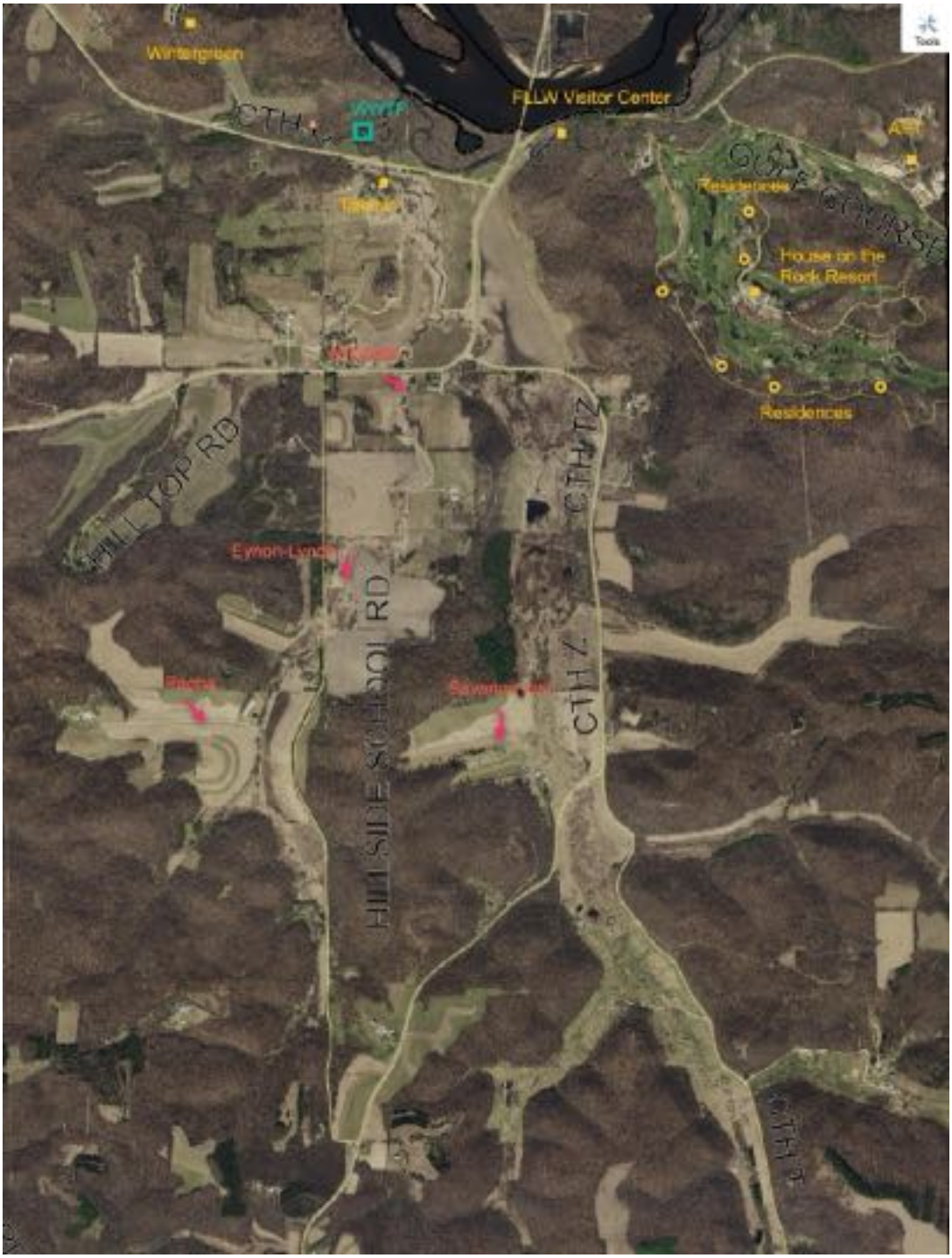
Spring Green Golf Club Sanitary District #2
Water Quality Trading Plan for Phosphorus

Facility Address: 5230 Hwy C, Spring Green, WI 53588
Permit Number: WI-0028383-10-1
FID# 125002790
Lower Wisconsin
HUC 8 Code: 07070005
Lowery Creek
HUC 12 Code: 070700051203

September 30, 2025
Revised: June 30, 2026

Special thanks to:
Dick Cates, Lowery Creek Watershed Initiative & Town of Wyoming Chairman
Matt Claucherty, WI DNR
BetsyJo Howe, WI DNR
Sara Wilhelm, Iowa County Land Conservation
Katie Abbot, Iowa County Land Conservation
Lowery Creek Watershed Initiative
Patrick Michaels, TwinCrix Farm, Landowner
Erik Hagen, Savanna Institute, Landowner
Eric Cates, Cates Family Farm, Land Lessee
Danielle Pacha, Landowner
Driftless Area Land Conservancy

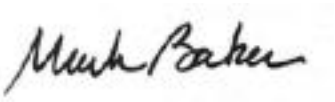


Map of Area

The subject area is in Iowa County, Town of Wyoming, Sections 01, 06, 25, 29-32.

Certification:

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



Mark A Baker

Commission President
Spring Green Golf Club Sanitary District #2

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the house
on the rock
Resort








THE WINTERGREEN


AMERICAN PLAYERS THEATRE





Spring Green Golf Club Sanitary District #2
Water Quality Trading Plan
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1. Summary

This Water Quality Trading Plan summarizes the Spring Green Golf Club Sanitary District #2 (District) plan to utilize Water Quality Trading (WQT) for compliance with the final total phosphorus limit as provided in the Wisconsin Pollutant Discharge Elimination System (WPDES) Permit # WI-0028383-10-1 for the Wastewater Treatment Facility (WWTF) FID# 125002790.

Originating with the 2020 DNR Permit renewal, a phosphorus optimization plan schedule was outlined. An engineering study was conducted to evaluate different approaches. Two general approaches evolved from this evaluation: a chemical feed system and water quality trading.

A ferric chloride based chemical feed system (system) was designed to meet the Multi-Discharger Variance Interim Limit (1.0 mg/L) no later than March 31, 2025. This system went online during August 2024 (WDNR Project No. S-2023-0630). This system substantially reduced the effluent phosphorus, well below the limit 1.0 limit. Adjustments to the feed rate continue to take place as we learn more about overall system optimization and the effect of seasonal treatment volume patterns.

Water quality trading consideration was taken under the leadership of the Lowery Creek Watershed Initiative a program which is part of the Driftless Area Land Conservancy Lowery Creek Watershed initiative. This overlapped with the Town of Wyoming leadership of John Hess and Dick Cates who were responsible for the District until the appointment of a separate commission in October of 2023. The hard work of this engaged farmer/landowner group led to the commitment of landowners and lessees to implement conservation practices. This was undertaken without consideration of compensation by the District. This has come to fruition with the significant commitment to stewardship of the land found in our township. Formal agreements have been executed in June 2026. Many thanks go to Dick Cates for his decades-long commitment to his land, the land in the Township, and well beyond.

As shown in Appendix 10 the Water Quality Trading Plan Summary and Best Management Practices (BMPs) implemented across three sites will generate credits to offset the phosphorous in the WWTF effluent after the implementation of the chemical feed system.

2. Background

a. Spring Green Golf Club Sanitary District #2

The District was formed September 1, 1988, by order of the Town of Wyoming Town Board. The district is a municipal corporation as permitted by Wisconsin State Statute Chapter 60, Subchapter IX Town Sanitary Districts. The district was formed in anticipation of the development of the resort and the residential areas that surround it. The WWTF was built by the developer of The Springs (now House on the Rock Resort and Golf Course) and transferred to the district on December 12, 1996. The WWTF capacity was based on the developers plan which almost 200 residential sites and additional facilities, much of which never materialized.

The district currently includes five commercial customers (Wintergreen, Taliesin Home, Taliesin Visitors Center, House on the Rock Resort and Golf Course, and American Players Theatre), 28 condominiums (Aspen Glen and Fairways), and 19 homes.

Volume has been steady to slightly declining over the past few years. The nature of the District's customer volume is highly seasonal (both commercial and residential). Beyond the addition of single-family homes (5-10 additional), there is likely little additional volume potential. Increased costs and an aging facility have resulted in two price increases in the past 3 years. The last increase was approximately 30%. This increase brings the district to break-even which includes a plan to replenish the reserve account, overseveral years, that was utilized to implement the chemical feed system and catch-up on facility maintenance. There are no full-time employees of the district. A contracted operator-in-charge, and resources from the Resort are used for sampling and monitoring. The commission is comprised of volunteers from the district's service customers. This independent commission was appointed by the Town Board in October of 2023.

The district uses an activated sludge plant located at 5230 Hwy C and accessed via an easement from the Wintergreen property. The wastewater treatment facility is comprised of a 20 acre parcel, an 800 sq. ft. control building with office, chemical room, blower room, influent channel/screen room in addition to a basement where the pumps are located. The two-ring 30' radius clarifier and 25' diameter, 20' tall sludge silo are adjacent to the control building. The plant was designed by MSA, Inc. in 1989. See Appendix 9.

b. Phosphorus Reduction and Water Quality Trading with Lowery Creek Watershed Initiative

The Lowrey Creek Watershed Initiative (LCWI) was created in 2014 by a group of interested residents, farmers and organizations within this 8600 acre watershed. The Driftless Area Land Conservation (DALC) organization houses this initiative. DALC has purchased the Wintergreen property, and they are a major landowner and will have their offices within the watershed and district this year.

When the phosphorus compliance engineering study became visible to the Town of Wyoming Board (who had the responsibility for the district at that time), Dick Cates began to work on the potential of water quality trading. With an unknown final phosphorus (TP) limit in the future, and an active, much broader, initiative within the upstream watershed, the pursuit of TP reduction was logical. We are incredibly fortunate to have engaged and informed landowners who value multi-generational stewardship of the land and water.

The engaged property owners and lessees with leadership and participation of the LCWI began the process to gain commitment for implementing best management practices (BMPs) for TP reduction. Iowa County Land and Water Conservation and Wisconsin DNR Water Quality Program lead have been instrumental in informing the technical aspects of this plan.

There are several different BMPs including conversion from row crop to alfalfa and/or rotational grazing, conversion to grass or perennial cover, and conversion to orchard. These practices have been implemented as this plan was developed to offset the District's phosphorus output. This process was driven by Dick Cates with his Leadership in the Lowery Creek Watershed Initiative and work on the Town of Wyoming board. He worked with the various owners/farmers to gain their participation. They began these conservation BMPs without regard to any current or future renumeration for participating. They are long term stewards of the land and have committed to sustainable practices.

See Appendix 8 for a map of trading credit generation sites, owners, fields, practices and credits generated.

c. Phosphorus Reduction and Ferric Chloride Chemical Feed (CF) Phosphorus Treatment

The following tables summarize the reported (estimated for August to December 2025) Discharge Monitoring Long Form Phosphorus Discharge. As you can see, the Chemical Feed. (ferric chloride system) implemented August 29, 2024, resulted in an 85% or greater reduction in effluent phosphorus.

The phosphorus discharged above the applicable WQBEL (.0075 mg/L) and subject to penalty payment for 2025 was 17 pounds. This was down dramatically from prior years due to implementation of the Ferric Chloride system.

Total phosphorus from DNR reporting

2024						
Month	Average Phos (mg/L)	Total Monthly Flow (Millions of Gallons)	Total Monthly Load (lbs/mo) 1	Applicable WQBEL (mg/L)	Allowable Monthly Load (lbs/mo) (1.0 MVD eff 4.1.25) 2	Monthly Exceedance WQT Credits Needed (lbs/mo) 3
JAN	4.036	0.152	5.13	0.075	0.10	5.03
FEB	3.642	0.128	3.88	0.075	0.08	3.80
MAR	3.956	0.107	3.54	0.075	0.07	3.48
APR	3.937	0.164	5.37	0.075	0.10	5.27
MAY	3.506	0.426	12.46	0.075	0.27	12.19
JUN	3.695	0.598	18.42	0.075	0.37	18.05
JUL	4.079	0.632	21.50	0.075	0.40	21.10
AUG	4.909	0.548	22.44	0.075	0.34	22.09
SEP	0.333	0.548	1.52	0.075	0.34	1.16
OCT	0.192	0.532	0.85	0.075	0.33	0.52
NOV	0.161	0.546	0.73	0.075	0.34	0.39
DEC	0.161	0.480	0.64	0.075	0.30	0.34
			Total Credits Needed (sum of all monthly values)			93.45

1 Total Monthly Load (lbs/mo) = Average Phosphorus Concentration * Total Monthly Flow * 8.34

2 Allowable Monthly Load. (lbs/mo) = Total Monthly Flow * Applicable WQBEL * 8.34

3 Monthly Exceedance: WQT Credits Needed (lbs/mo) = Total Monthly Load - Allowable Monthly Load

2025						
Month	Average Phos (mg/L)	Total Monthly Flow (Millions of Gallons)	Total Monthly Load (lbs/mo) 1	Applicable WQBEL (mg/L)	Allowable Monthly Load (lbs/mo) 2	Monthly Exceedance WQT Credits Needed (lbs/mo) 3
JAN	0.183	0.367	0.56	0.075	0.23	0.33
FEB	0.233	0.161	0.31	0.075	0.10	0.21
MAR	0.264	0.177	0.39	0.075	0.11	0.28
APR	0.451	0.272	1.02	0.075	0.17	0.85
MAY	0.256	0.539	1.15	0.075	0.34	0.81
JUN	0.206	0.735	1.26	0.075	0.46	0.80
JUL	0.310	0.813	2.10	0.075	0.51	1.59
AUG	0.299	0.798	1.99	0.075	0.50	1.49
SEP	0.298	0.684	1.70	0.075	0.43	1.27
OCT	0.541	0.592	2.67	0.075	0.37	2.30
NOV	0.426	0.486	1.73	0.075	0.30	1.42
DEC	0.509	0.444	1.88	0.075	0.28	1.61
			Total Credits Needed (sum of all monthly values)			12.98

1 Total Monthly Load (lbs/mo) = Average Phosphorus Concentration * Total Monthly Flow * 8.34

2 Allowable Monthly Load. (lbs/mo) = Total Monthly Flow * Applicable WQBEL * 8.34

3 Monthly Exceedance: WQT Credits Needed (lbs/mo) = Total Monthly Load - Allowable Monthly Load

2026						
Month	Average Phos (mg/L)	Total Monthly Flow (Millions of Gallons)	Total Monthly Load (lbs/mo) 1	Applicable WQBEL (mg/L)	Allowable Monthly Load (lbs/mo) 2	Monthly Exceedance WQT Credits Needed (lbs/mo) 3
JAN	0.315	0.313	0.82	0.2	0.52	0.30
FEB	0.241	0.213	0.43	0.2	0.35	0.07
MAR	0.539	0.334	1.50	0.2	0.56	0.94
APR	0.434	0.686	2.49	0.2	1.14	1.34
			Total Credits Needed (sum of all monthly values)			2.66

1 Total Monthly Load (lbs/mo) = Average Phosphorus Concentration * Total Monthly Flow * 8.34

2 Allowable Monthly Load. (lbs/mo) = Total Monthly Flow * Applicable WQBEL * 8.34

3 Monthly Exceedance: WQT Credits Needed (lbs/mo) = Total Monthly Load - Allowable Monthly Load

**The last column is pounds per month that informs the trade ratio (at proposed 1.2:1)
The downside of the chemical feed system is the increase in operational complexity (balancing feed rates and monitoring), increased solids and hauling costs, chemical costs, and system maintenance costs. These are significant for a small district.

d. Phosphorus reduction future considerations

We don't foresee major changes in influent volume or composition. Some continued residential development will continue, but residential additions add minimal total volume as water conservation practices have continued to mitigate volume growth. The chemical feed system will continue to be refined in its application and water quality trading will offset the remaining TP quantity in the effluent.

e. Credits Needed

Based on historical usage and phosphorus reductions experienced with chemical treatment in the past year (since August 2024) assuming little/no increase in volume and no change in the type of influent the plant would produce roughly 15-25 pounds of phosphorus annually. Due to the heavy seasonality of our flow and tourism driving the commercial facilities within the sanitary district, the actual phosphorus discharge will vary from the projection.

