

WATERTOWN WATERWAYS IMPROVEMENT PROGRAM

Water Quality Trading Plan

City of Watertown

106 Jones Street
Watertown, WI 53094

920-262-4060
mmcbroom@watertownwi.gov



Watertown Waterways Improvement Program (WWIP)

Water Quality Trading Plan

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Overview

Background

The Wisconsin Department of Natural Resources (WDNR) and the United States Environmental Protection Agency (EPA) approved a Total Maximum Daily Load (TMDL) study for the Rock River Basin in September 2011. The TMDL studied how much Total Suspended Solids (TSS) and Phosphorus would need to be prevented from entering the Rock River and its tributaries each year to return to healthy, fishable, swimmable conditions that meet water quality standards.

The Municipal Separate Storm Sewer System (MS4) Permit requires the City to reduce the amount of TSS and Phosphorus reaching local waterways per the pollutant reductions listed in the TMDL. The City's 2014 Storm Water Quality Master Plan estimated the cost of compliance with the TMDL at well over \$13 million dollars (in 2014 dollars) unless an alternative approach was used. Since then, the City has determined that a Water Quality Trading program implemented within two local subwatersheds (RR-28 and RR-29) would be the best option for a more cost effective way to meet the TMDL pollutant reductions as compared to strictly using traditional stormwater management practices.

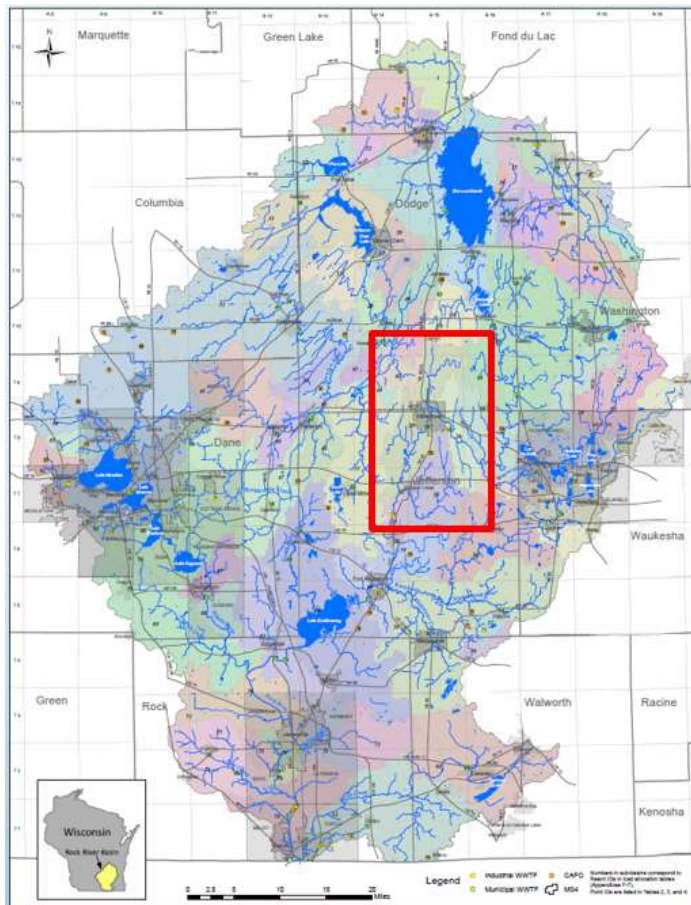
Rock River Basin TMDL Subwatersheds

Three City of Watertown
Subwatersheds shown in
red box:

RR-28

RR-29

JC-30



Source: Wisconsin Department of Natural Resources

Overall TMDL Implementation Approach

The City's long-term TMDL compliance approach to meet the MS4 Permit will continue to include a variety of options, with Water Quality Trading and strategic stormwater BMP installations being the primary means of MS4 Permit compliance.

A WinSLAMM model updated was completed in 2023 as part of the TMDL Implementation Plan, to meet Section A.6.3 of the MS4 Permit. This modeling shows that the City continues to make progress in reducing the amount of Total Suspended Solids (TSS) and Phosphorus reaching the Rock River and local waterways via the City's storm sewer system.

Total Suspended Solids Updated TMDL Modeling Regulatory Results (2023)

| Waterway (Reachshed) | TSS Loading – No Controls (lbs) | Existing TSS Reduction (%) | Existing TSS Reduction (lbs) | Required TSS Reduction (%) | Required TSS Reduction (lbs) | Additional Reduction Needed (lbs) |
|-----------------------------|--|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|--|
| Sinissippi Lake (#28) | 431,635 | 16.04% | 69,229 | 40% | 172,654 | 103,425 |
| Middle Rock River (#29) | 946,044 | 21.19% | 200,652 | 44% | 416,259 | 215,607 |
| Johnson Creek (#30) | 43,954 | 21.97% | 9,657 | 40% | 17,582 | 7,925 |

Source: Ruckert & Mielke; City of Watertown MS4 Permit No. WI -S050075-3 TMDL Implementation Plan, Oct. 2023

Total Phosphorus Updated TMDL Modeling Regulatory Results (2023)

| Waterway (Reachshed) | TP Loading – No Controls (lbs) | Existing TP Reduction (%) | Existing TP Reduction (lbs) | Required TP Reduction (%) | Required TP Reduction (lbs) | Additional Reduction Needed (lbs) |
|-----------------------------|---------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|--|
| Sinissippi Lake (#28) | 1,452 | 11.59% | 168 | 28% | 407 | 238 |
| Middle Rock River (#29) | 2,669 | 16.35% | 437 | 64% | 1,708 | 1,272 |
| Johnson Creek (#30) | 115 | 13.80% | 16 | 27% | 31 | 15 |

Source: Ruckert & Mielke; City of Watertown MS4 Permit No. WI -S050075-3 TMDL Implementation Plan, Oct. 2023

The City has completed plans and modeling, implemented strategies and installed urban stormwater runoff practices to control the amount of TSS and phosphorus reaching the Rock River and local waterways for over 10 years.

City of Watertown TMDL Implementation Actions To Date

| | |
|------|--|
| 2014 | Completed WinSLAMM Analysis for TMDL |
| 2016 | Updated Ch. 288, Stormwater Ordinance |
| 2017 | Submitted Water Quality Trading Option to WDNR |
| 2019 | Completed Water Quality Trading Analysis |
| 2019 | Completed Stormwater Utility Rate Study |
| 2020 | Re-Joined Rock River Stormwater Group |
| 2020 | Implemented Stormwater Utility Rate Increase |
| 2020 | Hired Stormwater Project Manager |
| 2021 | Received WDNR Approval for Water Quality Trading |
| 2021 | Re-Energized Stormwater Utility Credit Program |
| 2022 | Updated/Refined TMDL WinSLAMM Results |
| 2022 | Developed iWorQ TMDL Management System |
| 2022 | Completed Leaf Collection/Phosphorus Reduction Analysis |
| 2022 | Began Discussions with Jefferson County & Rock River Coalition re: a Water Quality Trading Program to meet TMDL Requirements |
| 2023 | Signed InterMunicipal Agreement with Jefferson County to Implement Watertown Waterways Improvement Program (WWIP), a local water quality trading program |
| 2023 | Submitted Water Quality Trading Notice of Intent |
| 2023 | Conducted WWIP Kick-off Meeting with Property Owners |
| 2023 | Completed TMDL Implementation Plan to meet MS4 Permit Requirements |

With the addition of the Watertown Waterways Improvement Program, a local water quality trading program, the City will continue to make progress in reducing the amount of TSS and phosphorus that is impacting the Rock River and its tributaries.

Water Quality Trading

Water Quality Trading typically involves a permitted entity looking for a more cost-effective way to meet pollution control requirements of a permit. When pollution controls are installed in areas that are not *required* to reduce pollution, the benefits of this pollution control can be traded with an entity that needs to show additional pollution reductions.

The City's MS4 Permit requires TSS and Phosphorus reductions in three separate subwatersheds (reachsheds). The cost of installing a pollution control practice in a rural area is much cheaper than the cost of a practice to capture the same amount of pollution in an urban area.

| Examples of Rural Pollution Control Practices | |
|--|---------------------|
| Grassed Waterways | Cover Crops |
| Buffer Strips | Barnyard Management |
| Streambank Stabilization | Wetland Restoration |

The cost of Water Quality Trading will depend largely on the market price of Phosphorus per pound. TMDL compliance is measured in pounds of TSS and Phosphorus. The amount that a property owner wants to charge per pound of phosphorus has been estimated to be \$35 - \$250 per pound (per discussions with WDNR and consultants, 2019-2021). A typical rural pollution control practice may be between \$5,000 and \$20,000 depending on practice type and size, while an urban stormwater best management practice (BMP) may range from \$50,000 to over \$3,000,000 (engineering, land acquisition, construction, etc.) (per recommendations in the 2014 Storm Water Quality Master Plan, December 2014).

City of Watertown Engineering Division staff began working with the Jefferson County Land & Water Conservation Department (County) and the Rock River Coalition (RRC) in early 2022 to develop a Water Quality Trading program to meet the City's TMDL requirements of the MS4 Permit. This partnership will lean heavily on the vast expertise and experience of both the County staff and the RRC regarding nonpoint source runoff best management practices, in-field assessments and site conditions, modeling, documentation, outreach, communications and more. Funds were approved in the 2023 Stormwater Utility budget to begin Water Quality Trading in 2023, and an Intergovernmental Agreement has been drafted and reviewed by staff and both the County and City attorneys, and has been approved by the City of Watertown Public Works Commission, City of Watertown Common Council and Jefferson County Board.

Local Water Quality Trading to meet TMDL Requirements of the MS4 Permit

The Watertown Waterways Improvement Program (WWIP) is a local water quality trading program designed to reduce excess TSS and Phosphorus identified in the Rock River Total Maximum Daily Load (TMDL) report, dated September 2011, as required by the City of Watertown's Municipal Separate Storm Sewer System (MS4) Permit no. WI-S050075. The backbone of this local water quality trading program is the partnership between the City, Jefferson County Land and Water Conservation Department (County) and the Rock River Coalition (RRC). The experience, expertise, local knowledge and relationships with potential WWIP participants in the target reachsheds is irreplaceable, and is an asset to the program. Wisconsin Department of Natural Resources (WDNR) staff have provided guidance and support during the development of this local water quality trading program.

