

LaGrander's Hillside Dairy - Stanley, WI
November 12, 2017
Trading Plan Number: WQT-20171112

Water Quality Trading Plan

TABLE OF CONTENTS

1	Introduction	2
2	Background	2
2.1	Purpose for Water Quality Trade	2
2.2	Purpose for new surface water outfall	3
2.3	Location of Outfall and Fields	3
2.3.1	Location of Outfall 007	3
2.3.2	Location of the Fields	3
3	Existing Land Use of the Fields, Soil Sampling, and Modeling of Potentially Tradeable Phosphorus	5
3.1	Existing Land Use of the Fields	5
3.2	Soil Sampling	5
3.3	SnapPlus Modeling of PTP under previous conditions	6
3.4	SnapPlus Modeling of PTP with proposed permanent grassland, not harvested	7
4	Trade Ratio Calculation	7
4.1	Individual Trade Ratio Factors	8
4.1.1	Delivery factor:	8
4.1.2	Downstream factor:	8
4.1.3	Equivalency factor:	8
4.1.4	Uncertainty factor:	8
4.1.5	Habitat Adjustment factor:	9
4.2	Calculation of Trade Ratio Based on Individual Factors	9
5	Credit Generation Calculation	9
6	Management Practice Description	10
6.1	Installation Plan	10
6.2	Operation and Maintenance Plan	10



7	Timeline	11
7.1	Schedule for Construction and Initial Operation of Wastewater Treatment Plant	11
7.2	Schedule for Installation of Permanent Vegetative Practice	11
8	Inspections and Reporting	11
8.1	Water Quality Trading Management Practice Registration	11
8.2	Monthly Certification	11
8.3	Annual Inspections	12
8.4	Notification of Problems with Permanent Vegetative Cover Management Practice	12
8.5	Annual Water Quality Trading Report	12
8.6	WDNR Right to Inspect the Fields	12
9	Compliance with Water Quality Trading Checklist	13
10	Certification of Water Quality Trade Report	14

Attachments

- A – Notice of Intent (NOI) to Conduct Water Quality Trading
- B – Lease agreement between LaGrander's and William Henke
- C – Watershed, Subwatershed, and Field Maps
- D – SnapPlus Modeling Reports (Current)
- E – SnapPlus Modeling Reports (Prairie)
- F – Completed "Practice Registration Form" 3400-207
- G – Prairie Establishment Plan
- H – Prairie O&M Plan
- I – Existing Farming Practices Information



1 Introduction

This water quality trading plan summarizes LaGrander's Hillside Dairy's (LaGrander's) plan to use water quality trading to comply with phosphorus discharge limits in its Wisconsin Discharge Elimination System (WPDES) permit for Outfall 007. To assist in complying with LaGrander's phosphorus discharge limits, LaGrander's will install and maintain permanent vegetative cover (aka. conservation easement) on previously farmed fields within the same subwatershed as Outfall 007 on property owned by a third party: William (Bill) Henke. LaGrander's has entered into a written agreement with Bill Henke for a permanent conservation easement to be placed on these lands.

LaGrander's has used SnapPlus modeling to quantify the amount of potentially tradable phosphorus from the fields assuming current farming practices continued and the amount after installation and maintenance of a permanent vegetative cover. Using a credit ratio of 1.2:1, LaGrander's calculated the phosphorus water quality credits available per year based on the change in management practice from farming to permanent vegetative cover at the three farm fields. LaGrander's will use these credits to demonstrate compliance with its total phosphorus limit in its WPDES permit

2 Background

2.1 Purpose for Water Quality Trade

The purpose of this Water Quality Trading Plan is to describe LaGrander's use of water quality trading to comply with the Total Phosphorus limits on Outfall 007 of WPDES permit WI-0054364. This Water Quality Trading Plan was developed pursuant to the Notice of Intent to Conduct Water Quality Trade included in Attachment A.

In particular, LaGrander's will trade with property owned by Bill Henke ("the Fields") within the same HUC-12 subwatershed as Outfall 007. These fields will be placed into perennial vegetation and use the phosphorus credits generated from this management practice to comply with its Total Phosphorus limits their WPDES permit. LaGrander's has entered into a written lease agreement with Bill Henke; this is provided in Attachment B.

With a total phosphorus 6-month average limit of 0.075 mg/L LaGrander's expects to need 30 to 79 lb TP/yr assuming a WWTP effluent of 0.2 – 0.4 mg/L and an average yearly flow rate of 0.080 MGD. At future flows of 0.150 MGD, it is expected that need will increase to 56 – 148 lb TP/yr.



2.2 Purpose for new surface water outfall

LaGrandeur's has historically spray irrigated their raw process wastewaters to fields that they own adjacent to the production facility. They also land apply raw process wastewaters to nearby fields owned by others. In recent years, they have struggled to land apply, especially during wet and winter conditions. A new surface water outfall will allow them discharge treated process wastewater year-round and in all weather conditions.

2.3 Location of Outfall and Fields

2.3.1 Location of Outfall 007

LaGrandeur's discharges treated process wastewater to the North Fork of the Eau Claire River through Outfall 007 at approximately latitude: 44.90821°N, longitude 90.847978°W. Outfall 007 is located in HUC12 Subwatershed 070500060103, which is also known as the Sterling Creek-North Fork Eau Claire River Subwatershed. The Sterling Creek-North Fork Eau Claire River Subwatershed is part of the larger North Fork Eau Claire River Watershed (0705000601), which drains to the Eau Claire River on its way to the Mississippi River. The Sterling Creek-North Fork Eau Claire River Subwatershed is not subject to a TMDL and is not upstream of a watershed subject to a TMDL. Figure 1 below depicts the location of Outfall 007 in the Subwatershed; this is also given in Attachment C.

2.3.2 Location of the Fields

LaGrandeur's will modify management practices to generate phosphorus credits on the Fields upstream of Outfall 007 that are also within the Sterling Creek-North Fork Eau Claire River Subwatershed. The map included at Attachment C shows that the Fields are upstream of Outfall 007. An intermittent stream WBIC 5011064 bisects the Henke property; this stream drains to an unnamed stream WBIC 2148600 that in turn drains directly into the North Fork of the Eau Claire River upstream of Outfall 007.

The Fields are located within Town of Worden (Clark County, WI) Parcels 064.0233.00 and 034.0232.00. The Property descriptions for these two properties are SW-NE SEC 12 TWP 28 N R 4 W, and NW-NE EX HWY R/W AS DESC IN 239 REC 179 SEC 12 TWP 28 N R 4 W, respectively. These are the only properties owned by William Henke within the Sterling Creek-North Fork Eau Claire River Subwatershed.

Table 1 below describes the current and future land use

Figure 1
Subwatershed Map with Outfall and Fields shown

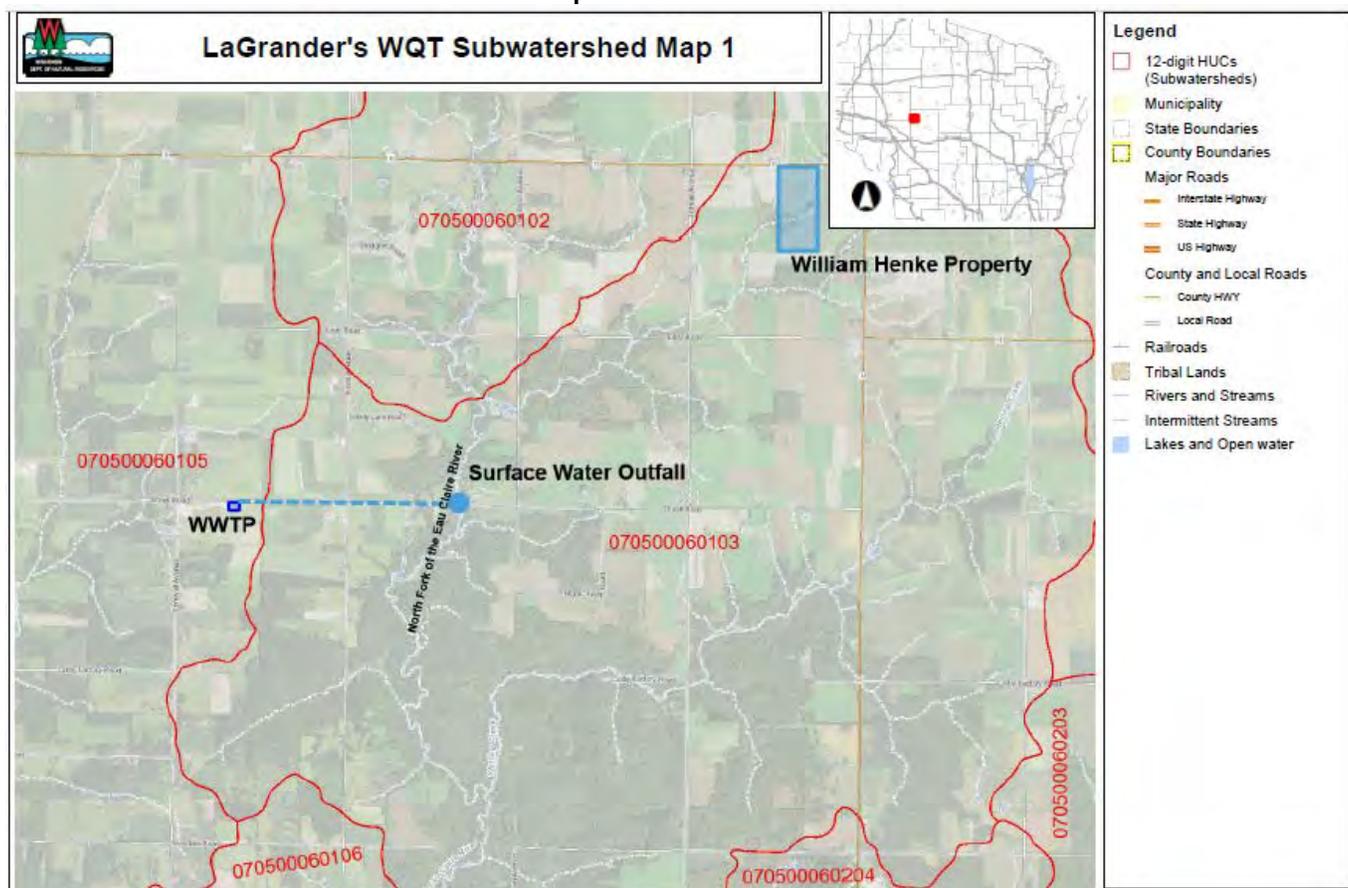


Table 1
Parcels owned by William Henke in Subwatershed

Parcel ID	Property Description	Total Acreage	Total Previously Farmed Acreage	Unfarmed Acreage	Farmland Converted to Conservation Easement
064.0233.00	SW-NE SEC 12 TWP 28 N R 4 W	40.00	22.81	17.19	9.80
0.64.0232.00	NW-NE EX HWY R/W AS DESC IN 239 SEC 12 TWP 28 N R 4 W	39.00	25.30	13.7	5.41
TOTAL	-	79.00	48.11	30.89	15.21

3 Existing Land Use of the Fields, Soil Sampling, and Modeling of Potentially Tradeable Phosphorus

3.1 Existing Land Use of the Fields

Table 1 above shows how much land is currently farmed on each parcel. A portion of this land will be converted to generate credits for this water quality trade. The unfarmed acreage contains a single-family residence with a mowed lawn as well as other unfarmed land. This unfarmed acreage will not be converted as part of the conservation easement used for water quality trading. There is an unnamed intermittent stream WBIC 5011064 that runs on both of the parcels of which most of the fields drain. This unnamed intermittent stream drains to a permanent unnamed stream WBIC 2148600.

3.2 Soil Sampling

Soil samples were taken on April 20, 2017 for seven fields (1 through 7) located on the Henke properties. A map of the seven fields are given in Attachment C. The soil sample results are included in the SnapPlus reports in both Attachments D and E.



3.3 SnapPlus Modeling of PTP under previous conditions

The following shows how much of each of the seven fields is to be converted to natural prairie (i.e. permanent grassland, unharvested):

- Field 1 0.00 acres
- Field 2 0.85 acres
- Field 3 6.77 acres
- Field 4 4.63 acres
- Field 5 2.41 acres
- Field 6 0.55 acres
- Field 7 0.00 acres
- **TOTAL 15.21 acres**

SnapPlus (version 16.3.16306.1328) was used to model the seven fields under current conditions. The seven fields had all seen identical cropping in 2014, 2015, and 2016: Soybeans, Corn Silage, and Corn Silage, respectively. The fields also had the following fertilizers and manure applications:

- 2014: 200lb/acre Potash, 100 lb/acre DAP, no manure
- 2015: 5 gal/acre starter fertilizer, 12,000 gal/acre liquid manure
- 2016: 5 gal/acre starter fertilizer, 12,000 gal/acre liquid manure

Attachment I includes information regarding existing farming practices including a completed Existing Farming Practices (EFP) questionnaire completed by William Henke as well as aerial photographs of the farm fields. No crop sales or insurance information is available.

This cropping and application data was modeled as a 3-year rotation through the year 2022.

Attachment D includes the following SnapPlus reports:

- Narrative and Crop Report
- Soil Test Report
- Application Summary Report
- Manure Tracking Report
- Fields Data and 590 Assessment Plan
- Nutrient Management Report
- Nutrient Management Sorted by Crop Report
- P Trade Report

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



Table 2
SnapPlus Potentially Tradable Phosphorus Report - Current

	Acres	2017	2018	2019	2020	2021	2022
Field 1	0.00	0.0	0.0	0.0	0.0	0.0	0.0
Field 2	0.85	8.6	8.8	8.1	8.6	8.8	8.1
Field 3	6.77	67.3	68.7	63.6	67.0	68.5	63.5
Field 4	4.63	42.0	43.1	39.9	41.8	43.0	39.8
Field 5	2.41	26.1	26.6	24.6	26.0	26.5	24.5
Field 6	0.55	6.0	6.1	5.6	6.0	6.1	5.6
Field 7	0.00	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	15.21	150.1	153.2	141.9	149.4	152.8	141.6

3.4 SnapPlus Modeling of PTP with proposed permanent grassland, not harvested

The fields were then modeled by replacing the current crop rotation with a permanent grassland, not harvested. The same SnapPlus reports as were done for the current crop rotation are available for the permanent grassland modeling in Attachment E. Table 3 below summarizes the Potentially Tradable Phosphorus (PTP) given in the P Trade Report.

Table 3
SnapPlus Potentially Tradable Phosphorus Report – Permanent Grassland, not harvested

	Acres	2017	2018	2019	2020	2021	2022
Field 1	0.00	0.0	0.0	0.0	0.0	0.0	0.0
Field 2	0.85	0.6	0.2	0.1	0.1	0.1	0.1
Field 3	6.77	4.6	1.6	1.2	1.0	0.9	0.9
Field 4	4.63	2.5	0.7	0.5	0.4	0.3	0.3
Field 5	2.41	1.7	0.5	0.4	0.3	0.3	0.3
Field 6	0.55	0.3	0.1	0.1	0.0	0.0	0.0
Field 7	0.00	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	15.21	9.7	3.1	2.2	1.8	1.7	1.6

4 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 August 21, 2013 ("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 – Habit Adjustment):1

See WQT Guidance at Section 2.11. For trades between point sources and nonpoint sources, there is a minimum trade ratio of 1.2:1. See WQT Guidance at Section 2.11.6.

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

4.1 Individual Trade Ratio Factors

4.1.1 Delivery factor:

As discussed earlier, the Fields subject to the permanent vegetative cover management practice are within the same HUC12, the Sterling Creek-North Fork Eau Claire River Subwatershed as LaGrander's Outfall 007. In addition, the Fields are close, approximately two-and-a-half miles, from Outfall 007. Because the Fields are within the same HUC12 as the Outfall, the delivery factor is not needed (i.e., it is zero). See WQT Guidance at § 2.11.1.

4.1.2 Downstream factor:

The Fields are located upstream of the Outfall. Because the Fields are upstream the downstream factor is not needed (i.e., it is zero). See WQT Guidance at Section 2.11.2. The Fields generally drain to an unnamed, intermittent stream WBIC 5011064. This stream discharges to unnamed stream WBIC 2148600 which in turn drains to North Fork of the Eau Claire River WBIC 2145400 approximately 0.6 mi upstream from the Outfall.

