

SENECA FOODS – MAYVILLE, WI

WATER QUALITY TRADING PLAN

**TMDL Derived QBELs for Total P &
TSS-North Drain Tile (Outfall 013)**

WPDES Permit WI-0050822

April 13, 2026

Prepared For:



Seneca Foods Corporation
500 South Clark Street
Mayville, Wisconsin 53050-1819
(920) 387-7226

Prepared By:



1601 Airport Road, Suite 110
Waukesha, WI 53188
(414) 897-9933

TABLE OF CONTENTS

1	Background	1
2	Prior Permit Period Credit Use	1
3	Trade Credit Requirements	2
4	Source of Trade Credit	2
4.1	Trade Credit Site Location	2
4.2	Site History	2
4.3	Management Practices Used to Generate Credit.....	3
4.4	Quantification of Credits	3
4.5	Trade Ratio	3
4.6	Amount of Credit Generated.....	3
5	Timeline for Credits & Agreements	4
6	Operation & Maintenance	4
6.1	Initial Seeding	4
6.2	Soil Sampling and Nutrient / Ammendment Recommendations	4
6.3	Harvesting	4
6.4	Reseeding	4
6.5	Rill / Gully Remediation	5
7	Inspection & Reporting	5
7.1	Site Inspections – Post Snow Melt, Harvests & Extreme Rainfall	5
7.2	Annual Water Quality Trading Report	5
7.3	Site Inspection by WDNR.....	6
8	Water Quality Plan Trading Checklist	6
9	Plan Certification	6

FIGURES

- Figure 1** Area Location
Figure 2 Site Location
Figure 3 Field Areas Generating Trade Credit

TABLES

- Table 1** Summary of Credit Use
Table 2 Total P Trade Calculation
Table 3 TSS Trade Calculation
Table 4 Site Inspection Checklist

APPENDICES

- Appendix A** Notice of Intent to Conduct Water Quality Trading
Appendix B Water Quality Trading Management Practice Registration
Appendix C Water Quality Trading Checklist
Appendix D Lease Agreement
Appendix E NRCS Wisconsin Agronomy Technical Note 6
Appendix F Summary of Flows and Potential TP/TSS Discharge-Outfall 013
Appendix G Site Inspection Reports
Appendix H SNAP+ Reports

WATER QUALITY TRADING PLAN

TMDL Derived QBELs for Total P and TSS-North Drain Tile (Outfall 013)

Seneca Foods – Mayville, WI

April 2026

1 BACKGROUND

The Seneca Foods Mayville (Figures 1 & 2) WPDES permit requires that measures be taken to satisfy TMDL derived solids discharge limits for total phosphorus (TP) and total suspended solids (TSS) at Outfall 013 (Figure 3). Discharge from Outfall 013 consists of subsurface tile drainage from Sprayfield G. Operational Evaluation Reports were previously prepared and submitted to the Department in April 2017. These evaluations concluded that source control measures were unlikely to influence amounts of TP and TSS discharged. However, further evaluations (particularly for TP) of the sprayfield/tile system for operational modifications/improvements and other options, such as P trading, were made that would allow Outfall 013 discharge limits to be met. As part of this evaluation, additional monitoring was performed during 2017 and 2018 to support an assessment of alternatives for meeting discharge limits. In particular, dissolved P was added to the laboratory analytical parameters from Outfall 013 discharges so that the impact of solids removal on TP content could be evaluated.

Due to the lack of source control measures and relatively low mass exceedance of TP and TSS limits, Seneca chose to pursue water quality trading to achieve compliance with permit limits as noted in the Final Compliance Alternatives Plan (April 2020). A Water Quality Trading Plan (WQTP) was previously submitted to the Department (October 2020) describing trading planned to generate credits needed for permit compliance. The WQTP also described means of implementing and maintaining land use changes on the agricultural fields noted in Figure 3 that are the basis of credit generation. The WQTP became effective June 1, 2021, as part of the WPDES permit WI-0050822-08 (expires March 31, 2026). This plan has been updated to incorporate operation since 2021 and the necessary updates needed for renewal of the WPDES permit.

2 PRIOR PERMIT PERIOD CREDIT USE

A summary of TP and TSS discharged from Outfall 013 is provided on Table 1. During the WPDES Permit WI-0050822-08 period, limited discharge occurred due to inability to meet permit dissolved oxygen (DO) limits. Consequently, no credits were used.

3 TRADE CREDIT REQUIREMENTS

Historical discharge data and that available from re-spray water to Sprayfield G have been summarized to estimate potential credit needs (Appendix F) due to the limited discharge during the prior permit period. In a few instances, weekly samples were obtained from the tile drainage collection tank when no discharge was occurring. The assessment provided in Appendix F is made utilizing Water Quality-Based Effluent limits for total phosphorus in the Departments January 30, 2026 assessment. Based on this assessment, the most restrictive limit for TP is the 6-month average concentration limit of 0.075 mg/L. TSS limits remain the same as the prior permit with daily maximum of 5.67 lb/day and monthly average of 3.46 lb/day.

Based on these monitoring results (Appendix F), potential TP discharge exceeded the monthly average mass limit by an annual average of 10.3 lb/year with annual exceedances ranging from 0 to 40 lb/year. Similarly, TSS exceeded the monthly average mass limit by an annual average of 194 lbs/year with annual exceedances ranging from 0 to 782 lb/year.

4 SOURCE OF TRADE CREDIT

Trade credit is generated from improvement of cropping management on the agricultural fields (Figure 3) resulting in reduced nonpoint source loadings of TP and TSS.

4.1 TRADE CREDIT SITE LOCATION

Agricultural fields utilized for credit generation are located in NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 34, NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 35 and SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 26, T12N R16E, Town of Williamstown, Dodge County, Wisconsin. Fields utilized are immediately north of Sprayfield G and shown on Figure 3 along with the location of Outfall 013.

4.2 SITE HISTORY

The trading site is owned by Glacier Ridge Landfill LLC (Glacier Ridge). The land was previously considered for use as expanded sprayfield treatment system and is currently part of a multi-year lease by Seneca from Glacial Ridge. As part of the intended sprayfield development, cropping was converted from row cropping (i.e. field corn and soybeans) to permanent grass cover. The trade credit is generated from the change in cropping, resulting in reduced nonpoint source loadings to surface water that offset TP and TSS discharged from Outfall 013. The site has remained as permanent grass cover since this conversion. Both the area generating credit and the sprayfield containing Outfall 013 are included in the same lease. The current land lease is provided in Appendix D. The trading credit would be eliminated without renewal of the lease.

4.3 MANAGEMENT PRACTICES USED TO GENERATE CREDIT

Cropping during 2009 and 2010 was a corn/soybean rotation which, based on site observations, utilized reduced tillage methods. During 2011, while the site was being investigated for potential for use as sprayfield, the site was uncropped (fallow) during much of the growing season. The summer of 2011, the site was seeded to a mixture of grasses in anticipation of use as sprayfield. Since the 2011 seeding, site cropping has been managed like the adjacent spray irrigation fields including regular harvest of forage produced. Management practice registration is included as Appendix B.

4.4 QUANTIFICATION OF CREDITS

Trading credits were initially quantified using SnapPlusV2 (build 19.3). Baseline conditions were determined by carrying the corn/soybean rotation starting in 2009 forward through the end of the renewed permit period (2025). Recommended fertilizer addition rates were used for crops grown, which included a starter fertilizer phosphorus addition for corn cropping. Reductions associated with cropping changes were calculated by revising the baseline cropping over the same period to include fallow during 2011 followed by perennial grass cover thereafter. No fertilizer has been applied since fields were cropped to mixed grasses. For baseline and reduction scenarios, P Trade and Sediment Trade reports were generated for use in calculating trade credits. SnapPlusV2 reports are provided in Appendix H. The original quantification as described above has been used to quantify credits for the current permit/trade period as field permanent grass cover cropping remains the same and no fertilizer P has been added.

4.5 TRADE RATIO

Trade ratio has been set at 2:1 by the Department.

4.6 AMOUNT OF CREDIT GENERATED

A detailed calculation of trade credits for each field are provided in Table 2 for TP, and Table 3 for TSS. Only long-term credit can be claimed because cropping practices were implemented more than 10 years ago. A summary of rotation average credits for the combined fields is provided below.

Parameter	Interim Credit¹	Long Term Credit (Year 11 & beyond)	Total
TP (lbs/yr)	0	53.2	53.2
TSS (lbs/yr)	0	17,060	17,060

¹ Available during the first 10 years

5 TIMELINE FOR CREDITS & AGREEMENTS

Management changes generating credits were initiated during crop year 2012 and have produced reduced TP and TSS loadings to surface water compared to baseline cropping since that time. However, trade credits in this Plan address credit generated during the period of WPDES permit WI-0050822-09. Seneca may choose to renew the trade agreement as part of future WPDES permits.

6 OPERATION & MAINTENANCE

Operation and maintenance is performed consistent with NRCS Wisconsin Agronomy Technical Note 6 (Appendix E) as it relates for forage and biomass production except as noted below.

6.1 INITIAL SEEDING

Fields were first seeded in 2011 with a continuous grass cover and have been maintained as the same since that time. The seed mix utilized includes Kentucky fescue, Switch grass, Orchard grass, Alsike clover and Annual Rye at a seeding rate of 20 lbs/acre. Subsequent seeding for maintenance purposes will be performed using the above seed mix in the following proportions: 35% Kentucky Fescue, 25% Switch Grass, 15% Orchard grass, 15% Alsike clover and 10% annual Rye

6.2 SOIL SAMPLING AND NUTRIENT / AMMENDMENT RECOMMENDATIONS

Soil sampling was performed in the fall 2024 consistent with procedures described in UW Extension Publication A2809 (Nutrient application guidelines for field, vegetable, and fruit crops in Wisconsin). Specifically, soils were analyzed for pH, available phosphorus, available potassium and nitrate-N. Subsequent soil sampling will be performed at minimum 4-year intervals. Any fertilizer or lime additions that are made will be consistent with recommendations derived from soil test results. No surface application of phosphorus fertilizer will be made.

6.3 HARVESTING

Forage crops are harvested at least twice annually. As vegetative cover consists of mixed grasses, no minimum plant harvest height is specified. Post harvest height is that associated with typical harvest equipment of about 3 inches. Crop yield is estimated from number of bales generated during harvest (i.e., tons/acre).

6.4 RESEEDING

Reseeding is performed consistent with procedures described in NRCS Technical Note 6 (Appendix E). The preferred method is no-till interseeding following a harvest event.

6.5 RILL / GULLY REMEDIATION

The site is cropped in a manner similar to the adjacent sprayfields. With the permanent grass cover maintained on these sites, significant rill/gully formation has not historically occurred. However, in the event of significant rill/gully formation, the affected area(s) will be regraded and reseeded. Regrading will be performed with a secondary tillage implement such as a disc harrow. A narrow-width implement is preferred to accomplish regrading while minimizing the disturbed area. Following regrading, reseeding of the disturbed areas is performed as described in Appendix E.

7 INSPECTION & REPORTING

7.1 SITE INSPECTIONS – POST SNOW MELT, HARVESTS & EXTREME RAINFALL

Site inspections are performed by Seneca in the spring following snowmelt, following cover crop harvests and following extreme rainfall/runoff events. Each of the fields are evaluated to identify areas of erosion or other factors that may have reduced the cover crop stand. A site inspection checklist (Table 3) is used to document inspection date, performing personnel, and observations made. At least one photograph of each of the four field areas (Figure 3) is taken to document site conditions. Areas identified as having reduced stands (i.e., <70% crop cover) are reseeded.

Crop cover is estimated in the field using a line point intercept method, where the percentage of equidistant points on a tape measure (or other measurement tool) placed on the land surface that are overlain by cover serve as an estimate of cover percentage. An example of the line point intercept method includes use of a 10-foot long 1/2" diameter PVC pipe with ten markings at 1-foot increments. The number of the ten observation points covered by crop are counted and then divided by the total number of observations (i.e., ten) to calculate the percentage of cover. A minimum of three measurements will be made at representative locations in the field.

Inspection dates and responses taken as a result of the inspections are documented in the Annual Water Quality Trading Report. If inspections indicate fields are not compliant with this plan, the Department will be notified by letter or email within 1 week of the inspection and informed of corrective measures to be taken. Past site inspection reports are provided in Appendix G.

7.2 ANNUAL WATER QUALITY TRADING REPORT

The annual report is provided to the Department by January 31 of the year following the reporting year. The report contains the number of pounds of TP and TSS discharged from Outfall 013 during the prior calendar year and compared with credits to demonstrate compliance. The annual report also summarizes results of the site inspections performed during the calendar year reported.

7.3 SITE INSPECTION BY WDNR

The fields may be inspected by WDNR after providing notice of intent to inspect to the Seneca Foods Mayville plant manager.

8 WATER QUALITY PLAN TRADING CHECKLIST

A Water Quality Trading Plan Checklist is provided in Appendix C which includes plan locations of specific checklist plan requirements for point to nonpoint trades.

9 PLAN CERTIFICATION

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

SENECA FOODS-MAYVILLE

Laura Mushinski

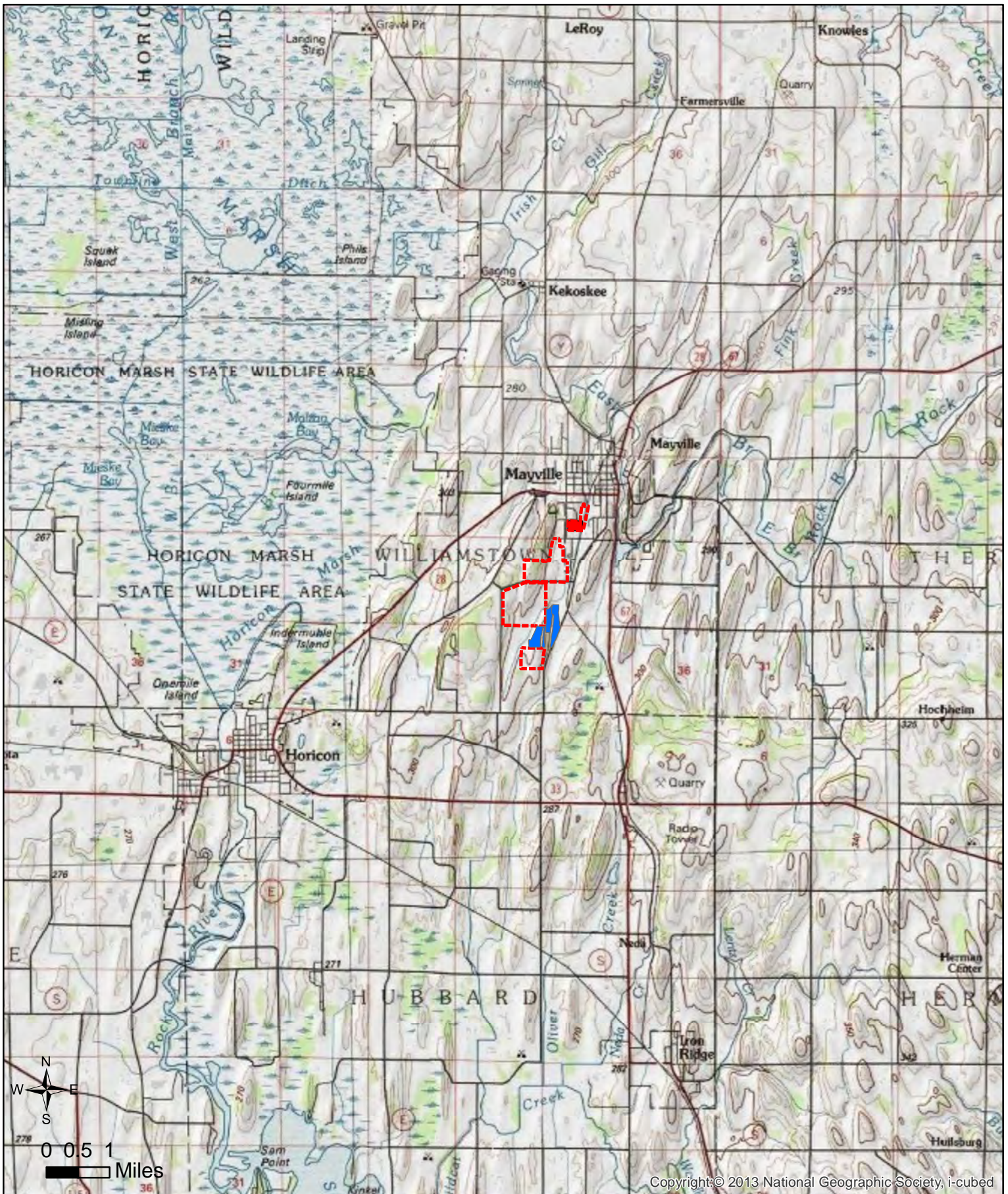
[Laura Mushinski \(Apr 13, 2026 15:52:36 CDT\)](#)

Laura Mushinski

Director - Env Affairs

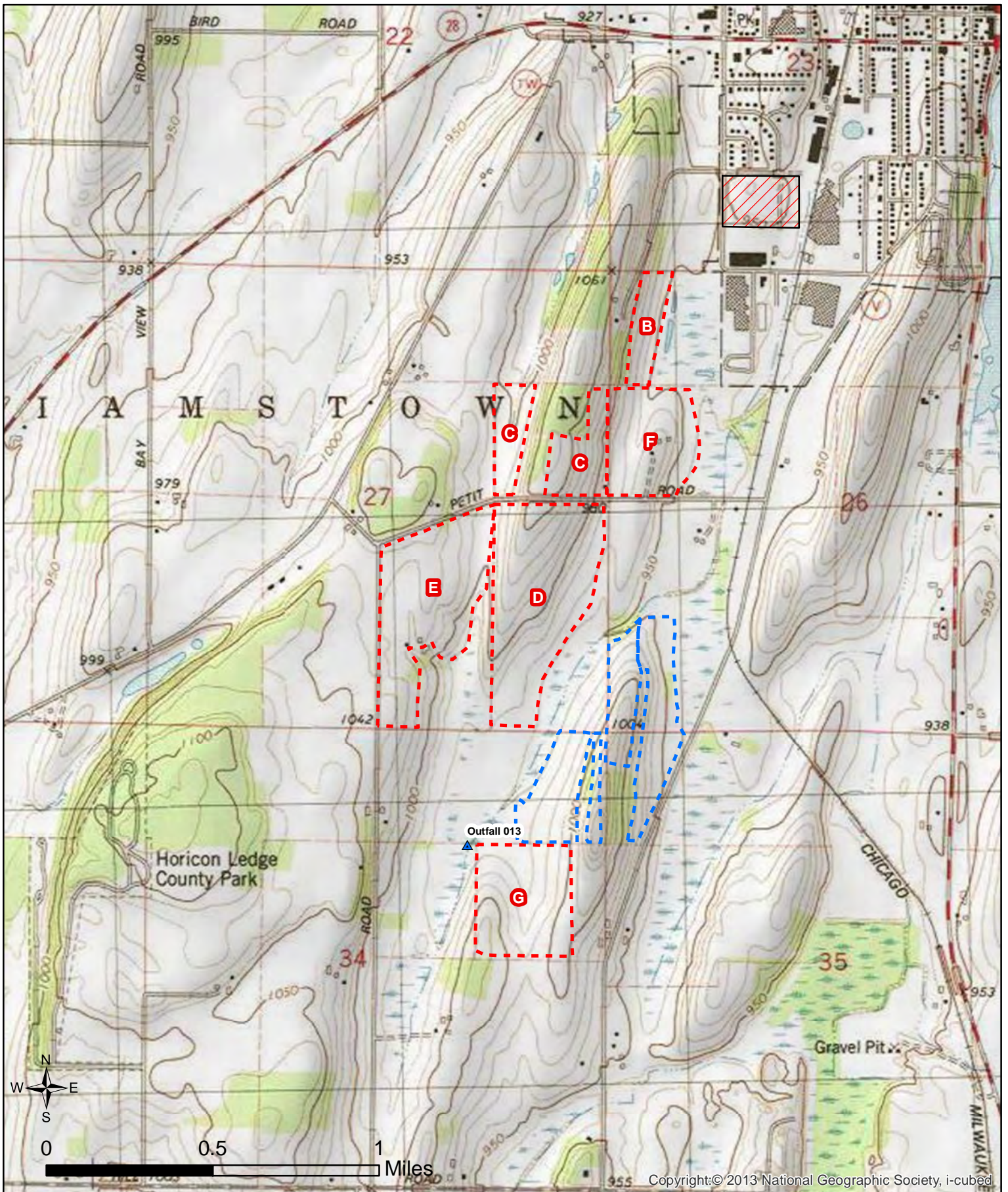
Seneca Foods-Mayville
5000 S Clark St
Mayville, WI 53050

FIGURES






Copyright © 2013 National Geographic Society, i-cubed

			SITE LOCATION			
	1601 AIRPORT RD SUITE 110 WAUKESHA, WI 53188 AS@APPLIEDSCIENCEINC.COM - (414) 897-9933		SENECA FOODS CORPORATION MAYVILLE, WISCONSIN			FIGURE NO.
	DRAWN RCW	CHECKED NPH	APPROVED NPH	REVISED 09/08/2025	PROJECT NO. C12901	FILE 2025Fig1TRADE



Copyright © 2013 National Geographic Society, i-cubed

	Fields Used to Generate Credit
	Sprayfields
	Plant

APPLIED SCIENCE
 SCIENCE • ENGINEERING • MANAGEMENT
 1601 AIRPORT RD | SUITE 110 | WAUKESHA, WI 53188
 AS@APPLIEDSCIENCEINC.COM - (414) 897-9933

DRAWN	CHECKED	APPROVED
RCW	NPH	NPH

AREA LOCATION		
SENECA FOODS CORPORATION MAYVILLE, WISCONSIN		
REVISED	PROJECT NO.	FILE
09/08/2025	C12901	2020Fig2TRADE
FIGURE NO.		2

TABLES

Table 1
WASTEWATER MANAGEMENT - SENECA FOODS MAYVILLE
Summary of TP/TSS Discharge and Trade Credit Use

<u>Year</u>	<u>Month</u>	<u>Total Suspended Solids (TSS)</u>			<u>Total Phosphorus (TP)</u>	
		<u>Average</u> -----lbs/day-----	<u>Maximum</u> -----lb-----	<u>Credit Used</u> -----lb-----	<u>Average</u> -----lb/day-----	<u>Credit Used</u> -----lb-----
2021	June	0.147	0.053	0	0.0013	0
	July	0.130	0.257	0	0.000925	0
	Aug	0.059	0.059	0	0.001	0
	Sep	0	0	0	0	0
	Oct	1.510	1.792	0	0.0273	0
	Nov	0.459	0.617	0	0.013	0
2022	No Discharge					
2023	No Discharge					
2024	No Discharge					

Table 2
WASTEWATER MANAGEMENT - SENECA MAYVILLE
Total Phosphorus (P) Trade Calculation

