# Permit Fact Sheet

## General Information

| | |
|---|---|
| Permit Number | WI-0036285-08-0 |
| Permittee Name and Address | STITZER SANITARY DISTRICT<br>P.O. Box 121, Stitzer, WI 53825 |
| Permitted Facility Name and Address | Stitzer Sanitary District WWTF<br>4074 WEST LATHROP STREET, STITZER, WISCONSIN |
| Permit Term | April 01, 2026 to March 31, 2031 |
| Discharge Location | SW ¼ of SE ¼ of Section 6, T5N, R2W, North Lancaster Township |
| Receiving Water | Gregory Branch in Upper Grant River of Grant-Platte in Grant County |
| Stream Flow ($Q_{7,10}$) | 0.3 cfs |
| Stream Classification | Warm Water Sport Fish (WWSF); non-public water supply. Approximately 2 miles downstream the classification changes to Cold Water (CW) Class II Trout Stream |
| Discharge Type | Existing, Continuous |
| Annual Average Design Flow (MGD) | 0.025 MGD |
| Industrial or Commercial Contributors | None |
| Plant Classification | A1 - Suspended Growth Processes; B - Solids Separation; C - Biological Solids/Sludges; P - Total Phosphorus; D - Disinfection; SS - Sanitary Sewage Collection System |
| Approved Pretreatment Program? | N/A |

## Facility Description

The Stitzer Sanitary District operates an extended aeration activated sludge wastewater treatment facility (WWTF). The WWTF was built in 1988 and is housed inside a pole shed. Treated wastewater is discharged to Gregory Branch (of the Grant River). Treatment consists of headworks (bar screen and comminution), activated sludge (extended aeration), final clarification, seasonal ultraviolet disinfection, post aeration, and chemical phosphorus removal. The chemical phosphorus removal system was completed in 2023. Biosolids are stored onsite in an aerated sludge storage tank prior to land spreading.

**Substantial Compliance Determination**

**Enforcement During Last Permit:** There have been violations of effluent limitations, missed samples, late reporting, and lack of pilot approval. The facility has completed most of the previously required actions as part of the enforcement process.

After a desk top review of all discharge monitoring reports, CMARs, land application reports, compliance schedule items, and a site visit on October 28, 2025, this facility has been found to be in substantial compliance with their current permit.

**Compliance determination made by Caitlin O'Connell on 10/28/2025.**

# Sample Point Descriptions

| Sample Point Designation | | |
|---|---|---|
| **Sample Point Number** | **Discharge Flow, Units, and Averaging Period** | **Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)** |
| 701 | | Influent: 24-Hr composite sampler located before the comminutor. |
| 001 | 0.01 MGD (September 2020 – August 2025) | Effluent: 24-Hr composite sampler located after the final clarifier, prior to discharge to Gregory Branch. Flow meter and grab samples collected after UV disinfection but prior to the wet well. |
| 002 | 2.2 US Ton (per 2024 permit application) | Aerobically digested, Liquid, Class B. Representative sludge samples shall be collected from the aerated sludge storage tank. |

# Permit Requirements

# 1 Influent – Monitoring Requirements

## 1.1 Sample Point Number: 701- INFLUENT

| Monitoring Requirements and Limitations | | | | | |
|---|---|---|---|---|---|
| **Parameter** | **Limit Type** | **Limit and Units** | **Sample Frequency** | **Sample Type** | **Notes** |
| BOD5, Total | | mg/L | 2/Week | 24-Hr Comp | |
| Suspended Solids, Total | | mg/L | 2/Week | 24-Hr Comp | |

### 1.1.1 Changes from Previous Permit:

Influent limitations and monitoring requirements were evaluated for this permit term and no changes were required in this permit section.

### 1.1.2 Explanation of Limits and Monitoring Requirements

Monitoring of BOD5 and total suspended solids is required by s. NR 210.04(2), Wis. Adm. Code, to assess wastewater strengths and volumes and to demonstrate the percent removal requirements in s. NR 210.05, Wis. Adm. Code, and in the Standard Requirements section of the permit.

# 2 Surface Water - Monitoring and Limitations

## 2.1 Sample Point Number: 001- EFFLUENT

| Monitoring Requirements and Limitations | | | | | |
|---|---|---|---|---|---|
| **Parameter** | **Limit Type** | **Limit and Units** | **Sample Frequency** | **Sample Type** | **Notes** |
| Flow Rate | | MGD | Daily | Continuous | |
| BOD5, Total | Weekly Avg | 30 mg/L | 2/Week | 24-Hr Comp | November through April |
| BOD5, Total | Weekly Avg | 15 mg/L | 2/Week | 24-Hr Comp | May through October |
| BOD5, Total | Monthly Avg | 30 mg/L | 2/Week | 24-Hr Comp | November through April |
| BOD5, Total | Monthly Avg | 15 mg/L | 2/Week | 24-Hr Comp | May through October |
| BOD5, Total | Weekly Avg | 6.3 lbs/day | 2/Week | Calculated | November through April |
| BOD5, Total | Weekly Avg | 3.1 lbs/day | 2/Week | Calculated | May through October |
| Suspended Solids, Total | Weekly Avg | 30 mg/L | 2/Week | 24-Hr Comp | November through April |
| Suspended Solids, Total | Weekly Avg | 15 mg/L | 2/Week | 24-Hr Comp | May through October |
| Suspended Solids, Total | Monthly Avg | 30 mg/L | 2/Week | 24-Hr Comp | November through April |
| Suspended Solids, Total | Monthly Avg | 15 mg/L | 2/Week | 24-Hr Comp | May through October |
| Suspended Solids, Total | Weekly Avg | 6.3 lbs/day | 2/Week | Calculated | November through April |
| Suspended Solids, Total | Weekly Avg | 3.1 lbs/day | 2/Week | Calculated | May through October |
| pH Field | Daily Max | 9.0 su | 5/Week | Grab | |
| pH Field | Daily Min | 6.0 su | 5/Week | Grab | |
| Dissolved Oxygen | Daily Min | 7.0 mg/L | 5/Week | Grab | |
| Nitrogen, Ammonia Variable Limit | | mg/L | 2/Week | See Table | Look up the variable ammonia limit from the 'Variable Ammonia Limitation' table and report the variable limit in the Ammonia Variable Limit column on the eDMR. |
| Nitrogen, Ammonia (NH3-N) Total | Daily Max - Variable | mg/L | 2/Week | 24-Hr Comp | Report the daily maximum Ammonia result in the Nitrogen, Ammonia (NH3-N) Total column of the eDMR. See Ammonia Limitation Section. |
| Nitrogen, Ammonia | Weekly Avg | 18 mg/L | 2/Week | 24-Hr Comp | November through April |

| Monitoring Requirements and Limitations | | | | | |
|---|---|---|---|---|---|
| **Parameter** | **Limit Type** | **Limit and Units** | **Sample Frequency** | **Sample Type** | **Notes** |
| (NH3-N) Total | | | | | |
| Nitrogen, Ammonia (NH3-N) Total | Weekly Avg | 27 mg/L | 2/Week | 24-Hr Comp | May through October |
| Nitrogen, Ammonia (NH3-N) Total | Monthly Avg | 13 mg/L | 2/Week | 24-Hr Comp | November through April |
| Nitrogen, Ammonia (NH3-N) Total | Monthly Avg | 25 mg/L | 2/Week | 24-Hr Comp | May through October |
| E. coli | Geometric Mean - Monthly | 126 #/100 ml | Weekly | Grab | May - September |
| E. coli | % Exceedance | 10 Percent | Monthly | Calculated | May - September. See the E. coli Percent Limit section. Enter the result in the DMR on the last day of the month. |
| Chloride | | mg/L | Monthly | 24-Hr Comp | Monitoring only in 2029. |
| Temperature Maximum | | deg F | 3/Week | Continuous | Monitoring only in 2029. |
| Phosphorus, Total | Monthly Avg | 1.0 mg/L | 2/Week | 24-Hr Comp | This is an interim MDV limit effective through March 31, 2028. See the MDV/Phosphorus sections and phosphorus schedules. |
| Phosphorus, Total | Monthly Avg | 0.6 mg/L | 2/Week | 24-Hr Comp | This is an interim MDV limit effective on April 1, 2028. See the MDV/Phosphorus sections and phosphorus schedules. |
| Phosphorus, Total | | lbs/month | Monthly | Calculated | Report the total monthly phosphorus discharged in lbs/month on the last day of the month on the DMR. See Standard Requirements for 'Appropriate Formulas' to calculate the Total Monthly Discharge in lbs/month. |
| Phosphorus, Total | | lbs/yr | Annual | Calculated | Report the sum of the total monthly discharges (for the months that the MDV is in effect) for the calendar year |

| Monitoring Requirements and Limitations | | | | | |
|---|---|---|---|---|---|
| **Parameter** | **Limit Type** | **Limit and Units** | **Sample Frequency** | **Sample Type** | **Notes** |
| | | | | | on the Annual report form. |
| Nitrogen, Total Kjeldahl | | mg/L | See Listed Qtr(s) | 24-Hr Comp | Annual in rotating quarters. See Nitrogen Series Monitoring section. |
| Nitrogen, Nitrite + Nitrate Total | | mg/L | See Listed Qtr(s) | 24-Hr Comp | Annual in rotating quarters. See Nitrogen Series Monitoring section. |
| Nitrogen, Total | | mg/L | See Listed Qtr(s) | Calculated | Annual in rotating quarters. See Nitrogen Series Monitoring section. Total Nitrogen shall be calculated as the sum of reported values for Total Kjeldahl Nitrogen and Total Nitrite + Nitrate Nitrogen. |
| Acute WET | | TUa | See Listed Qtr(s) | 24-Hr Comp | See WET section. |
| Chronic WET | | TUc | See Listed Qtr(s) | 24-Hr Comp | See WET section. |

### 2.1.1 Changes from Previous Permit

Effluent limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under "Explanation of Limits and Monitoring Requirements" below.

- **Sample Type-** Sample type updated from 24-Hr Flow Proportional Composite sample to 24-Hr Composite sample to reflect the current sampler capabilities and limitations for installation of a 24-Hr Flow Proportional sampler. The department determined that the current sample method is sufficient for WET testing and other parameters to provide representative samples at this time. In future permit terms the department may require the facility upgrade their sampler to 24-Hr Flow Proportional Composite sampler as this is the standard sample type for WET testing to ensure representative samples.
- **pH and DO-** Sampling frequency increased.
- **E. coli-** Fecal coliform monitoring and limits have been replaced with Escherichia coli (E. coli) monitoring and limits.
- **Chloride-** Sample frequency decreased. Sampling year updated.
- **Temperature-** Sampling year updated.
- **Phosphorus MDV -** The permittee has applied for a multi-discharger variance (MDV) for phosphorus for this permit term and the application has been approved by the Department. An MDV interim limit of 0.6 mg/L has been added that goes into effect per a compliance schedule. The permittee is now required to report the total amount of phosphorus discharged in lbs/month and lbs/year. By March 1 of each year the permittee shall make a payment(s) to participating county(s) of $68.40 per pound of phosphorus discharged during the previous year in excess of the target value of 0.2 mg/L.

- **WET-** Acute and chronic WET testing added.

### 2.1.2 Explanation of Limits and Monitoring Requirements

Detailed discussions of limits and monitoring requirements can be found in the attached water quality-based effluent limits (WQBEL) memo dated December 3, 2025.

**Monitoring Frequencies-** The Monitoring Frequencies for Individual Wastewater Permits guidance (April 12, 2021) recommends that standard monitoring frequencies be included in individual wastewater permits based on the size and type of the facility, in order to characterize effluent quality and variability, to detect events of noncompliance, and to ensure consistency in permits issued across the state. Guidance and requirements in administrative code were considered when determining the appropriate monitoring frequencies for pollutants that have final effluent limits in effect during this permit term. The sampling frequency for pH and DO have been increased to 5/Week which is the minimum frequency for municipal wastewater treatment facilities. 5/week monitoring is necessary to clearly characterize effluent quality and variability, to detect events of noncompliance and to ensure fairness and consistency. The sampling frequency for chloride was reduced to 'Monthly' for one year. Based on the data in the previous permit term, the department needs 11 sample results for evaluation during permit reissuance and the data shows '4/Month' sampling is no longer needed.

**Expression of Limits**- In accordance with the federal regulation 40 CFR 122.45(d) and s. NR 205.065, Wis. Adm. Code, limits in this permit are to be expressed as weekly average and monthly average limits whenever practicable.

**Phosphorus –** Phosphorus rules became effective December 1, 2010 per NR 217, Wis. Adm. Code, that required the permittee to comply with water quality based effluent limits (WQBELs) for total phosphorous. The final phosphorus WQBELs are six-month seasonal average limit of 0.075 mg/L and a monthly average limit of 0.225 mg/L and were to become effective as scheduled unless a variance was granted. For this permit term, the permittee has applied for the Multi-Discharger Variance (MDV) for phosphorus as provided for in s. 283.16, Wis. Stats., and approved by USEPA on February 6, 2017 for a 10-year duration. The permittee qualifies for the MDV because it is an existing source and a major facility upgrade is needed to comply with the applicable phosphorus WQBELs, thereby creating a financial burden. The interim effluent limit for total phosphorus is 0.6 mg/L as an average monthly limit.