4.1.3 Equivalency factor:

The permanent vegetative cover management practice on the Fields will reduce phosphorus loadings to the subwatershed. LaGrander's is using the phosphorus credits generated by the permanent vegetative cover management practice to comply with the phosphorus limits on Outfall 007. Because phosphorus reductions are being used to generate phosphorus credits, an equivalency factor is not needed (i.e., it is zero). See WQT Guidance at § 2.11.3.

4.1.4 Uncertainty factor:

The Fields will be placed in permanent vegetative cover, as described in Section 6. According to Table 4 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. See WQT Guidance at § 2.11.4, Table 4.



4.1.5 Habitat Adjustment factor:

LaGrander's is not claiming any beneficial habitat adjustment, so a habitat adjustment is not needed (i.e., it is zero). See WQT Guidance at § 2.11.5.

4.2 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 1:1:

$$\begin{aligned} \text{Trade Ratio} &= (0 + 0 + 0 + 1 - 0):1 \\ &= 1:1 \end{aligned}$$

However, because the minimum trade ratio for a point to nonpoint source trade is 1.2:1, LaGrander's will use a 1.2:1 trade ratio for estimating credits generated by the management practice.

5 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.

$$\text{Phosphorus Credits Per Year} = (\text{PTP Assuming Crops Rotation Continued} - \text{PTP Assuming Permanent Vegetative Cover}) \div \text{trade ratio}$$

Table 2 in Section 3.3 summarizes the PTP for each year assuming the crop rotation from 2012 through 2014 continued into the future. Table 3 in Section 4.1 summarizes the PTP for each year assuming a permanent vegetative cover is installed and maintained on the Fields. As discussed in Section 5, the applicable trade ratio is 1.2:1.

Table 4 below summarizes the credit generated for each year through 2022 after the trade ratio of 1.2 is applied.



Table 4
SnapPlus PTP total (lbs/yr) - (trade ratio of 1.2 applied)

	Acres	2017	2018	2019	2020	2021	2022
Field 1	0	0.0	0.0	0.0	0.0	0.0	0.0
Field 2	0.85	6.7	7.2	6.7	7.1	7.2	6.7
Field 3	6.77	52.3	55.9	52.0	55.0	56.3	52.1
Field 4	4.63	32.9	35.3	32.9	34.5	35.5	32.9
Field 5	2.41	20.4	21.7	20.2	21.4	21.8	20.2
Field 6	0.55	4.7	5.0	4.7	4.9	5.0	4.7
Field 7	0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	15.21	117.0	125.1	116.4	123.0	125.9	116.6

For example, in 2017 for Field 2:

PTP Assuming Crop Rotation Continues: 8.6 lbs P/yr (from Table 2)

PTP Assuming Permanent Vegetative Cover: 0.6 lbs P/yr (from Table 3)

Difference: 8.0 lb P/yr (8.6 – 0.6)

Trade ratio: 1.2:1 (from Section 5.2)

Difference (Trade ratio applied): **6.7 lb P/yr** (8.0 ÷ 1.2)

6 Management Practice Description

6.1 *Installation Plan*

An Establishment Plan has been developed by Carl Korfmacher of Midwest Prairies and has been included as Attachment G. The plan outlines what soil preparation, seed mix, erosion control measures, and other measures are required to install the native prairie consistent with NRCS Technical Standard 327. The seed mix includes all native grasses and sedges, and wildflower forbs. The plan is specific to each field and a map is included. The plan outlines other activities that may or may not be required to establish the prairie during the first couple of months.

6.2 *Operation and Maintenance Plan*

A separate operations plan was also prepared by Carl Korfmacher of Midwest Prairies and has been included as Attachment I. This plan outlines regular maintenance requirements to keep the prairie healthy. It also includes other irregular activities that may be required after inspections by a prairie expert.

7 Timeline

7.1 Schedule for Construction and Initial Operation of Wastewater Treatment Plant

LaGrander's will begin constructing the Industrial Wastewater Treatment Plant in summer 2017. Estimated start-up date and discharge of treated wastewater in accordance with Outfall 007 of their WPDES permit will occur in early 2018.

7.2 Schedule for Installation of Permanent Vegetative Practice

June 2017 - Initial planting of prairie (including cover crop)
July 2017 - First inspection (one month after planting)
August 2017 - Germination of all seed
August thru Nov. 2017 - Mowing and herbicide application as needed for weed control
September 2017 - Second inspection
November 2017 - Prairie established (bare spots greater than 100 yd² will be reseeded)
November 2017 - Additional wildflower forbs installation
January 2018 - Operation and Maintenance plan will be followed after this date

8 Inspections and Reporting

8.1 Water Quality Trading Management Practice Registration

Once the permanent vegetative cover management practice is effective, LaGrander's will file a completed Registration Form 3400-207 for Water Quality Trading Management Practice Registration ("Practice Registration Form"). A blank Practice Registration Form is included in Attachment F.

8.2 Monthly Certification

Each month LaGrander's shall 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 Water Quality Trading 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:

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.

8.3 Annual Inspections

Once a year, LaGrander's or its prairie restoration consultant will inspect the Fields generating the phosphorus reduction credits to confirm implementation of the permanent vegetative cover management practice and that the management practice is being appropriately maintained. This annual inspection shall occur between mid-August and mid-September each year and shall include at least one photograph of each of the Fields.

8.4 Notification of Problems with Permanent Vegetative Cover Management Practice

In accordance with the Operation and Maintenance Plan, LaGrander's will notify WDNR by telephone within 24 hours or next business day of becoming aware that pollutant reduction credits used or intended for use by the permittee are not being implemented or generated as defined in the approved trading plan. A written notification will be submitted to the Department within 5 days regarding the status of the permittee's pollutant reduction credits. LaGrander's will work to rectify such problems in accordance with the Operation and Maintenance Plan.

8.5 Annual Water Quality Trading Report

LaGrander's 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 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-0054364 with respect to water quality trading that have not been reported in discharge monitoring reports.

8.6 WDNR Right to Inspect the Fields

WDNR has the right to inspect the permanent vegetative cover management practice at any time it deems necessary to ensure the management practice is in compliance with the NRCS Technical Standard 327 and the terms of this Plan.

9 Compliance with Water Quality Trading Checklist

This Water Quality Trading Plan complies with the Water Quality Trading Checklist in Table 8 set forth at page 37 of the WQT Guidance. LaGrander's water quality trade must comply with the requirements for Credit Source (e) in Table 8. Credit Source (e) includes sources where "credits are obtained from a construction project or implementation of a plan undertaken by the credit user for sources other than that covered by the credit user's WPDES permit." LaGrander's will be installing permanent vegetative cover on the Fields, which are not currently covered by their WPDES permit.

Below is a list of the elements of a Water Quality Trading plan for credit sources classified as (e) under Table 8 and includes where in this Water Quality Trading Plan each element is addressed:

- Permittee's/credit user's WPDES permit number. LaGrander's WPDES permit number is WI-0054364 and is included in Section 2.1.
- Permittee's/credit user's contact information. LaGrander's contact information is included in Section 10.
- Pollutant(s) for which credits will be generated. Credits will be generated for phosphorus as discussed in Section 2.1.
- Amount of credits available from each location/management practice/local governmental unit when acting as a broker. The amount of credits generated per year by installing and maintaining permanent vegetative cover on the Fields is set forth in Table 5 in Section 5.
- Certification that the content of the trading application is accurate and correct. Certification that the content of this trading application is accurate and correct is included in Section 10.
- Signature and date of signature of permittee's/credit user's authorized representative. LaGrander's authorized representative's signature and date of signature is included in Section 10.
- Location(s) where credits will be generated (e.g., map of field or site where management practice will be applied including major drainage way(s) from the project). Maps indicating the location of the Fields and Outfall 007 are included in Section 2.3 and in Attachment C.
- Identification of method(s) including management practice(s) that will be used to generate credits at each location. The management practice applied to the Fields is permanent vegetative cover consistent with NRCS Technical Standard 327 and is explained in Section 6 and Attachments G and H.
- Duration of agreement (e.g., the design life of the management practice) with each credit generator. The design life of the permanent vegetative management practice is perpetual as described in Section 7.

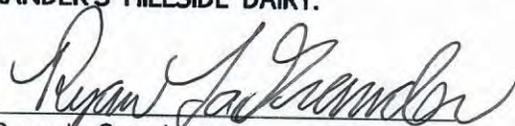
- Schedule for installation/construction of each management practice. The schedule for installation of the permanent vegetative practice is included in Section 7.2.
- Operation and maintenance plan for each management practice used to generate credits. The operation and maintenance plan for the permanent vegetative cover management practice is summarized in Section 6.2 and included in full in Attachment H.
- Date when credits become available for each management practice (i.e., when practice is established and effective). The date when credits become available is November 1, 2017 and is referenced in Section 7.
- Model(s) used to derive the amount of credits. The model used to derive the amount of credits is SnapPlus version 15.1 as referenced in Section 3.
- The applicable trade ratio for each for each management practice including supporting technical basis (see Table 4 on p. 20 of WQT Guidance). The applicable trade ratio is 1.2:1 and the technical basis and calculation of the trade ratio is included in Section 4.

10 Certification of Water Quality Trade Report

The undersigned hereby certifies that this Water Quality Trade Report WQT-20171112 is to the best of his knowledge accurate and correct.

LAGRANDER'S HILLSIDE DAIRY.

By:


Ryan LaGrander

(715) 644-2275
W11299 Broek Rd.
Stanley, WI 54768

ATTACHMENT A

Notice of Intent (NOI) to Conduct Water Quality Trading



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 LaGrander's Hillside Dairy		Permit Number WI- 0054364		Facility Site Number
Facility Address W11299 Broek Rd.			City Stanley	State WI
			ZIP Code 54768	
Project Contact Name (if applicable) Mark Pronley, P.E.		Address 17035 W. Wisconsin Ave.		City Brookfield
				State WI
				ZIP Code 53005
Project Name LaGrander Cheese New WWTP				
Receiving Water Name North Fork Eau Claire River		Parameter(s) being traded Total Phosphorus		HUC 12(s) 070500060103

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):	<input type="checkbox"/> Permitted Discharge (non-MS4/CAFO) <input type="checkbox"/> Urban nonpoint source discharge <input type="checkbox"/> Permitted MS4 <input checked="" type="checkbox"/> Agricultural nonpoint source discharge <input type="checkbox"/> Permitted CAFO <input type="checkbox"/> Other - Specify: _____

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

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

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

Point to Point Trades (Traditional Municipal / Industrial Discharge, MS4, CAFO)				
Discharge Type	Permit Number	Name	Contact Address	Is the point source credit generator currently in compliance with their permit requirements?
<input type="radio"/> Traditional <input type="radio"/> MS4 <input type="radio"/> CAFO				<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure
<input type="radio"/> Traditional <input type="radio"/> MS4 <input type="radio"/> CAFO				<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure
<input type="radio"/> Traditional <input type="radio"/> MS4 <input type="radio"/> CAFO				<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure
<input type="radio"/> Traditional <input type="radio"/> MS4 <input type="radio"/> CAFO				<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure
<input type="radio"/> Traditional <input type="radio"/> MS4 <input type="radio"/> CAFO				<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure

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

List the practices that will be used to generate credits:

Conservation Easement (natural prairie restoration) with portions of parcels 064.0232.000 and 064.0233.000 located in Clark County owned by William A Henke. Acreage to be 10 - 79 acres, depending on final modeling results.

Method for quantifying credits generated: Monitoring
 Modeling, Names: SnapPlus 15.1
 Other: _____

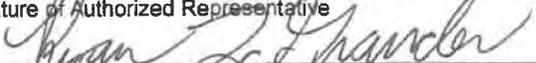
Projected date credits will be available: 09/01/2017

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 <u>4-24-17</u>
--	-------------------------------

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 <u>4-24-17</u>
---	-------------------------------

ATTACHMENT B

Lease agreement between LaGrander's and William Henke



Farmland Lease for Point to Nonpoint Source Trade Agreement

RECITALS

WHEREAS, concurrently herewith, Landlord and Tenant have entered into a Trade Agreement for Point to Nonpoint Source Trades (the "Trade Agreement") so that Tenant may discharge treated process wastewater to the North Fork of the Eau Claire River through Outfall 007 at approximately latitude: 43° 44' 12.11 "N, longitude 88° 10' 24.89"W.

WHEREAS, in order to implement its Water Quality Trading Plan (the "Trading Plan"), Tenant intends to plant a native prairie and maintain it as a permanent vegetative cover on 15.21 acres of the Property in order to reduce phosphorus loadings to the Sterling Creek-North Fork Eau Claire River Subwatershed. Tenant intends to use the phosphorus credits generated by the permanent vegetative cover management practice to comply with the phosphorus limits on Outfall 007.

SECTION I. PARTIES, PROPERTY AND TERM.

1. This lease is made this 7 day of July, 2017, between **WILLIAM A. HENKE and BRENDA K. HENKE**, herein called the *landlord*, and **LaGRANDER'S HILLSIDE DAIRY, INC.**, herein called the *Tenant*.
2. The Landlord, in consideration of the agreements with the Tenant herein after set forth, hereby leases to the Tenant, to occupy and to use for the purposes described in the Trading Plan as well as for agricultural purposes, the property described as follows:
Fifty (50) tillable acres located in W 1/2 of the NE 1/4 of Section 12, Township 28 North, Range 4 West, Town of Worden, Clark County Wisconsin (referred to herein as the "Property").
3. The provisions of this agreement shall be in effect for **60 months** commencing on the 1st day of January, 2018 and ending **December 31, 2022**.
4. This lease shall renew itself automatically from year to year on the same terms and conditions unless either party notifies the other in writing on or before **January 1** in the year in which expiration of the lease agreement is desired.

SECTION II. RENT

1. **Rent:** The rent for this Property to be paid by the Tenant to the Landlord is [REDACTED] [REDACTED] for the first year due on January 1, 2018 and shall be due on the same day of each year thereafter (the "Due Date") during the initial term and any extension renewal or extension of this lease. After 2018, the amount of the rent shall be adjusted annually on or before the Due Date by mutual agreement of the parties. If the amount of the annual rent cannot be settled by mutual agreement after thorough discussion, it shall be submitted for arbitration to a committee of three disinterested persons, one selected by each party hereto and the third by the two thus selected. The committee's decision shall be accepted by both parties.
2. **Prompt Payment.** All sums of money or charges required to be paid by Tenant under this Lease shall be promptly paid by Tenant when the same are due without any deductions or set-off whatsoever. Tenant's failure to pay any such amounts or charges when due shall carry with it the same consequences as Tenant's failure to pay rent. All such amounts or charges shall be payable to Landlord at the place where the Rent is payable. In addition to any other right or remedy available to Landlord by law or under this Lease, if Tenant shall fail to pay any Rent or other charges hereunder when the same shall be due and payable, such unpaid

amounts shall bear interest from the due date thereof to the date of payment at the rate of [REDACTED]

SECTION III. THE LANDLORD AGREES AS FOLLOWS:

1. **Quiet Enjoyment:** Tenant, on paying the Rent, and performing the covenants, agreements, conditions and terms aforesaid, shall quietly and peacefully have, hold and enjoy the Property during the term of this Lease.

