7 <i>Operating Requirements/Management Plan</i> | 25 |
| 6.5.8 <i>Chloride Requirements for Liquid Wastes and By-Product Solids</i> | 25 |
| 6.5.9 <i>Nitrogen Requirements for Liquid Wastes and By-Product Solids and Sludges</i> | 25 |
| 6.5.10 <i>Ponding</i> | 26 |
| 6.5.11 <i>Runoff</i> | 26 |
| 6.5.12 <i>Soil Incorporation Requirements</i> | 26 |
| 6.5.13 <i>Field Stockpiles</i> | 26 |
| 6.5.14 <i>Additional Requirements from ch. NR 214, Wis. Adm. Code</i> | 27 |
| 7 SUMMARY OF REPORTS DUE | 28 |

1 Surface Water Requirements

1.1 Sampling Point(s)

The discharge(s) shall be limited to the waste type(s) designated for the listed sampling point(s).

| Sampling Point Designation | |
|----------------------------|--|
| Sampling Point Number | Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable) |
| 001 | Finishing Water is discharged to the Unnamed Tributary to Pigeon Creek approximately 750 feet to the northwest of the production building. Effluent samples will be collected from inside the fish house in the purge system sump. The flow rate is measured at the influent inline flowmeter (mag meter) located after the 2 well heads tie into a common line. |

1.2 Monitoring Requirements and Effluent Limitations

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

1.2.1 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 | Total Daily | |
| BOD ₅ , Total | | mg/L | Monthly | Grab | |
| Suspended Solids, Total | | mg/L | Monthly | Grab | |
| pH Field | Daily Max | 9.0 su | Monthly | Grab | |
| pH Field | Daily Min | 6.0 su | Monthly | Grab | |
| Nitrogen, Ammonia (NH ₃ -N) Total | | mg/L | Monthly | Grab | |
| Temperature Maximum | | deg F | 3/Week | Continuous | |
| Additive - Hydrogen Peroxide | Daily Max | 0.3 mg/L | Monthly | Grab | |
| Additive - Hydrogen Peroxide | Daily Max | 0.16 lbs/day | Monthly | Grab | |
| Phosphorus, Total | Rolling 12 Month Avg | 1.0 mg/L | 3/Week | Grab | Report mg/L of phosphorus discharged. This limit represents the minimum control level. |
| Phosphorus, Total | | lbs/day | 3/Week | Calculated | Report lbs/day of phosphorus discharged. See Standard Requirement 6.3.6 for calculation. |

| Monitoring Requirements and Effluent Limitations | | | | | |
|---|-------------------|------------------------|-------------------------|--------------------|--|
| Parameter | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| WQT TP Credits | | lbs/day | 3/Week | Calculated | Report WQT TP Credits used. See subsections below for instructions on water quality trading. |
| WQT TP Credits | | lbs/month | Monthly | Calculated | See subsection 1.2.1.4 below. Available TP Credits for the calendar year are specified in the approved Water Quality Trading Plan. |
| WQT TP Computed Compliance | 6-Month Avg | 0.06 mg/L | 3/Week | Calculated | Report the WQT TP Computed Compliance value. See subsections below for instructions on water quality trading. Compliance with the 6-month average limit is evaluated at the end of each six month period on June 30 and December 31. |
| WQT TP Computed Compliance | Monthly Avg | 0.18 mg/L | 3/Week | Calculated | Report the WQT TP Computed Compliance value. See subsections below for instructions on water quality trading. |
| WQT TP Computed Compliance | 6-Month Avg | 0.03 lbs/day | 3/Week | Calculated | Report the WQT TP Computed Compliance value. See subsections below for instructions on water quality trading. Compliance with the 6-month average limit is evaluated at the end of each six month period on June 30 & December 31. |

1.2.1.1 Effluent Temperature Monitoring

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

1.2.1.2 Additive Sampling

Sampling for hydrogen peroxide only required during periods of active use. If no hydrogen peroxide is used during a month indicate non-use on the monthly eDMR and no sampling is required.

1.2.1.3 Adm. Water Quality Trading (WQT)

The permittee may use water quality trading to demonstrate compliance with WQBELs for total phosphorus (TP) of 0.18 mg/L monthly average and 0.06 mg/L 6-month average and 0.03 lbs/day 6-month average. Pollutant reduction credits equal to 168 lbs/year for total phosphorus are available as specified in Water Quality Trading Plan (WQT-2017-0005) or approved amendments thereof.

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

In the event pollutant reduction credits as defined in the approved water quality trading plan are no longer generated, the permittee shall comply with the WQBELs for TP contained in this subsection.

1.2.1.4 Demonstrating Compliance with TP WQBELs Using Water Quality Trading

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

WQT TP CREDITS

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

- Select and report as “WQT TP Credits” the TP pollutant reduction credits (in lbs/day) that will be used for each day that discharge is monitored for TP.
- Recommendation: When the TP discharge for a given day is greater than 0.06 mg/L or 0.03 lbs or both, report the greater of the two following values as the “WQT TP Credits” for that day:
 - WQT TP Credits (in lbs/day) = TP discharged (in lbs/day) – 0.03 lbs/day; or
 - WQT TP Credits (in lbs/day) = TP discharged (in lbs/day) – [the day’s flow in MGD × 0.06 mg/L × 8.34]

Note: When the TP discharge is less than 0.06 mg/L and 0.03 lbs/day for a given day, report 0 (zero) as the “WQT TP Credits” for that day.