Conditions of the MDV require the permittee to optimize phosphorus removal throughout the proposed permit term, comply with interim limits and make annual payments to participating county(s) by March 1 of each year based on the pounds of phosphorus discharged during the previous year in excess of the specified target value. A reopener clause is included in the permit to address the current MDV's expiration date, as a permit action may be required to update or remove variance provisions if the MDV is altered or unavailable after February 6, 2027.

The "price per pound" value is $50.00 adjusted for CPI annually during the first quarter as defined by s. 283.16(8)(a)2, Wis. Stats and takes effect for reissued permits with effective dates starting April 1. This may differ from the "price per pound" that is public noticed; however, the "price per pound" is set upon reissuance and is applicable for the entire permit term. The participating county(s) uses these payments to implement non-point source phosphorus control strategies at the watershed level.

# 3 Land Application - Monitoring and Limitations

| Municipal Sludge Description | | | | | | |
|---|---|---|---|---|---|---|
| **Sample Point** | **Sludge Class (A or B)** | **Sludge Type (Liquid or Cake)** | **Pathogen Reduction Method** | **Vector Attraction Method** | **Reuse Option** | **Amount Reused/Disposed (Dry Tons/Year)** |
| 002 | B | Liquid | Fecal Coliform | Aerobic SOUR | Land Application | 2.2 |
| Does sludge management demonstrate compliance? **Yes** | | | | | | |

| Municipal Sludge Description | | | | | | |
|---|---|---|---|---|---|---|
| **Sample Point** | **Sludge Class (A or B)** | **Sludge Type (Liquid or Cake)** | **Pathogen Reduction Method** | **Vector Attraction Method** | **Reuse Option** | **Amount Reused/Disposed (Dry Tons/Year)** |
| Is additional sludge storage required? **No** | | | | | | |
| Is Radium-226 present in the water supply at a level greater than 2 pCi/liter? **No**<br><br>If yes, special monitoring and recycling conditions will be included in the permit to track any potential problems in landapplying sludge from this facility | | | | | | |
| Is a priority pollutant scan required? **No**<br><br>Priority pollutant scans are required once every 10 years at facilities with design flows between 5 MGD and 40 MGD, and once every 5 years if design flow is greater than 40 MGD. | | | | | | |

## 3.1 Sample Point Number: 002- SLUDGE

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

| Monitoring Requirements and Limitations | | | | | |
|---|---|---|---|---|---|
| **Parameter** | **Limit Type** | **Limit and Units** | **Sample Frequency** | **Sample Type** | **Notes** |
| Zinc Dry Wt | Ceiling | 7,500 mg/kg | Annual | Composite | |
| Zinc Dry Wt | High Quality | 2,800 mg/kg | Annual | Composite | |
| Nitrogen, Total Kjeldahl | | Percent | Annual | Composite | |
| Nitrogen, Ammonium (NH4-N) Total | | Percent | Annual | Composite | |
| Phosphorus, Total | | Percent | Annual | Composite | |
| Phosphorus, Water Extractable | | % of Tot P | Annual | Composite | |
| Potassium, Total Recoverable | | Percent | Annual | Composite | |
| PCB Total Dry Wt | Ceiling | 50 mg/kg | Once | Composite | Once in 2027. |
| PCB Total Dry Wt | High Quality | 10 mg/kg | Once | Composite | Once in 2027. |
| PFOA + PFOS | | ug/kg | Annual | Calculated | Report the sum of PFOA and PFOS. See PFAS Permit Sections for more information. |
| PFAS Dry Wt | | | Annual | Grab | Perfluoroalkyl and Polyfluoroalkyl Substances based on updated DNR PFAS List. See PFAS Permit Sections for more information. |

## Changes from Previous Permit:

Sludge limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under "Explanation of Limits and Monitoring Requirements" below.

**PCB-** Monitoring year updated.

**PFAS** –Monitoring is required annually pursuant to s. NR 204.06(2)(b)9, Wis. Adm. Code.

## Explanation of Limits and Monitoring Requirements

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

**PFAS-** The presence and fate of PFAS in municipal and industrial sludges is an emerging public health concern. EPA has developed a draft risk assessment to determine future land application rates and released this risk assessment in January of

2025. The department is evaluating this new information. Until a decision is made, the "Interim Strategy for Land Application of Biosolids and Industrial Sludges Containing PFAS" should be followed

Collecting sludge data on PFAS concentrations from a wide range of wastewater treatment facilities will help protect public health from exposure to elevated levels of PFAS and determine the department's implementation of EPA's recommendations. To quantitate this risk, PFAS sampling has been included in this WPDES permit pursuant to ss. NR 214.18(5)(b) and NR 204.06(2)(b)9, Wis. Adm. Code.

# 4 Schedules

## 4.1 Phosphorus Schedule - Optimization and Compliance Planning

The permittee is required to optimize performance and undertake compliance planning to control phosphorus discharges per the following schedule.

| Required Action | Due Date |
|---|---|
| **Optimization and Compliance Alternatives:** The permittee shall implement a phosphorus discharge optimization plan to control phosphorus discharges to the greatest extent practicable. Submit a progress report that summarizes the approach to phosphorus removal at the facility, the resulting concentration and mass loading for the last 12-month period, and any changes that were or are needed to optimize removal of phosphorus by the due date.<br><br>The permittee shall also evaluate alternative phosphorus compliance options such as water quality trading and adaptive management. The progress report submitted on the date due shall also detail any outreach activities undertaken to evaluate these options, any communications with credit generators, brokers/clearinghouse, and any potential water quality trading or adaptive management projects that may lead to compliance with phosphorus WQBELs.<br><br>Financial alternatives evaluation: If the permittee intends to seek a renewed variance at the end of this permit term, the permittee may complete a financial evaluation to support ongoing variance eligibility. The report must evaluate financial mechanisms that have the potential to make compliance with phosphorus WQBELs economically feasible. Include an assessment of the feasibility and financial outcomes of the following opportunities: variable rate structures, grants through USDA or other sources, and DNR's Clean Water Fund Program. The assessment of the DNR's Clean Water Fund program should take into account subsidized interest rate loans, principal forgiveness, and other options as outlined in EPA's March 2024 Financial Capabilities Assessment Guidance, Appendix C. | 04/01/2027 |
| **Progress Report #2:** Submit a progress report per the above for the prior calendar year. | 04/01/2028 |
| **Progress Report #3:** Submit a progress report per the above for the prior calendar year. | 04/01/2029 |
| **Progress Report #4:** Submit a progress report per the above for the prior calendar year. | 04/01/2030 |
| **Final MDV Optimization and Compliance Alternatives Report:** Submit a progress report per the above for the prior calendar year.<br><br>If water quality trading or adaptive management will be used to comply with phosphorus limitations during the next permit term, submit a draft water quality trading plan, adaptive management plan, or executed clearinghouse credit purchase agreement.<br><br>The financial alternatives evaluation as described above must be submitted by the date due if the facility chooses to seek renewal of the variance. | 10/01/2030 |

### Explanation of Schedule

Per s. 283.16(6)(a), Wis. Stats. the Department may include a requirement that the permittee optimize the performance of a point source in controlling phosphorus discharges, which may be necessary to achieve compliance with applicable effluent limits. This compliance schedule requires the permittee to prepare an optimization plan with a schedule for implementation and submit it for Department approval. The schedule also includes a compliance planning element focused on economically feasible solutions to low-level phosphorus effluent limits such as water quality trading or adaptive management. The permittee shall take the steps called for in the optimization plan and submit annual progress reports on optimizing the removal of phosphorus and establishing a water quality trade or adaptive management project. Should the permittee intend to reapply for a subsequent term of variance coverage, a financial alternatives analysis will need to be completed. Report elements are listed in the schedule, and more information can be found in EPA's March 2024 Financial Capabilities Assessment Guidance, Appendix C.

## 4.2 Phosphorus Payment per Pound to County

The permittee is required to make annual payments for phosphorus reductions to the participating county or counties in accordance with s. 283.16(8), Wis. Stats, and the following schedule. The price per pound will be set at the time of permit reissuance and will apply for the duration of the permit.

| Required Action | Due Date |
|---|---|
| **Annual Verification of Phosphorus Payment to County:** The permittee shall make a total payment to the participating county or counties approved by the Department by March 1 of each calendar year. The amount due is equal to the following: [(lbs of phosphorus discharged minus the permittee's target value) times ($68.40 per pound)] or $640,000, whichever is less. See the payment calculation steps in the Surface Water section.<br><br>The permittee shall submit Form 3200-151 to the Department by March 1 of each calendar year indicating total amount remitted to the participating counties to verify that the correct payment was made. The first payment verification form is due by the specified Due Date.<br><br>Note: The applicable Target Value is 0.2 mg/L as defined by s. 283.16(1)(h), Wis. Stats. The "per pound" value is $50.00 adjusted for CPI. | 03/01/2027 |
| **Annual Verification of Payment #2:** Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties. | 03/01/2028 |
| **Annual Verification of Payment #3:** Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties. | 03/01/2029 |
| **Annual Verification of Payment #4:** Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties. | 03/01/2030 |
| **Annual Verification of Payment #5:** Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties. | 03/01/2031 |
| **Continued Coverage:** If the permittee intends to seek a renewed variance, an application for the MDV (Multi Discharger Variance) shall be submitted as part of the application for permit reissuance in accordance with s. 283.16(4)(b), Wis. Stats. | |
| **Annual Verification of Payment After Permit Expiration:** In the event that this permit is not reissued prior to the expiration date, the permittee shall continue to submit Form 3200-151 to the Department indicating total amount remitted to the participating counties by March 1 each year. | |

### Explanation of Schedule

Subsection 283.16(6)(b), Wis. Stats., requires permittees that have received approval for the multi-discharger variance (MDV) to implement a watershed project that is designed to reduce non-point sources of phosphorus within the HUC 8

watershed in which the permittee is located. The permittee has selected the "Payment to Counties" watershed option described in s. 283.16(8), Wis. Stats. Under this option the permittee shall make annual payment(s) to participating county(s) that are calculated based on the amount of phosphorus actually discharged during a calendar year in pounds per year less the amount of phosphorus that would have been discharged had the permittee discharged phosphorus at a target value concentration of 0.2 mg/L. The pounds of phosphorus discharged in excess of the target value is multiplied by a per pound phosphorus charge that will equal $68.40 per pound. This schedule requires the permittee to submit Form 3200-151 to the Department indicating the total amount remitted to the participating county(s).

## 4.3 Phosphorus Multi-Discharger Variance Interim Limit (0.6 mg/L)

This compliance schedule requires the permittee to achieve compliance with the specified MDV interim effluent limit in accordance with s. 283.16(6), Wis. Stats., by the due date.

| Required Action | Due Date |
|---|---|
| **Report on Effluent Discharges:** Submit a report on effluent discharges of phosphorus with conclusions regarding compliance. | 10/01/2026 |
| **Action Plan:** Submit an action plan for complying with the specified interim effluent limit. If construction is required, include plans and specifications with the submittal. | 04/01/2027 |
| **Initiate Actions:** Initiate actions identified in the plan. | 10/01/2027 |
| **Complete Actions**: Complete actions identified in the plan and achieve compliance with the specified interim effluent limit. | 04/01/2028 |

### Explanation of Schedule

Subsection 283.16(6), Wis. Stats., establishes required interim phosphorus effluent limits that must be met for multi-discharger variance (MDV) eligibility. The schedule above provides the permittee with two years to comply with that limit.

## 4.4 Land Application Management Plan

A management plan is required for the land application system.

| Required Action | Due Date |
|---|---|
| **Land Application Management Plan Submittal**: Submit an update to the management plan to optimize the land application system performance and demonstrate compliance with ch. NR 204, Wis. Adm. Code, by the Due Date. This management plan shall 1) specify information on pretreatment processes (if any); 2) identify land application sites; 3) describe site limitations; 4) address vegetative cover management and removal; 5) specify availability of storage; 6) describe the type of transporting and spreading vehicle(s); 7) specify monitoring procedures; 8) track site loading; 9) address contingency plans for adverse weather and odor/nuisance abatement; and 10) include any other pertinent information. Once approved, all landspreading activities shall be conducted in accordance with the plan. Any changes to the plan must be approved by the Department prior to implementing the changes. | 03/31/2027 |

### Explanation of Schedule

An up-to-date Land Application Management Plan is required that documents how the permittee will manage the land application of biosolids consistent with ch. NR 204, Wis. Adm. Code

## Other Comments
None

## Attachments
Water Quality Based Effluent Limits dated 12/3/2025
MDV Checklist dated 9/17/2025
MDV Approval Letter dated 9/17/2025

## Justification Of Any Waivers From Permit Application Requirements
No waivers requested or granted as part of this permit reissuance.

