

Permit Fact Sheet

General Information

Permit Number	WI-0026913-09-0
Permittee Name and Address	CITY OF DODGEVILLE 100 East Fountain Street, Dodgeville, WI 53533
Permitted Facility Name and Address	Dodgeville Wastewater Treatment Facility 901 E Spring St, Dodgeville, WI
Permit Term	January 01, 2027 to December 31, 2031
Discharge Location	North bank of Dodge Branch Headwater, approximately 200ft south of the Southeast corner of the wastewater treatment facility lot line
Receiving Water	Dodge Branch, in the Upper East Branch Pecatonica River Watershed (SP06) in the Sugar-Pecatonica River Basin, in Iowa County
Stream Flow ($Q_{7,10}$)	0.01 cfs
Stream Classification	Limited Forage Fish (LFF) community
Discharge Type	Existing; Continuous
Annual Average Design Flow	0.9 MGD
Industrial or Commercial Contributors	Sielaff Corporation
Plant Classification	A1 - Suspended Growth Processes; B - Solids Separation; C - Biological Solids/Sludges; P - Total Phosphorus; SS - Sanitary Sewage Collection System
Approved Pretreatment Program?	N/A

Facility Description

The Dodgeville Wastewater Treatment Facility is an activated sludge facility with biological phosphorus removal (BPR) and nitrification. Wastewater is conveyed to the treatment plant through a gravity sewer system and six sewage pumping stations. Preliminary treatment is provided with a mechanical step-screen. Phosphorus removal is accomplished through a BPR process within a series of selector basins after screening and prior to the oxidation ditches. Ferric chloride can be added to the oxidation ditch influent or effluent during periods of biological upset and is currently added during sludge storage tank decanting. Effluent from the oxidation ditch is settled in any of three final clarifiers. The effluent is reaerated using a step aerator before being discharged to the receiving stream. Waste activated sludge is treated with polymer to enhance settling and gravity thickening. The decant from the gravity thickening tank is recycled upstream of the oxidation ditches. Thickened waste activated sludge is stored for 180 days in a liquid storage tank which is then injected bi-annually at pre-approved fields by a contract hauler.

Substantial Compliance Determination

Enforcement During Last Permit: A Notice of Noncompliance (NON) was sent in June 2022 for SSOs that occurred in 2022. The facility has completed all previously required actions as part of the enforcement process.

After a desktop review of all discharge monitoring reports, CMARs, land application reports, compliance schedule items, and a site visit on 08/21/2025, this facility has been found to be in substantial compliance with their current permit.

Compliance determination made by Kenzie Ostien, Wastewater Engineer, on 7/1/2026.

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	0.53 MGD (Avg. January 2021 – April 2026)	Influent: Representative samples shall be taken from the 24-hr flow proportional composite sampler located in the sampler hut adjacent to the screening building. Flow shall be measured at the flow meter located in the screening building.
001	0.561 MGD (Avg. January 2021 – April 2026)	Effluent: Representative samples shall be taken from the 24-hr flow proportional composite sampler located in the effluent wet well before the step aerator. Grab samples shall be taken after the step aerator, prior to discharge to Dodge Branch. Flow shall be measured at the flow meter located at the effluent well before aeration.
003	114 Metric Tons/Year (Avg. 2021 – 2025)	Sludge: Aerobically stabilized, thickened liquid, Class B. Representative sludge samples shall be collected from the 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
Flow Rate		MGD	Daily	Continuous	
BOD5, Total		mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total		mg/L	3/Week	24-Hr Flow Prop Comp	

1.1.1 Changes from Previous Permit

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

1.1.2 Explanation of Limits and Monitoring Requirements

Monitoring of influent flow, 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	
BOD ₅ , Total	Daily Max	30 mg/L	3/Week	24-Hr Flow Prop Comp	
BOD ₅ , Total	Monthly Avg	15 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Daily Max	30 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	20 mg/L	3/Week	24-Hr Flow Prop Comp	
pH Field	Daily Max	9.0 su	5/Week	Grab	
pH Field	Daily Min	6.0 su	5/Week	Grab	
Dissolved Oxygen	Daily Min	4.0 mg/L	5/Week	Grab	
Nitrogen, Ammonia (NH ₃ -N) Total	Daily Max	10 mg/L	3/Week	24-Hr Flow Prop Comp	
Nitrogen, Ammonia (NH ₃ -N) Total	Weekly Avg	14 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies November - March.
Nitrogen, Ammonia (NH ₃ -N) Total	Weekly Avg	9.3 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in April.
Nitrogen, Ammonia (NH ₃ -N) Total	Weekly Avg	5.3 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in May.
Nitrogen, Ammonia (NH ₃ -N) Total	Weekly Avg	4.0 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in June.
Nitrogen, Ammonia (NH ₃ -N) Total	Weekly Avg	3.5 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in July.
Nitrogen, Ammonia (NH ₃ -N) Total	Weekly Avg	3.7 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in August.
Nitrogen, Ammonia (NH ₃ -N) Total	Weekly Avg	5.4 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in September.

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	8.5 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in October.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	5.6 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies January - February.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	6.3 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in March.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	4.2 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in April.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	2.3 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in May and September.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	1.8 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in June.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	1.5 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in July.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	1.6 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in August.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	3.6 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in October.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	6.0 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in November.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	5.8 mg/L	3/Week	24-Hr Flow Prop Comp	Limit applies in December.
E. coli	Geometric Mean - Monthly	126 #/100 ml	Weekly	Grab	Monitoring and limit effective May through September annually per the Effluent Limitations for E. coli Schedule.
E. coli	% Exceedance	10 Percent	Monthly	Calculated	Monitoring and limit effective May through September annually per the Effluent Limitations for E. coli Schedule. See the E. coli Percent Limit permit section. Enter the result in the DMR on the last day of the month.
Chloride	Weekly Avg	430 mg/L	4/Month	24-Hr Flow Prop Comp	This is an interim limit. Sampling shall be conducted on four consecutive days one week

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
					per month. See the Chloride Variance - Implement Source Reduction Measures permit section and the Chloride SRM (Target Value) Schedule.
Chloride		lbs/day	4/Month	Calculated	Calculate the daily mass discharge of chloride in lbs/day on the same days chloride sampling occurs. $\text{Mass (lbs/day)} = \text{Concentration (mg/L)} \times \text{Flow (MGD)} \times 8.34$
PFOS		ng/L	1/ 2 Months	Grab	Monitoring only. See the PFOS/PFOA permit sections and the PFOS/PFOA Minimization Plan Determination of Need Schedule.
PFOA		ng/L	1/ 2 Months	Grab	Monitoring only. See the PFOS/PFOA permit sections and the PFOS/PFOA Minimization Plan Determination of Need Schedule.
Phosphorus, Total	Monthly Avg	0.54 mg/L	3/Week	24-Hr Flow Prop Comp	Limit effective throughout the permit term, as it represents a minimum control level.
Phosphorus, Total		lbs/day	3/Week	Calculated	Report daily mass discharged using Equation 1a. in the Water Quality Trading (WQT) permit section.
WQT Credits Used (TP)		lbs/month	Monthly	Calculated	Report WQT TP Credits used per month using Equation 2c. in the Water Quality Trading (WQT) permit section. Available TP Credits are specified in Table 2 and in the approved Water Quality Trading Plan.

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
WQT Computed Compliance (TP)	Monthly Avg	0.225 mg/L	Monthly	Calculated	Limit effective 7/1/2027. Report the WQT TP Computed Compliance value using Equation 3a. in the Water Quality Trading (WQT) permit section. Value entered on the last day of the month.
WQT Computed Compliance (TP)	6-Month Avg	0.075 mg/L	Monthly	Calculated	Limit effective 7/1/2027. Compliance with the six-month average limit is evaluated at the end of the six-month period on June 30 and Dec 31.
WQT Computed Compliance (TP)	6-Month Avg	0.56 lbs/day	Monthly	Calculated	Report the WQT TP Computed Compliance value using Equation 3b. in the Water Quality Trading (WQT) permit section. Compliance with the six-month average limit is evaluated at the end of the six-month period on June 30 and Dec 31.
WQT Credits Used (TP)	Annual Total	500 lbs/yr	Annual	Calculated	Limit applies in 2027. The sum of total monthly credits used may not exceed Table 2 values listed in the permit.
WQT Credits Used (TP)	Annual Total	1,000 lbs/yr	Annual	Calculated	Limit applies 2028 - 2031. The sum of total monthly credits used may not exceed Table 2 values listed in the permit.
Temperature Maximum		deg F	Daily	Continuous	See the Effluent Temperature Monitoring permit section.
Nitrogen, Total Kjeldahl		mg/L	See Listed Qtr(s)	24-Hr Flow Prop Comp	Annual in rotating quarters. See Nitrogen Series Monitoring permit section.
Nitrogen, Nitrite + Nitrate Total		mg/L	See Listed Qtr(s)	24-Hr Flow Prop Comp	Annual in rotating quarters. See Nitrogen Series Monitoring permit section.

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total		mg/L	See Listed Qtr(s)	Calculated	Annual in rotating quarters. See Nitrogen Series Monitoring permit 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 Flow Prop Comp	See the Whole Effluent Toxicity (WET) Testing permit section.
Chronic WET		TUc	See Listed Qtr(s)	24-Hr Flow Prop Comp	See the Whole Effluent Toxicity (WET) Testing permit 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.

- Ammonia nitrogen daily maximum effluent limit has been updated.
- The monitoring frequency for pH and dissolved oxygen has increased to 5/Week.
- Addition of Escherichia coli (E. coli) monitoring and limits. At the end of the compliance schedule, disinfection requirements and E. coli limits of 126 #/100 mL as a monthly geometric mean that may not be exceeded and 410 #/100 mL as a daily maximum that may not be exceeded more than 10 percent of the time in any calendar month will apply. Monitoring is not required until the limit becomes effective at the end of the compliance schedule.
- The permittee has applied for a chloride variance. The chloride variance interim effluent limit has been decreased to 430 mg/L as a weekly average and updated source reduction measures are included throughout the permit term.
- PFOS and PFOA monitoring once every two months is included in the permit in accordance with s. NR 106.98(2)(b), Wis. Adm. Code.
- Compliance with the phosphorus effluent limits will be achieved through Water Quality Trading (WQT). The monthly average limit of 0.54 mg/L is retained this permit term as it represents the minimum control level (MCL). Several calculated parameters were added in order to demonstrate compliance. See explanation (below) for more details.
- The monitoring frequency for temperature maximum has changed to Daily because the same type is continuous.
- Annual total nitrogen monitoring is required in specific quarters as outlined in the permit.
- Addition of acute (3x/permit term) and chronic (annual) whole effluent toxicity (WET) testing in specific quarters as outlined in the permit.

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, by Sarah Luck, Water Resources Engineer, dated June 9, 2026.

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. Changes have been made to the monitoring frequencies for pH and dissolved oxygen.

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.

Disinfection and E. coli – Revisions to bacteria surface water quality criteria to protect recreational uses and accompanying E. coli WPDES permit implementation procedures became effective May 1, 2020. Section NR 102.04(5)(a), Wis. Adm. Code, states that all surface waters shall be suitable for recreational use and meet the E. coli criteria established to protect this use. Section NR 102.04(5)(b), Wis. Adm. Code, states that exceptions to the disinfection requirement can be made if the Department determines, in accordance with the procedures specified in s. NR 210.06(3), Wis. Adm. Code, that disinfection is not required to meet water quality criteria. As part of the reissuance process, the requirements for disinfection were reviewed under s. NR 210.06(3), Wis. Adm. Code. It was determined that the permittee is required to disinfect, during the months of May – September. If the Dodgeville WWTF decides to use chlorination for disinfection, effluent limitations would be required to ensure proper operation of the de-chlorination system and would become effective May 1, 2031, with the E. coli limitations. See the WQBEL memo for further explanation.

Chloride – The permittee has applied for a chloride variance, under the provisions of s. NR 106.83, Wis. Adm. Code, with its application for permit reissuance. The Department reviewed the permittee’s application for a chloride variance and the information supplied in the application supports the establishment of an interim effluent limit. The proposed permit includes an interim chloride limit of 430 mg/L (expressed as a weekly average), a target value of 400 mg/L (weekly average), implementation of the chloride source reduction measures identified in the City of Dodgeville Source Reduction Measures Plan dated January 2027, and submittal of annual progress reports each year by January 31st. The Department concludes that the City of Dodgeville is qualified for a variance from the water quality standard for chloride and proposes reissuance of this permit with the proposed variance.

PFOS and PFOA – NR 106 Subchapter VIII – Permit Requirements for PFOS and PFOA Dischargers became effective on August 1, 2022. At the first reissuance of a WPDES permit after August 1, 2022, the new rule requires WPDES permits for major municipal dischargers with an average flow rate greater than 1 MGD but less than 5 MGD, at a minimum sample effluent once every two months for PFOS and PFOA pursuant s. NR 106.98(2)(b), Wis. Adm. Code.

A sample frequency of “1/ 2 Months” means one sample is taken during any two-month period. Examples of 1/ 2 month sampling would be every other month (Jan, March, May, etc.) or back-to-back months with a break in between (February & March, May & June, Aug & Sept, etc.). DMR Short Forms will be generated for the following time periods: January-February, March-April, May-June, July-August, September-October, and November-December. At a minimum, one sample result will be present on each form.

The initial determination of the need for sampling shall be conducted for up to two years in order to determine if the permitted discharge has the reasonable potential to cause or contribute to an exceedance of the PFOS or PFOA standards under s. NR 102.04(8)(d)1, Wis. Adm. Code.

Phosphorus – The wastewater treatment facility is not able to meet the WQBEL. This permit authorizes the use of trading as a tool to demonstrate compliance with the phosphorus WQBELs. The permittee has entered into a credit purchase agreement with the Water Quality Trading Clearinghouse pursuant to s. 283.84(1)(f), Wis. Stats. This permit includes terms and conditions related to the Credit Verification Package CVP-2026-02 submitted by the Water Quality Trading Clearinghouse. The total ‘WQT TP Credits’ available are designated in a credit purchase agreement between the permittee and Clearinghouse. The CVP proposes restoration of an eroding barnyard and pasture area with conservation cover / perennial vegetation. The timeline for practice installation, as set forth in the CVP, indicates restoration activities will be

completed by June 30, 2027. The Credit Verification Package proposes the generation of 1000 lbs/yr of phosphorus credits for the next five years.

Additional WQT subsections in the permit provide information on compliance determinations, annual reporting and re-opening of the permit.

Total Nitrogen Monitoring (TKN, NO₂+NO₃, and Total N) – The Department has continued effluent monitoring for total nitrogen in the permit through the authority under s. 283.55(1)(e), Wis. Stats. Testing is required during the following quarters: October – December 2027; July – September 2028; April – June 2029; January – March 2030; and July – September 2031.

Acute WET – Testing is required during the following quarters: October – December 2027; April – June 2029; and July – September 2031.

Chronic WET – Testing is required during the following quarters: October – December 2027; July – September 2028; April – June 2029; January – March 2030; and July – September 2031.

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)
003	B	Liquid	Fecal Coliform	Injection	Land Application	Approx. 100
Does sludge management demonstrate compliance? Yes.						
Is additional sludge storage required? No.						
Is Radium-226 present in the water supply at a level greater than 2 pCi/liter? No.						
Is a priority pollutant scan required? N/A – 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: 003- 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	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
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	
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 (NH ₄ -N) Total		Percent	Annual	Composite	
Phosphorus, Total		Percent	Annual	Composite	
Phosphorus, Water Extractable		% of Tot P	Annual	Composite	
Potassium, Total Recoverable		Percent	Annual	Composite	
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.

3.1.1 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.

- Removed PCB monitoring requirements. PCB monitoring may be required at the next permit reissuance.
- Annual monitoring for PFAS is required pursuant to s. NR 204.06(2)(b)9., Wis. Adm. Code.

3.1.2 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), Wis. Adm. Code, 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. Radium requirements are addressed in s. NR 204.07(3)(n), 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 Chloride Source Reduction Measures (Target Value)

As a condition of the variance to the water quality-based effluent limitation(s) for chloride granted in accordance with s. NR 106.83(2), Wis. Adm. Code, the permittee shall perform the following actions.

Required Action	Due Date
Annual Chloride Progress Report: Submit an annual chloride progress report related to the source reduction activities for the previous year. The annual chloride progress report shall: Indicate which chloride source reduction measures or activities in the Source Reduction Plan have been implemented and state which, if any, source reduction measures from the Source Reduction Plan were not pursued and why. Include an assessment of whether each implemented source reduction measure appears to be effective or ineffective at reducing pollutant discharge concentrations and identify actions planned for the upcoming year; Include an analysis of trends in weekly, monthly and annual average chloride concentrations and total mass discharge of chloride based on chloride sampling and flow data; and Include an analysis of how effluent chloride varies with time and with significant loadings of chloride. Note that the interim limitation listed in the Surface Water section of this permit remains enforceable until new enforceable limits are established in the next permit issuance. The first annual chloride progress report is to be submitted by the Date Due.	01/31/2028
Annual Chloride Progress Report #2: Submit the chloride progress report, related to the source reduction activities for the previous year, as defined above.	01/31/2029
Annual Chloride Progress Report #3: Submit the chloride progress report, related to the source reduction activities for the previous year, as defined above.	01/31/2030
Final Chloride Report: Submit the final chloride report documenting the success in meeting the chloride target value of 400 mg/L (weekly avg), as well as the anticipated future reduction in chloride sources and chloride effluent concentrations. The report shall:	01/31/2031

Summarize chloride source reduction measures that have been implemented during the current permit term and state which, if any, source reduction measures from the Source Reduction Plan were not pursued and why; Include an assessment of which source reduction measures appear to have been effective or ineffective. Evaluate any needed changes to the pollutant reduction strategy accordingly; Include an analysis of trends in weekly, monthly and annual average chloride concentrations and total mass discharge of chloride based on chloride sampling and flow data during the current permit term; and Include an analysis of how influent and effluent chloride varies with time and with significant loadings of chloride as identified in the source reduction plan. If the permittee intends to reapply for a chloride variance, for the reissued permit, proposed target limits and a detailed source reduction measures plan, outlining the source reduction activities proposed for the upcoming permit term, shall also be included per ss. NR 106.90 (5) and NR 106.83 (4), Wis. Adm. Code. An updated source reduction measures plan shall: Include an explanation of why or how each source reduction measure will result in reduced discharge of the target pollutant; and Evaluate any available information on pollutant sources, timing, and concentration to update the mass balance assumptions and expected sources of the pollutant, and Identify any information needs that would help to better determine pollutant sources and make plans to collect that information. Note that the target value is the benchmark for evaluating the effectiveness of the chloride source reduction measures but is not an enforceable limitation under the terms of this permit.	
Annual Chloride Reports After Permit Expiration: In the event that this permit is not reissued by the date the permit expires the permittee shall continue to submit annual chloride reports for the previous year following the due date of Annual Chloride Progress Reports listed above. Annual Chloride Progress Reports shall include the information as defined above.	

4.1.1 Explanation of Schedule

Chloride Source Reduction Measures (Target Value) – This schedule is required to ensure that the permittee maintains compliance with the conditions and requirements of receiving a variance from the water quality-based chloride effluent limit. Since a compliance schedule is being granted, an interim limit is required, and that limit is established as 430 mg/L as a weekly average. The schedule requires that annual reports indicate which source reduction measures have been implemented during each calendar year, and an analysis of chloride concentration and mass discharge data based on chloride sampling and flow data. The annual reports shall document progress made towards meeting the chloride target value of 400 mg/L (weekly average) by the end of the permit term.

4.2 Disinfection and Effluent Limitations for E. coli

The permittee shall install disinfection treatment and comply with surface water limitations for E. coli as specified. No later than 14 days following each compliance date, the permittee shall notify the Department in writing of its compliance or noncompliance. If a submittal is required, a timely submittal fulfills the notification requirement.

