WATER QUALITY TRADING PLAN
FOR TOTAL PHOSPHORUS
CITY OF WATERTOWN WWTP

JUNE 2022

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EXECUTIVE SUMMARY

The City of Watertown (City) owns and operates a wastewater treatment plant (WWTP) with phosphorus limits. These phosphorus limits are based on the Rock River Total Maximum Daily Load (TMDL) allocations, which resulted in more restrictive limits than in previous permits. The City submitted a Final Compliance Alternatives Plan (CAP) to the Wisconsin Department of Natural Resources (WDNR) in September 2018. The Final CAP documented the City’s continued efforts to reduce phosphorus loadings in its effluent, evaluated compliance alternatives, and identified the actions that will be implemented to meet the TMDL phosphorus limits.

Water Quality Trading was selected as one alternative to comply with the new TMDL limits. This WQT plan (Plan) details the methods the City will use to secure at least the required 66 lbs/year in annual nonpoint source credits.

The City will implement a combination of best management practices (BMPs), including wetland restoration and perennial vegetation, on fields it owns to generate nonpoint source credits. SnapPlus modeling was used to estimate that the BMPs will result in approximately 102 lbs/year in reduced phosphorus loadings to the watershed. After applying the trade ratio of 1.2:1, this results in approximately 85 lbs/year in credits that the City can apply throughout the year to demonstrate compliance.

A Water Quality Trade agreement between the City and the WDNR is proposed in this Plan, and the City is applying to register this nonpoint-to-point trade. The City plans to contract with a third-party to implement the wetland restoration and perennial vegetation BMPs. The City plans to maintain these BMPs through at least Fall 2028, with an intention to maintain these BMPs, generate WQT credits, and apply these credits towards permit compliance for as long as possible thereafter.
SECTION 1
INTRODUCTION

The City of Watertown (City) owns and operates a wastewater treatment plant (WWTP) with phosphorus limits. These phosphorus limits are based on the Rock River Total Maximum Daily Load (TMDL) allocations, which resulted in more restrictive limits than in previous permits. The City submitted a Final Compliance Alternatives Plan (CAP) to the Wisconsin Department of Natural Resources (WDNR) in September 2018. The Final CAP documented the City’s continued efforts to reduce phosphorus loadings in its effluent, evaluated compliance alternatives, and identified the actions that will be implemented to meet the TMDL phosphorus limits.

Operational improvements and minor facility modifications alone would not enable the City to meet the new effluent phosphorus limits. Based on the Final CAP, it was recommended that the City achieve compliance using a combination of alternatives, including chemical phosphorus removal and Water Quality Trading (WQT).

Consequently, the WDNR requires a WQT plan (Plan) to detail the methods the City will use to comply with its phosphorus discharge limits. As presented in Table 1-1, a total of 66 lbs/year in annual nonpoint source credits were estimated to be required for compliance.

The City owns several fields adjacent to the WWTP site, including BE06 and BE08 west of the railroad. The City will implement a combination of best management practices (BMPs), including wetland restoration and perennial vegetation, to generate nonpoint source credits on an annual basis. SnapPlus modeling was used to estimate the number of credits generated. These annual credits can then be applied as needed throughout the year to demonstrate compliance.
### Table 1-1
Estimated Annual Phosphorus Credits Required

<table>
<thead>
<tr>
<th>Month</th>
<th>Total Phosphorus Effluent Limit (lbs/day)</th>
<th>Average Flow(^1) (mgd)</th>
<th>Estimated Effluent T-P Loading(^2) (lbs/day)</th>
<th>Required Offset(^2) (lbs/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>13.7</td>
<td>3.21</td>
<td>10.7</td>
<td>-</td>
</tr>
<tr>
<td>February</td>
<td>19.5</td>
<td>3.23</td>
<td>10.8</td>
<td>-</td>
</tr>
<tr>
<td>March</td>
<td>18.4</td>
<td>4.41</td>
<td>14.7</td>
<td>-</td>
</tr>
<tr>
<td>April</td>
<td>18.3</td>
<td>4.00</td>
<td>13.3</td>
<td>-</td>
</tr>
<tr>
<td>May</td>
<td>16.5</td>
<td>4.12</td>
<td>13.8</td>
<td>-</td>
</tr>
<tr>
<td>June</td>
<td>17.6</td>
<td>3.42</td>
<td>11.4</td>
<td>-</td>
</tr>
<tr>
<td>July</td>
<td>17.7</td>
<td>3.25</td>
<td>10.8</td>
<td>-</td>
</tr>
<tr>
<td>August</td>
<td>16.2</td>
<td>4.01</td>
<td>13.4</td>
<td>-</td>
</tr>
<tr>
<td>September</td>
<td>14.8</td>
<td>4.31</td>
<td>14.4</td>
<td>-</td>
</tr>
<tr>
<td>October</td>
<td>12.3</td>
<td>4.32</td>
<td>14.4</td>
<td>66.1</td>
</tr>
<tr>
<td>November</td>
<td>12.3</td>
<td>3.60</td>
<td>12.0</td>
<td>-</td>
</tr>
<tr>
<td>December</td>
<td>11.9</td>
<td>3.18</td>
<td>10.6</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>66</td>
</tr>
</tbody>
</table>

1. Based on August 2018 – July 2021 flow data.
2. Based on an average day effluent phosphorus concentration of 0.4 mg/l.
SECTION 2
PROJECT BACKGROUND

2.0 PROJECT INFORMATION

2.1 Facility and Field Locations

The City of Watertown owns and operates a 5.2 mgd wastewater treatment plant (WWTP) located at 800 Hoffman Rd, Watertown, WI, 53094, as shown in Appendix C. The WWTP discharges to Rock River (Middle Rock River Watershed, UR01 – Upper Rock River Basin) in Jefferson County. The facility’s outfall is regulated by the Wisconsin Department of Natural Resources’ (WDNR) Wisconsin Permit Discharge Elimination System (WPDES) Permit No. WI-0028541-09-0. In Phase 1, the City will generate credits on two fields, as shown in Appendix B: BE06 and BE08 which are located across the railroad to the west of the WWTP.

2.2 Existing Land Use

BE06 and BE08 are currently used to grow corn and soybeans on 20.5 and 40.8 acres, respectively. These fields have been farmed in a corn/soy rotation since at least 2014, according to the SnapPlus database. See Appendix D for records back to 2017, and Appendix E (WQ1: P Trade Report) for records back to 2016. The City also owns adjacent fields, including BE21, BE14, and BE07. No additional acreage will be farmed as a result of this trade, and that pollutant loading from other City-owned fields will not increase as a result of this trade.

Table 2-1

<table>
<thead>
<tr>
<th>Field</th>
<th>Acres</th>
<th>Existing Land Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE06</td>
<td>20.5</td>
<td>Corn and Soybeans</td>
</tr>
<tr>
<td>BE08</td>
<td>40.8</td>
<td>Corn and Soybeans</td>
</tr>
<tr>
<td>Total</td>
<td>61.3</td>
<td>-</td>
</tr>
</tbody>
</table>
2.3 Soil Sampling

The Snap Plus modeling was completed using agronomist records from the Snap Plus database for each farm. Soil sampling reports can be found in Appendix E. The Planner has certified the following with the 590 Checklist, which accompanies the Nutrient Management Plan:

1. The plan includes the following nutrient application requirements to protect surface and groundwater:
   a. Field nutrient levels were determined from soil samples analyzed by a DATCP certified laboratory.
   b. For fields or pastures with mechanical nutrient applications, field nutrient levels were determined from soil samples collected within the last 4 years according to 590 Standard (590) and UWEX Pub. A2809, Nutrient Application Guidelines for Field, Vegetable, and Fruit Crops in Wisconsin (A2809) typically collecting 1 sample per 5 acres of 10 cores.

Furthermore, the 590 Standard specifies the following about soil sampling:

1. Soils shall be tested a minimum of once every four years by a DATCP-certified laboratory for pH, phosphorus (P), potassium (K), and organic matter. A laboratory list is provided in Part VI of the Technical Note WI-1. Soil sampling shall be consistent with UWEX Pub. A2809, “Nutrient application guidelines for field, vegetable, and fruit crops in Wisconsin,” or A2100, “Sampling Soils for Testing.” For perennial fruit crops, use of soil test recommendations from UWEX Pub. A2809 is only required as the basis for fertilizer applications prior to establishment of new plantings.

2.4 Trade Ratio

A trade ratio is utilized to determine the number of credits received from the water quality trading. The following values were assumed to calculate the City’s trade ratio:

Delivery: 0. The WWTP and the credit generating acreage are both located in the same hydraulic unit code (HUC) 12 area.

Downstream: 0. The point of standards application for the Watertown WWTP is the bottom of the reach that generated the credit user’s wasteload allocation. The lower boundary of Reach 29 is located downstream of both the WWTP and the credit generator, as shown in Appendix C.

Equivalency: 0. Equivalency is not required for phosphorus trading.

Uncertainty: 1. The management practices under consideration are wetland restoration and perennial vegetation.

The calculated trade ratio is 1:1; however, a minimum trade ratio of 1.2:1 is required for non-point sources to point sources.
2.5 SnapPlus Modeling

SnapPlus modelling was conducted to determine the phosphorus losses from two scenarios: the baseline, without any new BMP, and the proposed, including the proposed BMPs. Table 2-1 compares the modelling results of the two scenarios. Additional details are in Appendix E.