Farm	Field	Unit	Acres	2020	2021	2022	2023	2024	2025	Average
Seneca-Mayville	Field 1	Baseline (lbs)	16.2	22	69	22	68	21	66	
Seneca-Mayville	Field 1	Reduction (lbs)	16.2	0	1	1	1	0	0	
		Savings (lbs)		22	68	21	67	21	66	44
		TMDL Credit Threshold ¹		2.6	2.6	2.6	2.6	2.6	2.6	
		Baseline		1.3	4.3	1.3	4.2	1.3	4.1	
		Reduction		0.0	0.1	0.1	0.1	0.0	0.0	
Interim Credits ³		Difference		1.3	4.2	1.3	4.1	1.3	4.1	
		Difference * Acres		21.6	68.0	20.7	67.2	20.9	65.9	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit		10.8	34.0	10.3	33.6	10.5	33.0	22.0
Long Term Credit		Difference		1.3	2.5	1.3	2.5	1.3	2.6	
		Difference * Acres		21.6	41.1	20.7	41.1	20.9	42.0	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit		10.8	20.6	10.3	20.6	10.5	21.0	15.6
Seneca-Mayville	Field 2	Baseline (lbs)	3.2	10	34	10	33	10	33	
Seneca-Mayville	Field 2	Reduction (lbs)	3.2	0	0	0	0	0	0	
		Savings (lbs)		10	34	10	33	10	33	22
		TMDL Credit Threshold ¹		2.6	2.6	2.6	2.6	2.6	2.6	
		Baseline		3.1	10.6	3.1	10.3	3.1	10.3	
		Reduction		0	0	0	0	0	0	
Interim Credits ³		Difference		3.1	10.6	3.1	10.3	3.1	10.3	
		Difference * Acres		10.0	34.0	10.0	32.9	10.0	33.0	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit		5.0	17.0	5.0	16.5	5.0	16.5	10.8
Long Term Credit		Difference		2.6	2.6	2.6	2.6	2.6	2.6	
		Difference * Acres		8.3	8.3	8.3	8.3	8.3	8.3	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit		4.2	4.2	4.2	4.2	4.2	4.2	4.2
Seneca-Mayville	Field 3	Baseline (lbs)	11.1	20	62	21	61	21	60	
Seneca-Mayville	Field 3	Reduction (lbs)	11.1	0	1	1	1	1	1	
		Savings (lbs)		20	61	20	60	20	59	40
		TMDL Credit Threshold ¹		2.6	2.6	2.6	2.6	2.6	2.6	
		Baseline		1.8	5.6	1.9	5.5	1.9	5.4	
		Reduction		0	0	0	0	0	0	
Interim Credits ³		Difference		1.8	5.5	1.8	5.4	1.8	5.3	
		Difference * Acres		20.4	61.0	20.0	60.0	20.0	59.2	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit		10.2	30.5	10.0	30.0	10.0	29.6	20.0
Long Term Credit		Difference		1.8	2.6	1.8	2.6	1.8	2.6	
		Difference * Acres		20.4	28.9	20.0	28.9	20.0	28.9	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit		10.2	14.4	10.0	14.4	10.0	14.4	12.2
Seneca-Mayville	Field 4	Baseline (lbs)	20.4	34	106	34	104	33	102	
Seneca-Mayville	Field 4	Reduction (lbs)	20.4	2	2	2	2	2	2	
		Savings (lbs)		32	104	32	102	31	100	67
		TMDL Credit Threshold ¹		2.6	2.6	2.6	2.6	2.6	2.6	
		Baseline		1.7	5.2	1.7	5.1	1.6	5.0	
		Reduction		0.1	0.1	0.1	0.1	0.1	0.1	
Interim Credits ³		Difference		1.6	5.1	1.6	5.0	1.5	4.9	
		Difference * Acres		31.8	104.1	32.3	102.5	31.0	100.0	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit		15.9	52.1	16.2	51.2	15.5	50.0	33.5
Long Term Credit		Difference		1.6	2.6	1.6	2.6	1.5	2.6	
		Difference * Acres		31.8	53.0	32.3	53.0	31.0	53.0	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit		15.9	26.5	16.2	26.5	15.5	26.5	21.2

¹ Rock River TMDL Reach 14, 56% reduction from baseline load of 6 lb/acre

² Specified by the Department

³ Available during the first 10 years

Total Interim Credit (lb/yr) 86.4

Total Long-Term Credit (lb/yr) 53.2

Table 3
WASTEWATER MANAGEMENT - SENECA MAYVILLE
Total Suspended Solids (TSS) Trade Calculation

Farm	Field		Acres	2020	2021	2022	2023	2024	2025	Average
Seneca-Mayville	Field 1	Baseline (Tons)	16.2	2.85	8.97	2.85	8.97	2.85	8.97	5.91
Seneca-Mayville	Field 1	Reduction (Tons)	16.2	0.01	0.01	0.01	0.01	0.01	0.01	
		Savings (Tons)		2.84	8.96	2.84	8.96	2.84	8.96	
		TMDL Credit Threshold ¹		1.88	5.92	1.88	5.92	1.88	5.92	
Interim Credits ³		Difference (Tons)		2.84	8.96	2.84	8.96	2.84	8.96	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit (Tons)		1.42	4.48	1.42	4.48	1.42	4.48	2.95
Long Term Credit		Difference (Tons)		1.87	5.91	1.87	5.91	1.87	5.91	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit (Tons)		0.93	2.95	0.93	2.95	0.93	2.95	1.94
Seneca-Mayville	Field 2	Baseline (Tons)	3.2	1.72	5.64	1.72	5.64	1.72	5.64	3.68
Seneca-Mayville	Field 2	Reduction (Tons)	3.2	0.01	0.01	0.01	0.01	0.01	0.01	
		Savings (Tons)		1.71	5.63	1.71	5.63	1.72	5.63	
		TMDL Credit Threshold ¹		1.14	3.72	1.14	3.72	1.14	3.72	
Interim Credits ³		Difference (Tons)		1.71	5.63	1.71	5.63	1.72	5.63	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit (Tons)		0.86	2.81	0.86	2.82	0.86	2.82	1.84
Long Term Credit		Difference (Tons)		1.13	3.71	1.13	3.71	1.13	3.71	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit (Tons)		0.56	1.86	0.56	1.86	0.56	1.86	1.21
Seneca-Mayville	Field 3	Baseline (Tons)	11.1	2.30	6.76	2.30	6.76	2.30	6.76	4.53
Seneca-Mayville	Field 3	Reduction (Tons)	11.1	0.01	0.01	0.01	0.01	0.01	0.01	
		Savings (Tons)		2.29	6.75	2.29	6.75	2.29	6.75	
		TMDL Credit Threshold ¹		1.52	4.46	1.52	4.46	1.52	4.46	
Interim Credits ³		Difference (Tons)		2.29	6.75	2.29	6.75	2.29	6.75	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit (Tons)		1.14	3.38	1.15	3.38	1.15	3.38	2.26
Long Term Credit		Difference (Tons)		1.51	4.45	1.51	4.45	1.51	4.45	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit (Tons)		0.75	2.23	0.75	2.23	0.75	2.23	1.49
Seneca-Mayville	Field 4	Baseline (Tons)	20.4	5.70	17.96	5.70	17.96	5.70	17.96	
Seneca-Mayville	Field 4	Reduction (Tons)	20.4	0.02	0.02	0.02	0.02	0.02	0.02	
		Savings (Tons)		5.68	17.94	5.68	17.94	5.69	17.94	11.81
		TMDL Credit Threshold ¹		3.76	11.85	3.76	11.85	3.76	11.85	
Interim Credits ³		Difference (Tons)		5.68	17.94	5.68	17.94	5.69	17.94	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit (Tons)		2.84	8.97	2.84	8.97	2.84	8.97	5.91
Long Term Credit		Difference (Tons)		3.74	11.83	3.75	11.83	3.75	11.83	
		Trade Ratio ²		2:1	2:1	2:1	2:1	2:1	2:1	
		Final Credit (Tons)		1.87	5.92	1.87	5.92	1.87	5.92	3.89

¹ Rock River TMDL Reach 14, 33% reduction from baseline load

² Specified by the Department

³ Available during the first 10 years

Total Interim Credit (lbs/year) 25902
Total Long-Term Credit (lbs/year) 17080

Table 4
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: _____

Inspector Initials: _____

Site Location: Field 1 (west) Field 2 (west central)
 Field 3 (east central) Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring Harvest Major Rainfall (~ _____ inch)

Crop Condition:

No visual evidence of reduced stands
 Visual evidence of reduced stand (indicate location(s) on map)

Evidence of Soil Erosion:

No visual evidence of soil erosion
 Visual evidence of localized erosion (indicate location(s) on map)

Site Photos:

Photo documentation of representative site conditions
 Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None
 Re seeding Selective Field Areas (Attach figure showing areas to be addressed)
 Regrading and re seeding eroded field areas (Attach figure showing areas to be addressed)

Average Crop Coverage: _____ %

APPENDIX A

Notice of Intent to Conduct Water

Quality Trading

Notice of Intent to Conduct Water Quality Trading

Form 3400-206 (1/14)

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

Applicant Information

Permittee Name Seneca Foods Mayville		Permit Number WI- 0050822-08		Facility Site Number 114007520	
Facility Address 500 S Clark St.			City Mayville	State WI	ZIP Code 53050
Project Contact Name (if applicable) Robert Wendt		Address 2902 Perry St		City Madison	State WI
Project Name Seneca Foods Mayville TP/TSS					
Receiving Water Name East Branch of Rock River		Parameter(s) being traded Total P & TSS		HUC 12(s) 070900010107	

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

Credit Generator Information

Credit generator type (select all that apply):

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

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

Unsure

Are any of the credit generators downstream of the applicant? Yes

No
 Unsure

Will a broker/exchange be used to facilitate trade? Yes; Name: _____

No
 Unsure

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

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

Notice of Intent to Conduct Water Quality Trading

Form 3400-206 (1/14)

Page 2 of 2

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

List the practices that will be used to generate credits:

Credits will be generated by conversion of previously row cropped farm land to permanent grass cover. Reduced erosion associated with the management change will be used to offset total phosphorus and total suspended solids generated from tile line discharge.

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

Projected date credits will be available: 09/01/2020

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
R. C. Werner

Date Signed
10-20-2020

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
[Signature]

Date Signed
10/22/20

APPENDIX B

Water Quality Trading Management

Practice Registration

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 Seneca Foods Mayville		Permit Number WI- 0050822-08	Facility Site Number 114007520		
Facility Address 500 S Clark St.		City Mayville	State WI	ZIP Code 53050	
Project Contact Name (if applicable) Robert Wendt	Address 2901 Perry St	City Madison	State WI	ZIP Code 53713	
Project Name Seneca Foods Mayville TP/TSS					

Broker/Exchange Information (if applicable)

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

Broker/Exchange Organization Name	Contact Name		
Address	Phone Number	Email	

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

Type	Trade Agreement Number	Practices Used to Generate Credits	Anticipated Load Reduction	Trade Ratio	Method of Quantification
<input type="radio"/> Urban NPS <input checked="" type="radio"/> Agricultural NPS <input type="radio"/> Other					
County Dodge	Closest Receiving Water Name East Branch of Rock River		Land Parcel ID(s)	Parameter(s) being traded TP & TSS	

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>Robert C. Wendt</i>	Date Signed 10-20-2020
---	---------------------------

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>Miss Small</i>	Date Signed 10/22/20
---	-------------------------

Leave Blank - For Department Use Only

Date Received	Trade Docket Number
Entered in Tracking System <input type="checkbox"/> Yes	Date Entered
Name of Department Reviewer	

APPENDIX C

Water Quality Trading

Checklist

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

Applicant Information				
Permittee Name Seneca Foods Mayville		Permit Number WI- 0050822-08		Facility Site Number 114007520
Facility Address 500S Clark St			City Mayville	State WI
ZIP Code 53050			City Madison	State WI
Project Contact Name (if applicable) Robert Wendt		Address 2902 Perry St		ZIP Code 53713
Project Name Seneca Foods Mayville TP/TSS				
Receiving Water Name East Branch of Rock River		Parameter(s) being traded Total P & TSS		HUC 12(s) 070900010107

Credit Generator Information	
Credit generator type (select all that apply):	<input type="checkbox"/> Permitted Discharge (non-MS4CAFO) <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?	<input type="radio"/> Yes; HUC 12: _____ <input checked="" type="radio"/> No
Are any of the credit generators downstream of the applicant?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Will a broker/exchange be used to facilitate trade?	<input type="radio"/> Yes (include description and contact information in WQT plan) <input checked="" type="radio"/> No

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

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

Discharge Type	Permit Number	Name	Contact Information	Trade Agreement Number
<input type="radio"/> Traditional <input type="radio"/> MS4 <input type="radio"/> CAFO				
<input type="radio"/> Traditional <input type="radio"/> MS4 <input type="radio"/> CAFO				
<input type="radio"/> Traditional <input type="radio"/> MS4 <input type="radio"/> CAFO				
<input type="radio"/> Traditional <input type="radio"/> MS4 <input type="radio"/> CAFO				
<input type="radio"/> Traditional <input type="radio"/> MS4 <input type="radio"/> CAFO				

Water Quality Trading Checklist

Form 3400-208 (1/14)

Page 2 of 3

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

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

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

Discharge Type	Practices Used to Generate Credits	Method of Quantification	Trade Agreement Number	Have the practice(s) been formally registered?
<input type="radio"/> Urban NPS <input checked="" type="radio"/> Agricultural NPS <input type="radio"/> Other				<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Only in part
<input type="radio"/> Urban NPS <input type="radio"/> Agricultural NPS <input type="radio"/> Other				<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Only in part
<input type="radio"/> Urban NPS <input type="radio"/> Agricultural NPS <input type="radio"/> Other				<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Only in part
<input type="radio"/> Urban NPS <input type="radio"/> Agricultural NPS <input type="radio"/> Other				<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Only in part
<input type="radio"/> Urban NPS <input type="radio"/> Agricultural NPS <input type="radio"/> Other				<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Only in part
<input type="radio"/> Urban NPS <input type="radio"/> Agricultural NPS <input type="radio"/> Other				<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Only in part
<input type="radio"/> Urban NPS <input type="radio"/> Agricultural NPS <input type="radio"/> Other				<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Only in part
<input type="radio"/> Urban NPS <input type="radio"/> Agricultural NPS <input type="radio"/> Other				<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Only in part

Does plan have a narrative that describes:		Plan Section
a. Description of existing land uses	<input checked="" type="radio"/> Yes <input type="radio"/> No	3.2
b. Management practices used to generate credits	<input checked="" type="radio"/> Yes <input type="radio"/> No	4.1
c. Amount of credit being generated	<input checked="" type="radio"/> Yes <input type="radio"/> No	4.2
d. Description of applicable trade ratio per agreement/management practice	<input checked="" type="radio"/> Yes <input type="radio"/> No	4.3
e. Location where credits will be generated	<input checked="" type="radio"/> Yes <input type="radio"/> No	3.1
f. Timeline for credits and agreements	<input checked="" type="radio"/> Yes <input type="radio"/> No	5
g. Method for quantifying credits	<input checked="" type="radio"/> Yes <input type="radio"/> No	4.2

Water Quality Trading Checklist

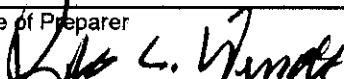
Form 3400-208 (1/14)

Page 3 of 3

Does plan have a narrative that describes:		Plan Section
h. Tracking procedures	<input checked="" type="radio"/> Yes <input type="radio"/> No	7.1/7.2
i. Conditions under which the management practices may be inspected	<input checked="" type="radio"/> Yes <input type="radio"/> No	7.3
j. Reporting requirements should the management practice fail	<input checked="" type="radio"/> Yes <input type="radio"/> No	7.1
k. Operation and maintenance plan for each management practice	<input checked="" type="radio"/> Yes <input type="radio"/> No	6
l. Location of credit generator in proximity to receiving water and credit user	<input type="radio"/> Yes <input type="radio"/> No	3.1
m. Practice registration documents, if available	<input checked="" type="radio"/> Yes <input type="radio"/> No	Appendix B
n. History of project site(s)	<input checked="" type="radio"/> Yes <input type="radio"/> No	3.2
o. Other: _____	<input type="radio"/> Yes <input type="radio"/> No	

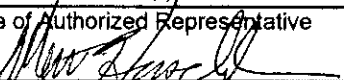
The preparer certifies all of the following:

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

Signature of Preparer 	Date Signed 10-20-2020
--	---------------------------

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 10/22/20
---	-------------------------

APPENDIX D

Lease

Agreement

LEASE AGREEMENT

THIS LEASE AGREEMENT (this "Lease") is made as of the 3rd day of June 2025 by and between Glacier Ridge Landfill, LLC, a Wisconsin limited liability company ("Lessor") and Seneca Foods Corporation, a corporation ("Lessee").

In consideration of the respective covenants of the parties and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

1. LEASED PREMISES; TERM AND POSSESSION

(a) Premises. In consideration of the rents, covenants and agreements hereinafter reserved and contained on the part of the Lessee to be observed and performed, the Lessor demises and leases to the Lessee, and the Lessee rents from the Lessor, the vacant real property parcels identified on Exhibit A attached hereto, which consists of approximately 131.63 acres located in the Village of Kekoskee, Dodge County, Wisconsin (collectively the "Premises"). Lessee's use of all driveways and access areas with respect to the Premises are non-exclusive. This Lease and the rights of the parties set forth herein shall create the relationship of "Lessor" and "Lessee" only between Lessor and Lessee.

Term: The term of this Lease (the "Term") shall commence on July 1, 2025 (the "Commencement Date") and shall continue thereafter for a period of two years. Thereafter the Term may be renewed only by mutual agreement of the parties.

(b) Possession; AS-IS: Lessee accepts possession of the Premises AS-IS, in its present condition, with all faults. Lessor makes no warranty or representation whatsoever with respect to the condition of the Premises. Lessee acknowledges that it has inspected the Premises to the satisfaction of Lessee and hereby waives any claim based upon any condition or defect, latent or patent, known or unknown. Lessee agrees that it shall, at its own cost and expense fully perform and observe all requirements and conditions of all easements and other exceptions to title existing as of the Commencement Date. LESSEE ACKNOWLEDGES AND AGREES THAT, EXCEPT AS EXPRESSLY SET FORTH IN THIS LEASE, LESSOR HAS NOT MADE, AND SPECIFICALLY NEGATES AND DISCLAIMS, ANY REPRESENTATIONS, WARRANTIES, COVENANTS OR AGREEMENTS OF ANY KIND OR CHARACTER REGARDING ANY ASPECT OF THE DEMISED PREMISES, INCLUDING, WITHOUT LIMITATION: (A) THE VALUE, NATURE, QUALITY OR PHYSICAL CONDITION THEREOF, (B) THE INCOME TO BE DERIVED THEREFROM, (C) THE SUITABILITY OF THE PREMISES FOR ANY ACTIVITY OR USE WHICH LESSEE MAY CONDUCT THEREON, OR (D) THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PREMISES, (E) THE MANNER, QUALITY, STATE OF REPAIR OR LACK OF REPAIR OF THE PREMISES. ADDITIONALLY, EXCEPT AS EXPRESSLY SET FORTH IN THIS LEASE, NO PERSON ACTING ON BEHALF OF LESSOR IS AUTHORIZED TO MAKE, AND BY EXECUTION

HEREOF LESSEE ACKNOWLEDGES THAT NO PERSON HAS MADE, ANY REPRESENTATION, WARRANTY, COVENANT OR AGREEMENT REGARDING THE PREMISES OR THE TRANSACTIONS CONTEMPLATED HEREIN. LESSEE ACKNOWLEDGES THAT, HAVING BEEN GIVEN THE OPPORTUNITY TO INSPECT THE PREMISES, LESSEE IS RELYING SOLELY ON ITS OWN INVESTIGATIONS AND NOT ON ANY INFORMATION PROVIDED OR TO BE PROVIDED BY LESSOR, OTHER THAN INFORMATION EXPRESSLY REQUIRED TO BE PROVIDED BY LESSOR HEREUNDER. LESSEE FURTHER ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW THE LEASE PROVIDED FOR HEREIN IS MADE ON AN "AS-IS, WHERE-IS" BASIS WITH ALL FAULTS. THE PROVISIONS OF THIS SECTION SHALL SURVIVE ANY TERMINATION OF THIS LEASE.

2. RENT

(a) Base Rent: Lessee shall pay to Lessor during the Term, without notice, demand, deduction or set-off, base annual rent in the amount of \$ 41,279.01 (constituting \$ 222.75 per acre, the "Base Rent"), payable the 1st day of July each year. Each year during the Term, beginning on July 1st, 2025, the Base Rent shall increase by 2.5 % per acre. If the Commencement Date is not the first of a month, the first installment of annual Base Rent shall be prorated by the number of calendar days remaining in the month in which the Commencement Date occurs.

(b) Additional Rent. In addition to Base Rent, all other amounts to be paid by Lessee pursuant to this Lease whether to be paid directly by Lessee or to the Lessor, shall be deemed to be Additional Rent, whether or not designated as such and where payable to the Lessor, shall be due and payable with the next installment of Base Rent due after receipt by Lessee of Lessor's statement thereof. Lessor shall have the same remedies for failure to pay Additional Rent as for the non-payment of Base Rent. Base Rent and Additional Rent are together the "Rent."

(c) Sales Tax. With each payment of Base Rent and Additional Rent payable directly to the Lessor, Lessee shall also pay the Lessor all applicable sales tax due thereon.

(d) Interest on Late Payments. Any amount due to the Lessor not paid on the due date shall bear interest at the rate of twelve percent (12%) per annum calculated from the due date until the date of payment, in full. Payment of such interest shall not excuse or cure any default by Lessee under this Lease.

3. USE

(a) Permitted Use: Lessee covenants and agrees that the Premises will be used and occupied by the Lessee only for the following purposes: planting, growing and harvesting hay with vegetable processing wastewater in strict compliance with all Laws (as defined below), including, but not limited to, Lessee's Permit to Discharge Under the Wisconsin Pollutant Discharge Elimination System and activities directly incident thereto, provided the same complies with the restrictions and requirements set forth in this Agreement. LESSEE shall also be permitted to operate four-wheel vehicles on the Leased Premises. Lessee shall not use the Premises or suffer to be used on the Premises or any portion thereof for any other purpose or purposes other than as stated herein without Lessor's prior written consent, which may be withheld by Lessor in its sole discretion. Lessee specifically agrees that the Premises shall not be used for mining or hunting. Lessee shall not occupy or use the Premises or permit the same to be occupied or used for any purpose or business which is unlawful. Lessee shall not operate on the Premises in any manner that interferes with or potentially interferes with any of the business

operations of Lessor or its affiliates, or that creates a public or private nuisance or that is a threat to the health, safety, or welfare of the Lessor or any third party or their employees, invitees, agents, or otherwise. Lessee shall not cause, allow or permit any interference with or damage or loss to any property or equipment of Lessor.

(b) Restrictions: Lessee shall not commit or suffer to be committed any waste upon the Premises and shall not use or permit the Premises to be used for any unlawful purposes, shall not violate any applicable zoning, building or land use regulations or restrictions, suffer or permit any condition that may make void or voidable any insurance then in force with respect to the Premises or render unobtainable any coverages required hereunder and shall not permit or suffer any overloading of the floors of any building on the Premises.

(c) Compliance with Laws by Lessee: Lessee, at its sole expense, shall comply in all material respects with all federal, state and local laws, ordinances, orders, rules, regulations, permits and licenses including, without limitation, all Environmental Laws (as defined below) with respect to its use and occupation of the Premises (collectively, "Laws"), and shall procure and maintain in good standing all permits, certificates, licenses and other authorizations required by applicable Laws relating to its use or occupancy of the Premises or the conduct of Lessee's business on the Premises. Lessee shall make all reports and filings required by applicable Laws with respect to its use of the Premises. Lessee shall defend, indemnify and hold harmless Lessor and Lessor's employees, directors, officers, stockholders, affiliates and agents from and against all claims, demands, liabilities, fines, penalties, losses, costs and expenses, including, but not limited to, costs of compliance, remedial costs, and reasonable attorney's fees, arising out of or relating to any failure of Lessee to comply in all materials respects with applicable Laws. Without limiting the foregoing, Lessee shall cause its employees, agents, customers, visitors, invitees, licensees, contractors, assignees and sublessees to:

(i) comply with all pretreatment requirements imposed by law with respect to the disposal of waste or effluent on the Premises;

(ii) prevent any dumping, spillage, leakage, or runoff of Hazardous Materials in any material quantity into dry wells, storm drains, water retention areas, or any areas where such substances could be absorbed into the soil of the Premises; and

(iii) Prepare, and upon request, provide a copy to the Lessor of, all response plans required by applicable Law.