Required Action	Due Date
Progress Report: The permittee shall submit a progress report on development and submittal of a facility plan for upgrades to meet disinfection requirements and E. coli limits.	09/30/2027

Submit Facility Plan: The permittee shall submit a Facility Plan per s. NR 110.09, Wis. Adm. Code, for meeting disinfection requirements and complying with E. coli surface water limitations. The permittee may submit an abbreviated facility plan if the Department determines that the modifications are minor.	04/30/2028
Final Plans and Specifications: The permittee shall submit final construction plans to the Department for approval pursuant to ch. NR 108, Wis. Adm. Code, specifying treatment plant upgrades that must be constructed to meet disinfection requirements per s. NR 210.06(1), Wis. Adm. Code, achieve compliance with final E. coli limitations, and a schedule for completing construction of the upgrades by the complete construction date specified below.	03/31/2029
Treatment Plant Upgrade to Meet Limitations: The permittee shall initiate bidding, procurement, and/or construction of the project. The permittee shall obtain approval of the final construction plans and schedule from the Department pursuant to s. 281.41, Stats., prior to initiating activities defined as construction under ch. NR 108, Wis. Adm. Code. Upon approval of the final construction plans and schedule by the Department pursuant to s. 281.41, Stats., the permittee shall construct the treatment plant upgrades in accordance with the approved plans and specifications.	09/30/2029
Construction Upgrade Progress Report: The permittee shall submit a progress report on construction upgrades.	09/30/2030
Complete Construction: The permittee shall complete construction of wastewater treatment system upgrades.	03/31/2031
Achieve Compliance: The permittee shall achieve compliance with final E. coli limitations.	04/30/2031

4.2.1 Explanation of Schedule

Disinfection and Effluent Limitations for E. coli – A compliance schedule is included in the permit to provide time for the permittee to submit plans and specs and install disinfection treatment for meeting E. coli water quality-based effluent limits and disinfection requirements pursuant to s. NR 210.06, Wis. Adm. Code. If the facility chooses to utilize chlorine for disinfection purposes, the permit may be modified to include total residual chlorine limits per the Water Quality-Based Effluent Limits (WQBEL) memo dated June 9, 2026.

4.3 PFOS/PFOA Minimization Plan Determination of Need

Required Action	Due Date
Report on Effluent Discharge: Submit a report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations. This analysis should also include a comparison to the applicable narrative standard in s. NR 102.04(8)(d), Wis. Adm. Code. This report shall include all additional PFOS and PFOA data that may be collected including any influent, intake, in-plant, collection system sampling, and blank sample results.	12/31/2027
Report on Effluent Discharge and Evaluation of Need: Submit a final report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations of data collected over the last 24 months. The report shall also provide a comparison on the likelihood of the facility needing to develop a PFOS/PFOA minimization plan. This report shall include all additional PFOS and PFOA data that may be collected including any influent, intake, in-plant, collection system sampling, and blank sample results. The permittee shall also submit a request to the department to evaluate the need for a PFOS/PFOA	12/31/2028

minimization plan. If the Department determines a PFOS/PFOA minimization plan is needed based on a reasonable potential evaluation, the permittee will be required to develop a minimization plan for Department approval no later than 90 days after written notification was sent from the Department. The Department will modify or revoke and reissue the permit to include PFOS/PFOA minimization plan reporting requirements along with a schedule of compliance to meet WQBELs. Effluent monitoring of PFOS and PFOA shall continue as specified in the permit until the modified permit is issued. If, however, the Department determines there is no reasonable potential for the facility to discharge PFOS or PFOA above the narrative standard in s. NR 102.04(8)(d), Wis. Adm. Code, no further action is required and effluent monitoring of PFOS and PFOA shall continue as specified in the permit.	
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4.3.1 Explanation of Schedule

PFOS/PFOA Minimization Plan Determination of Need – As stated above, ch. NR 106 Subchapter VIII – Permit Requirements for PFOS and PFOA Dischargers became effective on August 1, 2022. Section NR 106.98, Wis. Adm. Code, specifies steps to generate data in order to determine the need for reducing PFOS and PFOA in the discharge. Data generated per the effluent monitoring requirements will be used to determine the need for developing a PFOS/PFOA minimization plan. As part of the schedule, the permittee is required to submit two annual Reports on Effluent Discharge.

If the Department determines that a minimization plan is needed, the permit will be modified or revoked/reissued to include additional requirements.

4.4 Water Quality Trading (WQT) Annual Report

Required Action	Due Date
Annual WQT Report: Submit an annual WQT report that shall cover the first year of the permit term. The WQT Report shall include: The number of pollutant reduction credits (lbs/month) used each month of the previous year to demonstrate compliance; The source of each month's pollutant reduction credits by identifying the approved water quality trading plan that details the source; Results of the annual inspection of each nonpoint source management practice that generated any of the pollutant reduction credits used during the previous year; and Identification of noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading that have not been reported in discharge monitoring reports.	01/31/2028
Annual WQT Report #2: Submit an annual WQT report that shall cover the previous year.	01/31/2029
Annual WQT Report #3: Submit an annual WQT report that shall cover the previous year.	01/31/2030
Annual WQT Report #4: Submit the 4th annual WQT report. If the permittee wishes to continue to comply with phosphorus limits through WQT in subsequent permit terms, the permittee shall submit a revised WQT plan including a demonstration of credit need, compliance record of the existing WQT, and any additional practices needed to maintain compliance over time.	01/31/2031
Annual WQT Report Required After Permit Expiration: In the event that this permit is not reissued by the expiration date, the permittee shall continue to submit annual WQT reports by January 31 each year covering the total number of pollutant credits used, the source of the pollution reduction credits, a summary of annual inspection reports performed, and identification of	

noncompliance or failure to implement any terms or conditions of the approved water quality trading plan for the previous calendar year.	
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4.4.1 Explanation of Schedule

Water Quality Trading (WQT) Annual Report – Reports are required that include the following information:

- Verification that site inspections occurred;
- Results of site inspection findings;
- Identification of noncompliance or failure to implement any terms or conditions of the permit or credit verification package that have not been reported in discharge monitoring reports;
- Any applicable notices of termination or management practice registration; and
- A summary of credits used each month over the calendar year.

4.5 Land Application Management Plan

A management plan is required for the land application system.

Required Action	Due Date
Land Application Management Plan Submittal: Submit a 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.	06/30/2027

4.5.1 Explanation of Schedule

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

4.6 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.

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 (\$54.23 per pound)] or \$640,000, whichever is less. 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. Note: The applicable Target Value is 0.2 mg/L as defined by s. 283.16(1)(h), Wis. Stats. The “per	03/01/2027

pound" value is \$50.00 adjusted for CPI.	
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4.6.1 Explanation of Schedule

Phosphorus Payment per Pound to County – 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. Under the previous permit term, the permittee had 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 \$54.23 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) during the calendar year of 2026.

Attachments

Water Quality-Based Effluent Limitations for the Dodgeville Wastewater Treatment Facility WPDES Permit No. WI-0026913-09-0, by Sarah Luck, Water Resources Engineer, dated June 9, 2026

Chloride Variance EPA Data Sheet

City of Dodgeville Source Reduction Measures (SRM) Plan, dated January 2027

WQT Clearinghouse, Dodgeville Credit Verification Package (CVP), dated 01/23/2026

WQT Clearinghouse, Verification of Pollutant Reduction Credits for CVP-2026-02, dated 1/30/2026

Justification Of Any Waivers From Permit Application Requirements

No waivers from permit application requirements were requested or granted.

Prepared By: Sarah Donoughe, Wastewater Specialist-Adv

Date: July 13, 2026

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: June 9, 2026

TO: Sarah Donoughe – SER/Green Bay

FROM: Sarah Luck – SCR/Fitchburg

SUBJECT: Water Quality-Based Effluent Limitations for the Dodgeville Wastewater Treatment Facility
WPDES Permit No. WI-0026913-09-0

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 Dodgeville Wastewater Treatment Facility in Iowa County. This municipal wastewater treatment facility (WWTF) discharges to Dodge Branch, located in the Upper East Branch Pecatonica River Watershed (SP06) in the Sugar-Pecatonica River Basin. This discharge is included in the Sugar Pecatonica River Basin TMDL as approved by EPA, but the TMDL does not affect this evaluation since there are no allocations for point sources. 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
BOD ₅	30 mg/L			15 mg/L		2
TSS	30 mg/L			20 mg/L		2
pH	9.0 s.u.	6.0 s.u.				2
Dissolved Oxygen		4.0 mg/L				2
Ammonia Nitrogen						3
January	10 mg/L		14 mg/L	5.6 mg/L		
February	10 mg/L		14 mg/L	5.6 mg/L		
March	10 mg/L		14 mg/L	6.3 mg/L		
April	10 mg/L		9.3 mg/L	4.2 mg/L		
May	10 mg/L		5.3 mg/L	2.3 mg/L		
June	10 mg/L		4.0 mg/L	1.8 mg/L		
July	10 mg/L		3.5 mg/L	1.5 mg/L		
August	10 mg/L		3.7 mg/L	1.6 mg/L		
September	10 mg/L		5.4 mg/L	2.3 mg/L		
October	10 mg/L		8.5 mg/L	3.6 mg/L		
November	10 mg/L		14 mg/L	6.0 mg/L		
December	10 mg/L		14 mg/L	5.8 mg/L		
<i>E. coli</i> May – September				126 #/100 mL geometric mean		4
Residual Chlorine	19 µg/L		7.3 µg/L	7.3 µg/L		5
Chloride						6
Concentration Limit			400 mg/L	400 mg/L		
Mass limit			3,000 lbs/day	-		
PFOS and PFOA						7
Phosphorus WQT MCL				0.54 mg/L		8

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Six-Month Average	Footnotes
WQBELs				0.225 mg/L -	0.075 mg/L 0.56 lbs/day	
Temperature						1
TKN, Nitrate+Nitrite, and Total Nitrogen						2,9
Acute WET						10,12
Chronic WET						11,12

Footnotes:

1. Monitoring only.
2. No changes from the current permit.
3. The variable daily maximum ammonia nitrogen limit corresponding to various effluent pH values, shown in the table below, may be included in the permit in place of the single daily maximum limit of 10 mg/L. Dodgeville Wastewater Treatment Facility shall notify the Department of the preference for either the single limit or the variable limit based on effluent pH. These limits apply 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 ≤ pH ≤ 6.1	55	7.0 < pH ≤ 7.1	36	8.0 < pH ≤ 8.1	8.3
6.1 < pH ≤ 6.2	54	7.1 < pH ≤ 7.2	33	8.1 < pH ≤ 8.2	6.9
6.2 < pH ≤ 6.3	53	7.2 < pH ≤ 7.3	29	8.2 < pH ≤ 8.3	5.6
6.3 < pH ≤ 6.4	52	7.3 < pH ≤ 7.4	26	8.3 < pH ≤ 8.4	4.7
6.4 < pH ≤ 6.5	51	7.4 < pH ≤ 7.5	23	8.4 < pH ≤ 8.5	3.8
6.5 < pH ≤ 6.6	49	7.5 < pH ≤ 7.6	20	8.5 < pH ≤ 8.6	3.2
6.6 < pH ≤ 6.7	47	7.6 < pH ≤ 7.7	17	8.6 < pH ≤ 8.7	2.6
6.7 < pH ≤ 6.8	45	7.7 < pH ≤ 7.8	14	8.7 < pH ≤ 8.8	2.2
6.8 < pH ≤ 6.9	42	7.8 < pH ≤ 7.9	12	8.8 < pH ≤ 8.9	1.6
6.9 < pH ≤ 7.0	39	7.9 < pH ≤ 8.0	10	8.9 < pH ≤ 9.0	1.3

4. **Additional final limit:** No more than 10 percent of *E. coli* bacteria samples collected in any calendar month may exceed 410 count/100 mL. Since this is a new limit, a compliance schedule may be included in the permit.
5. Total residual chlorine limits apply only if chlorine is used to disinfect in order to meet *E. coli* limits. An additional limit to comply with the expression of limits requirements in ss. NR 106.07 and NR 205.065(7), Wis. Adm. Code, is included in bold.
6. These are the WQBELs for chloride; an additional limit to comply with the expression of limits requirements in ss. NR 106.07 and NR 205.065(7), Wis. Adm. Code, is included in bold. If these limits are included in the permit, dry weather and wet weather mass limits would also need to be included. An alternative effluent limitation of 430 mg/L as a weekly average, which represents the 4-day P₉₉ of representative effluent data, may be included in the permit in place of the WQBELs if the chloride variance application that was submitted is approved by EPA.
7. PFOS and PFOA monitoring is recommended at a frequency of once every two months in accordance with s. NR 106.98(2), Wis. Adm. Code.
8. The facility will use water quality trading (WQT) as an alternative compliance option to offset any total phosphorus discharged that exceeds the final phosphorus WQBELs. The phosphorus WQBELs may be expressed as computed compliance limits, but a minimum control level (MCL) must be set as a limit not to be exceeded at the outfall. Therefore, if WQT is implemented, a MCL of 0.54 mg/L as a monthly average should not be exceeded during the permit term.

9. The *Guidance for Total Nitrogen Monitoring in Wastewater Permits* (October 1, 2019) recommends annual total nitrogen monitoring 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. Code, provide the authority to request this monitoring during the permit term. Total Nitrogen is the sum of nitrate (NO₃), nitrite (NO₂), and total Kjeldahl nitrogen (TKN) (all expressed as N).
10. Three acute WET tests are recommended. 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.
11. Annual chronic WET monitoring is recommended. The Instream Waste Concentration (IWC) to assess chronic test results is 100%. 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 Dodge Branch.
12. 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. Chronic WET testing should continue after the permit expiration date (until the permit is reissued).

Please consult the attached report for details regarding the above recommendations. If there are any questions or comments, please contact Sarah Luck (Sarah.Luck@wisconsin.gov) or Diane Figiel (Diane.Figiel@wisconsin.gov).

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

PREPARED BY:  Date: June 9, 2026
Sarah Luck
Water Resources Engineer

E-cc: Kenzie Ostien, Wastewater Engineer – SCR/Fitchburg
Lisa Cregan, Regional Wastewater Supervisor – SCR/Fitchburg
Diane Figiel, Water Resources Engineer – WY/3
Nate Willis, Wastewater Section Manager – WY/3

Water Quality-Based Effluent Limitations for Dodgeville Wastewater Treatment Facility

WPDES Permit No. WI-0026913-09-0

PART 1 – BACKGROUND INFORMATION

Facility Description

The Dodgeville Wastewater Treatment Facility is an activated sludge facility with biological phosphorus removal (BPR) and nitrification. Wastewater is conveyed to the treatment plant through a gravity sewer system and six sewage pumping stations. Preliminary treatment is provided with a mechanical step-screen. Phosphorus removal is accomplished through a BPR process within a series of selector basins after screening and prior to the oxidation ditches. Ferric chloride can be added to the oxidation ditch influent or effluent during periods of biological upset and is currently added during sludge storage tank decanting. Effluent from the oxidation ditch is settled in any of three final clarifiers. The effluent is reaerated using a step aerator before being discharged to the receiving stream. Waste activated sludge is treated with polymer to enhance settling and gravity thickening. The decant from the gravity thickening tank is recycled upstream of the oxidation ditches. Thickened waste activated sludge is stored for 180 days in a liquid storage tank which is injected bi-annually at pre-approved fields by a contract hauler.

Attachment #2 is a map of the area showing the approximate location of Outfall 001.

Existing Permit Limitations

The current permit, which expired on December 31, 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
BOD ₅	30 mg/L			15 mg/L		2
TSS	30 mg/L			20 mg/L		2
pH	9.0 s.u.	6.0 s.u.				2
Dissolved Oxygen		4.0 mg/L				2
Ammonia Nitrogen						-
January	14 mg/L		14 mg/L	5.6 mg/L		
February	14 mg/L		14 mg/L	5.6 mg/L		
March	14 mg/L		14 mg/L	6.3 mg/L		
April	14 mg/L		9.3 mg/L	4.2 mg/L		
May	14 mg/L		5.3 mg/L	2.3 mg/L		
June	14 mg/L		4.0 mg/L	1.8 mg/L		
July	14 mg/L		3.5 mg/L	1.5 mg/L		
August	14 mg/L		3.7 mg/L	1.6 mg/L		
September	14 mg/L		5.4 mg/L	2.3 mg/L		

Attachment #1

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Six-Month Average	Footnotes
October	14 mg/L		8.5 mg/L	3.6 mg/L		
November	14 mg/L		14 mg/L	6.0 mg/L		
December	14 mg/L		14 mg/L	5.8 mg/L		
Chloride			450 mg/L			3
Phosphorus				0.54 mg/L		4
MDV Interim				0.225 mg/L	0.075 mg/L	
Final WQBELs					0.56 lbs/day	
Temperature						1
TKN, Nitrate+Nitrite, and Total Nitrogen						5

Footnotes:

1. Monitoring only.
2. These limits are based on the Limited Forage Fishery community of the immediate receiving water as described in s. NR 104.02(3)(a), Wis. Adm. Code.
3. This is an alternative effluent limitation that was included in the permit in place of the WQBELs since a chloride variance was approved by EPA.
4. The facility was covered under the multi-discharger variance (MDV) to comply with phosphorus WQBELs.
5. Annual monitoring in rotating quarters.

Receiving Water Information

- Name: Dodge Branch
- Waterbody Identification Code (WBIC): 910800
- Classification used in accordance with chs. NR 102 and 104, Wis. Adm. Code:
 - Limited forage fish community at the point of discharge
 - Warm water sport fish community approximately 0.6 miles downstream of the outfall
- Low flows used in accordance with chs. NR 106 and 217, Wis. Adm. Code:
 - At the outfall:
 - 7-Q₁₀ = 0.01 cubic feet per second (cfs)
 - 7-Q₂ = 0.01 cfs
 - Harmonic Mean Flow = 0.10 cfs using a drainage area of 1.05 mi²
 - The Harmonic Mean has been estimated based on average flow and the 7-Q₁₀ using an equation from U.S. EPA's *Technical Support Document for Water Quality-Based Toxics Control* (March 1991, EPA/505/2-90-001, pgs. 88-89).
 - At USGS station #05432752, located approximately 0.6 miles downstream of the outfall, just below the confluence with an unnamed tributary (from 03/20/2008 letter from USGS):
 - 7-Q₁₀ = 0.38 cfs (cubic feet per second)
 - 7-Q₂ = 0.55 cfs

	Attachment #1											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
7-Q ₁₀ (cfs)	0.44	0.43	0.52	0.63	0.55	0.48	0.46	0.45	0.46	0.49	0.51	0.43
7-Q ₂ (cfs)	0.62	0.62	0.84	1.06	0.95	0.86	0.73	0.72	0.68	0.71	0.73	0.68

- Hardness = 261 mg/L as CaCO₃. This value represents the geometric mean of data (n=3) from 2016-2019 WET testing conducted by Dodgeville Wastewater Treatment Facility; no newer data are available.
- % 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: Background concentrations are not included because they do not impact the calculated WQBEL when the receiving water low flows are nearly zero.
- Multiple dischargers: None.
- Impaired water status: None.
- Impaired water status: Dodge Branch is listed as impaired for total phosphorus and total suspended solids.

Effluent Information

- Flow rate:
Design annual average = 0.9 Million Gallons per Day (MGD)
For reference, the actual average flow from January 2021 through December 2025 was 0.21 MGD.
- Hardness = 338 mg/L as CaCO₃. This value represents the geometric mean of five samples collected in April 2025 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).
- Wastewater source: Domestic and commercial wastewater with one industrial contributor (Siellaff Corporation). It should be noted that QLF Agronomy is headquartered in Dodgeville but does not manufacture or produce at this location (though there is storage).
- Water supply: City of Dodgeville
- Additives: Dodgeville Wastewater Treatment Facility has included one additive in the permit application that has the potential to be present in the effluent. This additive is listed below:
 - Ferric Chloride – Ferric chloride is currently added during storage tank decanting and can be added during periods of a biological upset for 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 additive.
- 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 hardness.
- 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 on the next page or in their respective parts in this evaluation.