Table 2-2
Estimated Annual Phosphorus Reductions, Phase 1

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Field</th>
<th>Acres</th>
<th>Phosphorus Losses (PTP) lbs P / year</th>
<th>TP Reductions (lbs P/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>2022</td>
<td>2023</td>
</tr>
<tr>
<td>Baseline: Corn/Soybeans</td>
<td>BE06</td>
<td>20.5</td>
<td>130</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>BE08</td>
<td>40.8</td>
<td>148</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>61.3</td>
<td>278</td>
<td>167</td>
</tr>
<tr>
<td>Proposed: Wetland Restoration &amp; Perennial Vegetation, Corn/Soybeans in part of BE08</td>
<td>BE06 – Perennial Veg.</td>
<td>12.7</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>BE06 - Wetland Rest.</td>
<td>7.8</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>BE08 – Perennial Veg.</td>
<td>15.8</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>BE08 – Corn/Soy</td>
<td>25.0</td>
<td>92</td>
<td>74</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>61.3</td>
<td>114</td>
<td>88</td>
</tr>
</tbody>
</table>

2.6 Credit Generation

Based on the results presented in Tables 2-1 and 2-2, portions of field BE06 will be restored into wetlands. The remainder of field BE06 will be converted into perennial vegetation, along with approximately 15.8 acres of BE08. Implementing these BMPs will prevent approximately 102 pounds of total phosphorus from entering the watershed each year as compared to the baseline condition.

Fields BE06 and BE08 are within Reach 29 of the Rock River TMDL, as shown in Appendix C. According to Appendix H of the Rock River TMDL, non-point sources contributing to Reach 29 are required to reduce TP loads by 36% from the baseline. The assumed baseline loading for agricultural fields is equivalent to a Phosphorus Index (PI) of 6 lbs P/acre-year. Given the required reduction of 36%, the credit threshold for these fields is 3.84 lbs P/acre-year.
In both the baseline and proposed conditions, all of the fields had rotational average Phosphorus Index (PI) values below 3.84 lbs P/acre-year. These rotational average PI values ranged from a maximum of 3.31 lbs P/acre-year (Baseline BE06) to a minimum of 0.17 lbs P/acre-year (Proposed BE08 – Perennial Vegetation). Therefore, all credits generated will be long-term credits.

Table 2-3 presents the total number of credits generated by each field, after applying the trade ratio of 1.2:1. Consequently, the City will be able to apply 85 lbs/year in phosphorus credits to its permit to demonstrate compliance, which is almost 30% more than the anticipated requirement of 66 lbs/year. As nonpoint-to-point source WQT credits, the City will be able to apply the credits to any month within the year, although they will not rollover to subsequent years.

<table>
<thead>
<tr>
<th>Field</th>
<th>Acres</th>
<th>TP Reductions (lbs P/year)</th>
<th>TP Credits (lbs P/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE06</td>
<td>20.5</td>
<td>58</td>
<td>48</td>
</tr>
<tr>
<td>BE08</td>
<td>40.8</td>
<td>44</td>
<td>37</td>
</tr>
<tr>
<td>Total</td>
<td>61.3</td>
<td><strong>102</strong></td>
<td><strong>85</strong></td>
</tr>
</tbody>
</table>
SECTION 3
MANAGEMENT PRACTICE

3.0 MANAGEMENT PRACTICE BACKGROUND INFORMATION

3.1 Management Practice Description & Plan

The City plans to contract with a third-party to implement the wetland restoration and perennial vegetation BMPs. The City plans to maintain these BMPs through at least Fall 2028, with an intention to maintain these BMPs, generate WQT credits, and apply these credits towards permit compliance for as long as possible thereafter.

Establishment procedures for wetland restoration and perennial vegetation are included in Appendix F. Field Inspection and Operations and Maintenance Plans for the upkeep of restored wetlands and perennial vegetation are also included in Appendix F, based on guidance from the Natural Resources Conservation Service (NRCS), an agency of the United States Department of Agriculture (USDA).

All planting practices, tracking procedures, inspection requirements, and operation and maintenance of the planting practice will be completed in accordance with standards provided by the USDA.
SECTION 4
TIMELINE

4.0 SCHEDULE FOR INSTALLATION OF PRACTICE

4.1 Timeline for Actions

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 2022</td>
<td>Complete Construction – Wetland</td>
</tr>
<tr>
<td>August 2022</td>
<td>Complete Construction – Grassland Perennial Vegetation</td>
</tr>
<tr>
<td>September 2022</td>
<td>Post-Construction Inspection</td>
</tr>
<tr>
<td>January 2023</td>
<td>Credits become available</td>
</tr>
</tbody>
</table>
SECTION 5
INSPECTIONS AND REPORTING

5.0 METHODS FOR INSPECTION, REPORTING, AND OPERATIONS AND MAINTENANCE

5.1 Inspections, Certification, and Reporting

Wetland restoration requires that the City of Watertown or the City’s agent inspect the restored fields generating the phosphorus reduction credits to confirm the management practice is in acceptable conditions as required below:

- Inspections shall take after significant storm event and at least annually to identify repair and maintenance needs.
- The downstream toe of the embankment shall be inspected annually to ensure that no wet areas or seeps are present.
- Fields shall be inspected at least once a month for burrowing animals.

The City or the City’s agent shall certify that the management practices installed are operated and maintained in a manner consistent with that specified in this WQT Plan or provide a statement noting noncompliance. A certification of compliance may be made by including the following statement as a comment on the monthly discharge monitoring report (DMR):

“I certify that to the best of my knowledge the management practice identified in the approved WQT plan as the source of phosphorus reduction credits is installed, established and properly maintained.”

Photos taken during inspection can be used to verify compliance or noncompliance annual reports. Usage and reporting of phosphorus credits will be submitted on the DMRs.

5.2 Notification of Problems with Management Practice

Fields will be inspected one month after installation to verify compliance with relevant NRCS standards. After that, the fields will be inspected per the Operation and Maintenance Plan.
The WDNR will be provided written notification if the City becomes aware that phosphorus reduction credits used or intended for use by the City are not being implemented or generated as set forth in this WQT Plan. The City shall work to rectify such problems in accordance with the Operation and Maintenance Plan and the Water Quality Trading Agreement.

The WDNR has consistently provided assurance that if a permittee followed their WQT Plan but did not generate the estimated credits, then the WDNR would not issue a Notice of Violation (NOV), but would require the permittee to update their Plan to secure additional reductions. As part of this Plan, the City and the WDNR shall commit to the following contingency procedure in case insufficient credits would be generated:

- The City shall notify the WDNR within 7 days of becoming aware of an anticipated change in credits forecast by the Water Quality Trading Plan.
- If this notification would occur between January 1 and June 30 (e.g., 2023), then the City would commit to securing sufficient credits to be generated by the start of the following calendar year (e.g., 2024).
- If this notification would occur between July 1 and September 30 (e.g., 2023), then the City would attempt to secure sufficient credits to be generated by the start of the following calendar year (e.g., 2024). The City would not commit to securing sufficient credits to be generated by the start of the following calendar year (e.g., 2024).
- If this notification would occur between October 1 and December 31 (e.g., 2023), then the City would not be able to secure sufficient credits prior to the following calendar year (e.g., 2024), but would instead commit to secure enough credits within the following calendar year (e.g., 2024) to be applied more than a year later (e.g., 2025). If the City concludes at any time between July 1 and December 31 that it will not be able to secure sufficient credits prior to the start of the following calendar year (e.g., 2024), then the City would commit to provide a brief written summary to the WDNR prior to the year’s end (e.g., December 31, 2023) of the City’s unsuccessful efforts to secure sufficient credits.
- Consequently, the WDNR has indicated that it will follow a stepped enforcement process to resolve any potential issues, and will consider all pertinent information when determining which regulatory mechanism will be required. Although the WDNR reserves the right to issue a notice of violation (NOV) or notice of noncompliance (NON), the City does not expect that the WDNR would issue a NOV nor a NON to the City regarding phosphorus compliance as long as:
  - The City does not exceed its proposed annual average effluent plant effluent target (0.4 mg/L TP)
- The City executes agreements to fund best management practices (BMPs) that will secure credits totaling 66 lb/year, and
- The City follows the contingency procedure above if insufficient credits will be generated.

### 5.3 Annual Water Quality Trading Report

The City shall report to WDNR, by January 31 of each year, the following:

- The number of phosphorus reduction credits (lbs/month) used each month of the previous year to demonstrate compliance;
- Photographs from inspections, if available, of the management practice that generated the phosphorus reduction credits used during the previous years; and
- Identification of noncompliance or failure to implement any terms or conditions WPDES permit WI-0028541-09-0 with respect to WQT that have not been reported in discharge monitoring reports.

### 5.4 WDNR Right to Inspect the Fields

The WDNR has the right to inspect the permanent management practice at any time upon given reasonable notice to the WWTP to ensure the management practice is in compliance with NRCS Technical Standards 327 and 657 and the terms of this plan.
SECTION 6
WATER QUALITY TRADING CHECKLIST

6.0 WATER QUALITY TRADING CHECKLIST

The Water Quality Trading Checklist (Form 3400-208) can be found in Appendix G.

6.1 Water Quality Trading Management Practice Registration

Registration Form 3400-207 for Water Quality Trading Management Practice Registration can be found in Appendix G.

6.2 Water Quality Trade Agreement

The City will generate the nonpoint source credits without the need for a trading partner. Therefore, the trade agreement will be made between the City and WDNR. The trade agreement is required to be in place prior to using trading to demonstrate compliance with the new phosphorus limits. A draft agreement is included in Appendix G, and a final agreement will be executed prior to approval of the Plan.
SECTION 7
WATER QUALITY TRADING PLAN CERTIFICATION

7.0 WATER QUALITY TRADING PLAN CERTIFICATION

The undersigned hereby certified that this WQT Plan is, to the best of their knowledge, accurate and correct.