(d) Hazardous Materials: Lessee shall not cause nor permit, nor allow any of its employees, agents, customers, visitors, invitees, licensees, contractors, assignees or sublessees to cause or permit any Hazardous Materials to be brought upon, stored, manufactured, generated, blended, handled, recycled, treated, disposed of or used on, under or about the Premises except in compliance with all applicable Environmental Laws. As used in this Section 3, (i) "Hazardous Materials" means any chemical, substance, material, controlled substance, waste or living organism which is or may be hazardous to human health or safety or to the environment due to its radioactivity, ignitability, corrosivity, reactivity, explosivity, toxicity, carcinogenicity, mutagenicity, phytotoxicity, infectiousness or other harmful or potentially harmful properties or effects, including, without limitation, petroleum and petroleum products, asbestos, radon, polychlorinated biphenyls (PCBs), refrigerants (as defined in the EPA's "Refrigerant Recycling Rule" as amended from time to time), and all of those chemicals, substances, materials, controlled substances, waste and living organisms, which are listed, defined or regulated in any manner by an Environmental Law based upon, directly or indirectly, such properties or effects; and (ii)

“ Environmental Laws” means any federal, state or local statute or principle of common law, regulation, ordinance or code that requires or relates to (i) advising appropriate regulatory agencies, employees or the public of any intended release, actual release or threat of release of pollutants or Hazardous Materials, violations of discharge limits or other prohibitions, (ii) preventing or reducing to acceptable levels the release of pollutants or Hazardous Materials into the natural environment, (iii) reducing the quantities, preventing the release or minimizing the hazardous characteristics of wastes that are generated, (iv) protecting resources, species or ecological amenities, (v) reducing to acceptable levels the risks inherent in the transportation of pollutants, Hazardous Materials or other potentially harmful substances, (vi) cleaning up pollutants that have been released, preventing the threat of release or paying the costs of such clean up or prevention, or (vii) making responsible persons pay private parties, or groups of them, for damages done to their health or the environment or permitting self-appointed representatives of the public interest to recover for injuries done to public assets.

- (e) Lessor shall have the right to enter the Premises at any time to conduct borings and/or small excavation pits on the Premises to observe subsurface soils and groundwater and to conduct tests, monitoring and investigations with respect thereto, during the Term for Environmental Conditions (i.e., adverse condition relating to any Hazardous Materials or the environment, including surface water, ground water, drinking water supply, land, surface, subsurface strata or the ambient air and including air, land and water pollutants, noise, vibration, light and odors). In the event that any plantings are disturbed by such work, Lessor shall reimburse Lessee for any damaged plantings at a mutually agreed upon rate, not to exceed \$175 per acre damaged.

(f) **Possession.** Subject to Lessee's strict compliance with the terms of this Lease, Lessee shall have the right to possession of the Leased Premises for the term of this Lease beginning on the Commencement Date of this Lease, and, on paying the rents and performing the covenants herein contained, Lessee may peaceably hold said possession for the term of this Lease, except that Lessee understands and agrees that Lessor shall retain the right to allow hunting by its employees, guests, or invitees on the Leased Premises.

4. REAL PROPERTY TAXES AND UTILITIES

(a) **Taxes:** Lessor shall be responsible for real estate taxes and special assessments on the Premises. Lessee shall be responsible for any personal property taxes on its assets which are stored or kept on the Premises or increase in taxes due to Lessee's use of the Premises.

(b) **Utilities:** Lessee agrees that it will not install any equipment which will exceed or overload the capacity of any utility facilities and that if any equipment installed by Lessee shall require additional utility facilities; the same shall be installed at Lessee's expense in accordance with plans and specifications to be approved in writing by Lessor.

5. REPAIR AND MAINTENANCE

(a) **Lessee's General Obligations:** Lessee shall, throughout the Term at its sole expense, maintain the Premises in good working order, condition and repair consistent with the order and condition thereof on the Commencement Date, including all parking areas and driveways, any utilities furnished to the Premises for the benefit of the Lessee, all costs, fees and charges

related to or arising out of Lessee's operations at the Premises; all costs, fees and charges related to the repair and maintenance of the Premises. Lessee shall promptly make all repairs required to maintain the Premises in the same order and condition as such were on the Commencement Date, subject only to reasonable wear and tear. When used in this Section 5, the term "repair" shall include replacements or renewals, where necessary. Lessee shall keep the Premises in a clean, orderly, healthful and safe condition consistent with its permitted uses as described herein. If Lessee does not comply with its obligations under this Section 5 following written notice by Lessor and Lessee's failure to cure within thirty (30) days, Lessor may, but need not, make or arrange for such repairs and maintenance or obtain such service contracts, and Lessee shall pay Lessor the reasonable cost of such repairs and maintenance, together with

interest therein at the rate of eighteen percent (18%) per annum from the date Lessee receives notice of the total costs of such maintenance and repairs until paid. There shall be no liability of Lessor to Lessee by reason of any entry to the Premises, interruption of services or facilities, or interference with Lessee's business arising from the making of any such repairs or maintenance.

(b) Lessee's Additional Obligations Specific to Operations. Lessee shall fairly treat, preserve and care for the Premises, at its sole cost and expenses, the following:

- (i) Lessee shall refrain from committing or permitting to be committed any waste on the Premises;
- (ii) Lessee shall maintain a cover crop on the Premises and manage same in a manner to insure against impoverishment;
- (iii) Lessee shall conform to all Laws regarding noxious weeds on the Premises;
- (iv) Lessee shall maintain the Premises to prevent the development and/or expansion of brushy areas, wood lots and wetlands;
- (v) Lessee shall use due care and diligence in guarding the Premises from fire and securing the Premises from trespassers;
- (vi) Lessee shall monitor the groundwater at the Premises in accordance with all Laws and as required by Lessor from time to time and shall take immediate action to address any groundwater concerns with respect to Lessee's operations. Lessee shall provide copies of all groundwater monitoring data and related reports to Lessor in the manner that it has previously been provided to Lessor.

6. ALTERATIONS; MECHANIC'S LIENS

(a) Lessee shall not make any alterations to the Premises, whether structural, mechanical, electrical or otherwise, without the prior written consent of Lessor, which consent may be withheld in Lessor's sole discretion. Lessee shall present to Lessor plans and specifications for all proposed alterations at the time approval is sought. All improvements approved by Lessor shall be constructed by Lessee at Lessee's sole cost and expense in a thorough and workmanlike fashion and in accordance with all applicable laws, rules, regulations and ordinances. All trade fixtures, equipment and furnishings installed by Lessee shall remain the property of Lessee upon expiration or sooner termination of the term. Lessee's leasehold improvements (excluding Lessee's trade fixtures, equipment and furnishings) shall, upon the expiration or sooner termination of the term, become a part of the realty and be the sole property of Lessor. If, during the term hereof, any change, alteration, addition or correction shall be required by any law, rule or regulation of any

governmental authority to be made in or to the Premises or any portion thereof, such change, alteration, addition or correction shall be made promptly by Lessee at its sole cost and expense.

(b) Lessee shall have no authority to subject the Premises or any part thereof or any interest of Lessor therein, to any mechanic's or other lien. Should any mechanic's or other liens be filed against the Premises or any part thereof or any interest of Lessor therein, by reason of Lessee's acts or omissions or because of a claim against Lessee, Lessee shall cause the same to be

anceled and discharged of record by bond or otherwise within thirty (30) days after notice by Lessor.

7. LIABILITY AND PROPERTY INSURANCE

(a) Liability Insurance: Lessee shall maintain a policy or policies of comprehensive general liability insurance providing coverage for bodily injury and property damage liability, issued by and binding upon an insurance company with an A.M. Best rating of not less than A VIII and licensed to do business in the State of Wisconsin. Such insurance will afford minimum protection of not less than \$1,000,000 per occurrence and \$2,000,000.00 combined single limit coverage of bodily injury, property damage or combination thereof. Lessor shall be listed as an additional insured on Lessee's policy or policies of comprehensive general liability insurance, and Lessee shall provide Lessor with current Certificates of Insurance evidencing Lessee's compliance with this Paragraph. The general liability insurance policy or policies shall contain an endorsement naming Lessor and its Lenders as additional insured.

(b) Property Insurance: Lessee, at its sole cost and expense, shall maintain a policy or policies of commercial property insurance written on a special form basis, protecting against all risks of physical loss or damage to the Premises with a deductible no greater than \$100,000 per occurrence of all perils. Coverage shall be written with an insurance carrier with an A.M. Best rating of no less than A VIII and licensed to do business in the State of Wisconsin. Such coverage shall list the Lessor and its affiliates and lenders as loss payees. Evidence of coverage shall be provided to the Lessor at the inception of this Lease and, on an annual basis at least thirty (30) days prior to the expiration of the policy thereafter. Evidence of coverage shall be provided on an Accord Evidence of Property form.

(c) Worker's Compensation Insurance: Lessee shall, during the Term, keep in full force and effect, Worker's Compensation insurance in required statutory limits.,

(d) Automobile Liability Insurance: Lessee shall maintain a policy or policies of commercial automobile liability insurance, issued by and binding upon an insurance company with an A.M. Best rating of not less than A VIII and licensed to do business in the State of Wisconsin. Such insurance will afford minimum protection of not less than One Million and No/100 Dollars (\$1,000,000) per occurrence and shall include coverage for all owned, hired and non-owned vehicles used by or on behalf of the Lessee.

(ii) Insurance Requirements: N All Lessee's policies of insurance (and renewals) required to be carried hereunder shall (i) be with insurance companies with an "A.M. Best" rating of A or above; shall name Lessor, its property manager and any mortgagee as an additional insured, (iii) provide notice to Lessor that no cancellation of said policies shall be made without thirty (30) days prior written notice to Lessor (iv) provide that the insurance company issuing the same shall have no right of subrogation, to the extent allowed by law, against Lessor and that all policies of insurance will be written on a primary

basis. Lessee shall procure and maintain all policies entirely at its own expense and furnish Lessor with renewal certificates for existing policies at least twenty days prior to the expiration of said policies.

(e) Co-Insurance: If on account of the failure of Lessee to comply with the provisions of this Article 7, Lessor is deemed a co-insurer by its insurance carrier, then any loss or damage which Lessor shall sustain by reason thereof shall be borne by Lessee, and shall be paid by Lessee within ten (10) days after receipt of an invoice therefore.

(f) Adequacy of Insurance: Lessor makes no representation or warranty to Lessee that the amount of insurance to be carried by Lessee under the terms of this Lease is adequate to fully protect Lessee's interests. If Lessee believes that the amount of any such insurance is insufficient, Lessee is encouraged to obtain, at its sole cost and expense, such additional insurance as Lessee may deem desirable or adequate. Lessee acknowledges that Lessor shall not, by the fact of approving, disapproving, waiving, accepting, or obtaining any insurance, incur any liability for or with respect to the amount of insurance carried, the form or legal sufficiency of such insurance, the solvency of any insurance companies or the payment or defense or any lawsuit in connection with such insurance coverage, and Lessee hereby expressly assumes full responsibility therefore and all liability, if any, with respect thereto.

(g) Lessor Indemnification. Lessee shall indemnify and hold Lessor harmless from and against any liability for damages to any person, firm or corporation occasioned by or resulting from accidents on the Premises during the term of the Lease, except for liability or damages caused or alleged to have occurred as a result of Lessor's negligence. Lessee shall also assume the burden and expense of defending all such suits, whether brought before the expiration of the Lease or thereafter and commenced to recover for the injuries occasioned by such incidents occurring during the Term. This obligation of the Lessee shall extend to both injuries to persons and to property, and its obligation to hold Lessor harmless therefrom shall extend to claims arising from such incidents which are either valid or groundless. Lessor shall have the right to obtain its counsel of its choosing to assist in defending any such actions or claims and in which case, all reasonable costs therefor shall be paid by Lessee. No permitted or consented to assignment or sublease made by Lessee shall relieve Lessee from the foregoing obligations. Neither party shall settle any claim or action described herein without the written consent of the other.

(h) Waiver of Subrogation. To the extent allowed by law, Lessor and Lessee each hereby waive their respective rights and the subrogation rights of their respective insurers against Lessee or Lessor, as applicable, as well as their respective officers, employees, agents, authorized representatives and invitees, with respect to any claims including, but not limited to, claims for injury to any persons, and/or damage to the Premises and/or any fixtures, equipment, personal property, furniture, improvements and/or alterations in or to the Premises, which are caused by or result from (a) risks or damages required to be insured against under this Lease, or (b) risks and damages which are insured against by insurance policies maintained by Lessor or Lessee as applicable from time to time. Each of Lessor and Lessee shall obtain for the other party its respective insurers under each policy required by this Lease a waiver of all rights of subrogation which such insurers of Lessee or Lessor, as applicable, might otherwise have against Lessor or Lessee, as applicable.

8. CONDEMNATION

(a) Partial Condemnation. If any portion of the Premises shall be taken for a public or quasi-public use or purpose under the power of eminent domain and such partial taking may reasonably be construed to render the remainder of the Premises unsuitable for the business of Lessee, Lessee shall be entitled either to elect to terminate this Lease as of the date actual physical

possession of said portion of the Premises shall be so taken by the condemning authority,

or to remain in possession of the remainder of the Premises not so taken without any abatement of Rent due hereunder and without any right to any portion of the condemnation award, if any, provided, however, that Lessee shall give Lessor written notice of its said election within ten (10) days after the date of transfer of title, and failing so to do Lessee shall be deemed to have elected to remain in possession.

(b) Total Condemnation. If the whole of the Premises shall be taken for a public or quasi-public use or purpose under power of eminent domain, the term of this Lease shall terminate as of the date actual physical possession thereof shall be so taken by the condemning authority, and Lessee shall not be entitled to any portion of the condemnation award.

9. INDEMNIFICATION

(a) Indemnification: Lessee shall indemnify, protect, defend and hold Lessor harmless from and against, and shall be responsible for, all claims, damages, losses, costs, liens, encumbrances, liabilities and expenses, including reasonable attorneys', accountants' and investigators' fees and court costs (collectively, the "Claims"), arising from Lessee's use of the Premises, any breach of this Lease or violation of Laws, or any act or omission of Lessee, including without limitation any negligence or willful misconduct of Lessee, its invitees, servants, agents, employees or sublessee, except for any Claims caused by or arising out of the negligence or willful misconduct of Lessor, its agents, employees, contractors or invitees. Lessee shall further indemnify, protect, defend and hold Lessor harmless from and against, and shall be responsible for all Claims arising from any default in the performance of any obligation on Lessee's part to be performed under the terms of this Lease. In case any action or proceeding is brought against Lessor to which this indemnification shall be applicable, Lessee shall pay all Claims resulting therefrom and shall defend such action or proceeding, if Lessor shall so request, at Lessee's sole cost and expense, by counsel reasonably satisfactory to Lessor. The obligations of Lessee under this Section 9 shall survive the expiration or earlier termination of this Lease for a period of six (6) years after such expiration or termination. Lessor shall maintain direction and control of any defense and neither party shall settle any of the described actions without the prior written consent of the other party.

(b) Exculpation: Lessee hereby assumes all risk of damage to property, injury and death to persons and all claims of any other nature resulting from Lessee's use of all or any part of the Premises, except if caused by the negligence or willful misconduct of Lessor, its agents, employees or contractors. Lessee hereby waives all Claims in respect thereof against Lessor. Lessor shall not be liable for any injury or damage to persons or property resulting from any cause, unless and to the extent caused by the gross negligence or willful misconduct of Lessor. Neither Lessor nor its employees or agents shall be liable for any defects in the Premises. All property of Lessee kept or stored on the Property shall be so kept or stored at the risk of Lessee only and Lessee shall indemnify, defend and hold Lessor harmless from and against, and shall be responsible for all Claims arising out of damage to the same, including subrogation claims by Lessee's insurance carriers, unless and to the extent such damage shall be caused by the willful misconduct or gross negligence of Lessor. Lessee shall give prompt notice to Lessor with respect to any defects, fires or accidents which Lessee observes on the Premises.

10. LESSOR'S REMEDIES

(a) Lessor's Right to Perform Lessee Obligations: All covenants and agreements to be performed by Lessee under any of the term of this Lease shall be performed by Lessee at Lessee's sole cost and expense and without any abatement of Base Rent. If Lessee shall fail to pay any sum of money, other than Base Rent, required to be paid by it hereunder, or shall fail to perform any other act on its part to be performed hereunder, and such failure shall continue for five (5) days after written notice thereof by Lessor, Lessor may (but shall not be obligated to do

so) without waiving or releasing Lessee from any of Lessee's obligations, make any such payment or perform any such other act on behalf of Lessee. All sums so paid by Lessor and all necessary incidental costs, together with interest thereon at twelve percent (12%) per annum from the date of such payment by Lessor until reimbursement in full by Lessee, shall be payable to Lessor as Additional Rent with the next monthly installment of Base Rent.

(b) Events of Default: Lessee shall be in default under this Lease (an "Event of Default") if:

(i) Lessee fails to pay any Base Rent, Additional Rent and/or other sums required to be paid to Lessor under this Lease, and such payment remains unsatisfied more than five (5) days after the applicable due date;

(ii) Lessee shall assign, transfer, encumber, sublet or permit the use of the Premises by others, except in a manner permitted in this Lease;

(iii) Lessee's rental payments are received five (5) days or more past the date with due more than two (2) times during any one year during the Term of the Lease;

(iv) There shall occur, through the acts or omissions of Lessee, or its employees, invitees, contractors, agents or representatives, any violations of Environmental Laws, including without limitation CERCLA, affecting the Premises, or any breach or violation of Section 3 of this Lease;

(v) Lessee fails in any material respect to perform any obligation under this Lease within five (5) days after notice of non-performance; or

(vi) Lessee files a petition in bankruptcy or insolvency or for reorganization or arrangement under the bankruptcy laws of the United States or any insolvency act of any state or voluntarily takes advantage of any such law or act by answer or otherwise or makes an assignment for the benefit of its creditors; or

(vii) Involuntary proceedings under any such bankruptcy law or insolvency act or for dissolution are instituted against the Lessee or if a receiver or trustee is appointed for all or substantially all of the property of the Lessee and such proceedings are not dismissed or such receivership or trusteeship vacated within thirty (30) days after such institution or appointment; or

(viii) A receiver or trustee is appointed for all or any portion of the Lessee's property, and such receivership or trusteeship is not vacated or set aside within thirty (30) days after the appointment or such receiver or trustee.

(ix) Lessee abandons the Premises or ceases to conduct business in the normal and ordinary course as contemplated by this Lease.

(c) Remedies: Upon the occurrence of an Event of Default, Lessor may, at any time thereafter without further notice or demand, exercise any one or more of the following remedies concurrently or in succession:

(i) Terminate this Lease and retake possession upon the Lessor's own account, terminating all rights of the Lessee to the Premises (provided that any outstanding Rent,

future Rent or other sums due Lessor including with respect to any claims by Lessor against Lessee shall survive termination);

(ii) Not terminate this Lease but accelerate all sums due under the terms of this Lease. Upon such acceleration, all Rent and any other sums payable by Lessee directly to Lessor or by Lessee to others on behalf of Lessor or for Lessor's benefit under the terms of this Lease, shall be added to arrive at a total accelerated sum due;

(iii) Lessee hereby acknowledges that the late payment by Lessee to Lessor of Rent and other charges due under this Lease will cause Lessor to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult to ascertain. Such costs include, but are not limited to processing and accounting charges, and late charges which may be imposed on Lessor by the terms of any mortgage covering the Premises. Accordingly, if any installment of Rent or any other charge due from Lessee is not received by Lessor or Lessor's designee within five (5) days after such amount shall be due, then, in addition to the other remedies provided to the Lessor above, Lessee shall pay to Lessor a late charge equal to five twelve (12%) of such overdue amount, and in such event the parties hereby agree that such late charge represents a fair and reasonable estimate of the costs Lessor will incur by reason of the late payment by Lessee. The agreement to pay a late charge shall not be construed to give rise to a grace period or in any way extend or alter the due dates of payments under this Lease. Acceptance of such late charge by Lessor shall in no event constitute a waiver of Lessee's default with respect to such overdue amount, nor prevent Lessor from exercising any other rights and remedies granted to it hereunder; or

(iv) or

(v) All other remedies permitted in law or in equity.

11. ACCESS TO PREMISES.

Lessor shall at all times have the right to place, maintain and repair all utility equipment of any kind in, upon or under the Premises. Lessor shall also have the right to enter the Premises at all reasonable times to inspect the same and to make such repairs, additions, alterations or improvements as Lessor may deem desirable. Lessor shall be allowed to take all material in, to and upon the Premises that may be required therefore without the same constituting an eviction of Lessee in whole or in part and the rents reserved shall in no way abate while said work is in progress by reason of loss or interruption of Lessee's business or otherwise and Lessee shall have no claim for damages. The provisions of this paragraph shall in no way be construed to impose upon Lessor any obligation whatsoever for the maintenance or repair of the Premises or any part thereof except as otherwise herein specifically provided.

12. SURRENDER OF PREMISES

(a) Surrender upon Expiration or Termination. Lessee shall, upon the expiration or termination of this Lease for any reason, surrender to Lessor the Premises, in the same good order, condition and repair as at the Commencement Date, except for reasonable wear and tear. Upon the expiration or other termination of this Lease, all of the Lessee's equipment and personal property on the Premises shall be removed by the Lessee and any damage to the Premises resulting from such removal shall be repaired by and at the expense of the Lessee. Except as specifically provided herein, any equipment and personal property of the Lessee that is not removed from the Premises at or prior to the termination or expiration of this Lease shall, at Lessor's option, be presumed to have been conveyed to the Lessor under this Lease, without payment by the Lessor to the Lessee.

(b) If the Premises are not surrendered at the end of the term, then Lessee shall indemnify Lessor against loss or liability resulting from delay by Lessee in so surrendering the Premises, including, without limitation, any claims founded on such delay made by any succeeding occupant of the Premises or any part thereof, and Lessee shall be liable to Lessor for any and all legal expenses, costs, and fees incurred by Lessor in obtaining the possession of the Premises.

(c) In the event of any holding over after the expiration of the Term by Lessee, Lessee shall pay to Lessor a monthly rental payment equal to two hundred percent (200%) of the monthly Base Rent in effect under this Lease immediately prior to the expiration of the Term and shall otherwise be subject to the terms and conditions set forth in this Lease during any such holdover period.

13. **GENERAL PROVISIONS**

(a) Non-Business Days: If the date on which any action (including the delivery of notices) to be taken under this Lease is to occur falls on a day which is not a Business Day, such action will be deemed timely taken if taken on the first Business Day following such day.

(b) Notices: All notices or other communications which are required or may be given under this Lease shall be in writing and shall be deemed to have been duly given when delivered in person or transmitted by facsimile (with receipt confirmed) or one Business Day after being sent by overnight courier (subject to signature verifications) to a party at the address set forth below (as any such address may be changed from time to time by notice similarly given):

TO LESSOR:
Glacier Ridge Landfill, LLC
Attn: General Manager
N7296 Highway V
Horicon, WI 53032

With a copy to:
GFL Environmental
Attn: Melissa Bachhuber, VP – US Legal
90 Fort Wade Road; Suite 210
Ponte Vedra, FL 32081
mbachhuber@gflenv.com

TO LESSEE:
Seneca Foods Corporation
Attn: Gary Stapleton
500 South Clark Street
Mayville, WI 53050

With a copy to:
Seneca Foods
Corporation
Attn: General Counsel
418 E. Conde St.
Janesville, WI 53546

(c) Entire Agreement: This Lease constitutes the entire agreement, and supersedes

all of the prior agreements and undertakings, both written and oral, between the parties, with respect to the subject matter of this Lease.

