City of Stanley

353 S. Broadway St. P.O. Box 155|Stanley, WI, 54768

Stanley Wastewater Treatment Plant Phosphorus Trading Plan

February 25th, 2025

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ABBREVIATIONS

DNR	Wisconsin Department of Natural Resources
lbs.	Pounds
MGD	Million gallons per day
mg/L	Milligrams per liter
NRCS	National Resource Conservation Service
TP	Total phosphorus
WQBELs	Water Quality Based Effluent Limits
WWTF	Wastewater Treatment Facility

1. EXECUTIVE SUMMARY

The City of Stanley (City) is proposing to implement a Water Quality Trading Plan to comply with the Wastewater Treatment Facility's (WWTF) WPDES total phosphorus limits. The WWTF has encountered difficulty maintaining a 0.075 mg/L effluent total phosphorus concentration. The WWTF can reliably achieve an effluent total phosphorus of approximately 0.13 to 0.17 mg/L. Point to non-point phosphorus trading can bridge the gap between this concentration and the permit requirement of 0.075 mg/L TP.

The City currently owns several parcels around the City that are used for well-head protection, and buffer zones, some of which are grass and other are farmed. These parcels were evaluated to be taken out-of-production and placed into continuous prairie to create phosphorus trade credits for use at the WWTF. Parcels that are already continuous grass did not result in a beneficial trade credit. Whereas parcels that rotate as hay or alfalfa could generate a credit.

Additionally, the City has larger parcels, on the east and west side of the City, also known as the "Storm" and "Isenberger" Farms, respectively that are reserved for development, but segments of the lesser-developable areas were evaluated to provide additional credits needed to bring the WWTF into compliance. The City currently leases these parcels for agricultural crop production to a single farmer on a 3-year term. Our evaluation considered alternative cropping practices, but the required acres and management was determined to be less advantageous compared to converting to continuous prairie. 19.3 acres of tillable land on the Isenberger Farm and 24 acres of additional city owned properties, and 16.3 acres of the Storm Farm were identified as the optimal blend to maximize the land for near term development and wastewater compliance.

By committing these acres to the plan, it generates 112 lbs. of phosphorus runoff credits. Trading these pounds of phosphorous from the watershed to the City's WWTF creates an offset to discharge a higher allowable phosphorus concentration. The WWTF's existing WQBEL of 0.075 mg/L TP is offset higher by 0.063 mg/L TP enabling the waterbody to maintain compliance if the WWTF discharges up to 0.138 mg/L TP (6-month average).

It is recommended the City contractually lease these acres for 5 years to enable certainty that the trades will be developed and available for the duration of the next WWTF permit term. It is optional for the City to enroll the properties into a conservation program to assist with payment to establish and maintain the natural prairie and restore a portion of the farming rental income lost.

1.1 APPLICANT INFORMATION

Stanley Wastewater Treatment Facility
200 State St.
Stanley WI, 54768

Contact:
Nick Martin, Head Wastewater Operator
353 S. Broadway St. P.O. Box 155
Stanley WI, 54768

1.2 DISCHARGE PERMIT INFORMATION

Table 1-1 Stanley WWTP Background Information

Information Type	Stanley WWTP Data
Plant Address	200 State Street Stanley, WI 54768
WPDES Permit Number	WI-0021857-09-0
Receiving Water	Wolf River
HUC 12 of Outfall	070500060101

2. BACKGROUND

2.1 WASTEWATER TREATMENT PLANT INFORMATION

The City of Stanley owns and operates the Stanley WWTP. The facility completed a major upgrade in 2016. Information on the Stanley WWTF plant is summarized in Table 2-1. The liquid train of treatment consists of influent screening, grit removal, anaerobic selectors, an oxidation ditch, clarification, sand filtration, and disinfection. Phosphorus removal chemicals (ferric chloride etc.) can be dosed to the effluent box of the oxidation ditch, the mixed liquor pipe, and the aerobic digester.

Table 2-1 Stanley WWTP Background Information

Information Type	Stanley WWTP Data
Plant Address	200 State Street Stanley, WI 54768
WPDES Permit Number	WI-0021857-09-0
Receiving Water	Wolf River
HUC 12 of Outfall	070500060101
Total Phosphorus WQBELs	0.225 mg/L (monthly average) 0.075 mg/L (six-month average)
Average Effluent Flow	0.57 MGD

The WWTP needs improvements to comply with a notice of violation with high phosphorus discharges. The existing filters are planned to be rehabilitated in 5 years, but an interim solution is required by WDNR's most recent notice of non-compliance. Water Quality Trading for phosphorus reductions upstream from non-point has been identified as the most feasible near-term solution.

2.2 CREDIT GENERATION LOCATION INFORMATION

The phosphorus credits will be generated from City-owned land parcels shown in the map of Figure 2-1. The majority of the parcels are within the HUC-12; however, a watershed boundary crosses the Isenberger Farm making the eastern-most parcels ineligible due limitations with downstream trading. Note also, the parcel sizes reflect the actual tillable land. This figure is also provided as Appendix A.

In particular, the bulk of the credits were generated from the Isenberger Farm, and Storm Farms and to a lesser degree the 2 city owned properties.

Table 2-2 summarizes the information for the farmland.

Table 2-2 Credit Generation Location Information

Information Type	Parcel Data
Landowner	City of Stanley
Location	Clark County Section 31, Township 29N, Range 04W
HUC 12	070500060105
Tillable Acreage	59.6 acres
Parcel IDs	281.0101.000 281.0091.002 052.0608.000 22905-2612-00020000 22905-3414-00020001 22905-3413-00020000A

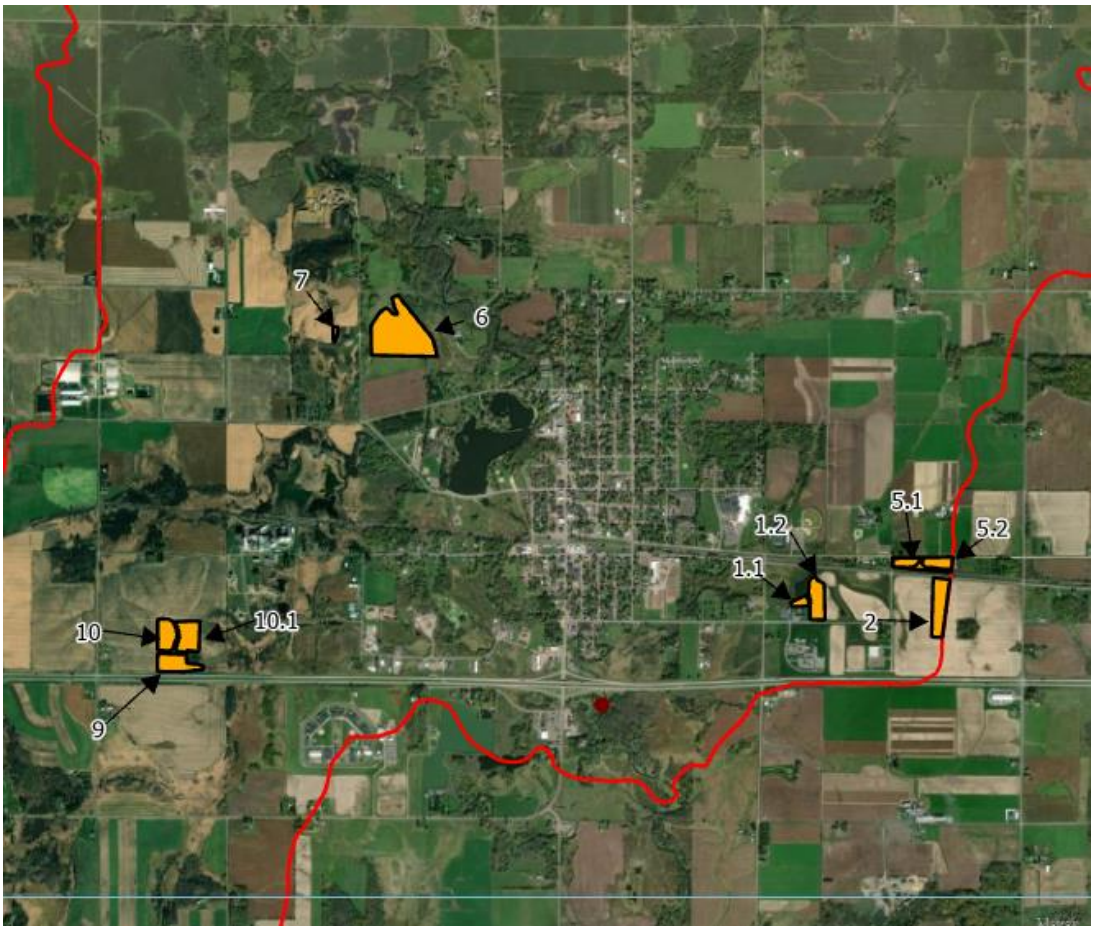


Figure 2-1 Proposed Properties Included in the WQT Program

3. WATER QUALITY TRADING CALCULATIONS

3.1 DETERMINATION OF CREDITS

This equivalence accounts for the average effluent flow from the treatment facility. The equation outlines the conversion of lbs. of phosphorus to mg/L of phosphorus discharge equivalence.

*Lbs. of phosphorus = [(0.01 mg/L phosphorus discharge equivalence) *(3.785 L/gallon) *(0.572 million gallons/Day) * 365 days* (1g/1000mg) *(1 lbs./453.592 grams)]*

The City specific criteria used to evaluate the Stanley WWTF credits required are shown below.

- Average Effluent Flow = 0.57 MGD
- Current Limit = 0.075 mg/L TP
- Goal Effluent TP = >0.13 mg/L TP

The phosphorus trade credits can be simplified as equating to approximately 17.5 pounds of phosphorus credits to raise the WWTF effluent every 0.01 mg/L of phosphorus. Which results in needing around 100 pounds of credits (after trade ratios are applied).

To determine the credit potential, the amount of phosphorus loss (or reduced erosion) is calculated using SnapPlus software. Revised farming practices are simulated to identify the phosphorus trade pounds (PTP) from each scenario.

3.1.1 BASELINE PHOSPHORUS LOSS

Cropscape is a USDA online map application that shows crop history and rotations. Historical crop rotations were validated using this database and extrapolated forward for future years where applicable crop rotation projections were not readily available from the respective farmer input.

Field 5.1 and 5.2 follows the historic cycling of soybean and corn noted on Cropscape and implemented soybean as a conservative option due to the potential uncertainty of whether corn or soybean was going to be implemented between 2026 and 2028 then returned to corn in 2029.

Field 6 and 7 exhibit a historical trend of utilizing longer rotational periods of alfalfa and corn silage, and/or corn grain rotated with soybeans. These parcels have been in alfalfa for several years and per discussions with the farmer, it is planned to move into a corn silage rotation. All tenants noted concern with investing in an alfalfa crop in fear of losing the City's rental contract to another farmer. Consequently, the City noted a conflicting non-desire to extend rental contracts longer as the City is constantly seeking other uses for the land.