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

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

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

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

WQT TP COMPUTED COMPLIANCE

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

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

$$\text{TP credits (in mg/L)} = [\text{TP credits in lbs/day}] \div [\text{the day's flow in MGD} \times 8.34]$$

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

Use the following method to demonstrate compliance with TP WQBELs expressed as a mass in lbs/day:

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

1.2.1.5 Additional Water Quality Trading Requirements

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

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

I certify that permanent vegetation identified in the approved water quality trading plan as the source of pollutant reduction credits are installed, established and properly maintained.

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

1.2.1.6 Annual Water Quality Trading Report

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

- The number of pollutant reduction credits (lbs/month) used each month of the previous year to demonstrate compliance;
- The source of each month's pollutant reduction credits by identifying the approved water quality trading plan that details the source;
- A summary of the annual inspection of each nonpoint source management practice that generated any of the pollutant reduction credits used during the previous year; and

- Identification of noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading that have not been reported in discharge monitoring reports.

1.2.1.7 Water Quality Trading Reopener Clause

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

- The permittee fails to implement the water quality trading plan as approved;
- The permittee fails to comply with permit terms and conditions related to water quality trading;
- New information becomes available that would change the number of credits available for the water quality trade or would change the Department's determinations that water quality trading is an acceptable option.

1.2.1.8 Alternative Approaches to Phosphorus WQBEL Compliance

The permittee may implement an alternative compliance option to achieve compliance with the final phosphorus limits, provided that the permit is modified, revoked and reissued, or reissued to incorporate any such alternative approach.

1.2.1.9 Submittal of Permit Application for Next Reissuance and Pollutant Trading Plan

The permittee shall submit the permit application for the next reissuance at least 6 months prior to expiration of this permit. The permittee has submitted a Water Quality Trading Plan that was approved by WDNR on October 6, 2017. If the permittee intends to pursue pollutant trading to achieve compliance in a manner that differs from that allowed in this permit, the permittee shall submit a new application for water quality trading with the application for the next reissuance. If other compliance measures 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 these alternative measures.

1.2.1.10 Cleaning Period Sample Reporting

The permittee shall indicate cleaning period samples on the discharge monitoring report.

2 Best Management Practices Requirements

2.1 Best Management Practices and Reporting

2.1.1 Definitions

As used in Section 2.1:

- *Aquatic animal containment system* means a culture or rearing unit such as a raceway, pond, tank, net, or other structure used to contain, hold, or produce aquatic animals. The containment systems include structures designed to hold sediment and other materials that are part of a wastewater treatment system.
- *Chemical* means any substance used to maintain or restore water quality for aquatic animal production
- *Drug* means any substance defined as a drug in section 201(g)(1) of the Federal Food, Drug, and Cosmetic Act 21 U.S.C. Section 321.
- *Extra label drug use* means a drug approved under the Federal Food, Drug, and Cosmetic Act that is not used in accordance with the approved label directions.

- *Investigational new animal drug (INAD)* means a drug for which there is a valid exemption in effect under section 512(j) of the Federal Food, Drug, and Cosmetic Act 21 U.S.C. 360(b)(1).
- *Pesticide* means any substance defined as a “pesticide” in section 2(u) of the Federal Insecticide, Fungicide, and Rodenticide Act, 7. U.S.C. § 136(u).
- *Therapeutant* means any substance that is used to maintain or restore aquatic animal health or to affect the structure or function of an aquatic animal.

2.1.2 Best Management Practices (BMP) Plan

A BMP Plan is a description of the standard operating procedures and actions required to maintain or improve effluent quality, control solids, store materials, maintain the aquatic animal containment structures, perform recordkeeping, train employees, closely monitoring feeding, collect and dispose of waste, address the transport or harvest discharge of aquatic animals, and remove dead aquatic animals. The permittee shall:

- Develop and maintain a plan on site describing how the permittee will achieve the requirements of 2.1.2.1 through 2.1.2.7;
- The plan shall be submitted to the Department for approval by October 1, 2018; and

2.1.2.1 Effluent Quality

The permittee shall:

- Maintain Effluent Quality to a level to ensure protection of the water quality standards. Describe the action plan including the parameter threshold concentration(s) that will initiate the different best management practices. The parameters and standards appropriate for this facility include:
 - pH - A daily maximum of 9.0 s.u. and a daily minimum of 6.0 s.u.

2.1.2.2 Solids Control

The permittee shall:

- Employ efficient feed management and feeding strategies that limit feed input to the minimum amount reasonably necessary to achieve production goals and sustain targeted rates of aquatic animal growth in order to minimize potential discharges of uneaten feed and waste products to waters of the State;
- In order to minimize the discharge of accumulated solids from settling ponds and basins and production systems, identify and implement procedures for routine cleaning of rearing units and off-line settling basins; and
- Identify procedures to minimize any discharge of accumulated solids during the inventorying, grading and harvesting aquatic animals in the production system; and
- Remove and dispose of aquatic animal mortalities properly on a regular basis to prevent discharge to waters of the State, except in cases where the Department authorizes such discharge in order to benefit the aquatic environment.

