Permit Fact Sheet

General Information

Permit Number	WI-0024791-11-0
Permittee Name and Address	CITY OF MINERAL POINT 137 High Street, Suite One, Mineral Point, WI 53565
Permitted Facility Name and Address	Mineral Point Wastewater Treatment Facility BOLLERUD STREET, MINERAL POINT, WISCONSIN
Permit Term	October 01, 2025 to September 30, 2030
Discharge Location	West bank of Brewery Creek, approximately ¼ mile downstream of the Jackson Street bridge. NW ¼ of SE ¼, Section 6, T4N R6E
Receiving Water	Brewery Creek (Mineral Point Branch Watershed, SP09 – Sugar-Pecatonica River Basin) in Iowa County
Stream Flow ($Q_{7,10}$)	0.72 cfs
Stream Classification	Limited Aquatic Life
Discharge Type	Existing, Continuous
Annual Average Design Flow (MGD)	0.353 MGD
Industrial or Commercial Contributors	Cummins Emissions Solution and Hooks Cheese Company
Plant Classification	A2 - Attached Growth Processes; B - Solids Separation; C - Biological Solids/Sludges; SS - Sanitary Sewage Collection System; P - Total Phosphorus
Approved Pretreatment Program?	N/A

Facility Description

The City of Mineral Point operates a secondary wastewater treatment facility providing treatment for a combination of domestic, commercial, and some industrial wastewater. Treatment consists of mechanical screening and grit removal, primary clarification, bio tower, chemical phosphorus removal, and final clarification prior to discharge to Brewery Creek. The facility had previously been exempted from disinfection requirements; a compliance schedule is included in the permit to allow time for the facility to evaluate methods of disinfection to meet bacteria criteria. Sludge that is produced is anaerobically digested and stored on-site prior to land application on department approved sites.

Substantial Compliance Determination

Enforcement During Last Permit: A notice of noncompliance (NON) was issued in August 2020 for total phosphorus and total suspended solids effluent limit violations, under reporting, late eDMRs, a broken flare, and standard requirement violations. The City did not take steps to correct the violations and enforcement was escalated. A notice of violation (NOV) was issued in December of 2020 and closed out in September of 2021. A NON was issued in October 2023 for

total BOD5, total suspended solids, and total phosphorus effluent limit violations, failure to have a certified designated operator in charge, and standard requirement violations. A NON was issued March 2024 for total phosphorus, total suspended solids, and dissolved oxygen effluent limit violations and water quality trading (WQT) violations. A NON was issued May 2024 for water quality trading (WQT) violations. The facility has completed all previously required actions as part of the enforcement process.

After a desk top review of all discharge monitoring reports, CMARs, land application reports, compliance schedule items, and a site visit on October 23, 2023, this facility has been found to be in substantial compliance with their current permit.

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	0.24 MGD (January 2019 – January 2025)	Influent: 24-hr flow proportional composite samples shall be collected downstream of the fine screen. An ultrasonic flow meter is located at the influent Parshall flume.
001	0.24 MGD (January 2019 – January 2025)	Effluent: 24-hr flow proportional composite samples shall be collected at the effluent Parshall flume and grab samples shall be collected at the top of the cascade aerator. An ultrasonic flow meter is located at the effluent Parshall flume.
002	40 Dry US Tons (2024 Permit Application)	Anaerobically digested, Liquid, Class B. Representative sludge samples shall be collected from sludge storage tank after agitating the sludge.

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	

Changes from Previous Permit:

Influent limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit.

Flow: The sample frequency has changed from “Continuous” to “Daily” for eDMR reporting purposes.

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	Daily Max	30 mg/L	3/Week	24-Hr Flow Prop Comp	
BOD5, 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 (NH3-N) Total	Daily Max	21 mg/L	3/Week	24-Hr Flow Prop Comp	May - October
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	11 mg/L	3/Week	24-Hr Flow Prop Comp	April - October
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	18 mg/L	3/Week	24-Hr Flow Prop Comp	November - March
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	3.4 mg/L	3/Week	24-Hr Flow Prop Comp	April
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	5.7 mg/L	3/Week	24-Hr Flow Prop Comp	May - October
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	8.5 mg/L	3/Week	24-Hr Flow Prop Comp	November - March
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.

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
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 section. Enter the result in the DMR on the last day of the month.
Phosphorus, Total	Monthly Avg	0.8 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) 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	0.225 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)	6-Month Avg	0.075 mg/L	Monthly	Calculated	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	0.22 lbs/day	Monthly	Calculated	Report the WQT TP Computed Compliance value using Equation 3b. in the Water Quality Trading (WQT) section.

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
					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	406.2 lbs/yr	Annual	Calculated	The sum of total monthly credits used may not exceed Table 2 values listed below.
Chloride		mg/L	Monthly	24-Hr Flow Prop Comp	Monitoring only in 2029.
PFOS		ng/L	1/ 2 Months	Grab	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.
PFOA		ng/L	1/ 2 Months	Grab	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.
Nitrogen, Total Kjeldahl		mg/L	See Listed Qtr(s)	24-Hr Flow Prop Comp	Annual in rotating quarters. See Nitrogen Series Monitoring section.
Nitrogen, Nitrite + Nitrate Total		mg/L	See Listed Qtr(s)	24-Hr Flow Prop Comp	Annual in rotating quarters. See Nitrogen Series Monitoring section.
Nitrogen, Total		mg/L	See Listed Qtr(s)	Calculated	Annual in rotating quarters. See Nitrogen Series Monitoring section.
Acute WET		TUa	See Listed Qtr(s)	24-Hr Flow Prop Comp	See Whole Effluent Toxicity (WET) Testing section.

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.

Flow: The sample frequency has changed from “Continuous” to “Daily” for eDMR reporting purposes.

Dissolved Oxygen (DO) and pH: The sample frequency has changed from “3/Week” to “5/Week”.

Ammonia: A daily maximum effluent limit has been added for the months of May through October.

Disinfection & E. coli: 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.

Chloride: The sample frequency has changed from "2/Month" to "Monthly".

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.

Total Nitrogen Monitoring (TKN, N02+N03 and Total N): Annual monitoring is required in specific quarters as outlined in the permit.

Acute WET: Monitoring is required in specific quarters as outlined in the permit.

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 for the Mineral Point Wastewater Treatment Facility dated May 8, 2025, prepared by Zainah Masri, and used for this reissuance.

Disinfection & 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 following months, May – September. See WQBEL for further explanation.

Chlorine: If Mineral Point Wastewater Treatment Facility decides to upgrade to use chlorination for disinfection, effluent limitations would be recommended to ensure proper operation of the dechlorination system and would become effective May 1, 2030 with the E. coli limitations. 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 38 µg/L would be required if Mineral Point 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 9.7 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, in addition to the daily maximum and weekly average limits discussed above, a monthly average limit of 9.7 µg/L, set equal to the weekly average limit, would also be required to meet expression of limits requirements.

Phosphorus: Phosphorus requirements are based on the Phosphorus Rules that became effective December 1, 2010 as detailed in NR 102 Water Quality Standards and NR 217 Effluent Standards and Limitations for Phosphorus. Chapter NR 217 of the Wis. Adm. Code addresses point source dischargers of phosphorus to surface waters. Currently in NR 217 Wis. Adm. Code there are two methods used to determine if a phosphorus limit is needed: a technology based effluent limit (TBEL) and a water quality based effluent limit (WQBEL). Based on the size and classification of the stream, the water quality criteria for the Mineral Point Branch is 75 ug/L. In this case, the WQBEL is 0.225 mg/L (monthly average), 0.075 mg/L & 0.22 lbs/day (6-month average). For the reasons explained in the April 30, 2012 paper entitled 'Justification for Use of Monthly, Growing Season and Annual Average Periods for Expression of WPDES Permit Limits for Phosphorus Discharges in Wisconsin', WDNR has determined that it is impracticable to express the phosphorus WQBEL for the permittee as a maximum daily, weekly or monthly value. The final effluent limit for phosphorus is expressed as a six-month average. It is also expressed as a monthly average equal to three times the derived WQBEL (which equates to 0.3

mg/L). This final effluent limit was derived from and complies with the applicable water quality criterion. A phosphorus concentration limit is necessary to prevent backsliding during the term of the permit. The MCL of 0.8 mg/L will be retained in the permit.

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. This permit includes terms and conditions related to the Water Quality Trading Plan (WQT-2025-0012) or approved amendments thereof. The total 'WQT TP Credits' available are designated in the approved WQT Plan. The City has implemented management practices including streambank stabilization. The WQT Plan proposes the generation of 406.2 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.

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 municipal dischargers with an average flow rate less than 1 MGD, to be evaluated on a case-by-case basis to determine if monitoring is required pursuant to s. NR 106.98(2)(c), Wis. Adm. Code. The department evaluated the need for PFOS and PFOA monitoring taking into consideration the presence of potential PFOS or PFOA industrial wastes, remediation sites and other potential sources of PFOS or PFOA. Based on information available at the time the proposed permit was drafted, it was identified that the POTW has an indirect discharger(s) that may be a potential source of PFOS/PFOA.

Therefore, monitoring once every two months is included. A sample frequency of 1/2 months means one sample is taken during any two-month period. Examples of 1/2 month sample 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.

Total Nitrogen Monitoring: The department has included effluent monitoring for Total Nitrogen through the authority under s. 283.55(1)(e), Wis. Stats., which allows the department to require the permittee to submit information necessary to identify the type and quantity of any pollutants discharged from the point source, and through s. NR 200.065(1)(h), Wis. Adm. Code, which allows for this monitoring to be collected during the permit term. More information on the justification to include total nitrogen monitoring in wastewater permits can be found in the "Guidance for Total Nitrogen Monitoring in Wastewater Permits" dated October 1, 2019. See permit for total nitrogen monitoring requirements.

WET: Whole effluent toxicity (WET) testing requirements and limits (if applicable) are determined in accordance with ss. NR 106.08 and NR 106.09, Wis. Adm. Code, as revised August 2016. See the current version of the Whole Effluent Toxicity Program Guidance Document and checklist and WET information, guidance and test methods at http://dnr.wi.gov/topic/wastewater/wet.html. See permit for WET testing requirements.

Monitoring Frequencies: The Monitoring Frequencies for Individual Wastewater Permits guidance (April 12, 2021) recommends that standard monitoring frequencies be included in individual wastewater permits based on the size and type of the facility, in order to characterize effluent quality and variability, to detect events of noncompliance, and to ensure consistency in permits issued across the state. Guidance and requirements in administrative code were considered when determining the appropriate monitoring frequencies for pollutants that have final effluent limits in effect during this permit term. The sample frequencies for DO and pH were increased from 3/Week to 5/Week and chloride sample frequency was reduced from 2/Month to Monthly per department guidance, specifically to align Mineral Point with facilities of similar size and to better capture effluent quality of these operational parameters.

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.

3 Land Application - Monitoring and Limitations

Municipal Sludge Description						
Sample Point	**Sludge Class (A or B)**	**Sludge Type (Liquid or Cake)**	**Pathogen Reduction Method**	**Vector Attraction Method**	**Reuse Option**	**Amount Reused/Disposed (Dry Tons/Year)**
002	B	Liquid	Anaerobic Digestion	Volatile Solids Reduction/Injection	Land Application	40

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.**

If yes, special monitoring and recycling conditions will be included in the permit to track any potential problems in landapplying sludge from this facility

Is a priority pollutant scan required? **No, design flow is less than 5 MGD.**

Priority pollutant scans are required once every 10 years at facilities with design flows between 5 MGD and 40 MGD, and once every 5 years if design flow is greater than 40 MGD.

3.1 Sample Point Number: 002- SLUDGE

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

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
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 (NH4-N) Total		Percent	Annual	Composite	
Phosphorus, Total		Percent	Annual	Composite	
Phosphorus, Water Extractable		% of Tot P	Annual	Composite	
Potassium, Total Recoverable		Percent	Annual	Composite	
PCB Total Dry Wt	Ceiling	50 mg/kg	Once	Composite	Once in 2026.
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	Once in 2026.
PFOA + PFOS		ug/kg	Annual	Calculated	Report the sum of PFOA and PFOS. See PFAS Permit Sections for more information.
PFAS Dry Wt			Annual	Grab	Perfluoroalkyl and Polyfluoroalkyl Substances based on updated DNR PFAS List. See PFAS Permit Sections for more information.

Changes from Previous Permit:

Sludge limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit.

The parameter order has changed, PCB is listed after the List 2 – Nutrients.

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

Explanation of Limits and Monitoring Requirements

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

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

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" may 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 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.

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.	06/30/2026
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.	04/30/2027
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.	03/31/2028
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.	09/30/2028
Construction Upgrade Progress Report: The permittee shall submit a progress report on construction upgrades.	09/30/2029
Complete Construction: The permittee shall complete construction of wastewater treatment system upgrades.	03/31/2030
Achieve Compliance: The permittee shall achieve compliance with final *E. coli* limitations.	04/30/2030

Explanation of Schedule

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 effluent E. coli water quality-based effluent limits and disinfection requirements pursuant s. NR 210.06, Wis. Adm. Code. If Mineral Point Wastewater Treatment Facility decides to upgrade to use chlorination for disinfection, effluent limitations would be recommended to ensure proper operation of the dechlorination system and would become effective May 1, 2030 with the E. coli limitations. 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 38 µg/L would be required if Mineral Point 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 9.7 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, in addition to the daily maximum and weekly average limits discussed above, a monthly average limit of 9.7 µg/L, set equal to the weekly average limit, would also be required to meet expression of limits requirements.

4.2 Annual Water Quality Trading (WQT) 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; 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.	01/31/2026
Annual WQT Report #2: Submit an annual WQT report that shall cover the previous year.	01/31/2027
Annual WQT Report #3: Submit an annual WQT report that shall cover the previous year.	01/31/2028
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.	01/31/2029
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

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 trading plan 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

4.3 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.	09/30/2026
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 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.	09/30/2027

Explanation of Schedule

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 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	09/30/2026

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.	

Explanation of Schedule

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

Attachments

Water Quality Based Effluent Limits, dated May 8, 2025

Water Quality Trading Plan Conditional Approval Letter, dated April 16, 2025

Approved Water Quality Trading Plan, dated March 19, 2025

Justification Of Any Waivers From Permit Application Requirements

No waivers requested or granted as part of this permit reissuance.

Prepared By: BetsyJo Howe, Wastewater Specialist **Date:** 8/12/2025

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: May 8, 2025

TO: Betsyjo Howe – SCR/Fitchburg

FROM: Zainah Masri – WY/3

SUBJECT: Water Quality-Based Effluent Limitations for the Mineral Point Wastewater Treatment Facility
WPDES Permit No. WI-0024791-11-0

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 Mineral Point Wastewater Treatment Facility in Iowa County. This municipal wastewater treatment facility (WWTF) discharges to the Brewery Creek located in the Mineral Point Branch Watershed (SP09) in the Sugar-Pecatonica Basin. The evaluation of the permit recommendations is discussed in more detail in the attached report.

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

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Six-Month Average	Footnotes
Flow Rate						1,2
BOD_5	30 mg/L			15 mg/L		1
TSS	30 mg/L			20 mg/L		1
pH	9.0 s.u.	6.0 s.u.				1
Dissolved Oxygen		4.0 mg/L				1
Chloride						3
Ammonia Nitrogen April May – October November – March	 - 21 mg/L -		 11 mg/L 11 mg/L 18 mg/L	 3.4 mg/L 5.7 mg/L 8.5 mg/L		
Bacteria						4
E. Coli				126 #/100 mL geometric mean		
PFOS and PFOA						5
Phosphorus						
MCL				0.8 mg/L		
WQT Computed Compliance (TP)				0.225 mg/L	0.075 mg/L 0.22 lbs/day	6
TKN, Nitrate+Nitrite, and Total Nitrogen						7
Acute WET						8,9

Footnotes:

1. No changes from the current permit.

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2. Monitoring only.
3. Monitoring at a frequency to ensure that 11 samples are available at the next permit issuance.
4. Bacteria limits apply during the disinfection season of May through September. Additional final limit: No more than 10 percent of *E. coli* bacteria samples collected in any calendar month may exceed 410 count/100 mL.
5. Based on the types of indirect dischargers contributing to the collection system, and unknown levels of PFOS/PFOA in the source water **PFOS and PFOA monitoring is recommended at a once every two months frequency.**
6. Phosphorus WQBELS are met through WQT computed compliance limits which also require a corresponding Minimum Control Level (MCL) to be met at the discharge. The facility has a maximum WQT of 406.2 lbs/year.
7. 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).
8. After consideration of the guidance provided in the Department's WET Program Guidance Document (2022) and other information described above **three acute WET tests are recommended through the permit term** in the reissued permit. Tests should be done in rotating quarters to collect seasonal information about this discharge. WET testing should continue after the permit expiration date (until the permit is reissued). 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.
9. 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.

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

Attachments (3) – Narrative, Map, and Ammonia Nitrogen Calculations

PREPARED BY: Zainah Masri, Water Resources Engineer Zainah Masri

APPROVED BY: Diane Figiel Date: 05/08/2025
Diane Figiel, PE,
Water Resources Engineer

E-cc: Kenzie Ostien, Wastewater Engineer – SCR/Fitchburg
Lisa Creegan, Regional Wastewater Supervisor – SCR/Fitchburg
Diane Figiel, Water Resources Engineer – WY/3
Kari Fleming, Environmental Toxicologist – WY/3
Nate Willis, Wastewater Engineer – WY/3

Attachment #2

Water Quality-Based Effluent Limitations for
Mineral Point Wastewater Treatment Facility

WPDES Permit No. WI-0024791-11-0

Prepared by: Zainah Masri

PART 1 – BACKGROUND INFORMATION

Facility Description

Mineral Point Wastewater Facility is a secondary wastewater treatment facility providing treatment for a combination of domestic, commercial, and some industrial wastewater. Treatment includes: mechanical screening and grit removal, primary clarifier, bio tower, final clarifier, anaerobic digestion, sludge storage tank, septage receiving, sludge handling facilities, and a SCADA system. Sludge is anaerobically digested prior to onsite liquid storage and seasonal land application on DNR approved agricultural sites. The facility is designed to treat an annual average design flow of 0.353 MGD. The primary clarifier was rehabilitated in 2020 and offline for sludge valve replacement and maintenance in April and June of 2023. The final clarifier was rehabilitated in 2023.

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

Existing Permit Limitations

The current permit, which expired on September 30, 2024, 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
Chloride						3
Ammonia Nitrogen April May – October November – March			 11 mg/L 11 mg/L 18 mg/L	 3.4 mg/L 5.7 mg/L 8.5 mg/L		
Phosphorus						
MCL				0.8 mg/L		
WQT Computed Compliance (TP)				0.225 mg/L	0.075 mg/L 0.22 lbs/day	4,5

Footnotes:

1. Monitoring only.

2. These limits are based on the Limited Forage Fish (LFF) community of the immediate receiving water based on a proposed classification change-. 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. Monitoring in the second year at a frequency to ensure at least 11 samples are available
4. A Compliance schedule was included in the permit to meet the phosphorus limits by October 1, 2021.
5. Phosphorus WQBELS through WQT computed compliance limits which also require a corresponding Minimum Control Level (MCL) to be met at the discharge. The facility has a maximum WQT of 406.2 lbs/year.

Receiving Water Information

- Name: Brewery Creek
- Waterbody Identification Code (WBIC): 928600
- Classification used in accordance with chs. NR 102 and 104, Wis. Adm. Code: Limited Aquatic Life. Brewery Creek and Furnace Creek are listed in s. NR 104.05, Wis. Adm. Code, as Limited Aquatic Life. Approximately 5 miles downstream from the outfall location, Mineral Point Branch is a warm water sport fish community. A 2004 rule revision proposed a reclassification for Brewery Creek to Limited Forage Fish Community for two miles with a classification of warm water sport fish community from the outfall to the confluence with the Rock Branch. Current BOD, TSS and ammonia nitrogen limits are based on the proposed classification of limited forage fish. The daily maximum ammonia nitrogen and temperature limits will use the codified classification of limited aquatic life.
- Low flows used in accordance with chs. NR 106 and 217, Wis. Adm. Code: The following 7-Q_{10} and 7-Q_2 values are from USGS Station SW 1/4 of NE1/4 of Section 6, T4N - R3E, Iowa County, at bridge on town road in Mineral Point.

  7-Q_{10} = 0.72 cfs (cubic feet per second)
  7-Q_2 =1.3 cfs
  Harmonic Mean Flow = 2.2 cfs using a drainage area of 6.74 mi^2
  The Harmonic Mean has been estimated based on average flow and the 7-Q_{10} 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).

  Approximately 5 miles downstream, Mineral Point Branch:
  7-Q_2 = 2.7 cfs
- Hardness = 432 mg/L as $CaCO_3$. This value represents the geometric mean of data from effluent hardness is used in place of receiving water because there is no hardness data for the receiving water.
- % 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 don't impact the calculated WQBEL.
- Multiple dischargers: None
- Impaired water status: Approximately 5 miles downstream of the outfall Mineral Point Branch is listed as impaired for Total Phosphorus.

Effluent Information

- Design flow rate(s):
  Annual average = 0.353 MGD (Million Gallons per Day)
  For reference, the actual average flow from January 2019 to January 2025 was 0.24 MGD.
- Hardness = 432 mg/L as $CaCO_3$. This value represents the geometric mean of data taken from January 2024 in the permit application
- Acute dilution factor used in accordance with s. NR 106.06(3)(c), Wis. Adm. Code: Not applicable – this facility does not have an approved Zone of Initial Dilution (ZID).
- Water source: Domestic wastewater with water supply from Mineral Point Wells. In the permit application Mineral Point Wastewater Treatment Facility indicated they had no industrial contributors however the compliance engineer indicated that the industrial contributors are the following: Cummins Emissions Solution, which produces engines and generators, and Hooks Cheese Company, a dairy producer.
- Additives: Aluminum Sulfate for Phosphorus removal.
- Effluent characterization: This facility is categorized as a minor municipality, so the permit application required effluent sample analyses for a limited number of common pollutants, as specified in s. NR 200.065, Table 1, Wis. Adm. Code, primarily metal substances plus ammonia, chloride, hardness and phosphorus.
- Effluent data for substances for which a single sample was analyzed is shown in the tables in Part 2 below, in the column titled "MEAN EFFL. CONC.". Otherwise, substances with multiple effluent data are shown in the tables below or in their respective parts in this evaluation.

Effluent Copper Data

Sample Date	Copper µg/L	Sample Date	Copper µg/L	Sample Date	Copper µg/L
01/15/2024	7.7	01/29/2024	7.3	02/12/2024	6.6
01/18/2024	9.3	02/01/2024	6.8	02/15/2024	7.1
01/22/2024	8.1	02/05/2024	6.9	02/19/2024	6.9
01/25/2024	7.7	02/08/2024	6.7		
1-day P_{99} = 7.4 µg/L					
4-day P_{99} = 8.3 µg/L					

Effluent Chloride Data

	Chloride mg/L
1-day P_{99}	395
4-day P_{99}	345
30-day P_{99}	316
Mean	300
Std	36.3
Sample size	24
Range	217 - 351

The following table presents the average concentrations and loadings at Outfall 001 from January 2020 to December 2024 for all parameters with limits in the current permit to meet the requirements of s. NR 201.03(6), Wis. Adm. Code:

Parameter Averages with Limits

Attachment #1

	Average Measurement	Average Mass Discharged
BOD_5	13 mg/L*	-
TSS	18 mg/L	-
Dissolved Oxygen	10.2 mg/L	-
pH field	6.7 s.u.	-
Phosphorus	1.0 mg/L	1.1 lbs/day
Ammonia Nitrogen	1.5 mg/L*	-

*Results below the level 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 P_{99}) value exceeds the comparable calculated limit (s. NR 106.05(4), Wis. Adm. Code)
3. If fewer than 11 detected results are available, the mean effluent concentration exceeds 1/5 of the calculated limit (s. NR 106.05(6), Wis. Adm. Code)

Acute Limits based on 1-Q_{10}

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

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

Where:

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

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

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

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

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

If the receiving water is effluent dominated under low stream flow conditions, the 1-Q_{10} method of limit calculation produces the most stringent daily maximum limitations and should be used while making

reasonable potential determinations. This is not the case for Mineral Point Wastewater Treatment Facility and the limits are set based on two times the acute toxicity criteria.

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

Daily Maximum Limits based on Acute Toxicity Criteria (ATC)

RECEIVING WATER FLOW = 0.58 cfs, (1-Q_{10} (estimated as 80% of 7-Q_{10})), as specified in s. NR 106.06(3)(bm), Wis. Adm. Code.

SUBSTANCE	REF. HARD.* mg/L	ATC	MAX. EFFL. LIMIT**	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.	1-day P_{99}	1-day MAX. CONC.
Arsenic		340	680	136	<1.1		
Cadmium	432	154.6	309.2	61.8	0.29		
Chromium	301	4446	8891.7	1778	<1.1		
Copper	432	62	123			9.4	9.3
Lead	56	365	729	146	<4.3		
Nickel	268	1080	2161	432	2.5		
Zinc	333	345	689	138	33		
Chloride (mg/L)		757	1514			395	351

* 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.

* * The 2 × ATC method of limit calculation yields a more restrictive limit than consideration of ambient concentrations and 1-Q_{10} flow rates per the changes to s. NR 106.07(3), Wis. Adm. Code, effective 09/01/2016.

Weekly Average Limits based on Chronic Toxicity Criteria (CTC)

RECEIVING WATER FLOW = 0.18 cfs (¼ of the 7-Q_{10}), as specified in s. NR 106.06(4)(c), Wis. Adm. Code

SUBSTANCE	REF. HARD.* mg/L	CTC	WEEKLY AVE. LIMIT	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.	4-day P_{99}
Arsenic		152	202	41	<1.1	
Cadmium	175	3.82	5.1	1.0	0.29	
Chromium	301	326	433	87	<1.1	
Copper	432	36	48			8.3
Lead	356	96	127	25	<4.3	
Nickel	268	169	225	45	2.5	
Zinc	333	345	458	92	33	
Chloride (mg/L)		395	525			345

* 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 = 0.5529 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	880	1771	354	0.29
Chromium (+3)	8,400,000	16,903,257	3,380,651	<1.1
Lead	2,240	4,508	902	<4.3
Nickel	110,000	221,352	44,270	2.5

Monthly Average Limits based on Human Cancer Criteria (HCC)
RECEIVING WATER FLOW = 0.5529 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	40	81	16	<1.1

Conclusions and Recommendations
Based on a comparison of the effluent data and calculated effluent limitations, effluent limitations are not required, but **chloride and PFOA/PFOS monitoring is recommended.**

Copper – Considering available effluent data from January 2024 to February 2024 the 1-day P_{99} concentration is 9.4 µg/L, the 4-day P_{99} is 8.3 µg/L with a maximum concentration of 9.3 µg/L. The maximum effluent concentration and the 1-day P_{99} of the effluent data did not exceed the calculated daily maximum limit, and the 4-day P_{99} does not exceed the weekly average limit, therefore **concentration and mass limits, as well as monthly monitoring, are not required.**

Chloride – Considering available effluent data from January 2023 to December 2023, the 1-day P_{99} chloride concentration is 395 mg/L, and the 4-day P_{99} of effluent data is 345 mg/L.

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

Mercury – The permit application did not require monitoring for mercury because the Mineral Point 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 November 2021 to August 2024

was 1.7 mg/kg, with a maximum reported concentration of 5.0 mg/kg. **Therefore, no mercury monitoring is recommended at Outfall 001.**

PFOS and PFOA – The need for PFOS and PFOA monitoring is evaluated in accordance with s. NR 106.98(2), Wis. Adm. Code. Based on the types of indirect dischargers contributing to the collection system and unknown levels of PFOS/PFOA in the source water, **PFOS and PFOA monitoring is recommended at a once every two months frequency.**

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

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

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

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

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

Where:

A = 0.633 and B = 90.0 for Limited Aquatic Life, and
pH (s.u.) = that characteristic of the effluent.

The effluent pH data was examined as part of this evaluation. A total of 966 sample results were reported from January 2019 to January 2025. The maximum reported value was 8.4 s.u. (Standard pH Units). The effluent pH was 7.8 s.u. or less 99% of the time. The 1-day P_{99}, calculated in accordance with s. NR 106.05(5), Wis. Adm. Code, is 8.1 s.u. The mean plus the standard deviation multiplied by a factor of 2.33, an estimate of the upper ninety ninth percentile for a normally distributed dataset, is 8.0 s.u. Therefore, a value of 8.1 s.u. is believed to represent the maximum reasonably expected pH, and therefore most appropriate for determining daily maximum limitations for ammonia nitrogen. Substituting a value of 8.1 s.u. into the equation above yields an ATC = 11 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-Q_{10} receiving water low flow if it is determined that the previous method of acute ammonia limit calculation (2×ATC) is not sufficiently protective of the fish and aquatic life. The more restrictive calculated limits shall apply.

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

Attachment #1

Daily Maximum Ammonia Nitrogen Determination

	Ammonia Nitrogen Limit mg/L
2×ATC	21
1-Q_{10}	22

The 2×ATC method yields the most stringent limits for Mineral Point 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 – LAL

Effluent pH s.u.	Limit mg/L	Effluent pH s.u.	Limit mg/L	Effluent pH s.u.	Limit mg/L
$6.0 \leq pH \leq 6.1$	167	$7.0 < pH \leq 7.1$	101	$8.0 < pH \leq 8.1$	21
$6.1 < pH \leq 6.2$	164	$7.1 < pH \leq 7.2$	91	$8.1 < pH \leq 8.2$	18
$6.2 < pH \leq 6.3$	160	$7.2 < pH \leq 7.3$	81	$8.2 < pH \leq 8.3$	15
$6.3 < pH \leq 6.4$	156	$7.3 < pH \leq 7.4$	71	$8.3 < pH \leq 8.4$	12
$6.4 < pH \leq 6.5$	150	$7.4 < pH \leq 7.5$	61	$8.4 < pH \leq 8.5$	9.9
$6.5 < pH \leq 6.6$	144	$7.5 < pH \leq 7.6$	53	$8.5 < pH \leq 8.6$	8.2
$6.6 < pH \leq 6.7$	137	$7.6 < pH \leq 7.7$	45	$8.6 < pH \leq 8.7$	6.8
$6.7 < pH \leq 6.8$	129	$7.7 < pH \leq 7.8$	37	$8.7 < pH \leq 8.8$	5.7
$6.8 < pH \leq 6.9$	121	$7.8 < pH \leq 7.9$	31	$8.8 < pH \leq 8.9$	4.8
$6.9 < pH \leq 7.0$	111	$7.9 < pH \leq 8.0$	26	$8.9 < pH \leq 9.0$	4.1

Weekly and Monthly Average Limits based on Chronic Toxicity Criteria (CTC)
The weekly and monthly average ammonia nitrogen limits calculation from the previous memo do not change because there have been no changes in the effluent and receiving water flow rates. The calculations from the previous WQBEL memo are shown in attachment #3.

Effluent Data
The following table evaluates the statistics based upon ammonia data reported from January 2019 to January 2025, with those results being compared to the calculated limits to determine the need to include ammonia limits in the Mineral Point Wastewater Treatment Facility permit for the respective month ranges. That need is determined by calculating 99th upper percentile (or P_{99}) values for ammonia during each of the month ranges and comparing to the calculated limits.

Attachment #1

Ammonia Nitrogen Effluent Data

Ammonia Nitrogen mg/L	April	May - October	November - March
1-day P_{99}	17	23	17
4-day P_{99}	11	15	11
30-day P_{99}	4.4	6.4	4.8
Mean*	1.5	2.0	1.5
Std	4.6	6.8	5.1
Sample size	77	472	406
Range	<0.03 - 20.58	<0.03 - 39.83	<0.03 - 33.15

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

Based on this comparison, **reasonable potential has been determined for the daily maximum limits from May – October and the monthly average limits from April – October.**

In addition, the permit currently has, weekly and monthly limits November through March. **Where there are existing ammonia nitrogen limits in the permit, the limits must be retained regardless of reasonable potential**, consistent with s. NR 106.33(1)(b), Wis. Adm. Code:

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

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
April	-	11 mg/L	3.4 mg/L
May – October	21 mg/L	11 mg/L	5.7 mg/L
November – March	-	18 mg/L	8.5 mg/L

PART 4 – 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.

Mineral Point Wastewater Treatment Facility had previously been exempted from disinfection based on the limited aquatic life classification of the 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 forage fish, limited aquatic life - that are defined in s. NR 104.02(3), Wis. Adm. Code). The hydrologic classification for Brewery Creek is listed in ch. NR 104, Wis. Adm. Code, as continuous. Continuous streams have a higher likelihood of providing opportunities for full contact recreational activities. Therefore, 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. The permit will include a compliance schedule to meet these limits.

PART 5 – PHOSPHORUS

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

Because Mineral Point Wastewater Treatment Facility currently has a limit more restrictive than 1.0 mg/L, the need for a TBEL will not be assessed 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.

Phosphorus criteria in s. NR 102.06, Wis. Adm. Code, do not apply to limited aquatic life waters as described in s. NR 102.06(6)(d), Wis. Adm. Code. These waters were not included in the USGS/WDNR stream and river studies and, therefore, the Department lacked the technical basis to determine and propose applicable criteria. At some time in the future, the Department may adopt phosphorus criteria based on new studies focusing on limited aquatic life waters. The Guidance for Implementing Wisconsin's Phosphorus Water Quality Standards for Point Source Discharges (2020) suggests that during the interim, WQBELs should be based on the criteria and flow conditions for the next stream segment downstream (or downstream lake or reservoir, if appropriate), because ss. 217.12 and 217.13,

Wis. Adm. Code, state that the Department must set WQBELs to protect downstream waters. The discharge location of the wastewater from Mineral Point Wastewater Treatment Facility is classified as limited aquatic life downstream from the point of discharge downstream to where it joins Mineral Point Branch. Mineral Point Branch is classified for warm water sport fishery uses and is listed as "impaired water" due to nutrients input.

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

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

Where:

WQC = 0.075 mg/L for Mineral Point Branch.
Qs = 100% of the 7-Q_2 of 2.7 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 = 0.353 MGD = 0.546 cfs
f = the fraction of effluent withdrawn from the receiving water = 0

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

A previous evaluation resulted in a WQBEL of 0.075 mg/L using a background concentration of 0.11 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 stored in the Surface Water Integrated Monitoring System database indicates the median background total phosphorus concentration is 0.12 mg/L for Mineral Point Branch. The following data were considered in estimating the background phosphorus concentration:

	Upstream	Downstream
SWIMS ID	253185/ 253176	333207
Station Name	Monitoring station at (Bridge) - N. Oak Park Rd	Monitoring station at Mineral Point Branch CTH O (Bi)
Waterbody	Mineral Point Branch	Mineral Point Branch
Sample Count	6	12
First Sample	05/19/2015	10/19/2009
Last Sample	10/20/2015	10/20/2015
Mean	0.113 mg/L	0.125 mg/L
Median	0.12 mg/L	0.116 mg/L

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

Effluent Data
The following table summarizes effluent total phosphorus monitoring data from January 2020 to January 2025.

Total Phosphorus Effluent Data

	Phosphorus mg/L	Phosphorus lbs/day
1-day P_{99}	4.1	4.0
4-day P_{99}	2.2	2.3
30-day P_{99}	1.3	1.5
Mean	0.86	1.1
Std	0.83	0.78
Sample size	936	639
Range	0.03 - 5.4	0.17 - 8.2

Reasonable Potential Determination
The Mineral Point Wastewater Treatment Facility 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 January – June and July – December.

Mass Limits
A mass limit is also required, pursuant to s. NR 217.14(1)(a), Wis. Adm. Code, because the discharge is to a surface water that is to or upstream of phosphorus impairment of Mineral Point Branch. **This final mass limit shall be 0.075 mg/L × 8.34 × 0.353 MGD = 0.22 lbs/day expressed as a six-month average.**

WQT Minimum Control Level (MCL)
A water quality trading plan has been submitted as an alternative compliance option to offset any Total Phosphorus discharged from Outfall 001 that exceeds the 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 location. **The current limit of 0.8 mg/L is recommended to continue as the MCL.**

PART 5 – WATER QUALITY-BASED EFFLUENT LIMITATIONS

Attachment #1
FOR THERMAL

Surface water quality standards for temperature took effect on October 1, 2010. These regulations are detailed in Chapters NR 102 (Subchapter II – Water Quality Standards for Temperature) and NR 106 (Subchapter V – Effluent Limitations for Temperature) of the Wisconsin Administrative Code. The daily maximum effluent temperature limitation shall be 86 °F for discharges to surface waters classified as Limited Aquatic Life according to s. NR 104.02(3)(b)1, Wis. Adm. Code, except for those classified as wastewater effluent channels and wetlands regulated under ch. NR 103 and described in s. NR 106.55(2), Wis. Adm. Code, which has a daily maximum effluent temperature limitation of 120 °F.

Reasonable Potential
As there is no data available from the current permit term, based on the available discharge temperature data from January 2013 to June 2014 shown below, the maximum daily effluent temperature reported was 70 °F; therefore, no reasonable potential for exceeding the daily maximum limit exists, and **no limits or monitoring are recommended**.

Monthly Temperature Effluent Data & Limits

Month	Representative Highest Monthly Effluent Temperature		Calculated Effluent Limit	
	Weekly Maximum (°F)	Daily Maximum (°F)	Weekly Average Effluent Limitation (°F)	Daily Maximum Effluent Limitation (°F)
JAN	45	45	-	86
FEB	44	45	-	86
MAR	45	46	-	86
APR	51	52	-	86
MAY	62	62	-	86
JUN	66	67	-	86
JUL	70	70	-	86
AUG	70	70	-	86
SEP	69	70	-	86
OCT	65	66	-	86
NOV	62	62	-	86
DEC	53	54	-	86

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).*

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

- Chronic testing is usually not recommended where the distance between the outfall and the point where the receiving water becomes a non-variance waterbody (i.e., one that supports a cold water, warm water sport fish, or warm water forage fish community) is greater than four miles. For the Mineral Point Wastewater Treatment Facility that distance is approximately 5 miles. Therefore chronic testing will not be evaluated.

- 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.