The existing practices for the farmland are summarized in Table 3-1. This information is also in the SnapPlus reports in Appendix C.

Table 3-1 Current Farming Practices for Credit-Generators by Parcel

Field # On WQT Map	Farm Property Name / ID	Farm Practices		
		Year	Crop	Tillage
1.1	Isenberger 1.1	2024	Corn Silage	Spring Vertical Tillage
1.1	Isenberger 1.1	2025	Corn Silage	Spring Vertical Tillage
1.1	Isenberger 1.1	2026	Corn Silage	Spring Vertical Tillage
1.1	Isenberger 1.1	2027	Corn Silage	Spring Vertical Tillage
1.1	Isenberger 1.1	2028	Corn Grain	Spring Vertical Tillage
1.1	Isenberger 1.1	2029	Corn Grain	Spring Vertical Tillage
1.2	Isenberger 1.2	2024	Corn Silage	Spring Vertical Tillage
1.2	Isenberger 1.2	2025	Corn Silage	Spring Vertical Tillage
1.2	Isenberger 1.2	2026	Corn Silage	Spring Vertical Tillage
1.2	Isenberger 1.2	2027	Corn Silage	Spring Vertical Tillage
1.2	Isenberger 1.2	2028	Corn Grain	Spring Vertical Tillage
1.2	Isenberger 1.2	2029	Corn Grain	Spring Vertical Tillage
2	Isenberger 2	2024	Corn Silage	Spring Vertical Tillage
2	Isenberger 2	2025	Corn Silage	Spring Vertical Tillage
2	Isenberger 2	2026	Corn Silage	Spring Vertical Tillage
2	Isenberger 2	2027	Corn Silage	Spring Vertical Tillage
2	Isenberger 2	2028	Corn Grain	Spring Vertical Tillage
2	Isenberger 2	2029	Corn Grain	Spring Vertical Tillage
5.1	Isenberger 5.1	2024	Corn Grain	Spring Vertical Tillage
5.1	Isenberger 5.1	2025	Corn Grain	Spring Vertical Tillage
5.1	Isenberger 5.1	2026	Soybean	Spring Vertical Tillage
5.1	Isenberger 5.1	2027	Soybean	Spring Vertical Tillage
5.1	Isenberger 5.1	2028	Soybean	Spring Vertical Tillage
5.1	Isenberger 5.1	2029	Corn Grain	Spring Vertical Tillage
5.2	Isenberger 5.2	2024	Corn Grain	Spring Vertical Tillage
5.2	Isenberger 5.2	2025	Corn Grain	Spring Vertical Tillage
5.2	Isenberger 5.2	2026	Soybean	Spring Vertical Tillage
5.2	Isenberger 5.2	2027	Soybean	Spring Vertical Tillage
5.2	Isenberger 5.2	2028	Soybean	Spring Vertical Tillage
5.2	Isenberger 5.2	2029	Corn Grain	Spring Vertical Tillage
6	22905-2612-00020000	2024	Alfalfa	None
6	22905-2612-00020000	2025	Alfalfa	None
6	22905-2612-00020000	2026	Corn Silage with small Grain cover Crop	cover crop no till
6	22905-2612-00020000	2027	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
6	22905-2612-00020000	2028	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
6	22905-2612-00020000	2029	Alfalfa	spring vertical tillage
7	22905-2621-07000000	2024	Alfalfa	None
7	22905-2621-07000000	2025	Alfalfa	None
7	22905-2621-07000000	2026	Corn Silage with small Grain cover Crop	cover crop no till
7	22905-2621-07000000	2027	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
7	22905-2621-07000000	2028	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
7	22905-2621-07000000	2029	Alfalfa	spring vertical tillage
9	Storm	2024	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
9	Storm	2025	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
9	Storm	2026	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
9	Storm	2027	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
9	Storm	2028	Corn Silage with small Grain cover Crop	spring vertical tillage
9	Storm	2029	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
10	Storm	2024	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
10	Storm	2025	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
10	Storm	2026	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
10	Storm	2027	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
10	Storm	2028	Corn Silage with small Grain cover Crop	spring vertical tillage
10	Storm	2029	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
10.1	Storm	2024	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
10.1	Storm	2025	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
10.1	Storm	2026	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
10.1	Storm	2027	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked
10.1	Storm	2028	Corn Silage with small Grain cover Crop	spring vertical tillage
10.1	Storm	2029	Corn Silage with small Grain cover Crop	Spring Vertical Tillage Cover crop disked

SnapPlus modeling was detailed for the parcels currently in row-crop production, however, it should be noted that hay/alfalfa farming practices at the additional City owned properties were determined based best available verbal records with assumptions for industry standard farming practices.

3.1.2 PROPOSED PHOSPHORUS LOSS

The Isenberger/Storm properties and additional city owned properties were evaluated for the transition to natural pasture/prairie. The evaluation investigated the transition of active farmland into natural prairie. The transition to continuous prairie grass minimizes the need for additional nutrients and tilling

of the soil. This will in turn provide a more certain reduction in phosphorus discharge from the fields. This information is included in the SnapPlus reports located Appendix D.

3.2 TRADE RATIO DETERMINATION

Credits are not allowed to be considered 1 for 1 to account for the limitations of a beneficial improvement (i.e., not directly at the WWTF point of discharge, and is not a regularly sampled practice, etc). The WDNR has a method for determining the applicable trade ratio, calculated using the following equation. Each factor is discussed separately in the following sections.

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

3.2.1 DELIVERY FACTOR

A map showing the HUC-12 boundary, the WWTP outfall, and the proposed credit generating parcels is presented in Appendix A.

WDNR Surface Water Viewer – SPARROW Theme was used to determine the delivery fraction. The Sparrow model catchment allows for the evaluation of properties and their relative distance from the credit receiving party. This calculation is in place to account for any potential natural settlement/attenuation that may occur between the source and the outfall. The delivery factor is calculated by using the equations below.

$$Delivery\ Fraction = 1 - \frac{\left(User\ del_{frac} - generator\ del_{frac}\right)}{user\ del_{frac}}$$

$$Delivery\ Factor = \frac{1}{Delivery\ Fraction} - 1$$

The Delivery Factors for all the properties are accounted for and outlined in the Water Quality Trading Workbook of Appendix B.

3.2.2 DOWNSTREAM TRADING FACTOR

Since the about half of the Isenberger farmland is located within the same HUC-12 and upstream of the WWTF, **the downstream trading factor is zero for these portions of the farm**. The eastern most portion of the farm displayed in Figure 2-1 is just outside of the Little Otter Creek-Wolf River watershed and is ineligible as it is beyond the WWTF outfall HUC-12.

3.2.3 EQUIVALENCY FACTOR

Since the nutrient being traded is total phosphorus, **the equivalency factor is zero**.

3.2.4 UNCERTAINTY FACTOR

According to the 2020 WQT Guidance document, the uncertainty factor for the **transition to Natural Prairie/vegetation equates to an uncertainty trade ratio 1.**

3.3 CALCULATION OF AVAILABLE CREDITS AS NATURAL PRAIRIE

A summary of the potentially tradable phosphorus per parcel is presented in Appendix B. Years 2025 and beyond account for the proposed changes of conventional corn farming practices to Prairie/ natural vegetation. See Appendix C and Appendix D for the SnapPlus existing and proposed reports, respectively. The resulting trade ratio for all properties evaluated within the Stanley Water Quality Trading plan is 1.2:1. As stated in the Section 3.2, the trade ratio is calculated by adding the trade factors for delivery, downstream, equivalency and uncertainty. Appendix B shows the individual trade factor applied to each property evaluated. For all properties evaluated the sum of the trade factors equate to between 1 and 1.12 but the lowest trade ratio allowable in accordance with the 2020 WQT guidance is 1.2:1. **All properties evaluated were addressed a 1.2:1 trade ratio.**

Table 3-2 Calculation of Potentially Tradable Phosphorus via Prairie Transition

Farm	Condition	Potentially Tradable Phosphorus (lbs./yr.)					
		2024	2025	2026	2027	2028	2029
Isenberger/Storm	Baseline	114	134	135	143	121	137
	Proposed	114	20	11	10	9	6
	Savings	**0**	**113**	**124**	**133**	**112**	**131**
Additional City Owned Properties	Baseline	2	1	2	14	14	14
	Proposed	2	0	0	0	0	0
	Savings	**0**	**1**	**2**	**14**	**14**	**14**

The City has set aside portions of the Storm and Isenberger farm with anticipation for future city development. Appendix B and Figure 1-2 outlines the portions of these farms included in the Water Quality Trading Agreement.

- The total area included from the Isenberger farm is 19.3 Acres.
- The total area included from the Storm farm is 16.3 Acres.
- The total area included from other City owned properties is 24 Acres.

The summary of all available credits is shown in Table 3-3. Accounting for a 1.2:1 trade ratio, the total credits generated (averaged over 5-year period) is 109.8 lbs. per year. By committing these acres to the plan, it generates 109.8 lbs. of phosphorus runoff credits. Trading these pounds of phosphorous from the watershed to the City's WWTF creates an offset to discharge a higher allowable phosphorus concentration. The WWTF's existing WQBEL of 0.075 mg/L TP is offset higher by 0.063 mg/L TP enabling the waterbody to maintain compliance if the WWTF discharges up to 0.138 mg/L TP (6-month average).

Table 3-3 Summary of Available Credits for Prairie

	Credits Available (lbs./yr.)					5-year Average
Farm	2025	2026	2027	2028	2029	lbs./yr.
Isenberger/Storm Trade Ratio = 1.2:1	**95**	**103.3**	**110.8**	**93.3**	**109.2**	**102.3**
Additional City Owned Properties, Trade Ratio =1.2:1	**.833**	**1.7**	**11.7**	**11.7**	**11.7**	**7.5**
TOTAL						**109.8**

4. EXECUTION

4.1 CONTRACTING

The City of Stanley currently has leasing contracts in place for the agriculture production. Once the WDNR approves this water quality trading plan, the City will enter a written legal agreement with the WDNR outlining the planned practices and cancel the current farming leases. Separately from the WQT agreement, the City intends to enroll these parcels in long-term contracts offered through a conservation program to assist with continued maintenance of the proposed prairie/natural vegetation.

4.2 IMPLEMENTATION TIMELINE

The proposed timeline for executing the water quality trading plan is shown in Figure 4-1.

