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WATER QUALITY TRADING PLAN

CREATED FOR

Richland Center Renewable Energy
Richland Center, WI
WPDES Permit WI-0064718-02-1
December 21, 2023



ENGINEER • DESIGN • BUILD • OPERATE • CONSULT

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1 INTRODUCTION

This water quality trading plan summarizes the plan for Richland Center Renewable Energy (RCRE) in Richland Center, WI to use water quality trading to comply with phosphorus discharge limits in its Wisconsin Discharge Elimination System (WPDES) permit for Outfall 001. To assist in complying with RCRE's phosphorus discharge limits, RCRE has contracted with a third-party landowner, Valley View Dairy (Valley View), to install and maintain permanent vegetative cover on previously farmed fields (Fields VVH-01 and VVH-11B) within the same subwatershed as Outfall 001 on property owned by Valley View. These fields have previously received manure applications. These manure applications will cease once the fields are converted and used for credit generation. The fields will be seeded with a grass hay mixture in September 2023, and remain continuously vegetated and non-fertilized for the duration of the Water Quality Trade (WQT).

RCRE has used SnapPlus modeling to quantify the amount of potentially tradable phosphorus from the fields assuming the previous farming practices continued, and then the amount after installation and maintenance of the permanent vegetative cover. Using a credit ratio of 1.2:1, this plan will calculate the phosphorus water quality credits available per year based on the change in management practice from farming in corn and soybean rotation to permanent vegetative cover at the four agricultural fields. RCRE will use water quality trading to demonstrate compliance with its total phosphorus limit in its reissued WPDES permit.

2 BACKGROUND

2.1 PURPOSE FOR WATER QUALITY TRADE

The purpose of this Water Quality Trading Plan ("Plan") is to describe RCRE's use of water quality trading to assist in complying with the Total Phosphorus (TP) limits on Outfall 001 of WPDES permit WI-0064718-02-1. This Plan was developed pursuant to Section 3.1 of the WPDES permit. RCRE will trade with property owned by Valley View ("the fields") in the same HUC-12 subwatershed as Outfall 001. These fields will be placed into perennial vegetation and RCRE will use the phosphorus credits generated from this management practice to comply with the TP limits in their WPDES permit. RCRE has entered into a written water quality trading agreement through 2028 with Valley View; the agreement is provided in Appendix B.

With an average flow rate of 1.37 MGD, TP 6-month average limit of 0.74 lb/day, and the facility's most recent 3-month average of 1.09 lb/day RCRE would require 127.75 lb TP/yr to comply with their mass limits under past conditions. However, that 3-month average is elevated due to issues with the tertiary treatment systems that have since been resolved. The 6-month average TP mass discharge immediately prior to the tertiary treatment issue was .901 lb/day, and historic mass discharges have been as low as .375 lb/day. RCRE believes that an average annual credit generation of 71 lbs TP/yr will be sufficient to comply with their mass limits due to improved effluent quality resulting from process upgrades and the completion of filter maintenance. RCRE also will be able to control the effluent phosphorus concentration of their process wastewater via chemical addition to ensure final compliance with the permitted phosphorus limits and the available annual trade credits discussed further in Table 5 of Section 5.

This Plan and the Water Quality Trade Agreement with Valley View were developed pursuant to the Notice of Intent (NOI) to Conduct a Water Quality Trade. An NOI to Conduct Water Quality Trading is included as Appendix A.

2.2 WASTEWATER TREATMENT PLANT OVERVIEW

The wastewater treatment system consists of a selector tank, two (2) aeration basins, two (2) anaerobic digesters, a dissolved air floatation (DAF) unit, a clarifier, an ultrafiltration membrane system for solid/liquid separation and four (4) sets of two (2) sand filters. Solids removed from the membranes are sent to storage and are ultimately hauled offsite for land application or other methods of disposal. Treated wastewater is discharged to the Pine River at Outfall 001.

2.3 LOCATION OF OUTFALL AND FIELDS

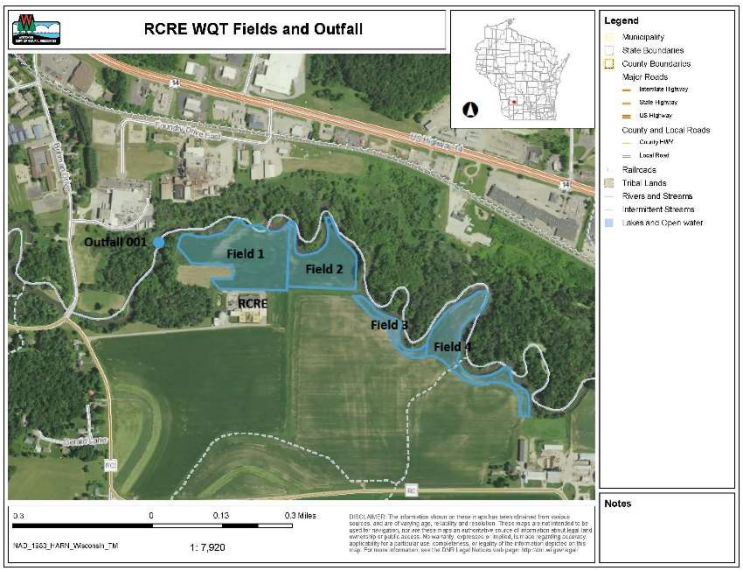
2.3.1 LOCATION OF OUTFALL 001

RCRE discharges treated process wastewater to the Pine River through Outfall 001 at approximate latitude of 43.316704°N and longitude of 90.374973°W. Outfall 001 is located in HUC12 Subwatershed 070700051107, which is also known as the Brush Creek - Pine River Subwatershed. The Brush Creek – Pine River Subwatershed is part of the larger Pine River Watershed (0707000511) in the Lower Wisconsin River Subbasin (07070005). The Brush Creek – Pine River Subwatershed is not subject to a total maximum daily load (TMDL) and is not upstream of a watershed subject to a TMDL. Figure 1 below depicts the location of Outfall 001 in the Subwatershed. The map is also provided in Appendix C.

2.3.2 LOCATION OF FIELDS

RCRE has implemented the management practices to generate phosphorus credits on the property of Valley View Dairy. All 22 acres of the proposed fields are downstream of Outfall 001 in the Brush Creek – Pine River Subwatershed and are adjacent to both RCRE and the Pine River. A map is included in Appendix C which includes the location of the fields in relation to Outfall 001.

Figure 1
Map with Outfall and Fields shown



The fields are located within the Town of Richland (Richland County, WI) and include parcels 022.2814.1000, 022.2723.5000, 022.2732.1000 and 022.2731.2000. These parcels are located in SEC 28 TWP 10N R 1E and SEC 27 TWP 10N R 1E. A map of these parcels is included in Appendix C.

Table 1 below describes the current and future land use of the parcels owned by Valley View used in this WQT within the HUC-12 subwatershed.

Table 1
Parcels in Subwatershed Owned by Valley View

Parcel ID	Total Acreage	Previously Farmed Acreage	Acreage Coverted to Permanent Grassland
022.2814.1000	12.13	12.13	10.1
022.2723.5000	8.16	8.16	5.8
022.2732.1000	36.87	36.87	1.4
022.2731.2000	21.07	21.07	5
Total	78.23	78.23	22.3

3 PREVIOUS CONDITIONS AND CURRENT TRADEABLE PHOSPHOROUS MODELING

3.1 PREVIOUS LAND USE OF THE FIELDS

Table 1 above shows how much land used to be farmed on each parcel owned by Valley View. A portion of the four parcels are being converted to generate credits for this WQT. Fields 1 and 2 comprised the entirety of Field VVH-01, and Fields 3 and 4 comprise a portion of Field VVH-11B. The map below displays the former agricultural field boundaries.

Figure 2
Agricultural Field Boundaries



3.2 SOIL SAMPLING

Soil samples from fields VVH-01 and VVH-11B were taken on October 22, 2021 in accordance with Wisconsin's A2809 guidelines using the conventional, 5-acre grid sampling method. NRCS soils maps of the fields are included in Appendix C and soil sample results are given in Appendix D. The sample results were used to calculate the current and future potentially tradeable phosphorus for the water quality trade. Results of the SnapPlus reports using these site-specific soil conditions can be found in Appendices E and F.

3.3 MODELED PTP UNDER PREVIOUS CONDITIONS

SnapPlus V2 (version 20.4.21154.1547) was used to model the fields under historic conditions, prior to implementation of the WQT. WQT 1 and WQT 2 had identical cropping rotations, as did WQT 3 and WQT 4. These cropping rotations were used as the basis for the initial water quality trade calculations. The fields have been managed in a five-year rotation of corn silage and corn grain. Historic manure application rates for the fields are included in Appendix E.

As with the crop rotation, the historic fertilizer and manure applications were used in the initial water quality trade calculations, which modeled cropping and nutrient applications from 2019-2023. This Plan uses the same data to model cropping rotations and nutrient applications from 2024-2028 (the length of the water quality trading agreement).

Appendix D includes Natural Resources Conservation Service (NRCS) CropScape maps to confirm the stated cropping practices. This cropping and application data was modeled as a five-year rotation through the year 2028.

Appendix E includes the following SnapPlus reports assuming historic cropping practices were continued into the future:

- Narrative and Crop Report
- Application Summary Report
- Fields Data and 590 Assessment Plan
- P Trade Report

Table 2 summarizes the Potentially Tradeable Phosphorus (PTP) from the SnapPlus P Trade Report using the current crop and application rotation.

Table 2
SnapPlus Potentially Tradeable Phosphorus – Historic Cropping Rotation

	2024	2025	2026	2027	2028
Field 1	81	60	79	83	79
Field 2	43	41	52	54	61
Field 3	9	8	11	12	8
Field 4	33	31	43	44	28
Total	**166**	**140**	**185**	**192**	**176**

3.4 MODELED PTP WITH HARVESTED GRASS HAY CROP

The fields were then modeled by replacing the historic crop rotation prior to implementation of the WQT with a no-till, non-fertilized, harvested grass hay crop. The same SnapPlus reports that were done for the current crop rotation are available for the grass hay in Appendix F. Table 3 below summarizes the PTP given in the SnapPlus P Trade Report for future conditions with the grass hay crop.

Table 3
SnapPlus Potentially Tradeable Phosphorus – Grass Hay

	2024	2025	2026	2027	2028
Field 1	36	21	16	16	15
Field 2	25	13	11	9	9
Field 3	3	2	2	2	2
Field 4	11	7	6	6	5
Total	**77**	**43**	**37**	**32**	**30**

*Note – the columns do not add up due to SnapPlus expressing PTP in whole numbers only

Since Valley View Dairy applies manure and other nutrients based off of an approved Nutrient Management Plan (NMP), manure application rates in other fields will not increase due to the reduction of total acreage available for manure application.

3.5 CALCULATION OF CHANGE IN PTP BASED ON MODIFIED LAND USE

Based on the change in land use from cropped agricultural land in corn and soybeans to a harvested non-tilled grass hay crop, total PTP was then calculated. Table 4 is a calculation of the difference of the values in Tables 2 and 3 above. This table does not incorporate the trade ratio which is discussed further in Section 4 of this report. The trade ratio must be included to determine final credits generated.

Table 4:
PTP Generated by WQT Management Practices

	2024	2025	2026	2027	2028
Historic PTP	166	140	185	192	176
WQT PTP	77	43	37	32	30
PTP Generated	**89**	**97**	**148**	**160**	**146**

3.5.1 TRADE RATIO CALCULATION

The PTP generated by the SnapPlus modeling is adjusted by the applicable trade ratio to determine the amount of credits the credit user can receive for the management practice. As described in WDNR's "Guidance for Implementing Water Quality Trading in WPDES Permits" dated June 1, 2020 ("WQT Guidance"), the trade ratio is the sum of the delivery, downstream, equivalency, and uncertainty factors less any habitat adjustment factor. The trade ratio can be summarized as:

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

See WQT Guidance at Section 3.4. For trades between point sources and nonpoint sources, there is a minimum trade ratio of 1.2:1.

As described in further detail by trade ratio factor below, RCRE's management practice results in the minimum trade ratio of 1.2:1.

3.6 INDIVIDUAL TRADE RATIO FACTORS

3.6.1 DELIVERY FACTOR

As discussed earlier, the fields subject to the permanent vegetative cover management practice are within the same HUC12, the Brush Creek – Pine River Subwatershed as RCRE's Outfall 001. In addition, the fields are immediately downstream of Outfall 001. Because the fields are within the same HUC12 as the Outfall, the delivery factor is not needed (i.e., it is zero).

3.6.2 DOWNSTREAM FACTOR

All 22 acres of the proposed trade fields are downstream of Outfall 001 and therefore require a downstream factor. Calculation of the downstream factor was done using PRESTO-lite and Section 3.4 of the WQT Guidance. The PRESTO-lite map and associated report are included in Appendix C.

PRESTO-lite estimates the average annual nonpoint phosphorus load to be 119,524 lbs of phosphorus for the 124,800-acre subcatchment in which Outfall 001 is located. All acreage in the subcatchment is upstream of RCRE's outfall, with the exception of the fields in the WQT, thus the total nonpoint load at the point of discharge is 119,524 lbs. RCRE's maximum load is expected to be 545 lbs/year. Therefore, RCRE's discharge will be .46% of the total current load at the point of discharge. Using Section 3.4 of the WQT Guidance, the 22 acres downstream of the point of discharge will have a downstream factor of 0.1.

3.6.3 EQUIVALENCY FACTOR

The permanent vegetative cover management practice on the fields will reduce phosphorus loadings to the subwatershed. RCRE is using the phosphorus credits generated by the permanent vegetative cover management practice to comply with the phosphorus limits on Outfall 001. Because phosphorus reductions are being used to generate phosphorus credits, an equivalency factor is not needed (i.e., it is zero).

