



# WPDES PERMIT

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

**Essential Industries Inc**

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility  
located at  
28391 Essential Rd, Merton, WI 53056  
to  
**the Bark River (Bark River Watershed, Rock River Basin) in Waukesha 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 \_\_\_\_\_  
Justin Meyers  
Wastewater Field Supervisor

\_\_\_\_\_  
Date Permit Signed/Issued

**PERMIT TERM: EFFECTIVE DATE - July 01, 2026**

**EXPIRATION DATE - June 30, 2031**

## TABLE OF CONTENTS

|  |           |
|--|-----------|
| <b>1 IN-PLANT REQUIREMENTS</b>   | <b>1</b>  |
| 1.1 SAMPLING POINT(S)  | 1         |
| 1.2 MONITORING REQUIREMENTS AND LIMITATIONS  | 1         |
| 1.2.1 <i>Sampling Point 101 - Water Softener Discharge; 102- Reverse Osmosis Discharge</i> | 1         |
| 1.2.2 <i>Sampling Point 103 - Non-Contact Cooling Water</i>                                | 1         |
| <b>2 SURFACE WATER REQUIREMENTS</b>  | <b>2</b>  |
| 2.1 SAMPLING POINT(S)  | 2         |
| 2.2 MONITORING REQUIREMENTS AND EFFLUENT LIMITATIONS                                       | 2         |
| 2.2.1 <i>Sampling Point (Outfall) 001 - NCCW, RO &amp; Water Softener</i>                  | 2         |
| <b>3 SCHEDULES</b>   | <b>4</b>  |
| 3.1 WATER QUALITY BASED EFFLUENT LIMITS (WQBELS) FOR TOTAL PHOSPHORUS                      | 4         |
| <b>4 STANDARD REQUIREMENTS</b>   | <b>5</b>  |
| 4.1 REPORTING AND MONITORING REQUIREMENTS  | 5         |
| 4.1.1 <i>Monitoring Results</i>  | 5         |
| 4.1.2 <i>Sampling and Testing Procedures</i>   | 5         |
| 4.1.3 <i>Sample Types</i>  | 5         |
| 4.1.4 <i>Recording of Results</i>  | 6         |
| 4.1.5 <i>Reporting of Monitoring Results</i>   | 6         |
| 4.1.6 <i>Records Retention</i>   | 7         |
| 4.1.7 <i>Other Information</i>   | 7         |
| 4.1.8 <i>Reporting Requirements – Alterations or Additions</i>                             | 7         |
| 4.2 SYSTEM OPERATING REQUIREMENTS  | 7         |
| 4.2.1 <i>Noncompliance Reporting</i>   | 7         |
| 4.2.2 <i>Bypass</i>  | 8         |
| 4.2.3 <i>Scheduled Bypass</i>  | 8         |
| 4.2.4 <i>Controlled Diversions</i>   | 8         |
| 4.2.5 <i>Proper Operation and Maintenance</i>  | 9         |
| 4.2.6 <i>Operator Certification</i>  | 9         |
| 4.2.7 <i>Planned Changes</i>   | 9         |
| 4.2.8 <i>Duty to Halt or Reduce Activity</i>   | 9         |
| 4.3 SURFACE WATER REQUIREMENTS   | 9         |
| 4.3.1 <i>Permittee-Determined Limit of Quantitation Incorporated into this Permit</i>      | 9         |
| 4.3.2 <i>Appropriate Formulas for Effluent Calculations</i>                                | 9         |
| 4.3.3 <i>Effluent Temperature Requirements</i>   | 10        |
| 4.3.4 <i>Visible Foam or Floating Solids</i>   | 10        |
| 4.3.5 <i>Surface Water Uses and Criteria</i>   | 10        |
| <b>5 SUMMARY OF REPORTS DUE</b>  | <b>12</b> |