Attachment #1

Copper Effluent Data

Sample Date	Copper (µg/L)	Sample Date	Copper (µg/L)	Sample Date	Copper (µg/L)
04/16/25	5.6	04/28/25	6.3	05/10/25	6.7
04/19/25	5.4	05/01/25	5.7	05/13/25	5.9
04/22/25	4.6	05/04/25	5.4	05/16/25	5.9
04/25/25	4.5	05/07/25	5.8		
1-day P ₉₉ = 7.3 µg/L					
4-day P ₉₉ = 6.4 µg/L					

Chloride Effluent Data

	Chloride (mg/L)
1-day P ₉₉	508
4-day P ₉₉	426
30-day P ₉₉	379
Mean	354
Std	57
Sample size	252
Range	226 - 560

The following table presents the average concentrations and loadings at Outfall 001 from January 2021 through December 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
BOD ₅	3 mg/L*
TSS	5 mg/L*
pH field	7.4 s.u.
Dissolved Oxygen	7.1 mg/L
Chloride	354 mg/L
Ammonia Nitrogen	0.51 mg/L
Phosphorus	0.30 mg/L

*Results below the limit of detection (LOD) were included as zeroes in calculation of average.

**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 99th percentile (or P₉₉) 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-Q₁₀

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. Adm. 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-Q₁₀ 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.

$$\text{Limitation} = \frac{(\text{WQC}) (Q_s + (1-f) Q_e) - (Q_s - f Q_e) (C_s)}{Q_e}$$

Where:

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

Q_s = average minimum 1-day flow which occurs once in 10 years (1-day Q₁₀)

if the 1-day Q₁₀ flow data is not available = 80% of the average minimum 7-day flow which occurs once in 10 years (7-day Q₁₀).

Q_e = 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

C_s = 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-Q₁₀ method of limit calculation produces the most stringent daily maximum limitations and should be used while making reasonable potential determinations.

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

Daily Maximum Limits based on Acute Toxicity Criteria (ATC)

RECEIVING WATER FLOW = 0.01 cfs, (1-Q₁₀ (estimated as 80% of 7-Q₁₀)), 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.
Chlorine		19.0	19.1	3.83	-		
Arsenic		340	341.8	68.4	<1.10		
Cadmium	338	41.6	41.9	8.4	<0.17		
Chromium	301	4446	4471.4	894	<1.50		
Copper	338	48.9	49.2		0.00	7.3	6.7
Lead	338	347	348.6	69.7	<5.40		
Nickel	268	1080	1086.5	217	<4.7		
Zinc	333	345	346.7	69.3	26		
Chloride (mg/L)		757	761.3			508	560

Attachment #1

* 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.

* * Per the changes to s. NR 106.07(3), Wis. Adm. Code, effective 09/01/2016 consideration of ambient concentrations and 1-Q₁₀ flow rates yields a more restrictive limit than the 2 × ATC method of limit calculation.

Weekly Average Limits based on Chronic Toxicity Criteria (CTC)

RECEIVING WATER FLOW = 0.0025 cfs (¼ of the 7-Q₁₀), 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	4-day Max
Chlorine		7.28	7.29	1.46	-		
Arsenic		152.2	152	30.5	<1.10		
Cadmium	175	3.82	3.83	0.8	<0.17		
Chromium	261	289.46	290	58.0	<1.50		
Copper	261	23.49	23.5			6.4	
Lead	261	70.65	70.8	14.2	<5.40		
Nickel	261	117.36	118	23.5	<4.7		
Zinc	261	278.15	279	55.7	26		
Chloride (mg/L)		395	396			426	491

* 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 = 0.0257 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	377	75.4	<0.17
Chromium (+3)	3,818,000	3,888,517	777,703	<1.50
Lead	140	143	28.5	<5.40
Nickel	43,000	43,794	8,759	<4.7

Monthly Average Limits based on Human Cancer Criteria (HCC)

RECEIVING WATER FLOW = 0.0257 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	13.3	13.5	2.71	<1.10

Conclusions and Recommendations

Based on a comparison of the effluent data and calculated effluent limitations, **effluent limitations are required for chloride**. Limits and monitoring recommendations are made in the paragraphs below.

Chloride – Considering available effluent data from the current permit term (January 2021 through March 2025), summarized in the table below, the 1-day P₉₉ concentration is 508 mg/L, the 4-day P₉₉ is 426 mg/L, and the peak weekly average is 491 mg/L (week of 01/31/2021).

Chloride Effluent Data		
	Concentration (mg/L)	Mass (lbs/day)
1-day P ₉₉	508	3,497
4-day P ₉₉	426	2,492
30-day P ₉₉	379	1,963
Mean	354	1,700
Std	57	584
Sample size	252	252
Range	226 - 560	0 – 3,463.9

Since the 4-day P₉₉ exceeds the calculated weekly average WQBEL, an effluent limit is needed in accordance with s. NR 106.05(4)(b), Wis. Adm. Code.

However, Subchapter VII of ch. NR 106, Wis. Adm. Code, provides for a variance from water quality standards for this substance, and Dodgeville Wastewater Treatment Facility has requested such a variance. That variance may be granted subject to the following conditions:

- 1) The permit shall include an “Interim” limitation intended to prevent an increase in the discharge of Chloride;
- 2) The permit shall specify “Source Reduction Measures” to be implemented during the permit term, with periodic progress reports; and
- 3) The permit shall include a “Target Limit” or “Target Value” to gage the effectiveness of the Source Reduction Measures, and progress toward the WQBELs.

Interim Limit for Chloride

Section NR 106.82(9), Wis. Adm. Code, defines a “Weekly average interim limitation” as either the 4-day P₉₉ concentration or 105% of the highest weekly average concentration of the representative data. The current permit includes an interim weekly average limit of 450 mg/L.

Ideally, the effluent chloride concentration at facilities with variances will trend downward as time goes on as a result of source reduction measures, and the recalculated interim limit will decline until the facility can meet the WQBEL. Therefore, an interim limit of **430 mg/L** (426 mg/L rounded to two significant figures) as a weekly average **is recommended as the interim chloride limit**. This value is equal to the current 4-day P₉₉ concentration.

A target limit and permit language for Source Reduction Measures are not recommended as part of this evaluation. These should follow contact with Dodgeville Wastewater Treatment Facility. If the Department and the Dodgeville Wastewater Treatment Facility are unable to reach agreement on all the terms of a Chloride Variance, the calculated limits described earlier should be included in the permit, in accordance with s. NR 106.83(3), Wis. Adm. Code.

Chloride Monitoring Recommendations

Four samples per month (on consecutive days) are recommended. This allows for averaging of the results to compare with the interim limit and allows the use of the average in determining future interim limits, and degree of success with chloride reduction measures.

In the absence of a variance, Dodgeville Wastewater Treatment Facility would be subject to the WQBELs of 400 mg/L (396 mg/L, rounded) as a weekly average, a weekly average mass limit of 3,000 lbs/day (2,972 lbs/day, rounded) ($396 \text{ mg/L} \times 0.9 \text{ MGD} \times 8.34$), and an alternative wet weather mass limit. The peak weekly design flow would be needed to calculate the wet weather mass limit. The wet weather mass limit applies when the dry weather mass limit is exceeded and the facility demonstrates to the Department the exceedance occurred during a wet weather event.

Mercury – The permit application did not require monitoring for mercury because the Dodgeville Wastewater Treatment Facility 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 April 2021 through April 2025 (n=5) was 0.41 mg/kg, with a maximum reported concentration of 0.70 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.

Available monitoring sample data from Dodgeville Waterworks (PWS ID: 12500796) is provided in the table below:

Water Supply PFAS Data

Sample Date	Sample ID	Well #	PFOS (ng/L)	PFOA (ng/L)
04/25/2023	CB04149-03	OK565	ND	ND
04/25/2023	CB04149-01	RR872	ND	ND
05/01/2023	CB04362-03	BF957	ND	ND
05/01/2023	CB04362-01	BF970	ND	ND

The limited data above shows the municipal water supply is below one-fifth of the applicable PFOS and PFOA criteria.

Previous monitoring produced a PFOS result of 0.827 ng/L and a PFOA result of 4.26 ng/L. These results are less than one fifth of the respective criteria for each substance.

However, based on the type of indirect discharger to the collection system, **PFOS and PFOA monitoring is recommended at a frequency of once every two months during the reissued permit term.**

**PART 3 – WATER QUALITY-BASED EFFLUENT LIMITATIONS
FOR BOD, TSS, PH, AND DISSOLVED OXYGEN**

BOD, TSS, DO, and pH

The current biological oxygen demand (BOD), total suspended solids (TSS), dissolved oxygen (DO), and pH limits are the limits given in s. NR 104.02(3)(a), Wis. Adm. Code, for discharges to limited forage fishery receiving waters. **No changes are recommended for BOD, TSS, DO, and pH limits.**

**PART 4 – 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.

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:

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

Where:

A = 0.411 and B = 58.4 for a Limited Forage Fishery, and
pH (s.u.) = that characteristic of the effluent.

The effluent pH data was examined as part of this evaluation. A total of 1,303 sample results were reported from January 2021 through March 2026. The maximum reported value was 8.2 s.u. (Standard pH Units). The effluent pH was 7.9 s.u. or less 99% of the time. The 1-day P₉₉, calculated in accordance with s. NR 106.05(5), Wis. Adm. Code, is 7.9 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 7.9 s.u. Therefore, a value of 7.9 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 7.9 s.u. into the equation above yields an ATC = 10.13 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 1-Q₁₀ 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-Q₁₀ (estimated as 80% of 7-Q₁₀) and the 2×ATC approach are shown below.

Daily Maximum Ammonia Nitrogen Determination

	Ammonia Nitrogen Limit (mg/L)
2×ATC	20

Attachment #1

	Ammonia Nitrogen Limit (mg/L)
1-Q ₁₀	10

The 1-Q₁₀ method yields the most stringent limits for Dodgeville Wastewater Treatment Facility.

Presented below is a table of daily maximum limitations corresponding to various effluent pH values. Use of this table is not necessarily recommended in the permit, but it is presented herein for informational purposes.

Daily Maximum Ammonia Nitrogen Limits – LFF

Effluent pH (s.u.)	Limit (mg/L)	Effluent pH (s.u.)	Limit (mg/L)	Effluent pH (s.u.)	Limit (mg/L)
6.0 ≤ pH ≤ 6.1	55	7.0 < pH ≤ 7.1	36	8.0 < pH ≤ 8.1	8.3
6.1 < pH ≤ 6.2	54	7.1 < pH ≤ 7.2	33	8.1 < pH ≤ 8.2	6.9
6.2 < pH ≤ 6.3	53	7.2 < pH ≤ 7.3	29	8.2 < pH ≤ 8.3	5.6
6.3 < pH ≤ 6.4	52	7.3 < pH ≤ 7.4	26	8.3 < pH ≤ 8.4	4.7
6.4 < pH ≤ 6.5	51	7.4 < pH ≤ 7.5	23	8.4 < pH ≤ 8.5	3.8
6.5 < pH ≤ 6.6	49	7.5 < pH ≤ 7.6	20	8.5 < pH ≤ 8.6	3.2
6.6 < pH ≤ 6.7	47	7.6 < pH ≤ 7.7	17	8.6 < pH ≤ 8.7	2.6
6.7 < pH ≤ 6.8	45	7.7 < pH ≤ 7.8	14	8.7 < pH ≤ 8.8	2.2
6.8 < pH ≤ 6.9	42	7.8 < pH ≤ 7.9	12	8.8 < pH ≤ 8.9	1.6
6.9 < pH ≤ 7.0	39	7.9 < pH ≤ 8.0	10	8.9 < pH ≤ 9.0	1.3

Weekly and Monthly Average Limits based on Chronic Toxicity Criteria (CTC)

No changes are recommended to the current weekly and monthly average ammonia limits 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 January 2021 through March 2026. It should be noted there was a reported plant upset on 12/06/2021 due to an unknown substance.

Ammonia Nitrogen Effluent Data

(mg/L)	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1-day P ₉₉	1.7	1.6	1.6	1.6	3.73	1.6	1.68	1.7	1.5	12.61	3.17	33.57
4-day P ₉₉	0.85	0.84	0.82	0.86	2.01	0.85	0.87	0.90	1.1	7.19	1.87	18.83
30-day P ₉₉	0.40	0.39	0.40	0.42	0.84	0.44	0.44	0.46	0.65	2.99	0.97	7.82
Mean	0.18	0.18	0.18	0.20	0.33	0.21	0.21	0.23	0.39	1.05	0.57	2.57
Std	0.46	0.46	0.43	0.42	1.18	0.38	0.41	0.39	0.24	4.11	0.72	12.08
Sample size	77 (54 ND)	73 (51 ND)	80 (60 ND)	64 (46 ND)	66 (39 ND)	65 (48 ND)	66 (49 ND)	67 (47 ND)	64 (37 ND)	68 (34 ND)	65 (33 ND)	66 (40 ND)
Range	<0.05 - 1	<0.05 - 1	<0.05 - 1	<0.05 - 1	<0.05 - 6.28	<0.05 - 1	<0.05 - 1.31	<0.05 - 1	<0.05 - 1	<0.05 - 22.87	<0.05 - 4.67	<0.05 - 37.35

“<” means that the pollutant was not detected at the indicated level of detection. The mean concentration was calculated using zero in place of the non-detected (ND) results.

Reasonable Potential

The need to include ammonia limits in the Dodgeville Wastewater Treatment Facility permit is determined by calculating 99th upper percentile (or P₉₉) values for ammonia and comparing those to the calculated limits. Based on this comparison, **there is reasonable potential for the discharge to exceed the daily maximum limit of 10 mg/L in October and December, and weekly and monthly average limits in December.** Additionally, since the permit currently has daily maximum, weekly average, and monthly average limits year-round, **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.

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)
January	10	14	5.6
February	10	14	5.6
March	10	14	6.3
April	10	9.3	4.2
May	10	5.3	2.3
June	10	4.0	1.8
July	10	3.5	1.5
August	10	3.7	1.6
September	10	5.4	2.3
October	10	8.5	3.6
November	10	14	6.0
December	10	14	5.8

PART 5 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR BACTERIA

Section NR 102.04(5), Wis. Adm. Code, states that all surface waters shall be suitable for supporting recreational use and shall meet *E. coli* criteria during the recreation season. Section NR 102.04(5)(b), Wis. Adm. Code, allows the Department to make exceptions when it determines, in accordance with s. NR 210.06(3), Wis. Adm. Code, that wastewater disinfection is not required to meet *E. coli* limits and protect the recreational use. Section NR 210.06(3), Wis. Adm. Code, tasks the Department with determining the need for disinfection using a site-specific analysis based on potential risk to human or animal health. It sets out the factors that must be considered in determining the necessity to disinfect municipal wastewater or to change the length of the disinfection season.

Dodgeville Wastewater Treatment Facility had previously been exempted from disinfection based on the limited forage fish classification of the immediate receiving water. Section NR 210.06(3)(g), Wis. Adm.

Code, states that disinfection decisions may be made based on the hydrologic classifications listed in s. NR 104.02(1), Wis. Adm. Code (not on the water quality classifications - i.e., limited aquatic life, limited forage fish - that are defined in s. NR 104.02(3), Wis. Adm. Code). The hydrologic classification for Dodge Branch at the outfall location is listed in ch. NR 104, Wis. Adm. Code, as noncontinuous. Discharges to noncontinuous streams with $7Q_{10}$ values < 0.1 cfs usually result in effluent-dominated situations. The risk of illness is related to the concentration of *E. coli* and therefore dilution is an important consideration when considering risk to human health. Since little to no dilution is present in these situations, disinfection should not be exempted based solely on this hydrological classification.

The Department has considered the information required by s. NR 210.06(3), Wis. Adm. Code, and has determined that the discharge cannot meet bacteria limits without disinfection. 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.

These limits are required during May through September.

Total Residual Chlorine – If Dodgeville Wastewater Treatment Facility decides to upgrade to use chlorination for disinfection, effluent limitations would be recommended to assure proper operation of the de-chlorination system. Section NR 210.06(2)(b), Wis. Adm. Code, states, “When chlorine is used for disinfection, the daily maximum total residual chlorine concentration of the discharge may not exceed 0.10 mg/L.” Because the WQBELs are more restrictive, they are recommended instead. Specifically, **a daily maximum limit of 19 µg/L would be required if Dodgeville Wastewater Treatment Facility decides to use chlorination for disinfection.** Due to revisions to s. NR 106.07(2), Wis. Adm. Code, mass limitations are no longer required. The calculated **weekly average effluent limitation of 7.3 µg/L would also be included in the permit because it is more restrictive than the daily maximum limit.**

Sections NR 106.07(3) and NR 205.067(7), Wis. Adm. Code, require WPDES permits contain weekly average and monthly average limitations for municipal dischargers whenever practicable and necessary to protect water quality. **Therefore, a weekly average and monthly average limit of 7.3 µg/L would also be required** to meet expression of limits requirements in addition to the daily max limit.

PART 6 – 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 Dodgeville Wastewater Treatment Facility currently has an interim limit which is more stringent than the TBEL limit of 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 Dodge 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):

$$\text{Limitation} = [(WQC)(Q_s + (1-f) Q_e) - (Q_s - f Q_e) (C_s)] / Q_e$$

Where:

WQC = 0.075 mg/L for Dodge Branch

Qs = 100% of the 7-Q₂ of 0.01 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 = 0.9 MGD = 1.39 cfs

f = the fraction of effluent withdrawn from the receiving water = 0

A previous evaluation resulted in a WQBEL of 0.075 mg/L using a background concentration of 0.178 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. No additional data were available to be considered in estimating the background phosphorus concentration.

The impaired water listing of Dodge Branch also points towards the notion that effluent phosphorus limits equal to the water quality criterion are needed to prevent the discharge from contributing to further impairment of the receiving water.

Effluent Data

The following table summarizes effluent total phosphorus monitoring data from January 2021 through March 2026.

Total Phosphorus Effluent Data

	Concentration (mg/L)
1-day P ₉₉	1.91
4-day P ₉₉	1.04
30-day P ₉₉	0.51
Mean	0.30
Std	0.41
Sample size	817
Range	0.03 - 5.93

Reasonable Potential Determination

The discharge has reasonable potential to cause or contribute to an exceedance of the water quality criterion because the 30-day P_{99} of reported effluent total phosphorus data is greater than the calculated WQBEL. Therefore, **a WQBEL is required.**

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 Limit

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 phosphorus impaired. **This final mass limit shall be $0.075 \text{ mg/L} \times 8.34 \times 0.9 \text{ MGD} = 0.56 \text{ lbs/day}$ expressed as a six-month average.**

Water Quality Trading Minimum Control Level

The facility has expressed interest in water quality trading (WQT) as an alternative compliance option to offset any total phosphorus discharged that exceeds the final phosphorus WQBELs. The phosphorus WQBELs may be expressed as computed compliance limits, but a minimum control level (MCL) must be set as a limit not to be exceeded at the outfall. Therefore, the previous MDV interim phosphorus limit of **0.54 mg/L as a monthly average is recommended during the reissued permit term to serve as the MCL.**

PART 7 – 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 January 2021 through March 2026.

The table on the next page summarizes the maximum temperatures reported during monitoring from January 2021 through March 2026.

Monthly Temperature Effluent Data & Limits

Month	Representative Highest Monthly Effluent Temperature		Calculated Effluent Limit	
	Weekly Maximum	Daily Maximum	Weekly Average Effluent Limitation	Daily Maximum Effluent Limitation
	(°F)	(°F)	(°F)	(°F)
JAN	51	52	54	78
FEB	50	51	54	79
MAR	52	54	57	80
APR	55	57	63	81
MAY	63	64	70	84
JUN	67	69	77	85
JUL	71	73	81	86
AUG	72	73	79	86
SEP	71	72	73	85
OCT	68	69	63	83
NOV	61	63	54	80
DEC	54	56	54	79

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:
 - The highest recorded representative daily maximum effluent temperature
 - 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:
 - The highest weekly average effluent temperature for the month.
 - 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, **weekly average temperature maximum limits are necessary for the months of October and November**. The complete thermal table can be found in Attachment #4.

Dissipative Cooling

Dodgeville Wastewater Treatment Facility submitted a dissipative cooling demonstration on December 15, 2014. The study was conducted in October and November 2012 and 2014 and included in-stream temperature data from 3-5 points in Dodge Branch. The study showed that, although effluent is

discharged into Dodge Branch at a temperature higher than the applicable sub-lethal water quality criterion in October and November, the criterion should be attained within a reasonable distance of the outfall (the study showed attainment within 2.24 miles with most meeting within less than half a mile).