Submitted for Approval by: [Signature] (signed)

[Printed Name] (printed)
Authorized Permit Representative
APPENDIX
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**

<table>
<thead>
<tr>
<th>Permittee Name</th>
<th>Permit Number</th>
<th>Facility Site Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Watertown Wastewater Utility</td>
<td>WI- 0028541-08-0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Facility Address</th>
<th>City</th>
<th>State</th>
<th>ZIP Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>800 Hoffmann Drive</td>
<td>Watertown</td>
<td>WI</td>
<td>53094</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Contact Name (if applicable)</th>
<th>Address</th>
<th>City</th>
<th>State</th>
<th>ZIP Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peter Hartz</td>
<td>800 Hoffmann Drive / PO Box 447</td>
<td>Watertown</td>
<td>WI</td>
<td>53094</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Name</th>
<th>City of Watertown Wastewater Treatment Facility WQBELs for Total Phosphorus</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Receiving Water Name</th>
<th>Parameter(s) being traded</th>
<th>HUC 12(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rock River</td>
<td>Total Phosphorus</td>
<td>070900010608</td>
</tr>
</tbody>
</table>

**Is the permittee in a point or nonpoint source dominated watershed?**
- [ ] Point source dominated
- [x] Nonpoint source dominated

**Credit Generator Information**

Credit generator type (select all that apply):
- [ ] Permitted Discharge (non-MS4/CAFO)
- [ ] Urban nonpoint source discharge
- [x] 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)**

<table>
<thead>
<tr>
<th>Discharge Type</th>
<th>Permit Number</th>
<th>Name</th>
<th>Contact Address</th>
<th>Is the point source credit generator currently in compliance with their permit requirements?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td></td>
<td></td>
<td></td>
<td>[ ] Yes</td>
</tr>
<tr>
<td>[ ] Traditional</td>
<td>[ ] MS4</td>
<td></td>
<td></td>
<td>[ ] No</td>
</tr>
<tr>
<td>[ ] Traditional</td>
<td>[ ] CAFO</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>[ ] Traditional</td>
<td></td>
<td></td>
<td></td>
<td>[ ] Yes</td>
</tr>
<tr>
<td>[ ] Traditional</td>
<td>[ ] MS4</td>
<td></td>
<td></td>
<td>[ ] No</td>
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<td>[ ] Traditional</td>
<td>[ ] CAFO</td>
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<tr>
<td>[ ] Traditional</td>
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<td></td>
<td></td>
<td>[ ] Unsure</td>
</tr>
</tbody>
</table>
Point to Nonpoint Trades (Non-permitted Agricultural, Non-Permitted Urban, etc.)
List the practices that will be used to generate credits:
Replacement of agricultural land use with wetland restoration and re-establishment of perennial vegetation or other natural restorative practices as approved by Jefferson County Land and Water Department or the City of Watertown.

Method for quantifying credits generated:
☐ Monitoring
☒ Modeling, Names: Snap Plus
☐ Other: ____________________________

Projected date credits will be available: 01/01/2023

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: September 22, 2021

Authorized Representative Signature: ____________________________ Date Signed: September 22, 2021

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.
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 3400-205 (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.).

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<thead>
<tr>
<th>Applicant Information</th>
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<tr>
<td>Permittee Name</td>
</tr>
<tr>
<td>City of Watertown</td>
</tr>
<tr>
<td>Facility Address</td>
</tr>
<tr>
<td>800 Hoffman Drive</td>
</tr>
<tr>
<td>Project Contact Name</td>
</tr>
<tr>
<td>(if applicable)</td>
</tr>
<tr>
<td>Project Name</td>
</tr>
<tr>
<td>City of Watertown</td>
</tr>
<tr>
<td>Wastewater Treatment</td>
</tr>
<tr>
<td>Plant WOBELs for Total</td>
</tr>
<tr>
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</tr>
<tr>
<td>Receiving Water Name</td>
</tr>
<tr>
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</tr>
<tr>
<td>Is the permittee in a</td>
</tr>
<tr>
<td>point or nonpoint</td>
</tr>
<tr>
<td>source dominated</td>
</tr>
<tr>
<td>(See PRESTO results -</td>
</tr>
<tr>
<td><a href="http://dnr.wi.gov/topic/surfacewater/presto.html">http://dnr.wi.gov/topic/surfacewater/presto.html</a>)</td>
</tr>
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<td>Credit Generator</td>
</tr>
<tr>
<td>Information</td>
</tr>
<tr>
<td>Credit generator type</td>
</tr>
<tr>
<td>(select all that apply):</td>
</tr>
<tr>
<td>Permitted Discharge</td>
</tr>
<tr>
<td>(non-MS4/CAFO)</td>
</tr>
<tr>
<td>Permitted MS4</td>
</tr>
<tr>
<td>Permitted CAFO</td>
</tr>
<tr>
<td>Urban nonpoint source</td>
</tr>
<tr>
<td>discharge</td>
</tr>
<tr>
<td>Agricultural nonpoint</td>
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<tr>
<td>source discharge</td>
</tr>
<tr>
<td>Other - Specify:</td>
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<tr>
<td>Are any of the credit</td>
</tr>
<tr>
<td>generators in a different</td>
</tr>
<tr>
<td>HUC 12 than the</td>
</tr>
<tr>
<td>applicant?</td>
</tr>
<tr>
<td>☐ No</td>
</tr>
<tr>
<td>☑ Yes; HUC 12</td>
</tr>
<tr>
<td>Are any of the credit</td>
</tr>
<tr>
<td>generators downstream</td>
</tr>
<tr>
<td>of the applicant?</td>
</tr>
<tr>
<td>☐ No</td>
</tr>
<tr>
<td>☑ Yes</td>
</tr>
<tr>
<td>Unsure</td>
</tr>
<tr>
<td>Will a broker/exchange</td>
</tr>
<tr>
<td>be used to facilitate</td>
</tr>
<tr>
<td>trade?</td>
</tr>
<tr>
<td>☐ Yes; Name:</td>
</tr>
<tr>
<td>☑ No</td>
</tr>
<tr>
<td>Unsure</td>
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<th>Point to Point Trades (Traditional Municipal / Industrial Discharge, MS4, CAFO)</th>
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<td>☐ Traditional ☐ MS4 ☐ CAFO</td>
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Point to Nonpoint Trades (Non-permitted Agricultural, Non-Permitted Urban, etc.)
List the practices that will be used to generate credits:
Replacement of agriculture with perennial vegetation.

Method for quantifying credits generated:  □ Monitoring
  □ Modeling, Names: Snap Plus
  □ Other: ______________________________________

Projected date credits will be available:  09/30/2018
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 19 October 2017

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 10-23-2017
APPENDIX B:
CREDIT GENERATOR MAPS
APPENDIX C: WWTP LOCATION
DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: http://dnr.wi.gov/legal/
APPENDIX D:
EXISTING LAND USE INFORMATION
APPENDIX E:
SNAPPLUS MODELING DATA
## NM1: Narrative and Crops Report

**Starting Year:** 2021  
**Reported For:** Watertown WWTP

**Printed:** 2021-04-29  
**Plan Completion/Update Date:** 2021-03-02

**SnapPlus Version:** 20.3 built on 2021-02-18

**Farm Narrative:** None

**NM1: Narrative and Crops Report**

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<tr>
<th>Field Name</th>
<th>Field Acres</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
</tr>
</thead>
</table>
| BE06          | 20.5        | Soybeans 15-20 inch row  
Corn grain Spring Cultivation  
191-210 bu/acre | Corn grain Fall Chisel, no disk  
191-210 bu/acre | Corn grain Fall Chisel, no disk  
191-210 bu/acre | Corn grain Fall Chisel, no disk  
191-210 bu/acre | Corn grain Fall Chisel, no disk  
191-210 bu/acre | Corn grain Fall Chisel, no disk  
191-210 bu/acre | Corn grain Fall Chisel, no disk  
191-210 bu/acre |
| BE08          | 40.8        | Soybeans 15-20 inch row  
Corn grain Spring Cultivation  
231-250 bu/acre | Soybeans 15-20 inch row  
Corn grain Spring Cultivation  
231-250 bu/acre | Corn grain Fall Chisel, no disk  
211-230 bu/acre | Soybeans 15-20 inch row  
Corn grain Spring Cultivation  
231-250 bu/acre | Corn grain Fall Chisel, no disk  
211-230 bu/acre | Soybeans 15-20 inch row  
Corn grain Spring Cultivation  
231-250 bu/acre | Soybeans 15-20 inch row  
Corn grain Spring Cultivation  
231-250 bu/acre |
| BE08 Split    | 25          | Soybeans 15-20 inch row  
Corn grain Spring Cultivation  
231-250 bu/acre | Soybeans 15-20 inch row  
Corn grain Spring Cultivation  
231-250 bu/acre | Corn grain Fall Chisel, no disk  
211-230 bu/acre | Soybeans 15-20 inch row  
Corn grain Spring Cultivation  
231-250 bu/acre | Corn grain Fall Chisel, no disk  
211-230 bu/acre | Soybeans 15-20 inch row  
Corn grain Spring Cultivation  
231-250 bu/acre | Soybeans 15-20 inch row  
Corn grain Spring Cultivation  
231-250 bu/acre |

**Spreader Calibration Methods:** Custom applications, Amount applied / Acres

**Annual Farm Notes:** No Annual Farm Notes

**Prepared for:** Watertown WWTP  
**attn:** City of Watertown

**Farm:** has 6 fields totalling 107 cropped acres.
### Field Name | Field Acres | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027
--- | --- | --- | --- | --- | --- | --- | --- | ---
Phase 1 BE06 Prairie | 12.7 | Soybeans 15-20 inch row | Grasslands, permanent, not harvested None | Grasslands, permanent, not harvested None | Grasslands, permanent, not harvested None | Grasslands, permanent, not harvested None | Grasslands, permanent, not harvested None | Grasslands, permanent, not harvested None
Spring Cultivation 56-65 bu/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre
Phase 1 BE06 Wetland | 7.8 | Soybeans 15-20 inch row | Grasslands, permanent, not harvested None | Grasslands, permanent, not harvested None | Grasslands, permanent, not harvested None | Grasslands, permanent, not harvested None | Grasslands, permanent, not harvested None | Grasslands, permanent, not harvested None
Spring Cultivation 56-65 bu/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre
Phase 1 BE08 Prairie | 15.8 | Soybeans 15-20 inch row | Grasslands, permanent, not harvested None | Grasslands, permanent, not harvested None | Grasslands, permanent, not harvested None | Grasslands, permanent, not harvested None | Grasslands, permanent, not harvested None | Grasslands, permanent, not harvested None
Spring Cultivation 56-65 bu/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre | 0-0 none/acre
### Summary by Crop:
**NOTE:** Yields calculated using the midpoint of the SnapPlus yield goal range for each crop.