We foresee additional acreage at the Michaels farm and the addition of acreage from Wintergreen owned by the Driftless Area Land Conservancy. The Lowery Creek Watershed Initiative will continue to encourage preservation of this treasured watershed.

With a 1.2:1 trade ratio, an offset of 18 to 30 pounds of phosphorus reduction would be required to yield 5 to 30 credits.

3. Baseline and Proposed Conditions of Credit Generating Sites

a. Credit Generator Locations

See the attached map. All project sites are in the same HUC-12 and directly adjacent to the Lowery Creek and upstream from the treatment plant's standards application. See Appendix 7

b. Credit Generation Location #1 Pacha (Appendix 11)

i. Baseline Load: See Pacha Snap Plus P-Trade Report

The field was in continuous corn/soybean rotation at the time of enrollment. Soils were sampled in December 2022 prior to implementation to establish baseline nutrient levels. Soil samples were conducted at 6-inch depth by UW WI Soil Analysis Lab.

ii. Proposed Conditions – See field map in Appendix 11

Native grasses were planted in early 2023 (confirmed in email from owner in March 2023) in two fields with a total of 7.6 acres. This serves as a conservation cover. These grasslands are permanent and will not be harvested.

iii. Management Practice Details

NRCS 327 Conservation will be followed. General conditions and maintenance as follows:

Vegetation Cover

- Always maintain a minimum of 70% live vegetative canopy cover during the growing season.
- Maintain a minimum stubble height of 4 inches after any cutting or mowing.
- Fields must remain in perennial cover for the full duration of the agreement.

Maintenance Requirements

Perform the following maintenance tasks as needed throughout the agreement period:

- Reseeding and Stand Repair: Inspect stands each spring and after disturbance events (flooding, drought, heavy traffic).
- Reseed any bare or thin areas (below 70% canopy cover) within the same growing season or the following spring.
- Use the same seed mix specified in the original seeding plan, or an NRCS-approved equivalent.
- Protect reseeded areas from traffic and disturbance until plants are established.

Erosion and Concentrated Flow

- Inspect fields after significant rainfall events for signs of concentrated flow, rilling, or gullying.
- If concentrated flow paths develop: regrade affected areas, reseed immediately, and contact your local NRCS office.
- Do not allow erosion features to persist. Address them within 30 days of discovery.

Structures and Fencing (if applicable)

- Maintain any fencing, water control structures, or diversions in good working order.
- Repair damaged fencing within 14 days to prevent livestock intrusion.
- Inspect structures after storm events and repair damage promptly.

c. Credit Generation Location #2 Savanna Institute (appendix 12)

The five enrolled fields originated as varying soybean, small grain or alfalfa/grass per the narrative and crops report in the appendix. They are being transitioned to perennial pasture under this Water Quality Trading agreement. No row crops shall be planted on enrolled fields during the agreement period. The proposed conditions described herein represent the management end-state and are binding for the duration of the agreement.

i. Baseline Conditions & Load

1. See narrative above and in the appendix.
2. Collection and results of samples
3. Soil samples were done in December 2021 when these fields were managed by Otter Creek. (See attachment of soil sampling map and lab results)
4. Practice establishment was done in accordance with NRCS 512 (Forage and Biomass Planting) and NRCS 528 (Prescribed Grazing)

ii. Proposed Conditions / Management

The enrolled fields shall be seeded with a perennial grass or grass/legume mixture in accordance with NRCS CPS 512 (Forage and Biomass Planting). The following conditions apply for the duration of the WQT agreement:

- No row crops shall be planted on enrolled fields during the agreement period.
- No commercial nutrient application (fertilizer, manure, or biosolids) shall occur on enrolled fields. The Snap Plus model has been configured to reflect zero nutrient application; this condition is binding and shall be clearly maintained in all management records.
- Enrolled fields shall be managed as perennial hay pasture with rotational stocking or as an alfalfa/grass mixture, consistent with the proposed end state.
- A minimum of 70% live canopy cover shall be maintained across enrolled fields during the growing season.

- Minimum stubble height after any cutting or grazing event shall not be less than 4 inches.
- Fields will not be harvested, only grazed.

iii. See the Snap Plus P-Trade Report Appendix 12

iv. Operations and Management Practice Details
The following Operations and Maintenance (O&M) Plan applies to all conservation practices implemented at Credit Generation Site #2 – Savanna Institute. This plan is organized by practice and shall be followed for the duration of the WQT agreement.

Forage and Biomass Planting (NRCS CPS 512)

Practice establishment occurred in accordance with NRCS Technical Standard 512. The following requirements apply during establishment and ongoing stand management:

Seeding & Establishment:

1. Identified crop fields shall be seeded with a perennial grass or grass/legume mixture. No row crops will be planted on these fields, nor will nutrient application occur on these fields during the agreement period.

2. Inspect and calibrate seeding equipment prior to use. Continually monitor seeding equipment performance during planting to achieve proper rate, distribution, and depth of planting material.

3. Monitor the growth of desired seedlings during the establishment period. Document establishment progress and compare against planned species composition.

4. Monitor new plantings for water stress. Depending on drought severity, mitigate water stress by reducing competing weeds, irrigating when possible, or replanting failed stands.

5. New seedings shall not be harvested until plants have established sufficient root systems to withstand traffic and recover from removal of top growth.

6. Apply mowing or herbicide treatments as necessary to control competitive weeds during establishment. Mowing shall occur before weeds develop mature seed. Residue from mowing shall be uniformly distributed or harvested to avoid smothering new seedlings.

7. Reseed as needed to maintain sufficient growth and vegetative coverage. A minimum of 70% live canopy cover shall be maintained during the growing season.

Ongoing Stand Management:

- Reseed bare areas as necessary to maintain adequate stand density and prevent erosion.

- Inspect fields for concentrated flow paths after significant rainfall events. Should concentrated flow paths develop, corrective action will taken (regrading and seeding) promptly to prevent the formation of rills or gullies.

- Field perimeters and waterways will be maintained in vegetated condition at all times.

Prescribed Grazing (NRCS CPS 528)

Operations:

- Prescribed grazing shall be applied on a continuing basis throughout the livestock occupation period of all planned grazing units.
- Adaptive management decisions shall be made as needed and documented within the grazing plan to ensure that goals and objectives of the prescribed grazing strategy are met.

Maintenance:

- Monitoring data and grazing records shall be used on a regular basis to ensure objectives are being met, or to make necessary changes to the prescribed grazing plan.

• All facilitating conservation practices (e.g., Fence (Code 382), Pest Management (Code 595), Brush Management (Code 314), Forage and Biomass Planting (Code 512)) that are needed to effect adequate grazing distribution shall be maintained in good working order and operated as intended.

v. NRCS Grazing Plan

Goals:

- To raise cattle using a system of rotational grazing.
- Improve the overall health of the herd.
- To increase carrying capacity of the pasture by improving forage quantity and quality.
- Generate additional income by improving animal performance.

Inventory

General Description: A herd of approximately 50 head of beef steers will be planned to utilize the pasture system. (50 animal units.).

Currently the landowner is following a rotational grazing plan on the tract. Within his plan he grazes 47 acres, and of these 47 acres 38.79 acres will be entered into a CRP Grasslands contract. The area consists primarily of Kentucky Bluegrass, Red Clover, and Orchardgrass with a minor component of Meadow Fescue and Smooth Brome.
See attached map for location of planned grazing areas.

Soils: Soils are assigned to Forage Suitability Groups (FSG) according to their suitability for hayland and pasture management. Forage species will have different responses to various soil characteristics, and the FSG provide a general means of selecting the pasture or hayland plants best suited to a particular site and a relative means of estimating potential productivity.

The predominant soils for this grazing system consist of Orion, Ettrick, and Churchtown. Orion soils (FSG 10) consist of occasionally flooded soils with approximate slopes of 0-3%. Ettrick soils (FSG 5) have a slope of 0-2% and are frequently flooded. Churchtown soils (FSG 7) are adequately drained with a slope of 12-20. All of these soils are silt loam.

It is suggested that pastures be fertilized based on current soil tests and nutrient management plan recommendations to bring soils up to optimum nutrient levels. Before doing any seeding, take soil samples and correct any nutrient deficiencies shown by the soil test results.

Forage Management and Rotation of Livestock

Rotation of livestock is based on forage height, not calendar days, especially in cases where paddocks are different sizes and vary in pasture productivity. If using a paddock system, consider rotating through paddocks faster in the spring, when rest periods between grazing could be as little as 10-15 days, and slower in the mid-summer, when rest periods could be as great as 30-45 days.

Do not overgraze! If the next pasture in the rotation to be grazed is not at optimum grazing heights, livestock need to be placed in a different pasture with optimum forage heights or moved to a barn or "sacrifice area" and fed stored feeds. Refer to the table below for appropriate heights to begin and end grazing.

Species	Optimum Forage Height (inches) "START GRAZING"	Minimum Forage Height (inches) "END GRAZING"
Alfalfa	8-12	4
Red Clover	8-12	4
Alsike Clover	8-12	4
Ladino Clover	8-12	4
Kura Clover	8-12	4
Festulolium	6-8	3
Kentucky Bluegrass	4-6	2
Meadow Fescue	8-12	4
Orchardgrass	8-12	4
Perennial Ryegrass	6-8	3
Reed Canarygrass	8-12	4
Smooth Bromegrass	8-12	4
Tall Fescue	8-12	4
Timothy	8-12	4
Big Bluestem	12-14	6
Indiangrass	12-14	6
Little Bluestem	4-6	2
Sideoats Grama	4-6	2
Switchgrass	12-14	6

Adapted from WI NRCS Standard 528 "Prescribed Grazing" (April 27, 2017)

Forage Production: Per the SnapPlus summary the fields/acres available for grazing are identified. It is estimated that these pastures could produce 138 to 141 tons of dry matter/acre/year of forage.

Stocking Rate: Current plans are to place approximately 50 animal units in total on the pasture in early spring where they will remain until early fall. Steers will average 750 lbs. while on pasture. Total forage demand is estimated at 2000 lbs. /day.

Forage-Animal Balance: Based on projected forage production and stocking rate, there will be enough forage for approximately 3 days of grazing per 4.5 acre paddock. The landowner will follow his current grazing system-rotating livestock every two- three days throughout the existing fifteen paddocks. Paddock size ranges from 1.6 acres to 4.8 acres. Keep in mind that rotation of livestock is based on pasture height and not time spent in the pasture. If the height of the vegetation reaches minimum

heights before this time, animals should be removed from the area to allow the pasture to regrow.

There are many factors that influence the number of days available for grazing including changes to animal numbers, types of livestock grazing in your system, changes to forage composition, weather conditions, etc. If you choose to change the number or types of animals in your grazing system, it is not required to have NRCS modify your plan as long as the appropriate forage heights are maintained (see Table 1).

Contingency Plan: In the event of extreme weather conditions, such as drought or wet conditions, actions should be taken to adjust the grazing management to avoid damage to the pasture. You should designate an area where cattle can be kept during times when pasture is short or when pastures are too wet to be grazed without doing damage. Getting livestock off of pasture during these times will help to ensure a healthy re-growth of pasture forages when optimal grazing and growing conditions return. Typical locations for a sacrifice area can include: Well fenced barnyard, Winter housing areas, Harvested crop fields. For this grazing system, the animals will be removed from the pasture and placed in housing or an open lot at the farmstead.

Over-Wintering: Pastures may be used for housing and feeding livestock during the winter months; however, livestock must be removed in the spring until new growth reaches acceptable grazing heights shown in Table 1. Any areas where vegetation is damaged or destroyed must be reseeded.

Monitoring Pastures: The best method for monitoring pasture productivity is to measure the amount of forage available. You are encouraged to measure and record pre- and post-grazing heights to determine the amount of forage actually consumed and/or available to grazing animals during different times of the year. Measuring and monitoring pasture growth and livestock consumption of pasture will be especially helpful during the first couple of years of managed grazing as it will allow you to gain an eye for estimating the available forage in a paddock. A daily log of the number of animals on pasture and the dates when paddocks are utilized is also very helpful during the grazing season.

Facilitating Practices

Fences: Currently, there is existing fence around the pasture and existing paddock fencing that is adequate for the operation.

Watering System: Most research suggests that animals will utilize pasture more efficiently and will tend to drink individually rather than in a group when the distance to water is less than 900 feet. Water provided to the livestock should be clean and fresh for maximum animal performance. Ongoing monitoring of watering areas will be needed to watch for signs of excessive soil compaction and/or erosion. Water is provided in all paddocks.

Cattle Lanes:
There is an existing cattle lane on the property that is in good condition.

Plan Review and Acceptance
Minimum vegetation heights shown in the table above will remain at all times during the grazing season. Livestock will not be placed on pasture until optimum vegetation heights are reached.

Through the dates of May 15- Aug 1 less than 50% of pastures can be harvested for hay.

Make available a planned sacrifice area, such as a barn/feedlot area, for drought and excess water conditions or when forage is likely to be damaged or destroyed. Keep the livestock off of the pasture until optimum vegetation heights are achieved.

If livestock are kept on the pasture during winter months, they will be removed in the spring until new growth reaches acceptable grazing heights. Any areas where vegetation is damaged or destroyed will be reseeded.

Monitoring data and grazing records will be used on a regular basis to ensure objectives are being met or to make necessary changes in the prescribed grazing plan. Types of records include:
location of animals and pasture usage during the grazing season including residency periods, rest periods, hay removal, etc.

The grazing system shall keep livestock stress to a minimum by always providing adequate supplies of water and forage.

d. Credit Generation Location #3 Michaels (Appendix 13)

i. Baseline Load, Snap Plus P-Trade Report
Field in corn-cover crop rotation. Converted to blueberries in 2023.

ii. Proposed Conditions – see field map
Conservation cover which is done by establishing and maintaining permanent vegetative cover in alignment with NRCS 327. The field was previously used for conventional agriculture consisting of Corn-wheat rotation. In 2023 this was seeded down to permanent cover grass cover with rows of blueberry plants, with mulch around the plants and grass cover maintained between the rows.

The orchard operation consists of harvesting blueberries in season. Plants were planted at a density of 1200 per acre. Periodic removal/replacement of plants might occur as needed without compromising the conservation purpose.

iii. Management Practice Details

1. Practices & Standards – NRCS or similar
<u>Conservation Practice Standard Conservation Cover (Code 327)</u>

2. Operations and Maintenance Plans:
OPERATION AND MAINTENANCE:

- Mowing or herbicide applications shall be used as necessary to control competitive weeds. Mowing should be done when introduced grasses reach 6-8 inches tall and before the weeds develop matured seed. The residue from mowing shall be uniformly distributed or removed as necessary to avoid smothering the new seedlings. Native warm season grasses should be mowed no lower than 7 inches.
- If wildlife habitat enhancement is a purpose, practice maintenance activities shall not disturb cover during the nesting period (May 15 to August 1) for desired wildlife species. Exceptions shall be made to spot treat necessary weed invasions prior to them setting seed.
- Maintenance measures must be adequate to control the establishment and

spread of noxious weeds and other invasive species.

