Permit Fact Sheet

General Information

Permit Number	WI-0032522-08-0
Permittee Name and Address	Village of Conrath PO Box 235, Conrath, WI 54731
Permitted Facility Name and Address	Village of Conrath Vine Avenue, Conrath, Wisconsin
Permit Term	January 01, 2027 to December 31, 2031
Discharge Location	East bank of Main Creek one-quarter mile south, downstream of County Highway G bridge. NE¼ - SW¼ of Section 31; T34N-R5W
Receiving Water	Main Creek in Main Creek Watershed of Upper Chippewa River Basin in Rusk County
Stream Flow ($Q_{7,10}$)	1.1 cubic feet per second (cfs)
Stream Classification	Warm Water Sport Fish (WWSF) community, non-public water supply, recreational use, exceptional resource water (ERW) and within the ceded territory
Wild Rice Impacts (no specific wild rice standards exist at this time)	No impacts identified at this location. The conclusion of no impact is based on low effluent volumes in comparison to the river volumes and the distance to any known wild rice habitat is great. (Evaluation completed March 2017)
Discharge Type	Existing continuous
Annual Average Design Flow (MGD)	0.0086 MGD
Industrial or Commercial Contributors	None
Plant Classification	A3 - Recirculating Media Filters; D - Disinfection; SS - Sanitary Sewage Collection System
Approved Pretreatment Program?	N/A

Facility Description

The Village of Conrath owns and operates a domestic wastewater treatment system designed to treat 8,600 gallons per day currently treats an average of 4,400 gallons per day (June 2021-June 2026 data). The treatment system consists of septic tanks, recirculating sand filter and UV disinfection system. Wastewater (influent) generated from households is collected in individual septic tanks. Decanted influent from the individual septic tanks flows into two community septic tanks that are operated in series (primary treatment). Wastewater then travels to a dosing tank in the control building where water is distributed to one of two filter beds constructed of layers of fine and coarse sand (secondary treatment). Naturally occurring aerobic microorganisms growing on the sand particles metabolize the organic matter in the wastewater as it percolates through the filter. The water from the filter beds flows to a splitter box where there is capability for wastewater to be "recirculated" back to the dosing tank before being pumped back to the filter beds for further treatment. Water that is not recirculated is seasonally (May-September) disinfected using an UV system and discharged to Main Creek in Rusk County.

The solids from both the homeowners' and treatment plant's septic tanks are pumped regularly to prevent the discharge of accumulated solids to the sand filters. These solids are considered septage and are regulated under NR 113, Wisconsin Administrative Code, for septage disposal.

Substantial Compliance Determination

There have been several minor violations of effluent limits, missed samples, and late reporting. However, the facility has taken the necessary steps to correct their actions and nothing further is required.

After a desktop review of all discharge monitoring reports, CMARs, land app reports, compliance schedule items, and a site visit on March 13, 2025, by Arthur Ryzak, WDNR, this facility has been found to be in substantial compliance with their current permit.

Compliance determination made by Arthur Ryzak, WDNR on October 9, 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	INFLUENT Flow is not a required parameter. Influent is assumed to equal effluent.	Representative grab samples shall be collected from the wet well in the lift station after the septic tanks.
001	EFFLUENT An average of 0.0044 MGD (June 2021- June 2026 data)	Representative samples shall be collected in the control building from the effluent stream after ultraviolet disinfection. The permittee is authorized to discharge to Main Creek within the Upper Chippewa River Drainage Basin.
990	SEPTAGE Flow is not a required parameter.	Septic tank solids from the individual homes and the septic tanks at the treatment facility are removed by a contract hauler. Solids taken from the septic tanks are regulated under NR 113 as septage.

Permit Requirements

1 Influent – Monitoring Requirements

1.1 Sample Point Number: 701- INFLUENT TO PLANT

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
BOD5, Total		mg/L	2/Month	Grab	
Suspended Solids,		mg/L	2/Month	Grab	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Total					

Changes from Previous Permit:

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

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	
BOD5, Total	Monthly Avg	30 mg/L	2/Week	Grab	
BOD5, Total	Weekly Avg	45 mg/L	2/Week	Grab	
Suspended Solids, Total	Monthly Avg	30 mg/L	2/Week	Grab	
Suspended Solids, Total	Weekly Avg	45 mg/L	2/Week	Grab	
pH Field	Daily Max	9.0 su	5/Week	Grab	
pH Field	Daily Min	6.0 su	5/Week	Grab	
E. coli	Geometric Mean - Monthly	126 #/100 ml	Weekly	Grab	Monitoring and limit effective May - September.
E. coli	% Exceedance	10 Percent	Monthly	Calculated	Monitoring and limit effective May - September.
Phosphorus, Total	Monthly Avg	7.2 mg/L	Weekly	Grab	Limit effective throughout the permit term, as it represents a minimum control level.
Phosphorus, Total		lbs/day	Weekly	Calculated	Report daily mass

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
					discharged using Equation 1a. in the Water Quality Trading (WQT) 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) section. Available TP Credits are specified in Table 2 and in the approved Water Quality Trading Plan.
WQT Computed Compliance (TP)	Monthly Avg	1.4 mg/L	Monthly	Calculated	Report the WQT TP Computed Compliance value using Equation 3a. in the Water Quality Trading (WQT) section. Value entered on the last day of the month.
WQT Computed Compliance (TP)	Monthly Avg	0.1 lbs/day	Monthly	Calculated	Report the WQT TP Computed Compliance value using Equation 3b. in the Water Quality Trading (WQT) section.
WQT Credits Used (TP)	Annual Total	60.8 lbs/yr	Annual	Calculated	The sum of total monthly credits used may not exceed Table 2 values listed below.
Nitrogen, Ammonia (NH3-N) Total		mg/L	Monthly	Grab	Monitoring is required during the 2029 calendar year.
Nitrogen, Total Kjeldahl		mg/L	See Listed Qtr(s)	24-Hr Flow Prop Comp	See the "Total Nitrogen Testing" subsection for testing schedule.
Nitrogen, Nitrite + Nitrate Total		mg/L	See Listed Qtr(s)	24-Hr Flow Prop Comp	See the "Total Nitrogen Testing" subsection for testing schedule.
Nitrogen, Total		mg/L	See Listed Qtr(s)	Calculated	Total Nitrogen = Total Nitrogen Kjeldahl (mg/L) + Nitrate+ Nitrogen (mg/L). See the "Total Nitrogen Testing" subsection for testing schedule.

Changes from Previous Permit

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

- The monitoring frequency for field **pH** monitoring has increased from twice a month to 5 times a week and **BOD5** and **Total Suspended Solids** from twice a month to weekly to twice a week. The frequency change was implemented to meet standard monitoring frequencies post upgrade which is based on the size and type of the facility.
- **Flow-** The sample frequency for flow has been changed from "continuous" to "daily" for eDMR reporting purposes.
- **Phosphorus** minimum control level has changed from a monthly average of 6.45 mg/L to 7.2 mg/L An upgrade to the collection system completed in 2024 significantly reduced inflow and infiltration (I&I) to the WWTF, which resulted in increases to the influent phosphorus concentration to the WWTF. If the MCL limit were to be reevaluated based on the level currently achievable by the WWTF, the updated limit would be recommended to be 7.2 mg/L as a monthly average. This is based on the maximum monthly average of effluent phosphorus data during January 2021 – October 2025. The antibacksliding and antidegradation requirements in ch. NR 207, Wis. Adm. Code were evaluated and met.

Explanation of Limits and Monitoring Requirements

Detailed discussions of limits and monitoring requirements can be found in the attached water quality-based effluent limits (WQBEL) memo dated March 20, 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.

Water Quality Trading – The wastewater treatment facility is not able to meet the WQBEL monthly average limits of 1.4 mg/L and 0.10 lb/day. This permit authorizes the use of trading as a tool to demonstrate compliance with the phosphorus WQBELs. This permit includes terms and conditions related to the Water Quality Trading Plan (WQT-2026-0022) or approved amendments thereof. The total 'WQT TP Credits' available are designated in the approved WQT Plan.

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

3 Septage Management - Monitoring and Limitations

Septage management is required in accordance ch. NR 113, Wisconsin Administrative Code. Records must be kept and made available to the Department on request. Required record keeping includes volumes of septage pumped, dates when the septage was removed, land application site DNR number and method used to satisfy pathogen and vector control, and/or the treatment plant where septage is disposed. Annual reporting is required when the permittee land applies the septage. Annual reporting is also required when the permittee disposes of septage at a designated treatment facility.

3.1 Sample Point Number: 990- Septic Tank

Changes from Previous Permit:

Septage requirements were evaluated for this permit term and no changes were required in this permit section.

Explanation of Limits and Monitoring Requirements

Requirements for septage management are determined in accordance with ch. NR 113, Wis. Adm. Code.

4 Schedules

4.1 Water Quality Trading (WQT) Annual Report

Required Action	Due Date
Annual WQT Report: Submit an annual WQT report that shall cover the previous 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; A summary of the annual inspection of each nonpoint source management practice that generated any of the pollutant reduction credits used during the previous year; and Identification of noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading that have not been reported in discharge monitoring reports.	01/31/2027
Annual WQT Report : Submit an annual WQT report that shall cover the previous year.	01/31/2028
Annual WQT Report: Submit an annual WQT report that shall cover the previous year.	01/31/2029
Annual WQT Report: Submit an annual WQT report that shall cover the previous year.	01/31/2030
Annual WQT Report: Submit an 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.	

Explanation of Schedule

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

- The number of pollutant reduction credits (lbs/month) used each month of the previous year;
- The source of each month's pollutant reduction credits;
- A brief summary or statement conveying the status of the Conrath-Hawkins water quality trade agreement; and
- Identification of noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading.