The structure and roles of partners in the WWIP is as follows:

- City (MS4 permittee): sponsor and funder of the program; credit user

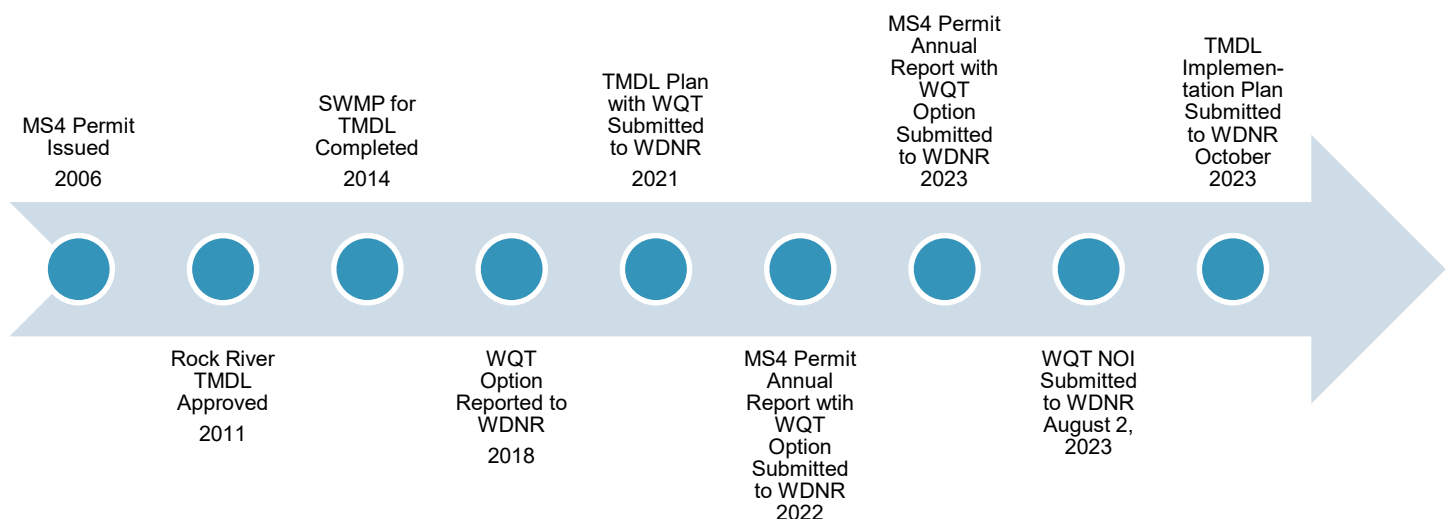
- County: program contact, technical modeling and practice design, inspections and administrative documentation and reporting
- RRC: marketing and outreach, website support
- Property owners/program participants: credit generator; installation and maintenance
- Wisconsin Department of Natural Resources: regulating agency, compliance guidance

Appendix A of the MS4 Permit No. WI-S050075 requires implementation of a plan to reduce pollutants identified in the Rock River TMDL report. The City's TMDL Implementation Plan includes a variety of pollutant reduction approaches, to maximize the City's Stormwater Utility Budget in the most cost-effective way possible. This City's TMDL Implementation Plan includes:

- traditional and green infrastructure stormwater quality treatment systems
- maximizing water quality aspects of flood control measures
- coordination with private property owners and developers
- potential dry pond retrofits
- a municipal leaf collection program
- waterway restoration projects
- water quality trading

The City formally notified the Wisconsin Department of Natural Resources (WDNR) of the decision to pursue a water quality trading program to meet the TMDL requirements in March 2018, per MS4 Permit No. WI-S050075-2 Section 1.5.4.5. The water quality trading program has also been discussed in MS4 Permit Annual Reports in 2021, 2022 and 2023. The water quality trading Notice of Intent (Form 3400-206) was submitted to WDNR on August 2, 2023. The City's TMDL Implementation Plan for 2024-2029, including the local water quality trading program, to meet Section A.6.3 of the MS4 Permit was submitted on October 27, 2023.

Figure 1: Timeline of Completed TMDL Implementation Milestones

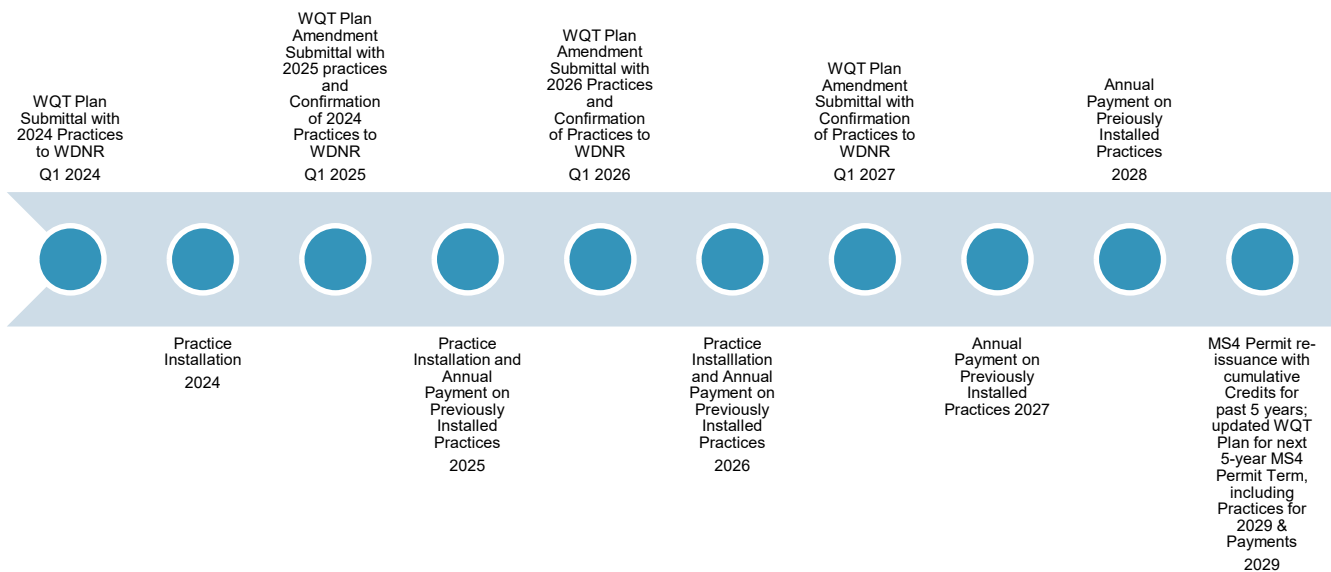


The WWIP officially began with a kick-off meeting to local property owners on August 30, 2023. Multiple property owners have since expressed interest in the program.

Water Quality Trading Plans (WQT Plans) for individual projects are planned to be submitted to DNR for review and approval annually as new projects are planned for construction. A fall sign-up deadline for the WWIP will be determined, which will allow time for field visits, modeling, and plan development prior to construction the following spring. The WQT Plan has been developed to capture individual project information in the appendices. The City is seeking approval from DNR of the proposed projects for use in compliance with the MS4 Permit prior to construction, as City staff strive to be good stewards of the City stormwater utility and the funds that are being spent on this water quality trading program.

Credits that are generated by projects in the WWIP will be assigned to the City's TMDL compliance program at the beginning of the subsequent MS4 Permit term. This will allow a few years after construction for the practice to grow and become established prior to the City claiming the TSS and phosphorus credits. The average length of an agreement with the property owner is expected to be 10 years, with the option of renewing the agreement once the existing one expires if the property owner is interested. Developing and installing projects within a 5-year time period in anticipation of claiming those credits beginning with the subsequent 5-year permit term also allows the WWIP partners to plan and budget on 5-year intervals. Staffing, budgets, complimentary urban water quality projects and other factors may be considered as planning evolves for the WWIP.

Figure 2: Example Timeline of Upcoming WWIP Implementation Milestones



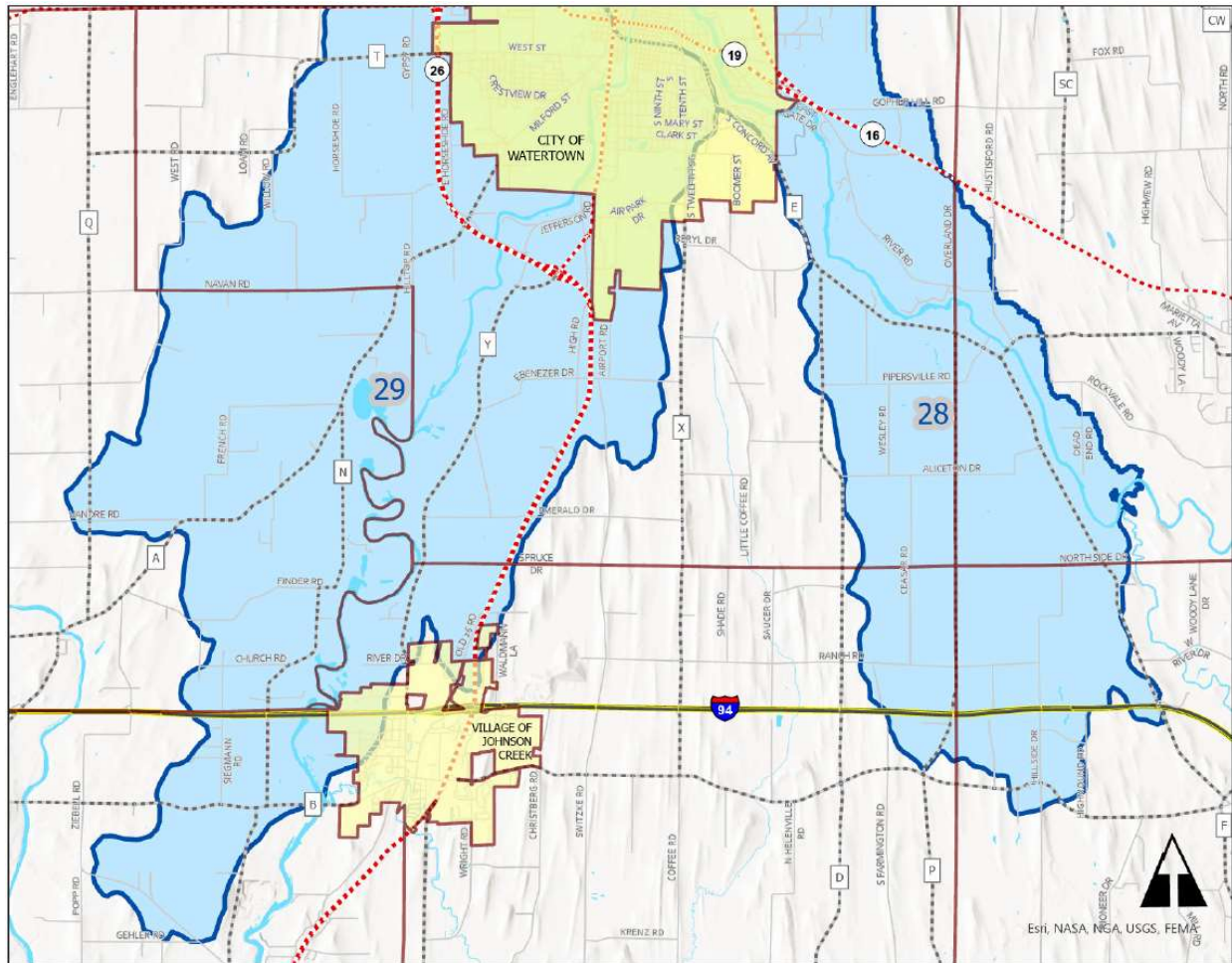
Full compliance with the TMDL requirements in the MS4 Permit is expected to take multiple decades through the City's Water Quality Trading Program. Current projections estimate 30-60 nonpoint source projects will need to be installed in Reachsheds 28 & 29 to meet the TSS

and TP reduction goals in the reachsheds required by the MS4 Permit. Most of the practices will result in an installation payment and annual payments to the property owner over a period of 10 years (some projects will only have the installation cost, and some project may have a slightly different timeframe). Property owners are able to re-enroll the practice in the WWIP after the initial time commitment is over, if desired.

The Watertown Waterways Improvement Program (WWIP) has been designed to meet the requirements of the Wisconsin Department of Natural Resources (WDNR) MS4 Permit No. WI-S050075-2 Section 1.5.4.5 (submitted in 2018) and MS4 Permit No. WI-S050075-3 Section A.3. In addition, the WWIP, as part of the overall City of Watertown's TMDL Implementation Plan, meets the requirements of NR216.07(10)(c), Wisconsin Administrative Code, regarding US EPA-approved TMDL. The WWIP has also been developed to meet the requirements of Chapter 283.84, Wisconsin State Statutes, regarding trading of water pollution credits. The pollutant credits generated by the proposed practices will be assigned to the City of Watertown's TMDL compliance under the subsequent MS4 Permit after the practices have been installed. A summary of the practices and the resulting TSS and phosphorus credits can be provided in tabular format with the MS4 Permit Annual Report, which is submitted by March 31st each year, and in the updated table of WWIP practices with each amended WQT Plan submittal. This approach of submitting the compliance mechanism with the annual report is similar to the format for other compliance subjects within the MS4 Permit. The City intends to continue operating the WWIP and the other required MS4 Permit compliance programs under MS4 Permit No. WI-S050075, and anticipates more specific water quality trading permit language and reporting forms to be included in future versions of MS4 Permit No. WI-S050075.

WWIP 2024-2029 Water Quality Trading Plan Locations, Practice Types and Timeline

The Watertown Waterways Improvement Program (WWIP) is implemented within the Jefferson County portions of Rock River TMDL Reachsheds 28 & 29.



Source: Jefferson County Land and Water Resource Department

See Appendix F for site-specific information on individual practices.