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

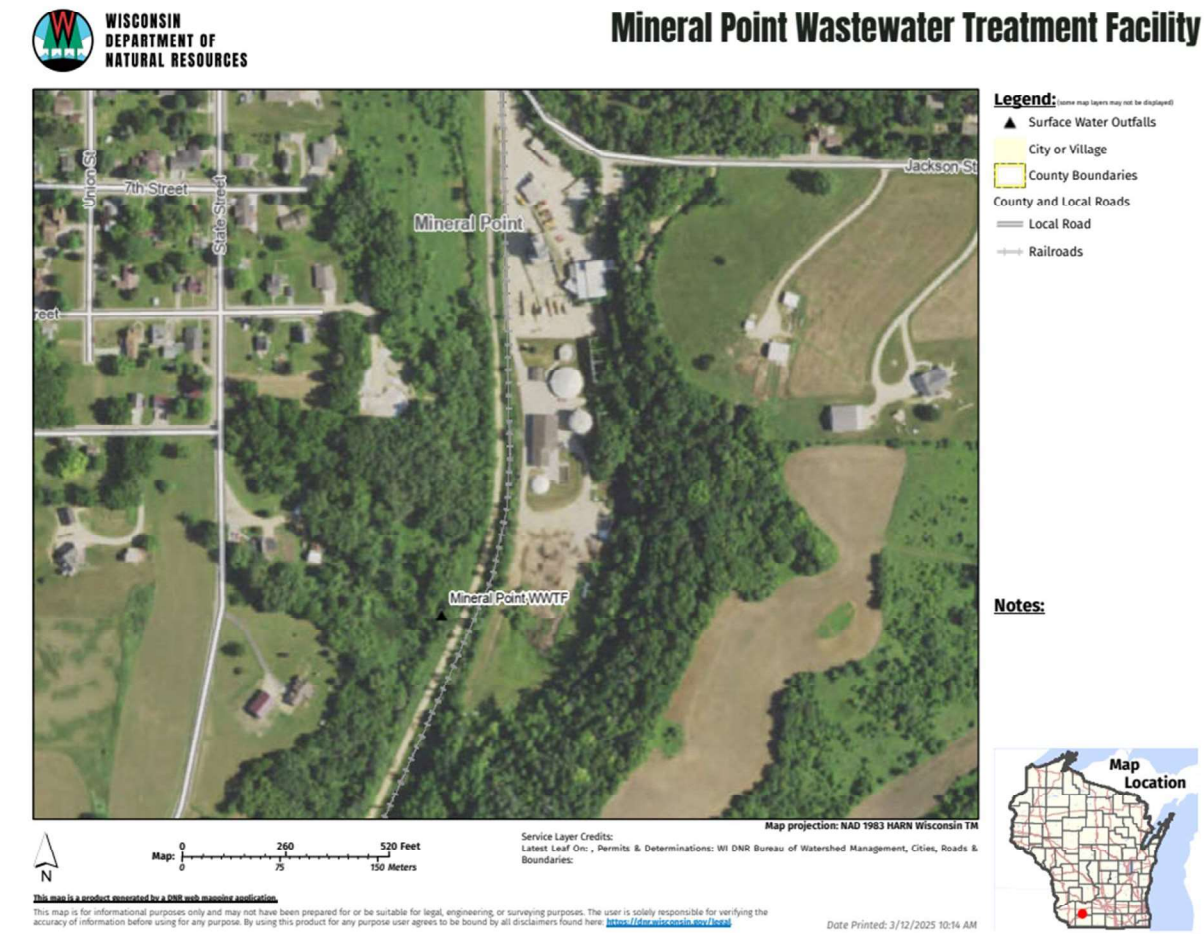
	Acute
AMZ/IWC	Not Applicable. **0 Points**
Historical Data	No data available from the last 5 years. **5 Points**
Effluent Variability	Variability, Violations present, consistent WWTF operations. **5 Points**
Receiving Water Classification	Variance water > 4 miles to WWSF **0 Points**
Chemical-Specific Data	Reasonable potential for limits for Ammonia Nitrogen based on ATC. Zinc, Cadmium, Copper, Chloride, Nickel detected.

Attachment #1

	Acute
	8 Points
Additives	1 Water Quality Conditioner added. Permittee has proper P chemical SOPs in place Yes **1 Point**
Discharge Category	2 Industrial Contributors. **6 Points**
Wastewater Treatment	Secondary or Better **0 Points**
Downstream Impacts	No impacts known **0 Points**
Total Checklist Points:	**25 Points**
Recommended Monitoring Frequency (from Checklist):	3 test in the permit term
Limit Required:	No
TRE Recommended? (from Checklist)	No

- After consideration of the guidance provided in the Department's WET Program Guidance Document (2022) and other information described above **three acute WET tests throughout the permit term** are recommended in the reissued permit. Tests should be done in rotating quarters to collect seasonal information about this discharge.

Site Map:


WISCONSIN DEPARTMENT OF NATURAL RESOURCES
Mineral Point Wastewater Treatment Facility
Union St
7th Street
State Street
Jackson St
Mineral Point
Mineral Point WWTF
Legend:
Surface Water Outfalls
City or Village
County Boundaries
County and Local Roads
Local Road
Railroads
Notes:
Map Location
Map projection: NAD 1983 HARN Wisconsin TM
Map: 0 260 520 Feet
0 75 150 Meters
N
Service Layer Credits:
Latest Leaf On: , Permits & Determinations: WI DNR Bureau of Watershed Management, Cities, Roads & Boundaries:
This map is a product generated by a DNR web mapping application.
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Date Printed: 3/12/2025 10:14 AM

Ammonia Nitrogen Limit Calculations from the March 3, 2009 WQBEL memo.

AMMONIA (as N) LIMITS			
CLASSIFICATION	**LIMITED FORAGE FISH**		
EFFLUENT FLOW (MGD)	0.353		
EFFLUENT FLOW (cfs)	0.546		
MAX. EFFLUENT pH (s.u.)	7.40		
f (withdrawal factor)	0.00		
BACKGROUND INFORMATION	***May - Oct.***	***Nov. - March***	***April***
7-Q_{10} (cfs)	0.72	0.72	0.72
7-Q_2 (cfs)	1.3	1.3	0.13
Ammonia (mg/L)	0.06	0.19	0.07
Temperature (deg C)	23	3	9
pH (std. units)	8.21	7.97	7.97
% of river flow used:	100	25	25
Reference weekly flow	0.72	0.18	0.18
Reference monthly flow	1.105	0.27625	0.027625
CRITERIA (in mg/L):			
Acute (@ effl. pH):	22.97	22.97	22.97
4-day Chronic (@ backgrd. pH)			
early life stages present	5.60	8.06	8.06
early life stages absent	7.69	31.06	27.30
30-day Chronic (@ backgrd. pH)			
early life stages present	2.24	3.22	3.22
early life stages absent	3.08	12.42	10.92
EFFLUENT LIMITS (in mg/L)			
Daily maximum	45.94	45.94	45.94
Weekly average			
early life stages present	12.91	10.66	10.70
early life stages absent		41.23	36.28
Monthly average			
early life stages present	6.65	4.76	3.38
early life stages absent		18.61	11.47

In the following table limits are also calculated for Furnace Creek downstream of Brewery Creek where the stream classification changes to warm water sport fish community (by default). We do not have Furnace Creek flow estimated by USGS however, we calculated Q7,10 and Q7,2 flows from combining Brewery Creek flow and Rock Branch Creek which is a tributary to Furnace Creek near Mineral Point. Rock Branch joins Furnace Creek approximately 2 miles downstream of the City of Mineral point outfall location.

Rock Branch estimated flows by USGS is from station # 05432300 at the NE ¼ of SE ¼ of Section 8 T4N, R3E which is at the mouth of Rock Branch with Furnace Creek. The flow estimates from this

station are updated according to latest estimated flows for Brewery Creek and the results are used in the ammonia calculations shown in the table following.

AMMONIA (as N) LIMITS			
CLASSIFICATION	**WARMWATER SPORTFISH**		
EFFLUENT FLOW (MGD)	0.353		
EFFLUENT FLOW (cfs)	0.546		
MAX. EFFLUENT pH (s.u.)	7.40		
BACKGROUND INFORMATION	***May - Oct.***	***Nov. - March***	***April***
7-Q_{10} (cfs)	1.57	1.57	1.57
7-Q_2 (cfs)	2.7	2.7	2.7
Ammonia (mg/L)	0.06	0.19	0.07
Temperature (deg C)	23	3	9
pH (std. units)	8.21	7.97	7.97
% of river flow used	100	25	25
Reference weekly flow	1.57	0.3925	0.3925
Reference monthly flow	2.295	0.57375	0.57375
CRITERIA (in mg/L)			
Acute (@ effl. pH)	22.97	22.97	22.97
4-day Chronic (@ backgrd. pH)			
early life stages present	2.55	6.35	6.35
early life stages absent	2.55	10.31	9.06
30-day Chronic (@ backgrd. pH)			
early life stages present	1.02	2.54	2.54
early life stages absent	1.02	4.12	3.63
EFFLUENT LIMITS (in mg/L)			
Daily maximum	45.94	45.94	45.94
Weekly average			
early life stages present	9.72	10.78	10.86
early life stages absent		17.58	15.53
Monthly average			
early life stages present	5.06	5.01	5.13
early life stages absent		8.26	7.36

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.

Ammonia Decay: The more restrictive calculated limits should be used 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.

Ammonia decay rates are dependent on temperature with in-stream nitrification essentially non-existent in the winter. In-stream decay is expected so a first order decay model will be used. Based on the available

literature, a decay rate of 0.25 day^{-1} at 20°C has been suggested as a default rate. A temperature correction factor of $\theta = 1.08$ is ($k_{.t} = k_{20}\,\theta^{(T-20)}$).

$$N_{Limit} = \left(\frac{N_{down}}{EXP(-k_t T)} \right)$$

Where:

N_{Limit} = Ammonia limit needed to protect downstream use (mg/L)
N_{down} = Ammonia limit calculated based on downstream classification and flow (mg/L)
$-k_t$ = Ammonia decay rate at background stream temperature (day^{-1})
T = Travel time from outfall to downstream use (day)

The velocity of receiving water is assumed to be 5 miles per day and the distance from the point of discharge to the classification change is approximately 2 miles (WWSF) and travel time of 0.4 days to reach to warm water section. This equation shows that at the location where the classification change to warm water, 88% of the ammonia is remaining during summer, 96% during April and 97% during winter. The limits can be adjusted for decay as follows:

Recommendation for Ammonia:
Using the available information summarized earlier and pursuant to s. NR 106.33(2), the ammonia limitations would be as follows.

Recommended Ammonia Nitrogen Limitations			
Ammonia Nitrogen	**Daily Max**	**Weekly Average**	**Monthly Average**
April	> 40 mg/L	11 mg/L	3.4 mg/L
May - October	> 20 mg/L	11 mg/L	5.7 mg/L
Nov. - March	> 40 mg/L	18 mg/L	8.5 mg/L

* Limits are rounded

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
3911 Fish Hatchery Road
Fitchburg, WI 53711

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

April 16, 2025

Matthew Honer
City Administrator
137 High St. Suite 1
Mineral Point, WI 53565

Subject: Mineral Point Wastewater Treatment Facility - WPDES Permit WI-0024791
Water Quality Trading Plan – CONDITIONAL APPROVAL

Dear Matthew:

The Department recently received a water quality trading plan (WQT Plan) for compliance with phosphorus effluent limits at the Mineral Point Wastewater Treatment Facility. The initial plan was received in September of 2024 and updated versions were received in December of 2024 and March and April of 2025. Based on WDNR review, the final WQT Plan (dated March 2025) is in general conformance with the WDNR Water Quality Trading Guidance and Section 283.84 of the Wisconsin Statutes. The WQT plan proposes to utilize streambank stabilization, these projects were completed in September of 2021. Credits started being generated in 2022, with the first permit term WQT approval (WQT-2020-0011). Credits generated from approved practices result in available credit quantities shown in Table 1. These credits will be incorporated into the reissued WPDES permit and will be used to demonstrate compliance with final phosphorus effluent limits.

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-2025-0012

Year	Available Credits (lbs/yr) – Total
2025	406.2
2026	406.2
2027	406.2
2028	406.2
2029	406.2
2030	406.2

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-2025-0012 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 608-419-4155 or at betsyjo.howe@wisconsin.gov

Thank You,

BetsyJo Howe

BetsyJo Howe
SC Region WQT Coordinator
Wisconsin Department of Natural Resources

e-CC:

Jordan Fure, Delta 3 Engineering
Nathan Fosbinder, City of Mineral Point
Matthew Claucherty, WDNR
Kenzie Ostien, WDNR

WATER QUALITY TRADING PLAN

City of Mineral Point
Iowa County, Wisconsin

Date: March 19, 2025

Project Number: D23-094

Prepared By: **Delta 3 Engineering, Inc.**
875 South Chestnut Street
Platteville, WI 53818
(608) 348-5355
www.delta3eng.biz

TABLE OF CONTENTS

Attachments

I. Executive Summary -

This Water Quality Trading Plan summarizes the City of Mineral Point's (City) utilization of Water Quality Trading (WQT) for compliance with the final total phosphorus limit as provided in the Wisconsin Pollutant Discharge Elimination System (WPDES) Permit #WI-0024791-10-2. The Wastewater Treatment Facility (WWTF) treated an average of 0.162 MGD in 2022. The WWTF has had an average effluent Total Phosphorus (TP) concentration of 0.78 mg/L during this permit term. The WWTF is required to offset approximately 348 lbs of TP annually to meet the final six-month average limit of 0.075 mg/L and monthly average limit of 0.225 mg/L, which became effective September 30, 2021.

NRCS Streambank Erosion modeling methods were used to calculate the total phosphorus credits that would be generated based on the installation of best management practices (BMPs). These credits will be used to demonstrate compliance with the final total phosphorus limit as proposed in the WPDES Permit. Modeling results are provided in Table 1.1.

Table 1.1 – Modeling Results

Stream Reach	Current Phosphorus Loading (lbs/yr)	Proposed Phosphorus Loading (lbs/yr)	Proposed Phosphorus Reductions (lbs/yr)	Trade Ratio	Proposed Phosphorus Credits
1 (Right)	24.2	0	24.2	2:1	12.1
1 (Left)	37.7	0	37.7	2:1	18.9
8 (Right)	265.8	0	265.8	2:1	132.9
8 (Left)	293.8	0	293.8	2:1	146.9
9 (Right)	77.0	0	77.0	2:1	38.5
9 (Left)	113.8	0	113.8	2:1	56.9
				Total	**406.2**

Justification for Trade Ratio is provided below:

Trade Ratio = (Delivery + Downstream + Equivalency + Uncertainty – Habitat Adjustment):1

- Delivery = 0 (Trading within same HUC-12 Watershed)
- Downstream = 0 (All Trades are upstream of the Outfall 001)
- Equivalency = 0 (Not necessary of Total Phosphorus)
- Uncertainty:
  Streambank Stabilization with Habitat Restoration = 2 (Brewery Creek is eligible for habitat restoration since it is classified as an impaired water)

As demonstrated in Table 1.1, the WWTF had registered approximately 406 credits. The implementation of this WQT Plan will provide WQT Credits to the WWTF for meeting final TP limits.

II. Background -

The purpose of this Water Quality Trading Plan (Plan) is to describe the City's use of Water Quality Trading to comply with the total phosphorus limits as provided in City's WPDES Permit #WI-0024791-10-2. The Plan was developed following the Notice of Intent to Conduct Water Quality Trading, provided in Attachment #1. The Water Quality Trading Checklist Form 3400-208 is provided in Attachment #2.

The City of Mineral Point is located in Iowa County adjacent to United States Highway '151' in southwest Wisconsin. The City operates and maintains its own public wastewater and water systems. The City is located in Sections 36, 1, 31, 32, 6, and 5, Town 4 and 5 North, Range 2 and 3 East of the Fourth Principal Meridian. The City has a population of 2,487 and contains one (1) service area, which is the City Proper. The City of Mineral Point Location Map is provided in Attachment #3.

The downtown portion of the City is comprised mostly of commercial and residential development and is situated along Brewery Creek. Industrial development is primarily located on the north end of the City. The City has many rolling hills with the grade sloping throughout the area anywhere from 5% to 15%. Elevations in the area range from approximately 940'± at the Wastewater Treatment Facility (WWTF) to 1138'± at the water tower, which is located at the intersection of Church Street and Ridge Street.

The existing sanitary sewer collection consists of 521 sanitary sewer manholes; ten (10) sanitary lamp holes; seven (7) sanitary lift stations; 90 feet of six-inch (6") sanitary sewer; 94,250 feet of eight-inch (8") sanitary sewer; 3,180 feet of 10" sanitary sewer; 1,500 feet of 12" sanitary sewer; 2,100 feet of 15" sanitary sewer; and 8,970 feet of four-inch (4") sanitary force main. The gravity sewer varies in composition between concrete, clay, and PVC. The manholes vary in composition between brick, block, and precast structures. As of August 1, 2016, the City had developed its Capacity, Management, Operation, and Maintenance (CMOM) Program according to Schedule 5.3.2 of the City's Wisconsin Pollutant Discharge Elimination System (WPDES) Permit. The CMOM Program is used for documenting operation and maintenance activities within the collection system.

The City of Mineral Point owns and operates a WWTF that utilizes a bio-tower treatment system. The facility consists of a mechanical screen, grit removal, primary clarifier, bio-tower, and secondary clarifier. Screenings and grit are disposed at a sanitary landfill. Sludge from the treatment process is anaerobically digested and stored prior to land application. Alum is used at the treatment facility for the removal of Phosphorus. Please refer to Attachment #4 for the flow schematic of the City of Mineral Point's WWTF. The City of Mineral Point's WWTF has one (1) receiving water and effluent discharge location, Outfall 001: Brewery Creek (Mineral Point Branch Watershed, SP09-Sugar-Pecatonica River Basin).

The monthly average effluent flows and loadings at the WWTF for 2023 are shown in Table 2.1. In addition the average effluent flows and loadings at the WWTF from 2019 through 2023 are provided in Table 2.2

Table 2.1 – 2023 Monthly Averages

Month	Outfall	Flow MGD Effluent	Phosphorus mg/L Effluent	Phosphorus lbs./day Effluent
Jan. ('23)	001	0.260	0.60	1.29
Feb. ('23)	001	0.286	0.67	1.90
Mar. ('23)	001	0.403	0.76	2.67
Apr. ('23)	001	0.314	0.88	2.48
May ('23)	001	0.201	0.39	0.75
June ('23)	001	0.118	0.56	0.73
July ('23)	001	0.131	0.91	1.20
Aug. ('23)	001	0.130	0.56	0.79
Sept. ('23)	001	0.142	0.70	1.21
Oct. ('23)	001	0.148	0.91	1.16
Nov. ('23)	001	0.140	1.39	2.00
Dec. ('23)	001	0.144	1.31	1.64
Average =		**0.196**	**0.80**	**1.49**

Table 2.2 – 2019-2023 Annual Averages

Year	Outfall	Flow MGD Effluent	Phosphorus mg/L Effluent	Phosphorus lbs./day Effluent	Phosphorus WQT Credits Used
2019	001	0.394	0.32	1.05	-
2020	001	0.263	1.86	4.08	-
2021	001	0.146	0.74	0.84	68.7
2022	001	0.162	0.78	1.06	312.7
2023	001	0.196	0.80	1.49	406.2

To reduce effluent TP, the City has made efforts to optimize TP reduction at the WWTF. The City has also implemented source reduction measures such as investigating potential TP contributors. None of the businesses were determined to be substantial contributors for TP. The City tested Municipal Well #3 and Well #4 for TP and determined background TP was negligible. The City has attempted to optimize the WWTF and evaluated minor facility modifications. Since the bio-tower treatment system was not designed for effluent TP reduction, little to no benefits were achieved through optimization. The City had implemented chemical addition and evaluated Alum dosage rates to identify the optimal dosage. The City had determined that Alum alone will not satisfy final Effluent TP Limits.

Additionally, the City has investigated watershed compliance alternatives such as Water Quality Trading (WQT) and Adaptive Management (AM). Utilizing the results from PRESTO, the watershed for the City of Mineral Point's WWTF has a nonpoint source ratio of 4:96 and is considered to be nonpoint source dominated. Stream monitoring data for TP is not available on the Brewery Creek. The City should investigate background concentrations within the Brewery Creek to evaluate whether the stream is meeting the water quality criteria (WQC).

Following the initial watershed investigation, the City elected to move forward with WQT. The City performed WQT projects within the City's HUC-12 #070900030103 as outlined in

Attachment #5. The Iowa County Land Conservation Department (LCD) has been contacted for possible WQT funding.

Flows and loading data from 2023 were omitted for evaluating needed WQT Credits due to abnormal operating conditions at the WWTF. The City exceeded the available credits by 86.2 lbs for 2023. The WWTF experienced issues with their Alum feed pump in April and May. The pump was ultimately replaced mid-May 2023 and phosphorus treatment improved as represented in the May through September data. Furthermore, in October, the WWTF rehabilitated the internal equipment of their Final Clarifier. From October 16th to December 6th, the Final Clarifier was operated as a passive tank and unable to settle and remove TP from the effluent. This rehabilitation has also caused other exceedances of WPDES permit limits such as for total suspended solids (TSS). Currently, the Final Clarifier is back in operation and the WWTF has resumed normal flow patterns throughout the plant and effluent treatment has returned to normal. Therefore, flow and loading data from 2022 has been utilized to determine credits needed.

Annual effluent TP was estimated at 385 lbs. The final limit would allow annual discharge of 37 lbs. The City would be required to offset 348 lbs of effluent TP. Calculations for required WQT reductions are provided below.

1) The current annual Phosphorus loading discharged at the WWTF is calculated as follows:

Average Daily Flow (Q) = 0.162 MGD
Average Phosphorus concentration = 0.78 mg/L

0.78 mg/L x 0.162 MGD x 8.34 x 365 days/yr. = 385 lbs./yr.

2) The proposed allowable annual Phosphorus mass limit at the WWTF is calculated as follows:

Average Daily Flow (Q) = 0.162 MGD
Proposed Seasonal Phosphorus Concentration Limit = 0.075 mg/L

0.075 mg/L x 0.162 MGD x 8.34 x 365days/yr. = 37 lbs./yr.

3) Reduction of Total Phosphorus required at WWTF -

385 lbs./yr. – 37 lbs./yr. = 348 lbs/yr

The current required reduction of Total Phosphorus is approximately 348 lbs/yr which is 86% of the available 406 WQT Credits. The City currently has adequate WQT Credits to offset discharges, but will want to investigate further effluent Total Phosphorus reduction and/or additional WQT Credits.

III. Location and Description of Credit Generation Sites –

The City discharges to the Brewery Creek (Mineral Point Branch Watershed, SP09-Sugar-Pecatonica River Basin) at Outfall 001. As mentioned previously, the City has performed WQT projects within the City's HUC-12 #070900030103. The City has implemented BMPs to generate TP credits. Specifically, Streambank stabilization has occurred along the banks of the Brewery Creek on the following properties:

- Parcels 251-0921, 251-0908, 251-0907, 251-0893, and 251-0893.01
- Parcels 251-1040, 251-1041, 251-1006, 251-1042, and 251-1123

See Figure 3.1 and Figure 3.2 for additional project location information.

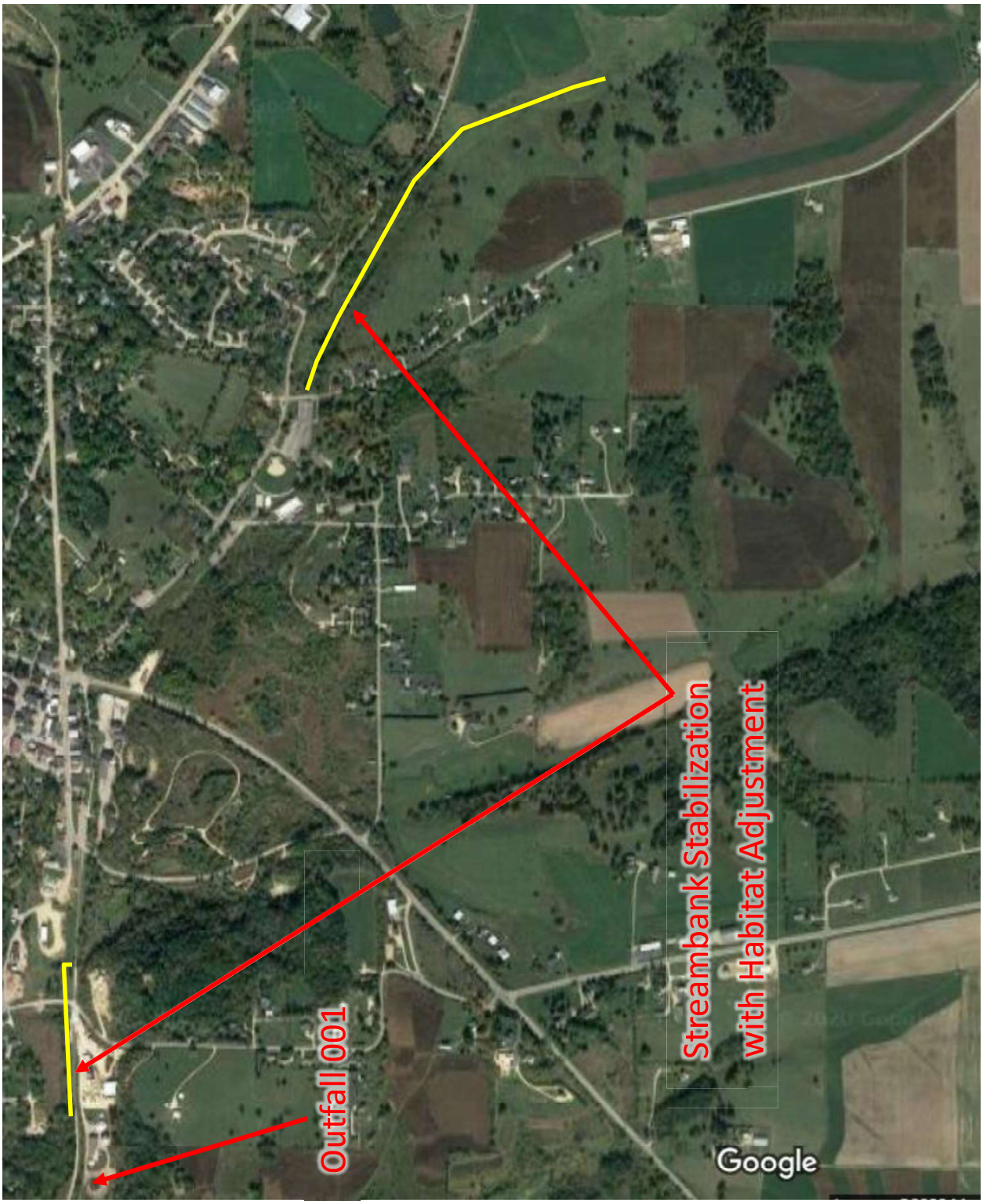


Figure 3.1 – Streambank stabilization locations in relation to Outfall 001.

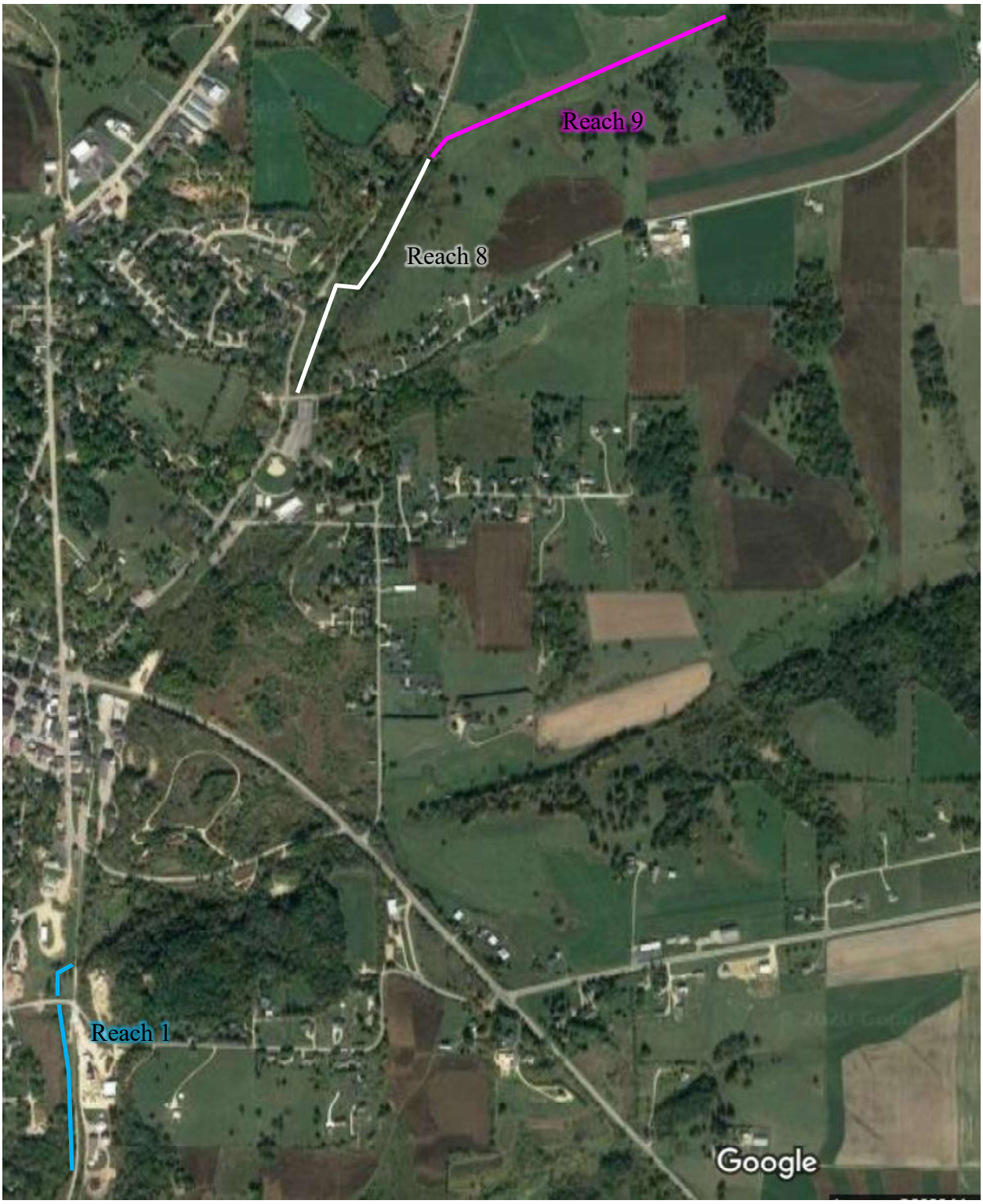


Figure 3.2 – Streambank stabilization locations.

IV. Methods for Nonpoint Source Load Reduction –

The Plan identifies trading practices that have reduced TP runoff by 812 lbs and will utilize a 2:1 trade ratio. The WQT practices identified for this Water Quality Trading Plan are currently generating approximately 406 TP credits/year indefinitely as long as trading practices are maintained.

A. Methods Used to Generate Load Reductions

For streambank stabilization, the City is generating TP load reductions through streambank grading with minor riprapping as needed for approximately 5,550' of streambank. Streambank Stabilization will be performed as per NR 328 *Shore Erosion Control Structures in Navigable Waterways,* NRCS 580 *Streambank and Shoreline Protection*, and NRCS 395 *Stream Habitat Improvement and Management*. Riprapping the streambank in high energy locations better protects the streambank as compared to grading alone. The streambank stabilization project has occurred within HUC-12 #070900030103 in order to generate TP credits. A Plan of the grading and riprap implementation is provided in Attachment #6.

Delta 3 Engineering, Inc. prepared the plans, specification, and operation and maintenance manual. The City acquired all required permits and authorizations prior to construction. To register credits, the City has entered into trade agreements with Property Owners A and B pursuant to *s. 283.84(1)(b), Wis. Stats*.

B. History of Project Site

Mineral Point is located within the Southwest Savanna ecological landscape. The City was settled in 1827 and has undergone significant development. Currently, the land use within the watershed is a mix of commercial, residential, undeveloped, and pasture. The commercial and residential areas consist of manicured lawns, impermeable surfaces, and storm sewer. The undeveloped areas typically consist of forest, wetland, and savannah ecosystems. Pastured areas consist of short grass with minimal trees. Existing trees are primarily boxelder, willow, and cottonwood. The streambanks have experienced significant erosion as the Brewery Creek Watershed has been developed and cleared for agricultural and residential use. The banks are predominately undercut with some rills and vegetative overhang. Tree roots are readily visible throughout the reaches. Fallen trees and slumps are also visible in areas. Recession rates for each Reach along with documentation regarding existing condition were estimated in Attachment #7.

C. Model Used to Derive Load Reductions

NRCS Streambank Erosion modeling methods were used to calculate the total phosphorus credits that would be generated based on the installation of BMPs. These credits will be used to demonstrate compliance with the final total phosphorus limit as proposed in the WPDES Permit. Modeling results are provided in Table 4.1.

Table 4.1 – Modeling Results

Stream Reach	Current Phosphorus Loading (lbs/yr)	Proposed Phosphorus Loading (lbs/yr)	Proposed Phosphorus Reductions (lbs/yr)	Trade Ratio	Proposed Phosphorus Credits
1 (Right)	24.2	0	24.2	2:1	12.1
1 (Left)	37.7	0	37.7	2:1	18.9
8 (Right)	265.8	0	265.8	2:1	132.9
8 (Left)	293.8	0	293.8	2:1	146.9
9 (Right)	77.0	0	77.0	2:1	38.5
9 (Left)	113.8	0	113.8	2:1	56.9
				Total	**406.2**

Justification for Trade Ratio is provided below:

Trade Ratio = (Delivery + Downstream + Equivalency + Uncertainty – Habitat Adjustment):1

- Delivery = 0 (Trading within same HUC-12 Watershed)
- Downstream = 0 (All Trades are upstream of the Outfall 001)
- Equivalency = 0 (Not necessary of Total Phosphorus)
- Uncertainty:
  Streambank Stabilization with Habitat Restoration = 2 (Brewery Creek is eligible for habitat restoration since it is classified as an impaired water)

Soil testing had been completed to determine TP concentrations within the soil. Soil sampling was performed every 100 feet and included the use of a soil sampler which pulled ¾" cores at 8" depth. Approximately six (6) cores were taken at each sampling location to provide a representative sample. Soils maps and soil testing data is provided in Attachment #8. Soil sample locations are provided in Attachment #6. An onsite evaluation has been conducted to estimate stream bank recession rate. The streambank has also been surveyed horizontally and vertically via Global Position System (GPS) Equipment. The survey data, narrative, and photos documenting the current state of eroding stream banks is provided in Attachment #7.

With the collected data, the NRCS Streambank Erosion Model was used to calculate TP loss from each reach of the eroding streambank. The modeling data for the NRCS Streambank Erosion Model is available in Attachment #9. The designed streambank stabilization grading and riprap will continue to eliminate streambank recession thus eliminating TP inputs due to previous streambank recession in planned areas. For the Habitat Restoration portions of the WQT Plan, the City was in contact with the DNR Fisheries Biologist for Iowa County for direction regarding stream habitat improvements. The City submitted the final design plans and specifications to the DNR and received approval. TP Credits were registered following construction of the BMPs.

The Plan and model inputs have not changed; therefore models and calculations are accurate as previously approved.

D. Stream Habitat Improvements

As provided in NRCS 395 Stream Habitat Improvement and Management, the definition of *stream habitat improvement and management* is to maintain, improve physical, chemical, and biological functions of a stream, and its associated riparian zone, necessary for meeting the life history and requirements of desired aquatic species. The goal of stream habitat improvements within this Plan is to provide suitable habitat for desired fish and other aquatic species as well as provide riparian condition that maintain the stream corridor ecological processes which supports diverse stream habitat and aquatic species.

Prior to designing stream habitat improvements, the current conditions of the Brewery Creek and surrounding land uses were evaluated. The Brewery Creek watershed is dominated by urban development and livestock production practices. The Brewery Creek experiences significant storm water runoff issues including flooding, increased bank erosion, sedimentation, and limited riparian habitat. This is primarily caused by residential agricultural development within the watershed. The Brewery Creek is listed on State of Wisconsin 2018 Impaired Waters List due to degraded biological community and chronic toxicity due to lead and zinc. This contamination is due to the areas historic mining background and the mine waste piles that remain.

The Brewery Creek is a cold-water aquatic community. At the Outfall 001, the stream is classified as Limited Aquatic Life (LAL). Limited fishing opportunities are available on the Brewery Creek; however, brown trout were found in Brewery Creek even though the stream is not stocked. Brewery Creek is comprised primarily of hard substrates consisting of rubble/cobble or broken bedrock along with some silt substrates. Brewery Creek has one of the lowest width-to-depth ratios in the Mineral Point Branch watershed. Pools are scarce throughout and is a major attributor to limited fish numbers and species diversity. Additionally, perched culverts limit upstream mobility of aquatic organisms. The City worked with Justin Haglund (DNR Fisheries Biologist) for the incorporation of in-stream habitat improvements with the Project Plans and Specifications.

E. Operation and Maintenance

An Operation and Maintenance (O&M) Plan is provided in Attachment #10. The O&M plan describes in how the Stream Stabilization Practices are operated and maintained. The O&M Plan also addresses response procedures for Practice Registration, Noncompliance Notification, and Notification of Trade Agreement Termination.

As previously mentioned, the City performed streambank stabilization by installing rip-rap along approximately 5,550' of streambank. The stabilization practices were installed and are being maintained as per NR 328 *Shore Erosion Control Structures in Navigable Waterways,* NRCS 580 *Streambank and Shoreline Protection*, and NRCS 395 *Stream Habitat Improvement and Management*. Restoration landscaping and seeding were installed following construction and have been closely monitored for two (2) growing seasons and will continue to be monitored to ensure the new seeding grows and erosion is not prevalent. The City is also addressing weed and invasive vegetation growth when present and as needed. The riprap has and will continue to be inspected following heavy rain events at a minimum. Inspection will be used to

determine appropriate actions in order to maintain the riprap for continuous and ongoing streambank stabilization and TP credit generation.

BMP monthly inspections and annual reports are provided in Attachment #11.

The BMPs is and will continue to be inspected annually by a licensed Professional Engineer to ensure that the BMPs are functioning as intended in order to meet the requirements of this WQT Plan.

Although the banks have remained stable since construction, vegetation was damaged at several sites on Reach 9. Reach 9 is a pastured area which contains horses. The horses trampled vegetation at several stream crossing locations. The City has since fenced off these sites and re-seeded. A remediation plan for Reach 9 is provided in Attachment #12.

The City is committed to remediating Reach 9. The City will further evaluate Reach 9 in 2025 to determine whether the remediation plan was effective. If the plan was not effective, the City will evaluate whether streambank armoring or other BMP is warranted. Additional guidance for the operation and maintenance of Reach 9 has been included in Attachment #10.

V. Trade Timeline –

Schedule for Installation of the above mentioned trading practices for Total Phosphorus Credit Generation for TP compliance is provided in Table 5.1 below.

Table 5.1 – Trade Timeline

Item	Completion Date
Site Investigation	March 31, 2019
Conceptual Design	September 30, 2019
Final Design	June 30, 2020
Construction Permits	June 30, 2020
DNR Review of Final Design	August 31, 2020
Construction of BMPs	Fall, 2020
Phosphorus Credit Registration	June 30, 2021
Use of Phosphorus Credits by City of Mineral Point (Ongoing for Permit Compliance)	September 30, 2021

Credits have been used by the City since 9/30/2021. Credits will continue as long as the trading practices are maintained as outlined in this WQT Plan.

VI. Inspection Reporting –

A. Tracking Procedures

The City will continue to track credits used monthly. The City will report credit usage to the DNR on a monthly basis in the Discharge Monitoring Reports (DMRs). The annual report will summarize the 12 months of credit usage and credit generation. The City will report to DNR any concern that they have that may result in a need to modify the trade agreement and/or this trade plan. For example, a need to generate additional credits based on discharge.