Attachments

Water Flow Schematic created in 2015

Water Quality Based Effluent Limits memo March 20, 2026

“Water Quality Trading Agreement” and “Signature Page” dated September, 2026

“Conditional Approval of the Preliminary Water Quality Trading Plan and Trade Agreement” letter dated November 4, 2026

Justification Of Any Waivers From Permit Application Requirements

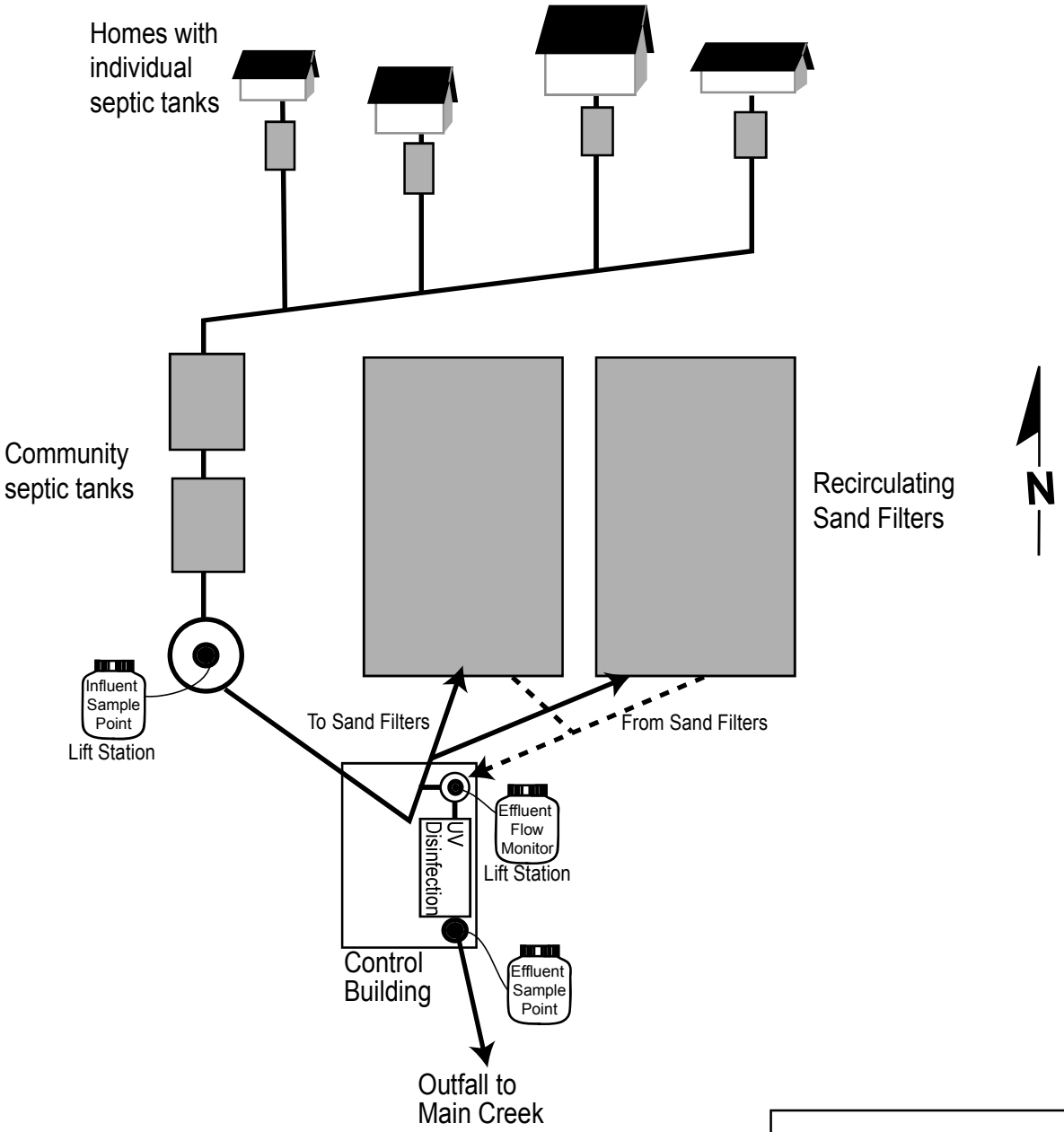
A decision has been made not to require effluent monitoring for metals in the application because:

1. The low design flow (8,600 gallons) and low actual flows (an average of 4,400 MGD) from this facility.
2. The wastewater is all domestic with no industrial contributors to the collection system.
3. Based on the total points accumulated on the WET checklist and Chapter 1.3 of the WET Guidance Document there is little likelihood the effluent is toxic.
4. The Village of Conrath does not have a public water supply system and does not have any control over corrosivity in the influent wastewater.

Prepared By: Sheri A. Snowbank Wastewater Specialist **Date:** August 3, 2026

VILLAGE OF CONRATH
Wastewater Treatment Facility

The Conrath wastewater treatment facility consists of septic tanks at the individual homes, two community septic tanks operated in series, followed by sand filters and an ultraviolet disinfection unit. Effluent is discharged to Main Creek in Rusk County. Solids collected in the septic tanks are spread as a soil conditioner on approved cropland. The diagram below shows the treatment units and sampling locations.



● Represents Sample Points

NOT TO SCALE

Design Flow: 0.0086 MGD
BOD: 16.5 lbs/day
Construction Year: 1989

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: March 20, 2026

TO: Sheri Snowbank – NOR/Spooner Service Center

FROM: Michael Polkinghorn – NOR/Rhinelander Service Center

SUBJECT: Water Quality-Based Effluent Limitations for the Village of Conrath
WPDES Permit No. WI-0032522-08-0

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 Village of Conrath in Rusk County. This municipal wastewater treatment facility (WWTF) discharges to the Main Creek, located in the Main Creek Watershed in the Upper Chippewa River Basin. The evaluation of the permit recommendations is discussed in more detail in the attached report.

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

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Footnotes
Flow Rate					1
BOD_5			45 mg/L	30 mg/L	1, 2
TSS			45 mg/L	30 mg/L	1, 2
pH	9.0 s.u.	6.0 s.u.			1, 2
E. coli May – September				126 #/100 mL geometric mean	1, 3
Phosphorus					1, 4
MCL				7.2 mg/L	
Final				1.4 mg/L 0.10 lbs/day	
Ammonia Nitrogen					1, 5
TKN, Nitrate+Nitrite, and Total Nitrogen					1, 6

Footnotes:

1. No changes from the current permit.
2. These limits are based on the Warm Water Sport Fish (WWSF) community of the immediate receiving water as described in s. NR 210.05(1), Wis. Adm. Code.
3. Additional final limit: No more than 10 percent of *E. coli* bacteria samples collected in any calendar month may exceed 410 count/100 mL. These limits became effective during the current permit term on 04/30/2025.
4. The Village of Conrath has satisfied the antidegradation and antibacksliding requirements of ch. NR 207, Wis. Adm. Code, and the minimum control level (MCL) limit has increased to 7.2 mg/L. A water quality trading plan has been submitted as an alternative compliance option to offset any total phosphorus discharged from this outfall that exceed the phosphorus WQBELs. The phosphorus WQBELs may be expressed as computed compliance limits, but the MCL limit must be met at the point of discharge. The final phosphorus WQBELs became effective during the current permit term on 12/01/2021.

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5. Monthly monitoring for 1 year is recommended to continue during the reissued permit term to determine the need for ammonia nitrogen limits at the next permit reissuance.
6. As recommended in the Department's October 1, 2019 Guidance for Total Nitrogen Monitoring in Wastewater Permits, annual total nitrogen monitoring is recommended for all minor municipal permittees. Sections 283.37(5) and 283.55(1)(e), Wis. Stats, and ss. NR 200.065(1)(g) and NR 200.065(1)(h), Wis. Adm. Codes, provide the authority to request this monitoring during the permit term. Total Nitrogen is the sum of nitrate (NO_3), nitrite (NO_2), and total Kjeldahl nitrogen (TKN) (all expressed as N).

No WET testing is required because information related to the discharge indicates low to no risk for toxicity. Additional limits to comply with the expression of limits requirements in ss. NR 106.07 and NR 205.065(7), Wis. Adm. Codes, are not required due to the non-continuous nature of the discharge.

Please consult the attached report for details regarding the above recommendations. If there are any questions or comments, please contact Michael Polkinghorn at (715) 360-3379 or Michael.Polkinghorn@wisconsin.gov and Diane Figiel at Diane.Figiel@wisconsin.gov.

Attachments (2) – Narrative & discharge area map.

PREPARED BY: Michael A. Polkinghorn – Water Resources Engineer

E-cc: Arthur Ryzak, Regional Wastewater Engineer – NOR/Ladysmith Service Center
Michelle BalkLudwig, Regional Wastewater Supervisor – NOR/Spooner Service Center
Diane Figiel, Water Resources Engineer – WY/3
Nate Willis, Wastewater Engineer – WY/3

Attachment #1

Water Quality-Based Effluent Limitations for
Village of Conrath

WPDES Permit No. WI-0032522-08-0

Prepared by: Michael A. Polkinghorn

PART 1 – BACKGROUND INFORMATION

Facility Description

The treatment system, upgraded in 2024, consists of septic tanks, recirculating sand filters, and a UV disinfection system. Wastewater (influent) generated from households is collected in individual septic tanks where floating and suspended solids are allowed to separate from the liquid waste and settle. Decanted influent then flows to the wastewater treatment facility, where the wastewater first flows through a filter manhole, then into two community septic tanks that are operated in series where additional floating and suspended solids are separated and settled (primary treatment). Wastewater is then pumped to four flow equalization manholes and then to two filter beds constructed of layers of fine and coarse sand (secondary treatment). Naturally occurring aerobic microorganisms growing on the sand particles metabolize the remaining organic matter in the wastewater as it percolates through the filter. The water that has passed through the filter beds then flows to the control building where a portion of the filtered wastewater can be "recirculated" back to the lift station and mixed with incoming wastewater for further treatment. The remaining portion of effluent that has passed through the filters is then seasonally disinfected during May – September using an ultraviolet light system and then discharged on a noncontinuous basis via Outfall 001 to the east bank of Main Creek, approx. 1,400 ft south of CTH G bridge.

Attachment #2 is a discharge area map of Outfall 001.

Existing Permit Limitations

The current permit, expiring on 12/31/2025, includes the following effluent limitations and monitoring requirements.