2.1.2.3 Solids Discharge Prohibitions

- Discharging sludge, grit, and accumulated solid residues to surface waters is prohibited.
- Practices (e.g., the removal of dam boards in raceways or ponds) that allow accumulated solids to discharge to surface waters is prohibited.
- Discharging untreated cleaning wastewater to surface waters is prohibited.

- Sweeping, raking, or intentionally discharging accumulated solids from raceways or ponds to surface water is prohibited.

2.1.2.4 Materials Storage

The permittee shall:

- Ensure proper storage of drugs, pesticides, and feed in a manner designed to prevent spills that may result in the discharge of drugs, pesticides or feed to waters of the State; and
- Implement procedures for properly containing, cleaning, and disposing of any spilled material.

2.1.2.5 Structural Maintenance

The permittee shall:

- Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage; and
- Conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.

2.1.2.6 Training

The permittee shall:

- In order to ensure the proper clean-up and disposal of spilled material adequately train all relevant facility personnel in spill prevention and how to respond in the event of a spill; and
- Train staff on the proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment.

2.1.2.7 Recordkeeping

The permittee shall:

- In order to calculate representative feed conversion ratios, maintain records for aquatic animal rearing units documenting the feed amounts and estimates of the numbers and weight of aquatic animals; and
- Keep records documenting the frequency of cleaning, inspections, maintenance and repairs.
- These records shall be maintained on site and available to the Department upon request.

2.1.3 Additional Reporting Requirements

2.1.3.1 Additive Reporting

- For the purpose of Section 2.1.3, an additive is defined as any chemical, drug, pesticide or therapeutant, including medicated feed, that the permittee uses to maintain or restore water quality for aquatic animal production, to maintain or restore aquatic animal health, or to affect the structure or any function of an aquatic animal.
- The permittee shall maintain an additives log that includes; additive name, date(s) used, amount used, location in the facility where additives are introduced and duration of the physical addition in hours each day. This log shall be maintained on site and available to the Department upon request.
- In its application for permit reissuance, the permittee shall identify and provide usage rates for each additive that may be discharged to waters of the State.

- If the permittee wishes to commence use of an additive that may be discharged to waters of the State, or increase the usage rate of an additive greater than that indicated in the permit application, the permittee must notify the Department prior to initiating such a change. The Department may modify the permit in accordance with s. 283.53, Stats, to impose restrictions on the use of the additive.

2.1.3.2 INAD and Extra Label Drug Treatment

The permittee shall notify the Department of the use (i.e. application) of any investigational new animal drug (INAD) or any extralabel drug use (i.e. application) where such a use may lead to a discharge of the drug to waters of the State. Reporting is not required for an INAD or extralabel drug that has been previously approved by FDA for a different species or disease if the INAD or extralabel use is at or below the approved dosage and involved similar conditions of use.

(Note: Use of a drug to treat fish in a freshwater system that was previously approved for a different freshwater species would be considered a similar condition of use. In contrast, a drug that had been previously approved for a marine setting used in a freshwater application would not be considered a similar condition of use. A drug approved to treat terrestrial animals as an INAD used to treat aquatic animals would not be considered a similar condition of use.)

- The permittee shall provide a written report to the Department of an INADs impending use (i.e., application) within 7 days of agreeing or signing up to participate in an INAD study. The written report must identify the INAD to be used, method of use, the dosage, and the disease or condition the INAD is intended to treat.
- For INADs and extralabel drug use (i.e. applications), the permittee shall provide an oral report to the Department as soon as possible, preferably in advance of use, but no later than 7 days after initiating use of that drug. The oral report must identify the drugs used, method of application, and the reason for using that drug.
- For INADs and extralabel drug use (i.e., applications), the permittee shall provide a written report to the permitting authority within 30 days after initiating use of that drug. The written report must identify the drug used and include: the reason for treatment, date(s) and time(s) of the additional (including duration), method of application, and the amount added. All INAD use shall also be included in the additive log identified in 2.1.3.1.

2.1.3.3 Unanticipated Discharge Due to a Failure in or Damage to the Structure of an Aquatic Animal Containment System

In accordance with the following procedures, the permittee shall notify the Department when there is a reportable failure in, or damage to, the structure of an aquatic animal containment system resulting in an unanticipated material discharge of pollutants to waters of the State.

- The permittee shall provide an oral report within 24 hours of discovery of any reportable failure or damage that results in a material discharge of pollutants, describing the cause of the failure or damage in the containment system and identifying materials that have been released to the environment as a result of this failure.
- The permittee shall provide a written report within 7 days of discovery of the failure or damage documenting the cause, the estimated time elapsed until the failure or damage was repaired, an estimate of the material released as a result of the failure or damage, and steps being taken to prevent a reoccurrence.