In accordance with their previous permit, Dodgeville Wastewater Treatment Facility submitted an updated dissipative cooling request with their application stating that there had been no substantial changes in operation or river flows. Therefore, **no effluent temperature limits are recommended for Dodgeville's discharge to Dodge Branch.**

Future WPDES Permit Reissuance

Dissipative cooling requests must be re-evaluated every permit reissuance. The permittee is responsible for submitting an updated DC request prior to permit reissuance. Such a request must either include:

- a) A statement by the permittee that there have been no substantial changes in operation of, or thermal loadings to, the treatment facility and the receiving water; or
- b) New information demonstrating DC to supplement the information used in the previous DC determination. If significant changes in operation or thermal loads have occurred, additional DC data must be submitted to the Department.

PART 8 – 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 LC₅₀ (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 IC₂₅ (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 100%**, 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:

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

Where:

Q_e = annual average flow = 0.9 MGD = 1.393 cfs

f = fraction of the Q_e withdrawn from the receiving water = 0

Q_s = $\frac{1}{4}$ of the 7- Q_{10} = 0.01 cfs $\div$ 4 = 0.0025 cfs

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- The new IWC of 100% is higher than the previous IWC of 78%. This change is because the previous IWC (calculated in 2014) used 100% of the downstream flow rate of 0.38 cfs (where the classification changes). The IWC should consider the presence of aquatic organisms at the outfall and not just the code listing. The modeled natural community at the outfall is Cool-cold headwater which indicates a community beyond macroinvertebrate may be present. Therefore, the IWC should be protective of the aquatic life community found at the outfall and 0.6 miles downstream where the classification changes to warmwater sport fish.
- 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 WET 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.
- Shown below is a tabulation of all available WET data for Outfall 001. Efforts are made to ensure that decisions about WET monitoring and limits are made based on representative data, as specified in s. NR 106.08(3), Wis. Adm. Code. Data not believed to be representative of the discharge was not included in reasonable potential calculations. The table below differentiates between tests used and not used when making WET determinations.

Tests conducted prior to 2005 are not presented in the table below due to significant changes that were made to WET test methods in 2004. These changes were assumed to be fully implemented by certified labs by no later than June 2005. Data collected before July 1, 2005 do not show repeated toxicity that was never resolved and are not the only data available.

WET Data History

Date Test Initiated	Chronic Results IC ₂₅ %				Footnotes or Comments
	<i>C. dubia</i>	Fathead minnow	Pass or Fail?	Used in RP?	
07/21/2005	>100	>100	Pass	Yes	
10/10/2006	>100	>100	Pass	Yes	
04/16/2009	>100	>100	Pass	No	1
08/03/2010	>100	>100	Pass	No	1
11/01/2011	>100	>100	Pass	Yes	
01/19/2016	>100	>100	Pass	Yes	
05/02/2017	>100	>100	Pass	Yes	
03/19/2019	>100	>100	Pass	Yes	

Footnote:

1. *Tests done by S-F Analytical, July 2008 – March 2011.* The DNR has reason to believe that WET tests completed by SF Analytical Labs from July 2008 through March 31, 2011 were not performed using proper

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test methods. Therefore, WET data from this lab during this period has been disqualified and was not included in the analysis.

- According to s. NR 106.08, Wis. Adm. Code, WET reasonable potential is determined by multiplying the highest toxicity value that has been measured in the effluent by a safety factor, to predict the likelihood (95% probability) of toxicity occurring in the effluent above the applicable WET limit. The safety factor used in the equation changes based on the number of toxicity detects in the dataset. The fewer detects present, the higher the safety factor, because there is more uncertainty surrounding the predicted value. **WET limits must be given, according to s. NR 106.08(6), Wis. Adm. Code, whenever the applicable Reasonable Potential equation results in a value greater than 1.0.**

According to s. NR 106.08(6)(d), Wis. Adm. Code, TU_a and TU_c effluent values are equal to zero whenever toxicity is not detected (i.e. when the LC₅₀, IC₂₅ or IC₅₀ ≥ 100%).

Acute Reasonable Potential = 0 < 1.0, reasonable potential is not shown, and **an acute WET limit is not required.**

Chronic Reasonable Potential = 0 < 1.0, reasonable potential is not shown, and **a chronic WET limit is not required.**

The WET checklist was developed to help DNR staff make recommendations regarding WET limits, monitoring, and other related permit conditions. The checklist indicates whether acute and chronic WET limits are needed, based on requirements specified in s. NR 106.08, Wis. Adm. Code. The checklist steps the user through a series of questions, assesses points based on the potential for effluent toxicity, and suggests monitoring frequencies based on points accumulated during the checklist analysis. As toxicity potential increases, more points accumulate, and more monitoring is recommended to ensure that toxicity is not occurring. A summary of the WET checklist analysis completed for this permittee is shown in the table below. Staff recommendations based on best professional judgment are provided below the summary table. For guidance related to reasonable potential and the WET checklist, see Chapter 1.3 of the WET Guidance Document: <https://dnr.wisconsin.gov/topic/Wastewater/WET.html>.

WET Checklist Summary

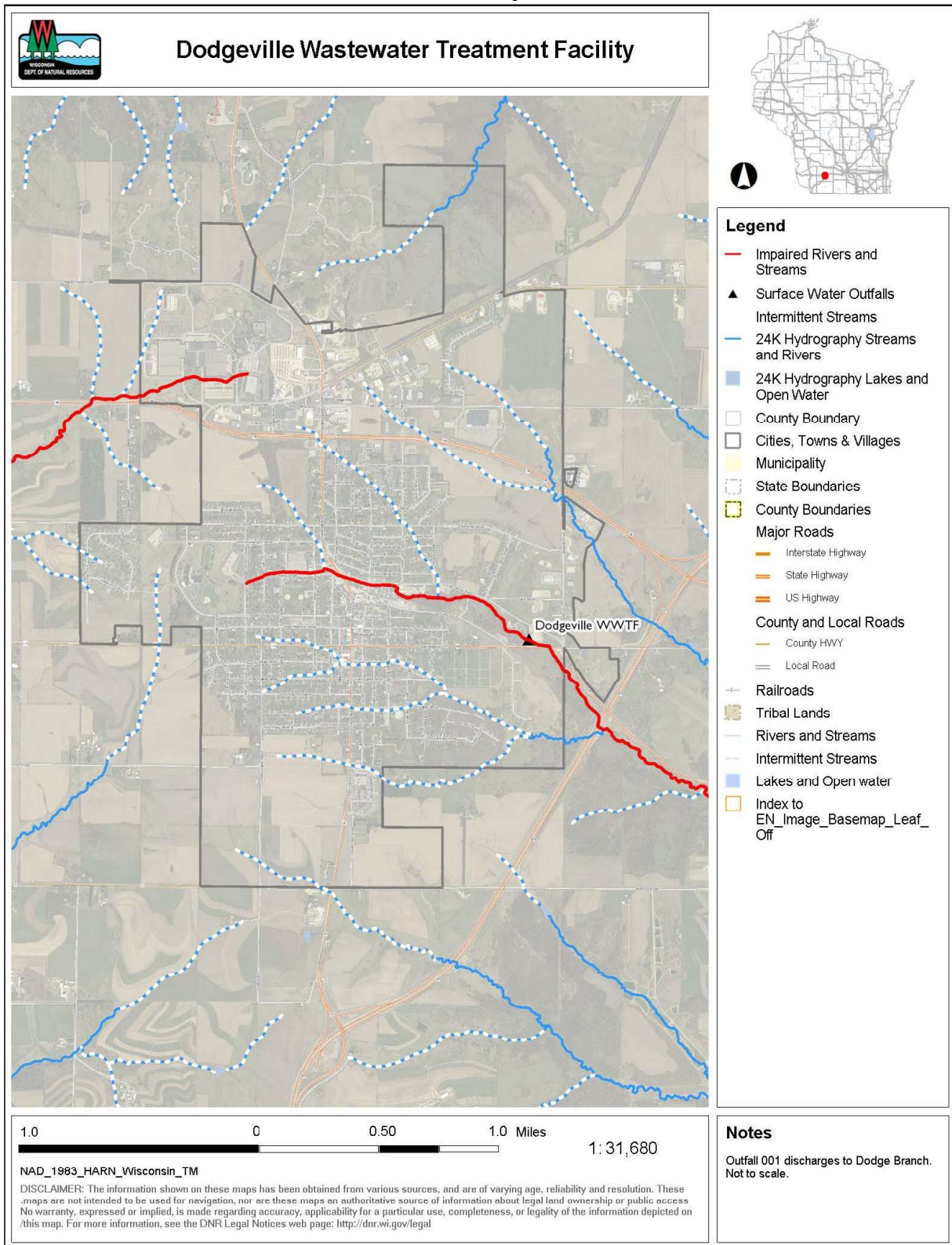
	Acute	Chronic
AMZ/IWC	Not Applicable. 0 Points	IWC = 100% 15 Points
Historical Data	No data collected in last five years. 5 Points	6 tests used to calculate RP. No tests failed. No data collected in last five years. 5 Points
Effluent Variability	Some variability, one upset in December 2021, otherwise mostly consistent WWTF operations. 5 Points	Same as Acute. 5 Points
Receiving Water Classification	< 4 mi to non-variance 5 Points	Same as Acute. 5 Points
Chemical-Specific Data	Reasonable potential for ammonia limits based on ATC. Chloride, copper, and zinc detected. Additional Compounds of Concern: None. 8 Points	Reasonable potential for chloride and ammonia limits based on CTC. Copper and zinc detected. Additional Compounds of Concern: None. 8 Points

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	Acute	Chronic
Additives	No biocides and one water quality conditioner (ferric chloride for phosphorus removal) added. Permittee has proper P chemical SOP in place. 1 Point	All additives used more than once per 4 days. 1 Point
Discharge Category	One industrial contributor (Sielauff Corporation). 5 Points	Same as Acute. 5 Points
Wastewater Treatment	Secondary or better. 0 Points	Same as Acute. 0 Points
Downstream Impacts	No impacts known. 0 Points	Same as Acute. 0 Points
Total Checklist Points:	29 Points	44 Points
Recommended Monitoring Frequency:	3 tests during permit term.	1x yearly.
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, **three acute and annual chronic WET tests 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. Chronic WET testing should continue after the permit expiration date (until the permit is reissued).

Attachment #2 Site Map



Ammonia Nitrogen Calculations from the WQBEL Memo Addendum dated April 4, 2008

The following sections summarize the effluent quality and associated monthly limitations calculated in accordance with chs. NR 105, and 106 (Wis. Adm. Code).

AMMONIA (as N) LIMITS						
CLASSIFICATION:	LIMITED FORAGE FISH COMMUNITY					
EFFLUENT FLOW (MGD)	0.9					
EFFLUENT FLOW (cfs)	1.393					
f (withdrawal factor)	0.00					
BACKGROUND INFORMATION:	Jan.	Feb.	March	April	May	June
7-Q ₁₀ (cfs)	0.01	0.01	0.01	0.01	0.01	0.01
7-Q ₂ (cfs)	0.01	0.01	0.01	0.01	0.01	0.01
Ammonia (mg/L)	0.19	0.19	0.07	0.07	0.06	0.06
Temperature (deg C)	3	3	7	9	17	21
pH (std. units)	7.97	7.97	7.97	7.97	8.21	8.21
% of river flow used	100	100	100	100	100	100
Reference weekly flow	0.01	0.01	0.01	0.01	0.01	0.01
Reference monthly flow	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085
CRITERIA (in mg/L)						
4-day Chronic (@ backgrd. pH)						
early life stages present	8.06	8.06	8.06	8.06	5.60	5.60
early life stages absent	31.06	31.06	31.06	27.30	11.32	8.75
30-day Chronic (@ backgrd. pH)						
early life stages present	3.22	3.22	3.22	3.22	2.24	2.24
early life stages absent	12.42	12.42	12.42	10.92	4.53	3.50
EFFLUENT LIMITS (in mg/L)						
Weekly average						
early life stages present	8.12	8.12	8.12	8.12	5.64	5.64
early life stages absent	31.28	31.28	31.28	27.50		
Monthly average						
early life stages present	3.24	3.24	3.24	3.24	2.25	2.25
early life stages absent	12.50	12.50	12.50	10.99		

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AMMONIA (as N) LIMITS continued						
CLASSIFICATION	LIMITED FORAGE FISH (LFF)					
EFFLUENT FLOW (MGD)	0.9					
EFFLUENT FLOW (cfs)	1.393					
f (withdrawal factor)	0.00					
BACKGROUND INFORMATION:	July	Aug.	Sept.	Oct.	Nov.	Dec.
7-Q ₁₀ (cfs)	0.01	0.01	0.01	0.01	0.01	0.01
7-Q ₂ (cfs)	0.01	0.01	0.01	0.01	0.01	0.01
Ammonia (mg/L)	0.06	0.06	0.05	0.05	0.05	0.19
Temperature (deg C)	23	22	16	9	7	3
pH (std. units)	8.21	8.21	8.21	7.97	7.97	7.97
% of river flow used	100	100	100	100	100	100
Reference weekly flow	0.01	0.01	0.01	0.01	0.01	0.01
Reference monthly flow	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085
CRITERIA (in mg/L)						
4-day Chronic (@ backgrd. pH)						
early life stages present	5.60	5.60	5.60	8.06	8.06	8.06
early life stages absent	7.69	8.20	12.08	27.30	31.06	31.06
30-day Chronic (@ backgrd. pH)						
early life stages present	2.24	2.24	2.24	3.22	3.22	3.22
early life stages absent	3.08	3.28	4.83	10.92	12.42	12.42
EFFLUENT LIMITS (in mg/L)						
Weekly average						
early life stages present	5.64	5.64	5.64	8.12	8.12	8.12
early life stages absent				27.50	31.28	31.28
Monthly average						
early life stages present	2.25	2.25	2.25	3.24	3.24	3.24
early life stages absent				10.99	12.50	12.50

In the following table limits are also calculated for downstream where the stream classification changes to warm water sport fish community:

AMMONIA (as N) LIMITS						
CLASSIFICATION	WARMWATER SPORTFISH					
EFFLUENT FLOW (MGD)	0.9					
EFFLUENT FLOW (cfs)	1.393					
BACKGROUND INFORMATION	Jan.	Feb.	March	April	May	June
7-Q ₁₀ (cfs)	0.44	0.43	0.52	0.63	0.55	0.48
7-Q ₂ (cfs)	0.62	0.62	0.84	1.06	0.95	0.86
Ammonia (mg/L)	0.19	0.19	0.07	0.07	0.06	0.06
Temperature (deg C)	3	3	7	9	17	21
pH (std. units)	7.97	7.97	7.97	7.97	8.21	8.21
% of river flow used	100	100	100	100	100	100
Reference weekly flow	0.44	0.43	0.52	0.63	0.55	0.48
Reference monthly flow	0.527	0.527	0.714	0.901	0.8075	0.731
CRITERIA (in mg/L)						

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4-day Chronic (@ backgrd. pH)						
early life stages present	6.35	6.35	6.35	6.35	3.76	2.90
early life stages absent	10.31	10.31	10.31	9.06	3.76	2.90
30-day Chronic (@ backgrd. pH)						
early life stages present	2.54	2.54	2.54	2.54	1.50	1.16
early life stages absent	4.12	4.12	4.12	3.63	1.50	1.16
EFFLUENT LIMITS (in mg/L)						
Weekly average						
early life stages present	8.30	8.25	8.70	9.19	5.22	3.89
early life stages absent	13.51	13.44	14.14	13.13		
Monthly average						
early life stages present	3.43	3.43	3.81	4.14	2.34	1.74
early life stages absent	5.61	5.61	6.20	5.93		

AMMONIA (as N) LIMITS continued						
CLASSIFICATION	WARMWATER SPORT FISH					
EFFLUENT FLOW (MGD)	0.9					
EFFLUENT FLOW (cfs)	1.393					
BACKGROUND INFORMATION	July	Aug.	Sept.	Oct.	Nov.	Dec.
7-Q ₁₀ (cfs)	0.46	0.45	0.46	0.49	0.51	0.43
7-Q ₂ (cfs)	0.73	0.72	0.68	0.71	0.73	0.68
Ammonia (mg/L)	0.06	0.06	0.05	0.05	0.05	0.19
Temperature (deg C)	23	22	16	9	7	3
pH (std. units)	8.21	8.21	8.21	8.21	7.97	7.97
% of river flow used	100	100	100	100	100	100
Reference weekly flow	0.46	0.45	0.46	0.49	0.51	0.43
Reference monthly flow	0.6205	0.612	0.578	0.6035	0.6205	0.578
CRITERIA (in mg/L)						
4-day Chronic (@ backgrd. pH)						
early life stages present	2.55	2.72	4.01	4.41	6.35	6.35
early life stages absent	2.55	2.72	4.01	6.30	10.31	10.31
30-day Chronic (@ backgrd. pH)						
early life stages present	1.02	1.09	1.60	1.76	2.54	2.54
early life stages absent	1.02	1.09	1.60	2.52	4.12	4.12
EFFLUENT LIMITS (in mg/L)						
Weekly average						
early life stages present	3.38	3.58	5.32	5.95	8.66	8.25
early life stages absent				8.49	14.07	13.44
Monthly average						
early life stages present	1.45	1.54	2.25	2.51	3.65	3.52
early life stages absent				3.59	5.94	5.76

Note: Early life stages present limits apply during the months of April through September and the early life stages absent limits apply to October through March for warm water sport fish community streams where burbot are not expected to be present.

Summary of Calculated Limits

Calculated Ammonia Nitrogen Effluent Limits (mg/L) For LFF (mg/L)												
	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Weekly	31	31	31	8.1	5.6	5.6	5.6	5.6	5.6	28	31	31
Monthly	12	12	12	3.2	2.2	2.2	2.2	2.2	2.2	11	12	12

Calculated Ammonia Nitrogen Effluent Limits (mg/L) For WWSF (mg/L)												
	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Weekly	14	13	14	9.2	5.2	3.9	3.4	3.6	5.3	8.5	14	13
Monthly	5.6	5.6	6.2	4.1	2.3	1.7	1.4	1.5	2.2	3.6	5.9	5.8

Note: all the numbers in the above table are rounded to two significant figures.

Ammonia Decay: The more restrictive calculated limits should be used in order to protect at the point of discharge and downstream uses. Where the calculated limits are more restrictive based on downstream uses, ammonia decay can be considered to determine if these more restrictive limits are needed or if the ammonia will decay before it reaches the point of the classification change.

Recommendation for Ammonia:

Using the available information summarized earlier and pursuant to s. NR 106.33(2), the ammonia limitations are as follows.

Recommended Ammonia Nitrogen Limitations for Dodgeville (mg/L)												
	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Weekly	14	14	14	9.3	5.3	4	3.5	3.7	5.4	8.5	14	14
Monthly	5.6	5.6	6.3	4.2	2.3	1.8	1.5	1.6	2.3	3.6	6	5.8

Temperature limits for receiving waters with unidirectional flow

(calculation using default ambient temperature data)

Facility:	Dodgeville WWTF		7-Q₁₀:	0.01 cfs	Temp Dates	Flow Dates
Outfall(s):	001		Dilution:	25%	Start:	01/01/21
Date Prepared:	5/14/2026		f:	0	End:	03/31/26
Design Flow (Q_e):	0.90 MGD		Stream type:	Limited forage fish community		
Storm Sewer Dist.	0 ft		Qs:Q_e ratio:	0.0 :1		
			Calculation Needed?:	YES		

Month	Water Quality Criteria			Receiving Water Flow Rate (Qs)	Representative Highest Effluent Flow Rate (Q _e)			f	Representative Highest Monthly Effluent Temperature		Calculated Effluent Limit	
	Ta (default) (°F)	Sub-Lethal WQC (°F)	Acute WQC (°F)		7-day Rolling Average (Q _{esl}) (MGD)	Daily Maximum Flow Rate (Q _{ea}) (MGD)			Weekly Average (°F)	Daily Maximum (°F)	Weekly Average Effluent Limit (°F)	Daily Maximum Effluent Limit (°F)
JAN	37	54	78	0.01	0.694	0.713		0	51	52	54	78
FEB	39	54	79	0.01	0.700	1.011		0	50	51	54	79
MAR	43	57	80	0.01	0.967	1.060		0	52	54	57	80
APR	50	63	81	0.01	1.001	1.038		0	55	57	63	81
MAY	59	70	84	0.01	1.467	1.606		0	63	64	70	84
JUN	64	77	85	0.01	1.436	1.521		0	67	69	77	85
JUL	69	81	86	0.01	1.580	1.747		0	71	73	81	86
AUG	68	79	86	0.01	1.474	1.768		0	72	73	79	86
SEP	63	73	85	0.01	0.813	0.882		0	71	72	73	85
OCT	55	63	83	0.01	0.657	0.862		0	68	69	63	83
NOV	46	54	80	0.01	0.822	1.000		0	61	63	54	80
DEC	40	54	79	0.01	1.892	7.578		0	54	56	54	79

Facility Specific Chloride Variance Data Sheet

Directions: Please complete this form electronically. Record information in the space provided. Select checkboxes by double clicking on them. Do not delete or alter any fields. For citations, include page number and section if applicable. Please ensure that all data requested are included and as complete as possible. Attach additional sheets if needed.