B. Inspection

Inspection of the BMPs shall occur during any construction phase to ensure they are installed and maintained per the design and meet all applicable codes and permits. Inspections of the established BMPs shall occur each month at a minimum or following heavy rain events. A licensed professional engineer will perform an annual certification to ensure the practice is performing as designed and the City remains in compliance.

The inspection reports will include:

i. Name and contact information of the inspector
ii. Inspection Date
iii. Relevant standards set forth in the Design Plan or Operation and Maintenance Plan
iv. Issues identified
v. When and how any issues identified were addressed
vi. When and how any issues identified will be addressed in the future
vii. Inspection photos of the BMP's (annually at a minimum)
viii. Vegetative & structural condition

Inspection reports generated during each routine or after rain event inspection will be included with the Annual Water Quality Trading Report submitted by the City to DNR. Annual inspections by a professional engineer will typically occur in April or May. This time of year is ideal for evaluating the condition of BMPs as it follows the freeze/thaw which poses the greatest potential for changes to the BMPs. Minimal vegetation cover will allow for adequate visual inspection.

C. Management Practice Registration Form

The City had filed a completed registration form 3400-207 for Water Quality Trading Management Practice Registration separately from this Plan.

D. Annual Water Quality Trading Report Submittal

The following shall be submitted to the DNR by January 31 of each year:

i. The number of pollutant reduction credits (lbs/month) used each month of the previous year to demonstrate compliance;
ii. A summary of the annual inspection of the practice that generated any of the pollutant reduction credits used during the previous year, this

inspection shall be completed by a licensed Professional Engineer;

iii. All monthly inspection reports;
iv. 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;
v. A list of all noncompliance and the correction measures and timing to address the issues throughout the year; and
vi. An updated WQT plan if management practices have or will change.

E. Monthly Certification of Management Practices

Each month, the City will certify that the BMPs are maintained and operating in a manner consistent with this Water Quality Trading Plan or provide a statement noting noncompliance with this Plan. The monthly Discharge Monitoring Report (DMR) will include the following statement as a certification of compliance when the Credit Generating Practice is operating in a manner consistent with the Plan:

> "I certify that to the best of my knowledge that the management practices identified in the approved water quality trading plan as the source of phosphorus credits is installed, established and properly maintained."

F. Notification of Failure to Generate Credits

The City will notify DNR by telephone call to DNR's regional wastewater compliance engineer within 24 hours or next business day of becoming aware that phosphorus credits used or intended for use by City are not being generated as outlined in this Water Quality Trading Plan.

The City will submit a written notification within five days after the City recognizes that the phosphorus credits are not being generated as outlined in the Trading Plan. DNR may waive the requirement for submittal for a written notice within five days and instruct the City to submit the written notice with the next regularly scheduled monitoring report required by City's WPDES Permit.

The written notice will contain a description of how and why the TP credits are not being generated as outlined in the Water Quality Trading Plan, the steps taken or planned to prevent reoccurrence of the identified problems and the length of time anticipated it will take to address the issue.

The City will work to rectify the problem as laid out in the Operation and Maintenance Plans.

G. Conditions under which Management Practices May Be Inspected

Any DNR authorized officer, employee, or representative has the right to access and inspect the credit generating practice so long as the City's trade agreement with the property owner(s) and this Water Quality Trading Plan remain in effect.

VII. Certification –

The undersigned hereby certifies that this Water Quality Trading Plan is accurate and correct to the best of his knowledge.

City of Mineral Point Wastewater Treatment Facility

By: _____

Matthew Honer
City Administrator
City of Mineral Point
137 High Street, Suite 1
Mineral Point, WI 53565
Telephone: (608) 987-0463
Email: administrator@cityofmineralpoint.com

Attachment #1

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
City of Mineral Point	WI- 0024791-09-0	

Facility Address	City	State	ZIP Code
Bollerude Street, (NEQ, SEQ, Section 6, T4N-R3E)	Mineral Point	WI	53565

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Jordan Fure (Delta 3 Eng.)	875 South Chestnut Street	Platteville	WI	53818

Project Name
Proposed 2021 Stream Improvements - Brewery Creek

Receiving Water Name	Parameter(s) being traded	HUC 12(s)
Brewery Creek	Total Phosphorus	070900030103

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: _____
- ◉ 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: _____
- ◉ 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:

Streambank Stabilization

Method for quantifying credits generated:
- ☐ Monitoring
- ☒ Modeling, Names: NRCS Streambank Erosion Estimator
- ☐ Other: _____

Projected date credits will be available: 09/30/2021

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
Nadia Fine	3/17/2020

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
Erin M. Hirn	4/15/2020

Attachment #2

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

Water Quality Trading Checklist

Form 3400-208 (1/14)

Notice: Pursuant to s. 283.84, Wis. Stats., this form must be completed by any WPDES permittee that intends to pursue pollutant 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
City of Mineral Point	WI- 0024791	

Facility Address	City	State	ZIP Code
Bollerude Street, (NEQ, SEQ, Section 6, T4N-R3E)	Mineral Point	WI	53565

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Jordan Fure (Delta 3 Eng.)	875 South Chestnut Street	Platteville	WI	53818

Project Name
Proposed 2021 Stream Improvements - Brewery Creek

Receiving Water Name	Parameter(s) being traded	HUC 12(s)
Brewery Creek	Total Phosphorus	070900030103

Credit Generator Information

Credit generator type (select all that apply):

- ☐ Permitted Discharge (non-MS4CAFO)
- ☐ 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: _____
- ◉ No

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

Will a broker/exchange be used to facilitate trade?
- ○ Yes *(include description and contact information in WQT plan)*
- ◉ No

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

Are each of the point source credit generators identified in this section in compliance with their WDPES permit requirements?
- ○ Yes
- ○ No

Discharge Type	Permit Number	Name	Contact Information	Trade Agreement Number
○ Traditional ○ MS4 ○ CAFO				
○ Traditional ○ MS4 ○ CAFO				
○ Traditional ○ MS4 ○ CAFO				
○ Traditional ○ MS4 ○ CAFO				
○ Traditional ○ MS4 ○ CAFO				

Point to Point Trades (Traditional Municipal / Industrial, MS4, CAFO) *cont.*

Does plan have a narrative that describes:			Plan Section
a. Summary of discharge and existing treatment including optimization	◯ Yes	◯ No	
b. Amount of credit being generated	◯ Yes	◯ No	
c. Timeline for credits and agreements	◯ Yes	◯ No	
d. Method for quantifying credits	◯ Yes	◯ No	
e. Tracking and verification procedures	◯ Yes	◯ No	
f. Location of credit generator in proximity to receiving water and credit user	◯ Yes	◯ No	
g. Other: ______________________	◯ Yes	◯ No	

Point to Nonpoint Trades (Non-Permitted Urban, Agricultural, Other)

Discharge Type	Practices Used to Generate Credits	Method of Quantification	Trade Agreement Number	Have the practice(s) been formally registered?
◯ Urban NPS ◉ Agricultural NPS ◯ Other	Streambank Stabilization	NRCS Streambank Erosion Estimator	N/A	◯ Yes ◉ No ◯ Only in part
◉ Urban NPS ◯ Agricultural NPS ◯ Other	Streambank Stabilization	NRCS Streambank Erosion Estimator	N/A	◯ Yes ◉ No ◯ Only in part
◯ Urban NPS ◯ Agricultural NPS ◯ Other				◯ Yes ◯ No ◯ Only in part
◯ Urban NPS ◯ Agricultural NPS ◯ Other				◯ Yes ◯ No ◯ Only in part
◯ Urban NPS ◯ Agricultural NPS ◯ Other				◯ Yes ◯ No ◯ Only in part
◯ Urban NPS ◯ Agricultural NPS ◯ Other				◯ Yes ◯ No ◯ Only in part
◯ Urban NPS ◯ Agricultural NPS ◯ Other				◯ Yes ◯ No ◯ Only in part
◯ Urban NPS ◯ Agricultural NPS ◯ Other				◯ Yes ◯ No ◯ Only in part

Does plan have a narrative that describes:			Plan Section
a. Description of existing land uses	◉ Yes	◯ No	Section IV
b. Management practices used to generate credits	◉ Yes	◯ No	Section IV
c. Amount of credit being generated	◉ Yes	◯ No	Section IV
d. Description of applicable trade ratio per agreement/management practice	◉ Yes	◯ No	Section IV
e. Location where credits will be generated	◉ Yes	◯ No	Section III
f. Timeline for credits and agreements	◉ Yes	◯ No	Section V
g. Method for quantifying credits	◉ Yes	◯ No	Section IV

Does plan have a narrative that describes:			Plan Section
h. Tracking procedures	◉ Yes	○ No	Section IV
i. Conditions under which the management practices may be inspected	◉ Yes	○ No	Section VI
j. Reporting requirements should the management practice fail	◉ Yes	○ No	Section VI
k. Operation and maintenance plan for each management practice	◉ Yes	○ No	Section IV
l. Location of credit generator in proximity to receiving water and credit user	◉ Yes	○ No	Section III
m. Practice registration documents, if available	○ Yes	◉ No	
n. History of project site(s)	◉ Yes	○ No	Section IV
o. Other: _____	○ Yes	○ No	

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.
- I certify that the information in this document is true to the best of my knowledge.

Signature of Preparer	Date Signed
Jordan Finne	4-14-2020

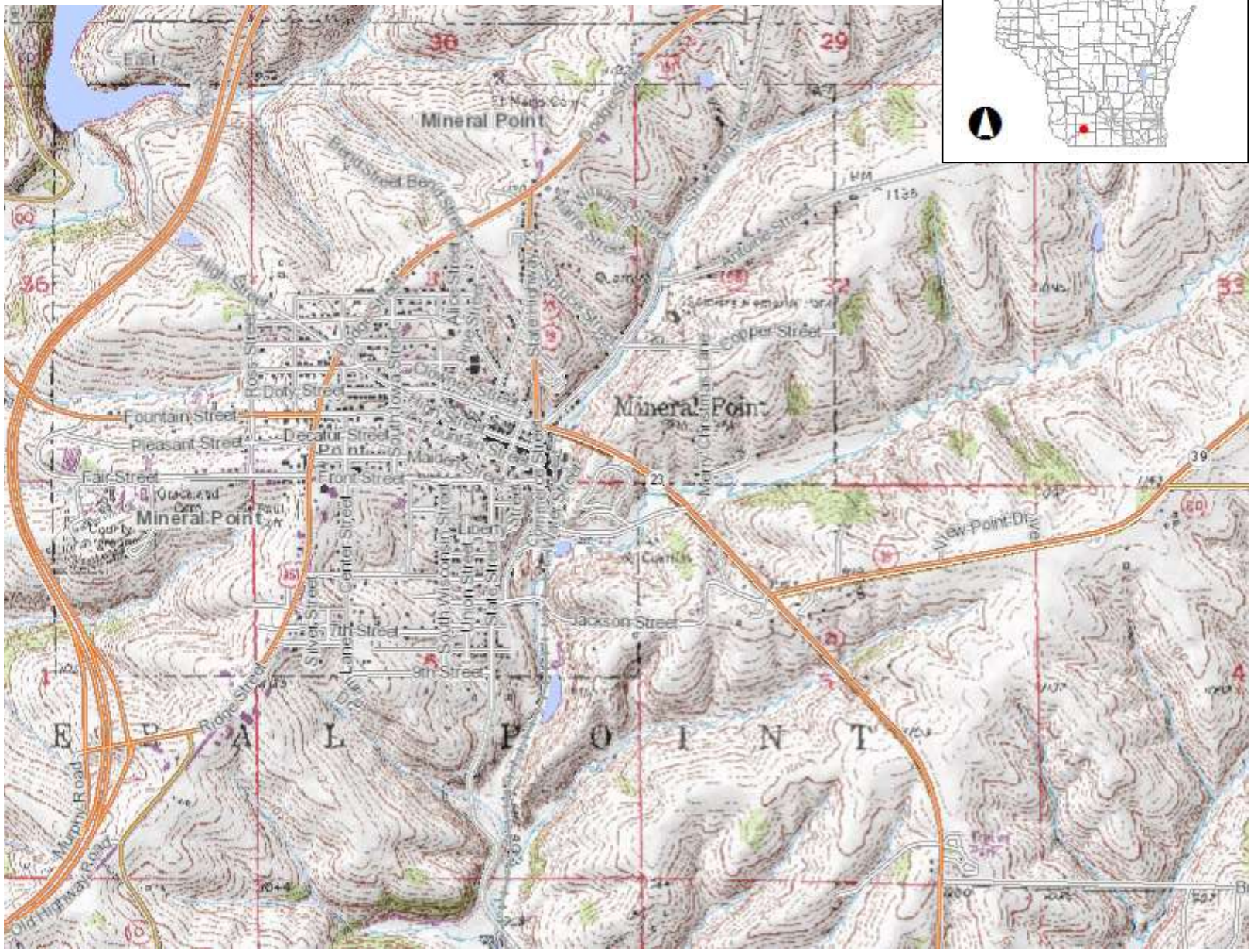
Authorized Representative Signature

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
Erin M. Hirn	04/15/2020

Attachment #3

Location Map



Legend

- 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
- 24K USGS Quad Index - Level 7 - 16

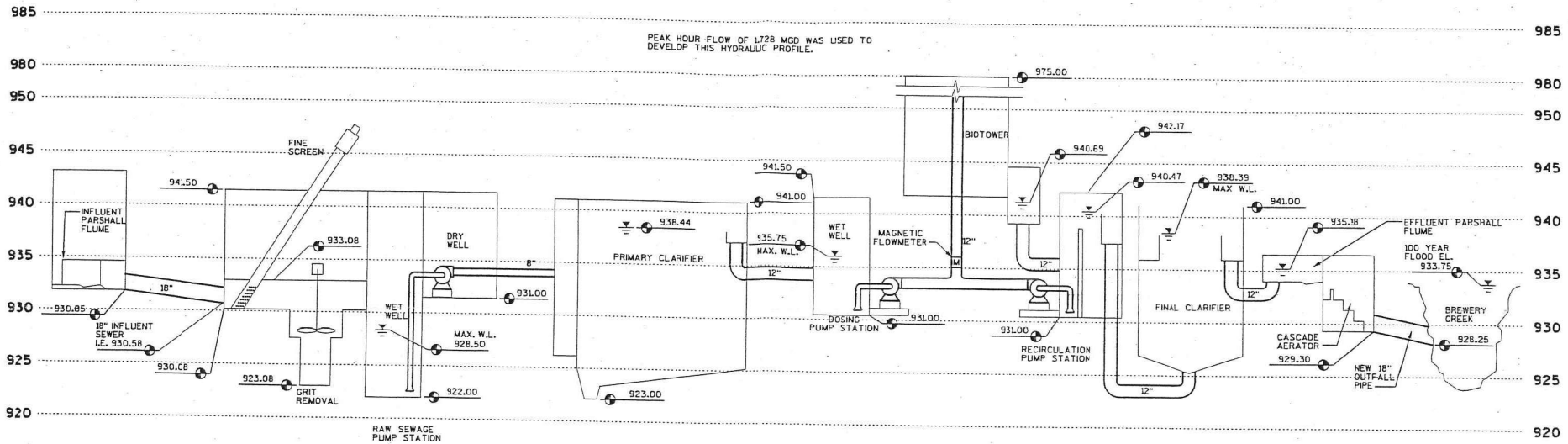
Notes

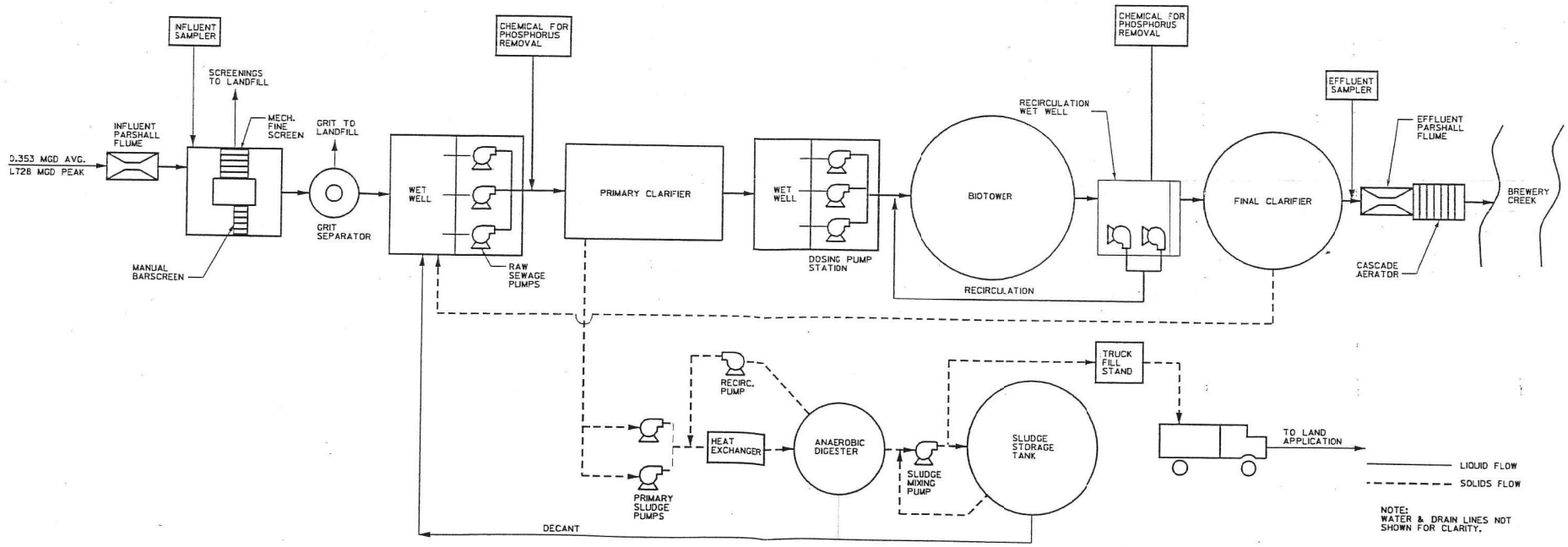
0.8 0 0.38 0.8 Miles

NAD_1983_HARN_Wisconsin_TM

1: 23,760

Attachment #4





FLOW DIAGRAM AND HYDRAULIC PROFILE

WASTEWATER TREATMENT FACILITY UPGRADE AND EXPANSION
CITY OF MINERAL POINT
IOWA COUNTY, WISCONSIN

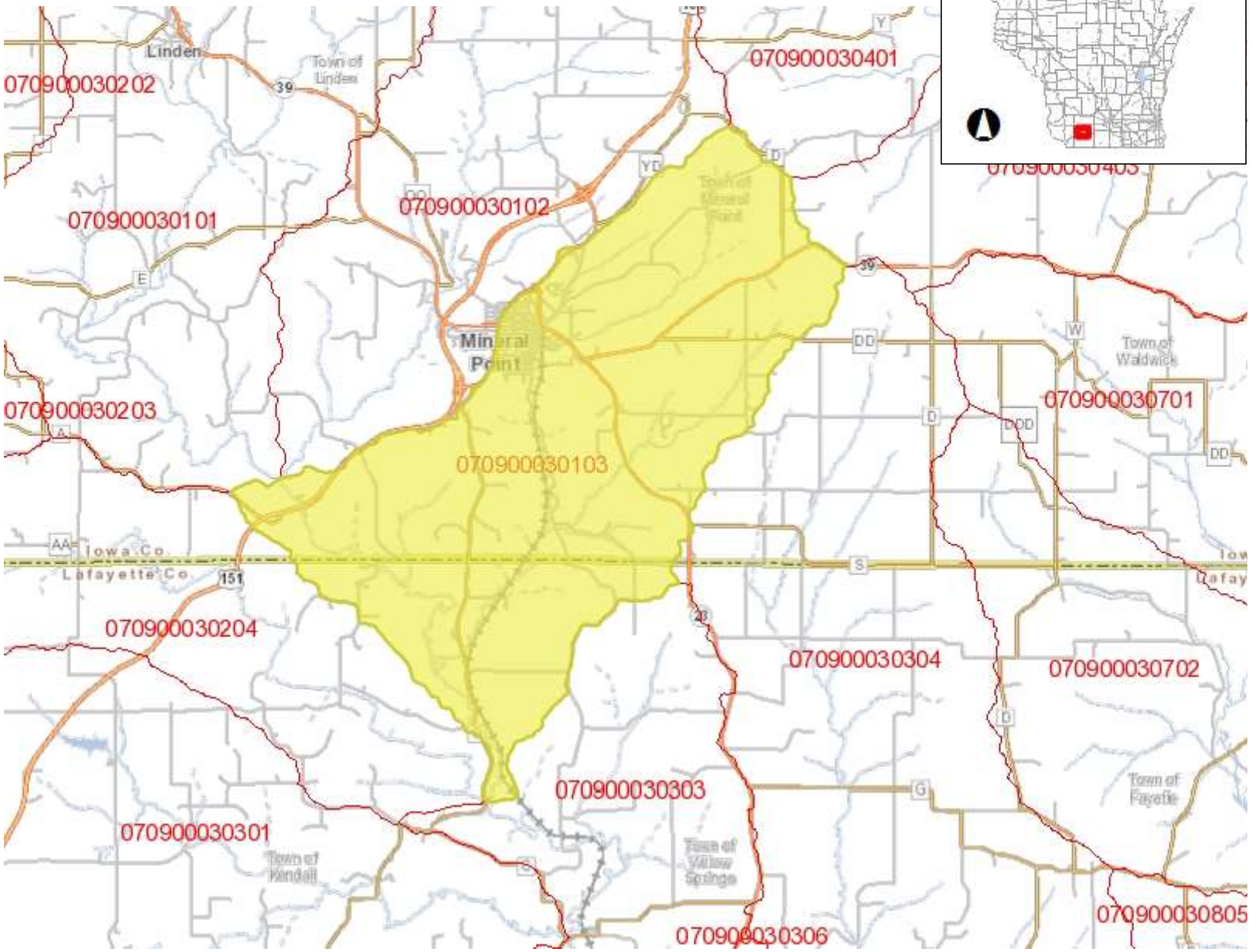
FILE NO. M24-103

SHEET G-9

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL • REMEDIATION
ILLINOIS LICENSE NO. 184-000966

Attachment #5

HUC-12 Watershed 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
- Rivers and Streams
- Intermittent Streams
- Lakes and Open water

Notes

4.0 0 2.00 4.0 Miles

NAD_1983_HARN_Wisconsin_TM

1: 126,720

Attachment #6

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

OWNER: CITY OF MINERAL POINT MINERAL POINT, WI

PROJECT LOCATION MAP

SCALE: N.T.S.

DIGGERS HOTLINE IS OPEN
24 HOURS A DAY,7 DAYS A WEEK, 365 DAYS A YEAR!
TO NOTIFY DIGGERS HOTLINE OF YOU INTENT TO DIG CALL:
MILWAUKEE AREA: (414) 259-1181
TOLL FREE: (800) 242-8511
HEARING IMPAIRED (TTD): (800) 542-2289

UTILITIES NOTE:

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLAN HAVE BEEN OBTAINED BY FIELD CHECKS, A UTILITY LOCATE THROUGH DIGGERS HOTLINE, AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE SURVEYOR DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR SHOULD VERIFY LOCATIONS W THE UTILITY COMPANIES AND THE "CITY OF MINERAL POINT " PRIOR TO STARTING ANY EXCAVATION.

SHEET INDEX:

SHEET TITLE:	SHEET DESCRIPTION:	DATE OF ISSUE:	DATE OF REVISION:
G000	TITLE SHEET & PROJECT LOCATION MAP	JUNE 17, 2021	-
G001	LEGEND & GENERAL NOTES	JUNE 17, 2021	-
C101	PLAN VIEW - REACH 1	JUNE 17, 2021	-
C102	PLAN VIEW - REACH 8	JUNE 17, 2021	-
C103	PLAN VIEW - REACHES 8 & 9	JUNE 17, 2021	-
C104	PLAN VIEW - REACH 9	JUNE 17, 2021	-
C201	DETAILS - EROSION CONTROL & NOTES	JUNE 17, 2021	-
C202	DETAILS - STREAM & TYPICAL CROSS-SECTIONS	JUNE 17, 2021	
C203	DETAILS - STREAM	JUNE 17, 2021	

WISCONSIN
BART P. NIES
E-34685
PLATTEVILLE
WI
PROFESSIONAL ENGINEER

6/17/2021

PROJECT INFORMATION:

OWNER:
CITY OF MINERAL POINT
MR. JASON BASTING
MAYOR
137 HIGH STREET, SUITE 1
MINERAL POINT, WI 53565
(608) 987-2361

STREETS AND STORM SEWERS:
CITY OF MINERAL POINT
MR. TODD DOREY
STREET SUPERINTENDENT
137 HIGH STREET, SUITE 1
MINERAL POINT, WI 53565
OFFICE: (608) 987-2960
MOBILE: (608) 341-8748

WATER AND SANITARY SEWER UTILITIES:
CITY OF MINERAL POINT
MR. RYAN KOWALSKI
WATER/SEWER SUPERINTENDENT
137 HIGH STREET, SUITE 1
MINERAL POINT, WI 53565
OFFICE: (608) 987-3462
MOBILE: (608) 574-7060

TELEPHONE UTILITY:
FRONTIER COMMUNICATIONS
MR. JERRY MOORE
CONSTRUCTION DETAILER
100 COMMUNICATIONS DRIVE
SUN PRAIRIE, WI 53596
MOBILE: (608) 742-9507

CABLE TELEVISION UTILITY:
CHARTER COMMUNICATIONS
MR. STEVE HEGGE
2701 DANIELS STREET
MADISON, WI 53718
(608) 274-3822 x6687

ELECTRICAL & NATURAL GAS UTILITIES:
ALLIANT ENERGY
MR. CHAD NOVAK
490 SHAKERAG STREET
MINERAL POINT, WI 53565
MOBILE: (608) 574-1037

ENGINEER:
DELTA 3
KEEP MOVING FORWARD
PROFESSIONAL CIVIL, MARINE, & STRUCTURAL ENGINEERING • ARCHITECTURE
GRANT WRITING • LAND DEVELOPMENT • PLANNING & GIS SERVICES
825 SOUTH CHESTNUT STREET PLATTEVILLE, WISCONSIN 53818 PHONE: (608) 348-5355
895 JACKSON STREET DUBUQUE, IOWA 52004 PHONE: (563) 542-5005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:
MR. JORDAN FURE, E.I.T.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK
CITY OF MINERAL POINT, WI
PROJECT LOCATION: MINERAL POINT, WISCONSIN - BREWERY CREEK
OWNER: CITY OF MINERAL POINT; 137 HIGH STREET; SUITE 101; MINERAL POINT, WI 53565

REVISIONS		
NO.	DATE	DESCRIPTION
AS-BUILT:		BY:

FOR BID	
PROJECT NUMBER	D19-032
SHEET SCALE	NOT TO SCALE
DRAWN BY	C.COYIER
DATE ISSUED	JUNE 17, 2021
SHEET DESC.	TITLE SHEET & PROJECT LOCATION MAP

SHEET TITLE: G000

SHEET NUMBER # 01 of 09

LEGEND

- EX. CON. MANHOLE
- EX. ECC. MANHOLE
- EX. LIFT STATION
- EX. CLEAN OUT
- EX. FIRE HYDRANT
- EX. WATER SERVICE
- EX. WATER VALVE
- EX. YARD HYDRANT
- EX. CATCH BASIN
- EX. STORM INLET
- EX. NATURAL GAS VALVE
- EX. NATURAL GAS METER
- EX. POWER POLE
- EX. LIGHT POLE
- EX. WARNING SIREN
- EX. TEL. PEDESTAL
- EX. MAILBOX
- EX. LP TANK
- EX. SATELLITE DISH
- EX. POST OR POLE
- EX. STREET SIGN
- EX. EVERGREEN TREE
- EX. DECIDUOUS TREE
- EX. TREE STUMP
- EX. BUSH/SHRUB
- EX. TREE/BRUSH LINE
- EX. WINDMILL
- EX. PARK BENCH
- EX. BENCHMARK
- SURVEY CONTROL POINT
- EX. PROPERTY PIN
- RIGHT-OF-WAY (R/W)
- PROPERTY LINE (P/L)
- EASEMENT
- EX. SAN. S. LATERAL (San. Lat.)
- EX. 6" SAN. S. MAIN
- EX. 8" SAN. S. MAIN
- EX. 10" SAN. S. MAIN
- EX. 12" SAN. S. MAIN
- EX. 15" SAN. S. MAIN
- EX. FLOW DIRECTION
- EX. CAPPED SERVICE
- EX. WATER SERVICE
- EX. 4" WATER MAIN
- EX. 6" WATER MAIN
- EX. 8" WATER MAIN
- EX. 10" WATER MAIN
- EX. 12" WATER MAIN
- EX. <12" STORM SEWER
- EX. 12" STORM SEWER
- EX. 15" STORM SEWER
- EX. 18" STORM SEWER
- EX. 24" STORM SEWER
- EX. 27" STORM SEWER
- EX. 30" STORM SEWER
- EX. 36" STORM SEWER
- EX. 42" STORM SEWER
- EX. 48" STORM SEWER
- EX. CURB AND GUTTER
- EX. U.GRD N. GAS UTILITY (GAS)
- EX. U.GRD ELECTRIC UTILITY (UGE)
- EX. U.GRD CABLE TV UTILITY (UGC)
- EX. U.GRD TELEPHONE UTILITY (TEL)
- EX. U.GRD FIBER OPTIC UTILITY (FO)
- EX. OVERHEAD ELECTRIC (OHE)
- EX. FENCE
- EX. RAILROAD TRACKS
- EX. CONTOUR (99)
- EX. DRAINAGE SWALE

- PROP. SANITARY SEWER LATERAL
- PROP. <6" SANITARY SEWER MAIN
- PROP. 6" SANITARY SEWER MAIN
- PROP. 8" SANITARY SEWER MAIN
- PROP. 10" SANITARY SEWER MAIN
- PROP. 12" SANITARY SEWER MAIN
- PROP. 15" SANITARY SEWER MAIN
- PROP. 18" SANITARY SEWER MAIN
- PROP. CIPP LINER
- PROP. FLOW DIRECTION
- PROP. WATER SERVICE
- PROP. <4" WATER MAIN
- PROP. 4" WATER MAIN
- PROP. 6" WATER MAIN
- PROP. 8" WATER MAIN
- PROP. 10" WATER MAIN
- PROP. 12" WATER MAIN
- PROP. 15" WATER MAIN
- PROP. <12" STORM SEWER
- PROP. 12" STORM SEWER
- PROP. 15" STORM SEWER
- PROP. 18" STORM SEWER
- PROP. 24" STORM SEWER
- PROP. 30" STORM SEWER
- PROP. 36" STORM SEWER
- PROP. 48" STORM SEWER
- PROP. CURB AND GUTTER
- PROP. CURB BACK OPENING
- PROP. U.GRD GAS UTILITY (GAS)
- PROP. U.GRD ELECTRIC UTILITY (UGE)
- PROP. U.GRD CABLE TV UTILITY (UGCTV)
- PROP. U.GRD TELEPHONE UTILITY (UGT)
- PROP. U.GRD FIBER OPTIC UTILITY (FIBER)
- PROP. OVERHEAD ELECTRIC (OHE)
- PROP. CROSSING OF N. GAS UTILITY (CAUTION NATURAL GAS)
- PROP. UTILITY POLE
- PROP. LIGHT POLE
- PROP. FENCE
- TEMPORARY EASEMENT
- CONSTRUCTION EASEMENT
- ESTIMATED DISTURBANCE LIMITS
- PROP. CONTOUR (99)
- PROP. DRAINAGE SWALE
- PROP. SILT FENCE
- PROP. EROSION CONTROL SEDIMENT LOG
- PROP. PAVEMENT MARKING
- PAINTED TRAFFIC ARROW
- ADA PARKING DESIGNATION
- PARKING STALL COUNT (10)
- RADIUS POINT/SIZE (5'R)
- STA. ON CENTERLINE (0+00)
- PROP. HANDICAP RAMP WITH DETECTABLE WARNING FIELD
- SOIL BORING LOCATION
- RIVER FLOW DIRECTION
- PROP. 4' DIA. SANITARY MANHOLE
- PROP. 5' DIA. SANITARY MANHOLE
- PROP. MANHOLE CHIMNEY REHABILITATION / TOP ADJUSTMENT
- PROP. SANITARY LIFT STATION

- PROP. TYPE "X" CURB & GUTTER
- PROP. REVERSE-PITCH CURB & GUTTER
- PROP. HOT MIX ASPHALT PAVEMENT (DRIVEWAY)
- PROP. 4" CONCRETE SIDEWALK
- PROP. 6" CONCRETE PAVEMENT
- PROP. 8" CONCRETE PAVEMENT
- PROP. GRAVEL SHOULDER / DRIVEWAY
- EROSION MATTING (MILD SLOPES)
- EROSION MATTING (STEEP SLOPES)
- PROP. REGRADING AND LANDSCAPING
- PROP. RIP-RAP
- PROP. STORM STRUCTURES - PROFILE
- PROP. STORM PIPE(RCP) - PROFILE
- PROP. STORM PIPE(CMP OR HDPE) - PROFILE
- PROP. SANITARY STRUCTURE - PROFILE
- PROP. WATER MAIN PIPE - PROFILE
- PROP. CLAY LINER - PROFILE
- PROP. SANITARY SEWER FORCE MAIN - PROFILE
- PROP. SPOT REPAIR - PROFILE / PLAN VIEW
- PROP. CASING PIPE - PROFILE
- PROP. CLEARING AND GRUBBING
- PROP. BUILDING REMOVAL
- PROP. SIDEWALK REMOVAL
- PROP. PRESSURE-REDUCING VALVE STATION
- PROP. FIRE HYDRANT
- PROP. WATER SERVICE
- PROP. WATER SERVICE WITH VALVE BOX SLEEVE
- PROP. WATER VALVE
- PROP. WATER BEND - HORIZONTAL
- PROP. WATER BEND - VERTICAL
- PROP. WATER BEND <5°
- PROP. WATER TEE
- PROP. WATER CROSS
- PROP. WATER REDUCER
- PROP. MJ PLUG
- PROP. 4' DIA. STORM MANHOLE
- PROP. 5' DIA. STORM MANHOLE
- PROP. INLET
- PROP. 4' DIA. INLET
- PROP. 6' DIA. INLET
- PROP. 4' DIA. CATCH BASIN- W/ 2'X3' CASTING
- PROP. 5' DIA. CATCH BASIN- W/ 2'X3' CASTING
- PROP. 6' DIA. CATCH BASIN- W/ 2'X3' CASTING
- PROP. 4'X6' CATCH BASIN W/2'X3' CASTING
- PROP. CURB OPENING CASTING
- PROP. 2'X3' CATCH BASIN
- PROP. ADJUSTED CATCH BASIN TOP
- PROP. WISDOT TYPE 8 INLET
- PROP. WISDOT TYPE 9 INLET
- PROP. CMP ENDWALL
- PROP. RCP ENDWALL

KEY NOTES [100]:

100 PROPOSED SILT FENCE FOR EROSION CONTROL.
101 PROPOSED SEDIMENT LOG FOR EROSION CONTROL.
102 PROPOSED TRACKING PAD FOR EROSION CONTROL.
103 RE-GRADE YARD/DITCH LINE (MIN. SLOPE 1.0%).
104 PROPOSED EROSION MAT CLASS I, TYPE 'B'.
105 INSTALL TYPE 'D' INLET PROTECTION.
106 PROPOSED MAIL BOX RELOCATION.
107 ITEM TO REMAIN.
108 CONTRACTOR TO REMOVE ITEM.
109 PROPOSED TURBIDITY BARRIER (TYP.) (SEE DETAIL - SHEET C203).
200 PROPOSED SANITARY SEWER [SIZE].
201 NEW SANITARY SEWER LATERAL [SIZE].
202 REPLACE EXISTING SANITARY SEWER LATERAL.
203 RECONNECT EXISTING SANITARY SEWER LATERAL.
204 CONNECTION TO EXISTING SANITARY SEWER PIPE/STRUCTURE.
205 REMOVE EXISTING SANITARY SEWER PIPE /STRUCTURE.
206 REHABILITATE SANITARY MANHOLE; SEE TABLE 'B'.
207 SANITARY SEWER SPOT REPAIR.
208 ABANDON AND CAP EXISTING SANITARY SEWER.
209 ABANDON EXISTING SANITARY SEWER LATERAL.
210 CONTRACTOR TO FIELD VERIFY SANITARY SEWER LATERAL LOCATION/ACTIVITY AND REPLACE ACCORDING TO ENGINEER.
300 PROPOSED WATER MAIN [SIZE].
301 NEW WATER SERVICE [SIZE].
302 REPLACE EXISTING WATER SERVICE WITH 1" WATER SERVICE.
303 RECONNECT EXISTING WATER SERVICE.
304 DIRECTIONAL DRILL PROPOSED WATER SERVICE.
305 CONNECTION TO EXISTING WATER MAIN.
306 EXISTING HYDRANT TO BE REMOVED AND SALVAGED TO OWNER.
307 REMOVE EXISTING WATER MAIN VALVE BOX/STRUCTURE.
308 ADJUST EXISTING WATER MAIN VALVE BOX.
309 ABANDON, DRAIN, & CAP EXISTING WATER MAIN.
310 ABANDON EXISTING WATER SERVICE.
311 CONTRACTOR TO FIELD VERIFY WATER SERVICE LOCATION/ACTIVITY AND REPLACE ACCORDING TO ENGINEER.
400 PROPOSED STORM SEWER [SIZE].
401 CONNECT EXISTING ROOF DRAIN TO CURB OPENING
402 CONNECTION TO EXISTING STORM SEWER PIPE/STRUCTURE.
403 REMOVE EXISTING STORM SEWER PIPE/STRUCTURE.
404 ABANDON & CAP EXISTING STORM SEWER.
405 ADJUST EXISTING STORM STRUCTURE.
500 TREE & STUMP TO BE REMOVED (LESS THEN 12")
501 TREE & STUMP TO BE REMOVED (12" & GREATER)
502 SHRUB TO BE REMOVED.
503 CLEAR AND GRUB BRUSH LINE AS NECESSARY TO COMPLETE CONSTRUCTION. ALL CLEARING TO BE VERIFIED BY PROJECT ENGINEER.
504 REMOVE AND REINSTALL/REPLACE EXISTING LANDSCAPING, FENCE, RETAINING WALL, ETC. (IF NECESSARY).
505 REMOVE EXISTING LANDSCAPING, FENCE, RETAINING WALL, ETC.
506 POLE/PEDESTAL TO BE SECURED BY UTILITY COMPANY DURING CONSTRUCTION.
507 POLE TO BE RELOCATED BY UTILITY COMPANY.
508 GUY WIRE TO BE RELOCATED BY UTILITY COMPANY.
509 PEDESTAL TO BE RELOCATED BY UTILITY COMPANY.
510 UTILITY CONFLICT - TO BE RELOCATED/ADJUSTED BY UTILITY COMPANY.
511 POTENTIAL UTILITY CONFLICT - VERIFY WITH UTILITY COMPANY.
512 **CAUTION!** - UTILITY CROSSING.
600 REMOVE EXISTING CURB & GUTTER.
601 PROPOSED 24" CONCRETE CURB & GUTTER.
602 PROPOSED 30" CONCRETE CURB & GUTTER.
603 PROPOSED 36" CONCRETE CURB & GUTTER.
604 MATCH TO EXISTING CURB & GUTTER.
605 PROVIDE TYPE 'X' CURB.
606 PROVIDE REVERSE-PITCH CURB & GUTTER.
607 PROVIDE CURB TAPER.
608 REMOVE ASPHALT/CONCRETE/WALL/STEPS.
609 PROPOSED 4" CONCRETE SIDEWALK.
610 PROPOSED 6" CONCRETE SIDEWALK/DRIVEWAY.
611 PROPOSED 6" CONCRETE PAVEMENT.
612 PROPOSED 8" CONCRETE PAVEMENT.
613 PROPOSED CONCRETE STEPS. STEP RISE HEIGHT AND STEP TREAD DEPTH SHALL MEET APPLICABLE BUILDING CODES. CONTRACTOR SHALL CONFIRM REQUIRED NUMBER OF STEPS WITH PROJECT ENGINEER PRIOR TO INSTALL.
614 PROPOSED 2' GRAVEL SHOULDER.
615 REGRADE EXISTING GRAVEL.
616 PROPOSED GRAVEL DRIVEWAY.
617 REMOVE & REPLACE GRAVEL DRIVEWAY.
618 REMOVE GRAVEL DRIVEWAY & REPLACE WITH BITUMINOUS DRIVEWAY/APRON.
619 REMOVE & REPLACE HMA PAVEMENT.
620 REMOVE & REPLACE HMA PAVEMENT DRIVEWAY.
621 PROPOSED HMA PAVEMENT.
622 MATCH TO EXISTING EDGE PAVEMENT.
623 PROPOSED RESIDENTIAL HMA PAVEMENT DRIVEWAY.
624 PROPOSED COMMERCIAL HMA PAVEMENT DRIVEWAY.
625 REMOVE & REPLACE 4" CONCRETE SIDEWALK.
626 REMOVE & REPLACE 6" CONCRETE SIDEWALK/DRIVEWAY.
627 PROPOSED HANDICAP RAMP WITH - D. WARN. FIELD [S.F].
628 SAW CUT PCC PAVEMENT.
629 SAW CUT HMA PAVEMENT.
630 PROPOSED BITUMINOUS WEDGE CURB.