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Footnotes
Flow Rate					1
BOD_5			45 mg/L	30 mg/L	2, 3
TSS			45 mg/L	30 mg/L	2, 3
pH	9.0 s.u.	6.0 s.u.			2, 3
E. coli May – September				126 #/100 mL geometric mean	2, 4
Phosphorus					5
MCL				6.45 mg/L	
Final				1.4 mg/L 0.10 lbs/day	
Ammonia Nitrogen					1

Attachment #1

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Footnotes
TKN, Nitrate+Nitrite, and Total Nitrogen					1, 6

Footnotes:

1. Monitoring only.
2. **These limitations are not being evaluated as part of this review.** Because the water quality criteria (WQC), reference effluent flow rates, and receiving water characteristics have not changed, limitations for these water quality characteristics do not need to be re-evaluated at this time.
3. These limits are based on the Warm Water Sport Fish (WWSF) community of the immediate receiving water as described in s. NR 210.05(1), Wis. Adm. Code.
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. These limits became effective during the current permit term on 04/30/2025.
5. A water quality trading plan has been submitted as an alternative compliance option to offset any total phosphorus discharged from this outfall that exceed the phosphorus WQBELs. The phosphorus WQBELs may be expressed as computed compliance limits, but the minimum control level (MCL) limit must be met at the point of discharge. The final phosphorus WQBELs became effective during the current permit term on 12/01/2021.
6. As recommended in the Department's October 1, 2019 Guidance for Total Nitrogen Monitoring in Wastewater Permits, annual total nitrogen monitoring is recommended for all minor municipal permittees. Sections 283.37(5) and 283.55(1)(e), Wis. Stats, and ss. NR 200.065(1)(g) and NR 200.065(1)(h), Wis. Adm. Codes, provide the authority to request this monitoring during the permit term. Total Nitrogen is the sum of nitrate (NO_3), nitrite (NO_2), and total Kjeldahl nitrogen (TKN) (all expressed as N).

Receiving Water Information

- Name: Main Creek
- Waterbody Identification Code (WBIC): 2217100
- Classification used in accordance with chs. NR 102 and 104, Wis. Adm. Code: Warm Water Sport Fish (WWSF) community, non-public water supply, recreational use, and exceptional resource water (ERW).
- Low flows used in accordance with chs. NR 106 and 217, Wis. Adm. Code: The following 7-Q_{10} value is from USGS for Station SW ¼, NE ¼, Section 31, T34N – R5W, approx. 0.6 mi upstream of where Outfall 001 is located.

  7-Q_{10} = 1.1 cubic feet per second (cfs)

  7-Q_2 = 2.5 cfs

  The previous WQBEL memorandum (January 2015) estimated the 7-Q_2 flow at 2.5 cfs based on the drainage area. The 7-Q_2 value is estimated to be 2.5 cfs utilizing a 7-Q_2:7-Q_{10} ratio of 2.23. This ratio is determined by taking the respective low-flow values from the Main Creek stream segment in the WPDES viewer before the confluence with Outfall 001 (approx. 0.07 mi upstream). The associated drainage area with the ratio is 119 mi^2.
- % of low flow used to calculate limits in accordance with s. NR 106.06(4)(c)5., Wis. Adm. Code: 25%.

- Multiple dischargers: None.
- Impaired water status: There are no known impairments for Main Creek. Approx. 8.2 mi downstream of Outfall 001, the Holcombe Flowage is on the Clean Water Act Section 303(d) list for mercury, phosphorus, TSS, and sediment impairments.

Effluent Information

- Design flow rate:
  Annual average = 0.0086 million gallons per day (MGD)
  For reference, the actual average flow from January 2021 – October 2025 was 0.0048 MGD excluding days discharge did not occur.
- 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 wastewater with no industrial contributors.
- Water supply: Private wells.
- Additives: None.
- Effluent characterization: This facility is categorized as a minor municipality and received instructions in the application notification letter that exempt it from standard monitoring requirements. The permit required ammonia nitrogen monitoring during the current permit term.

The following table presents the average concentrations and loadings at Outfall 001 from January 2021 – October 2025 for all parameters with limits in the current permit to meet the requirements of s. NR 201.03(6), Wis. Adm. Code:

Parameters with Effluent Limits

	Average Measurement*	Average Mass Discharged
BOD_5	0.81 mg/L	
TSS	3.7 mg/L	
pH field	6.3 s.u.	
E. coli	16 #/100 mL**	
Phosphorus	5.2 mg/L	0.17 lbs/day

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

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

Mercury – The permit application did not require monitoring for mercury because the Village of Conrath 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)." However, sludge sampling is not available because the Village of Conrath is a recirculating sand filter facility and generates solids which are hauled away as septage. It is not expected that there are

exceedances of the high-quality mercury concentration based on similar municipal treatment plants and the lack of industries. **Therefore, mercury monitoring is not recommended during the reissued permit term.**

PFOS and PFOA – The need for PFOS and PFOA monitoring is evaluated in accordance with s. NR 106.98(2), Wis. Adm. Code. Based on the type of discharge, the effluent flow rate, and the lack of indirect dischargers contributing to the collection system, **PFOS and PFOA monitoring is not recommended during the reissued permit term.** The Department may re-evaluate the need for sampling at the next permit reissuance if new information becomes available that suggests PFOS or PFOA may be present in the discharge.

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

The State of Wisconsin promulgated revised water quality standards for ammonia nitrogen in ch. NR 105, Wis. Adm. Code, effective March 1, 2004 which includes criteria based on both acute and chronic toxicity to aquatic life. Given the fact that the Village of Conrath does not currently have ammonia nitrogen limits, the need for limits is evaluated at this time.

Acute Limits based on 1-Q_{10}

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

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

Where:

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

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

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

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

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

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

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 ATC for ammonia is calculated using the following equation:

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

Where:

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

The effluent pH data was examined as part of this evaluation. A total of 106 sample results were reported from January 2021 – October 2025. The maximum reported value was 7.40 s.u. (Standard pH Units). The effluent pH was 7.40 s.u. or less 99% of the time. The 1-day P_{99}, calculated in accordance with s. NR 106.05(5), Wis. Adm. Code, is 7.51 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 7.43 s.u. Therefore, a value of 7.51 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 7.51 s.u. into the equation above yields an ATC = 19.6 mg/L. Therefore, the applicable daily maximum limit is 39 mg/L.

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 – WWSF Community

Effluent pH s.u.	Limit mg/L	Effluent pH s.u.	Limit mg/L	Effluent pH s.u.	Limit mg/L
$6.0 \leq pH \leq 6.1$	108	$7.0 < pH \leq 7.1$	66	$8.0 < pH \leq 8.1$	14
$6.1 < pH \leq 6.2$	106	$7.1 < pH \leq 7.2$	59	$8.1 < pH \leq 8.2$	11
$6.2 < pH \leq 6.3$	104	$7.2 < pH \leq 7.3$	52	$8.2 < pH \leq 8.3$	9.4
$6.3 < pH \leq 6.4$	101	$7.3 < pH \leq 7.4$	46	$8.3 < pH \leq 8.4$	7.8
$6.4 < pH \leq 6.5$	98	$7.4 < pH \leq 7.5$	40	$8.4 < pH \leq 8.5$	6.4
$6.5 < pH \leq 6.6$	94	$7.5 < pH \leq 7.6$	34	$8.5 < pH \leq 8.6$	5.3
$6.6 < pH \leq 6.7$	89	$7.6 < pH \leq 7.7$	29	$8.6 < pH \leq 8.7$	4.4
$6.7 < pH \leq 6.8$	84	$7.7 < pH \leq 7.8$	24	$8.7 < pH \leq 8.8$	3.7
$6.8 < pH \leq 6.9$	78	$7.8 < pH \leq 7.9$	20	$8.8 < pH \leq 8.9$	3.1
$6.9 < pH \leq 7.0$	72	$7.9 < pH \leq 8.0$	17	$8.9 < pH \leq 9.0$	2.6

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

The weekly and monthly average ammonia nitrogen limits calculation from the previous limit evaluation do not change because there have been no changes in the effluent and receiving water flow rates. The calculations from the previous limit evaluation (September 2020) are included in the table below:

Weekly & Monthly Ammonia Nitrogen Limits – WWSF Community

Main Creek		Summer May – Oct.	Winter Nov. – April
Effluent Flow	Qe (MGD)	0.0086	0.0086

Attachment #1

Main Creek		Summer May – Oct.	Winter Nov. – April
Background Information	7-Q_{10} (cfs)	1.1	1.1
	7-Q_2 (cfs)	2.5	2.5
	Ammonia (mg/L)	0.04	0.13
	Average Temperature (°C)	16	3
	Maximum Temperature (°C)	21	9
	pH (s.u.)	7.5	7.5
	% of Flow used	100	25
	Reference Weekly Flow (cfs)	1.1	0.3
	Reference Monthly Flow (cfs)	2.1	0.5
Criteria mg/L	4-day Chronic		
	Early Life Stages Present	7.39	10.91
	Early Life Stages Absent		
	30-day Chronic		
	Early Life Stages Present	2.96	4.36
	Early Life Stages Absent		
Effluent Limitations mg/L	Weekly Average		
	Early Life Stages Present	615	234
	Early Life Stages Absent		
	Monthly Average		
	Early Life Stages Present	469	173
	Early Life Stages Absent		

Effluent Data

The following table evaluates the statistics based upon ammonia data reported from January 2023 – December 2023.

Ammonia Nitrogen Effluent Data

Sample Date	Conc. (mg/L)
01/25/2023	1.2
02/01/2023	0.2
02/08/2023	0.3
03/29/2023	1.6
04/29/2023	0.6
05/24/2023	0.2
06/07/2023	1.2
07/05/2023	1.9
09/27/2023	0.7
10/18/2023	0.6
11/08/2023	0.1
12/13/2023	0.1
1-day P_{99}	3.0
4-day P_{99}	1.7
30-day P_{99}	1.0
Mean*	0.72
Std	0.61

Attachment #1

Sample size	12
Range	<0.1 - 1.9

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

Reasonable Potential

The need to include ammonia limits in the Village of Conrath permit is determined by calculating 99th upper percentile (or P_{99}) values and comparing those to the calculated limits. Based on this comparison, there is no reasonable potential for the discharge to exceed any of the calculated ammonia nitrogen limits. **Therefore, ammonia nitrogen limits are not recommended during the reissued permit term. Monthly monitoring for 1 year is recommended to continue during the reissued permit term to determine the need for ammonia nitrogen limits at the next permit reissuance.**

PART 4 – 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.