Nonpoint source practices that are covered in this program include:

- Harvestable Vegetated Filter Strips
- Vegetated Filter Strips
- Grassed Waterways
- Roof Runoff Structures

Other acceptable practices will be evaluated on a case-by-case basis.

The WWIP will be implemented on a 5-year basis, concurrent with the WDNR-issued MS4 Permit. Annual updates will be made to the WWIP Water Quality Trading Plan when new practices are planned to be implemented in the following year. Practices that are established within the 5-year permit period will be compiled at the end of the 5 years with the re-application for MS4 Permit coverage. The amount of TSS & Phosphorus that is controlled by those practices can then be included in the subsequent MS4 Permit.

Proposed Projects and Credit Locations

The Watertown Waterways Improvement Program (WWIP) is anticipated to result in numerous nonpoint source projects throughout TMDL Reachsheds RR-28 & RR-29 within over multiple decades. The resulting pollutant reductions will be used to meet the requirements of the City of Watertown's Municipal Separate Storm Sewer System (MS4) Permit WI-S050075-3.

A brief summary of this year's proposed projects is listed here. Detailed information on these projects, as well as any previous projects, is included in Appendix F.

Inspections and Maintenance, Reporting

Practices will be inspected annually to ensure performance. The property owner is responsible for performing any needed maintenance of the practices. If maintenance is not completed resulting in the practice under-performing, then the annual payment from the City to the property owner may be withheld. See Appendix G for site-specific maintenance plans.

Summary

The Watertown Waterways Improvement Program (WWIP) is a local water quality trading program intended to meet the TSS and Phosphorus reduction requirements of the Rock River TMDL (Total Maximum Daily Load) study, per the City of Watertown's Municipal Separate Storm Sewer System (MS4) Permit No. WI-S050075. The program is planned to be implemented over multiple decades. This local water quality improvement program draws off the experience, existing relationships and expertise of the partners involved.

The Water Quality Trading Plan (WQT Plan) describing individual proposed projects will be submitted to the DNR prior to installation for review and approval to use toward the TMDL compliance requirements of the MS4 Permit. Subsequent WQT Plan submittals will include

an additional appendix with the upcoming year's proposed projects. This will allow for public notice once during the year.

Certification of Water Quality Trading Plan

Water Quality Trading Plan prepared by:

Site-specific modeling and project details prepared by:

The undersigned hereby certifies that this water quality trading plan to meet the TMDL requirements of the MS4 Permit is accurate and correct to the best of his/her knowledge.

Authorized Permit Representative:

_____ (signed) _____ (date)

_____ (printed)

Appendices

- A. MS4 Permit-WQT Notice of Intent
- B. Management Practice Registration Form (Form 3400-207)
- C. Watertown Waterways Improvement Program (WWIP) Brochure
- D. Figure A: WWIP Area Location Map
- E. Project Status Spreadsheet
- F. Figure B: Cumulative Project Sites Location Map
- G. 2024 Proposed Projects and Credit Location Details

Appendix A

MS4 Permit – Notice of Intent (August 2023)

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) Page 1 of 2

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 City of Watertown | | Permit Number WI- S050075-3 | Facility Site Number 31435 | |
| Facility Address 106 Jones Street | | City Watertown | State WI | ZIP Code 53094 |
| Project Contact Name (if applicable) Maureen McBroom | Address 106 Jones Street | City Watertown | State WI | ZIP Code 53094 |
| Project Name Watertown Waterways Improvement Program (WWIP) | | | | |
| Receiving Water Name Rock River | Parameter(s) being traded TSS/Sediment & Phosphorus | HUC 12(s) 070900010608, 070900011103 | | |

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

| Credit Generator Information | |
|--|--|
| Credit generator type (select all that apply): | <input type="checkbox"/> Permitted Discharge (non-MS4/CAFO) <input type="checkbox"/> Urban nonpoint source discharge <input type="checkbox"/> Permitted MS4 <input checked="" type="checkbox"/> Agricultural nonpoint source discharge <input type="checkbox"/> Permitted CAFO <input type="checkbox"/> 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: Jefferson County Land & Water
 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? |
|--|---------------|------|-----------------|--|
| <input type="radio"/> Traditional <input type="radio"/> MS4 <input type="radio"/> CAFO | | | | <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure |
| <input type="radio"/> Traditional <input type="radio"/> MS4 <input type="radio"/> CAFO | | | | <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure |
| <input type="radio"/> Traditional <input type="radio"/> MS4 <input type="radio"/> CAFO | | | | <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure |
| <input type="radio"/> Traditional <input type="radio"/> MS4 <input type="radio"/> CAFO | | | | <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure |
| <input type="radio"/> Traditional <input type="radio"/> MS4 <input type="radio"/> CAFO | | | | <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure |

Notice of Intent to Conduct Water Quality Trading
Form 3400-206 (1/14) Page 2 of 2

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

List the practices that will be used to generate credits:

Nonpoint source practices including filter strips, grassed waterways, barnyard management, etc.

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

Projected date credits will be available: 09/01/2023

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 <i>Maurice McBreen</i> | Date Signed <i>8/2/2023</i> |
|---|--------------------------------|

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 <i>James J. Hollaway</i> | Date Signed <i>8-2-23</i> |
|--|------------------------------|

Appendix B

Management Practice Registration Form

Save... Print... Clear Data

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? <input type="radio"/> Yes <input type="radio"/> 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 |
| <input type="radio"/> Urban NPS <input type="radio"/> Agricultural NPS <input type="radio"/> Other | | | | | |
| County | Closest Receiving Water Name | | Land Parcel ID(s) | Parameter(s) being traded | |
| The preparer certifies all of the following: | | | | | |
| <ul style="list-style-type: none"> 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 <input type="checkbox"/> Yes | | Date Entered | | Name of Department Reviewer | |

Appendix C

Watertown Waterways Improvement Program (WWIP) Brochure

For more information on water quality trading and the City of Watertown Waterways Improvement Program please visit the Rock River Coalition website:

www.rockrivercoalition.org/watertown-waterways-improvement-program/



QUESTIONS?

Watertown Waterways Improvement Program Contact:

David Hoffman
Jefferson County Land & Water Conservation Department

 dhoffman@jeffersoncountywi.gov

 920-674-7115

THE CITY OF WATERTOWN
WATERWAYS IMPROVEMENT PROGRAM

Landowner incentives for conservation practices that improve local water quality



THE CITY OF WATERTOWN
WATERWAYS IMPROVEMENT PROGRAM

The City of Watertown is implementing *water quality trading* as an innovative way to achieve clean water goals and reduce the amount of phosphorus entering local waterways. Water quality trading gives municipalities the ability to partner with area landowners on implementing conservation practices that will achieve pollutant reductions.

Watertown's water quality trading will be facilitated by the *Watertown Waterways Improvement Program (WWIP)*, a partnership between Jefferson County Land and Water Conservation Department (LWCD), Rock River Coalition and the City of Watertown. This program will involve area landowners with the goal of reducing phosphorus in a way that is more effective and less expensive than the City working individually.

To help meet water quality requirements, the City of Watertown will reimburse private landowners for implementing voluntary conservation practices through WWIP. These conservation practices will

help decrease the amount of phosphorus runoff and improve water quality in the watershed at large. Eligible landowners who participate in this program will sign 10-year contracts, will be paid a fixed rate upon installation, and in some cases will receive annual payments for the length of the contract (see rates on back page).

Landowner Benefits:

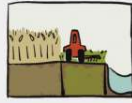
- **Receive economic incentives offered through the City of Watertown.**
- **Reduce soil erosion on your property.**
- **Improve your local water quality.**
- **Improve your farm's sustainability.**



CONSERVATION PRACTICES

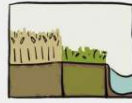
Examples include:

HARVESTABLE VEGETATED FILTER STRIPS



Strip of vegetation along the edge of a cropped field and/or adjacent to a waterway. The strips can be harvested as forage throughout the growing season.

VEGETATED FILTER STRIPS



Strips of vegetation (native species optional) along the edge of a cropped field and/or adjacent to a waterway that reduce suspended solids and contaminants.

GRASSED WATERWAYS



Graded channels with vegetation suitable to transport surface water to a less erodible site, which allows fields to shed water and reduces further erosion.

Additional practices:

- Roof runoff structures
- Other acceptable best management practices may be eligible.

PARTICIPATION PROCESS

- 1. Site Visit:** The landowner and LWCD meet and determine which conservation practice(s) works best for the land and landowner.
- 2. Design of Practice:** LWCD prepares a proposed conservation practice plan.
- 3. Modeling & Paperwork:** LWCD models phosphorus reduction based on the proposed plan.
- 4. Practice Approval:** The City of Watertown approves the conservation practice plan for funding.
- 5. Contracting:** The landowner signs a conservation practice contract.
- 6. Practice Installation:** The landowner or contractor installs the conservation practice (with oversight by LWCD if applicable).
- 7. Practice Certification & Payment:** Once installed, LWCD visits the property to certify practice. The City of Watertown pays the landowner the contracted initial payment.
- 8. Recording of Practice:** The City of Watertown records the conservation practice on the property deed.
- 9. Annual Visits:** LWCD conducts yearly site visits. If applicable, the City of Watertown pays the landowner an annual payment.
- 10. Termination:** Upon completion of contract, the City of Watertown files termination of agreement on property deed (unless the contract is renewed).

PAYMENT RATES TABLE

| Practice | One Time Installation Rate (\$/ac.) | Annual Payment Rate (\$/ac.) | Estimated Practice Lifespan* (Years) | Contract Period | Comments |
|---|---|------------------------------|--------------------------------------|-----------------|---|
| Harvestable Vegetated Filter Strips | 225 Upright | 400 Annually | 10+ | 10 | <ul style="list-style-type: none"> • Width of Buffers/Filters is 30' min. and 150' max. • Potential for larger widths so long as it provides additional P-reduction. • Additional funding for native species may be available. |
| Vegetated Filter Strips (Introduce or Native Species) | 225 Upright | 400 Annually | 10+ | 10 | |
| Grassed Waterways | All installation expenses paid, one time payment | | 10+ | 10 | |
| Roof Runoff Structures | All installation expenses paid, one time payment | | Min. of 15 | 10 | |
| Other Accepted Practices | If other phosphorus reducing practices can be utilized, LWCD will work with the City of Watertown to establish guidelines and conditions. | | | | |

* Proper maintenance and management will provide longer lasting functioning practices that will outlive the contract period