NOTES:

TRAFFIC CONTROL NOTE:
ALL CONTRACTORS MUST CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE REQUIREMENTS OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION. ONE LANE OF TRAFFIC MUST REMAIN OPEN DURING AND AFTER ALL CONSTRUCTION ACTIVITIES FOR EMERGENCY VEHICLE ACCESS.

STREET SIGN NOTE:
CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING, STORING, AND RESETTING ALL PERMANENT SIGNS. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING SIGNS UNTIL REMOVED. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL TEMPORARY SIGNS THAT MAY BE REQUIRED.

TRAFFIC SIGN NOTE:
CONTRACTOR TO PROVIDE TEMPORARY TRAFFIC SIGNS FOR ANY TRAFFIC SIGNS DISTURBED DURING CONSTRUCTION. ALL DISTURBED TRAFFIC SIGNS MUST BE REPLACED AND INSTALLED AS PER LOCAL REGULATIONS AT THE COMPLETION OF THE PROJECT.

EROSION CONTROL NOTE:
CONTRACTOR TO INSTALL BACKFILL MATERIAL INTO THE EXCAVATED TRENCH AS SOON AS POSSIBLE TO IMPLEMENT EROSION CONTROL.

PROPERTY LINE AND RIGHT-OF-WAY NOTE:
ALL RIGHT-OF-WAYS AND PROPERTY LINES SHOWN ARE APPROXIMATE AND FOR ILLUSTRATIVE PURPOSES ONLY. A PROPERTY SURVEY PERFORMED BY A PROFESSIONAL LAND SURVEYOR SHOULD BE COMPLETED TO DETERMINE THE ACTUAL PROPERTY LINE AND RIGHT-OF-WAY LOCATIONS.

MAILBOX RELOCATION NOTE:
CONTRACTOR TO RELOCATE EXISTING MAILBOXES DURING CONSTRUCTION (COORDINATE AND VERIFY WITH LOCAL POSTAL SERVICE ON LOCATION). RESET BEHIND CURB AND GUTTER OR SHOULDER ACCORDING TO THE REQUIREMENTS OF THE LOCAL POSTMASTER UPON COMPLETION OF STREET CONSTRUCTION.

TREE TRIMMING NOTE:
CONTRACTOR TO PROPERLY TRIM ALL TREE BRANCHES, ROOTS, AND BUSHES DISTURBED DUE TO SANITARY SEWER, WATER SYSTEM, STORM SEWER, AND STREET CONSTRUCTION.

TREE REMOVAL NOTE:
CONTRACTOR TO CONTACT ENGINEER OR **CITY OF MINERAL POINT** FOR VERIFICATION PRIOR TO ANY TREE REMOVAL.

SAW CUT NOTE:
CONTRACTOR TO PROVIDE FULL DEPTH SAW CUTS AND REPLACE PAVEMENT.

UTILITIES' NOTE:
THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLAN HAVE BEEN OBTAINED BY FIELD CHECKS, A UTILITY LOCATE THROUGH DIGGER'S HOTLINE, AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE SURVEYOR DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR SHOULD VERIFY LOCATIONS W/ THE UTILITY COMPANIES AND **CITY OF MINERAL POINT** PRIOR TO STARTING ANY EXCAVATION.

SITE RESTORATION NOTE:
CONTRACTOR WILL BE RESPONSIBLE FOR REPLACEMENT OF ALL DISTURBED PROJECT AREA COMPONENTS INCLUDING, BUT NOT LIMITED TO, EXISTING CONCRETE, BITUMINOUS PAVEMENT, GRAVEL, CULVERTS, WATER AND SANITARY SEWER SYSTEM COMPONENTS, STORM SEWER SYSTEM COMPONENTS, TREES, LAWN ORNAMENTS, FENCING, YARD LANDSCAPING, RETAINING WALLS, MAILBOXES, AND LANDSCAPE AREAS.

PROPERTY DAMAGES:
THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF ADJACENT PROPERTY AND FOR ANY DAMAGE TO THE SITE OR TO ADJACENT PROPERTY INCIDENTAL TO THE CONSTRUCTION ACTIVITIES. AFTER THE COMPLETION OF CONSTRUCTION, ANY AREAS ADJACENT TO THE CONSTRUCTION SITE DAMAGED BY THE CONTRACTOR DURING EXECUTION OF THE CONTRACT SHALL BE RESTORED TO MATCH THE PRECONSTRUCTION CONDITIONS.

GENERAL NOTES:

1. CONTRACTOR SHALL REPAIR ALL DRIVEWAYS, FENCES, AND FIELD ROADS DAMAGED DUE TO CONSTRUCTION ACTIVITIES.
2. CONTRACTOR MUST PROVIDE THE CITY WITH A MINIMUM 24-HR NOTICE OF PROPOSED CONSTRUCTION ACTIVITIES. THE CITY IS REQUIRED TO PERFORM REMOVAL OF ENDANGERED RESOURCES EACH DAY PRIOR TO CONSTRUCTION.
3. CONTRACTOR TO INSTALL EROSION CONTROL AND TURBIDITY BARRIER PRIOR TO COMMENCING CONSTRUCTION.
4. ALL PROPOSED GRADING LOCATIONS TO BE CLEARED AND GRUBBED BY THE CONTRACTOR.
5. SOIL SPREAD WITHIN THE FLOOD PLAIN AREA SHALL NOT EXCEED FOUR INCHES (4") OF DEPTH AND SHALL NOT BE DEPOSITED INTO WETLANDS.
6. CONTRACTOR SHALL NOT REMOVE TREES, SOIL, ROCK, AND THE LIKE FROM THE SITE WITHOUT CONSENT OF THE OWNER.
7. CONTRACTOR TO INSTALL EXISTING DRAIN TILES THROUGH PROPOSED GRADING AND RIP-RAP.
8. CONTRACTOR TO RESTORE/LANDSCAPE ALL DISTURBED AREAS.

DISCIPLINE	DESIGNATION
REMOVAL	R
GENERAL	G
CIVIL	C
LANDSCAPE	L
AQUATIC	AQ
ARCHITECTURAL	A
STRUCTURAL	S
ELECTRICAL	E
INSTRUMENTATION/CONTROLS	N
PROCESS	D
PLUMBING	P
HVAC /MECHANICAL	M

DISCIPLINE DESIGNATORS

TYPE	DESIGNATION
NOTES & SCHEDULES	0
PLANS	1
ELEVATIONS & DETAILS	2
CROSS-SECTIONS	3
DIAGRAMS	4

DRAWING SHEET DESIGNATION

C102
- DRAWING NUMBER
- DRAWING SHEET DESIGNATION
- DISCIPLINE DESIGNATION (MAY HAVE MULTIPLE)

SHEET NUMBER IDENTIFICATION

ENGINEER:
DELTA 3 — EVERY ANGLE COVERED
PROFESSIONAL CIVIL, MUNICIPAL, & STRUCTURAL ENGINEERING • ARCHITECTURE
GRANT WRITING • LAND DEVELOPMENT • PLANNING & CADD SERVICES
875 SOUTH CHESTNUT STREET, PLATTEVILLE, WISCONSIN 53818 — PHONE: (608) 348-5355
898 JACKSON STREET, DUBUQUE, IOWA 52001 — PHONE: (563) 542-9005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:
MR. JORDAN FURE, E.I.T.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT, WI

PROJECT LOCATION: MINERAL POINT, WISCONSIN - BREWERY CREEK
OWNER: CITY OF MINERAL POINT, 137 HIGH STREET, SUITE 101, MINERAL POINT, WI 53565

REVISIONS:		
NO.	DATE	DESCRIPTION

AS-BUILT: -/-/---- BY: -.----

FOR BID

PROJECT NUMBER	D19-032
SHEET SCALE	NOT TO SCALE
DRAWN BY	C.COYIER
DATE ISSUED	JUNE 17, 2021
SHEET DESC.	LEGEND & GENERAL NOTES

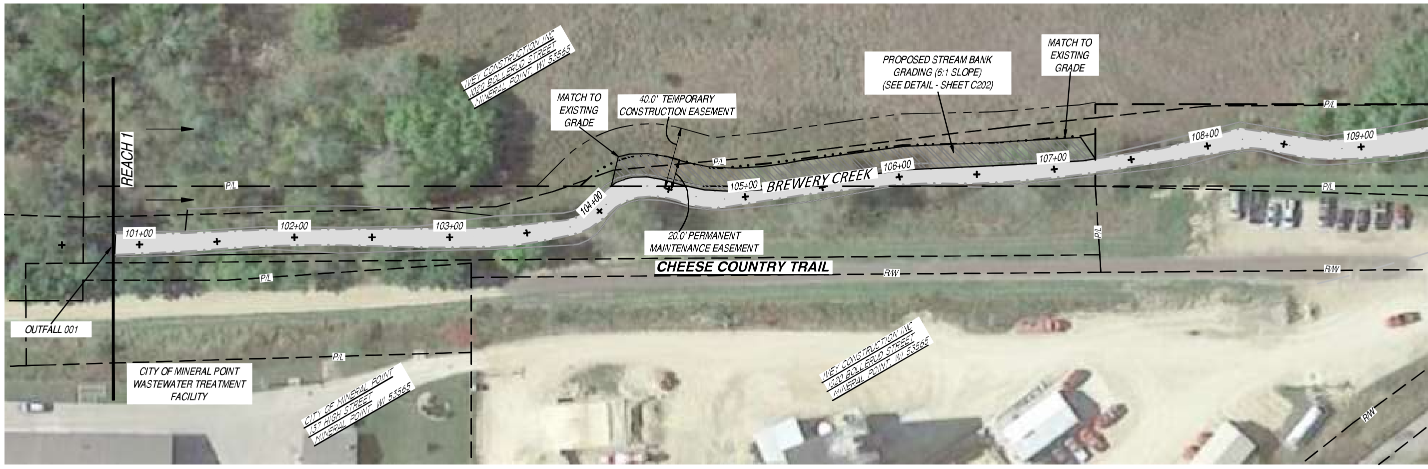
SHEET TITLE: **G001**

SHEET NUMBER # 02 of 09

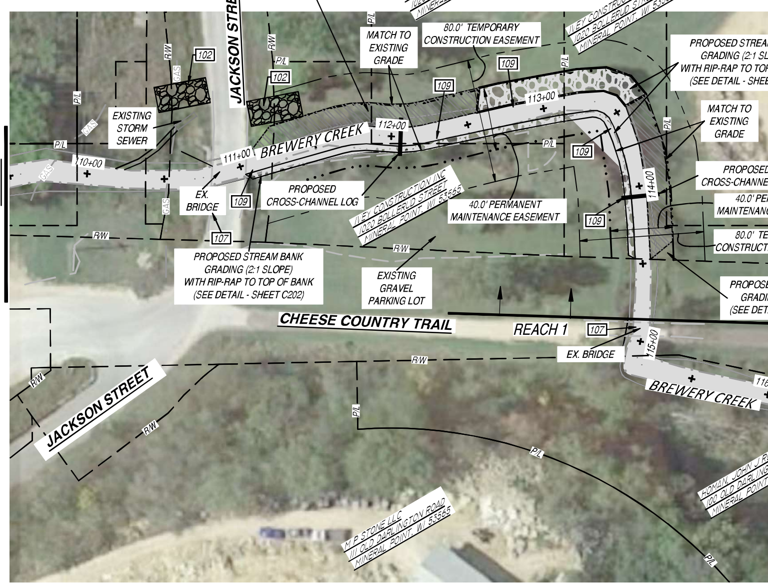
KEY NOTES 100 :

102 PROPOSED TRACKING PAD FOR EROSION CONTROL.
107 ITEM TO REMAIN.
109 PROPOSED TURBIDITY BARRIER (TYP.) (SEE DETAIL - SHEET C203).

SCALE: 1"=80' (11"x17")
0 20 40 60



SCALE: 1"=80' (11"x17")
0 20 40 60



GENERAL NOTES:

1. CONTRACTOR SHALL REPAIR ALL DRIVEWAYS, FENCES, AND FIELD ROADS DAMAGED DUE TO CONSTRUCTION ACTIVITIES.
2. CONTRACTOR MUST PROVIDE THE CITY WITH A MINIMUM 24-HR NOTICE OF PROPOSED CONSTRUCTION ACTIVITIES. THE CITY IS REQUIRED TO PERFORM REMOVAL OF ENDANGERED RESOURCES EACH DAY PRIOR TO CONSTRUCTION.
3. CONTRACTOR TO INSTALL EROSION CONTROL AND TURBIDITY BARRIER PRIOR TO COMMENCING CONSTRUCTION.
4. ALL PROPOSED GRADING LOCATIONS TO BE CLEARED AND GRUBBED BY THE CONTRACTOR.
5. SOIL SPREAD WITHIN THE FLOOD PLAIN AREA SHALL NOT EXCEED FOUR INCHES (4") OF DEPTH AND SHALL NOT BE DEPOSITED INTO WETLANDS .
6. CONTRACTOR SHALL NOT REMOVE TREES, SOIL, ROCK, AND THE LIKE FROM THE SITE WITHOUT CONSENT OF THE OWNER.
7. CONTRACTOR TO INSTALL EXISTING DRAIN TILES THROUGH PROPOSED GRADING AND RIP-RAP.
8. CONTRACTOR TO RESTORE/LANDSCAPE ALL DISTURBED AREAS.

ENGINEER:
DELTA 3
PROFESSIONAL CIVIL, MUNICIPAL, & STRUCTURAL ENGINEERING • ARCHITECTURE GRANT WRITING • LAND DEVELOPMENT • PLANNING & CADD SERVICES
875 SOUTH CHESTNUT STREET PLATTEVILLE, WISCONSIN 53818 PHONE: (608) 348-5355
898 JACKSON STREET DUBUQUE, IOWA 52001 PHONE: (563) 542-9005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:
MR. JORDAN FURE, E.I.T.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT, WI

PROJECT LOCATION: MINERAL POINT, WISCONSIN - BREWERY CREEK
OWNER: CITY OF MINERAL POINT, 137 HIGH STREET, SUITE 101, MINERAL POINT, WI 53565

REVISIONS:		
NO.	DATE	DESCRIPTION

AS-BUILT: --/--/---- BY: -.----

FOR BID

PROJECT NUMBER	D19-032
SHEET SCALE	HORZ-1"=80'
DRAWN BY	C.COYIER
DATE ISSUED	JUNE 17, 2021
SHEET DESC.	PLAN VIEW - REACH 1

SHEET TITLE: C101

GENERAL NOTES:

1. CONTRACTOR SHALL REPAIR ALL DRIVEWAYS, FENCES, AND FIELD ROADS DAMAGED DUE TO CONSTRUCTION ACTIVITIES.
2. CONTRACTOR MUST PROVIDE THE CITY WITH A MINIMUM 24-HR NOTICE OF PROPOSED CONSTRUCTION ACTIVITIES. THE CITY IS REQUIRED TO PERFORM REMOVAL OF ENDANGERED RESOURCES EACH DAY PRIOR TO CONSTRUCTION.
3. CONTRACTOR TO INSTALL EROSION CONTROL AND TURBIDITY BARRIER PRIOR TO COMMENCING CONSTRUCTION.
4. ALL PROPOSED GRADING LOCATIONS TO BE CLEARED AND GRUBBED BY THE CONTRACTOR.
5. SOIL SPREAD WITHIN THE FLOOD PLAIN AREA SHALL NOT EXCEED FOUR INCHES (4") OF DEPTH AND SHALL NOT BE DEPOSITED INTO WETLANDS.
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7. CONTRACTOR TO INSTALL EXISTING DRAIN TILES THROUGH PROPOSED GRADING AND RIP-RAP.
8. CONTRACTOR TO RESTORE/LANDSCAPE ALL DISTURBED AREAS.

KEY NOTES 100 :

102 PROPOSED TRACKING PAD FOR EROSION CONTROL.
107 ITEM TO REMAIN.
109 PROPOSED TURBIDITY BARRIER (TYP.) (SEE DETAIL - SHEET C203).
511 POTENTIAL UTILITY CONFLICT - VERIFY WITH UTILITY COMPANY.

SCALE: 1"=80' (11"x17")
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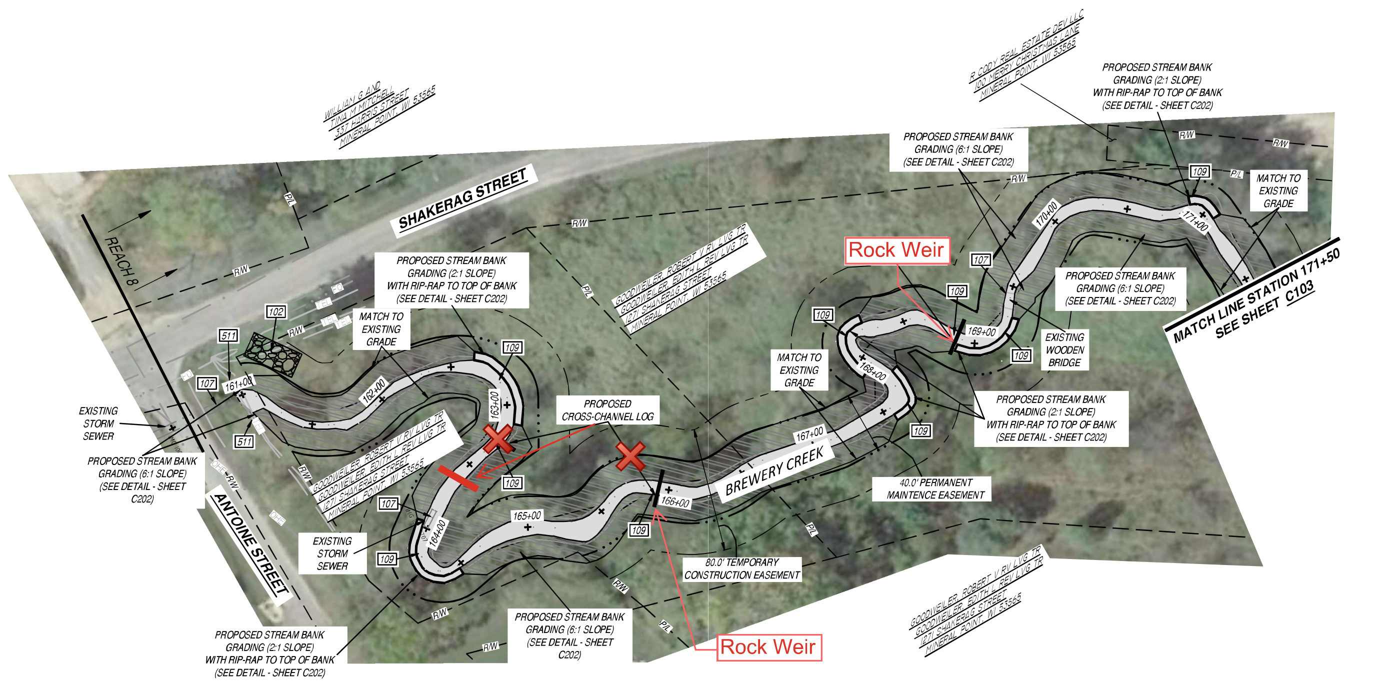


ENGINEER:
DELTA 3
875 SOUTH CHESTNUT STREET PLATTEVILLE, WISCONSIN 53818 PHONE: (608) 348-5355
890 JACKSON STREET DUBUQUE, IOWA 52001 PHONE: (563) 542-9005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:
MR. JORDAN FURE, E.I.T.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT, WI

PROJECT LOCATION: MINERAL POINT, WISCONSIN - BREWERY CREEK
OWNER: CITY OF MINERAL POINT, 137 HIGH STREET, SUITE 101, MINERAL POINT, WI 53565

REVISIONS:		
NO.	DATE	DESCRIPTION

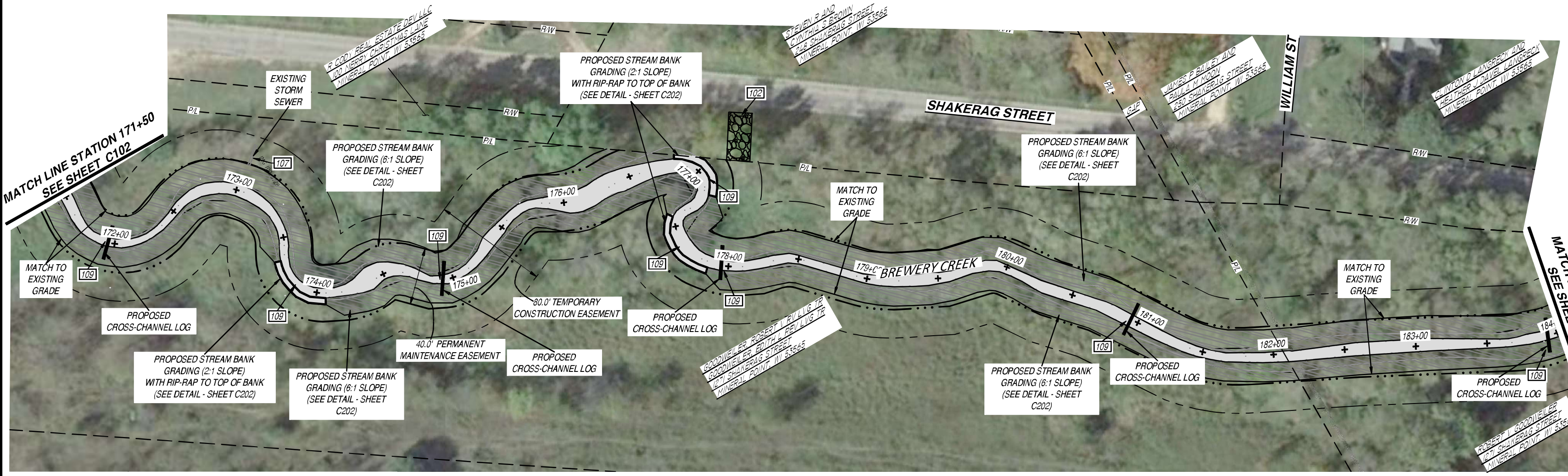
AS-BUILT: --/--/---- BY: -.-----

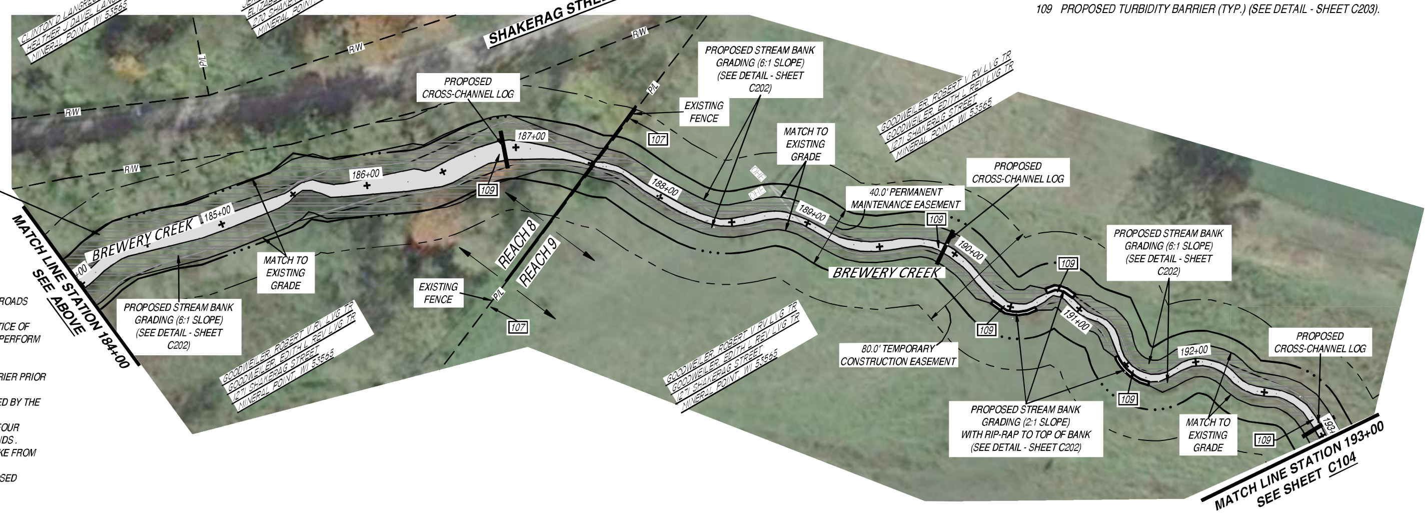
FOR BID

PROJECT NUMBER	D19-032
SHEET SCALE	HORZ - 1" = 80'
DRAWN BY	C.COYIER
DATE ISSUED	JUNE 17, 2021
SHEET DESC.	PLAN VIEW - REACH 8

SHEET TITLE: C102

SHEET NUMBER # 04 of 09





KEY NOTES 100 :

102 PROPOSED TRACKING PAD FOR EROSION CONTROL.
107 ITEM TO REMAIN.
109 PROPOSED TURBIDITY BARRIER (TYP.) (SEE DETAIL - SHEET C203).

GENERAL NOTES:

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7. CONTRACTOR TO INSTALL EXISTING DRAIN TILES THROUGH PROPOSED GRADING AND RIP-RAP.
8. CONTRACTOR TO RESTORE/LANDSCAPE ALL DISTURBED AREAS.

ENGINEER:
DELTA 3 EVERY ANGLE COVERED
PROFESSIONAL CIVIL, MUNICIPAL, & STRUCTURAL ENGINEERING • ARCHITECTURE
GRANT WRITING • LAND DEVELOPMENT • PLANNING & CADD SERVICES
875 SOUTH CHESTNUT STREET PLATTEVILLE, WISCONSIN 53818 PHONE: (608) 348-5355
898 JACKSON STREET DUBUQUE, IOWA 52001 PHONE: (563) 542-9005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:
MR. JORDAN FURE, E.I.T.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT, WI

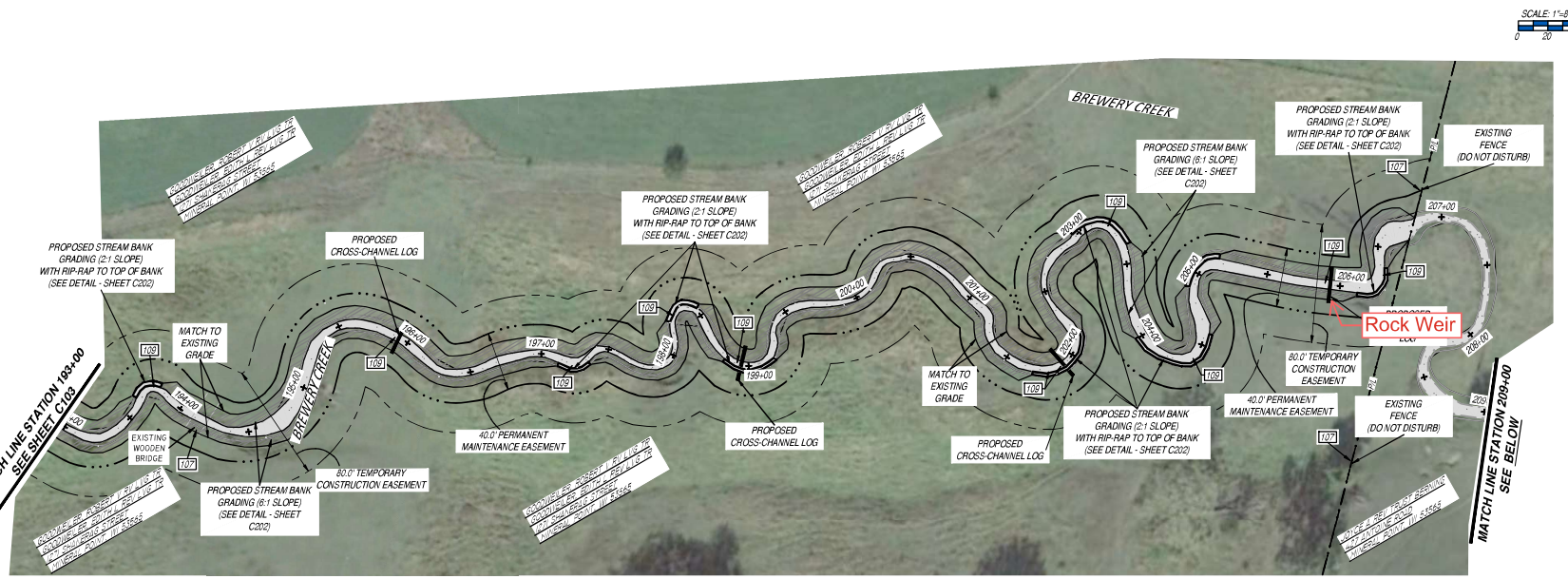
PROJECT LOCATION: MINERAL POINT, WISCONSIN - BREWERY CREEK
OWNER: CITY OF MINERAL POINT, 137 HIGH STREET, SUITE 101, MINERAL POINT, WI 53565

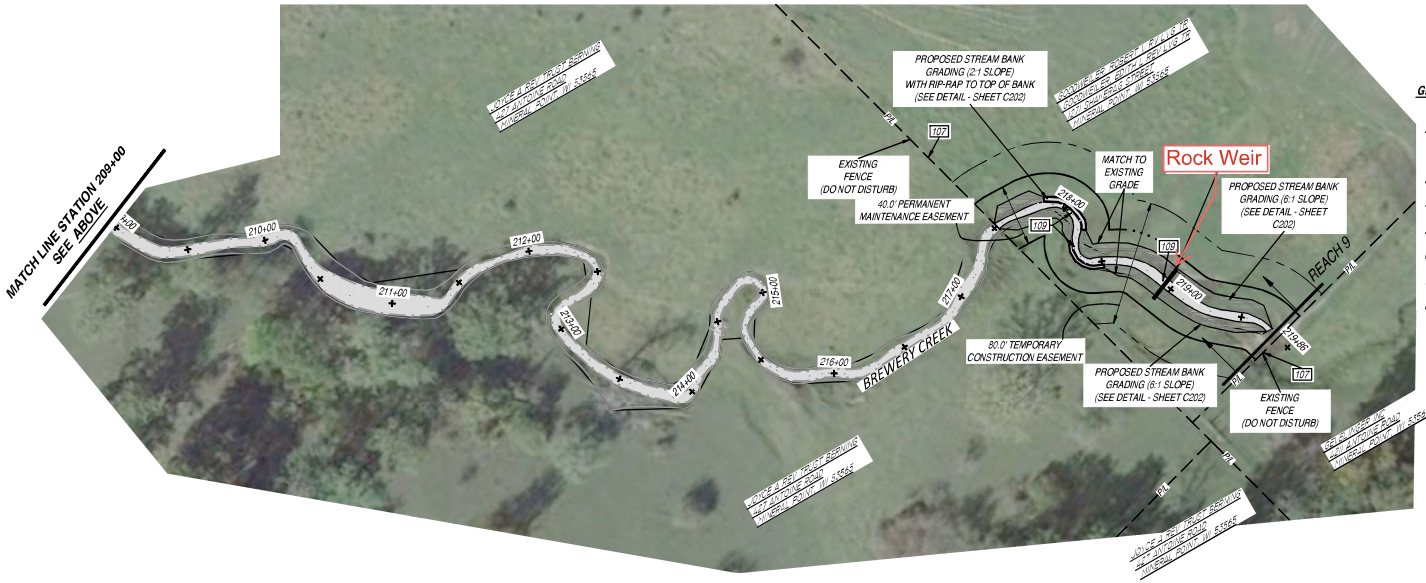
REVISIONS:		
NO.	DATE	DESCRIPTION

AS-BUILT: --/--/---- BY: -.-----

FOR BID	
PROJECT NUMBER	D19-032
SHEET SCALE	HORZ-1" =80'
DRAWN BY	C.COYIER
DATE ISSUED	JUNE 17, 2021
SHEET DESC.	PLAN VIEW - REACHES 8 & 9

SHEET TITLE:
C103





GENERAL NOTES:

1. CONTRACTOR SHALL REPAIR ALL DRIVEWAYS, FENCES, AND FIELD ROADS DAMAGED DUE TO CONSTRUCTION ACTIVITIES.
2. CONTRACTOR MUST PROVIDE THE CITY WITH A MINIMUM 24-HR NOTICE OF PROPOSED CONSTRUCTION ACTIVITIES. THE CITY IS REQUIRED TO PERFORM REMOVAL OF ENDANGERED RESOURCES EACH DAY PRIOR TO CONSTRUCTION.
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8. CONTRACTOR TO RESTORE/LANDSCAPE ALL DISTURBED AREAS.

KEY NOTES [100] :

107 ITEM TO REMAIN.
109 PROPOSED TURBIDITY BARRIER (TYP.) (SEE DETAIL - SHEET C203).

ENGINEER:
DELTA 3
PROFESSIONAL GIS, SURVEYING, & STRUCTURAL ENGINEERING+MONITORING
DANE OFFICE+LAND DEVELOPMENT+PLANNING & CAD SERVICES
575 SOUTH OAKLEY STREET
PLATTEVILLE, WISCONSIN 53818
PHONE: (608) 348-5355
FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:
MR. JORDAN FURE, E.I.T.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT, WI

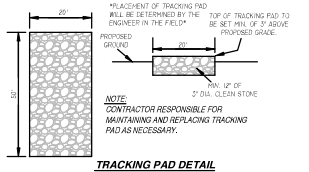
PROJECT LOCATION: MINERAL POINT, WISCONSIN - BREWERY CREEK
OWNER: CITY OF MINERAL POINT, 137 HIGH STREET, SUITE 101, MINERAL POINT, WI 53565

REVISIONS:		
NO.	DATE	DESCRIPTION
AS-BUILT:		BY:
-/-/----		-----

FOR BID	
PROJECT NUMBER	D19-032
SHEET SCALE	HORZ.- 1" =80'
DRAWN BY	C.COYIER
DATE ISSUED	JUNE 17, 2021
SHEET DESC.	PLAN VIEW - REACH 9

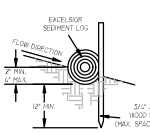
SHEET TITLE:
C104

SHEET NUMBER # **06 of 09**

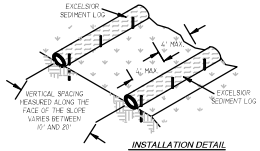


NOTE:
CONTRACTOR RESPONSIBLE FOR MAINTAINING AND REPLACING TRACKING PAD AS NECESSARY.

TRACKING PAD DETAIL
SCALE: N.T.S.



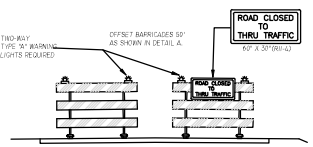
TRENCH DETAIL
SCALE: N.T.S.



INSTALLATION DETAIL
SCALE: N.T.S.

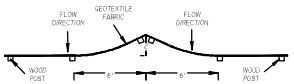
TYPE 1 = 20" ROLL (HEAVY DUTY CONCENTRATED FLOW)
TYPE 2 = 12" ROLL (HEAVY CONCENTRATED FLOW)
TYPE 3 = 9" ROLL (MILD CONCENTRATED FLOW)
TYPE 4 = 6" ROLL (LOW CONCENTRATED FLOW)

EROSION CONTROL SEDIMENT LOG
SCALE: N.T.S.

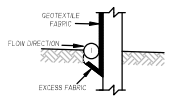


APPROACH VIEW

LANE CLOSURE BARRICADE - DETAIL D
SCALE: N.T.S.



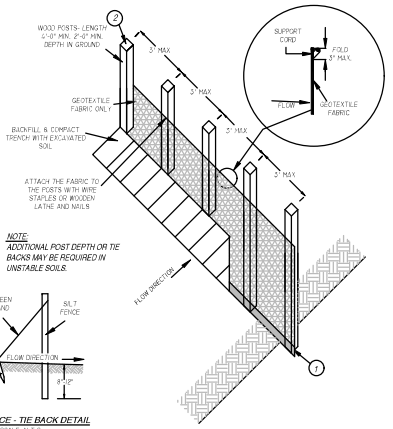
SILT FENCE - JOINING TWO LENGTHS DETAIL
SCALE: N.T.S.



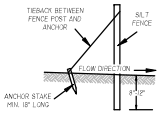
SILT FENCE - TRENCH DETAIL
SCALE: N.T.S.

GENERAL NOTES- SILT FENCE:
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION (MOST CURRENT EDITION) AND THE APPLICABLE SPECIAL PROVISIONS.

1. *TRENCH SHALL BE A MINIMUM OF 4" WIDE & 8" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL*
2. *WOOD POST SHALL BE A MINIMUM SIZE OF 1-1/8" X 1-1/8" OF OAK OR HICKORY.*



NOTE:
ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS.



SILT FENCE - TIE BACK DETAIL
SCALE: N.T.S.

SILT FENCE INSTALLATION DETAIL
SCALE: N.T.S.