# 1 In-Plant Requirements

## 1.1 Sampling Point(s)

| Sampling Point Designation |  |
|----------------------------|--|
| Sampling Point Number      | Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)                                  |
| 101                        | Report flow from water softener discharged via Outfall 001. Flow shall be estimated based on regeneration cycle information.   |
| 102                        | Report flow from reverse osmosis filter discharged via Outfall 001. Flow shall be estimated based on operations and water use. |
| 103                        | Report non-contact cooling water monitored via magnetic meter and discharged via Outfall 001.                                  |

## 1.2 Monitoring Requirements and Limitations

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

### 1.2.1 Sampling Point 101 - Water Softener Discharge; 102- Reverse Osmosis Discharge

| Monitoring Requirements and Limitations |            |                 |                  |             |       |
|---|------------|-----------------|------------------|-------------|-------|
| Parameter                               | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| Flow Rate                               |            | gpd             | Daily            | Total Daily |       |

### 1.2.2 Sampling Point 103 - Non-Contact Cooling Water

| Monitoring Requirements and Limitations |            |                 |                  |             |       |
|---|------------|-----------------|------------------|-------------|-------|
| Parameter                               | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| Flow Rate                               |            | gpd             | Daily            | Continuous  |       |

## 2 Surface Water Requirements

### 2.1 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 Type/Sample Contents and Treatment Description (as applicable)   |
| 001                        | EFFLUENT: Combined wastewater discharge from water softener brine discharge, reverse osmosis filter discharge, and non-contact cooling water. Flow shall be calculated from flow rates reported via In Plant sample points 101, 102 and 103. Representative grab samples collected at manhole prior to discharge to the Bark River. |

### 2.2 Monitoring Requirements and Effluent Limitations

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

#### 2.2.1 Sampling Point (Outfall) 001 - NCCW, RO & Water Softener

| Monitoring Requirements and Effluent Limitations |             |                 |                  |             |  |
|--|-------------|-----------------|------------------|-------------|--|
| Parameter  | Limit Type  | Limit and Units | Sample Frequency | Sample Type | Notes  |
| Flow Rate  |             | gpd             | Daily            | Total Daily |  |
| BOD <sub>5</sub> , Total                         |             | mg/L            | Annual           | Grab        |  |
| Suspended Solids, Total                          | Daily Max   | 40 mg/L         | Monthly          | Grab        |  |
| Suspended Solids, Total                          | Monthly Avg | 40 mg/L         | Monthly          | Grab        |  |
| Suspended Solids, Total                          | Monthly Avg | 1.98 lbs/day    | Monthly          | Calculated  |  |
| pH Field   | Daily Min   | 6.0 su          | Quarterly        | Grab        |  |
| pH Field   | Daily Max   | 9.0 su          | Quarterly        | Grab        |  |
| Nitrogen, Ammonia (NH <sub>3</sub> -N) Total     |             | mg/L            | Annual           | Grab        |  |
| Oil & Grease (Hexane)                            | Daily Max   | 15 mg/L         | Annual           | Grab        |  |
| Oil & Grease (Hexane)                            | Monthly Avg | 15 mg/L         | Annual           | Grab        |  |
| Chloride   | Daily Max   | 1,510 mg/L      | Monthly          | Grab        | Sample when flow is reported for Sample Point 101. |
| Chloride   | Weekly Avg  | 1,510 mg/L      | Monthly          | Grab        |  |
| Chloride   | Monthly Avg | 1,510 mg/L      | Monthly          | Grab        |  |
| Phosphorus, Total                                | Monthly Avg | 1.1 mg/L        | Monthly          | Grab        | Interim limit effective until October 31, 2028.    |