**Prepared By:**
Jennifer Jerich, Wastewater Specialist

**Date:** 1/22/2026

**Date amended post Fact Check:**

**Date amended post Public Notice:**

# CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: December 3, 2025

TO: Jennifer Jerich – SCR/Horicon

FROM: Zainah Masri – WY/3

SUBJECT: Water Quality-Based Effluent Limitations for the Stitzer Sanitary District WWTF
WPDES Permit No. WI-0036285-08

This is in response to your request for an evaluation of the need for water quality-based effluent limitations (WQBELs) using chapters NR 102, 104, 105, 106, 207, 210, 212, and 217 of the Wisconsin Administrative Code (where applicable) for the discharge from the Stitzer Sanitary District WWTF in Grant County. This municipal wastewater treatment facility (WWTF) discharges to the Gregory Branch, located in the Upper Grant River Watershed in the Grant- Platte Rivers Basin.

The evaluation of the permit recommendations is discussed in more detail in the attached report.

Based on our review, the following recommendations are made on a chemical-specific basis at Outfall 001:

| Parameter | Daily Maximum | Daily Minimum | Weekly Average | Monthly Average | Six-Month Average | Footnotes |
|---|---|---|---|---|---|---|
| Flow Rate | | | | | | 1,2 |
| $BOD_5$<br>November – April<br><br>May – October | | | 30 mg/L<br>6.3 lbs/day<br>15 mg/L<br>3.1 lbs/day | **30 mg/L**<br><br>**15 mg/L** | | 1,4 |
| TSS<br>November – April<br><br>May – October | | | 30 mg/L<br>6.3 lbs/day<br>15 mg/L<br>3.1 lbs/day | **30 mg/L**<br><br>**15 mg/L** | | 1,4 |
| pH | 9.0 s.u. | 6.0 s.u. | | | | 1 |
| Dissolved Oxygen | | 7.0 mg/L | | | | 1 |
| Ammonia Nitrogen<br>November – April<br>May – October | Variable<br>Variable | | **18 mg/L**<br>**27 mg/L** | **13 mg/L**<br>**25 mg/L** | | 1,3,4 |
| Bacteria | | | | | | |
| Final Limit<br>*E. coli* | | | | 126 #/100 mL<br>geometric mean | | 5 |
| Chloride | | | | | | 6 |
| Temperature | | | | | | 2 |
| Phosphorus<br>LCA Interim Limit<br>HAC Interim Limit | | | | 1.0 mg/L<br>0.6 mg/L | | 7 |
| Final WQBEL<br>Final Mass Limit | | | | 0.225 mg/L | 0.075 mg/L<br>0.016 lbs/day | |
| TKN,<br>Nitrate+Nitrite, and<br>Total Nitrogen | | | | | | 8 |

| Parameter | Daily Maximum | Daily Minimum | Weekly Average | Monthly Average | Six-Month Average | Footnotes |
|---|---|---|---|---|---|---|
| Acute WET | | | | | | 9,11,12 |
| Chronic WET | | | | | | 10,11,12 |

Footnotes:

1. No changes from the current permit.
2. Monitoring only.
3. The variable daily maximum ammonia nitrogen limit table corresponding to various effluent pH values applies year-round.

| **Effluent pH s.u.** | **Limit mg/L** | **Effluent pH s.u.** | **Limit mg/L** | **Effluent pH s.u.** | **Limit mg/L** |
|---|---|---|---|---|---|
| $6.0 \leq pH \leq 6.1$ | 72 | $7.0 < pH \leq 7.1$ | 44 | $8.0 < pH \leq 8.1$ | 9.3 |
| $6.1 < pH \leq 6.2$ | 71 | $7.1 < pH \leq 7.2$ | 39 | $8.1 < pH \leq 8.2$ | 7.6 |
| $6.2 < pH \leq 6.3$ | 69 | $7.2 < pH \leq 7.3$ | 35 | $8.2 < pH \leq 8.3$ | 6.3 |
| $6.3 < pH \leq 6.4$ | 67 | $7.3 < pH \leq 7.4$ | 31 | $8.3 < pH \leq 8.4$ | 5.2 |
| $6.4 < pH \leq 6.5$ | 65 | $7.4 < pH \leq 7.5$ | 27 | $8.4 < pH \leq 8.5$ | 4.3 |
| $6.5 < pH \leq 6.6$ | 63 | $7.5 < pH \leq 7.6$ | 23 | $8.5 < pH \leq 8.6$ | 3.5 |
| $6.6 < pH \leq 6.7$ | 60 | $7.6 < pH \leq 7.7$ | 19 | $8.6 < pH \leq 8.7$ | 3.0 |
| $6.7 < pH \leq 6.8$ | 56 | $7.7 < pH \leq 7.8$ | 16 | $8.7 < pH \leq 8.8$ | 2.5 |
| $6.8 < pH \leq 6.9$ | 52 | $7.8 < pH \leq 7.9$ | 14 | $8.8 < pH \leq 8.9$ | 2.1 |
| $6.9 < pH \leq 7.0$ | 48 | $7.9 < pH \leq 8.0$ | 11 | $8.9 < pH \leq 9.0$ | 1.8 |

4. Additional limits to comply with the expression of limits requirements in ss. NR 106.07 and NR 205.065(7), Wis. Adm. Codes, are included in bold.
5. Bacteria limits apply during the disinfection season of May through September. Additional final limit: No more than 10 percent of *E. coli* bacteria samples collected in any calendar month may exceed 410 count/100 mL.
6. Monitoring at a frequency to ensure that 11 samples are available at the next permit issuance.
7. Under the phosphorus MDV, a level currently achievable (LCA) interim limit of 1.0 mg/L should be effective upon permit reissuance. A compliance schedule may be included in the permit until the highest attainable condition (HAC) limit of 0.6 mg/L can be met. The final WQBELs remain at 0.225 mg/L as a monthly average and 0.075 mg/L as a six-month average, as well as a respective mass limit.
8. As recommended in the Department's October 1, 2019 Guidance for Total Nitrogen Monitoring in Wastewater Permits, annual total nitrogen monitoring is recommended for all minor municipal permittees. Sections 283.37(5) and 283.55(1)(e), Wis. Stats, and ss. NR 200.065(1)(g) and NR 200.065(1)(h), Wis. Adm. Codes, provide the authority to request this monitoring during the permit term. Total Nitrogen is the sum of nitrate ($NO_3$), nitrite ($NO_2$), and total Kjeldahl nitrogen (TKN) (all expressed as N).
9. After consideration of the guidance provided in the Department's *WET Program Guidance Document* (2022) and other information described above, **3 acute WET tests throughout the permit term are recommended in the reissued permit**. According to the *State of Wisconsin Aquatic Life Toxicity Testing Methods Manual* (s. NR 219.04, Table A, Wis. Adm. Code), a synthetic (standard) laboratory water may be used as the dilution water and primary control in acute WET tests.
10. After consideration of the guidance provided in the Department's *WET Program Guidance Document* (2022) and other information described above, **3 chronic WET tests throughout the permit term are recommended in the reissued permit**. The Instream Waste Concentration

(IWC) to assess chronic test results is 34 %. According to the *State of Wisconsin Aquatic Life Toxicity Testing Methods Manual* (s. NR 219.04, Table A, Wis. Adm. Code), chronic testing shall be performed using a dilution series of 100%, 75%, 50%, 25% & 12.5%. The primary control water used in chronic WET tests conducted on Outfall 001 shall be a grab sample collected from Gregory Branch.

11. Sampling WET concurrently with any chemical-specific toxic substances is recommended. Tests should be done in rotating quarters, to collect seasonal information about this discharge.
12. If a satisfactory phosphorus chemical SOP is established and implemented at the facility prior to permit reissuance, then acute and chronic WET testing can be dropped in the reissued permit.

Please consult the attached report for details regarding the above recommendations. If there are any questions or comments, please contact Zainah Masri at Zainah.Masri@wisconsin.gov or Diane Figiel at Diane.Figiel@wisconsin.gov.

Attachments (4) – Narrative, Thermal Table, Ammonia Nitrogen Calculations & Map

PREPARED BY: Zainah Masri, Water Resources Engineer Zainah Masri

APPROVED BY: Diane Figiel Date: 12/3/2025
Diane Figiel, PE,
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Lisa Creegan, Regional Wastewater Supervisor – SCR/Fitchburg
Diane Figiel, Water Resources Engineer – WY/3
Nate Willis, Environmental Engineer Manager– WY/3
Kari Fleming, Natural Resources Program Manager – WY/3

Attachment #1

**Water Quality-Based Effluent Limitations for**
**Stitzer Sanitary District Wastewater Treatment Facility**

**WPDES Permit No. WI-0036285-08-0**

Prepared by: Zainah Masri – WY/3

## PART 1 – BACKGROUND INFORMATION

### Facility Description

The Stitzer Sanitary District operates a wastewater treatment facility (WWTF) providing secondary treatment and nutrient removal to primarily domestic wastewater. The WWTF was built in 1988 and is housed inside a pole shed which helps with cold weather treatment.

Treated wastewater is discharged to Gregory Branch (of the Grant River) on a daily basis via a pipe that is approximately three miles long. Treatment units consist of headworks (bar screen and comminution), activated sludge (extended aeration), final clarification, and seasonal ultraviolet disinfection. Biosolids are aerobically digested prior to land spreading. The Sanitary District has at least 180 days of storage capacity on-site. Digested biosolids are land spread on DNR approved sites.

As a part of the MDV phosphorus requirements, Stitzer Sanitary District WWTF completed construction upgrades to their facility in November 2023 resulting in chemical addition for phosphorus removal as a part of their phosphorus reduction efforts.

Attachment #4 is a map of the area showing the approximate location of Outfall 001.

### Existing Permit Limitations

The current permit, which expired on September 30, 2025, includes the following effluent limitations and monitoring requirements.

| Parameter | Daily Maximum | Daily Minimum | Weekly Average | Monthly Average | Six-Month Average | Footnotes |
|---|---|---|---|---|---|---|
| Flow Rate | | | | | | 1,2 |
| $BOD_5$<br>November – April<br><br>May – October | | | 30 mg/L<br>6.3 lbs/day<br>15 mg/L<br>3.1 lbs/day | **30 mg/L**<br><br>**15 mg/L** | | 1,4 |
| TSS<br>November – April<br><br>May – October | | | 30 mg/L<br>6.3 lbs/day<br>15 mg/L<br>3.1 lbs/day | **30 mg/L**<br><br>**15 mg/L** | | 1,4 |
| pH | 9.0 s.u. | 6.0 s.u. | | | | 1 |
| Dissolved Oxygen | | 7.0 mg/L | | | | 1 |

Attachment #1

| Parameter | Daily Maximum | Daily Minimum | Weekly Average | Monthly Average | Six-Month Average | Footnotes |
|---|---|---|---|---|---|---|
| Ammonia Nitrogen<br>November – April<br>May – October | <br>Variable<br>Variable | | <br>**18 mg/L**<br>**27 mg/L** | <br>**13 mg/L**<br>**25 mg/L** | | 3,4 |
| Bacteria | | | | | | |
| Interim Limit<br>Fecal Coliform | | | | 400 #/100 mL<br>geometric mean | | 5,8 |
| Final Limit<br>*E. coli* | | | | 126 #/100 mL<br>geometric mean | | |
| Chloride | | | | | | 6 |
| Temperature | | | | | | 6 |
| Phosphorus<br>LCA Interim Limit<br>HAC Interim Limit<br>Final Limit | | | | <br>7.7 mg/L<br>1.0 mg/L<br>0.225 mg/L | <br><br><br>0.075 mg/L<br>0.016 lbs/day | 7 |
| TKN,<br>Nitrate+Nitrite,<br>and Total Nitrogen | | | | | | 9 |

Footnotes:

1. These limitations are not being evaluated as part of this review. Because the water quality criteria (WQC), reference effluent flow rates, and receiving water characteristics have not changed, limitations for these water quality characteristics do not need to be re-evaluated at this time.
2. Monitoring only
3. The variable daily maximum ammonia nitrogen limit table corresponding to various effluent pH values applies year-round.

| **Effluent pH s.u.** | **Limit mg/L** | **Effluent pH s.u.** | **Limit mg/L** | **Effluent pH s.u.** | **Limit mg/L** |
|---|---|---|---|---|---|
| $6.0 \leq pH \leq 6.1$ | 72 | $7.0 < pH \leq 7.1$ | 44 | $8.0 < pH \leq 8.1$ | 9.3 |
| $6.1 < pH \leq 6.2$ | 71 | $7.1 < pH \leq 7.2$ | 39 | $8.1 < pH \leq 8.2$ | 7.6 |
| $6.2 < pH \leq 6.3$ | 69 | $7.2 < pH \leq 7.3$ | 35 | $8.2 < pH \leq 8.3$ | 6.3 |
| $6.3 < pH \leq 6.4$ | 67 | $7.3 < pH \leq 7.4$ | 31 | $8.3 < pH \leq 8.4$ | 5.2 |
| $6.4 < pH \leq 6.5$ | 65 | $7.4 < pH \leq 7.5$ | 27 | $8.4 < pH \leq 8.5$ | 4.3 |
| $6.5 < pH \leq 6.6$ | 63 | $7.5 < pH \leq 7.6$ | 23 | $8.5 < pH \leq 8.6$ | 3.5 |
| $6.6 < pH \leq 6.7$ | 60 | $7.6 < pH \leq 7.7$ | 19 | $8.6 < pH \leq 8.7$ | 3.0 |
| $6.7 < pH \leq 6.8$ | 56 | $7.7 < pH \leq 7.8$ | 16 | $8.7 < pH \leq 8.8$ | 2.5 |
| $6.8 < pH \leq 6.9$ | 52 | $7.8 < pH \leq 7.9$ | 14 | $8.8 < pH \leq 8.9$ | 2.1 |
| $6.9 < pH \leq 7.0$ | 48 | $7.9 < pH \leq 8.0$ | 11 | $8.9 < pH \leq 9.0$ | 1.8 |

4. Additional limits to comply with the expression of limits requirements in ss. NR 106.07 and NR 205.065(7), Wis. Adm. Codes, are included in bold.
5. Bacteria limits apply during the disinfection season of May through September. The fecal coliform interim limit will apply until the end of the compliance schedule when *E. coli* limits take effect. Additional final limit: No more than 10 percent of *E. coli* bacteria samples collected in any calendar month may exceed 410 count/100 mL.