SILT FENCE DETAILS
SCALE: N.T.S.

GENERAL NOTES - BARRICADE:

DETAILS OF TRAFFIC CONTROL DEVICES AND THEIR LOCATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE WISCONSIN MANUAL OF TRAFFIC CONTROL DEVICES, THE PLANS, WISDOT STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE CONTRACT.

SIGN AND BARRICADE LOCATIONS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER. ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS WORK SHALL BE COVERED AS DIRECTED BY THE ENGINEER. ALL "STOP" OR OTHER REGULATORY SIGNS ON THE SIDE ROADS SHALL NOT BE DISTURBED, EXCEPT WHEN NECESSARY TO COMPLETE THE WORK. THE SIGNS MUST THEN BE IMMEDIATELY RE-ESTABLISHED.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE LANE CLOSURE BARRICADE DETAIL FOR FULL ROAD CLOSURES. TYPE "A" LOW INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE "ROAD CLOSED" SIGN (R11-2), "ROAD CLOSED ___ MILES AHEAD" SIGN (R11-3), AND THE "ROAD CLOSED TO THRU TRAFFIC" SIGN (R11-4) SHALL BE ATTACHED ONLY TO THE TOP RAIL OF THE TYPE III BARRICADE. THE SIGNS SHALL NOT COVER THE MIDDLE RAIL.

TYPE "H" REFLECTIVE SHEETING SHALL BE USED ON ALL BARRICADES. TYPE I, II, AND III, AND ON ALL R11-2, R11-3, AND R11-4 SIGNS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED.

TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND AT LEAST ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN.

ONE-WAY LIGHTS SHALL BE PROVIDED ON ALL ADVANCE WARNING SIGNS. THE UNIT SHALL BE POSITIONED SUCH THAT THE LIGHT SOURCE IS OUTSIDE THE SIGN FACE AND AT THE TOP OF THE SIGN.

GENERAL NOTES:

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48"X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY THE ENGINEER.

"WC" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

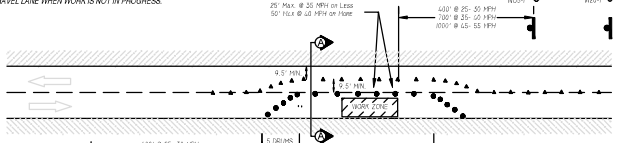
W20.1 AND G20.2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20.2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THEN 7 CONTINUOUS DAYS AND NIGHTS.

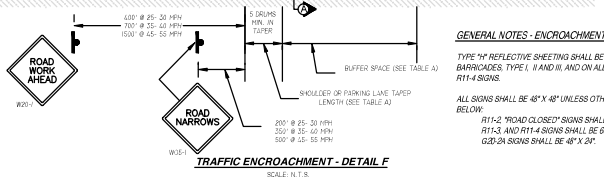
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TRAFFIC TABLE A

Shoulder Width	Taper Length 4	6	8	10	Buffer Space (Feet)
30	20	30	40	50	85
35	30	45	55	70	120
40	40	55	75	90	170
45	60	90	120	150	220
50	70	100	135	170	280
55	75	110	150	185	335

LEGEND
- Work Area
- Work Zone Drum
- Flexible Tubular Marker Post
- Post Mounted Sign
- Direction of Traffic Flow





TRAFFIC ENCROACHMENT - DETAIL F
SCALE: N.T.S.

GENERAL NOTES - ENCROACHMENT:

TYPE "H" REFLECTIVE SHEETING SHALL BE USED ON ALL BARRICADES. TYPE I, II AND III, AND ON ALL R11-2, R11-3 AND R11-4 SIGNS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- *R11-2 "ROAD CLOSED" SIGNS SHALL BE 48" X 30"*
- *R11-3, AND R11-4 SIGNS SHALL BE 60" X 30".*
- *G20-2A SIGNS SHALL BE 48" X 24".*

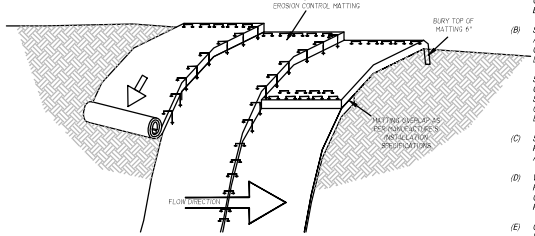
EROSION CONTROL NOTES:

1. *GENERAL EROSION NOTES AND MAINTENANCE MEASURES ARE ILLUSTRATED ON THE PLAN SHEETS. AFTER AWARD OF THE CONTRACT, THE GENERAL CONTRACTOR SHALL INSTALL ALL BEST MANAGEMENT PRACTICES AS SHOWN ON THE PLAN SHEETS. ONCE INSTALLED, THE GENERAL CONTRACTOR SHALL CONTACT DELTA 3 ENGINEERING, INC. (608-348-5365). ONCE NOTIFIED DELTA 3 ENGINEERING INC. WILL VISIT THE SITE WITHIN 5 DAYS TO REVIEW THE SITE WITH THE GENERAL CONTRACTOR'S SUPERINTENDENT. UPON VISITING THE SITE, THE CONSULTING ENGINEER AND THE GENERAL CONTRACTOR'S SUPERINTENDENT WILL REVIEW THE SITE FOR COMPLIANCE WITH THE EROSION CONTROL MEASURES. IF AND WHEN ALL BEST MANAGEMENT PRACTICES REQUIRED TO COMMENCE SITE CONSTRUCTION ARE IN PLACE, THE CONSULTING ENGINEER AND PROJECT SUPERINTENDENT WILL SIGN AND CERTIFY THIS FACT. THIS REVIEW AND CERTIFICATION SHALL TAKE PLACE PRIOR TO THE REQUIRED PRE-CONSTRUCTION MEETING. THE SITE SUPERINTENDENT SHALL MAINTAIN AN AS-BUILT COPY OF THE EROSION CONTROL MEASURES ON SITE AT ALL TIMES. ANY ACTIVITIES INVOLVING INSTALLATION OF BEST MANAGEMENT PRACTICES SHALL BE INDICATED ON THE AS-BUILT PLAN WITH AN INSTALLED TIME AND DATE. RECORDED INFORMATION SHALL BE PERMANENTLY PLACED ON THE SITE MAP INCLUDING ANY CHANGES MADE TO THE BEST MANAGEMENT PRACTICES. IF THE SITE MAP BECOMES HARD TO READ, THE INITIAL DRAWING SHALL BE SAVED AND A CLEAN COPY SHALL BE ISSUED IN ORDER TO CONTINUE RECORDING ANY ON-SITE EROSION CONTROL ACTIVITY.*
2. *A COMPLETE COPY OF ALL INSPECTION REPORTS, PLAN REVISIONS, ETC., MUST BE RETAINED AT THE PROJECT SITE AT ALL TIMES DURING DURATION OF THE PROJECT AND KEPT IN THE PERMANENT PROJECT RECORDS FOR AT LEAST FIVE YEARS FOLLOWING SUBMISSION OF THE NOTICE OF TERMINATION (NOT).*
3. *THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THAT ALL SUB-CONTRACTORS INVOLVED IN GROUND DISTURBING ACTIVITY COMPLY WITH THE EROSION CONTROL REQUIREMENTS.*
4. *DAILY INSPECTIONS BY THE PROJECT SUPERINTENDENT AND MONTHLY INSPECTIONS BY THE OWNER'S CONSTRUCTION MANAGER MUST BE MADE TO DETERMINE THE EFFECTIVENESS OF THE EROSION CONTROL MEASURES. THE GENERAL CONTRACTOR IS TO INSPECT EROSION AND SEDIMENT CONTROLS WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 0.5 INCHES OR GREATER. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES AS NECESSARY WITHIN 24 HOURS OF INSPECTION.*
5. *ONCE THE SITE REACHES FINAL STABILIZATION, ALL PERMANENT EROSION AND SEDIMENTATION CONTROLS ARE INSTALLED AND ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS ARE REMOVED. THE GENERAL CONTRACTOR AND OWNER MUST COMPLETE A FINAL SITE INSPECTION. UPON APPROVAL BY OWNER, THE OWNER AND GENERAL CONTRACTOR, AS APPLICABLE, MUST COMPLETE AND SUBMIT A NOTICE OF TERMINATION (NOT) FORM TO BE SUBMITTED TO THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES.*
6. *A RECORD OF THE DATES WHEN MAJOR GROUND-DISTURBING ACTIVITIES OCCUR, WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, AND WHEN STABILIZATION MEASURES ARE INITIATED MUST BE MAINTAINED UNTIL THE NOT IS FILED. CONTROLS MUST BE IN PLACE DOWN GRADIENT OF GROUND-DISTURBING ACTIVITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.*
7. *A LOG OF ALL INSPECTIONS BY FEDERAL, STATE, OR LOCAL STORM WATER OR OTHER ENVIRONMENTAL AGENCIES SHALL BE KEPT BY THE GENERAL CONTRACTOR. THE LOG SHALL INCLUDE THE DATE AND TIME OF VISIT AND WHETHER A REPORT WAS ISSUED OR WILL BE ISSUED AS A RESULT OF THE INSPECTION. ANY REPORTS ISSUED SHALL BE FAXED TO THE DELTA 3 ENGINEERING INC. 608-348-5455 (FAX).*
8. *SOIL STABILIZATION - THE PURPOSE OF SOIL STABILIZATION IS TO PREVENT SOIL FROM LEAVING THE SITE. IN THE NATURAL CONDITION, SOIL IS STABILIZED BY NATIVE VEGETATION. THE PRIMARY TECHNIQUE TO BE USED AT THIS PROJECT FOR STABILIZING SITE SOIL WILL BE TO PROVIDE A PROTECTIVE COVER OF TURF GRASS OR PAVEMENT.*
   - *(A) TEMPORARY SEEDING OR STABILIZATION - AREAS MAY BE STABILIZED TEMPORARILY WITH THE USE OF FAST-GERMINATING ANNUAL SEED, STRAW MULCH, WOOD CELLULOSE FIBERS, TACKIFIERS, NETTING OR BLANKET. WHERE CONDITIONS ARE FAVORABLE, AREAS SHALL BE TEMPORARILY STABILIZED WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITY CEASES. ALL DISTURBED GROUND WHERE THERE WILL NOT BE CONSTRUCTION FOR LONGER THAN 14 DAYS MUST BE SEEDED OR OTHERWISE STABILIZED.*
   - *(B) PERMANENT SEEDING OR SOD - ALL AREAS AT FINAL GRADE MUST BE SEEDED OR SODDED WITHIN 3 DAYS AFTER COMPLETION OF THE MAJOR CONSTRUCTION ACTIVITY. EXCEPT FOR SMALL LEVEL SPOTS, SEEDED AREAS SHOULD GENERALLY BE PROTECTED WITH MULCH. ALL AREAS TO BE SEEDED WILL ALSO HAVE TOPSOIL AND OTHER AMENDMENTS AS STATED IN WISDOT SPECIFICATION SECTION 02900-PLANTING.*
   - *(C) MULCHING - ALL AREAS THAT ARE TEMPORARY OR PERMANENT SEEDED SHALL BE MULCHED ACCORDING TO SECTION 627 - MULCHING OF THE WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. ALL MULCH IS TO BE ANCHORED UTILIZING METHOD A, B, OR C.*
   - *(D) EROSION CONTROL MATTING - FOR ANY SLOPES GREATER THAN 3:1, EROSION MATTING IS REQUIRED.*
9. *STRUCTURAL CONTROLS - BEFORE ANY MAJOR GRADING ACTIVITIES, THE FOLLOWING BEST MANAGEMENT PRACTICES SHALL BE INSTALLED ON THE PROPOSED SITE + SILT FENCE, TEMPORARY TRACKING PAD, AND STORM SEWER INLET PROTECTION.*
   - *(A) SILT FENCE - SILT FENCE IS A SYNTHETIC PERMEABLE WOVEN OR NON-WOVEN FABRIC TYPICALLY INCORPORATING WOODEN OR METAL SUPPORT STAKES AT INTERVALS SUFFICIENT TO SUPPORT THE FENCE, WATER, AND SEDIMENT RETAINED BY THE FENCE. SILT FENCE CAN ALSO BE INSTALLED WITH A WIRE FENCE BACKING. THE FENCE IS DESIGNED TO RETAIN SEDIMENT-LADEN WATER AND ALLOW SETTLEMENT OF SUSPENDED SOILS BEFORE THE STORM WATER FLOWS THROUGH THE FABRIC FOR DISCHARGE DOWNSTREAM. SILT FENCE SHALL BE LOCATED AS SHOWN ON THE PLAN SHEETS. THE SILT FENCE TO BE INCLUDED FOR THIS PROJECT SHALL BE CONSTRUCTED PER WISCONSIN DNR TECHNICAL STANDARDS FOR SILT FENCE (CODE 1056).*
   - *(B) TEMPORARY TRACKING PAD - ALL ACCESS POINTS FROM THE PUBLIC STREET INTO THE CONSTRUCTION SITE SHALL INCLUDE A TRACKING PAD COMPOSED OF COURSE STONE TO THE DIMENSIONS SHOWN ON DETAIL SHEET (C201). ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY STREET CLEANING (NOT FLUSHING) BEFORE THE END OF EACH WORKDAY.*
   - *(C) STORM SEWER INLET PROTECTION - CURB AND GRATED INLETS ARE PROTECTED FROM THE INTRUSION OF SILT AND SEDIMENT THROUGH A VARIETY OF SEDIMENT CONTROL PRACTICES TO ALLOW SETTLEMENT OF SUSPENDED SOILS BEFORE DISCHARGING INTO THE STORM SEWER. GRATED INLETS TYPICALLY INCLUDE A STURDY FRAME WRAPPED IN GEOTEXTILE FABRIC OR SEDIMENT LOG PERIMETER TO SLOW THE FLOW OF WATER AND ALLOW PONDING WHERE SEDIMENT MAY SETTLE OUT. CURB INLETS TYPICALLY INCLUDE SEDIMENT LOG BARRIERS HELD IN PLACE WITH GEOTEXTILE FABRIC. OTHER MANUFACTURED PRODUCTS ARE ALSO AVAILABLE. ALL STORM DRAINS SHALL BE PROTECTED BY USING STRAW BALES, SEDIMENT LOGS, FABRIC, OR EQUIVALENT BARRIER.*

   FINAL SITE STABILIZATION IS ACHIEVED WHEN TURF GRASS COVER PROVIDES PERMANENT STABILIZATION FOR AT LEAST 70 PERCENT OF THE DISTURBED SOIL SURFACE, EXCLUSIVE OF AREAS THAT HAVE BEEN PAVED.
10. *OTHER POLLUTANT CONTROLS*
    - *(A) DUST CONTROL - CONSTRUCTION TRAFFIC MUST ENTER AND EXIT THE SITE AT THE STABILIZED CONSTRUCTION EXIT. THE PURPOSE IS TO TRAP DUST AND MUD THAT WOULD OTHERWISE BE CARRIED OFF-SITE BY CONSTRUCTION EQUIPMENT.*

      WATER TRUCKS OR OTHER DUST CONTROL AGENTS WILL BE USED AS NEEDED DURING CONSTRUCTION TO REDUCE DUST GENERATED ON THE SITE. DUST CONTROL MUST BE PROVIDED BY THE GENERAL CONTRACTOR TO A DEGREE THAT IS ACCEPTABLE TO THE OWNER'S CONSTRUCTION MANAGER, AND IN COMPLIANCE WITH APPLICABLE LOCAL AND STATE DUST CONTROL REGULATIONS. AFTER CONSTRUCTION, THE SITE WILL BE STABILIZED (AS DESCRIBED ELSEWHERE), WHICH WILL REDUCE THE POTENTIAL FOR DUST GENERATION.
    - *(B) SOLID WASTE DISPOSAL - NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, ARE ALLOWED TO BE DISCHARGED FROM THE SITE WITH STORM WATER. ALL SOLID WASTE, INCLUDING DISPOSABLE MATERIALS INCIDENTAL TO THE MAJOR CONSTRUCTION ACTIVITIES, MUST BE COLLECTED AND PLACED IN CONTAINERS. THE CONTAINERS WILL BE EMPTIED AS NECESSARY BY A CONTRACT TRASH DISPOSAL SERVICE AND HAULED AWAY FROM THE SITE. THE LOCATION OF SOLID WASTE RECEPTACLES SHALL BE SHOWN AND APPROVED BY THE OWNER.*

      SUBSTANCES THAT HAVE THE POTENTIAL FOR POLLUTING SURFACE AND/OR GROUNDWATER MUST BE CONTROLLED BY WHATEVER MEANS NECESSARY IN ORDER TO ENSURE THAT THEY DO NOT DISCHARGE FROM THE SITE. FOR EXAMPLE, SPECIAL CARE MUST BE EXERCISED DURING EQUIPMENT FUELING AND SERVICING OPERATIONS. IF A SPILL OCCURS, IT MUST BE CONTAINED AND DISPOSED SO THAT IT WILL NOT FLOW FROM THE SITE OR ENTER GROUNDWATER, EVEN IF THIS REQUIRES REMOVAL, TREATMENT, AND DISPOSAL OF SOIL. IN THIS REGARD, POTENTIALLY POLLUTING SUBSTANCES SHOULD BE HANDLED IN A MANNER CONSISTENT WITH THE IMPACT THEY REPRESENT.
    - *(C) SANITARY FACILITIES - ALL PERSONNEL INVOLVED WITH CONSTRUCTION ACTIVITIES MUST COMPLY WITH STATE AND LOCAL SANITARY OR SEPTIC SYSTEM REGULATIONS. TEMPORARY SANITARY FACILITIES MUST BE PROVIDED AT THE SITE THROUGHOUT THE CONSTRUCTION PHASE. THEY MUST BE UTILIZED BY ALL CONSTRUCTION PERSONNEL AND MUST BE SERVICED BY A COMMERCIAL OPERATOR.*
    - *(D) WATER SOURCE - NON-STORM WATER COMPONENTS OF SITE DISCHARGE MUST BE CLEAN WATER. WATER USED FOR CONSTRUCTION WHICH DISCHARGES FROM THE SITE MUST ORIGINATE FROM A PUBLIC WATER SUPPLIER, OR PRIVATE WELL APPROVED BY THE STATE HEALTH DEPARTMENT. WATER USED FOR CONSTRUCTION THAT DOES NOT ORIGINATE FROM AN APPROVED PUBLIC SUPPLY MUST NOT DISCHARGE FROM THE SITE. IT CAN BE RETAINED IN THE PONDS UNTIL IT INFILTRATES AND EVAPORATES.*
    - *(E) CONCRETE WASTE FROM CONCRETE READY-MIX TRUCKS - DISCHARGE OF EXCESS OR WASTE CONCRETE AND/OR WASH WATER FROM CONCRETE TRUCKS WILL BE ALLOWED ON THE CONSTRUCTION SITE, BUT ONLY IN SPECIFICALLY DESIGNATED DIKED AREAS PREPARED TO PREVENT CONTACT BETWEEN THE CONCRETE AND/OR WASH WATER AND STORM WATER THAT WILL BE DISCHARGED FROM THE SITE. ALTERNATIVELY, WASTE CONCRETE CAN BE PLACED INTO FORMS TO MAKE RIP-RAP OR OTHER USEFUL CONCRETE PRODUCTS. THE CURED RESIDUE FROM THE CONCRETE WASHOUT DIKED AREAS SHALL BE DISPOSED IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS. THE JOB SITE SUPERINTENDENT IS RESPONSIBLE FOR ASSURING THAT THESE PROCEDURES ARE FOLLOWED.*
    - *(F) FUEL TANKS - TEMPORARY ON-SITE FUEL TANKS FOR CONSTRUCTION VEHICLES SHALL MEET ALL STATE AND FEDERAL REGULATIONS. TANKS SHALL HAVE APPROVED SPILL CONTAINMENT WITH THE CAPACITY REQUIRED BY THE APPLICABLE REGULATIONS. THE TANK SHALL BE IN SOUND CONDITION FREE OF RUST OR OTHER DAMAGE WHICH MIGHT COMPROMISE CONTAINMENT. HOSES, VALVES, FITTINGS, CAPS, FILLER NOZZLES, AND ASSOCIATED HARDWARE SHALL BE MAINTAINED IN PROPER WORKING CONDITION AT ALL TIMES.*
11. *MINIMIZING EROSION AND RUNOFF DURING TRENCH OPERATIONS*
    - *(A) EXCAVATED TRENCH MATERIALS SHALL BE PLACED ON THE UPPER SIDE OF THE TRENCH WHILE THE TRENCH IS OPEN.*
    - *(B) EXCAVATED TRENCH MATERIAL, UPON COMPLETING WORK IN TRENCH, SHALL BE PLACED BACK IN THE TRENCH OR HAULED AWAY TO A PROPER SPOIL SITE. THE TRENCH SHALL BE BACKFILLED AND STABILIZED AT THE END OF EACH WORKING DAY.*



EROSION MATTING NOTES:

1. *PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF FERTILIZER AND MULCH AND SEED.*
2. *BEGIN AT THE TOP OF THE SHOULDER (OR CHANNEL) BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.*
3. *ROLL THE BLANKETS DOWN (STARTING AT DOWNSTREAM PROCEEDING UPSTREAM) HORIZONTALLY ACROSS THE SLOPE.*
4. *THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH MANUFACTURE'S RECOMENDED OVERLAP.*
5. *WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH AN OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.*
6. *IN HIGH CHANNEL APPLICATIONS, A STAPLE SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A ROW OF STAPLES 4" APART OVER THE ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGERED PATTERN.*
7. *THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.*

EROSION MATTING - SLOPE INSTALLATION DETAIL
SCALE: N.T.S.

ENGINEER:
DELTA 3
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PLATTEVILLE, WISCONSIN 53818
800 JACKSON STREET PHONE: (920) 342-9000
DURAND, WISCONSIN 54701

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:
MR. JORDAN FURE, E.I.T.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5365

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT, WI

PROJECT LOCATION: MINERAL POINT, WISCONSIN - BREWERY CREEK
OWNER: CITY OF MINERAL POINT, 137 HIGH STREET, SUITE 101, MINERAL POINT, WI 53565

REVISIONS:

NO.	DATE	DESCRIPTION

AS-BUILT: BY:

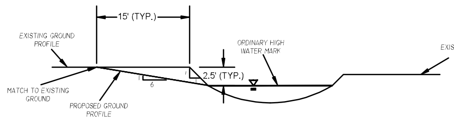
FOR BID

PROJECT NUMBER	D19-032
SHEET SCALE	NOT TO SCALE
DRAWN BY	C.COYIER
DATE ISSUED	JUNE 17, 2021
SHEET DESC.	DETAILS - EROSION CONTROL & NOTES

SHEET TITLE:

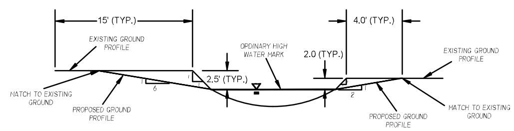
C201

SHEET NUMBER # 07 of 09



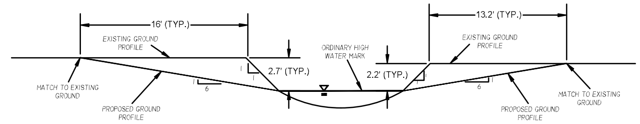
DRAINAGE DITCH DETAIL - REACH 1 (SOUTH OF JACKSON ST.)

SCALE: N.T.S.



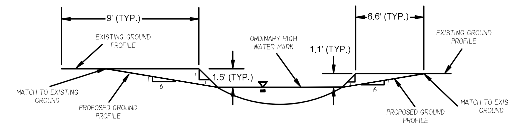
DRAINAGE DITCH DETAIL - REACH 1 (NORTH OF JACKSON ST.)

SCALE: N.T.S.



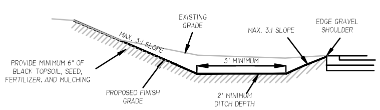
TYPICAL CROSS-SECTION DETAIL - REACH 8

SCALE: N.T.S.



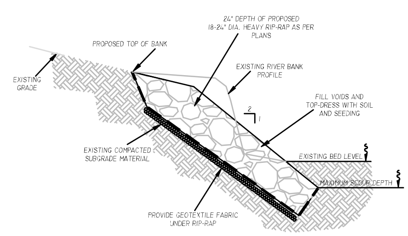
TYPICAL CROSS-SECTION DETAIL - REACH 9

SCALE: N.T.S.



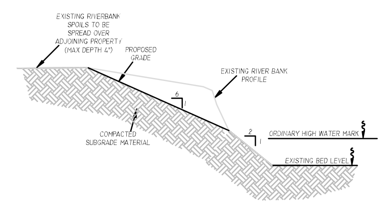
REGRADE DITCH DETAIL

SCALE: N.T.S.



STREAM BANK GRADING (2:1 SLOPE) WITH RIP-RAP TO TOP OF BANK DETAIL

SCALE: N.T.S.



STREAM BANK GRADING (6:1 SLOPES) DETAIL

SCALE: N.T.S.

ENGINEER:

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FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:

MR. JORDAN FURE, E.I.T.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT, WI

PROJECT LOCATION: MINERAL POINT, WISCONSIN - BREWERY CREEK
OWNER: CITY OF MINERAL POINT; 137 HIGH STREET; SUITE 101; MINERAL POINT, WI 53565

REVISIONS:

NO.	DATE	DESCRIPTION

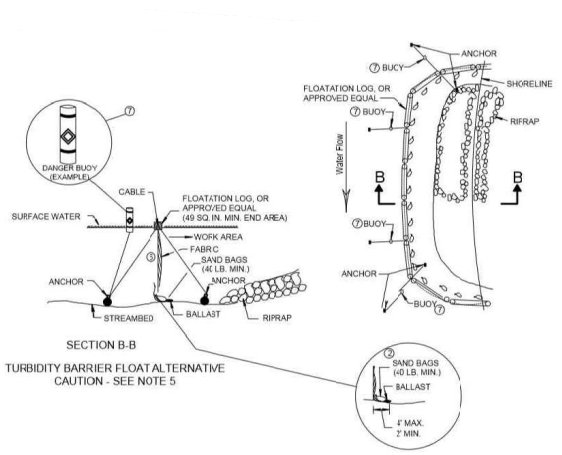
AS-BUILT: --/--/---- BY: --,-----

FOR BID

PROJECT NUMBER	D19-032
SHEET SCALE	NOT TO SCALE
DRAWN BY	C.COYIER
DATE ISSUED	JUNE 17, 2021
SHEET DESC.	DETAILS - STREAM & TYP. CROSS-SECTIONS

SHEET TITLE:

C202



TURBIDITY BARRIER PLACEMENT DETAIL

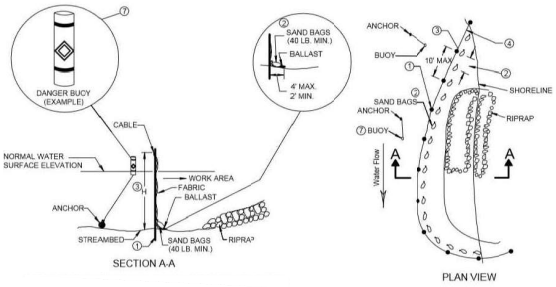
SCALE: N.T.S.

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD AND THE APPLICABLE SPECIAL PROVISIONS.

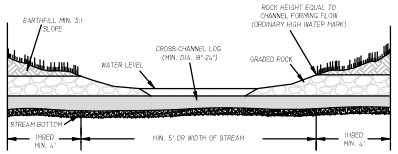
TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS OR PROJECT MANAGERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

1. DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
2. SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER OR PROJECT MANAGER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
3. WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.
4. IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
5. FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER OR PROJECT MANAGER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.
6. ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
7. USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.

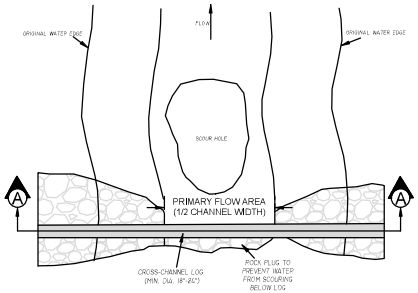


TURBIDITY BARRIER STANDARD POST INSTALLATION

SCALE: N.T.S.



CROSS-CHANNEL LOG CROSS-SECTION A-A

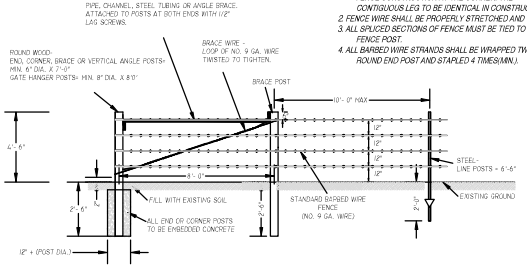


CROSS-CHANNEL LOG DETAIL - PLAN VIEW

SCALE: N.T.S.

NOTE:

1. FENCE DETAIL (AS ILLUSTRATED) SHOWS ONE LEG OF FENCE CONSTRUCTION AT THE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL IN CONSTRUCTION.
2. FENCE WIRE SHALL BE PROPERLY STRETCHED AND TIED.
3. ALL SPLICED SECTIONS OF FENCE MUST BE TIED TO A FENCE POST.
4. ALL BARBED WIRE STRANDS SHALL BE WRAPPED TWICE ROUND END POST AND STAPLED 4 TIMES(MIN.).



FENCE INSTALLATION DETAIL

SCALE: N.T.S.

ENGINEER:

DELTA 3
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FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:

MR. JORDAN FURE, E.I.T.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT, WI

PROJECT LOCATION: MINERAL POINT, WISCONSIN - BREWERY CREEK

OWNER: CITY OF MINERAL POINT, 137 HIGH STREET, SUITE 101, MINERAL POINT, WI 53565

REVISIONS:		
NO.	DATE	DESCRIPTION
AS-BUILT:		BY:

FOR BID	
PROJECT NUMBER	D19-032
SHEET SCALE	NOT TO SCALE
DRAWN BY	C.COYIER
DATE ISSUED	JUNE 17, 2021
SHEET DESC.	DETAILS - STREAM

SHEET TITLE:

C203

SHEET NUMBER # **09 of 09**

Attachment #7

ATTACHEMENT #7
TABLE OF CONTENTS

I. Introduction

The lateral recession rate of the eroding bank is a critical component for the NRCS Streambank Erosion Estimator. The following documentation provides the justification for the lateral recession rates used in the NRCS Streambank Erosin Estimator. Lateral recession rate was estimated based on the photos provided, description, and on site evaluation. The following includes representative photos of Project Reaches to be stabilized through installation of Best Management Practices (BMPs).

II. Reach 1

Image 1.1 – Undercut with exposed tree roots.

Image 1.2 – Undercut with exposed tree roots.

Image 1.3 – Undercut with exposed tree roots.

Image 1.4 – Undercut with exposed tree roots.

Image 1.5 – Undercut with exposed tree roots.

Image 1.6 – Undercut with exposed tree roots.

Image 1.7 – Undercut with exposed tree roots.

Image 1.8 – Undercut with exposed tree roots.

Image 1.9 – Undercut and slump with exposed tree roots.

Image 1.10 – Undercut with slump and exposed tree roots.

III. Reach 8

Image 8.1 - Undercut with exposed tree roots.

Image 8.2 - Undercut with exposed tree roots.

Image 8.3 - Undercut with exposed tree roots.

Image 8.4 - Undercut with exposed tree roots.

Image 8.5 - Undercut with exposed tree roots.

Image 8.6 - Undercut with exposed tree roots.

Image 8.7 - Undercut with exposed tree roots.

Image 8.8 - Undercut with exposed tree roots.

Image 8.9 - Undercut with exposed tree roots.

Image 8.10 - Undercut with exposed tree roots.

Image 8.11 - Undercut with exposed tree roots.

Image 8.12 - Undercut with exposed tree roots.

Image 8.13 - Undercut with exposed tree roots.

Image 8.14 - Undercut with exposed tree roots.

Image 8.15 - Undercut with exposed tree roots.

IV. Reach 9

Image 9.1 - Undercut with slump and exposed roots. Erosion is somewhat hidden in Reach 9 due to overhanging grass.

Image 9.2 - Undercut with exposed roots. Erosion is somewhat hidden in Reach 9 due to overhanging grass.

Image 9.3 - Undercut with exposed roots. Erosion is somewhat hidden in Reach 9 due to overhanging grass.

Image 9.4 - Undercut with slump and exposed roots. Erosion is somewhat hidden in Reach 9 due to overhanging grass.

Image 9.5 - Undercut with slump and exposed roots. Erosion is somewhat hidden in Reach 9 due to overhanging grass.

Image 9.6 - Undercut with slump and exposed roots. Erosion is somewhat hidden in Reach 9 due to overhanging grass.

Image 9.7 - Undercut with exposed roots. Erosion is somewhat hidden in Reach 9 due to overhanging grass.

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Image 9.9 - Undercut with exposed roots. Erosion is somewhat hidden in Reach 9 due to overhanging grass.

Image 9.10 - Undercut with exposed roots. Erosion is somewhat hidden in Reach 9 due to overhanging grass.

Image 9.11 - Undercut with exposed roots. Erosion is somewhat hidden in Reach 9 due to overhanging grass.

Attachment #8

Soil Map—Iowa County, Wisconsin

Map Scale: 1:19,400 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 250 500 1000 1500

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Iowa County, Wisconsin
Survey Area Data: Version 14, Sep 14, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 2, 2011—Aug 21, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
161D2	Fivepoints silt loam, 12 to 20 percent slopes, moderately eroded	9.6	0.5%
606A	Huntsville silt loam, 0 to 3 percent slopes, occasionally flooded	39.6	2.2%
608A	Lawson silt loam, 0 to 3 percent slopes, occasionally flooded	4.1	0.2%
616B	Chaseburg silt loam, moderately well drained, 2 to 6 percent slopes	21.2	1.2%
626A	Arenzville silt loam, 0 to 3 percent slopes, occasionally flooded	24.2	1.3%
628A	Orion silt loam, 0 to 3 percent slopes, occasionally flooded	43.7	2.4%
629A	Ettrick silt loam, 0 to 2 percent slopes, frequently flooded	23.5	1.3%
1130F	Lacrescent-Dunbarton complex, very stony, 30 to 60 percent slopes	49.5	2.7%
1195F	Elkmound-Northfield complex, 30 to 60 percent slopes, very rocky	2.3	0.1%
2014	Pits, quarry, hard bedrock	7.6	0.4%
2019	Dumps, mine	46.5	2.5%
DgB2	Dodgeville silt loam, 2 to 6 percent slopes, moderately eroded	3.0	0.2%
DgC2	Dodgeville silt loam, 6 to 12 percent slopes, moderately eroded	0.2	0.0%
DhB2	Dodgeville silt loam, deep, 2 to 6 percent slopes, moderately eroded	73.8	4.0%
DhC2	Dodgeville silt loam, deep, 6 to 12 percent slopes, moderately eroded	10.5	0.6%
DsB2	Newglarus silt loam, moderately deep, 2 to 6 percent slopes, moderately eroded	11.6	0.6%
DsC2	Newglarus silt loam, moderately deep, 6 to 12 percent slopes, moderately eroded	349.0	19.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DsD2	Newglarus silt loam, moderately deep, 12 to 20 percent slopes, moderately eroded	602.6	32.8%
DsE2	Newglarus silt loam, moderately deep, 20 to 30 percent slopes, moderately eroded	51.7	2.8%
DtB2	Palsgrove silt loam, 2 to 6 percent slopes, moderately eroded	230.4	12.5%
DtC2	Palsgrove silt loam, 6 to 12 percent slopes, moderately eroded	137.6	7.5%
DtD2	Palsgrove silt loam, 12 to 20 percent slopes, moderately eroded	27.0	1.5%
DuC2	Newglarus complex, 6 to 12 percent slopes, moderately eroded	24.2	1.3%
JuB	Judson silt loam, 2 to 6 percent slopes	3.0	0.2%
SoC2	Sogn and Dodgeville silt loams, shallow, 6 to 12 percent slopes, moderately eroded	4.1	0.2%
SoD2	Sogn and Dodgeville silt loams, shallow, 12 to 20 percent slopes, moderately eroded	22.1	1.2%
SoE2	Sogn and Dodgeville silt loams, shallow, 20 to 30 percent slopes, moderately eroded	9.4	0.5%
W	Water	5.9	0.3%
Totals for Area of Interest		**1,837.9**	**100.0%**

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

710 Commerce Drive
PO Box 169
Watertown, WI 53094

920-261-0446 phone
920-261-1365 fax
www.rockriverlab.com

Delta3 Engineering-Platteville Total Phosphorous Analysis

Field ID	Sample #	Total P (ppm)
MP ALT B	1	747.4
MP ALT B	3	661.2
MP ALT B	5	893.7
MP ALT B	7	665.8
MP ALT B	9	844.8
MP ALT B	11	916.3
MP ALT B	13	769.2
MP ALT B	15	761.0
MP ALT B	17	671.6
MP ALT B	19	749.7
MP ALT B	21	641.6
MP ALT B	23	758.1
MP ALT B	25	735.4
MP ALT B	27	666.3
MP ALT B	29	821.7
MP ALT B	31	718.6
MP ALT B	33	781.1
MP ALT B	35	893.8
MP ALT B	37	554.0
MP ALT B	39	1111.0
MP ALT B	41	773.8
MP ALT B	43	547.1
MP ALT B	45	913.6
MP ALT B	47	569.8
MP ALT B	49	591.2
MP ALT B	51	464.4
MP ALT B	53	541.2
MP ALT B	55	747.7
MP ALT B	57	603.2
MP ALT B	59	607.2
MP ALT B	61	668.0
MP ALT B	63	706.3
MP ALT B	65	840.4
MP ALT B	67	644.5
MP ALT B	69	547.3

Field ID	Sample #	Total P (ppm)
MP ALT G	1	937.7
MP ALT G	3	868.4
MP ALT G	5	762.5
MP ALT G	7	797.7
MP ALT G	9	835.0
MP ALT G	11	768.6
MP ALT G	13	737.0
MP ALT G	15	754.0
MP ALT G	17	874.9
MP ALT G	19	849.8
MP ALT G	21	769.5
MP ALT G	23	773.9
MP ALT G	25	917.1
MP ALT G	27	911.9
MP ALT G	29	660.1
MP ALT G	31	706.5
MP ALT G	33	922.3
MP ALT G	35	800.4
MP ALT G	37	661.6
MP ALT G	39	721.6
MP ALT G	41	754.0
MP ALT G	43	716.1
MP ALT G	45	706.4
MP ALT G	47	766.7
MP ALT G	49	748.5
MP ALT G	51	739.6
MP ALT G	53	746.4
MP ALT G	55	697.9
MP ALT G	57	853.4
MP ALT G	59	647.3
MP ALT G	61	755.1
MP ALT G	63	802.7
MP ALT G	65	763.3
MP ALT G	67	636.5
MP ALT G	69	704.0
MP ALT G	71	717.4
MP ALT G	73	733.5
MP ALT G	75	751.1

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Delta3 Engineering-Platteville Total Phosphorous Analysis