3 Land Treatment Requirements

3.1 Sampling Point(s)

The discharge(s) shall be limited to the waste type(s) designated for the listed sampling point(s).

| Sampling Point Designation | |
|----------------------------|---|
| Sampling Point Number | Sampling Point Location, Waste Description/Sample Contents and Treatment Description (as applicable) |
| 002 | Land Treatment: Discharge from outfall 002 shall be limited to process wastewater from the approved storage pond. Samples shall be taken prior to discharging to the 20.6 acre spray irrigation system located in the SE1/4, SE1/4, Section 22, Township 1 North, Range 7 East, in the Town of Northfield Jackson County. |

3.2 Monitoring Requirements and Limitations

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

3.2.1 Sampling Point (Outfall) 002 - Spray Irrigation

| Monitoring Requirements and Limitations | | | | | |
|---|--------------|-------------------|------------------|--------------|---|
| Parameter | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| Flow Rate | | gpd | Daily | Total Daily | |
| Hydraulic Application Rate | Monthly Avg | 10,000 gal/ac/day | Monthly | Calculated | Limit is reduced to zero if spray fields are snow or ice-covered. |
| Hydraulic Application Rate | Monthly Avg | 0 gal/ac/day | Monthly | Calculated | Limit effective Dec 1 through Feb 28 |
| Chloride | | mg/L | 2/Month | Composite | |
| Nitrogen, Total Kjeldahl | | mg/L | 2/Month | Composite | |
| Nitrogen, Max Applied On Any Zone | Annual Total | 200 lbs/ac/yr | Annual | Total Annual | See Annual Loading Calculations Subsection. |

| Daily Log – Monitoring Requirements and Limitations | | | | |
|--|--------------|-------------------|-------------------------|--------------------|
| All discharge and monitoring activity shall be documented on log sheets. Originals of the log sheets shall be kept by the permittee as described under “Records Retention” in the Standard Requirements section, and if requested, made available to the Department. | | | | |
| Parameters | Limit | Units | Sample Frequency | Sample Type |
| Zone or Location Being Sprayed | - | Number | Daily | Log |
| Acres Being Sprayed | - | Acres | Daily | Log |
| Start to End Time | - | Date, Hour | Daily | Log |
| Maximum Applied Volume | 0.40 | Inches/Load Cycle | Daily | Calculated |

| Annual Report – Monitoring Requirements and Limitations | | | | |
|---|--------------|------------------|-------------------------|--------------------|
| The Annual Report is due by January 31 st of each year for the previous calendar year. | | | | |
| Parameters | Limit | Units | Sample Frequency | Sample Type |
| Total Volume Per Zone | - | Gallons | Annual | Total Annual |
| Total Nitrogen per Zone | 200 | Pounds/Acre/Year | Annual | Calculated |
| Soil Analysis | - | - | Annual | Composite |
| Fertilizer Used | - | Pounds/Acre/Year | Annual | Total Annual |

Note: Inches/load cycle = gallons/acre/load cycle divided by 27,154.

3.2.1.1 Monthly Avg Flow – LT Calculation

The monthly average discharge flow for Land Treatment systems is calculated by dividing the total wastewater volume discharged for the month by the total number of days in the month.

3.2.1.2 Year to Date Nitrogen Loading Calculations

Record the calendar year cumulative nitrogen loadings on the facility log by adding the current loading to the loading total from the previous months in the calendar year. The following method shall be used to calculate the loading for the month:

$$\frac{(\text{most recent sample, mg/L}) (\text{monthly total water to cell or zone, million gallons}) (8.34)}{\text{acres of cell or zone}} = \text{month lbs/ac}$$

3.2.1.3 Annual Nitrogen Loading Calculations and Reporting

Report the annual cumulative nitrogen loadings to the spray irrigation system on the December eDMR. The values reported on the eDMR should be a summary of the data included on the facility monthly log forms. Final flow values and details of nitrogen and chloride loadings to specific site locations in the spray irrigation system shall be provided in the Annual Report.

3.2.1.4 Land Treatment Management Plan and Additional Land Treatment Requirements

The permittee shall submit a Land Treatment Management Plan to optimize the land treatment system performance and demonstrate compliance with ch. NR 214, Wis. Adm. Code. See the Land Treatment Standard Requirements section (Section 6.4) for additional details regarding: calculation of monthly average gal/day flow rate, the monthly average gal/ac/day hydraulic application rate, the wastewater loading volume in inches per load event, ponding, runoff, compliance with annual nitrogen lbs/ac/year loading limits, and soil test.

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 | Representative composite sample of sand filter bed contents taken prior to land application. Monitoring only required during quarters sludge is land applied. |

4.2 Monitoring Requirements and Limitations

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

4.2.1 Sampling Point (Outfall) 003 – Sand Bed Sludge

| Monitoring Requirements and Limitations | | | | | |
|---|------------|-----------------|------------------|-------------|-------|
| Parameter | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| Flow Rate | | gpd | Daily | Measure | |
| Solids, Total | | % Comp | Quarterly | Grab | |
| Chloride | | mg/L | Quarterly | Grab | |
| Nitrogen, Total Kjeldahl | | mg/L | Quarterly | Grab | |
| Phosphorus, Total | | mg/L | Quarterly | Grab | |

| Daily Log – Monitoring Requirements and Limitations | | | | |
|--|-------|--------------|------------------|-------------|
| All discharge and monitoring activity shall be documented on log sheets. Originals of the log sheets shall be kept by the permittee as described under “Records Retention” in the Standard Requirements section, and if requested, made available to the Department. | | | | |
| Parameters | Limit | Units | Sample Frequency | Sample Type |
| DNR Site Number(s) | - | Number | Daily | Log |
| Acres Applied | - | Acres | Daily | Log |
| Application Rate | - | Gal/Acre/Day | Daily | Calculated |