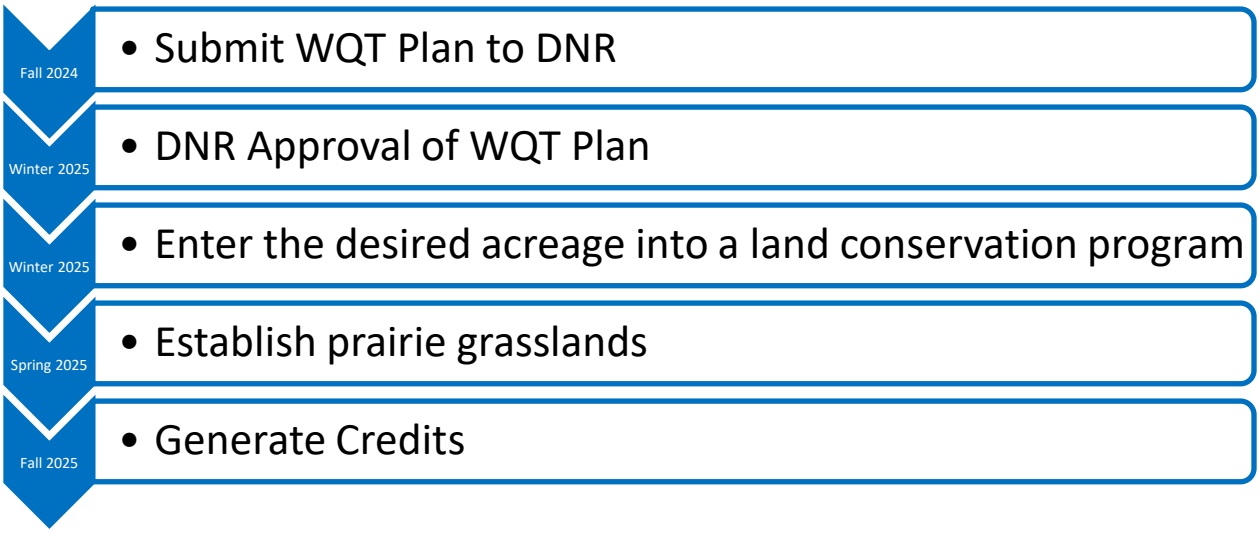


Figure 4-1 Proposed Implementation Timeline

4.3 OPERATION, MAINTENANCE, AND INSPECTION PLAN

4.3.1 IMPLEMENTATION & MAINTENANCE

The City plans to enter the farmland that is included into a conservation land program to manage the natural prairie/grass lands as needed. Once a WQT Plan is agreed upon, the City will work to transition the farmland into the conservation program and establish grasslands/prairie in the spring of 2025. The City will in additional to the scheduled inspections, periodically inspect the fields to verify the grass lands are maintained properly as well as provide maintenance on an as needed basis.

The fields will be inspected 45 days after the site restoration to verify the successful transition of the farmland to native grassland. The installation and management of the conservation cover (grassland) will adhere to National Resources Conservation Service's (NRCS) Conservation Cover Standard practice, Appendix E.

After the initial site inspection is completed and the Conservation Cover has been established, the WDNR will be notified of the status and an inspection report will be submitted showing the status of the fields.

The city anticipates hiring a third party to assist with establishment and maintenance of the fields and will utilize City staff to conduct routine inspections and NRCS staff to conduct major interval inspections.

4.3.2 INSPECTION

The grassland restoration requires that the City of Stanley or a representative of the City inspect the fields and verify the condition of the fields. These inspections will follow the standards outlined:

- Field inspections will occur after major storm events and at a minimum, annual inspection of the fields to identify any maintenance required.
- Pest inspection shall be performed during all field investigation and more thoroughly during the annual inspections.
- The City will ensure the grassland is well maintained (mowed, burned, or re-established as needed).
- The City or it's representative will document all field inspections including photographs, maintenance recommendations and items of concern.
- The WDNR has the right to inspect the fields and management practices at any time upon giving reasonable notice to the City of Stanley to ensure practices are in compliance with technical standards and the terms of this plan.

4.3.3 REPORTING AND NOTIFICATIONS

Approximately 45 days after the fields have been established an inspection report will be provided to the WDNR outlining the status of each field and providing photo documentation of the conservation cover and its status.

As field inspections can occur on a non-standard schedule, each individual inspection form will be provided to the WDNR on an annual basis with the WQT Annual Report outlined in Section 4.3.3.1

4.3.3.1 Annual Report

The City will provide an annual report by July 31st of every year the fields are included in the WQT plan. These reports will include the following:

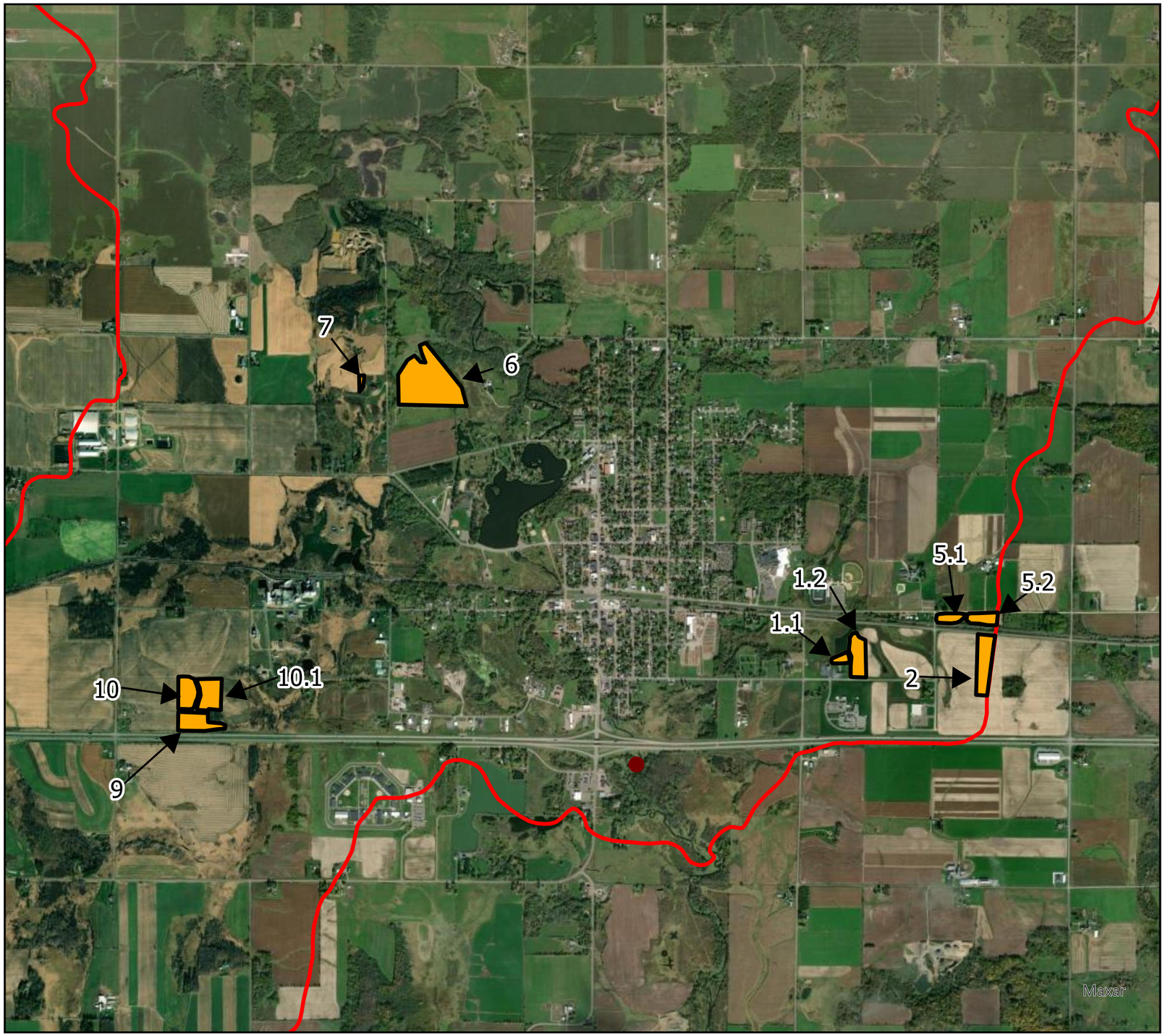
- The Status of each field and the photo documentation of the status of each field.
- Any work/ major changes to the fields or surrounding properties that would impact the conservation cover crops effectiveness.
- Any problems noted in the field that would limit the fields' ability to act as a conservation cover area.
- All the inspection forms and reports which occurred over the previous year.

4.3.3.2 Notification

If the City or their representatives identify any problems associated with the field's conservation cover crop status, the WDNR will be notified and provided an inspection report outlining the issue within 30 days of being made aware of the issue. The City will also provide a detailed plan on how the problem will be resolved.

Appendix A – Water Quality Trading Plan Map

Stanley Water Quality Trading Plan Map



N

0 0.25 0.5 Miles

Legend

- Properties Included in the WQT Plan
- Stanley Outfall
- HUC-12 Boundary

The farming properties evaluated were identified by the City of Stanley as potential properties to be included in the proposed Water Quality Trading Agreement.

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Appendix B – Water Quality Trading Spreadsheet

Water Quality Trading Workbook

Properties Overview

Figure Number	Farm	Acres	HUC12 Location	Delivery Factor	Uncertainty Factor	Downstream Factor	Trade Ratio [1]
1.1	Isenberger 1.1	1.3	Little Otter Creek- Wolf River	0	1	0	1.2
1.2	Isenberger 1.2	5.5	Little Otter Creek- Wolf River	0	1	0	1.2
2	Isenberger 2	7.3	Little Otter Creek- Wolf River	0	1	0	1.2
5.1	Isenberger 5.1 [2]	2.2	Little Otter Creek- Wolf River	0.02	1	0	1.2
5.2	Isenberger 5.2 [2]	3	Little Otter Creek- Wolf River	0.02	1	0	1.2
6	22905-2612-00020000 [S01]	23.5	Little Otter Creek- Wolf River	0.06	1	0	1.2
7	22905-2621-07000000 [S02]	0.5	Little Otter Creek- Wolf River	0.06	1	0	1.2
9	Storm East- South	5.6	Little Otter Creek- Wolf River	0.04	1	0	1.2
10	Storm East -Northwest	4.9	Little Otter Creek- Wolf River	0.04	1	0	1.2
10.1	Storm East -Northeast	5.9	Little Otter Creek- Wolf River	0.04	1	0	1.2

Baseline PTP

Figure Number	Farm	Acres	2024	2025	2026	2027	2028	2029
1.1	Isenberger 1.1	1.3	3	4	4	4	3	1
1.2	Isenberger 1.2	5.5	24	34	35	35	25	5
2	Isenberger 2	7.3	29	40	42	43	31	7
5.1	Isenberger 5.1 [2]	2.2	2	2	2	4	5	5
5.2	Isenberger 5.2 [2]	3	4	4	4	9	11	11
6	22905-2612-00020000 [S01] [2]	23.5	2	1	2	13	13	13
7	22905-2621-07000000 [S02] [2]	0.5	0	0	0	1	1	1
9	Storm East- South	5.5	30	29	28	28	27	66
10	Storm East -Northwest	4.9	12	12	11	11	11	21
10.1	Storm East -Northeast	5.9	10	9	9	9	8	21