6. Monitoring only in 2024.
7. A compliance schedule is in the current permit to meet the interim phosphorus WQBEL of 1.0 mg/L by October 1, 2024.
8. A compliance schedule is in the current permit to meet the final *E.coli* WQBEL by April 30, 2025.
9. As recommended in the Department's October 1, 2019 Guidance for Total Nitrogen Monitoring in Wastewater Permits, annual total nitrogen monitoring is recommended for all minor municipal permittees. Sections 283.37(5) and 283.55(1)(e), Wis. Stats, and ss. NR 200.065(1)(g) and NR 200.065(1)(h), Wis. Adm. Codes, provide the authority to request this monitoring during the permit term. Total Nitrogen is the sum of nitrate ($NO_3$), nitrite ($NO_2$), and total Kjeldahl nitrogen (TKN) (all expressed as N).

**Receiving Water Information**

- Name: Gregory Branch
- Waterbody Identification Code (WBIC): 964400
- Classification used in accordance with chs. NR 102 and 104, Wis. Adm. Code: Gregory Branch is a cold water Class II trout stream. Rogers Branch below (and above) the mouth of Gregory Branch and the Grant River from the mouth of Rogers Branch down the Grant County Highway (A) west of Lancaster are also cold water class II trout streams.
- Low flows used in accordance with chs. NR 106 and 217, Wis. Adm. Code: The following 7-$Q_{10}$ and 7-$Q_2$ values were estimated by USGS for Gregory Branch at section 6 T5N-R2W in August of 1985. The 7-Q2 was not determined at this site, but since the 7-Q2 was available at Fennimore (located upstream of Stitzer), the 7-Q2 was determined by ratios. At Fennimore the 7-Q2= 0.03 cfs and the 7-Q10 = 0.01 cfs which equals a ratio of 3: 1. Although there is more drainage area at Stitzer then at Fennimore, the ratio of 3:1 was used in order to be conservative. These were the flows that have been used in the previous permit terms. The facility can request updated low flows from USGS where Outfall 001 is located.

  7-$Q_{10}$ = 0.3 cubic feet per second (cfs)

  7-$Q_2$ = 0.9 cfs

  Harmonic Mean Flow = 1.4 cfs using a drainage area of 6.52 $mi^2$

  The Harmonic Mean has been estimated using the watershed delineation tool by Purdue University (L-THIA).
- Hardness = 346 mg/L as $CaCO_3$. This value represents the geometric mean of data from SWAMP's receiving water information from May 2001 to August 2024.
- % of low flow used to calculate limits in accordance with s. NR 106.06(4)(c)5., Wis. Adm. Code: 25%
- Source of background concentration data: Metals data from Borah Creek is used for this evaluation because there is no data available for the Gregory Branch. Borah Creek is within the same ecological landscape so ambient water quality characteristics are expected to be similar. The numerical values are shown in the tables below. If no data is available, the background concentration is assumed to be negligible and a value of zero is used in the computations. Background data for calculating effluent limitations for ammonia nitrogen are described later.
- Multiple dischargers: Fennimore Wastewater Treatment Facility dischargers to Gregory Branch approximately 2.5 miles upstream of Outfall 001. However, since the mixing zones do not overlap, it does not impact this evaluation.
- Impaired water status: Approximately 5.5 miles downstream, the Rogers Branch (stream miles 0.00 – 8.00) is listed as impaired for total phosphorus and TSS.

**Effluent Information**

- Design flow rate(s):
  Annual average = 0.025 million gallons per day (MGD)
  For reference, the actual average flow from September 2020 to August 2025 was 0.01 MGD.
- Hardness = 345 mg/L as $CaCO_3$. This value represents the geometric mean of four samples collected in August 2023 which were reported on the permit application.
- Acute dilution factor used in accordance with s. NR 106.06(3)(c), Wis. Adm. Code: Not applicable – this facility does not have an approved Zone of Initial Dilution (ZID).
- Water supply: Municipality waterworks and private wells.
- Additives: Stitzer Sanitary District WWTF has included 1 additive in the SWAMP as an SDS sheet and usage was confirmed by the compliance engineer, that have the potential to be present in Outfall 001 . These additives are listed below:
  - Alum (Aluminum Sulfate) – Phosphorus Removal
  - An additive review is not necessary for any additives where either the toxicity is well documented and understood, can be controlled by a WQBEL, or are not believed to be present in the discharge. This is the case upon initial review of the listed additives, and the facility is not requesting increased dosages or use frequencies. Therefore, an additive review is not needed at this time.
- Effluent characterization: This facility is categorized as a minor municipality, so the permit application required effluent sample analyses for a limited number of common pollutants, as specified in s. NR 200.065, Table 1, Wis. Adm. Code, primarily metal substances plus ammonia, chloride, hardness and phosphorus.
- Effluent data for substances for which a single sample was analyzed is shown in the tables in Part 2, in the column titled "MEAN EFFL. CONC.". Otherwise, substances with multiple effluent data are shown in the tables below or in their respective parts in this evaluation.

**Copper Effluent Data**

| Sample Date | Copper (µg/L) | Sample Date | Copper (µg/L) | Sample Date | Copper (µg/L) |
|---|---|---|---|---|---|
| 02/06/2025 | <3.2 | 02/18/2025 | <3.2 | 03/02/2025 | <3.2 |
| 02/09/2025 | <3.2 | 02/21/2025 | <3.2 | 03/05/2025 | <3.2 |
| 02/12/2025 | <3.2 | 02/24/2025 | 4.0 | 03/08/2025 | <3.2 |
| 02/15/2025 | <3.2 | 02/27/2025 | 5.4 | | |
| Mean = 0.85 µg/L | | | | | |

"<" means that the pollutant was not detected at the indicated limit of detection. The mean concentration was calculated using zero in place of the non-detected results.

**Chloride Effluent Data**

| | Chloride (mg/L) |
|---|---|
| 1-day $P_{99}$ | 429 |
| 4-day $P_{99}$ | 338 |
| 30-day $P_{99}$ | 288 |
| Mean | 262 |
| Std | 59.1 |
| Sample size | 48 |
| Range | 143 - 358 |

The following table presents the average concentrations and loadings at Outfall 001 from September 2020 to August 2025 for all parameters with limits in the current permit to meet the requirements of s. NR 201.03(6), Wis. Adm. Code:

**Parameters with Effluent Limits**

| | Average Measurement | Average Mass Discharged |
|---|---|---|
| $BOD_5$ | 4.1 mg/L* | 0.19 lbs/day |
| TSS | 6.7 mg/L | 0.31 lbs/day |
| pH field | 7.4 s.u. | - |
| Dissolved Oxygen | 9.5 mg/L | - |
| Ammonia Nitrogen | 1.0 mg/L* | - |
| Fecal Coliform | 42 #/100 mL** | - |
| *E. coli* | 13 #/100 mL** | - |
| Phosphorus | 0.73 mg/L | - |

*Results below the limit of detection (LOD) were included as zeroes in calculation of average.
** The average measurement for bacteria is calculated as a geometric mean. Values reported below the LOD are replaced with a value of 1 for the calculation of the geometric mean.

## PART 2 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR TOXIC SUBSTANCES – EXCEPT AMMONIA NITROGEN

Permit limits for toxic substances are required whenever any of the following occur:

1. The maximum effluent concentration exceeds the calculated limit (s. NR 106.05(3), Wis. Adm. Code)
2. If 11 or more detected results are available in the effluent, the upper 99$^{th}$ percentile (or $P_{99}$) value exceeds the comparable calculated limit (s. NR 106.05(4), Wis. Adm. Code)
3. If fewer than 11 detected results are available, the mean effluent concentration exceeds 1/5 of the calculated limit (s. NR 106.05(6), Wis. Adm. Code)

**Acute Limits based on 1-$Q_{10}$**

Daily maximum effluent limitations for toxic substances are based on the acute toxicity criteria (ATC), listed in ch. NR 105, Wis. Adm. Code. Previously daily maximum limits for toxic substances were calculated as two times the ATC. However, changes to ch. NR 106, Wis. Code, (September 1, 2016) require the Department to calculate acute limitations using the same mass balance equation as used for other limits along with the 1-$Q_{10}$ receiving water low flow to determine if more restrictive effluent limitations are needed to protect the receiving stream from discharges which may cause or contribute to an exceedance of the acute water quality standards. The mass balance equation is provided below.

$$\text{Limitation} = \frac{(WQC)\,(Qs + (1-f)\,Qe) - (Qs - f\,Qe)\,(Cs)}{Qe}$$

Where:

WQC =Acute toxicity criterion or secondary acute value according to ch. NR 105, Wis. Adm. Code.

Qs = average minimum 1-day flow which occurs once in 10 years (1-day $Q_{10}$)

if the 1-day $Q_{10}$ flow data is not available = 80% of the average minimum 7-day flow which occurs once in 10 years (7-day $Q_{10}$).

Qe = Effluent flow (in units of volume per unit time) as specified in s. NR 106.06(4)(d), Wis. Adm. Code.

f = Fraction of the effluent flow that is withdrawn from the receiving water, and

Cs = Background concentration of the substance (in units of mass per unit volume) as specified in s. NR 106.06(4)(e), Wis. Adm. Code.

If the receiving water is effluent dominated under low stream flow conditions, the 1-$Q_{10}$ method of limit calculation produces the most stringent daily maximum limitations and should be used while making reasonable potential determinations. This is not the case for Stitzer Sanitary District WWTF, and the limits are set based on two times the acute toxicity criteria.

The following tables list the calculated WQBELs for this discharge along with the results of effluent sampling for all the detected substances. All concentrations are expressed in terms of micrograms per Liter (µg/L), except for hardness and chloride (mg/L).

**Daily Maximum Limits based on Acute Toxicity Criteria (ATC)**

RECEIVING WATER FLOW = 0.24 cfs, (1-$Q_{10}$ (estimated as 80% of 7-$Q_{10}$)), as specified in s. NR 106.06(3)(bm), Wis. Adm. Code.

| SUBSTANCE | REF. HARD.* mg/L | ATC | MAX. EFFL. LIMIT** | 1/5 OF EFFL. LIMIT | MEAN EFFL. CONC. | 1-day $P_{99}$ | 1-day MAX. CONC. |
|---|---|---|---|---|---|---|---|
| Arsenic | | 340 | 680 | 136 | <1.1 | | |
| Cadmium | 345 | 18 | 36 | 7.2 | <0.17 | | |
| Chromium | 301 | 4,446 | 8,892 | 1,778 | <1.5 | | |
| Copper | 345 | 50 | 100 | 20 | 0.85 | | 5.4 |
| Lead | 345 | 354 | 708 | 142 | <5.4 | | |
| Nickel | 268 | 1,080 | 2,161 | 432 | <4.7 | | |
| Zinc | 333 | 345 | 689 | 138 | <2.0 | | |
| Chloride (mg/L) | | 757 | 1,514 | | | 262 | 358 |

* The indicated hardness may differ from the effluent hardness because the effluent hardness exceeded the maximum range in ch. NR 105, Wis. Adm. Code, over which the acute criteria are applicable. In that case, the maximum of the range is used to calculate the criterion.