| <b>Monitoring Requirements and Effluent Limitations</b> |                   |                        |                         |                    |  |
|---|-------------------|------------------------|-------------------------|--------------------|--|
| <b>Parameter</b>  | <b>Limit Type</b> | <b>Limit and Units</b> | <b>Sample Frequency</b> | <b>Sample Type</b> | <b>Notes</b>   |
| Phosphorus, Total                                       | Monthly Avg       | 0.225 mg/L             | Monthly                 | Grab               | Final limit effective November 1, 2028. See Permit Section 2.2.1.2 and Schedule 3.1. |
| Phosphorus, Total                                       | 6-Month Avg       | 0.075 mg/L             | Monthly                 | Grab               | Final limit effective November 1, 2028. See Permit Section 2.2.1.2 and Schedule 3.1. |
| Phosphorus, Total                                       | Monthly Avg       | 0.0438 lbs/day         | Monthly                 | Calculated         | Final limit effective November 1, 2028. See Permit Section 2.2.1.2 and Schedule 3.1. |

**2.2.1.1 pH – Grab Sample Analyses**

When pH Field limit(s) or monitoring are included in a permit, the permittee shall comply with the following conditions:

- The permittee shall perform pH testing required in this permit using an approved method from ch. NR 219, Wis. Adm. Code, Table B,
- The permittee shall utilize a pH probe/meter that incorporates and uses automatic temperature compensation,
- The permittee shall analyze pH samples as soon as possible after collection not to exceed 15 minutes (this may mean transporting samples to an offsite laboratory is not an option), and
- The permittee shall calibrate the pH probe/meter daily, using unexpired 4, 7, and 10 buffers prior to use.

**2.2.1.2 Total Maximum Daily Load (TMDL) Limitations**

**Approved TMDL:** The Rock River TMDL Waste Load Allocation (WLA) for Total Phosphorus and Total Suspended Solids was approved by the U.S. Environmental Protection Agency on September 28, 2011. The annual WLA for phosphorus is 16 lbs/year and the annual WLA for TSS is 724 lbs/year. The limits in this permit are 0.0438 lbs/day expressed as a monthly average for Total Phosphorus and 1.98 lbs/day expressed as a monthly average for Total Suspended Solids based on the annual WLAs divided by 365 days/year. The WLA limit for Total Suspended Solids is effective immediately. The WLA limit for phosphorus goes into effect November 1, 2028, per schedule 3.1.

### 3 Schedules

#### 3.1 Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus

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

| Required Action   | Due Date   |
|---|------------|
| <b>Final Plans and Specifications:</b> The permittee shall submit final construction plans to the Department for approval pursuant to s. 281.41, Stats., specifying treatment plant upgrades that must be constructed to achieve compliance with final phosphorus WQBELs, and a schedule for completing construction of the upgrades by the complete construction date specified below.   | 10/31/2026 |
| <b>Treatment Plant Upgrade to Meet WQBELs:</b> The permittee shall initiate construction of the upgrades. The permittee shall obtain approval of the final construction plans and schedule from the Department pursuant to s. 281.41, Stats. Upon approval of the final construction plans and schedule by the Department pursuant to s. 281.41, Stats., the permittee shall construct the treatment plant upgrades in accordance with the approved plans and specifications. | 06/30/2027 |
| <b>Construction Upgrade Progress Report #1:</b> The permittee shall submit a progress report on construction upgrades.  | 12/31/2027 |
| <b>Construction Upgrade Progress Report #2:</b> The permittee shall submit a progress report on construction upgrades.  | 06/30/2028 |
| <b>Complete Construction &amp; Achieve Compliance:</b> The permittee shall complete construction of wastewater treatment system upgrades.   | 11/01/2028 |

## 4 Standard Requirements

**Chapter 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), Wis. Adm. Code.

### 4.1 Reporting and Monitoring Requirements

#### 4.1.1 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 pursuant s. NR 205.07(1)(r)2., Wis. Adm. Code.

For the purpose of meeting sampling frequency requirements, a week is defined as a calendar week, which begins on Sunday and ends on Saturday. The calendar week shall be used as the basis for reporting monitoring data on discharge monitoring reports.

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.