| Crops Grouped By Category | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
--- | --- | --- | --- | --- | --- | --- | --- |
Corn grain | Acres | bu | 86 | 17,243 | 21 | 4,211 | 86 | 17,243 | 21 | 4,211 |
Soybeans 15-20 inch row | Acres | bu | 123 | 7,442 | 66 | 3,993 | 66 | 3,993 | 66 | 3,993 |
Grasslands, permanent, not harvested | Acres | none | 36 | 0 | 36 | 0 | 36 | 0 | 36 | 0 |
The P Trade Report estimates the annual pounds of phosphorus (P) in surface runoff from cropland entering surface waters. These P loss calculations are based on a field’s soil test P concentration, crops, tillage, nutrient management practices and estimates of average runoff and sheet and rill erosion for the predominant soil type. Losses from concentrated flow channel or gully erosion with a field are not included in these calculations. Field runoff losses are calculated for each year as PTP (lb P/field/yr). Fields are only included if there are at least 2 years of crops before the selected start year. Before using this report as part of a Water Quality Trade activity, phosphorus losses (PTP) must be converted into ‘P credits’ according to DNR guidance.

For more information go to [http://dnr.wi.gov/](http://dnr.wi.gov/) and type keyword: Water Quality Trading

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

<table>
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<tr>
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# FM6: Soil Test Report

**Reported For:** Watertown WWTP  
**Prepared for:** Watertown WWTP  
**attn:** City of Watertown

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<th>Actual #</th>
<th>pH</th>
<th>OM%</th>
<th>P</th>
<th>K</th>
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APPENDIX F:
BEST MANAGEMENT PRACTICE INFORMATION
NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

CONSERVATION COVER

(Ac.)

CODE 327

DEFINITION
Establishing and maintaining permanent vegetative cover

PURPOSE
This practice is applied to support one or more of the following purposes:

- Reduce sheet, rill, and wind erosion and sedimentation.
- Reduce ground and surface water quality degradation by nutrients and surface water quality degradation by sediment.
- Reduce emissions of particulate matter (PM), PM precursors, and greenhouse gases.
- Enhance wildlife, pollinator and beneficial organism habitat.
- Improve soil health.

CONDITION WHERE PRACTICE APPLIES
This practice applies on all lands needing permanent herbaceous vegetative cover. This practice does not apply to plantings for forage production or to critical area plantings. This practice can be applied on a portion of the field.

CRITERA

General Criteria Applicable to All Purposes
Select species that are adapted to the soil, ecological sites, and climatic conditions that are suitable for the planned purpose and site conditions. Periodic removal of some products such as high value trees, medicinal herbs, nuts, and fruits is permitted provided the conservation purpose is not compromised by the loss of vegetation or harvesting disturbance.

Inoculate legumes at planting time.

Choose seeding rates and planting methods that will be adequate to accomplish the planned purpose.

Planting dates, planting methods and care in handling and planting of the seed or planting stock shall ensure that planted materials have an acceptable rate of survival.

Prepare the site by establishing a consistent seeding depth. Eliminate weeds that would impede the establishment and growth of selected species.

Base the timing and equipment selection on the site and soil conditions.

Apply nutrients as needed to ensure crop establishment and planned growth.

Additional Criteria to Reduce Sheet, Rill, and Wind Erosion and Sedimentation
Determine and maintain the amount of plant biomass and cover needed to reduce wind and water erosion to the planned soil loss objective by using the current approved wind and/or water erosion prediction technology.

Additional Criteria to Reduce Emissions of Particulate Matter (PM), PM Precursors, and greenhouse gases
In perennial crop systems such as orchards, vineyards, berries and nursery stock, establish vegetation to provide full ground coverage in the alleyway during mowing and harvest operations to minimize generation of particulate matter.

Additional Criteria to Enhance Wildlife, Pollinator and Beneficial Organism Habitat
Plant a diverse mixture grasses and forbs

Conservation practice standards are reviewed periodically and updated if needed. To obtain the current version of this standard, contact your Natural Resources Conservation Service State Office or visit the Field Office Technical Guide.

NRCS, NHCP
September 2014
species to promote bio-diversity and meet the needs of the targeted species using approved habitat appraisal guides, evaluation tools, and appraisal worksheets for the respective state.

Locate habitat plantings to reduce pesticide exposures that could harm wildlife, pollinators, and other beneficial organisms.

**Additional Criteria to Improve Soil Health**

To maintain or improve soil organic matter, select plants that will produce high volumes of organic material. The amount of biomass needed will be determined using the current soil conditioning index procedure.

**CONSIDERATIONS**

This practice may be used to promote the conservation of wildlife species in general, including threatened and endangered species.

Certified seed and planting stock that is adapted to the site should be used when it is available.

Mowing may be needed during the establishment period to reduce competition from weeds.

On sites where annual grasses are an expected weed problem it may be necessary to postpone nitrogen fertilizer application until the planted species are well established.

Where applicable this practice may be used to conserve and stabilize archeological and historic sites.

Consider rotating management and maintenance activities (e.g. mow only one-fourth or one-third of the area each year) throughout the managed area to maximize spatial and temporal diversity.

Where wildlife management is an objective, the food and cover value of the planting can be enhanced by using a habitat evaluation procedure to aid in selecting plant species and by providing or managing for other habitat requirements necessary to achieve the objective. Encouraging plant species diversity and establishing plantings that result in multiple structural levels of vegetation within the conservation cover will maximize wildlife use.

Where pollinator and wildlife habitat are primary purposes consider less dense seeding rates as long as soil loss is within tolerable soil loss limits.

To provide habitat for natural enemies of crop pests, select a mix of plant species that provide year round habitat and food (accessible pollen or nectar) for the desired beneficial species. Consider habitat requirements of predatory and parasitic insects, spiders, insectivorous birds and bats, raptors, and terrestrial rodent predators. Consult Land Grant University Integrated Pest Management recommendations for beneficial habitat plantings to manage the target pest species.

Use a diverse mix of cover plant species that come into bloom at different times and provide a sequence of bloom throughout the year (e.g., plant at least three flowering species from each of the three bloom periods (spring, summer, and fall).

Where practical, use native species that are appropriate for the identified resource concern and management objective. Consider trying to re-establish the native plant community for the site.

If a native cover (other than what was planted) establishes, and this cover meets the intended purpose and the landowner’s objectives, the cover should be considered adequate.

During vegetation establishment, natural mulches, such as wood products or hay, can be used to conserve soil moisture, support beneficial soil life, and suppress competing vegetation.

**PLANS AND SPECIFICATIONS**

Prepare plans and specifications for the site to include, but are not limited to:

- recommended species,
- seeding rates and dates,
- establishment procedures,
- management actions needed to insure and adequate stand

Specifications and operation and maintenance shall be recorded using approved Implementation Requirement document.

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**NRCS, NHCP**

**September 2014**
OPERATION AND MAINTENANCE

Mowing and harvest operations in a perennial crop system such as orchards, vineyards, berries, and nursery stock shall be done in a manner which minimizes the generation of particulate matter.

If wildlife habitat enhancement is a purpose, maintenance practices and activities shall not disturb cover during the reproductive period for the desired species. Exceptions should be considered for periodic burning or mowing when necessary to maintain the health of the plant community.

Control noxious weeds and other invasive species.

Mowing may be needed during the establishment period to reduce competition from weeds.

To benefit insect food sources for grassland nesting birds, spraying or other control of noxious weeds shall be done on a “spot” basis to protect forbs and legumes that benefit native pollinators and other wildlife.

Re-vegetate bare spots.

REFERENCES


Revised Universal Soil Loss Equation Version 2 (RUSLE2) website:

Wind Erosion Prediction System (WEPS) website:

http://directives.sc.egov.usda.gov/
DEFINITION
The return of a wetland and its functions to a close approximation of its original condition as it existed prior to disturbance on a former or degraded wetland site.

PURPOSE
To restore wetland function, value, habitat, diversity, and capacity to a close approximation of the pre-disturbance conditions by restoring:

- Conditions conducive to hydric soil maintenance.
- Wetland hydrology (dominant water source, hydroperiod, and hydrodynamics).
- Native hydrophytic vegetation (including the removal of undesired species, and/or seeding or planting of desired species).
- Original fish and wildlife habitats.

CONDITIONS WHERE PRACTICE APPLIES
This practice applies only to natural wetland sites with hydric soils which have been subject to the degradation of hydrology, vegetation, or soils.

This practice is applicable only where the natural hydrologic conditions can be approximated by actions such as modifying drainage, restoring stream/floodplain connectivity, removing diversions, dikes, and levees, and/or by using a natural or artificial water source to provide conditions similar to the original, natural conditions.

This practice does not apply to:

- The treatment of point and non-point sources of water pollution (Constructed Wetland - 656);
- The rehabilitation of a degraded wetland, the reestablishment of a former wetland, or the modification of an existing wetland, where specific wetland functions are augmented beyond the original natural conditions; possibly at the expense of other functions (Wetland Enhancement - 659);
- The creation of a wetland on a site location which was historically non-wetland (Wetland Creation - 658);
- The management of fish and wildlife habitat on wetlands restored under this standard.