- To benefit insect food sources for grassland nesting birds, spray or other means to control noxious weeds shall be done on a "spot basis" to protect forbs and legumes that benefit native pollinators and other wildlife.
- Bare areas will be reseeded and actions to remedy concentrated flow paths (such as regrading) to prevent the development of rills or gullies.

4. Trade Ratio

i. Trade Ratio Factors

1. Delivery factor and Downstream Factor
   A delivery factor is not required as the credits generators and credit user are both located in the same 12-digit hydrological unit, and all credit generators are upstream from the credit user.
2. Equivalency – this trading is for phosphorus, so an equivalency factor is not necessary.
3. Uncertainty – a nonpoint source credit generator and management practices are affecting the main mechanisms of pollutant delivery including whole field management, companion crops. The uncertainty factor is 1.
4. The stated trade ratio is 1.2:1. (source water quality trading guidance 2020, p.29)

ii. Trade Ratio Calculation

1. Trade Ratio = (Delivery + Downstream + Equivalency + Uncertainty):1
2. Trade Ratio = (N/A + N/A + N/A + 1):1
3. Our calculated trade ratio = 1:1.
4. The minimum trade ratio of 1.2:1 will apply.

5. Credit Generation

A summary of credit generation is provided in the table form in the appendix referenced below. The BMPs have been implemented as this plan was being created and approved. With the leadership of the Lowery Creek Watershed Initiative (sponsored by Driftless Area Land Conservancy) these landowners and the lessee have taken a long-term land stewardship view. They have jointly worked on these efforts and carefully monitored stream/stream fishery quality and believe strongly in conservation practices.

See Appendix 10

Iowa County Land Conservation has led the SnapPlus reporting process and the reports are included in the appendices.

6. Tracking, Inspecting, Reporting

i. Credit Usage Tracking

The District will track credits used monthly. The District will report credit usage to the DNR monthly in the Discharge Monitoring Report (DMR). The annual report will summarize the 12 months of credit usage and credit generation. The District will report to the DNR any concern that they have that may result in a need to modify the trade agreement and/or this trade plan. This may include a change in practice or change in TP discharged.

ii. Inspections

Inspection of BMPs has been conducted at the initiation of the trade agreement utilization and semi-annually thereafter. Once at the beginning of the growing season and once at the end of the growing

season. A qualified individual will conduct the inspection with the template included in Appendix 5.

If a major storm event occurs, rain over six inches in 24-hour period, an additional inspection will occur.

iii. Reporting
An annual report of water quality trading will be submitted to the Wisconsin DNR, and the stakeholders in this plan including the Lowery Creek Watershed Initiative, Driftless Area Land Conservancy, landowners and lessee, in addition to the District Commission and Town of Wyoming board.

Appendices:

1) Notice of Intent to Conduct Water Quality Trading (Form 3400-206)
2) WQT Credit Generator Agreement – WQT Agreement with Landowners.pdf
3) Practice Registration Forms (Form 3400-207) one for each of 4 sites.
4) WQT Checklist (Form 3400-208)

[Appendix 1]

State of Wisconsin
Department of Natural Resources
101 South Webster Street
Madison WI 53707-7921
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Notice of Intent to Conduct Water Quality Trading

Form 3400-206 (1/14)

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

Applicant Information

Permittee Name	Permit Number	Facility Site Number
Spring Green Golf Course SD #2	WI- 0028383-10-1	125002790

Facility Address	City	State	ZIP Code
5320 Hwy C	Spring Green	WI	53588

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Mark Baker	1621 S Springs Dr	Spring Green	WI	53588

Project Name: SGGCSD#2 and Lowery Creek Watershed Initiative WQT Plan

Receiving Water Name	Parameter(s) being traded	HUC 12(s)
Unnamed Trib of Lowery Creek	Phosphorus	070700051203

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

PDF p.20

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

List the practices that will be used to generate credits:

Conversion to Perennial Prairie, Conversion to pasture, Inclusion of cover crop and no-till practices, Conversion to orchard, etc. These will follow applicable NRCS standards as outlined in the water quality trading plan.

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

Projected date credits will be available:

The preparer certifies all of the following:

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

Signature of Preparer	Date Signed
Mark A Bachman	9-30-25

Authorized Representative Signature

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

Signature of Authorized Representative	Date Signed
Mark A Bachman	9-30-25

[Appendix 2]

Via E-Mail

Dear (landowner/lessee)

The Lowery Creek Watershed Initiative you have been involved with is reaching its next important milestone. The conservation practices you have been working on with Dick Cates, the Initiative, and the Iowa County Land and Water Conservation staff is to be formalized and included in a Water Quality Trading Plan by the Sanitary District as part of their permit renewal.

The Spring Green Golf Course Sanitary District #2 was established in the 1980's to support the development in the Township including Wintergreen, Taliesin, Taliesin Visitors Center, House on the Rock Resort & Golf Course, American Players Theatre and the residences adjacent to the golf course. Up until late 2023 the district was directly managed by the township. In October 2023, the Township appointed a separate commission composed of individuals representing those who are directly part of the Sanitary District.

The conservation practices you have implemented and resulting phosphorus (and related nutrients & organic matter) reductions are not only beneficial to our precious Lowery Creek, but they also qualify for water quality trading credits. The sanitary district can use these credits to offset the limited phosphorus that is produced beyond their recent phosphorus reductions and the DNR determined permit levels.

The agreement you will find attached is required by the DNR to formalize the practices you have already put in place. Additionally, we are required to conduct an annual visual inspection to ensure the practices are maintained.

Please sign and return the attached at your convenience, but prior to September 23rd, 2025. Please address questions you might have to both of us.

Signed,

Dick Cates
Chair
Town of Wyoming
richardlcates@gmail.com
608-712-2836

Mark Baker
President
Spring Green Golf Course Sanitary District #2
mark@baker15.com
608-516-0685

Water Quality Trading Credit Generator Landowner Agreement

This Agreement is made and entered into as of September 30, 2025, by and between:

- Landowner/Lessor/Credit Generator: Danielle Pacha, danielle.pacha@gmail.com

Property Address: 6310 Hillside School Road, Spring Green, WI 53588

Tax Address: 5801 Taft Street, Middleton, WI 53562

- Sanitary District Permittee (Permittee):
  Name: Spring Green Golf Course Sanitary District #2
  WPDES Permit #: 0028363-10-0
  Contact: Mark Baker, District Commission President, mark@baker15.com 608-516-0685

- Land Lessee/Party responsible for conservation practices
Same as above.

1. Purpose

This Agreement sets forth terms under which the Landowner agrees to implement and maintain specific conservation practices (BMPs) that generate water quality trading credits. These credits will be provided to Spring Green Golf Course Sanitary District #2 (Permittee) for use toward compliance with phosphorus under their WPDES permit, as permitted by Wis. Stat. § 283.84.

2. Description of Property & Practices

Location: 6310 Hillside School Road, East Prairie & Upper Section South

Practice(s) Installed:
Native grasses were planted in 2022 in two fields with a total of 7.6 acres. This serves as a conservation cover. These grasslands are permanent and will not be harvested.

Modeling Tool Used: SnapPlus (by Iowa County Land & Water Conservation)
Estimated Credit Generation: [e.g., 105 lbs phosphorus/year]
Installation Date: 2022
BMP Lifespan: 5 years (until April 1, 2030)

Maintain and operate as outlined in NRCS Code 327:

- 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.

3. Term and Renewal

This Agreement will remain in effect for a term of approximately 5 years, beginning on the date of execution and extending to April 1, 2030. It may be extended by mutual written agreement or automatically renewed if the WPDES permit is reissued and requires continued credits.

Changes can be made to the practices by mutual agreement of both parties and will be noticed to Wisconsin DNR as per Water Quality Trading Plan.

4. Landowner Responsibilities

The Landowner agrees to:
- Install and maintain the practices listed in Item 2 above in accordance with NRCS standards.
- Allow inspection and verification by the District and WDNR with reasonable notice.
- Cooperate with required recordkeeping, including photographs, receipts, or field logs.
- Notify District within 30 days of sale or transfer of land or change in lessee, if any.

5. District (Permittee) Responsibilities

The District (Permittee) agrees to:
- Submit the trading plan and agreements to WDNR for approval and incorporation into the WPDES permit.
- Coordinate with the Landowner for ongoing verification and credit use.

6. Verification and Maintenance

Verification Frequency: Twice Annually or after significant rain event.
The District and/or qualified individual will perform the verification/inspection.

Corrective Action Timeline: Landowner shall correct deficiencies within 60 days after written notice, adjusted based upon normal seasonal/conservation practice patterns.

7. Transferability

If the property is sold or transferred, the Agreement:
- Shall transfer to the new owner unless the District agree in writing to terminate this agreement.
- Landowner agrees to disclose this Agreement to prospective buyers.

8. Termination

This Agreement may be terminated:
- By mutual written agreement of all parties.
- By the District (Permittee) if the Landowner fails to maintain BMPs after written notice and 60 days to cure.
- If WDNR terminates approval of the associated credits.

9. Miscellaneous

- Governing Law: This Agreement shall be governed by the laws of the State of Wisconsin.
- Entire Agreement: This constitutes the full agreement between the parties.
- Amendments: Any changes must be made in writing and signed by all parties.
- Liability: Landowner assumes responsibility for on-site safety and compliance with practice installation.

10. Signatures

Landowner:
Signature: _____
Print Name: _____
Date: _____

Land Lessee:
Signature: _____
Print Name: _____
Date: _____

Permittee:
Signature: _____
Print Name: _____
Title: _____
Date: _____

State of Wisconsin
Department of Natural Resources
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Madison WI 53707-7921
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[Appendix 3-1]

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	Facility Site Number
Spring Green GC Sanitary District #2	WI- 0028383-10-1	125002790

Facility Address	City	State	ZIP Code
5230 Hwy C	Spring Green	WI	53588

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Mark Baker	1621 S Springs Dr	Spring Green	WI	53588

Project Name
Pacha

Broker/Exchange Information (if applicable)

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

Broker/Exchange Organization Name	Contact Name

Address	Phone Number	Email

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

Type	Trade Agreement Number	Practices Used to Generate Credits	Anticipated Load Reduction	Trade Ratio	Method of Quantification
○ Urban NPS ◉ Agricultural NPS ○ Other	SGGC_SD-LC 1	Native grasses were planted in 2022 in two fields with a total of 7.6 acres. This serves as a conservation cover. These grasslands are permanent	7	2:1	SnapPlus

County	Closest Receiving Water Name	Land Parcel ID(s)	Parameter(s) being traded
Iowa	Lowery Creek	'028-0487, 028-0484, 028-	Phosphorus

The preparer certifies all of the following:

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

Signature of Preparer	Date Signed
Mark A Baker	9-30-25

Authorized Representative Signature

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

Signature of Authorized Representative	Date Signed
Mark A Baker	June 30, 2026

Leave Blank – For Department Use Only

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

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

[Appendix 3-2]

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	Facility Site Number
Spring Green GC Sanitary District #2	WI- 0028383-10-1	125002790

Facility Address	City	State	ZIP Code
5230 Hwy C	Spring Green	WI	53588

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Mark Baker	1621 S Springs Dr	Spring Green	WI	53588

Project Name
Savanna

Broker/Exchange Information (if applicable)

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

Broker/Exchange Organization Name	Contact Name

Address	Phone Number	Email

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

Type	Trade Agreement Number	Practices Used to Generate Credits	Anticipated Load Reduction	Trade Ratio	Method of Quantification
○ Urban NPS ◉ Agricultural NPS ○ Other	SGGC_SD-LC 2	Conversion to hay pasture with rotational stocking or alfalfa/grass. NRCS 528 or similar.	13	2:1	SnapPlus

County	Closest Receiving Water Name	Land Parcel ID(s)	Parameter(s) being traded
Iowa	Lowery Creek	'028-111, 112, 116, 118	Phosphorus

The preparer certifies all of the following:

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

Signature of Preparer	Date Signed
Mark A Baker	9-30-25

Authorized Representative Signature

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

Signature of Authorized Representative	Date Signed
Mark A Baker	June 30, 2026

Leave Blank – For Department Use Only

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

State of Wisconsin
Department of Natural Resources
101 South Webster Street
Madison WI 53707-7921
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[Appendix 3-3]

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	Facility Site Number
Spring Green GC Sanitary District #2	WI- 0028383-10-1	125002790

Facility Address	City	State	ZIP Code
5230 Hwy C	Spring Green	WI	53588

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Mark Baker	1621 S Springs Dr	Spring Green	WI	53588

Project Name
Michaels

Broker/Exchange Information (if applicable)

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

Broker/Exchange Organization Name	Contact Name

Address	Phone Number	Email

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

Type	Trade Agreement Number	Practices Used to Generate Credits	Anticipated Load Reduction	Trade Ratio	Method of Quantification
○ Urban NPS ◉ Agricultural NPS ○ Other	SGGC_SD-LC 3	Conservation cover with permanent blueberry plans/orchard with mulch and grass cover.	6	2:1	SnapPlus

County	Closest Receiving Water Name	Land Parcel ID(s)	Parameter(s) being traded
Iowa	Lowery Creek	'028-0111, 028-0116	Phosphorus

The preparer certifies all of the following:

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

Signature of Preparer	Date Signed
Mark A Baker	9-30-25

Authorized Representative Signature

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

Signature of Authorized Representative	Date Signed
Mark A Baker	June 30, 2026

Leave Blank – For Department Use Only

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

State of Wisconsin
Department of Natural Resources
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dnr.wi.gov

[Appendix 4]

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
Spring Green Golf Course SD #2	WI- 0028383-10-1	125002790

Facility Address	City	State	ZIP Code
5320 Hwy C	Spring Green	WI	53588

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Mark Baker	1621 S Springs Dr	Spring Green	WI	53588

Project Name
SGGCSD#2 and Lowery Creek Watershed Initiative WQT Plan

Receiving Water Name	Parameter(s) being traded	HUC 12(s)
Unnamed Trib of Lowery Creek	Phosphorus	070700051203

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	Companion Crop: Conversion to native prairie	SnapPlus v20.4	SGGC_SD-LC 1 (Pacha)	◉ Yes ○ No ○ Only in part
○ Urban NPS ◉ Agricultural NPS ○ Other	Whole field - conversion to pasture, no till	SnapPlus v20.4	SGGC_SD-LC 2 (Savanna Inst)	◉ Yes ○ No ○ Only in part
○ Urban NPS ◉ Agricultural NPS ○ Other	Companion Crop - conversion to orchard	SnapPlus v20.4	SGGC_SD-LC 3 (Michaels)	◉ Yes ○ No ○ Only in part
○ Urban NPS ◉ Agricultural NPS ○ Other	Whole field - conversion to cover crop	SnapPlus v20.4	SGGC_SD-LC 4 (Eynon-Lynch)	◉ 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	see TOC
b. Management practices used to generate credits	◉ Yes	○ No	see TOC
c. Amount of credit being generated	◉ Yes	○ No	see TOC
d. Description of applicable trade ratio per agreement/management practice	◉ Yes	○ No	see TOC
e. Location where credits will be generated	◉ Yes	○ No	see TOC
f. Timeline for credits and agreements	◉ Yes	○ No	see TOC
g. Method for quantifying credits	◉ Yes	○ No	see TOC PDF p.31

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

The preparer certifies all of the following:

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

Signature of Preparer	Date Signed
Mark A Bale	9-30-25

Authorized Representative Signature

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

Signature of Authorized Representative	Date Signed
Mark A Bale	9-30-25

5) Site Inspection Template

WQT SITE INSPECTION CHECKLIST

Inspections must be conducted in clear conditions (no precipitation, fog, high water, or obstructed views). Inspector must be close enough to each practice to make valid observations.