Section I: General Information

A. Name of Permittee: City of Dodgeville
 B. Facility Name: Dodgeville Wastewater Treatment Facility
 C. Submitted by: Wisconsin Department of Natural Resources
 D. State: Wisconsin Substance: Chloride Date completed: August 10, 2026
 E. Permit #: WI-0026913-09-0 WQSTS #: (EPA USE ONLY)
 F. Duration of Variance Start Date: January 1, 2027 End Date: December 31, 2031
 G. Date of Variance Application: June 30, 2025
 H. Is this permit a: ☐ First time submittal for variance
☒ Renewal of a previous submittal for variance (Complete Section IX)

I. Description of proposed variance: The City of Dodgeville WWTF (Dodgeville) discharges to Dodge Branch, in the Upper East Branch Pecatonica River Watershed in the Sugar-Pecatonica River Basin, in Iowa County. The proposed variance for chloride is from the water quality-based effluent limits (WQBELs) of 400 mg/L expressed as a weekly average and 400 mg/L expressed as a monthly average. The proposed permit includes an interim limit of 430 mg/L expressed as a weekly average, a target value of 400 mg/L (weekly average), and the requirement to implement source reduction measures (SRMs). The term of the proposed variance is five years, concurrent with the term of the proposed WPDES permit. The underlying designated uses and criteria of Wisconsin's chloride water quality standards (WQS) will be retained, and all other applicable WQS will remain in effect with adoption of the proposed variance.

Citation: An interim chloride effluent limitation under s. NR 106.83(2), Wis. Adm. Code, represents a variance to water quality standards authorized by s. 283.15, Wis. Stats., and 40 CFR §131.14.

J. List of all who assisted in the compilation of data for this form

Name	Email	Phone	Contribution
Sarah Donoughe	Sarah.Donoughe@Wisconsin.gov	920-366-6076	Permit Drafter/Variance Coordinator
Kenzie Ostien	Kenzie.Ostien@Wisconsin.gov	608-516-6487	Compliance Engineer
Sarah Luck	Sarah.Luck@Wisconsin.gov	608-843-3876	Limits Calculator

Section II: Criteria and Variance Information

A. Water Quality Standard from which variance is sought: 395 mg/L (Chloride CTC)
 B. List other criteria likely to be affected by variance: None.
 C. Source of Substance: Sources of chloride include residential water softeners, commercial water softeners, potential industrial dischargers, and winter road maintenance activities.
 D. Ambient Substance Concentration: Unknown at point of discharge. ☐ Measured ☐ Estimated
☐ Default ☒ Unknown
 E. If measured or estimated, what was the basis? Include citation.
 N/A
 F. Average effluent discharge rate: 0.21 MGD Maximum effluent discharge rate: 7.58 MGD
 (average of data reported from January 2021 through (12/13/2022)
 December 2025)
 G. Effluent Substance Concentration: 1-day P99 = 508 mg/L ☒ Measured ☐ Estimated
 4-day P99 = 426 mg/L ☐ Default ☐ Unknown
 30-day P99 = 379 mg/L
 Mean = 354 mg/L

H. If measured or estimated, what was the basis? Include Citation. Effluent concentration data collected from January 2021 through December 2025 (252 samples).	
I. Type of HAC:	☐ Type 1: HAC reflects waterbody/receiving water conditions ☐ Type 2: HAC reflects achievable effluent conditions ☒ Type 3: HAC reflects current effluent conditions
J. Statement of HAC: The Department has determined the highest attainable condition of the receiving water is achieved through the application of the variance limit in the permit, combined with a permit requirement that the permittee implement its Chloride SRM plan. Thus, the HAC at commencement of this variance is 430 mg/L, which reflects the greatest chloride reduction achievable with the current treatment processes, in conjunction with the implementation of the permittee's Chloride SRM plan. The current effluent condition is reflective of on-site optimization measures that have already occurred. This HAC determination is based on the economic feasibility of available compliance options for Dodgeville WWTF at this time (see Economic Section below). The permittee may seek to renew this variance in the subsequent reissuance of this permit; the Department will reevaluate the HAC in its review of such a request. A subsequent HAC cannot be defined as less stringent than this HAC.	
K. Variance Limit: 430 mg/L as a weekly average	
L. Level currently achievable (LCA): 430 mg/L as a weekly average	
M. What data were used to calculate the LCA, and how was the LCA derived? (Immediate compliance with LCA is required.) The 4-day P99 effluent chloride concentration from January 2021 through March 2025 of 430 mg/L (426 mg/L rounded to two significant figures) as a weekly average is recommended as the LCA.	
N. Explain the basis used to determine the variance limit (which must be $\leq$ LCA). Include citation. The variance limit = 4-day P99 (after rounding to two significant figures). The limit is established in accordance with s. 283.15 (5), Wis. Stats., and ch. NR 106, Subchapter II, Wis. Adm. Code. Chapter NR 106, Subchapter VII, Wis. Adm. Code, allows for a variance, the imposition of a less restrictive interim limit, a compliance schedule that stresses source reduction and public education, and allowance for a target value or limit to be a goal for reduction.	
O. Select all factors applicable as the basis for the variance provided ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒ 6 under 40 CFR 131.10(g). Summarize justification below: The use of a reverse osmosis system was evaluated. The cost of the system was estimated at an average cost per household that would result in 2.08% of the MHI. Installing lime softening on the current municipal water supply system was also evaluated. The cost of installing lime softening was estimated at an average cost per household that would result in 3.96% of the MHI. Without a variance, meeting the water quality standard of 400 mg/L would result in substantial and widespread economic and social impacts.	
Section III: Location Information	
A. Counties in which water quality is potentially impacted: <u>Iowa</u>	
B. Receiving waterbody at discharge point: <u>Dodge Branch</u>	
C. Flows into which stream/river? <u>East Branch Pecatonica River</u>	How many miles downstream? <u>~16 mi.</u>
D. Coordinates of discharge point (UTM or Lat/Long): <u>42.96042° N / 90.11579° W</u>	
E. What is the distance from the point of discharge to the point downstream where the concentration of the substance falls to less than or equal to the chronic criterion of the substance for aquatic life protection? It is estimated that compliance with the criterion would occur before the point of classification change, which is approximately 0.6 miles downstream of the outfall. The 7-Q10 low flow estimate at the point of classification change is 0.38 cfs. Using an effluent flow rate of 0.9 MGD (1.393 cfs) at 430 mg/L mixed with 0.38 cfs (assuming complete mixing at the downstream location) and no background chloride concentration gives a mix concentration of 338 mg/L, which is below the chronic criterion of 395 mg/L.	
F. Provide the equation used to calculate that distance (Include definitions of all variables, identify the values used for the clarification, and include citation): $[(\text{interim limit in mg/L} \times \text{effluent design flow in cfs}) + (\text{background concentration mg/L} \times \text{background stream flow in cfs})] / (\text{effluent design flow in cfs} + \text{background stream flow in cfs}) = < 395 \text{ mg/L.}$	

G. What are the designated uses associated with the direct receiving waterbody, and the designated uses for any downstream waterbodies until the water quality standard is met? Limited Forage Fish (LFF), at the point of discharge; the classification changes to Warm Water Sport Fish (WWSF) approx. 0.6 miles downstream			
H. Identify all other variance permittees for the same substance which discharge to the same stream, river, or waterbody in a location where the effects of the combined variances would have an additive effect on the waterbody: None.			
Permit Number	Facility Name	Facility Location	Variance Limit [mg/L]
N/A			
I. Please attach a map, photographs, or a simple schematic showing the location of the discharge point as well as all variances for the substance currently draining to this waterbody on a separate sheet See the "Dodgeville WWTF – Current Variance Outfalls" map.			
J. Is the receiving waterbody on the CWA 303(d) list? If yes, please list the impairments below. ☒ Yes ☐ No ☐ Unknown			
River Mile	Pollutant	Impairment	
0 – 16.52	Sediment/TSS	Degraded Habitat	
16.52 – 22.76	Total Phosphorus, Sediment/TSS	Degraded Biological Community, Degraded Habitat	
K. Please list any contributors to the POTW in the following categories:			
Food processors (cheese, vegetables, meat, pickles, soy sauce, etc.)	None		
Metal Plating/Metal Finishing	Sielaff Corporation		
Car Washes	KwikTrip, New Horizons, Midwest Auto Wash		
Municipal Maintenance Sheds (salt storage, truck washing, etc.)	City of Dodgeville Street Dept., Iowa County Highway Dept.		
Laundromats	Millennium Laundry		
Other presumed commercial or industrial chloride contributors to the POTW	Upland Hills Health Hospital		
L. If the POTW does not have a DNR-approved pretreatment program, is a sewer use ordinance enacted to address the chloride contributions from the industrial and commercial users? If so, please describe. No.			
Section IV: Pretreatment (complete this section only for POTWs with DNR-Approved Pretreatment Programs. See w:\Variances\Templates and Guidance\Pretreatment Programs.docx)			
A. Are there any industrial users contributing chloride to the POTW? If so, please list. N/A			
B. Are all industrial users in compliance with local pretreatment limits for chloride? If not, please include a list of industrial users that are not complying with local limits and include any relevant correspondence between the POTW and the industry (NOVs, industrial SRM updates and timeframe, etc.) N/A			
C. When were local pretreatment limits for chloride last calculated? N/A			
D. Please provide information on specific SRM activities that will be implemented during the permit term to reduce the industry's discharge of the variance pollutant to the POTW N/A			
Section V: Public Notice			
A. Has a public notice been given for this proposed variance? ☒ Yes ☐ No			
B. If yes, was a public hearing held as well? ☒ Yes ☐ No ☐ N/A			
C. What type of notice was given?			

☒ Notice of variance included in notice for permit ☐ Separate notice of variance	
D. Date of public notice: <u>TBD (est. August 20, 2026)</u>	Date of hearing: <u>October 5, 2026</u>
E. Were comments received from the public in regards to this notice or hearing? (If yes, see notice of final determination) ☐ Yes ☐ No	
Section VI: Human Health	
A. Is the receiving water designated as a Public Water Supply? ☐ Yes ☒ No	
B. Applicable criteria affected by variance: No human health criteria for chloride.	
C. Identify any expected impacts that the variance may have upon human health, and include any citations: None.	
Section VII: Aquatic Life and Environmental Impact	
A. Aquatic life use designation of receiving water: Limited Forage Fish (LFF), at the point of discharge; the classification changes to Warm Water Sport Fish (WWSF) approx. 0.6 miles downstream	
B. Applicable criteria affected by variance: Chronic toxicity criteria for chloride = 395 mg/L from ch. NR 105, Wis. Adm. Code; applicable in all waters in Wisconsin	
C. Identify any environmental impacts to aquatic life expected to occur with this variance, and include any citations: The proposed variance limit of 430 mg/L results in an instream concentration that exceeds the genus mean chronic values for <i>Ceriodaphnia</i> (417 mg/L). No genus mean chronic values are exceeded by the 395 mg/L criterion.	
D. List any Endangered or Threatened species known or likely to occur within the affected area, and include any citations: There are no Endangered or Threatened species known that would affect the water quality criterion, as the chronic toxicity criterion for chloride is more stringent than all genus mean chronic values for organisms with chloride toxicity data. As a result, no endangered species with data would need more protection than already provided by the existing criterion. Citation: U.S. Fish and Wildlife Service – Environmental Conservation Online System (http://www.fws.gov/endangered/) and National Heritage Index (http://dnr.wi.gov/topic/nhi/)	
Section VIII: Economic Impact and Feasibility	
A. Describe the permittee's current pollutant control technology in the treatment process: The Dodgeville Wastewater Treatment Facility is an activated sludge facility with biological phosphorus removal (BPR) and nitrification. Wastewater is conveyed to the treatment plant through a gravity sewer system and six sewage pumping stations. Preliminary treatment is provided with a mechanical step-screen. Phosphorus removal is accomplished through a BPR process within a series of selector basins after screening and prior to the oxidation ditches. Ferric chloride can be added to the oxidation ditch influent or effluent during periods of biological upset and is currently added during sludge storage tank decanting. Effluent from the oxidation ditch is settled in any of three final clarifiers. The effluent is reaerated using a step aerator before being discharged to the receiving stream. Waste activated sludge is treated with polymer to enhance settling and gravity thickening. The decant from the gravity thickening tank is recycled upstream of the oxidation ditches. Thickened waste activated sludge is stored for 180 days in a liquid storage tank which is then injected bi-annually at pre-approved fields by a contract hauler.	
B. What modifications would be necessary to comply with the current limits? Include any citations. Installation of a reverse osmosis system or lime softening on the current municipal water supply system.	
C. How long would it take to implement these changes? N/A – The costs of providing reverse osmosis (RO) at the wastewater treatment facility or installing lime softening on the current municipal water supply system were evaluated and determined to be prohibitively expensive. See Section II:O.	
D. Estimate the capital cost (Citation): \$708,750 for RO treatment (<i>WDNR Form 3400-193 Chloride Variance Application from permittee</i>)	

E. Estimate additional O & M cost (Citation):	\$229,950 for RO treatment (<i>WDNR Form 3400-193 Chloride Variance Application from permittee</i>)
F. Estimate the impact of treatment on the effluent substance concentration, and include any citations:	A RO system at the WWTF could potentially remove chloride from the effluent to achieve levels below the water quality standard. Installing a centralized lime softening system would eliminate the need for ion exchange softeners and the associated chloride brine generated during the regeneration/backwash cycle that is ultimately discharged to the wastewater treatment system. However, neither option is considered to be economically feasible.
G. Identify any expected environmental impacts that would result from further treatment, and include any citations:	End-of-pipe RO wastewater treatment technology for chloride produces concentrated brine that can be as much or more of an environmental liability than the untreated effluent. Since the concentrated brine cannot be further treated, the only recourse for the disposal of the brine is transfer to another community, which is often not feasible. Appropriate chloride source reduction activities are preferable environmentally to effluent end-of-pipe treatment in most cases, since the end product of treatment (production of a concentrated brine) does not remove the load of chloride from the environment. There would be some impacts based on disposal of brine from RO. These include air pollution impacts from trucking brine and increased chloride impacts at the point where brine is discharged.
H. Is it technically and economically feasible for this permittee to modify the treatment process to reduce the level of the substance in the discharge?	☐ Yes ☒ No ☐ Unknown RO treatment of the Dodgeville WWTF effluent to meet the QBEL is technically feasible. However, it is not economically feasible. See WDNR Variance Application and Municipal RO Screening Tool for costs of RO. Use of RO was evaluated. The resulting total cost for sewer user rates was estimated to result in an average cost to households that would be 2.08% of the MHI. An increase of this magnitude would cause substantial and widespread adverse social and economic impacts in the area where the discharge is located. Lime softening treatment of Dodgeville's water supply is technically feasible and would potentially enable the WWTF effluent to meet the chloride QBEL. However, lime softening is not economically feasible. See the Chloride Variance Economic Eligibility Tool (Lime Softening) for costs of lime softening. Use of municipal lime softening was evaluated; the resulting cost for sewer user rates was estimated to result in an average cost to households that would be 3.96% of the MHI. An increase of this magnitude would cause substantial and widespread adverse social and economic impacts in the area where the discharge is located.
I. If treatment is possible, is it possible to comply with the limits on the substance?	☒ Yes ☐ No ☐ Unknown
J. If yes, what prevents this from being done? Include any citations.	See Section VIII:H. The costs associated with RO and lime softening treatment are prohibitively expensive.
K. List any alternatives to current practices that have been considered, and why they have been rejected as a course of action, including any citations:	Reverse Osmosis (RO) Treatment – not economically feasible (2.08% of the MHI) Centralized Lime Softening Treatment – not economically feasible (3.96% of the MHI)
Section IX: Compliance with Water Quality Standards	
A. Describe all activities that have been, and are being, conducted to reduce the discharge of the substance into the receiving stream. This may include existing treatments and controls, consumer education, promising centralized or remote treatment technologies, planned research, etc. Include any citations.	During the previous permit term, the City of Dodgeville's permit included the following SRMs: • Continue annual review of water consumption records to maintain list of high volume customers within the City. • Develop and distribute a survey to the identified high volume customers to learn about softeners, salt usage, maintenance, and other potential processes that could impact the WWTP.

- Develop a high volume user water softener database to track types, ages, usage, and maintenance of softeners in order to develop a priority list amongst the users.
- Meet with high volume users to discuss results of survey response, review water softener system and practices, discuss chloride reduction efforts and goals, and establish annual reporting requirements to the City.
- Continue to deploy a portable sampler in the collection system to locate areas of high concentration for further exploration and focus.
- Develop and distribute an educational brochure or flier to be distributed with sewer bills on an annual basis.
- Provide updates to the City's website to emphasize chloride reduction goals and to raise awareness to City residents.
- Encourage local plumbing companies and water softening professionals to promote and conduct residential softener tune-ups and optimizations while working within the City limits.
- Continue rehabilitation of sanitary manholes, and record information as part of City's Capacity, Management, Operation, and Maintenance (CMOM) program.
- Conduct an infiltration and inflow (I&I) study to locate areas of concern within the collection system.
- Prioritize recommendations from I&I report and address I&I study findings with municipal projects as budgets allow.
- Conduct a sewer ordinance review with specific focus on chlorides mandates such as high efficiency softener requirements, softener tune-ups, and bypassing softeners for outside hose bib use.
- Draft language for new sewer ordinances with the City attorney and present for approval at City Council.
- Adopt new City ordinances, begin spreading awareness of new requirements and begin enforcement as required.
- Continue mixing asphalt chips and sand with winter salt piles at a minimum of 5% of the total annual volume used to reduce quantity of salt required for deicing applications.
- Optimize biological phosphorus removal and ferric chloride usage to minimize dosing required during sludge storage tank decanting.
- Evaluate the purchase of a new plow truck with brine application equipment for annual salt application reduction.

Citation: City of Dodgeville WWTF Chloride Annual SRM Reports 2021-2025

B. Describe all actions that the permit requires the permittee to complete during the variance period to ensure reasonable progress towards attainment of the water quality standard. Include any citations.

As conditions of this variance the permittee is required to (a) maintain effluent quality at or below the interim effluent limitation in the proposed permit, (b) implement the chloride source reduction measures specified in the City of Dodgeville Source Reduction Measures Plan dated January 2027, and (c) perform the actions listed in the Schedule section of the proposed permit.

Citation: City of Dodgeville Source Reduction Measures Plan dated January 2027

Section X: Compliance with Previous Permit (Variance Reissuances Only)

A. Date of previous submittal: October 2, 2020 **Date of EPA Approval:** November 27, 2020
B. Previous Permit #: WI-0026913-08-0 **Previous WQSTS #:** (EPA USE ONLY)
C. Effluent substance concentration: 426 mg/L (4-day P99) **Variance Limit:** 450 mg/L (weekly average)
D. Target Value(s): 410 mg/L **Achieved?** ☐ Yes ☐ No ☒ Partial

E. For renewals, list previous steps that were to be completed. Show whether these steps have been completed in compliance with the terms of the previous variance permit. Attach additional sheets if necessary.