(d) Assignment; Binding Effect; Amendment: This Lease and the rights of the Lessee hereunder may not be assigned by the Lessee without the written consent of the Lessor,

which consent may be withheld in Lessor's sole and absolute discretion; provided, however, that regardless of any such assignment Lessee shall remain fully liable for the performance of all of the conditions, covenants and obligations of this Lease. Lessee shall provide Lessor with a copy of any such approved assignment. A transfer of a controlling interest in the Lessee shall be deemed to be an assignment of this Lease, requiring the Lessor's prior written consent. Lessee may not sublet the Premises or any part thereof with Lessor's prior written consent, which consent may be withheld in Lessor's sole and absolute discretion; provided that that regardless of any such sublease approved by Lessor, Lessee shall remain fully liable for the performance of all of the conditions, covenants and obligations of this Lease. Any and all approved subleases entered into by Lessee shall be made expressly subject to this Lease and all of the terms and provisions hereof. Lessee shall provide Lessor with all copies of such approved subleases. The Lessee shall not mortgage nor otherwise encumber this Lease. Subject to the foregoing, this Lease shall be binding upon the parties and their respective successors and permitted assigns.

(e) Counterparts: This Lease may be executed in counterparts which together shall constitute a single agreement.

(f) Governing Law; Jurisdiction: This Lease shall be governed by and construed in accordance with the internal substantive laws of the State of Wisconsin without regard to any conflict or choice of law rules of the State of Wisconsin or any other jurisdiction. **AS A MATERIAL INDUCEMENT FOR LESSOR TO ENTER INTO THIS LEASE, LESSEE AND LESSOR HEREBY KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVE THE RIGHT IT MAY HAVE TO A TRIAL BY JURY WITH RESPECT TO ANY LITIGATION ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS LEASE AND ANY COURSE OF CONDUCT, COURSE OF DEALING, STATEMENTS (WHETHER VERBAL OR WRITTEN) OR ACTIONS.**

(g) Severability of Provisions: If a provision of this Lease or its application to any Person or circumstance, is held invalid or unenforceable in any jurisdiction, to the extent permitted by law, such provision or the application of such provision to Persons or circumstances (other than those as to which it is held invalid or unenforceable) in other jurisdictions, and the remaining provisions of this Lease, shall not be affected.

(h) Joint Drafting: This Lease and its Exhibits have been jointly drafted by the parties and their counsel. Neither this Lease nor its Exhibits shall be construed against any party based on its authorship.

(i) Captions: The article captions contained in this Lease are for convenience only and shall not affect the meaning or interpretation of this Lease.

(j) No Third-Party Beneficiaries: There are no third-party beneficiaries of this Lease.

(k) Waiver: No delay of or omission in the exercise of any right, power of remedy accruing to any party as a result of any breach or default by any other party under this Lease shall impair any such right, power or remedy, nor shall it be construed as a waiver of or acquiescence in any such breach or default, or of or in any similar breach or default occurring later; nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default occurring before or after that waiver.

(l) No Partnership. Nothing contained in this Lease shall or shall be deemed or construed so as to create the relationship of principal-agent, joint venturers, co-adventurers, partners or co-Lessees between Lessor and Lessee; it being the express intention of the parties that they are and shall remain independent contractors one as to the other.

(m) Time is of the Essence. Time is of the essence under this Lease with respect to Lessee's performance of any obligations and all provisions relating thereto shall be strictly construed.

(n) Environmental Indemnification.

(i) Lessee shall not use or permit the use of the Premises for the generation, storage, treatment, use, transportation, handling or disposal of any chemical, material or substance which is regulated as toxic or hazardous or exposure to which is prohibited, limited or regulated by any governmental authority, or which, even if not so regulated, may or could pose a hazard to the health or safety of persons on the Premises, and no such chemical, material or substance shall be brought unto the Premises without the Lessor's express written approval. Lessee agrees that it will at all times observe and abide by all laws and regulations relating to the handling of such materials and will promptly notify Lessor of (a) the receipt of any warning notice, notice of violation, or complaint received from any governmental agency or third party relating to environmental compliance and (b) any release of Hazardous Materials on the Premises. Lessee shall carry out, at its sole cost and expense, any remediation required as a result of the release of any hazardous substance by Lessee or by Lessee's agents, employees, contractors, invitees, assignees or sublessees on or from the Premises.

(ii) Lessee agrees to indemnify and save the Lessor harmless from all liability, costs and claims, including attorneys' fees, resulting from any environmental contamination on the Premises caused by Lessee or its agents, contractors, employees, invitees, assignees or sublessees, including the cost of remediation and defense of any action for any violation of the provisions of this Paragraph. The provisions of this Paragraph shall survive the termination of this Lease.

IN WITNESS WHEREOF, the parties hereto have executed this Lease on the date evidenced on the first page hereof.

LESSOR:

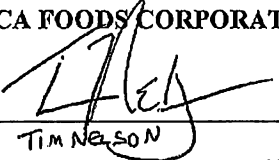
GLACIER RIDGE LANDFILL, LLC

By: 
Michael Stoeckigt, Area Vice President

7-7-25
Witness

LESSEE:

SENECA FOODS CORPORATION

By: 
Name: TIM NELSON
Title: SUP OF OPERATIONS

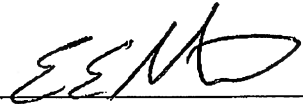

Witness
Eric E. Marzetti
VP of Eastern Operations

Exhibit A

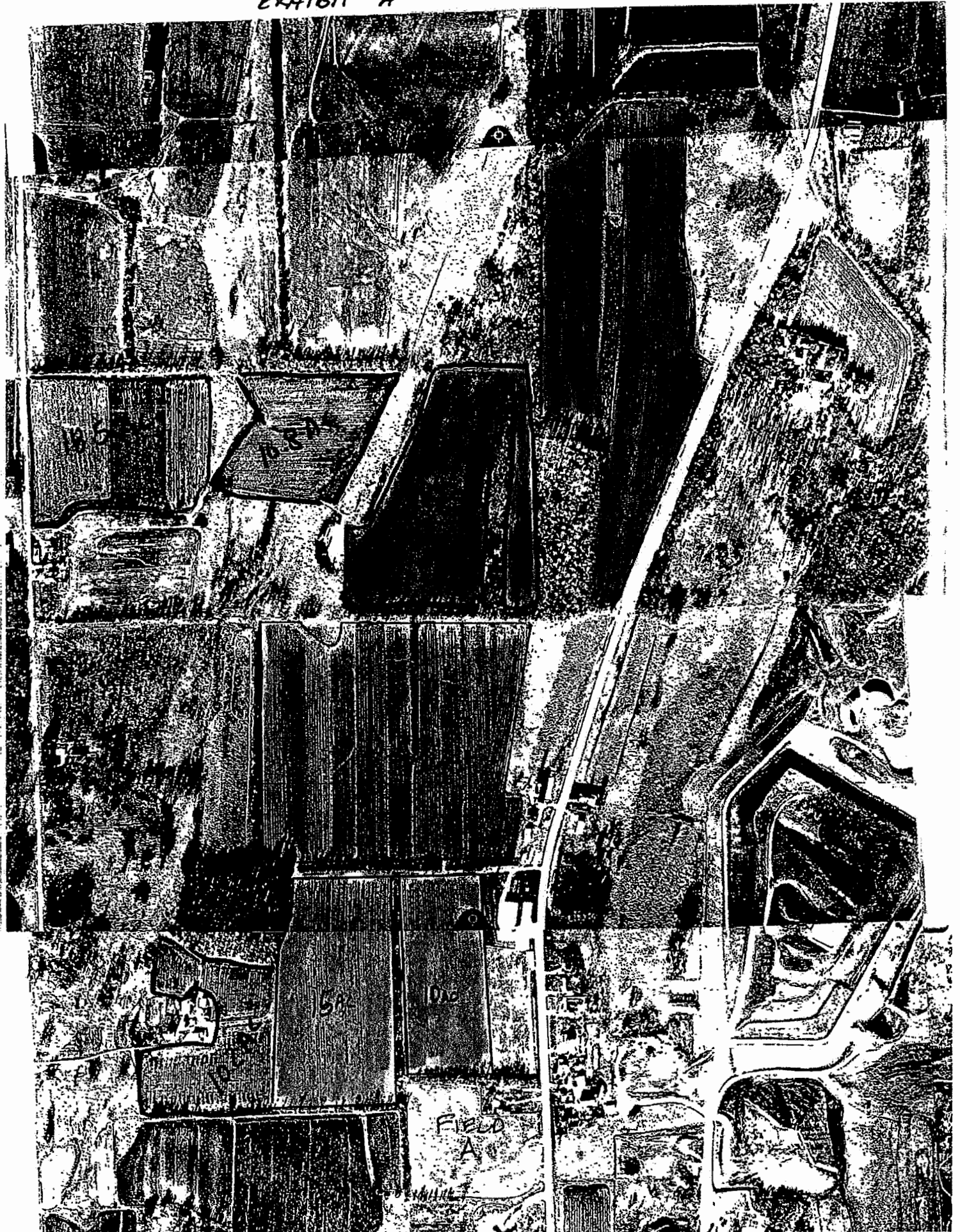
Leased Premises:

- SW ¼ of the SE ¼ Section 34 Township 12 N Range 16 E 17.6 acres- Parcel 3443-001
- NW ¼ of the SE ¼ Section 34 Township 12N Range 16 E 4.20 acres- Parcel 3442-000
- SW ¼ of the NE ¼ Section 34 Township 12 N Range 16 E 6.40 acres- Parcel 3413-000
- SW ¼ of the NE ¼ Section 34 Township 12 N Range 16 E 10.40 acres- Parcel 3413-000
- NW ¼ of the NE ¼ Section 34 Township 12 N Range 16 E 14 acres- Parcel 3412-000
- SW ¼ of the NW ¼ Section 34 Township 12 N Range 16 E 39.03 acres-Parcel 143-1216-3414-000
- NE ¼ of the NE ¼ Section 34 Township 12 N Range 16 E 40.0 acres Parcel 143-1216-3411-000
- SW ¼ of the SW ¼ Section 26 Township 12 N Range 16 E , excluding County Hwy V and portion on east side of County Hwy V 35.8 acres, Parcel 143-1216-2633-000
- NW ¼ of the NW ¼ of Section 35 Township 12 N Range 16 E excluding County Hwy V and portion on east side of County Hwy V 20.1 acres Parcel 143-1216-3522-000

Exhibit A

Map of Leased Premises

EXHIBIT "A"



Approximate Area Under Search By Camera 11/20/19

APPENDIX E

NRCS Wisconsin Agronomy

Technical Note 6

Establishing and Maintaining Introduced Grasses and Legumes

INTRODUCTION

This technical note will provide guidance for the establishment of introduced (non-native) plantings of perennial herbaceous vegetation for the purpose of meeting the criteria in Wisconsin Natural Resources Conservation Service (NRCS), Field Office Technical Guide (FOTG), Section IV, Practice Standards 327, Conservation Cover; 645, Wildlife Upland Habitat Establishment; 342, Critical Area Planting; and 512, Forage and Biomass Planting. Additional ecological and engineering standards will reference this technical note. Refer to those standards for specific practice purposes and requirements.

BACKGROUND

Introduced stands of perennial herbaceous vegetation have the potential to control soil erosion and sedimentation, improve water quality, and create or enhance wildlife habitat if properly established and maintained.

Introduced species are typically easier and less expensive to establish than native grasses and forbs.

Seed sources are readily available, relatively inexpensive, and establishment methods are widely understood using common agricultural equipment.

Introduced plantings can provide high quality wildlife habitat with some degree of routine maintenance and cover management. These species will require some reoccurring interseeding to maintain a diverse plant community. Legumes adapted to wet and wet-mesic sites are typically short lived and will require routine reseeding to maintain plant diversity.

Introduced plantings are better adapted to the typical growing conditions in the Northern Planting Zone and tend to thrive in areas where sunlight intensity is moderate, temperature is moderate, and water is readily available. These plants produce most of their growth during the spring, late summer, and early fall when the soil and air temperatures are cooler. For this group of plants, the minimum air temperature for active shoot growth is 40-42 degrees F. Growth is maximized at 65-75 degrees F.

For erosion control, on critical areas, introduced species are the preferred vegetation.

TABLE OF CONTENTS

Description of Tables	2
Specie Selection and Seed Quality	3
Pure Live Seed.....	3
Inoculation.....	4
Criteria for Seed Mixture Development	4
Conservation Cover (327).....	4
Critical Area Planting (342).....	4
Forage And Biomass Planting (512).....	5
Seeding Dates	11
Temporary Cover and Companion Crops	12
Temporary Cover Crop	12
Companion Crops	12
Special Erosion Control Measures	12
Mulching.....	13
Hydroseeding.....	13
Sodding.....	13
Nutrient and Soil Amendment Recommendations	14

Fertilizer.....	14
Lime.....	14
Seedbed Preparation and Seeding Recommendations	14
Conventional Seeding	14
No-Till Planting	14
Dormant Seeding	15
Frost Seeding	15
Stand Evaluation	16
Cover Maintenance	16
Weed Control - Establishment Year	16
Weed Control - Established Cover	16
References	17

LIST OF TABLES

Table 1: Relationship Between Moisture Regimes, Drainage Classes, and Forage Suitability Groups	6
Table 2: Common Species and Recommended Pure Stand Seeding Rates.....	7
Table 3: Plant Morphology and Physiology Characteristics.....	8
Table 4: Summary of Seeding Requirements for Standards 327, 342, 512 (Introduced Species).....	10
Table 5: Recommended Seeding Dates by Planting Zone	11
Table 6: Plant Density and Stand Evaluation One Year After Planting.....	16
Table 7: Wildlife Habitat Mixes	18
Table 8: Seeding Mixtures Suitable for Critical Area Plantings.....	19
Table 9: Introduced Pollinator Habitat Mixes	21
Table 10: Forage and Hayland Planting Recommendations	21

SITE ASSESSMENT

Introduced plants are generally adapted to one or more soil moisture regimes: wet, wet-mesic, mesic, dry-mesic, and dry. These moisture regimes correlate to some degree with both drainage classes and forage suitability groups.

Drainage classes refer to the frequency and duration of wet periods under conditions similar to those under which the soil formed naturally. Alterations of the water regime by human activities are not considered in this case. These soil moisture regimes fall into one or more of the seven natural soil drainage classes.

Forage suitability groupings are an additional tool to provide guidance to planners. Forage Suitability Groups (FSG) are pasture and hay land soil interpretation reports that provide users with forage production guidance for the soils and climatic conditions present in their area of interest. The vast majority of forage plants utilized in Wisconsin are introduced grasses and legumes. For the purpose of this technical note, FSGs will focus on available water capacity, water table, and runoff potential. FSGs are divided into ten categories.

There is often no sharp division between moisture regimes, drainage classes and forage suitability groups, and oftentimes they blend or overlap into multiple categories. Understanding soil conditions plays an important role when planning a successful introduced herbaceous planting.

Refer to Table 1 correlating the five moisture regimes, seven drainage classes, and ten forage suitability groups.

SPECIE SELECTION AND SEED QUALITY

Evaluate the winter hardiness of species selected for planting. To ensure stand longevity, species listed as Hardy (H) or Very Hardy (VH) in Tables 2-8 of Wisconsin Circular A-1525, Forage Crop Variety Yield Trials for Wisconsin, are preferred. Varieties listed as Moderately Hardy-Plus (MH+) are acceptable.

Select species based on the site conditions looking closely at soil type and moisture regime. Tables 1, 2 and 3 will provide additional guidance for selecting species appropriate for the site conditions.

The recommended introduced species, listed in Table 2, are not identified as prohibited or restrictive

for planting statewide in accordance with Natural Resource Law 40, Invasive Specie Control. However, Kentucky Bluegrass, Smooth Bromegrass, Redtop, Birdsfoot Trefoil, Red and White Clover are species that can propagate and spread with little difficulty due to their growth characteristics and should be evaluated carefully when plantings are planned in the vicinity of native remnants or natural areas.

- It is suggested that seed purchased be harvested within a 250 mile radius of the area where the planting will occur. This suggestion is less critical for introduced versus native species.
- For pollinator habitat, the recommended introduced bunch grasses are Orchardgrass, Tall Fescue, Perennial Ryegrass, and Timothy. Refer to Table 9 for introduced pollinator habitat mixtures.
- Kentucky Bluegrass, Bromegrass, and Redtop are examples of sod-forming plants. Refer to Table 8 for additional examples.

Introduced mixtures for wildlife habitat must contain at least 50 percent grass seed per square foot. The exception to this criteria is the establishment of pollinator habitat.

Introduced mixtures for areas with shrub and tree plantings are not required to contain 25 percent sod forming grass seed per square foot. These seed mixtures must still contain at least 50 percent grass seed per square foot. Sod-forming grasses are not recommended in shrub and tree plantings.

Below are species with multiple scientific names. The underlined specie is the most recognized genus and specie in Wisconsin and is referenced as such in vegetative Standards 327, Conservation Cover; 342, Critical Area Planting; and 512, Forage and Biomass Planting.

- **Tall Fescue:** Schedonorus arundinaceus, Lolium arundinacea, Festuca arundinacea
- **Meadow Fescue:** Schedonorus pratense, Lolium pratense

Pure Live Seed

Pure Live Seed (PLS) is a means of expressing seed quality.

PLS is the percentage of seed in a seed lot that is both pure seed and viable seed. Pure seed is the percentage by weight of the seed (kind, cultivar,

variety) that is under consideration. Inert matter, weed seed, and other crop seed is excluded from pure seed. Total Viable Seed (TVS) is the percentage estimate of the potential for germination, which includes percent hard seed and/or dormant seed.

Example: Pure Live Alfalfa Seed

(1) XYZ Seed Company, 1000 Crop Seed Lane, Ft. Collins, CO	
(2) Alfalfa, VNS	(6) Germination: 92%
(3) Lot number: 1234	Hard seed: 5%
(4) Pure Seed: 99.00%	Dormant seed: --
Other Crop: 0.25%	T.V.S.: 97%
Weed Seed: 0.10%	(7) Date Tested: 10/2000
Inert material: 0.65%	(8) Origin: CO
(5) Noxious weed seed: dodder 1 per lb.	(9) Seed Treatment: none

$$\text{Pure seed} \times \text{TVS} = \text{PLS}$$

$$99\% \times 97\% = 96.03\%$$

The PLS for Lot number 1234 is 96.03%.

Nearly all species recommended for conservation plantings by NRCS uses PLS expressed in pounds or ounces per acre which is calibrated to seeds per square foot.

Seeding rates in this technical note are shown in pounds or ounces and seeds per square foot per acre.

Inoculation

Legumes are unique plants which have the ability to work with certain strains of bacteria (Rhizobia) to gather atmospheric nitrogen from the soil atmosphere and convert it to useable ammonia nitrogen. Nitrogen produced by this symbiotic relationship is virtually free and results not only in improved soil fertility, but increased protein and forage production in the legume host plant for the benefit of domesticated and wildlife heterotrophs.

Inoculate legume seed with the appropriate inoculant. Inoculants must not be exposed to sunlight or allowed to dry out prior to planting legumes.

CRITERIA FOR SEED MIXTURE DEVELOPMENT

Seed mixtures can consist of a grass component only or a grass and legume component, depending on the standard criteria and the purpose of the planting. Custom seeding mixtures can be developed from selected species listed in Table 2.

For other ecological Wisconsin standards such as Field Border (386), the planner will need to review the standard to determine the specific seeding

requirements for the intended purpose. The Field Border standard will direct the planner to use Standard 342, Critical Area Planting, for erosion concerns and Standard 327, Conservation Cover, when the purpose or concern is for establishing pollinator habitat. This also includes Wisconsin engineering standards such as Standard 635, Waste Treatment Strips.

It is important to reference program rules when determining seed mixtures. Some programs have preapproved required mixtures to meet program and cost requirements.

Conservation Cover (327)

Introduced Species

1. Wildlife Habitat Planting

A minimum of two grasses seeded at a minimum rate of 70 grass seeds per square foot, and at least one legume seeded at a minimum of 30 seeds per square foot.

Fifty percent of the seeds per square foot will comprise of grasses.

Refer to Table 7 for example mixtures.

For dormant and frost seedings, increase seeds per square foot by 15 percent.

2. Herbaceous Pollinator Habitat

At least one and a maximum of two bunch grasses seeded at a maximum rate of 30 seeds per square foot and a minimum of two legumes seeded at a minimum rate of 40 seeds per square foot.

Fifty percent of the seeds per square foot comprising of grasses is not a seed requirement for pollinator habitat planting mixtures.

For dormant and frost seedings, increase the seeds per square foot by 15 percent.

Critical Area Planting (342)

Introduced Species

- A minimum of 160 seeds per square foot for a solid grass planting or in combination with legumes.
- Fifty percent of the seeds per square foot will comprise of grasses and 25 percent of the seed

per square foot will consist of sod-forming grasses.

- For dormant seedings, increase the seeds per square foot by 15 percent.

Dormant seeding can be used when planting introduced species on concentrated and non-concentrated flow areas. When using dormant seedings on concentrated flow areas, the site must be mulched according to Standard 484, Mulching. Frost seeding is not an approved seeding method when using this standard.

Refer to Table 8 for example mixtures.

Forage and Biomass Planting (512)

Introduced Species

1. Pasture and Hayland Planting

- For pasture plantings, mixtures will have at least 1 grass and 1 legume. The mixture will have at least 50 percent grass seeds per square foot, and the total mix will have at least 60 seeds per square foot.
- For hayland establishment, mixtures and single specie plantings may be used as long as the total seeding rate is at least 60 seeds per square foot.

2. Interseeding of Grasses/Legumes Into Existing Pastures and Haylands

- Seeding rate is half of the pure stand seeding rate as specified in Table 2. Seeds per square foot for legumes will vary according to specie.
- Frost seeding is approved only for legumes into existing pastures at a seeding rate of two-thirds the recommended pure stand seeding rate.

Refer to Table 10 for pasture and hayland planting seed mixtures.