Prairie Practices PTP

Figure Number	Farm	Acres	2024	2025	2026	2027	2028	2029
1.1	Isenberger 1.1	1.3	3	0	0	0	0	0
1.2	Isenberger 1.2	5.5	24	3	1	1	0	0
2	Isenberger 2	7.3	29	3	1	0	0	0
5.1	Isenberger 5.1 [2]	2.2	2	1	1	1	1	1
5.2	Isenberger 5.2 [2]	3	4	1	1	1	1	1
6	22905-2612-00020000 [S01] [2]	23.5	2	0	0	0	0	0
7	22905-2621-07000000 [S02] [2]	0.5	0	0	0	0	0	0
9	Storm East- South	5.5	30	5	2	2	2	1
10	Storm East -Northwest	4.9	12	4	3	3	3	2
10.1	Storm East -Northeast	5.9	10	3	2	2	2	1

Figure Number	Farm	Total Acres	Acres Included in Trade	Trade Credits Available							
				2024	2025	2026	2027	2028	2029	5 Year Avg	mg/L equivalent
1.1	Isenberger 1.1	1.3	1.3	0.0	3.3	3.3	3.3	2.5	0.8	2.7	0.0015
1.2	Isenberger 1.2	5.5	5.5	0.0	25.8	28.3	28.3	20.8	4.2	21.5	0.0123
2	Isenberger 2	7.3	7.3	0.0	30.8	34.2	35.8	25.8	5.8	26.5	0.0152
5.1	Isenberger 5.1 [2]	2.2	2.2	0.0	0.8	0.8	2.5	3.3	3.3	2.2	0.0012
5.2	Isenberger 5.2 [2]	3	3	0.0	2.5	2.5	6.7	8.3	8.3	5.7	0.0033
6	22905-2612-00020000 [S01] [2]	23.5	23.5	0.0	0.8	1.7	10.8	10.8	10.8	7.0	0.0040
7	22905-2621-07000000 [S02] [2]	0.5	0.5	0.0	0.0	0.0	0.8	0.8	0.8	0.5	0.0003
9	Storm East- South	5.5	5.5	0.0	20.0	21.7	21.7	20.8	54.2	27.7	0.0159
10	Storm East -Northwest	4.9	4.9	0.0	6.7	6.7	6.7	6.7	15.8	8.5	0.0049
10.1	Storm East -Northeast	5.9	5.9	0.0	5.0	5.8	5.8	5.0	16.7	7.7	0.0044

Notes:

[1] Minimal Allowable Trading Factor of 1.2:1

[2] The Properties are included with an estimate on current farming practices.

Appendix C – SnapPlus Baseline Practice Reports

WQ1: P Trade Report

Reported For	
Printed	2025-01-24
Plan Completion/Update Date	2020-09-08
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\ppaulos\Desktop\SnapPlus Files\1_25_2025 BaselineModel.snapDb	

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

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

Questions? Please contact DNRphosphorus@wisconsin.gov

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

P Trade Report				PTP					
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029
1.1	WITHEE	WeA	1	3	4	4	4	3	1
1.2	LOYAL	LoB	6	24	34	35	35	25	5
10	WITHEE	WeB	5	12	12	11	11	11	21
10.1	WITHEE	WeB	6	10	9	9	9	8	21
2	LOYAL	LoB	7	29	40	42	43	31	7
5.1	WITHEE	WeA	2	2	2	2	4	5	5
5.2	LOYAL	LoB	3	4	4	4	9	11	11

P Trade Report				PTP					
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029
6	COMSTOCK	Cm	24	2	1	2	13	13	13
7	SPENCER	SsB	1	0	0	0	1	1	1
9	LOYAL	LoC2	6	30	29	28	28	27	66
Total			**60**	**116**	**135**	**138**	**155**	**132**	**150**

NM1: Narrative and Crops Report

Starting Year	**2024**
Reported For	**WQT PERMIT**
Printed	**2025-01-24**
Plan Completion/Update Date:	**2020-09-08**
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\ppaulos\Desktop\SnapPlus Files\1_25_2025 BaselineModel.snapDb	

Prepared for:
WQT PERMIT
attn:NA
8517 345th Street
Stanley, 54768

Farm has 10 fields totalling 59.6 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

Spreader Calibration Methods: Equipment calibration

Narrative and Crops:

Field Name	Field Acres	2024	2025	2026	2027	2028	2029
1.1	1.3	Corn silage Spring vertical tillage 20.1-25 ton/acre	Corn silage Spring vertical tillage 20.1-25 ton/acre	Corn silage Spring vertical tillage 20.1-25 ton/acre	Corn silage Spring vertical tillage 20.1-25 ton/acre	Corn grain Spring vertical tillage 211-230 bu/acre	Corn grain Spring vertical tillage 211-230 bu/acre
1.2	5.5	Corn silage Spring vertical tillage 20.1-25 ton/acre	Corn silage Spring vertical tillage 20.1-25 ton/acre	Corn silage Spring vertical tillage 20.1-25 ton/acre	Corn silage Spring vertical tillage 20.1-25 ton/acre	Corn grain Spring vertical tillage 211-230 bu/acre	Corn grain Spring vertical tillage 211-230 bu/acre
10	4.9	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Corn silage Spring vertical tillage 20.1-25 ton/acre	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre

Field Name	Field Acres	2024	2025	2026	2027	2028	2029
10.1	5.9	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Corn silage Spring vertical tillage 20.1-25 ton/acre	Corn silage to small grain cover crop Spring Chisel, disked, cover crop disked 20.1-25 ton/acre
2	7.3	Corn silage Spring vertical tillage 20.1-25 ton/acre	Corn silage Spring vertical tillage 20.1-25 ton/acre	Corn silage Spring vertical tillage 20.1-25 ton/acre	Corn silage Spring vertical tillage 20.1-25 ton/acre	Corn grain Spring vertical tillage 211-230 bu/acre	Corn grain Spring vertical tillage 211-230 bu/acre
5.1	2.2	Corn grain Spring vertical tillage 191-210 bu/acre	Corn grain Spring vertical tillage 191-210 bu/acre	Soybeans 7-10 inch row Spring vertical tillage 56-65 bu/acre	Soybeans 7-10 inch row Spring vertical tillage 56-65 bu/acre	Soybeans 7-10 inch row Spring vertical tillage 56-65 bu/acre	Corn grain Spring vertical tillage 191-210 bu/acre
5.2	3	Corn grain Spring vertical tillage 191-210 bu/acre	Corn grain Spring vertical tillage 191-210 bu/acre	Soybeans 7-10 inch row Spring vertical tillage 56-65 bu/acre	Soybeans 7-10 inch row Spring vertical tillage 56-65 bu/acre	Soybeans 7-10 inch row Spring vertical tillage 56-65 bu/acre	Corn grain Spring vertical tillage 191-210 bu/acre
6	23.5	Alfalfa None 4.6-5.5 ton/acre	Alfalfa None 4.6-5.5 ton/acre	Corn silage to small grain cover crop No Till, cover crop no till 20.1-25 ton/acre	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Alfalfa Seeding Spring Spring vertical tillage 2.6-3.5 ton/acre
7	0.5	Alfalfa None 4.6-5.5 ton/acre	Alfalfa None 4.6-5.5 ton/acre	Corn silage to small grain cover crop No Till, cover crop no till 20.1-25 ton/acre	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Alfalfa Seeding Spring Spring vertical tillage 2.6-3.5 ton/acre

Field Name	Field Acres	2024	2025	2026	2027	2028	2029
9	5.5	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Corn silage Spring vertical tillage 20.1-25 ton/acre	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre

Summary by Crop:

NOTE: Yields calculated using the midpoint of the SnapPlus yield goal range for each crop.

Crops Grouped By Category		2024	2025	2026	2027	2028	2029
Corn grain	Acres bu	5 1,003	5 1,003			14 3,087	19 4,190
Corn silage	Acres ton	14 316	14 316	14 316	14 316	16 361	
Soybeans 7-10 inch row	Acres bu			5 303	5 303	5 303	
Alfalfa	Acres ton	24 121	24 121				
Alfalfa Seeding Spring	Acres ton						24 73
Corn silage to small grain cover crop	Acres ton	16 361	16 361	40 902	40 902	24 541	16 361

Appendix D – SnapPlus Proposed Reports

WQ1: P Trade Report

Reported For	
Printed	2025-01-24
Plan Completion/Update Date	2020-09-08
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\ppaulos\Desktop\SnapPlus Files\1_24_2025 Prairie Model (2).snapDb	

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

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

Questions? Please contact DNRphosphorus@wisconsin.gov

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

P Trade Report				PTP					
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029
1.1	WITHEE	WeA	1	3	0	0	0	0	0
1.2	LOYAL	LoB	6	24	3	1	1	0	0
10	WITHEE	WeB	5	12	4	3	3	3	2
10.1	WITHEE	WeB	6	10	3	2	2	2	1
2	LOYAL	LoB	7	29	3	1	0	0	0
5.1	WITHEE	WeA	2	2	1	1	1	1	1
5.2	LOYAL	LoB	3	4	1	1	1	1	1

P Trade Report				PTP					
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029
6	COMSTOCK	Cm	24	2	0	0	0	0	0
7	SPENCER	SsB	1	0	0	0	0	0	0
9	LOYAL	LoC2	6	30	5	2	2	2	1
Total			**60**	**116**	**21**	**11**	**9**	**8**	**8**

NM1: Narrative and Crops Report

Starting Year	**2024**
Reported For	**Mahr Brothers 2021-2025**
Printed	**2025-01-24**
Plan Completion/Update Date:	**2020-09-08**
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\ppaulos\Desktop\SnapPlus Files\1_24_2025 Prairie Model (2).snapDb	

Prepared for:
Mahr Brothers 2021-2025
attn:Brody, Jermey, and Mike Mahr
8517 345th Street
Stanley, 54768

Farm has 10 fields totalling 59.6 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

Spreader Calibration Methods: Equipment calibration

Narrative and Crops:

Field Name	Field Acres	2024	2025	2026	2027	2028	2029
1.1	1.3	Corn silage Spring vertical tillage 20.1-25 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
1.2	5.5	Corn silage Spring vertical tillage 20.1-25 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Field Name	Field Acres	2024	2025	2026	2027	2028	2029
10	4.9	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
10.1	5.9	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
2	7.3	Corn silage Spring vertical tillage 20.1-25 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
5.1	2.2	Corn grain Spring vertical tillage 191-210 bu/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
5.2	3	Corn grain Spring vertical tillage 191-210 bu/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
6	23.5	Alfalfa None 4.6-5.5 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Field Name	Field Acres	2024	2025	2026	2027	2028	2029
7	0.5	Alfalfa None 4.6-5.5 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
9	5.5	Corn silage to small grain cover crop Spring vertical tillage, cover crop disked 20.1-25 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 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		2024	2025	2026	2027	2028	2029
Corn silage	Acres ton	14 316					
Grasslands, permanent, not harvested	Acres none		60 0	60 0	60 0	60 0	60 0
Corn grain	Acres bu	5 1,003					
Alfalfa	Acres ton	24 121					
Corn silage to small grain cover crop	Acres ton	16 361					

Appendix E – Notice of Intent

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 # of ##

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

Applicant Information

Permittee Name	Permit Number	Facility Site Number
Stanley Wastewater Treatment Facility	WI- WI-21857	

Facility Address	City	State	ZIP Code
200 State St.	Stanley	WI	54768

Project Contact Name (if applicable)	Address	City	State	ZIP Code
	353 S. Broadway St. P.O. Box 155	Stanley	WI	54768

Project Name
Stanley Water Quality Trading Program

Receiving Water Name	Parameter(s) being traded	HUC 12(s)
Wolf Creek River	phosphorus	070500060101

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

Credit Generator Information

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

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

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

Will a broker/exchange be used to facilitate trade?
- ◯ Yes; Name: _____
- ◉ No
- ◯ Unsure

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

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

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

List the practices that will be used to generate credits:

Transition from a primarily conventional tillage row crop corn grain/silage practices to native prairie grasses/vegetation to provide continuous cover and no tillage. These practice changes significantly reduce erosion and subsequent phosphorus losses to the watershed.