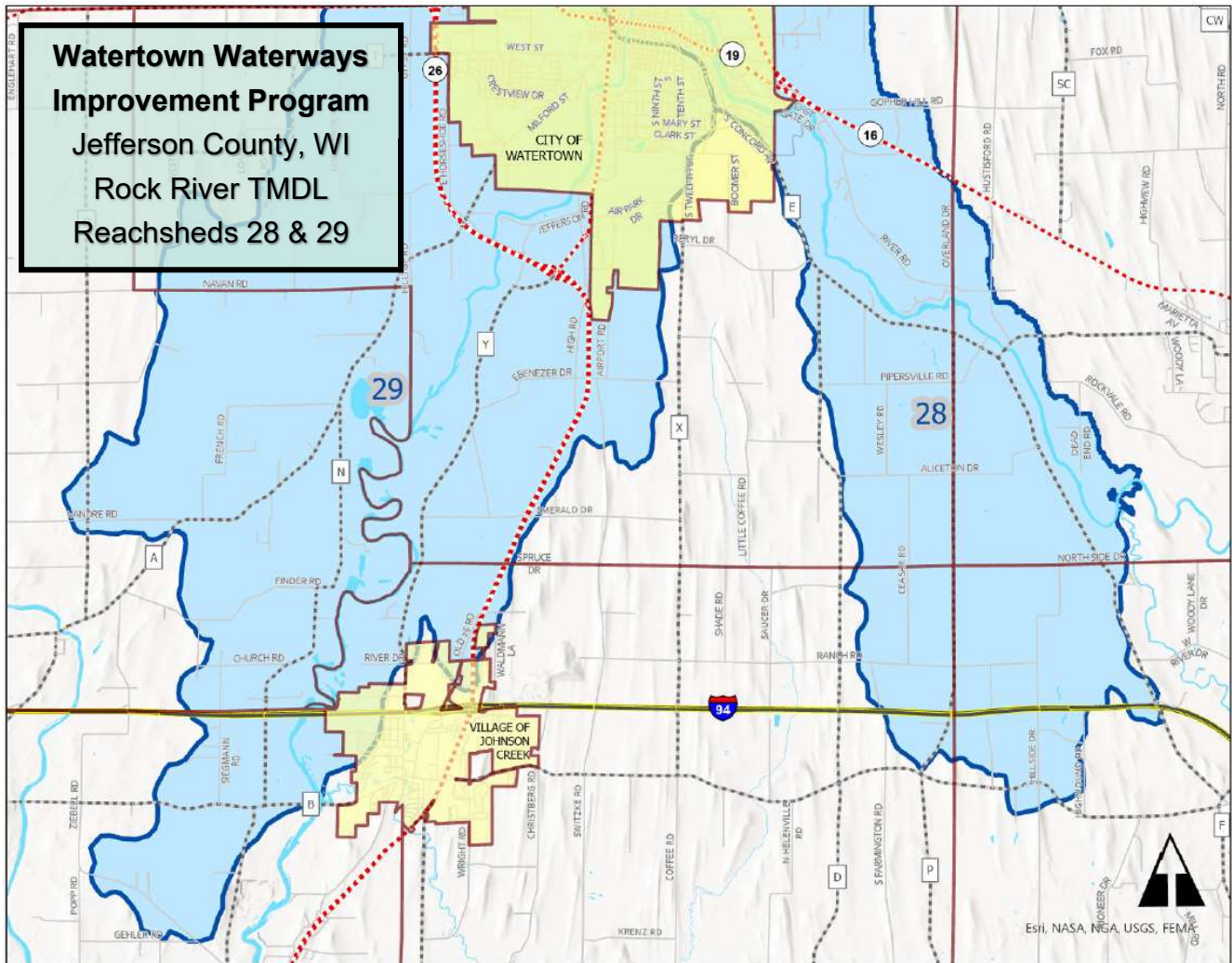
PARTNERS

The Watertown Waterways Improvement Program (WWIP) is a collaborative effort between the City of Watertown, Jefferson County Land and Water Conservation Department (LWCD) and Rock River Coalition, a local nonprofit that works to improve water quality in South Central Wisconsin.



Appendix D

Figure A: WWIP Area Location Map



- WWIP Project Area shown in Blue.

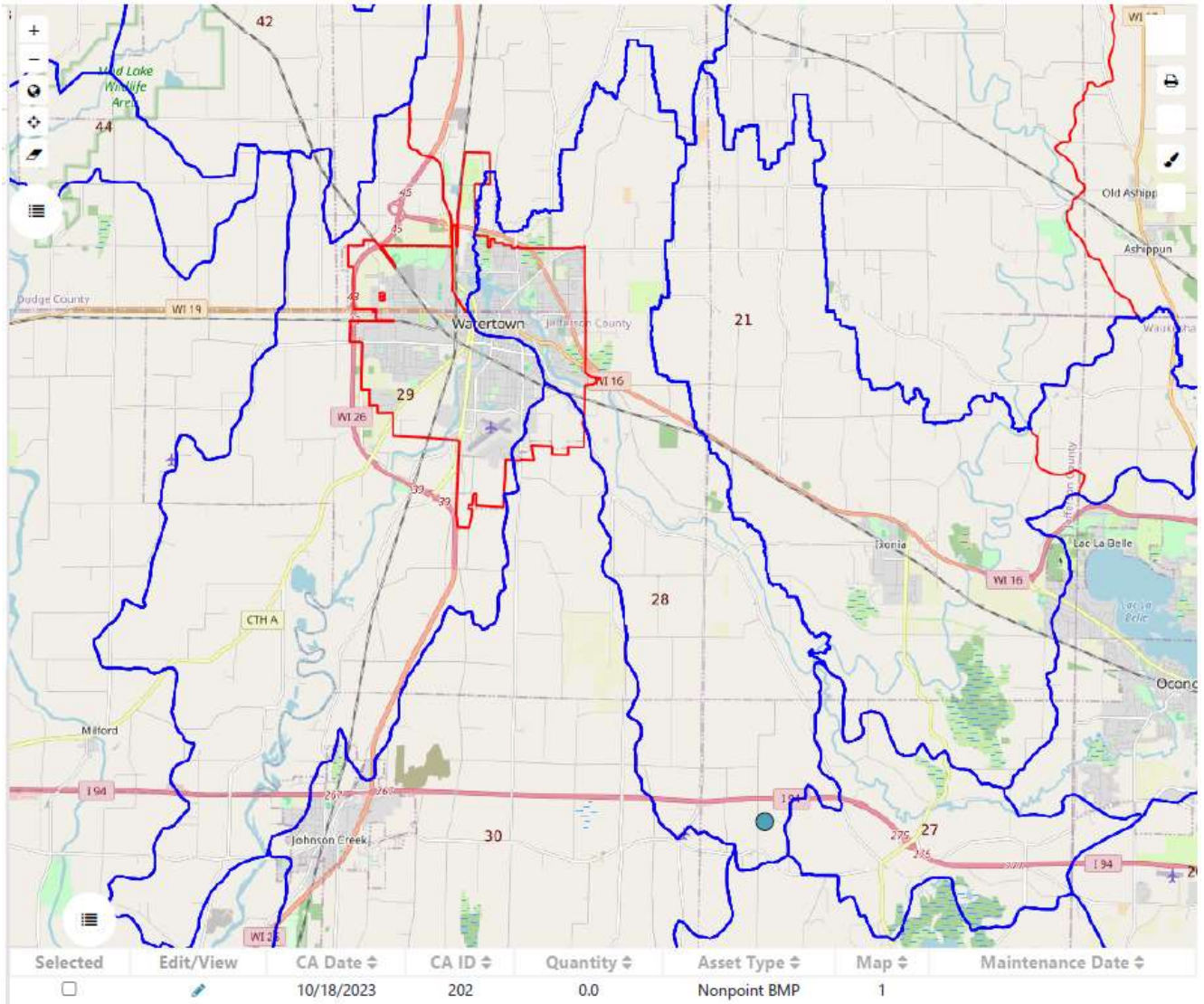
Appendix E

Project Status Spreadsheet

(placeholder for project status spreadsheet)

Appendix F

Figure B: Cumulative Project Sites Location Map



● One (1) Project in Design

Appendix G

WWIP Individual Nonpoint Source Practices – 2024 Update

Proposed Projects and Credit Locations

Project WWIP-RR28-001-2024:

2 Harvestable Buffers (Filter Strips) to control 40.5 acres of cropped fields

Town of Concord, Jefferson County

Trade Ratio: 2 : 1

Anticipated Average Annual Interim TP Reduction Credits: 14.8 lbs.

Anticipated Average Annual Interim TSS Reduction Credits: 2.18 tons

Anticipated Average Annual Long-Term TP Reduction Credits: 58.45 lbs.

Anticipated Average Annual Long-Term TSS Reduction Credits: 6.53 tons

Management Practice Registration recorded at County: (TBD)

Project Status: **Proposed**/Constructed/Performing

PROJECTS 1 and 2:

Two agricultural fields plan to have harvestable buffers installed located in the town of Concord, T7N, R16E, Sec. 08, Jefferson County, Wisconsin, parcel #006-0716-0833-004 (Field M1) and parcel #006-0716-0834-001 (Field M3). Both sites are in the Upper Rock River watershed (HUC 8- 070900001), specifically the Ashippun River- Rock River HUC 12- 070900010608 sub-watershed (Reachshed 28). The planned harvestable buffers will each be 150' wide (maximum width for WWIP payments) and will offer phosphorus and TSS reductions to the agricultural ditch that flows to the Rock River.

DNR Form 3400-208 Water Quality Trading Checklist Criteria for Point to Nonpoint

Trades:

A. Description of Past, Current, and Future Land Use:

Project 1- Field M1

Field M1 (west side of waterway) is in agricultural production on a typical corn for grain-soybean rotation with winter wheat and alfalfa added to the crop rotation as the operator sees necessary. The field primarily consists of FsB silt loam and LaB silt loam soils on 2-6% slopes.

The operator/landowner had portions of field M1 in CRP up until 2022, when they switched over to a corn-soybean rotation. M1 West has historically been broken up into two different fields (north and south) and soil samples taken for each are comparable. When the south field (Field 1 in SnapPlus) is in corn then the north field (Field 2 in SnapPlus) is planted with soybeans and vice versa the following year. Both fields represent one field that contributes P and TSS to the downslope waterway and is identified as Field M1.

The operator plans to combine fields into one whole field (Field M1 in SnapPlus reports), which is considered the contributing area (CA) in the credit spreadsheets provided in Item G. The contributing area is defined as the upslope portion of the agricultural field that delivers water flow and sediment towards the harvestable buffer.

The landowner's conservation plan for M1 calls for a conservation crop rotation and residue and tillage management. A minimum tillage system (fall chisel and spring cultivation) may be used that leaves at least 30% soybean residue cover and at least 40% corn residue cover. No-till can be applied at any time for each field. In SnapPlus, M1's recent soil samples indicate a P measurement of 16 ppm with average soil loss (T-value) of 4 tons/acre/year. Contour farming (planting and tilling on the contour versus up and down hills) is being practiced on this field.

Project 2- Field M3

Field M3 (field and harvestable buffer on the east side of waterway) is in agricultural production on a typical corn-bean rotation with winter wheat and alfalfa added to the crop rotation as the operator sees necessary. The primary soils are ThC2 silt loam on 6-12% slopes, LaB silt-loam on 2-6% slopes, and Sm soils with 0-2% slopes.

M3 East has historically been broken up into two different fields (west (S01) and east (S02) based on SnapPlus data) and recent soil samples taken for each are average 11 ppm with average soil loss of 4 tons/acre/year. Both fields represent one field that contributes P and TSS to the downslope agricultural ditch and is identified as Field M3. Contour farming is also being practiced on M3.

Both M1 and M3 fields have slopes draining towards an agricultural ditch, which has year-round water flow, making these fields good candidates for potential trading. Within M1 field, there's a concentrated flow area that was field checked, in 2021 for Jefferson County's Farmland Preservation Program (FPP) and in 2024 due to heavy rains. LWCD staff have verified there's no gully forming. The concentrated flow begins to fan out and disperse its energy as the slope decreases prior to reaching the 150' wide buffer.

Both M1 and M3 fields have remained in FPP compliance since 2016 and are compliant with NR151 Runoff Management statutes. Below is a copy of the landowner's approved nutrient management plan 590 Checklist. Jefferson County LWCD staff checked these fields on June 1, 2021 and found them to be in compliance with the Farmland Preservation Program.

ARM-LWR-480 (REV. 06/22/17)



Wisconsin Department of Agriculture, Trade and Consumer Protection
 Division of Agricultural Resource Management
 Bureau of Land and Water Resources
 PO Box 8911, Madison WI 53708-8911, Phone: 608-224-4605

Use this form to check nutrient management (NM) plans for compliance with the WI NRCS 2015-590 Standard.

Nutrient Management Checklist Wis. Stat. §92.05(3) (k), Wis. Admin. Code §ATCP50.04(3) and Ch. 51

| | | | |
|--|---|---|---|
| COUNTY Jefferson | DATE PLAN SUBMITTED 1/23/2024 | GROWING SEASON YEAR PLAN IS WRITTEN FOR 2024 (from harvest to harvest) | |
| TOWNSHIP: (T. 7 N.) | RANGE: (R. 16 E., W.) | CHECK ONE: Initial Plan or Updated Plan | |
| NAME OF FARM OPERATOR RECEIVING NM PLAN Ted Mueller | | FARM NAME (OPTIONAL) Mueller Farms | BUSINESS PHONE 920-988-2583 |
| STREET ADDRESS W2117 Northside Drive | | CITY Watertown | STATE ZIP WI 53094 |
| REASON THE PLAN WAS DEVELOPED: DATCP – FP or cost share | | | CROPLAND ACRES (OWNED & RENTED) 226 |
| RENTED FARM(S) LANDOWNER NAME(S) AND ACREAGE: add sheet(s) if needed Vi Corliss 27 ac | | | |
| WAS THE PLAN WRITTEN IN SNAPPLUS? YES | | If yes, which software version, if known? 20.4 | |
| CHECK PLANNER'S QUALIFICATION: (1. NAICC-CPCC, 2. ASA-CCA, 3. 555A-Soil Scientist, 4. DATCP approved training course, 5. Other approved by DATCP) | | | |
| NAME OF QUALIFIED NUTRIENT MANAGEMENT PLANNER Paul Davidson | | | BUSINESS PHONE 920-925-3737 |
| STREET ADDRESS N1754 Cty R P.O. Box 9 | | CITY Lebanon | STATE ZIP WI 53047 |

Use header sections to add comments. Mark NA in the shaded sections if no manure is applied.