Because the Village of Conrath does not currently have an existing technology-based limit, the need for this limit in the reissued permit is evaluated. The data demonstrates that the annual monthly average phosphorus loading is less than 150 lbs/month, which is the threshold for municipalities in accordance with s. NR 217.04(1)(a)1, Wis. Adm. Code. **Therefore, a technology-based limit is not recommended during the reissued permit term.** In addition, the need for a WQBEL for phosphorus must be considered.

Annual Average Mass Total Phosphorus Loading

Month	Average Phosphorus Concentration (mg/L)	Total Effluent Flow (Million Gallons)	Calculated Mass (lbs/month)
Nov. 2024	4.04	0.108	3.6
Dec. 2024	4.68	0.110	4.3
Jan. 2025	4.28	0.151	5.4
Feb. 2025	4.49	0.140	5.2
March 2025	4.71	0.179	7.0
April 2025	5.01	0.123	5.1
May 2025	5.19	0.087	3.8
June 2025	5.22	0.126	5.5
July 2025	5.48	0.081	3.7
Aug. 2025	4.94	0.085	3.5
Sept. 2025	4.61	0.080	3.1
Oct. 2025	4.57	0.104	4.0
		Average =	4.5

Total P (lbs/month) = Monthly average (mg/L) × total flow (MG/month) × 8.34 (lbs/gallon)
Where total flow is the sum of the actual flow (MGD) for that month

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 Main Creek.

Downstream impacts are also considered. The Holcombe Flowage is defined as an impounded flowing water as described in s. NR 102.03(1q), Wis. Adm. Code, using the lake natural community layer in WPDES viewer. The phosphorus criterion is set equal to the primary stream or river entering the impounded water as described in s. NR 102.06(3)(c), Wis. Adm. Code. The Chippewa River is the primary river that drains into the Holcombe Flowage which is listed in s. NR 102.06(3)(a)8, Wis. Adm. Code, with a phosphorus criterion of 0.100 mg/L. This criterion applies for the Holcombe Flowage, approx. 8.2 miles downstream from Outfall 001. Downstream impacts will not be considered further since the applicable phosphorus criterion for Main Creek is the more stringent.

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):

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

Where:

WQC = 0.075 mg/L for Main Creek.
Qs = 100% of the 7-Q_2 of 2.5 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 = 0.0086 MGD = 0.013 cfs
f = the fraction of effluent withdrawn from the receiving water = 0

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

The previous limit evaluation September 2020 resulted in a WQBEL of 1.4 mg/L using a background concentration of 0.068 mg/L. Section NR 217.13(2)(d), Wis. Adm. Code, states that the determination of upstream concentrations shall be evaluated at each permit reissuance. Additional data were considered in estimating the background phosphorus concentration.

A review of all available in stream total phosphorus data from stored in the Surface Water Integrated Monitoring System database shows no updated samples for Main Creek so other surface waterbodies with similar ecological characteristics as used in Rusk County. The background phosphorus concentration of 0.029 mg/L is based on the median of samples taken from multiple unidirectional flowing surface

waterbodies from the last 5 years (n = 33, July 2021 – October 2025), the majority from the Chippewa and Flambeau Rivers.

Substituting a median value of 0.029 mg/L into the limit calculation equation above, the calculated limit is 8.7 mg/L. This limit is significantly less stringent than the current limit of 1.4 mg/L effective in the current permit. **Therefore, the current monthly average phosphorus WQBEL of 1.4 mg/L is recommended during the reissued permit term unless the applicable antibacksliding and antidegradation requirements as described in ch. NR 207, Wis. Adm. Code, are satisfied.**

Effluent Data
The following table summarizes effluent total phosphorus monitoring data from January 2021 – October 2025. A total of 6 effluent phosphorus samples in August 2021 and November 2021 are believed to be errors in the sampling procedure and are not considered to be representative of the discharge. Therefore, they are excluded from this evaluation.

Total Phosphorus Effluent Data

Statistics	Conc. (mg/L)	Mass (lbs/day)
1-day P_{99}	7.78	0.63
4-day P_{99}	6.42	0.37
30-day P_{99}	5.65	0.23
Mean	5.24	0.17
Std	0.93	0.12
Sample size	241	237
Range	2.3 - 9.4	0 - 0.849

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

Mass Limits
A mass limit is also required, pursuant to s. NR 217.14(1)(a), Wis. Adm. Code, because Main Creek is an ERW. **This final mass limit shall be 1.4 mg/L × 8.34 × 0.0086 MGD = 0.10 lbs/day expressed as a monthly average.**

Water Quality Trading Minimum Control Level
A WQT plan has been resubmitted as an alternative compliance option to offset any total phosphorus discharged from Outfall 001 that exceed the phosphorus WQBELs. The phosphorus WQBELs may be expressed as computed compliance limits, but a MCL must be set as a limit not to be exceeded at the outfall location. **Therefore, the phosphorus AEL of 6.45 mg/L as a monthly average is recommended to continue during the reissued permit term to serve as the MCL.**

Antidegradation & Antibacksliding
The Village of Conrath has requested an increase in the MCL limit of their phosphorus WQT. This is in response to a significant wastewater collection system upgrade decreasing the amount of inflow and infiltration (I&I) in the sewershed, which resulted in increases to the influent phosphorus concentration to

the WWTF. If the MCL limit were to be reevaluated based on the level currently achievable by the WWTF, the updated limit would be recommended to be 7.2 mg/L as a monthly average. This is based on the maximum monthly average of effluent phosphorus data during January 2021 – October 2025.

Because an effective limit in the permit is proposed to be removed, the applicable antibacksliding and antidegradation requirements in ch. NR 207, Wis. Adm. Code, must be met before the limit can be increased in the reissued permit. In this case the Village of Conrath is not considered an increased discharge as defined in s. NR 207.02(6)(a), Wis. Adm. Code, as the Village of Conrath indicated they have enough WQT credits to comply with the phosphorus WQBELs with an increased MCL limit, so the phosphorus WQC would still be met and not result in a lowering of phosphorus water quality. Therefore, antidegradation does not apply and only antibacksliding requirements will be evaluated.

Subchapter II of NR. 207, Wis. Adm. Code, contains the requirements for increasing or relaxing (backsliding) any effective limit in a permit. In order to make an effective limit less stringent, the "safety clause" requirements as described in s. NR 207.12(1)(a) and (b), Wis. Adm. Codes, must be met. Also, an additional set of requirements must be met depending on the type of the limit in question. For the Village of Conrath, s. NR 207.12(1)(a), Wis. Adm. Code, is met as there is no applicable technology-based effluent limits (TBELs) available for phosphorus for municipal discharges. This code refers to TBELs as established under Title 40 CFR Part 125 based on national effluent limit guidelines (ELGs) and standards established by the EPA or best professional judgement on a case-by-case basis in absence of such standards. The limit required under subchapter II of ch. NR 217, Wis. Adm. Code, does not meet the definition of a TBEL as it is a technology-based treatment standard promulgated by the state that is not an ELG. Section NR 207.12(1)(b), Wis. Adm. Code, is met as the Village of Conrath will still be meeting their phosphorus WQBELs via their phosphorus WQT and antidegradation is not applicable as stated prior. Because the MCL limit is derived similar to how the Department would implement an interim limit, s. NR 207.12(4), Wis. Adm. Code, is applicable. In this case, s. NR 207.12(4)(a), Wis. Adm. Code, is applicable where circumstances upon which the previous permit was based have materially and substantially changed since the time the permit was issue. This circumstance are the wastewater collection system upgrades affecting the I&I flow in the sewershed, resulting in increases to the influent phosphorus concentration to the WWTF. Therefore, the antibacksliding requirements of ch. NR 207, Wis. Adm. Code, are met, and **the MCL limit may be increased to 7.2 mg/L as a monthly average during the reissued permit term.**

PART 5 – 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.

Due to the amount of upstream flow available for dilution in the limit calculation (Qs:Qe >20:1), the lowest calculated limitation is 120° F as a daily maximum as described in s. NR 106.55(6)(a), Wis. Adm. Code. At temperatures above approx. 103° F, conventional biological treatment systems do not function properly and experience upsets. There is no indication that this has ever occurred in this treatment system,

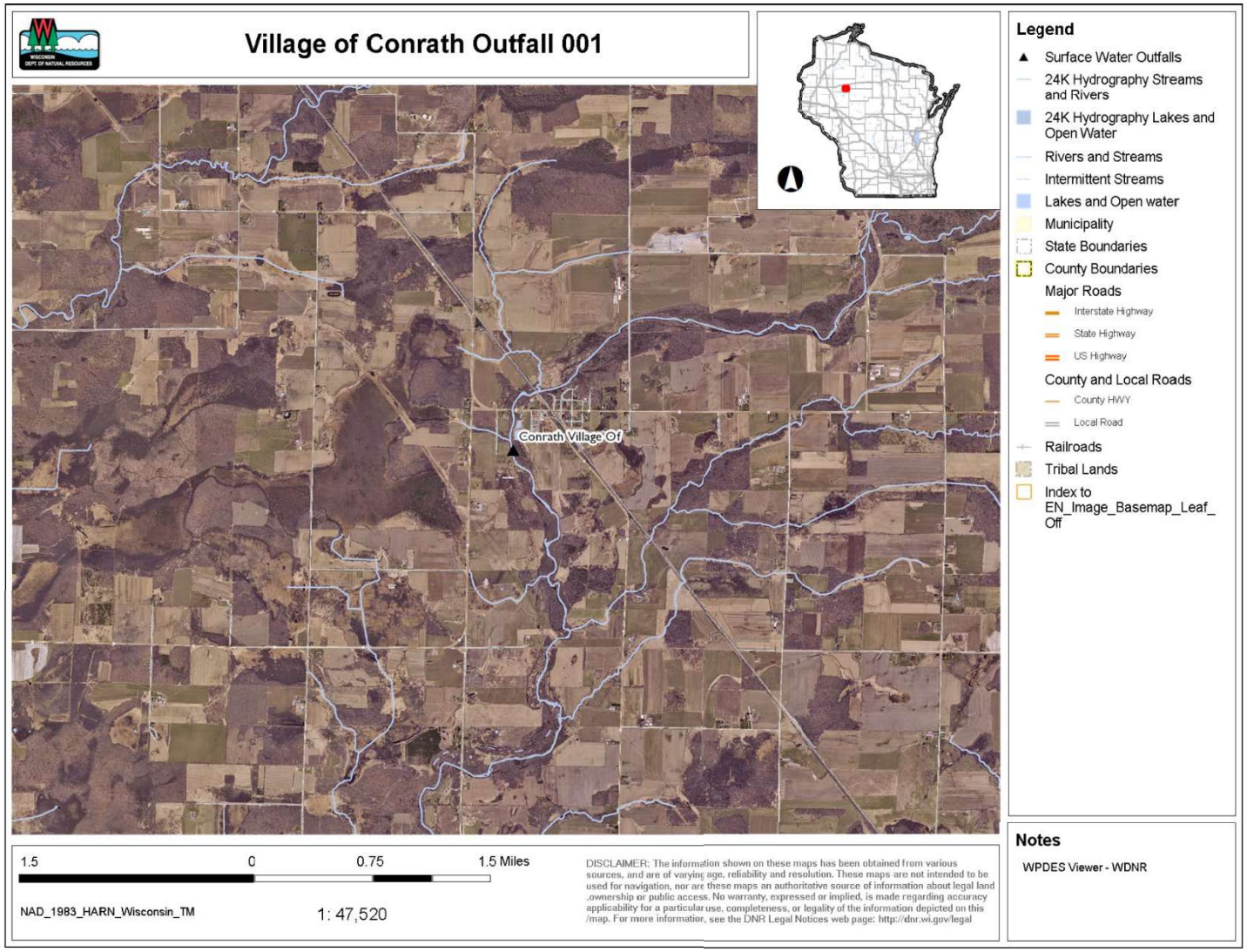
so there is no reasonable potential for the discharge to exceed this limit. **Therefore, temperature limits or monitoring are not recommended during the reissued permit term.**