Method for quantifying credits generated:
- ☐ Monitoring
- ☒ Modeling, Names: snapplus
- ☐ Other: _____

Projected date credits will be available: 11/01/2025

The preparer certifies all of the following:

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

Signature of Preparer	Date Signed

Authorized Representative Signature

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

Signature of Authorized Representative	Date Signed
Michael J Henke	8/19/2024

Appendix F – Water Quality Trading Checklist

State of WisconsinDepartment of
Natural Resources101 South Webster
Street
Madison WI 53707-7921dnr.wi.gov

Water Quality Trading Checklist

Form 3400-208 (1/14)

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

Applicant Information

Permittee Name	Permit Number	Facility Site Number
Stanley Wastewater Treatment Facility	WI- 21857	

Facility Address	City	State	ZIP Code
200 State Street	Stanley	WI	54768

Project Contact Name (if applicable)	Address	City	State	ZIP Code
	353 S. Broadway St., P.O. Box 155	Stanley	WI	54768

Project Name
Stanley Water Quality Trading Plan

Receiving Water Name	Parameter(s) being traded	HUC 12(s)
Wolf Creek River	Phosphorus	070500060101

Credit Generator Information

Credit generator type (select all that apply):

- ☐ Permitted Discharge (non-MS4CAFO)
- ☐ Permitted MS4
- ☐ Permitted CAFO
- ☑ Urban nonpoint source discharge
- ☑ Agricultural nonpoint source discharge
- ☐ Other - Specify: _____

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

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

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

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

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

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

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

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

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

Discharge Type	Practices Used to Generate Credits	Method of Quantification	Trade Agreement Number	Have the practice(s) been formally registered?
○ Urban NPS ◉ Agricultural NPS ○ Other	Convert farmland to continuous prairie grass	SnapPlus Model Data	TBD	○ Yes ◉ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part
○ Urban NPS ○ Agricultural NPS ○ Other				○ Yes ○ No ○ Only in part

Does plan have a narrative that describes:			Plan Section
a. Description of existing land uses	◉ Yes	○ No	*3.1.1*
b. Management practices used to generate credits	◉ Yes	○ No	*3.1.2*
c. Amount of credit being generated	◉ Yes	○ No	*3.3*
d. Description of applicable trade ratio per agreement/management practice	◉ Yes	○ No	*3.2 and 3.3*
e. Location where credits will be generated	◉ Yes	○ No	*2.2*
f. Timeline for credits and agreements	◉ Yes	○ No	*4.2*
g. Method for quantifying credits	◉ Yes	○ No	*3.3*

Does plan have a narrative that describes:			Plan Section
h. Tracking procedures	◉ Yes	○ No	4.3
i. Conditions under which the management practices may be inspected	◉ Yes	○ No	4.3
j. Reporting requirements should the management practice fail	◉ Yes	○ No	4.3
k. Operation and maintenance plan for each management practice	◉ Yes	○ No	4.3
l. Location of credit generator in proximity to receiving water and credit user	◉ Yes	○ No	2.2
m. Practice registration documents, if available	○ Yes	◉ No	N/A
n. History of project site(s)	◉ Yes	○ No	3.1.1
o. Other: _____	○ Yes	◉ No	N/A

The preparer certifies all of the following:

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

Signature of Preparer	Date Signed
Erin Tyree	08-23-2024

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
Mitch Hart	08-23-2024

Appendix G – NRCS Conservation Cover Standard Practices

Natural Resources Conservation Service

CONSERVATION PRACTICE STANDARD

CONSERVATION COVER

CODE 327

(ac)

DEFINITION

Establishing and maintaining permanent vegetative cover.

PURPOSE

This practice is used to accomplish one or more of the following purposes:

- Reduce sheet, rill, and wind erosion.
- Reduce sediment transport to surface water.
- Reduce ground and surface water quality degradation by nutrients.
- Reduce emissions of particulate matter.
- Provide wildlife, pollinator, and other beneficial organism habitat.
- Improve soil health by maintaining or increasing soil organic matter quantity.
- Improve soil health by increasing soil aggregate stability.
- Improve soil health by enhancing habitat for soil organisms.
- Improve soil health by reducing compaction.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on most lands needing permanent vegetative cover. This practice may be used to conserve and stabilize archeological and historic sites. This practice does not apply to plantings for forage production or to critical area plantings that require special measures to ensure successful establishment. If the soil and water resource concerns meet minimum planning criteria and the only purpose of the planting is to provide wildlife habitat, Wildlife Habitat Planting (CPS 420) may be implemented.

CRITERIA

General Criteria Applicable to All Purposes

Select species that are adapted to the soil, ecological sites, and climatic conditions and are suitable for the planned purpose and site conditions.

Ensure that planting dates, seeding rates, planting methods, and care in handling and planting seed or planting stock are used to accomplish the planned purpose.

If the specific Rhizobium bacteria for selected legumes are not present in the soil, treat the seed with the appropriate available inoculum. Inoculate legumes at time of planting based on conservation objectives and site history. See USDA NRCS Plant Materials Technical Note No. 5 (Title 190), Using the Appropriate Legume Inoculant for Conservation Plantings.

Prepare the site by eliminating weeds that will impede the establishment and growth of selected species.

NRCS reviews and periodically updates conservation practice standards. To obtain the current version of this standard, contact your Natural Resources Conservation Service State office or visit the Field Office Technical Guide online by going to the NRCS website at https://www.nrcs.usda.gov/ and type FOTG in the search field.

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Apply nutrients and amendments as needed to ensure vegetation establishment and planned growth. Nutrients and amendments are not always needed for native plant establishment.

The established stand will produce a positive soil conditioning index (SCI) value. Use the SCI results available in the current NRCS erosion prediction technology.

For organic and transitioning-to-organic operations, all seeds, planting stock, materials, and methods used in the implementation of this practice standard must comply with the National Organic Program (NOP) Rules. See the USDA Organic Regulations and the NRCS resource page Conservation for Organic Farmers.

Additional Criteria to Reduce Sheet, Rill and Wind Erosion

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 NRCS erosion prediction technology. Soil erosion must not exceed the tolerable soil loss value for the critical dominant soil in the planning area.

Additional Criteria to Reduce Emissions of Particulate Matter

Establish plants that can tolerate the impacts of routine operations (e.g., orchard and vineyard alleys during mowing, spraying, or harvest operations) and provide sufficient ground cover in the planted area to minimize the generation of particulate matter.

Additional Criteria to Provide Wildlife, Pollinator, and Beneficial Organism Habitat

Plant a diverse mixture of tree, shrub, grass, and forb species to meet the habitat needs of the targeted species using approved habitat evaluation tools for the respective state.

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 produce high volumes of organic material. Determine the amount of biomass needed by using the current soil conditioning index procedure.

CONSIDERATIONS

General Considerations

Use certified seed and planting stock that is adapted to the site when it is available.

When restoring or repairing sites, consider use of inoculant for native species when available.

When using Conservation Cover as a prairie strip, design a minimum width of 30 feet.

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

To mitigate for greenhouse gas emissions, select species that will store carbon in the soil via extensive root systems or in woody biomass.

Location of this practice in orchard/vineyard alleys can significantly reduce the particulate matter emissions associated with tractor traffic in the alleys when compared to bare alleys.

If nitrogen fertilizer is used on sites where nitrogen-responsive weeds are present, delay N application until the planted species are well established to avoid expected weed problems. If the site has poor or low-fertility soil, consider using slow-release nutrient sources in lieu of soluble fertilizer to improve the site without stimulating weeds.

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

Where wildlife management is an objective, encourage plant species and structural diversity to maximize wildlife use. Habitat evaluation tools can aid in selecting plants for food and cover.

As long as soil loss is within tolerable soil loss limits, use less dense seeding rates where ground-nesting pollinator and wildlife habitat are the primary purposes.

To provide habitat for natural enemies of crop pests, select a mix of plant species that provide year-round habitat or food (accessible pollen or nectar) for the desired beneficial species. Use a diverse mix of 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). Use habitat requirements of predatory and parasitic insects, spiders, insectivorous birds and bats, raptors, and predators of terrestrial rodents. Consult land grant university integrated pest management recommendations for beneficial habitat plantings to manage the target pest species. See USDA NRCS Agronomy Technical Note No. 9 (Title 190), Preventing or Mitigating Potential Negative Impacts of Pesticides on Pollinators using IPM and Other Conservation Practices.

Use native species that are appropriate for the identified resource concern and management objectives with the aim of reestablishing the native plant community for the site. It should be considered adequate if a native cover other than what was planted establishes and addresses the resource concern and landowner objectives .

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.

Including a diverse mix of species enhances the above- and below ground ecosystem biodiversity.

Additional Considerations to Improve Soil Health

The effects of this practice are enhanced when it is integrated into a soil health management system. Refer to NRCS Soil Health Technical Note No. 4 (Title 450), “The Basics of Addressing Resource Concerns with Conservation Practices within Soil Health Management Systems on Cropland” for more information.

PLANS AND SPECIFICATIONS

Develop plans and specifications for each field or treatment unit according to the criteria and operation and maintenance requirements of this standard. Specifications must describe the requirements to apply this practice to achieve the intended purpose. Record the following specification components in an approved NRCS Conservation Practice Standard Conservation Cover (Code 327) implementation requirements document:

- All applicable purposes for the installation of this practice.
- Field numbers and installation locations referenced on the conservation plan map.
- Recommended plant species.
- Seeding rates and dates.
- Seedbed preparation procedures.
- Establishment methods.
- Management actions needed to ensure an adequate establishment.
- Soil loss estimates and SCI results, if applicable.

When applying this practice to perennial systems, such as orchards and vineyards, the establishment and management requirements apply only to the areas planted with this practice (e.g., the grassed alleyways are seeded and managed under this practice, but the vine row or tree row is managed separately).