3.6.4 UNCERTAINTY FACTOR

The fields will be placed in permanent vegetative cover, as described in Section 6. According to Appendix H of the WQT Guidance, land in perennial vegetation that was established and is maintained consistent with NRCS Technical Standard 327 results in an uncertainty factor of 1.

3.7 CALCULATION OF TRADE RATIO BASED ON INDIVIDUAL FACTORS

Inserting the above factors into the WQT Guidance's trade ratio formula results in a trade ratio of 1.2:1:

Trade Ratio = (Delivery + Downstream + Equivalency + Uncertainty):1
Trade Ratio = (0 + 0.1 + 0 + 1 – 0):1
= 1.1:1

Because the minimum allowed trade ratio by WDNR is 1.2:1, RCRE will use a 1.2:1 trade ratio for the entire 22 acres for estimating credits generated by the management practice.

4 CREDIT GENERATION CALCULATION

For each year, the credit generated from the management practice is the difference between the PTP based on SnapPlus modeling assuming the prior crop rotation was continued and the PTP based on SnapPlus modeling assuming a permanent vegetative cover is installed and maintained on the fields,

divided by the credit ratio as shown in the equation below. Table 5 shows the results of this calculation for each field.

Phosphorus Credits Per Year = (PTP Assuming Crops Rotation Continued - PTP Assuming Permanent Vegetative Cover) ÷ trade ratio

Table 5
SnapPlus PTP (adjusted for trade ration of 1.2)

2024	2025	2026	2027	2028
74	81	123	133	122

For example, in 2024:
PTP Assuming Crop Rotation Continues: 166 lbs P/yr (from Table 2)
PTP Assuming Permanent Vegetative Cover: 77 lbs P/yr (from Table 3)
Difference: 89 lb P/yr (Table 4)
Trade ratio: 1.2:1 (from Section 4.2)
PTP including Trade Ratio: 74 lbs P/yr (89/1.2)

WDNR's "Guidance for Implementing Water Quality Trading in WPDES Permits" was updated and signed on June 18th, 2020. The updated guidance allows for the baseline conditions to be averaged based on the crop rotation used prior to the management practice change.

RCRE generates water quality trade credits for total phosphorus (TP) based on conversion of historical agricultural land managed in a 5-year crop rotation of corn silage and corn grain to permanent grass hay fields. The conversion to permanent vegetation will occur in September 2023.

In order to maintain compliance with their WPDES TP limits, RCRE is proposing using a rotational average of 106.6 lbs/year (the average of PTP adjusted for a trade ratio for the years 2024-2028) to determine annual available credits.

5 MANAGEMENT PRACTICE DESCRIPTION

5.1 *OPERATION AND MAINTENANCE PLAN*

The water quality trading fields will be maintained and operated by Valley View Dairy. Beginning in September 2023, a winter cover crop will be seeded directly onto the field following removal of the current corn silage crop. In spring 2024, the fields will be overseeded (no-till) with a 50/50 alfalfa grass mixture. Alfalfa is self-thinning, and an optimum plant density will be achieved with a 15 lb/acre alfalfa seed/8 lb/acre grass seed mix (grass contains twice the amount of seed per pound as alfalfa). The fields will be harvested 2-3 times annually to facilitate phosphorus uptake and removal by the crop as well as controlling invasive species and maintaining the intended plant communities. Overseeding will occur as necessary to ensure constant vegetative coverage. At no time during the duration of the water quality trade will the field receive fertilizer containing phosphorus, nor will the field be tilled or reduced to bare ground.

The maximum slope in the extent of the trading fields is 6%, with over 90% of the fields having a slope of less than 3%. In areas where gully erosion potential was high, grass waterways were established, along with a grass strip along the outside boundaries of the fields. As such, additional

erosion control measures beyond the establishment of permanent vegetation are not anticipated to be required.

In any incident where a catastrophic event occurs that results in the removal of the permanent vegetation (extreme flooding, fire, etc.), the fields will be re-seeded as soon as possible and WDNR informed of the variation of the plan due to these events.

6 TIMELINE

TASK	TARGET COMPLETION DATE
Winter Cover Crop Seeding	September 2023
Grass/Hay Overseeding	April 2024
Full Field Vegetation Establishment	June 2024
First Harvest	August/September 2024

7 INSPECTIONS AND REPORTING

7.1 WATER QUALITY TRADING MANAGEMENT PRACTICE REGISTRATION

Seeding of the permanently vegetated area will begin in September 2023. A completed Registration Form 3400-207 for Water Quality Trading Management Practice Registration ("Practice Registration Form") is included in Appendix G.

7.2 MONTHLY INSPECTION, CERTIFICATION, AND REPORTING

Each month, RCRE will inspect the fields generating the phosphorus reduction credits to confirm continued cover of the permanent vegetative management practices. Any photos taken during these inspections can be used to supplement the annual inspections described further in Section 7.3.

Each month, RCRE shall also certify that the permanent vegetative cover management practice installed to generate phosphorus reduction credits is operated and maintained in a manner consistent with that specified in this Plan or a statement noting noncompliance with this Plan. A certification of compliance may be made by including the following statement as a comment on the monthly discharge monitoring report (DMR):

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

Usage and reporting of phosphorus credits will also occur on a monthly basis and be submitted on the DMRs.

7.3 ANNUAL INSPECTIONS

Once per year, RCRE's prairie restoration consultant will inspect the fields generating the phosphorus reduction credits to confirm continuation of the permanent vegetative cover management practice and that the management practice is being appropriately maintained. The inspection will confirm compliance with the appropriate standards and verify that no sheet, rill, or gully erosion is occurring. This annual inspection shall occur between mid-August and mid-September each year and shall

include at least two photographs of each of the fields; one overall site photo, and one close-up photo of a representative area of each field. The inspector will also take notes regarding plant diversity, density, overall ecological health, and any potential erosion issues.
The inspection reports will include:

- The name of the inspector.
- The inspection date.
- The relevant standards set forth in the Establishment Plan or Operation and Maintenance Plan for the growing season in which the inspection occurs and whether the fields have met the standards.
- Whether erosion concerns were identified and, if so, what those concerns are.
- When and how any identified issues with meeting standards and erosion concerns were addressed.
- When and how any identified issues with meeting standards and erosion concerns will be addressed in the future.

Inspection reports generated during each inspection will be included with the Annual Water Quality Trading Report submitted by RCRE pursuant to Section 7.5 of this Plan.

7.4 NOTIFICATION OF PROBLEMS WITH COVER MANAGEMENT PRACTICE

In accordance with the Operation and Maintenance Plan, RCRE will notify WDNR verbally within 24 hours of becoming aware that phosphorus reduction credits used or intended for use by RCRE are not being implemented or generated as set forth in this Plan. Additionally, within five (5) days of becoming aware of noncompliance, written notification will be provided to WDNR. Both notifications will include the nature of the noncompliance, a description of how the issues will be addressed, and an appropriate timeline to address the issues. RCRE shall work to rectify such problems in accordance with the Operation and Maintenance Plan.

7.5 ANNUAL WATER QUALITY TRADING REPORT

RCRE shall report to WDNR by January 31 of each year the following:

- The number of phosphorus reduction credits (lbs/month) used each month of the previous year to demonstrate compliance;
- Photographs from the annual inspection, and monthly inspections if available, of the permanent vegetative cover management practice that generated the phosphorus reduction credits used during the previous years; and
- Identification of noncompliance or failure to implement any terms or conditions WPDES permit WI-0064718-02-1 with respect to water quality trading that have not been reported in discharge monitoring reports.

7.6 WDNR RIGHT TO INSPECT THE FIELDS

WDNR has the right to inspect the permanent vegetative cover management practice at any time upon giving reasonable notice to RCRE to ensure the management practice is in compliance with the NRCS Technical Standard 327 and the terms of this Plan.

APPENDIX A
Notice of Intent (NOI) to Conduct Water Quality Trading

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

Notice of Intent to Conduct Water Quality Trading

Form 3400-206 (1/14)

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

Applicant Information

Permittee Name	Permit Number	Facility Site Number
Richland Center Renewable Energy	WI- 0064718-02-1	

Facility Address	City	State	ZIP Code
24520 County Hwy RC	Richland Center	WI	53581

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Bryan Gatzke	17035 W. Wisconsin Ave Suite 120	Brookfield	WI	53005

Project Name
RCRE WQT

Receiving Water Name	Parameter(s) being traded	HUC 12(s)
Pine River	Phosphorus	070700051107

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

Credit Generator Information

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

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

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

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

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

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

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

List the practices that will be used to generate credits:

Conversion of cropped agricultural fields to permanently vegetated (grass hay, non-tilled, non-fertilized) fields/buffer strips.

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

Projected date credits will be available: 01/01/2024

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
Bryan Gatzke	7/28/2023

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
	12/20/2023

APPENDIX B
Trade Agreement with Valley View Dairy

EXECUTIVE SUMMARY FOR WATER QUALITY TRADING CONTRACT

Buyer / Permittee / Credit User Information	
Buyer (Permittee / Credit User) Name: Richland Center Renewable Energy, LLC	Contact person name and telephone number: Paul Bytheway (920) 455-6109
Trade Agreement Number (Assigned by WDNR): _____	WPDES Permit Number: WI-0064718-02-1
Buyer Mailing Address: RCRE Attn: Paul Bytheway P.O. Box 19010 Green Bay, WI 54307-9010	Facility Address: 24520 County Hwy RC, Richland Center, WI County: Richland HUC12 Code: 070700051107 Watershed Name: Pine River Watershed Subwatershed Name: Brush Creek – Pine River
Seller / Credit Generator	
Seller (Credit Generator) Name: Valley View Dairy Inc.	Contact person name and telephone number: Matthew Schmitz (608) 604-4800
Seller Address: 25360 County Hwy RC Richland Center, WI 53581	County: Richland HUC12 Code: 070700051107 Watershed Name: Pine River Watershed Subwatershed: Brush Creek – Pine River Tax Parcel(s) identification numbers where Credit Generating Practices will be installed: Field 1 – Parcel 02228141000 (9.7 acres) Field 2 – Parcel 02227235000 (5.6 acres) Field 3 – Parcel 02227321000 (1.8 acres) Field 4 – Parcel 02227312000 (4.9 acres) Total of 22 Acres to be part of WQT Agreement
Method for Generating Credit	
Describe Credit Generating Practices: Valley View Dairy will convert agricultural cropland on which it currently grows corn to continuously vegetated land for use of cover crops (e.g., natural hay field which is to be harvested at least twice a year), conservation tillage, discontinue application of phosphorous fertilizers, and incorporate buffers to reduce phosphorus coming off farm.	Estimated Installation Date: Early September 2023, or as soon as fields are ready (i.e., after able to cut and turn corn into sileage)

WATER QUALITY TRADING AGREEMENT

This WATER QUALITY TRADING AGREEMENT ("Agreement") is made and entered into this ___ day of July, 2023, by and between Richland Center Renewable Energy, LLC ("RCRE" or "Buyer") and Valley View Dairy Inc. ("Valley View" or "Seller").

RECITALS

A. RCRE holds a Wisconsin Pollutant Discharge Elimination System (WPDES) Permit No. WI-0064718-02-1 that permits RCRE to discharge from its facility located ½ mile east of the junction of Hwy "OO" and Bohmann Drive (the "RCRE Facility") to the Pine River in Richland County, and to the groundwater of Wisconsin, in accordance with the effluent limitations, monitoring requirement and other conditions set forth in the permit (the "RCRE WPDES Permit").

B. Valley View owns various farm land in Richland County, including land adjacent to the RCRE Facility and along the Pine River. The specific parcels and acreage to be covered by this Agreement are depicted and further described in **Exhibit A**, attached hereto and fully incorporated by reference (the "Covered Seller Property").

C. Water quality trading ("WQT") is an alternative compliance option for WPDES permit holders, authorized by § 283.84, Wis. Stats.

D. The Wisconsin Department of Natural Resources ("WDNR") issued Water Quality Trading Guidance (the "WQT Guidance") dated August 2013. The WQT Guidance has been approved by the U.S. Environmental Protection Agency ("EPA") and provides further details for trading partners to assure statutory requirements are achieved under a proposed trade.

E. The RCRE WPDES Permit includes phosphorous limits and RCRE desires to purchase credits under the State's WQT compliance option to assist RCRE in achieving compliance with its permitted limits for phosphorous.

F. RCRE and Valley View have been engaged in discussions over the past several months regarding the potential installation and maintenance of credit generating practices at property owned by Valley View and in exchange for the consideration provided herein, along with Schreiber Food's commitment to purchase Valley View's milk supply, Valley View has agreed to convert agricultural cropland to a continuously vegetated natural hay field, per the terms defined below.

G. This Agreement certifies that certain activities are being used to meet the terms and requirements of WQT as set forth by § 283.84, Wis. Stats.

H. Funds exchanged as part of this Agreement shall be used for the installation and maintenance of Credit Generating Practices (as defined below) that will reduce the loading of pollutants into the Pine River and/or its tributaries.

I. RCRE wishes to use credits for the purpose of compliance with the RCRE WPDES Permit and thus RCRE will submit a WQT Plan and Checklist to the WDNR for review, approval, and incorporation into the RCRE WPDES Permit.

J. Conservation practices and best management practices are activities performed by the Seller to reduce pollutant loadings into nearby receiving water, hereinafter referred to as "Credit Generating Practices."

K. For purposes of this Agreement, "Annual Practices" are those Credit Generating Practices that are installed or otherwise occur on a year-to-year basis as part of a planned rotation and/or maintenance of qualifying crops.