Field ID	Sample #	Total P (ppm)
MP ALT A	1	765.5
MP ALT A	3	867.3
MP ALT A	5	950.6
MP ALT A	7	1289.0
MP ALT A	9	772.9
MP ALT A	11	804.4
MP ALT A	13	836.9
MP ALT A	15	867.6
MP ALT A	17	509.2
MP ALT A	19	777.5
MP ALT A	21	600.4
MP ALT A	23	702.6
MP ALT A	25	509.2
MP ALT A	27	556.7
MP ALT A	29	584.2
MP ALT A	31	622.5
MP ALT A	33	587.1
MP ALT A	35	612.2
MP ALT A	37	610.1
MP ALT A	39	672.7

Field ID	Sample #	Total P (ppm)
MONT F	1	1005.0
MONT F	5	822.7
MONT F	9	927.9
MONT F	13	710.0
MONT F	17	828.0
MONT F	21	760.4
MONT F	25	772.2
MONT F	29	922.2
MONT F	33	725.2
MONT F	52	947.0
MONT F	56	919.3
MONT F	60	730.2
MONT F	64	705.8
MONT F	68	609.5
MONT F	72	840.0
MONT F	76	770.8
MONT F	80	939.0
MONT F	84	828.1

Field ID	Sample #	Total P (ppm)
MONT B	1	912.3
MONT B	5	613.5
MONT B	9	637.0
MONT B	13	817.6
MONT B	17	669.7
MONT B	21	860.3
MONT B	24	760.0
MONT B	28	698.8
MONT B	32	639.4
MONT B	36	598.4
MONT B	40	736.3
MONT B	44	645.4

Field ID	Sample #	Total P (ppm)
MONT A	47	695.7
MONT A	51	695.9
MONT A	55	551.3
MONT A	59	709.3
MONT A	63	769.7
MONT A	68	660.3
MONT A	72	660.1
MONT A	76	824.4
MONT A	80	747.2
MONT A	84	662.4
MONT A	87	739.1

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Delta3 Engineering-Platteville Total Phosphorous Analysis 6/13/19

Field ID	Sample #	Total P (ppm)
Wauzeka-Kickapoo	1	608.8
Wauzeka-Kickapoo	3	308.6
Wauzeka-Kickapoo	5	519.5
Wauzeka-Kickapoo	7	494.1
Wauzeka-Kickapoo	9	661.9
Wauzeka-Kickapoo	11	576.8
Wauzeka-Kickapoo	13	687.7
Wauzeka-Kickapoo	15	578.9
Wauzeka-Kickapoo	17	616.2
Wauzeka-Kickapoo	19	483.0
Wauzeka-Kickapoo	21	567.2
Wauzeka-Kickapoo	23	562.1
Wauzeka-Kickapoo	25	356.4
Wauzeka-Kickapoo	27	588.7
Wauzeka-Kickapoo	29	335.2

Field ID	Sample #	Total P (ppm)
D3-C-MP	1	800.7
D3-C-MP	5	851.8
D3-C-MP	9	727.6
D3-C-MP	13	915.3
D3-C-MP	59E	719.8
D3-C-MP	63E	762.8
D3-C-MP	67E	816.0
D3-C-MP	71E	659.4
D3-C-MP	75E	669.9
D3-C-MP	79E	668.6
D3-C-MP	83E	1185.0
D3-C-MP	87E	715.6
D3-C-MP	91E	693.6
D3-C-MP	95E	567.1
D3-C-MP	99E	685.7
D3-C-MP	103E	627.6
D3-C-MP	107E	758.3
D3-C-MP	111E	733.1
D3-C-MP	115E	612.1
D3-C-MP	119E	597.9

Field ID	Sample #	Total P (ppm)
D3-C-MP	57	1144.0
D3-C-MP	61	531.3
D3-C-MP	65	610.6
D3-C-MP	69	687.5
D3-C-MP	73	817.9
D3-C-MP	77	614.1
D3-C-MP	81	1489.0
D3-C-MP	85	883.8
D3-C-MP	89	663.1
D3-C-MP	93	713.0
D3-C-MP	97	630.9
D3-C-MP	101	807.9
D3-C-MP	105	658.2
D3-C-MP	109	668.5
D3-C-MP	113	785.5
D3-C-MP	117	620.3
D3-C-MP	121	721.7
D3-C-MP	123E	733.3
D3-C-MP	125	881.4
D3-C-MP	127E	712.1

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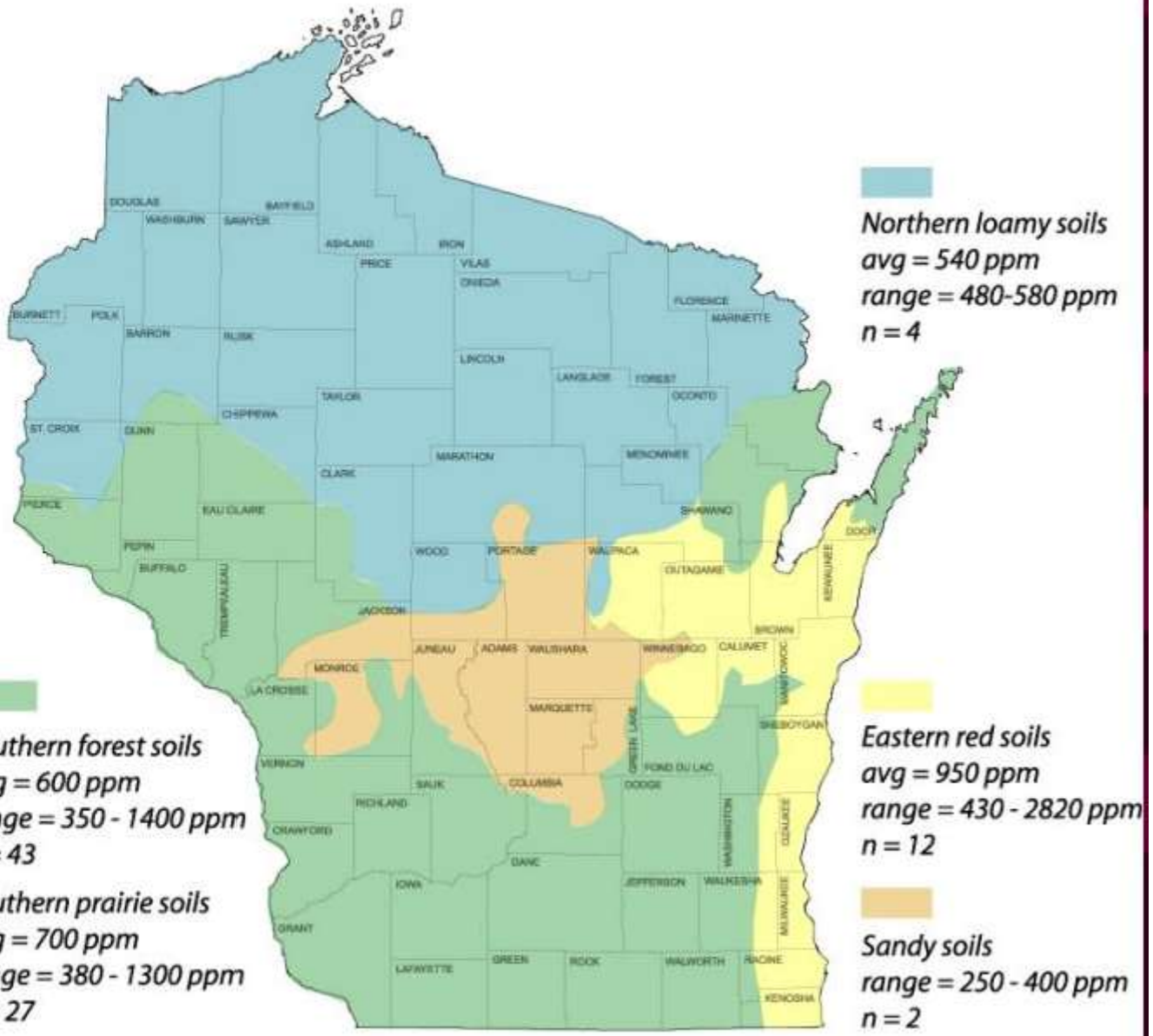
Delta3 Engineering-Platteville Total Phosphorous Analysis 6/13/19

Field ID	Sample #	Total P (ppm)
D3-C-MP	3	955.9
D3-C-MP	7	939.4
D3-C-MP	11	795.9
D3-C-MP	15	891.5
D3-C-MP	17	885.6
D3-C-MP	19	757.7
D3-C-MP	21	1082.0
D3-C-MP	23	719.0
D3-C-MP	25	935.3
D3-C-MP	27	910.2
D3-C-MP	29	1083.0
D3-C-MP	31	604.5
D3-C-MP	33	942.6
D3-C-MP	35	729.7
D3-C-MP	37	855.7
D3-C-MP	39	1099.0
D3-C-MP	41	739.9
D3-C-MP	41E	1005.0
D3-C-MP	43	894.8
D3-C-MP	45	1051.0
D3-C-MP	47	564.2
D3-C-MP	49	856.7
D3-C-MP	51	896.7
D3-C-MP	53	850.3
D3-C-MP	55	1083.0

Soil Total P



Northern loamy soils
avg = 540 ppm
range = 480-580 ppm
n = 4

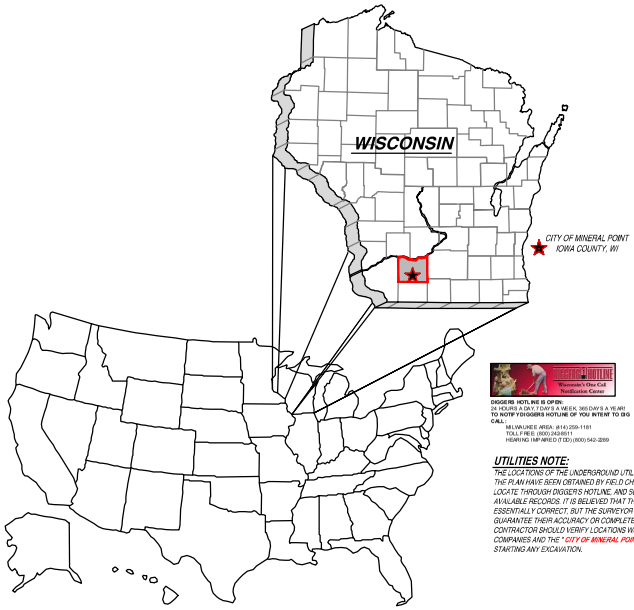
Southern forest soils
avg = 600 ppm
range = 350 - 1400 ppm
n = 43

Southern prairie soils
avg = 700 ppm
range = 380 - 1300 ppm
n = 27

Eastern red soils
avg = 950 ppm
range = 430 - 2820 ppm
n = 12

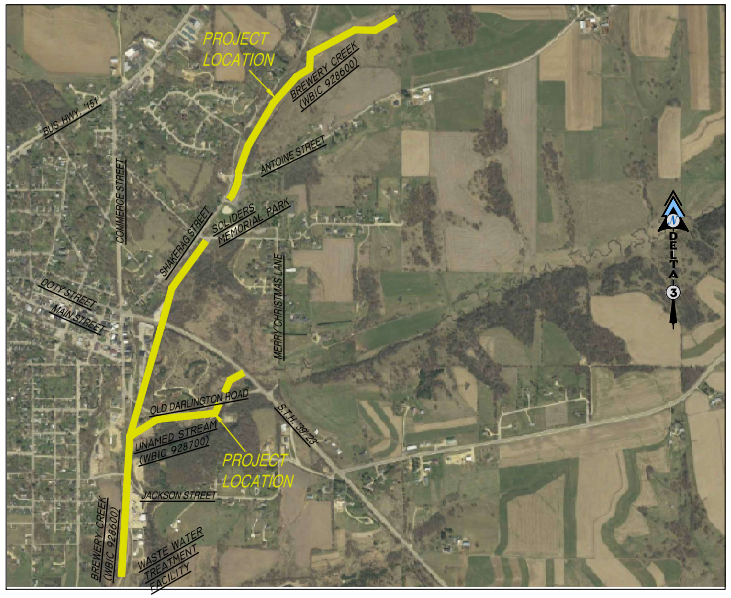
Sandy soils
range = 250 - 400 ppm
n = 2

Organic soils: range = 1330 - 1350 ppm, n = 2



DIGGERS HOTLINE IS OPEN:
24 HOURS A DAY, 7 DAYS A WEEK, 365 DAYS A YEAR!
TO NOTIFY DIGGERS HOTLINE OF YOU INTENT TO DIG CALL:
MILWAUKEE AREA: (414) 259-1181
TOLL FREE: (800) 242-8511
HEARING IMPAIRED (TDD) (800) 542-2289

UTILITIES NOTE:
THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLAN HAVE BEEN OBTAINED BY FIELD CHECKS, A UTILITY LOCATE THROUGH DIGGER'S HOTLINE, AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE SURVEYOR DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR SHOULD VERIFY LOCATIONS W/ THE UTILITY COMPANIES AND THE "CITY OF MINERAL POINT" PRIOR TO STARTING ANY EXCAVATION.



PROJECT LOCATION MAP
SCALE: N.T.S.

FOR SOIL SAMPLE LOCATION ONLY

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

OWNER: CITY OF MINERAL POINT

SHEET INDEX:

SHEET TITLE:	SHEET DESCRIPTION:	DATE OF ISSUE:	DATE OF REVISION:
G000	TITLE SHEET & PROJECT LOCATION MAP	MARCH 31, 2020	-
G001	LEGEND & GENERAL NOTES	MARCH 31, 2020	-
C101	PLAN VIEW - SOUTH BREWERY CREEK	MARCH 31, 2020	-
C102 - C103	PLAN VIEW - TRIBUTERY TO BREWERY CREEK	MARCH 31, 2020	-
C104 - C107	PLAN VIEW - BREWERY CREEK	MARCH 31, 2020	-
C201	DETAILS - EROSION CONTROL & NOTES	MARCH 31, 2020	-
C202	DETAILS - STREAM BANK	MARCH 31, 2020	-

PROJECT INFORMATION:

OWNER:
CLERK/ADMINISTRATOR
MS. DEBI HEISNER
CITY OF MINERAL POINT
137 HIGH STREET, SUITE 1
MINERAL POINT, WI 53565
(608) 987-2361

STREETS AND STORM SEWERS:
CITY OF MINERAL POINT
MR. TODD DONEY
137 HIGH STREET, SUITE 1
MINERAL POINT, WI 53565
(608) 987-2960

WATER AND SANITARY SEWER UTILITIES:
CITY OF MINERAL POINT
MR. PAT O' FLAHRITY
137 HIGH STREET, SUITE 1
MINERAL POINT, WI 53565
OFFICE: (608) 987-3442
CELL: (608) 574-2348

TELEPHONE UTILITY:
FRONTIER CONSTRUCTION DETAILER
MR. JERRY MOORE
100 COMMUNICATIONS DRIVE
SUN PRAIRIE, WI 53590
CELL: (608) 742-9507

CABLE TELEVISION UTILITY:
CHARTER COMMUNICATIONS
MR. STEVE HEGGE
2701 DANIELS STREET
MADISON, WI 53718
(608) 274-3822 x 6687

ELECTRICAL & NATURAL GAS UTILITIES:
ALLIANT ENERGY
MR. PATRICK MUELLER
490 SHAKEBAG STREET
MINERAL POINT, WI 53565
(920) 948-3527

ENGINEER:
DELTA 3
ENGINEERING, LLC
PROFESSIONAL CIVIL, MUNICIPAL & STRUCTURAL ENGINEERING+HIGHWAY/ROAD ENGINEERING+LAND DEVELOPMENT+PLANNING & CADD SERVICES
825 SOUTH CHESTNUT STREET
PLATTEVILLE, WISCONSIN 53818
PHONE: (608) 348-5355
300 JACKSON STREET
DUBUQUE, IOWA 52001
PHONE: (563) 542-4005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:
MR. BART NIES, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK
CITY OF MINERAL POINT
PROJECT LOCATION: WITHIN MINERAL POINT CITY LIMITS, BREWERY CREEK(928600) & UNAMED STREAM(928700)
OWNER: CITY OF MINERAL POINT: 137 HIGH STREET, MINERAL POINT, WI 53565

REVISIONS:		
NO.	DATE	DESCRIPTION
AS-BUILT:		BY:

FOR AGENCY REVIEW

PROJECT NUMBER	D19-032
SHEET SCALE	NOT TO SCALE
DRAWN BY	C.COYIER
DATE ISSUED	MARCH 31, 2020
SHEET DESC.	TITLE SHEET & PROJECT LOCATION MAP

SHEET TITLE:
G000

SHEET NUMBER # 01 of 11

LEGEND

- EX. CON. MANHOLE
- EX. ECC. MANHOLE
- EX. LIFT STATION
- EX. CLEAN OUT
- EX. FIRE HYDRANT
- EX. WATER SERVICE
- EX. WATER VALVE
- EX. YARD HYDRANT
- EX. CATCH BASIN
- EX. STORM INLET
- EX. NATURAL GAS VALVE
- EX. NATURAL GAS METER
- EX. POWER POLE
- EX. LIGHT POLE
- EX. WARNING SIREN
- EX. TEL. PEDESTAL
- EX. MAILBOX
- EX. LP TANK
- EX. SATELLITE DISH
- EX. POST OR POLE
- EX. STREET SIGN
- EX. EVERGREEN TREE
- EX. DECIDUOUS TREE
- EX. TREE STUMP
- EX. BUSH/SHRUB
- EX. TREE/BRUSH LINE
- EX. WINDMILL
- EX. PARK BENCH
- EX. BENCHMARK
- SURVEY CONTROL POINT
- EX. PROPERTY PIN
- RIGHT-OF-WAY
- PROPERTY LINE
- EASEMENT
- EX. SAN. S. LATERAL
- EX. 6" SAN. S. MAIN
- EX. 8" SAN. S. MAIN
- EX. 10" SAN. S. MAIN
- EX. 12" SAN. S. MAIN
- EX. 15" SAN. S. MAIN
- EX. FLOW DIRECTION
- EX. CAPPED SERVICE
- EX. WATER SERVICE
- EX. 4" WATER MAIN
- EX. 6" WATER MAIN
- EX. 8" WATER MAIN
- EX. 10" WATER MAIN
- EX. 12" WATER MAIN
- EX. <12" STORM SEWER
- EX. 12" STORM SEWER
- EX. 15" STORM SEWER
- EX. 18" STORM SEWER
- EX. 24" STORM SEWER
- EX. 27" STORM SEWER
- EX. 30" STORM SEWER
- EX. 36" STORM SEWER
- EX. 42" STORM SEWER
- EX. 48" STORM SEWER
- EX. CURB AND GUTTER
- EX. U.GRD N. GAS UTILITY
- EX. U.GRD ELECTRIC UTILITY
- EX. U.GRD CABLE TV UTILITY
- EX. U.GRD TELEPHONE UTILITY
- EX. U.GRD FIBER OPTIC UTILITY
- EX. OVERHEAD ELECTRIC
- EX. FENCE
- EX. RAILROAD TRACKS
- EX. CONTOUR
- EX. DRAINAGE SWALE

- PROP. SANITARY SEWER LATERAL
- PROP. <6" SANITARY SEWER MAIN
- PROP. 6" SANITARY SEWER MAIN
- PROP. 8" SANITARY SEWER MAIN
- PROP. 10" SANITARY SEWER MAIN
- PROP. 12" SANITARY SEWER MAIN
- PROP. 15" SANITARY SEWER MAIN
- PROP. 18" SANITARY SEWER MAIN
- PROP. CIPP LINER
- PROP. FLOW DIRECTION
- PROP. WATER SERVICE
- PROP. <4" WATER MAIN
- PROP. 4" WATER MAIN
- PROP. 6" WATER MAIN
- PROP. 8" WATER MAIN
- PROP. 10" WATER MAIN
- PROP. 12" WATER MAIN
- PROP. 15" WATER MAIN
- PROP. <12" STORM SEWER
- PROP. 12" STORM SEWER
- PROP. 15" STORM SEWER
- PROP. 18" STORM SEWER
- PROP. 24" STORM SEWER
- PROP. 30" STORM SEWER
- PROP. 36" STORM SEWER
- PROP. 48" STORM SEWER
- PROP. CURB AND GUTTER
- PROP. CURB BACK OPENING
- PROP. U.GRD GAS UTILITY
- PROP. U.GRD ELECTRIC UTILITY
- PROP. U.GRD CABLE TV UTILITY
- PROP. U.GRD TELEPHONE UTILITY
- PROP. U.GRD FIBER OPTIC UTILITY
- PROP. OVERHEAD ELECTRIC
- PROP. CROSSING OF N. GAS UTILITY
- PROP. UTILITY POLE
- PROP. LIGHT POLE
- PROP. FENCE
- TEMPORARY EASEMENT
- CONSTRUCTION EASEMENT
- ESTIMATED DISTURBANCE LIMITS
- PROP. CONTOUR
- PROP. DRAINAGE SWALE
- PROP. SILT FENCE
- PROP. EROSION CONTROL SEDIMENT LOG
- PROP. PAVEMENT MARKING
- PAINTED TRAFFIC ARROW
- ADA PARKING DESIGNATION
- PARKING STALL COUNT
- RADIUS POINT/SIZE
- STA. ON CENTERLINE
- PROP. HANDICAP RAMP WITH DETECTABLE WARNING FIELD
- SOIL BORING LOCATION
- RIVER FLOW DIRECTION
- PROP. 4' DIA. SANITARY MANHOLE
- PROP. 5' DIA. SANITARY MANHOLE
- PROP. MANHOLE CHIMNEY REHABILITATION / TOP ADJUSTMENT
- PROP. SANITARY LIFT STATION

- PROP. TYPE "X" CURB & GUTTER
- PROP. REVERSE-PITCH CURB & GUTTER
- PROP. HOT MIX ASPHALT PAVEMENT (DRIVEWAY)
- PROP. 4" CONCRETE SIDEWALK
- PROP. 6" CONCRETE PAVEMENT
- PROP. 8" CONCRETE PAVEMENT
- PROP. GRAVEL SHOULDER / DRIVEWAY
- EROSION MATTING (MILD SLOPES)
- EROSION MATTING (STEEP SLOPES)
- PROP. REGRADING AND LANDSCAPING
- PROP. RIP-RAP
- PROP. STORM STRUCTURES - PROFILE
- PROP. STORM PIPE(RCP) - PROFILE
- PROP. STORM PIPE(CMP OR HDPE) - PROFILE
- PROP. SANITARY STRUCTURE - PROFILE
- PROP. WATER MAIN PIPE - PROFILE
- PROP. CLAY LINER - PROFILE
- PROP. SANITARY SEWER FORCE MAIN - PROFILE
- PROP. SPOT REPAIR - PROFILE / PLAN VIEW
- PROP. CASING PIPE - PROFILE
- PROP. CLEARING AND GRUBBING
- PROP. BUILDING REMOVAL
- PROP. SIDEWALK REMOVAL
- PROP. PRESSURE-REDUCING VALVE STATION
- PROP. FIRE HYDRANT
- PROP. WATER SERVICE
- PROP. WATER SERVICE WITH VALVE BOX SLEEVE
- PROP. WATER VALVE
- PROP. WATER BEND - HORIZONTAL
- PROP. WATER BEND - VERTICAL
- PROP. WATER BEND <5°
- PROP. WATER TEE
- PROP. WATER CROSS
- PROP. WATER REDUCER
- PROP. MJ PLUG
- PROP. 4' DIA. STORM MANHOLE
- PROP. 5' DIA. STORM MANHOLE
- PROP. INLET
- PROP. 4' DIA. INLET
- PROP. 6' DIA. INLET
- PROP. 4' DIA. CATCH BASIN- W/ 2'X3' CASTING
- PROP. 5' DIA. CATCH BASIN- W/ 2'X3' CASTING
- PROP. 6' DIA. CATCH BASIN- W/ 2'X3' CASTING
- PROP. 4'X6' CATCH BASIN W/2'X3' CASTING
- PROP. CURB OPENING CASTING
- PROP. 2'X3' CATCH BASIN
- PROP. ADJUSTED CATCH BASIN TOP
- PROP. WISDOT TYPE 8 INLET
- PROP. WISDOT TYPE 9 INLET
- PROP. CMP ENDWALL
- PROP. RCP ENDWALL

KEY NOTES [100]:

100 PROPOSED SILT FENCE FOR EROSION CONTROL.
101 PROPOSED SEDIMENT LOG FOR EROSION CONTROL.
102 PROPOSED TRACKING PAD FOR EROSION CONTROL.
103 RE-GRADE YARD/DITCH LINE (MIN. SLOPE 1.0%).
104 PROPOSED EROSION MAT CLASS I, TYPE 'B'.
105 INSTALL TYPE 'D' INLET PROTECTION.
106 PROPOSED MAIL BOX RELOCATION.
107 ITEM TO REMAIN.
108 CONTRACTOR TO REMOVE ITEM.
200 PROPOSED SANITARY SEWER [SIZE].
201 NEW SANITARY SEWER LATERAL [SIZE].
202 REPLACE EXISTING SANITARY SEWER LATERAL.
203 RECONNECT EXISTING SANITARY SEWER LATERAL.
204 CONNECTION TO EXISTING SANITARY SEWER PIPE/STRUCTURE.
205 REMOVE EXISTING SANITARY SEWER PIPE /STRUCTURE.
206 REHABILITATE SANITARY MANHOLE; SEE TABLE 'B'.
207 SANITARY SEWER SPOT REPAIR.
208 ABANDON AND CAP EXISTING SANITARY SEWER.
209 ABANDON EXISTING SANITARY SEWER LATERAL.
210 CONTRACTOR TO FIELD VERIFY SANITARY SEWER LATERAL LOCATION/ACTIVITY AND REPLACE ACCORDING TO ENGINEER.
300 PROPOSED WATER MAIN [SIZE].
301 NEW WATER SERVICE [SIZE].
302 REPLACE EXISTING WATER SERVICE WITH 1" WATER SERVICE.
303 RECONNECT EXISTING WATER SERVICE.
304 DIRECTIONAL DRILL PROPOSED WATER SERVICE.
305 CONNECTION TO EXISTING WATER MAIN.
306 EXISTING HYDRANT TO BE REMOVED AND SALVAGED TO OWNER.
307 REMOVE EXISTING WATER MAIN VALVE BOX/STRUCTURE.
308 ADJUST EXISTING WATER MAIN VALVE BOX.
309 ABANDON, DRAIN, & CAP EXISTING WATER MAIN.
310 ABANDON EXISTING WATER SERVICE.
311 CONTRACTOR TO FIELD VERIFY WATER SERVICE LOCATION/ACTIVITY AND REPLACE ACCORDING TO ENGINEER.
400 PROPOSED STORM SEWER [SIZE].
401 CONNECT EXISTING ROOF DRAIN TO CURB OPENING
402 CONNECTION TO EXISTING STORM SEWER PIPE/STRUCTURE.
403 REMOVE EXISTING STORM SEWER PIPE/STRUCTURE.
404 ABANDON & CAP EXISTING STORM SEWER.
405 ADJUST EXISTING STORM STRUCTURE.
500 TREE & STUMP TO BE REMOVED (LESS THEN 12")
501 TREE & STUMP TO BE REMOVED (12" & GREATER)
502 SHRUB TO BE REMOVED.
503 CLEAR AND GRUB BRUSH LINE AS NECESSARY TO COMPLETE CONSTRUCTION. ALL CLEARING TO BE VERIFIED BY PROJECT ENGINEER.
504 REMOVE AND REINSTALL/REPLACE EXISTING LANDSCAPING, FENCE, RETAINING WALL, ETC. (IF NECESSARY).
505 REMOVE EXISTING LANDSCAPING, FENCE, RETAINING WALL, ETC.
506 POLE/PEDESTAL TO BE SECURED BY UTILITY COMPANY DURING CONSTRUCTION.
507 POLE TO BE RELOCATED BY UTILITY COMPANY.
508 GUY WIRE TO BE RELOCATED BY UTILITY COMPANY.
509 PEDESTAL TO BE RELOCATED BY UTILITY COMPANY.
510 UTILITY CONFLICT - TO BE RELOCATED/ADJUSTED BY UTILITY COMPANY.
511 POTENTIAL UTILITY CONFLICT - VERIFY WITH UTILITY COMPANY.
512 **CAUTION!** - UTILITY CROSSING.
600 REMOVE EXISTING CURB & GUTTER.
601 PROPOSED 24" CONCRETE CURB & GUTTER.
602 PROPOSED 30" CONCRETE CURB & GUTTER.
603 PROPOSED 36" CONCRETE CURB & GUTTER.
604 MATCH TO EXISTING CURB & GUTTER.
605 PROVIDE TYPE 'X' CURB.
606 PROVIDE REVERSE-PITCH CURB & GUTTER.
607 PROVIDE CURB TAPER.
608 REMOVE ASPHALT/CONCRETE/WALL/STEPS.
609 PROPOSED 4" CONCRETE SIDEWALK.
610 PROPOSED 6" CONCRETE SIDEWALK/DRIVEWAY.
611 PROPOSED 6" CONCRETE PAVEMENT.
612 PROPOSED 8" CONCRETE PAVEMENT.
613 PROPOSED CONCRETE STEPS. STEP RISE HEIGHT AND STEP TREAD DEPTH SHALL MEET APPLICABLE BUILDING CODES. CONTRACTOR SHALL CONFIRM REQUIRED NUMBER OF STEPS WITH PROJECT ENGINEER PRIOR TO INSTALL.
614 PROPOSED 2' GRAVEL SHOULDER.
615 REGRADE EXISTING GRAVEL.
616 PROPOSED GRAVEL DRIVEWAY.
617 REMOVE & REPLACE GRAVEL DRIVEWAY.
618 REMOVE GRAVEL DRIVEWAY & REPLACE WITH BITUMINOUS DRIVEWAY/APRON.
619 REMOVE & REPLACE HMA PAVEMENT.
620 REMOVE & REPLACE HMA PAVEMENT DRIVEWAY.
621 PROPOSED HMA PAVEMENT.
622 MATCH TO EXISTING EDGE PAVEMENT.
623 PROPOSED RESIDENTIAL HMA PAVEMENT DRIVEWAY.
624 PROPOSED COMMERCIAL HMA PAVEMENT DRIVEWAY.
625 REMOVE & REPLACE 4" CONCRETE SIDEWALK.
626 REMOVE & REPLACE 6" CONCRETE SIDEWALK/DRIVEWAY.
627 PROPOSED HANDICAP RAMP WITH - D. WARN. FIELD [S.F].
628 SAW CUT PCC PAVEMENT.
629 SAW CUT HMA PAVEMENT.
630 PROPOSED BITUMINOUS WEDGE CURB.

NOTES:

TRAFFIC CONTROL NOTE:
ALL CONTRACTORS MUST CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE REQUIREMENTS OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION. ONE LANE OF TRAFFIC MUST REMAIN OPEN DURING AND AFTER ALL CONSTRUCTION ACTIVITIES FOR EMERGENCY VEHICLE ACCESS.

STREET SIGN NOTE:
CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING, STORING, AND RESETTING ALL PERMANENT SIGNS. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING SIGNS UNTIL REMOVED. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL TEMPORARY SIGNS THAT MAY BE REQUIRED.

TRAFFIC SIGN NOTE:
CONTRACTOR TO PROVIDE TEMPORARY TRAFFIC SIGNS FOR ANY TRAFFIC SIGNS DISTURBED DURING CONSTRUCTION. ALL DISTURBED TRAFFIC SIGNS MUST BE REPLACED AND INSTALLED AS PER LOCAL REGULATIONS AT THE COMPLETION OF THE PROJECT.

EROSION CONTROL NOTE:
CONTRACTOR TO INSTALL BACKFILL MATERIAL INTO THE EXCAVATED TRENCH AS SOON AS POSSIBLE TO IMPLEMENT EROSION CONTROL.

PROPERTY LINE AND RIGHT-OF-WAY NOTE:
ALL RIGHT-OF-WAYS AND PROPERTY LINES SHOWN ARE APPROXIMATE AND FOR ILLUSTRATIVE PURPOSES ONLY. A PROPERTY SURVEY PERFORMED BY A PROFESSIONAL LAND SURVEYOR SHOULD BE COMPLETED TO DETERMINE THE ACTUAL PROPERTY LINE AND RIGHT-OF-WAY LOCATIONS.

MAILBOX RELOCATION NOTE:
CONTRACTOR TO RELOCATE EXISTING MAILBOXES DURING CONSTRUCTION (COORDINATE AND VERIFY WITH LOCAL POSTAL SERVICE ON LOCATION). RESET BEHIND CURB AND GUTTER OR SHOULDER ACCORDING TO THE REQUIREMENTS OF THE LOCAL POSTMASTER UPON COMPLETION OF STREET CONSTRUCTION.

TREE TRIMMING NOTE:
CONTRACTOR TO PROPERLY TRIM ALL TREE BRANCHES, ROOTS, AND BUSHES DISTURBED DUE TO SANITARY SEWER, WATER SYSTEM, STORM SEWER, AND STREET CONSTRUCTION.

TREE REMOVAL NOTE:
CONTRACTOR TO CONTACT ENGINEER OR **CITY OF MINERAL POINT** FOR VERIFICATION PRIOR TO ANY TREE REMOVAL.

SAW CUT NOTE:
CONTRACTOR TO PROVIDE FULL DEPTH SAW CUTS AND REPLACE PAVEMENT.

UTILITIES' NOTE:
THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLAN HAVE BEEN OBTAINED BY FIELD CHECKS, A UTILITY LOCATE THROUGH DIGGER'S HOTLINE, AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE SURVEYOR DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR SHOULD VERIFY LOCATIONS W/ THE UTILITY COMPANIES AND **CITY OF MINERAL POINT** PRIOR TO STARTING ANY EXCAVATION.

SANITARY SEWER LATERAL NOTE:
THE LOCATION OF EXISTING SANITARY SEWER LATERALS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION AND STATUS OF EACH SANITARY SEWER LATERAL ENCOUNTERED. ONLY ACTIVE SANITARY SEWER LATERALS SHALL BE CONNECTED TO THE NEW SANITARY SEWER MAIN.

CASTING NOTE:
ALL EXISTING MANHOLE CASTINGS AND STORM SEWER CASTINGS TO BE REMOVED AND/OR REPLACED SHALL BE SALVAGED TO THE **CITY OF MINERAL POINT.**

WATER SYSTEM NOTE:
CONTRACTOR TO SALVAGE EXISTING HYDRANTS TO BE REMOVED TO THE **CITY OF MINERAL POINT**. REMOVE EXISTING HYDRANTS TO A MINIMUM DEPTH OF 4'-0".

TRACER WIRE NOTE:
TRACER WIRE (12 GAUGE) TO BE INSTALLED WITH ALL POLYVINYL CHLORIDE (PVC) WATER MAIN.

CABLE-BOND NOTE:
ALL PROPOSED CLASS 52 DUCTILE IRON PIPE WATER MAIN TO BE CABLE-BOND.

WATER SERVICE NOTE:
CONTRACTOR TO VERIFY STATUS AND LOCATION OF EACH WATER SERVICE ENCOUNTERED. CONTRACTOR TO REPLACE ACCORDING TO ENGINEER. ONLY ACTIVE WATER SERVICES SHALL BE CONNECTED TO THE NEW WATER MAIN.

SITE RESTORATION NOTE:
CONTRACTOR WILL BE RESPONSIBLE FOR REPLACEMENT OF ALL DISTURBED PROJECT AREA COMPONENTS INCLUDING, BUT NOT LIMITED TO, EXISTING CONCRETE, BITUMINOUS PAVEMENT, GRAVEL, CULVERTS, WATER AND SANITARY SEWER SYSTEM COMPONENTS, STORM SEWER SYSTEM COMPONENTS, TREES, LAWN ORNAMENTS, FENCING, YARD LANDSCAPING, RETAINING WALLS, MAILBOXES, AND LANDSCAPE AREAS.

PROPERTY DAMAGES:
THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF ADJACENT PROPERTY AND FOR ANY DAMAGE TO THE SITE OR TO ADJACENT PROPERTY INCIDENTAL TO THE CONSTRUCTION ACTIVITIES. AFTER THE COMPLETION OF CONSTRUCTION, ANY AREAS ADJACENT TO THE CONSTRUCTION SITE DAMAGED BY THE CONTRACTOR DURING EXECUTION OF THE CONTRACT SHALL BE RESTORED TO MATCH THE PRECONSTRUCTION CONDITIONS.