SECTION IV. THE TENANT AGREES AS FOLLOWS:

1. **Farming Practices:** As to those parts of the Property not subject to restrictions of the Trading Plan, to preserve and maintain established watercourses, tile drains, tile outlets, grass waterways and terraces and to refrain from any operating in a manner that will injure them unless otherwise agreed; and to follow the soil conservation plan, or; if no conservation plan, those farming practices that are generally recommended and best adapted to this type of Property and for this locality unless other practices are agreed upon.
2. **Weed Control:** To cut, spray or otherwise control noxious weeds before they go to seed. Noxious weeds are defined as those described and/or referred to in sec. 66.0407 Wisconsin Statutes.
3. **Fences.** To keep and maintain, at Tenant's expense, the fences on the Property in good condition and repair. If Tenant desires additional fences on the Property, or additional fences are required under Chapter 90 Wis. Stats., Tenant shall build the same at Tenant's expense.
4. **Alterations and Improvements.** Ditching and tiling may be done on the Property, at the Tenant's discretion and expense, without Landlord's consent. No other improvements to the Property shall be made without first obtaining Landlord's written consent, and Tenant shall not commit waste nor suffer waste to be committed upon the Property.
5. **Relinquishing Possession:** To yield peaceable possession of the Property at the termination of this lease. All alterations, changes and improvements built, constructed or placed on the Property by the Tenant, with the exception of movable personal property, shall, unless otherwise provided by written agreement between Landlord and Tenant, be the property of Landlord and remain on the Property at the expiration or termination of the lease.
6. **Liens.** To keep the Property free of all liens and encumbrances at all times EXCEPT those liens and encumbrances created by the act or omission of the Landlord.
7. **Laws and Regulations:** To conduct all operations on the Property in a manner consistent with all applicable local, state, and federal environmental codes, regulations, and statutes and shall bear sole responsibility for any violations thereof. The Tenant shall be solely responsible for securing any permits or approvals necessary for his or her activities on the property. In the event of any legally prohibited release of materials to the environment, the operator will indemnify the Landlord for any costs of environmental cleanup and restoration as well as any penalties, fines, judgments or other amounts incurred by landowner as a result of such release.
8. **Indemnification.** To protect, indemnify and save harmless Landlord, its successors and assigns from and against all liabilities, obligations, claims, damages, penalties, causes of action, costs and expenses (including without limitation, reasonable attorneys' fees and expenses) imposed upon or incurred by or asserted against Landlord by reason of (1) any accident, injury to or death of persons or loss of or damage to property resulting from any act or omission of Tenant or anyone claiming by, through or under Tenant; (2) any failure on the part of Tenant to perform or comply with any of the terms of this Lease; or (3) performance of any labor or services or the furnishing of any materials or other property in respect of the Property or any part thereof. In case any action, suit or proceeding is brought against Landlord by reason of any occurrence described in this Section, Tenant will, at Tenant's expense, resist and defend such action,

suit or proceeding, or cause the same to be resisted and defended. The obligations of Tenant under this Section shall survive the expiration of this Lease.

9. **Insurance.** Tenant shall maintain in effect at all times during the term of this Lease a policy of commercial general liability insurance naming Landlord and any other party designated by Landlord as the insured, to insure against injury to property, person, or loss of life arising out of Tenant's use and occupancy of the Property with limits of coverage that are at levels customarily maintained by businesses in the community in which the Property is located. For each year during the Term and any renewal or extension hereof, Tenant shall provide Landlord and the other parties designated by Landlord with a copy of the insurance policy endorsement or wording showing that Landlord and the other parties have been added as additional insureds. The policy shall contain a supplemental endorsement covering contractual liability voluntarily assumed by the insured under this Agreement. Insurance required of Tenant under this Lease shall be written by companies duly qualified to do business in the State of Wisconsin and shall be satisfactory in all respects to Landlord. Tenant shall deliver to Landlord copies of the policies or certificates evidencing the existence and amounts of the insurance with loss payable clauses satisfactory to Landlord. No such policy shall be cancelable or subject to reduction of coverage or modification except after 30 days' prior written notice to Landlord. At least 30 days before the expiration of Tenant's policies, Tenant shall furnish Landlord with renewals or "binders" of the policies, or Landlord may order such insurance and charge the cost to Tenant. Tenant shall not do or permit anything to be done that will invalidate the insurance policies furnished by Tenant. Landlord may from time to time require that the policy limits of any or all such insurance be increased to reflect the effects of inflation and changes in normal commercial insurance practice.

SECTION V. DEFAULT.

1. **Failure to Pay.** If the Tenant fails to pay the rent due or fails to keep the agreements of this lease, all costs and attorney fees of the landlord in enforcing collection or performance shall be added to and become a part of the obligations payable by the Tenant hereunder.
2. **Landlord's Right to Repossess, Operate, or Relet.** (1) If the rent, other charges, or any part thereof, to be paid under this lease agreement by Tenant, are not paid when due and shall remain unpaid for a period of 5 days after written notice, or (2) if Tenant shall fail to promptly perform any other covenant, condition, or provision by him to be performed under this lease agreement and such failure shall continue for a period of 30 days after notice in writing specifying the nature of the failure, or (3) if Tenant abandons the Property, or (4) if Tenant breaches any obligation under this lease agreement, by it to be performed, which cannot be cured, then Tenant shall be deemed to be in default and Landlord, without further notice, may, at its option, reenter and take possession of the Property, including all improvements on the Property located at, in, or about the Property, and take, operate, or relet the Property in whole, or in part, for the account of Tenant at such rental and on such agreement and conditions and to such tenant or tenants as Landlord in good faith may deem proper for a term not exceeding the unexpired period of the full term of this lease agreement. Landlord shall receive all proceeds and rent accruing from the operation or reletting of the Property and shall apply the proceeds and rent in the following costs and expenses in order of priority: (1) to the payment of all costs and expenses incurred by Landlord in obtaining possession and in the operation or reletting of the Property, including reasonable attorney fees, commissions, and collection fees; (2) to the cost and expense of any alterations or repairs reasonably necessary to enable Landlord to operate or relet the Property; and (3) to the payment of all such other amounts as may be due or become payable under the provisions of this lease agreement. The balance remaining, if any, at the expiration of the full term of this lease agreement or on the sooner termination of this lease agreement by written notice of termination given by Landlord to Tenant shall be paid over to Tenant.
3. **Repossession or Reletting Not a Termination.** Landlord's Right to Terminate Not Forfeited. No reentry, repossession, operation, or reletting of the Property shall be construed as an election by Landlord to terminate this lease agreement unless a written notice of such intention is given by Landlord to Tenant. Notwithstanding any such operation or reletting without terminating this lease agreement, Landlord may at

any time thereafter elect to terminate this lease agreement in the event at such time Tenant remains in default under the provisions of this lease agreement.

4. **Tenant's Obligation to Pay Deficiencies.** In the event the proceeds or rentals received by Landlord under the provisions of this section are insufficient to pay all costs and expenses and all amounts due and becoming due under this lease agreement, Tenant shall pay to Landlord on demand any deficiency as may from time to time occur or exist.
5. **Landlord's Right to Perform Tenant's Duties at Tenant's Cost.** In spite of any provision as to notice contained in this lease agreement, if in the judgment of Landlord the continuance of any default by Tenant, other than for the payment of money, for the full period of the notice otherwise provided for will jeopardize the Property or the rights of Landlord, Landlord may, without notice, elect to perform those acts in respect of which Tenant is in default, at the expense of Tenant, and Tenant shall then reimburse Landlord, with interest at the rate of 10% per annum on 5 days' notice by Landlord to Tenant.
6. **Landlord's Remedies Cumulative.** Each and all of the remedies given to Landlord in this lease agreement or by law shall be cumulative, and the exercise of one right or remedy by Landlord shall not impair its right to exercise any other right or remedy.

SECTION VI. MISCELLANEOUS PROVISIONS.

1. **Waiver.** The waiver, by Landlord, of any covenant or condition herein contained shall not vitiate the same or any other covenant or condition herein, and all of the covenants, conditions and terms of this lease shall be binding upon the respective parties and their successors and assigns.
2. **Assignment.** The Tenant shall not assign this lease to any person or persons without written consent of the Landlord. Tenant may sublet the Property, or parts thereof, for a period no longer than the initial term or any extensions thereof. The sublease of the Property, or part thereof, shall not be construed as a waiver or release of Tenant from the terms of any covenant or obligation under this Lease.
3. **Construction.** It is hereby understood and agreed that in construing this instrument, all words used herein in the singular number shall include the plural, and the present tense shall include the future and the masculine gender shall include the feminine and neuter.
4. **Entire Agreement.** This lease and the Trade Agreement for Point to Nonpoint Source Trades of even date herewith shall constitute the entire agreement between the parties. Any prior understanding or representation of any kind preceding the date of this lease shall not be binding on either party except to the extent incorporated in this lease.
5. **Amendments and Alterations.** Amendments and alterations to this lease shall be in writing and shall be signed by both the Landlord and Tenant.
6. **No partnership is established.** The terms of this lease shall not be construed as establishing a partnership relation between the Landlord and the Tenant, and neither party is to be held liable for any debts or obligations incurred by the other without written consent.
7. **Binding Effect.** The provisions of this lease shall be binding upon the heirs, executors, administrators, assigns and successors of both Landlord and Tenant in like manner as upon the original parties, except as provided by mutual written agreement.

Date: July 7, 2017



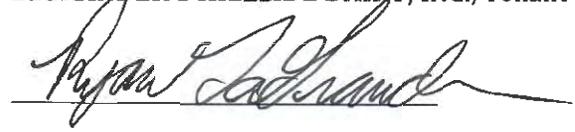
William A. Henke, Landlord



Brenda K. Henke, Landlord

Date: July 11, 2017

LaGRANDER'S HILLSIDE DAIRY, INC., Tenant



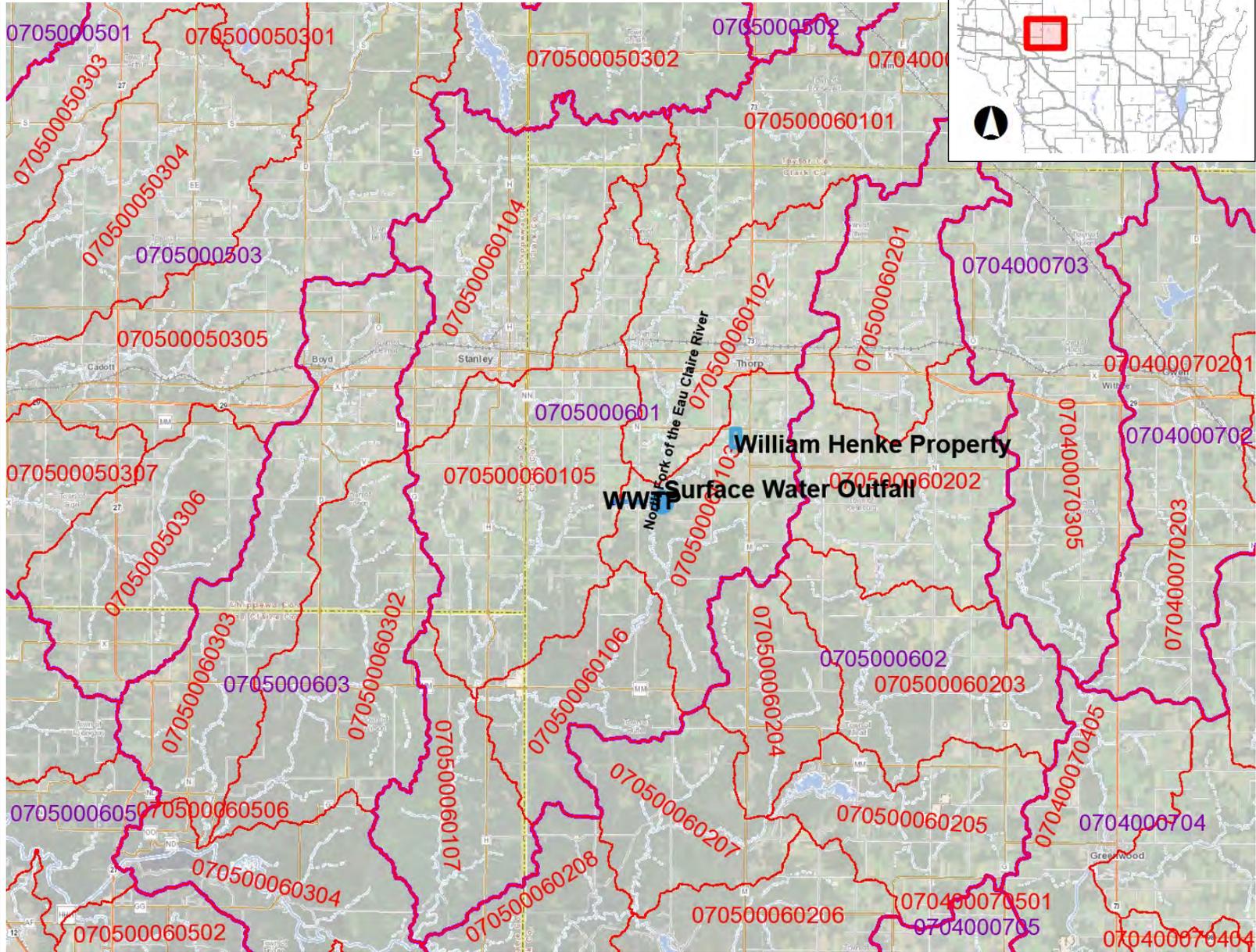
ATTACHMENT C

Watershed, Subwatershed, and Field Maps





LaGrandier's WQT Watershed Map 2



- Legend**
- 12-digit HUCs (Subwatersheds)
 - 10-digit HUCs (Watersheds)
 - 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



NAD_1983_HARN_Wisconsin_TM

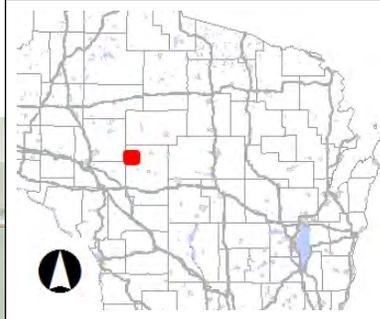
1: 253,440

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/>

Notes

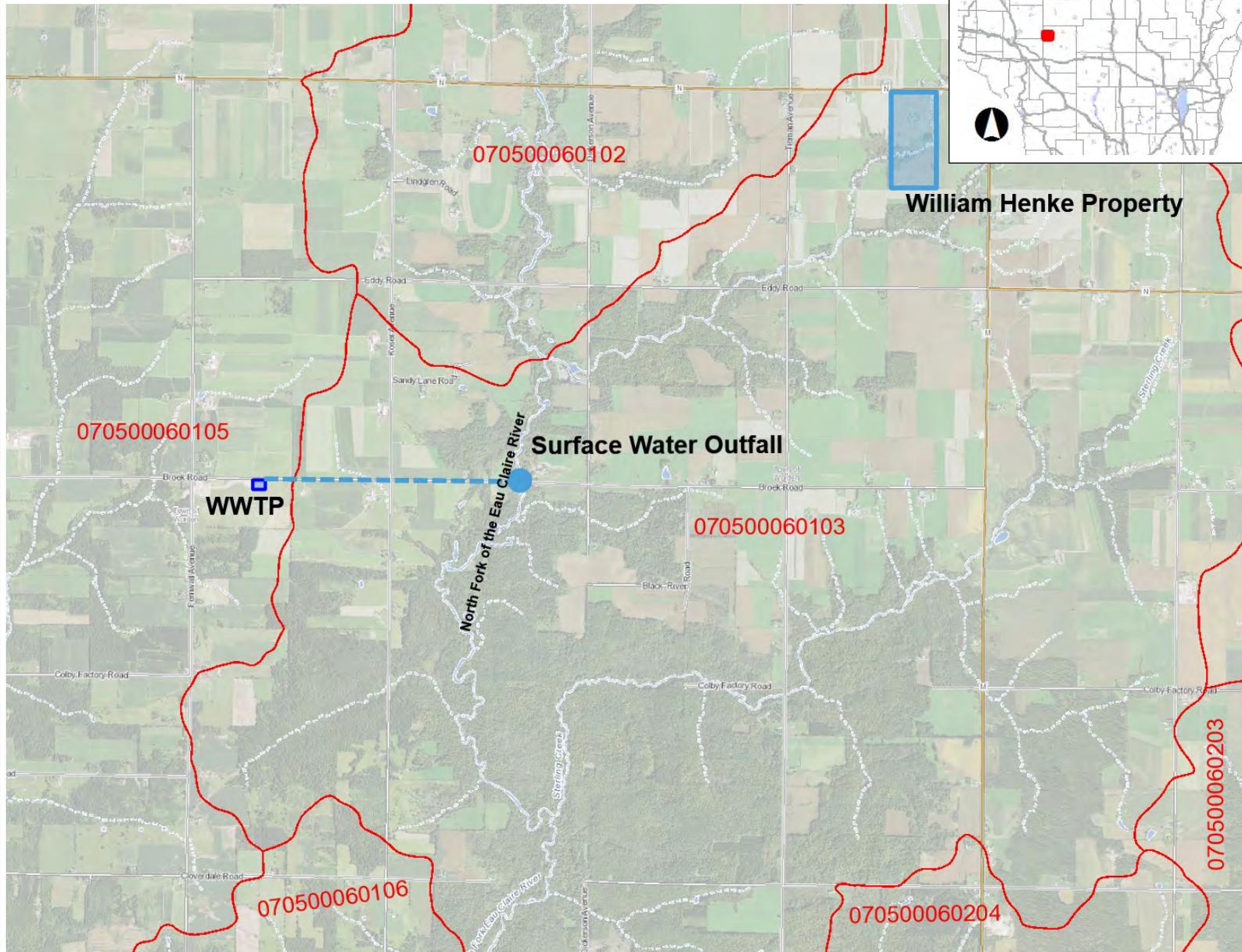


LaGrandier's WQT Subwatershed Map 1



Legend

- 12-digit HUCs (Subwatersheds)
- 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



1.5 0 0.75 1.5 Miles

NAD_1983_HARN_Wisconsin_TM

1: 47,520

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/>

Notes



SITE PLAN
SCALE: N.T.S.