CRITERIA
General Criteria Applicable to All Purposes
The purpose, goals, and objectives of the restoration shall be clearly defined in the restoration plan, including soils, hydrology, vegetation, and fish and wildlife habitat criteria that are to be met and are appropriate for the site and the project objectives.

These planning steps shall be done with the use of a functional assessment-type procedure, or a state approved equivalent. The objectives will be determined by an analysis of current and historic site functions. They will be based on those functions which can reasonably be supported by current site constraints. Data from historic and recent aerial photography and/or other remotely sensed data, soil maps, topographic maps, stream gage data, intact reference wetlands, and historical records shall be gathered.

The soils, hydrology and vegetative conditions existing on the site, the adjacent landscape, and the contributing watershed shall be documented in the planning process.

The nutrient and pesticide tolerance of the
plant and animal species likely to occur shall be evaluated where known nutrient and pesticide contamination exists. Sites suspected of containing hazardous material shall be tested to identify appropriate remedial measures. If remedial measures are not possible or practicable, the practice shall not be planned.

The availability of sufficient water rights should be reviewed prior to restoration.

Upon completion, the site shall meet soil, hydrology, vegetation and habitat conditions of the wetland that previously existed on the site to the extent practicable.

Where offsite hydrologic alterations or the presence of invasive species impact the site, the design shall compensate for these impacts to the extent practicable.

Invasive species, federal/state listed noxious plant species, and nuisance species (e.g., those whose presence or overpopulation jeopardize the practice) shall be controlled on the site as necessary to restore wetland functions. The establishment and/or use of non-native plant species shall be discouraged.

**Criteria for Hydric Soil Restoration**

Restoration sites will be located on soils that are hydric.

If the hydric soil is covered by fill, sediment, spoil, or other depositional material, the material covering the hydric soil shall be removed to the extent needed to restore the original soil functions.

Soil hydrodynamic and bio-geochemical properties such as permeability, porosity, pH, or soil organic carbon levels shall be restored to the extent needed to restore hydric soil functions.

**Criteria for Hydrology Restoration**

The hydroperiod, hydrodynamics, and dominant water source of the restored site shall approximate the conditions that existed before alteration. The restoration plan shall document the adequacy of available water sources based on groundwater investigation, stream gage data, water budgeting, or other appropriate means.

The work associated with the wetland shall not adversely affect adjacent properties or other water users unless agreed to by signed written letter, easement or permit.

Timing and level setting of water control structures, if needed, will be based on the actions needed to maintain a close approximation of the original, natural hydrologic conditions.

The original natural water supply should be used to reestablish the site’s hydrology to approximate the hydrologic conditions of the wetland type. If this is not possible, an alternate natural or artificial water supply can be used; however, these sources shall not be diverted from other wetland resources. If the alternate water source requires energy inputs, these shall be estimated and documented in the restoration plan.

To the extent technically feasible reestablish macrotopography and/or microtopography. Use reference sites within the local area to determine desired topographic relief. The location, size, and geometry of earthen structures, if needed, shall match that of the original macrotopographic features to the extent practicable.

Macrotopographic features, including ditch plugs installed in lieu of re-filling surface drainage ditches, shall meet the requirements of other practice standards to which they may apply due to purpose, size, water storage capacity, hazard class, or other parameters. If no other practice standard applies, they shall meet the requirements for Dike – 356 unless there is no potential for damage to the feature or other areas on or off site due to erosion, breaching, or overtopping.

Excavations from within the wetland shall remove sediment to approximate the original topography or establish a water level that will compensate for the sediment that remains.

Water control structures that may impede the movement of target aquatic species or species of concern shall meet the criteria in Fish Passage, Code 396.

Wetland restoration sites that exhibit soil oxidation and/or subsidence, resulting in a lower surface elevation compared to pre-disturbance, shall take into account the appropriate hydrologic regime needed to support the original wetland functions.
Criteria for Vegetative Restoration

Hydrophytic vegetation restoration shall be of species typical for the wetland type(s) being established and the varying hydrologic regimes and soil types within the wetland. Preference shall be given to native wetland plants with localized genetic material.

Where natural colonization of acceptable species can realistically be expected to occur within 5 years, sites may be left to revegetate naturally. If not, the appropriate species will be established by seeding or planting.

Adequate substrate material and site preparation necessary for proper establishment of the selected plant species shall be included in the plan.

Where planting and/or seeding is necessary, the minimum number of native species to be established shall be based on a reference wetland with the type of vegetative communities and species planned on the restoration site:

- Where the dominant vegetation will be herbaceous community types, a subset of the original vegetative community shall be established within 5 years, or a suitable precursor to the original community will be established within 5 years that creates conditions suitable for the establishment of the native community. Species richness shall be addressed in the planning of herbaceous communities. Seeding rates shall be based upon the percentage of pure live seed and labeled with a current seed tag from a registered seed laboratory identifying the germination rate, purity analysis, and other seed statistics.

- Where the dominant vegetation will be forest or woodland community types, vegetation establishment will include a mix of woody species (trees and/or shrubs) adequate to establish the reference wetland community.

CONSIDERATIONS

Soil Considerations

Consider making changes to physical soil properties, including:

- Increasing or decreasing saturated hydraulic conductivity by mechanical compaction or tillage, as appropriate.
- Incorporating soil amendments.
- The effect of construction equipment on soil density, infiltration, and structure.

Consider changes in soil bio-geochemical properties, including:

- Increasing soil organic carbon by incorporating compost.
- Increasing or decreasing soil pH with lime, gypsum, or other compounds

Hydrology Considerations

Consider the general hydrologic effects of the restoration, including:

- Impacts on downstream stream hydrographs, volumes of surface runoff, and groundwater resources due to changes of water use and movement created by the restoration.

Consider the impacts of water level management, including:

- Increased predation due to concentrating aquatic organisms, including herptivores, in small pool areas during draw downs
- Increased predation of amphibians due to high water levels that can sustain predators.
- Decreased ability of aquatic organisms to move within the wetland and from the wetland area to adjacent habitats, including fish and amphibians as water levels are decreased.
- Increases in water temperature on-site, and in off-site receiving waters.
- Changes in the quantity and direction of movement of subsurface flows due to increases or decreases in water depth.
- The effect changes in hydrologic regime have on soil bio-geochemical properties, including: oxidation/reduction; maintenance of organic soils; and salinity
increase or decrease on site and on adjacent areas.

**Vegetation Considerations**

Consider:

- The relative effects of planting density on fish and wildlife habitat versus production rates in woody plantings.
- The potential for vegetative buffers to increase function by trapping sediment, cycling nutrients, and removing pesticides.
- The selection of vegetation for the protection of structural measures that is appropriate for wetland function.
- The potential for invasive or noxious plant species to establish on bare soils after construction and before the planned plant community is established.
- The use of prescribed burning to restore wetland and adjacent upland plant communities.

**Fish and Wildlife Habitat Considerations**

Consider:

- The addition of coarse woody debris on sites to be restored to woody plant communities for an initial carbon source and fish and wildlife cover.
- The potential to restore habitat capable of supporting fish and wildlife with the ability to control disease vectors such as mosquitoes.
- The potential to establish fish and wildlife corridors to link the site to adjacent landscapes, streams, and water bodies and to increase the sites colonization by native flora.
- The need to provide barriers to passage for unwanted or predatory species.

**PLANS AND SPECIFICATIONS**

Plans and specifications for this practice shall be prepared for each site. Plans and specifications shall be recorded using approved specifications sheets, job sheets, or other documentation. The plans and specifications for structural features will include, at a minimum, a plan view, quantities, and sufficient profiles and cross-sections to define the location, line, and grade for stakeout and checkout. Plans and specifications shall be reviewed and approved by staff with appropriate job approval authority.

**OPERATION AND MAINTENANCE**

A separate Operation and Maintenance Plan will be prepared for sites that have structural features. The plan will include specific actions for the normal and repetitive operation of installed structural items, especially water control structures, if included in the project. The plan will also include the maintenance actions necessary to assure that constructed items are maintained for the life of the project. It will include the inspection schedule, a list of items to inspect, a checklist of potential damages to look for, recommended repairs, and procedures for documentation.

Management and monitoring activities needed to ensure the continued success of the wetland functions may be included in the above plan, or in a separate Management and Monitoring Plan. In addition to the monitoring schedule, this plan may include the following:

- The timing and methods for the use of fertilizers, pesticides, prescribed burning, or mechanical treatments.
- Circumstances when the use of biological control of undesirable plant species and pests (e.g. using predator or parasitic species) is appropriate, and the approved methods.
- Actions which specifically address any expected problems from invasive or noxious species.
- The circumstances which require the removal of accumulated sediment.
- Conditions which indicate the need to use haying or grazing as a management tool, including timing and methods.

**REFERENCES:**


CITY OF WATERTOWN

Field Inspection and Operation & Maintenance Plan - Perennial Vegetation

Vegetation should be established and maintained in accordance with NRCS Technical Standard 327. In addition, field inspections should document and report any large areas of sheet, rill, or gully erosion. Field inspections should be conducted after significant storm events and at least annually to identify repair and maintenance needs.

Per NRCS WI Agronomy Technical Note 5 Establishing and Maintaining Native Grasses, Forbs, and Legumes:

DETERMINING SUCCESS OF THE PLANTING

In determining stand adequacy, there are two major considerations: 1) adequate protection of the soil resource, and 2) adequate stand for the planned purpose. It may be difficult to determine if the prairie restoration is successful, particularly during the seeding year. Most native species are long-lived, but develop slowly. It may take two to five years for a stand to be fully successful. For native plantings determined to be questionable or inadequate, a final evaluation deciding whether to reseed should not be done until after the third growing season. It is often said prairie sleeps the first year (sets root structure), creeps the second year (starts to spread slowly) and leaps in the third year (distinct and prominent). Patience is a virtue.