PART 6 – 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).

Guidance in Chapter 1.11 of the WET Guidance Document (WET Testing of Minor Municipal Discharges) was consulted. This is a minor municipal discharge (< 1.0 MGD) comprised solely of domestic wastewater, no history of WET failures, no additives used, and no toxic compounds detected at levels of concern. **No WET testing is recommended at this time because of the low risk in effluent toxicity.**

Attachment #2



WATER QUALITY TRADING PLAN FOR VILLAGE OF CONRATH

VILLAGE OF CONRATH

Agreement with Village of Hawkins

WQT-2026-022

September, 2026

Village of Conrath Board:

President Gary Pomeranke

Trustee Tony Vojtasek

Trustee James Chiovarie

Clerk Angie Harvey

Treasurer Beau Harvey

State of Wisconsin
Department of Natural Resources
101 South Webster Street
Madison WI 53707-7921
dnr.wi.gov

Notice of Intent to Conduct Water Quality Trading

Form 3400-206 (1/14)

Notice: Pursuant to s. 283.84, Wis. Stats., and ch. NR 217 Wis. Adm. Code, this form must be completed by any WPDES permittee that is using water quality trading as a method of complying with a permit limitation. Failure to complete this form would not result in penalties. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.).

Applicant Information

Permittee Name	Permit Number	Facility Site Number
Village of Conrath	WI- 0032522-08-0	

Facility Address	City	State	ZIP Code
Vine Avenue	Conrath	WI	54731

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Angie Harvey	N2682 1st Street	Conrath	WI	54731

Project Name: Conrath WWTF

Receiving Water Name	Parameter(s) being traded	HUC 12(s)
Main Creek	Phosphorus	070500040305

Is the permittee in a point or nonpoint source dominated watershed? (See PRESTO results - http://dnr.wi.gov/topic/surfacewater/presto.html)
- ○ Point source dominated
- ◉ Nonpoint source dominated

Credit Generator Information

Credit generator type (select all that apply):
- ☐ Permitted Discharge (non-MS4/CAFO)
- ☐ Permitted MS4
- ☐ Permitted CAFO
- ☐ Urban nonpoint source discharge
- ☒ Agricultural nonpoint source discharge
- ☐ Other - Specify:

Are any of the credit generators in a different HUC 12 than the applicant?
- ◉ Yes; HUC 12: 070500040303
- ○ No
- ○ Unsure

Are any of the credit generators downstream of the applicant?
- ○ Yes
- ◉ No
- ○ Unsure

Will a broker/exchange be used to facilitate trade?
- ◉ Yes; Name: Village of Hawkins
- ○ No
- ○ Unsure

Point to Point Trades (Traditional Municipal / Industrial Discharge, MS4, CAFO)

Discharge Type	Permit Number	Name	Contact Address	Is the point source credit generator currently in compliance with their permit requirements?
○ Traditional ○ MS4 ○ CAFO				○ Yes ○ No ○ Unsure
○ Traditional ○ MS4 ○ CAFO				○ Yes ○ No ○ Unsure
○ Traditional ○ MS4 ○ CAFO				○ Yes ○ No ○ Unsure
○ Traditional ○ MS4 ○ CAFO				○ Yes ○ No ○ Unsure
○ Traditional ○ MS4 ○ CAFO				○ Yes ○ No ○ Unsure

Point to Nonpoint Trades (Non-permitted Agricultural, Non-Permitted Urban, etc.)

List the practices that will be used to generate credits:

The Village of Conrath will continue to purchase Phosphorus Credits from the Village of Hawkins. Refer to The Village of Hawkins Water Quality Trade Agreement, approved 3-12-24. The Village of Hawkins is generating credits through perennial vegetation (conservation easement).

The Village of Conrath, on average, discharges 60# of phosphorus per year into Main Creek. The final permitted limit is 1.4 mg/l of phosphorus discharged into Main Creek or 17# allowed per year. The Village needs a minimum credit of (60# - 17#) = 43# of phosphorus per year from Hawkins. This does not include a trade ratio or margin of safety. Therefore, the Village of Conrath is requesting 70# per year of available phosphorus trading credits from the Village of Hawkins.

Method for quantifying credits generated:
- ☐ Monitoring
- ☐ Modeling, Names: _____
- ☒ Other: Report approved by WI DNR 3-12-24

Projected date credits will be available:

The preparer certifies all of the following:

- I am familiar with the specifications submitted for this application, and I believe all applicable items in this checklist have been addressed.
- I have completed this document to the best of my knowledge and have not excluded pertinent information.

Signature of Preparer	Date Signed
Tony Latham	5-21-25

Authorized Representative Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision. Based on my inquiry of those persons directly responsible for gathering and entering the information, the information is, to the best of my knowledge and belief, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative	Date Signed
Christa M Ott	05/21/2025

VILLAGE OF CONRATH -VILLAGE OF HAWKINS
TRADE AGREEMENT
POINT TO NON POINT SOURCE TRADE

Permittee Information				
Credit User (Permittee): Village of Conrath	Permit Number: WI-0032522-08-0	Facility Site Number:	Pending WPDES Permit Term: 1/1/2026-12/31/2030	
Facility Address: Vine Avenue	Village: Conrath		State: WI	Zip Code: 54731
Contact Person Address: Angela Harvey N2682 First St.	Village: Conrath		State: WI	Zip Code: 54731
Receiving Water Name: Main Creek	parameter being traded: Phosphorus		HUC 12: 070500040305	
Credit Producer/Broker				
Credit producer: Village of Hawkins	Permit Number: N/A Non Point Source Generator			WQT plan Number: WQT-2024-0008
Contact Person Address: Alicia Valentine PO BOX 108	Village: Hawkins		State: WI	Zip Code: 54530
Address of Credit Producer: W11945 USH 8	Village: Hawkins		State: WI	Zip Code: 54530
Receiving Water Name: Main Creek	parameter being traded: Phosphorus		HUC 12: 070500040303	
Legal Description of property: NE¼ of the NW¼ and the SE¼ of the NW¼, Section 7, T.35N.-R.2W., located in the Township of Kennan, Price County				

Agreement

The property described above is enrolled in a Water Quality Trading Agreement. Improvements to the property used to generate phosphorus credits have been installed and approved in Water Quality Trading Plan WQT-2018-0001 and maintained through WQT-2024-0008. The property generates phosphorus credits in excess of what the Village of Hawkins needs for their own use. The Village of Hawkins agrees to annually sell 73 pounds of available phosphorus (PTP) to the Village of Conrath for $2,500.00 per year for the term of October 1, 2023 - September 30, 2028 and increasing to $3,285.00 per year for the term of October 1, 2028 - September 30, 2033, unless for any reason the phosphors requirements of WPDES permit is modified by the DNR. The annual payment will be due October 1st. The above payment terms and dates do not coincide with with the WPDES permit term. If, for any reason the WPDES permit is modified by the DNR, either Village, at their discretion, may opt not to renew the agreement into the third WPDES term.

Village Board Resolution of the Credit Producer/Broker:

Resolved, that this water quality trade agreement, is hereby approved by the Village Board of the Village of Hawkins.

DATE: 6/25/25 APPROVED: _____
Douglas Vandoorn, President

DATE: 6/30/25 SIGNED: _____
Douglas Vandoorn, President

I hereby certify that the foregoing is a copy of a resolution adopted by the Village Board of the Village of Hawkins.

_____
Alicia Valentine, Village Clerk

STATE OF WISCONSIN)
RUSK COUNTY)ss
I, Alicia Valentine, being the duly appointed, qualified and acting clerk of the Village of Hawkins, Rusk County, do hereby certify that the Village of Hawkins passed resolution number 06152025 on 6/25/25 authorizing me to issue an approval of this Water Quality Trading Agreement granted and effective on the 1 day of October, 2028

DATE: 6/30/25 SIGNED: _____
Alicia Valentine, Village Clerk

Village Board Resolution of the credit user (permittee):

Resolved, that this water quality trade agreement, is hereby approved by the Village Board of the Village of Conrath.

DATE: 6.27.25 APPROVED: _____
Gary Pomeranke, President

DATE: 6.27.25 SIGNED: _____
Gary Pomeranke, President

I hereby certify that the foregoing is a copy of a resolution adopted by the Village Board of the Village of Conrath.

_____
Angela Harvey, Village Clerk

STATE OF WISCONSIN)
RUSK COUNTY)ss
I, Angela Harvey, being the duly appointed, qualified and acting clerk of the Village of Conrath, Rusk County, do hereby certify that the Village of Conrath passed resolution number 2025-1 on 6/27/25 authorizing me to issue an approval of this Water Quality Trading Agreement granted and effective on the 27 day of June, 2025.