**Weekly Average Limits based on Chronic Toxicity Criteria (CTC)**

RECEIVING WATER FLOW = 0.0750 cfs (¼ of the 7-$Q_{10}$), as specified in s. NR 106.06(4)(c), Wis. Adm. Code

| SUBSTANCE | REF. HARD.* mg/L | CTC | WEEKLY AVE. LIMIT | 1/5 OF EFFL. LIMIT | MEAN EFFL. CONC. | 4-day $P_{99}$ |
|---|---|---|---|---|---|---|
| Arsenic | | 148 | 435 | 87 | <1.1 | |
| Cadmium | 175 | 3.8 | 11 | 2.2 | <0.17 | |
| Chromium | 301 | 213 | 625 | 125 | <1.5 | |
| Copper | 346 | 30 | 88 | 18 | 0.85 | |
| Lead | 346 | 93 | 273 | 55 | <5.4 | |
| Nickel | 268 | 120 | 353 | 71 | <4.7 | |
| Zinc | 333 | 345 | 1,103 | 203 | <2.0 | |

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| SUBSTANCE | REF. HARD.* mg/L | CTC | WEEKLY AVE. LIMIT | 1/5 OF EFFL. LIMIT | MEAN EFFL. CONC. | 4-day $P_{99}$ |
|---|---|---|---|---|---|---|
| Chloride (mg/L) | | 395 | 1,161 | | 262 | 338 |

* The indicated hardness may differ from the receiving water hardness because the receiving water hardness exceeded the maximum range in ch. NR 105, Wis. Adm. Code, over which the chronic criteria are applicable. In that case, the maximum of the range is used to calculate the criterion.

**Monthly Average Limits based on Wildlife Criteria (WC)**
The effluent characterization did not include any effluent sampling results for substances for which Wildlife Criteria exist.

**Monthly Average Limits based on Human Threshold Criteria (HTC)**
RECEIVING WATER FLOW = 0.35 cfs (¼ of Harmonic Mean), as specified in s. NR 106.06(4), Wis. Adm. Code.

| SUBSTANCE | HTC | MO'LY AVE. LIMIT | 1/5 OF EFFL. LIMIT | MEAN EFFL. CONC. |
|---|---|---|---|---|
| Cadmium | 370 | 3,748 | 750 | <0.17 |
| Chromium (+3) | 3,818,000 | 38,364,028 | 7,672,806 | <1.5 |
| Lead | 140 | 1,407 | 281 | <5.4 |
| Nickel | 4,300 | 432,073 | 86,415 | <4.7 |

**Monthly Average Limits based on Human Cancer Criteria (HCC)**
RECEIVING WATER FLOW = 0.35 cfs (¼ of Harmonic Mean), as specified in s. NR 106.06(4), Wis. Adm. Code.

| SUBSTANCE | HCC | MO'LY AVE. LIMIT | 1/5 OF EFFL. LIMIT | MEAN EFFL. CONC. |
|---|---|---|---|---|
| Arsenic | 13 | 134 | 27 | <1.1 |

**Conclusions and Recommendations**
Based on a comparison of the effluent data and calculated effluent limitations, **effluent limitations are not required but chloride monitoring is recommended**. Limits and/or monitoring recommendations are made in the paragraphs below:

Copper – Considering available effluent data from the current permit application from February 2025 to March 2025 the mean concentration is 0.85 µg/L, with a maximum concentration of 5.4 µg/L. The maximum and mean effluent concentration do not exceed the calculated daily maximum limit, **therefore concentration and mass limits, as well as monthly monitoring, are not required.**

Chloride – Considering available effluent data from the current permit term from September 2020 to August 2025 the 1-day $P_{99}$ chloride concentration is 262 mg/L, and the 4-day $P_{99}$ of effluent data is 338 mg/L.

These effluent concentrations are below the calculated WQBELs for chloride, **therefore no effluent limits are needed. Chloride monitoring is recommended to ensure that 11 sample results are available at the next permit issuance to meet the data requirements of s. NR 106.85, Wis. Adm. Code.**

Mercury – The permit application did not require monitoring for mercury because the Stitzer Sanitary District WWTF is categorized as a minor facility as defined in s. NR 200.02(8), Wis. Adm. Code. In accordance with s. NR 106.145(3)(a)3, Wis. Adm. Code, a minor municipal discharger shall monitor, and report results of influent and effluent mercury monitoring once every three months if, "there are two or more exceedances in the last five years of the high-quality sludge mercury concentration of 17 mg/kg specified in s. NR 204.07(5), Wis. Adm. Code." A review of the past five years of sludge characteristics data reveals that all the sample results are within expected analytical ranges and well below the 17 mg/kg level. The average concentration in the sludge from September 2021 to May 2024 was 2.6 mg/kg, with a maximum reported concentration of 9.8 mg/kg. Therefore, **no mercury monitoring is recommended at Outfall 001.**

PFOS and PFOA – The need for PFOS and PFOA monitoring is evaluated in accordance with s. NR 106.98(2), Wis. Adm. Code.

Based on the type of discharge, the effluent flow rate, unknown levels of PFOS/PFOA in the source water **PFOS and PFOA monitoring is not recommended.**

The Department may re-evaluate the need for sampling at the next permit reissuance if new information becomes available that suggests PFOS or PFOA may be present in the discharge.

## PART 3 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR AMMONIA NITROGEN

The State of Wisconsin promulgated revised water quality standards for ammonia nitrogen in ch. NR 105, Wis. Adm. Code, effective March 1, 2004 which includes criteria based on both acute and chronic toxicity to aquatic life. The current permit has daily maximum, weekly average and monthly average limits. These limits are re-evaluated at this time due to the following changes:

- Subchapter IV of ch. NR 106, Wis. Adm. Code allows limits based on available dilution instead of limits set to twice the acute criteria.
- Section NR 106.07(3), Wis. Adm. Code requires weekly and monthly average limits for municipal treatment plants.
- The maximum expected effluent pH has changed

**Daily Maximum Limits based on Acute Toxicity Criteria (ATC)**
Daily maximum limitations are based on acute toxicity criteria in ch. NR 105, Wis. Adm. Code, which are a function of the effluent pH and the receiving water classification. The acute toxicity criterion (ATC) for ammonia is calculated using the following equation:

$$\text{ATC in mg/L} = [A \div (1 + 10^{(7.204 - pH)})] + [B \div (1 + 10^{(pH - 7.204)})]$$

Where:

A = 0.275 and B = 39.0 for a Cold-Water Category 1 fishery, and
pH (s.u.) = that characteristic of the effluent.

The effluent pH data was examined as part of this evaluation. A total of 522 sample results were reported from September 2020 to August 2025 The maximum reported value was 8.1 s.u. (Standard pH Units). The effluent pH was 8.0 s.u. or less 99% of the time. The 1-day $P_{99}$, calculated in accordance with s. NR

106.05(5), Wis. Adm. Code, is 8.0 s.u. The mean plus the standard deviation multiplied by a factor of 2.33, an estimate of the upper ninety ninth percentile for a normally distributed dataset, is 8.0 s.u. Therefore, a value of 8.0 s.u. is believed to represent the maximum reasonably expected pH, and therefore most appropriate for determining daily maximum limitations for ammonia nitrogen. Substituting a value of 8.0 s.u. into the equation above yields an ATC = 5.6 mg/L.

**Daily Maximum Ammonia Nitrogen Effluent Limitations Calculation Method**
In accordance with s. NR 106.32(2), Wis. Adm. Code daily maximum ammonia limitations are calculated using the the 1-$Q_{10}$ receiving water low flow if it is determined that the previous method of acute ammonia limit calculation (2×ATC) is not sufficiently protective of the fish and aquatic life. The more restrictive calculated limits shall apply.

The calculated daily maximum ammonia nitrogen effluent limits using the mass balance approach with the 1-$Q_{10}$ (estimated as 80 % of 7-$Q_{10}$) and the 2×ATC approach are shown below.

**Daily Maximum Ammonia Nitrogen Determination**

| | Ammonia Nitrogen Limit mg/L |
|---|---|
| 2×ATC | 11 |
| 1-$Q_{10}$ | 40 |

The 2×ATC method yields the most stringent limits for Stitzer Sanitary District WWTF.

The current permit has variable daily maximum effluent limits based on effluent pH. Presented below is a table of daily maximum limitations corresponding to various effluent pH values.

**Daily Maximum Ammonia Nitrogen Limits – Cold water**

| Effluent pH s.u. | Limit mg/L | Effluent pH s.u. | Limit mg/L | Effluent pH s.u. | Limit mg/L |
|---|---|---|---|---|---|
| $6.0 \leq pH \leq 6.1$ | 72 | $7.0 < pH \leq 7.1$ | 44 | $8.0 < pH \leq 8.1$ | 9.3 |
| $6.1 < pH \leq 6.2$ | 71 | $7.1 < pH \leq 7.2$ | 39 | $8.1 < pH \leq 8.2$ | 7.6 |
| $6.2 < pH \leq 6.3$ | 69 | $7.2 < pH \leq 7.3$ | 35 | $8.2 < pH \leq 8.3$ | 6.3 |
| $6.3 < pH \leq 6.4$ | 67 | $7.3 < pH \leq 7.4$ | 31 | $8.3 < pH \leq 8.4$ | 5.2 |
| $6.4 < pH \leq 6.5$ | 65 | $7.4 < pH \leq 7.5$ | 27 | $8.4 < pH \leq 8.5$ | 4.3 |
| $6.5 < pH \leq 6.6$ | 63 | $7.5 < pH \leq 7.6$ | 23 | $8.5 < pH \leq 8.6$ | 3.5 |
| $6.6 < pH \leq 6.7$ | 60 | $7.6 < pH \leq 7.7$ | 19 | $8.6 < pH \leq 8.7$ | 3.0 |
| $6.7 < pH \leq 6.8$ | 56 | $7.7 < pH \leq 7.8$ | 16 | $8.7 < pH \leq 8.8$ | 2.5 |
| $6.8 < pH \leq 6.9$ | 52 | $7.8 < pH \leq 7.9$ | 14 | $8.8 < pH \leq 8.9$ | 2.1 |
| $6.9 < pH \leq 7.0$ | 48 | $7.9 < pH \leq 8.0$ | 11 | $8.9 < pH \leq 9.0$ | 1.8 |

**Weekly and Monthly Average Limits based on Chronic Toxicity Criteria (CTC)**
Weekly and monthly average limits are not included in the current permit but are being evaluated here due to changes to ch. NR 106, Wis. Adm. Code. **The weekly and monthly average ammonia nitrogen limits calculation from the previous memo do not change** because there have been no changes in the effluent and receiving water flow rates. The calculations from the previous WQBEL memo are shown in attachment #3.

**Effluent Data**
The following table evaluates the statistics based upon ammonia data reported from September 2020 to August 2025.

**Ammonia Nitrogen Effluent Data**

| | Ammonia Nitrogen mg/L |
|---|---|
| 1-day $P_{99}$ | 14 |
| 4-day $P_{99}$ | 8.9 |
| 30-day $P_{99}$ | 3.8 |
| Mean* | 1.1 |
| Std | 4.8 |
| Sample size | 721 |
| Range | <0.05 - 42 |

*Values lower than the limit of detection were substituted with a zero

| Ammonia Nitrogen mg/L | May - October | November - April |
|---|---|---|
| 1-day $P_{99}$ | 13 | 19 |
| 4-day $P_{99}$ | 8.4 | 13 |
| 30-day $P_{99}$ | 3.5 | 5.4 |
| Mean* | 1.3 | 1.6 |
| Std | 3.6 | 5.8 |
| Sample size | 260 | 261 |
| Range | <0.05 - 27 | <0.05 - 42 |

*Values lower than the limit of detection were substituted with a zero

**Reasonable Potential**
The permit currently has daily maximum limits year-round as well as weekly and monthly limits year round. **Where there are existing ammonia nitrogen limits in the permit, the limits must be retained regardless of reasonable potential, consistent with s. NR 106.33(1)(b), Wis. Adm. Code:**

> (b) If a permittee is subject to an ammonia limitation in an existing permit, the limitation shall be included in any reissued permit. Ammonia limitations shall be included in the permit if the permitted facility will be providing treatment for ammonia discharges.

**Expression of Limits**
Revisions to ch. NR 106, Wis. Adm. Code, in September 2016 aligned Wisconsin's WQBELs with 40 CFR § 122.45(d), which specifies that effluent limits for continuous dischargers must be expressed as weekly and monthly averages for publicly owned treatment works and as daily maximums and monthly averages for all other dischargers, unless shown to be impracticable. Because a daily maximum ammonia limit is necessary for Stitzer Sanitary District Wastewater Treatment Facility, weekly and monthly average limits are also required under this code revision.

The methods for calculating limitations for municipal treatment facilities to conform to 40 CFR 122.45(d) are specified in s. NR 106.07(3), Wis. Adm. Code, and are as follows:

> Whenever a daily maximum limitation is determined necessary to protect water quality, a weekly and monthly average limitation shall also be included in the permit and set equal to the daily maximum limit unless a more restrictive limit is already determined necessary to protect water quality.

In this case, the recommended daily maximum limits vary with effluent pH, so additional limits should be set equal to the highest recommended limit. Therefore, **monthly and weekly average limits of 18 mg/L and 13 mg/L from November – April and monthly and weekly average limits of 27 mg/L and 25 mg/L from May – October** are recommended to continue in the permit.

**Conclusions and Recommendations**
In summary, after rounding to two significant figures, the following ammonia nitrogen limitations are recommended. No mass limitations are recommended in accordance with s. NR 106.32(5), Wis. Adm Code.