Condition of Previous Variance	Compliance
Continue annual review of water consumption records to maintain list of high volume customers within the City.	☒ Yes ☐ No
Develop and distribute a survey to the identified high volume customers to learn about softeners, salt usage,	☐ Yes ☒ No

maintenance, and other potential processes that could impact the WWTP.	
Develop a high volume user water softener database to track types, ages, usage, and maintenance of softeners in order to develop a priority list amongst the users.	☒ Yes ☐ No
Meet with high volume users to discuss results of survey response, review water softener system and practices, discuss chloride reduction efforts and goals, and establish annual reporting requirements to the City.	☐ Yes ☒ No
Continue to deploy a portable sampler in the collection system to locate areas of high concentration for further exploration and focus.	☐ Yes ☒ No
Develop and distribute an educational brochure or flier to be distributed with sewer bills on an annual basis.	☐ Yes ☒ No
Provide updates to the City's website to emphasize chloride reduction goals and to raise awareness to City residents.	☒ Yes ☐ No
Encourage local plumbing companies and water softening professionals to promote and conduct residential softener tune-ups and optimizations while working within the City limits.	☐ Yes ☐ No
Continue rehabilitation of sanitary manholes, and record information as part of City's Capacity, Management, Operation, and Maintenance (CMOM) program.	☒ Yes ☐ No
Conduct an infiltration and inflow (I&I) study to locate areas of concern within the collection system.	☒ Yes ☐ No
Prioritize recommendations from I&I report and address I&I study findings with municipal projects as budgets allow.	☒ Yes ☐ No
Conduct a sewer ordinance review with specific focus on chlorides mandates such as high efficiency softener requirements, softener tune-ups, and bypassing softeners for outside hose bib use.	☒ Yes ☐ No
Draft language for new sewer ordinances with the City attorney and present for approval at City Council.	☐ Yes ☒ No
Adopt new City ordinances, begin spreading awareness of new requirements and begin enforcement as required.	☐ Yes ☒ No
Continue mixing asphalt chips and sand with winter salt piles at a minimum of 5% of the total annual volume used to reduce quantity of salt required for deicing applications.	☒ Yes ☐ No
Optimize biological phosphorus removal and ferric chloride usage to minimize dosing required during sludge storage tank decanting.	☒ Yes ☐ No
Evaluate the purchase of a new plow truck with brine application equipment for annual salt application reduction.	☒ Yes ☐ No

City of Dodgeville Source Reductions Measures Plan
January 2027

Source Reduction Measure	Timeline				
	Year 1	Year 2	Year 3	Year 4	Year 5
Identification & Monitoring					
Continue annual review of water consumption records to maintain list of high volume customers within the City.	X	X	X	X	X
Develop and distribute a survey to the identified high volume customers to learn about softeners, salt usage, maintenance, and other potential processes that could impact the WWTP.	X				
Develop a high volume user water softener database to track types, ages, usage, and maintenance of softeners in order to develop a priority list amongst the users.		X	X	X	X
Meet with high volume users to discuss results of survey response, review water softener system and practices, discuss chloride reduction efforts and goals, and establish annual reporting requirements to the City.		X	X	X	X
Continue inspections and add info on water softener make, model, installation date, and condition to the database for residential water softeners.		X	X	X	X
Education					
Develop and distribute an educational brochure or flier to be distributed with sewer bills on an annual basis.	X	X	X	X	X
Provide updates to the City's website to emphasize chloride reduction goals and to raise awareness to City residents.		X	X	X	X
Encourage local plumbing companies and water softening professionals to promote and conduct residential softener tune-ups and optimizations while working within the City limits.	X	X	X	X	X
Maintenance					
Continue rehabilitation of sanitary manholes, and record information as part of City's Capacity, Management, Operation, and Maintenance (CMOM) program.	X	X	X	X	X
Conduct an infiltration and inflow (I&I) study to locate areas of concern within the collection system.	X	X			

Prioritize recommendations from I&I report and address I&I study findings with municipal projects as budgets allow.			X	X	X
Timeline Source Reduction MeasureYear 1Year 2Year 3Year 4Year 5					
Regulations					
Conduct a sewer ordinance review with specific focus on chlorides mandates such as high efficiency softener requirements, softener tune-ups, and bypassing softeners for outside hose bib use.	X				
Draft language for new sewer ordinances with the City attorney and present for approval at City Council.		X			
Adopt new City ordinances, begin spreading awareness of new requirements and begin enforcement as required.			X	X	X
Adopt an incentive plan for residential users to upgrade from time based to demand type softeners.			X	X	X
Additional					
Continue mixing asphalt chips and sand with winter salt piles at a minimum of 5% of the total annual volume used to reduce quantity of salt required for deicing applications.	X	X	X	X	X
Optimize biological phosphorus removal and ferric chloride usage to minimize dosing required during sludge storage tank decanting.	X	X	X	X	X
Evaluate the purchase of a new plow truck with brine application equipment for annual salt application reduction.	X	X	X	X	X

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Credit Verification Package-Lalor Site-01/23/2026

Project Name: Dodgeville-Lalor: Conservation Easement

Conservation Practice Standard- Conservation Cover: Code 327

Landowner Information: Thomas Lalor

Mailing Address: 12617 O Brien Rd, Hebron, IL 60034

Physical Address of Project: 5581 County Road YZ
Dodgeville, WI 53533
Parcel ID 008-0239, 008-0241, 008-0288, 008-0292, 008-0296

Land Manager: Kyle Levetzow- Model Dairy

Mailing Address: 5234 County Road YZ
Dodgeville, WI 53533

Resource Environmental Solutions:

Mailing Address: 17921 W Smith Rd
Brodhead, WI 53520
Contact Person: Isaac Welsh, (608)-314-4126

Introduction: The Lalor site has been run by Kyle Levetzow (Land Steward) and Model Dairy Farms for the last 30 years. The site consists of a feedlot in the northern section, with a 12-acre barnyard downslope to the south, and a 27.8 pasture further down slope to the southwest. The 12-acre barnyard has cattle in it year-round. The site has had a high concentration of cattle resulting in near year-round bare soil and manure accumulation in the barnyard. The 27.8-acre pasture that is over grazed.

Location of Activities: The project is located within the Simmons Branch-Dodge Branch HUC 12 (070900030401). The project is located in the northeastern corner of the HUC 12 east of Dodgeville, WI on the south side of County Y. See Appendix II.

Practice Being Installed: In spring of 2027, RES (Resource Environmental Solutions) will stabilize the barnyard, pasture, and feedlot by removing the cattle from the site, repairing the rills, and revegetating the site. The practice being installed is a conservation easement. USDA-NRCS standard Conservation Cover 327 will be used as guidance. The cattle will be removed from the project site to a confinement shed that will be built to the standards set by Iowa county and the State of WI for a cattle confinement barn at the scale that it is built, and manure will be managed in a way that is complaint with a 590 NMP.

Site Preparation and Stabilization

The livestock are planned to be moved from the Lalor site to the new heifer shed in the late winter of 2026. In spring of 2027, stabilization of the Lalor site will begin.

What vegetation grows in the barnyard is mainly invasive weeds. A broad-spectrum herbicide will be applied to provide a clean seeding environment at a rate specific to the product label. Tree removal in the lower section of the barnyard will be necessary to allow for full vegetative cover and tillage. There is sheet and rill erosion across the barnyard. Tillage will be utilized with a chisel and disk to break up compaction, level off the rills, and prepare the seed bed. Seed bed preparation will take place immediately following leveling activities. A fine, firm seedbed to a minimum depth of three inches will be prepared. The seedbed will be considered firm when a footprint penetrates $\frac{1}{4}$ to $\frac{1}{2}$ inch deep.

The pasture to easement area (pasture) is being abandoned. The cattle will be removed, and the cattle will not regain access over the life of the project. The grass will be allowed to regrow. The pasture will be treated with spot herbicide for noxious weed control and perennial grass establishment as needed. The pasture will still be held to the same standards found in the monitoring and maintenance section. The pasture to crop area is being converted into crop ground.



Figure 1-Site Layout- Feed Lot: 30,614 square feet, Barnyard: 12 acres, Pasture to Easement 20 acres, Pasture to crop: 7.8 acres.

Vegetation Installation

Seeding will occur as soon as possible after site preparation is completed. The seed will be drilled as appropriate to the topography and ability of equipment to access. Mulching shall be done immediately after seedbed preparation and seeding.

Mulch will be spread uniformly and at the rate of 1.5-2.0 tons per acre. This application results in a layer of 6 to 7 stems, 1 to 2 inches thick, and provides a minimum 70% ground cover. Erosion control matting will be used in areas of disturbances greater than 4:1 slope. RES will certify planting and inform DNR and the Clearinghouse. Seeding rates are below for minimum pure live seed rate per acre in Figure 2.

Minimum Pure Live Seed (PLS) Rate per acre and total Pounds of seed needed.		
	Acres	12
Species	Rate (#)	Total Pounds
Perennial ryegrass	7	84
Creeping red Fescue	8	96
Annual ryegrass	8	96
Timothy	3	36
Switchgrass	2	24
Indian Grass	6	72
Oats (Companion Crop)	64	768

Figure 2: Seeding Rates

Restoration activities are targeting to be fully completed by June 30th of 2027.

Planned Livestock Management

All livestock will be removed from the Lalor Site. The cattle will be moved to a confinement heifer shed that is built to meet the standards set by Iowa County and the State of WI for a cattle confinement shed of the scale it is built to. The building will be built to hold a minimum of 170 cattle plus the planned additional growth of Model Dairy Farms. There are three potential locations for the confinement heifer shed. Those locations are shown below. Final location of the shed will be selected based on regulation and permit requirements and the needs of Model Dairy Farms. The cattle will remain in the confinement shed at the new site and will not use the adjacent feedlot area or pastures at the new site. The new structure will utilize water management infrastructures as deemed necessary to prevent new erosion/ runoff from the agricultural operation.



Figure 3 Potential confinement shed locations. Aerial near 42.983176, -90.084018

The cattle will not have access to pastures at the new location. They will be confined to the heifer shed.

The manure will be cleaned regularly. The manure will then be applied to farm fields in a way that is compliant with 590 Nutrient Management Plan. Currently, the land manager collects over 50% of the estimated manure produced by the livestock on the Lalor site.

Vegetation Management:

Frequency of Inspections: During the initial establishment year, RES will inspect the site after every rain event greater than one inch as well as during snow melt. After the establishment year, RES will inspect the site after every 25-year, 24-hour storm event or 25-year, 5-day precipitation total rainfall event. RES will conduct annual site inspections and provide a yearly report to the Wisconsin Water Quality Clearinghouse. Items to be inspected and documented are those listed below in the Monitoring and Maintenance section. Documentation will include written descriptions and photographs to provide evidence that the best management practices are in good condition and function properly.

Monitoring and Maintenance: Standards

Standards:

1. All state regulated noxious plants within the conservation easement shall always be controlled during the agreement period. Herbicides are allowed.
2. An adequate stand shall consist of a minimum of 70% canopy cover for the easement area in year 1 and 85%+ from year 2 onward.
3. RES may apply pesticides and fungicides according to federal and state approved label directions.
4. RES may remove forage by mowing. If wildlife production is desired, consider delaying mowing until after August 1.
5. RES may remove mature forage using prescribed burning. Prescribed burning will be completed by qualified personnel.
6. No livestock production shall occur within the conservation easement at any time during the agreement period.
7. If rills, gullies or other erosion occurs at any time, RES shall immediately fill and compact these areas and revegetate immediately with the planted species.
8. RES will have the option to seed in perennial native forbs once the weed pressure is adequately controlled and the grasses are well established.
9. The pasture to cropland will be monitored that the crop rotation consists of a minimum of 4 years of perennial vegetation.
10. The pasture to cropland will be monitored to determine that vertical tillage or field cultivation is the heaviest tillage occurring and residue is managed.
11. Years where corn silage is taken will have either a rye or wheat cover.

Credit Generation

Modeling Methods

A combination of APLE Lots and Snap Plus V2 were used to determine the amount of phosphorus runoff for baseline and planned conditions. A 20-year average was used for the Snap Plus modeling to represent each area. The average used data from 2026-2045.

There were four areas modeled. The names of the areas are the following: Feed Lot, Barnyard, Pasture Easement, and Pasture to Crop. All files can be shared upon request by WIDNR. Figure 1 shows the layout as well as in Appendix I-B. The Snap Plus estimates used the

“bred heifer herd”. The bred heifer herd consists of 160 1,000 lbs. dairy heifers.

Aple Lots was used to model the Feed Lot. The feedlot was modeled using 160, 1000# dairy heifers, for 5 hours a day. In the feed lot 20,082 square feet of the lot is paved, and the other 10,532 square feet is an earth lot. It is modeled with a clean out every 14 days. The existing conditions had 0% vegetation cover and planned has 75% cover. The planned modeling included 1 dairy calf 150 lb/ 1 hour a day throughout the year to allow the modeling to work.

The barnyard was modeled using Snap Plus with the Crop Type: Pasture, dry lot, exercise area because the following criteria were met.

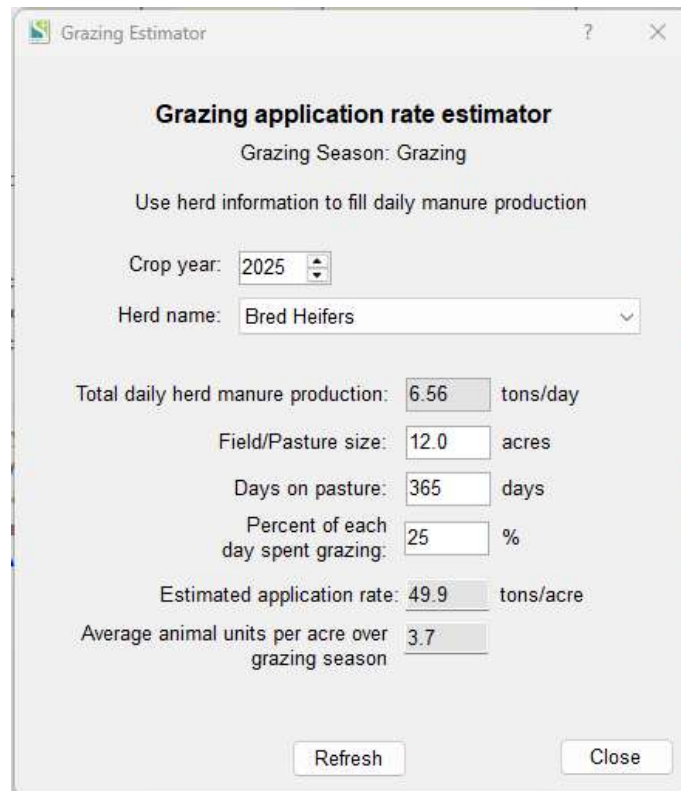
1. The area had a high animal density of great than 10 animal units per acre. 14+ animal units.
2. The livestock are fed a TMR and less than 10% of the animal nutrition comes from grazing the vegetation.
3. Over 50% of the area is bare throughout growing season.

Figure 4 Bred Heifer Herd- The number and weight of animals.

Animal Type	Number of Animals	Daily Manure Production (tons/animal)	Total Daily Manure Production (tons/day)	AU
1,000 lbs Dairy Heifer	160	82	13,120	176

Total daily production (all animals)	
tons/day	Total AU
6.55	176

The barnyard was modeled with an application of 49.9 tons of manure/acre. This number was derived by using grazing rates where the cattle spent 25% of the total number of hours in the year in this lot. The value of 25% is based on an average of 6 hours a day during the year being spent on this lot. During the summer more time is spent out in the pasture, but this lot is still used as a highway between the feedlot and the pasture and during the winter the cattle hangout in this area.



The screenshot shows a software window titled "Grazing Estimator". Inside, the title "Grazing application rate estimator" is centered. Below it, "Grazing Season: Grazing" is displayed. A instruction "Use herd information to fill daily manure production" is present. The "Crop year" is set to 2025, and the "Herd name" is "Bred Heifers". The calculated values are: "Total daily herd manure production: 6.56 tons/day", "Field/Pasture size: 12.0 acres", "Days on pasture: 365 days", "Percent of each day spent grazing: 25 %", "Estimated application rate: 49.9 tons/acre", and "Average animal units per acre over grazing season: 3.7". At the bottom are "Refresh" and "Close" buttons.

Input/Label	Value	Unit
Crop year	2025	
Herd name	Bred Heifers	
Total daily herd manure production	6.56	tons/day
Field/Pasture size	12.0	acres
Days on pasture	365	days
Percent of each day spent grazing	25	%
Estimated application rate	49.9	tons/acre
Average animal units per acre over grazing season	3.7	

The planned conditions for the barnyard used an alfalfa/brome seeding fall with fall chisel then from 2027 on, the grassland, permanent, not harvested crop type is used.

The pasture easement and pasture crop existing conditions were modeled using the pasture continuous stocking, high density. The high-density version was chosen because the pasture is stocked at greater than 1 animal unit per acre over the grazing season. The average vegetation minimum grass height of 3 inches is also not maintained in many areas and bare areas are present. The grazing manure rate was set at 17.9 tons per acre. This is based on the cattle spending roughly half their time in the pasture between May 1st and September 31st. The criteria entered in Snap Plus to get the 17.9 tons per acre number are the following: A 152-day window, 50% of the time is spent in the pasture, with a total of 27.8 acres of pasture. The Bred Heifers herd was used for all Snap Plus Modeling. The soil type in the pasture easement had two soils competing for predominance. The Judson Silt Loam with a B slope and Dodgeville Silt Loam with a D slope. After discussions with the WI DNR and the project lead of the Snap Plus team it was determined to take the average of these two soil. Appendix VIII and Appendix IX have two sets of WQ1:P Trade Reports. The first is with Dodgeville (DgD2) and the second is with Judson (JuB). The values were averaged between the two models to give the baseline and planned conditions for planned pasture easement.

The screenshot shows a software window titled "Grazing Estimator". Inside, the title "Grazing application rate estimator" is centered. Below it, "Grazing Season: Grazing" is displayed. A instruction "Use herd information to fill daily manure production" is present. The "Crop year" is set to 2025, and the "Herd name" is "Bred Heifers". The calculated values are: "Total daily herd manure production: 6.56 tons/day", "Field/Pasture size: 27.8 acres", "Days on pasture: 152 days", "Percent of each day spent grazing: 50 %", "Estimated application rate: 17.9 tons/acre", and "Average animal units per acre over grazing season: 2.0". At the bottom are "Refresh" and "Close" buttons.

Parameter	Value	Unit
Crop year	2025	
Herd name	Bred Heifers	
Total daily herd manure production	6.56	tons/day
Field/Pasture size	27.8	acres
Days on pasture	152	days
Percent of each day spent grazing	50	%
Estimated application rate	17.9	tons/acre
Average animal units per acre over grazing season	2.0	

The planned conditions for the pasture simply changed the pasture, continuous stocking to grasslands, permanent, not harvested crop type in 2026.

The planned conditions for the Pasture to Crop uses an average rotation of 4 years alfalfa/grass and 4 years of annual crops. Seedbed preparation for the row crops was modeled in worst case scenario with vertical tillage **except for the initial cropping year (2027) having a spring chisel and disk.** This resulted in **12** more pounds of P being lost in planned conditions than baseline conditions.

The change in practice results in an increase of 12 pounds of phosphorus loss from the site. This results in a negative 12 in the calculation.

Soil Samples

Soil samples were taken on September 3rd, 2025. Each sample contained 10 subsamples and were combined to represent each area. The subsamples were taken to a depth of 6 inches. The barnyard contained samples 1 and 2 and the pasture contained sample 3. See Appendix VII for results and subsample location map.

Amount and Duration of Credits:

An Uncertainty factor of 1 was used. The practice is Conservation Easement where the land is converted to perennial vegetation. The edge of site trade ratio is 1.

The existing conditions had a phosphorus loss of **1491** pounds. The planned conditions have a P loss of 144 pounds. The Feed Lot had 182 pounds with a TP delivery factor of .91 resulting in 163 pounds delivered to perennial water. The TP delivery factor is based on the Snap Plus pull-down menu which shows the TP delivery factor based on the dominate slope and distance from stream. The dominant slope is 2-6% slope and the distance is 1001-5000 feet. The menu is below in Appendix X. This results in bringing the reduction to **1332** pounds of Phosphorus. The uncertainty factor of 1 result in **1332** credits before Delivery and downstream factors, which will be dependent on the buyer.