| Annual Report – Summary of Monitoring Requirements and Limitations | | | | |
|---|---------------------------------------|-------------------------|----------------------------|--------------------|
| The Annual Report is due by January 31 st of each year for the previous calendar year. See the ‘Annual Land Application Report’ subsection in Standard Requirements. | | | | |
| Parameters | Limit | Units | Reporting Frequency | Sample Type |
| DNR Site Number(s) | - | Number | - | - |
| Acres Land Applied | - | Acres | Annual | - |
| Total Volume Per Site | - | Gallons | Annual | Total Annual |
| Total Kjeldahl Nitrogen per Site | 165, or alternate approved in writing | Pounds/Acre/Year | Annual | Calculated |
| Total Chloride per Site | 340 | Pounds/Acre per 2 Years | Annual | Calculated |

4.2.1.1 Annual Site Nitrogen Loading

For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the “Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges” paragraph in the Standard Requirements section of this permit.

4.2.1.2 Biennial Site Chloride Loading

For details on chloride requirements see the “Chloride Requirements for Liquid Wastes and By-Product Solids” paragraph in the Standard Requirements section of this permit.

5 Schedules

5.1 Annual Water Quality Trading (WQT) Report

| Required Action | Due Date |
|---|------------|
| Annual WQT Report: Submit an annual WQT report that shall cover the period from April 1, 2018 through December 31, 2018. The WQT shall include the total number of pollutant credits used, the source of the pollution reduction credits, a summary of annual inspections performed, and identification of noncompliance or failure to implement any terms or conditions of the approved water quality trading plan (WQT-2017-0005). | 01/31/2019 |
| Annual WQT Report #2: Submit an annual WQT report that shall cover the period from January 1, 2019 to December 31, 2019. | 01/31/2020 |
| Annual WQT Report #3: Submit an annual WQT report that shall cover the period from January 1, 2020 to December 31, 2020. | 01/31/2021 |
| Annual WQT Report #4: Submit an annual WQT report that shall cover the period from January 1, 2021 to December 31, 2021. | 01/31/2022 |
| Annual WQT Report #5: Submit the 5th annual WQT report. If the permittee wishes to continue to comply with phosphorus limits through WQT in subsequent permit terms, the permittee shall submit a revised WQT plan WQT-2017-0005 including a demonstration of credit need, compliance record of the existing WQT, and any additional practices needed to maintain compliance over time. | 01/31/2023 |
| Annual WQT Report Required After Permit Expiration: In the event that this permit is not reissued on time for a April 1, 2023 reissuance date, the permittee shall continue to submit annual WQT reports by January 31 each year covering the total number of pollutant credits used, the source of the pollution reduction credits, a summary of annual inspection reports performed, and identification on noncompliance or failure to implement any terms or conditions of the approved water quality trading plan (WQT-2017-0005) for the previous calendar year (i.e., the annual report covering the calendar year 2023 shall be due by January 31, 2024; the annual report covering calendar year 2024 shall be due by January 31, 2025; etc.). | |

5.2 Land Treatment Management Plan

A management plan is required for the land treatment system.

| Required Action | Due Date |
|---|------------|
| Land Treatment Management Plan: Submit a management plan to optimize the land treatment system performance and demonstrate compliance with Wisconsin Administrative Code NR 214. | 04/01/2019 |

5.3 Land Application Management Plan

A management plan is required for the land application system.

| Required Action | Due Date |
|---|----------|
| Land Application Management Plan: Submit a management plan to optimize the land application system performance and demonstrate compliance with Wisconsin Administrative Code ch. NR 214 to account for the land application of sludge from the sand beds. This plan shall be submitted 60 days | |

| | |
|----------------------------|--|
| prior to land application. | |
|----------------------------|--|

5.4 Sand Bed Sludge Removal Plan

| Required Action | Due Date |
|--|----------|
| Submit Desludge Management Plan: The permittee shall submit a management plan if removal of sludge will occur during the permit term. At a minimum, the plan shall address how the sludge will be sampled, removed, transported, and disposed of. No desludging may occur unless approval from the Department is obtained. Daily logs shall be kept that record where the sludge has been disposed. The plan is due a minimum of 60 days prior to desludging. | |

5.5 Best Management Practices Plan

| Required Action | Due Date |
|---|------------|
| Action: Submit a Best Management Practices (BMP) plan describing how the permittee will satisfy the requirements of Section 2.1 of the permit. | 10/01/2018 |

6 Standard Requirements

NR 205, Wisconsin Administrative Code (Conditions for Industrial Dischargers): The conditions in ss. NR 205.07(1) and NR 205.07(3), 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(3).

6.1 Reporting and Monitoring Requirements

6.1.1 Monitoring Results

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

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

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

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

6.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

6.1.3 Recording of Results

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

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

6.1.4 Reporting of Monitoring Results

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

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.
- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.
- For purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD₅ and Total Suspended Solids shall be considered to be limits of quantitation
- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a 0 (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

6.1.5 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings or electronic data records for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application, except for sludge management forms and records, which shall be kept for a period of at least 5 years.