**Final Ammonia Nitrogen Limits**

| | Daily Maximum mg/L | Weekly Average mg/L | Monthly Average mg/L |
|---|---|---|---|
| November – April | Variable | **18 mg/L** | **13 mg/L** |
| May – October | Variable | **27 mg/L** | **25 mg/L** |

## PART 4 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR BACTERIA

On May 1, 2020, revisions to chs. NR 102 and NR 210, Wis. Adm. Codes, became effective which replace fecal coliform limits with new *Escherichia coli* (*E. coli*) limits for protection of recreational uses. Section NR 210.06(2)(a)1, Wis. Adm. Code, includes two limits which must be included in permits for facilities which are required to disinfect:

1. The geometric mean of *E. coli* bacteria in effluent samples collected in any calendar month may not exceed 126 counts/100 mL.
2. No more than 10 percent of *E. coli* bacteria samples collected in any calendar month may exceed 410 counts/100 mL.

*E. coli* monitoring is recommended at the same frequency that fecal coliform monitoring is required in the current permit. Because Stitzer Sanitary District WWTF permit requires weekly monitoring, the 410 counts/100 mL limit will effectively function as a daily maximum limit unless the facility performs additional monitoring. Any additional monitoring beyond what is required by the permit must also be reported on the DMR as required in the standard requirements section of the permit.

These limits are required during May through September. No changes are recommended to the current recreational period and the required disinfection season.

**Effluent Data**
The *E. coli* limits described above have been effective in the current permit since 04/30/2025 so the following effluent data is included for informational purposes. Stitzer Sanitary District WWTF has

monitored effluent *E. coli* from May 2021 to August 2025 and a total of 128 results are available. A value of 126 counts/100 mL was exceeded twice; however the monthly geometric mean was never exceeded. The average *E.coli* geometric mean was 13 count/100 mL, and based on this effluent data it appears that the facility can meet new *E. coli* limits and a compliance schedule is not needed in the reissued permit.

## PART 5 – PHOSPHORUS

**Technology-Based Effluent Limit**
Subchapter II of Chapter NR 217, Wis. Adm. Code, requires municipal wastewater treatment facilities that discharge greater than 150 pounds of total phosphorus per month to comply with a monthly average limit of 1.0 mg/L, or an approved alternative concentration limit.

**Since Stitzer Sanitary District Wastewater Treatment Facility has phosphorus limits in effect that are as stringent as 1.0 mg/L, the need for a TBEL will not be considered further.** In addition, the need for a WQBEL for phosphorus must be considered.

**Water Quality-Based Effluent Limits (WQBEL)**
Revisions to administrative rules regulating phosphorus took effect on December 1, 2010. These rule revisions include additions to s. NR 102.06, Wis. Adm. Code, which establish phosphorus standards for surface waters. Subchapter III of NR 217, Wis. Adm. Code, establishes procedures for determining WQBELs for phosphorus, based on the applicable standards in ch. NR 102, Wis. Adm. Code.

Section NR 102.06(3)(a), Wis. Adm. Code, specifically names river segments for which a phosphorus criterion of 0.100 mg/L applies. For other stream segments that are not specified in s. NR 102.06(3)(a), Wis. Adm. Code, s. NR 102.06(3)(b), Wis. Adm. Code, specifies a phosphorus criterion of 0.075 mg/L. The phosphorus criterion of 0.075 mg/L applies for Gregory Branch.

The conservation of mass equation is described in s. NR 217.13(2)(a), Wis. Adm. Code, for phosphorus WQBELs and includes variables of water quality criterion (WQC), receiving water flow rate (Qs), effluent flow rate (Qe), and upstream phosphorus concentrations (Cs) provided below.

$$\text{Limitation} = [(WQC)(Qs+(1-f)\ Qe) - (Qs-f\ Qe)\ (Cs)]/Qe$$

Where:

WQC = 0.075 mg/L for Gregory Branch
Qs = 100% of the 7-$Q_2$ of 0.9 cfs
Cs = background concentration of phosphorus in the receiving water pursuant to s. NR 217.13(2)(d), Wis. Adm. Code
Qe = effluent flow rate = 0.025 MGD = 0.039 cfs
f = the fraction of effluent withdrawn from the receiving water = 0

Section NR 217.13(2)(d), Wis. Adm. Code, specifies that the background phosphorus concentration used in the limit calculation formula shall be calculated as a median using the procedures specified in s. NR 102.07(1)(b) to (c), Wis. Code. All representative data from the most recent 5 years shall be used, but data from the most recent 10 years may be used if representative of current conditions.

A previous evaluation resulted in a WQBEL of 0.075 mg/L using a background concentration 0.182

mg/L. Section NR 217.13(2)(d), Wis. Adm. Code, states that the determination of upstream concentrations shall be evaluated at each permit reissuance. Additional data were considered in estimating the background phosphorus concentration.

In stream total phosphorus data upstream of the discharge is not available however the following data were considered in estimating the background phosphorus concentration:

| | |
|---|---|
| SWIMS ID | 223349 |
| Station Name | Monitoring station at Rogers Brach – Borah Road |
| Waterbody | Rogers Branch |
| Sample Count | 18 |
| First Sample | 05/10/2005 |
| Last Sample | 09/12/2006 |
| Mean | 0.203 mg/L |
| Median | 0.147 mg/L |

Substituting a background concentration above criteria into the limit calculation equation above would result in a calculated limit that is less than the applicable criterion of 0.075 mg/L. However, s. NR 217.13(7), Wis. Adm. Code, specifies that "if the WQBEL calculated pursuant to the procedures in this section is less than the phosphorus criterion specified in s. NR 102.06, Wis. Adm. Code, for the water body, the effluent limit shall be set equal to the criterion."

The facility may opt to sample the receiving water upstream of the outfall. The WQBEL may be amended if background phosphorus stream data, collected during the period of May – October and with regards to other stipulations laid out in s. NR 217.13(2)(d), Wis. Adm. Code, is submitted to the department that shows the upstream concentration of Total Phosphorus is in fact less than the applicable criterion. For informational purposes only, the following table shows a range of limits based on possible background concentrations. This calculation is based on effluent flow 0.025 MGD and stream flow (7-$Q_2$) of 0.9 cfs at the criterion of 0.075 mg/L in accordance with s. NR 217.13(2), Wis. Adm. Code.

**Total Phosphorus Background Concentrations & Limits**

| Upstream 'Concentrations' mg/L | Corresponding P Limit mg/L |
|---|---|
| 0.02 | 1.4 |
| 0.03 | 1.1 |
| 0.04 | 0.89 |
| 0.05 | 0.66 |
| 0.06 | 0.42 |
| 0.07 | 0.19 |
| > = 0.075 | 0.075 |

**Effluent Data**

The following table summarizes effluent total phosphorus monitoring data from September 2020 to August 2025.

Attachment #1

**Total Phosphorus Effluent Data**

| | Phosphorus mg/L |
|---|---|
| 1-day $P_{99}$ | 5.8 |
| 4-day $P_{99}$ | 3.2 |
| 30-day $P_{99}$ | 1.5 |
| Mean | 0.73 |
| Std | 1.31 |
| Sample size | 521 |
| Range | 0.03 - 8.4 |

**Reasonable Potential Determination**
The discharge has reasonable potential to cause or contribute to an exceedance of the water quality criterion and is currently operating the treatment facility to remove phosphorus and meet the WQBELs. Therefore, **the WQBELs are required to continue in the reissued permit per ss. NR 217.15 and 205.067(5), Wis. Adm. Codes.**

**Limit Expression**
According to s. NR 217.14(2), Wis. Adm. Code, because the calculated WQBEL is less than or equal to 0.3 mg/L, **the effluent limit of 0.075 mg/L may be expressed as a six-month average.** If a concentration limitation expressed as a six-month average is included in the permit, **a monthly average concentration limitation of 0.225 mg/L, equal to three times the WQBEL calculated under s. NR 217.13, Wis. Adm. Code shall also be included in the permit.** The six-month average should be averaged during the months of May – October and November – April.

**Mass Limits**
A mass limit is also required, pursuant to s. NR 217.14(1)(a), Wis. Adm. Code, because the discharge is to a surface water that is to or upstream of a phosphorus impaired water. **This final mass limit shall be (concentration) 0.075 mg/L × 8.34 × 0.025 MGD = 0.016 lbs/day expressed as a six-month average**.

**Multi-Discharge Variance Interim Limit**
With the permit application, Stitzer Sanitary District WWTF has re-applied for the phosphorus multi-discharger variance (MDV). Conditions of the phosphorus MDV require the facility to comply with an interim phosphorus limit in lieu of meeting the final WQBEL. The recommended interim limit during the 2nd permit under MDV approval, pursuant to s. 283.16 (6) (a), Wis. Stats., **is 0.6 mg/L as a monthly average. A compliance schedule may be appropriate to meet this interim limit but compliance with 0.6 mg/L shall be no later than the end of the reissued permit.** The previous interim limit of 1.0 mg/L should not be exceeded during the compliance schedule.

## PART 6 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR THERMAL

Surface water quality standards for temperature took effect on October 1, 2010. These regulations are detailed in chs. NR 102 (Subchapter II – Water Quality Standards for Temperature) and NR 106 (Subchapter V – Effluent Limitations for Temperature) of the Wisconsin Administrative Code. Daily

maximum and weekly average temperature criteria are available for the 12 different months of the year depending on the receiving water classification.

In accordance with s. NR 106.53(2)(b), Wis. Adm. Code, the highest daily maximum flow rate for a calendar month is used to determine the acute (daily maximum) effluent limitation. In accordance with s. NR 106.53(2)(c), Wis. Adm. Code, the highest 7-day rolling average flow rate for a calendar month is used to determine the sub-lethal (weekly average) effluent limitation. These values were based off actual flow reported from September 2020 to August 2025.

A heat loss equation is used to adjust the calculated limit based upon the length of conveyance channel before discharge to waters of the state, because the discharge is through a forcemain. The discharge from permit Outfall 001 travels through at least 15,840 feet of forcemain before reaching the Gregory Branch. Under s. NR 106.55(5), Wis. Adm. Code, the default cooling rate is estimated as 1° F for every 400 feet of conveyance channel. The adjusted limits are shown in the table.

The table below summarizes the maximum temperatures reported during monitoring from January 2024 to December 2024.

**Monthly Temperature Effluent Data & Limits**

| Month | Representative Highest Monthly Effluent Temperature | | Calculated Effluent Limit | | Adjusted Thermal Limit | |
|---|---|---|---|---|---|---|
| | Weekly Maximum (°F) | Daily Maximum (°F) | Weekly Average Effluent Limitation (°F)* | Daily Maximum Effluent Limitation (°F) | Weekly Average Effluent Limitation (°F) | Daily Maximum Effluent Limitation (°F) |
| JAN | 47 | 47 | NA | 120 | NA | 120.0 |
| FEB | 49 | 49 | 108 | 120 | 120.0 | 120.0 |
| MAR | 49 | 49 | 74 | 106 | 113.7 | 120.0 |
| APR | 49 | 52 | 96 | 120 | 120.0 | 120.0 |
| MAY | 60 | 60 | 74 | 89 | 114.1 | 120.0 |
| JUN | 61 | 63 | 74 | 78 | 113.8 | 117.3 |
| JUL | 62 | 63 | 71 | 79 | 110.1 | 119.0 |
| AUG | 62 | 63 | 69 | 83 | 108.4 | 120.0 |
| SEP | 70 | 72 | **67** | 85 | 106.6 | 120.0 |
| OCT | 64 | 65 | 65 | 108 | 104.8 | 120.0 |
| NOV | 61 | 61 | 67 | 105 | 106.5 | 120.0 |
| DEC | 49 | 49 | 103 | 120 | 120.0 | 120.0 |

* NA denotes "not applicable" when the calculated weekly average limit is greater than or equal to 120 °F.

**Reasonable Potential**

Permit limits for temperature are recommended based on the procedures in s. NR 106.56, Wis. Adm. Code.

- An acute limit for temperature is recommended for each month in which the representative daily maximum effluent temperature for that month exceeds the acute WQBEL. The representative daily maximum effluent temperature is the greater of the following:

(a) The highest recorded representative daily maximum effluent temperature

(b) The projected 99th percentile of all representative daily maximum effluent temperatures

- A sub−lethal limitation for temperature is recommended for each month in which the representative weekly average effluent temperature for that month exceeds the weekly average WQBEL. The representative weekly average effluent temperature is the greater of the following:
  (a) The highest weekly average effluent temperature for the month.
  (b) The projected 99th percentile of all representative weekly average effluent temperatures for the month

Comparing the representative highest effluent temperature to the calculated effluent limits determines the reasonable potential of exceeding the effluent limits. The months in which limitations are recommended are shown in bold. Based on this analysis, **no limits are necessary, but temperature monitoring is recommended to continue in the next permit term.**

## PART 7 – WHOLE EFFLUENT TOXICITY (WET)

WET testing is used to measure, predict, and control the discharge of toxic materials that may be harmful to aquatic life. In WET tests, organisms are exposed to a series of effluent concentrations for a given time and effects are recorded. Decisions below related to the selection of representative data and the need for WET limits were made according to ss. NR 106.08 and 106.09, Wis. Adm. Code. WET monitoring frequency and toxicity reduction evaluation (TRE) recommendations were made using the best professional judgment of staff familiar with the discharge after consideration of the guidance in the *Whole Effluent Toxicity (WET) Program Guidance Document* (2022).