POST-PLANTING WEED CONTROL

Planting Year Post Emergence Weed Control Mowing – New Seedings

Mesic and wet sites in particular are prone to weed competition. Currently, there are limited herbicides available to control weeds in a prairie restoration planting without potentially impacting native legumes and most forbs. To combat this problem, repeated mowing is essential throughout the establishment period. The first year following seeding, mow growing plants to a height of 7 inches whenever the canopy reaches a height of 12 inches. Depending on rainfall and growing conditions, three mowings may be required. In a normal growing season, mowing should occur around the middle of June, early to mid July as well as the first part of August. It may be necessary to remove the clippings to avoid smothering the seedlings. Utilize a rotary mower or flail chopper to uniformly distribute mowed material over the field surface. It is essential to monitor the canopy height to avoid the accumulation of excess clipped material over top of seedlings and to ensure sunlight reaches the soil surface for the new seeding. Use of this mowing strategy will stress the weeds and will not harm the prairie plants in this first year.

Second Year Weed Control
Routinely evaluate the stand in the second year to determine if mowing for weed control is necessary. When necessary to control weed canopy, mow the planting to a height of 7 inches as
often as required. The strategy in year two will mirror year one maintenance activities. Establishment of your native planting will have precedent over nesting season concerns. Once the prairie is established, wildlife habitat concerns should be mitigated with seasonal or spot treatment activities that will minimally impact wildlife.

POST ESTABLISHMENT MANAGEMENT
Any planned maintenance (except for noxious weed control) after the establishment period, should be done before May 15 or after August 1 to protect nesting cover and reduce disruption of nesting activities.

Spot Treatment By Clipping
Spot clipping can be used to control annual weeds and to suppress other weeds. Spot clipping must be done before the target plant forms viable seed and must continue throughout the growing season. Spot clipping is not an effective control for biennial and perennial weeds but can be used to contain these plants until other control treatments can be implemented.

Spot Treatment With Herbicide
It is often necessary to spot treat invasive plants in a prairie. Introduced grasses and legumes and other aggressive weeds can severely impact a prairie when these undesirable plants are not controlled. The timing of herbicide product application is an important factor to protect prairie plants. Improper herbicide selection or application timing can severely damage a prairie planting. Early spring spot treatment with herbicides is often highly effective in addressing aggressive weeds while native plants are dormant. Spot treatment should be timed to treat weeds during active growth periods. Effective herbicide spot treatment can prevent the target plants from setting seed and spreading in the prairie.

Spot Treatment By Hand Pulling/Digging
Hand pulling or digging can be an effective control if the entire root is removed from the soil. Hand pulling/digging is most effective in the spring when the soil is moist and loose from the Winter freeze/thaw cycles.

Prescribed Burning – Established Cover
Burning is a good tool for long-term stand management of native vegetation. Burning may be used to manage weeds once the prairie has been established if there is enough material to carry a fire. Time of burning and frequency will impact the species that are present on the site. Fall burns and to a lesser extent early spring burns, will tend to promote forbs. Late spring burns tend to stimulate the growth of warm season grasses and suppress cool season plants. Burn when the cool season plants are growing and the warm season plants are dormant or starting to grow to control cool season species. Do not conduct sequential prescribed burns on a given site at the same time of year. This tends to reduce stand diversity and can create a negative impact on desirable prairie plants. For longevity and plant diversity, burning should be conducted periodically, every other year to every fifth year.
CITY OF WATERTOWN

Field Inspection and Operation & Maintenance Plan - Wetland Restoration

The purpose of this practice is to return a wetland and its functions to a close approximation of its original condition as it existed prior to disturbance on a former or degraded wetland site. See attached construction plan for practice location. Necessary operation and maintenance items include:

1. Inspect after significant storm events and at least annually to identify repair and maintenance needs.
2. Inspect the downstream toe of the embankment annually. If there are wet areas or seeps present, it could be a serious problem. Ask for assistance from a qualified professional to evaluate the seepage.
3. Clear accumulated trash away from water control structures, pipe inlets or outlets, rock riprap, and trash racks. Boards in Water Control Structures should be removed periodically to flush debris that could accumulate in pipe. Flow a maximum of 5 minutes and then put boards back.
4. Repair erosion at pipe outlets.
5. Fill rills and gullies that occur on the embankments. Seed the filled areas.
6. Check frequently for burrowing animals. When found, remove the burrowing animals, replace embankment materials, and seed repaired areas.
7. Maintain a vigorous sod by regular mowing. Time the first mowing after nesting birds have hatched about August 1. Remove excess top grass. Operate mowing and other equipment on slopes in accordance with the machinery operation manual.
8. Prevent woody vegetation from growing in or around the embankment and in upland plantings. Control tree and bush growth by hand cutting, mowing, or chemicals. Avoid damaging grass with herbicide sprays.
9. Maintain a riparian filter around the perimeter of the wetland to trap sediment.
10. Maintain a diverse stand of aquatic vegetation by manipulating water levels
11. Adjust flashboards in water control structures to maintain water levels for wildlife management.
12. Monitor and control invasive species. Mow or burn as needed to control invasive species.
DUCKS UNLIMITED
WATERTOWN WQT
CITY OF WATERTOWN
JEFFERSON COUNTY, WI

WATERTOWN TOWNSHIP
T8N, R15E, S8

SHEET INDEX
1. COVER SHEET & PROJECT LOCATION MAP
2. ESTIMATED QUANTITIES, SPECIFICATIONS & NOTES
3. OVERALL SITE PLAN
4. SCRAPE PONDS/TILE REMOVAL
5. AGRIRAIN & EMBANKMENT DETAILS
6. AGRIRAIN DETAILS
6A. TRASH RACK
7. WATER CONTROL STRUCTURE PROFILES
8. SEEDING

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Know What's Below.
Call Before You Dig.
CONSTRUCTION NOTES:

1. ALL UNDERGROUND HAZARDS AND UTILITIES MUST BE INVESTIGATED PRIOR TO CONSTRUCTION. NOTIFICATION OF EFFECTED UTILITY COMPANIES IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTACT DIGGERS HOTLINE AT LEAST THREE DAYS PRIOR TO START OF CONSTRUCTION.

2. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED WITH DU PERSONNEL, THE CONTRACTOR, AND THE LANDOWNER PRIOR TO CONSTRUCTION START-UP.

3. THE CONTRACTOR AND/OR LANDOWNER SHALL NOTIFY DU AT LEAST 3 DAYS PRIOR TO START-UP OF CONSTRUCTION.

4. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS.

5. ALL LOCAL STATE AND FEDERAL PERMITS WILL BE OBTAINED PRIOR TO CONSTRUCTION.

6. ALL EXCAVATED FILL WILL BE USED IN CONSTRUCTION OF PLANNED DITCH FILLS AND EMBANKMENT. ANY REMAINING SOILS CAN BE PLACED IN DESIGNATED SPOILS AREAS LISTED ON PLAN VIEW.

7. ALL DISTURBED AREAS WILL BE SEEDED UPON COMPLETION OF CONSTRUCTION.

8. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL ACCESS ROADS AND STAGING AREAS TO PRE-CONSTRUCTION CONDITIONS AFTER CONSTRUCTION IS COMPLETED.

9. DU TECHNICIAN WILL STAKE ALL CONSTRUCTION ACTIVITIES PRIOR TO CONSTRUCTION.

10. ALL TRAFFIC LEAVING THE SITE SHALL BE FREE OF ANY LOOSE MUD AND/OR DEBRIS. ANY MUD DEPOSITED ON ROAD WILL BE REMOVED AND DEPOSITED BACK ON SITE IMMEDIATELY.

11. BID ITEM FOR MOBILIZATION SHALL INCLUDE THE SUPPLY OF ALL LABOR, MATERIAL AND EQUIPMENT TO TRANSPORT ALL NEEDED LABOR, MATERIAL AND EQUIPMENT, TO AND FROM A PROJECT SITE, TO SUCCESSFULLY COMPLETE THAT PROJECT AS SHOWN ON THE PLANS.

12. BID ITEM FOR EXCAVATION IS FOR CUTTING OUT OR EXCAVATING ALL SCRAP PONDS AND TILE BREAK. SITE PREPARATION FOR PONDS IS INCIDENTAL.

13. THE BID ITEM FOR SOIL EROSION AND POLLUTION CONTROL SHALL INCLUDE THE SUPPLY, INSTALLATION, AND MAINTENANCE OF ALL MATERIALS, IN COMPLIANCE WITH WISCONSIN REGULATIONS. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF WORK, AND WILL BE MAINTAINED UNTIL FINAL STABILIZATION OF THE SITE. CONTRACTOR SHALL MAINTAIN, INSPECT, AND PROVIDE ALL PROPER RECORDING AND REPORTING ACCORDING TO THE PERMIT REGULATIONS. INCLUDES SEEDING, AND MULCHING.

14. THE BID ITEM FOR SITE PREPARATION SHALL INCLUDE STRIPPING FOR EMBANKMENT, STOCKPILING TOPSOIL FOR REPLACEMENT, PLACING TOPSOIL OVER ALL DISTURBED AREAS, REMOVING AND DISPOSING OF PUMP AND PIPING AND LEVELING SUITABLE ENOUGH FOR SEEDING. GRUBBING OF BRUSH AND TREES FOR EARTHWORK PREPARATION IS ALSO INCLUDED.

15. DEWATERING AND WATER MAINTENANCE IS THE CONTRACTOR'S RESPONSIBILITY, AND IS CONSIDERED INCIDENTAL TO THE PROJECT.

16. BID ITEM FOR EMBANKMENT SHALL INCLUDE ALL WORK REQUIRED TO HAUL, PLACE, AND COMPACT FILL MATERIAL TO CONSTRUCT EARTHWORK, AS STAKED IN THE FIELD. ANY MATERIAL EITHER NEEDED OR REMAINING FROM THIS OPERATION SHALL BE UTILIZED FROM THE DISPOSAL AREA.