FIELD	064.0232.00	064.0233.00	TOTAL (ACRES)
1	-	-	0
2	0.85 ACRES	-	0.85
3	4.32 ACRES	2.45 ACRES	6.77
4	4.63 ACRES	-	4.63
5	-	2.41 ACRES	2.41
6	-	0.55 ACRES	0.55
			15.21

TOTAL AREA:
15.21 ACRES



17035 W. WISCONSIN AVE.
SUITE 120
BROOKFIELD, WI. 53005
TEL: (262) 264-5665
FAX: (262) 436-1359

This document contains information which is the property of The Probst Group, and may not, in whole or in part, be duplicated, disclosed or used for design or manufacturing purposes without the prior written permission of The Probst Group.

CONFIDENTIAL
ALL RIGHTS RESERVED

LaGRANDER'S HILLSIDE DAIRY, Inc.
STANLEY, WISCONSIN
PROPOSED CONSERVATION EASEMENT

REVISIONS

NO.	DATE

DRAWN BY: MJM
CHK'D BY: MFP
PROJ. ENG: MFP
ISSUE DATE: 5-11-17

PROJECT NUMBER:
5166

SHEET

ATTACHMENT D

SnapPlus Modeling Reports (Current)



SnapPlus Application Summary Report

Starting Year	2014
Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date:	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGrander's\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
Henke Farm REV2
attn:Henke Farm 3

Annual Manure Production And Use By Source

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

Source		2014	2015	2016
Manure	Production (Gallons)	0	0	0
	Used (Gallons)	0	182,520	182,520
	Analysis Date	-	-	-
	Analysis (N/Ninc/Ninj-P2O5-K2O)	4/6/7-3-11	4/6/7-3-11	4/6/7-3-11
	Dry Matter (%)	2	2	2
	Total Value	0.00	0.00	0.00

Application Results Reported For Farm All

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

		2014	2015	2016
Produced from Manure (lb)	Ninj	0	0	0
	P2O5	0	0	0
	K2O	0	0	0
Total Available Manure Nutrients Applied (lb)	N	0	1,095	1,095
	P2O5	0	548	548
	K2O	0	2,008	2,008
Total Fertilizer Nutrients Applied (lb)	N	274	91	91
	P2O5	700	304	304
	K2O	1,521	0	0
Total Crop Removal (lb)	P2O5	380	1,217	1,217
	K2O	608	2,814	2,814
Nutrient Balance (Applied - Crop removal, lb)	P2O5	319	-365	-365
	K2O	913	-806	-806

SnapPlus Narrative and Crops Report

Starting Year	2014
Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date:	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGrander's\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
Henke Farm REV2
attn:Henke Farm 3

Farm has 7 fields totalling 15.2 acres

Farm Narrative: None

Concentrated Flow Notes: None

Field Name	Acres	2014	2015	2016
1	0	Soybeans 15-20 inch row Spring MB Plow 26-35 bu/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre
2	0.8	Soybeans 15-20 inch row Spring MB Plow 26-35 bu/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre
3	6.8	Soybeans 15-20 inch row Spring MB Plow 26-35 bu/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre
4	4.6	Soybeans 15-20 inch row Spring MB Plow 26-35 bu/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre
5	2.4	Soybeans 15-20 inch row Spring MB Plow 26-35 bu/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre

Field Name	Acres	2014	2015	2016
6	0.6	Soybeans 15-20 inch row Spring MB Plow 26-35 bu/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre
7	0	Soybeans 15-20 inch row Spring MB Plow 26-35 bu/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre

Summary by Crop:

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

Crops Grouped By Category		2014	2015	2016
Corn silage	Acres ton		15 338	15 338
Soybeans 15-20 inch row	Acres bu	15 458		

SnapPlus Nutrient Management Report

Crop Year	2014
Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGrander's\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
Henke Farm REV2
attn:Henke Farm 3

Field data: 15 total acres reported.

Field Data			Soil Test ppm		Crop Data				Recommendations			Planned Applications and Credits			Over(+)/Under(-) UW Recs		
Field Name	Ac	Predominant Soil and N Restrictions	Avg P	Avg K	2013 Crop	2014 Crop	Yield Goal	Tillage	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac
1	0	LOYAL LoB	21	66	missing	Soybeans 15-20 inch row	26-35	Spring MB Plow	0	25	85	18	46	100	18	21	15
2	0.8	LOYAL LoB	22	73	missing	Soybeans 15-20 inch row	26-35	Spring MB Plow	0	25	85	18	46	100	18	21	15
3	6.8	LOYAL LoB	22	73	missing	Soybeans 15-20 inch row	26-35	Spring MB Plow	0	25	85	18	46	100	18	21	15
4	4.6	LOYAL LoB	12	68	missing	Soybeans 15-20 inch row	26-35	Spring MB Plow	0	55	85	18	46	100	18	-9	15
5	2.4	LOYAL LoB	18	99	missing	Soybeans 15-20 inch row	26-35	Spring MB Plow	0	25	70	18	46	100	18	21	30
6	0.6	LOYAL LoB	10	55	missing	Soybeans 15-20 inch row	26-35	Spring MB Plow	0	65	85	18	46	100	18	-19	15
7	0	LOYAL LoB	16	79	missing	Soybeans 15-20 inch row	26-35	Spring MB Plow	0	55	85	18	46	100	18	-9	15

Restriction Legend	
Code	Description of Code
S	Field is in SWQMA
D	Drinking water well within 50 feet of field.
C	Conduit to groundwater within 200 feet upslope of field.
L	Local restrictions on nutrient applications.
%	Slope restriction for winter applications

HenkeFarm3

SnapPlus Nutrient Management Report

11/12/2017

P	High permeability N restricted soils
R	N restricted soils with less than 20 inches to bedrock
W	N restricted soils with less than 12 inches to apparent water table
+	This map unit may have any of the N restrictive features, however an on-site investigation is needed to identify which restrictions may actually be present.

SnapPlus Nutrient Management Report

Crop Year	2015
Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGranders\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
Henke Farm REV2
attn:Henke Farm 3

Field data: 15 total acres reported.

Field Data			Soil Test ppm		Crop Data				Recommendations			Planned Applications and Credits			Over(+)/Under(-) UW Recs		
Field Name	Ac	Predominant Soil and N Restrictions	Avg P	Avg K	2014 Crop	2015 Crop	Yield Goal	Tillage	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac
1	0	LOYAL LoB	21	66	Soybeans 15-20 inch row	Corn silage	20.1-25	Spring Chisel, disked	140 0.05 /MRTN	59	225	78	56	132	-62	-3	-93
2	0.8	LOYAL LoB	22	73	Soybeans 15-20 inch row	Corn silage	20.1-25	Spring Chisel, disked	140 0.05 /MRTN	59	225	78	56	132	-62	-3	-93
3	6.8	LOYAL LoB	22	73	Soybeans 15-20 inch row	Corn silage	20.1-25	Spring Chisel, disked	140 0.05 /MRTN	59	225	78	56	132	-62	-3	-93
4	4.6	LOYAL LoB	12	68	Soybeans 15-20 inch row	Corn silage	20.1-25	Spring Chisel, disked	140 0.05 /MRTN	110	225	78	56	132	-62	-54	-93
5	2.4	LOYAL LoB	18	99	Soybeans 15-20 inch row	Corn silage	20.1-25	Spring Chisel, disked	140 0.05 /MRTN	59	195	78	56	132	-62	-3	-63
6	0.6	LOYAL LoB	10	55	Soybeans 15-20 inch row	Corn silage	20.1-25	Spring Chisel, disked	140 0.05 /MRTN	120	225	78	56	132	-62	-64	-93
7	0	LOYAL LoB	16	79	Soybeans 15-20 inch row	Corn silage	20.1-25	Spring Chisel, disked	140 0.05 /MRTN	110	225	78	56	132	-62	-54	-93

Restriction Legend	
Code	Description of Code
S	Field is in SWQMA
D	Drinking water well within 50 feet of field.

C	Conduit to groundwater within 200 feet upslope of field.
L	Local restrictions on nutrient applications.
%	Slope restriction for winter applications
P	High permeability N restricted soils
R	N restricted soils with less than 20 inches to bedrock
W	N restricted soils with less than 12 inches to apparent water table
+	This map unit may have any of the N restrictive features, however an on-site investigation is needed to identify which restrictions may actually be present.

SnapPlus Nutrient Management Report

Crop Year	2016
Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGranders\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
Henke Farm REV2
attn:Henke Farm 3

Field data: 15 total acres reported.

Field Data			Soil Test ppm		Crop Data				Recommendations			Planned Applications and Credits			Over(+)/Under(-) UW Recs		
Field Name	Ac	Predominant Soil and N Restrictions	Avg P	Avg K	2015 Crop	2016 Crop	Yield Goal	Tillage	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac
1	0	LOYAL LoB	21	66	Corn silage	Corn silage	20.1-25	Spring Chisel, disked	190 0.05 /MRTN	80	240	78	56	132	-112	-24	-108
2	0.8	LOYAL LoB	22	73	Corn silage	Corn silage	20.1-25	Spring Chisel, disked	190 0.05 /MRTN	80	240	78	56	132	-112	-24	-108
3	6.8	LOYAL LoB	22	73	Corn silage	Corn silage	20.1-25	Spring Chisel, disked	190 0.05 /MRTN	80	240	78	56	132	-112	-24	-108
4	4.6	LOYAL LoB	12	68	Corn silage	Corn silage	20.1-25	Spring Chisel, disked	190 0.05 /MRTN	110	240	78	56	132	-112	-54	-108
5	2.4	LOYAL LoB	18	99	Corn silage	Corn silage	20.1-25	Spring Chisel, disked	190 0.05 /MRTN	80	225	78	56	132	-112	-24	-93
6	0.6	LOYAL LoB	10	55	Corn silage	Corn silage	20.1-25	Spring Chisel, disked	190 0.05 /MRTN	120	240	78	56	132	-112	-64	-108
7	0	LOYAL LoB	16	79	Corn silage	Corn silage	20.1-25	Spring Chisel, disked	190 0.05 /MRTN	110	240	78	56	132	-112	-54	-108

Restriction Legend	
Code	Description of Code
S	Field is in SWQMA
D	Drinking water well within 50 feet of field.

C	Conduit to groundwater within 200 feet upslope of field.
L	Local restrictions on nutrient applications.
%	Slope restriction for winter applications
P	High permeability N restricted soils
R	N restricted soils with less than 20 inches to bedrock
W	N restricted soils with less than 12 inches to apparent water table
+	This map unit may have any of the N restrictive features, however an on-site investigation is needed to identify which restrictions may actually be present.

SnapPlus Annual PI Report

Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGrander's\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
Henke Farm REV2
attn:Henke Farm 3

Field Name	Soil Series & Symbol (critical)	Slope	Tillage	Rot Avg PI	PI	2014	2015	2016
1	LOYAL LoB	10	SP-SCD-SCD	24	Total	23.9	24.8	22.9
					Particulate	23.3	24.3	22.4
					Soluble	0.5	0.5	0.5
2	LOYAL LoB	3	SP-SCD-SCD	9	Total	8.7	8.8	8.2
					Particulate	8.1	8.3	7.7
					Soluble	0.6	0.5	0.5
3	LOYAL LoB	5	SP-SCD-SCD	13	Total	12.7	13.0	12.0
					Particulate	12.1	12.4	11.5
					Soluble	0.6	0.5	0.5
4	LOYAL LoB	10	SP-SCD-SCD	27	Total	27.2	28.3	26.1
					Particulate	26.8	27.9	25.7
					Soluble	0.4	0.4	0.4
5	LOYAL LoB	6	SP-SCD-SCD	17	Total	17.6	18.0	16.6
					Particulate	17.1	17.5	16.1
					Soluble	0.5	0.5	0.5
6	LOYAL LoB	5	SP-SCD-SCD	12	Total	12.6	12.8	11.8
					Particulate	12.2	12.4	11.5
					Soluble	0.4	0.4	0.4
7	LOYAL LoB	3	SP-SCD-SCD	9	Total	9.1	9.3	8.6
					Particulate	8.7	8.8	8.1
					Soluble	0.5	0.5	0.5

SnapPlus Field Data and 590 Assessment Plan

Reported For	Henke Farm 3
Printed	2017-10-16
Plan Completion/Update Date	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGrander's\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm 3.snapDb	

Prepared for:
Henke Farm 3
attn:Henke Farm 3

Field Data: 15 Total Acres Reported.

Field Name	SubF arm	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	N/Fld Res	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
1				0	Clark	LOYAL LoB	10	200	0 - 2	1001 - 5000	S %	No / No	No	No	Sg15-Csl-Csl	SP-SCD-SCD	2014-2016	4	31.9	-2.6	24	21	-27	-
2				0.8	Clark	LOYAL LoB	3	200	0 - 2	1001 - 5000		No / No	No	No	Sg15-Csl-Csl	SP-SCD-SCD	2014-2016	4	9	-0.7	9	22	-27	-
3				6.8	Clark	LOYAL LoB	5	200	2.1 - 6	1001 - 5000	S	No / No	No	No	Sg15-Csl-Csl	SP-SCD-SCD	2014-2016	4	14	-1.1	13	22	-27	-
4				4.6	Clark	LOYAL LoB	11	200	0 - 2	1001 - 5000	S %	No / No	No	No	Sg15-Csl-Csl	SP-SCD-SCD	2014-2016	4	34.5	-2.8	27	12	-27	-
5				2.4	Clark	LOYAL LoB	6	200	0 - 2	1001 - 5000	S	No / No	No	No	Sg15-Csl-Csl	SP-SCD-SCD	2014-2016	4	18.1	-1.5	17	18	-27	-
6				0.6	Clark	LOYAL LoB	5	200	0 - 2	1001 - 5000	S	No / No	No	No	Sg15-Csl-Csl	SP-SCD-SCD	2014-2016	4	12.5	-1.0	12	10	-27	-
7				0	Clark	LOYAL LoB	3	200	0 - 2	1001 - 5000		No / No	No	No	Sg15-Csl-Csl	SP-SCD-SCD	2014-2016	4	7.8	-0.7	9	16	-27	-

Abbreviation	Crop
Csl	Corn silage
Sg15	Soybeans 15-20 inch row

Abbreviation	Tillage
SCD	Spring Chisel, disked
SP	Spring MB Plow

Restriction Legend	
Code	Description of Code
S	Field is in SWQMA
D	Drinking water well within 50 feet of field.
C	Conduit to groundwater within 200 feet upslope of field.
L	Local restrictions on nutrient applications.
%	Slope restriction for winter applications
P	High permeability N restricted soils
R	N restricted soils with less than 20 inches to bedrock
W	N restricted soils with less than 12 inches to apparent water table
+	This map unit may have any of the N restrictive features, however an on-site investigation is needed to identify which restrictions may actually be present.

SnapPlus Field Data and 590 Assessment Plan

Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGrander's\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
Henke Farm REV2
attn:Henke Farm 3

Field Data: 15 Total Acres Reported.