Property / Project Name:	
Inspector:	
Date:	
Weather Conditions:	
Practices Inspected:	
Were photos taken?	Yes / No (Photos must be captioned with field name per WQT Plan naming convention)

Rating Key: 1 = Good 2 = Monitor **3 = Needs Repair**

#	Item	N/A	1	2	3
VEGETATION COMPOSITION					
1	Vegetation matches plan (correct species; appropriate legume, grass, forb, tree, and/or shrub mix)				
2	Adequate vegetation cover (few to no bare patches; survival rate or seed establishment is satisfactory; newly established vegetation is expected height/density)				
Notes: _____ _____					
VEGETATION CONDITION					
3	Vegetation appears free from stress (disease, insect damage, drought, flooding, etc.)				
4	Nuisance weeds, shrubs, and/or trees are absent or minimal				
5	No visible signs of erosion (rills, gullies, or concentrated flow paths)				
6	Vegetation height is adequate (not mowed or grazed below 4 inches, or other height per plan)				
7	Management/disturbance practices are done according to plan (timing, methods, area affected)				

8	Bare areas have been reseeded as necessary; minimum 70% live canopy cover maintained during growing season				

Notes:

_____

_____

STRUCTURAL PRACTICES					
9	Structures are in good condition (fencing, water systems, riprap, etc.)				
10	Structures are functioning as intended				
11	No signs of erosion at or near structures				

Notes:

_____

_____

WATER QUALITY					
12	No signs of concentrated flow, runoff, or active rill/gully development				
13	Streambank condition is not visibly worsening (no increased erosion or sloughing)				
14	Water quality not visibly degraded (no excess algae, fish kills, etc.)				

Notes:

_____

_____

O&M COMPLIANCE					
15	No row crops planted on enrolled fields; no nutrient applications observed				
16	Grazing pressure appears consistent with prescribed grazing plan (where applicable)				
17	Conditions indicate applicable O&M procedures have been carried out				

Notes:

_____

_____

OTHER					
18					
19					

Notes:
_____
_____

FOLLOW-UP ACTIONS REQUIRED

Item #s needing attention: _____

Required action(s):
_____

_____
_____

Follow-up inspection date: _____

Inspector Signature: _____ Date: _____

6) Annual Report Template

Wisconsin DNR Water Quality Trading Annual Report

1. Site Inspection Verification

Verification that site inspection occurred	☐ Yes ☐ No
Date of Credit Generation/Inspection	_____
Statement of Findings	Practices functioning and maintained according to O&M plan

2. Deficient Items

Deficient items identified (if applicable):

3. Remedies for Deficient Items

Remedies (how, who, and timeframe for corrections):

4. Credits Available and Used

	Credits Used	Phosphorus Loading	
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			
Total			

5. Duration of Credit Availability

Duration of phosphorus credit availability (based on design life and maintenance):

6. Termination Notices or Registration Changes

Termination notices or practice registration changes:

7. Certification

I certify that the information contained in this report is accurate and complete to the best of my knowledge.

Responsible Party	Mark Baker, Commission President, Spring Green Golf Club Sanitary District #2
Signature	_____
Date	_____

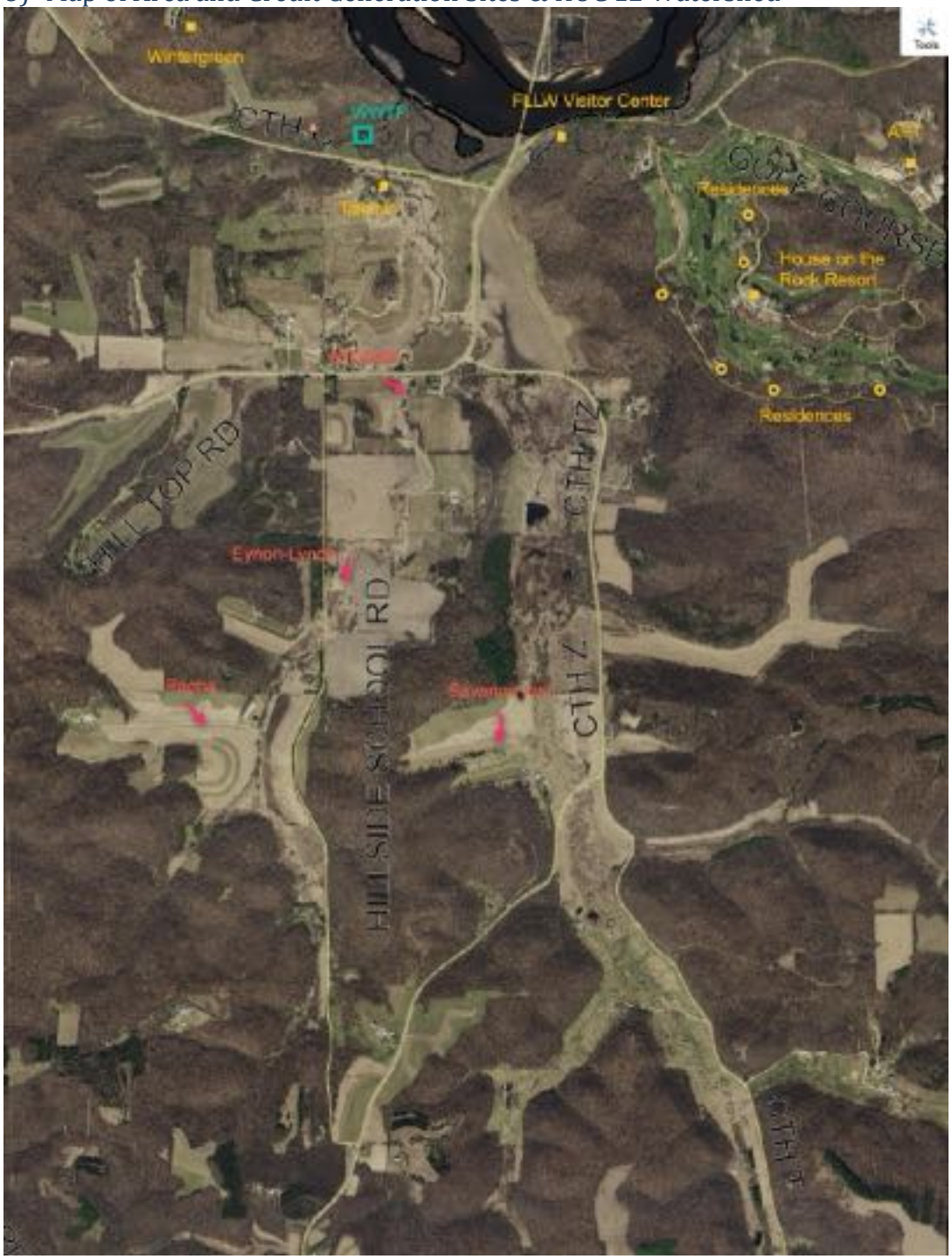
7) Wisconsin DNR Inspections

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

The District will notify WDNR by telephone call to WDNR's regional wastewater compliance engineer within 24 hours or next business day of becoming aware that phosphorus credits used or intended for use by District are not being generated as outlined in this WQT Plan. The District will submit a written notification within five days after the District recognizes that the phosphorus credits are not being generated as outlined in the WQT Plan. WDNR may waive the requirement for submittal for a written notice within five days and instruct the District to submit the written notice with the next regularly scheduled monitoring report required by the District's WPDES Permit.

The written notice will contain a description of how and why the TP credits are not being generated as outlined in the WQT Plan, the steps taken or planned to prevent reoccurrence of the identified problems and the length of time anticipated it will take to address the issue. The District will work to rectify the problem as laid out in the Operation and Maintenance Plans

8) Map of Area and Credit Generation Sites & HUC 12 Watershed



Basic Tools | Locate & Identify | Draw & Measure | Help & Resources

Home | Show Layers | Legend | Themes | Upload Data | Add Layers | Share Link | Print Map | Identify | Clear All

Decimal Degrees (DD)

Lat: 43.1481° N
Lon: 90.0294° W

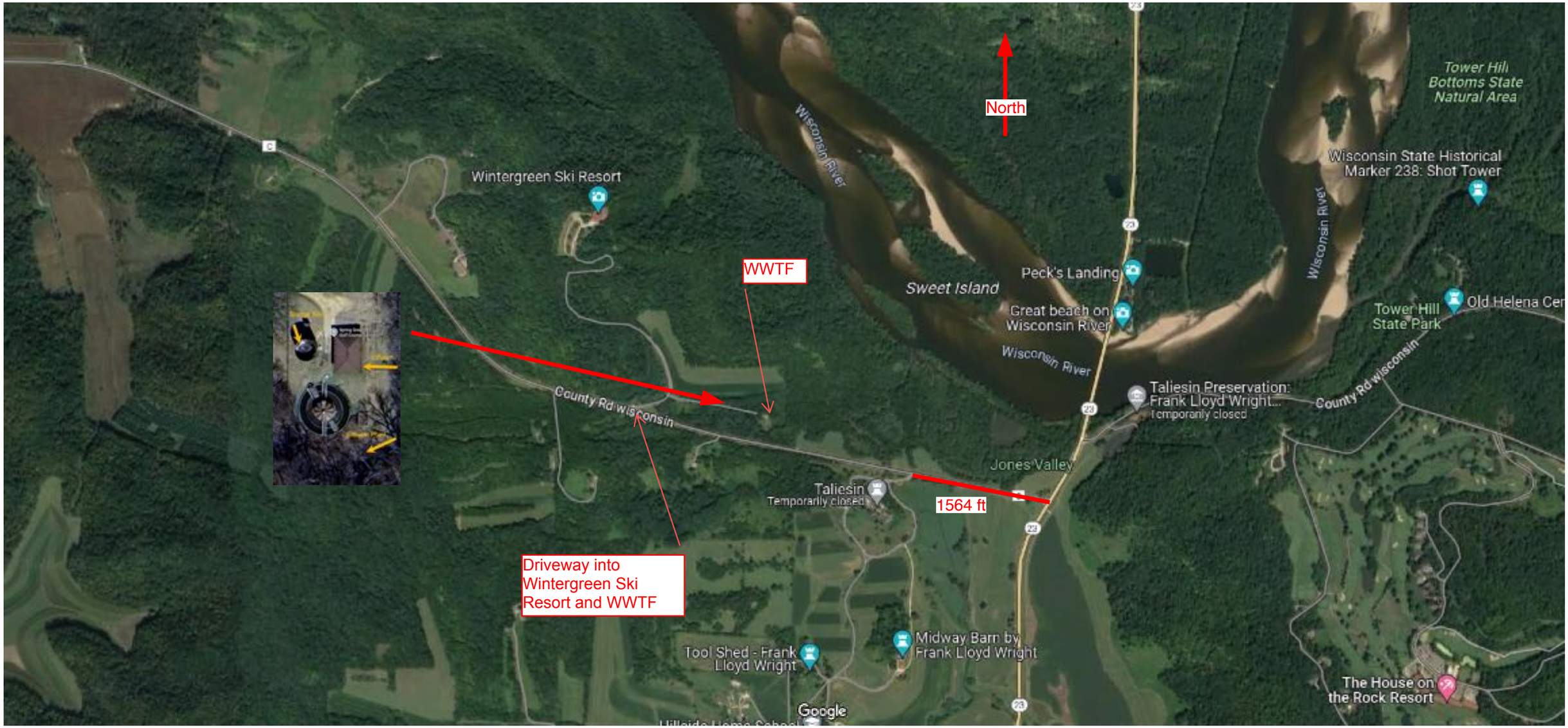
Hide Coordinates

070700051202
Wilson Creek-Wisconsin River
Mill Creek
Pearl Road
070700050705
070700050707
Coon Rock-Mill Creek
Trout Creek-Mill Creek
070700051205
Cruson Slough-Wisconsin River
Golf Course Road
Taliesin Lake
Glenaeg Lane
Lamon Stone Lane
Spring Drive
South Springs Drive
State Highway 23
City of Spring Green-Wisconsin River
070700051204
Rush Creek
Wyoming
Hilltop Road
070700051203
070700050512
Lowery Creek
High Point Road
Quarry Road
Hillside School Road
Upper Wyoming Road
Weaver Road
Knight Hollow-Mill Creek
070700050704
070700050705
070700050512
070700051203
070700051204
City of Spring Green-Wisconsin River
Rush Creek
Lowery Creek
Knight Hollow-Mill Creek
Trout Creek-Mill Creek
Lowery Creek