6.1.6 Other Information

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

6.1.7 Reporting Requirements – Alterations or Additions

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

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

6.2 System Operating Requirements

6.2.1 Noncompliance Reporting

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 as directed at the end of this permit 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 Bypass

Except for a controlled diversion as provided in the 'Controlled Diversions' section of this permit, any bypass 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.

6.2.3 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 unscheduled bypassing 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.

6.2.4 Controlled Diversions

Controlled diversions are allowed only when necessary for essential maintenance to assure efficient operation provided the following requirements are met:

- Effluent from the wastewater 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 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 wastewater treatment facility records and such records shall be available to the department on request.

6.2.5 Proper Operation and Maintenance

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

6.2.6 Operator Certification

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

6.2.7 Spill Reporting

The permittee shall notify the Department in accordance with ch. NR 706 (formerly NR 158), Wis. Adm. Code, in the event that a spill or accidental release of any material or substance results in the discharge of pollutants to the waters of the state at a rate or concentration greater than the effluent limitations established in this permit, or the spill or accidental release of the material is unregulated in this permit, unless the spill or release of pollutants has been reported to the Department in accordance with s. NR 205.07 (1)(s), Wis. Adm. Code.

6.2.8 Planned Changes

In accordance with ss. 283.31(4)(b) and 283.59, Stats., the permittee shall report to the Department any facility expansion, production increase or process modifications which will result in new, different or increased discharges of pollutants. The report shall either be a new permit application, or if the new discharge will not violate the effluent limitations of this permit, a written notice of the new, different or increased discharge. The notice shall contain a description of the new activities, an estimate of the new, different or increased discharge of pollutants and a description of the effect of the new or increased discharge on existing waste treatment facilities. Following receipt of

this report, the Department may modify this permit to specify and limit any pollutants not previously regulated in the permit.

6.2.9 Duty to Halt or Reduce Activity

Upon failure or impairment of treatment facility operation, the permittee shall, to the extent necessary to maintain compliance with its permit, curtail production or wastewater discharges or both until the treatment facility operations are restored or an alternative method of treatment is provided.

6.3 Surface Water Requirements

6.3.1 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.

6.3.2 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.

6.3.3 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.

6.3.4 Visible Foam or Floating Solids

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

6.3.5 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.

6.3.6 Compliance with Phosphorus Limitation

Compliance with the concentration limitation for phosphorus shall be determined as a rolling twelve-month average and shall be calculated as follows:

First, determine the pounds of phosphorus for an individual month by multiplying the average of all the concentration values for phosphorus (in mg/L) for that month by the total flow for the month in Million Gallons times the conversion factor of 8.34.

Then, the monthly pounds of phosphorus determined in this manner shall be summed for the most recent 12 months and inserted into the numerator of the following equation.

$$\text{Average concentration of P in mg/L} = \frac{\text{Total lbs of P discharged (most recent 12 months)}}{\text{Total flow in MG (most recent 12 months) X 8.34}}$$

The compliance calculation shall be performed each month with a reported discharge volume after substituting data from the most recent month(s) for the oldest month(s). A calculated value in excess of the concentration limitation will be considered equivalent to a violation of a monthly average.

6.3.7 Additives

In the event that the permittee wishes to commence use of a water treatment additive, or increase the usage of the additives greater than indicated in the permit application, the permittee must get a written approval from the Department prior to initiating such changes. This written approval shall provide authority to utilize the additives at the specific rates until the permit can be either reissued or modified in accordance with s. 283.53, Stats. Restrictions on the use of the additives may be included in the authorization letter.

6.4 Land Treatment Requirements for Industrial Discharges

NR 214, Wisconsin Administrative Code: The requirements of this section are based on ss. NR 214.12-16, Wis. Adm. Code, and apply to wastewater discharges to designed and constructed absorption pond, ridge & furrow, spray irrigation, overland flow and subsurface absorption treatment systems.

6.4.1 Formulas for Land Treatment Calculations

The permittee shall use the following formulas for land treatment calculations, unless an alternate calculation method is approved by the Department in the Land Treatment Management Plan.

6.4.1.1 Monthly Average Hydraulic Application Rate

Determine the monthly average hydraulic application rate (in gal/acre/day) for each outfall by calculating the total gallons of wastewater applied onto the site for the month, dividing that total by the number of wetted acres loaded during the month, and then dividing this resulting value by the number of days in the month. Enter this calculated monthly value on the Discharge Monitoring Report form in the box for the last day of the month, in the "Hydraulic Application Rate" column.

6.4.1.2 Annual Total Nitrogen per Cell or per Zone

$$\frac{(\text{annual ave. concentration in mg/L}) (\text{tot. annual flow in million gallons per cell or zone}) (8.34)}{\text{acreage of cell or zone}} = \text{lbs/ac/yr}$$

6.4.1.3 Annual Total Chloride per Cell or per Zone

$$\frac{(\text{annual ave. concentration in mg/L}) (\text{tot. annual flow in million gallons per cell or zone}) (8.34)}{\text{acreage of cell or zone}} = \text{lbs/ac/yr}$$

6.4.2 Land Treatment Annual Report

Annual Land Treatment Reports are due by January 31st of each year for the previous calendar year.