1. Does the plan include the following nutrient application requirements to protect surface and groundwater?

This section applies to fields and pastures. If no manure is applied, check NA for 1.c., 1.h., 1.i., 1.n., 1.o., 1.q., 1.s.

| | | Yes | No | NA |
|---|---|-----|----|----|
| a. Determine field nutrient levels from soil samples analyzed by a DATCP certified laboratory. | X | | | |
| b. For fields or pastures with mechanical nutrient applications, determine field nutrient levels 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. Soil tests are not required on pastures that do not receive mechanical applications of nutrients if either of the following applies: 1. The pasture average stocking rate is one animal unit per acre or less at all times during the grazing season. 2. The pasture is winter grazed or stocked at an average stocking rate of more than one animal unit per acre during the grazing season, and a nutrient management plan for the pasture complies with 590 using an assumed soil test phosphorus level of 150 PPM and organic matter content of 6%. | X | | | |
| c. For livestock siting permit approval, collect and analyze soil samples meeting the requirements above in 1. b., excluding pastures, within 12 months of approval and revise the nutrient management plan accordingly. Until then, either option below maybe used: 1. Assume soil test phosphorus levels are greater than 100 ppm soil test P, OR 2. Use preliminary estimates analyzed by a certified DATCP laboratory with soil samples representing > 5 ac/sample. | | | | X |
| d. Identify all fields' name, boundary, acres, and location. | X | | | |
| e. Use the field's previous year's legume credit and/or applications, predominant soil series, and realistic yield goals to determine the crop's nutrient application rates consistent with A2809 for ALL forms of N, P, and K. | X | | | |
| f. Make no winter applications of N and P fertilizer, except on grass pastures and winter grains. | X | | | |
| g. Document method used to determine application rates. Nutrients shall not runoff during or immediately after application. | X | | | |
| h. Identify in the plan that adequate acreage is available for manure produced and/or applied. | | | | X |
| i. Apply a single phosphorus (P) assessment using either the P index or soil test P management strategy to all fields within a tract when fields receive manure or organic by-products during the crop rotation. | | | | X |
| j. Use complete crop rotations and the field's critical soil series to determine that sheet and rill erosion estimates will not exceed tolerable soil loss (T) rates on fields that receive nutrients. | X | | | |
| k. Use contours; reduce tillage; adjust the crop rotation; or implement other practices to prevent ephemeral erosion; and maintain perennial vegetative cover to prevent reoccurring gullies in areas of concentrated flow. | X | | | |
| l. Make no nutrient applications within 8' of irrigation wells or where vegetation is not removed. | X | | | |
| m. Make no nutrient applications within 50' of all direct conduits to groundwater, unless directly deposited by gleaning/pasturing animals or applied as starter fertilizer to corn. | X | | | |

| | Yes | No | NA |
|--|-----|----|----|
| n. Make no untreated manure applications to areas within 1000' of a community potable water well or within 100' of a non-community potable water well (ex. church, school, restaurant) unless manure is treated to substantially eliminate pathogens. | | | X |
| o. Make no manure applications to areas locally delineated by the Land Conservation Committee or in a conservation plan as areas contributing runoff to direct conduits to groundwater unless manure is substantially buried within 24 hours of application. | | | X |
| p. Make no applications of late summer or fall commercial N fertilizer to the following areas UNLESS needed for establishment of fall seeded crops OR to meet A2809 with a blended commercial fertilizer. Commercial fertilizer N applications shall not exceed 36 lbs. N/acre on: <ul style="list-style-type: none"> • Sites vulnerable to N leaching PRW Soils (P=high permeability, R= bedrock < 20 inches, or W= wet < 12 inches to apparent water table); • Soils with depths of 5 feet or less to bedrock; • Area within 1,000 feet of a community potable water well. On P soils, when commercial N is applied for full season crops in spring and summer , follow A2809 and apply one of the following: <ol style="list-style-type: none"> 1. A split or delayed N application to apply a majority of crop N requirement after crop establishment. 2. Use a nitrification inhibitor with ammonium forms of N. 3. Use slow and controlled release fertilizers for a majority of the crop N requirement applied near the time of planting. | X | | |
| q. Limit manure applications in late summer or fall using the lesser of A2809 or the following 590 rates on PRW Soils . Use ≤ 120 lbs. available N/acre on: P and R soils on all crops, except annual crops. Additionally, manure with ≤ 4% dry matter (DM) wait until after soil temp. < 50°F or Oct. 1, and use either a nitrification inhibitor OR surface apply and do not incorporate for at least 3 days. W soils or combo. W soils on all crops. Additionally, manure with ≤ 4% DM on all crops use at least one of the following: <ol style="list-style-type: none"> 1. Use a nitrification inhibitor; 2. Apply on an established cover crop, an overwintering annual, or perennial crop; 3. Establish a cover crop within 14 days of application; 4. Surface apply & don't incorporate for at least 3 days; 5. Wait until after soil temp. < 50°F or Oct. 1. Use ≤ 90 lbs. available N/acre on: P and R soils on annual crops wait until after soil temp. < 50°F or Oct. 1. Additionally, manure with ≤ 4% DM use either a nitrification inhibitor OR surface apply and do not incorporate for at least 3 days. W soils or combination W soils receiving manure with ≤ 4% DM on all crops. | | | X |
| r. Use at least one of the following practices on non-frozen soils for all nutrient applications within Surface Water Quality Management Area (SWQMA) = 1000' of lakes/ponds or 300' of rivers: <ol style="list-style-type: none"> 1. Maintain > 30% cover after nutrient application; 2. Effective incorporation within 72 hours of application; 3. Establish crops prior to, at, or promptly following application; 4. Install/maintain vegetative buffers or filter strips; 5. Have at least 3 consecutive years no-till for applications to fields with < 30% residue (silage) and apply nutrients within 7 days of planting. | X | | |
| s. Limit mechanical applications to 12,000 gals/acre of unincorporated liquid manure or organic by-products with 11% or less dry matter where subsurface drainage is present OR within SWQMA. Wait a minimum of 7 days between sequential applications AND use one or more of the practice options on non-frozen soils listed in 1.r.1. through 1.r.5. | | | X |

2. When frozen or snow-covered soils prevent effective incorporation, does the plan follow these requirements for winter applications of all mechanically applied manure or organic by-products? *This section doesn't apply to winter gleaning/pasturing meeting 590 N and P requirements.*

If no manure is applied, check NA for 2.a. through 2.g.

| | Yes | No | NA |
|--|-----|----|----|
| a. Identify manure quantities planned to be spread during the winter , or the amount of manure generated in 14 days, whichever is greater. For daily haul systems, assume 1/3 of the manure produced annually will need to be winter applied. | | | X |
| b. Identify manure storage capacity for each type applied and stacking capacity for manure ≥ 16% DM if permanent storage does not exist. | | | X |
| c. Show on map and make no applications within the SWQMA . | | | X |
| d. Show on map and make no surface applications of liquid manure during February and March where Silurian dolomite is within 60 inches of the soils surface OR where DNR Well Compensation funds provided replacement water supplies for wells contaminated with livestock manure. | | | X |
| e. Show on map and make no applications of manure within 300 feet of direct conduits to groundwater . | | | X |
| f. Do not exceed the P removal of the following growing season's crop when applying manure. Liquid manure applications are limited to 7,000 g/acre . All winter manure applications are not to exceed 60 lbs. of P2O5/acre . | | | X |
| g. Make no applications of manure to fields with concentrated flow channels unless using two of the following: <ol style="list-style-type: none"> 1. Contour buffer strips or contour strip cropping; 2. Leave all crop residue and no fall tillage; 3. Apply manure in intermittent strips on no more than 50% of field; 4. Apply manure on no more than 25% of the field waiting a minimum of 14 days between applications; 5. Reduce manure app. rate to 3,500 gal. or 30 lbs. P2O5, whichever is less; 6. No manure application within 200 feet of all concentrated flow channels; 7. Fall tillage is on the contour and slopes are lower than 6%. Make no applications to slopes greater than 6% (soil map units with C, D, E, and F slopes) unless the plan documents that no other accessible fields are available for winter spreading AND two of the options 2.g.1. through 2.g.5. are used. | | | X |

I certify that the plan represented by the answers on this checklist complies with Wisconsin's NRCS 2015-590 NM Standard or is otherwise noted.

| | |
|---|---|
| | 1-23-24 |
| Qualified NM planner signature NAICC-Certified Professional Crop Consultant, ASA-Certified Crop Adviser, or SSSA-Soil Scientist | Date |
| | 1-24-24 |
| Qualified NM farmer, planner or Authorized farm operator signature receiving and understanding the plan | Date Signature if reviewed for quality assurance Date |

B. Management practices used to generate credits:

Harvestable buffers will be used to generate WQT credits and are swathes of permanent (perennial) vegetation along the downslope side of a cropped field or adjacent to a stream or agricultural ditch that acts as a buffer to reduce water quality degradation from the transport of nutrients downslope. This practice, much like filter strips, has a minimum lifespan of 10 years, and is used to collect suspended solids and associated contaminants from runoff (NRCS CPS Filter Strips Code 390). LWCD will use the NRCS Wisconsin Conservation Practice Standards for Filter Strips (Code 393) and the Planning, Design, Management and Maintenance of Vegetative Filter Strips Wisconsin Agronomy Tech Note 10 as the requirement for planning, site-preparation, seed mixes, establishment, and ongoing maintenance.

The buffers will be harvested as a way to incentivize landowners, beyond payments, to allow the use of the established perennial vegetation for livestock feed or other sources of income, while still providing water quality benefits. This keeps the land in production and the buffer continues to be effective at P and TSS reduction if managed properly.

An added benefit of harvestable buffers is the plant itself has continuous P uptake throughout the growing season, so there's an increase P reduction by the removal of biomass which is not calculated in SnapPlus or will be used as additional credits. Per NRCS Code 393, where the purpose is to remove phosphorus, remove (harvest) the filter strip aboveground biomass at least once each year. Also, for the purposes of filtering contaminants, permanent filter strips shall be harvested as appropriate to encourage dense growth, maintain an upright growth habit, and remove nutrients and other contaminants that are contained in the plant tissue (NRCS Code 393, pg. 4).

See Item K below for installation, establishment, and management guidelines.

C. Amount of credit being generated:

The following tables in this section show the potentially tradable phosphorus (PTP) and total suspended solids (TSS) available credits with a 2:1 trade ratio applied. These credits will be available for Watertown to use over the course of a 10-year agreement (2024-2033 for interim credits) between the City and the credit generator. Additionally, the City will seek continued 10-year agreements with the credit generator to apply for long-term credits which are only available after the initial interim credits are expired.

For nonpoint source credit generators an interim credit must be given for reductions made to comply with total maximum daily load (TMDL) load allocations. Interim credits are generated for the first ten years of an approved practice (i.e. harvestable buffer), and long-term credit will be given for all reductions that go above and beyond the load allocation in TMDL areas.

Credits are generated by using the P and TSS Trade Reports, from SnapPlus, within approved TMDL watersheds, and requires an additional step to determine final water quality trading credits. This step requires identifying the credit threshold for an approved TMDL watershed, then applying the credit threshold to SnapPlus P/TSS Trade reports results, and finally using applicable trade ratios. These steps and how to find the credit threshold based off the percent reduction are detailed below.