L. Valley View is the owner of the Seller Covered Property where Credit Generating Practices are to be performed.

M. The approximate Credit Generating Practices installation dates and the date at which all the credits become effective may be found in the Credit Certification Report.

N. RCRE is purchasing all of the total phosphorous credits generated pursuant to this Agreement and shall have exclusive rights to the use of such credits.

NOW, THEREFORE, in consideration of the preceding recitals, and the consideration, obligations, covenants and agreements set forth herein, the legal sufficiency of which the parties hereby acknowledge, Buyer and Seller agree as follows:

1. Sale of Pollutant Loading Credits. Subject to the conditions set forth in this Agreement, the Seller agrees to sell to Buyer and Buyer agrees to purchase from Seller an annual quantity of 123 Total Phosphorous ("TP") Credits. The Credit Certification Report attached hereto as **Exhibit B** provides additional details.

2. Credit Generating Practices. Buyer agrees to provide funds (defined below) to Seller in return for the following Credit Generating Practices to be performed during the term of this Agreement, which includes the installation, operation and maintenance of the following best management practices designed to enhance water quality:

- Seller will convert the Seller Covered Property from agricultural cropland (corn) to a continuously vegetated natural hayfield, which Seller shall harvest at least twice a year. Seller shall retain all rights to the harvested hay.
- Seller shall seed and maintain the Seller Covered Property as a natural hayfield.
- Seller shall not till the Seller Covered Property.
- Seller will not apply any phosphorous fertilizer to the Seller Covered Property, nor take any other actions that will cease or prevent generation of TP Credits.

3. Purchase Price. Buyer agrees to pay Seller an annual payment in the amount of [redacted] over a term of five (5) years for a total of [redacted] (collectively, the "Purchase Price"), representing a total of 615 TP Credits during the term of this Agreement.

4. Payment Terms.

4.1 Buyer shall make an initial payment of [redacted] within ten (10) days of signing of this Agreement by both parties. The remaining balance shall be paid in periodic installments, subsequent to annual verification of the Credit Generating Practices, as follows:

> For first time installation of Credit Generating Practices, and maintenance of the Credit Generating Practices during 2024, a payment of [redacted] shall be provided to Seller not later than 30 days after Buyer's receipt of the annual Credit Verification Report form prepared by The Probst Group ("Probst") in its role as the verifier, for calendar year 2024, in accordance with Paragraph 5.6, below.
>
> Remaining payments of [redacted] shall occur in four (4) installments paid not later than 30 days after Buyer's receipt of each annual Credit Verification Report prepared by the Probst for calendar years 2025, 2026, 2027, and 2028, consistent with paragraph 5.7, below.

4.2 Should Buyer fail to make any payments consistent with paragraph 4.1, above, within fifteen (15) calendar days of the date such payment is due, then interest shall accrue at the rate of five percent (5%) per annum.

4.3 Failure of Buyer to pay Seller within thirty (30) days from the date payment is due, and after late notice of payment and failure to cure within thirty (30) days from the date of such notice, shall be considered a material breach of this Agreement, entitling Seller to terminate this Agreement and seek equitable relief along with any other appropriate relief.

5. Timing and Verification of Credit Generating Practices.

5.1 As specified in the Credit Certification Report, Credit Generating Practices shall be installed and maintained during calendar years 2023, 2024, 2025, 2026, 2027 and 2028.

5.2 As specified in the Credit Certification Report, and subject to the terms and conditions of this Agreement, credits shall be available for use between January 1,

2024 – December 31, 2028.

5.3 Verification of the Credit Generating Practices will be performed by a third party Verifier that is selected by the Buyer. Performance will be measured by evaluating criteria set forth in the attached Operations & Maintenance, plus Performance Valuation Plan. Buyer is responsible for ensuring that verification of Credit Generating Practices occurs; however, Seller shall notify the Verifier by telephone in the event of a Credit Generating Practice fails or is otherwise damaged. Where credits are used for permit compliance, Buyer is responsible for submitting necessary documentation to the WDNR.

5.4 The Verifier will perform on-site inspection(s) of Credit Generating Practices on credit generation sites and review appropriate records and documents. Verification may also include interviews with the land owner, manager or operator. Seller shall assist with verification as detailed herein.

5.5 Verification shall be conducted at least annually at an appropriate time of the year based on the type of Credit Generating practice(s) installed. The Parties agree to verification of the Credit Generating Practice(s) during the following months:

- November and May of each year for Annual Practices (cover crops and no till); and
- May of each year for conservation cover.

5.6 The Verifier completes and submits a Management Practice Registration form to the Buyer within fourteen (14) days of the first time installation of Credit Generating Practices.

5.7 Buyer is responsible for ensuring that the Verifier completes and submits a Credit Verification Report to the Buyer within fourteen (14) days of site visits specified in Section 5.5, above.

5.8 The terms and conditions governing the relationship between the Buyer and Verifier, and Verifier duties consistent with this Agreement, are set forth in a separate Verification Services Agreement between the Buyer and Probst . Notices to the Verifier shall be directed to:

The Probst Group
Attn: Bryan Gatzke
17035 West Wisconsin Avenue, Suite 120
Brookfield, WI 53005
bgatzke@probstgroup.com

In the event the Buyer changes its Verifier, then notice shall be provided to the Seller identifying the new Verifier and providing necessary contact information within fourteen (14) days of the change.

6. Credit Terms and Conditions.

6.1 If Seller wishes to modify the type, timing or location of Credit Generating Practices outlined in the Credit Certification Report and/or the Water Quality Trading Plan *prior* to Credit Generating Practice installation, then Seller must provide the Buyer with the information necessary to complete and submit an updated Credit Certification Report and/or Water Quality Trading Plan, as appropriate, to the WDNR. Seller shall further demonstrate to the satisfaction of the Buyer that the modification is necessary and appropriate. Buyer's approved modifications to the Credit Certification Report constitute a revision of this Agreement and shall be retained with all documents relevant to this Agreement.

6.2 If Seller wishes to modify the type, timing or location of Credit Generating Practices outlined in the Credit Certification Report *after* Credit Generating Practice installation, Seller must provide the Buyer with the information necessary to complete and submit an updated Credit Certification Report, and associated modified Water Quality Trading Plan, demonstrating to the WDNR that the modifications will result in the quantity of TP Credits agreed to in the Water Quality Trading Agreement. Seller shall further demonstrate to the satisfaction of the Buyer that the modification is necessary and appropriate. Buyer's approved modifications to the Credit Certification Report constitute a revision of this Agreement and shall be retained with all documents relevant to this Agreement.

6.3 Deliberate removal or substantial alteration of a Credit Generating Practice by Seller, Seller's agents, employees, or affiliates without advance written approval of Buyer and notification to the WDNR shall constitute a material breach of this Agreement by Seller, entitling Buyer to terminate this Agreement and seek appropriate relief.

6.4 Damage to a Credit Generating Practice due to an action or event beyond the Seller's (or Seller's agents, employees or affiliates) control is not in and of itself considered a violation of this Agreement. If such an action occurs, the Seller, Seller's agent or the Verifier shall report the damage(s) to the Buyer within three (3) days of discovering the damage. The Buyer is responsible for notifying WDNR when damage(s) may affect permit compliance. The Seller shall repair damaged Credit Generating Practice(s), to the maximum extent practicable, within thirty (30) days of Seller's knowledge of the damage.

6.5 Credits from Credit Generating Practices damaged due to an action or event beyond the Seller's (or Seller's agent, employees or affiliates) control will remain valid and effective for ninety (90) days from the date of discovery or until the credits are reinstated, suspended or cancelled, whichever comes sooner. Credits may be reinstated pursuant to a Credit Suspension, Reinstatement or Cancellation Report.

6.6 If damages to Credit Generating Practices due to an action or event beyond the Seller's (or Seller's agent, employees or affiliates) control cannot reasonably be repaired within thirty (30) days, Seller shall notify Buyer and Seller agrees to assist the Verifier, as necessary, to prepare and submit a Credit Suspension or Cancellation Notice. Such notice shall be provided to the Buyer.

6.7 Damaged Credit Generating Practices that cannot be replaced through the Credit Reserve Pool for that calendar year, or are otherwise not repaired or replaced within thirty (30) days of Seller's knowledge shall constitute a material breach of this Agreement by Seller, entitling Buyer to appropriate relief.

6.8 Buyer shall not be responsible or liable for any personal injury or property damage caused by Verifier, Seller, or Seller's Credit Generating Practices.

6.9 Buyer shall be responsible for communicating all necessary information to the WDNR. Seller shall provide credentialed WDNR staff with access to property and records related to Credit Generating Practices during reasonable hours.

7. Contract Timing and Termination.

7.1 This Agreement becomes effective upon signature by both parties or their designated representatives.

7.2 This Agreement shall expire and terminate on December 31, 2028.

7.3 This Agreement may be modified or amended by mutual agreement through a written document signed by Seller and Buyer, at any time prior to the termination date of this Agreement.

7.4 In the event that Seller fails to meet the Credit Terms and Conditions set forth in Section 6, above, then Buyer is entitled to terminate this Agreement.

7.5 This Agreement and the terms contained herein shall be binding and enforceable against the parties, their successors and assigns for as long as the Agreement remains in effect.

7.6 If prior to the end of the term of this Agreement, Buyer or Seller become the subject of a petition in bankruptcy or any proceeding related to insolvency, receivership, liquidation or comparable proceeding or any assignment for the benefit of creditors, which is not dismissed within sixty (60) days, then the other party to this Agreement shall have the right to terminate this Agreement. In the event of termination, the non-bankrupt party shall be entitled to seek equitable relief along with other appropriate relief (e.g., status as a creditor in the bankruptcy proceeding for the monetary value of any unperformed Credit Generating Practices).

8. Seller Warranties.

8.1 Seller has the authority to enter into this Agreement and to carry out the transactions contemplated herein.

8.2 No known actions, proceedings or investigations are pending or threatened against Seller that would interfere with Seller's ability to enter into this Agreement or carry out the agreed upon transaction.

8.3 No damage nor condemnation with respect to the Seller's property or any part thereof has occurred that would interfere with Seller' ability to enter into this Agreement or carryout the obligations herein and no such condemnation is pending or threatened.

8.4 No uncured violations of any law, ordinance, order or regulation of any governmental authority having jurisdiction over Seller's property exist that would impede the installation of Credit Generating Practices or completion of other obligations set forth in this Agreement.

8.5 Seller has not entered into any other contract or agreement that would impede the installation of Credit Generating Practices at Seller's property.

8.6 Seller agrees to install and maintain Credit Generating Practices in exchange for payment as outlined in this Agreement and as detailed in the supporting Credit Certification Report.

8.7 In the event of a sale or other transfer of property upon which Credit Generating Practices are installed, Seller shall assure that the sale includes provisions for continued compliance with this Agreement by the successor. Notice shall be provided to the Buyer not less than thirty (30) days in advance of any sale, with a copy provided to the proposed new owner. The Buyer may terminate this Agreement in whole or in part in the event of a sale or other change in Seller identity.

8.8 Seller agrees to assist the Verifier, as necessary, in preparing a Management Practice Registration Form upon initial installation of Credit Generating Practices under this Agreement, as well as periodic Credit Verification Reports, as outlined in Section 5 of this Agreement.

9. Waiver. Failure of either party to enforce any term or condition of this Agreement shall not constitute a waiver of that term or condition or of any other term or condition of this Agreement.

10. Governing Law / Venue. This Agreement shall be governed under and pursuant to the laws of the State of Wisconsin. The parties further subject themselves to the exclusive jurisdiction of Richland County, Wisconsin.

11. Contingent on Approval of WDNR. For the purposes of attaining compliance with applicable WPDES effluent limitations, the validity of the credits intended for compliance is contingent upon WDNR approval of a WQT Plan.

12. Severability. If any of the provisions contained in this Agreement are held illegal, invalid or unenforceable, such provision(s) shall be deemed severable, and the remaining provisions of this Agreement shall continue in full force and effect.

13. Entire Agreement. This Agreement constitutes the entire agreement between the parties and supersedes all prior written or oral communications.

14. Counterparts. This Agreement may be executed in two or more counterparts, each of which is deemed original, but all constitute one and the same instrument. The parties agree that a facsimile copy of a signature, including a PDF of such signature, will be deemed original and binding.

[SIGNATURE PAGE FOLLOWS]

In lieu of the entire Agreement, a copy of the following section of this Agreement may be supplied independently to the WDNR to certify that a WQT Agreement exists and has been agreed to by the signatories.