DATE: 06/27/25 SIGNED: _____
Angela Harvey, Village Clerk

Conrath WWTP 2021 water quality trading report

Number of credits used by month

- January 0 lbs
- February 0 lbs
- March 0 lbs
- April 0 lbs
- May 0 lbs
- June 0 lbs
- July 0 lbs
- August 0 lbs
- September 0 lbs
- October 0 lbs
- November 0 lbs
- December 3.545 lbs

The sources of the purchased water quality trading credits is, Village of Hawkins nonpoint source

WQT-2018-0001. The WQT agreement between Hawkins and Conrath is in effect until September 30 2028.

There were no noncompliance issues in the 2021 year with the management of the WQT site managed by the Village of Hawkins.

Al Zenner OIC of Conrath Sanitary District.

Conrath WWTP 2022 water quality trading report

Number of credits used by month

- January 3.545 lbs
- February 3.095 lbs
- March 5.613 lbs
- April 5.222 lbs
- May 5.919 lbs
- June 0 lbs
- July 3.966 lbs
- August 4.987 lbs
- September 2.959 lbs
- October 0 lbs
- November 4.163 lbs
- December 3.262 lbs
- Total credits used 42.731 of 60.8 available

The sources of the purchased water quality trading credits is, Village of Hawkins nonpoint source

WQT-2018-0001. The WQT agreement between Hawkins and Conrath is in effect until September 30 2028.

There were no noncompliance issues in the 2022 year with the management of the WQT site managed by the Village of Hawkins.

Al Zenner OIC of Conrath Sanitary District.

Conrath WWTP 2023

water quality trading report

Number of credits used by month

- January 2.984 lbs
- February 2.979 lbs
- March 5.50 lbs
- April 10.712 lbs
- May 2.122 lbs
- June 2.63 lbs
- July 2.548 lbs
- August 0 lbs
- September 0 lbs
- October 3.515 lbs
- November 2.674 lbs
- December 2.305 lbs
- Total credits used 37.969 of 60.8 available

The sources of the purchased water quality trading credits is, Village of Hawkins nonpoint source

WQT-2018-0001. The WQT agreement between Hawkins and Conrath is in effect until September 30 2028.

There were no noncompliance issues in the 2023 year with the management of the WQT site managed by the Village of Hawkins.

Al Zenner OIC of Conrath Sanitary District.

Conrath WWTP 2024 water quality trading report

Number of credits used by month

- January 2.349 lbs
- February 0 lbs
- March 3.983 lbs
- April 4.543 lbs
- May 5.098 lbs
- June 6.180 lbs
- July 2.267 lbs
- August 0 lbs
- September 2.084 lbs
- October 0 lbs
- November 2.084 lbs
- December 3.012 lbs
- Total credits used 31.6 of 60.8 available

The sources of the purchased water quality trading credits is, Village of Hawkins nonpoint source

WQT-2018-0001. The WQT agreement between Hawkins and Conrath is in effect until September 30 2028.

There were no noncompliance issues in the 2024 year with the management of the WQT site managed by the Village of Hawkins.

Al Zenner OIC of Conrath Sanitary District.

M & P Project No. 15-129

-WATER QUALITY TRADING AGREEMNT-

between

Village of Hawkins Nonpoint source WQT-2018-0001

And

Village of Conrath, Point Source

February, 2019

Revised 4-1-2019

Revised 6-11-2019

Revised 8-22-2019

Prepared by:

MORGAN & PARMLEY, LTD.
Professional Consulting Engineers
115 W 2nd Street, South
Ladysmith, Wisconsin 54848

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-WATER QUALITY TRADE AGREEMENT –
BETWEEN
VILLAGE OF HAWKINS AND THE VILLAGE OF CONRATH

Introduction

The Village of Conrath will purchase phosphorus credits from the Village of Hawkins in order to remain in compliance with the phosphorus WQBEL limits of the WPDES permit. Alternatives such as discharging to a wetland, alternate discharge location, "regionalization", chemical addition, and purchasing land to develop a WQT plan were all dismissed due to technical and financial limitations. However, the Village of Hawkins has an approved Water Quality Trading Plan (WQT-2018-0001), which generates more phosphorus credits than the Village of Hawkins needs to meet their own effluent limits. This allows Hawkins to then sell the remaining phosphorus credits. The Village of Hawkins on an annual basis has 606 to 686 pounds of Potentially Tradeable Phosphorus available for sale. The Village of Conrath has agreed to purchase 73 pounds annually.

Water Quality Trading

1. **Purpose:** The purpose of Water Quality Trading is to provide an alternative method for communities to remain in compliance with WPDES effluent limits, without having to fully upgrade their existing WWTF. Water Quality trading allows a WPDES permit holder to allocate reductions in phosphorus runoff from other sources in their watershed, to offset their own point source discharge. The phosphorus reduction can either be generated directly by a Water Quality Trading Plan prepared and managed by the WPDES permit holder, or by a Credit Producer/Broker with an approved Water Quality Trading Plan (WQT Plan). The Credit Producer/Broker prepares a WQT Plan and installs the practices outlined therein, that reduce phosphorus runoff. This reduction in phosphorus runoff is considered Potentially Tradeable Phosphorus (PTP), which can then be sold to WPDES permit holders not wishing prepare their own WQT Plan. The Village of Hawkins is a Credit Producer/Broker with an approved WQT Plan.

2. **Credit Producer/Broker:** The Village of Hawkins completed a Water Quality Trading Plan (WQT-2018-0001) to comply with final phosphorus limit requirements of their WPDES Permit and to produce Potentially Tradeable Phosphorus to sell. The Village of Hawkins purchased an active dairy farm and converted the farm to permanent hay to produce PTP. The Village used some of their PTP to trade with themselves to meet their phosphorus requirements. On an annual basis, over the last ten years, the Village of Hawkins discharged an average of 117 pounds per year of phosphorus. The rate varied from a low of 9 pounds per year to a maximum of 355 pounds per year. Hawkins' WPDES Permit limits their phosphorus discharged to Main Creek at approximately 22 pounds per year. For design purposes, the Village of Hawkins proposed to mitigate (350 lb. /year – 22 lb. /year) X 1.2(trade ratio) = 400 pounds PTP/year by Water Quality Trading with themselves. The former dairy farm, converted to permanent hay, will generate on average approximately 1,000 pounds of PTP for the Village of Hawkins. The Village of Hawkins proposes to sell the remaining 600± pounds of PTP.

2.1. Location of Property Generating PTP: The farm generating PTP discharges to an unnamed perennial waterway that flows into Stony Creek and then into the South Fork of Main Creek. All upstream of the Village of Conrath's outfall. The farm is located in HUC 070500040303 and consists of the NE ¼ of the NW ¼, and the SE ¼ of the NW ¼, Section 7, T.35N.-R.2W., located in the Town of Kennan, Price County.

2.2. Farm (Baseline): Prior to the Village of Hawkins purchasing the farm it was under the management of Brian Olson as a dairy farm. The 80 acre farm was home to a continuous milking herd of approximately 50 cows plus associated dry cows and young stock. Manure from the dairy herd was applied to all the tillable acreage on the farm. The primary crop grown was corn silage, due to the small land base available to feed their livestock. Spring moldboard plowing and disking was performed to create a seed bed for the following corn crop. The above practices were modeled with SnapPlus nutrient management software to quantify the amount of Potentially Tradeable Phosphorus (PTP) leaving the farm in runoff. The tillage and cropping practices modeled, cause high levels of soil erosion which carry sediment bound and dissolved phosphorus into the adjoining surface water eventually entering Main Creek. The model indicated that annually 900-1100 lb. of PTP left the farm in runoff.

2.3. Farm (Future Operation): After the Water Quality Trading Plan (WQT-2018-0001) was approved by the DNR the Village of Hawkins, purchased the Olson Farm. The home, farm buildings, barnyard, and impervious surfaces were removed. The entire farm, including: former building sites, farm roads, cropland, and pastures were seeded to permanent grass cover. The grass cover will be maintained to have a high stand count to trap sediments and utilize nutrients in those sediments. The permanent grass cover will be harvested for grass hay by a local farmer and removed from the farm. Removing grass hay from the farm will draw down phosphorus levels in the soils and also in any sediments leaving the farm. The farm will be soil tested periodically and fertilized according to UW recommendations. Phosphorus levels will be maintained at or below the optimum level. The above farm operating conditions were modeled with SnapPlus nutrient management software. The farm model, after the establishment year of the permanent grass cover, indicated that annually 20-50 lb. of PTP would leave the farm in runoff.

2.4. Summary of Potentially Tradeable Phosphorus (PTP) Generated by Hawkins

TABLE 1

Hawkins' Summary of PTP from 2019 through 2023				
Year	CURRENT PRACTICES (BASELINE) PTP	PERMANENT GRASS HAY PTP	PTP TO BE USED BY THE VILLAGE OF HAWKINS	REMAINING PTP TO BE SOLD
2019	1058	-52	-400	606
2020	1091	-36	-400	655
2021	1094	-27	-400	667
2022	1109	-23	-400	686
2023	1109	-23	-400	686

Note: all years after 2022 will generate 1109 lb. PTP

3. **Village of Conrath (Phosphorus Credit Use):** The Village of Conrath has a sub-surface sand filter treatment facility. Primary sewage treatment takes place in individual septic tanks located at each service. Individual septic tanks discharge into the small-diameter (combination pressure/gravity) collection system. A master lift station pumps all collected domestic strength wastewater to the two final septic tanks, which drain into the headworks of the WWTF. Following treatment in the sand filter, the effluent is seasonally disinfected by a UV unit prior to discharge to Main Creek. The annual hydraulic design flow is 0.0086 million gallons per day, however the average 2015-2017 flow has been 0.0047 million gallons per day. The original design did not address or require phosphorus removal. Therefore, Conrath's WWTF has no components for phosphorus removal. The average effluent phosphorus concentration, from October 2015 thru January 2017, was 4.46 mg/l; the proposed WPDES effluent limit is 1.5 mg/l.

3.1. **Location of the Outfall:** The Village of Conrath WWTF outfall discharges into Main Creek at approximate Latitude 45.3826°, Longitude 91.0432°. The outfall is located in HUC 070500040305.