- Acute tests predict the concentration that causes lethality of aquatic organisms during a 48 to 96-hour exposure. To assure that a discharge is not acutely toxic to organisms in the receiving water, WET tests must produce a statistically valid $LC_{50}$ (Lethal Concentration to 50% of the test organisms) greater than 100% effluent, according to s. NR 106.09(2)(b), Wis. Adm Code.

- Chronic tests predict the concentration that interferes with the growth or reproduction of test organisms during a seven-day exposure. To assure that a discharge is not chronically toxic to organisms in the receiving water, WET tests must produce a statistically valid $IC_{25}$ (Inhibition Concentration) greater than the instream waste concentration (IWC), according to s. NR 106.09(3)(b), Wis. Adm Code. The IWC is an estimate of the proportion of effluent to total volume of water (receiving water + effluent). The **IWC of 34%,** shown in the WET Checklist summary below, was calculated according to the following equation, as specified in s. NR 106.03(6), Wis. Adm Code:

$$IWC\ (as\ \%) = Q_e \div \{(1 - f)\ Q_e + Q_s\} \times 100$$

Where:

$Q_e$ = annual average flow = 0.025 MGD = 0.039 cfs
f = fraction of the $Q_e$ withdrawn from the receiving water = 0
$Q_s$ = ¼ of the 7-$Q_{10}$ = 0.3 cfs ÷ 4 = 0.075 cfs

- According to the *State of Wisconsin Aquatic Life Toxicity Testing Methods Manual* (s. NR 219.04, Table A, Wis. Adm. Code), a synthetic (standard) laboratory water may be used as the dilution water

and primary control in acute WET tests, unless the use of different dilution water is approved by the Department prior to use. The primary control water must be specified in the WPDES permit.

- According to the *State of Wisconsin Aquatic Life Toxicity Testing Methods Manual* (s. NR 219.04, Table A, Wis. Adm. Code), receiving water must be used as the dilution water and primary control in chronic tests, unless the use of different dilution water is approved by the Department prior to use. The dilution water used in WET tests conducted on Outfall 001 shall be a grab sample collected from the receiving water location, upstream and out of the influence of the mixing zone and any other known discharge. The specific receiving water location must be specified in the WPDES permit.

**WET Checklist Summary**

| | Acute | Chronic |
|---|---|---|
| **AMZ/IWC** | Not Applicable.<br><br>**0 Points** | IWC = 34%.<br><br>**0 Points** |
| **Historical Data** | No data available from the last five years.<br><br>**5 Points** | No data available from the last five years.<br><br>**5 Points** |
| **Effluent Variability** | Little variability, no violations or upsets, consistent WWTF operations.<br><br>**0 Points** | Same as Acute.<br><br>**0 Points** |
| **Receiving Water Classification** | < 4 mi to non-variance (5 pts), CW community<br><br>**5 Points** | Same as Acute.<br><br>**5 Points** |
| **Chemical-Specific Data** | Ammonia nitrogen limit carried over from the current permit.<br>Copper and Chloride detected.<br><br>**3 Points** | Ammonia nitrogen limit carried over from the current permit.<br>Copper and Chloride detected.<br><br>**3 Points** |
| **Additives** | 0 Biocides and 1 Water Quality Conditioner added.<br><br>Permittee does not have proper P chemical SOPs in place<br><br>**16 Points** | All additives used more than once per 4 days.<br><br>**16 Points** |
| **Discharge Category** | No Industrial Contributors.<br><br>**0 Points** | Same as Acute.<br><br>**0 Points** |
| **Wastewater Treatment** | Secondary or Better<br><br>**0 Points** | Same as Acute.<br><br>**0 Points** |
| **Downstream Impacts** | No impacts known<br><br>**0 Points** | Same as Acute.<br><br>**0 Points** |
| **Total Checklist Points:** | **29 Points** | **29 Points** |
| **Recommended Monitoring Frequency (from Checklist):** | 3 tests during permit term | 3 tests during permit term |

| | Acute | Chronic |
|---|---|---|
| **Limit Required?** | No | No |
| **TRE Recommended? (from Checklist)** | No | No |

- After consideration of the guidance provided in the Department's *WET Program Guidance Document* (2022) and other information described above, **3 acute and 3 chronic WET tests throughout the permit term are recommended in the reissued permit**. Sampling WET concurrently with any chemical-specific toxic substances is recommended. Tests should be done in rotating quarters, to collect seasonal information about this discharge.
- If a satisfactory phosphorus chemical SOP is established and implemented at the facility prior to permit reissuance, then acute and chronic WET testing can be dropped in the reissued permit.

Thermal Table:

## Temperature limits for receiving waters with unidirectional flow

(calculation using default ambient temperature data)

| | | | | | | Temp Dates | Flow Dates |
|---|---|---|---|---|---|---|---|
| **Facility:** | Stitzer SD WWTF | | **7-$Q_{10}$:** | 0.30 | cfs | | |
| **Outfall(s):** | 001 | | **Dilution:** | 25% | | **Start:** | 01/01/24 | 09/01/20 |
| **Date Prepared:** | | | **f:** | 0 | | **End:** | 12/31/24 | 08/31/25 |
| **Design Flow (Qe):** | 0.03 | MGD | **Stream type:** | Cold water community | | | |
| **Storm Sewer Dist.** | 15,840 | ft | **Qs:Qe ratio:** | 1.9 | :1 | | |
| | | | **Calculation Needed?** | YES | | | |

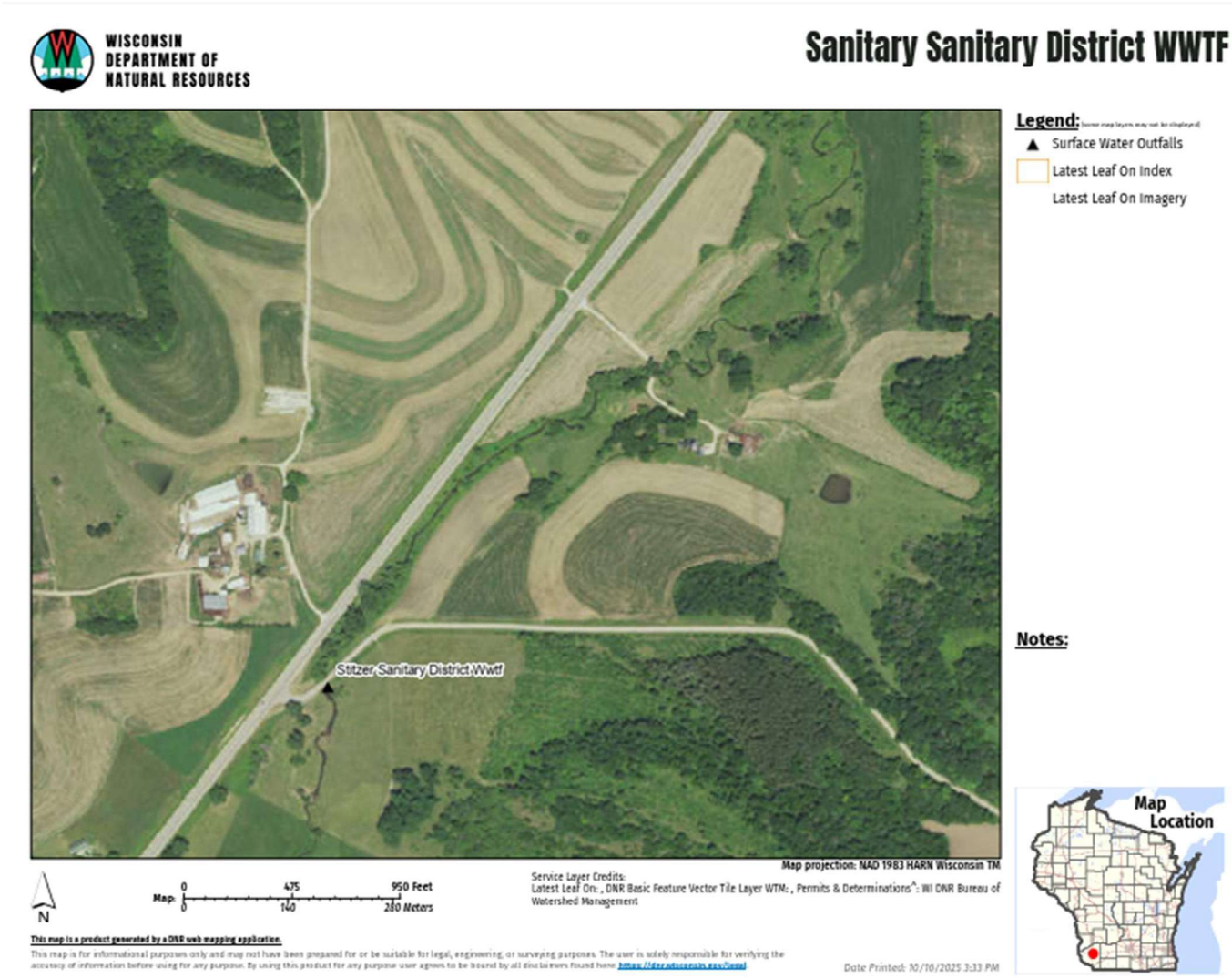
| Month | Water Quality Criteria | | | Receiving Water Flow Rate (Qs) | Representative Highest Effluent Flow Rate (Qe) | | f | Representative Highest Monthly Effluent Temperature | | Calculated Effluent Limit | | **Adjusted Thermal Limits** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ta (default) | Sub-Lethal WQC | Acute WQC | | 7-day Rolling Average (Qesl) | Daily Maximum Flow Rate (Qea) | | Weekly Average | Daily Maximum | Weekly Average Effluent Limitation | Daily Maximum Effluent Limitation | **Weekly Average** | **Daily Maximum** |
| | (°F) | (°F) | (°F) | (cfs) | (MGD) | (MGD) | | (°F) | (°F) | (°F) | (°F) | (°F) | (°F) |
| JAN | 35 | 47 | 68 | 0.30 | 0.006 | 0.013 | 0 | 47 | 47 | NA | 120 | NA | 120.0 |
| FEB | 36 | 47 | 68 | 0.30 | 0.009 | 0.030 | 0 | 49 | 49 | 108 | 120 | 120.0 | 120.0 |
| MAR | 39 | 51 | 69 | 0.30 | 0.025 | 0.039 | 0 | 49 | 49 | 74 | 106 | 113.7 | 120.0 |
| APR | 47 | 57 | 70 | 0.30 | 0.013 | 0.022 | 0 | 49 | 52 | 96 | 120 | 120.0 | 120.0 |
| MAY | 56 | 63 | 72 | 0.30 | 0.030 | 0.046 | 0 | 60 | 60 | 74 | 89 | 114.1 | 120.0 |
| JUN | 62 | 67 | 72 | 0.30 | 0.034 | 0.086 | 0 | 61 | 63 | 74 | 78 | 113.8 | 117.3 |
| JUL | 64 | 67 | 73 | 0.30 | 0.041 | 0.068 | 0 | 62 | 63 | 71 | 79 | 110.1 | 119.0 |
| AUG | 63 | 65 | 73 | 0.30 | 0.025 | 0.047 | 0 | 62 | 63 | 69 | 83 | 108.4 | 120.0 |
| SEP | 57 | 60 | 72 | 0.30 | 0.021 | 0.058 | 0 | 70 | 72 | 67 | 85 | 106.6 | 120.0 |
| OCT | 49 | 53 | 70 | 0.30 | 0.016 | 0.027 | 0 | 64 | 65 | 65 | 108 | 104.8 | 120.0 |
| NOV | 41 | 48 | 69 | 0.30 | 0.018 | 0.037 | 0 | 61 | 61 | 67 | 105 | 106.5 | 120.0 |
| DEC | 37 | 47 | 69 | 0.30 | 0.009 | 0.019 | 0 | 49 | 49 | 103 | 120 | 120.0 | 120.0 |

**Ammonia Nitrogen Calculations from WQBEL memo dated September 22, 2009**

| AMMONIA (as N) LIMITS | Stitzer | |
|---|---|---|
| **CLASSIFICATION:** | **COLDWATER** | |
| EFFLUENT FLOW (MGD): | 0.025 | |
| EFFLUENT FLOW (cfs): | 0.039 | |
| MAX. EFFLUENT pH (s.u.): | 8.00 | |
| f (withdrawal factor) | 0.00 | |
| **BACKGROUND INFORMATION:** | *summer* | *winter* |
| 7-$Q_{10}$ (cfs) | 0.3 | 0.3 |
| 7-$Q_2$ (cfs) | 0.9 | 0.9 |
| Ammonia (mg/L) | 0.06 | 0.48 |
| Temperature (deg C) | 20 | 5 |
| pH (std. units) | 8.21 | 7.97 |
| % of river flow used: | 100 | 25 |
| Reference weekly flow: | 0.3 | 0.075 |
| Reference monthly flow: | 0.765 | 0.19125 |
| **CRITERIA (in mg/L):** | | |
| 4-day Chronic (@ backgrd. pH): | | |
| early life stages present | 3.10 | 6.35 |
| 30-day Chronic (@ backgrd. pH) | | |
| early life stages present | 1.24 | 2.54 |
| **EFFLUENT LIMITS (in mg/L):** | | |
| **Weekly average** | | |
| early life stages present | 26.66 | 17.73 |
| **Monthly average** | | |
| early life stages present | 24.56 | 12.73 |