Field Name	SubF arm	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	N/Fld Res	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
1				0	Clark	LOYAL LoB	10	200	0 - 2	1001 - 5000	S %	No / No	No	No	Sg15-Csl-Csl	SP-SCD-SCD	2014-2016	4	31.9	-2.6	24	21	-27	-
2				0.8	Clark	LOYAL LoB	3	200	0 - 2	1001 - 5000		No / No	No	No	Sg15-Csl-Csl	SP-SCD-SCD	2014-2016	4	9	-0.7	9	22	-27	-
3				6.8	Clark	LOYAL LoB	5	200	0 - 2	1001 - 5000	S	No / No	No	No	Sg15-Csl-Csl	SP-SCD-SCD	2014-2016	4	14	-1.1	13	22	-27	-
4				4.6	Clark	LOYAL LoB	11	200	0 - 2	1001 - 5000	S %	No / No	No	No	Sg15-Csl-Csl	SP-SCD-SCD	2014-2016	4	34.5	-2.8	27	12	-27	-
5				2.4	Clark	LOYAL LoB	6	200	0 - 2	1001 - 5000	S	No / No	No	No	Sg15-Csl-Csl	SP-SCD-SCD	2014-2016	4	18.1	-1.5	17	18	-27	-
6				0.6	Clark	LOYAL LoB	5	200	0 - 2	1001 - 5000	S	No / No	No	No	Sg15-Csl-Csl	SP-SCD-SCD	2014-2016	4	12.5	-1.0	12	10	-27	-
7				0	Clark	LOYAL LoB	3	200	0 - 2	1001 - 5000		No / No	No	No	Sg15-Csl-Csl	SP-SCD-SCD	2014-2016	4	7.8	-0.7	9	16	-27	-

Crop Abbreviations

Abbreviation	Crop
Csl	Corn silage
Sg15	Soybeans 15-20 inch row

Tillage Abbreviations

Abbreviation	Tillage
SCD	Spring Chisel, disked
SP	Spring MB Plow

Restriction Legend	
Code	Description of Code
S	Field is in SWQMA
D	Drinking water well within 50 feet of field.
C	Conduit to groundwater within 200 feet upslope of field.
L	Local restrictions on nutrient applications.
%	Slope restriction for winter applications
P	High permeability N restricted soils
R	N restricted soils with less than 20 inches to bedrock
W	N restricted soils with less than 12 inches to apparent water table
+	This map unit may have any of the N restrictive features, however an on-site investigation is needed to identify which restrictions may actually be present.

Farm	Field	Soil Series	Soil Symb	Acres	PTP 2017	PTP 2018	PTP 2019	PTP 2020	PTP 2021	PTP 2022	PTP 2023	PTP 2024	PTP 2025
Henke Farm REV2	1	LOYAL	LoB	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Henke Farm REV2	2	LOYAL	LoB	0.85	8.6	8.8	8.1	8.6	8.8	8.1	8.6	8.8	8.1
Henke Farm REV2	3	LOYAL	LoB	6.77	67.3	68.7	63.6	67.0	68.5	63.5	66.9	68.4	63.4
Henke Farm REV2	4	LOYAL	LoB	4.63	42.0	43.1	39.9	41.8	43.0	39.8	41.7	43.0	39.8
Henke Farm REV2	5	LOYAL	LoB	2.41	26.1	26.6	24.6	26.0	26.5	24.5	26.0	26.5	24.5
Henke Farm REV2	6	LOYAL	LoB	0.55	6.0	6.1	5.6	6.0	6.1	5.6	6.0	6.1	5.6
Henke Farm REV2	7	LOYAL	LoB	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total				15.21	150.1	153.2	141.9	149.4	152.8	141.6	149.1	152.7	141.5

SnapPlus Soil Test Report

Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGrander's\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
 Henke Farm REV2
 attn:Henke Farm 3

Field Name	Subfarm	Acres	Predominant		Soil Test Date	Soil Test Lab	Lab Number	Samples		pH	OM%	in ppm			
			Soil Map Symbol	Soil Name				Rec. #	Actual #			P	K	S	CEC
1		0	LoB	LOYAL	2017-04-20		BA68284	1	1	6.2	2.0	21	66	0	0
2		0.85	LoB	LOYAL	2017-04-21		BA68285	1	1	6.1	2.7	22	73	0	0
3		6.77	LoB	LOYAL	2017-04-22		BA68286	1	1	6.0	2.6	22	73	0	0
4		4.63	LoB	LOYAL	2017-04-23		BA68287	1	1	6.4	2.4	12	68	0	0
5		2.41	LoB	LOYAL	2017-04-24		BA68288	1	1	6.4	3.1	18	99	0	0
6		0.55	LoB	LOYAL	2017-04-25		BA68289	1	1	6.0	3.3	10	55	0	0
7		0	LoB	LOYAL	2017-04-26		BA68290	1	1	6.0	3.7	16	79	0	0

Crop Year Soil Test Needed

Field Name	Soil Test Date	2017	2018	2019	2020	2021	2022	2023
1	2017-04-20					X		
2	2017-04-21					X		
3	2017-04-22					X		
4	2017-04-23					X		
5	2017-04-24					X		
6	2017-04-25					X		
7	2017-04-26					X		

ATTACHMENT E

SnapPlus Modeling Reports (Prairie)



SnapPlus Application Summary Report

Starting Year	2014
Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date:	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGrander's\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
 Henke Farm REV2
 attn:Henke Farm 3

Annual Manure Production And Use By Source

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

Source		2014	2015	2016	2017	2018	2019	2020
Manure	Production (Gallons)	0	0	0	0	0	0	0
	Used (Gallons)	0	182,520	182,520	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	4/6/7-3-11	4/6/7-3-11
	Dry Matter (%)	2	2	2	2	2	2	2
	Total Value	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Application Results Reported For Farm All

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

		2014	2015	2016	2017	2018	2019	2020
Produced from Manure (lb)	Ninj	0	0	0	0	0	0	0
	P2O5	0	0	0	0	0	0	0
	K2O	0	0	0	0	0	0	0
Total Available Manure Nutrients Applied (lb)	N	0	1,095	1,095	0	0	0	0
	P2O5	0	548	548	0	0	0	0
	K2O	0	2,008	2,008	0	0	0	0
Total Fertilizer Nutrients Applied (lb)	N	274	91	91	0	0	0	0
	P2O5	700	304	304	0	0	0	0
	K2O	1,521	0	0	0	0	0	0
Total Crop Removal (lb)	P2O5	380	1,217	1,217	0	0	0	0
	K2O	608	2,814	2,814	0	0	0	0
Nutrient Balance (Applied - Crop removal, lb)	P2O5	319	-365	-365	0	0	0	0
	K2O	913	-806	-806	0	0	0	0

SnapPlus Narrative and Crops Report

Starting Year	2014
Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date:	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGrander's\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
Henke Farm REV2
attn:Henke Farm 3

Farm has 7 fields totalling 15.2 acres

Farm Narrative: None

Concentrated Flow Notes: None

Field Name	Acres	2014	2015	2016	2017	2018	2019	2020	2021
1	0	Soybeans 15-20 inch row Spring MB Plow 26-35 bu/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre				
2	0.8	Soybeans 15-20 inch row Spring MB Plow 26-35 bu/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre				
3	6.8	Soybeans 15-20 inch row Spring MB Plow 26-35 bu/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre				
4	4.6	Soybeans 15-20 inch row Spring MB Plow 26-35 bu/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre				

Field Name	Acres	2014	2015	2016	2017	2018	2019	2020	2021
5	2.4	Soybeans 15-20 inch row Spring MB Plow 26-35 bu/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre				
6	0.6	Soybeans 15-20 inch row Spring MB Plow 26-35 bu/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre				
7	0	Soybeans 15-20 inch row Spring MB Plow 26-35 bu/acre	Corn silage Spring Chisel, disked 20.1-25 ton/acre	Corn silage Spring Chisel, disked 20.1-25 ton/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		2014	2015	2016	2017	2018	2019	2020	2021
Corn silage	Acres ton		15 338	15 338					
Grasslands, permanent, not harvested	Acres none				15 0	15 0	15 0	15 0	15 0
Soybeans 15-20 inch row	Acres bu	15 458							

SnapPlus Nutrient Management Report

Crop Year	2014
Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGrander's\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
Henke Farm REV2
attn:Henke Farm 3

Field data: 15 total acres reported.

Field Data			Soil Test ppm		Crop Data				Recommendations			Planned Applications and Credits			Over(+)/Under(-) UW Recs		
Field Name	Ac	Predominant Soil and N Restrictions	Avg P	Avg K	2013 Crop	2014 Crop	Yield Goal	Tillage	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac
1	0	LOYAL LoB	21	66	missing	Soybeans 15-20 inch row	26-35	Spring MB Plow	0	15	85	18	46	100	18	31	15
2	0.8	LOYAL LoB	22	73	missing	Soybeans 15-20 inch row	26-35	Spring MB Plow	0	15	70	18	46	100	18	31	30
3	6.8	LOYAL LoB	22	73	missing	Soybeans 15-20 inch row	26-35	Spring MB Plow	0	15	70	18	46	100	18	31	30
4	4.6	LOYAL LoB	12	68	missing	Soybeans 15-20 inch row	26-35	Spring MB Plow	0	55	85	18	46	100	18	-9	15
5	2.4	LOYAL LoB	18	99	missing	Soybeans 15-20 inch row	26-35	Spring MB Plow	0	25	70	18	46	100	18	21	30
6	0.6	LOYAL LoB	10	55	missing	Soybeans 15-20 inch row	26-35	Spring MB Plow	0	55	85	18	46	100	18	-9	15
7	0	LOYAL LoB	16	79	missing	Soybeans 15-20 inch row	26-35	Spring MB Plow	0	25	70	18	46	100	18	21	30

Restriction Legend	
Code	Description of Code
S	Field is in SWQMA
D	Drinking water well within 50 feet of field.
C	Conduit to groundwater within 200 feet upslope of field.
L	Local restrictions on nutrient applications.
%	Slope restriction for winter applications

HenkeFarm3

SnapPlus Nutrient Management Report

11/12/2017

P	High permeability N restricted soils
R	N restricted soils with less than 20 inches to bedrock
W	N restricted soils with less than 12 inches to apparent water table
+	This map unit may have any of the N restrictive features, however an on-site investigation is needed to identify which restrictions may actually be present.

SnapPlus Nutrient Management Report

Crop Year	2015
Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGranders\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
Henke Farm REV2
attn:Henke Farm 3

Field data: 15 total acres reported.

Field Data			Soil Test ppm		Crop Data				Recommendations			Planned Applications and Credits			Over(+)/Under(-) UW Recs		
Field Name	Ac	Predominant Soil and N Restrictions	Avg P	Avg K	2014 Crop	2015 Crop	Yield Goal	Tillage	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac
1	0	LOYAL LoB	21	66	Soybeans 15-20 inch row	Corn silage	20.1-25	Spring Chisel, disked	140 0.05 /MRTN	49	225	78	56	132	-62	7	-93
2	0.8	LOYAL LoB	22	73	Soybeans 15-20 inch row	Corn silage	20.1-25	Spring Chisel, disked	140 0.05 /MRTN	49	210	78	56	132	-62	7	-78
3	6.8	LOYAL LoB	22	73	Soybeans 15-20 inch row	Corn silage	20.1-25	Spring Chisel, disked	140 0.05 /MRTN	49	210	78	56	132	-62	7	-78
4	4.6	LOYAL LoB	12	68	Soybeans 15-20 inch row	Corn silage	20.1-25	Spring Chisel, disked	140 0.05 /MRTN	110	225	78	56	132	-62	-54	-93
5	2.4	LOYAL LoB	18	99	Soybeans 15-20 inch row	Corn silage	20.1-25	Spring Chisel, disked	140 0.05 /MRTN	59	195	78	56	132	-62	-3	-63
6	0.6	LOYAL LoB	10	55	Soybeans 15-20 inch row	Corn silage	20.1-25	Spring Chisel, disked	140 0.05 /MRTN	120	225	78	56	132	-62	-64	-93
7	0	LOYAL LoB	16	79	Soybeans 15-20 inch row	Corn silage	20.1-25	Spring Chisel, disked	140 0.05 /MRTN	89	210	78	56	132	-62	-33	-78

Restriction Legend	
Code	Description of Code
S	Field is in SWQMA
D	Drinking water well within 50 feet of field.

C	Conduit to groundwater within 200 feet upslope of field.
L	Local restrictions on nutrient applications.
%	Slope restriction for winter applications
P	High permeability N restricted soils
R	N restricted soils with less than 20 inches to bedrock
W	N restricted soils with less than 12 inches to apparent water table
+	This map unit may have any of the N restrictive features, however an on-site investigation is needed to identify which restrictions may actually be present.

SnapPlus Nutrient Management Report

Crop Year	2016
Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGranders\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
Henke Farm REV2
attn:Henke Farm 3

Field data: 15 total acres reported.

Field Data			Soil Test ppm		Crop Data				Recommendations			Planned Applications and Credits			Over(+)/Under(-) UW Recs		
Field Name	Ac	Predominant Soil and N Restrictions	Avg P	Avg K	2015 Crop	2016 Crop	Yield Goal	Tillage	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac
1	0	LOYAL LoB	21	66	Corn silage	Corn silage	20.1-25	Spring Chisel, disked	190 0.05 /MRTN	73	240	78	56	132	-112	-17	-108
2	0.8	LOYAL LoB	22	73	Corn silage	Corn silage	20.1-25	Spring Chisel, disked	190 0.05 /MRTN	73	240	78	56	132	-112	-17	-108
3	6.8	LOYAL LoB	22	73	Corn silage	Corn silage	20.1-25	Spring Chisel, disked	190 0.05 /MRTN	73	240	78	56	132	-112	-17	-108
4	4.6	LOYAL LoB	12	68	Corn silage	Corn silage	20.1-25	Spring Chisel, disked	190 0.05 /MRTN	110	240	78	56	132	-112	-54	-108
5	2.4	LOYAL LoB	18	99	Corn silage	Corn silage	20.1-25	Spring Chisel, disked	190 0.05 /MRTN	80	225	78	56	132	-112	-24	-93
6	0.6	LOYAL LoB	10	55	Corn silage	Corn silage	20.1-25	Spring Chisel, disked	190 0.05 /MRTN	120	240	78	56	132	-112	-64	-108
7	0	LOYAL LoB	16	79	Corn silage	Corn silage	20.1-25	Spring Chisel, disked	190 0.05 /MRTN	110	240	78	56	132	-112	-54	-108

Restriction Legend	
Code	Description of Code
S	Field is in SWQMA
D	Drinking water well within 50 feet of field.

C	Conduit to groundwater within 200 feet upslope of field.
L	Local restrictions on nutrient applications.
%	Slope restriction for winter applications
P	High permeability N restricted soils
R	N restricted soils with less than 20 inches to bedrock
W	N restricted soils with less than 12 inches to apparent water table
+	This map unit may have any of the N restrictive features, however an on-site investigation is needed to identify which restrictions may actually be present.

SnapPlus Nutrient Management Report

Crop Year	2017
Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGranders\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
Henke Farm REV2
attn:Henke Farm 3

Field data: 15 total acres reported.

Field Data			Soil Test ppm		Crop Data				Recommendations			Planned Applications and Credits			Over(+)/Under(-) UW Recs		
Field Name	Ac	Predominant Soil and N Restrictions	Avg P	Avg K	2016 Crop	2017 Crop	Yield Goal	Tillage	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac
1	0	LOYAL LoB	21	66	Corn silage	Grasslands, permanent, not harvested	0-0	None	0	0	0	0	0	0	0	0	0
2	0.8	LOYAL LoB	22	73	Corn silage	Grasslands, permanent, not harvested	0-0	None	0	0	0	0	0	0	0	0	0
3	6.8	LOYAL LoB	22	73	Corn silage	Grasslands, permanent, not harvested	0-0	None	0	0	0	0	0	0	0	0	0
4	4.6	LOYAL LoB	12	68	Corn silage	Grasslands, permanent, not harvested	0-0	None	0	0	0	0	0	0	0	0	0
5	2.4	LOYAL LoB	18	99	Corn silage	Grasslands, permanent, not harvested	0-0	None	0	0	0	0	0	0	0	0	0
6	0.6	LOYAL LoB	10	55	Corn silage	Grasslands, permanent, not harvested	0-0	None	0	0	0	0	0	0	0	0	0
7	0	LOYAL LoB	16	79	Corn silage	Grasslands, permanent, not harvested	0-0	None	0	0	0	0	0	0	0	0	0

Restriction Legend	
Code	Description of Code
S	Field is in SWQMA
D	Drinking water well within 50 feet of field.

C	Conduit to groundwater within 200 feet upslope of field.
L	Local restrictions on nutrient applications.
%	Slope restriction for winter applications
P	High permeability N restricted soils
R	N restricted soils with less than 20 inches to bedrock
W	N restricted soils with less than 12 inches to apparent water table
+	This map unit may have any of the N restrictive features, however an on-site investigation is needed to identify which restrictions may actually be present.

SnapPlus Nutrient Management Report

Crop Year	2017
Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGranders\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
Henke Farm REV2
attn:Henke Farm 3

Field data: 15 total acres reported.