3.2. **WPDES Permit:** The final effluent limit of 1.5 mg/l TP will be met by using water quality trading. The Village of Conrath will purchase phosphorus credits from the Village of Hawkins to remain in compliance with the final phosphorus effluent limits. Conrath's current WPDES permit will expire 9-30-2020, future WPDES permit terms will be synchronized with those of Hawkins. The upcoming permit term will be three years to coincide with Hawkins reissuance date of 10-1-2023.

3.3. **Total Phosphorus Testing:** The Village of Conrath was not required to start testing for Total Phosphorus (TP) until October of 2015.

- 2015 October-December the average discharge rate was 0.0048 MGD with an effluent monthly average Total Phosphorus of 4.6 mg/l which if extrapolated for the year would be (0.0048 MGD x 4.6 mg/l. x 8.34 x 365 days= 67 lb. of TP
- 2016 the average discharge rate was 0.00476 MGD with an effluent monthly average Total Phosphorus of 4.78 mg/l (0.00476 MGD x 4.78 mg/l. x 8.34 x 365 days= 69 lb. of TP
- 2017 the average discharge rate was 0.00448 MGD with an effluent monthly average Total Phosphorus of 4.12 mg/l (0.00448 MGD x 4.12 mg/l. x 8.34 x 365 days= 56 lb. of TP
- 2018 the average discharge rate was 0.00353 MGD with an effluent monthly average Total Phosphorus of 2.91 mg/l (0.00353 MGD x 2.91 mg/l. x 8.34 x 365 days= 31 lb. of TP

3.4. **Trade Ratio:** The Village of Conrath will purchase Potentially Tradeable Phosphorus (PTP) from the Village of Hawkins. The DNR requires a trade ratio be applied to ensure that the reduction in farm phosphorus runoff results in a net water quality improvement at Conrath's point of standards application. The trade ratio accounts uncertainty in practices reducing phosphorus runoff, and losses to stream assimilation. The Trade Ratio between the Village of Conrath and Hawkins is as follows:

- Delivery Factor = The Village of Conrath WWTF discharge is located in HUC 070500040305 downstream of the credit generator being located in HUC

070500040303, (.942 user delivery fraction - .942 generator delivery fraction)/0.942 user delivery fraction) = 0 delivery fraction

- Downstream Trading Factor = N/A credit user is downstream of the credit generator
- Equivalency Factor = 0 for TP
- Uncertainty Factor = 1:1 per. Table 16, Pg. 57 of a WQT How To Manual, WI DNR
- Habitat Adjustment = N/A no habitat work

0 delivery factor + N/A downstream trading factor + 0 equivalency factor + 1:1 uncertainty factor + N/A habitat adjustment = 1:1. However, the minimum trade ratio allowed by the DNR from a non-point source to a point source is 1.2:1

3.5.Credit Calculation: Since the Village of Conrath has only been testing Total Phosphorus (TP) since October of 2015, a safety factor will be applied to insure that the Village of Hawkins reserves sufficient PTP for the Village of Conrath. PTP must be used in the year it is generated or it will be lost; so enough credit must be reserved to cover the **worst anticipated year (2016)** plus a safety factor. In 2016, the Village of Conrath discharged 69 pounds of TP into Main Creek. However, the WPDES allows 22 pounds of phosphorus to be discharged into Main Creek. ((0.00476MGD "2016 flow" x 1.5 mg/l x 8.34) x 365 days =22 lb. TP) Therefore:

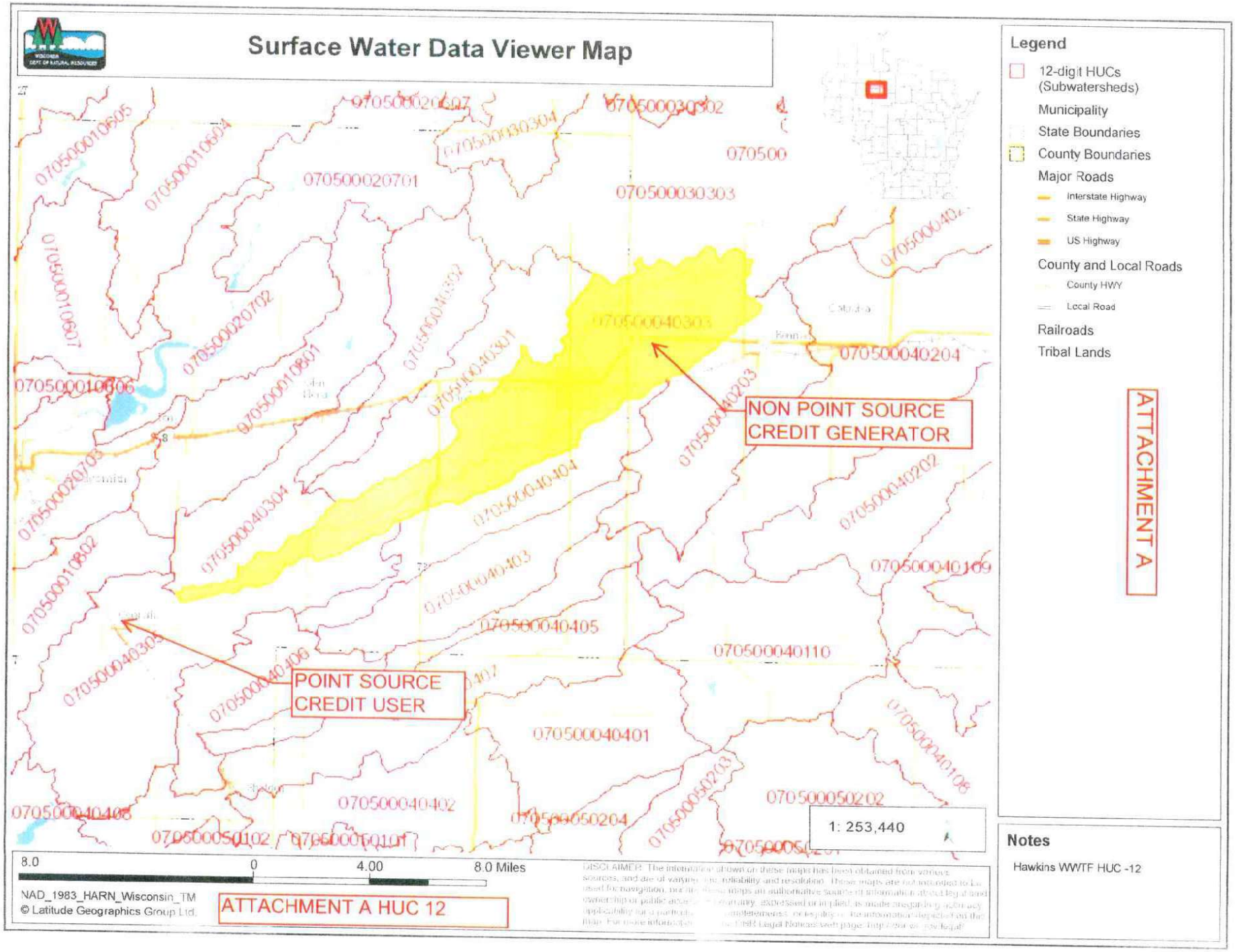
- (69 lb. TP 2016 - 22 lb. TP permitted) x 1.2 Trade Ratio = 56 lb. of PTP would have been required in 2016 had the final effluent limits been in place.
- The Village of Conrath decided to purchase 73 Lb. PTP from the Village of Hawkins, giving them a safety factor of (17lb./1.2)=14.16 lb., over their greatest annual TP discharge.

3.6. Summary of Potentially Tradeable Phosphorus after trade with Conrath:

TABLE 2

BALANCE SHEET OF PTP REMAINING FOR SALE BY THE VILLAGE OF HAWKINS AFTER TRADE WITH CONRATH			
Year	PTP AVAILABE FOR SALE - SEE TABLE 1	PTP BUDGETED FOR CONRATH W/1.2:1 TRADE RATIO	REMAINING PTP TO SELL AFTER TTRADING WITH CONRATH
2019	606	73	533
2020	655	73	582
2021	667	73	594
2022*	686	73	613
2023*	686	73	613

Note: PTP generated by Hawkins WQT Plan in 2023 and beyond will be based upon the 2022 PTP of 686 lb. per year.


Surface Water Data Viewer Map
Legend
12-digit HUCs (Subwatersheds)
Municipality
State Boundaries
County Boundaries
Major Roads
Interstate Highway
State Highway
US Highway
County and Local Roads
County HWY
Local Road
Railroads
Tribal Lands
070500020607
070500030302
070500010505
070500030304
070500
070500020701
070500030303
070500010604
070500040402
070500010607
070500020702
070500040303
070500010606
070500040204
070500040301
070500010601
070500040203
NON POINT SOURCE CREDIT GENERATOR
070500020703
070500040404
070500040304
070500040202
070500010802
070500040403
070500040109
070500040405
070500040305
070500040110
070500040406
POINT SOURCE CREDIT USER
070500040401
070500040108
070500040408
070500040402
070500050202
070500050204
070500050203
070500050102
070500050101
ATTACHMENT A
1: 253,440
8.0
0
4.00
8.0 Miles
NAD_1983_HARN_Wisconsin_TM
© Latitude Geographics Group Ltd.
ATTACHMENT A HUC 12
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Notes
Hawkins WWTF HUC -12

State of Wisconsin
Department of Natural Resources
101 South Webster Street
Madison WI 53707-7921
dnr.wi.gov

Notice of Intent to Conduct Water Quality Trading

Form 3400-206 (1/14)

ATTACHMENT B

Notice: Pursuant to s. 283.84, Wis. Stats., and ch. NR 217 Wis. Adm. Code, this form must be completed by any WPDES permittee that is using water quality trading as a method of complying with a permit limitation. Failure to complete this form would not result in penalties. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.).