Area	Existing	Planned	Change	TP Delivery Factor	TP Delivered
Unit	#P	#P	#p		#P
Feed Lot	182	2.9	179	0.91	163
Exercise Lot	1059	27	1032	Snap Plus Factored IN	1032
Pasture	158	10	149	Snap Plus Factored IN	149
Pasture to Crop	92	104	-12	Snap Plus Factored IN	-12
	1491	144			1332

1332 credits will be maintained and available for a minimum of 20 years. The credits become available upon verification of practice installation. RES will verify the credits, and the practice will be verified when the following are met cattle have been removed from the site and all restoration activities have been completed. All activities are expected to be verified by June 30th of 2027. Below the table shows the credits generated from each modeled area.

Area	Credits at Edge of Site
Feed Lot	163
Barnyard	1032
Pasture	149
Pasture to Crop	-12
Total Credits	1332



629 99th Street, Milwaukee, WI 53214
P: 408.897.8641
WWW.ORES.US

PROJECT LOCATION: IOWA COUNTY, WI

CONCEPTUAL DESIGN PLAN

LALOR SITE RESTORATION



REVISIONS:

PROJECT STATUS:

CONCEPT

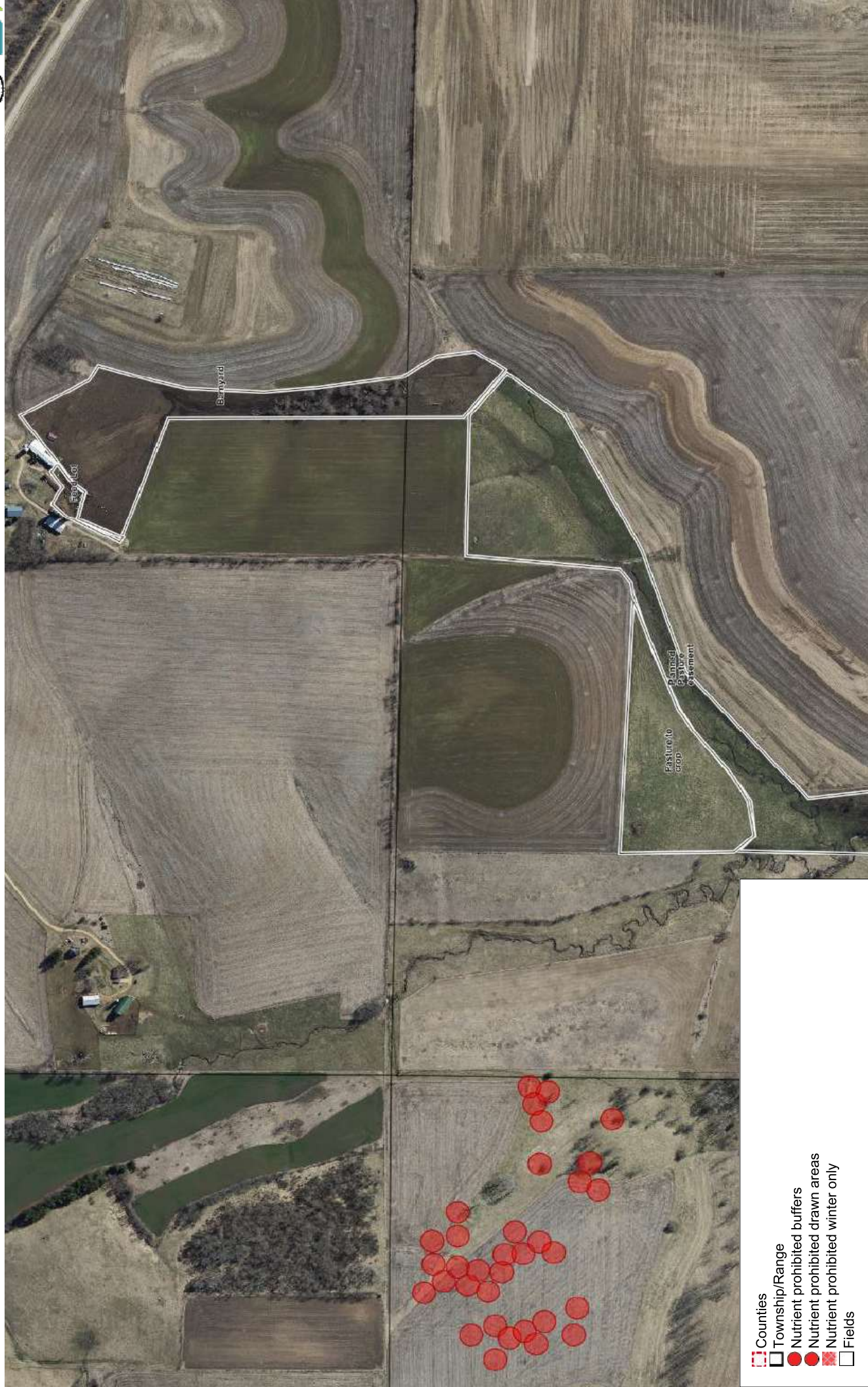
PROJECT MANAGER	IV
DESIGNED BY	JD
DESIGNED DATE	11/28/24
DESIGNED BY	STRECH
DATE	10/27/2025
SHEET NO.	01 OF 01



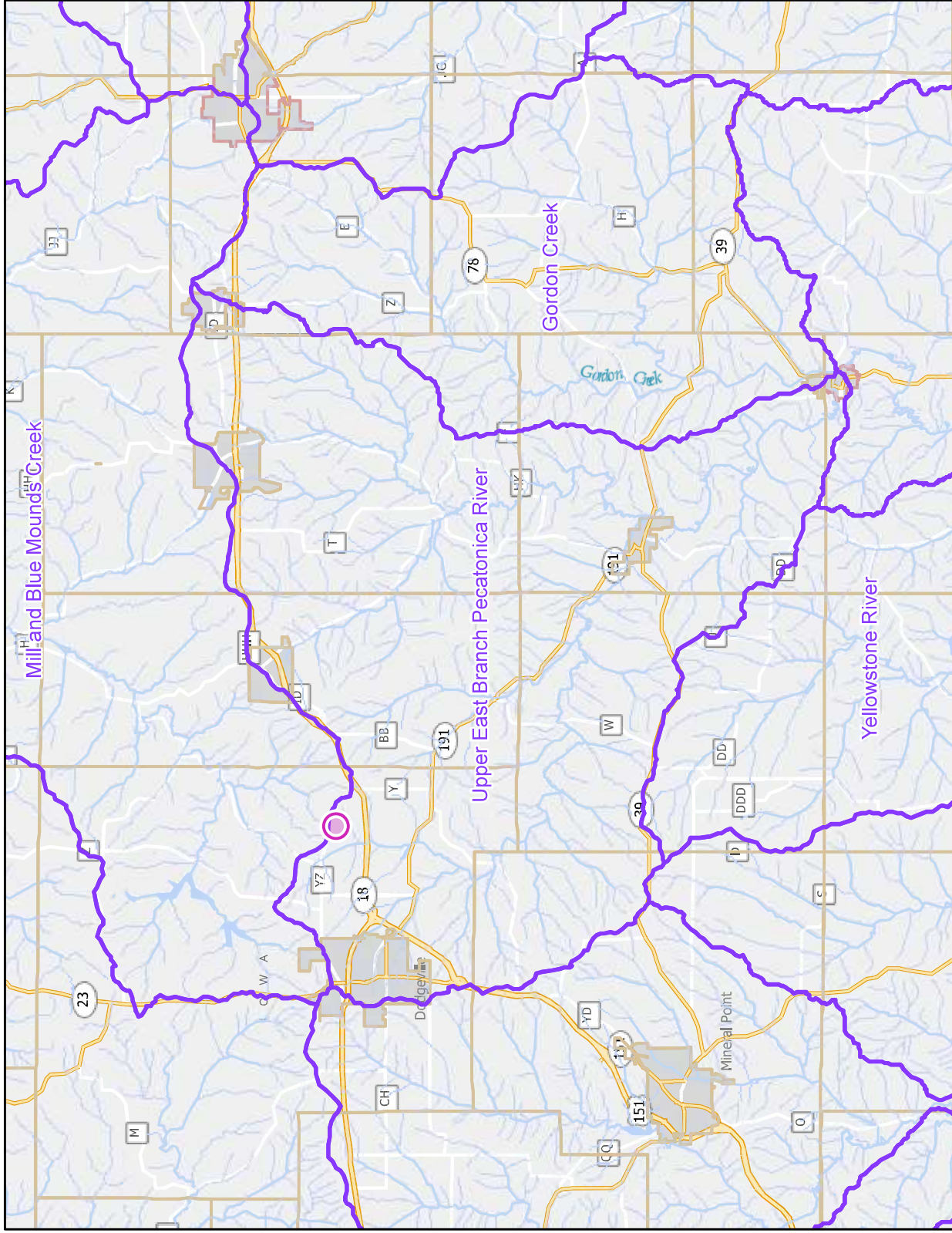


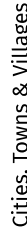
Site Layout

Farm: Lalor Site Planned, V20 Generated:11/4/2025, Crop year: 2026, Township Range Section:6N 4E s30

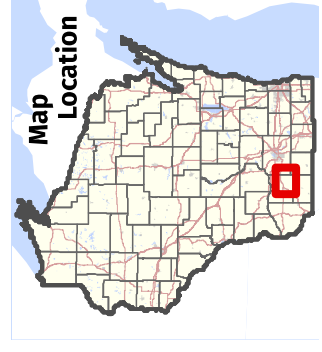


- Counties
- Township/Range
- Nutrient prohibited buffers
- Nutrient prohibited drawn areas
- Nutrient prohibited winter only
- Fields



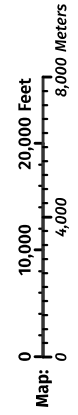
- Legend:** (some map layers may not be displayed)
-  Watersheds
 -  Rivers and Streams
 -  Intermittent Streams
 -  Open Water
 -  Cities, Towns & Villages
 -  City
 -  Village
 -  Civil Town

Notes:



Map projection: NAD 1983 HARN Wisconsin TM

Service Layer Credits:
DNR Basic Feature Vector Tile Layer WTM, Surface Water (Cached), WIDNR, USGS, and other data



This map is a product generated by a DNR web mapping application.
This map is for informational purposes only and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. The user is solely responsible for verifying the accuracy of information before using for any purpose. By using this product for any purpose user agrees to be bound by all disclaimers found here: <https://dnr.wisconsin.gov/legal>

Date Printed: 9/24/2025 2:45 PM



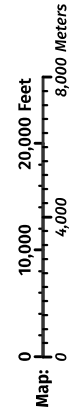
- Legend:** (some map layers may not be displayed)
- Watersheds
 - 12-digit HUCs (Subwatersheds)
 - Rivers and Streams
 - Intermittent Streams
 - Open Water
 - Latest Leaf Off Imagery

Notes:



Service Layer Credits:
Latest Leaf Off: DNR Basic Feature Vector Tile Layer WTM: Hydrologic Units (HUCs): U. S. Department of Agriculture, Natural Resources Conservation Service, Surface Water (Cached): WIDNR, USGS, and other data

Map projection: NAD 1983 HARN Wisconsin TM



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Date Printed: 9/24/2025 2:23 PM

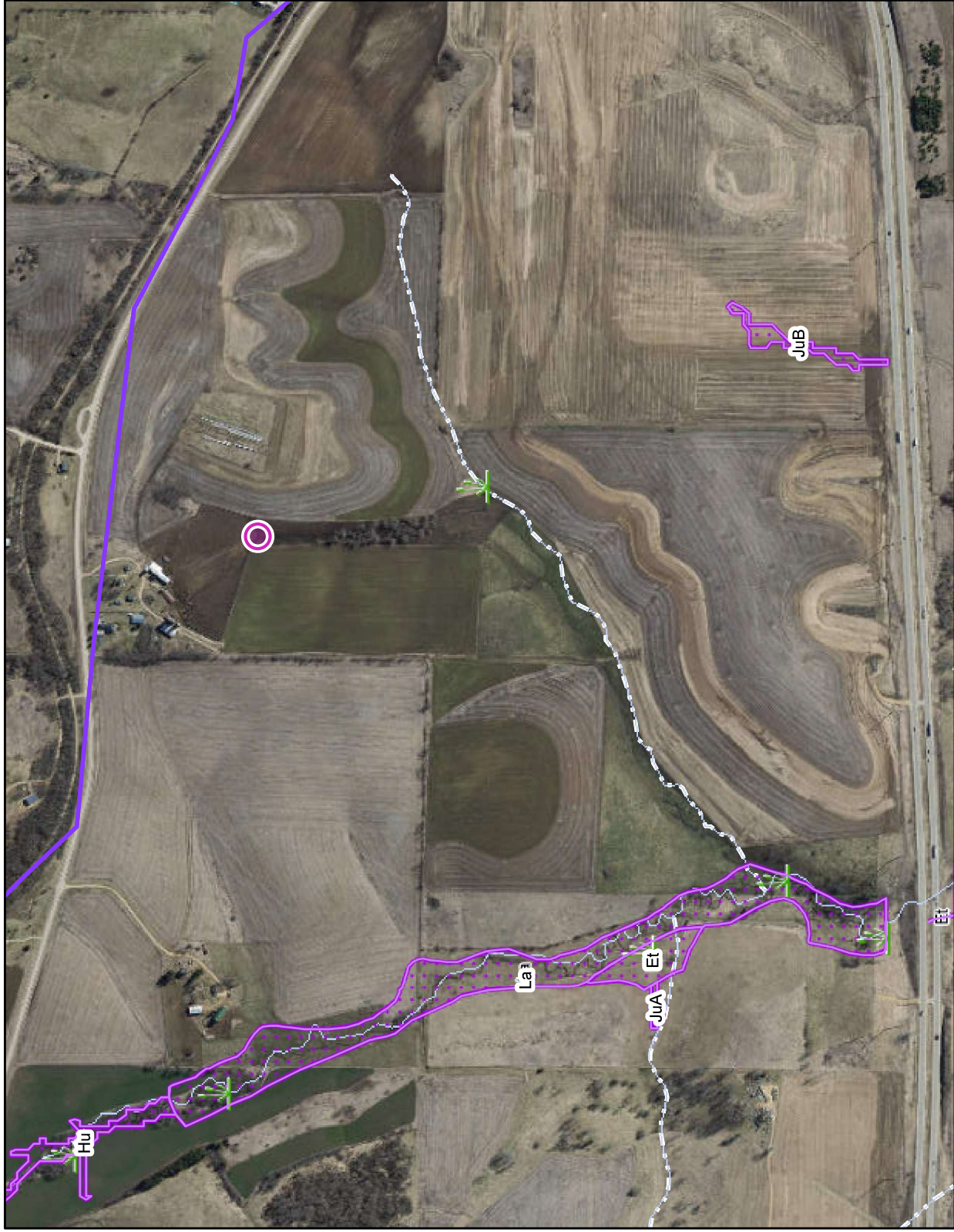


Topography

Farm: Lalor Site Plan, V20 Generated:10/23/2025, Crop year: 2026, Township Range Section:6N 4E s30

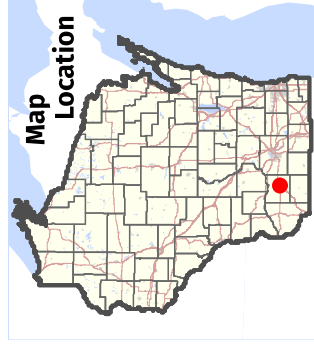


- Counties
- Township/Range
- Nutrient prohibited buffers
- Nutrient prohibited drawn areas
- Nutrient prohibited winter only
- Fields



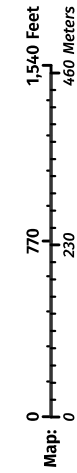
- Legend:** (some map layers may not be displayed)
- Watersheds
 - Wetland Indicators
 - Wetland Class Points
 - Dammed pond
 - Wetland too small to delineate
 - Wetland Indicators
 - Rivers and Streams
 - Intermittent Streams
 - 24K Intermittent Streams
 - Cities, Towns & Villages
 - Civil Town
 - Latest Leaf Off Imagery

Notes:



Map projection: NAD 1983 HARN Wisconsin TM

Service Layer Credits:
Wetland Indicators & Soils^: Surface Water Data Viewer Team, Latest Leaf Off: ^, DNR Basic Feature Vector
Tile Layer WTM: ^, Surface Water (Cached): WIDNR, USGS, and other data, Wetland Inventory NMI (Dynamic):
Calvin Lawrence, Dennis Weise, Nina Rihn



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This map is for informational purposes only and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. The user is solely responsible for verifying the accuracy of information before using for any purpose. By using this product for any purpose user agrees to be bound by all disclaimers found here: <https://dnr.wisconsin.gov/legal>

Date Printed: 9/24/2025 3:05 PM

Appendix VI: Site Pictures

Upper Lot:



Bottom of Upper Lot looking south into the Lower Lot:



Lower Lot Middle Looking south while in the trees



Bottom of Lower Lot Looking East:.



Note that in the Lower lot there is rubble composing 2,200 square feet of area. There are no plans to remove the rubble. Rubble area is noted in yellow.



Pasture Looking West



Report Number
F25252-4001
Account Number
02526



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3505 Conestoga Dr.
Fort Wayne, IN 46808
260.483.4759
algreatlakes.com

To: RESOURCE ENVIRON. SOLUTIONS
17921 W SMITH RD
BRODHEAD, WI 53520-9355

For: DODGEVILLE WWTF
Farm: LALOR
Field: BARNYARD

County: IOWA
Soil: DODGEVILLE
Plow Depth: 7
Acres: 5

Attn: JOHN LARSON

Date Received: 9/9/2025

SOIL TEST REPORT

Date Reported: 9/11/2025

Page: 1 of 1

Sample ID	Lab Number	OM %	P * ppm	K * ppm	Mg ** ppm	Ca ** ppm	Soil pH	Buffer pH	CEC ** meq/100g	Cation Saturation **				S ppm	Zn ppm	Mn ppm	Fe ppm	Cu ppm	B ppm	Bicarb-P ppm	NO3-N ppm**
										%K	%Mg	%Ca	%H								
1	51899	8.5	480	1095	875	2800	7.7		24.1	11.7	30.3	58.1									
2	51900	5.4	133	338	590	1850	7.5		15.0	5.8	32.7	61.5									
Average		6.9	307^	717^	733	2325	7.6		19.6	8.7	31.5	59.8									

WI DATCP Laboratory Certification Number 01-15-03-201

Report reviewed and approved by our professional agronomy staff.

* Soil Test Recommendations for Field, Vegetable and Fruit Crops, UW A2809, 2012. ** Recommended Chemical Soil Test Procedures for the North Central Region, NCR No. 221, 2012. ^ Weighted average, UW-A2809.

W040105



Report Number
F25252-4002
Account Number
02526

3505 Conestoga Dr.
Fort Wayne, IN 46808
260.483.4759
algreatlakes.com

To: RESOURCE ENVIRON. SOLUTIONS
17921 W SMITH RD
BRODHEAD, WI 53520-9355

For: DODGEVILLE WWTF
Farm: LALOR
Field: PASTURE

County: IOWA
Soil: DODGEVILLE
Plow Depth: 7
Acres: 30

Attn: JOHN LARSON

Date Received: 9/9/2025

SOIL TEST REPORT

Date Reported: 9/11/2025

Page: 1 of 1

Sample ID	Lab Number	OM %	P * ppm	K * ppm	Mg ** ppm	Ca ** ppm	Soil pH	Buffer pH	CEC ** meq/100g	Cation Saturation **				S ppm	Zn ppm	Mn ppm	Fe ppm	Cu ppm	B ppm	Bicarb-P ppm	NO3-N ppm**
										%K	%Mg	%Ca	%H								
3	51901	6.2	36	151	505	1500	6.7		12.1	3.2	34.8	62.0									
Average		6.2	36 [^]	151 [^]	505	1500	6.7		12.1	3.2	34.8	62.0									

WI DATCP Laboratory Certification Number 01-15-03-201

Report reviewed and approved by our professional agronomy staff.

* Soil Test Recommendations for Field, Vegetable and Fruit Crops, UW A2809, 2012. ** Recommended Chemical Soil Test Procedures for the North Central Region, NCR No. 221, 2012. ^ Weighted average, UW-A2809.