Early life stages present limits apply year –round for cold water streams

**Site Map:**


WISCONSIN
DEPARTMENT OF
NATURAL RESOURCES
Sanitary Sanitary District WWTF
Stitzer Sanitary District Wwtf
Legend:
Surface Water Outfalls
Latest Leaf On Index
Latest Leaf On Imagery
Notes:
Map Location
Map projection: NAD 1983 HARN Wisconsin TM
Map: 0 475 950 Feet
0 140 280 Meters
N
Service Layer Credits:
Latest Leaf On: , DNR Basic Feature Vector Tile Layer WTM: , Permits & Determinations^: WI DNR Bureau of Watershed Management
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**State of Wisconsin**
**DEPARTMENT OF NATURAL RESOURCES 101**
**S. Webster Street**
**Box 7921**
**Madison WI 53707-7921**

**Tony Evers, Governor**
**Karen Hyun, Ph.D., Secretary**
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

9/17/2025

Carey Allen, Sanitary District President
3985 Lathrop St
Stitzer, WI 53825

Subject: Conditional approval of a multi-discharger phosphorus variance
Receiving Stream: Gregory Branch in Grant County
Permittee: Stitzer Sanitary District, WPDES WI-0036285

Dear Cary Allen:

In accordance with s. 283.16 of the Wisconsin Statutes, you have requested coverage under Wisconsin's multi-discharger phosphorus variance for the Stitzer Sanitary District Wastewater Treatment Facility in an application dated 8/10/2025. Wisconsin's multi-discharger phosphorus variance was approved by EPA on September 3, 2025. Coverage under the multi-discharger phosphorus variance may only be granted to an existing source that demonstrates a major facility upgrade is necessary to achieve phosphorus compliance and the upgrade will result in economic hardship as defined in the federally approved variance. The water quality criterion for which you are seeking a variance is contained in s. NR 102.06, Wis. Adm. Code.

After review of the application materials, the Department is tentatively approving coverage under the phosphorus multi discharger variance because the applicant has demonstrated that a major facility upgrade would be required to comply with the phosphorus water quality-based effluent limitation, and the applicant meets the economic hardship eligibility criteria delineated in the federally approved variance. In addition, the permitted facility has agreed to comply with the interim limitations that will be included in the WPDES permit, and has agreed to reduce the amount of phosphorus entering surface waters by making payments to the counties pursuant to s. 283.16(6)(b)1., Wis. Stats.

Public comment on this decision will be solicited at the time of permit reissuance after which a final decision will be made. The Department appreciates your attention and interest in Wisconsin's multi-discharger phosphorus variance. Should you have further questions regarding this matter, please contact me at (608) 400 – 5596 or by email at matthew.claucherty@wisconsin.gov.

Sincerely,

Matt Claucherty, MDV Point Source Coordinator
Bureau of Water Quality

e-cc Logan Hoppman, Delta Three Engineering
Jordan Fure, Delta Three Engineering
Caitlin Oconnell, WDNR
Jennifer Jerich, WDNR
Michelle Woods, EPA Region 5
Tim Elkins, EPA Region 5

State of Wisconsin
Department of Natural Resources
Bureau of Water Quality
Permits Section - WQ/3

# Multi-Discharger Variance Application Evaluation Checklist

Form 3200-145 (R 5/16) 

**Notice:** This checklist is meant to be a tool to help Department of Natural Resources (DNR) staff review municipal and industrial multi-discharger variance (MDV) applications (Forms 3200-149 and 3200-150). Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31-19.39, Wis. Stats.).

Permittee Name

Stitzer Sanitary District

| WPDES Permit Number | County |
|---|---|
| **WI-** 0 \| 0 \| 3 \| 6 \| 2 \| 8 \| 5 | Grant |

| | | |
|---|---|---|
| 1. Did the point source apply for the MDV at the appropriate time? | (•) Yes<br>( ) No. *STOP- facility not eligible at this time.* | *See Questions 1-3.* |
| 2. This operation is (check one): | ( ) New or relocated outfall. *STOP- facility not eligible.*<br>(•) Existing outfall | *See Questions 5-6.* |
| 3. Is the point source is located in an MDV eligible area? | (•) Yes<br>( ) No. *STOP- facility not eligible.* | *Apply County information to Appendix H. Additional information provided in Q7 on municipal form & Q7-8 on industrial form.* |
| 4. The secondary indicator score for the county (counties) the discharge is located is: | 6 | *See Appendices A-F. If the score is less than 2, stop; the facility is not eligible. See Q23 on municipal form & Q28 on industrial form.* |
| 5. Is a major facility upgrade required to comply with phosphorus limits? | (•) Yes<br>( ) No. *STOP- facility not eligible.* | *See Q8 on municipal form/Q9 on industrial form.* |
| 6. List the months where phosphorus limits cannot be achieved during the permit term: | ☒ All<br>☒ Jan ☒ Apr ☒ Jul ☒ Oct<br>☒ Feb ☒ May ☒ Aug ☒ Nov<br>☒ Mar ☒ Jun ☒ Sep ☒ Dec | *Consider checking with limit calculator. If this does not match information in application, the application should be updated prior to approval.* |

7. What is the current effluent level achievable?

| Outfall Number(s) | Conc. (mg/L) | Method for calculation: | Does this concur with application? | |
|---|---|---|---|---|
| 001 | 0.97 | (•) 30-day P99<br>( ) Other, specify: | ( ) Yes<br>(•) No, why not: Application used a small subset of data | *DNR staff should verify the effluent concentration value(s) provided. See Q11 on municipal form & Q12 on industrial form.* |

8. What is the appropriate interim limitation(s) for the permit term?

0.6 mg/L as a monthly average pursuant to s. 283.16(6)(a)2., Wis. Stats.
Target value = 0.2 mg/L

Provide Rationale:

Effluent data from the past three years (6/1/2022 - 7/31/2025, n=331) yield a 30-day P99 value of 0.97 mg/L. The dataset contains periods of compromised phosphorus treatment as well as periods of highly effective phosphorus treatment (below 0.2 mg/L). The facility should readily be able to meet the 0.6 mg/L interim limit without a schedule. Note that the MDV application characterizes current effluent quality at 0.24 mg/L.

*Note: See description in Section 2.02 of the MDV implementation guidance. Interim limitations should reflect the "highest attainable condition" for the permittee in question pursuant to s. 283.16(7), Wis. Stat.*

| | | |
|---|---|---|
| 9. *For Industries Only*- Where does the phosphorus in the effluent come from? (check all that apply) | ☐ Process<br>☐ Additive Usage<br>☐ Water supply<br>*Can intake credits be given or can the facility use an alternative water supply?*<br>◯ Not feasible<br>◯ Possibly, but further analysis needed<br>◯ Not evaluated at this time | *See Q14-15 & 19 on industrial form. If the answer is "possibly" or "not evaluated", the schedule section of the MDV permit should contain a requirement to perform this analysis.* |
| 10. Has this facility optimized? | ◯ Yes<br>◉ In progress<br>◯ No | *See Q14 on municipal form & Q16 & 20 on industrial form. Facility must optimize and operate at an optimize treatment level (s. 283.16(6)(a), Wis. Stat.)If no will need compliance schedule.* |
| 11. Has a facility plan/compliance alternative plan been completed for the facility? | ◉ Yes<br>◯ In progress<br>◯ No | *See Q15 on municipal form & Q17 on industrial form.* |
| 12. What is the projected cost for complying with phosphorus?<br>Source: | $ 3,000,000.00<br>Value from MDV application. See notes in economic demonstration for revised costs based on deficient documentation. | *Facility must submit site-specific compliance costs. If cost projections are used from EIA, the permittee must certify that these costs are reasonable for the facility in question. See "projected compliance costs" in Section 2.02 of the MDV Implementation Guidance for details.* |

Comments on planning efforts:

Stitzer Sanitary District submitted a final compliance alternatives plan, prepared by Fehr Graham and dated September 2019. The Plan evaluates options for meeting the low-level phosphorus effluent limits applicable to the discharge. Water quality trading and adaptive management are evaluated. Adaptive management is dismissed and WQT may be viable - but no trading partners were identified. Regionalization is also evaluated, with costs higher than tertiary filtration. The report dismissed filtration and indicated a new plant would need to be built. During the current permit term, Stitzer optimized phosphorus treatment. Water quality trading partners have yet to be identified. An updated compliance cost estimate was provided with the current MDV application.

| | | |
|---|---|---|
| 13. Are adaptive management and water quality trading viable? | ◯ Yes<br>◉ Perhaps. Additional analysis required.<br>◯ No | *See Q18-21 on municipal form & Q22-25 on industrial form. If additional analyses required, the applicant may need to complete this analysis during the MDV permit term.* |
| 14. Has the point source met the appropriate primary screener? | ◉ Yes<br>◯ No. *STOP- facility not eligible.* | *See Q4 of this form in addition to the "eligibility" guidance in Section 2.01 of the MDV Implementation Guidance.* |

Save

Comments on economic demonstration:

The MDV application cites a compliance cost of $3M. After further inqury from the department, Delta Three Engineering submitted an updated compliance cost estimate of $2,821,875.00 with three items contributing costs. The item "WWTF Maintenance" for $1,400,000 is not being used in the economic demonstration do to lack of definition. Remaining items are $750,000 for a filtration system and $107,500.00 for mobilization/bonding/insurance. Together these represent a capital cost of $857,500. O&M cost increases are estimated at $12,350.00. Assuming a 20-year CWFP loan at 2.475% interest rate, annual payments would be $54,876.35, and $67,226.35 total costs after O&M. The residential share is 67%, meaning that $45,041.65 annually will need to be paid by households. Divided amongst 78 households, the annual average per-user cost increase will be $577.46. With current sewer rates at $293, future sewer user rates are projected at $870.46. This value is 1.03% of the service area's $84,821 median household income. In Grant County with a secondary indicator score of 6, projected sewer user rates at 1% of MHI meet the primary screener. The applicant meets the primary screener.

15. What watershed option was selected?

- (•) County project option. *Complete Section 5.*
- ( ) Binding, written agreement with the DNR to construct a project or implement a watershed plan. *Complete Section 4.*
- ( ) Binding, written agreement with another person that is approved by the DNR to construct a project or implement a watershed plan. *Complete Section 4.*

## Section 4. Watershed Plan Review

| | |
|---|---|
| 16. MDV Plan Number:<br>*Note: This is for tracking purposes. Contact Statewide Phosphorus Implementation Coordinator for the plan number.* | _____ |
| 17. Did the point source complete Form 3200-148? | ( ) Yes<br>( ) No |
| 18. Is the project area in the same HUC 8 watershed as the point of discharge? | ( ) Yes<br>( ) No. *STOP- Watershed plan must be updated.* |
| 19. What is the annual offset required?<br>*See Section 2.03 of the MDV implementation guidance. If this value is different from the offset target provided in form 3200-148, the watershed plan should be amended.* | _____ |
| 20. Does the plan ensure that the annual load is offset annually? | ( ) Yes<br>( ) No. *STOP- Watershed plan must be updated.* |

21. Are projects occurring on land owned/operated by a CAFO or within a permitted MS4 boundary?

- ( ) Yes. *Work with appropriate DNR staff to ensure projects are not working towards other permit compliance.*
- ( ) No.

22. Are other funding sources being used as part of the MDV watershed project?

- ( ) Yes. *Work with appropriate DNR staff to ensure that funding sources can be appropriately used in the plan area.*
- ( ) No.

| | |
|---|---|
| 23. Do you have any concerns about the watershed project?<br>*Note: Coordinate with other DNR staff as appropriate.* | ( ) Yes. *STOP- Watershed plan must be updated.*<br>( ) No. |

Save

Comments:

## Section 5. Payment to the County(ies)

24. At this time, the appropriate per pound payment is: $ 66.62

See "Payment Calculator" document at *\\central\water\WQWT_PROJECTS\WY_CW_Phosphorus\MDV*.

## Section 6. Determination

Based on the available information, the MDV application is:

- (•) Approved
- ( ) Request for more information
- ( ) Denied

Additional Justification (if needed):
Additional information provided by Stitzer SD and consultant on 8/11/2025 included a site-specific compliance cost estimate and indicate the no water quality trading credits are available.

## Certification

| Preparer Name | Title | |
|---|---|---|
| Matt Claucherty | Water Resources Management Specialist | |
| Signature of Preparer | | Date |
| Matt Claucherty | | 9/17/2025 |

Save