Signatures, Notarization and Certification	
Buyer: Richland Center Renewable Energy, LLC	Seller: Valley View Dairy Inc.
Buyer Agent Name (if applicable): The Probst Group	Seller Agent Name (if applicable): Matt Schmitz
HUC12 Code: 070700051107 Watershed Name: Pine River Subwatershed Name: Brush Creek WPDES Permit No. WI-0064718-02-1	
Buyer/Buyer Agent Signature: Paul W. Christiansen	Seller/Seller Agent Signature: Matthew Schmitz
Date: 8/4/2023	Date: 07/31/2023

EXHIBIT A

DESCRIPTION OF SELLER COVERED PROPERTY

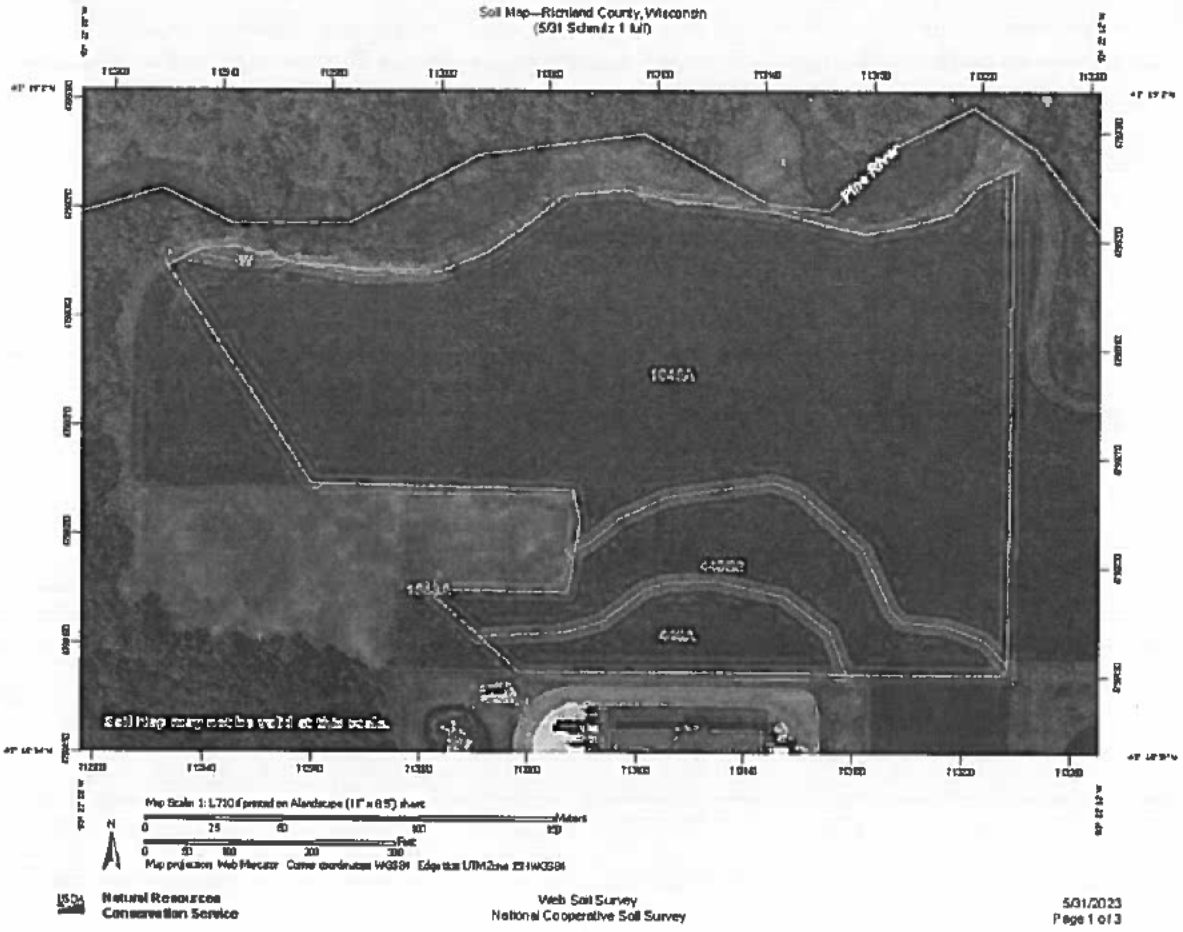
Valley View Dairy agrees to install and maintain Credit Generating Practices, as defined in the Agreement, on the following field parcels and acreages, and as further depicted on the maps attached hereto:

Field 1 – Parcel 02228141000 – 9.7 acres of the 12.13 acres in total
Field 2 – Parcel 02227235000 – 5.6 acres of the 8.16 acres in total
Field 3 – Parcel 02227321000 – 1.8 acres of the 36.8 acres in total
Field 4 – Parcel 02227312000 – 4.9 acres of the 21.07 acres in total

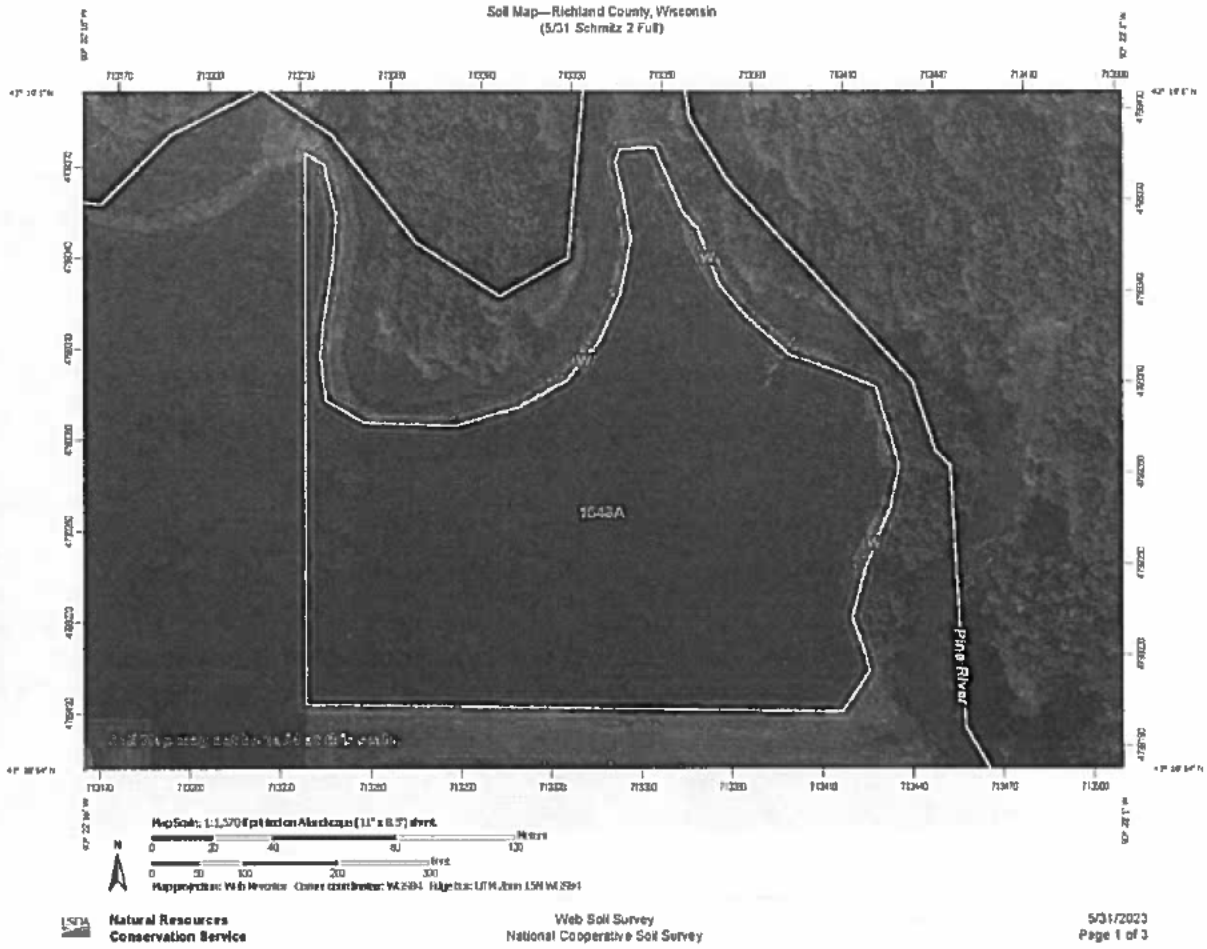
Total Acres Covered by the Agreement: 22 acres

(Attach maps)