OPERATION AND MAINTENANCE

Prepare an operation and maintenance plan for this practice. Planned activities may include, but are not limited to, the following:

- Protect the cover from irreversible damage by traffic, implements, and herbicides.
- 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.
- Mowing and harvest operations in a perennial crop system (such as orchards, vineyards, berries, and nursery stock), will be accomplished in a manner that minimizes the generation of particulate matter.
- Mowing may be needed during the establishment period to reduce competition from weeds.
- Control noxious weeds and invasive species.
- If wildlife habitat enhancement is a purpose, maintenance practices and activities will occur during periods of the day or season to minimize negative impacts of disturbance.
- If wildlife habitat is a purpose, include the procedures necessary to conserve the cover's wildlife habitat functions.
- To support insects eaten by grassland nesting birds, spot treat noxious weeds to protect other forbs and legumes that benefit native pollinators and other wildlife.
- Revegetate bare spots when they occur.

REFERENCES

USDA AMS. Organic Regulations. Washington, D.C. Accessed July 22, 2022. https://www.ams.usda.gov/rules-regulations/organic

USDA ARS. 1997. Agricultural Handbook Number 703. Predicting Soil Erosion by Water: A Guide to Conservation Planning with the Revised Universal Soil Loss Equation (RUSLE). Washington, D.C. Accessed July 22, 2022. https://www.ars.usda.gov/ARSUserFiles/64080530/RUSLE/AH_703.pdf

USDA NRCS. Conservation for Organic Farmers. Accessed July 22, 2022. https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/organic/

USDA NRCS. "Water Erosion (RUSLE2)." Accessed December 16, 2020. Water Erosion (RUSLE2) | Natural Resources Conservation Service (usda.gov)

USDA NRCS. "Wind Erosion (WEPS)." Accessed December 16, 2020. https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/tools/weps/

USDA NRCS. 2014. Agronomy Technical Note No. 9 (Title 190), Preventing or Mitigating Potential Negative Impacts of Pesticides on Pollinators using IPM and Other Conservation Practices. Washington, D.C. Accessed July 22, 2022. 595_KY_GD_Agronomy_Tech_Note_9_Preventing_or_Mitigating_Potential_Negative_Impacts_of_Pesticides_on_Pollinators_2014 (usda.gov)

USDA NRCS. 2019. Soil Health Technical Note No. 4 (Title 450). The Basics of Addressing Resource Concerns with Conservation Practices within Soil Health Management Systems on Cropland. Washington, D.C.

USDA NRCS. 2020. Plant Materials Technical Note No. 5 (Title 190), Using the Appropriate Legume Inoculant for Conservation Plantings. USDA, NRCS, Plant Materials Program. Washington, D.C. Accessed February 28, 2024. National Plant Materials Technical Note 5: Using the Appropriate Legume Inoculant for Conservation Plantings (usda.gov)

Appendix H – Soil Data

Appendix H

Soil Data Overview		
Field	**Collection Date**	**Notes**
1.1	11/18/24	Please see attached AgSource Lab Report.
1.2	11/18/24	Please see attached AgSource Lab Report.
2	11/18/24	Please see attached AgSource Lab Report.
5.1	11/18/24	Please see attached AgSource Lab Report.
5.2	11/18/24	Please see attached AgSource Lab Report.
6	11/18/24	Please see attached AgSource Lab Report.
7	11/18/24	Please see attached AgSource Lab Report.
8	11/18/24	Please see attached AgSource Lab Report.
9	11/13/23	Collected by previous land management leasing organization and imported into Snapplus. Original lab report is currently not available.
10	11/18/24	Please see attached AgSource Lab Report.
10.1	11/13/23	Collected by previous land management leasing organization and imported into Snapplus. Original lab report is currently not available.

Soil Analysis

Submitted By: **SF16591-000**
City of Stanley
PO Box 155
Stanley, WI 54768-0155

Submitted For:
City of Stanley
WI

Laboratory Sample #
DB02013 - DB02028

Date Received:
11/18/2024

Date Processed:
11/21/2024

Information Sheet #
126290

Lab ID: 3268-47 to 3268-48
State: WI **Acres:**
County: Chippewa **Tiled:** Yes
Plow Depth: 6.5 **Irrigated:** No
Field: 1
Soil Name:
Map Unit:

WISCONSIN NUTRIENT RECOMMENDATIONS

Cropping Sequence	Yield Goal - per acre -	Nutrient Needs N	P_2O_5 lbs/a	K_2O lbs/a	Fertilizer Credits Legume N --- lbs/a ----
Corn, grain	170	165***	0.00	45.00	0.00
Soybean, grain	60	0	0.00	85.00	0.00
Alfalfa, seeding	3.5	0	0.00	180.00	0.00
Alfalfa, established	6	0	0.00	360.00	0.00

LABORATORY ANALYSIS

Sample No.	Text Code	Est CEC	Soil pH	O.M. %	P ppm	K ppm	Ca ppm	Mg ppm	B ppm	Mn ppm	Zn ppm	SO4-S ppm	Density	Buffer pH	60-69 Lime	% Base Saturation %K	%Ca	%Mg	Tot %	%H
1-1	2	8.9	5.3	2.9	44	126	805	190					0.99	7.0	2.0	3.6	45.2	17.5	67.5	32.5
1-2	2	9.1	5.3	2.9	43	129	833	199					1.02	6.9	2.0	3.6	45.6	17.8	68.2	31.8
Adjusted Avg:		9.0	5.3	2.9	44	128	819	195												

INTERPRETATION

	Very Low	Low	Medium	Optimum	High	Very High	Excessive
Phosphorus							Excessive
Potassium				Optimum			
Calcium				Optimum			
Magnesium				Optimum			

Lime required for this rotation to reach 6.80 is 2.00 T/A of 60-69 lime or 1.50 T/A of 80-89 lime.

*** **Click to open Nitrogen Applicaton Rate Guidelines for Corn:** Nitrogen Application Guidelines

ADDITIONAL INFORMATION

- Ca test average value of 819 is in Optimum category.
- If a legume crop preceeds the first crop listed on the sample submission form, N credits should be subtracted from the N recommendation for the first crop listed. See Chapter 9 in UWEX Publication A2809 for more details.
- If alfalfa will be maintained for more than three years, increase recommended K2O by 20% each year.
- If corn is harvested for silage instead of grain apply extra 90 lbs K2O per acre to next crop.
- If lime has been applied in the last two years, more lime may not be needed due to incomplete reaction.
- If manure, biosolids, septage or other waste materials have been applied to this field, be sure to take nutrient credits and adjust fertilizer rate. See Chapter 9 in UWEX Publication A2809 for more details.
- Mg test average value of 194.5 is in Optimum category.
- Nitrogen application rates for grain and silage corn reflect the maximum return to N (MRTN) at a 0.10 N:corn price ratio (eg. $0.30/lb N and $3.00/bu; or $0.40/lb N and $4.00/bu) and the range of rates that produce profitability within $1/a of the MRTN rate. N application rates can be adjusted to reflect different prices for N and grain. See Chapter 6 in UWEX Publication A2809 for more details.
- No crops were provided, a default rotation with nutrient application rate guidelines is provided.
- No soil information was provided. Generic nutrient application rate guidelines are given on this report. They should not be used for nutrient management planning purposes. In the future, please submit samples with county and soil map unit or soil series name to obtain the nutrient application guidelines that are more appropriate for your soil.
- Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.
- Starter fertilizer may accelerate early season corn development, which may not always translate into increased yield. Corn will benefit more from a complete starter fertilizer (e.g. 10+20+20 lbs N+P2O5+K2O/a) when grown on soils testing optimum or less in P and K.
- A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P205 + K2O/a) is advisable for row crops on soils slow to warm in the spring.
- A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.

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Soil Analysis

Submitted By: **SF16591-000**
City of Stanley
PO Box 155
Stanley, WI 54768-0155

Submitted For:
City of Stanley
WI

Laboratory Sample #
DB02013 - DB02028

Date Received:
11/18/2024

Date Processed:
11/21/2024

Information Sheet #
126290

Lab ID: 3269-11 to 3269-12
State: WI **Acres:**
County: Chippewa **Tiled:** Yes
Plow Depth: 6.5 **Irrigated:** No
Field: **10**
Soil Name:
Map Unit:

WISCONSIN NUTRIENT RECOMMENDATIONS

Cropping Sequence	Yield Goal - per acre -	Nutrient Needs N	P_2O_5 lbs/a	K_2O lbs/a	Fertilizer Credits Legume N --- lbs/a ----
Corn, grain	170	165***	0.00	0.00	0.00
Soybean, grain	60	0	0.00	0.00	0.00
Alfalfa, seeding	3.5	0	0.00	0.00	0.00
Alfalfa, established	6	0	0.00	0.00	0.00

LABORATORY ANALYSIS

Sample No.	Text Code	Est CEC	Soil pH	O.M. %	P ppm	K ppm	Ca ppm	Mg ppm	B ppm	Mn ppm	Zn ppm	SO4-S ppm	Density	Buffer pH	60-69 Lime	% Base Saturation %K	%Ca	%Mg	Tot %	%H
10-1	2	11.5	7.1	3.5	95	321	1458	379					1.02	N.R.		7.1	63.4	27.0	100.0	0.0
10-2	2	10.7	7.0	3.5	102	342	1346	352					0.97	N.R.		8.1	62.7	26.9	100.0	0.0
Adjusted Avg:		11.1	7.1	3.5	99	332	1402	366												

INTERPRETATION

	Very Low	Low	Medium	Optimum	High	Very High	Excessive
Phosphorus							Excessive
Potassium							Excessive
Calcium					High		
Magnesium				Optimum			

There is no lime recommendation for this rotation. Please see Additional Information below.

***** Click to open Nitrogen Applicaton Rate Guidelines for Corn:** Nitrogen Application Guidelines

ADDITIONAL INFORMATION

- Buffer pH not required for calculation of lime requirement when soil pH is 6.6 or higher.
- Ca test average value of 1402 is in High category.
- If a legume crop preceeds the first crop listed on the sample submission form, N credits should be subtracted from the N recommendation for the first crop listed. See Chapter 9 in UWEX Publication A2809 for more details.
- If alfalfa will be maintained for more than three years, increase recommended K2O by 20% each year.
- If manure, biosolids, septage or other waste materials have been applied to this field, be sure to take nutrient credits and adjust fertilizer rate. See Chapter 9 in UWEX Publication A2809 for more details.
- Mg test average value of 365.5 is in Optimum category.
- Nitrogen application rates for grain and silage corn reflect the maximum return to N (MRTN) at a 0.10 N:corn price ratio (eg. $0.30/lb N and $3.00/bu; or $0.40/lb N and $4.00/bu) and the range of rates that produce profitability within $1/a of the MRTN rate. N application rates can be adjusted to reflect different prices for N and grain. See Chapter 6 in UWEX Publication A2809 for more details.
- No crops were provided, a default rotation with nutrient application rate guidelines is provided.
- No soil information was provided. Generic nutrient application rate guidelines are given on this report. They should not be used for nutrient management planning purposes. In the future, please submit samples with county and soil map unit or soil series name to obtain the nutrient application guidelines that are more appropriate for your soil.
- Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.
- Starter fertilizer may accelerate early season corn development, which may not always translate into increased yield. Corn will benefit more from a complete starter fertilizer (e.g. 10+20+20 lbs N+P2O5+K2O/a) when grown on soils testing optimum or less in P and K.
- A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P205 + K2O/a) is advisable for row crops on soils slow to warm in the spring.
- A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.