W0401005

Soil Test Locations

Figure 6: Sample 1 Sub points



Figure 5 Sample 2 Subpoints



Figure 7: Sample 3 Subpoints



Appendix X:TP Delivery Factor

Pull-down menu options for Snap-Plus		
Dominant slope	Distance from stream	TP delivery factor
0-2%	0- 300 ft	1
	300 -1,000 ft.	0.95
	1,001-5,000 ft	0.87
	5,001 -10, 000 ft	0.72
	10,001 - 20,000 ft.	0.55
	> 20,000 ft.	0.45
2-6%	0- 300 ft	1
	300 -1,000 ft.	0.96
	1,001-5,000 ft	0.91
	5,001-10, 000 ft	0.79
	10,001 - 20,000 ft.	0.65
	> 20,000 ft.	0.56
6-12%	0- 300 ft	1
	300 -1,000 ft.	0.98
	1,001-5,000 ft	0.92
	5,001-10, 000 ft	0.81
	10,001 - 20,000 ft.	0.69
	> 20,000 ft.	0.61
> 12%	0- 300 ft	1
	300 -1,000 ft.	0.98
	1,001-5,000 ft	0.93
	5,001-10, 000 ft	0.83
	10,001 - 20,000 ft.	0.71
	> 20,000 ft.	0.64

WQ1: P Trade Report

Reported For	Lalor Site Existing
Printed	2026-01-23
Plan Completion/Update Date	2025-09-09
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\isaac.welsh\OneDrive - Resource Environmental Solutions, LLC\Documents\RES\Projects\2026\Dodgeville\Opportunity\Lalor\CVP\Final Crediting\Snap Plus\Lalor Site Baseline - JuB.snapDb	

Prepared for:
Lalor Site Existing
attn: Kyle Levatozw

The P Trade Report estimates the annual pounds of phosphorus (P) in surface runoff from cropland entering surface waters. These P loss calculations are based on a field's soil test P concentration, crops, tillage, nutrient management practices and estimates of average runoff and sheet and rill erosion for the predominant soil type. Losses from concentrated flow channel or gully erosion with a field are not included in these calculations. Field runoff losses are calculated for each year as **PTP** (lb P/field/yr). Fields are only included if there are at least 2 years of crops before the selected start year. Before using this report as part of a Water Quality Trade activity, phosphorus losses (PTP) must be converted into 'P credits' according to DNR guidance.

For more information go to <http://dnr.wi.gov/> and type keyword: **Water Quality Trading**

Questions? Please contact
DNRphosphorus@wisconsin.gov

This report was developed for Wisconsin DNR Water Quality Trading and Adaptive Management purposes and cannot be used to demonstrate compliance with NR 151 or NRCS 590 NM plan requirements.

P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Barnyard	DODGEVILLE	DhD2	12	924	937	950	963	976	990	1,003	1,016	1,030	1,044	1,057
Pasture to crop	DODGEVILLE	DgD2	8	86	87	88	88	89	89	90	90	91	91	92
Planned Pasture easement	JUDSON	JuB	20	74	75	76	76	77	77	78	79	79	80	80
Total			40	1,085	1,099	1,113	1,127	1,142	1,156	1,171	1,185	1,200	1,215	1,230

PTP									
2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
1,071	1,085	1,099	1,113	1,128	1,142	1,156	1,171	1,186	1,201
92	93	94	94	95	95	96	96	97	98
81	82	82	83	83	84	85	85	86	86
1,245	1,260	1,275	1,290	1,306	1,321	1,337	1,353	1,368	1,384

WQ1: P Trade Report

Reported For	Lalor Site Existing
Printed	2026-01-23
Plan Completion/Update Date	2025-09-09
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\isaac.welsh\OneDrive - Resource Environmental Solutions, LLC\Documents\RES\Projects\2026\Dodgeville\Opportunity\Lalor\CVP\Final Crediting\Snap Plus\Lalor Site Baseline - JuB.snapDb	

Prepared for:
Lalor Site Existing
attn: Kyle Levatozw

The P Trade Report estimates the annual pounds of phosphorus (P) in surface runoff from cropland entering surface waters. These P loss calculations are based on a field's soil test P concentration, crops, tillage, nutrient management practices and estimates of average runoff and sheet and rill erosion for the predominant soil type. Losses from concentrated flow channel or gully erosion with a field are not included in these calculations. Field runoff losses are calculated for each year as **PTP** (lb P/field/yr). Fields are only included if there are at least 2 years of crops before the selected start year. Before using this report as part of a Water Quality Trade activity, phosphorus losses (PTP) must be converted into 'P credits' according to DNR guidance.

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DNRphosphorus@wisconsin.gov

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P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Barnyard	DODGEVILLE	DhD2	12	924	937	950	963	976	990	1,003	1,016	1,030	1,044	1,057
Pasture to crop	DODGEVILLE	DgD2	8	86	87	88	88	89	89	90	90	91	91	92
Planned Pasture easement	JUDSON	JuB	20	74	75	76	76	77	77	78	79	79	80	80
Total			40	1,085	1,099	1,113	1,127	1,142	1,156	1,171	1,185	1,200	1,215	1,230

WQ1: P Trade Report

Reported For	Lalor Site Planned
Printed	2026-01-23
Plan Completion/Update Date	2025-09-09
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\isaac.welsh\OneDrive - Resource Environmental Solutions, LLC\Documents\RES\Projects\2026\Dodgeville\Opportunity\Lalor\CVP\Final Crediting\Snap Plus\Lalor Site Planned.snapDb	

Prepared for:
Lalor Site Planned
attn:Kyle Levatozw

The P Trade Report estimates the annual pounds of phosphorus (P) in surface runoff from cropland entering surface waters. These P loss calculations are based on a field's soil test P concentration, crops, tillage, nutrient management practices and estimates of average runoff and sheet and rill erosion for the predominant soil type. Losses from concentrated flow channel or gully erosion with a field are not included in these calculations. Field runoff losses are calculated for each year as **PTP** (lb P/field/yr). Fields are only included if there are at least 2 years of crops before the selected start year. Before using this report as part of a Water Quality Trade activity, phosphorus losses (PTP) must be converted into 'P credits' according to DNR guidance.

For more information go to <http://dnr.wi.gov/> and type keyword: **Water Quality Trading**

Questions? Please contact
DNRphosphorus@wisconsin.gov

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P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Barnyard	DODGEVILLE	DhD2	12	56	37	30	27	26	25	25	25	24	24	24
Pasture to crop	DODGEVILLE	DgD2	8	106	146	109	185	217	33	19	10	67	129	99
Planned Pasture easement	DODGEVILLE	DgD2	20	25	19	14	12	11	11	11	10	10	10	10
Total			40	187	202	152	225	254	69	54	45	102	164	134

PTP												
2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
24	24	24	24	24	24	24	24	24	24			
169	201	30	17	8	64	123	94	159	190	27	15	7
10	10	10	10	10	10	10	10	10	10			
204	236	64	51	43	98	158	129	194	225	27	15	7

PTP									
2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
1,071	1,085	1,099	1,113	1,128	1,142	1,156	1,171	1,186	1,201
92	93	94	94	95	95	96	96	97	98
81	82	82	83	83	84	85	85	86	86
1,245	1,260	1,275	1,290	1,306	1,321	1,337	1,353	1,368	1,384

WQ1: P Trade Report

Reported For	Lalor Site Planned
Printed	2026-01-23
Plan Completion/Update Date	2025-09-09
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\isaac.welsh\OneDrive - Resource Environmental Solutions, LLC\Documents\RES\Projects\2026\Dodgeville\Opportunity\Lalor\CVP\Final Crediting\Snap Plus\Lalor Site Planned - JuB.snapDb	

Prepared for:
Lalor Site Planned
attn:Kyle Levatozw

The P Trade Report estimates the annual pounds of phosphorus (P) in surface runoff from cropland entering surface waters. These P loss calculations are based on a field's soil test P concentration, crops, tillage, nutrient management practices and estimates of average runoff and sheet and rill erosion for the predominant soil type. Losses from concentrated flow channel or gully erosion with a field are not included in these calculations. Field runoff losses are calculated for each year as **PTP** (lb P/field/yr). Fields are only included if there are at least 2 years of crops before the selected start year. Before using this report as part of a Water Quality Trade activity, phosphorus losses (PTP) must be converted into 'P credits' according to DNR guidance.

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Questions? Please contact
DNRphosphorus@wisconsin.gov

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P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Barnyard	DODGEVILLE	DhD2	12	56	37	30	27	26	25	25	25	24	24	24
Pasture to crop	DODGEVILLE	DgD2	8	106	146	109	185	217	33	19	10	67	129	99
Planned Pasture easement	JUDSON	JuB	20	14	11	9	9	8	8	8	8	8	8	8
Total			40	175	194	148	221	251	66	51	42	99	161	131

PTP												
2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
24	24	24	24	24	24	24	24	24	24			
169	201	30	17	8	64	123	94	159	190	27	15	7
8	8	8	8	8	8	8	8	8	8			
201	233	62	49	40	96	155	126	191	222	27	15	7

APLE-Lots Average Annual Runoff Report
10/28/2025 12:53:42 PM

Project Name Lalor Barnyard 10-13-2025
Version Name Original
Lot Name Feed Lot
County Iowa
Location 6N 4E s19

Cover Type combo
Area(sq. ft.) 30614

Date 10/28/2025
% Vegetated 0
Average Days Between Cleaning 14

Contributing Area		Type(CN)
Name	Area	Type
Contributing area	40362	Farmstead(82)
Animals		
Month	Animal type/hours a day	Number
January	Dairy Heifer 1000 lb/5 hrs	160
February	Dairy Heifer 1000 lb/5 hrs	160
March	Dairy Heifer 1000 lb/5 hrs	160
April	Dairy Heifer 1000 lb/5 hrs	160
May	Dairy Heifer 1000 lb/5 hrs	160
June	Dairy Heifer 1000 lb/5 hrs	160
July	Dairy Heifer 1000 lb/5 hrs	160
August	Dairy Heifer 1000 lb/5 hrs	160
September	Dairy Heifer 1000 lb/5 hrs	160
October	Dairy Heifer 1000 lb/5 hrs	160
November	Dairy Heifer 1000 lb/5 hrs	160
December	Dairy Heifer 1000 lb/5 hrs	160

Manure dry matter produced in year(ton):

Model results for Feed Lot annual output

Runoff (in)
Sediment loss (ton)
Total P loss (lb.)

31.2
18.3
181.6

Mitigation	Mitigation Text	Percent Diverted
FALSE		0
Manure dry matter produced in month(ton)		
4.33		
3.91		
4.33		
4.19		
4.33		
4.19		
4.33		
4.33		
4.19		
4.33		
4.19		
4.33		
51		

APLE-Lots Average Annual Runoff Report
10/28/2025 12:46:18 PM

Project Name Lalor Barnyard 10-13-2025
Version Name Planned
Lot Name Feed Lot
County Iowa
Location 6N 4E s19

Cover Type
Area(sq. ft.) 30614
combo

Date 10/28/2025
% Vegetated 75
Average Days Between Cleaning 365

Contributing Area		Type(CN)
Name	Area	Type
Contributing area	40362 Farmstead(82)	
Animals		
Month	Animal type/hours a day	Number
January	Dairy Calf 150 lb/1 hrs	1
February	Dairy Calf 150 lb/1 hrs	1
March	Dairy Calf 150 lb/1 hrs	1
April	Dairy Calf 150 lb/1 hrs	1
May	Dairy Calf 150 lb/1 hrs	1
June	Dairy Calf 150 lb/1 hrs	1
July	Dairy Calf 150 lb/1 hrs	1
August	Dairy Calf 150 lb/1 hrs	1
September	Dairy Calf 150 lb/1 hrs	1
October	Dairy Calf 150 lb/1 hrs	1
November	Dairy Calf 150 lb/1 hrs	1
December	Dairy Calf 150 lb/1 hrs	1

Manure dry matter produced in year(ton):

Model results for Feed Lot annual output

Runoff (in)
Sediment loss (ton)
Total P loss (lb.)

26.5
0.7
2.9

Mitigation

FALSE

Mitigation Text Percent Diverted

Percent Diverted

0

Manure dry matter produced in month(ton)

0

0

0

0

Q

C

C

C

0 0

0 0

00

0 0

○ ○

D



- Municipal well 1000ft buffers
- Runoff to direct conduits to gw
- Direct conduit to groundwater 300ft
- Evidence of runoff
- Counties
- Township/Range
- County Defined Karst Features
- Lots
- Contributing areas

NM3: Field Data and 590 Assessment Plan

Reported For	Lalor Site Existing	
Printed	2025-11-04	
Plan Completion/Update Date	2025-09-09	
SnapPlus Version	20.4 built on 2021-06-03	
C:\Users\isaac.welsh\Documents\RES\Projects\2025\Dodgeville\Lalor \CVP\Final Crediting\Lalor Site Baseline.snapDb		

Prepared for:
Lalor Site Existing
attn:Kyle Levatozw

Prepared by: RES
608-314-4126,

Field Data: 40 Total Acres Reported.

Field Name	SubF arm	FSA Trct	FSA Fld	Acres	County	Critical Soil Series & Symbol	F. Slp %	F.Slp Len ft	Below Field Slope To Water %	Dist.To Water ft	Contour/ Filters	Irrig	Tiled	Rotation	Tillage	Report Period	Field "I" t/ac	Rot Avg Soil Loss t/ac	SCI	Rot Avg PI	Soil Test P ppm	Rot P2O5 Bal lb/ac	P2O5 Bal Target lb/ac
Barnyard				11.9	Iowa	DODGE VILLE DhD2	14	150	2.1 - 6	1001 - 5000	No / No	No	No	PdI-PdI-PdI-PdI-PdI	None-None-None-None-None-None	2026-2033	3	13.5	-0.7	80	307	1200	0
Pasture to crop				7.8	Iowa	DODGE VILLE DgD2	14	150	6.1 - 12	301 - 1000	No / No	No	No	Pu-Pu-Pu-Pu-Pu	None-None-None-None-None-None	2026-2033	2	4.2	0.7	11	36	232	-
Planned Pasture easement				20	Iowa	NEWGL ARUS DsD2	16	100	6.1 - 12	301 - 1000	No / No	No	No	Pu-Pu-Pu-Pu-Pu	None-None-None-None-None-None	2026-2033	2	4.9	0.7	13	36	232	-

Crop Abbreviations	
Abbreviation	Crop
Pdl	Pasture, dry lot, exercise area
Pu	Pasture, continuous stocking, high density

Tillage Abbreviations	
Abbreviation	Tillage
None	None

NM3: Field Data and 590 Assessment Plan

Reported For	Lalor Site Planned		
Printed		2025-11-04	
Plan Completion/Update Date		2025-09-09	
SnapPlus Version	20.4 built on 2021-06-03		
C:\Users\isaac.welsh\Documents\IRES\Projects\2025\Dodgeville\Lalor \CVP\Final Crediting\Lalor Site Planned.snapDb			

Prepared for:
Lalor Site Planned
attn:Kyle Levatozw

Prepared by: 608-314-4126,

Field Data: 40 Total Acres Reported.

Field Name	SubF arm	FSA Trct	FSA Fld	Acres	County	Critical Soil Series & Symbol	F. Slp %	F. Slp Len ft	Below Field Slope To Water %	Dist.To Water ft	Contour/ Filters	Irrig	Tiled	Rotation	Tillage	Report Period	Field "I" t/ac	Rot Avg Soil Loss t/ac	SCI	Rot Avg PI	Soil Test P ppm	Rot P2O5 Bal lb/ac	P2O5 Bal Target lb/ac
Barnyard				12	Iowa	DODGE VILLE DhD2	14	150	2.1 - 6	1001 - 5000	No / No	No	No	AGsls-Gnh-Gnh-Gnh-Gnh	FCD-None-None-None-None-None	2026-2033	3	0.4	1.3	4	307	0	0
Pasture to crop				7.8	Iowa	DODGE VILLE DgD2	14	150	6.1 - 12	301 - 1000	No / No	No	No	Cg-IRwf-Cgl-Sg15-Wwg+s-AGsls-AG-AG	SFC-NT-SVT-FVT-Fcult-None-None	2026-2033	2	2.7	0.7	7	36	-415	-
Planned Pasture easement				20	Iowa	NEWGL ARUS DsD2	16	100	6.1 - 12	301 - 1000	No / No	No	No	Gnh-Gnh-Gnh-Gnh-Gnh	None-None-None-None-None	2026-2033	2	0	1.5	1	36	0	-

Crop Abbreviations	
Abbreviation	Crop
[Rwf-Cg]	Winter Rye (forage) to Corn grain
AG	Alfalfa/Grass
AGsls	Alfalfa/Grass Seeding Fall
Cg	Corn grain
Gnh	Grasslands, permanent, not harvested
Sg15	Soybeans 15-20 inch row
Wwg+s	Winter wheat (grain+straw)

Tillage Abbreviations	
Abbreviation	Tillage
FCD	Fall Chisel, disked
Fcult	Field Cultivation
FVT	Fall vertical tillage
None	None
NT	No Till
SFC	Spring Cultivation
SVT	Spring vertical tillage



1/30/2026

Wisconsin Clearinghouse
c/o: Chris Murphy, Nutrient Trading Manager
17921 Smith Road
Brodhead, WI 53520

Subject: Verification of Pollutant Reduction Credits
Lalor Site Credit Verification Package: CVP-2026-02

Dear Mr. Murphy:

The Department of Natural Resources (department) recently received a credit verification package (CVP) for proposed generation of phosphorus credits via the State's water quality trading clearinghouse. Initial information was received in November of 2025 and a final CVP was received on 1/23/2026. Based on the department's review, the final CVP (dated 01/23/2026) is in general conformance with the DNR Water Quality Trading Guidance and Sections 16.9685 and 283.84 of the Wisconsin Statutes. The CVP proposes restoration of an eroding barnyard and pasture area with conservation cover / perennial vegetation. The timeline for practice installation, as set forth in the CVP, indicates restoration activities will be complete by June 30th of 2027.

Credits generated from approved practices result in available credit quantities shown in Table 1. These credits may be incorporated into WPDES permits, subject to the department's public notice and permit modification/reissuance procedures. An agreement must be established with a credit buyer pursuant to s. 283.84(1)(f), Wis Stats., and buyers must be located in the applicable hydrologic area, as defined at s. 283.84(1m)(e)2., Wis. Stats. Credit sales must observe any applicable downstream or delivery factors, as defined in guidance. Pollutant credits may be used to demonstrate compliance with phosphorus water quality-based effluent limits.

Table 1: Total Phosphorus Credits Available per CVP-2026-02

Year	Available Credits (lbs/yr)*	Year	Available Credits (lbs/yr)*
2027	666	2038	1332
2028	1332	2039	1332
2029	1332	2040	1332
2030	1332	2041	1332
2031	1332	2042	1332
2032	1332	2043	1332
2033	1332	2044	1332
2034	1332	2045	1332
2035	1332	2046	1332
2036	1332	2047	1332
2037	1332		

*- Trade ratio not included, final credit quantities will be fewer than listed. A minimum 1.2:1 trade ratio is applicable. Establishment of a federally-approved TMDL may require updating the CVP approval to encompass interim and long-term credits.

The department conditionally verifies pollutant credits for a duration of twenty years, provided monitoring & maintenance, inspection reporting, and NRCS technical standard protocols are adhered to. This verification is not to be construed as an approval for any activities requiring a permit under chs. 30 or 31, Wis. Stats. or other permits/approvals required at the county or municipal level. The department has assigned the CVP a tracking number of CVP-2026-02 and it will be referenced as such in the WPDES permits of credit users. The CVP will be included as part of the public notice package when a credit buyer's permit is reissued to incorporate credits. The WPDES permit will include a requirement for an annual trading inspection report, requirements to implement the CVP as approved, and effluent monitoring for total phosphorus to demonstrate credit use and computed compliance.

If you have any questions or comments, please contact me at (608) 400 - 5596 or by email at matthew.claucherty@wisconsin.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Claucherty", with a stylized flourish at the end.

Matt Claucherty
Phosphorus Implementation Coordinator
Wisconsin Department of Natural Resources

e-CC:

Isaac Welsh, RES
Andrew Craig, DNR
Laura Dietrich, DNR