Table 1
Relationship Between Moisture Regimes, Drainage Classes, and Forage Suitability Groups

Moisture Regimes	Drainage Class	Forage Suitability Group
Wet Wet mineral or organic soils are typified by very poorly drained soil types.	Very poorly drained Water is removed from the soil so slowly that free water remains at or very near the ground surface during much of the growing season and mesophytic crops cannot be grown. The soils are commonly level or depressed and frequently ponded.	FSG 7 High water holding capacity, seasonal high water table, excessively wet, subject to ponding and flooding. FSG 10 High water holding capacity, seasonal high water table, organic surface layers, subject to ponding and flooding.
	Very poorly drained Somewhat poorly drained Water is removed slowly so that the soil is wet at a shallow depth for significant periods during the growing season. Wetness markedly restricts the growth of mesophytic crops.	FSG 7, FSG 10 FSG 4 Moderate water holding capacity, generally sandy, seasonal high water table, excessively wet for half of growing season. FSG 7, FSG 10
Mesic Mesic sites will be found on most moderately well and well drained mineral soils which have moderate to very high Available Water Capacity. Mesic sites may occur on some somewhat poorly drained soils with low or very low Available Water Capacity.	Somewhat poorly drained Moderately well drained Water is removed from the soil somewhat slowly during some periods of the year. The soils are wet for only a short time within the rooting depth during the growing season.	FSG 4, FSG 7, FSG 10 FSG 1 Low water holding capacity, generally sandy, seasonal high water table. FSG 4 FSG 5 Moderate water holding capacity, no seasonal high water table, at times seasonal droughtiness, less than 12% slope. FSG 6 Moderate water holding capacity, no seasonal high water table, seasonal droughtiness, greater than 12% slope, runoff concerns. FSG 8 High water holding capacity, no seasonal high water table, less than 12% slopes.
	Well drained Water is removed from the soil readily but not rapidly. Water is available to plants throughout most of the growing season. Wetness does not inhibit growth of roots.	FSG 1, FSG 5, FSG 6, FSG 8 FSG 9 High water capacity, no seasonal high water table, runoff concern.
	Moderately well drained	FSG 1, FSG 4, FSG 5, FSG 6, FSG 8
Dry-Mesic Dry-mesic sites are transitional between dry and mesic. They occur on some somewhat excessively drained and some well drained soils.	Well drained	FSG 1 FSG 2 Low water holding capacity, generally sandy, no seasonal high water table, 0 to 12% slopes. FSG 3 Low water holding capacity, generally sandy, no seasonal high water table, greater than 12% slopes, seasonal droughtiness. FSG 5, FSG 6
	Somewhat excessively drained Water is removed from the soil rapidly. The soils are commonly coarse-textured.	FSG 1, FSG 2, FSG 3, FSG 5, FSG 6
	Well drained	FSG 1, FSG 2, FSG 3, FSG 5, FSG 6
Dry Dry sites occur mostly on well to excessively drained soils.	Well drained	FSG 1, FSG 2, FSG 3, FSG 5, FSG 6
	Somewhat excessively drained	FSG 2, FSG 3, FSG 6
	Excessively drained	FSG 2, FSG 3

Table 2
Common Species and Recommended Pure Stand Seeding Rates

Name	Genus and species	Plant Type	Moisture Regime	Single Species Seeding Rate (PLS) Lbs./Acre	Seeds/Lb.	Seeds/Ft ² /Lb./Ac.
Chewings Red Fescue	Festuca rubra L. ssp fallax	Grass	D, DM, M	5	350,000	8
Creeping Red Fescue	Festuca rubra	Grass	DM, M, WM	5	350,000	8
Festulolium	Festuca X Lolium	Grass	DM, M, WM	12	227,000	5.2
Italian or Annual Ryegrass	Lolium perenne L. ssp. multiflorum	Grass	DM, M, WM	20	227,000	5.2
Kentucky Bluegrass	Poa pratensis	Grass	D, DM, M, WM, W	8	2,177,000	50
Meadow Fescue	Schedonorus pratensis	Grass	DM, M, WM	12	227,000	5.2
Orchardgrass	Dactylis glomerata L.	Grass	D, DM, M, WM	10	653,000	15
Perennial Ryegrass	Lolium perenne	Grass	DM, M, WM	20	227,000	5.2
Redtop	Agrostis gigantea	Grass	M, WM, W	4	4,990,000	114.5
Smooth Bromegrass	Bromus inermis	Grass	D, DM, M, WM	20	136,000	3.1
Tall Fescue	Schedonorus arundinaceus	Grass	D, DM, M, WM	12	227,000	5.2
Timothy	Phleum pratense	Grass	DM, M, WM, W	8	1,230,000	28.2
Alfalfa	Medicago sativa	Legume	D, DM, M	12	219,000	5.0
Alsike Clover	Trifolium hybridum	Legume	M, WM, W	3	680,000	15.6
Birdsfoot Trefoil	Lotus corniculatus	Legume	DM, M, WM, W	7	375,000	8.6
Red Clover	Trifolium pratense	Legume	DM, M, WM	10	275,000	6.3
White Ladino Clover	Trifolium repens	Legume	DM, M, WM	3	871,650	20

Table 3
Plant Morphology and Physiology Characteristics

Common Name <i>Scientific Name</i>	Plant Type	Growth Habit	Practice Recommendation	Pure Stand Rate	Seeds per Ft ² /Lb/Ac.	Wildlife Value	Retardance	Pollinator Habitat	Deep Rooted	Moisture Regime	Forage Suitability Group	pH	Flood Tolerance	Average Height at Maturity	Drought
Grasses															
Chewings Red Fescue <i>Festuca rubra L. ssp. fallax</i>	grass	perennial, cool season sod-forming	342, 512	5 lbs/ac	8	poor	D	no	no	D-M	2, 3, 5, 6, 8, 9	5.0 - 7.5	poor	1.5'	yes
Creeping Red Fescue <i>Festuca rubra</i>	grass	perennial, cool season sod-forming	342, 512	5 lbs/ac	8	poor	D	no	no	DM-WM	1, 4 to 9	5 - 7.5	poor	2'	yes
Festulolium <i>Festuca x Lolium</i>	grass	short-lived annual bunchgrass	342, 512	12 lbs/ac	5.2	fair	C	yes	no	DM-WM	1 to 9	5.0 - 7.5	moderate	1.5 - 2.0'	moderate
Italian (Annual) Ryegrass <i>Lolium perenne L. ssp. multiflorum</i>	grass	short-lived annual bunchgrass	327, 342, 512	12 lbs/ac	5.2	fair	C	yes	no	DM-WM	1, 4 to 9	5.0 - 7.5	moderate	1.5 - 2.0'	moderate
Kentucky Bluegrass <i>Poa pratensis</i>	grass	long-lived perennial cool season plant, sod-forming by rhizomes	327, 342, 512	8 lbs/ac	50	poor	D	no	no < 8"	D-W	1 to 9	5 - 7	fair	2.0'	yes
Meadow Fescue <i>Lolium pratense</i>	grass	perennial, cool season aggressive bunchgrass, with age produces thick sod	342, 512	12 lbs/ac	5.2	fair	D	no	no	DM-WM	1, 4 to 9	5 - 7.2	moderate	2 - 3'	yes
Orchard Grass <i>Dactylis glomerata</i>	grass	long-lived perennial bunchgrass, reproduces from seed	327, 342, 512	10 lbs/ac	15	fair	B	yes	no < 8"	D-WM	1 to 9	5.8 - 7.0	moderate	2.5'	yes
Perennial Ryegrass <i>Lolium perenne</i>	grass	short-lived perennial bunchgrass	327, 342, 512	20 lbs/ac	5.2	fair	C	yes	no	DM-WM	1, 4, 5, 6 to 9	5 - 7.5	moderate	1.5 - 2.0'	yes

Common Name <i>Scientific Name</i>	Plant Type	Growth Habit	Practice Recommendation	Pure Stand Rate	Seeds per Ft ² /Lb/Ac.	Wildlife Value	Retardance	Pollinator Habitat	Deep Rooted	Moisture Regime	Forage Suitability Group	pH	Flood Tolerance	Average Height at Maturity	Drought
Redtop <i>Agrostis gigantea</i>	grass	long-lived perennial cool season plant, sod-forming by stolons	327, 342, 512	4 lbs/ac	114.5	fair	C	no	yes < 2"	M-W	1, 4, 7	4.5 - 8.0	good	3'	no
Smooth Bromegrass <i>Bromus inermis</i>	grass	tall long-lived perennial cool season plant, sod-forming by rhizomes	327, 342, 512	20 lb/ac	3.1	fair	B	no	no < 12"	D-WM	1 to 9	6 - 7.5	brief fair	3 - 4'	yes
Tall Fescue <i>Schedonorus arundinaceus</i>	grass	perennial, cool season aggressive bunchgrass, with age produces thick sod	327, 342, 512	12 lbs/ac	5.2	fair	B	yes	yes > 14"	D-WM	1 to 9	5 - 9	moderate	2.5 - 3.0'	yes
Timothy <i>Phleum pratense</i>	grass	cool season short-lived perennial bunch grass, reproduces by seed	327, 342, 512	8 lbs/ac	28.2	fair	B	no	no < 8"	DM-W	1, 4 to 9	5.5 - 7.0	moderate	3.0'	no
Legumes															
Alfalfa <i>Medicago sativa</i>	legume	single crown, warm season perennial legume, has a deep tap root	327, 342, 512	12 lbs/ac	5	good	C	yes	yes > 14"	D-M	2-3, 5, 6, 8, 9	> 6.5	poor	2.5'	yes
Alsike Clover <i>Trifolium hybridum</i>	legume	perennial, single crown, upright short-lived legume	327, 342, 512	3 lbs/ac	15.6	good	D	yes	no < 8"	M-W	1, 4, 5, 7, 8, 9	> 6.2	moderate	1'	no
Birdsfoot trefoil <i>Lotus corniculatus</i>	legume	warm season perennial legume	327, 342, 512	7 lbs/ac	8.6	good	D	yes	no < 10"	DM-W	1, 4 to 9	> 5.5	moderate-good	.5 - 1'	moderate
Red Clover <i>Trifolium pratense</i>	legume	upright short-lived perennial legume, produces runners, deep taproot	327, 342, 512	10 lbs/ac	6.3	good	C	yes	yes > 14"	DM-WM	1 to 9	> 6.0	poor	2.0'	no
White Ladino Clover <i>Trifolium repens</i>	legume	shallow-rooted perennial legume, prostrate, spreads by stolons	327, 342, 512	3 lbs/ac	20	fair	D	yes	no	DM-WM	1, 4, 5, 7 to 9	> 5.5	fair to poor	1.0'	no

Table 4
Summary of Seeding Requirements for Standards 327, 342, 512 (Introduced Species)

327 - Conservation Cover									
Mix Type	Grasses		Legumes^a		Seeding Periods				Notes
	No.	seeds/ft²	No.	seeds/ft²	Spring	Late Summer	Dormant^b	Frost^b	
Wildlife Habitat	≥2	≥70	≥1	≥30	X	X	X	X	Grasses must be at least 50% of mix.
Pollinator Habitat	1-2	≤30	≥2	≥40	X	X	X	X	Grasses must be bunch-type.

(a) If more than 20% of legumes are hard seed, increase rate by % of hard seed.

(b) Increase rate 15% for frost and dormant seedings.

342 - Critical Area Planting									
Mix Type	Grasses		Legumes^a		Seeding Periods				Notes
	No.	seeds/ft²	No.	seeds/ft²	Spring	Late Summer	Dormant^b	Frost	
Grasses Only	≥1	160			X	X	X	NR	At least 25% of the total seeds must be sod-forming grasses.
Mixtures	≥1	≥80	≥1	See Notes	X	X	X	NR	Grasses must be at least 50% of the mix. Mix must be at least 160 seeds/ft ² total. At least 25% of the seeds in the mix must be sod-forming grasses.

(a) If more than 20% of legumes are hard seed, increase rate by % of hard seed.

(b) Increase rate 15% for dormant seedings. Seedings in concentrated areas must be mulched.

512 - Forage & Biomass Planting									
Mix Type	Grasses		Legumes^a		Seeding Periods				Notes
	No.	seeds/ft²	No.	seeds/ft²	Spring	Late Summer	Dormant	Frost	
Pasture	≥1	See Notes	≥1	See Notes	X	X	NR	NR	Mix must be at least 60 seeds/ft ² total. Grasses must be at least 50% of the mix.
Hayland	Single species or mixture with ≥60 seeds/ft ² .				X	X	NR	NR	
Interseeding		See Notes		See Notes	X	X	NR	Legumes Only	Use 1/2 the pure stand rate for spring or late summer seeding. Use 2/3 pure stand rate for frost seeding.

(a) If more than 20% of legumes are hard seed, increase rate by % of hard seed.

SEEDING DATES

Date of seeding is a critical factor in determining whether a seeding will succeed or fail. The specific date that provides the best chance for success will vary from south to north and from year to year with prevailing moisture and temperature conditions. Late summer seeding is generally riskier than spring seeding. Planting at either end of the allowable range is riskier than the middle of the range. Refer to Table 5 for the recommended seeding dates.

Seeding outside of the established dates must be approved by the NRCS State Agronomist or Area Resource Conservationist prior to seeding. All variance requests shall provide documentation of the current soil moisture conditions and proposed timeframes for seeding to be completed.

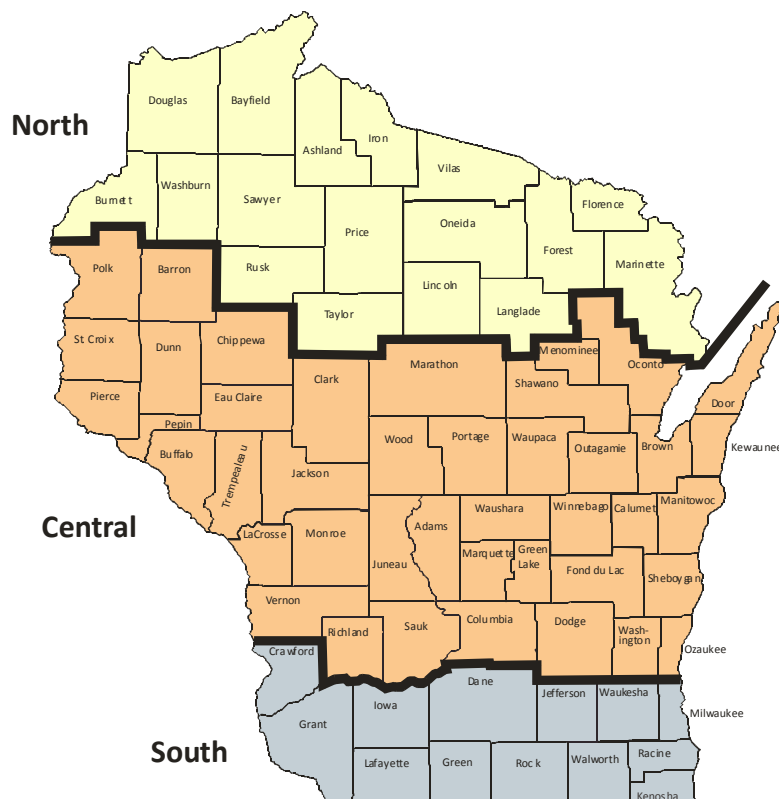
The frost seeding period in Wisconsin ranges from mid February to early March and will vary from year to year depending on the weather. Frost seeding is only allowed during active freezing and thawing cycles.

Table 5
Recommended Seeding Dates by Planting Zone

Planting Zone*	Spring	Late Summer	Dormant
North	5/1 – 6/15	7/15 – 8/10	11/1 – Freeze up
Central	4/15 – 6/1	8/1 – 8/21	11/1 – Freeze up
South	4/1 – 5/15	8/7 – 8/29	11/1 – Freeze up

*See Figure 1

Figure 1
Planting Zone Map



TEMPORARY COVER AND COMPANION CROPS

Temporary Cover Crop

All land will be established to permanent vegetative cover during the first year of the land use conversion, when possible. Temporary cover, during the first year, may be used if:

- the required seeds or plant stock are not available,
- the normal planting period for the species has passed, or
- where herbicide carryover will not allow establishment of permanent cover immediately.

If temporary cover is used, the permanent vegetative cover must be established by the end of the normal planting period of the following year.

Temporary Seeding Recommendations

1. Fields where planting is delayed due to lack of suitable seed or late planting, select one of the following species:
 - Forage sorghum – ½ bushel per acre (5/15 to 7/15)
 - Sorghum - Sudangrass hybrid – 1 bushel per acre (5/15 to 7/15)
 - Sudangrass – 1 bushel per acre (5/15 to 7/15)
 - Winter wheat - 2 bushels per acre (8/1 to 10/1)
 - Winter cereal rye - 2 bushels per acre (8/1 to 10/15)
 - Oats - 2 bushels per acre (4/1 to 9/1)
 - Annual ryegrass - 20 pounds per acre (4/1 to 9/1)
2. For fields with triazine herbicide carryover, select one of the following species:
 - Forage sorghum – ½ bushel per acre (5/15 to 7/15)
 - Sorghum - Sudangrass hybrid – 1 bushel per acre (5/15 to 7/15)
 - Sudangrass – 1 bushel per acre (5/15 to 7/15)

A bioassay test may be used to better determine chemical carryover.

A temporary cover will typically not be necessary on those areas where at least 50 percent of the ground is covered with either crop residue or vegetative cover.

Temporary cover crops must be clipped or destroyed before the plant produces viable seed, preventing excessive competition to the scheduled permanent seeding. Winter wheat and rye must be terminated by tillage, crimping, herbicides, or a combination before planting the permanent seeding.

Companion Crops

Companion crops can be used to reduce the amount of erosion on critical sites, suppress weeds, and provide added protection for permanent perennial vegetation seeded during first year plantings.

Companion crop recommendations:

- Oats - 2 bushels per acre (4/1 to 9/1)
- Winter wheat - 1 bushel per acre (8/1 to 10/1)
- Annual ryegrass - 6 pounds per acre (4/1 to 9/1)
- Spring wheat - 1 bushel per acre (4/1 to 6/1)

Companion crops shall be clipped after jointing or boot stage. Second and subsequent clippings are necessary when re-growth provides competition to the new planting. Clipping height should be above the developing seedlings. Where excessive growth has accumulated, the vegetation should be mowed and vegetation distributed uniformly. Companion crops seeded with late summer introduced grasses and legumes in most cases will not require clippings prior to the first killing frost. When the growing season is prolonged, clipping may be required for late summer plantings.

Winter cereal rye is not recommended as a companion crop with introduced season grasses. Biotoxin compounds secreted by cereal rye may inhibit germination or suppress introduced grass seedlings.

SPECIAL EROSION CONTROL MEASURES

Evaluate the need for additional soil erosion controls prior to and during the establishment period. Where erosion is determined to be a concern, alternatives shall be developed to divert water from the site or stabilize the soil surface.

When soil erosion control is an identified resource concern, increase grass composition above 50 percent of the mixture and increase the percentage of sod-forming grasses above 25 percent of the mixture.

Introduced mixtures for areas with shrub and tree plantings are not required to contain 25 percent sod forming grass seed per square foot. These seed mixtures must still contain at least 50 percent grass seed per square foot. Sod-forming grasses are not recommended in shrub and tree plantings.

Mulching

Wisconsin NRCS Standard 484, Mulching, shall be followed if program or practice design requires mulching.

Mulch shall consist of either natural and/or artificial materials such as plant residue (including cereal grain straw, grass hay, wood chips, bark and wood fiber), plastic, fabric, or other equivalent materials of sufficient dimension (depth or thickness) and durability to achieve the intended effect for the required time period. Mulch material shall be relatively free of disease, pesticides, chemicals, noxious weed seeds, and other pests and pathogens.

The type of mulching material selected should be based on cost, time of year, soils, percent slope, anticipated runoff velocities, and landscape position.

Mulching will be applied as soon as possible after seeding. Prepare the seedbed, apply the fertilizer and seed, then apply and anchor the mulch material.

When construction is completed and a permanent seeding delay is anticipated, plant temporary cover or apply a temporary mulch to the site to control erosion, or seed permanent vegetation and evaluate the status of the seeding, especially when seeding outside of the recommended dates. Reseeding may be required. All dormant plantings planned on concentrated flow areas will be mulched.

Hydroseeding

Hydroseeding typically consists of applying a mixture of cellulose fiber, seed, fertilizer, and stabilizing emulsion with hydromulching equipment to provide permanent or temporary protection to disturbed areas that are susceptible to erosion by water and wind. Hydroseeding may be used as the primary mulching method only when there is sufficient time remaining in the season to ensure adequate vegetation establishment and will provide adequate erosion control. Hydroseeding can be used

in conjunction with other mulching techniques. Hydroseeding advantages include:

- the protection of seeds from heat and birds during the germination process,
- a stabilized soil temperature,
- more even application of seeds than broadcast seeding,
- effective in keeping seeds from being washed away on slopes,
- provide added organic components to enrich the soil after the critical area is established,
- retention of moisture as seeds sprout, and
- allows for a better root formation as opposed to sodding.

Follow seeding dates outlined in Table 5 of this technical note.

Sodding

Specifications for site preparation, topsoiling, seedbed preparation and fertilizing are the same as conventional seeding. Sod shall consist of a dense, well rooted growth of a perennial desirable specie. All sod used shall be free of noxious weeds, diseases and insects. Only moist, fresh sod shall be used. The sod shall be sufficiently moist to withstand exposure during transport and transplanting operations. Sod should be placed on site within 24 hours after cutting and sod strips shall not have dry or dead edges.

Wet soil to a depth of two inches or more prior to laying the sod. Lay the sod from the lower end of the slope and work up slope. On steep slopes, stake the sod or peg with at least 6 inches or longer anchoring staplers. Tamp or roll the laid sod to insure uniform contact between the roots and soil surface. Outside edges of sodded areas shall be rolled in or banked flush with soil. On sites where surface drainage may try to follow sodded edges, extend sod strips 1 foot beyond the edges of the area sodded.

After laying sod, water thoroughly to wet the sod pad and the soil to a depth of 4 inches. In the absence of adequate rainfall, water during the first 30 days to keep underlying soil moist and allow the sod to become established. After the initial 30 day period, water as necessary to maintain adequate moisture in the root zone.

NUTRIENT AND SOIL AMENDMENT RECOMMENDATIONS

Fertilizer

Fertilizer will be applied according to a current soil test and will be consistent with University of Wisconsin recommendations found in Publication A-2809, Nutrient Application Guidelines for Field, Vegetable and Fruit Crops. A current soil test is defined as test results no older than four years from the time last tested to the date of the planned seeding. Guidelines for soil testing in Wisconsin can be found in Publication A-2100, Sampling Soils For Testing. In lieu of soil testing, apply 150 pounds of 20-10-10 fertilizer per acre, applicable only to Practice Standards 327, Conservation Cover; and 342, Critical Area Planting.

Lime

When alfalfa is part of the seeding mixture, the soil pH must be corrected to a minimum of 6.5. When birdsfoot trefoil, red clover or white ladino clover is a component of the seeding mixture, pH must be corrected to a minimum of 6.2. Liming material will be applied according to soil test recommendations. In lieu of soil testing, apply 2 tons of 80-89 lime or equivalent per acre, applicable only to Practice Standards 327, Conservation Cover; and 342, Critical Area Planting..

SEEDBED PREPARATION AND SEEDING RECOMMENDATIONS

Conventional Seeding

The seed is broadcasted or drilled into a partial or clean seedbed.

For conventional seeding, prepare a fine, firm seedbed to a minimum of 3 inches. All tillage operations shall be performed across the general slope of the landscape.

The seedbed should contain enough fine soil particles to provide uniform shallow coverage of the seed as well as contact with moisture and nutrients. It is important to have a firm seedbed. As a minimum, cultipack or roll before and after seeding. When walking on a properly prepared seedbed, the depth of your footprints should not exceed ¼ inch. Do not use heavy, no-till type drills to seed on conventionally prepared seedbeds. Heavy drills tend to sink into the soil and seeding depth will be difficult to control. Do not plant seed deeper than ¼ inch. The use of a drag

or similar equipment after seeding is not advised when small seeds are included in the mixture.

Advantages:

- May incorporate nutrients and soil amendments such as lime.
- Provides the opportunity to destroy perennial weeds.

Disadvantages:

- Soil erosion risk increases greatly.
- Erosion can wash away new seedlings or cover and smother the seedling with sediment.
- Higher field preparation cost.
- Annual weed competition can be greater.
- A nurse crop is often needed for erosion control and to suppress weed competition.
- Requires more trips across the field resulting in higher fuel cost.

No-Till Planting

No-till is the seeding of grasses and/or legumes in the absence of tillage using planting tools capable of drilling into an undisturbed soil surface and interseeding into existing herbaceous cover or prior-year crop residue.

No-Till Planting Into the Prior-Year Crop Residue

On cropland, leave the existing crop residue on the field without tillage. Soybean stubble is the preferred residue of choice. No-tilling into large amounts of non-fragile residue such as corn and small grain will reduce germination and seedling vigor. For spring weed control, when no-tilling introduced grasses and legumes, use a burndown chemical prior to or within four days after planting to kill weeds. Keep in mind that quackgrass and many broadleaf weeds are more consistently controlled when herbicides are applied early fall and a follow-up application in the spring.