#### 4.1.2 Sampling and Testing Procedures

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

#### 4.1.3 Sample Types

The permittee shall use the following definitions from s. NR 218.04, Wis. Adm. Code as prescribed in the WPDES permit for the appropriate method and manner of obtaining samples:

**24-hour Composite Sample:** A combination of individual samples taken at intervals of not more than one hour such that the volumes of each of the individual samples and of the combination are proportional to the volumes of flow during each interval and during the 24-hour period respectively.

- **24-hour Flow Proportional Composite Sample:** A combination of individual grab samples taken over a 24-hr period, where the individual grab samples are of equal volume and taken at intervals after a specified volume of discharge has occurred.
- **24-hour Time Proportional Composite Sample:** A combination of individual grab samples taken over a 24-hr period, where the individual grab samples are of equal volume and taken at consistent intervals not exceeding 15 minutes.

**Composite Sample:** A combination of individual samples of equal volume taken at approximately equal intervals not exceeding one hour over a specified period of time.

- **3-hr Composite Sample:** A combination of three (3) individual grab samples of equal volume taken at one-hour intervals.

**Continuous Sample:** A composite of successive individual samples of equal volume taken automatically at equal intervals not exceeding 15 minutes. Where the term is used in connection with monitoring temperature or pH it means continuous in-line recording or monitoring at intervals of not more than 15 minutes.

Continuous sample is synonymous with in-line measurements and may apply to flow, temperature, pH, and dissolved oxygen measurements only. The in-line instrument takes automatic readings at intervals of not more than 15 minutes during a 24-hour period.

**Grab Sample:** A single sample taken at one moment of time or a combination of several smaller samples of equal volume taken in less than a 2-minute period. Where the term is used in connection with monitoring temperature or pH it means a single measurement.

#### 4.1.4 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.

#### 4.1.5 Reporting of Monitoring Results

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

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.
- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.
- For purposes of calculating fees under ch. NR 101, Wis. Adm. Code, a reporting limit of 2.0 mg/L for BOD<sub>5</sub> and 2.5 mg/L Total Suspended Solids shall be considered to be limits of quantitation.
- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a "0" (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for

results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

- If no discharge occurs through an outfall, flow related parameters (e.g. flow rate, hydraulic application rate, volume, etc.) should be reported as “0” (zero) at the required sample frequency specified for the outfall. For example: if the sample frequency is daily, “0” would be reported for any day during the month that no discharge occurred.

#### **4.1.6 Records Retention**

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

#### **4.1.7 Other Information**

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

#### **4.1.8 Reporting Requirements – Alterations or Additions**

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

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

### **4.2 System Operating Requirements**

#### **4.2.1 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.**

#### 4.2.2 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 preventive 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.

#### 4.2.3 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.

#### 4.2.4 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.

#### **4.2.5 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.

#### **4.2.6 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).

#### **4.2.7 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.

#### **4.2.8 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.

### **4.3 Surface Water Requirements**

#### **4.3.1 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.

#### **4.3.2 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, except in cases of Water Quality Trading, wherein the applicable periods are January through June and July through December.]

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

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

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

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

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

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

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

### 4.3.3 Effluent Temperature Requirements

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

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

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

### 4.3.4 Visible Foam or Floating Solids

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

### 4.3.5 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:

- Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state.
- Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the state.

- Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state.
- Substances in concentrations or in combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

## 5 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

| Description  | Date   | Page |
|--|--|------|
| Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Final Plans and Specifications             | October 31, 2026                             | 4    |
| Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Treatment Plant Upgrade to Meet WQBELs     | June 30, 2027                                | 4    |
| Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Construction Upgrade Progress Report #1    | December 31, 2027                            | 4    |
| Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Construction Upgrade Progress Report #2    | June 30, 2028                                | 4    |
| Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Complete Construction & Achieve Compliance | November 1, 2028                             | 4    |
| Wastewater Discharge Monitoring Report   | no later than the date indicated on the form | 5    |

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to: Southeast Region, 1027 W Saint Paul Ave, Milwaukee, WI 53233.