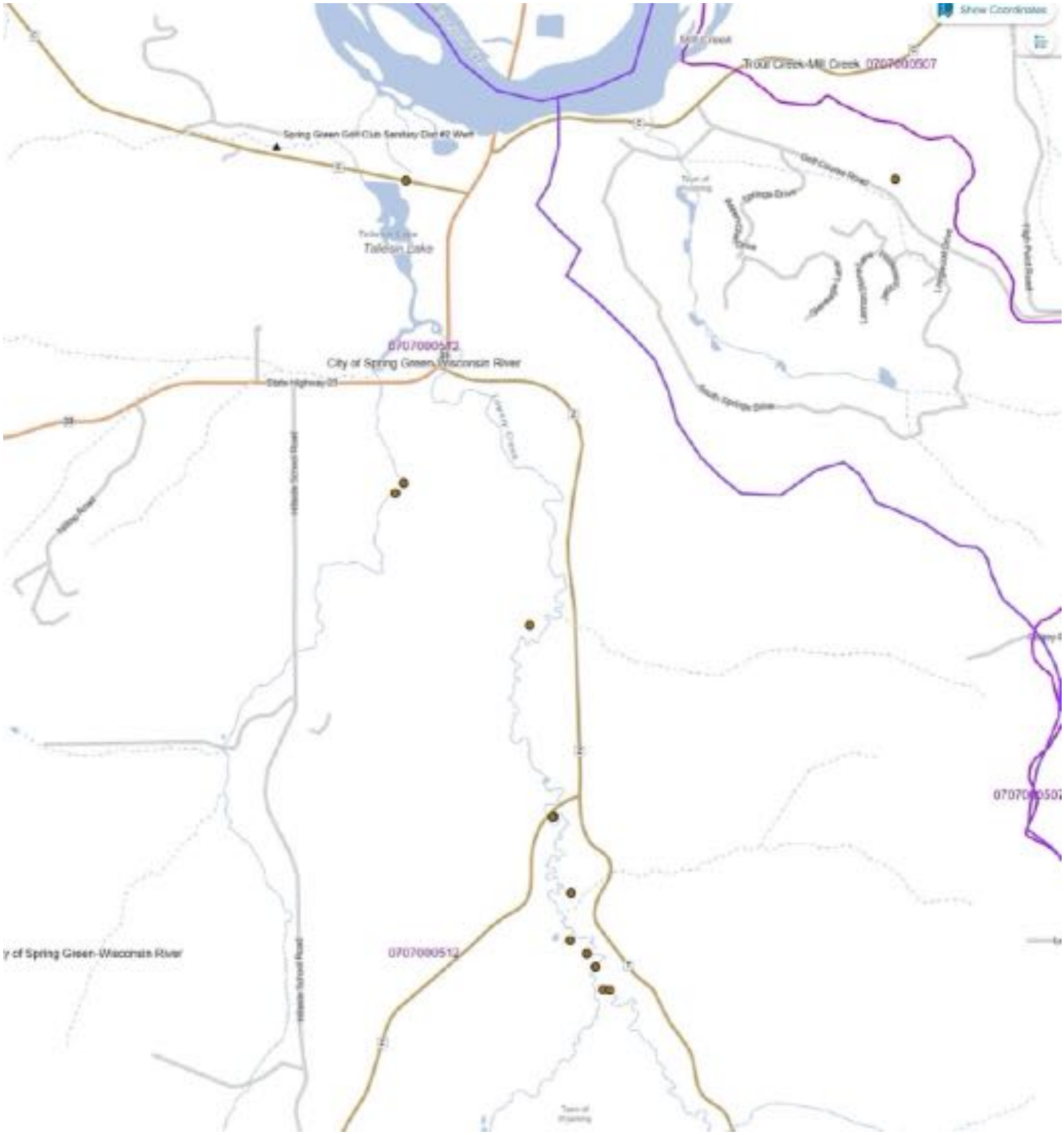
2,000 ft

Scale 21584

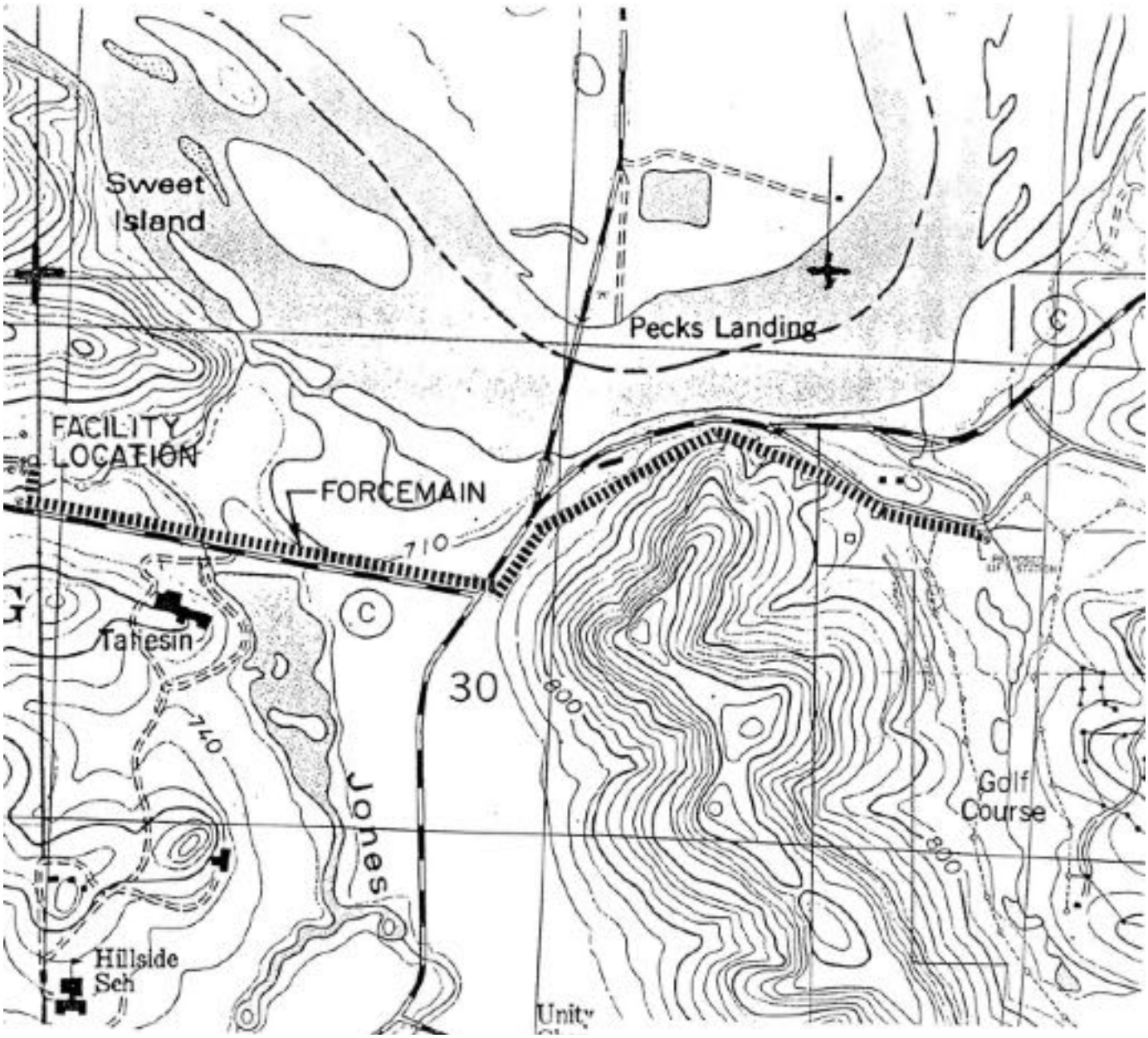
Google Maps


North
Wintergreen Ski Resort
Wisconsin River
WWTF
Sweet Island
Peck's Landing
Great beach on Wisconsin River
Wisconsin River
Tower Hill Bottoms State Natural Area
Wisconsin State Historical Marker 238: Shot Tower
Wisconsin River
Tower Hill State Park
Old Helena Cer
County Rd wisconsin
Taliesin Preservation: Frank Lloyd Wright...
Temporarily closed
County Rd wisconsin
Jones Valley
Taliesin
Temporarily closed
1564 ft
Driveway into Wintergreen Ski Resort and WWTF
Tool Shed - Frank Lloyd Wright
Midway Barn by Frank Lloyd Wright
The House on the Rock Resort
Google
Imagery ©2024 CNES / Airbus, Maxar Technologies, USDA/FPAC/GEO, Map data ©2024 1000 ft

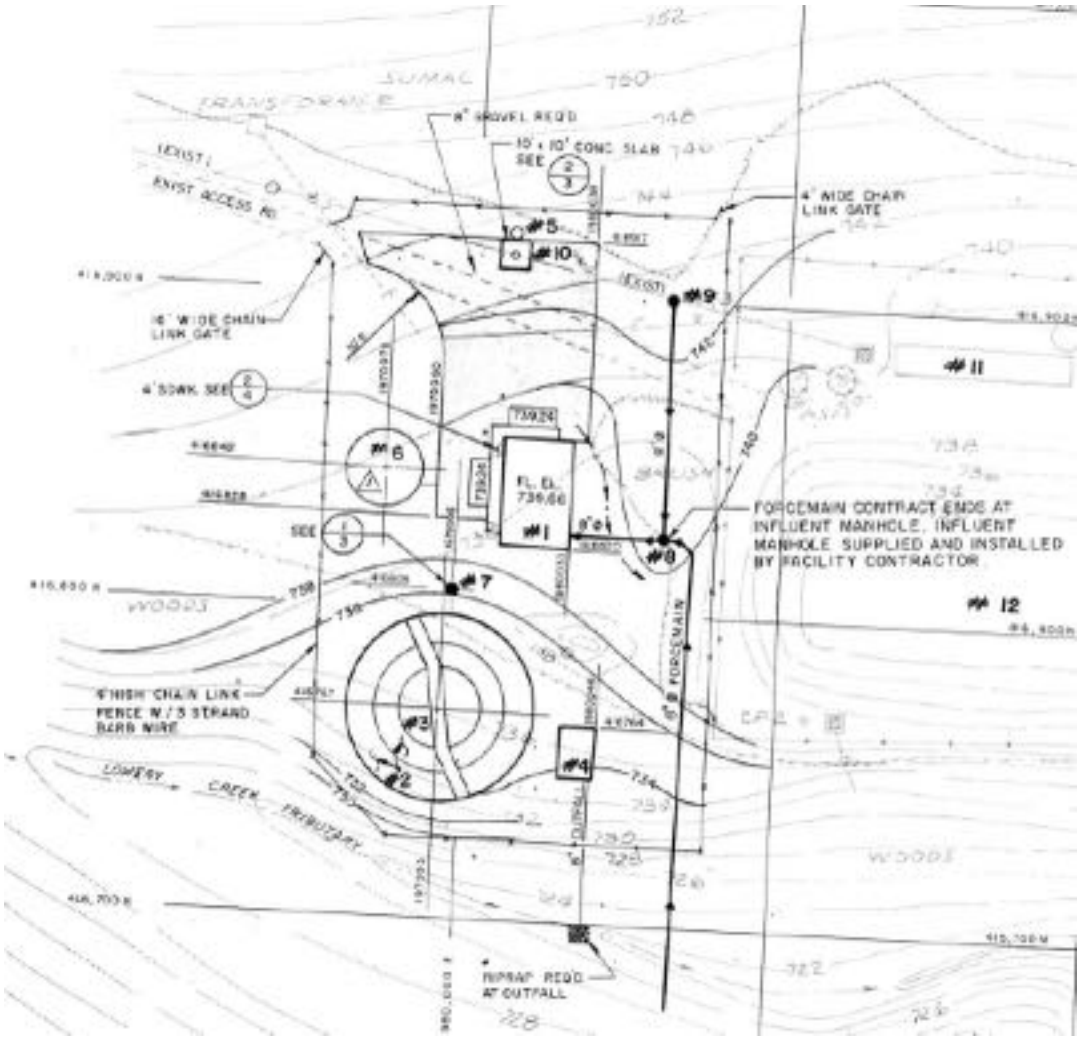
HUC 12 Watershed Map



9) WWTF Site Location Map

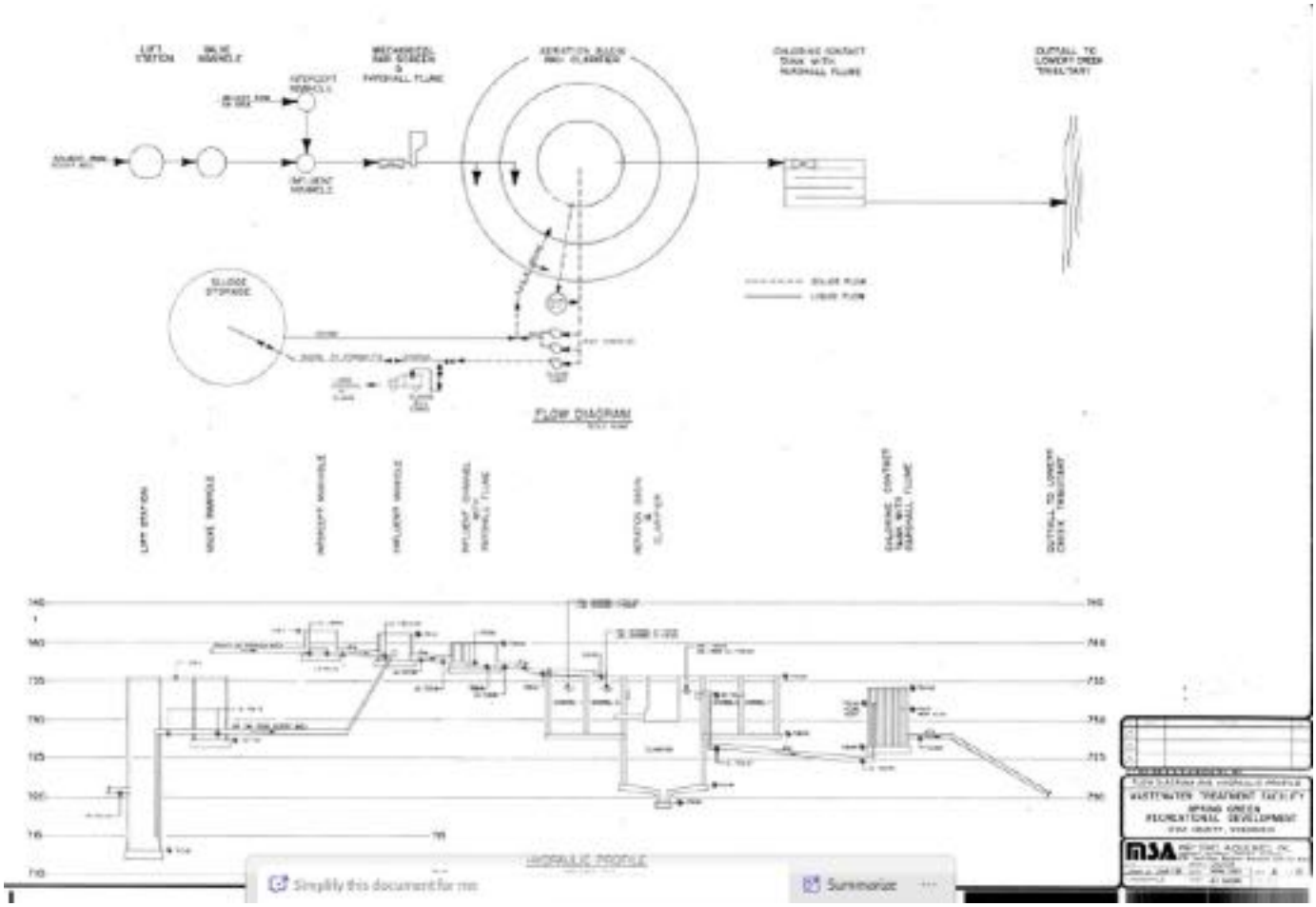


WWTF Site and Dimensions





WWTF Schematic Diagram



10)Water Quality Trading Summary

Water Quality Trading Plan Summary

ID	Property Owner	Address	Site	Trade Agreement	Taxkey	Acres	Rotational Average Baseline	Rotational Average Proposed	Reductions	Trade Ratio	WQT Credits Generated
1.1	Pacha	6310 Hillside School Rd	East Prairie	SGGC_SD-LC 1	028-0487, 028-0484	2.5	2.67	1.00	1.67	1.2:1	1.39
1.2	Pacha	6311 Hillside School Rd	Upper Section South	SGGC_SD-LC 1	028-0483	5.1	14.00	4.00	10.00	1.2:1	8.33
2.1	Savanna Institute	6172 Co Rd Z	Field 1	SGGC_SD-LC 2	028-0113	7.1	1.17	1.29	-0.12	1.2:1	0.00
2.2	Savanna Institute	6172 Co Rd Z	Field 2	SGGC_SD-LC 2	028-0112, 028-0118	5.2	4.75	4.67	0.08	1.2:1	0.07
2.3	Savanna Institute	6172 Co Rd Z	Field 3	SGGC_SD-LC 2	028-0118	5.6	6.50	2.67	3.83	1.2:1	3.19
2.4	Savanna Institute	6172 Co Rd Z	Field 4	SGGC_SD-LC 2	028-0118	12.4	0.00	1.22	-1.22	1.2:1	0.00
2.5	Savanna Institute	6172 Co Rd Z	Field 5	SGGC_SD-LC 2	028-0111, 028-0116	15.9	8.75	4.67	4.08	1.2:1	3.40
2.6	Savanna Institute	6173 Co Rd Z	Pasture Conversion	SGGC_SD-LC 2	028-0111, 028-0117	3.0	3.00	1.22	1.78	1.2:1	1.48
3.0	Michaels	6679 State Road 23	Field 7	SGGC_SD-LC 3	028-0057	7.0	7.00	1.00	6.00	1.2:1	5.00
Total							**47.84**	**21.74**	**26.10**		**22.87**