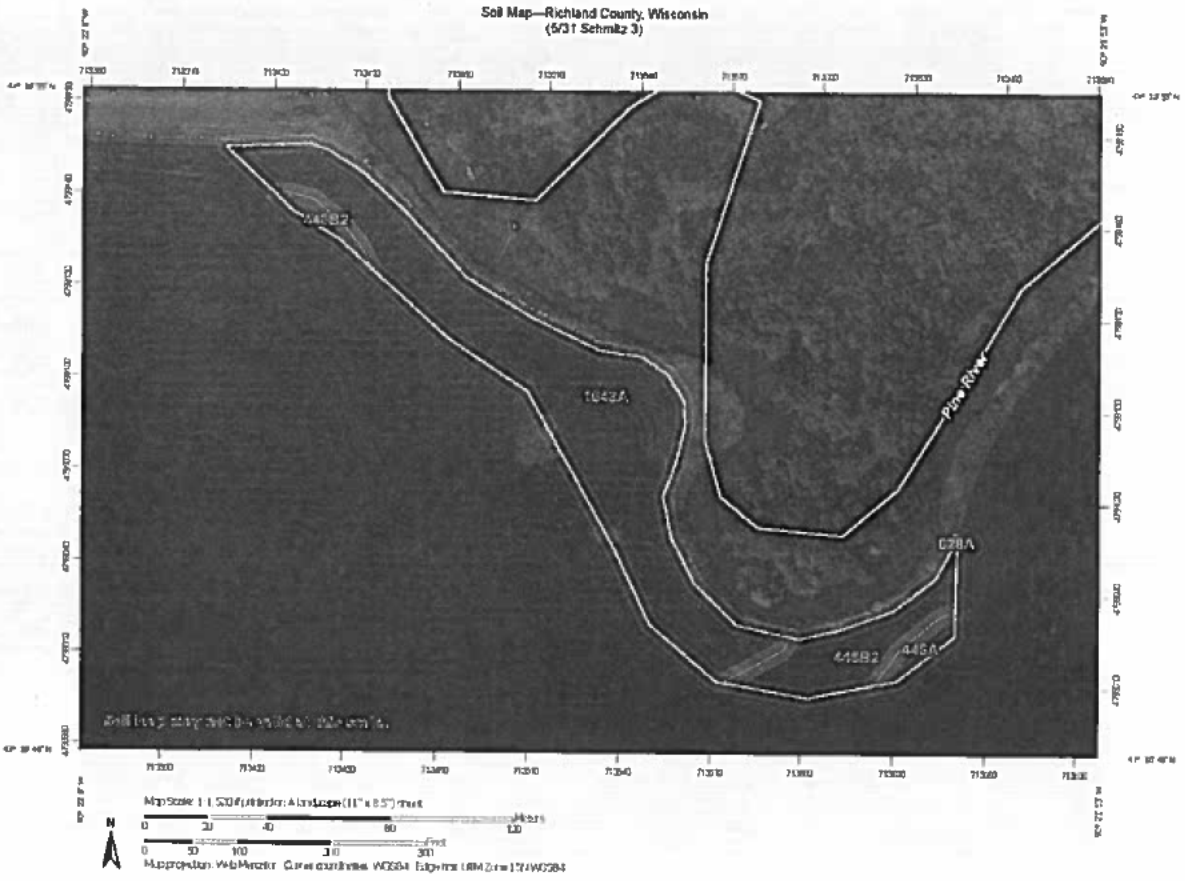
VALLEY VIEW DAIRY FIELD 1



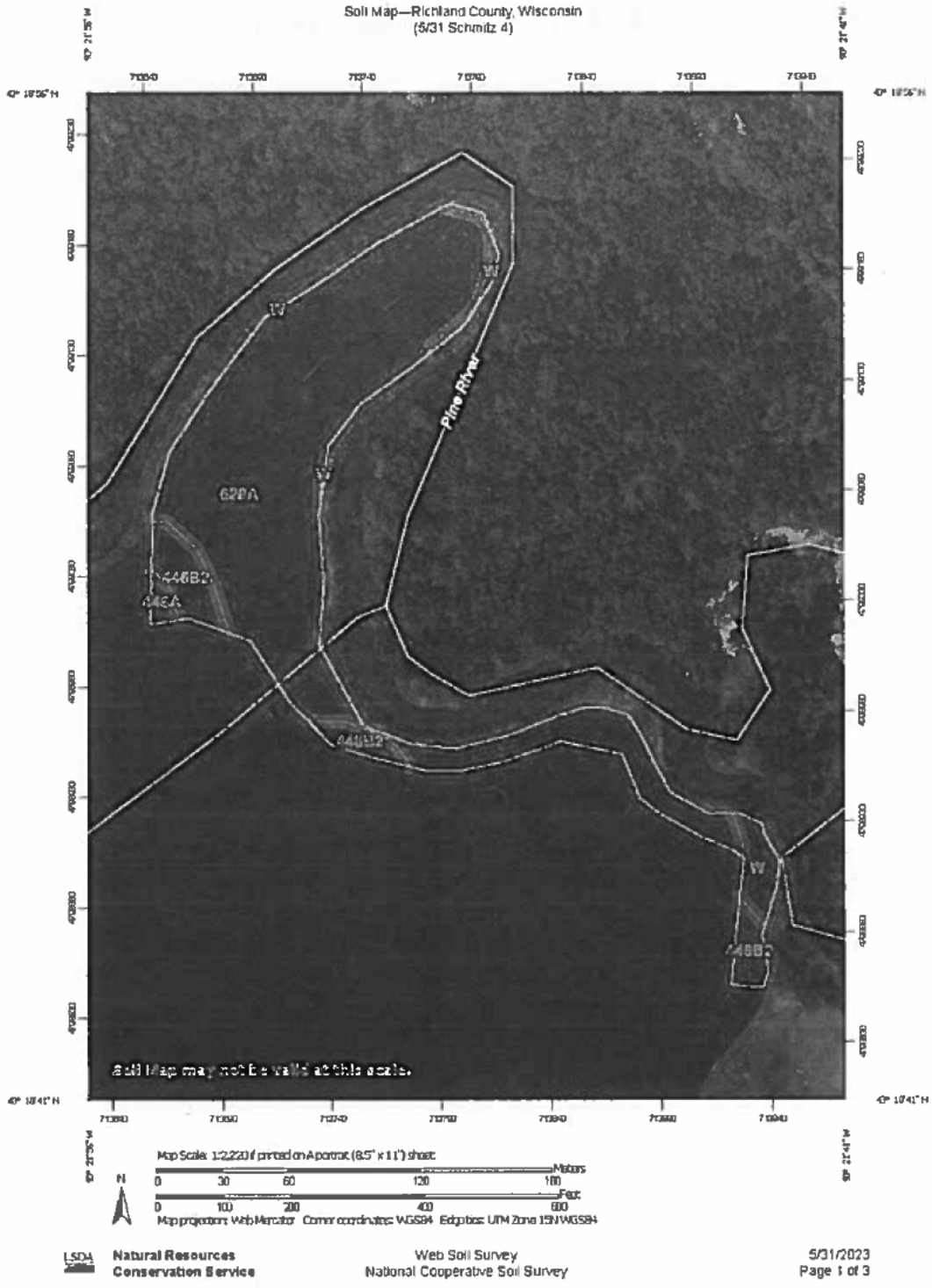
VALLEY VIEW DAIRY FIELD 2



VALLEY VIEW DAIRY FIELD 3

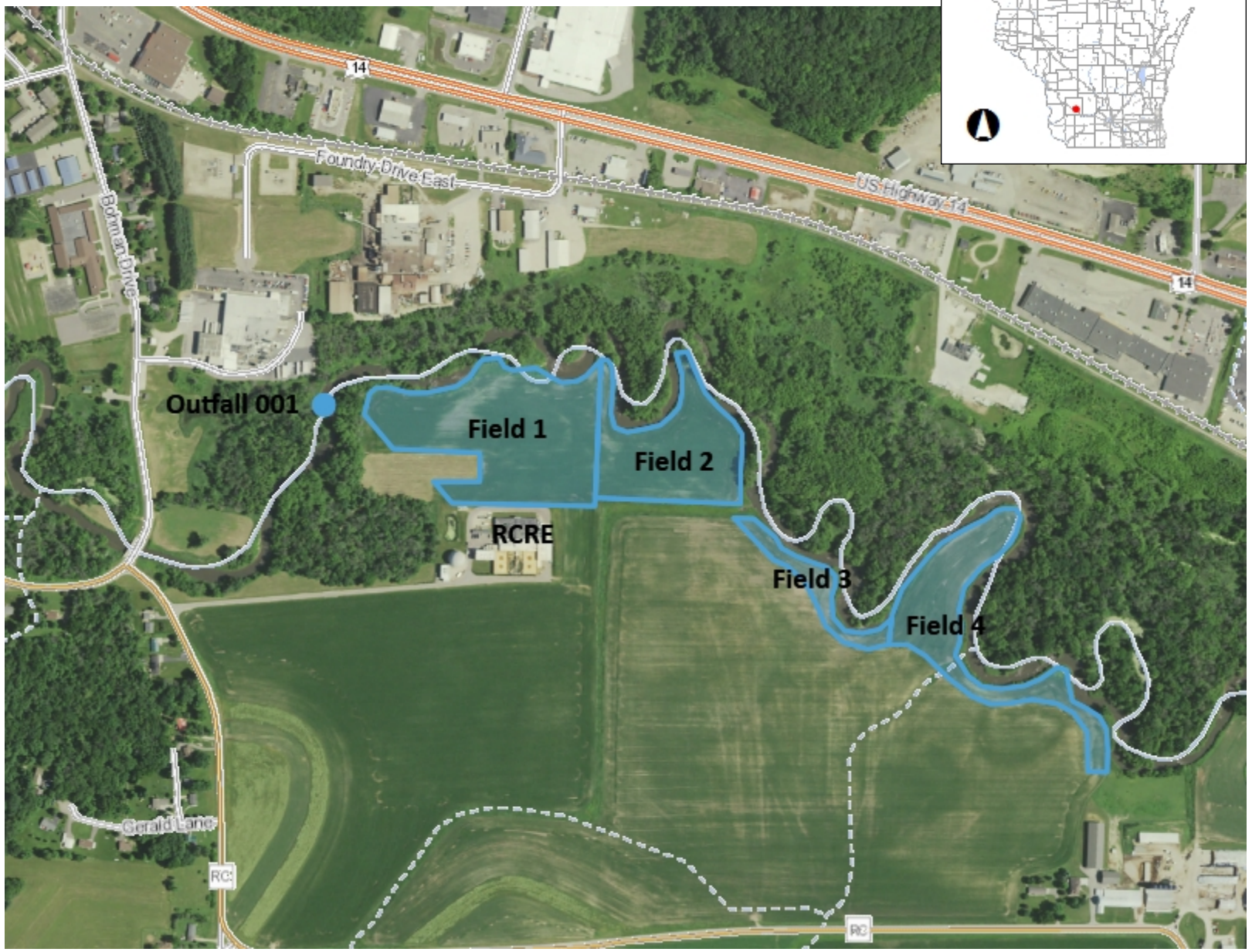


VALLEY VIEW DAIRY FIELD 4



APPENDIX C
Watershed, Subwatershed, and Field Maps

RCRE WQT Fields and Outfall



Legend

- Municipality
- State Boundaries
- County Boundaries
- Major Roads
  - Interstate Highway
  - State Highway
  - US Highway
- County and Local Roads
  - County HWY
  - Local Road
- Railroads
- Tribal Lands
- Rivers and Streams
- Intermittent Streams
- Lakes and Open water

Notes

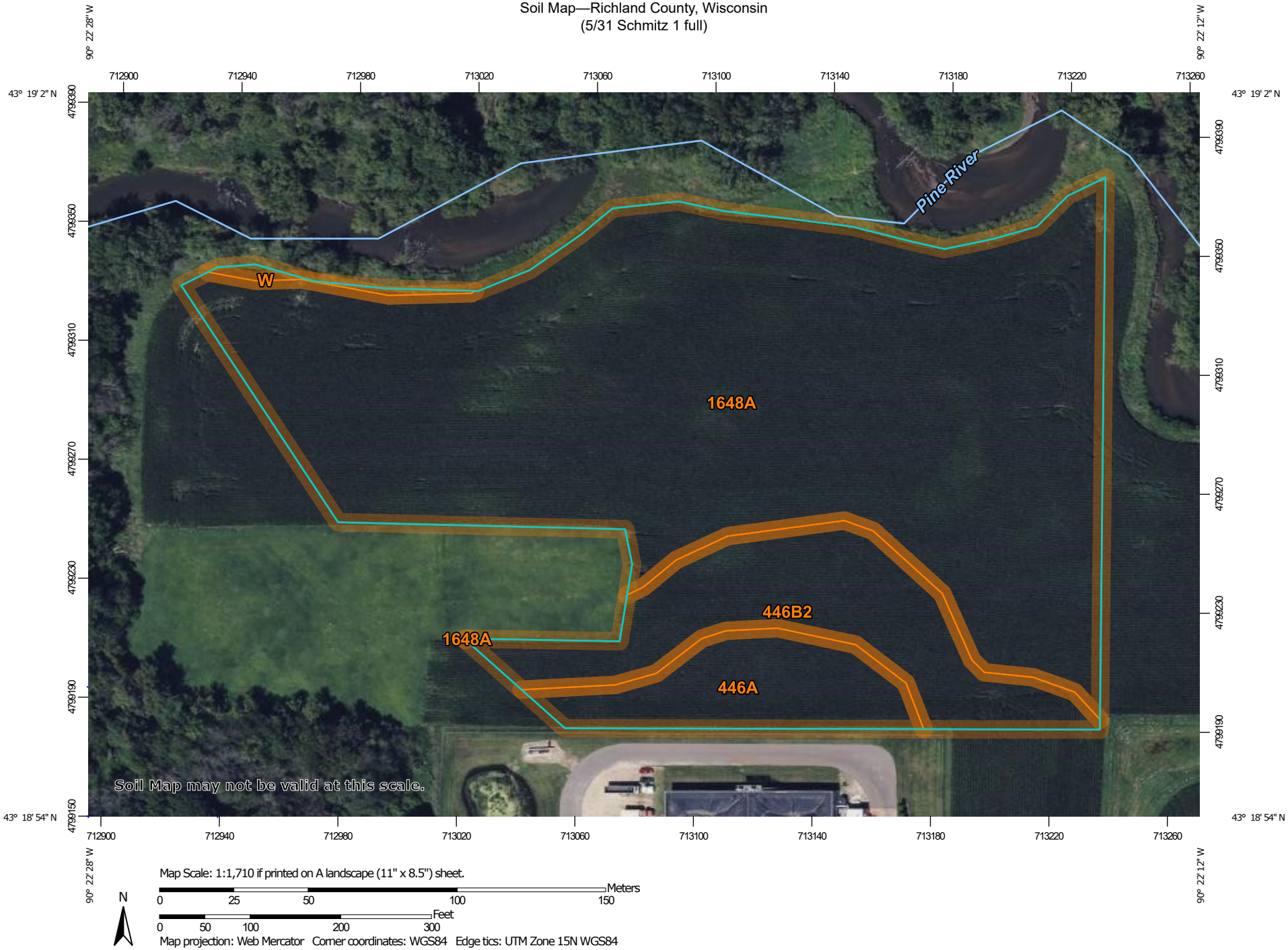
0.3 0 0.13 0.3 Miles

NAD_1983_HARN_Wisconsin_TM

1: 7,920

DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: http://dnr.wi.gov/legal/

Soil Map—Richland County, Wisconsin
(5/31 Schmitz 1 full)



Map Scale: 1:1,710 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 25 50 100 150

Feet
0 50 100 200 300

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

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

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

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

Soil Survey Area: Richland County, Wisconsin
Survey Area Data: Version 18, Sep 6, 2022

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

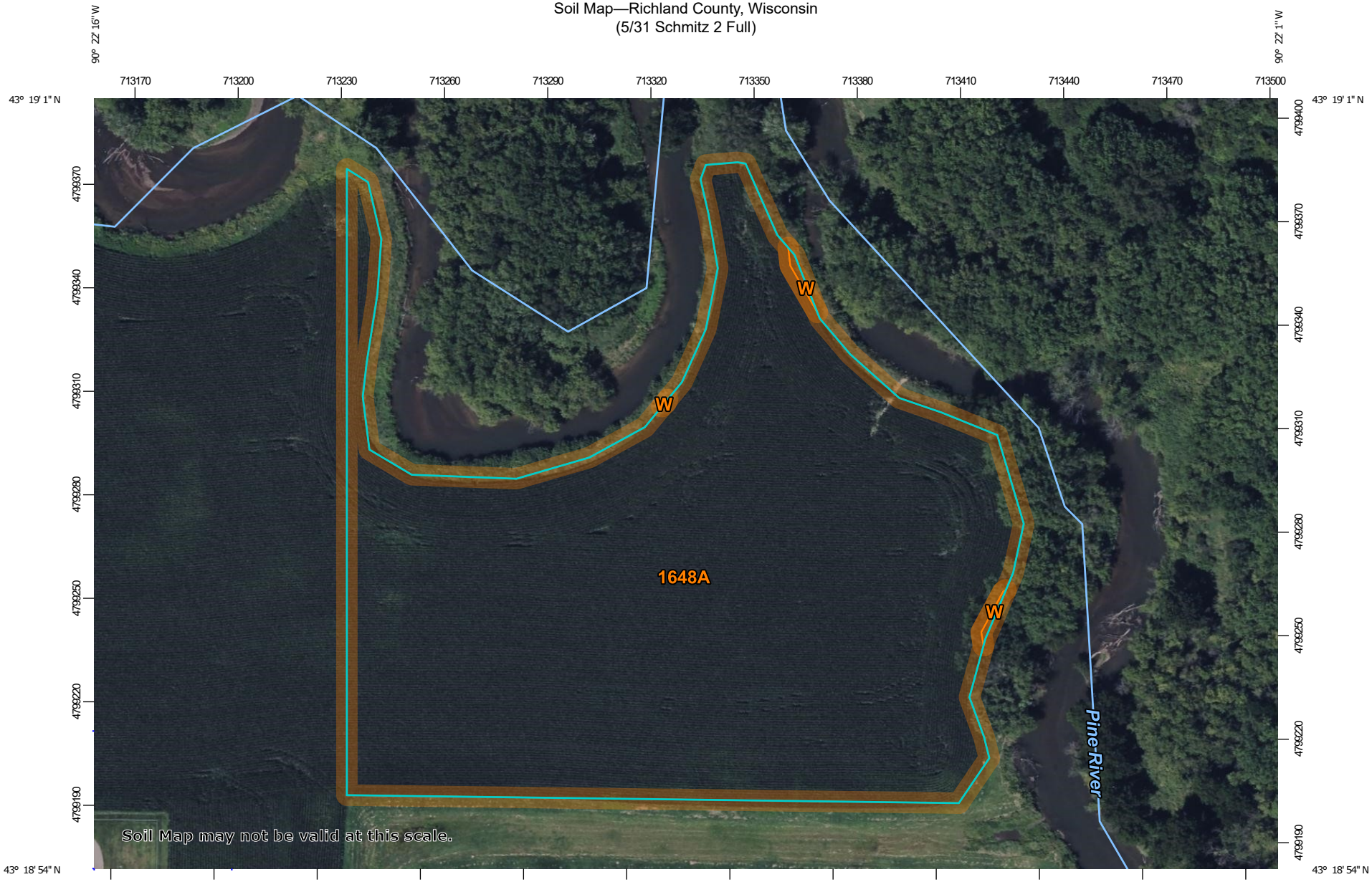
Date(s) aerial images were photographed: Aug 2, 2022—Sep 28, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
446A	Merimod silt loam, 0 to 3 percent slopes	0.7	7.7%
446B2	Merimod silt loam, 2 to 6 percent slopes, moderately eroded	1.4	14.4%
1648A	Northbend-Ettrick silt loams, 0 to 3 percent slopes, frequently flooded	7.6	77.5%
W	Water	0.0	0.5%
Totals for Area of Interest		**9.7**	**100.0%**