Site Preparation for No-Till Interseeding Into Existing Grass Cover

Interseeding is a good way to improve existing stands of single species on fields utilized for pasture, wildlife, or idle land. Interseeding yields a mixture of grasses and legumes that gives the greatest benefit for wildlife or forage for livestock.

Land that has been in grass for many years usually has a thick layer of residue on the soil surface. In order to prepare a good seedbed for no-till interseeding and improve herbicide effectiveness, the litter or residue must be removed or altered. Existing vegetation shall be evaluated prior to seeding and a

management strategy developed to limit competition with new seedlings. Reducing competition of the existing stand is important for a successful interseeding. Options to prepare existing cover for no-till interseeding include herbicide application, grazing, mowing, haying, or burning the site.

- **Mowing:** Mow the site using a rotary mower or flail chopper to a height of 3 inches. The timing and type of mowing equipment selected shall be planned to uniformly distribute the mowed plant material over the field surface. Mowing should be planned before any known weeds produce mature seeds.
- **Burning:** Carry out a Prescribed Burn according to the requirements outlined in the plan. The burn plan must address safety concerns and document the appropriate timing for the burn to provide the maximum control of weeds and protect any existing desirable plants on the site.
- **Haying:** Harvest a hay crop from the site the year before the planned interseeding. The timing of the hay harvest should be planned to minimize the amount of re-growth that will occur prior to interseeding.
- **Grazing:** Graze the site immediately prior to herbicide application, if herbiciding is planned. The timing and duration of the grazing must be managed to prevent erosion or damage to sensitive environmental areas, but must be intensive enough to significantly reduce the existing vegetative cover. If possible, begin the grazing at a time of the year when the standing vegetation is green and growing to increase the palatability and feed value of the forage, resulting in a more uniform removal of the vegetation by grazing animals.
- **Herbicide Application:** Apply approved herbicides to kill or suppress existing vegetation and control weeds. The effectiveness of herbicides improves when combined with haying, grazing, or mowing.

A drill equipped for no-till planting shall be used to allow consistent penetration of disk openers.

Advantages:

- Soil erosion is minimized.
- Reduced energy usage.
- No nurse crop is required.
- Greater moisture availability due to lack of tillage.

- Drilling can occur under adverse conditions.
- Carbon sequestration improves.
- Seed placement is ensured.

Disadvantages:

- Increased herbicide use.
- No-till drill required.
- Nutrients and soil amendments cannot be incorporated.

To ensure success of the interseeding, regardless of the options selected above, the field will need constant maintenance by mowing and removal of the existing vegetation until the interseeded planting becomes well-established and can survive the competition of the existing vegetation.

Dormant Seeding

Seed is broadcasted and incorporated, no-tilled, or drilled into a partial or clean seedbed after the growing season and before freeze-up. The seed remains dormant until the following spring.

Seedbed preparation and conditions are similar to conventional seeding. A firm seedbed is strongly recommended for broadcast dormant seedings. Seed broadcasted without incorporation is more risky, and relies on snow, freezing, and thawing to embed seed. The approved dormant seeding date for introduced species statewide is November 1.

Advantages:

- Occurs at a time of year when labor is more available.
- Seedlings take advantage of early spring moisture.
- Soil erosion is minimized.

Disadvantages:

- Seeding rates should be increased.

Refer to the section, "Criteria for Seed Mixture Development," to determine when dormant seeding is allowed.

Frost Seeding

Broadcast seed on top of existing stands of introduced grass species or on seedbeds prepared the previous fall. Frost seed in February to mid March when the freezing and thawing cycle is active to help incorporate the seed into the soil.

The soil surface is usually "honeycombed" with small cracks at this time during the year. Frost seeding SHALL NOT occur on fields covered with

solid ice or a snow cover depths greater than 2 inches. Frost seeding must be completed before the freeze and thaw cycle ends. Do not frost seed into winter wheat or winter rye cover crops. All commonly grown legumes can be frost seeded because of their greater seedling vigor, such as red clover, alsike clover, and white ladino clover. Alfalfa and birdsfoot trefoil are approved for frost seeding; however, these species at times are less successful and slower to establish.

Advantages:

- No special drill is required.
- Labor is more available in late winter.

Disadvantages:

- Stand establishment is normally less successful, particularly in dry years.
- The seeding rate must be increased.

Frost seeding is only recommended under the following conditions:

- legumes seeded into established pastures,
- seedbeds prepared in fall, and
- undisturbed sites that consist of fragile residue such as soybean stubble.

Frost seeding is not recommended in undisturbed non-fragile residue such as corn and small grain.

Refer to the section, “Criteria for Seed Mixture Development,” to determine when frost seeding is allowed.

STAND EVALUATION

To determine the overall success of the planting, a monitoring program should consider the number of seedlings across a field, seeding vigor, height, and growth stage and overall diversity of plants. Preliminary evaluation of spring and fall plantings should be completed four to six weeks after germination. This inspection of seeding density and distribution can be combined with an inspection for post planting weed control recommendations.

Several methods can be used to evaluate stand adequacy. Density measurements are taken by counting the number of individual plants and species within a standard one foot quadrant. As a general rule, there should be at least two sample sites per acre.

**Table 6
Plant Density and Stand Evaluation One Year
After Planting**

Average Seedlings/Ft ²	Action/Condition
<1	Reseed.
1-3	Wait and re-evaluate next year.
4-5	Successful planting.
>6	Very good.

COVER MAINTENANCE

Weed Control - Establishment Year

Weed control during the establishment year is required to ensure survival of the new permanent seeding. Weed control during the seeding year will have precedent over nesting season concerns and is allowed until stand is established. Activities should be minimized when possible during the nesting season.

Mow early before weeds have a chance to smother out the new seeding. Mow before the companion crop or undesirable vegetation reach boot stage. Mow introduced plantings to a height of no less than 4 inches. Depending on the weather, mowing every 2 or 3 weeks throughout the growing season may be required to increase the probability of a successful stand. In addition, approved herbicides may be used on introduced plantings for additional weed control.

Weed Control - Established Cover

Any planned maintenance after establishment, should be done before May 15 or after August 1 to protect nesting species and reduce disruption of nesting activities. The impact of any disturbance to existing cover on wildlife and threatened or endangered species must be assessed and mitigated to the extent practicable or as required by law. In the majority of situations, established plantings will only require spot treatment without disturbing the entire unit.

To control undesirable plants during the primary nesting season, utilize one or more of the following spot treatment options:

- Spot mowing can be used to control annual weeds and to suppress perennial weeds. Spot mowing must be done before the target plant produces viable seed and must continue throughout the growing season as needed. Spot mowing is not the most effective treatment

option for biennial and perennial weeds but can be used to contain these plants until other control treatments can be implemented.

- Spot treatment of herbicides is often necessary for controlling invasive plants in introduced plantings. Spot treatment should be timed to treat weeds during active growth periods. Effective herbicide spot treatment can prevent the target plants from setting seed and spreading and dominating introduced stands. NRCS staff is prohibited from making herbicide recommendations.
- Spot Treatment by hand pulling or digging can be an effective control if the entire root is removed from the soil. Hand pulling/digging is most effective in the spring when the soil is moist and loose from the winter freeze/thaw cycle.

REFERENCES

Curtis, J. T., 1959. The Vegetation of Wisconsin: an Ordination of Plant Communities. University of Wisconsin Press, Madison.

USDA NRCS, Wisconsin Field Office Technical Guide, Section IV, Conservation Practice Standards and Specifications.

USDA, NRCS Wisconsin Field Office Technical Guide (FOTG), Section III, Conservation Management Systems.

University of Wisconsin Extension Publication A1525, Perennial Forage Crop Variety Update for Wisconsin.

University of Wisconsin Extension Publication A2809, Nutrient Application Guidelines for Field, Vegetable and Fruit Crops.

University of Wisconsin Extension Publication A2100, Sampling Soils For Testing.

Wisconsin Administrative Code, Department of Agriculture, Trade and Consumer Protection, Chapter ATCP 20, Seed Labeling and Sale.

Wisconsin State Statutes, Chapter 94, Plant Industry, ss. 94.38 to 94.46.

**Table 7
Wildlife Habitat Mixes**

Seed Calculator Code*	Mixtures	Pounds PLS per Acre	Seeds per Square Foot	Moisture Regime
327-16A	Timothy	2.5	71	DM, M
	Smooth Bromegrass	3.0	9	
	Alfalfa	6.0	30	
327-16B	Timothy	2.0	56	M, WM, W
	Orchardgrass	2.0	30	
	Red Clover	5.0	32	
327-16C	Timothy	2.0	56	DM, M
	Orchardgrass	2.0	30	
	Alfalfa	6.0	30	
327-16D	Timothy	2.5	71	M, WM
	Smooth Bromegrass	3.0	9	
	Red Clover	5.0	32	
327-16E	Timothy	2.0	56	M, WM
	Smooth Bromegrass	2.0	6	
	Orchardgrass	1.0	15	
	Red Clover	5.0	32	
	White Ladino Clover	0.5	10	
324-16F	Timothy	2.0	56	M, WM
	Orchardgrass	2.0	30	
	Red Clover	5.0	32	
	White Ladino Clover	0.5	10	
327-16G	Timothy	2.0	56	DM, M, WM
	Orchardgrass	2.0	30	
	Birdsfoot Trefoil	4.0	34	
327-16H	Tall Fescue	3.0	15	M, WM
	Red Clover	4.0	25	
	White Ladino Clover	1.0	20	
	Timothy	2.0	56	

*These codes represent the mixtures used in the Wisconsin Seed Calculator.

Table 8
Seeding Mixtures Suitable for Critical Area Plantings

Seed Calculator Code*	Moisture Regimes	Common Name	Scientific Name	Seeding Rate in lb/ac PLS	Seeding Rate in Seeds/Ft ² PLS	Capacity Retardance	Type of Site**
342-1	Dry-Mesic and Mesic Sites	Smooth Bromegrass	Bromus inermis	10	31	B	EB, WW, CSB
		Creeping Red Fescue	Festuca rubra	3	24		
		Alfalfa	Medicago sativa	3	15		
		Red Clover	Trifolium pratense	3	19		
		Kentucky bluegrass	Poa pratensis	1.5	75		
342-2	Dry-Mesic and Mesic Sites***	Smooth Bromegrass	Bromus inermis	15	47	B	EB, WW
		Alfalfa	Medicago sativa	7	35		
		Timothy	Phleum pratense	3	85		
342-3	Dry-Mesic and Mesic Sites	Kentucky bluegrass	Poa pratensis	1	50	B	CSB, EB, WW
		Smooth Bromegrass	Bromus inermis	10	31		
		Timothy	Phleum pratense	2	56		
		Tall Fescue	Schedonorus arundinaceus	2	10		
		Perennial Ryegrass	Lolium perenne	5	26		
342-4	Dry-Mesic and Mesic Sites	Smooth Bromegrass	Bromus inermis	20	62	B	EB, WW, CSB
		Creeping Red Fescue	Festuca rubra	5	40		
		Alfalfa	Medicago sativa	8	40		
		Red Clover	Trifolium pratense	4	25		
342-5	Dry-Mesic and Mesic Sites	Smooth Bromegrass	Bromus inermis	30	93	B	EB, WW, CSB
		Alfalfa	Medicago sativa	14	70		
342-6	Dry-Mesic, Mesic, and Wet Mesic Sites	Smooth Bromegrass	Bromus inermis	7	22	B	CSB, EB, WW
		Timothy	Phleum pratense	2	56		
		Creeping Red Fescue	Festuca rubra	1	8		
		Kentucky Bluegrass	Poa pratensis	1	50		
		Perennial Ryegrass	Lolium perenne	3	16		
		Red Clover	Trifolium pratense	3	19		
342-7	Mesic Sites***	Smooth Bromegrass	Bromus inermis	7	22	B	EB, WW
		Creeping Red Fescue	Festuca rubra	2	16		
		Kentucky bluegrass	Poa pratensis	3	150		
		Birdsfoot trefoil	Lotus corniculatus	2	17		
342-8	Mesic Sites***	Smooth Bromegrass	Bromus inermis	15	47	B	WW, EB
		Creeping Red Fescue	Festuca rubra	2	16		
		Kentucky Bluegrass	Poa pratensis	2	100		
342-9	Mesic Sites***	Kentucky Bluegrass	Poa pratensis	3	150	C	WW, EB
		Creeping Red Fescue	Festuca rubra	4	32		
		Perennial Ryegrass	Lolium perenne	10	52		
342-10	Mesic Sites	Smooth Bromegrass	Bromus inermis	14	43	B	EB, WW, CSB
		Timothy	Phleum pratense	3	85		
		Red Clover	Trifolium pratense	3	19		
		Perennial Ryegrass	Lolium perenne	4	21		
342-11	Mesic Sites	Smooth Bromegrass	Bromus inermis	32	99	B	EB, WW
		Creeping Red Fescue	Festuca rubra	8	64		

Seed Calculator Code*	Moisture Regimes	Common Name	Scientific Name	Seeding Rate in lb/ac PLS	Seeding Rate in Seeds/Ft ² PLS	Capacity Retardance	Type of Site**
342-12	Mesic Sites	Kentucky bluegrass	Poa pratensis	4	200	C	EB, WW
		Creeping Red Fescue	Festuca rubra	3	24		
342-13	Mesic Sites	Smooth Bromegrass	Bromus inermis	14	43	B	EB, WW, CSB
		Timothy	Phleum pratense	4	113		
		Red Clover	Trifolium pratense	3	19		
342-14	Mesic Sites	Smooth Bromegrass	Bromus inermis	15	43	B	EB, WW, CSB
		Timothy	Phleum pratense	3.5	99		
		Alsike Clover	Trifolium hybridum	2	32		
342-15	Mesic Sites	Smooth Bromegrass	Bromus inermis	15	47	B	EB, WW
		Timothy	Phleum pratense	3.5	99		
		Birdsfoot trefoil	Lotus corniculatus	3	26		
342-16	Wet Mesic Sites	Tall Fescue	Schedonorus arundinaceus	5	26	B	CSB, EB, WW
		Timothy	Phleum pratense	3	85		
		Perennial Ryegrass	Lolium perenne	3	16		
		Red Clover	Trifolium pratense	3	19		
		Smooth Bromegrass	Bromus inermis	6	19		
		Kentucky Bluegrass	Poa pratensis	2	100		
342-17	Wet Mesic Sites	Redtop	Agrostis gigantea	1	115	C	WW, CSB, EB
		Timothy	Phleum pratense	3	85		
		Red Clover	Trifolium pratense	5	32		
342-18	Wet Mesic Sites	Timothy	Phleum pratense	3	85	B	WW, CSB, EB
		Perennial Ryegrass	Lolium perenne	3	16		
		Red Clover	Trifolium pratense	3	19		
		Smooth Bromegrass	Bromus inermis	6	19		
		Kentucky Bluegrass	Poa pratensis	2	100		
342-19	Wet Mesic Sites	Redtop	Agrostis gigantea	1	115	C	WW, CSB, EB
		Timothy	Phleum pratense	1	28		
		Red Clover	Trifolium pratense	4	25		
		Kentucky Bluegrass	Poa pratensis	2	100		
342-20	Wet Sites***	Redtop	Agrostis gigantea	2	229	C	WW
		Alsike Clover	Trifolium hybridum	2	31		
		Kentucky Bluegrass	Poa pratensis	2	100		
342-21	Wet Mesic Sites	Redtop	Agrostis gigantea	3	344	C	WW
		Alsike Clover	Trifolium hybridum	3	47		

*These codes represent the mixtures used in the Wisconsin Seed Calculator.

**EB = Embankments; WW = Waterways; CSB = Channel and Streambanks

***Mixtures can be used on other site descriptions when not listed.

Table 9
Introduced Pollinator Habitat Mixes

Seed Calculator Code*	Mixtures	Pounds PLS per Acre	Seeds per Square Foot	Moisture Regime
327-17A	Timothy	0.5	14	DM, M
	Orchardgrass	1.0	15	
	Alfalfa	4.0	20	
	White Ladino Clover	1.5	30	
327-17B	Tall Fescue	3.0	16	WM, W
	Perennial Ryegrass	3.0	16	
	Red Clover	4.0	25	
	Alsike Clover	1.5	23	

*These codes represent the mixtures used in the Wisconsin Seed Calculator.

Table 10
Forage and Hayland Planting Recommendations

Forage Suitability Group	Seed Calculator Code ¹	Species	Lbs. PLS per Acre	Seeds per Square Foot
Hay Crop				
Group 1: Low water holding capacity, seasonal high water table.	512-H1	Red Clover	6	38
		Tall Fescue	6	31
		Timothy	1	28
Group 2: Low water holding capacity, 0 to 12 percent slopes.	512-H2	Alfalfa	12	60
	512-H3	Alfalfa Smooth Bromegrass	10 4	50 12
Group 3: Low water holding capacity, greater than 12 percent slopes.	512-H3	Alfalfa Smooth Bromegrass	10 4	50 12
Group 4: Moderate water holding capacity, seasonal high water table.	512-H4	Alsike Clover	3	47
		Tall Fescue	6	31
		Timothy	1	28
Group 5: Moderate water holding capacity, less than 12 percent slopes.	512-H3	Alfalfa Smooth Bromegrass	10 4	50 12
Group 6: Moderate water holding capacity, greater than 12 percent slopes.	512-H3	Alfalfa Smooth Bromegrass	10 4	50 12
Group 7: High water holding capacity, seasonal high water table.	512-H4	Alsike Clover	3	48
		Tall Fescue	6	31
		Timothy	1	28
Group 8: High water holding capacity, less than 12 percent slopes.	512-H5	Alfalfa	8	40
		Timothy	2	56
Group 9: High water holding capacity, greater than 12 percent slopes.	512-H6	Alfalfa	8	40
		Smooth Bromegrass	4	12
		Timothy	1	28

Forage Suitability Group	Seed Calculator Code ¹	Species	Lbs. PLS per Acre	Seeds per Square Foot
Group 10: Organic soils, wetlands, ledge outcrop.	---	Planting not feasible.	---	---
Rotation and Permanent Pastures				
Group 1: Low water holding capacity, seasonal high water table.	512-PP1	Alsike Clover Meadow Fescue	2 6	31 31
	512-PP1A	Alsike Clover Orchardgrass	2 3	31 45
	512-PP1B	Alsike Clover Timothy	2 1.5	31 42
Groups 2: Low water holding capacity, 0 to 12 percent slopes.	512-PP2	Alfalfa Smooth Bromegrass Orchardgrass	6 4 4	30 12 60
Group 3: Low water holding capacity, greater than 12 percent slopes.	512-PP2	Alfalfa Smooth Bromegrass Orchardgrass	6 4 4	30 12 60
Group 4: Moderate water holding capacity, seasonal high water table.	512-PP4	Alsike Clover Meadow Fescue Timothy	2 6 1	31 31 28
	512-PP4B	Birdsfoot Trefoil Meadow Fescue Timothy	3 6 1	26 31 28
Group 5: Moderate water holding capacity, less than 12 percent slopes.	512-PP5	Red Clover White Ladino Clover Orchardgrass Meadow Fescue	5 1 3 6	32 20 45 31
	512-PP5B	Red Clover White Ladino Clover Festulolium Meadow Fescue	5 1 7 6	32 20 36 31
Group 6: Moderate water holding capacity, greater than 12 percent slopes.	512-PP6	Red Clover Orchardgrass Smooth Bromegrass	5 4 4	32 60 12
Group 7: High water holding capacity, seasonal high water table.	512-PP7	Alsike Clover Meadow Fescue Timothy Redtop	2 6 1 1	31 31 28 115
	512-PP7B	Birdsfoot Trefoil Meadow Fescue Timothy Redtop	3 6 1 1	26 31 28 115
Group 8: High water holding capacity, less than 12 percent slopes.	512-PP8	White Ladino Clover Orchardgrass Meadow Fescue	1 3 6	20 45 31
	512-PP8B	White Ladino Clover Festulolium Meadow Fescue	1 7 6	20 36 31
Group 9: High water holding capacity, greater than 12 percent slopes.	512-PP9	Red Clover Orchardgrass Meadow Fescue	5 3 6	32 45 31

Forage Suitability Group	Seed Calculator Code ¹	Species	Lbs. PLS per Acre	Seeds per Square Foot
Group 10: Organic soils, wetlands, ledge outcrop.	---	Planting not feasible.	---	---
Pasture for Horses/Sheep				
Groups 1, 4, 7: Seasonal high water table.	512-PHS1	Kentucky Bluegrass Meadow Fescue White Ladino Clover	4 4 1	200 21 20
	512-PSH1A	Kentucky Bluegrass Meadow Fescue Birdsfoot Trefoil	4 4 3	200 21 26
Groups 5, 6, 7, & 8: Moderate to high water holding capacity.	512-PHS2	Kentucky Bluegrass Festulolium White Ladino Clover	2 7 1	100 36 20
	512-PHS2A	Kentucky Bluegrass Perennial Ryegrass White Ladino Clover	2 7 1	100 36 20
Groups 2 & 3: Low water holding capacity.	512-PHS3	Alfalfa Orchardgrass	6 3	30 45
Pasture for Hogs				
		Alfalfa OR Red clover Forage Rape OR Oats OR Sudangrass OR Hybrid Pearl Millet	12 10 25 35 2 bu/ac	60 63 --- --- ---
Summer Annuals for Supplemental Forage				
		Hybrid Pearl Millet Winter rye (fall planted) Forage Rape Forage Turnips and Swedes Rape and Kale	25 1½ - 2 bu/ac 4 bu/ac 1½-2 lbs./ac 4 lbs./ac	--- --- --- --- ---

¹These codes represent the mixtures used in the Wisconsin Seed Calculator.

APPENDIX F

Summary of Flows and Potential TP/ TSS Discharge-Outfall 013

Table 1
WASTEWATER MANAGEMENT - SENECA FOODS MAYVILLE
2014 Phosphorus & Total Suspended Solids (TSS) North Tile Line Flow (Outfall 013) Effluent

Month	Sample Date	Flow	Total P	TSS			
			Concentration	Concentration	Daily	Month Avg.	Total Month Mass >3.46 lbs/day Avg.
	---Date---	--Gal/day--	----mg/L----	----mg/L----	-----lb/day-----		--lb/month--
LIMITS (2026 permit proposed in italic)			0.075 mg/L	40	5.67	3.46	
May	5/14/2014	82,620	<0.052	<0.95	0	0	
June	6/17/2014	7,560	0.14	1.0	0.1		
	6/25/2014	143,100	0.19	11.0	13.1	6.6	94.07
July	7/2/2014	128,520	<0.052	4.8	5.1		
	7/9/2014	54,540	0.27	4.2	1.9		
	7/16/2014	9,720	0.13	2.6	0.2		
	7/23/2014	10,800	0.20	15.3	1.4	2.2	
August	8/13/2014	12,960	<0.052	2.3	0.2	0.2	
September	9/3/2014	61,560	1.00	8.8	4.5		
	9/26/2014	35,100	0.32	9.6	2.8	3.7	6.12
October	10/1/2014	6,480	0.30	9.0	0.5	0.5	
Total							
	Average	50,269	0.23	6.9	2.7	2.2	
	Median	35,100	0.24	6.8	1.4	1.3	
	Minimum	6,480	<0.052	<0.095	0.0	0.0	
	Maximum	143,100	1.00	15.3	13.1	6.6	
Annual Load to Offset¹, lbs/year			11.97		7.46	+	100.19
							107.65

LI

Notes

1. Limit for Total P is 0.075 mg/L 6-month average. Limit for TSS is 5.67 lb/day daily maximum and 3.46 lb/day monthly average. Highlighted (yellow) values exceed existing or proposed limits.
2. Data listed include all monitoring results both during discharge to surface water and during reapplication (orange highlighted) to the sprayfield.