Field Data			Soil Test ppm		Crop Data				Recommendations			Planned Applications and Credits			Over(+)/Under(-) UW Recs		
Field Name	Ac	Predominant Soil and N Restrictions	Avg P	Avg K	2016 Crop	2017 Crop	Yield Goal	Tillage	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac
1	0	LOYAL LoB	21	66	Corn silage	Grasslands, permanent, not harvested	0-0	None	0	0	0	0	0	0	0	0	0
2	0.8	LOYAL LoB	22	73	Corn silage	Grasslands, permanent, not harvested	0-0	None	0	0	0	0	0	0	0	0	0
3	6.8	LOYAL LoB	22	73	Corn silage	Grasslands, permanent, not harvested	0-0	None	0	0	0	0	0	0	0	0	0
4	4.6	LOYAL LoB	12	68	Corn silage	Grasslands, permanent, not harvested	0-0	None	0	0	0	0	0	0	0	0	0
5	2.4	LOYAL LoB	18	99	Corn silage	Grasslands, permanent, not harvested	0-0	None	0	0	0	0	0	0	0	0	0
6	0.6	LOYAL LoB	10	55	Corn silage	Grasslands, permanent, not harvested	0-0	None	0	0	0	0	0	0	0	0	0
7	0	LOYAL LoB	16	79	Corn silage	Grasslands, permanent, not harvested	0-0	None	0	0	0	0	0	0	0	0	0

Restriction Legend	
Code	Description of Code
S	Field is in SWQMA
D	Drinking water well within 50 feet of field.

C	Conduit to groundwater within 200 feet upslope of field.
L	Local restrictions on nutrient applications.
%	Slope restriction for winter applications
P	High permeability N restricted soils
R	N restricted soils with less than 20 inches to bedrock
W	N restricted soils with less than 12 inches to apparent water table
+	This map unit may have any of the N restrictive features, however an on-site investigation is needed to identify which restrictions may actually be present.

SnapPlus Annual PI Report

Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGrander's\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
 Henke Farm REV2
 attn:Henke Farm 3

Field Name	Soil Series & Symbol (critical)	Slope	Tillage	Rot Avg PI	PI	2017	2018	2019
1	LOYAL LoB	10	None-None-None	0	Total Particulate Soluble	0.1 0.0 0.1	0.1 0.0 0.1	0.1 0.0 0.1
2	LOYAL LoB	3	None-None-None	0	Total Particulate Soluble	0.1 0.0 0.1	0.1 0.0 0.1	0.1 0.0 0.1
3	LOYAL LoB	5	None-None-None	0	Total Particulate Soluble	0.1 0.0 0.1	0.1 0.0 0.1	0.1 0.0 0.1
4	LOYAL LoB	10	None-None-None	0	Total Particulate Soluble	0.1 0.0 0.1	0.1 0.0 0.1	0.1 0.0 0.1
5	LOYAL LoB	6	None-None-None	0	Total Particulate Soluble	0.1 0.0 0.1	0.1 0.0 0.1	0.1 0.0 0.1
6	LOYAL LoB	5	None-None-None	0	Total Particulate Soluble	0.1 0.0 0.1	0.1 0.0 0.1	0.1 0.0 0.1
7	LOYAL LoB	3	None-None-None	0	Total Particulate Soluble	0.1 0.0 0.1	0.1 0.0 0.1	0.1 0.0 0.1

SnapPlus Field Data and 590 Assessment Plan

Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGrander's\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
 Henke Farm REV2
 attn:Henke Farm 3

Field Data: 15 Total Acres Reported.

Field Name	SubF arm	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	N/Fld Res	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
1				0	Clark	LOYAL LoB	10	200	0 - 2	1001 - 5000	S %	No / No	No	No	Gnh-Gnh-Gnh	None-None-None	2017-2019	4	0	1.6	0	21	0	-
2				0.8	Clark	LOYAL LoB	3	200	0 - 2	1001 - 5000		No / No	No	No	Gnh-Gnh-Gnh	None-None-None	2017-2019	4	0	1.6	0	22	0	-
3				6.8	Clark	LOYAL LoB	5	200	0 - 2	1001 - 5000	S	No / No	No	No	Gnh-Gnh-Gnh	None-None-None	2017-2019	4	0	1.6	0	22	0	-
4				4.6	Clark	LOYAL LoB	11	200	0 - 2	1001 - 5000	S %	No / No	No	No	Gnh-Gnh-Gnh	None-None-None	2017-2019	4	0	1.6	0	12	0	-
5				2.4	Clark	LOYAL LoB	6	200	0 - 2	1001 - 5000	S	No / No	No	No	Gnh-Gnh-Gnh	None-None-None	2017-2019	4	0	1.6	0	18	0	-
6				0.6	Clark	LOYAL LoB	5	200	0 - 2	1001 - 5000	S	No / No	No	No	Gnh-Gnh-Gnh	None-None-None	2017-2019	4	0	1.6	0	10	0	-
7				0	Clark	LOYAL LoB	3	200	0 - 2	1001 - 5000		No / No	No	No	Gnh-Gnh-Gnh	None-None-None	2017-2019	4	0	1.6	0	16	0	-

Crop Abbreviations	
Abbreviation	Crop
Gnh	Grasslands, permanent, not harvested

Tillage Abbreviations	
Abbreviation	Tillage
None	None

Restriction Legend	
Code	Description of Code
S	Field is in SWQMA
D	Drinking water well within 50 feet of field.
C	Conduit to groundwater within 200 feet upslope of field.
L	Local restrictions on nutrient applications.
%	Slope restriction for winter applications
P	High permeability N restricted soils
R	N restricted soils with less than 20 inches to bedrock
W	N restricted soils with less than 12 inches to apparent water table
+	This map unit may have any of the N restrictive features, however an on-site investigation is needed to identify which restrictions may actually be present.

Farm	Field	Soil Series	Soil Symbol	Acres	PTP 2017	PTP 2018	PTP 2019	PTP 2020	PTP 2021	PTP 2022	PTP 2023	PTP 2024	PTP 2025
Henke Farm REV2	1	LOYAL	LoB	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Henke Farm REV2	2	LOYAL	LoB	0.85	0.6	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Henke Farm REV2	3	LOYAL	LoB	6.77	4.6	1.6	1.2	1.0	0.9	0.9	0.9	0.9	0.9
Henke Farm REV2	4	LOYAL	LoB	4.63	2.5	0.7	0.5	0.4	0.3	0.3	0.3	0.3	0.3
Henke Farm REV2	5	LOYAL	LoB	2.41	1.7	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2
Henke Farm REV2	6	LOYAL	LoB	0.55	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Henke Farm REV2	7	LOYAL	LoB	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total				15.21	9.7	3.1	2.2	1.8	1.7	1.6	1.6	1.6	1.6

SnapPlus Soil Test Report

Reported For	Henke Farm REV2
Printed	2017-11-12
Plan Completion/Update Date	2001-01-01
SnapPlus Version 16.3 built on 2016-10-31	
W:\Clients\LaGrander's\Stanley, WI\5014_New WWTP\Permitting & Regulations\Phosphorus Trade\Henke Farm REV2.snapDb	

Prepared for:
 Henke Farm REV2
 attn:Henke Farm 3

Field Name	Subfarm	Acres	Predominant		Soil Test Date	Soil Test Lab	Lab Number	Samples		pH	OM%	in ppm			
			Soil Map Symbol	Soil Name				Rec. #	Actual #			P	K	S	CEC
1		0	LoB	LOYAL	2017-04-20		BA68284	1	1	6.2	2.0	21	66	0	0
2		0.85	LoB	LOYAL	2017-04-21		BA68285	1	1	6.1	2.7	22	73	0	0
3		6.77	LoB	LOYAL	2017-04-22		BA68286	1	1	6.0	2.6	22	73	0	0
4		4.63	LoB	LOYAL	2017-04-23		BA68287	1	1	6.4	2.4	12	68	0	0
5		2.41	LoB	LOYAL	2017-04-24		BA68288	1	1	6.4	3.1	18	99	0	0
6		0.55	LoB	LOYAL	2017-04-25		BA68289	1	1	6.0	3.3	10	55	0	0
7		0	LoB	LOYAL	2017-04-26		BA68290	1	1	6.0	3.7	16	79	0	0

Crop Year Soil Test Needed

Field Name	Soil Test Date	2017	2018	2019	2020	2021	2022	2023
1	2017-04-20					X		
2	2017-04-21					X		
3	2017-04-22					X		
4	2017-04-23					X		
5	2017-04-24					X		
6	2017-04-25					X		
7	2017-04-26					X		

ATTACHMENT F

Completed “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 LaGrander's Hillside Dairy		Permit Number WI- 0054364		Facility Site Number
Facility Address W11299 Broek Rd			City Stanley	State WI
Project Contact Name (if applicable) Mark Pronley, P.E.			Address 17035 W. Wisconsin Ave.	City Brookfield
			State WI	ZIP Code 53005
Project Name LaGrander's Cheese New WWTP				

Broker/Exchange Information (if applicable)		
Was a broker/exchange be used to facilitate trade?		
<input type="radio"/> Yes <input checked="" type="radio"/> No		
Broker/Exchange Organization Name		Contact Name
Address		Phone Number
		Email

Trade Registration Information (Use a separate form for each trade agreement)						
Type	Trade Agreement Number	Practices Used to Generate Credits	Anticipated Load Reduction		Trade Ratio	Method of Quantification
<input type="radio"/> Urban NPS <input checked="" type="radio"/> Agricultural NPS <input type="radio"/> Other	WQT-20171112	Conservation Easement - Conversion of farmland to natural prairie per NRCS 327	2018 2019 2020 2021 2022	125.1 116.4 123.0 125.9 116.6	1.2	SnapPlus 16.3
County Clark	Closest Receiving Water Name Unnamed WBIC 2148600		Land Parcel ID(s) 064.0233.00 034.0232.00		Parameter(s) being traded Total 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 <i>Mark J. Pronley</i>	Date Signed 11/13/2017
---	---------------------------

Authorized Representative Signature	
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision. Based on my inquiry of those persons directly responsible for gathering and entering the information, the information is, to the best of my knowledge and belief, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	
Signature of Authorized Representative <i>Ryan J. Grander</i>	Date Signed 11/15/17

Leave Blank -- For Department Use Only			
Date Received		Trade Docket Number	
Entered in Tracking System <input type="checkbox"/> Yes	Date Entered	Name of Department Reviewer	

ATTACHMENT G

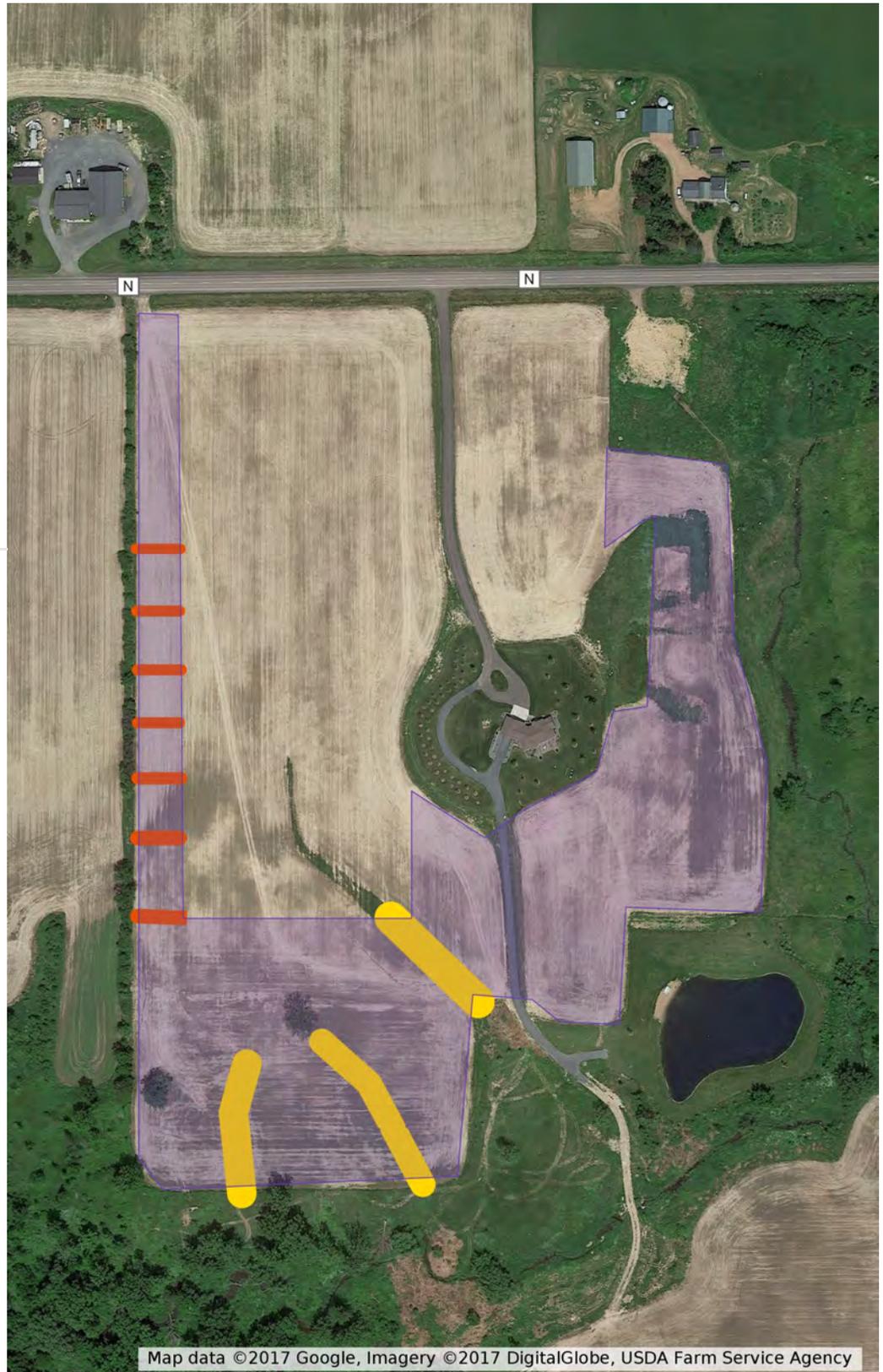
Prairie Establishment Plan



Lagrande Erosion Control

Untitled layer

- Planting Area - Straw Mulch
- Erosion Mat - Type 1
- Erosion Mat - Type 2
- Erosion Mat - Type 2
- Erosion Mat - Type 2



Lagrande Planting Zones

Untitled layer

- Planting Zone 1 a - 6.0 ac
- Planting Zone 1 b - 1.6 ac
- Planting Zone 2 a - 2.2 ac
- Planting Zone 2 b - 2.2 ac
- Planting Zone 1 d - 0.4 ac
- Planting Zone 1 c - 0.4 ac
- Planting Zone 2 c - 0.9 ac
- Planting Zone 1 e - 1.5 ac



Lagrander Hillside Dairy Prairie Plantings Establishment Plan

This Establishment Plan was developed to establish permanent conservation cover consistent with the requirements and recommendations of NRCS Technical Standard 327. The primary purpose of the installation of conservation cover at the sites is to reduce downstream surface water quality degradation by nutrients and sedimentation.

Soil Preparation

The fields were planted in corn in 2016. Some areas will require moderate regrading where heavy rains washed out areas. After these areas are re-graded, fields will be disced and cultipacked prior to seed installation.

Seed Products

Seed, with the exception of cover crop, shall be species native to west-central Wisconsin and from a genetic source within the Midwest. Species selected are known to grow in Clark County, WI, as listed by the University of Wisconsin's state herbarium records. Seed provided shall be measured as pure live seed, properly labeled and shipped in accordance with Wisconsin law. The species chosen have been carefully selected to ensure they are adapted to the local soils, ecological conditions and climactic conditions of the region.

Three seeding mixes will be used to ensure that species planted are adapted to the particular area of the site where they will be installed. The seed mixes include a heavier seeding of grasses than is typical because the primary purpose of the conservation cover is to reduce downstream surface water quality degradation by nutrients and sedimentation and to ensure quick site stabilization. Further, each unit includes a fairly dense seeding of *Elymus canadensis* (Canada wild rye), which establishes quickly. Unlike the other prairie grass species, *Elymus canadensis* is a cool season grass that typically germinates more readily without stratification and will provide a secondary cover after the oat cover crop (described below) begins to senesce in the late summer. The remaining warm season grasses are slower to establish, but will eventually come to dominate the site and provide a permanent cover that, if properly maintained, will last indefinitely. These species have deep root systems and will completely stabilize the soil at maturity.

Wildflower, or forb, seeds will also be installed. These species have been selected to be complimentary with the grasses. Each species occupies a different niche and provides habitat and food value to different insect, bird and animal species.