Soil Map—Richland County, Wisconsin
(5/31 Schmitz 2 Full)



Map Scale: 1:1,570 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

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

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

Water Features
- Streams and Canals

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Background
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Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

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Survey Area Data: Version 18, Sep 6, 2022

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

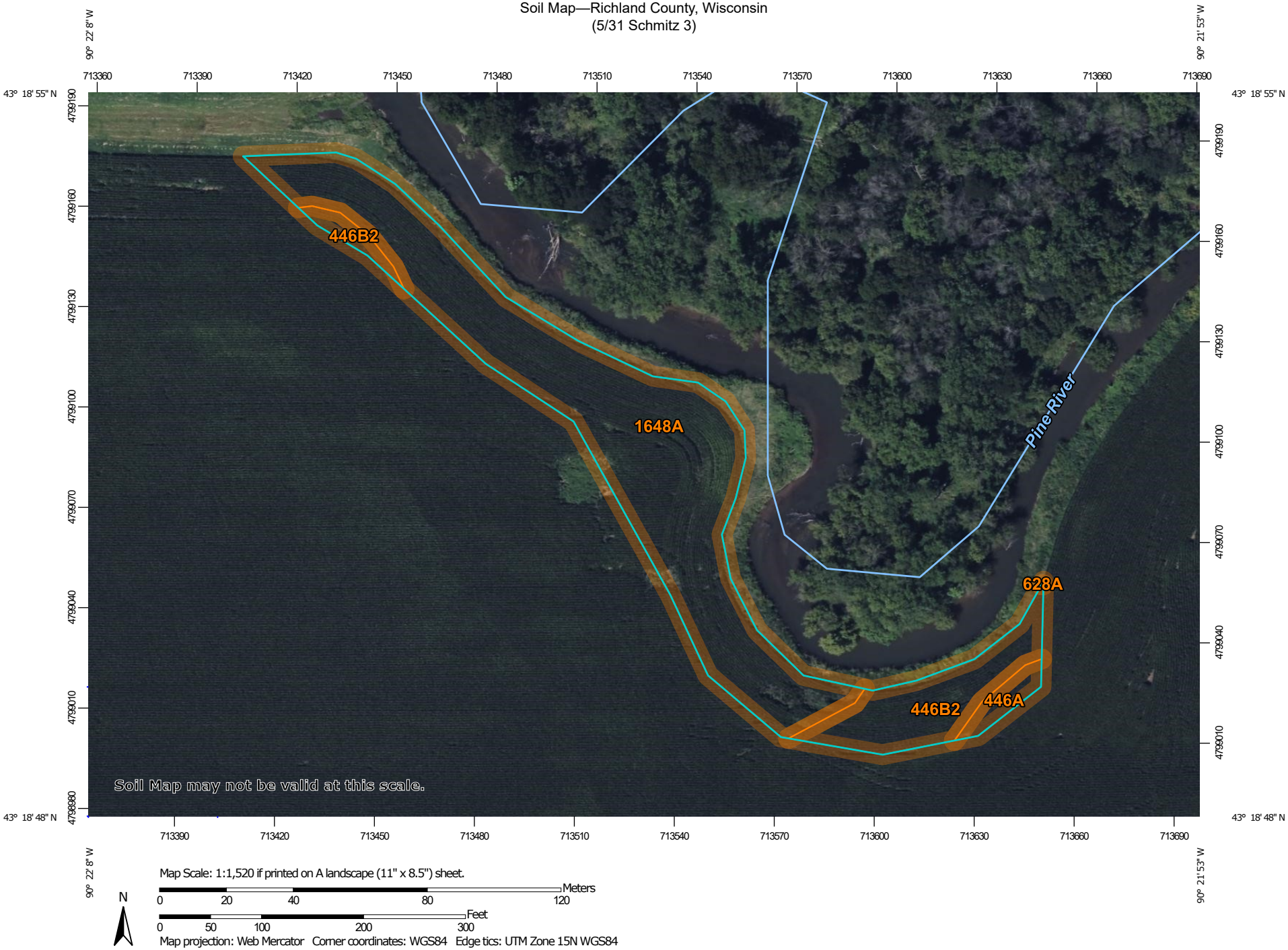
Date(s) aerial images were photographed: Aug 2, 2022—Sep 28, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1648A	Northbend-Ettrick silt loams, 0 to 3 percent slopes, frequently flooded	5.6	99.8%
W	Water	0.0	0.2%
Totals for Area of Interest		**5.6**	**100.0%**

Soil Map—Richland County, Wisconsin
(5/31 Schmitz 3)



Map Scale: 1:1,520 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

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

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
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- Gravel Pit
- Gravelly Spot
- Landfill
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- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
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Please rely on the bar scale on each map sheet for map measurements.

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

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

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

Soil Survey Area: Richland County, Wisconsin
Survey Area Data: Version 18, Sep 6, 2022

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

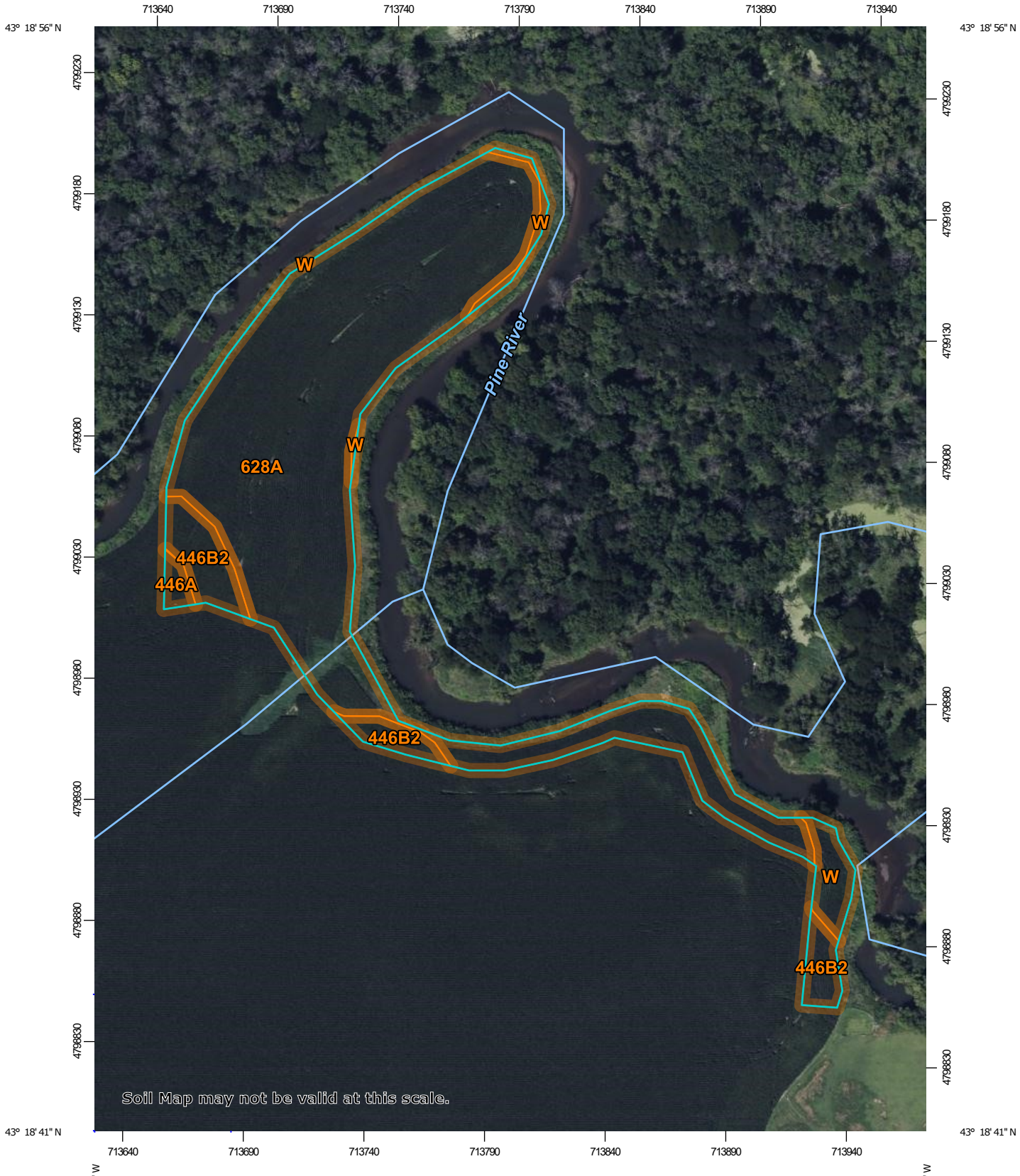
Date(s) aerial images were photographed: Aug 2, 2022—Sep 28, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
446A	Merimod silt loam, 0 to 3 percent slopes	0.1	3.0%
446B2	Merimod silt loam, 2 to 6 percent slopes, moderately eroded	0.3	18.6%
628A	Orion silt loam, 0 to 3 percent slopes, occasionally flooded	0.0	0.0%
1648A	Northbend-Ettrick silt loams, 0 to 3 percent slopes, frequently flooded	1.4	78.4%
Totals for Area of Interest		**1.8**	**100.0%**

Soil Map—Richland County, Wisconsin
(5/31 Schmitz 4)



Map Scale: 1:2,220 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

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

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

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

Soil Survey Area: Richland County, Wisconsin
Survey Area Data: Version 18, Sep 6, 2022

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

Date(s) aerial images were photographed: Aug 2, 2022—Sep 28, 2022

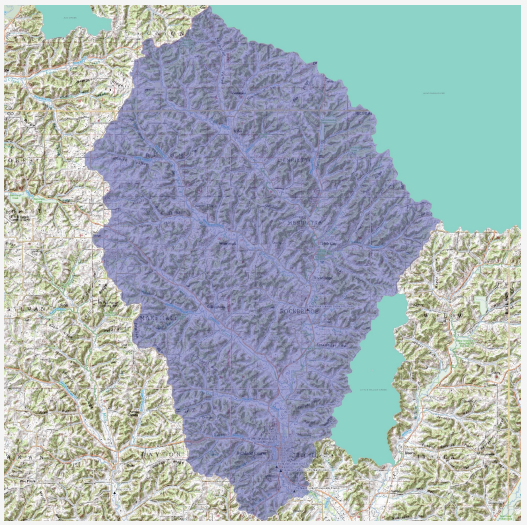
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

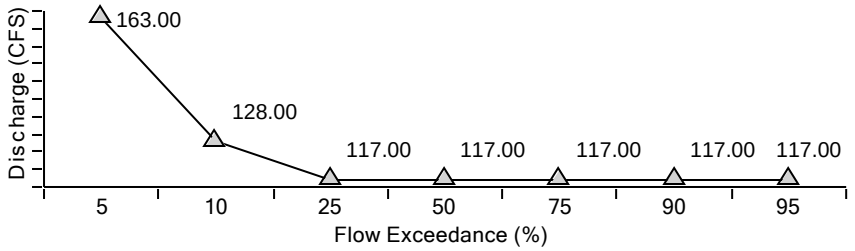
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
446A	Merimod silt loam, 0 to 3 percent slopes	0.1	1.1%
446B2	Merimod silt loam, 2 to 6 percent slopes, moderately eroded	0.4	9.4%
628A	Orion silt loam, 0 to 3 percent slopes, occasionally flooded	4.0	85.2%
W	Water	0.2	4.3%
Totals for Area of Interest		**4.7**	**100.0%**

PRESTO-Lite Watershed Delineation Report

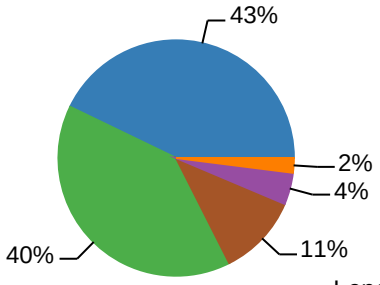
Reach ID: 200035273
Watershed Name: Brush Creek-Pine River
Waterbody Name: Pine River
HUC08: Lower Wisconsin
Watershed Area: 195.02 mi²
Average Annual Precipitation: 34.13in



Stream Flow

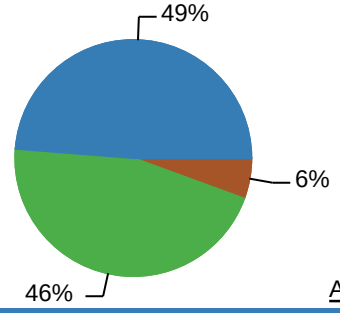


Tributary Stream Type



Type	Length
Cool-Cold Headwater	296861 ft
Coldwater	274446 ft
Cool-Cold Mainstem	77571 ft
Cold Mainstem	30274 ft
Macroinvertebrates	13781 ft
Cold Headwater	0 ft
Large River	0 ft
Warm Headwater	0 ft
Warm Mainstem	0 ft

Landcover



Type	Area
Agriculture	92.79 mi²
Forest	87 mi²
Urban	10.61 mi²
Barren	2.63 mi²
Grassland	1.25 mi²
Wetland	0.76 mi²

PRESTO Phosphorus Load Estimate

Avg. Annual Nonpoint Phosphorous Load (80% Confidence Interval)	119,524 (55,616 - 256,868) lbs
Number of Facilities (Individual Facility Information below)	3
Avg. Annual Point-source Phosphorous Load (2010 - 2012 total of all facilities)	11,426lbs
Most Likely Point : Nonpoint Phosphorous Ratio	9% : 91%
Low Estimate Point : Nonpoint Phosphorous Ratio (Adaptive Management)	4% : 96%