Table 2
WASTEWATER MANAGEMENT - SENECA FOODS MAYVILLE
2015 Phosphorus & Total Suspended Solids (TSS) North Tile Line Flow (Outfall 013) Effluent

Month	Sample Date	Flow	Total P	TSS				
			Concentration	Concentration	Daily	Month Avg.	Total Month Mass >3.46 lbs/day Avg.	
	---Date---	--Gal/day--	---mg/L---	---mg/L---	-----lb/day-----		--lb/month--	
LIMITS (2026 permit proposed in italic)			0.075 mg/L	40	5.67	3.46		
May	5/20/2015	3780	0.057	6.2	0.2	0.2		
June	6/3/2015	7020	0.086	12.2	0.7			
	6/24/2015	17820	0.25	8.6	1.3			
	6/30/2015	27000	<0.052	2.0	0.5	0.8		
July	7/8/2015	2700	0.067	5.2	0.1			
	7/15/2015	37800	0.13	4.4	1.4			
	7/21/2015	15660	0.25	11.6	1.5			
	7/28/2015	0	0.082	22.0	0.0	0.8		
August	8/5/2015	8100	0.65	45	3.0			
	8/12/2015	6480	0.055	7	0.4			
	8/19/2015	1620	0.44	16.8	0.2			
	8/26/2015	1080	0.38	20.4	0.2	1.0		
September	9/2/2015	11340	1.6	34.8	3.3			
	9/9/2015	119340	1.1	11.2	11.1			
	9/16/2015	0	0.27	6.4	0.0			
	9/23/2015	88560	1.1	14.2	10.5			
October	9/28/2015	48060	0.44	5.4	2.2	5.4	58.75	
	10/21/2015	8100	<0.052	2.2	0.1	0.1		
	Average	22,470	0.39	13.1	2.0	1.4		
	Median	8,100	0.26	9.9	0.6	0.8		
	Minimum	-	<0.052	2.0	0	0.1		
	Maximum	119,340	1.60	45	11.1	5.4		
Annual Load to Offset¹, lbs/year			9.87		10.30	+	58.75	69.04

Notes

1. Limit for Total P is 0.075 mg/L 6-month average. Limit for TSS is 5.67 lb/day daily maximum and 3.46 lb/day monthly average. Highlighted (yellow) values exceed existing or proposed limits.
2. Data listed include all monitoring results both during discharge to surface water and during reapplication (orange highlighted) to the sprayfield.

Table 3
WASTEWATER MANAGEMENT - SENECA FOODS MAYVILLE
2016 Phosphorus & Total Suspended Solids (TSS) North Tile Line Flow (Outfall 013) Effluent

Month	Sample Date	Flow	Total P	TSS				
			Concentration	Concentration	Daily	Month Avg.	Total Month Mass >3.46 lbs/day Avg.	
	---Date---	--Gal/day--	---mg/L---	---mg/L---	-----lb/day-----		--lb/month--	
LIMITS (2026 permit proposed in italic)			0.075 mg/L	40	5.67	3.46		
May	5/16/2016	5940	<0.052	6.0	0.3	0.3		
June	6/14/2016	1620	<0.052	4.2	0.1			
	6/21/2016	4860	0.075	<0.95	0.0			
	6/28/2016	2700	<0.052	<0.95	0.0	0.0		
July	7/5/2016	0	<0.052	1.0	0.0			
	7/12/2016	1080	<0.052	1.4	0.01			
	7/19/2016	540	<0.052	2.0	0.01			
August	7/26/2016	1080	<0.052	2.2	0.02	0.01		
	8/2/2016	3240	0.2	17.6	0.5			
	8/9/2016	62640	0.23	13.7	7.2			
	8/16/2016	11880	<0.052	3.4	0.3			
	8/23/2016	124740	0.3	4.8	5.0			
September	8/30/2016	119340	1.0	18.8	18.7	6.3	89.12	
	9/6/2016	21600	0.52	16.2	2.9			
	9/13/2016	58320	1.1	18.0	8.8			
	9/20/2016	34560	1.1	27.5	7.9			
October	9/27/2016	31860	0.49	18.4	4.9	6.1	79.87	
	10/6/2016	11340	0.28	10.2	1.0			
September	10/13/2016	17820	0.17	13.0	1.9	1.4		
	Average	27,114	0.29	10.5	3.1	2.4		
	Median	11,340	0.33	10.2	0.5	0.9		
	Minimum	-	<0.052	<0.095	0	0		
	Maximum	124,740	1.10	27.5	18.7	6.3		
Annual Load to Offset¹, lbs/year			8.23		19.87	+	168.99	188.86

Notes

1. Limit for Total P is 0.075 mg/L 6-month average. Limit for TSS is 5.67 lb/day daily maximum and 3.46 lb/day monthly average. Highlighted (yellow) values exceed existing or proposed limits.
2. Data listed include all monitoring results both during discharge to surface water and during reapplication (orange highlighted) to the sprayfield.

Table 4
WASTEWATER MANAGEMENT - SENECA FOODS MAYVILLE
2017 Phosphorus & Total Suspended Solids (TSS) North Tile Line Flow (Outfall 013) Effluent

Month	Sample Date	Flow	Total P	TSS				
			Concentration	Concentration	Daily	Month Avg.	Total Month Mass >3.46 lbs/day Avg.	
	---Date---	--Gal/day--	----mg/L----	----mg/L----	-----lb/day-----		--lb/month--	
LIMITS (2026 permit proposed in italic)			0.075 mg/L	40	5.67	3.46		
May	5/31/2017	17280	<.052	10	1.4	1.4		
June	6/13/2017	6480	0.072	9.2	0.5			
	6/20/2017	1620	<.052	3.6	0.0			
July	6/27/2017	17280	0.13	1	0.1	0.2		
	7/5/2017	23220	<.052	<0.95	0.0			
	7/11/2017	4860	<.052	1.6	0.1			
	7/18/2017	4860	<.052	1	0.0			
August	7/25/2017	9720	<.052	1	0.1	0.05		
	8/1/2017	7560	<.052	4.4	0.3			
	8/8/2017	15660	<.052	3.8	0.5			
	8/15/2017	5400	0.41	10.7	0.5			
September	8/22/2017	7020	0.12	11.2	0.7			
	8/29/2017	6480	0.18	8	0.4	0.5		
	9/5/2017	8100	<.052	5.2	0.4			
	9/12/2017	6480	0.092	8.4	0.5			
October	9/19/2017	21600	0.18	13.6	2.4			
	9/26/2017	5400	0.24	17.2	0.8	1.0		
	10/3/2017	14040	0.65	27	3.2			
	10/10/2017	23220	0.69	20.4	4.0			
	10/17/2017	59400	0.62	14	6.9			
	10/24/2017	58320	0.34	8.4	4.1	4.5	33.27	
	Average	15,429	0.18	9.0	1.3	1.3		
	Median	8,100	0.21	8.4	0.5	0.7		
	Minimum	1,620	<0.052	<0.95	0	0.05		
	Maximum	59,400	0.69	27.0	6.9	4.5		
Annual Load to Offset¹, lbs/year			2.34		1.27	+	33.27	34.54

Notes

1. Limit for Total P is 0.075 mg/L 6-month average. Limit for TSS is 5.67 lb/day daily maximum and 3.46 lb/day monthly average. Highlighted (yellow) values exceed existing or proposed limits.
2. Data listed include all monitoring results both during discharge to surface water and during reapplication (orange highlighted) to the sprayfield.

Table 5
WASTEWATER MANAGEMENT - SENECA FOODS MAYVILLE
2018 Phosphorus & Total Suspended Solids (TSS) North Tile Line Flow (Outfall 013) Effluent

Month	Sample Date	Flow	Total P	TSS				
			Concentration	Concentration	Daily	Month Avg.	Total Month Mass >3.46 lbs/day Avg.	
	---Date---	--Gal/day--	----mg/L----	----mg/L----	-----lb/day-----		--lb/month--	
LIMITS (2026 permit proposed in italic)			0.075 mg/L	40	5.67	3.46		
May	5/22/2018	21060	<0.052	2.2	0.39	0.39		
June	6/12/2018	1080	0.067	6.8	0.06	0.06		
July	7/5/2018	3780	<0.052	1.2	0.04			
	7/10/2018	2160	<0.052	1.8	0.03			
	7/17/2018	3240	<0.052	2.6	0.07			
	7/24/2018	540	0.16	2.6	0.01			
August	7/31/2018	1620	<0.052	2.2	0.03	0.04		
	8/7/2018	1620	<0.052	1.6	0.02			
	8/14/2018	540	<0.052	1.8	0.01			
	8/21/2018	48060	0.11	4.4	1.76			
	8/28/2018	96600	0.4	6.4	5.16	1.74		
September	9/4/2018	37800	0.21	9.2	2.90			
	9/11/2018	16200	0.18	10.4	1.41			
	9/18/2018	1080	0.46	14.2	0.13			
23490	9/25/2018	38880	0.098	6.2	2.01	1.61		
October	10/2/2018	31860	0.1	4.6	1.22			
	10/16/2018	33480	<0.052	2.2	0.61	0.94		
	11/6/2018	2700	0.19	9	0.20	0.20		
	Average	19,976	0.11	5.0	0.89	0.71		
	Median	3,780	0.17	3.5	0.17	0.39		
	Minimum	540	<0.052	1.2	0.01	0.04		
	Maximum	96,600	0.46	14.2	5.16	1.74		
Annual Load to Offset¹, lbs/year			1.22		0.00	+	0.00	0.00

Notes

1. Limit for Total P is 0.075 mg/L 6-month average. Limit for TSS is 5.67 lb/day daily maximum and 3.46 lb/day monthly average. Highlighted (yellow) values exceed existing or proposed limits.
2. Data listed include all monitoring results both during discharge to surface water and during reapplication (orange highlighted) to the sprayfield.

Table 6
WASTEWATER MANAGEMENT - SENECA FOODS MAYVILLE
2019 Phosphorus & Total Suspended Solids (TSS) North Tile Line Flow (Outfall 013) Effluent

Month	Sample Date	Flow	Total P	TSS				
			Concentration	Concentration	Daily	Month Avg.	Total Month Mass >3.46 lbs/day Avg.	
	---Date---	--Gal/day--	----mg/L----	----mg/L----	-----lb/day-----		--lb/month--	
LIMITS (2026 permit proposed in italic)			0.075 mg/L	40	5.67	3.46		
May	5/28/2019	166500	<0.052	2	2.78	2.77		
June	6/18/2019	12000	0.067	<0.95	0			
	6/25/2019	13500	<0.052	<0.95	0	0		
July	7/2/2019	45000	0.13	<0.95	0			
	7/9/2019	43500	0.52	3.2	1.16			
	7/16/2019	25000	<0.52	5.6	1.17			
28375	7/23/2019	0	0.81	47	0	0.582		
August	8/6/2019	45000	0.41	20.8	7.81			
	8/13/2019	90000	0.12	12.2	9.16			
	8/20/2019	15000	0.43	37	4.63	7.20	115.86	
September	9/3/2019	0	0.62	6	0.00			
	9/10/2019	64800	1.2	24.3	13.13			
	9/17/2019	226800	0.38	6	11.35			
October	9/24/2019	291600	1.30	18.5	44.99	17.37	431.15	
	10/1/2019	97200	1.00	16.7	13.54			
	10/8/2019	45000	0.23	11.4	4.28	8.91	168.89	
	Average	73,806	0.45	16.2	7.1	6.1		
	Median	45,000	0.43	12.2	3.5	5.0		
	Minimum	-	<0.052	<0.095	0.0	0.0		
	Maximum	291,600	1.30	47.0	45.0	17.4		
Annual Load to Offset¹, lbs/year			39.82		65.95	+	715.90	781.86

Notes

1. Limit for Total P is 0.075 mg/L 6-month average. Limit for TSS is 5.67 lb/day daily maximum and 3.46 lb/day monthly average. Highlighted (yellow) values exceed existing or proposed limits.
2. Data listed include all monitoring results both during discharge to surface water and during reapplication (orange highlighted) to the sprayfield.

Table 7
WASTEWATER MANAGEMENT - SENECA FOODS MAYVILLE
2020 Phosphorus & Total Suspended Solids (TSS) North Tile Line Flow (Outfall 013) Effluent

Month	Sample Date	Flow	Total P	TSS				
			Concentration	Concentration	Daily	Month Avg.	Total Month Mass >3.46 lbs/day Avg.	
	---Date---	--Gal/day--	----mg/L----	----mg/L----	-----lb/day-----		--lb/month--	
LIMITS (2026 permit proposed in italic)			0.075 mg/L	40	5.67	3.46		
May	5/26/2020	64800	0.052	2.2	1.19	1.19		
June	6/16/2020	24300	0.050	2.0	0.41			
	6/23/2020	12960	0.062	1.8	0.19			
	6/30/2020	181400	0.036	3.8	5.75	2.12		
July	7/7/2020	16200	<0.029	3.6	0.49			
	7/14/2020	24300	0.41	24.8	5.03			
	7/28/2020	72900	0.071	14.8	9.00	4.84	42.68	
August	8/31/2020	97200	0.059	6.2	5.03	5.03	48.67	
September	9/8/2020	1620	0.53	35.6	0.48			
	9/14/2020	100440	0.31	13.2	11.06	5.77	69.27	
	Average	59,612	0.16	10.8	3.9	3.8		
	Median	44,550	0.06	5.0	3.1	4.8		
	Minimum	1,620	<0.029	<0.095	0.2	1.2		
	Maximum	181,400	0.53	35.6	11.1	5.8		
Annual Load to Offset¹, lbs/year			5.65		8.72	+	160.63	169.34

Notes

1. Limit for Total P is 0.075 mg/L 6-month average. Limit for TSS is 5.67 lb/day daily maximum and 3.46 lb/day monthly average. Highlighted (yellow) values exceed existing or proposed limits.
2. Data listed include all monitoring results both during discharge to surface water and during reapplication (orange highlighted) to the sprayfield.

Table 8
WASTEWATER MANAGEMENT - SENECA FOODS MAYVILLE
2021 Phosphorus & Total Suspended Solids (TSS) North Tile Line Flow (Outfall 013) Effluent

Month	Sample Date	Flow	Total P	TSS				
			Concentration	Concentration	Daily	Month Avg.	Total Month Mass >3.46 lbs/day Avg.	
	---Date---	--Gal/day--	----mg/L----	----mg/L----	-----lb/day-----		--lb/month--	
LIMITS (2026 permit proposed in italic)			0.075 mg/L	40	5.67	3.46		
June	6/8/2021	0	<0.029	2.0	0.00			
	6/15/2021	4050	0.089	15.8	0.53			
	6/22/2021	1620	0.12	1.6	0.02			
	6/29/2021	1620	0.047	2.8	0.04	0.15		
July	7/6/2021	1620	0.038	14.8	0.20			
	7/13/2021	1620	0.052	1.8	0.02			
	7/20/2021	1620	0.13	3.0	0.04			
	7/27/2021	1620	0.051	19.0	0.26	0.13		
August	8/3/2021	1620	0.11	4.4	0.06			
	8/10/2021	1620	0.32	5.0	0.07			
	8/17/2021	147420	0.24	22.4	27.54	9.22	178.64	
September	9/14/2021	1620	0.37	23.8	0.32			
	9/21/2021	0	0.13	6.4	0			
	9/28/2021	0	2.0	58.4	0	0.11		
October	10/19/2021	10231	0.22	14.4	1.23			
	10/26/2021	10231	0.42	21.0	1.79	1.51		
November	11/4/2021	10000	0.11	3.6	0.30			
	11/18/2021	10000	0.20	7.4	0.62	0.46		
	Average	11,473	0.26	12.6	1.8	1.9		
	Median	1,620	0.13	6.9	0.1	0.3		
	Minimum	-	<0.029	<0.095	0.0	0.1		
	Maximum	147,420	2.00	58.4	27.5	9.2		
Annual Load to Offset¹, lbs/year			2.98		21.87	+	178.64	200.51

Notes

1. Limit for Total P is 0.075 mg/L 6-month average. Limit for TSS is 5.67 lb/day daily maximum and 3.46 lb/day monthly average. Highlighted (yellow) values exceed existing or proposed limits.
2. Data listed include all monitoring results both during discharge to surface water and during reapplication highlighted (orange) to the sprayfield.

Table 9
WASTEWATER MANAGEMENT - SENECA FOODS MAYVILLE
2022-2024 Phosphorus & Total Suspended Solids (TSS) North Tile Line Flow (Outfall 013) Effluent

Month	Sample Date	Flow	Total P	TSS			
			Concentration	Concentration	Daily	Month Avg.	Total Month Mass >3.46 lbs/day Avg.
	---Date---	--Gal/day--	----mg/L----	----mg/L----	-----lb/day-----		--lb/month--
LIMITS (2026 permit proposed in italic)			0.075 mg/L	40	5.67	3.46	
<i>No water discharged to surface water from 2022 through 2024. All tile water resprayed back on the sprayfield.</i>							
	6/2/2022	0	0.11				
	6/29/2022	0	0.19	3.3			
	7/20/2022	0	0.2	5.3			
	7/27/2022	0	0.0053	15.3			
	8/3/2022	0	0.061	5.6			
	8/10/2022	0	0.062				
	8/17/2022	0	<0.050	2.7			
	8/24/2022	0	0.2	6			
	8/31/2022	0	0.14	20.2			
	10/5/2022	0	<0.050	5.4			
	10/26/2022	0	<0.050	2.6			
	11/9/2022	0	0.054	1.7			
	11/16/2022	0	0.057	1.4			
	11/21/2022	0	0.067				
	11/30/2022	0	<0.050	2.1			
	9/20/2023	0	0.25	9.8			
	9/27/2023	0	0.96	138			
	10/4/2023	0	0.13	9.6			
	10/11/2023	0	0.1	5.4			
	10/18/2023	0	0.95	9			
	Average	-	0.14	14.3			
	Median	-	0.12	5.4			
	Minimum	-	<0.050	1.4			
	Maximum	-	0.96	138			

Summary of Required Offset		
Year	Total	
	Phosphorus	TSS
	-----lb/yr-----	
2014	11.97	107.65
2015	9.87	69.04
2016	8.23	188.86
2017	2.34	34.54
2018	1.22	0.00
2019	39.82	781.86
2020	5.65	169.34
2021	2.98	200.51
Average	10.26	193.97

Notes

1. Limit for Total P is 0.075 mg/L 6-month average. Limit for TSS is 5.67 lb/day daily maximum and 3.46 lb/day monthly average. Highlighted (yellow) values exceed existing or proposed limits.

APPENDIX G

Site Inspection Reports

Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 4-21-21

Inspector Initials: RTH

Site Location: Field 1 (west) Field 2 (west central)
 Field 3 (east central) Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring Harvest Major Rainfall (~ _____ inch)

Crop Condition:

No visual evidence of reduced stands
 Visual evidence of reduced stand (indicate location(s) on map)

Evidence of Soil Erosion

No visual evidence of soil erosion
 Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions
 Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None
 Re seeding Selective Field Areas (Attach figure showing areas to be addressed)
 Regrading and re seeding eroded field areas (Attach figure showing areas to be addressed)

Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 4-21-21

Inspector Initials: RTH

Site Location: Field 1 (west) Field 2 (west central)
 Field 3 (east central) Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring Harvest Major Rainfall (~ ____ Inch)

Crop Condition:

No visual evidence of reduced stands
 Visual evidence of reduced stand (indicate location(s) on map)

Evidence of Soil Erosion

No visual evidence of soil erosion
 Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions
 Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None
 Re seeding Selective Field Areas (Attach figure showing areas to be addressed)
 Regrading and re seeding eroded field areas (Attach figure showing areas to be addressed)

Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 4-21-21

Inspector Initials: RTN

Site Location: Field 1 (west) Field 2 (west central)
 Field 3 (east central) Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring Harvest Major Rainfall (~ ____ inch)

Crop Condition:

No visual evidence of reduced stands
 Visual evidence of reduced stand (indicate location(s) on map)

Evidence of Soil Erosion

No visual evidence of soil erosion
 Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions
 Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None
 Re seeding Selective Field Areas (Attach figure showing areas to be addressed)
 Regrading and re seeding eroded field areas (Attach figure showing areas to be addressed)

Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 4-21-21

Inspector Initials: RTH

Site Location: Field 1 (west) Field 2 (west central)
 Field 3 (east central) Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring Harvest Major Rainfall (~ _____ inch)

Crop Condition:

No visual evidence of reduced stands
 Visual evidence of reduced stand (indicate location(s) on map)

Evidence of Soil Erosion

No visual evidence of soil erosion
 Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions
 Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None
 Re seeding Selective Field Areas (Attach figure showing areas to be addressed)
 Regrading and re seeding eroded field areas (Attach figure showing areas to be addressed)



















Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 7/14/22

Inspector Initials: J. Mushinski

Site Location:

Field 1 (west)

Field 2 (west central)

Field 3 (east central)

Field 4 (east)

*parked on Cty V
walked site 2pm-3pm*

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring

Harvest

Major Rainfall (~ _____ inch)

Crop Condition:

No visual evidence of reduced stands

Visual evidence of reduced stand (indicate location(s) on map)

Evidence of Soil Erosion

No visual evidence of soil erosion

Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions

Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None

Re seeding Selective Field Areas (Attach figure showing areas to be addressed)

Regrading and reseeding eroded field areas (Attach figure showing areas to be addressed)

Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 7/14/22

Inspector Initials: SM

Site Location:

Field 1 (west)

Field 2 (west central)

Field 3 (east central)

Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring

Harvest

Major Rainfall (~ ____ inch)

Crop Condition:

No visual evidence of reduced stands

Visual evidence of reduced stand (indicate location(s) on map) *slight*

Evidence of Soil Erosion

No visual evidence of soil erosion

Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions

Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None

Re seeding Selective Field Areas (Attach figure showing areas to be addressed)

Regrading and reseeding eroded field areas (Attach figure showing areas to be addressed)

Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 7/14/22

Inspector Initials: JM

Site Location: Field 1 (west) Field 2 (west central)
 Field 3 (east central) Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring Harvest Major Rainfall (~ _____ inch)

Crop Condition:

No visual evidence of reduced stands *just turkey*
 Visual evidence of reduced stand (indicate location(s) on map)

*dusting
@ ~~10:00 AM~~
area*

Evidence of Soil Erosion

No visual evidence of soil erosion
 Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions
 Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None
 Re seeding Selective Field Areas (Attach figure showing areas to be addressed)
 Regrading and re seeding eroded field areas (Attach figure showing areas to be addressed)

Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 7/14/22

Inspector Initials: *RM*

Site Location: Field 1 (west) Field 2 (west central)
 Field 3 (east central) Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring Harvest Major Rainfall (~ ____ inch)

Crop Condition:

No visual evidence of reduced stands
 Visual evidence of reduced stand (indicate location(s) on map)

Evidence of Soil Erosion

No visual evidence of soil erosion
 Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions
 Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None
 Re seeding Selective Field Areas (Attach figure showing areas to be addressed)
 Regrading and re seeding eroded field areas (Attach figure showing areas to be addressed)

WQT Inspection – Site Photos – July 2022

Field 1



Field 2



Turkey dusting area on Field 2



Field 3



Sparse cover crop on Field 3



Field 4



TileOutfall Field Boundaries Streams Soil Type HUC12	APPLIED SCIENCE, INC. SCIENCE • ENGINEERING • MANAGEMENT 2602 PERRY STREET MADISON, WI 53713 800APPLIEDSCIENCE.COM • (608) 278-8833		<i>Fields Generating Trade Credit</i> SENECA FOODS CORPORATION MAYVILLE, WISCONSIN		FIGURE NO. 3
	DRAWN: RCW	CHECKED: NPH	APPROVED: RCW	DATE: 9/16/2020	PROJECT NO: C12901



Farm Fresh Goodness Made Great

February 6, 2023

Zach Watson
Senior Hydrogeologist
Water Quality Bureau
Wisconsin Department of Natural Resources
1500 N Johns Street
Dodgeville, WI 53533
Zachary.watson@wisconsin.gov

RE: Seneca Foods Corporation – Mayville
WPDES Permit No. WI-0050822-08-0
Annual Water Quality Trading (WQT) Report

Dear Mr. Watson:

In accordance with WPDES Permit No. WI-0050822-08-0, effective on June 1, 2021, Seneca Foods Corporation (Seneca) is providing the required Annual Water Quality Trading (WQT) Report for the 2022 calendar year. Specifically Part 5.5 of the permit requires:

Annual WQT Report #2: Submit an annual WQT report that shall cover the previous year.