Interim Credits

Interim credits are based on the credit threshold which refers to the amount of pollutant reduction that needs to be achieved before credits are generated. The interim credit value is based upon the difference between pre-trade conditions (baseline conditions) and the load allocation/credit threshold. The credit threshold denotes the level of pollutant loading below which reductions need to be made to generate credits. When trading in a watershed with USEPA approved TMDLs, like the Upper Rock River basin, the credit threshold ensures that the assumptions and modeling supporting the allocations contained in the TMDL are maintained (WQT Guidance for WPDES Permits, Chapter 3.2 Pollutant Reduction Credit Threshold, pg.18).

The credit threshold is defined by using the TMDL load allocation, which is represented as a percent reduction from the baseline condition (WQT Guidance for WPDES Permits, Chapter 3.2 Nonpoint source Pollutant Reduction Credit Threshold, pg. 20). After consultation with WDNR the percent reduction needed to determine the credit threshold for Reachshed 28 (location of credit generator) equals 16% and is applied in the spreadsheets and described in the steps detailed below.

The first step in determining the available PTP and TSS credits is inputting all current cropping data and operating conditions into SnapPlus and running both the Water Quality P-Trade and the Water Quality Sediment Trade reports for 13 years (3 years of actual cropping data plus 10 years of cropping if landowner continues farming as is). The baseline data of all fields is shown in the top row of each table. From this data we can first figure the interim credits, which must be applied prior to long-term credits being utilized. Interim credits are generated by load reductions that achieve the interim credit floor or credit threshold and therefore, can only be generated when the current pollutant load exceeds the load allocation (WQT Guidance for WPDES Permits, Chapter 3.3).

Step 1: Use SnapPlus reports to determine baseline (continue current farming practices) P and TSS loss from fields (row 1 in tables below).

Step 2: Baseline reports need to be presented in 5-year averages (row 2 in tables below).

Step 3: The 5-year averages need to be expressed as Lbs./Acre/Year (reports are in Lbs./Field/Year).

- Steps 2 and 3 are completed in the same row- Baseline Load 5-year Avg. Lbs./Ac/Year (Row 2 in tables below).

Step 4: Apply the percent reduction needed to get the credit threshold. Multiply the 5-year average P loss by the % reduction target (16% for Reachshed 28) to determine the TMDL credit threshold (row 3 in tables below).

Step 5: To determine interim credits, subtract the credit threshold from the current average P loss and then multiply by the number of acres in each field (row 4 in tables below).

Step 6: Apply the 2:1 trade ratio by dividing the interim credits by two (row 5 in tables below). This row represents the available interim credits Watertown can use for the first ten years of practice.

PTP and TSS Interim Credits Tables:

| Table 1a: Field M1 Potential Tradable Phosphorus (PTP)- Interim Credits | | | | | | | | | | | | | | | | |
|--|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------|------|
| Field | Acres | PTP 2021 | PTP 2022 | PTP 2023 | PTP 2024 | PTP 2025 | PTP 2026 | PTP 2027 | PTP 2028 | PTP 2029 | PTP 2030 | PTP 2031 | PTP 2032 | PTP 2033 | | |
| M1 Baseline P-Load Lbs/Field/Yr (continue current farming operations) | 30.8 | 64 | 76 | 79 | 212.6 | 95.7 | 221.9 | 97.3 | 222.5 | 97.3 | 222.3 | 97.2 | 221.9 | 96.9 | | |
| M1 Baseline P-Load (2) 5-year Avg. (Lbs/Ac/Yr) | 1.0 | N/A | | | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | | |
| Credit Threshold = 5 yr avg. x 0.85 (Lbs/Ac/Yr) | 1.0 | | | | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| Interim Credits = (Baseline Avg Lbs/Ac/Yr - Credit Threshold) x 30.8 Ac. | 30.8 | | | | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 22.1 | 22.1 | 22.1 | 22.1 | 22.1 | 22.1 |
| Interim Credits with 2:1 Trade (Lbs/Field/Yr) | 30.8 | | | | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |

| Table 2a: Field M3 Potential Tradable Phosphorus (PTP)- Interim Credits | | | | | | | | | | | | | | | |
|--|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----|
| Field | Acres | PTP 2021 | PTP 2022 | PTP 2023 | PTP 2024 | PTP 2025 | PTP 2026 | PTP 2027 | PTP 2028 | PTP 2029 | PTP 2030 | PTP 2031 | PTP 2032 | PTP 2033 | |
| M1 Baseline P-Load Lbs/Field/Yr (continue current farming operations) | 9.8 | 18.8 | 24.0 | 32.2 | 59.8 | 26.8 | 50.0 | 26.8 | 50.3 | 26.9 | 50.3 | 26.9 | 50.3 | 26.8 | |
| M1 Baseline P-Load (2) 5-year Avg. (Lbs/Ac/Yr) | 1.0 | N/A | | | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | |
| Credit Threshold = 5 yr avg. x 0.85 (Lbs/Ac/Yr) | 1 | | | | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| Interim Credits = (Baseline Avg Lbs/Ac/Yr - Credit Threshold) x 30.8 Ac. | 9.8 | | | | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |
| Interim Credits with 2:1 Trade (Lbs/Field/Yr) | 9.8 | | | | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 |

| Table 3a: Field M1 Total Suspended Solids (TSS) Report (Interim Credits) | | | | | | | | | | | | | | | | |
|---|-------|------|------|------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Field | Acres | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | | |
| M1 Baseline TSS Load Tons/Field (continue current farming operations) | 30.8 | 6.2 | 10.8 | 8.6 | 31.8 | 10.2 | 33.3 | 10.3 | 33.5 | 10.3 | 33.5 | 10.3 | 33.5 | 10.3 | | |
| M1 Baseline TSS Loading (2) 5-year Avg. (Lbs/A.Yr) | 1.0 | N/A | | | | 1547.0 | 1547.0 | 1547.0 | 1547.0 | 1547.0 | 1273.5 | 1273.5 | 1273.5 | 1273.5 | | |
| Credit Threshold (Lbs/Ac) = 5 yr avg. \times 0.84 | 1.0 | | | | | 1299.5 | 1299.5 | 1299.5 | 1299.5 | 1299.5 | 1069.7 | 1069.7 | 1069.7 | 1069.7 | 1069.7 | 1069.7 |
| Interim Credits = (Baseline Avg Tons/AcYr - Credit Threshold) \times 30.8 Ac. | 30.8 | | | | | 7623.8 | 7623.8 | 7623.8 | 7623.8 | 7623.8 | 6275.8 | 6275.8 | 6275.8 | 6275.8 | 6275.8 | 6275.8 |
| Interim Credits w/ 2:1 Trade (Lbs/Ac/Field) | 30.8 | | | | | 3811.9 | 3811.9 | 3811.9 | 3811.9 | 3811.9 | 3137.9 | 3137.9 | 3137.9 | 3137.9 | 3137.9 | 3137.9 |
| Interim Credits w/ 2:1 Trade (Tons/Field) | 30.8 | | | | | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 |

| Table 4a: Field M3 Total Suspended Solids (TSS) Report (Interim Credits) | | | | | | | | | | | | | | | |
|--|-------|------|------|------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Field | Acres | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | |
| M3 Baseline TSS Load TonsYr./Field (continue current farming operations) | 9.8 | 3.66 | 3.14 | 3.64 | 12.27 | 3.68 | 10.19 | 3.68 | 10.24 | 3.69 | 10.26 | 3.70 | 10.26 | 3.70 | |
| M3 Baseline TSS Loading (2) 5-year Avg. Lbs./Ac.Yr. | 1.0 | N/A | | | | 1634.7 | 1634.7 | 1634.7 | 1634.7 | 1634.7 | 1289.8 | 1289.8 | 1289.8 | 1289.8 | |
| Credit Threshold (Lbs/Ac) = 5 yr avg. \times 0.84 | 1.0 | | | | | 1373.1 | 1373.1 | 1373.1 | 1373.1 | 1373.1 | 1083.4 | 1083.4 | 1083.4 | 1083.4 | 1083.4 |
| Interim Credits = (Baseline Avg Lbs/AcYr - Credit Threshold) \times 30.8 Ac. | 9.8 | | | | | 2563.2 | 2563.2 | 2563.2 | 2563.2 | 2563.2 | 2022.4 | 2022.4 | 2022.4 | 2022.4 | 2022.4 |
| Interim Credits with 2:1 Trade (Lbs/FieldYr) | 9.8 | | | | | 1281.6 | 1281.6 | 1281.6 | 1281.6 | 1281.6 | 1011.2 | 1011.2 | 1011.2 | 1011.2 | 1011.2 |
| Interim Credits w/ 2:1 Trade (Tons/FieldYr) | 9.8 | | | | | 0.64 | 0.64 | 0.64 | 0.64 | 0.64 | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 |

Long-Term Credits

Long-term credit is given for reductions that reduce pollutant loading to levels below the load allocation in approved TMDL areas. Long-term credit will be given for all reductions that go above and beyond the load allocation in TMDL areas. The tables below introduce the harvestable buffers installed at the edge of the fields and running several SnapPlus reports to determine combined P and TSS loss reductions from installing this conservation practice.

Step 1: Use SnapPlus reports to determine baseline (continue current farming practices) P and TSS loss from fields (row 1 in tables below).

Step 2: Use SnapPlus reports showing perennial vegetation instead of row crops (row 2 in tables below).

Step 3: Use SnapPlus reports to show the loss of acreage in row crops with the harvestable buffer installed and the report considering a filter area designed at the edge of the field shown in row 3 of the tables below. For the report found in row 3 the filter area button in SnapPlus is used, which serves the purpose of including edge-of-field filter strips as a management option to show how a harvestable buffer would reduce PTP/TSS in overland flow.

Step 4: Add the combined PTP/TSS loss. This shows the future predictions and reductions made with harvestable buffer compared to the baseline loads (row 4).

Step 5: Represents row 4 as Lbs./Acre/Year with 5-year averages.

Step 6: To determine the long-term credits, we must subtract 5-year averages from the credit threshold (found in interim credit tables above) and then multiply by the number of acres in the fields to get total lbs. available for trading (row 6).

Step 7: Apply the 2:1 trade ratio by dividing future predictions by two (row 7). This row represents the available credits Watertown can use for long-term use after the interim credits are expired.