6.4.3 Chloride Requirements for Land Treatment Systems

Since chloride is not significantly treated by the soil, the chloride level of the wastewater treated on land shall be minimized to the extent that is technically and economically feasible. The goal is to protect groundwater quality and prevent exceedance of the 125 mg/L groundwater preventive action limit.

6.4.4 Nitrogen Loading Requirements for Spray Irrigation

The total annual nitrogen loading (pounds/acre/year) to the wastewater spray irrigation acreage shall not exceed the limitation contained in the land treatment annual report table of this permit. Determination of the annual pounds of nitrogen applied to the land treatment system shall include the nitrogen supplied by the wastewater, organic nitrogen becoming available to plants and any supplemental fertilizers used. The Department may approve (in writing) an alternative nitrogen loading limit in a spray irrigation management plan based on the annual nitrogen needs of the

cover crop and the permittee's demonstration of nitrogen losses for the site as specified in s. NR 214.14(3)(c), Wis. Adm. Code.

6.4.5 Ponding

The intensity of wastewater spray shall be limited to prevent ponding, except for temporary conditions following rainfall events.

6.4.6 Runoff

The volume of wastewater sprayed shall be limited to prevent runoff of any wastewater mixed with rainwater as specified in s. NR 214.14(3)(f), Wis. Adm. Code. If wastewater runoff occurs, spray irrigation shall cease immediately.

6.4.7 Seasonal Irrigation Restriction

Discharge to the spray irrigation field shall occur only between May 1 and October 31 each year, unless otherwise specified in the approved Land Treatment Management Plan.

6.4.8 Irrigation Management Plan

The spray irrigation treatment system shall be operated and managed in accordance with a Department approved management plan. The management plan shall be consistent with the conditions listed in this permit and s. NR 214.14(5), Wis. Adm. Code, which requires a load/rest cycle, cover crop removal, annual soil testing, etc. If operational changes are needed, the management plan shall be amended and such plan shall be submitted to the Department for approval prior to implementing such changes.

6.5 Land Application Requirements

6.5.1 General Sludge Management Information

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

6.5.2 Land Application Characteristic Report

The analytical results from testing of liquid wastes, by-product solids and sludges that are land applied shall be reported annually on the Characteristic Report Form 3400-49. The report form shall be submitted electronically no later than the date indicated on the form. Following submittal of the electronic Characteristic Report Form 3400-49, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

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 sludge results shall be reported on a dry weight basis.

6.5.3 Monitoring and Calculating PCB Concentrations in Sludge

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

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

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

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

6.5.4 Annual Land Application Report

The annual totals for the land application loadings of liquid wastes, by-product solids and sludges to field spreading sites shall be submitted electronically on the Annual Land Application Report Form 3400-55 by January 31, each year whether or not waste is land applied. Following submittal of the electronic Annual Land Application Report Form 3400-55, this form shall be certified electronically via the ‘eReport Certify’ page by a responsible executive officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The ‘eReport Certify’ page certifies that the electronic report form is true, accurate and complete.

6.5.5 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 waste is hauled to another facility, landfilled, incinerated, or stored in a manure pit. Following submittal of the electronic Report Form 3400-52, this form shall be certified electronically via the ‘eReport Certify’ page by a responsible executive officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated

signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

6.5.6 Land Application Site Approval

The permittee is authorized to landspread permitted liquid wastes, by-product solids and sludges on sites approved in writing by the Department in accordance with ss. NR 214.17(2) and 214.18(2), Wis. Adm. Code. Any site use restrictions or granting of case-by-case exceptions shall be identified in the approval letter. If the permittee wishes to have approval for additional sites, application shall be made using Land Application Site Request Form 3400-053. Complete information shall be submitted about each site, including location maps and soil maps, any soil analyses results and other information showing that the site complies with all application requirements and permit conditions. Spreading on a site may commence upon receipt of Department approval. If an existing spreading site is found by the Department to be environmentally unacceptable, a written notice will be issued to withdraw approval of that site.

6.5.7 Operating Requirements/Management Plan

All land application sites used for treatment of liquid wastes, by-product solids and sludges shall be operated in accordance with a Department approved management plan. The management plan shall be consistent with the requirements of this permit, ss. NR 214.17 (3) and (6), and NR 214.18 (3) and (6), Wis. Adm. Code. If operational changes are needed, the land application management plan shall be amended by submitting a written request to the Department for approval. A land application management plan shall be submitted for approval at least 60 days prior to land application.