Applicant Information

Permittee Name	Permit Number	Facility Site Number
Village of Conrath	WI- 0032522-06-0	

Facility Address	City	State	ZIP Code
Vine Avenue	Conrath	WI	54731

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Donald Mataczynski	N2626 Railroad Street	Conrath	WI	54731

Project Name: Conrath WWTF

Receiving Water Name	Parameter(s) being traded	HUC 12(s)
Main Creek	Phosphorus	070500040305

Is the permittee in a point or nonpoint source dominated watershed? (See PRESTO results - http://dnr.wi.gov/topic/surfacewater/presto.html)
- ○ Point source dominated
- ◉ Nonpoint source dominated

Credit Generator Information

Credit generator type (select all that apply):
- ☐ Permitted Discharge (non-MS4/CAFO)
- ☐ Permitted MS4
- ☐ Permitted CAFO
- ☐ Urban nonpoint source discharge
- ☒ Agricultural nonpoint source discharge
- ☐ Other - Specify:

Are any of the credit generators in a different HUC 12 than the applicant?
- ◉ Yes; HUC 12: 070500040303
- ○ No
- ○ Unsure

Are any of the credit generators downstream of the applicant?
- ○ Yes
- ◉ No
- ○ Unsure

Will a broker/exchange be used to facilitate trade?
- ◉ Yes; Name: Village of Hawkins
- ○ No
- ○ Unsure

Point to Point Trades (Traditional Municipal / Industrial Discharge, MS4, CAFO)

Discharge Type	Permit Number	Name	Contact Address	Is the point source credit generator currently in compliance with their permit requirements?
○ Traditional ○ MS4 ○ CAFO				○ Yes ○ No ○ Unsure
○ Traditional ○ MS4 ○ CAFO				○ Yes ○ No ○ Unsure
○ Traditional ○ MS4 ○ CAFO				○ Yes ○ No ○ Unsure
○ Traditional ○ MS4 ○ CAFO				○ Yes ○ No ○ Unsure
○ Traditional ○ MS4 ○ CAFO				○ Yes ○ No ○ Unsure

Point to Nonpoint Trades (Non-permitted Agricultural, Non-Permitted Urban, etc.)
List the practices that will be used to generate credits:

The Village of Conrath proposes to purchase Phosphorous Credits from the Village of Hawkins. Refer to The Village of Hawkins Water Quality Trade Agreement, approved 5-30-2018. The Village of Hawkins is generating credits through perennial vegetation (conservation easement).

The Village of Conrath, on average, discharges 66# of phosphorus per year into Main Creek. The final permitted limit is 1.5 mg/l of phosphorus discharged into Main Creek or 21.5# allowed per year. The Village is seeking credit of (66# - 21.5#) = 44.5# of phosphorus per year from Hawkins.

Method for quantifying credits generated: ☐ Monitoring
☐ Modeling, Names:
☒ Other: Report approved by WI DNR 5-30-18

Projected date credits will be available:

The preparer certifies all of the following:

- I am familiar with the specifications submitted for this application, and I believe all applicable items in this checklist have been addressed.
- I have completed this document to the best of my knowledge and have not excluded pertinent information.

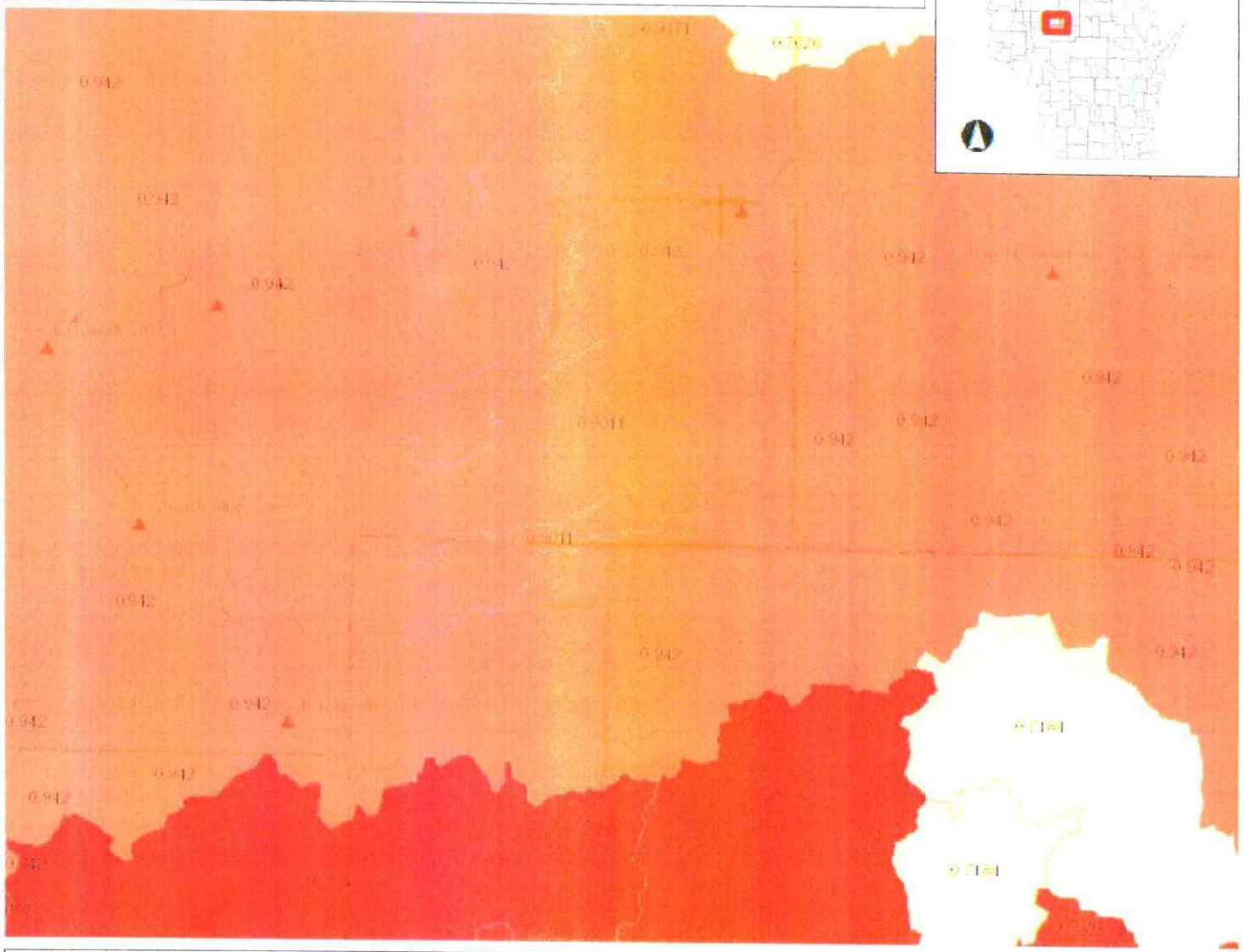
Signature of Preparer	Date Signed
Robert G Parmley	10-10-2018

Authorized Representative Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision. Based on my inquiry of those persons directly responsible for gathering and entering the information, the information is, to the best of my knowledge and belief, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative	Date Signed
Dan Matczynski	10-12-18

Surface Water Data Viewer Map



Legend

SPARROW Model Catchment
- 0.092600 - 0.459700
- 0.459701 - 0.621400
- 0.621401 - 0.825600
- 0.825601 - 0.947100
- 0.947101 - 1.000000

Surface Water Outfalls

Municipality

State Boundaries

County Boundaries

Major Roads
- Interstate Highway
- State Highway
- US Highway

County and Local Roads
- County HWY
- Local Road

Railroads

Tribal Lands

Rivers and Streams

Intermittent Streams

Lakes and Open water

ATTACHMENT C

8.0 0 4.00 8.0 Miles

NAD_1983_HARN_Wisconsin_TM

1: 253,440

DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation; nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: http://dnr.wi.gov/legal

Notes

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Ladysmith Field Office
N4103 Hwy 27 North
Ladysmith, WI 54848

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

November 4, 2026

Gary Pomeranke
Village President
Village of Conrath
PO Box 235
Conrath, WI 54731

Subject: Conrath WWTF - WPDES Permit WI- 0032522-07-0
Water Quality Trading Plan – CONDITIONAL APPROVAL

Dear Mr. Pomeranke,

The Department recently received an updated (2nd term) water quality trading plan (WQT Plan) for compliance with phosphorus effluent limits at the Village of Conrath WWTF. The 1st term plan, for phosphorus compliance in the current WPDES permit, (WQT-2019-0007), was received in April of 2019 and conditionally approved May 13, 2019. This updated WQT Plan was submitted on October 16, 2026, to comply with phosphorus effluent requirements for the upcoming permit term. Based on WDNR review, the final WQT Plan (dated September 2026) is in general conformance with the WDNR Water Quality Trading Guidance and Section 283.84 of the Wisconsin Statutes. The updated WQT plan proposes for the Village of Conrath to purchase 60.8 lbs. of phosphorus credits per year (73 lbs PTP/yr) from the Village of Hawkins, which generates excess WQT credits from their own WQT Plan (WQT-2024-0008). The associated practices at Village of Hawkins have already been installed but are proposed to be maintained as in their WQT plan. Credits generated from approved practices result in available credit quantities shown in Table 1. These credits will be incorporated into the draft WPDES permit for reissuance and will be used to demonstrate compliance with final phosphorus effluent limits beginning January 1st, 2027.

Please note that this WQT plan approval is not to be construed as approval to commence work regulated under other state or local authorities, such as Chapter 30 waterways and wetlands permitting, floodplain, or construction activities.

Table 1: Total Phosphorus Credits Available per WQT-2026-0022

Year	Available Credits (lbs/yr) - Total
2027	60.8
2028	60.8
2029	60.8
2030	60.8
2031	60.8

The Department conditionally approves the WQT Plan as a basis for water quality trading during the next WPDES permit term. The Department has assigned the WQT plan a tracking number of WQT-2026-0022 and will be referenced as such in the draft WPDES permit. The final WQT plan will be included as part of the public notice package for permit reissuance. The draft WPDES permit will include a requirement for an annual trading report and effluent monitoring for total phosphorus.

If you have any questions or comments, please contact me at 715-403-2924 or at arthur.ryzak@wisconsin.gov

Thank You,

Arthur C. Ryzak, Ph.D., P.E.
Wastewater Compliance Engineer
Wisconsin Department of Natural Resources

e-CC:

Alexander Zenner, Village of Conrath
Angela Harvey, Village of Conrath
Matthew Claucherty, WDNR
Sheri Snowbank, WDNR
Michelle BalkLudwig, WDNR