DISCIPLINE	DESIGNATION
REMOVAL	R
GENERAL	G
CIVIL	C
LANDSCAPE	L
AQUATIC	AQ
ARCHITECTURAL	A
STRUCTURAL	S
ELECTRICAL	E
INSTRUMENTATION/CONTROLS	N
PROCESS	D
PLUMBING	P
HVAC /MECHANICAL	M

DISCIPLINE DESIGNATORS

TYPE	DESIGNATION
NOTES & SCHEDULES	0
PLANS	1
ELEVATIONS & DETAILS	2
CROSS-SECTIONS	3
DIAGRAMS	4

DRAWING SHEET DESIGNATION

C102
- DRAWING NUMBER
- DRAWING SHEET DESIGNATION
- DISCIPLINE DESIGNATION (MAY HAVE MULTIPLE)

SHEET NUMBER IDENTIFICATION

ENGINEER:

DELTA 3
EVERY ANGLE COVERED
PROFESSIONAL CIVIL, MUNICIPAL, & STRUCTURAL ENGINEERING • ARCHITECTURE
GRANT WRITING • LAND DEVELOPMENT • PLANNING & CADD SERVICES

875 SOUTH CHESTNUT STREET PLATTEVILLE, WISCONSIN 53818 PHONE: (608) 348-5355
898 JACKSON STREET DUBUQUE, IOWA 52001 PHONE: (563) 542-9005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:

MR. BART NIES, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT

PROJECT LOCATION: WITHIN MINERAL POINT CITY LIMITS, BREWERY CREEK(928600) & UNAMED STREAM(928700)
OWNER: CITY OF MINERAL POINT: 137 HIGH STREET, MINERAL POINT, WI 53565

REVISIONS:		
NO.	DATE	DESCRIPTION

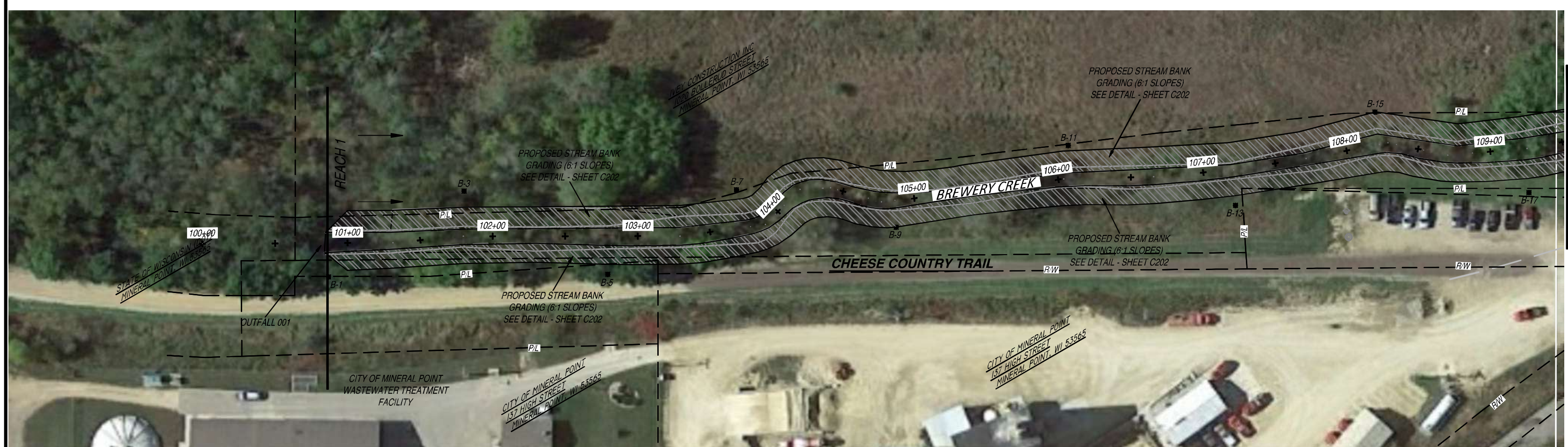
AS-BUILT: --/--/---- BY: -.-----

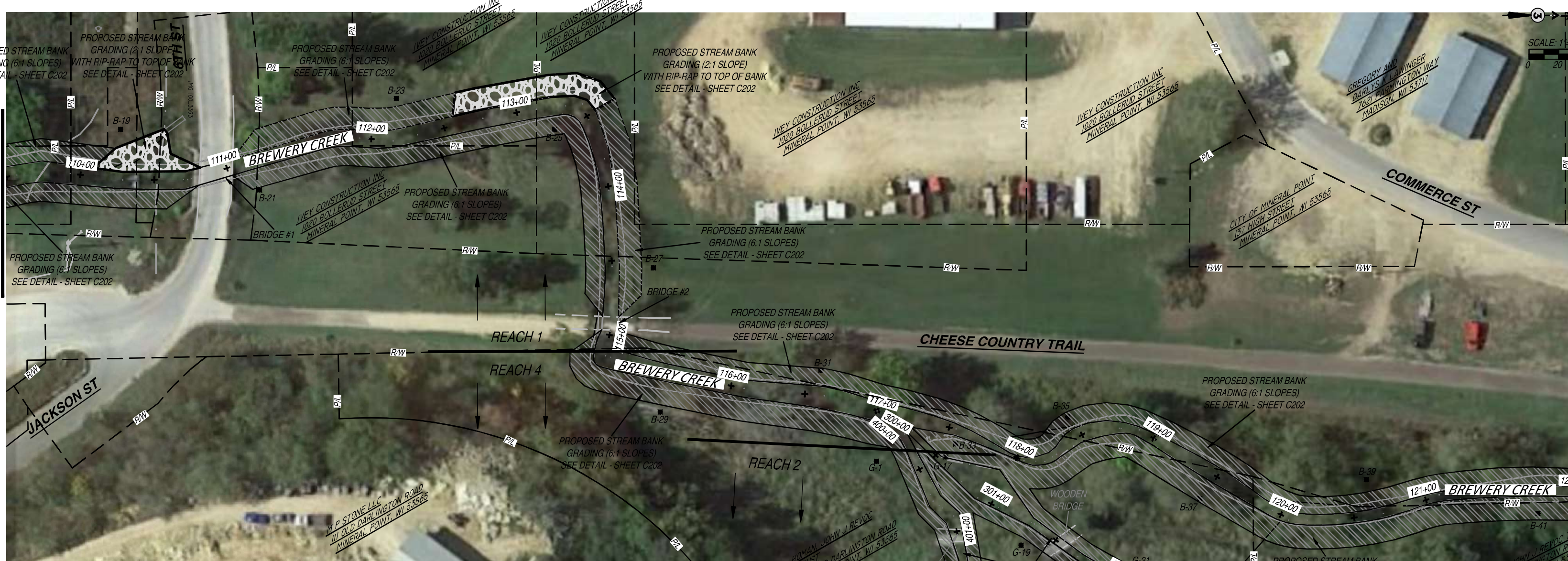
FOR AGENCY REVIEW

PROJECT NUMBER	D19-032
SHEET SCALE	NOT TO SCALE
DRAWN BY	C.COYIER
DATE ISSUED	MARCH 31, 2020
SHEET DESC.	LEGEND & GENERAL NOTES

SHEET TITLE: **G001**

SHEET NUMBER # **02 of 11**





ENGINEER:

DELTA 3
EVERY ANGLE COVERED

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898 JACKSON STREET DUBUQUE, IOWA 52001 PHONE: (563) 542-9005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:

MR. BART NIES, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT

PROJECT LOCATION: WITHIN MINERAL POINT CITY LIMITS, BREWERY CREEK(928600) & UNAMED STREAM(928700)
OWNER: CITY OF MINERAL POINT; 137 HIGH STREET, MINERAL POINT, WI 53565

REVISIONS:		
NO.	DATE	DESCRIPTION

AS-BUILT: --/--/---- BY: -.-----

FOR AGENCY REVIEW

PROJECT NUMBER	D19-032
SHEET SCALE	HORZ -1" =40'
DRAWN BY	C.COYIER
DATE ISSUED	MARCH 31, 2020
SHEET DESC.	PLAN VIEW - SOUTH BREWERY CREEK

SHEET TITLE: C101

SHEET NUMBER # .-03 of 11

MATCH LINE STATION 314+00
SEE SHEET C103

SCALE: 1"=40' (24"x36")
0 20 40 60

ENGINEER:

DELTA 3
EVERY ANGLE COVERED
PROFESSIONAL CIVIL, MUNICIPAL, & STRUCTURAL ENGINEERING • ARCHITECTURE
GRANT WRITING • LAND DEVELOPMENT • PLANNING & CADD SERVICES

875 SOUTH CHESTNUT STREET
PLATTEVILLE, WISCONSIN 53818
PHONE: (608) 348-5355

898 JACKSON STREET
DUBUQUE, IOWA 52001
PHONE: (563) 542-9005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:

MR. BART NIES, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT

PROJECT LOCATION: WITHIN MINERAL POINT CITY LIMITS, BREWERY CREEK(928600) & UNAMED STREAM(928700)
OWNER: CITY OF MINERAL POINT: 137 HIGH STREET, MINERAL POINT, WI 53565

REVISIONS:

NO.	DATE	DESCRIPTION

AS-BUILT: --/--/---- BY: -.-----

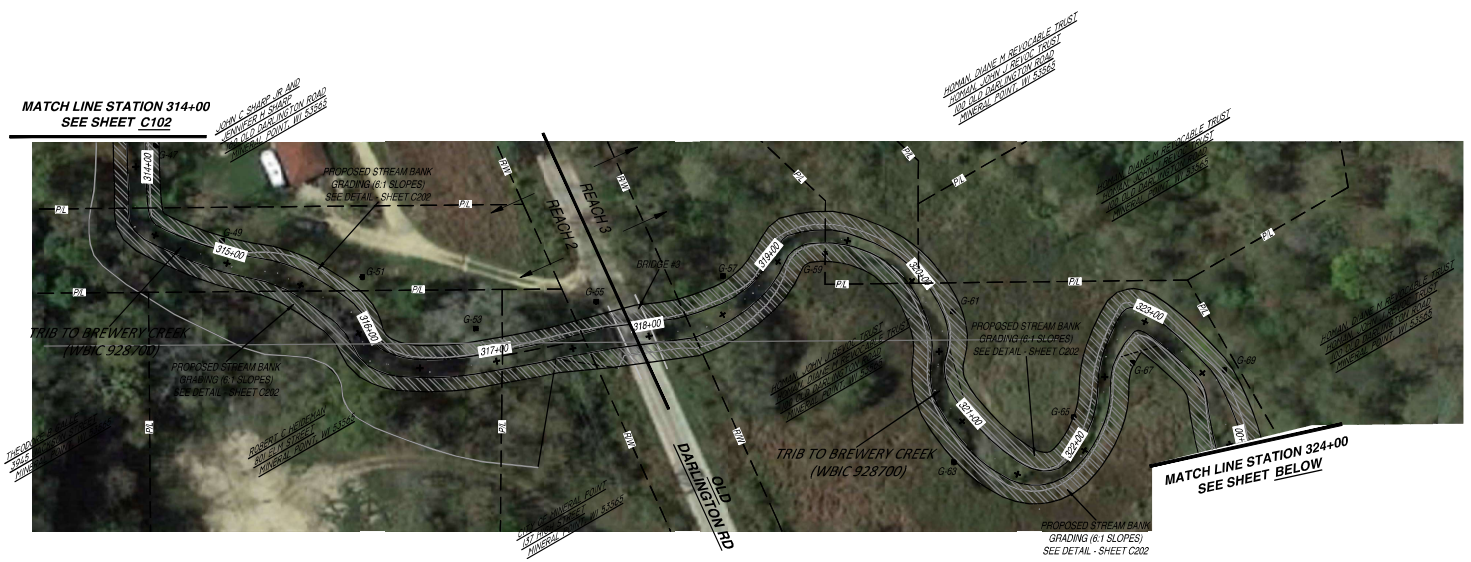
FOR AGENCY REVIEW

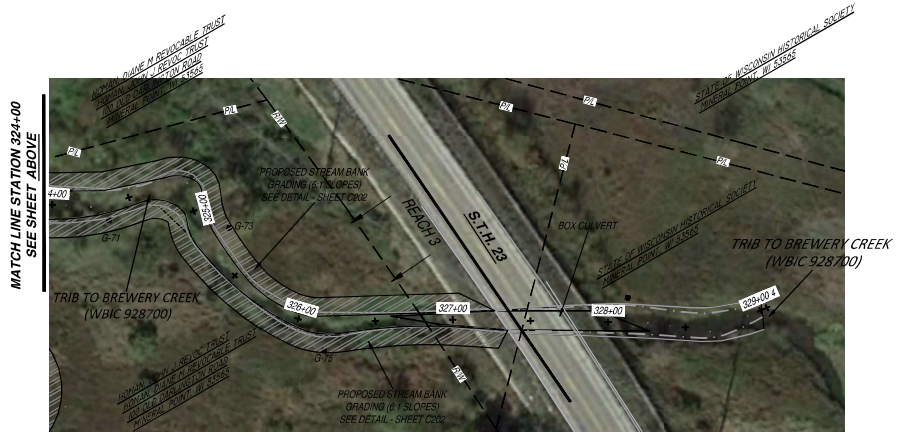
PROJECT NUMBER	D19-032
SHEET SCALE	HORZ - 1" =40'
DRAWN BY	C.COYIER
DATE ISSUED	MARCH 31, 2020
SHEET DESC.	PLAN VIEW - TRIB. TO BREWERY CREEK

SHEET TITLE:

C102

SHEET NUMBER # 04 of 11





SCALE: 1"=40' (24"x36")
0 20 40 60

SCALE: 1"=40' (24"x36")
0 20 40 60

ENGINEER:
DELTA 3
LAND WATER SERVICES
PROFESSIONAL CIVIL, MUNICIPAL & STRUCTURAL ENGINEERING • RESOURCE BASED WATER • LAND DEVELOPMENT • PLANNING & CAD SERVICES
675 SOUTH CHESTNUT STREET
PHONE: (608) 348-5355
PLATTEVILLE, WISCONSIN 53818
908 JACKSON STREET
PHONE: (563) 542-4055
DUBUQUE, IOWA 52001

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:
MR. BART NIES, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT

PROJECT LOCATION: WITHIN MINERAL POINT CITY LIMITS, BREWERY CREEK(928600) & UNAMED STREAM(928700)
OWNER: CITY OF MINERAL POINT: 137 HIGH STREET, MINERAL POINT, WI 53565

REVISIONS:

NO.	DATE	DESCRIPTION

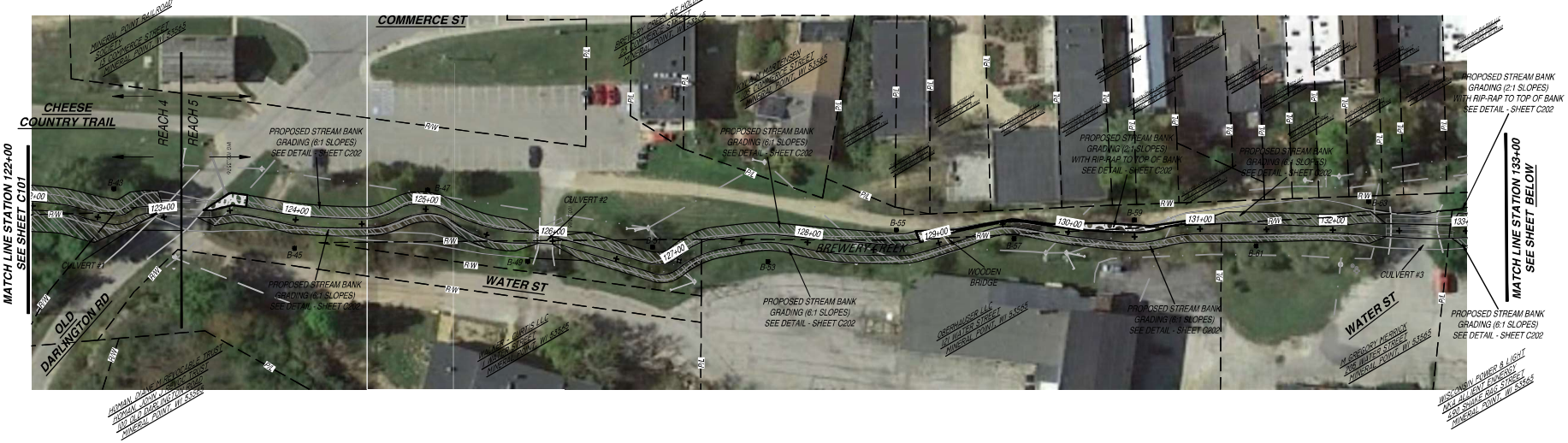
AS-BUILT: BY:

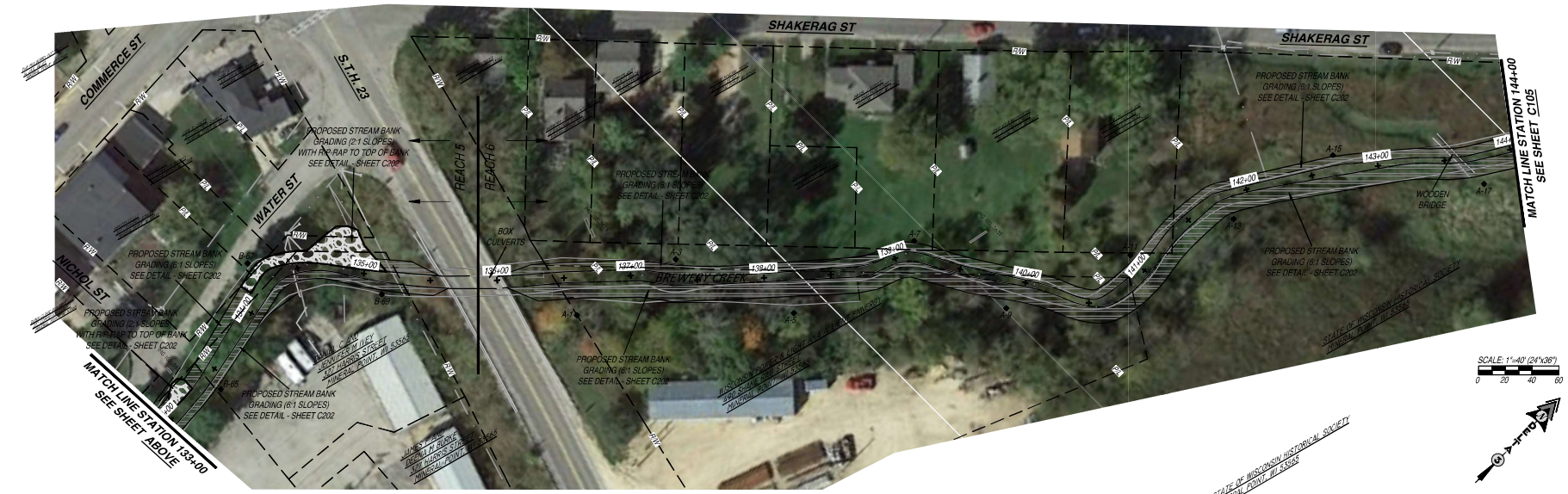
FOR AGENCY REVIEW

PROJECT NUMBER	D19-032
SHEET SCALE	HORZ.-1" =40'
DRAWN BY	C.COYIER
DATE ISSUED	MARCH 31, 2020
SHEET DESC.	PLAN VIEW - TRIB. TO BREWERY CREEK

SHEET TITLE:
C103

SHEET NUMBER # 05 of 11





SCALE: 1"=40' (24"x36")
0 20 40 60

ENGINEER:
DELTA 3
EARTH WELL COURSES
PROFESSIONAL CIVIL, MUNICIPAL & STRUCTURAL ENGINEERING • ARCHITECTURE
LAND SURVEYING • LAND DEVELOPMENT PLANNING & CAD SERVICES
675 SOUTH CHESTNUT STREET PHONE: (608) 348-5355
PLATTEVILLE, WISCONSIN 53818
908 JACKSON STREET PHONE: (563) 542-4055
DUBUQUE, IOWA 52001

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:

MR. BART NIES, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

CONSENT STATEMENT

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT

PROJECT LOCATION: WITHIN MINERAL POINT CITY LIMITS, BREWERY CREEK(928600) & UNAMED STREAM(928700)
OWNER: CITY OF MINERAL POINT: 137 HIGH STREET, MINERAL POINT, WI 53565

REVISIONS:

NO.	DATE	DESCRIPTION

AS-BUILT: BY:

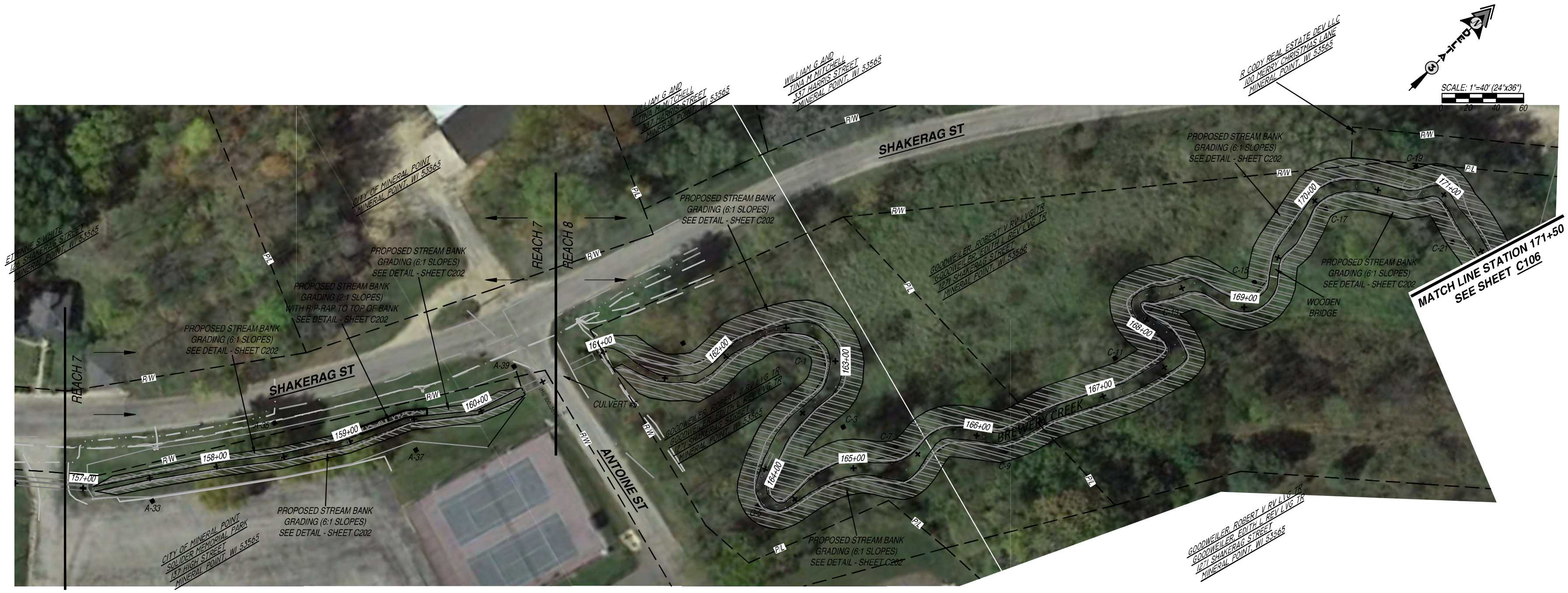
FOR AGENCY REVIEW

PROJECT NUMBER	D19-032
SHEET SCALE	HORZ.-1" =40'
DRAWN BY	C.COYIER
DATE ISSUED	MARCH 31, 2020
SHEET DESC.	PLAN VIEW - BREWERY CREEK

SHEET TITLE:

C104

SHEET NUMBER # 06 of 11



ENGINEER:

DELTA 3

PROFESSIONAL CIVIL, MUNICIPAL, & STRUCTURAL ENGINEERING • ARCHITECTURE
GRANT WRITING • LAND DEVELOPMENT • PLANNING & CADD SERVICES

875 SOUTH CHESTNUT STREET, PLATTEVILLE, WISCONSIN 53818 — PHONE: (608) 348-5355
866 JACKSON STREET, DUBUQUE, IOWA 52001 — PHONE: (563) 542-9005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:

MR. BART NIES, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT

PROJECT LOCATION: WITHIN MINERAL POINT CITY LIMITS, BREWERY CREEK(928600) & UNAMED STREAM(928700)
OWNER: CITY OF MINERAL POINT: 137 HIGH STREET, MINERAL POINT, WI 53565

REVISIONS:		
NO.	DATE	DESCRIPTION

AS-BUILT: --/--/---- BY: -.-----

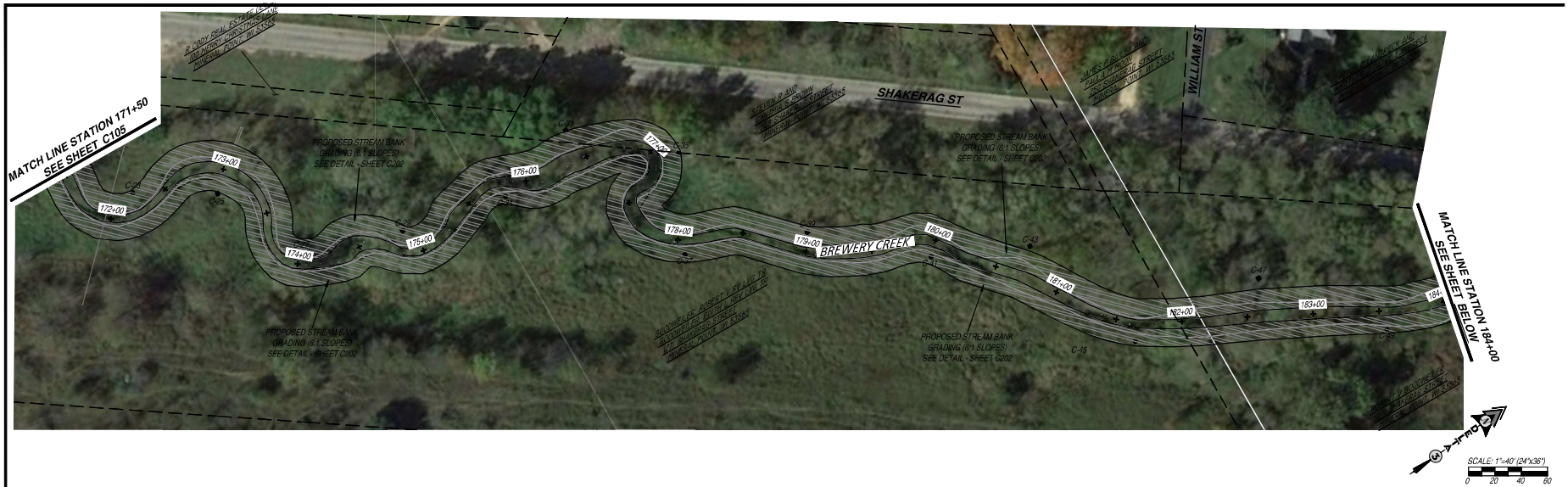
FOR AGENCY REVIEW

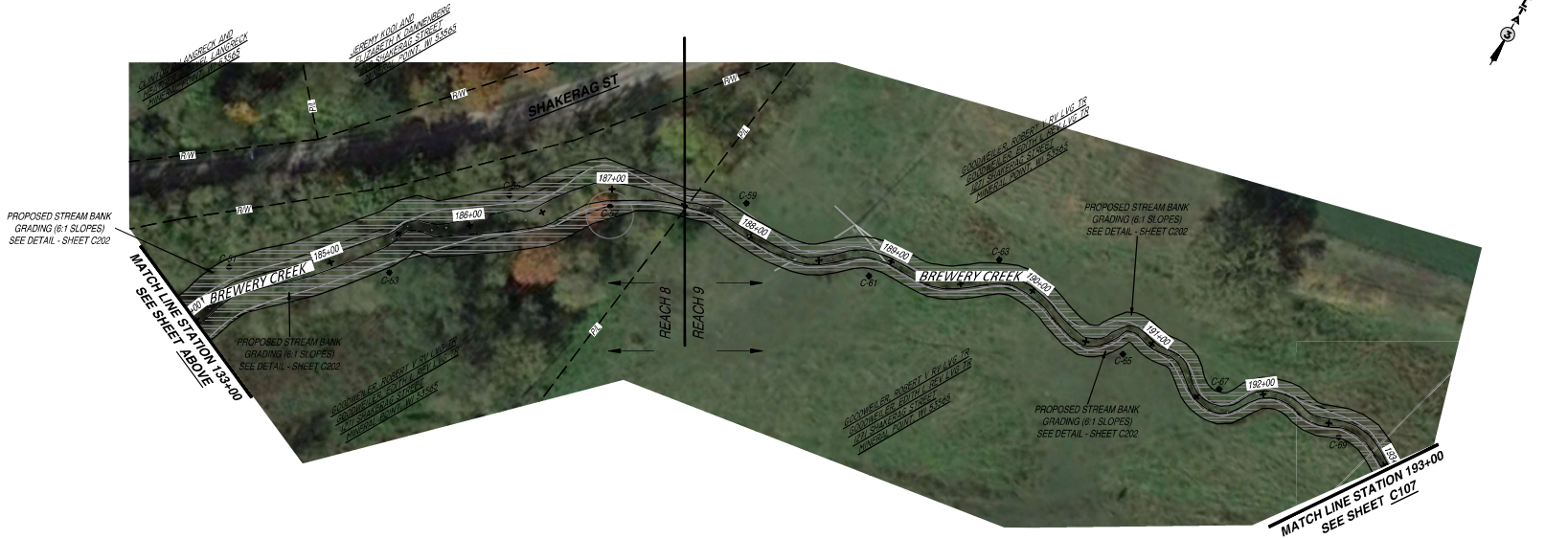
PROJECT NUMBER	D19-032
SHEET SCALE	HORZ.-1"=40'
DRAWN BY	C.COYIER
DATE ISSUED	MARCH 31, 2020
SHEET DESC.	PLAN VIEW - BREWERY CREEK

SHEET TITLE:

C105

SHEET NUMBER # 07 of 11





ENGINEER:
DELTA 3
ENGINEERING
PROFESSIONAL CIVIL, MUNICIPAL & STRUCTURAL ENGINEERING • ARCHITECTURE
CRANE INSPECTION • LAND DEVELOPMENT • PLANNING & CAD SERVICES
675 SOUTH CHESTNUT STREET
PLATTEVILLE, WISCONSIN 53818
PHONE: (608) 348-5355
900 JACKSON STREET
DUBUQUE, IOWA 52001
PHONE: (563) 542-4055

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:
MR. BART NIES, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT

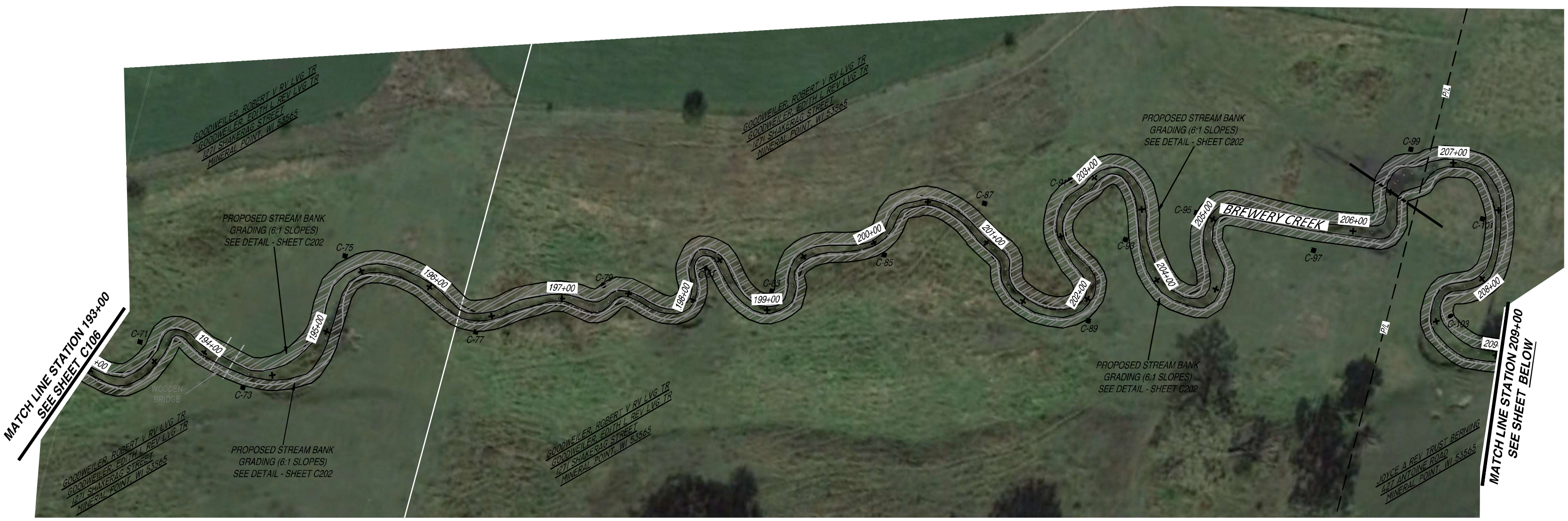
PROJECT LOCATION: WITHIN MINERAL POINT CITY LIMITS, BREWERY CREEK(928600) & UNAMED STREAM(928700)
OWNER: CITY OF MINERAL POINT; 137 HIGH STREET, MINERAL POINT, WI 53565

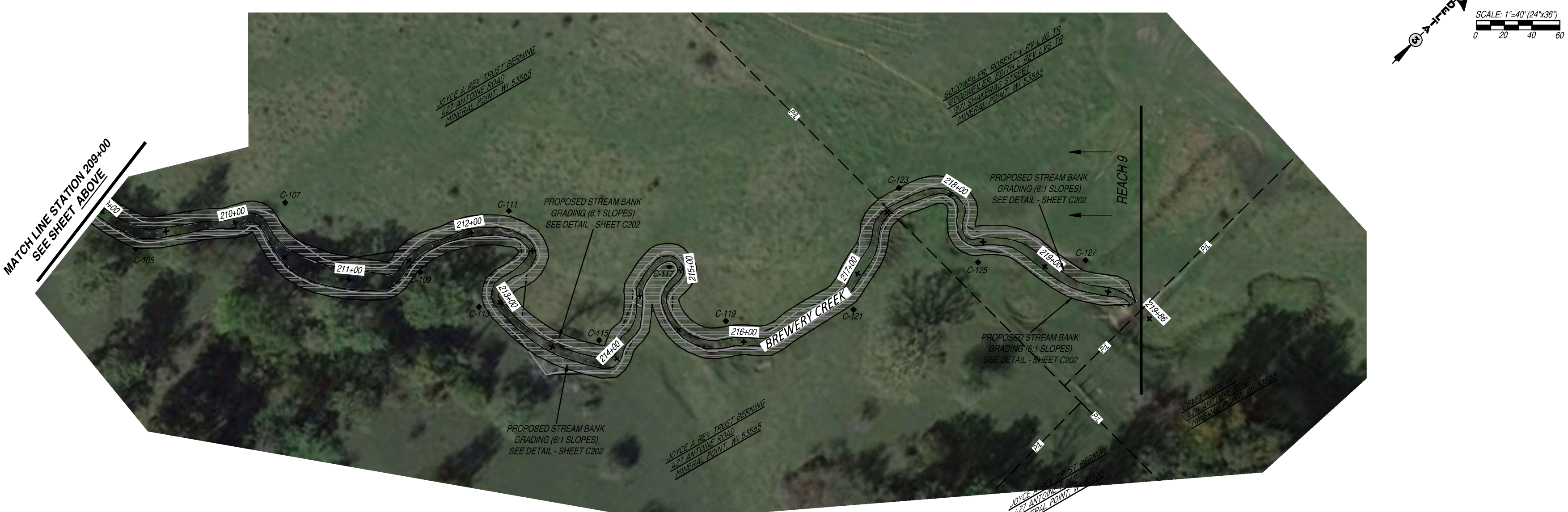
REVISIONS:		
NO.	DATE	DESCRIPTION
AS-BUILT:		BY:

FOR AGENCY REVIEW	
PROJECT NUMBER	D19-032
SHEET SCALE	HORZ -1" =40'
DRAWN BY	C.COYIER
DATE ISSUED	MARCH 31, 2020
SHEET DESC.	PLAN VIEW - BREWERY CREEK

SHEET TITLE:
C106

SHEET NUMBER # **08 of 11**





ENGINEER:

DELTA 3

PROFESSIONAL CIVIL, MUNICIPAL, & STRUCTURAL ENGINEERING • ARCHITECTURE
GRANT WRITING • LAND DEVELOPMENT • PLANNING & CADD SERVICES

875 SOUTH CHESTNUT STREET PLATTEVILLE, WISCONSIN 53818 PHONE: (608) 348-5355
898 JACKSON STREET DUBUQUE, IOWA 52001 PHONE: (563) 542-9005

FOR QUESTIONS REGARDING THIS PROJECT, PLEASE CONTACT:

MR. BART NIES, P.E.
DELTA 3 ENGINEERING, INC.
TELEPHONE: (608) 348-5355

CONSENT STATEMENT

PROPOSED 2021 STREAM IMPROVEMENTS - BREWERY CREEK

CITY OF MINERAL POINT

PROJECT LOCATION: WITHIN MINERAL POINT CITY LIMITS, BREWERY CREEK(928600) & UNAMED STREAM(928700)
OWNER: CITY OF MINERAL POINT; 137 HIGH STREET, MINERAL POINT, WI 53565

REVISIONS:		
NO.	DATE	DESCRIPTION

AS-BUILT: --/--/---- BY: --.-----

FOR AGENCY REVIEW

PROJECT NUMBER	D19-032
SHEET SCALE	HORZ.-1"=40'
DRAWN BY	C.COYIER
DATE ISSUED	MARCH 31, 2020
SHEET DESC.	PLAN VIEW - BREWERY CREEK

SHEET TITLE:

C107

Attachment #9

NRCS Excel Workbook Estimating 'Other' Erosion Types June 2006

Annual soil loss predictions for conservation planning purposes are made with current soil loss prediction technology (RUSLE2). RUSLE2 estimates sheet, rill and interrill erosion. Erosion that is seasonal in nature and caused by concentrated flow, however, is not predicted by RUSLE2.

This workbook provides conservation planners with simple tools and processes to help estimate the amount of erosion occurring in ephemeral gullies, classic gullies and on streambank erosion sites.

Definitions:

Rill Erosion: consists of the removal of soil by concentrated water running through little streamlets, or headcuts. Detachment in a rill occurs if the sediment in the flow is below the amount the load can transport and if the flow exceeds the soil's resistance to detachment. As detachment continues or flow increases, rills will become wider and deeper. Rills may be of any size but are usually less than four inches deep. Rills are:

<> generally parallel on the slope, but may converge,
<> generally of uniform spacing and dimension,
<> generally appear at different locations on the landscape from year to year,
<> generally shorter than ephemeral cropland gullies,
<> usually end at a concentrated flow channel, or an area where the slope flattens and deposition occurs,
<> are on the same portion of the slope that is used to determine the length of slope (L) for RUSLE2,
<> many small, but conspicuous channels running in the direction of slope gradient

Rill erosion is considered in the RUSLE2 calculations.

Ephemeral Gully Erosion: Small erosion channels formed on crop fields as a result of concentrated flow of runoff water. These channels are routinely eliminated by tillage of the field but return following subsequent runoff events. Ephemeral Gullies are small enough to be eliminated (temporarily) with the use of typical farm tillage equipment and they:

<> recur in the same area of concentrated flow each time they form,
<> frequently form in well-defined depressions in natural drainage ways,
<> are generally wider, deeper, and longer than the rills in the field,

Ephemeral Gullies are **not** calculated by the RUSLE2 program.

Gully Erosion: Permanent gullies are formed when channel development has progressed to the point where the gully is too wide and too deep to be tilled across. These channels carry large amounts of water after rains and deposit eroded material at the foot of the gully. They disfigure landscape and make the land unfit for growing crops. Gullies:

<> may grow or enlarge from year to year by head cutting and lateral enlarging,
<> often occur in depressions or natural drainage ways,
<> may begin as ephemeral gullies that were left in the field untreated,
<> may, over time, become partially stabilized by grass, weeds or woody vegetation,

Gully erosion is not calculated by the RUSLE2 program.

Streambank Erosion: The wearing away of streambanks by flowing water. The removal of soil from streambanks is typically caused by the direct action of stream flow and/or wind/wave action, typically occurring during periods of high flow. Streambank erosion:

<> is a natural process that generally increases when unprotected streambanks (e.g. no woody vegetation) are subject to the actions of flowing water and ice damage.

<> is a common occurrence on many Vermont river channels that are experiencing geomorphic adjustments

---

The soil loss from ephemeral gullies, gullies and streambank erosion areas can be estimated by calculating the volume of soil removed by erosion processes. The volume of soil loss can be multiplied by the typical unit weight of the soil (based on soil texture) which is eroded. Approximate soil unit weights are expressed below[1]:

Soil Texture	Estimated Dry Density lb/ft^3
Gravel	110
Sand	105
Loamy Sand	100
Sandy Loam	100
Fine Sandy Loam	100
Sandy Clay Loam	90
Silt Loam	85
Silty Clay Loam	85
Silty Clay	85
Clay Loam	85
Organic	22

Procedure for estimating Ephemeral Soil Erosion:

The following formula will be used to calculate annual estimated ephemeral gully erosion:

$$\frac{\text{Ephemeral Gully } \mathbf{Length} \times \text{Gully Average } \mathbf{Width} \times \text{Gully Average } \mathbf{Depth}}{2000} \times \text{Soil Weight (lbs/ft}^3\text{)} \times \text{Occurrences per Year} = \mathbf{Estimated} \text{ Soil Loss (Tons per Year)}$$

* Ephemeral gully erosion may reform multiple times per year, and under certain conditions it may not form in a given year. The voided volume which would be calculated after a runoff event is not necessarily representative of an annual rate, but is representative of only the specific event. This erosion can be calculated for individual storms and can be summed for a yearly estimate.