Note: Savanna Field 7 and Savanna Stapleton Corn are not included in the scope of our Water Quality Trading Plan.
Years used to calculate rotational average for the baseline on a field basis:

- 1: Baseline 2019-2024 (Alfalfa to Pasture)
- 2: Baseline 2019-2022 (Corn/Soy to Pasture)
- 3: Baseline 2019-2022 (Corn/Soy to Pasture)
- 4: Baseline 2019-2022 (Grass Hay to Pasture)
- 5: Baseline 2019-2026 (Corn/Soy to Alfalfa)
- 7: Baseline 2019-2024 (Corn/Soy to Pasture)
- Pasture Conversion: 2019-2022 (Corn/Soy to Pasture)

Status of owner agreements:

Agreement	Version	Sent	Signature Received
Pacha	v.1.1	6.15.26 revised after WQT Plan update and SnapPlus update	6.30.36
Savanna / Cates	v.1.1	6.15.26 revised after WQT Plan update and SnapPlus update	6.30.26
Michaels	v.1.1	6.15.26 revised after WQT Plan update and SnapPlus update	6.30.26

11) Credit Generation Location #1 Pacha

NMP Baseline Establishment for
6310 Hillside School Rd., Spring Green, WI
Richard Wagner & Danielle Pacha



NM1: Narrative and Crops Report

Starting Year	**2020**
Reported For	**Richard Wagner & Danielle Pacha**
Printed	**2026-06-04**
Plan Completion/Update Date:	**2023-03-14**
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\sara.wilhelm\OneDrive - Iowa County\Land Conservation - Documents\Technical assistance\P Trading\Phosphorus Trading-Wyoming\Danielle Pacha\NMP\Richard Wagner & Danielle Pacha (actual practice) - Copy.snapDb	

Prepared for:
Richard Wagner & Danielle Pacha
attn:Richard Wagner & Danielle Pacha
6310 Hillside School Rd
Spring Green, 53588

Farm has 2 fields totalling 7.6 cropped acres.
Farm Narrative: Plan was created to create a baseline for Wyoming Valley water quality trading project. The field was in continuous corn/soybean rotation at the time of enrollment. Soils were sampled December 2022 prior to practice implementation to establish baseline nutrient levels. Soil samples were conducted at 6in depth by the UW WI Soil and Anaylsis Lab. These baseline results were used to configure the Snap Plus model for credit calculations. No manure of commercial fertilizer applications were made to the field following enrollment.

Annual Farm Notes:

Crop Year	Annual Notes
2023	Native grasses were planted in 2022 in two fields in plan.

Spreader Calibration Methods: Amount applied / Acres

Narrative and Crops:

Field Name	Field Acres	2020	2021	2022	2023	2024	2025	2026	2027
East Prarie	2.5	Soybeans 30-36 inch row No Till 46-55 bu/acre	Corn grain No Till 171-190 bu/acre	Corn grain No Till 171-190 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
Upper Section South	5.1	Soybeans 30-36 inch row No Till 46-55 bu/acre	Corn grain No Till 171-190 bu/acre	Corn grain No Till 171-190 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

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

Crops Grouped By Category		2020	2021	2022	2023	2024	2025	2026	2027
Corn grain	Acres bu		8 1,444	8 1,444					
Grasslands, permanent, not harvested	Acres none				8 0	8 0	8 0	8 0	8 0
Soybeans 30-36 inch row	Acres bu	8 404							

WQ1: P Trade Report

Reported For	Richard Wagner & Danielle Pacha
Printed	2026-06-03
Plan Completion/Update Date	2023-03-14
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\sara.wilhelm\OneDrive - Iowa County\Land Conservation - Documents\Technical assistance\P Trading\Phosphorus Trading-Wyoming\Danielle Pacha\NMP\Richard Wagner & Danielle Pacha (actual practice) - Copy.snapDb	

Prepared for:
Richard Wagner & Danielle Pacha
attn:Richard Wagner & Danielle Pacha
6310 Hillside School Rd
Spring Green, 53588

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	2020	2021	2022	2023	2024	2025	2026	2027
East Prarie	TODDVILLE	336A	3	3	3	2	1	1	1	1	1
Upper Section South	NORDEN	254D2	5	13	20	9	4	4	4	4	4
Total			**8**	**15**	**22**	**11**	**5**	**5**	**5**	**5**	**5**

Samples Analyzed By:
Soil & Forage Analysis Lab
4702 University Avenue
Madison, WI 53705
phone: 608-262-4364

LAB #: 4367

SOIL TEST REPORT

COOPERATIVE EXTENSION
University of Wisconsin-Extension
University of Wisconsin-Madison
Department of Soil Science

Results also available on-line at http://not available
lab number: 4367 access code: rtqqz

Richard Wagner
5801 Taft St
Middleton, WI 53562

This Report is for:
Rich Wagner

County	Account No.
Iowa	560704

Date Received	Date Processed
12/29/2022	1/18/2023

Slope	Acres	Plow Depth	Irrigated
2-6%	5.1	6"	No

Soil Name
unknown **
loamy soil

Tiled
No

Field Name
Upper Section South

Previous Crop
no crop

NUTRIENT RECOMMENDATIONS

Cropping Sequence	Yield Goal	Crop Nutrient Need			Fertilzer Credit				Nutrients to Apply		
		N	P2O5	K2O	Legume N	Manure N	P2O5	K2O	N	P2O5	K2O
	per acre	lbs/a			lbs/a	lbs/a			lbs/a		
Pasture, unimproved	2.1-3 ton	100	0	45	0	0	0	0	100	0	45
Pasture, unimproved	2.1-3 ton	100	0	45	0	0	0	0	100	0	45
Pasture, unimproved	2.1-3 ton	100	0	45	0	0	0	0	100	0	45
Pasture, unimproved	2.1-3 ton	100	0	45	0	0	0	0	100	0	45

There is no lime recommendation.

ADDITIONAL INFORMATION

Nutrient application guidelines for pasture make no assumptions about manure/urine deposition. Nutrient credits for manure/urine deposition should be subtracted from these rates.

*** No soil information was provided, therefore generic, less precise nutrient application guidelines are being given. 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.

Because of excessively high P levels, no P_2O_5 fertilizer or manure is recommended on this field.

Year 1,2,3,4: Split nitrogen applications into two to three applications per year.

N.R.=Not required for calculation of lime requirement when soil pH is 6.6 or higher.

SOIL TEST INTERPRETATION FOR CROPPING SEQUENCE

	Very Low	Low	Optimum	High	Very High	Excessive
Phosphorus	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP		PPPPPPPPPPPPPPPPPP	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP		
Potassium	KKKKKKKKKKKKKKKKKKKKKKKKKKKKKK		KKKKKKKKKKKKKKKKKK	KKKKKKK		
Rotation pH	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXX		

LABORATORY ANALYSIS

Sample Identification	Soil pH	O.M %	Phosphorus ppm	Potassium ppm	60-69 Lime Req (T/a)	Calcium ppm	Magnesium ppm	Est. CEC (cmol/kg)	Boron ppm	Manganese ppm	Zinc ppm	Sulfate-Sulfur ppm		Texture Code	Sample Density	Buffer pH
1	7.2	3.7	163	170	0									2	1.01	N.R.
2	6.3	3.0	144	116	0									2	1.05	6.8
Adjusted Averages	6.8	3.4	154	143												

PDF p.51

Samples Analyzed By:
Soil & Forage Analysis Lab
4702 University Avenue
Madison, WI 53705
phone: 608-262-4364

SOIL TEST REPORT

COOPERATIVE EXTENSION
University of Wisconsin-Extension
University of Wisconsin-Madison
Department of Soil Science

Results also available on-line at http://not available
lab number: 4367 access code: rtqqz

LAB #: 4367

This Report is for:
Rich Wagner

Richard Wagner
5801 Taft St
Middleton, WI 53562

County	Account No.
Iowa	560704

Date Received	Date Processed
12/29/2022	1/18/2023

Slope	Acres	Plow Depth	Irrigated
0-2%	2.5	6"	No

Soil Name: unknown ** loamy soil
Tiled: No
Field Name: East Prarie
Previous Crop: no crop

NUTRIENT RECOMMENDATIONS

Cropping Sequence	Yield Goal	Crop Nutrient Need N	Crop Nutrient Need P2O5	Crop Nutrient Need K2O	Fertilzer Credit Legume N	Fertilzer Credit Manure N	Fertilzer Credit P2O5	Fertilzer Credit K2O	Nutrients to Apply N	Nutrients to Apply P2O5	Nutrients to Apply K2O
	per acre	lbs/a			lbs/a	lbs/a			lbs/a		
Pasture, unimproved	2.1-3 ton	100	0	0	0	0	0	0	100	0	0
Pasture, unimproved	2.1-3 ton	100	0	0	0	0	0	0	100	0	0
Pasture, unimproved	2.1-3 ton	100	0	0	0	0	0	0	100	0	0
Pasture, unimproved	2.1-3 ton	100	0	0	0	0	0	0	100	0	0

There is no lime recommendation.

ADDITIONAL INFORMATION

Nutrient application guidelines for pasture make no assumptions about manure/urine deposition. Nutrient credits for manure/urine deposition should be subtracted from these rates.

*** No soil information was provided, therefore generic, less precise nutrient application guidelines are being given. 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.

Because of excessively high P levels, no P_2O_5 fertilizer or manure is recommended on this field.

Year 1,2,3,4: Split nitrogen applications into two to three applications per year.

N.R.=Not required for calculation of lime requirement when soil pH is 6.6 or higher.

SOIL TEST INTERPRETATION FOR CROPPING SEQUENCE

	Very Low	Low	Optimum	High	Very High	Excessive
Phosphorus	PPPPPPPPPPPPPPP	PPPPPPPPPPPPPPP	PPPPPPPPPPPPPPPPPP	PPPPPPPPPPPPPPP	PPPPPPPPPPPPPPP	PPPPPPPPPPPPPP
Potassium	KKKKKKKKKKKKKKK	KKKKKKKKKKKKKKK	KKKKKKKKKKKKKKKKKK	KKKKKKKKKKKKKKK	KKKKKKKKKKKKKKK	KKKKKKKKKKKKKK
Rotation pH	XXXXXXXXXXXXXXX	XXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXX		

LABORATORY ANALYSIS

Sample Identification	Soil pH	O.M %	Phosphorus ppm	Potassium ppm	60-69 Lime Req (T/a)	Calcium ppm	Magnesium ppm	Est. CEC (cmol/kg)	Boron ppm	Manganese ppm	Zinc ppm	Sulfate-Sulfur ppm		Texture Code	Sample Density	Buffer pH
3	6.5	4.0	130	239	0									2	0.96	6.6
4	6.6	4.0	117	203	0									2	0.97	N.R.
Adjusted Averages	6.6	4.0	124	221												

PDF p.52

12)Credit Generation Location #2 Savanna Institute

Savanna Institute Farm Map

Farm: Savanna Institute - Hagan, V18 Generated:10/9/2025, Crop year: 2025, Township Range Section:7N 4E s6



- Counties
- Fields
- Township/Range
- Nutrient prohibited buffers
- Nutrient prohibited drawn areas
- Nutrient prohibited winter only

PDF p.54

WQ1: P Trade Report

Reported For	Savanna Institute - Hagan
Printed	2025-12-01
Plan Completion/Update Date	2024-10-25
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\howebm\Desktop\Savanna Institute - Hagan3 (Reviewed and Edited by Landon for SNAP+ Accuracy) (9-29-25).snapDb	

Prepared for:
Savanna Institute - Hagan
attn:Savanna Institute - Hagan

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	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1	CHURCHTOWN	116D2	7	1	1	1	1	2	1	1	1	1	1	1
2	CHURCHTOWN	116D2	5	8	3	2	6	29	8	1	1	1	1	1
3	NORDEN	254D2	6	10	5	3	8	11	4	1	2	2	1	1
4	URNE	255E2	12	0	0	0	0	3	1	1	1	1	1	1
5	ETTRICK	629A	16	11	10	8	9	8	7	9	8	6	5	4
7	ORION	628A	1	1	1	1	1	1	1	1	1	1	0	0
pasture conversion	NORDEN	254D2	4	5	2	1	4	6	2	0	1	1	1	0

PTP	
2030	2031
2	2
0	0
1	1
1	1
3	2
0	0
0	0

P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Stapleton Corn	ORION	628A	3	2	2	1	2	1	1	2	1	1	1	1
Total			**54**	**39**	**23**	**17**	**30**	**60**	**25**	**15**	**14**	**11**	**10**	**9**

PTP	
2030	2031
0	0
8	**7**

NM1: Narrative and Crops Report

Starting Year	**2021**
Reported For	**Savanna Institute - Hagan**
Printed	**2025-12-02**
Plan Completion/Update Date:	**2024-10-25**
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\howebm\Desktop\Savanna Institute - Hagan3 (Reviewed and Edited by Landon for SNAP+ Accuracy) (9-29-25).snapDb	

Prepared for:
Savanna Institute - Hagan
attn:Savanna Institute - Hagan

Farm has 8 fields totalling 53.7 cropped acres.
Farm Narrative: Field 6 was not included in the trade as there were no soil samples associated with it

Field 3 bordered the entire length of field 4 until 2023. In 2023 part of field 3 (pasture conversion) was seeded down to continuous pasture.

Annual Farm Notes:

Crop Year	Annual Notes
2025	8/4/25 Notes: Field 3, and field 5 boundaries were adjusted to match description provided by Eric Cates. "Stapleton Corn" was added as its own separate field (acreage that was subtracted from the previously larger field 3), and planned out through 2031 to match the rotation field 5 is going to follow according to the description provided by Savannah Institute, does this seem correct? Field 3 cropping history was also updated to match that of Field "Pasture Conversion", as grazer indicated this field is currently in a grazing rotation. This plan has been updated to reflect current grazing conditions as expressed by the manager of the grazing herd. This consisted of 25 cows average 1,000 lbs being present for an estimated 180 days,applying equal grazing pressure to 74.2 acres around this farm. This averages out to a grazing manure application rate of 2.5 tons acre, accounted for on defined fields in this plan. Remaining grazing manure unaccounted for in this plan was applied via grazing to pre-existing pasture acreage outside the boundaries of the fields identified in this plan and are not at this time included in this phosphorus loss reduction accounting exercise.
2026	This year's plan has been updated to reflect planned future grazing conditions as expressed by the manager of the grazing herd. This will consist of 50 cows average 1,000 lbs being present for an estimated 180 days,applying equal grazing pressure to 74.2 acres. This averages out to a grazing manure application rate of 5 tons acre, accounted for on defined fields in this plan. Remaining grazing manure unaccounted for in this plan was applied via grazing to pre-existing pasture acreage outside the boundaries of the fields identified in this plan and are not at this time included in this phosphorus loss reduction accounting exercise.
2027	8/4/25 Notes: Fields Stapleton Corn, and 5 are planned here to be transitioned to alfalfa/grass and out of row cropping. This continues to apply the updated expected grazing conditions as expressed by the manager of the grazing herd. This consisted of 50 cows average 1,000 lbs being present for an estimated 180 days,applying equal grazing pressure to 74.2 acres. This averages out to a grazing manure application rate of 5 tons acre, accounted for on defined fields in this plan. Remaining grazing manure unaccounted for in this plan was applied via grazing to pre-existing pasture acreage outside the boundaries of the fields identified in this plan and are not at this time included in this phosphorus loss reduction accounting exercise.