In order to ensure that the primary purpose of the conservation cover will be met, seed for native grass species will be applied at a minimum rate of 10 lbs/acre. In addition, seed for wildflower or forb species will be applied at a rate of 10 oz/acre.

Oats will be seeded at a rate of 35 lbs/acre and used as a cover crop during the first year. Oats will be used as a cover crop because they germinate quickly and will provide ample cover within a few weeks. Other cover crop species have various drawbacks that oats do not have, such as an allelopathic effect (winter rye or winter wheat) and or they tend to persist longer than desired (annual rye).

The property has been broken into three units: hill top, slope, and valley, which are described below:

Planting Zone 1: These units are moderately sloped areas. The species selected and rates are biased toward more mesic species.

<i>Grasses and Sedges</i>		<i>9.9 ac</i>		
<i>Scientific Name</i>	<i>Common Name</i>	<i>Rate/Ac</i>	<i>Unit</i>	<i>Total Seed Qty</i>
Andropogon scoparius	Little Bluestem	3.000	lb	29.700
Bouteloua curtipendula	Side-oats Grama	2.000	lb	19.800
Andropogon gerardii	Big bluestem	1.000	lb	9.900
Sorghastrum nutans	Indiangrass	1.000	lb	9.900
Carex brevior	Plains Oval Sedge	0.100	lb	0.990
Elymus canadensis	Canada Wild Rye	3.000	lb	29.700
Panicum virgatum	Switch Grass	1.000	lb	9.900
<i>Wildflowers</i>		<i>Total grasses and sedges</i>	<i>11.100</i>	<i>lb</i>
Asclepias tuberosa	Butterfly Weed	1.000	oz	9.900
Asclepias sericea	Common milkweed	1.000	oz	9.900
Echinacea pallida	Coneflower - Pale Purple	1.000	oz	9.900
Heliopsis helianthoides	Sunflower - Early (Ox-eyed)	1.000	oz	9.900
Liatris aspera	Blazing star, rough	0.500	oz	4.950
Lespideza captiata	Round headed bush clover	1.000	oz	9.900
Lupinus perennis	Lupine, Wild	1.000	oz	9.900
Monarda fistulosa	Bergamot, Wild	1.000	oz	9.900
Rudbeckia hirta	Black-eyed Susan	1.000	oz	9.900
Solidago speciosa	Showy goldenrod	1.000	oz	9.900
Tradescantia ohiensis	Spiderwort, Ohio	1.000	oz	9.900
Zizia aurea	Alexanders, Golden	1.000	oz	9.900
		<i>Total wildflowers (forbs)</i>	<i>11.500</i>	<i>oz</i>

Planting Zone 2: These units are relatively flat to somewhat sloped and contain hydric soil types. These soil types historically supported wetland vegetation. Therefore the plants selected are wet mesic to wet prairie species.

<i>Grasses and Sedges</i>		5.2	ac		
<i>Scientific Name</i>	<i>Common Name</i>	<i>Rate/Ac</i>	<i>Unit</i>	<i>Total Seed Qty</i>	
Andropogon scoparius	Little Bluestem	1.000	lb	5.200	
Bouteloua curtipendula	Side-oats Grama	1.000	lb	5.200	
Andropogon gerardii	Big bluestem	2.000	lb	10.400	
Sorghastrum nutans	Indiangrass	1.000	lb	5.200	
Carex brevior	Plains Oval Sedge	1.000	oz	5.200	
Carex vulpinoidea	Fox Sedge	2.000	oz	10.400	
Elymus canadensis	Canada Wild Rye	3.000	lb	15.600	
Panicum virgatum	Switch Grass	1.500	lb	7.800	
<i>Wildflowers</i>		<i>Total grasses and sedges</i>		<i>12.500</i>	
Aster nova anglieae	New England aster	1.000	oz	5.200	
Asclepias sericea	Common milkweed	2.000	oz	10.400	
Asclepias incarnata	Swamp milkweed	0.500	oz	2.600	
Eupatorium maculatum	Spotted Joe Pye weed	1.000	oz	5.200	
Heliopsis helianthoides	Sunflower - Early (Ox-eyed)	1.000	oz	5.200	
Liatris pycnostachya	Blazing Star, Prairie	0.500	oz	2.600	
Physostegia virginiana	Obedient plant	1.000	oz	5.200	
Monarda fistulosa	Bergamot, Wild	1.000	oz	5.200	
Rudbeckia hirta	Black-eyed Susan	1.000	oz	5.200	
Solidago nemoralis	Old field goldenrod	1.000	oz	5.200	
Tradescantia ohiensis	Spiderwort, Ohio	1.000	oz	5.200	
Zizia aurea	Alexanders, Golden	1.000	oz	5.200	
		<i>Total wildflowers (forbs)</i>		<i>12.000</i>	

Erosion Control: Areas that are to receive type 1 and Type 2 erosion matting will be seeded with the seed mix that corresponds to the Planting Zone they are located in. Before installing the mat, seed from the species below will also be installed.

<i>Scientific Name</i>	<i>Common Name</i>	<i>Qty</i>	<i>Unit</i>	<i>Total Seed Qty</i>
Spartina pectinata	Cord grass	1.000	lb	1.000
Bromus ciliatus	Fringed brome	1.000	lb	1.000
Carex comosa	Bristly sedge	2.000	lb	1.000

The seeding mixes will be applied to the sites in accordance with the attached map.

Seed Installation

Seed will be planted in 2017. All grass seeds and one-half of the available forb species will be planted in late June or early July of 2017 with a no-till drill specifically manufactured for the purpose of planting prairie seed. The other half of the forb seeds will be broadcast in November 2017 to aid establishment of forbs. It is generally recognized that forb seed installations do better when installed in the fall. Many of these species require cold/moist stratification and will be more likely to germinate and thrive when installed right before snowfall. In addition, many forb seeds are small and germinate on the surface of the soil. Such species when planted with a drill may be installed too deep. By splitting the forb seed into two applications we will maximize the opportunity to get all species established.

By applying forb seed using two methods and in two seasons, we expect to maximize germination success.

Erosion Control

See erosion control plan.

A mulch of straw or shall be applied in all areas (except those covered by erosion mat described below) after seed has been installed at a rate of 1 ton per acre. This practice has been used for many years in reclamation activities but has not been widely used in CRP plantings or ecological restoration in general. We have chosen to use it on this project to further ensure that the planting will quickly establish and also to inhibit erosion during the establishment phase.

The designed rate of 1 ton per acre will provide moderate cover allowing light to penetrate to the soil while reducing evaporation from the soil at the surface and also reducing the impact of rain droplets that can start the erosion process. This will accelerate germination and protect young seedlings. This is important for the first few weeks after planting especially if seed is installed later in the growing season or if a hot, dry spell occurs.

Erosion matting will be placed in locations where significant erosion has been noted in the past. The erosion control plan shows the locations of Type 1 and Type 2 erosion mat. Additional locations may also be identified.

Type 1 is defined as: Class 1 Type A Urban (EG1SNN) is the single net straw with biodegradable net

- Single net straw: 100% straw with a single biodegradable jute netting. It is designed to provide erosion protection and assist with vegetation establishment for 8 to 12 months on slopes up to 3:1 and low-flow channels.

Type 2 is defined as: Class 1 Type B Urban (EG2SNN) is the double net straw with biodegradable nets

- Double net straw: 100% straw between two biodegradable jute nettings. It is designed to provide erosion control and assist with vegetation establishment assistance for 8 to 12 months on 2:1 to 3:1 slopes and in moderate-flow channels.

Seed Establishment Standards

Standards for 2017, the Year of Planting

- Germination of cover crop shall occur within 20 days of installation. Cover crop establishment shall be uniform and consistent. Any area of more than 1 square yard that is devoid of cover crop shall be reseeded within three weeks of installation.
- Germination of native grass species shall be apparent by mid-August. Areas of erosion where seed has likely been lost will be reseeded and appropriate erosion control measures applied.
- Establishment of native grasses should be consistent and widespread by the middle of September 2017, although seedlings are likely to be inconspicuous. Areas greater than 100 square yards that do not have native grasses shall be reseeded with native grasses in November.

Seed Establishment Activities

Mowing: The purpose of mowing is to keep weeds from going to seed and to allow sunlight to penetrate to native grasses seedlings and to limit competition for water by weed species.

During the Year of Planting, seeded areas shall be mowed at a height of 8 to 12 inches when vegetation has reached a height of 18 inches. Depending on the growing conditions, this may require mowing as frequently as every two weeks. In no event will mowing be conducted at a height less than 8 inches.

Herbicide Applications: Herbicide shall be applied to perennial weeds such as Canada thistle or woody plants that invade the areas seeded with prairie seed. The herbicide used shall be the most selective possible given the target species and shall be applied only to the target species to the extent practicable. Herbicide shall not be applied to annual weeds unless they cannot be controlled by mowing and if they have developed a monoculture that precludes establishment of native grasses.

Site Inspections

The sites will be inspected one month after installation to ensure cover crop germination. The site will also be inspected to confirm initial germination of native grasses in mid-September 2017 in order to provide ample time to develop a cover cropping plan for winter, if necessary. After that, the sites will be inspected per the operation and maintenance standards.

Lagrander Hillside Dairy Prairie Plantings Establishment Plan

This Establishment Plan was developed to establish permanent conservation cover consistent with the requirements and recommendations of NRCS Technical Standard 327. The primary purpose of the installation of conservation cover at the sites is to reduce downstream surface water quality degradation by nutrients and sedimentation.

Soil Preparation

The fields were planted in corn in 2016. Some areas will require moderate regrading where heavy rains washed out areas. After these areas are re-graded, fields will be disced and cultipacked prior to seed installation.

Seed Products

Seed, with the exception of cover crop, shall be species native to west-central Wisconsin and from a genetic source within the Midwest. Species selected are known to grow in Clark County, WI, as listed by the University of Wisconsin's state herbarium records. Seed provided shall be measured as pure live seed, properly labeled and shipped in accordance with Wisconsin law. The species chosen have been carefully selected to ensure they are adapted to the local soils, ecological conditions and climactic conditions of the region.

Three seeding mixes will be used to ensure that species planted are adapted to the particular area of the site where they will be installed. The seed mixes include a heavier seeding of grasses than is typical because the primary purpose of the conservation cover is to reduce downstream surface water quality degradation by nutrients and sedimentation and to ensure quick site stabilization. Further, each unit includes a fairly dense seeding of *Elymus canadensis* (Canada wild rye), which establishes quickly. Unlike the other prairie grass species, *Elymus canadensis* is a cool season grass that typically germinates more readily without stratification and will provide a secondary cover after the oat cover crop (described below) begins to senesce in the late summer. The remaining warm season grasses are slower to establish, but will eventually come to dominate the site and provide a permanent cover that, if properly maintained, will last indefinitely. These species have deep root systems and will completely stabilize the soil at maturity.

Wildflower, or forb, seeds will also be installed. These species have been selected to be complimentary with the grasses. Each species occupies a different niche and provides habitat and food value to different insect, bird and animal species.

In order to ensure that the primary purpose of the conservation cover will be met, seed for native grass species will be applied at a minimum rate of 10 lbs/acre. In addition, seed for wildflower or forb species will be applied at a rate of 10 oz/acre.

Oats will be seeded at a rate of 35 lbs/acre and used as a cover crop during the first year. Oats will be used as a cover crop because they germinate quickly and will provide ample cover within a few weeks. Other cover crop species have various drawbacks that oats do not have, such as an allelopathic effect (winter rye or winter wheat) and or they tend to persist longer than desired (annual rye).

The property has been broken into three units: hill top, slope, and valley, which are described below:

Planting Zone 1: These units are moderately sloped areas. The species selected and rates are biased toward more mesic species.

<i>Grasses and Sedges</i>		<i>9.9 ac</i>		
<i>Scientific Name</i>	<i>Common Name</i>	<i>Rate/Ac</i>	<i>Unit</i>	<i>Total Seed Qty</i>
Andropogon scoparius	Little Bluestem	3.000	lb	29.700
Bouteloua curtipendula	Side-oats Grama	2.000	lb	19.800
Andropogon gerardii	Big bluestem	1.000	lb	9.900
Sorghastrum nutans	Indiangrass	1.000	lb	9.900
Carex brevior	Plains Oval Sedge	0.100	lb	0.990
Elymus canadensis	Canada Wild Rye	3.000	lb	29.700
Panicum virgatum	Switch Grass	1.000	lb	9.900
<i>Wildflowers</i>		<i>Total grasses and sedges</i>	<i>11.100</i>	<i>lb</i>
Asclepias tuberosa	Butterfly Weed	1.000	oz	9.900
Asclepias sericea	Common milkweed	1.000	oz	9.900
Echinacea pallida	Coneflower - Pale Purple	1.000	oz	9.900
Heliopsis helianthoides	Sunflower - Early (Ox-eyed)	1.000	oz	9.900
Liatris aspera	Blazing star, rough	0.500	oz	4.950
Lespideza captiata	Round headed bush clover	1.000	oz	9.900
Lupinus perennis	Lupine, Wild	1.000	oz	9.900
Monarda fistulosa	Bergamot, Wild	1.000	oz	9.900
Rudbeckia hirta	Black-eyed Susan	1.000	oz	9.900
Solidago speciosa	Showy goldenrod	1.000	oz	9.900
Tradescantia ohioensis	Spiderwort, Ohio	1.000	oz	9.900
Zizia aurea	Alexanders, Golden	1.000	oz	9.900
		<i>Total wildflowers (forbs)</i>	<i>11.500</i>	<i>oz</i>

Planting Zone 2: These units are relatively flat to somewhat sloped and contain hydric soil types. These soil types historically supported wetland vegetation. Therefore the plants selected are wet mesic to wet prairie species.

<i>Grasses and Sedges</i>		5.2	ac		
<i>Scientific Name</i>	<i>Common Name</i>	<i>Rate/Ac</i>	<i>Unit</i>	<i>Total Seed Qty</i>	
Andropogon scoparius	Little Bluestem	1.000	lb	5.200	
Bouteloua curtipendula	Side-oats Grama	1.000	lb	5.200	
Andropogon gerardii	Big bluestem	2.000	lb	10.400	
Sorghastrum nutans	Indiangrass	1.000	lb	5.200	
Carex brevior	Plains Oval Sedge	1.000	oz	5.200	
Carex vulpinoidea	Fox Sedge	2.000	oz	10.400	
Elymus canadensis	Canada Wild Rye	3.000	lb	15.600	
Panicum virgatum	Switch Grass	1.500	lb	7.800	
<i>Wildflowers</i>		<i>Total grasses and sedges</i>		<i>12.500</i>	
Aster nova anglieae	New England aster	1.000	oz	5.200	
Asclepias sericea	Common milkweed	2.000	oz	10.400	
Asclepias incarnata	Swamp milkweed	0.500	oz	2.600	
Eupatorium maculatum	Spotted Joe Pye weed	1.000	oz	5.200	
Heliopsis helianthoides	Sunflower - Early (Ox-eyed)	1.000	oz	5.200	
Liatris pycnostachya	Blazing Star, Prairie	0.500	oz	2.600	
Physostegia virginiana	Obedient plant	1.000	oz	5.200	
Monarda fistulosa	Bergamot, Wild	1.000	oz	5.200	
Rudbeckia hirta	Black-eyed Susan	1.000	oz	5.200	
Solidago nemoralis	Old field goldenrod	1.000	oz	5.200	
Tradescantia ohioensis	Spiderwort, Ohio	1.000	oz	5.200	
Zizia aurea	Alexanders, Golden	1.000	oz	5.200	
		<i>Total wildflowers (forbs)</i>		<i>12.000</i>	

Erosion Control: Areas that are to receive type 1 and Type 2 erosion matting will be seeded with the seed mix that corresponds to the Planting Zone they are located in. Before installing the mat, seed from the species below will also be installed.

<i>Scientific Name</i>	<i>Common Name</i>	<i>Qty</i>	<i>Unit</i>	<i>Total Seed Qty</i>
Spartina pectinata	Cord grass	1.000	lb	1.000
Bromus ciliatus	Fringed brome	1.000	lb	1.000
Carex comosa	Bristly sedge	2.000	lb	1.000

The seeding mixes will be applied to the sites in accordance with the attached map.