PTP and TSS Long-term Credit Tables:

| Table 1b: Field M1 Potential Tradable Phosphorus (PTP) w/ Runoff Reductions- Long-term Credits | | | | | | | | | | | | | | |
|---|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Field | Acres | PTP 2021 | PTP 2022 | PTP 2023 | PTP 2024 | PTP 2025 | PTP 2026 | PTP 2027 | PTP 2028 | PTP 2029 | PTP 2030 | PTP 2031 | PTP 2032 | PTP 2033 |
| M1 Baseline P-Load Lbs/Field/Yr (continue current farming operations) | 30.8 | 64 | 76 | 79 | 212.6 | 95.7 | 221.9 | 97.3 | 222.5 | 97.3 | 222.3 | 97.2 | 221.9 | 96.9 |
| M1 Grass/Alfalfa Buffer Acres | 7.4 | 7 | 8 | 11 | 17.5 | 4.7 | 2.8 | 1.6 | 0.8 | 0.4 | 0.2 | 0.2 | 0.1 | 0.1 |
| M1 Contributing Acres (CA) EOF | 23.3 | 19 | 17 | 27 | 41.4 | 33.2 | 43.4 | 33.9 | 43.5 | 33.9 | 43.5 | 33.8 | 43.4 | 33.7 |
| Combined P-Loss from Buffered Acres + Contributing Acres w/ EOF | 30.7* | 26.4 | 25.1 | 37.7 | 58.9 | 37.8 | 46.2 | 35.5 | 44.4 | 34.3 | 43.7 | 34.0 | 43.5 | 33.9 |
| Future Predictions with EOF and Buffer Installed (2) 5-year Avg. (Lbs/Ac/Yr) | 1.0 | N/A | | | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| Long Term PTP Reduction Avg. w/ Baseline 15% Credit Threshold Applied (Lbs/Field/Yr) | 30.8 | N/A | | | 99.9 | 99.9 | 99.9 | 99.9 | 99.9 | 87.2 | 87.2 | 87.2 | 87.2 | 87.2 |
| Long-term credits applied after 10-yr. interim credits are used | | | | | | | | | | | | | | |
| Long-term Credits w/ 2:1 Trade PTP (Lbs/Field/Yr) | 30.8 | N/A | | | PTP 2034 | PTP 2035 | PTP 2036 | PTP 2037 | PTP 2038 | PTP 2039 | PTP 2040 | PTP 2041 | PTP 2042 | PTP 2043 |
| | | | | | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 43.6 | 43.6 | 43.6 | 43.6 | 43.6 |
| *Difference in acreage due to SnapPlus mapping functionality. The program does not like layered polygons on the same field which resulted in 0.1 ac. difference between the whole field (M1 Baseline), the buffered field, and the contributing acre field. | | | | | | | | | | | | | | |

Table 2b: Field M3 Potential Tradable Phosphorus (PTP) w/ Runoff Reductions- Long-term Credits

| Field | Acres | PTP 2021 | PTP 2022 | PTP 2023 | PTP 2024 | PTP 2025 | PTP 2026 | PTP 2027 | PTP 2028 | PTP 2029 | PTP 2030 | PTP 2031 | PTP 2032 | PTP 2033 |
|--|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| M1 Baseline P-Load Lbs/Field/Yr (continue current farming operations) | 9.8 | 18.8 | 24.0 | 32.2 | 59.8 | 26.8 | 50.0 | 26.8 | 50.3 | 26.9 | 50.3 | 26.9 | 50.3 | 26.8 |
| M1 Grass/Alfalfa Buffer Acres | 2.7 | 2.4 | 4.0 | 5.4 | 5.2 | 1.5 | 0.9 | 0.5 | 0.3 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| M1 Contributing Acres (CA) EOF | 7.1 | 4.5 | 8.3 | 11.1 | 11.3 | 8.8 | 9.5 | 8.8 | 9.5 | 8.8 | 9.5 | 8.8 | 9.5 | 8.8 |
| Combined P-Loss from Buffered Acres + Contributing Acres w/ EOF | 9.8 | 6.9 | 12.4 | 16.6 | 16.6 | 10.3 | 10.4 | 9.3 | 9.8 | 9.0 | 9.6 | 8.9 | 9.6 | 8.8 |
| Future Predictions with EOF and Buffer Installed (2) 5-year Avg. (Lbs/Ac/Yr) | 1 | N/A | | | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Long Term PTP Reduction Avg. w/ Baseline 15% Credit Threshold Applied (Lbs/Field/Yr) | 9.8 | | | | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 21.6 | 21.6 | 21.6 | 21.6 | 21.6 |
| Long-term credits applied after 10-yr. interim credits are used | | | | | | | | | | | | | | |
| Long-term Credits (2:1 Trade) After 1st 10 yr. Interim Credits | 9.8 | N/A | | | PTP 2034 | PTP 2035 | PTP 2036 | PTP 2037 | PTP 2038 | PTP 2039 | PTP 2040 | PTP 2041 | PTP 2042 | PTP 2043 |
| | 9.8 | | | | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 10.8 | 10.8 | 10.8 | 10.8 | 10.8 |

Table 3b: Field M1 Total Suspended Solids (TSS) Report (Long-Term Credits)

| Field | Acres | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|--|-------|------|------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| M1 Baseline TSS-Load Tons/Field/Yr (continue current farming operations) | 30.8 | 63.7 | 76.2 | 79.3 | 212.6 | 95.7 | 221.9 | 97.3 | 222.5 | 97.3 | 222.3 | 97.2 | 221.9 | 96.9 |
| M1 Grass/Alfalfa Buffer Acres | 7.4 | 0.5 | 0.9 | 0.9 | 3.1 | 0.6 | 0.3 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| M1 Contributing Acres (CA) EOF | 23.3 | 1.9 | 2.6 | 3.0 | 6.8 | 3.5 | 7.1 | 3.6 | 7.2 | 3.6 | 7.2 | 3.6 | 7.2 | 3.6 |
| Combined TSS Loss from Buffered Acres + Contributing Acres w/ EOF | 30.7* | 2.4 | 3.5 | 3.9 | 9.9 | 4.1 | 7.5 | 3.7 | 7.3 | 3.6 | 7.2 | 3.6 | 7.2 | 3.6 |
| Future Predictions with EOF and Buffer Installed (2) 5-year Avg. (Lbs/Ac/Yr) | 1.0 | N/A | | | 423.2 | 423.2 | 423.2 | 423.2 | 423.2 | 329.3 | 329.3 | 329.3 | 329.3 | 329.3 |
| Long Term TSS Reduction Avg. w/ Baseline 16% Credit Threshold Applied (Lbs/Field/Yr) | 30.8 | | | | 26902.1 | 26902.1 | 26902.1 | 26902.1 | 26902.1 | 22730.8 | 22730.8 | 22730.8 | 22730.8 | 22730.8 |
| Long-term TSS credits applied after 10-yr. Interim Credits are used | | | | | | | | | | | | | | |
| Long-term Credits w/ 2:1 Trade Lbs/Field/Yr | 30.8 | N/A | | | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 |
| | | | | | 13451.0 | 13451.0 | 13451.0 | 13451.0 | 13451.0 | 11365.4 | 11365.4 | 11365.4 | 11365.4 | 11365.4 |
| Long-term Credits w/ 2:1 Trade Tons/Field/Year | | N/A | | | 6.73 | 6.73 | 6.73 | 6.73 | 6.73 | 5.68 | 5.68 | 5.68 | 5.68 | 5.68 |

*Difference in acreage due to SnapPlus mapping functionality. The program does not like layered polygons on the same field which resulted in 0.1 ac. difference between the whole field (M1 Baseline), the buffered field, and the contributing acre field.

| Table 4b: Field M3 Total Suspended Solids (TSS) Report (Long-Term Credits) | | | | | | | | | | | | | | |
|---|-------|------|------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Field | Acres | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
| M3 Baseline TSS-Load (continue current farming operations) | 9.8 | 3.66 | 3.14 | 3.64 | 12.27 | 3.68 | 10.19 | 3.68 | 10.24 | 3.69 | 10.26 | 3.70 | 10.26 | 3.70 |
| M3 Grass/Alfalfa Buffer Acres | 2.7 | 0.35 | 0.36 | 0.41 | 1.30 | 0.27 | 0.13 | 0.07 | 0.04 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 |
| M3 Contributing Acres (CA) EOF | 7.1 | 0.70 | 0.83 | 0.89 | 2.11 | 0.95 | 1.75 | 0.96 | 1.76 | 0.96 | 1.76 | 0.96 | 1.76 | 0.96 |
| Combined TSS Loss from Buffered Acres + Contributing Acres w/ EOF | 9.8 | 1.05 | 1.19 | 1.30 | 3.41 | 1.22 | 1.88 | 1.03 | 1.79 | 0.98 | 1.78 | 0.97 | 1.77 | 0.97 |
| Future Predictions with EOF and Buffer Installed (2) 5-year Avg. (Lbs./Ac./Yr.) | 1.0 | N/A | | | 380.8 | 380.8 | 380.8 | 380.8 | 380.8 | 264.5 | 264.5 | 264.5 | 264.5 | 264.5 |
| Long Term TSS Reduction Avg. w/ Baseline 16% Credit Threshold Applied | 9.8 | N/A | | | 992.31 | 992.31 | 992.31 | 992.31 | 992.31 | 818.92 | 818.92 | 818.92 | 818.92 | 818.92 |
| Long-term TSS credits applied after 10-yr. Interim Credits are used | | | | | | | | | | | | | | |
| Long-term Credits w/ 2:1 Trade Lbs./Field/Yr | 9.8 | N/A | | | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 |
| | | | | | 496.16 | 496.16 | 496.16 | 496.16 | 496.16 | 409.46 | 409.46 | 409.46 | 409.46 | 409.46 |
| Long-term Credits w/ 2:1 Trade Tons/Field/Year | 9.8 | N/A | | | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |

D. Description of applicable trade ratio per agreement/management practices:

There are several factors that must be considered in determining the final amount of credits available to the City including the trade ratio, uncertainty factors, applying credit thresholds for TMDL watersheds, and applying interim and long-term credits associated with each practice. Prior to establishing the interim and long-term credits, a trade ratio must be established to be applied once all inputs are considered.

The trade ratio equals the sum of the **delivery factor** (the distance between the credit generator and the credit user inside the same HUC-12 watershed), the **downstream trading factor** (considered when the credit generator and associated practice is installed downstream of the credit user), the **equivalency factor** (accounts for discharging different forms of the pollutant that's being traded), and the **uncertainty factor** (considers uncertainties from nonpoint sources such as weather variability, soil testing inaccuracies, modelling inaccuracies, nonpoint source pollution variability, and the reliability of a conservation practice to be 100% effective under different hydrologic conditions throughout its lifetime).

Per Appendix H Management Practices and Associated Information, a nonpoint source uncertainty factor for a credit user who is downstream of credit generator is 1 for filter/buffer strips and applicable to TP and TSS only. Due to the uncertainty factors of the contributing areas upslope of the proposed buffer continuing in agricultural production, the City of Watertown is seeking a 2:1 trade with the information provided in this appendix.

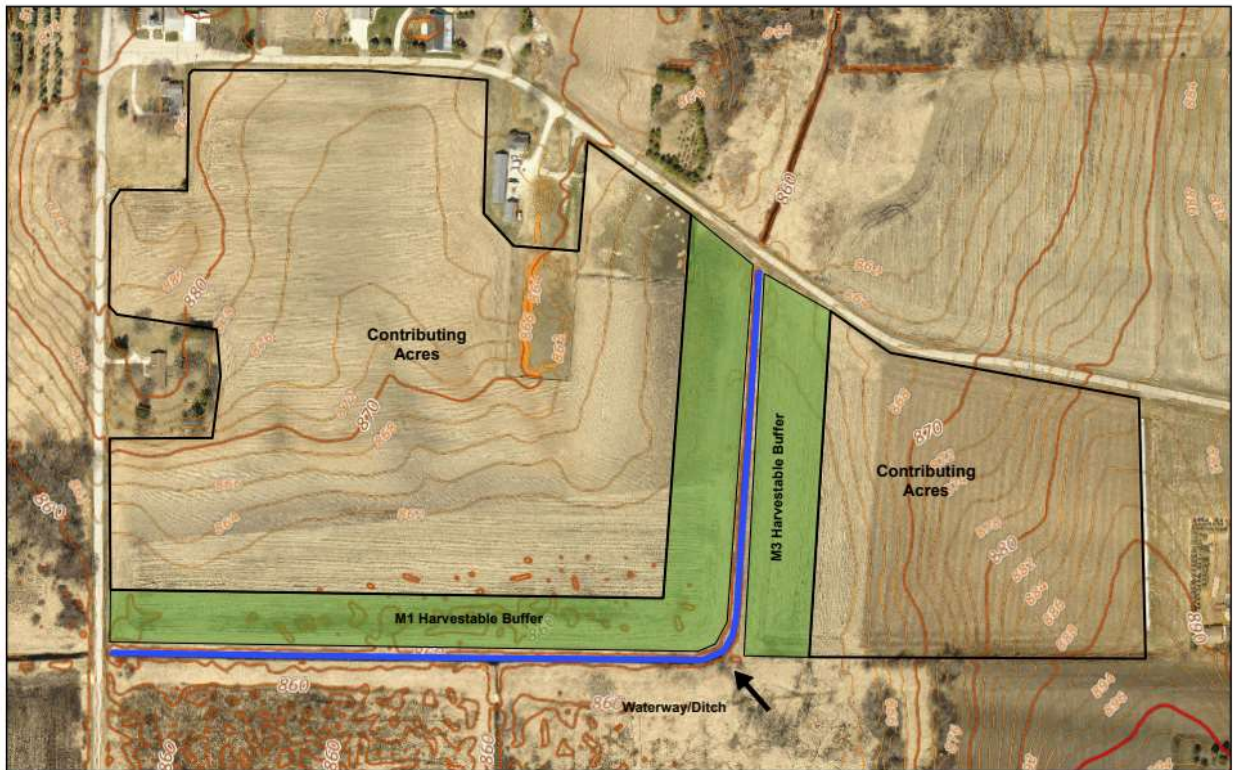
- Trade Ratio = delivery factor (credit user and generator are in same HUC12) + downstream factor (credit generator is upstream of credit user- see Item L) + equivalency (phosphorus and TSS default equivalency factors are 0) + Uncertainty (uncertainty factor of 2 per Appendix H for buffers):1

- City of Watertown’s Trade Ratio = (0 + 0 + 0 + 2) = 1
 - Trade ratio = 2:1 (applied for interim and long-term credits)

E. Location of where credits will be generated:

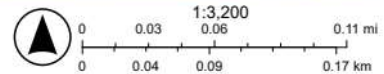
Two agricultural fields plan to have harvestable buffers installed and are located in the town of Concord, T7N, R16E, Sec. 08, Jefferson County, Wisconsin, parcel #006-0716-0833-004 (Field M1) and parcel #006-0716-0834-001 (Field M3). Both sites are located in the Upper Rock River watershed, specifically the Ashippun River- Rock River HUC 12- 070900010608 sub-watershed (Reachshed #28).