2028	This continues to apply the updated expected grazing conditions as expressed by the manager of the grazing herd. This consisted of 50 cows average 1,000 lbs being present for an estimated 180 days,applying equal grazing pressure to 74.2 acres. This averages out to a grazing manure application rate of 5 tons acre, accounted for on defined fields in this plan. Remaining grazing manure unaccounted for in this plan was applied via grazing to pre-existing pasture acreage outside the boundaries of the fields identified in this plan and are not at this time included in this phosphorus loss reduction accounting exercise. Animals were not planned here to graze on crops in "Stapleton Corn" or "5"

Spreader Calibration Methods: Custom applications, Equipment calibration, Amount applied / Acres

Narrative and Crops:

Field Name	Field Acres	2021	2022	2023	2024	2025	2026	2027	2028
1	7.1	Alfalfa/Grass None 3.6-4.5 ton/acre	Alfalfa (grassy, yr 3+) None 3.6-4.5 ton/acre	Alfalfa (grassy, yr 3+) None 3.6-4.5 ton/acre	Alfalfa (grassy, yr 3+) None 3.6-4.5 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 3.1-4 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 3.1-4 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 3.1-4 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 3.1-4 ton/acre
2	5.2	Soybeans to small grain cover crop No Till, cover crop no till 56-65 bu/acre	Corn grain to small grain cover crop No Till, cover crop no till 171-190 bu/acre	Pasture seeding, grass/legume Spring Chisel, disked 0.5-1.9 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre
3	5.6	Soybeans to small grain cover crop No Till, cover crop no till 56-65 bu/acre	Corn grain to small grain cover crop No Till, cover crop no till 171-190 bu/acre	Pasture seeding, grass/legume No Till 0.5-1.9 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre
4	12.4	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Pasture seeding, grass/legume No Till 0.5-1.9 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre

Field Name	Field Acres	2021	2022	2023	2024	2025	2026	2027	2028
5	15.9	Soybeans to small grain cover crop No Till, cover crop no till 56-65 bu/acre	Corn grain to small grain cover crop No Till, cover crop no till 191-210 bu/acre	Corn grain to small grain cover crop No Till, cover crop no till 191-210 bu/acre	Soybeans to small grain cover crop No Till, cover crop no till 56-65 bu/acre	Corn grain to small grain cover crop No Till, cover crop no till 191-210 bu/acre	Corn grain to small grain cover crop No Till, cover crop no till 191-210 bu/acre	Alfalfa/Grass Seeding Spring No Till 1.0-2.5 ton/acre	Alfalfa/Grass None 4.6-5.5 ton/acre
7	1.4	Soybeans to small grain cover crop No Till, cover crop no till 56-65 bu/acre	Corn grain to small grain cover crop No Till, cover crop no till 171-190 bu/acre	Corn grain No Till 171-190 bu/acre	Soybeans to small grain cover crop No Till, cover crop no till 56-65 bu/acre	Pasture seeding, grass/legume No Till 0.5-1.9 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre
pasture conversion	3.6	Soybeans to small grain cover crop No Till, cover crop no till 56-65 bu/acre	Corn grain to small grain cover crop No Till, cover crop no till 171-190 bu/acre	Pasture seeding, grass/legume No Till 0.5-1.9 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre	Hay (1st cut) to Pasture, rotational stocking, grass/legume None 2-3 ton/acre
Stapleton Corn	2.9	Soybeans to small grain cover crop No Till, cover crop no till 56-65 bu/acre	Corn grain to small grain cover crop No Till, cover crop no till 191-210 bu/acre	Corn grain to small grain cover crop No Till, cover crop no till 191-210 bu/acre	Soybeans to small grain cover crop No Till, cover crop no till 56-65 bu/acre	Corn grain to small grain cover crop No Till, cover crop no till 191-210 bu/acre	Corn grain to small grain cover crop No Till, cover crop no till 191-210 bu/acre	Alfalfa Seeding Spring No Till 1.0-2.5 ton/acre	Alfalfa/Grass None 4.6-5.5 ton/acre

Summary by Crop:

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

Crops Grouped By Category		2021	2022	2023	2024	2025	2026	2027	2028
Alfalfa (grassy, yr 3+)	Acres ton		7 28	7 28	7 28				
Alfalfa/Grass	Acres ton	7 28							19 96
Hay (1st cut) to Pasture, rotational stocking, grass/legume	Acres ton				27 68	34 121	35 124	35 124	35 124

Crops Grouped By Category		2021	2022	2023	2024	2025	2026	2027	2028
Corn grain to small grain cover crop	Acres bu		35 6,318	19 3,810		19 3,810	19 3,810		
Pasture seeding, grass/legume	Acres ton			27 32		1 1			
Soybeans to small grain cover crop	Acres bu	35 2,118			20 1,210				
Grass hay	Acres ton	12 30	12 30						
Alfalfa/Grass Seeding Spring	Acres ton							16 28	
Corn grain	Acres bu			1 181					
Alfalfa Seeding Spring	Acres ton							3 5	

Otter Creek,Taliesin
Taliesin - Soil Sampling - 2021

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CROP
Corn

Tube ID	Sample Name	Sample Depth (in)	ph 1:1	Buffered pH	OM (% Mass)	PO_4P (ppm)			Mehlich-3 ICP (ppm)									
						Bray	Olsen	Mehlich-3	K	S	Zn	Na	Ca	Mg	Fe	Cu	Mn	B
142457	33	0-6	6.8	7.1	4.3	122.0	60.6	229.7	209.7	7.0	11.4	6.0	3299.6	390.5	178.7	3.7	97.6	1.4
142443	34	0-6	7.1	7.2	4.3	161.0	76.0	345.6	287.1	8.0	13.0	9.6	4265.2	551.3	207.1	5.5	55.3	2.0
142431	35	0-6	7.4	7.4	3.5	223.0	79.4	460.2	228.5	7.9	20.0	9.7	3630.4	706.1	179.0	5.8	123.0	1.7
142411	36	0-6	5.6	6.7	2.8	20.5	6.0	36.9	122.1	16.0	2.8	3.2	1181.3	304.5	170.7	2.1	96.3	0.6
142437	37	0-6	7.5	7.5	2.1	None	14.0	103.5	81.8	10.5	16.6	2.3	3557.6	457.7	226.8	2.1	171.0	1.2
142449	38	0-6	6.7	7.0	3.7	54.7	22.4	74.6	132.3	8.0	9.0	3.5	2311.3	621.3	157.6	2.7	125.0	0.8
142419	39	0-6	6.1	6.8	3.8	43.5	19.0	53.5	190.4	10.6	5.6	1.9	1788.4	426.3	140.0	2.2	127.3	0.7

Tube ID	Sample Name	CEC (meq/100g)	Nitrogen (ppm)		% Base Saturation				Electrical Conductivity (dS/m)	DTPA Zn Regression (ppm)	Carbon	
			Nitrate	Ammonium	K	Mg	Ca	Na			TOC (%)	Active (ppm)
142457	33	18.3			2.9	17.7	79.2	0.1		4.5		
142443	34	24.1			3.0	19.0	77.7	0.2		4.9		
142431	35	22.5			2.6	26.2	71.0	0.2		7.1		
142411	36	11.7			2.7	21.8	44.6	0.1		1.3		
142437	37	10.9			1.9	35.0	62.9	0.1		5.7		
142449	38	15.7			2.2	33.0	64.8	0.1		3.6		
142419	39	14.3			3.4	24.8	55.0	0.1		2.5		

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CROP
Corn

Tube ID	Sample Name	Sample Depth (in)	ph 1:1	Buffered pH	OM (% Mass)	PO_4P (ppm)			Mehlich-3 ICP (ppm)									
						Bray	Olsen	Mehlich-3	K	S	Zn	Na	Ca	Mg	Fe	Cu	Mn	B
142453	40	0-6	6.1	6.8	3.4	28.2	14.3	37.5	62.4	7.7	5.0	3.7	1866.4	468.4	171.7	2.2	97.2	0.6
142458	41BIO	0-6	7.2	7.3	3.3	51.0	25.0	79.7	102.2	9.2	9.5	3.6	2784.3	764.6	203.0	3.5	169.2	1.3
142444	42	0-6	6.5	7.0	4.5	44.2	25.6	61.3	129.3	8.1	7.6	4.2	2869.1	810.0	190.5	3.2	128.2	1.2
142432	43	0-6	6.1	6.8	4.8	102.0	59.2	135.5	242.2	7.6	6.3	5.6	2481.4	639.2	303.3	3.5	41.7	1.1
142412	44	0-6	6.8	7.0	4.5	54.7	29.4	77.2	104.7	7.7	7.4	8.2	3132.0	858.1	235.6	4.3	83.4	1.0
142438	45	0-6	6.1	6.9	3.0	11.1	5.1	18.2	49.6	7.9	4.4	12.3	1407.7	371.0	182.8	1.8	158.5	0.7
142450	46	0-6	6.6	7.1	2.7	7.3	4.0	12.2	55.2	6.1	3.7	6.6	1372.1	424.2	163.2	1.7	191.2	0.7

Tube ID	Sample Name	CEC (meq/100g)	Nitrogen (ppm)		% Base Saturation				Electrical Conductivity (dS/m)	DTPA Zn Regression (ppm)	Carbon	
			Nitrate	Ammonium	K	Mg	Ca	Na			TOC (%)	Active (ppm)
142453	40	14.7			1.1	26.6	55.9	0.1		2.2		
142458	41BIO	18.9	13.6	2.2	1.4	33.7	64.8	0.1		3.5		
142444	42	19.7			1.7	34.2	64.0	0.1		3.2		
142432	43	19.3			3.2	27.6	56.6	0.1		2.8		
142412	44	21.2			1.3	33.7	64.9	0.2		2.9		
142438	45	10.7			1.2	29.0	58.1	0.5		2.0		
142450	46	9.7			1.5	35.3	62.0	0.3		1.5		

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DATE COMPLETED
12/02/2021

CROP
Corn

Tube ID	Sample Name	Sample Depth (in)	ph 1:1	Buffered pH	OM (% Mass)	PO_4P (ppm)			Mehlich-3 ICP (ppm)									
						Bray	Olsen	Mehlich-3	K	S	Zn	Na	Ca	Mg	Fe	Cu	Mn	B
142420	47	0-6	6.4	6.9	3.2	8.2	4.0	12.6	58.3	7.3	2.9	10.1	1330.6	393.4	155.2	2.0	231.7	0.6
142454	48	0-6	6.4	7.0	2.3	72.6	15.4	86.3	67.8	7.1	3.1	3.4	816.8	224.7	227.4	1.2	120.4	0.7
142459	49	0-6	6.3	7.0	2.9	18.3	7.4	35.2	55.6	12.2	3.2	4.1	1454.7	424.4	179.6	1.2	142.2	0.7
142462	50	0-6	7.0	7.2	3.2	15.1	9.2	21.5	84.9	11.7	2.9	6.2	1801.2	619.6	147.4	1.8	222.5	0.8
142464	51	0-6	6.8	7.2	2.7	11.8	5.4	19.5	40.9	9.3	3.7	4.5	1478.4	467.7	150.4	1.6	161.0	0.7
142413	52	0-6	7.4	7.4	3.3	17.0	9.2	26.8	79.8	12.8	4.3	3.4	1937.6	624.6	133.0	1.9	272.5	1.3
142466	53	0-6	6.4	7.1	2.6	10.0	4.8	14.8	125.9	9.2	4.9	2.8	1066.1	261.5	160.7	1.7	195.9	0.6

Tube ID	Sample Name	CEC (meq/100g)	Nitrogen (ppm)		% Base Saturation				Electrical Conductivity (dS/m)	DTPA Zn Regression (ppm)	Carbon	
			Nitrate	Ammonium	K	Mg	Ca	Na			TOC (%)	Active (ppm)
142420	47	10.5			1.4	31.1	55.6	0.4		1.2		
142454	48	5.7			3.1	33.1	63.6	0.3		1.3		
142459	49	10.1			1.4	35.0	63.4	0.2		1.4		
142462	50	13.3			1.6	38.7	59.4	0.2		1.1		
142464	51	10.5			1.0	37.0	61.8	0.2		1.4		
142413	52	14.0			1.5	37.3	61.1	0.1		1.5		
142466	53	7.2			4.5	30.2	65.1	0.2		2.1		

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ORDER NUMBER
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12/02/2021

CROP
Corn

Tube ID	Sample Name	Sample Depth (in)	pH 1:1	Buffered pH	OM (% Mass)	PO_4P (ppm)			Mehlich-3 ICP (ppm)									
						Bray	Olsen	Mehlich-3	K	S	Zn	Na	Ca	Mg	Fe	Cu	Mn	B
142451	54	0-6	5.9	6.8	2.9	20.7	9.0	28.0	117.3	8.7	4.0	3.5	1409.6	404.2	158.3	1.5	111.1	0.6
142421	55BIO	0-6	6.1	6.9	3.4	37.6	18.4	53.0	309.1	10.7	4.3	2.7	1853.0	407.6	167.1	1.8	83.0	0.8
142455	56	0-6	6.5	7.0	3.5	39.0	18.8	45.3	210.2	8.2	4.7	2.8	1662.1	428.4	156.3	1.5	89.1	0.7
142460	57	0-6	6.2	6.9	4.1	21.5	11.1	39.9	193.1	10.7	7.0	2.5	1949.2	438.6	168.3	3.6	127.8	0.8
142463	58	0-6	6.0	6.9	2.6	32.0	19.8	45.5	144.5	9.5	4.6	3.5	1536.1	402.9	165.5	1.6	113.3	0.7
142465	59	0-6	6.4	7.0	3.4	23.7	10.2	35.3	77.9	8.0	4.5	3.9	1642.3	426.9	149.6	1.8	116.8	0.7
142414	60	0-6	6.9	7.2	2.9	9.4	4.2	20.6	39.6	9.0	3.3	9.6	1538.1	425.3	153.2	1.5	161.7	0.8

Tube ID	Sample Name	CEC (meq/100g)	Nitrogen (ppm)		% Base Saturation				Electrical Conductivity (dS/m)	DTPA Zn Regression (ppm)	Carbon	
			Nitrate	Ammonium	K	Mg	Ca	Na			TOC (%)	Active (ppm)
142451	54	12.3			2.4	27.4	50.5	0.1		1.8		
142421	55BIO	13.6	9.0	4.3	5.8	25.1	69.2	0.1		1.9		
142455	56	11.4			4.7	31.2	64.0	0.1		2.0		
142460	57	13.9			3.6	26.2	61.5	0.1		3.1		
142463	58	11.7			3.2	28.7	57.8	0.1		2.1		
142465	59	11.0			1.8	32.3	65.7	0.2		1.9		
142414	60	10.4			1.0	34.2	64.4	0.4		1.3		

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CROP
Corn

Tube ID	Sample Name	Sample Depth (in)	pH 1:1	Buffered pH	OM (% Mass)	PO_4P (ppm)			Mehlich-3 ICP (ppm)									
						Bray	Olsen	Mehlich-3	K	S	Zn	Na	Ca	Mg	Fe	Cu	Mn	B
142467	61	0-6	7.1	7.2	3.6	17.6	6.4	31.5	59.5	8.7	3.8	12.7	2081.5	613.5	139.7	1.9	125.3	0.9
142468	62	0-6	6.1	6.9	2.7	4.9	2.9	11.5	27.8	6.6	3.5	8.1	1121.3	285.2	140.4	1.3	136.5	0.5
142422	63	0-6	6.9	7.2	3.0	5.3	3.2	9.6	30.7	6.5	3.6	6.7	1098.0	352.3	124.4	1.4	174.5	0.5
142456	64	0-6	7.1	7.3	2.9	4.1	4.3	8.7	46.0	6.5	3.6	3.3	1562.7	417.8	140.5	2.4	201.0	1.1
142461	65	0-6	6.3	7.0	2.5	6.3	3.3	10.1	40.4	7.0	1.9	11.7	1162.1	323.0	133.5	1.4	122.6	0.6