Seed Installation

Seed will be planted in 2017. All grass seeds and one-half of the available forb species will be planted in late June or early July of 2017 with a no-till drill specifically manufactured for the purpose of planting prairie seed. The other half of the forb seeds will be broadcast in November 2017 to aid establishment of forbs. It is generally recognized that forb seed installations do better when installed in the fall. Many of these species require cold/moist stratification and will be more likely to germinate and thrive when installed right before snowfall. In addition, many forb seeds are small and germinate on the surface of the soil. Such species when planted with a drill may be installed too deep. By splitting the forb seed into two applications we will maximize the opportunity to get all species established.

By applying forb seed using two methods and in two seasons, we expect to maximize germination success.

Erosion Control

See erosion control plan.

A mulch of straw or shall be applied in all areas (except those covered by erosion mat described below) after seed has been installed at a rate of 1 ton per acre. This practice has been used for many years in reclamation activities but has not been widely used in CRP plantings or ecological restoration in general. We have chosen to use it on this project to further ensure that the planting will quickly establish and also to inhibit erosion during the establishment phase.

The designed rate of 1 ton per acre will provide moderate cover allowing light to penetrate to the soil while reducing evaporation from the soil at the surface and also reducing the impact of rain droplets that can start the erosion process. This will accelerate germination and protect young seedlings. This is important for the first few weeks after planting especially if seed is installed later in the growing season or if a hot, dry spell occurs.

Erosion matting will be placed in locations where significant erosion has been noted in the past. The erosion control plan shows the locations of Type 1 and Type 2 erosion mat. Additional locations may also be identified.

Type 1 is defined as: Class 1 Type A Urban (EG1SNN) is the single net straw with biodegradable net

- Single net straw: 100% straw with a single biodegradable jute netting. It is designed to provide erosion protection and assist with vegetation establishment for 8 to 12 months on slopes up to 3:1 and low-flow channels.

Type 2 is defined as: Class 1 Type B Urban (EG2SNN) is the double net straw with biodegradable nets

- Double net straw: 100% straw between two biodegradable jute nettings. It is designed to provide erosion control and assist with vegetation establishment assistance for 8 to 12 months on 2:1 to 3:1 slopes and in moderate-flow channels.

Seed Establishment Standards

Standards for 2017, the Year of Planting

- Germination of cover crop shall occur within 20 days of installation. Cover crop establishment shall be uniform and consistent. Any area of more than 1 square yard that is devoid of cover crop shall be reseeded within three weeks of installation.
- Germination of native grass species shall be apparent by mid-August. Areas of erosion where seed has likely been lost will be reseeded and appropriate erosion control measures applied.
- Establishment of native grasses should be consistent and widespread by the middle of September 2017, although seedlings are likely to be inconspicuous. Areas greater than 100 square yards that do not have native grasses shall be reseeded with native grasses in November.

Seed Establishment Activities

Mowing: The purpose of mowing is to keep weeds from going to seed and to allow sunlight to penetrate to native grasses seedlings and to limit competition for water by weed species.

During the Year of Planting, seeded areas shall be mowed at a height of 8 to 12 inches when vegetation has reached a height of 18 inches. Depending on the growing conditions, this may require mowing as frequently as every two weeks. In no event will mowing be conducted at a height less than 8 inches.

Herbicide Applications: Herbicide shall be applied to perennial weeds such as Canada thistle or woody plants that invade the areas seeded with prairie seed. The herbicide used shall be the most selective possible given the target species and shall be applied only to the target species to the extent practicable. Herbicide shall not be applied to annual weeds unless they cannot be controlled by mowing and if they have developed a monoculture that precludes establishment of native grasses.

Site Inspections

The sites will be inspected one month after installation to ensure cover crop germination. The site will also be inspected to confirm initial germination of native grasses in mid-September 2017 in order to provide ample time to develop a cover cropping plan for winter, if necessary. After that, the sites will be inspected per the operation and maintenance standards.

ATTACHMENT H

Prairie O&M Plan





Lagrander Hillside Dairy Prairie Plantings Operation and Maintenance Plan

The goal of this Operation and Maintenance Plan is to ensure native cover remains consistently and exclusively throughout the site in perpetuity. The primary purpose of the installation and maintenance of conservation cover at the site is to reduce downstream surface water quality degradation by nutrients and sedimentation. This Maintenance Plan was developed to ensure this goal is achieved and is consistent with the requirements and recommendations of NRCS Technical Standard 327.

Prairie plants require regular maintenance and management to remain healthy. The concept of adaptive management is critical. Adaptive management implies that while we can and will prepare for certain activities to occur on site, we also must respond to changing conditions that are not always predictable. As a result, this Plan outlines certain activities to ensure the prairie plants remain healthy, but management practices will remain flexible and consistent with the principles outlined below, in order to adapt to any changing circumstances on-site.

As outlined below, the site will be inspected to ensure that management tools are used appropriately. The inspector will walk the entire site and take photos and notes regarding plant diversity, density, overall ecological health, and any erosion issues. Based on those findings, a more detailed prescription for remedial and maintenance activities will be developed specific to the current conditions on the site to ensure that consistent, perennial native cover remains on the site. The prescriptions for such activities will follow the standards and practices below.

Prairie Cover Standards for Seasons after the First Season

Standards for Second Growing Season:

- It is unlikely, but it is possible that it will be necessary to re-seed cover crop in the spring of 2018. If native grasses are sparse and there is danger of erosion due to lack of cover, a cover crop of oats shall be seeded again in May 2018 when danger of frost has passed.
- Native grasses shall be found consistently throughout the site by mid-July 2018. Areas greater than 25 square yards that exclusively have plants that are not native grasses or forbs shall be reseeded with native grasses prior to November 30, 2018.
- Seedlings of native forb species shall be apparent throughout the site by mid-July 2018. If forb species are not apparent in parts of the site, areas larger than 100 square yards will be reseeded with the original forb species in November 2018.



Standards for Third and Fourth Growing Seasons:

- Native grasses shall be found consistently throughout the site by mid-July 2019 and 2020. Areas greater than 5 square yards that exclusively have plants that are not native grasses or forbs shall be reseeded with native grasses prior to the end of November 2019 and 2020.
- Seedlings of native forb species shall be apparent throughout the site during the fourth growing season. Identification of at least 30% of forb species shall be made within the zones the species were planted. If at least 30% of forb species are not identified, those species not identified will be re-seeded in November.

Standards for the Fifth Growing Season and Subsequent Seasons:

- Native grasses shall be found consistently throughout the site as determined during the annual inspection each year. Areas greater than 5 square yards that exclusively have plants that are not native grasses or forbs shall be reseeded with native grasses in November of that same year.
- Seedlings of native forb species shall be apparent throughout the site. Identification of at least 50% of forb species shall be made within the zones the species were planted. If at least 50% of forb species are not identified during the annual inspection, those species not identified will be re-seeded in November of that same year.
- Once the native forb species diversity test above has been met, it will not remain a test thereafter. This is because prairie plantings that are not grazed often tend to have fewer forbs and more grasses as time goes on. The only way to remedy this other than grazing, is to chisel plow to break up the sod, which would create a potential erosion problem.

Reseeding activities shall continue in following seasons as necessary to ensure the standards for the Fifth Growing Season continue to be met in later years.

Early Maintenance Activities for Prairie Through 2021

Herbicide Applications: Herbicide shall be applied to perennial weeds such as Canada thistle or woody plants that invade the areas seeded with prairie seed. The herbicide used shall be the most selective possible given the target species and shall be applied only to the target species to the extent practicable. Herbicide shall not be applied to annual weeds unless they cannot be controlled by mowing or burning and if they have a developed a monoculture that precludes native grasses.

Prescribed Burning: The primary management tool for prairies is prescribed burning. Prescribed burning simulates the effects of wildfires that were part of Wisconsin's pre-settlement environment in which native plant communities, including prairies, thrived. Native prairie grasses and forbs, including those species planted at the site, develop deep roots and buds beneath the soil, enabling them to withstand



the heat of a fire. The deep roots of native prairie plants also stabilize the site after a fire and enable native prairie plants to quickly regenerate. The Wisconsin Department of Natural Resources has additional information regarding prescribed burning and its benefits to native plant communities, such as prairies, on its website at: <http://dnr.wi.gov/topic/wildlifehabitat/burn.html>.

Because fire is a critical element in sustaining native prairies, prescribed burning will be used as a management tool at the site. If fuel levels allow, seeded areas may be burned in the spring of 2020 or 2021. Prescribed burning will only occur if fuel levels and weather conditions are appropriate to ensure a prescribed burn can be conducted in a safe and controlled manner and that the site will benefit ecologically from the burn. Because burning will occur at the earliest in the fourth growing season after native vegetation is well-established, nutrient runoff is not expected. However, after a burn is conducted, the site will be monitored for any erosion issues. If erosion issues are identified, they will be addressed pursuant to the below sections titled, "Methods to Address Minor Erosion Control Concerns" and "Methods to Address Effects of Catastrophic and Anomalous Events."

Long-Term Maintenance and Management of Prairie after 2021

Prescribed Burning: As described in the immediately preceding section, the primary management tool for prairies is prescribed burning. Prescribed burning is ecologically beneficial to native prairie plants and will be used as a management tool, as appropriate, to ensure the continued health of the prairie at the site. Generally speaking, after 2021, one third of the site should be burned every year, creating a 3 year rotation. However, certain weeds and woody invasive species may be controlled with more or less frequent fire. In light of that, the determination of which area will be burned and when that area will be burned will be based on the best judgment of the inspector and his/her prescription for maintenance activities.

Prescribed burning will only occur if fuel levels and weather conditions are appropriate to ensure a prescribed burn can be conducted in a safe and controlled manner and that the site will benefit ecologically from the burn. Because burning will occur when the site is well-established, nutrient runoff is not expected. However, after a burn is conducted, the site will be monitored for any erosion issues. If erosion issues are identified, they will be addressed pursuant to the below sections titled, "Methods to Address Minor Erosion Control Concerns" and "Methods to Address Effects of Catastrophic and Anomalous Events."

Herbicide Applications: Management of some invasive species can often only be accomplished through the use of herbicides. Herbicide shall be applied to perennial weeds such as Canada thistle or woody plants that invade the areas seeded with prairie seed. The herbicide used shall be the most selective possible given the target species and shall be applied only to the target species to the extent practicable.



Herbicide shall not be applied to annual weeds unless they cannot be controlled by burning and if they have developed a monoculture that precludes native grasses.

Site Inspections

The site will be inspected one time each during the spring, summer, and fall in the second, third, and fourth growing seasons. Thereafter, the site will be inspected once on an annual basis. This annual inspection will occur between mid-August and mid-September of each year. The site inspections will ensure compliance with seed establishment standards and identify any erosion issues. The site will also be inspected following any major events that could cause erosion as soon as the safety of the inspector can be assured, and if any erosion issues are identified, they will be addressed in accordance with the seed establishment standards above and erosion control sections below. During inspections, the inspector will walk the site and take close-up and distant photos of the site. The inspector will also take notes regarding plant diversity, density, overall ecological health, and any erosion issues. Based on those findings, a more detailed prescription for remedial and maintenance activities will be developed that will ensure that consistent, perennial native cover remains on the site. If the inspection identifies areas at the site that are not meeting the applicable seed establishment standards for the growing season, the remedial action identified in each standard will be taken. If the inspection identifies erosion issues, they will be addressed pursuant to the sections in this Plan titled “Methods to Address Minor Erosion Control Concerns” and “Methods to Address Effects of Catastrophic and Anomalous Events.”

The inspection reports and associated documentation will be submitted to the Wisconsin Department of Natural Resources with the Lagrander Hillside Dairy Annual Report, which is described in the Water Quality Trading Plan.

Methods to Address Minor Erosion Control Concerns

The site will be inspected for any bare spots, gullies, or other erosion control concerns. Erosion concerns will be addressed as follows:

- If bare spots larger than five square yards are identified during the growing season (May 15 through September 30), they will be immediately reseeded with cover crop and covered with a light straw mulch.
- If bare spots larger than five square yards occur outside the growing season, they will be addressed with temporary erosion matting, mulching, or the application of polyacrylamide, as necessary. Erosion events that occur outside of the growing season will be seeded with cover crop once the growing season begins.
- In the event of a major erosion event, such as the formation of a gully greater than one foot wide and one foot deep, the area will be regraded first and then reseeded per above.



All bare spots or gullies described above will also be reseeded with native grasses. Bare spots or gullies will be re-seeded with forbs if they are larger than 100 square yards. Reseeding of native grasses and forbs in eroded areas must occur prior to July 15 or after November 1. Any eroded areas that are reseeded will be treated as newly established prairie and must meet the requirements for each growing season per the standards in the Establishment Plan and listed above.

Methods to Address Effects of Catastrophic and Anomalous Events

Certain catastrophic events may require the development of a more intense and urgent plan than the events outlined under the “Methods to Address Minor Erosion Control Concerns” above. These primarily include events that would cause flooding. For instance, in 1996 the Joliet, Illinois, area received over seventeen inches of rain in less than 48 hours. The level of flooding and related erosion was greater than had ever been experienced. Should such an event take place, it would be very difficult if not impossible to address while the event was in progress.

It is impossible to predict all the potential catastrophic or anomalous events that could cause significant damage to prairie plantings. If a catastrophic or anomalous event occurs, a site inspection would be done as soon as the safety of the inspector can be assured and an emergency plan will be developed and implemented promptly following inspection unless weather or other conditions indicate it should be implemented later. The emergency plan will be consistent with the standards and practices outlined in the Establishment Plan and this Plan to ensure native perennial cover remains consistently throughout the site.

If a catastrophic flood event occurs during the growing season, an erosion plan that includes practices that closely resemble the standards and practices outlined in the Establishment Plan and in this Plan would be developed and implemented. If such an event occurred in mid-September or later, it would be impossible to establish cover prior to winter. Therefore, an erosion plan that includes standard physical erosion control structures would have to be prepared and implemented. This might include placing silt fence, straw wattles or perhaps even the excavation of a settling basin, if so warranted. In addition, a plan would be developed for the next growing season to grade if necessary and reseed in accordance with the standards and practices outlined in the Establishment Plan and this Plan. That plan would be implemented prior to July 1 of that growing season unless weather or other conditions indicate that it should be implemented later.

Other catastrophic events may be wind-based events, such as a tornado or intense straight-line winds, and these may cause trees to fall into the site from the surrounding fence lines. A site inspection would be done as soon as the safety of the inspector can be assured. Any fallen trees will be promptly removed and to the extent the prairie plantings are damaged, erosion issues will be addressed and the area reseeded per the standards and practices above.



Vandalism is another possible hazard. This would most likely involve off road vehicles illegally accessing the property and creating ruts. Ruts would be promptly filled, erosion issues would be addressed, and the area would be reseeded per the standards and practices above.

As previously stated, it is impossible to predict all the possible hazards. However, prairie plantings, in the form of Conservation Reserve Program plantings, private prairies, and remnant prairie plant communities have been shown to be exceptionally resilient in the face of disturbance.

Plan Preparation

This Plan was prepared by Carl Korfmacher, Owner, Midwest Prairies, LLC, 11847 Washington Road Edgerton, WI 53534, 800.382.1132, on behalf of Lagrander Hillside Dairy for inclusion in the Water Quality Trading Plan.

ATTACHMENT I

Existing Farming Practices Information



Field	A	B	C	D
Nutrient Management Plan available?	YES	YES	YES	YES
2016 crop & estimated yield	20 TON CORN	20 TON CORN	20 TON CORN	20 TON CORN
2015 crop & estimated yield	SILAGE PER ACRE	SILAGE PER ACRE	SILAGE PER ACRE	SILAGE PER ACRE
2014 crop & estimated yield	35 BUSHELS SOYBEANS PER ACRE			
2016 fertilizer (incl. quantity)	5 GALS LIQUID STARTER PER ACRE			
2015 fertilizer (incl. quantity)	LI	LI	LI	LI
2014 fertilizer (incl. quantity)	200# POT ASH 100# DAP PER ACRE			
2016 manure quantity	12,000 GAL LIQUID MANURE PER ACRE			
2015 manure quantity				
2014 manure quantity	—	—	—	—
Is manure incorporated?	YES	YES	YES	YES
Irrigated?	NO	NO	NO	NO
2016 tilling ¹	SPRING CHISELED, DISKED			→
2015 tilling ¹	LI	LI	LI	LI
2014 tilling ¹	— SPRING MB PLOW			→

¹Choose one of the following:

- Fall chiseled, disked
- Fall chiseled, no disked
- Fall cultivated
- Fall MB Plow
- Fall vertical tillage
- No Till
- Spring chiseled, disked
- Spring chiseled, no disked
- Spring cultivated
- Spring MB Plow
- Spring vertical tillage