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Soil Analysis

Submitted By: **SF16591-000**
City of Stanley
PO Box 155
Stanley, WI 54768-0155

Submitted For:
City of Stanley
WI

Laboratory Sample #
DB02013 - DB02028

Date Received:
11/18/2024

Date Processed:
11/21/2024

Information Sheet #
126290

Lab ID: 3268-49 to 3268-50
State: WI **Acres:**
County: Chippewa **Tiled:** Yes
Plow Depth: 6.5 **Irrigated:** No
Field: **2**
Soil Name:
Map Unit:

WISCONSIN NUTRIENT RECOMMENDATIONS

Cropping Sequence	Yield Goal - per acre -	Nutrient Needs N	P_2O_5 lbs/a	K_2O lbs/a	Fertilizer Credits Legume N --- lbs/a ----
Corn, grain	170	165***	30.00	45.00	0.00
Soybean, grain	60	0	25.00	85.00	0.00
Alfalfa, seeding	3.5	0	20.00	180.00	0.00
Alfalfa, established	6	0	40.00	360.00	0.00

LABORATORY ANALYSIS

Sample No.	Text Code	Est CEC	Soil pH	O.M. %	P ppm	K ppm	Ca ppm	Mg ppm	B ppm	Mn ppm	Zn ppm	SO4-S ppm	Density	Buffer pH	60-69 Lime	% Base Saturation %K	%Ca	%Mg	Tot %	%H
2-1	2	10.4	4.8	2.7	34	126	872	242					1.04	7.0	2.0	3.1	42.1	19.1	65.5	34.5
2-2	2	10.1	4.7	2.7	31	127	847	228					0.99	7.0	2.0	3.2	41.8	18.4	64.6	35.4
Adjusted Avg:		10.3	4.8	2.7	33	127	860	235												

INTERPRETATION

	Very Low	Low	Medium	Optimum	High	Very High	Excessive
Phosphorus					High		
Potassium				Optimum			
Calcium				Optimum			
Magnesium				Optimum			

Lime required for this rotation to reach 6.80 is 2.00 T/A of 60-69 lime or 1.50 T/A of 80-89 lime.

***** Click to open Nitrogen Applicaton Rate Guidelines for Corn:** Nitrogen Application Guidelines

ADDITIONAL INFORMATION

- Ca test average value of 859.5 is in Optimum category.
- If a legume crop preceeds the first crop listed on the sample submission form, N credits should be subtracted from the N recommendation for the first crop listed. See Chapter 9 in UWEX Publication A2809 for more details.
- If alfalfa will be maintained for more than three years, increase recommended K2O by 20% each year.
- If corn is harvested for silage instead of grain apply extra 90 lbs K2O per acre to next crop.
- If lime has been applied in the last two years, more lime may not be needed due to incomplete reaction.
- If manure, biosolids, septage or other waste materials have been applied to this field, be sure to take nutrient credits and adjust fertilizer rate. See Chapter 9 in UWEX Publication A2809 for more details.
- Mg test average value of 235 is in Optimum category.
- Nitrogen application rates for grain and silage corn reflect the maximum return to N (MRTN) at a 0.10 N:corn price ratio (eg. $0.30/lb N and $3.00/bu; or $0.40/lb N and $4.00/bu) and the range of rates that produce profitability within $1/a of the MRTN rate. N application rates can be adjusted to reflect different prices for N and grain. See Chapter 6 in UWEX Publication A2809 for more details.
- No crops were provided, a default rotation with nutrient application rate guidelines is provided.
- No soil information was provided. Generic nutrient application rate guidelines are given on this report. They should not be used for nutrient management planning purposes. In the future, please submit samples with county and soil map unit or soil series name to obtain the nutrient application guidelines that are more appropriate for your soil.
- Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.
- Starter fertilizer may accelerate early season corn development, which may not always translate into increased yield. Corn will benefit more from a complete starter fertilizer (e.g. 10+20+20 lbs N+P2O5+K2O/a) when grown on soils testing optimum or less in P and K.
- A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P205 + K2O/a) is advisable for row crops on soils slow to warm in the spring.
- A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.

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Soil Analysis

Submitted By: **SF16591-000**
City of Stanley
PO Box 155
Stanley, WI 54768-0155

Submitted For:
City of Stanley
WI

Laboratory Sample #
DB02013 - DB02028

Date Received:
11/18/2024

Date Processed:
11/21/2024

Information Sheet #
126290

Lab ID: 3269-01 to 3269-02
State: WI **Acres:**
County: Chippewa **Tiled:** Yes
Plow Depth: 6.5 **Irrigated:** No
Field: **5**
Soil Name:
Map Unit:

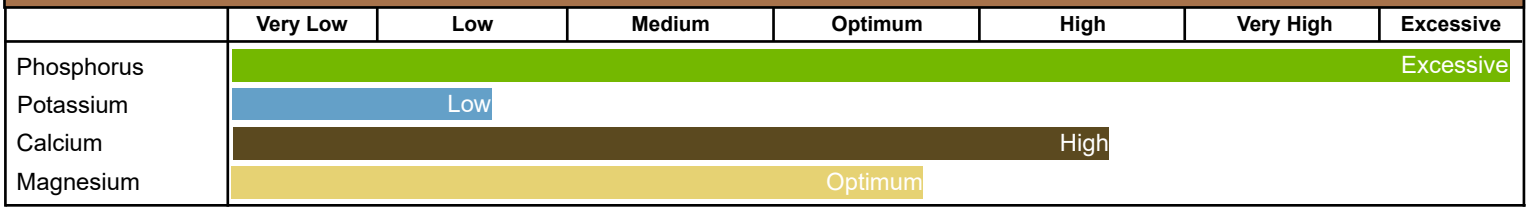
WISCONSIN NUTRIENT RECOMMENDATIONS

Cropping Sequence	Yield Goal - per acre -	Nutrient Needs N	P_2O_5 lbs/a	K_2O lbs/a	Fertilizer Credits Legume N --- lbs/a ----
Corn, grain	170	165***	0.00	75.00	0.00
Soybean, grain	60	0	0.00	115.00	0.00
Alfalfa, seeding	3.5	0	0.00	220.00	0.00
Alfalfa, established	6	0	0.00	400.00	0.00

LABORATORY ANALYSIS

Sample No.	Text Code	Est CEC	Soil pH	O.M. %	P ppm	K ppm	Ca ppm	Mg ppm	B ppm	Mn ppm	Zn ppm	SO4-S ppm	Density	Buffer pH	60-69 Lime	% Base Saturation %K	%Ca	%Mg	Tot %	%H
5-1	2	10.4	6.0	2.9	43	92	1175	309					0.98	7.2	2.0	2.3	56.2	24.2	84.0	16.0
5-2	2	9.5	6.0	2.9	49	91	1021	272					0.87	7.1	2.0	2.5	54.0	23.6	81.3	18.7
Adjusted Avg:		10.0	6.0	2.9	46	92	1098	291												

INTERPRETATION



Lime required for this rotation to reach 6.80 is 2.00 T/A of 60-69 lime or 1.50 T/A of 80-89 lime.

*** **Click to open Nitrogen Applicaton Rate Guidelines for Corn:** Nitrogen Application Guidelines

ADDITIONAL INFORMATION

- Ca test average value of 1098 is in High category.
- If a legume crop preceeds the first crop listed on the sample submission form, N credits should be subtracted from the N recommendation for the first crop listed. See Chapter 9 in UWEX Publication A2809 for more details.
- If alfalfa will be maintained for more than three years, increase recommended K2O by 20% each year.
- If corn is harvested for silage instead of grain apply extra 90 lbs K2O per acre to next crop.
- If lime has been applied in the last two years, more lime may not be needed due to incomplete reaction.
- If manure, biosolids, septage or other waste materials have been applied to this field, be sure to take nutrient credits and adjust fertilizer rate. See Chapter 9 in UWEX Publication A2809 for more details.
- Mg test average value of 290.5 is in Optimum category.
- Nitrogen application rates for grain and silage corn reflect the maximum return to N (MRTN) at a 0.10 N:corn price ratio (eg. $0.30/lb N and $3.00/bu; or $0.40/lb N and $4.00/bu) and the range of rates that produce profitability within $1/a of the MRTN rate. N application rates can be adjusted to reflect different prices for N and grain. See Chapter 6 in UWEX Publication A2809 for more details.
- No crops were provided, a default rotation with nutrient application rate guidelines is provided.
- No soil information was provided. Generic nutrient application rate guidelines are given on this report. They should not be used for nutrient management planning purposes. In the future, please submit samples with county and soil map unit or soil series name to obtain the nutrient application guidelines that are more appropriate for your soil.
- Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.
- Starter fertilizer may accelerate early season corn development, which may not always translate into increased yield. Corn will benefit more from a complete starter fertilizer (e.g. 10+20+20 lbs N+P2O5+K2O/a) when grown on soils testing optimum or less in P and K.
- A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P205 + K2O/a) is advisable for row crops on soils slow to warm in the spring.
- A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.

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Soil Analysis

Submitted By: **SF16591-000**
City of Stanley
PO Box 155
Stanley, WI 54768-0155

Submitted For:
City of Stanley
WI

Laboratory Sample #
DB02013 - DB02028

Date Received:
11/18/2024

Date Processed:
11/21/2024

Information Sheet #
126290

Lab ID: 3269-03 to 3269-06
State: WI **Acres:**
County: Chippewa **Tiled:** Yes
Plow Depth: 6.5 **Irrigated:** No
Field: **6**
Soil Name:
Map Unit:

WISCONSIN NUTRIENT RECOMMENDATIONS

Cropping Sequence	Yield Goal - per acre -	Nutrient Needs N	P_2O_5 lbs/a	K_2O lbs/a	Fertilizer Credits Legume N --- lbs/a ----
Corn, grain	170	165***	90.00	90.00	0.00
Soybean, grain	60	0	80.00	130.00	0.00
Alfalfa, seeding	3.5	0	70.00	235.00	0.00
Alfalfa, established	6	0	110.00	415.00	0.00

LABORATORY ANALYSIS

Sample No.	Text Code	Est CEC	Soil pH	O.M. %	P ppm	K ppm	Ca ppm	Mg ppm	B ppm	Mn ppm	Zn ppm	SO4-S ppm	Density	Buffer pH	60-69 Lime	% Base Saturation %K	%Ca	%Mg	Tot %	%H
6-1	2	10.9	6.2	2.9	13	51	1182	418					0.91	7.1	2.0	1.2	54.3	31.5	87.8	12.2
6-2	2	10.5	6.3	2.9	12	67	1133	405					0.91	7.2	2.0	1.6	54.0	31.7	88.1	11.9
6-3	2	11.0	6.3	2.9	11	65	1223	427					0.95	7.1	2.0	1.5	55.7	31.9	89.9	10.1
6-4	2	11.0	6.5	2.8	13	47	1266	434					0.96	7.2	2.0	1.1	57.6	32.4	91.9	8.1
Adjusted Avg:		10.9	6.3	2.9	12	58	1201	421												

INTERPRETATION

	Very Low	Low	Medium	Optimum	High	Very High	Excessive
Phosphorus		Low					
Potassium	Very Low						
Calcium					High		
Magnesium				Optimum			

Lime required for this rotation to reach 6.80 is 2.00 T/A of 60-69 lime or 1.50 T/A of 80-89 lime.