Adaptive Management Results

Facilities Discharging to the Brush Creek-Pine River Watershed:

Facility Name	Permit #	Outfall #	Waste Type	Receiving Water	Avg. Phosphorus Load (lbs.) (2010 - 2012)
RICHLAND CENTER WASTEWATER TREATMENT FAC	0020109	001	Municipal	Pine River	11210
HUB ROCK SANITARY DISTRICT #1 WWTF	0049689	001	Municipal	Pine River	216
FOREMOST FARMS USA - RICHLAND CENTER	0004413	001	Industrial	Pine River	0

Watershed Analysis Limitations

- This analysis relies on pre-defined catchments from the Wisconsin Hydrography Data-Plus and may not delineate from the exact location required. When assessing phosphorus loads for specific facility in support of efforts such as adaptive management, care should be taken to ensure that additional downstream point sources do not exist. For adaptive management information related to specific facilities please reference the PRESTO website http://dnr.wi.gov/topic/surfacewater/presto.html
- Delineation of watersheds is based on a topographic assessment and therefore do not account for modified drainage networks such as stormwater sewer systems and ditched agriculture.
- If a watershed requires delineation from an exact location the user may use the desktop version of PRESTO that requires ESRI ArcGIS. The PRESTO tool and default datasets can be downloaded at http://dnr.wi.gov/topic/surfacewater/presto.html
- Data sources for this report originate from the WDNR's Wisconsin Hydrography Data-Plus value-added dataset and the point and non-point source loading information including in the WDNR's PRESTO model.
- If you have questions about the report generated from the PRESTO-Lite application please contact: DNRWATERQUALITYMODELING@wisconsin.gov

APPENDIX D
Management Data from Agricultural Fields

2019 Valley View



Land Cover Categories

(by decreasing acreage)

AGRICULTURE

- Corn
- Grass/Pasture
- Alfalfa
- Fallow/Idle Cropland
- Soybeans
- Potatoes
- Other Hay/Non Alfalfa
- Dry Beans
- Sweet Corn
- Peas
- Sorghum
- Oats

NON-AGRICULTURE*

- Woody Wetlands
- Deciduous Forest
- Developed/Low Intensity
- Developed/Open Space
- Developed/Medium Intensity
- Developed/High Intensity

* Only top 6 non-agriculturecategories are listed.

2020 Valley View



Land Cover Categories

(by decreasing acreage)

AGRICULTURE

- Corn
- Grass/Pasture
- Alfalfa
- Soybeans
- Oats
- Potatoes
- Winter Wheat
- Fallow/Idle Cropland
- Dry Beans
- Other Hay/Non Alfalfa
- Sweet Corn

NON-AGRICULTURE*

- Woody Wetlands
- Deciduous Forest
- Developed/Low Intensity
- Developed/Open Space
- Developed/Medium Intensity
- Developed/High Intensity

* Only top 6 non-agriculturecategories are listed.

2021 Valley View



Land Cover Categories

(by decreasing acreage)

AGRICULTURE

- Corn
- Grass/Pasture
- Alfalfa
- Soybeans
- Dry Beans
- Dbl Crop WinWht/Corn
- Oats

NON-AGRICULTURE*

- Woody Wetlands
- Deciduous Forest
- Developed/Low Intensity
- Developed/Medium Intensity
- Developed/High Intensity
- Developed/Open Space

* Only top 6 non-agriculturecategories are listed.

2022 Valley View



Land Cover Categories

(by decreasing acreage)

AGRICULTURE

- Corn
- Grass/Pasture
- Alfalfa
- Winter Wheat
- Soybeans
- Dry Beans

NON-AGRICULTURE*

- Woody Wetlands
- Deciduous Forest
- Developed/Low Intensity
- Developed/Medium Intensity
- Developed/High Intensity
- Developed/Open Space

* Only top 6 non-agriculturecategories are listed.

FM6: Soil Test Report

Reported For	RCRE WQT Finalized Field Historic
Printed	2023-08-29
Plan Completion/Update Date	2023-06-22
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\BGatzke\OneDrive - Probst Group\Desktop\SnapPlus Files\RCRE WQT Finalized Field Historic.snapDb	

Prepared for:
RCRE WQT Finalized Field Historic
attn:RCRE WQT Finalized Field Historic

			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
WQT1		10.1	1648A	ETTRICK	2021-10-22	Rock River Laboratory	253262	**2**	**4**	6.7	2.4	167	154	0	10
WQT1		10.1	1648A	ETTRICK	2017-12-15	ROCK RIVER LAB	208031	**2**	**3**	6.6	2.2	104	211	0	12
WQT2		5.9	628A	ORION	2021-10-22	Rock River Laboratory	253262	**1**	**4**	6.7	2.4	167	154	0	10
WQT2		5.9	628A	ORION	2017-12-15	ROCK RIVER LAB	208031	**1**	**3**	6.6	2.2	104	211	0	12
WQT3		1.4	1648A	ETTRICK	2021-10-22	Rock River Laboratory	253262	**1**	**16**	6.5	2.8	131	177	3.9	10
WQT3		1.4	1648A	ETTRICK	2017-12-15	ROCK RIVER LAB	208031	**1**	**6**	6.6	2.5	122	272	0	12
WQT4		5	628A	ORION	2021-10-22	Rock River Laboratory	253262	**1**	**16**	6.5	2.8	131	177	3.9	10
WQT4		5	628A	ORION	2017-12-15	ROCK RIVER LAB	208031	**1**	**6**	6.6	2.5	122	272	0	12

Crop Year Soil Test Needed

Field Name	Soil Test Date	2021	2022	2023	2024	2025	2026	2027
WQT1	2021-10-22						X	
WQT2	2021-10-22						X	
WQT3	2021-10-22						X	
WQT4	2021-10-22						X	

APPENDIX E
SnapPlus Modeling – Historic Practices

NM1: Narrative and Crops Report

Starting Year	**2024**
Reported For	**RCRE WQT Finalized Field Historic**
Printed	**2023-08-29**
Plan Completion/Update Date:	**2023-06-22**
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\BGatzke\OneDrive - Probst Group\Desktop\SnapPlus Files\RCRE WQT Finalized Field Historic.snapDb	

Prepared for:
RCRE WQT Finalized Field Historic
attn:RCRE WQT Finalized Field Historic

Farm has 4 fields totalling 22.4 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

Spreader Calibration Methods: No spreader calibration rate documentation has been selected.

Narrative and Crops:

Field Name	Field Acres	2024	2025	2026	2027	2028
WQT1	10.1	Corn grain, baled stalks Spring Cultivation 191-210/3.1-4 bu/acre/ton/acre	Corn silage Spring vertical tillage 30.1-35 ton/acre	Corn silage Spring Cultivation 30.1-35 ton/acre	Corn silage Spring Cultivation 30.1-35 ton/acre	Corn silage Spring Cultivation 30.1-35 ton/acre
WQT2	5.9	Corn grain, baled stalks Spring Cultivation 191-210/3.1-4 bu/acre/ton/acre	Corn silage Spring Cultivation 30.1-35 ton/acre	Corn silage Spring Cultivation 30.1-35 ton/acre	Corn silage Spring Cultivation 30.1-35 ton/acre	Corn silage Spring Cultivation 30.1-35 ton/acre
WQT3	1.4	Corn silage Spring vertical tillage 30.1-35 ton/acre	Corn silage Spring vertical tillage 30.1-35 ton/acre	Corn silage Spring vertical tillage 30.1-35 ton/acre	Corn silage to small grain cover crop Spring Cultivation, cover crop no till 30.1-35 ton/acre	Corn grain, baled stalks No Till 191-210/3.1-4 bu/acre/ton/acre

Field Name	Field Acres	2024	2025	2026	2027	2028
WQT4	5	Corn silage Spring vertical tillage 30.1-35 ton/acre	Corn silage Spring vertical tillage 30.1-35 ton/acre	Corn silage Spring vertical tillage 30.1-35 ton/acre	Corn silage to small grain cover crop Spring Cultivation, cover crop no till 30.1-35 ton/acre	Corn grain, baled stalks No Till 191-210/3.1-4 bu/acre/ton/acre

Summary by Crop:

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

Crops Grouped By Category		2024	2025	2026	2027	2028
Corn grain, baled stalks	Acres bu/ton	16 3,208/57				6 1,203/21
Corn silage	Acres ton	6 195	22 716	22 716	16 521	16 521
Corn silage to small grain cover crop	Acres ton				6 195	

NM3: Field Data and 590 Assessment Plan

Reported For	RCRE WQT Finalized Field Historic
Printed	2023-08-29
Plan Completion/Update Date	2023-06-22
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\BGatzke\OneDrive - Probst Group\Desktop\SnapPlus Files\RCRE WQT Finalized Field Historic.snapDb	

Prepared for:
RCRE WQT Finalized Field Historic
attn:RCRE WQT Finalized Field Historic

Field Data: 22 Total Acres Reported.

Field Name	Sub Farm	FSA Trct	FSA Fld	Acres	County	Critical Soil Series & Symbol	F. Slp %	F.Slp Len ft	Below Field Slope To Water %	Dist.To Water ft	Contour/ Filters	Irrig	Tiled	Rotation	Tillage	Report Period	Field "T" t/ac	Rot Avg Soil Loss t/ac	SCI	Rot Avg PI	Soil Test P ppm	Rot P2O5 Bal lb/ac	P2O5 Bal Target lb/ac
WQT1				10.1	Richland	NORTHBEND 1648A	1	250	0 - 2	0 - 300	No / No	No	No	Csl	SFC	2023-2023	**3**	**1.6**	**0.2**	**NA**	167	-44	-29
WQT2				5.9	Richland	MERIMOD 446B2	4	250	0 - 2	0 - 300	No / No	No	No	Csl	SFC	2023-2023	**5**	**7.2**	**-0.2**	**NA**	104	-43	-29
WQT3				1.4	Richland	MERIMOD 446B2	4	250	More than 12	0 - 300	No / No	No	No	Cgbs-Csl-Csl-Csl-Csl+cv	NT-SVT-SVT-SVT-SFC/NTcvr	2023-2027	**5**	**4**	**0.3**	**NA**	131	-142	-138
WQT4				5	Richland	MERIMOD 446B2	4	250	2.1 - 6	301 - 1000	No / No	No	No	Cgbs-Csl-Csl-Csl-Csl+cv	NT-SVT-SVT-SVT-SFC/NTcvr	2023-2027	**5**	**4**	**0.3**	**NA**	131	-142	-138

Crop Abbreviations

Abbreviation	Crop
Cgbs	Corn grain, baled stalks
Csl	Corn silage
Csl+cv	Corn silage to small grain cover crop

Tillage Abbreviations

Abbreviation	Tillage
NT	No Till
SFC	Spring Cultivation
SFC/NTcvr	Spring Cultivation, cover crop no till

FM2: Application Summary Report

Starting Year	**2024**
Reported For	**RCRE WQT Finalized Field Historic**
Printed	**2023-08-29**
Plan Completion/Update Date:	**2023-06-22**
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\BGatzke\OneDrive - Probst Group\Desktop\SnapPlus Files\RCRE WQT Finalized Field Historic.snapDb	

Prepared for:
RCRE WQT Finalized Field Historic
attn:RCRE WQT Finalized Field Historic

Annual Manure Production And Use By Source

Total Value = $ Value of all nutrients, incorporated including S.

Source		2024	2025	2026	2027	2028
Dairy 1 Slurry	Production (Tons)	0	0	0	0	0
	Used (Tons)	0	200	0	0	0
	Analysis Date	-	-	-	-	-
	Analysis (N/Ninc/Ninj-P2O5-K2O)	3/3/3-2-7	3/3/3-2-7	3/3/3-2-7	3/3/3-2-7	3/3/3-2-7
	Dry Matter (%)	21	21	21	21	21
	Total Value	0.00	0.00	0.00	0.00	0.00
Dairy Lagoon Dairy Slurry	Production (Gallons)	0	0	0	0	0
	Used (Gallons)	286,800	147,600	243,000	100,000	70,800
	Analysis Date	-	-	-	-	-
	Analysis (N/Ninc/Ninj-P2O5-K2O)	7/10/12-6-17	7/10/12-6-17	7/10/12-6-17	7/10/12-6-17	7/10/12-6-17
	Dry Matter (%)	6	6	6	6	6
	Total Value	0.00	0.00	0.00	0.00	0.00
Dairy Liquid	Production (Gallons)	0	0	0	0	0
	Used (Gallons)	0	0	0	0	0
	Analysis Date	-	-	-	-	-
	Analysis (N/Ninc/Ninj-P2O5-K2O)	4/6/7-3-11	4/6/7-3-11	4/6/7-3-11	4/6/7-3-11	4/6/7-3-11
	Dry Matter (%)	2	2	2	2	2
	Total Value	0.00	0.00	0.00	0.00	0.00

Source		2024	2025	2026	2027	2028
Dairy Pack Heifers	Production (Tons) Used (Tons) Analysis Date Analysis (N/Ninc/Ninj-P2O5-K2O) Dry Matter (%) Total Value	0 115 - 2/3/3-3-6 33 0.00	0 0 - 2/3/3-3-6 33 0.00	0 26 - 2/3/3-3-6 33 0.00	0 154 - 2/3/3-3-6 33 0.00	0 102 - 2/3/3-3-6 33 0.00
Fall 2021 M	Production (Gallons) Used (Gallons) Analysis Date Analysis (N/Ninc/Ninj-P2O5-K2O) Dry Matter (%) Total Value	-	-	-	0 59,000 - 5/6/8-4-18 4 0.00	0 100,000 - 5/6/8-4-18 4 0.00

Application Results Reported For Farm All

Annual Pounds Of Available N, P2O5 And K2O Applied From Manure and Fertilizer.