The WQT Report shall include:

- The number of pollutant reduction credits (lbs/month) used each month of the previous year to demonstrate compliance;
The source of each month’s pollutant reduction credits by identifying the approved water quality trading plan that details the source;
A summary of the annual inspection of each nonpoint source management practice that generated any of the pollutant reduction credits used during the previous year; and
Identification of noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading that have not been reported in discharge monitoring reports.

Pollution Credits Used

Table with 4 columns: Month, 013 Discharge (gallons/month), WQT Total Suspended Solids Credits Used (lbs/month), WQT Total Phosphorus Credits Used (lbs/month). Rows for months January through August, all showing 'No discharge to stream' and zero credits used.

Month	013 Discharge (gallons/month)	WQT Total Suspended Solids Credits Used (lbs/month)	WQT Total Phosphorus Credits Used (lbs/month)
September	No discharge to stream	-	-
October	No discharge to stream	-	-
November	No discharge to stream	-	-
December	No discharge to stream	-	-

Source of Pollution Reduction Credits

Agricultural fields utilized for credit generation are located in the NE ¼ NE ¼ Section 34, NW ¼ NW ¼ Section 35, and the SW ¼ SW ¼ Section 26 in Township 12 North, Range 16 East, in the Town of Williamstown in Dodge County. A figure is attached showing the location of the fields in relation to the North Tile Outfall (Outfall 013).

Summary of Annual Inspection of Nonpoint Source Management Practices


Laura Mushinski and/or Juan Muniz Jr. conducted inspections of the WQT fields on July 14, 2022 and September 12, 2022 after grass harvest or a heavy rain event. These inspection reports are attached, including photos.

Identification of Noncompliance or Failure

Seneca is not aware of any noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading. For 2022, there were no discharges to surface water via Outfall 013 so technically the credits were unused.

If you have any questions, please contact the undersigned at gstapleton@senecafoods.com or (920) 387-7226. Thank you!

Sincerely,
Seneca Foods Corporation


Gary Stapleton
Plant Manager

cc: Laura Mushinski, Seneca
Juan Muniz Jr., Seneca – Clyman & Mayville



	APPLIED SCIENCE, INC. SCIENCE • ENGINEERING • MANAGEMENT 2002 PERRY STREET MADISON, WI 53713 www.appliedscienceinc.com • (608) 278-9933		<i>Fields Generating Trade Credit</i> SENECA FOODS CORPORATION MAYVILLE, WISCONSIN			FIGURE NO. 3
	DRAWN RCW	CHECKED NPH	APPROVED RCW	REVISION 9/16/2020	PROJECT NO. C12901	FILE 2020WQTRD

January 12, 2024

Zach Watson
Senior Hydrogeologist
Water Quality Bureau
Wisconsin Department of Natural Resources
1500 N Johns Street
Dodgeville, WI 53533
Zachary.watson@wisconsin.gov

RE: Seneca Foods Corporation – Mayville
WPDES Permit No. WI-0050822-08-0
Annual Water Quality Trading (WQT) Report

Dear Mr. Watson:

In accordance with WPDES Permit No. WI-0050822-08-0, effective on June 1, 2021, Seneca Foods Corporation (Seneca) is providing the required Annual Water Quality Trading (WQT) Report for the 2023 calendar year. Specifically Part 5.5 of the permit requires:

Annual WQT Report #3: Submit an annual WQT report that shall cover the previous year.

The WQT Report shall include:

- The number of pollutant reduction credits (lbs/month) used each month of the previous year to demonstrate compliance;*
- The source of each month's pollutant reduction credits by identifying the approved water quality trading plan that details the source;*
- A summary of the annual inspection of each nonpoint source management practice that generated any of the pollutant reduction credits used during the previous year; and*
- Identification of noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading that have not been reported in discharge monitoring reports.*

Pollution Credits Used

Month	013 Discharge (gallons/month)	WQT Total Suspended Solids Credits Used (lbs/month)	WQT Total Phosphorus Credits Used (lbs/month)
January	No discharge to stream	-	-
February	No discharge to stream	-	-
March	No discharge to stream	-	-
April	No discharge to stream	-	-
May	No discharge to stream	-	-
June	No discharge to stream	-	-
July	No discharge to stream	-	-
August	No discharge to stream	-	-

Month	013 Discharge (gallons/month)	WQT Total Suspended Solids Credits Used (lbs/month)	WQT Total Phosphorus Credits Used (lbs/month)
September	No discharge to stream	-	-
October	No discharge to stream	-	-
November	No discharge to stream	-	-
December	No discharge to stream	-	-

Source of Pollution Reduction Credits

Agricultural fields utilized for credit generation are located in the NE ¼ NE ¼ Section 34, NW ¼ NW ¼ Section 35, and the SW ¼ SW ¼ Section 26 in Township 12 North, Range 16 East, in the Town of Williamstown in Dodge County. A figure is attached showing the location of the fields in relation to the North Tile Outfall (Outfall 013).

Summary of Annual Inspection of Nonpoint Source Management Practices

Juan Muniz Jr. and I conducted inspections of the WQT fields on May 17th, 2023 and September 15th, 2023 after grass harvest or a heavy rain event. These inspection reports are attached, including photos.

Identification of Noncompliance or Failure

Seneca is not aware of any noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading. For 2023, there were no discharges to surface water via Outfall 013 so technically the credits were unused.

If you have any questions, please contact the undersigned at gstapleton@senecafoods.com or (920) 387-7226. Thank you!

Sincerely,
Seneca Foods Corporation



Gary Stapleton
Plant Manager

cc: Laura Mushinski, Seneca
Juan Muniz Jr., Seneca – Clyman & Mayville



Tile Outfall Field Boundaries Streams Soil Type HUC12	APPLIED SCIENCE, INC. SCIENCE • ENGINEERING • MANAGEMENT 2002 Perry Street Madison, WI 53713 www.appliedscienceinc.com • (800) 278-8833	<i>Fields Generating Trade Credit</i>			FIGURE NO. 3		
		SENECA FOODS CORPORATION MAYVILLE, WISCONSIN		DRAWN RCW		CHECKED NPH	APPROVED RCW

Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 5/17/21

Inspector Initials: ES

Site Location: Field 1 (west) Field 2 (west central)
 Field 3 (east central) Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring Harvest Major Rainfall (~ ____ inch)

Crop Condition:

No visual evidence of reduced stands
 Visual evidence of reduced stand (indicate location(s) on map)

Evidence of Soil Erosion

No visual evidence of soil erosion
 Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions
 Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None
 Re seeding Selective Field Areas (Attach figure showing areas to be addressed)
 Regrading and re seeding eroded field areas (Attach figure showing areas to be addressed)

Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 5/17/23

Inspector Initials: GS

Site Location: Field 1 (west) Field 2 (west central)
 Field 3 (east central) Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring Harvest Major Rainfall (~ ____ inch)

Crop Condition:

No visual evidence of reduced stands
 Visual evidence of reduced stand (indicate location(s) on map)

Evidence of Soil Erosion

No visual evidence of soil erosion
 Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions
 Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None
 Re seeding Selective Field Areas (Attach figure showing areas to be addressed)
 Regrading and re seeding eroded field areas (Attach figure showing areas to be addressed)

Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 5/17/23

Inspector Initials: ES

Site Location: Field 1 (west) Field 2 (west central)
 Field 3 (east central) Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring Harvest Major Rainfall (~ ____ inch)

Crop Condition:

No visual evidence of reduced stands
 Visual evidence of reduced stand (indicate location(s) on map)

Evidence of Soil Erosion

No visual evidence of soil erosion
 Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions
 Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None
 Re seeding Selective Field Areas (Attach figure showing areas to be addressed)
 Regrading and re seeding eroded field areas (Attach figure showing areas to be addressed)

Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 5/17/23

Inspector Initials: GS

Site Location: Field 1 (west) Field 2 (west central)
 Field 3 (east central) Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring Harvest Major Rainfall (~ _____ inch)

Crop Condition:

No visual evidence of reduced stands
 Visual evidence of reduced stand (indicate location(s) on map)

Evidence of Soil Erosion

No visual evidence of soil erosion
 Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions
 Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None
 Re seeding Selective Field Areas (Attach figure showing areas to be addressed)
 Regrading and re seeding eroded field areas (Attach figure showing areas to be addressed)



Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 9/15/23

Inspector Initials: G. Stapleton
J. Ulanicz

Site Location: Field 1 (west) Field 2 (west central)
 Field 3 (east central) Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring Harvest Major Rainfall (~ _____ inch)

Crop Condition:

No visual evidence of reduced stands
 Visual evidence of reduced stand (indicate location(s) on map)

Evidence of Soil Erosion

No visual evidence of soil erosion
 Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions
 Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None
 Re seeding Selective Field Areas (Attach figure showing areas to be addressed)
 Regrading and re seeding eroded field areas (Attach figure showing areas to be addressed)

Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 9/15/23

Inspector Initials: G. Stapleton
J. Muniz

Site Location: Field 1 (west) Field 2 (west central)
 Field 3 (east central) Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring Harvest Major Rainfall (~ _____ inch)

Crop Condition:

No visual evidence of reduced stands
 Visual evidence of reduced stand (indicate location(s) on map)

Evidence of Soil Erosion

No visual evidence of soil erosion
 Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions
 Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None
 Re seeding Selective Field Areas (Attach figure showing areas to be addressed)
 Regrading and re seeding eroded field areas (Attach figure showing areas to be addressed)

Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 9/15/23

Inspector Initials: G. Stapleton
J. Muniz

Site Location: Field 1 (west) Field 2 (west central)
 Field 3 (east central) Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring Harvest Major Rainfall (~ _____ inch)

Crop Condition:

No visual evidence of reduced stands
 Visual evidence of reduced stand (indicate location(s) on map)

Evidence of Soil Erosion

No visual evidence of soil erosion
 Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions
 Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None
 Re seeding Selective Field Areas (Attach figure showing areas to be addressed)
 Regrading and re seeding eroded field areas (Attach figure showing areas to be addressed)

Table 3
WATER QUALITY TRADING PLAN - SENECA FOODS MAYVILLE
Site Inspection Checklist

Date: 9/15/23

Inspector Initials: B. Stapleton
J. Muritz

Site Location: Field 1 (west) Field 2 (west central)
 Field 3 (east central) Field 4 (east)

Inspection Frequency: Inspections should be performed in the spring following snowmelt and following harvest. In addition, inspection should be performed following major rainfall events.

Spring Harvest Major Rainfall (~ _____ inch)

Crop Condition:

No visual evidence of reduced stands
 Visual evidence of reduced stand (indicate location(s) on map)

Evidence of Soil Erosion

No visual evidence of soil erosion
 Visual evidence of localized erosion (indicate location(s) on map)

Site Photos

Photo documentation of representative site conditions
 Photo documentation of areas of reduced stand or localized erosion

Corrective Action Recommended: If site conditions require corrective measures, notify DNR within 1 week of inspection and inform of corrective actions to be taken

None
 Re seeding Selective Field Areas (Attach figure showing areas to be addressed)
 Regrading and re seeding eroded field areas (Attach figure showing areas to be addressed)





Farm Fresh Goodness Made Great

January 16, 2025

Zach Watson
Senior Hydrogeologist
Water Quality Bureau
Wisconsin Department of Natural Resources
1500 N Johns Street
Dodgeville, WI 53533
Zachary.watson@wisconsin.gov

RE: Seneca Foods Corporation – Mayville
WPDES Permit No. WI-0050822-08-0
Annual Water Quality Trading (WQT) Report

Dear Mr. Watson:

In accordance with WPDES Permit No. WI-0050822-08-0, effective on June 1, 2021, Seneca Foods Corporation (Seneca) is providing the required Annual Water Quality Trading (WQT) Report for the 2024 calendar year. Specifically Part 5.5 of the permit requires:

Annual WQT Report #3: Submit an annual WQT report that shall cover the previous year.

The WQT Report shall include:

- The number of pollutant reduction credits (lbs/month) used each month of the previous year to demonstrate compliance;
The source of each month’s pollutant reduction credits by identifying the approved water quality trading plan that details the source;
A summary of the annual inspection of each nonpoint source management practice that generated any of the pollutant reduction credits used during the previous year; and
Identification of noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading that have not been reported in discharge monitoring reports.

Pollution Credits Used

Table with 4 columns: Month, 013 Discharge (gallons/month), WQT Total Suspended Solids Credits Used (lbs/month), WQT Total Phosphorus Credits Used (lbs/month). Rows for months January through August, all showing 'No discharge to stream' and '-' for credits used.

Month	013 Discharge (gallons/month)	WQT Total Suspended Solids Credits Used (lbs/month)	WQT Total Phosphorus Credits Used (lbs/month)
September	No discharge to stream	-	-
October	No discharge to stream	-	-
November	No discharge to stream	-	-
December	No discharge to stream	-	-

Source of Pollution Reduction Credits

Agricultural fields utilized for credit generation are located in the NE ¼ NE ¼ Section 34, NW ¼ NW ¼ Section 35, and the SW ¼ SW ¼ Section 26 in Township 12 North, Range 16 East, in the Town of Williamstown in Dodge County. A figure is attached showing the location of the fields in relation to the North Tile Outfall (Outfall 013).

Summary of Annual Inspection of Nonpoint Source Management Practices

Inspections were conducted of the WQT fields on May 22nd, 2024 and September 28th, 2024 after grass harvest or a heavy rain event. These inspection reports are attached, including photos.

Identification of Noncompliance or Failure

Seneca is not aware of any noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading. For 2024, there were no discharges to surface water via Outfall 013 so technically the credits were unused.

If you have any questions, please contact the undersigned at gstapleton@senecafoods.com or (920) 387-7226. Thank you!

Sincerely,
Seneca Foods Corporation

Gary Stapleton
Plant Manager

cc: Laura Mushinski, Seneca
Juan Muniz Jr., Seneca



	 SCIENCE • ENGINEERING • MANAGEMENT 2002 PRARY STREET MADISON, WI 53713 AS@APPLIEDSCIENCE.COM • (800) 278-8833			Fields Generating Trade Credit SENECA FOODS CORPORATION MAYVILLE, WISCONSIN			FIGURE NO. 3
	DRAWN RCW	CHECKED NPH	APPROVED RCW	REVISED 9/16/2020	PROJECT NO. C12901	FILE 2020WQTRD	

Water Quality Trading Report – May 22nd 2024 after .24" rain



Water Quality Trading Report – Sept 28th 2024



APPENDIX H

SNAP+ Reports

NM1: Narrative and Crops Report

Starting Year	2020
Reported For	Seneca-Mayville
Printed	2026-02-26
Plan Completion/Update Date:	2019-06-20
SnapPlus Version 20.4 built on 2021-06-03	
I:\File\C12901\WPDES Permit\2026 WQT Revision\Seneca-Mayville Before.snapDb	

Prepared for:
Seneca-Mayville
attn:Seneca-Mayville

Farm has 4 fields totalling 50.9 cropped acres.

Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

Spreader Calibration Methods: Custom applications

Narrative and Crops:

Field Name	Field Acres	2020	2021	2022	2023	2024	2025
Field 1	16.2	Soybeans 15-20 inch row Fall Chisel, no disk 46-55 bu/acre	Corn grain Fall Chisel, no disk 151-170 bu/acre	Soybeans 15-20 inch row Fall Chisel, no disk 46-55 bu/acre	Corn grain Fall Chisel, no disk 151-170 bu/acre	Soybeans 15-20 inch row Fall Chisel, no disk 46-55 bu/acre	Corn grain Fall Chisel, no disk 151-170 bu/acre
Field 2	3.2	Soybeans 15-20 inch row Fall Chisel, no disk 46-55 bu/acre	Corn grain Fall Chisel, no disk 151-170 bu/acre	Soybeans 15-20 inch row Fall Chisel, no disk 46-55 bu/acre	Corn grain Fall Chisel, no disk 151-170 bu/acre	Soybeans 15-20 inch row Fall Chisel, no disk 46-55 bu/acre	Corn grain Fall Chisel, no disk 151-170 bu/acre
Field 3	11.1	Soybeans 15-20 inch row Fall Chisel, no disk 46-55 bu/acre	Corn grain Fall Chisel, no disk 151-170 bu/acre	Soybeans 15-20 inch row Fall Chisel, no disk 46-55 bu/acre	Corn grain Fall Chisel, no disk 151-170 bu/acre	Soybeans 15-20 inch row Fall Chisel, no disk 46-55 bu/acre	Corn grain Fall Chisel, no disk 151-170 bu/acre

Field Name	Field Acres	2020	2021	2022	2023	2024	2025
Field 4	20.4	Soybeans 15-20 inch row Fall Chisel, no disk 46-55 bu/acre	Corn grain Fall Chisel, no disk 151-170 bu/acre	Soybeans 15-20 inch row Fall Chisel, no disk 46-55 bu/acre	Corn grain Fall Chisel, no disk 151-170 bu/acre	Soybeans 15-20 inch row Fall Chisel, no disk 46-55 bu/acre	Corn grain Fall Chisel, no disk 151-170 bu/acre

Summary by Crop:

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

Crops Grouped By Category		2020	2021	2022	2023	2024	2025
Corn grain	Acres bu		51 8,186		51 8,186		51 8,186
Soybeans 15-20 inch row	Acres bu	51 2,576		51 2,576		51 2,576	

NM1: Narrative and Crops Report

Starting Year	2020
Reported For	Seneca-Mayville
Printed	2026-02-26
Plan Completion/Update Date:	2019-06-21
SnapPlus Version 20.4 built on 2021-06-03	
I:\File\C12901\WPDES Permit\2026 WQT Revision\Seneca-Mayville After.snapDb	

Prepared for:
Seneca-Mayville
attn:Seneca-Mayville

Farm has 4 fields totalling 50.9 cropped acres.

Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

Spreader Calibration Methods: Custom applications

Narrative and Crops:

Field Name	Field Acres	2020	2021	2022	2023	2024	2025
Field 1	16.2	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre
Field 2	3.2	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre
Field 3	11.1	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre
Field 4	20.4	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre	Grass hay None 2-3 ton/acre

Summary by Crop:

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

Crops Grouped By Category		2020	2021	2022	2023	2024	2025
Grass hay	Acres ton	51 128	51 128	51 128	51 128	51 128	51 128

WQ1: P Trade Report

Reported For	Seneca-Mayville
Printed	2020-10-20
Plan Completion/Update Date	2019-06-20
SnapPlus Version 19.3 built on 2020-05-11	
C:\SnapPlus2\MySnapPlusData\Seneca-Mayville Before.snapDb	

Prepared for:
Seneca-Mayville
attn:Seneca-Mayville

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

Questions? Please contact
DNRphosphorus@wisconsin.gov

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

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

P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Field 1	ST. CHARLES	ScC2	16	73	21	67	22	70	22	68	22	68	22	69
Field 2	HOCHHEIM	HnE2	3	36	11	35	11	34	10	34	10	35	10	34
Field 3	CHANNAHON	CdD2	11	64	22	63	21	61	21	72	20	60	20	62
Field 4	ST. CHARLES	ScC2	20	132	37	130	36	109	35	107	35	105	34	106
Total			51	305	91	294	90	275	88	282	87	268	86	272

PTP			
2022	2023	2024	2025
22	68	21	66
10	33	10	33
21	61	21	60
34	104	33	102
88	266	86	261

WQ1: P Trade Report

Reported For	Seneca-Mayville
Printed	2020-10-20
Plan Completion/Update Date	2019-06-21
SnapPlus Version 19.3 built on 2020-05-11	
C:\SnapPlus2\MySnapPlusData\Seneca-Mayville After.snapDb	

Prepared for:
Seneca-Mayville
attn:Seneca-Mayville

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

Questions? Please contact
DNRphosphorus@wisconsin.gov

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

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

P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Field 1	ST. CHARLES	ScC2	16	69	27	2	1	1	0	0	0	0	0	1
Field 2	HOCHHEIM	HnE2	3	26	39	13	1	0	0	0	0	0	0	0
Field 3	CHANNAHON	CdD2	11	65	24	2	1	1	0	0	0	0	0	1
Field 4	ST. CHARLES	ScC2	20	114	45	6	4	3	3	3	2	2	2	2
Total			51	274	135	23	6	5	4	3	3	2	2	4

PTP			
2022	2023	2024	2025
1	1	0	0
0	0	0	0
1	1	1	1
2	2	2	2
4	3	3	3

WQ2: Sediment Trade Report

Reported For	Seneca-Mayville
Printed	2020-10-20
Plan Completion/Update Date	2019-06-20
SnapPlus Version	19.3 built on 2020-05-11
C:\SnapPlus2\MySnapPlusData\Seneca-Mayville Before.snapDb	

Prepared for:
Seneca-Mayville
attn:Seneca-Mayville

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

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

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

Sediment Trading

Field Name	Soil Series	Soil Symbol	Acres	Sediment (US Tons)						
				2011	2012	2013	2014	2015	2016	2017
Field 1	ST. CHARLES	ScC2	16.2	9.00	2.61	8.47	2.84	8.96	2.85	8.97
Field 2	HOCHHEIM	HnE2	3.2	5.67	1.72	5.64	1.72	5.64	1.72	5.64
Field 3	CHANNAHON	CdD2	11.1	6.79	2.30	6.76	2.30	6.76	2.30	6.76
Field 4	ST. CHARLES	ScC2	20.4	18.02	5.71	17.96	5.70	17.96	5.70	17.96
Total				39.48	12.34	38.84	12.57	39.32	12.57	39.32

Questions? Please contact
DNRphosphorus@wisconsin.gov

Sediment (US Tons)							
2018	2019	2020	2021	2022	2023	2024	2025
2.85	8.97	2.85	8.97	2.85	8.97	2.85	8.97
1.72	5.90	1.72	5.64	1.72	5.64	1.72	5.64
2.30	6.76	2.30	6.76	2.30	6.76	2.30	6.76
5.70	17.96	5.70	17.96	5.70	17.96	5.70	17.96
12.57	39.58	12.57	39.32	12.57	39.32	12.57	39.32

WQ2: Sediment Trade Report

Reported For	Seneca-Mayville
Printed	2020-10-20
Plan Completion/Update Date	2019-06-21
SnapPlus Version	19.3 built on 2020-05-11
C:\SnapPlus2\MySnapPlusData\Seneca-Mayville After.snapDb	

Prepared for:
Seneca-Mayville
attn:Seneca-Mayville

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

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

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

Sediment Trading

Field Name	Soil Series	Soil Symbol	Acres	Sediment (US Tons)						
				2011	2012	2013	2014	2015	2016	2017
Field 1	ST. CHARLES	ScC2	16.2	8.37	3.19	0.19	0.05	0.03	0.02	0.02
Field 2	HOCHHEIM	HnE2	3.2	4.16	6.07	1.97	0.12	0.03	0.02	0.01
Field 3	CHANNAHON	CdD2	11.1	6.75	2.60	0.17	0.05	0.03	0.02	0.02
Field 4	ST. CHARLES	ScC2	20.4	16.77	6.40	0.38	0.09	0.06	0.04	0.03
Total				36.04	18.25	2.71	0.31	0.15	0.10	0.07