WWIP Harvestable Buffers M1 and M3



7/31/2024

- Mueller Harvestable Buffers
- 2 Foot Contours
- 2 ft contour interval
- 10 Foot Contours
- 10 ft contour interval
- 100 ft contour interval



Jefferson County LWCD

F. Timeline for credits and agreements:

- Winter/Spring 2024: establish contractual agreement with landowner
- Spring 2024: landowner to plant harvestable buffer
- 2024 Growing Season: buffer establishment, no harvesting until establishment is sufficient.
- March 2025: Submit WQT Practice Registration Form 3400-207 with MS4 Permit Annual Report
- 2025 – 2033: buffer maintained to standards with P and TSS reduction calculated in SnapPlus reports. Annual monitoring and reporting as detailed in Item K. Interim credits being traded from landowner to City of Watertown.
- 2034-2043: Initiate long-term credits if landowner chooses to agree to another 10-yr agreement with City.

G. Method for Quantifying Credits:

For harvestable buffers, LWCD uses SnapPlus to model each field to determine P and TSS reductions with the “edge of the field filter” attribute which accounts for a buffer/filter strip along the downslope side of the mapped field. The shortfall of SnapPlus, is that it doesn’t calculate all of the P reduction when modeling any given field.

Some considerations are needed when modelling to improve these shortfalls and accurately model total P and TSS reductions. One issue with SnapPlus is the “edge of the field filter” attribute only accounts for a 30-foot buffer which is the minimum standard found in NRCS’s Code 393 for Filter Strips. The planned practices (M1 West and M3 East) are to be 150-ft. buffers (measured by GPS and shapefiles uploaded into SnapMaps) and will capture more sediment/phosphorus.

The other shortfall of SnapPlus is not accounting for a decrease in acreage as the model assumes a filter is placed only at the edge of the field, not in the field.

To alleviate these shortfalls, the SnapPlus reports will be modelled three different ways:

1) Baseline condition reports, which assumes the landowner will continue farming the whole field with a corn-soybean rotation and is modelled with the same crop rotation over the course of 10 years.

2) The “Contributing Area” reports, which represents the part of the field that will continue to be farmed in row crops and is modelled with the Designed, Field Edge Filter button clicked on in SnapPlus.

3) 150’ wide alfalfa/grass buffer, which represents the other part of the field that will remain in perennial vegetation for the 10-year agreement.

Steps for determining the applicable credits available for trading are defined Item C to give reference to the listed tables and available credits. More information on the method for quantifying available credits can be found there.

H. Tracking Procedures:

Jefferson County, signed by City of Watertown officials and County Administrator put into effect on April 4, 2023, the Land and Water Conservation Dept. agrees to help Watertown with the implementation, establishment, and management/tracking of all WQT practices. LWCD has qualified staff that will be tracking the complete process of installation, establishment and maintenance throughout the life of the conservation practice. LWCD will work with landowners and producers to comply with all regulatory requirements and guidelines concerning these practices.

Landowners and producers must sign a Conservation Practice Agreement with the City that will be notarized and recorded with the Jefferson Co. Register of Deeds. This agreement will detail landowner/producer responsibilities and obligations; city/county responsibilities/obligations; general conditions of the agreement (e.g. stop work orders, payments, indemnification clause, amendment process, etc.); summary of installation, practice, and annual payments; legal descriptions; and the installation and management plan. Per the MOU, LWCD will provide technical assistance and oversight on the installation and management of each practice; complete final inspections; complete the practice registration documents (form 3400-207); and annually verify the status of installed projects for the life of the project.

The annual reports, created and provided by LWCD, will be submitted to the City by February 15 of each year and will summarize activities conducted the previous year, including locations of installed projects, types of practices installed at each project site, inspections, site visits, any required or completed maintenance and other relevant information necessary for project verification.

I. Conditions under which management practices may be inspected:

- Before installation to meet with landowner to show the exact area to plant.
- During and after installation to ensure proper techniques were used to plant and verify practices.
- After vegetation emergence to identify plants used and confirm uniform and dense vegetative cover per tech note standards.
- After initial mowing or harvesting to ensure proper cut height of vegetation.
- If the area receives significant rainfall within a 24-hr. period during establishment period (3-6 months pending environmental conditions). The landowner will oversee any necessary replanting due to erosion caused by significant rainfall.
- If extreme rainfall occurs within a 24-hr. period once vegetation is established to ensure there's no gully erosion beginning to form in the agricultural fields adjacent to harvestable buffer and ensure no erosion throughout the buffer.

- After establishment, at least once per growing season to ensure the buffer has these following minimum standard requirements as detailed in applicable standards found in Item K:
 - proper vegetation cover
 - boundaries are free of any encroachment from row crops
 - lacking invasive cover particularly State-listed noxious weeds
 - ensure there's no erosion and the practice is being maintained to be 100% effective

J. Reporting requirements should the management practice fail:

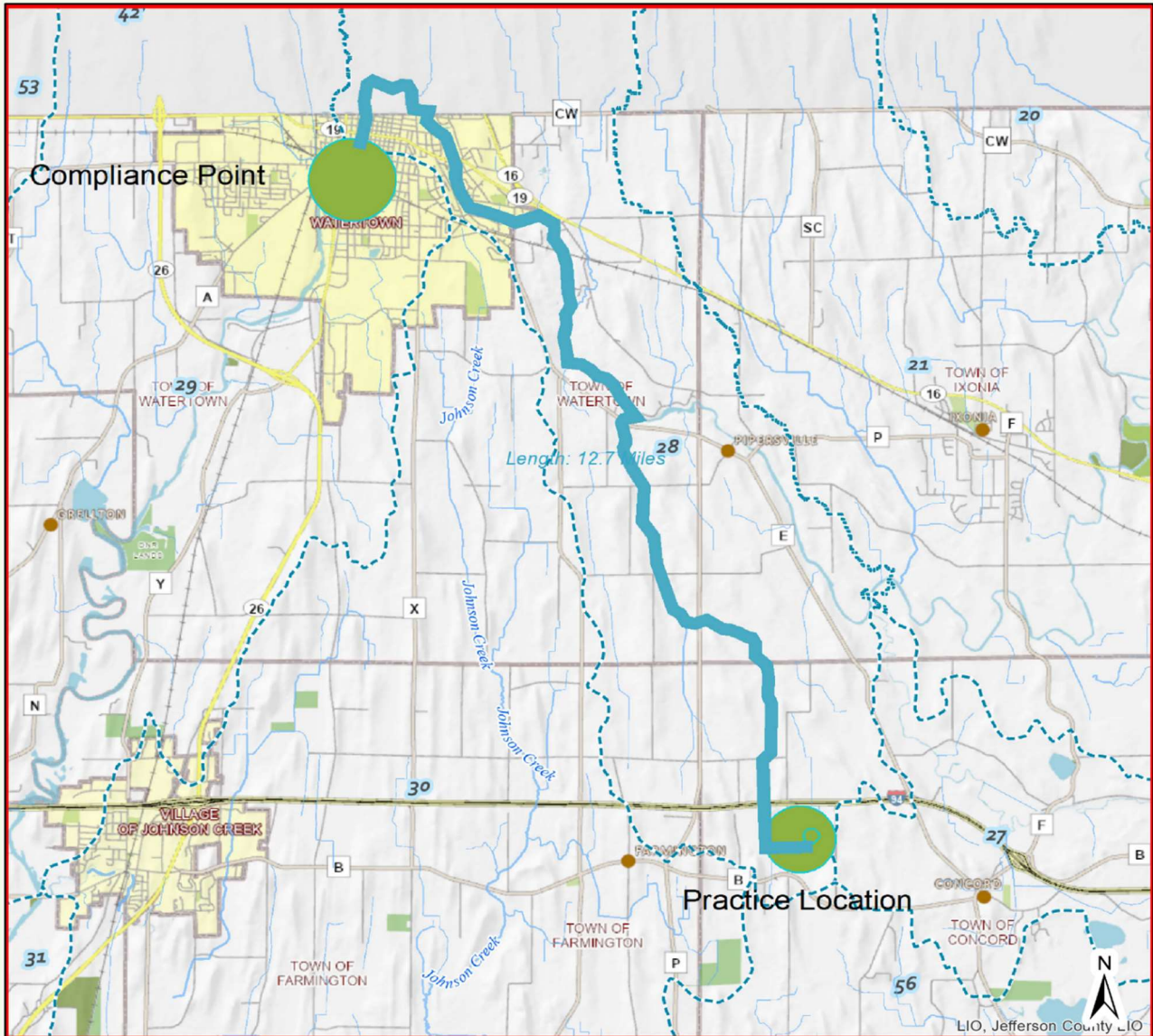
All stakeholders (landowners, Watertown staff, DNR staff, LWCD staff) will promptly be issued a notice of failed management practices. The practice will then be reinstalled as soon as possible, and initiate the tracking of the installation, establishment, and maintenance processes again which is detailed Items G, I, and K.

K. Operation and maintenance for each management practices:

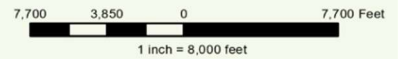
Harvestable buffers will follow guidelines set forth in "NRCS Conservation Practice Standard for Filter Strips, Code 393," and in the "Planning, Design, Management and Maintenance of Vegetative Filter Strips Wisconsin Agronomy Tech Note 10." These documents will be used by both the landowner and LWCD to determine design components, installation/establishment criteria, management/maintenance of the practice, and be used by LWCD for inspection guidelines.

L. Location of credit generator in proximity to receiving water and credit user:

Credit Generator in Proximity to Receiving Water and Credit User



| Lines | Streams & Ditches | |
|------------|-------------------|------------------------|
| Override 1 | 1 Stream Order | 5 Stream Order |
| Areas | 2 Stream Order | Rock_Subbasins_reaches |
| Override 1 | 3 Stream Order | Rock_303d_lake |
| | 4 Stream Order | |



Jefferson County Geographic Information System

DISCLAIMER: This map is not a substitute for an actual field survey or onsite investigation. The accuracy of this map is limited to the quality of the records from which it was assembled. Other inherent inaccuracies occur during the compilation process. Jefferson County makes no warranty whatsoever concerning this information.

Printed on: February 20, 2024
Author: Public User

M. Practice registration documents (If available):

Submittal of Form 3400-207 WQT- Management Practice Registration will be provided to the DNR once established and considered 100% effective at reducing P and TSS after LWCD inspections.

N. History of Project Sites:

Information about the site history is contained in the beginning sections of Appendix F, mostly Item A when describing the current, past and future land uses.

DNR Form 3400-208 Water Quality Trading Checklist

Jefferson County LWCD has signed Form 3400-208 Water Quality Trading Checklist as the Plan Preparer and the City of Watertown has signed the checklist as the Authorized Representative.