		2024	2025	2026	2027	2028
Produced from Manure (lb)	Ninj P2O5 K2O	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Total Available Manure Nutrients Applied (lb)	Ninj P2O5 K2O	3,787 2,066 5,566	2,331 1,286 3,809	2,994 1,536 4,287	2,110 1,298 3,704	1,916 1,131 3,646
Total Fertilizer Nutrients Applied (lb)	N P2O5 K2O	2,118 0 0	2,308 0 0	2,273 0 0	2,441 0 0	2,412 0 0
Total Crop Removal (lb)	P2O5 K2O	2,176 4,448	2,576 6,048	2,576 6,048	2,576 6,048	2,416 5,408
Nutrient Balance (Applied - Crop removal, lb)	P2O5 K2O	-110 1,118	-1,290 -2,239	-1,040 -1,761	-1,278 -2,344	-1,285 -1,762

WQ1: P Trade Report

Reported For	RCRE WQT Finalized Field Historic
Printed	2023-08-29
Plan Completion/Update Date	2023-06-22
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\BGatzke\OneDrive - Probst Group\Desktop\SnapPlus Files\RCRE WQT Finalized Field Historic.snapDb	

Prepared for:
RCRE WQT Finalized Field Historic
attn:RCRE WQT Finalized Field Historic

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

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

Questions? Please contact DNRphosphorus@wisconsin.gov

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

P Trade Report				PTP				
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028
WQT1	ETTRICK	1648A	10	81	60	79	83	79
WQT2	ORION	628A	6	43	41	52	54	61
WQT3	ETTRICK	1648A	1	9	8	11	12	8
WQT4	ORION	628A	5	33	31	43	44	28
Total			**22**	**166**	**140**	**185**	**192**	**176**

WQ2: Sediment Trade Report

Reported For	RCRE WQT Finalized Field Historic
Printed	2023-08-29
Plan Completion/Update Date	2023-06-22
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\BGatzke\OneDrive - Probst Group\Desktop\SnapPlus Files\RCRE WQT Finalized Field Historic.snapDb	

Prepared for:
RCRE WQT Finalized Field Historic
attn:RCRE WQT Finalized Field Historic

The Sediment Trade Report estimates the annual tons of sediment in surface runoff from cropland entering surface waters. These sediment delivery calculations are based on RUSLE2 estimates of sheet and rill erosion for the predominant soil. Sediment losses from concentrated flow channel or gully erosion within a field are not included in these calculations. Field sediment yields are calculated for each year as US tons/field/year. Fields are only included if there at least 2 years of crops before the selected start year. Before using this report as part of a Water Quality Trade activity, sediment losses must be converted into '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.

Sediment Trading

Field Name	Soil Series	Soil Symbol	Acres	Sediment (US Tons)				
				2024	2025	2026	2027	2028
WQT1	ETTRICK	1648A	10.1	4.5	2.2	5.1	5.9	6.2
WQT2	ORION	628A	5.9	4.6	2.8	5.2	6.2	6.1
WQT3	ETTRICK	1648A	1.4	0.2	0.7	0.7	0.5	0.2
WQT4	ORION	628A	5	1.2	3.5	3.6	2.7	1.2
Total				10.5	9.2	14.6	15.4	13.7

APPENDIX F
SnapPlus Modeling – Permanent Vegetative Cover

NM1: Narrative and Crops Report

Starting Year	**2024**
Reported For	**RCRE WQT Finalized Field Trade**
Printed	**2023-08-29**
Plan Completion/Update Date:	**2023-06-22**
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\BGatzke\OneDrive - Probst Group\Desktop\SnapPlus Files\RCRE WQT Finalized Field Trade (2).snapDb	

Prepared for:
RCRE WQT Finalized Field Trade
attn:RCRE WQT Finalized Field Historic

Farm has 4 fields totalling 22.4 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

Spreader Calibration Methods: No spreader calibration rate documentation has been selected.

Narrative and Crops:

Field Name	Field Acres	2024	2025	2026	2027	2028
WQT1	10.1	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre
WQT2	5.9	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre
WQT3	1.4	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre
WQT4	5	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre	Grass hay None 0.5-1.9 ton/acre

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

Crops Grouped By Category		2024	2025	2026	2027	2028
Grass hay	Acres	22	22	22	22	22
	ton	26	26	26	26	26

NM3: Field Data and 590 Assessment Plan

Reported For	RCRE WQT Finalized Field Trade
Printed	2023-08-29
Plan Completion/Update Date	2023-06-22
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\BGatzke\OneDrive - Probst Group\Desktop\SnapPlus Files\RCRE WQT Finalized Field Trade (2).snapDb	

Prepared for:
RCRE WQT Finalized Field Trade
attn:RCRE WQT Finalized Field Historic

Field Data: 22 Total Acres Reported.

Field Name	Sub Farm	FSA Trct	FSA Fld	Acres	County	Critical Soil Series & Symbol	F. Slp %	F.Slp Len ft	Below Field Slope To Water %	Dist.To Water ft	Contour/ Filters	Irrig	Tiled	Rotation	Tillage	Report Period	Field "T" t/ac	Rot Avg Soil Loss t/ac	SCI	Rot Avg PI	Soil Test P ppm	Rot P2O5 Bal lb/ac	P2O5 Bal Target lb/ac
WQT1				10.1	Richland	NORTHBEND 1648A	1	250	0 - 2	0 - 300	No / No	No	No	Csl	SFC	2023-2023	**3**	**1.6**	**0.2**	**NA**	167	-44	-29
WQT2				5.9	Richland	MERIMOD 446B2	4	250	0 - 2	0 - 300	No / No	No	No	Csl	SFC	2023-2023	**5**	**7.2**	**-0.2**	**NA**	104	-43	-29
WQT3				1.4	Richland	MERIMOD 446B2	4	250	More than 12	0 - 300	No / No	No	No	Cgbs-GH-GH-GH-GH	NT-None-None-None-None	2023-2027	**5**	**0**	**1.4**	**NA**	131	-122	-43
WQT4				5	Richland	MERIMOD 446B2	4	250	2.1 - 6	301 - 1000	No / No	No	No	Cgbs-GH-GH-GH-GH	NT-None-None-None-None	2023-2027	**5**	**0**	**1.4**	**NA**	131	-122	-43

Crop Abbreviations

Abbreviation	Crop
Cgbs	Corn grain, baled stalks
Csl	Corn silage
GH	Grass hay

Tillage Abbreviations

Abbreviation	Tillage
None	None
NT	No Till
SFC	Spring Cultivation

FM2: Application Summary Report

Starting Year	**2024**
Reported For	**RCRE WQT Finalized Field Trade**
Printed	**2023-08-29**
Plan Completion/Update Date:	**2023-06-22**
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\BGatzke\OneDrive - Probst Group\Desktop\SnapPlus Files\RCRE WQT Finalized Field Trade (2).snapDb	

Prepared for:
RCRE WQT Finalized Field Trade
attn:RCRE WQT Finalized Field Historic

Annual Manure Production And Use By Source

Total Value = $ Value of all nutrients, incorporated including S.

Source		2024	2025	2026	2027	2028
Dairy 1 Slurry	Production (Tons)	0	0	0	0	0
	Used (Tons)	0	0	0	0	0
	Analysis Date	-	-	-	-	-
	Analysis (N/Ninc/Ninj-P2O5-K2O)	3/3/3-2-7	3/3/3-2-7	3/3/3-2-7	3/3/3-2-7	3/3/3-2-7
	Dry Matter (%)	21	21	21	21	21
	Total Value	0.00	0.00	0.00	0.00	0.00
Dairy Lagoon Dairy Slurry	Production (Gallons)	0	0	0	0	0
	Used (Gallons)	0	0	0	0	0
	Analysis Date	-	-	-	-	-
	Analysis (N/Ninc/Ninj-P2O5-K2O)	7/10/12-6-17	7/10/12-6-17	7/10/12-6-17	7/10/12-6-17	7/10/12-6-17
	Dry Matter (%)	6	6	6	6	6
	Total Value	0.00	0.00	0.00	0.00	0.00
Dairy Liquid	Production (Gallons)	0	0	0	0	0
	Used (Gallons)	0	0	0	0	0
	Analysis Date	-	-	-	-	-
	Analysis (N/Ninc/Ninj-P2O5-K2O)	4/6/7-3-11	4/6/7-3-11	4/6/7-3-11	4/6/7-3-11	4/6/7-3-11
	Dry Matter (%)	2	2	2	2	2
	Total Value	0.00	0.00	0.00	0.00	0.00

Source		2024	2025	2026	2027	2028
Dairy Pack Heifers	Production (Tons) Used (Tons) Analysis Date Analysis (N/Ninc/Ninj-P2O5-K2O) Dry Matter (%) Total Value	0 0 - 2/3/3-3-6 33 0.00	0 0 - 2/3/3-3-6 33 0.00	0 0 - 2/3/3-3-6 33 0.00	0 0 - 2/3/3-3-6 33 0.00	0 0 - 2/3/3-3-6 33 0.00
Fall 2021 M	Production (Gallons) Used (Gallons) Analysis Date Analysis (N/Ninc/Ninj-P2O5-K2O) Dry Matter (%) Total Value	- 	- 	- 	0 0 - 5/6/8-4-18 4 0.00	0 0 - 5/6/8-4-18 4 0.00

Application Results Reported For Farm All

Annual Pounds Of Available N, P2O5 And K2O Applied From Manure and Fertilizer.

		2024	2025	2026	2027	2028
Produced from Manure (lb)	Ninj P2O5 K2O	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Total Available Manure Nutrients Applied (lb)	Ninj P2O5 K2O	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Total Fertilizer Nutrients Applied (lb)	N P2O5 K2O	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Total Crop Removal (lb)	P2O5 K2O	448 1,568	448 1,568	448 1,568	448 1,568	448 1,568
Nutrient Balance (Applied - Crop removal, lb)	P2O5 K2O	-448 -1,568	-448 -1,568	-448 -1,568	-448 -1,568	-448 -1,568

WQ1: P Trade Report

Reported For	RCRE WQT Finalized Field Trade
Printed	2023-08-29
Plan Completion/Update Date	2023-06-22
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\BGatzke\OneDrive - Probst Group\Desktop\SnapPlus Files\RCRE WQT Finalized Field Trade (2).snapDb	

Prepared for:
RCRE WQT Finalized Field Trade
attn:RCRE WQT Finalized Field Historic

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

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

Questions? Please contact DNRphosphorus@wisconsin.gov

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

P Trade Report				PTP				
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028
WQT1	ETTRICK	1648A	10	38	21	18	16	15
WQT2	ORION	628A	6	25	13	11	9	9
WQT3	ETTRICK	1648A	1	3	2	2	2	2
WQT4	ORION	628A	5	11	7	6	6	5
Total			**22**	**77**	**43**	**37**	**32**	**30**

WQ2: Sediment Trade Report

Reported For	RCRE WQT Finalized Field Trade
Printed	2023-08-29
Plan Completion/Update Date	2023-06-22
SnapPlus Version 20.4 built on 2021-06-03	
C:\Users\BGatzke\OneDrive - Probst Group\Desktop\SnapPlus Files\RCRE WQT Finalized Field Trade (2).snapDb	

Prepared for:
RCRE WQT Finalized Field Trade
attn:RCRE WQT Finalized Field Historic

The Sediment Trade Report estimates the annual tons of sediment in surface runoff from cropland entering surface waters. These sediment delivery calculations are based on RUSLE2 estimates of sheet and rill erosion for the predominant soil. Sediment losses from concentrated flow channel or gully erosion within a field are not included in these calculations. Field sediment yields are calculated for each year as US tons/field/year. Fields are only included if there at least 2 years of crops before the selected start year. Before using this report as part of a Water Quality Trade activity, sediment losses must be converted into '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.

Sediment Trading

Field Name	Soil Series	Soil Symbol	Acres	Sediment (US Tons)				
				2024	2025	2026	2027	2028
WQT1	ETTRICK	1648A	10.1	2.3	0.2	0.1	0.0	0.0
WQT2	ORION	628A	5.9	2.3	0.2	0.1	0.0	0.0
WQT3	ETTRICK	1648A	1.4	0.1	0.0	0.0	0.0	0.0
WQT4	ORION	628A	5	0.4	0.1	0.0	0.0	0.0
Total				5.2	0.5	0.2	0.1	0.1

APPENDIX G
Practice Registration Form 3400-207

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

Water Quality Trading Management Practice Registration

Form 3400-207 (R 1/14)

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

Applicant Information

Permittee Name	Permit Number	Facility Site Number
Richland Center Renewable Energy	WI- 0064718-02-1	

Facility Address	City	State	ZIP Code
24520 County Hwy RC	Richland Center	WI	53581

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Bryan Gatzke	17035 W. Wisconsin Ave Suite 120	Brookfield	WI	53005

Project Name
RCRE Water Quality Trade

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	TBD	Agricultural field conversion - conventionally tilled/ fertilized corn rotation to no-till, no fertilizer permanent grass hay	106 lbs/yr	1.2:1	SnapPlus v.20.4.21154.1547

County	Closest Receiving Water Name	Land Parcel ID(s)	Parameter(s) being traded
Richland	Pine River	022.2814.1000,022.2723.5000, 022.2732.1000,022.2731.2000	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
Bryan Gatzke	8/31/2023

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
	12/20/2023

Leave Blank – For Department Use Only

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