1 Data from published soil surveys, laboratory data, and soil interpretation record are to be used where available. Parent materials, soil consistency, soil structure, pore space, soil texture, and coarse fragments all influence unit weight.

Procedure for estimating Gully Soil Erosion:

The following formula will be used to calculate annual estimated classic gully erosion:

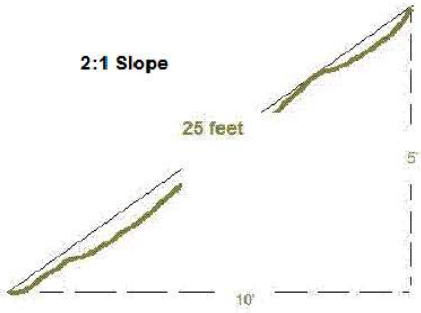
$$\frac{\text{Gully } \textbf{Length} \times (\text{Average } \textbf{Width} \times \text{Average } \textbf{Depth} \times 0.5) \times \textbf{Soil Weight (lbs/ft3)}}{2000} \Big/ \text{Formation Years} = \textbf{Estimated Soil Loss Per Year (Tons)}$$

Procedure for estimating Streambank Soil Erosion (Direct Volume Method):

The following formula will be used to calculate annual estimated streambank erosion unless a field measurement procedure[2] is used:

$$\frac{\text{ing Bank } \textbf{Length} \times \text{Eroding Bank Height} \times \text{Lateral Recession Rate (FT/YR)} \times \text{Soil Weight (lb}}{2000} = \textbf{Estimated Soil Loss Per Year (Tons)}$$

** Eroding bank height is measured along the bank, not the vertical height of bank. Example: if vertical height of an eroding streambank is 5 feet, and the bank is on a 2:1 slope, the total eroding bank distance is 25 feet -- 1/2 (Base X Height).



***The average annual recession rate is the thickness of soil eroded from a bank surface (perpendicular to the face) in an average year.

Stream bank erosion sometimes presents itself as a major occurance in a given year, whereas the same bank may not erode significantly for a period of years if no major runoff events occur. Recession rates need to be calculated as an average of years when erosion does and does not occur. Recession rate is not calculated as the erosion occurring after a single event.

Use available resources to assist in the estimation of recession rate: use past and present aerial photography, old survey records, and any other information that helps to determine the bank condition at known times in the past. When such information is lacking or insufficient, field observations and professional judgement are needed to estimate recession rates.
It is often not possible to directly measure recession rates in the field. Therefore, the following table has been included which relates recession rates to narrative descriptions of banks eroding at different rates (Table from NRCS Wisconsin guidance).

Lateral Recession Rate (ft/yr)	Category	Description
0.01-0.05	Slight	Some bare bank but active erosion not readily apparent. Some rills but no vegetative overhang. No exposed tree roots.
0.06-0.2	Moderate	Bank is predominantly bare with some rills and vegetative overhang. Some exposed tree roots but no slumps or slips.
0.3-0.5	Severe	Bank is bare with rills and severe vegetative overhang. Many exposed tree roots and some fallen trees and slumps or slips. Some changes in cultural features such as fence corners missing and realignment of roads or trails. Channel cross section becomes U-shaped as opposed to V-shaped.
0.5+	Very Severe	Bank is bare with gullies and severe vegetative overhang. Many fallen trees, drains and culverts eroding out and changes in cultural features as above. Massive slips or washouts common. Channel cross section is U-shaped and stream course may be meandering.

2 The best way to quantify streambank erosion is to measure it directly in the field. The basic procedure in measuring streambank erosion is to survey, flag, or in some way fix a "before" image of the channel you are evaluating in order to establish the baseline condition. Changes due to erosion can then be monitored over time by going back to the study area and re-measuring from the fixed reference points.
Channel cross-sections can be surveyed and plotted on a periodic basis to monitor change. Stakes or pins can be driven into channel banks flush with the surface. The amount of stake or pin exposed due to erosion is the amount of change at the streambank erosion site between your times of observation.
The time required to monitor a site often precludes this method of data collection. The Direct Volume Method can be used to estimate streambank erosion at your site.

Acknowledgements: This Excel workbook was created as a planning tool for use by conservation planners. The basic format and content of the tool is a compilation of various similar tools, processes and procedures employed by NRCS in several states including: Indiana, Iowa, Kansas, Maryland, Michigan, Missouri, Nebraska, Oklahoma, South Dakota and Wisconsin. Some of the terminology in the 'Definitions' section of this Readme document closely mirrors these sources.

NRCS Streambank and Irrigation Ditch Erosion Estimator (Direct Volume Method)

Farmer / Cooperator Name:	Varies	Evaluated By:	J. Fure
Tract Number:	Varies	Evaluation Date:	May 5, 2022

Field Number	Eroding Strmbnk Reach #; or Ditch Side/Bottom	Eroding Bank or Ditch Length (Feet)	Eroding Bank Height; or Ditch Bottom Width* (Feet)	Area of Eroding Strmbank or Ditch (FT^2)	Lateral or Ditch Bottom Recession Rate (Estimated) (FT / Year)	Estimated Volume (FT^3) Eroded Annually	Soil Texture	Approximate Pounds of Soil per FT^3	Estimated Soil Loss (Tons/Year)	Soil Total Phosphorus (ppm)	Estimated Phosphorus Loss (Pounds/Year)
Varies	1 (Right)	422	3.6	1,519	0.25	379.8	Silt Loam	85	16.1	748.7	24.2
	1 (Left)	741	4.0	2,964	0.20	592.8	Silt Loam	85	25.2	748.7	37.7
	8 (Right)	2,655	3.8	10,089	0.35	3,531.2	Silt Loam	85	150.1	885.6	265.8
	8 (Left)	2,655	4.2	11,151	0.35	3,902.9	Silt Loam	85	165.9	885.6	293.8
	9 (Right)	2,145	2.3	4,934	0.25	1,233.4	Silt Loam	85	52.4	734.4	77.0
	9 (Left)	2,145	3.4	7,293	0.25	1,823.3	Silt Loam	85	77.5	734.4	113.8
				TOTAL		11463.2			487.2		**812.3**

Attachment #10

Water Quality Trading
Operation and Maintenance Plan

Introduction:
The Water Quality Trading (WQT) Operation and Maintenance (O&M) Plan is meant to be a working document and should be updated as new trading practices are implemented. Currently, the Operation and Maintenance Plan revolves around streambank stabilization along Brewery Creek. The attached *Streambank Inspection Form* should be completed during annual inspections and following major storm events. Inspection forms shall be retained for at least five (5) years to ensure compliance with the WQT Plan.

Publicly Owned Riprap:
City representative to complete inspection form annually and following major storm events. The form will then be provided to the Director of Public Works following inspection. The City will address maintenance issues identified during inspection within 30 days. Substantial maintenance issues may require an extended timeframe for generation of plans, specifications, and a public bid process to perform the work. Inspections and O&M activities shall be reported in the annual WQT Report sent to the DNR.

Privately Owned Riprap:
City representative to complete inspection form annually and following major storm events. The form will then be provided to the Director of Public Works following inspection. The City will address maintenance issues identified during inspection within 30 days. Substantial maintenance issues may require an extended timeframe for generation of plans, specifications, and a public bid process to perform the work. Maintenance expenses will be incurred by the City. The Private Property Owner will be allowed to perform maintenance activities at the expense of the Private Property Owner. Inspections and O&M activities shall be reported in the annual WQT Report sent to the DNR.

Easement:
A temporary construction easement and permanent access easement are to be utilized by the City of Mineral Point to construct, operate, and maintain the streambank stabilization.

Quality Assurance:
Riprap gradation and composition shall be provided for each source of material. Riprap shall be installed per *Wisconsin Department of Transportation Specification 606 Riprap*, attached.

Installation:
- Install erosion control.
- Grade streambanks as indicated on Plans.
- Install riprap:
    - Place geotextile fabric over substrate, lap edges and ends.
    - Do not place riprap over frozen or spongy subgrade surfaces.
    - Place riprap as indicated on Construction Plans.
    - Installed Thickness: Heavy Riprap; 18-inch to 24-inch diameter; installed minimum 30-inch thickness or as per thickness shown on the plans.
- Restore all disturbed areas to prevent erosion.

Practice Registration:
The purpose of the "Water Quality Trading Management Practice Registration" form is to report to WDNR that a management practice identified in the trading plan has been properly installed and is established and effective. This information will be used to track implementation progress, verify compliance and perform audits, as necessary. A registration form should be submitted for every management practice that has been identified in the trading plan. If practices are established prior to trading plan submittal, registration forms may be submitted with the trading plan. Otherwise, registration forms should be submitted during the permit term as practices become effective or with the annual report. A blank *Water Quality Trading Management Practice Registration Form 3400-207* is attached and should be submitted following implementation of the trading practice.

Tracking Procedures:
The City will track credits used monthly. The City will report credit usage to the DNR on a monthly basis in the Discharge Monitoring Reports (DMRs). The annual report will summarize the 12 months of credit usage and credit generation. The City will report to DNR any concern that they have that may result in a need to modify the trade agreement and/or this trade plan. For example, a need to generate additional credits based on discharge.

Inspections/Maintenance Considerations:
- A *Streambank Inspection Form* is attached.
    - Station: As noted on Construction Plans
    - Vegetative Condition: Excellent; Good; Fair; or Poor
    - Structural Condition of Riprap: Excellent; Good; Fair; or Poor
    - Maintenance Estimate: Provide an estimate for how long the maintenance will take to complete or a dollar value for completion. This will help determine if the City will perform the work or if the City will hire another entity to perform the work.
    - Date Completed: Following completion of the required maintenance, input the date of completion.
    - Comments: Provide the required maintenance activity along with any other useful information. If the cell provided is not large enough for Comments, write "See Back of Sheet" and provide comments on the reverse side of the Form.
- Following installation of the riprap, inspect the riprap closely over the next few months to ensure that seeding grows.
- Riprap may settle or shift especially after flooding events or freeze/thaw.
- May need to control weed and brush growth.
- Inspect riprap areas as needed.
- At a minimum, inspect after major storm events.
- If riprap has been damaged, repair it promptly to prevent a progressive failure.
- If repairs are needed repeatedly at a location, evaluate the site to determine if the original design conditions have changed.

Reach 9 Remediation Plan:
Reach 9 is located within a pastured area. Inspections that occurred in 2024 identified several sites with damaged vegetation due to heavy grazing and/or livestock travel routes. Several locations where livestock access the stream have needed to be revegetated. The City will complete restoration measures for

trampled areas as needed including grading, seeding, mulching, and temporary fencing. If trampled areas continue to be problematic or get worse, stone and/or riprap will be evaluated to further stabilize the sites.

- Annual inspections will occur each Spring.
- Annual inspections will include photographs representative of each Reach.
    - Any problems identified shall be documented with photographs.
- Any sites identified with poor vegetative cover will be noted on the annual inspection report. Vegetation will be categorized as follows:
    - Excellent (90-100% cover)
    - Good (80-90% cover)
    - Fair (70-80% cover)
    - Poor (less than 70% cover)
- Where soil is deformed due to livestock trampling or erosion, grading will be utilized to reshape and maintain bank stability.
- Within two (2) weeks of identifying a site that has erosion or poor vegetation, the site shall be fenced in order to exclude livestock access.
- Following fencing of a site, site restoration will include seeding and mulch consistent with the WQT Plan standards.
- Additional photos shall be taken following implementation of fencing, seeding, and mulch.
- Once the site is re-established, take photos of established vegetation and remove fencing.

Throughout 2025 and 2026, the City will evaluate Reach 9 and will follow the O&M Plan to maintain consistent vegetation. If unable to maintain established vegetation such as at the livestock crossing at approximate station 196+00, the City will take measures to armor the crossing consistent with NRCS Conservation Practice Standard for Stream Crossing (Code 578) . This evaluation will be included in the WQT Annual Report due January 31, 2027.

Routine Maintenance Items that can be performed by City:

- Evaluate streambank condition
    - Re-grade/re-seed streambank that is impaired.
    - Reconstruct/replace riprap that has settled, shifted, or washed out.
- Manage Vegetation
    - Add seeding and mulch to areas that need to be revegetated.
    - Temporary fencing may be needed within the pasture to restrict livestock access while seeding is established.
    - Remove invasive/noxious plants.
- Manage Garbage
    - Remove garbage and other debris that could otherwise impair the streambank stability.

Monthly Certification:

Each month, the City will certify that the riprap is maintained and operating in a manner consistent with this Water Quality Trading Plan or provide a statement noting noncompliance with this Plan. The monthly Discharge Monitoring Report (DMR) will include the following statement as a certification of compliance when the Credit Generating Practice is operating in a manner consistent with the Plan:

"I certify that to the best of my knowledge that the management practices identified in the approved water quality trading plan as the source of phosphorus credits is installed, established and properly maintained."

Annual Inspection:
An annual inspection of the riprap will be performed by a licensed Professional Engineer to ensure that the riprap is functioning as intended in order to meet the requirements of the WQT Plan.

Noncompliance:
The City will notify DNR by telephone call to DNR's regional wastewater compliance engineer within 24 hours or next business day of becoming aware that phosphorus credits used or intended for use by City are not being generated as outlined in this Water Quality Trading Plan.

The City will submit a written notification within five days after the City recognizes that the phosphorus credits are not being generated as outlined in the Trading Plan. DNR may waive the requirement for submittal for a written notice within five days and instruct the City to submit the written notice with the next regularly scheduled monitoring report required by City's WPDES Permit.

The written notification should include:

- Description of noncompliance and cause.
- Period of noncompliance including dates and times.
- Schedule for attaining compliance including time and steps toward compliance.
- Plan to prevent reoccurrence of the noncompliance.

Notification of Trade Agreement Termination:
If a trade agreement or the trading plan needs to be terminated during the permit term, the permittee should submit a Notice of Termination to the wastewater engineer/specialist to inform WDNR of the termination. WDNR staff should use this information to determine if a permit modification is required due to the termination, the termination will result in non-compliance, or other permit actions are required due to the termination. When credits are reduced or eliminated for any reason, the permittee is still required to meet their WQBELs without any grace period. To prevent noncompliance with WQBELs, changes to trading plans must be addressed before credits are lost. Modifying the permit/trading plan will require at least 180 days. A blank *Notification of Water Trade Agreement Termination Form 3400-209* is attached and should be submitted to WDNR prior to practice termination, no later than the submittal date of the annual report.

Streambank Inspection Form

Date: _____

Inspector: _____

Reason for Inspection (circle one): Monthly / Precipitation Event / Other: _____

Last Inspection Photos Date: _____
(inspection photos should be taken annually at minimum)

Reach	Vegetative Condition of BMP	Structural Condition of BMP	Required Maintenance	Maintenance Estimate (Time or Cost)	Comments

Photos Taken? ☐ Yes ☐ No

Section 606 Riprap

606.1 Description

(1) This section describes furnishing and placing riprap.

606.2 Materials

606.2.1 Riprap Stone

(1) Furnish durable field or quarry stone that is sound, hard, dense, resistant to the action of air and water, and free of seams, cracks, or other structural defects. Use stone pieces with a length and width no more than twice the thickness. Do not place material without the engineer's approval of the stone quality, size, and shape.

(2) The department will determine the average dimension of stone pieces by averaging measurements of thickness, width, and length. Furnish stones conforming to the size requirements for the riprap grade the plans show. Size requirements are expressed as the percent of the gross in-place riprap volume occupied by stones within average dimension size ranges for each riprap grade as follows:

AVERAGE DIMENSION RANGES FOR EACH RIPRAP GRADE				FRACTION OF GROSS
LIGHT RIPRAP	MEDIUM RIPRAP	HEAVY RIPRAP	EXTRA-HEAVY RIPRAP	IN-PLACE RIPRAP VOLUME OCCUPIED
inches	inches	inches	inches	BY STONES
>16	>20	>25	>30	0%
11 - 13	14 - 16	18 - 20	22 - 25	10% - 14%
9 - 11	11 - 14	14 - 18	18 - 22	15% - 21%
4 - 9	5 - 11	6.5 - 14	8 - 18	20% - 28%
<4	<5	<6.5	<8	5% - 7%
<1	<1	<1	<1	2% or less

(3) The contractor may substitute waste concrete slabs for stone. Furnish sound concrete, free of protruding reinforcement, and conforming to the size requirements specified for stone.

606.2.2 Riprap Grout

(1) Furnish an air-entrained mortar or concrete to fill the voids between riprap stones in grouted riprap. Conform to the physical requirements for component materials as specified in 501.2 except furnish fine aggregate or a combination of fine and coarse aggregate with a gradation that results in a grout with a consistency that allows complete filling of the riprap voids.

(2) Certify that the grout conforms to the following mixture requirements:

- Contains 470 pounds or more of portland cement per cubic yard of grout. The contractor may substitute class C fly ash for up to 30 percent of the required portland cement.
- Contains only enough water to achieve a 3-inch slump. Any additional workability required to completely fill the riprap voids must be achieved with admixture without increasing the w/cm ratio.
- Contains 9 percent or more air for mixes with a nominal top size aggregate less than 3/8 inch or 7 percent or more air for a mix with 3/8 inch or larger aggregate.

606.3 Construction

606.3.1 General

(1) Prepare the bed for the riprap by excavating, shaping the slopes, and constructing the toe for riprap installation. After placing the riprap, restore the surface of adjacent work and dispose of surplus material.

606.3.2 Placing Light Riprap

(1) If laying stone above the waterline, place it by hand. Lay it with close, broken joints and firmly bed it in the slope and against the adjoining stones. Lay the stones perpendicular to the slope with ends in contact. Compact the riprap thoroughly as construction progresses. Make the finished surface even and tight. Place larger stone in lower courses. Chink spaces between stones by firmly ramming spalls into place. If placing riprap over geotextile, use type R and conform to 645.3.1.6.

(2) Unless specified otherwise, make riprap at least one foot thick, measured perpendicular to the slope.

(3) Do not place riprap against, or in contact with, concrete surface before the end of the concrete's curing and protection period.

606.3.3 Placing Medium, Heavy, and Extra-Heavy Riprap

(1) The contractor may place medium, heavy, and extra-heavy riprap by any mechanical means that produce a completed job within reasonable tolerances of the typical section the plans show. Limit

handwork to the quantity necessary to fill large voids or to correct segregated areas. If placing riprap over geotextile, use type HR and conform to 645.3.1.7.

(2) Unless specified otherwise, make medium riprap at least 18 inches thick, heavy riprap at least 24 inches thick, and extra-heavy riprap at least 30 inches thick.

606.3.4 Placing Grouted Riprap

(1) If the plans specify using grouted riprap, lay the stone as specified above under 606.3.2 or 606.3.3. Fill the spaces between the stones with cement mortar. Use sufficient mortar or concrete to completely fill voids, except leave the face surface of the stone exposed.

(2) Place grout from the bottom to the top and then sweep the surface with a stiff broom. After completing the grouting, cure the surface as specified in 415.3.12 except substitute type 1-D curing compound as specified for structures in 502.2.6. During cold weather, protect the concrete as specified in 415.3.13 for concrete pavement.

606.4 Measurement

(1) The department will measure the bid items under this section by the cubic yard acceptably completed, measured as the volume within the limiting dimensions the contract designates or the engineer establishes in the field.

606.5 Payment

(1) The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
606.0100	Riprap Light	CY
606.0200	Riprap Medium	CY
606.0300	Riprap Heavy	CY
606.0400	Riprap Extra-Heavy	CY
606.0500	Grouted Riprap Light	CY
606.0600	Grouted Riprap Medium	CY
606.0700	Grouted Riprap Heavy	CY
606.0800	Grouted Riprap Extra-Heavy	CY

(2) Payment for the bid items under this section is full compensation for preparing the bed, providing and placing riprap, restoring adjacent work, and disposing of surplus material. The department will pay for excavation in excess of the approximate volume of earth occupied by the riprap under the Excavation Common bid item as specified under 205.5.

(3) Payment for the Grouted Riprap bid items also includes placing and curing mortar.

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

Water Quality Trading Management Practice Registration

Form 3400-207 (R 1/14)

Notice: Pursuant to s. 283.84, Wis. Stats., 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 WI-	Facility Site Number

Facility Address	City	State	ZIP Code

Project Contact Name (if applicable)	Address	City	State	ZIP Code

Project Name

Broker/Exchange Information (if applicable)

Was a broker/exchange be used to facilitate trade? ◯ Yes ◯ No

Broker/Exchange Organization Name	Contact Name

Address	Phone Number	Email

Trade Registration Information (Use a separate form for each trade agreement)

Type	Trade Agreement Number	Practices Used to Generate Credits	Anticipated Load Reduction	Trade Ratio	Method of Quantification
◯ Urban NPS ◯ Agricultural NPS ◯ Other					

County	Closest Receiving Water Name	Land Parcel ID(s)	Parameter(s) being traded

The preparer certifies all of the following:

- I have completed this document to the best of my knowledge and have not excluded pertinent information.
- I certify that the information in this document is true to the best of my knowledge.

Signature of Preparer	Date Signed

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

Leave Blank – For Department Use Only

Date Received		Trade Docket Number
Entered in Tracking System ☐ Yes	Date Entered	Name of Department Reviewer

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

Notification of Water Trade Agreement Termination

Form 3400-209 (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 WI-	Facility Site Number

Facility Address	City	State	ZIP Code

Project Contact Name (if applicable)	Address	City	State	ZIP Code

Project Name

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:

Trade Agreement number(s) to be terminated including affected land parcel ID(s):

Amount of trading credit being terminated	Effective date of termination

Reason for termination

Is this agreement being updated or replaced?

- ◯ Yes
- ◯ No
- ◯ Unsure

Will this termination result in non-compliance with the effective limit or other permit requirements?

- ◯ Yes; Name: _____
- ◯ No
- ◯ Unsure

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

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

Attachment #11

DELTA 3
Platteville, Wisconsin
Dubuque, Iowa
P 608.348.5355
P 563.542.9005
E mail@delta3eng.biz
W www.delta3eng.biz

January 21, 2022

Mr. Nathan Wells
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711

Re: Annual Water Quality Trading Report #1
City of Mineral Point, WI

Dear Nathan:

As requested and required by Schedule 4.1 Annual Water Quality Trading (WQT) Report of the City's Wisconsin Pollutant Discharge Elimination System (WPDES) Permit #WI-0024791-10-1, below, please find the Annual WQT Report for the City of Mineral Point's Wastewater Treatment Facility. Please review for approval.

I. WQT Credit Use

Table 1 provides a summary of Total Phosphorus (TP) Credits used each month in 2021.

Table 1 – 2021 Monthly Credits Used

Month	Credits Used
Jan. ('21)	-
Feb. ('21)	-
Mar. ('21)	-
Apr. ('21)	-
May ('21)	-
Jun. ('21)	-
Jul. ('21)	-
Aug. ('21)	-
Sept. ('21)	-
Oct. ('21)	16.20
Nov. ('21)	42.72
Dec. ('21)	9.73
Total:	**68.65**

II. Source of Credits

The City of Mineral Point's WQT Plan (WQT-2020-0011) was approved on 6-24-2020. The WQT Plan approved 754 lbs./yr. Since approval of the original WQT Plan and subsequent WPDES Permit modification to include 754 WQT Credits, several property owners no longer wanted to participate in the WQT Plan. Therefore, the City approved to construct Reaches 1, 8, and 9 and completed construction in Fall 2021.The City registered 406.15 TP Credits on 11-2-2021. The 406 Credits will be adequate for future compliance with TP limits. The City is currently using TP Credits to comply with the WWTF's Effluent TP Limit.

III. Annual Inspection

Construction was completed in Fall of 2021. The Project was installed per the Plans and Specifications. Credits were registered accordingly. The owner, property owner, and contractor will perform a Project walk through this Spring following establishment of vegetation. Annual inspections will continue to be performed in the Spring of each year to ensure the trading practices remain in place and satisfy the WQT Plan. The City of Mineral

Point has operated and will continue to operate in accordance with the terms and conditions of its WPDES Permit and WQT Plan.

If you have any questions, please feel free to contact me at (608) 348-5355. Thank you.

Sincerely,
DELTA 3 Engineering, Inc.

Jordan Fure, E.I.T.
Project Engineer

JDF: jf

Cc: Ryan Kowalski – Water & Sewer Superintendent

DELTA 3
Platteville, Wisconsin
Dubuque, Iowa
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January 31, 2023

Ms. Caitlin O'Connell
Wisconsin Department of Natural Resources
1500 N. Johns Street
Dodgeville, WI 53533

Re: Annual Water Quality Trading Report #2
City of Mineral Point, WI

Dear Caitlin:

As requested and required by Schedule 4.1 Annual Water Quality Trading (WQT) Report of the City's Wisconsin Pollutant Discharge Elimination System (WPDES) Permit #WI-0024791-10-1, below, please find the Annual WQT Report for the City of Mineral Point's Wastewater Treatment Facility. Please review for approval.

I. WQT Credit Use

Table 1 provides a summary of Total Phosphorus (TP) Credits used each month in 2022.

Table 1 – 2022 Monthly Credits Used

Month	Credits Used
Jan. ('22)	6.7
Feb. ('22)	15.6
Mar. ('22)	57.4
Apr. ('22)	52.1
May ('22)	12.1
Jun. ('22)	19.3
Jul. ('22)	21.3
Aug. ('22)	26.5
Sept. ('22)	20.0
Oct. ('22)	29.5
Nov. ('22)	22.2
Dec. ('22)	30.0
Total:	**312.7**

II. Source of Credits

The City of Mineral Point's WQT Plan (WQT-2020-0011-1) was approved on 6-6-2022. The WQT Plan approved 406.2 lbs./yr. of TP Credits which were included in the latest WPDES Permit. Construction of the WQT Project was completed in Fall 2021 and credits were registered on 11-2-2021. The City is currently using TP Credits to comply with the WWTF's Effluent TP Limit.

III. Annual Inspection

Annual inspection was completed in April 2022 with no major deficiencies identified. Vegetation has been well established since completion of construction. Monthly inspections also identified no deficiencies. Annual inspections will continue to be performed in the Spring of each year to ensure the trading practices remain in place and satisfy the WQT Plan. The City of Mineral Point has operated and will continue to operate in accordance with the terms and conditions of its WPDES Permit and WQT Plan.

If you have any questions, please feel free to contact me at (608) 348-5355. Thank you.

Sincerely,
DELTA 3 Engineering, Inc.

Jordan Fure, P.E.
Project Engineer

JDF: jf

Cc: Ryan Kowalski – Public Works Superintendent

EVERY ANGLE COVERED

Streambank Inspection Form

Date: 1/21/22

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	1/21/22	Frozen Ground
8	161+00	185+50	Good	-	-	1/21/22	Frozen Ground
9	185+50	219+86	Good	-	-	1/21/22	Frozen Ground

Streambank Inspection Form

Date: 2/18/22

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	2/18/22	Frozen Ground
8	161+00	185+50	Good	-	-	2/18/22	Frozen Ground
9	185+50	219+86	Good	-	-	2/18/22	Frozen Ground

Streambank Inspection Form

Date: 3/18/22

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Fair	-	-	3/18/22	Snow melt/Spring thaw has caused some rill erosion; to be fixed by Contractor; Seeding needs to get established.
8	161+00	185+50	Fair	-	-	3/18/22	
9	185+50	219+86	Fair	-	-	3/18/22	

Streambank Inspection Form

Date: 4/22/22

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Fair	-	-	4/22/22	Seeding needs to establish; Contractor to fix areas of rill erosion from Spring thaw and reseed as needed.
8	161+00	185+50	Fair	-	-	4/22/22	
9	185+50	219+86	Fair	-	-	4/22/22	

Streambank Inspection Form

Date: 5/20/22

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	5/20/22	Seeding is established; Contractor reseeded bare spots
8	161+00	185+50	Good	-	-	5/20/22	
9	185+50	219+86	Good	-	-	5/20/22	

Streambank Inspection Form

Date: 6/17/22

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Excellent	-	-	6/17/22	Seeding is established and looks great!
8	161+00	185+50	Excellent	-	-	6/17/22	
9	185+50	219+86	Excellent	-	-	6/17/22	

Streambank Inspection Form

Date: 7/22/22

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Excellent	-	-	7/22/22	Seeding is established and looks great! Flowers from seed mix are blooming. Contract closed out with Contractor. Contracotr has 1-year warranty period.
8	161+00	185+50	Excellent	-	-	7/22/22	
9	185+50	219+86	Excellent	-	-	7/22/22	

Streambank Inspection Form

Date: 8/19/22

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	8/19/22	-
8	161+00	185+50	Good	-	-	8/19/22	-
9	185+50	219+86	Good	-	-	8/19/22	-

Streambank Inspection Form

Date: 9/23/22

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	9/23/22	-
8	161+00	185+50	Good	-	-	9/23/22	-
9	185+50	219+86	Good	-	-	9/23/22	-

Streambank Inspection Form

Date: 10/21/22

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	10/21/22	-
8	161+00	185+50	Good	-	-	10/21/22	-
9	185+50	219+86	Good	-	-	10/21/22	-

Streambank Inspection Form

Date: 11/18/22

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	11/18/22	-
8	161+00	185+50	Good	-	-	11/18/22	-
9	185+50	219+86	Good	-	-	11/18/22	-

Streambank Inspection Form

Date: 12/23/22

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	12/23/22	-
8	161+00	185+50	Good	-	-	12/23/22	-
9	185+50	219+86	Good	-	-	12/23/22	-

DELTA 3
Platteville, Wisconsin
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March 14, 2024

Ms. Kenzie Ostien
Wisconsin Department of Natural Resources
3911 Fish Hatchery Rd.
Fitchburg, WI 53711-5367

Re: Annual Water Quality Trading Report #3R1
City of Mineral Point, WI

Dear Kenzie:

As requested and required by Schedule 4.1 Annual Water Quality Trading (WQT) Report of the City's Wisconsin Pollutant Discharge Elimination System (WPDES) Permit #WI-0024791-10-2, below, please find the Annual WQT Report for the City of Mineral Point's Wastewater Treatment Facility. Please review for approval.

I. WQT Credit Use

Table 1 provides a summary of Total Phosphorus (TP) Credits used each month in 2023.

Table 1 – 2023 Monthly Credits Used

Month	Credits Used
Jan. ('23)	33.4
Feb. ('23)	47.2
Mar. ('23)	75.8
Apr. ('23)	67.7
May ('23)	18.3
Jun. ('23)	18.7
Jul. ('23)	35.4
Aug. ('23)	20.4
Sept. ('23)	30.4
Oct. ('23)	37.3
Nov. ('23)	21.6
Dec. ('23)	0
Total:	**406.2**

II. Source of Credits

The City of Mineral Point's WQT Plan (WQT-2020-0011-1) was approved on 6-6-2022. TP Credits were generated from a streambank stabilization project as described in the City's WQT Plan. The City is currently using TP Credits to comply with the WWTF's Effluent TP Limit. The WQT Plan approved **406.2 lbs./yr**. of TP Credits which were included in the latest WPDES Permit. Construction of the WQT Project was completed in Fall 2021 and credits were registered on 11-2-2021. The City exceeded the available credits by 86.2 lbs for 2023. The WWTF experienced issues with their Alum feed pump in April and May. The pump was ultimately replaced mid-May 2023 and phosphorus treatment improved as represented in the May through September data in Table 1. Furthermore, in October, the WWTF rehabilitated the internal equipment of their Final Clarifier. From October 16th to December 6th, the Final Clarifier was operated as a passive tank and unable to settle and remove TP from the effluent. This rehabilitation has also caused other exceedances of WPDES permit limits such as for total suspended solids (TSS). Currently, the Final Clarifier is back in operation and the

WWTF has resumed normal flow patterns throughout the plant and effluent treatment is back on track.

III. Annual Inspection

Annual inspection was completed in April 2023 with no major deficiencies identified. Vegetation has been well established since completion of construction. Monthly inspections also identified no deficiencies. Please see Appendix A for the monthly Streambank Inspection Forms for 2023. Photos were not taken during 2023 inspections. Photos will be provided going forward starting with the 2024 inspections. Annual inspections will continue to be performed in the Spring of each year to ensure the trading practices remain in place and satisfy the WQT Plan. The City of Mineral Point has operated and will continue to operate in accordance with the terms and conditions of its WPDES Permit and WQT Plan.

If you have any questions, please feel free to contact me at (608) 348-5355. Thank you.

Sincerely,
DELTA 3 Engineering, Inc.

Logan Hoppman

Logan Hoppman, E.I.T.
Civil/Environmental Engineer

LMH:lh

Cc: Jordan Fure – Delta 3 Engineering, Inc.
Nathan Fosbinder – Public Works Superintendent

Streambank Inspection Form

Date: 1/20/23

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	1/20/23	-
8	161+00	185+50	Good	-	-	1/20/23	-
9	185+50	219+86	Good	-	-	1/20/23	-

Streambank Inspection Form

Date: 2/17/23

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	2/17/23	-
8	161+00	185+50	Good	-	-	2/17/23	-
9	185+50	219+86	Good	-	-	2/17/23	-

Streambank Inspection Form

Date: 3/24/23

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	3/24/23	-
8	161+00	185+50	Good	-	-	3/24/23	-
9	185+50	219+86	Good	-	-	3/24/23	-

Streambank Inspection Form

Date: 4/21/23

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	4/21/23	-
8	161+00	185+50	Good	-	-	4/21/23	-
9	185+50	219+86	Good	-	-	4/21/23	-

Streambank Inspection Form

Date: 5/19/23

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	5/19/23	-
8	161+00	185+50	Good	-	-	5/19/23	-
9	185+50	219+86	Good	-	-	5/19/23	-

Streambank Inspection Form

Date: 6/23/23

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	6/23/23	-
8	161+00	185+50	Good	-	-	6/23/23	-
9	185+50	219+86	Good	-	-	6/23/23	-

Streambank Inspection Form

Date: 7/21/23

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	7/21/23	-
8	161+00	185+50	Good	-	-	7/21/23	-
9	185+50	219+86	Good	-	-	7/21/23	-

Streambank Inspection Form

Date: 8/18/23

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	8/18/23	-
8	161+00	185+50	Good	-	-	8/18/23	-
9	185+50	219+86	Good	-	-	8/18/23	-

Streambank Inspection Form

Date: 9/22/23

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	9/22/23	-
8	161+00	185+50	Good	-	-	9/22/23	-
9	185+50	219+86	Good	-	-	9/22/23	-

Streambank Inspection Form

Date: 10/20/23

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	10/20/23	-
8	161+00	185+50	Good	-	-	10/20/23	-
9	185+50	219+86	Good	-	-	10/20/23	-

Streambank Inspection Form

Date: 11/17/23

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	11/17/23	-
8	161+00	185+50	Good	-	-	11/17/23	-
9	185+50	219+86	Good	-	-	11/17/23	-

Streambank Inspection Form

Date: 12/22/23

Inspector: Jordan Fure

Reason for Inspection: Monthly Inspection

Stream Reach	Station Start	Station Stop	Condition	Required Maintenance	Maintenance Estimate (Time or Cost)	Date Completed	Comments
1	100+90	114+50	Good	-	-	12/22/23	-
8	161+00	185+50	Good	-	-	12/22/23	-
9	185+50	219+86	Good	-	-	12/22/23	-

Attachment #12

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
South Central Region Headquarters
3911 Fish Hatchery Rd
Fitchburg, WI 53711-5397

Tony Evers, Governor

Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

July 9, 2024
Nathan Fosbinder
Operator in Charge
City of Mineral Point
137 High Street, Suite 1,
Mineral Point, WI 53565

SUBJECT: **Remediation Plan DNR Response**
WPDES Permit WI-0024791-10-2

Dear Mr. Fosbinder,

Thank you for submitting a remediation plan for the management and protection of the streambanks in reaches 8 and 9 per the Notice of Noncompliance (NON) dated May 10, 2024. The remediation plan was received Thursday, June 20, 2024, and has been reviewed. The items listed below must be addressed before the remediation plan can be approved. Please submit a revised remediation plan by **Friday, July 19, 2024.**

- Site 1 must be repaired to technical standard specifications for crossings if the site is to remain as a crossing. See NRCS technical standard 578, available for download at: https://www.nrcs.usda.gov/resources/guides-and-instructions/stream-crossing-no-578-conservation-practice-standard. The crossing must be armored with a suitable material to withstand use and prevent ongoing erosion.

- Streambank erosion was observed at Site 5 and will likely need structural treatment such as riprap for restoration due to the streambank's higher grade.

- To ensure future compliance and protection of the streambanks, a commitment to permanent management of reaches 8 and 9 must be made. If the landowner is unwilling to exclude livestock from the riparian corridor, the annual task of fencing off and revegetating problem areas identified during inspections must be completed. This protocol will need to be incorporated into the City of Mineral Point's updated water quality trading (WQT) plan that is required as part of the 2024 permit reissuance application.

Reminder to provide a written report documenting corrective actions taken in reaches 8 and 9 with photos showing corrective actions applied to each site by **Thursday, August 8, 2024.**

Per the May 10, 2024, NON, the remediation plan shall be included in the updated WQT plan, and future WQT annual reports filed by the City of Mineral Point shall convey inspection results (photos, measurements, and field observations) for the areas of noncompliance identified in the NON and the WQT inspection report dated April 19, 2024.

Thank you for your attention to this matter. If you have any questions, please contact me at (608) 516-6487 or kenzie.ostien@wisconsin.gov. I appreciate your cooperation in protecting our natural resources.

Sincerely,

Kenzie Ostien

Kenzie Ostien
Wastewater Engineer

CC (email): Matthew Honer, City of Mineral Point City Administrator
Weston Matthews, SCR Waterways Regulation Zoning Specialist
Jacob Dickmann, SCR Nonpoint Source Coordinator
Nate Willis, SCR Wastewater Supervisor
Matt Claucherty, Statewide Phosphorus Implementation Program Coordinator
Betsyjo Howe, SCR Trading Coordinator

Kenzie,

We walked the areas in reaches 8 and 9. We took photos of the current status of the stream banks. After reviewing the NON and discussions with the Goodweiler's are plan of action is as follows:

In conversations with the property owners it was discussed that Site 1 is a defined crossing that was installed as part of the project. This crossing was one of requests of the property owners and is where they cross the creek with equipment. This will remain a point of crossing and likely be a point where livestock will cross as well.

We are planning to re-seed and renovate the areas that are noted in the NON (sites 1-5).

Delta 3 noted couple of additional areas during their inpection (one near site 1 and one between sites 3 and 4). We will re-seed these areas as well.

We will work the property owners to complete this work by August 8th.

We will section off those areas from livestock traffic until vegetation is established.

We will continue to monitor those locations as well as the rest of reach 8/9.

In doing these steps we are hopeful the stream banks will be re-established to an acceptable level.

We will continue to work with the DNR and the property owners to resolve this to the best of our ability.

We would also like to note that the DNR was fully aware that livestock would be present in this area after the project and raised no comment or concern regarding this.