6.5.8 Chloride Requirements for Liquid Wastes and By-Product Solids

The total pounds of chloride applied shall be limited to 340 pounds per acre per 2 year period. Calculate the chloride loading as follows:

$$\text{Wet Weight Solids: } \frac{\text{lbs of solids} \times \% \text{solids} \times \% \text{chloride}}{\text{acres land applied} \times 100 \times 100} = \text{lbs chloride/acre}$$

$$\text{Liquid: } \frac{\text{mg/L chloride} \times (\text{millions of gallons}) \times 8.34}{\text{acres land applied}} = \text{lbs chloride/acre}$$

6.5.9 Nitrogen Requirements for Liquid Wastes and By-Product Solids and Sludges

NR 214.17(4) and NR 214.18(4) Wis. Adm. Code specify that the total pounds of nitrogen land applied per acre per year shall be limited to the nitrogen needs of the cover crop minus any other nitrogen added to the land application site, including fertilizer or manure. Nitrogen applied can be calculated on the basis of plant available nitrogen, as long as the release of nitrogen from the organic material is credited to future years. This permit requires that the Total Kjeldahl Nitrogen calendar year application amount shall not exceed 165 pounds per acre per year, except when alternate numerical nitrogen loading limits (consistent with the above sections of NR 214) are approved in writing via the Department's land application management plan approval. Calculate nitrogen loading as follows ("TKN" represents "Total Kjeldahl Nitrogen"):

$$\text{Wet Weight Solids and Sludges: } \frac{\text{lbs of solids} \times \% \text{solids} \times \% \text{TKN}}{\text{acres land applied} \times 100 \times 100} = \text{lbs TKN/acre}$$

$$\text{Liquid: } \frac{\text{mg/L TKN} \times (\text{millions of gallons}) \times 8.34}{\text{acres land applied}} = \text{lbs TKN/acre}$$

6.5.10 Ponding

The volume of liquid wastes land applied shall be limited to prevent ponding, except for temporary conditions following rainfall events. If ponding occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

6.5.11 Runoff

The volume of liquid wastes land applied shall be limited to prevent runoff. If runoff occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

6.5.12 Soil Incorporation Requirements

- **Liquid Sludge Requirements:** The Department may require that liquid sludge be incorporated into the soil on specific land application sites when necessary to prevent surface runoff or objectionable odors. Requirements and procedures for incorporation of liquid sludge, when such incorporation may be necessary, shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.
- **Cake Sludge Requirements:** After land application, cake sludge shall be incorporated into the soil. The timing of such incorporation and other related requirements and procedures shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.
- **Liquid Wastewater Requirements:** The Department may require that liquid wastewater be incorporated or injected into the soil on specific land application sites when necessary to prevent surface runoff or objectionable odors. Requirements and procedures for injection or incorporation of liquid wastewater, when such injection or incorporation is necessary, shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.
- **By-Product Solids Requirements:** The Department may limit the volume of by-products solids that are landspread on a specific site when necessary to prevent surface runoff or leaching of contaminants to groundwater and objectionable odors. By-product solids shall, after application, be plowed, disced, or otherwise incorporated into the soil. Requirements and procedures for the incorporation of byproduct solids into the soil shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

6.5.13 Field Stockpiles

The permittee is encouraged to landspread the by-product solids or sludges as they are transported to the fields; but if it becomes necessary to stockpile solids in the fields, the stockpiles shall be spread within 72 hours or as specified in the approved management plan.

6.5.14 Additional Requirements from ch. NR 214, Wis. Adm. Code

The requirements of s. NR 214.17 (4)(c) [pathogen prohibition for human consumption crop fields], (4)(d)1 [no adverse soil effects], (4)(d)10 [allowable whey spreading rates], and (4)(e)1-3 [by-product solids spreading within agricultural practices and not cause contamination] for landspreading of liquid wastes and by product solids and s. NR 214.18 (4)(b),(d)-(h) [application, nutrient, pH, metals, and PCB limitations] for sludge spreading systems are included by reference in this permit. The permittee shall comply with these requirements.

7 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

| Description | Date | Page |
|---|---|------|
| Annual Water Quality Trading (WQT) Report -Annual WQT Report | January 31, 2019 | 14 |
| Annual Water Quality Trading (WQT) Report -Annual WQT Report #2 | January 31, 2020 | 14 |
| Annual Water Quality Trading (WQT) Report -Annual WQT Report #3 | January 31, 2021 | 14 |
| Annual Water Quality Trading (WQT) Report -Annual WQT Report #4 | January 31, 2022 | 14 |
| Annual Water Quality Trading (WQT) Report -Annual WQT Report #5 | January 31, 2023 | 14 |
| Annual Water Quality Trading (WQT) Report -Annual WQT Report Required After Permit Expiration | See Permit | 14 |
| Land Treatment Management Plan -Land Treatment Management Plan | April 1, 2019 | 14 |
| Land Application Management Plan -Land Application Management Plan | See Permit | 15 |
| Sand Bed Sludge Removal Plan -Submit Desludge Management Plan | See Permit | 15 |
| Best Management Practices Plan -Action | October 1, 2018 | 15 |
| General Sludge Management Form 3400-48 | prior to any significant sludge management changes | 23 |
| Characteristic Report Form 3400-49 | no later than the date indicated on the form | 23 |
| Land Application Report Form 3400-55 | January 31, each year whether or not waste is land applied | 24 |
| Other Methods of Disposal or Distribution Report Form 3400-52 | by January 31, each year whether or not waste is hauled to another facility, landfilled, incinerated, or stored in a manure pit | 24 |
| Annual Land Treatment Reports | by January 31st of each year for the previous calendar year | 22 |
| Wastewater Discharge Monitoring Report | no later than the date indicated on the form | 16 |

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to:
 West Central Region, 1300 W. Clairemont Ave., Eau Claire, WI 54701