*** **Click to open Nitrogen Applicaton Rate Guidelines for Corn:** Nitrogen Application Guidelines

ADDITIONAL INFORMATION

- Ca test average value of 1201 is in High category.
- If a legume crop preceeds the first crop listed on the sample submission form, N credits should be subtracted from the N recommendation for the first crop listed. See Chapter 9 in UWEX Publication A2809 for more details.
- If alfalfa will be maintained for more than three years, increase recommended K2O by 20% each year.
- If corn is harvested for silage instead of grain add extra 30 lbs P2O5 per acre and 90 lbs K2O per acre to next crop.
- If lime has been applied in the last two years, more lime may not be needed due to incomplete reaction.
- If manure, biosolids, septage or other waste materials have been applied to this field, be sure to take nutrient credits and adjust fertilizer rate. See Chapter 9 in UWEX Publication A2809 for more details.
- Mg test average value of 421 is in Optimum category.
- Nitrogen application rates for grain and silage corn reflect the maximum return to N (MRTN) at a 0.10 N:corn price ratio (eg. $0.30/lb N and $3.00/bu; or $0.40/lb N and $4.00/bu) and the range of rates that produce profitability within $1/a of the MRTN rate. N application rates can be adjusted to reflect different prices for N and grain. See Chapter 6 in UWEX Publication A2809 for more details.
- No crops were provided, a default rotation with nutrient application rate guidelines is provided.
- No soil information was provided. Generic nutrient application rate guidelines are given on this report. They should not be used for nutrient management planning purposes. In the future, please submit samples with county and soil map unit or soil series name to obtain the nutrient application guidelines that are more appropriate for your soil.
- Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.
- Starter fertilizer may accelerate early season corn development, which may not always translate into increased yield. Corn will benefit more from a complete starter fertilizer (e.g. 10+20+20 lbs N+P2O5+K2O/a) when grown on soils testing optimum or less in P and K.

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Soil Analysis

Submitted By: **SF16591-000**
City of Stanley
PO Box 155
Stanley, WI 54768-0155

Submitted For:
City of Stanley
WI

Laboratory Sample #
DB02013 - DB02028

Date Received:
11/18/2024

Date Processed:
11/21/2024

Information Sheet #
126290

● A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P205 + K2O/a) is advisable for row crops on soils slow to warm in the spring.
● A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.

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Soil Analysis

Submitted By: **SF16591-000**
City of Stanley
PO Box 155
Stanley, WI 54768-0155

Submitted For:
City of Stanley
WI

Laboratory Sample #
DB02013 - DB02028

Date Received:
11/18/2024

Date Processed:
11/21/2024

Information Sheet #
126290

Lab ID: 3269-07 to 3269-08
State: WI **Acres:**
County: Chippewa **Tiled:** Yes
Plow Depth: 6.5 **Irrigated:** No
Field: **7**
Soil Name:
Map Unit:

WISCONSIN NUTRIENT RECOMMENDATIONS

Cropping Sequence	Yield Goal - per acre -	Nutrient Needs N	P_2O_5	K_2O (lbs/a)	Fertilizer Credits Legume N --- lbs/a ----
Corn, grain	170	165***	100.00	90.00	0.00
Soybean, grain	60	0	90.00	130.00	0.00
Alfalfa, seeding	3.5	0	80.00	235.00	0.00
Alfalfa, established	6	0	120.00	415.00	0.00

LABORATORY ANALYSIS

Sample No.	Text Code	Est CEC	Soil pH	O.M. %	P ppm	K ppm	Ca ppm	Mg ppm	B ppm	Mn ppm	Zn ppm	SO4-S ppm	Density	Buffer pH	60-69 Lime	% Base Saturation %K	%Ca	%Mg	Tot %	%H
7-1	2	8.6	6.9	2.7	7	55	1105	337					0.98	N.R.		1.6	64.3	32.2	98.9	1.1
7-2	2	9.2	7.0	2.7	7	52	1202	366					1.04	N.R.		1.4	65.2	32.6	100.0	0.0
Adjusted Avg:		8.9	7.0	2.7	7	54	1154	352												

INTERPRETATION

	Very Low	Low	Medium	Optimum	High	Very High	Excessive
Phosphorus	Very Low						
Potassium	Very Low						
Calcium					High		
Magnesium				Optimum			

There is no lime recommendation for this rotation. Please see Additional Information below.

***** Click to open Nitrogen Applicaton Rate Guidelines for Corn:** Nitrogen Application Guidelines

ADDITIONAL INFORMATION

- Buffer pH not required for calculation of lime requirement when soil pH is 6.6 or higher.
- Ca test average value of 1153.5 is in High category.
- If a legume crop preceeds the first crop listed on the sample submission form, N credits should be subtracted from the N recommendation for the first crop listed. See Chapter 9 in UWEX Publication A2809 for more details.
- If alfalfa will be maintained for more than three years, increase recommended K2O by 20% each year.
- If corn is harvested for silage instead of grain add extra 30 lbs P2O5 per acre and 90 lbs K2O per acre to next crop.
- If manure, biosolids, septage or other waste materials have been applied to this field, be sure to take nutrient credits and adjust fertilizer rate. See Chapter 9 in UWEX Publication A2809 for more details.
- Mg test average value of 351.5 is in Optimum category.
- Nitrogen application rates for grain and silage corn reflect the maximum return to N (MRTN) at a 0.10 N:corn price ratio (eg. $0.30/lb N and $3.00/bu; or $0.40/lb N and $4.00/bu) and the range of rates that produce profitability within $1/a of the MRTN rate. N application rates can be adjusted to reflect different prices for N and grain. See Chapter 6 in UWEX Publication A2809 for more details.
- No crops were provided, a default rotation with nutrient application rate guidelines is provided.
- No soil information was provided. Generic nutrient application rate guidelines are given on this report. They should not be used for nutrient management planning purposes. In the future, please submit samples with county and soil map unit or soil series name to obtain the nutrient application guidelines that are more appropriate for your soil.
- Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.
- Starter fertilizer may accelerate early season corn development, which may not always translate into increased yield. Corn will benefit more from a complete starter fertilizer (e.g. 10+20+20 lbs N+P2O5+K2O/a) when grown on soils testing optimum or less in P and K.
- A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P205 + K2O/a) is advisable for row crops on soils slow to warm in the spring.
- A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.

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Soil Analysis

Submitted By: **SF16591-000**
City of Stanley
PO Box 155
Stanley, WI 54768-0155

Submitted For:
City of Stanley
WI

Laboratory Sample #
DB02013 - DB02028

Date Received:
11/18/2024

Date Processed:
11/21/2024

Information Sheet #
126290

Lab ID: 3269-09 to 3269-10
State: WI **Acres:**
County: Chippewa **Tiled:** Yes
Plow Depth: 6.5 **Irrigated:** No
Field: **8**
Soil Name:
Map Unit:

WISCONSIN NUTRIENT RECOMMENDATIONS

Cropping Sequence	Yield Goal - per acre -	Nutrient Needs N	P_2O_5 lbs/a	K_2O lbs/a	Fertilizer Credits Legume N --- lbs/a ----
Corn, grain	170	165***	0.00	0.00	0.00
Soybean, grain	60	0	0.00	0.00	0.00
Alfalfa, seeding	3.5	0	0.00	0.00	0.00
Alfalfa, established	6	0	0.00	0.00	0.00

LABORATORY ANALYSIS

Sample No.	Text Code	Est CEC	Soil pH	O.M. %	P ppm	K ppm	Ca ppm	Mg ppm	B ppm	Mn ppm	Zn ppm	SO4-S ppm	Density	Buffer pH	60-69 Lime	% Base Saturation %K	%Ca	%Mg	Tot %	%H
8-1	2	11.3	7.3	3.5	91	372	1411	368					0.99	N.R.		8.4	62.5	26.7	100.0	0.0
8-2	2	12.4	7.2	3.5	97	324	1587	407					1.01	N.R.		6.7	64.1	26.9	100.0	0.0
Adjusted Avg:		11.9	7.3	3.5	94	348	1499	388												

INTERPRETATION

	Very Low	Low	Medium	Optimum	High	Very High	Excessive
Phosphorus							Excessive
Potassium							Excessive
Calcium					High		
Magnesium				Optimum			

There is no lime recommendation for this rotation. Please see Additional Information below.

***** Click to open Nitrogen Applicaton Rate Guidelines for Corn:** Nitrogen Application Guidelines

ADDITIONAL INFORMATION

- Buffer pH not required for calculation of lime requirement when soil pH is 6.6 or higher.
- Ca test average value of 1499 is in High category.
- If a legume crop preceeds the first crop listed on the sample submission form, N credits should be subtracted from the N recommendation for the first crop listed. See Chapter 9 in UWEX Publication A2809 for more details.
- If alfalfa will be maintained for more than three years, increase recommended K2O by 20% each year.
- If manure, biosolids, septage or other waste materials have been applied to this field, be sure to take nutrient credits and adjust fertilizer rate. See Chapter 9 in UWEX Publication A2809 for more details.
- Mg test average value of 387.5 is in Optimum category.
- Nitrogen application rates for grain and silage corn reflect the maximum return to N (MRTN) at a 0.10 N:corn price ratio (eg. $0.30/lb N and $3.00/bu; or $0.40/lb N and $4.00/bu) and the range of rates that produce profitability within $1/a of the MRTN rate. N application rates can be adjusted to reflect different prices for N and grain. See Chapter 6 in UWEX Publication A2809 for more details.
- No crops were provided, a default rotation with nutrient application rate guidelines is provided.
- No soil information was provided. Generic nutrient application rate guidelines are given on this report. They should not be used for nutrient management planning purposes. In the future, please submit samples with county and soil map unit or soil series name to obtain the nutrient application guidelines that are more appropriate for your soil.
- Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.
- Starter fertilizer may accelerate early season corn development, which may not always translate into increased yield. Corn will benefit more from a complete starter fertilizer (e.g. 10+20+20 lbs N+P2O5+K2O/a) when grown on soils testing optimum or less in P and K.
- A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P205 + K2O/a) is advisable for row crops on soils slow to warm in the spring.
- A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.

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