17. BID ITEM FOR RIP-RAP CLASS I IS FOR THE ROCK PLACED DOWNSTREAM OF THE WATER CONTROL STRUCTURE. NON-WOVEN FILTER FABRIC IS REQUIRED BENEATH ALL ROCK/RIP-RAP AND SHALL BE SECURED TO SLOPES AND BOTTOM, USING PINS AS NOTED SPECIFICATION 305. QUANTITY IS BASED ON TONS. CONTRACTOR SHALL PROVIDE SCALE TICKETS WITH WEIGHTS INCLUDING TARE WEIGHS, GROSS WEIGHTS, AND NET WEIGHTS OF MATERIAL DELIVERED.

18. BID ITEM FOR WATER CONTROL STRUCTURE IS FOR STRUCTURE AND ALL COMPONENTS. THE BID ITEM FOR PIPE INSTALLATION IS FOR LINEAL FEET OF INLET AND OUTLET PIPES FOR WATER CONTROL STRUCTURES.

SPECIFICATIONS

101 GENERAL CONDITIONS
102 SUPPLEMENTAL CONDITIONS
201 MOBILIZATION
202 SITE PREPARATION
203 EXCAVATION
204 EMBANKMENT CONSTRUCTION
301 WATER CONTROL STRUCTURES
303 CULVERT AND PIPE INSTALLATION
305 RIP-RAP
402 SEEDING AND MULCHING

ESTIMATED QUANTITIES

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<td>1225</td>
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<td>305</td>
<td>RIP RAP WITH GROTEXILE</td>
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<td>203</td>
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<tr>
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<td>SEEDING AND MULCHING</td>
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</tbody>
</table>
SCRAPE NUMBER | ACRES | CY
---|---|---
EAST | 0.1 | 120
WEST | 0.1 | 105

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Revision Sheet

PROFILE OF AGRI-DRAIN WATER CONTROL STRUCTURE

NOT TO SCALE

PERCENT PASSING

BY WEIGHT

SIZE (INCHES)

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<th>BY WEIGHT</th>
<th>SIZE (INCHES)</th>
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<td>25-50</td>
<td>7</td>
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<tr>
<td>0-5</td>
<td>2</td>
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</table>

NOTES:

1. EAST WATER CONTROL STRUCTURE USES EXISTING GROUND, WHICH MEETS REQUIRED EMBANKMENT ELEVATION.

2. THE SAND CLAY CLASS DESIGNATION IS NOT APPLICABLE TO WATER CONTROL STRUCTURE.

3. HUNTER'S BEAK PIPES MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

4. OUTLET AND STONE RIP-RAP DETAIL

PIPE INSTALLATION & REMOVAL DETAIL

NOT TO SCALE
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Revision Sheet

AGRI-DRRAIN WATER CONTROL STRUCTURE

11/1/2021
BG
MJS
MJS

NOTE: Other options for securing the rods in place include cotter pins, or simply bending the rods at right angle to the pipe. Smooth rod would be acceptable if these methods are used.

ANIMAL CALIBER

OUTLET PIPE

MAXIMUM SPACING BETWEEN RODS 2 1/2"
NOTES:
1. Minimum height of panel to be 3 feet. The minimum length of steel posts shall be 5 feet.
2. The panels shall be fastened to each post with a minimum of 2 strands per loop of 10 gauge insulated copper wire securely twisted. Spacing of wire loops shall not exceed 2 feet with minimum 2 loops per post.
3. Panels (sold as Hog or Cattle Panels) shall be \( \frac{3}{4} \) galvanized steel rods welded together to form a panel. Maximum spacing of rods shall be 6 inches vertical and 8 inches horizontal.
**SEEDING DATES**

- **TIME PERIOD**: April 15 through June 1
- **DATES**: June 1
- **TYPE OF SEEDING**: Permanent

- **TIME PERIOD**: June 2 through August 21
- **DATES**: August 21
- **TYPE OF SEEDING**: Temporary *

- **TIME PERIOD**: August 1 through Snow Cover
- **DATES**: Snow Cover
- **TYPE OF SEEDING**: Dormant

- **TIME PERIOD**: November 1 through Snow Cover
- **DATES**: Snow Cover
- **TYPE OF SEEDING**: Not Allowed

**MATERIALS**

If no soil test is available, apply a minimum of 150 pounds of 20-10-10 fertilizer per acre. This is equivalent to 30 pounds nitrogen (N), 15 pounds phosphate (P2O5), and 15 pounds potash (K2O) per acre. Apply two tons/acre of 80-89 lime or equivalent. (See page 2 for equivalent)

* Seed a temporary cover crop of **Annual Ryegrass** at 20 #/ac (0.8 bu/ac)

A permanent seeding shall be completed during the next acceptable time period following a temporary seeding.

**MINIMUM PURE LIVE SEED (PLS)**

- **RATE PER ACRE**: 0.20
- **TOTAL POUNDS OF SEED NEEDED**:

<table>
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<tr>
<th>SPECIES</th>
<th>RATE</th>
<th>POUNDS</th>
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</thead>
<tbody>
<tr>
<td>Redtop</td>
<td>1.3</td>
<td>0.3</td>
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<tr>
<td>Timothy</td>
<td>3.8</td>
<td>0.6</td>
</tr>
<tr>
<td>Red Clover</td>
<td>6.3</td>
<td>1.3</td>
</tr>
</tbody>
</table>

**Annual Ryegrass**: 6.0  1.2

**ADDITIONAL SEED PERCENT**: 20%

**Companion Crop**

Total % Germination may also be termed Total % Viable Seed on a tag. If a tag only shows % Germination, the user must include percentage of the seed that germinated during the lab test (% Germination) plus the percentage of hard and/or dormant seed. Hard seed and dormant seed are seeds that are still capable of germinating and producing a plant but did not germinate under the conditions of the test in the lab.

**SEEDBED PREPARATION**

- Seedbed preparation shall immediately follow construction activities.
- Prepare a fine, firm seedbed to a minimum depth of three inches. A seedbed is considered firm when a footprint penetrates less than 1/4 inch deep.

**SEEDING**

Inoculate legumes with the specific inoculum for the species in accordance with the manufacturer's recommendations. When using a hydrosower, five times the recommended rate of inoculant shall be added to the hydrosower. Inoculant shall not be mixed with liquid fertilizer.

Seed may be broadcast or drilled as appropriate to the site.

Seed, fertilize, and lime as soon as possible after construction. Seeding perpendicular to direction of flow is required to limit erosion.

Seed grasses and legumes no more than 1/4 inch deep.

Consider seeding at a lower rate and making 2 passes to ensure more uniform distribution.

**TEMPORARY SEEDING OPTIONS**

Select one of the following species for temporary cover:

1. The required seeds or plant stock are not available or the normal permanent seeding period for the species has passed
   - Forage Sorghum - 1/2 bushel per acre (May 15-July 15)
   - Sorghum - Sudangrass Hybrid - 1 bushel per acre (May 15-July 15)
   - Sudangrass - 1 bushel per acre (May 15-July 15)
   - Winter Wheat - 2 bushels per acre (Aug 1-Oct 1)
   - Winter Cereal Rye - 2 bushels per acre (Aug 1-Oct 15)
   - Oats - 2 bushels per acre (Apr 1-Sept 1)
   - Annual Ryegrass - 20 Pounds per acre (Apr 1-Sept 1)

2. Triazine herbicide carryover will not allow establishment of permanent cover immediately.
   - Forage Sorghum - 1/2 Bushel per acre (May 15-July 15)
   - Sorghum - Sudangrass Hybrid - 1 Bushel per acre (May 15-July 15)
   - Sudangrass - 1 Bushel per acre (May 15-July 15)

**DORMANT SEEDING**

Seed is broadcast and incorporated, no-tilled, or drilled into the seedbed. Seedbed preparation and conditions are similar to conventional seeding.

**MULCHING WILL BE COMPLETED ON EMBANKMENT**

Mulching shall be completed immediately after seedbed preparation and seeding. Mulch shall be applied immediately after final grading for areas seeded at a later date. Mulch material shall be relatively free of disease, pesticides, chemicals, noxious weed seeds, and other pests and pathogens.

Spread straw and hay mulch uniformly and at the rate of 1.5-2.0 tons per acre (30-70 bales). This application results in a layer of 6 to 7 stems, 1 to 2 inches thick, and provides a minimum 70% ground cover. Some soil surface can be seen after the application. Crimping (disking), wood cellulose fiber, tackifiers, netting, pinning, or other acceptable methods of anchoring will be used if needed to hold the mulch in place.

If other mulch materials are used, the rate of application shall meet the manufacturer's recommendations.

<table>
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<th>Lime Quality</th>
<th>Tons / AC.</th>
<th>Lime Quality</th>
<th>Tons / AC.</th>
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APPENDIX G: WATER QUALITY TRADING CHECKLIST
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:** City of Watertown
  - **Permit Number:** WI-0028541-09-0
  - **Facility Site Number:**

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<th>Facility Address</th>
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<tr>
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<td>Watertown</td>
<td>WI</td>
<td>53094</td>
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<table>
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<tr>
<th>Project Contact Name (if applicable)</th>
<th>Address</th>
<th>City</th>
<th>State</th>
<th>ZIP Code</th>
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<tr>
<td>Peter Hartz</td>
<td>800 Hoffman Drive</td>
<td>Watertown</td>
<td>WI</td>
<td>53094</td>
</tr>
</tbody>
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### Project Name
City of Watertown Wastewater Treatment Plant WQBELs for Total Phosphorus

### Receiving Water Name
Rock River

### Parameter(s) being traded
- Phosphorus

### HUC 12(s)
070900011103

### Credit Generator Information
- **Credit generator type (select all that apply):**
  - ☐ Permitted Discharge (non-MS4/CAFO)
  - ☐ Urban nonpoint source discharge
  - ☑ Agricultural nonpoint source discharge
  - ☐ Permitted MS4
  - ☐ Permitted CAFO

- 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 WPDES permit requirements?  
  - ☐ Yes
  - ☑ No

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<th>Contact Information</th>
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### Point to Point Trades (Traditional Municipal / Industrial, MS4, CAFO) cont.