Tube ID	Sample Name	CEC (meq/100g)	Nitrogen (ppm)		% Base Saturation				Electrical Conductivity (dS/m)	DTPA Zn Regression (ppm)	Carbon	
			Nitrate	Ammonium	K	Mg	Ca	Na			TOC (%)	Active (ppm)
142467	61	14.5			1.1	35.3	63.3	0.4		1.4		
142468	62	8.6			0.8	27.6	57.3	0.4		1.6		
142422	63	7.9			1.0	37.3	61.4	0.4		1.4		
142456	64	10.5			1.1	33.2	65.5	0.1		1.4		
142461	65	8.0			1.3	33.8	64.2	0.6		0.8		

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Nutrient Cycling Indicator Report

CROP: Corn

GROWER: Otter Creek Organic Farms

FARM: Taliesin

FIELD: North & South

SAMPLING DATES: 11/19/2021

Sample Name	Sample Date	Tags	Crop	Bacterial Diversity	Denitrification Potential	Nitrate Ammonification Potential	Nitrification Potential	Oxygen Availability	Phosphorus Mineralization Potential	Phosphorus Solubilization Potential
18BIO	11/19/21		Corn	1386.9	0.4	0.19	0.29	64.22	0.67	1.16
41BIO	11/19/21		Corn	1001.63	0.44	0.25	0.29	59.99	0.72	1.41
55BIO	11/19/21		Corn	1398.96	0.49	0.14	0.29	68.84	0.55	1.08
									* All measurements are unitless	
Legend			Corn	<565.99	>0.49	<0.11	>0.26	<63.72	<0.36	<0.89
				>869.14	<0.39	>0.18	<0.22	>69.37	>0.58	>1.32

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Nutrient Cycling Indicator Report

Indicator	Definition
Bacterial Diversity	Bacterial Diversity •The bacterial diversity indicator is a unitless index that takes into account the number of species present (richness) as well as the relative abundance of each species (balance or evenness). •This diversity indicator includes both bacteria and archaea, which are classified as prokaryotes and both are typically unicellular organisms. Certain soil processes are carried out either by bacteria or archaea or both. For example, both groups are involved in nitrification. To ease communication we use the term "bacterial" diversity instead of "prokaryotic" diversity, as the former is more familiar to most users. •Bacterial diversity is expected to be higher at moderate soil pH (not very acidic nor very alkaline) and in soils that experience minimal disturbances, such as no-till. Bacterial diversity also tends to increase with decreasing soil moisture content.
Denitrification Potential	Nitrate (NO_3^-) → Dinitrogen/Nitrous Oxide (N_2/N_2O) • Denitrification is a process where specific soil organisms convert nitrate to gaseous forms of nitrogen. • The Denitrification indicator represents the abundance of genes belonging to denitrifying organisms and are specifically involved in these nitrogen transformation processes. • This form of loss mainly occurs in waterlogged soils with reduced oxygen availability. Addressing the source of waterlogging or making multiple in-season nitrogen applications are ways to mitigate nitrogen loss through denitrification.
Nitrate Ammonification Potential	Nitrate (NO_3^-) → Ammonium (NH_4^+) • The Nitrate ammonification indicator represents the abundance of genes belonging to organisms that have the capability of converting nitrate to ammonium. • This process can contribute to nitrogen retention by counteracting nitrogen loss from leaching or denitrification, particularly under low oxygen conditions and at higher soil pH. • This process is also known as Dissimilatory Nitrate Reduction to Ammonium (DNRA).

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Nutrient Cycling Indicator Report

Indicator	Definition
Nitrification Potential	Ammonium (NH_4^+) → Nitrate (NO_3^-) • Nitrification is a process where specific soil microorganisms convert ammonium to nitrate, which is the form of nitrogen that is most susceptible to loss. • The Nitrification indicator represents the abundance of genes belonging to nitrifying organisms and which are specifically involved in this process.
Oxygen Availability	• The Oxygen availability indicator reflects the oxygen status of the soil by quantifying the amount of organisms that are adapted to low oxygen levels. • This indicator gives us insight into the porosity and waterlogging of soil and contributes to the interpretation of other microbial indicators that are sensitive to oxygen, such as Denitrification.
Phosphorus Mineralization Potential	Organic Phosphorus → Phosphate (PO_4^{3-}) • The Phosphorus mineralization indicator represents the abundance of genes belonging to organisms that release available phosphorus from organic forms. • This allows phosphorus that is stored in soil organic matter to be added to the plant-available pool.

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Nutrient Cycling Indicator Report

Indicator	Definition
Phosphorus Solubilization Potential	Non-Labile Phosphate (PO_4^{3-}) → Plant-Available Phosphate (PO_4^{3-}) • The Phosphorus solubilization indicator represents the abundance of genes belonging to organisms that are involved in the process of liberating phosphate from soil minerals. • This allows previously plant-unavailable phosphorus to be added to the plant-available pool.

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Pathogen Report

CROP: Corn

GROWER: Otter Creek Organic Farms

FARM: Taliesin

FIELD: North & South

SAMPLING DATES: 11/19/2021

Sample Name	Sample Date	Tags	Crop	Anthracnose *Colletotrichum graminicole*	Bacterial Leaf Streak *Xanthomonas vasicola pv. vasculorum*	Charcoal Rot *Macrophomina phaseolina*	Common Smut *Ustilago maydis*	Fusarium Stalk Rot *Fusarium spp.*	Goss' Wilt *Clavibacter michiganensis*	Gray Leaf Spot *Cercospora spp.*	Pythium Root Rot *Pythium spp.*	Root Rot *Pythium aphanidermatum*	Seed Rot and Seedling Blight *Fusarium verticillioides*	Seedling Blight *Penicillium oxalicum*	Seedling Blight and Root Rot *Rhizoctonia solani*	Seedling Blight and Root Rot *Rhizoctonia spp.*	Stewart's Wilt *Pantoea stewartii*
18BIO	11/19/21		Corn	0.06	0.12	0.25	1.12	19.93	15.63	0.93	6.48	0.0	0.0	0.0	0.75	0.75	0.0
41BIO	11/19/21		Corn	0.07	0.47	0.4	0.27	5.58	11.03	0.34	3.7	0.13	0.0	0.0	0.2	0.2	0.0
55BIO	11/19/21		Corn	0.03	0.18	0.1	0.08	4.03	3.05	0.68	3.8	0.05	0.0	0.0	0.0	0.0	0.03
																	* All units are parts per billion (ppb
Legend			Corn	>0.11	>0.34	>0.4	>0.78	>23.2	>10.37	>0.26	>5.97	>0.13	>0.07	>0.43	>0.2	>0.2	>0.04
				<0.0	<0.0	<0.0	<0.06	<4.35	<1.36	<0.0	<0.66	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0

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FM6: Soil Test Report

Reported For	Savanna Institute - Hagan
Printed	2025-07-31
Plan Completion/Update Date	2024-10-25
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\sara.wilhelm\OneDrive - Iowa County\Phosophorus Trade \Savanna Institute - Hagan3 (Reviewed and Edited by Landon for SNAP+ Accuracy) (1).snapDb	

Prepared for:
Savanna Institute - Hagan
attn:Savanna Institute - Hagan

			Predominant					Samples				in ppm			
Field Name	Subfarm	Acres	Soil Map Symbol	Soil Name	Soil Test Date	Soil Test Lab	Lab Number	Rec. #	Actual #	pH	OM%	P	K	S	CEC
1		7.1	116D2	CHURCHTOWN	2021-11-29			**1**	**4**	6.4	2.8	9	58	7.1	9
2		5.2	116D2	CHURCHTOWN	2021-11-29			**1**	**3**	6.7	2.9	15	48	11.1	11
3		10.2	254D2	NORDEN	2021-11-29			**2**	**8**	6.4	3.2	21	123	9.7	12
4		12.4	255E2	URNE	2021-11-29			**2**	**6**	6.7	2.9	6	41	7.4	10
5		17.2	629A	ETTRICK	2021-11-29			**3**	**8**	6.9	3.5	43	100	9.7	16
pasture conversion		3.6	254D2	NORDEN	2025-02-27			**1**	**2**	6.9	3.0	14	103	0	0

Crop Year Soil Test Needed

Field Name	Soil Test Date	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
1	2021-11-29						X					
2	2021-11-29						X					
3	2021-11-29						X					
4	2021-11-29						X					
5	2021-11-29						X					
pasture conversion	2025-02-27									X		

13)Credit Generation Location #3 Michaels

Patrick Michaels Soils

Farm: Patrick Michaels, V18 Generated:8/25/2025, Crop year: 2025, Township Range Section:8N 4E s31



- Counties
- Township/Range
- Soils
- W - Wet <12" to Watertable
- Nutrient prohibited buffers
- Nutrient prohibited drawn areas
- Nutrient prohibited winter only
- Fields

NM1: Narrative and Crops Report

Starting Year	**2021**
Reported For	**Patrick Michaels**
Printed	**2025-08-25**
Plan Completion/Update Date:	**2023-06-09**
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\sara.wilhelm\OneDrive - Iowa County\Wyoming Phosophorus Trade\Patrick Michaels.snapDb	

Prepared for:
Patrick Michaels
attn:Patrick Michaels
6679 State Road 23
Spring Green, 53588

Farm has 1 fields totalling 3.8 cropped acres.
Farm Narrative: Plan was created to create a baseline for Wyoming Valley water quality trading project.

Annual Farm Notes:

Crop Year	Annual Notes
2023	Field has been in a corn-cover crop rotation. Being converted into an orchard in 2023.

Spreader Calibration Methods: Custom applications

Narrative and Crops:

Field Name	Field Acres	2021	2022	2023	2024	2025	2026	2027
7	3.8	Corn grain Spring MB Plow 131-150 bu/acre	Winter Rye (grain +straw) to interseeded red clover cover crop Field Cultivation 31-50 bu/acre	Sod, seeding, spring Disk 0-0 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

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

Crops Grouped By Category		2021	2022	2023	2024	2025	2026	2027
Corn grain	Acres bu	4 562						

Crops Grouped By Category		2021	2022	2023	2024	2025	2026	2027
Grasslands, permanent, not harvested	Acres none				4 0	4 0	4 0	4 0
Sod, seeding, spring	Acres ton			4 0				
Winter Rye (grain +straw) to interseeded red clover cover crop	Acres bu		4 162					

WQ1: P Trade Report

Reported For	Patrick Michaels
Printed	2025-08-20
Plan Completion/Update Date	2023-06-09
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\sara.wilhelm\OneDrive - Iowa County\Phosophorus Trade \Patrick Michaels.snapDb	

Prepared for:
Patrick Michaels
attn:Patrick Michaels
6679 State Road 23
Spring Green, 53588

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	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
7	NORDEN	254C2	4	11	38	10	37	10	7	3	1	1	0
Total			**4**	**11**	**38**	**10**	**37**	**10**	**7**	**3**	**1**	**1**	**0**

FM6: Soil Test Report

Reported For	Patrick Michaels
Printed	2026-06-26
Plan Completion/Update Date	2023-06-09
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\sara.wilhelm\OneDrive - Iowa County\Land Conservation - Documents\Technical assistance\P Trading\Phosphorus Trading-Wyoming\Patrick Michaels\NMP\Patrick Michaels.snapDb	

Prepared for:
Patrick Michaels
attn:Patrick Michaels
6679 State Road 23
Spring Green, 53588

			Predominant					Samples				in ppm			
Field Name	Subfarm	Acres	Soil Map Symbol	Soil Name	Soil Test Date	Soil Test Lab	Lab Number	Rec. #	Actual #	pH	OM%	P	K	S	CEC
7		3.8	254C2	NORDEN	2022-11-30	22-332-0671		**1**	**3**	6.4	2.9	26	188	0	0

Crop Year Soil Test Needed

Field Name	Soil Test Date	2022	2023	2024	2025	2026	2027
7	2022-11-30						X

REPORT NUMBER
22-332-0671
COMPLETED DATE
Nov 30, 2022
ACCOUNT
31540
RECEIVED DATE
Nov 28, 2022

Midwest Laboratories®

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www.midwestlabs.com

TODAY'S DATE
Nov 30, 2022

COPY TO
12623 MIDWESTERN BIOAG INC
ACCOUNTS PAYABLE

2nd COPY TO
94015 GARY ZIMMER

MIDWESTERN BIOAG INC
PRECISION ACCOUNT
10955 BLACKHAWK DRIVE
BLUE MOUND WI 53517-0160

IDENTIFICATION
OCOF
HOYER FARM
FIELD 7

SOIL ANALYSIS REPORT

INFO SHEET: 1536173

LAB NUMBER *408*	SAMPLE IDENTIFICATION	ORGANIC MATTER L.O.I. percent	RATE	PHOSPHORUS P_1 (WEAK BRAY) 1:7 ppm	RATE	PHOSPHORUS P_2 (STRONG BRAY) 1:7 ppm	RATE	OLSEN BICARBONATE P ppm	RATE	NEUTRAL AMMONIUM ACETATE (EXCHANGEABLE) POTASSIUM K ppm	RATE	MAGNESIUM Mg ppm	RATE	CALCIUM Ca ppm	RATE	SODIUM Na ppm	RATE	pH SOIL pH 1:1	BUFFER INDEX	CATION EXCHANGE CAPACITY C.E.C. meq/100g	PERCENT BASE SATURATION (COMPUTED) % K	% Mg	% Ca	% H	% Na
75997	7-A	3.0	M	20	M	33	M			165	H	409	VH	1917	M			6.4	6.8	14.7	2.9	23.2	65.2	8.7	
75998	7-B	3.0	M	31	VH	52	H			203	VH	269	VH	1684	H			6.4	6.8	12.3	4.2	18.2	68.5	9.1	
75999	7-C	2.6	M	27	H	51	H			197	VH	276	VH	1635	H			6.5	6.9	11.9	4.2	19.3	68.7	7.8	

LAB NUMBER *408*	NITRATE-N (FIA) SURFACE ppm	SURFACE lbs/A	SURFACE depth (in)	SUBSOIL 1 ppm	SUBSOIL 1 lbs/A	SUBSOIL 1 depth (in)	SUBSOIL 2 ppm	SUBSOIL 2 lbs/A	SUBSOIL 2 depth (in)	Total lbs/A	SULFUR S ICAP ppm	RATE	ZINC Zn DTPA ppm	RATE	MANGANESE Mn DTPA ppm	RATE	IRON Fe DTPA ppm	RATE	COPPER Cu DTPA ppm	RATE	BORON B SORB. DTPA ppm	RATE	EXCESS LIME RATE	SOLUBLE SALTS 1:1 mmhos/cm	RATE
75997			0-6								12	L	2.0	M	8	L	40	VH	1.0	M	0.8	M			
75998			0-6								9	L	2.3	M	11	M	45	VH	1.0	M	0.7	L			
75999			0-6								10	L	1.3	M	8	L	36	VH	0.9	M	0.7	L			

These soil results DO NOT meet the Wisconsin Department of Agriculture requirements for Nutrient Management. Midwest Laboratories can provide a Wisconsin certified test. For more information, please call (402) 334-7770.

REV.10/17

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The above analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days.

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