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<td>b. Amount of credit being generated</td>
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<td>c. Timeline for credits and agreements</td>
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<td>d. Method for quantifying credits</td>
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<td>e. Tracking and verification procedures</td>
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<td>f. Location of credit generator in proximity to receiving water and credit user</td>
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<tr>
<td>g. Other:</td>
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### Point to Nonpoint Trades (Non-Permitted Urban, Agricultural, Other)

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<tr>
<td>□ Urban NPS</td>
<td>□ Agricultural NPS</td>
<td>□ Other</td>
<td>Wetland Restoration, Perennial Vegetation</td>
<td>SnapPlus</td>
</tr>
</tbody>
</table>

| □ Urban NPS          | □ Agricultural NPS                 | □ Other                  | Wetland Restoration, Perennial Vegetation | SnapPlus | WQT-2021+ | □ Yes | □ No | □ Only in part |

| □ Urban NPS          | □ Agricultural NPS                 | □ Other                  | Wetland Restoration, Perennial Vegetation | SnapPlus | WQT-2021+ | □ Yes | □ No | □ Only in part |

| □ Urban NPS          | □ Agricultural NPS                 | □ Other                  | Wetland Restoration, Perennial Vegetation | SnapPlus | WQT-2021+ | □ Yes | □ No | □ Only in part |

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| □ Urban NPS          | □ Agricultural NPS                 | □ Other                  | Wetland Restoration, Perennial Vegetation | SnapPlus | WQT-2021+ | □ Yes | □ No | □ Only in part |

### Does plan have a narrative that describes:

<p>| a. Description of existing land uses                                             | □ Yes | □ No | 2.2 |
| b. Management practices used to generate credits                                | □ Yes | □ No | 3.1 |
| c. Amount of credit being generated                                              | □ Yes | □ No | 2.6 |
| d. Description of applicable trade ratio per agreement/management practice       | □ Yes | □ No | 2.4 |
| e. Location where credits will be generated                                      | □ Yes | □ No | 2.1 |
| f. Timeline for credits and agreements                                            | □ Yes | □ No | 3.1, 4.1 |
| g. Method for quantifying credits                                                | □ Yes | □ No | 2.5 |</p>
<table>
<thead>
<tr>
<th>Does plan have a narrative that describes:</th>
<th>Plan Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>h. Tracking procedures</td>
<td>Yes □ No □ 5.1</td>
</tr>
<tr>
<td>i. Conditions under which the management practices may be inspected</td>
<td>Yes □ No □ 5.4</td>
</tr>
<tr>
<td>j. Reporting requirements should the management practice fail</td>
<td>Yes □ No □ 5.2</td>
</tr>
<tr>
<td>k. Operation and maintenance plan for each management practice</td>
<td>Yes □ No □ 3.1</td>
</tr>
<tr>
<td>l. Location of credit generator in proximity to receiving water and credit user</td>
<td>Yes □ No □ 2.1</td>
</tr>
<tr>
<td>m. Practice registration documents, if available</td>
<td>Yes □ No □ 6.1</td>
</tr>
<tr>
<td>n. History of project site(s)</td>
<td>Yes □ No □ 2.2</td>
</tr>
<tr>
<td>o. Other:</td>
<td>Yes □ No □</td>
</tr>
</tbody>
</table>

**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**

[Signature]

**Date Signed**

October 13, 2021

**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**

[Signature]

**Date Signed**

September 21, 2021
### Applicant Information

<table>
<thead>
<tr>
<th>Permittee Name</th>
<th>Permit Number</th>
<th>Facility Site Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Watertown</td>
<td>WI-0028541-09-0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Facility Address</th>
<th>City</th>
<th>State</th>
<th>ZIP Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>800 Hoffman Drive</td>
<td>Watertown</td>
<td>WI</td>
<td>53094</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Contact Name (if applicable)</th>
<th>Address</th>
<th>City</th>
<th>State</th>
<th>ZIP Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peter Hartz</td>
<td>800 Hoffman Drive</td>
<td>Watertown</td>
<td>WI</td>
<td>53094</td>
</tr>
</tbody>
</table>

### Project Name

City of Watertown Wastewater Treatment Plant WQBELs for Total Phosphorus

### Broker/Exchange Information (if applicable)

- **Was a broker/exchange be used to facilitate trade?**
  - ☐ Yes
  - ☐ No

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

<table>
<thead>
<tr>
<th>Type</th>
<th>Trade Agreement Number</th>
<th>Practices Used to Generate Credits</th>
<th>Anticipated Load Reduction</th>
<th>Trade Ratio</th>
<th>Method of Quantification</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Urban NPS</td>
<td></td>
<td>NA</td>
<td>Wetland Restoration, Perennial Vegetation</td>
<td>102</td>
<td>1.2</td>
</tr>
<tr>
<td>☐ Agricultural NPS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>County</th>
<th>Closest Receiving Water Name</th>
<th>Land Parcel ID(s)</th>
<th>Parameter(s) being traded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jefferson</td>
<td>Rock River</td>
<td>See WQT Plan</td>
<td>Phosphorus</td>
</tr>
</tbody>
</table>

### 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**

Leo A. Rusek

**Date Signed**

October 13, 2021

### 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**

[Signature]

**Date Signed**

September 22, 2021

---

**Leave Blank – For Department Use Only**

<table>
<thead>
<tr>
<th>Date Received</th>
<th>Trade Docket Number</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Entered in Tracking System</th>
<th>Date Entered</th>
<th>Name of Department Reviewer</th>
</tr>
</thead>
</table>
Water Quality Trade Agreement

Permittee Information
Credit User Name (Permittee)  Permit Number
City of Watertown  WI-0028541-09-0

Credit User Address
800 Hoffman Drive, Watertown, WI 53094

Permittee/Broker/Exchange Name (if applicable)  Trade Agreement Number
N/A  WQT-2021-

Permittee/Broker/Exchange Address (if applicable)

Street Address  City  State  ZIP Code
N/A  

Project Name
BE06 and BE08 – Wetland Restoration, Perennial Vegetation

Name of Credit Generator (Landowner/Operator) (Last, First, M.I.)
City of Watertown

Street Address  City  State  ZIP Code
800 Hoffman Drive  Watertown  WI  53094

Property Information

Name of Landowner(s) (if not Operator) (Last, First, M.I.)
City of Watertown

Street Address  City  State  ZIP Code
800 Hoffman Drive  Watertown  WI  53094

Legal Description of Property - Contiguous sites under the same ownership. (add additional sheets if necessary)
See attached.

Parcel ID(s):
291-0815-0831-000

Site Locator for Construction Projects
County  Township  Range  E / W  Section  Quarter/Quarter (e.g., NW ¼ of the NE ¼)
Jefferson  T8 N  R15E  8  NE1/4 of SW1/4

Agreement
The property described above is enrolled in a Water Quality Trade Agreement. Funds are provided to the landowner/ operator in return for the installation, operation and maintenance of best management practices (BMPs) designed to enhance water quality. This agreement commits the landowner/operator, their heirs, successors and assigns to fulfill the trade agreement until a satisfaction or release is filed by the grantee.

Addenda which describe the BMPs, costs, installation schedule, and conditions are hereby incorporated into this agreement and are on file with the grantee and may be given to Wisconsin DNR upon request by the Department.
Section A – General Requirements

A 1. This agreement may be amended by mutual agreement of either party, so long as the agreement has not yet expired.
A 2. If a significant archeological or historical site is found, construction is to cease immediately and the BMP will be relocated, redesigned, or deleted to prevent damage to the archeological or historical site. The BMP may be deleted only if approved in writing by the Department of Natural Resources.

Section B – Landowner/Operator Shall:

B 1. Design, install, operate and maintain BMPs listed in Addendum 2 of this agreement.
B 2. Allow access to the installed BMP by the grantee, or an authorized representative of the grantee for site inspection of the BMP for installation, operation and maintenance, following written or verbal authorization from landowner.

<table>
<thead>
<tr>
<th>TA Number</th>
<th>Typed Name of Landowner/Operator</th>
<th>Initials of Landowner/Operator</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>City of Watertown</td>
<td>Sall</td>
<td>4-7-2022</td>
</tr>
</tbody>
</table>
The cost-share recipient shall implement and maintain all best management practices listed in this Addendum, unless otherwise amended in accordance with this agreement.

<table>
<thead>
<tr>
<th>Field #</th>
<th>DNR BMP Code</th>
<th>Practice Name</th>
<th>Quantity</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Estimated Total Cost</th>
<th>Reimbursement Rate (%)</th>
<th>Estimated Cost-Share Amt.</th>
<th>Cost-Share Amt. From Other Programs*</th>
<th>Estimated Year to be Installed</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE06</td>
<td>NRCS 327</td>
<td>Perennial Vegetation</td>
<td>12.7</td>
<td>Acres</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2022</td>
</tr>
<tr>
<td>BE06</td>
<td>NRCS 657</td>
<td>Wetland Restoration</td>
<td>7.8</td>
<td>Acres</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2022</td>
</tr>
<tr>
<td>BE08</td>
<td>NRCS 327</td>
<td>Perennial Vegetation</td>
<td>15.8</td>
<td>Acres</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2022</td>
</tr>
</tbody>
</table>

* Identify Program Names: 

<table>
<thead>
<tr>
<th>CSA Number</th>
<th>Typed Name of Landowner/Operator</th>
<th>Initials of Landowner/Operator</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>City of Watertown</td>
<td>4AH</td>
<td>4-7-2022</td>
</tr>
</tbody>
</table>