Village of Plover
2400 Post Road | Plover, WI 54467

Village of Plover Wastewater Treatment Facility Water Quality Trading Plan

February 2026

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Donohue Project No.: 14396

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1. BACKGROUND

1.1 PURPOSE

This Water Quality Trading Plan summarizes the Village of Plover's plan to ensure compliance with its forthcoming Wisconsin Pollutant Discharge Elimination System (WPDES) permit (Permit No. WI-0027995-10) total phosphorus (TP) limits (effective January 1, 2025) at its Wastewater Treatment Facility (WWTF) by utilizing Water Quality Trading (WQT), as provided for in Wis. Stat. 283.84.[1] The Village submitted a WQT notice of intent (NOI) to the WDNR in March of 2024. Appendix A contains a copy of the NOI.

1.2 WWTF INFORMATION

The Village of Plover owns and operates a WWTF located in Portage County south of the City of Stevens Point. The WWTF is governed by a WPDES permit, which limits pollutant loads, including TP, to the receiving waterbody. The WWTF currently removes phosphorus to comply with its existing TP permit limits via enhanced biological phosphorus removal as well as ferric chloride chemical backup. The Village's pending permit reissuance provides more restrictive TP permit limits derived from the Wisconsin River Total Maximum Daily Load (TMDL). To ensure compliance with the new TP limits without resorting to expensive tertiary treatment capital improvements, the Village seeks to use WQT to provide a compliance buffer.

2. WATER QUALITY TRADING DETERMINATION

2.1 HISTORICAL WWTF PERFORMANCE

On January 1, 2025, the Village's WPDES permit will contain two new TP limits derived from the site-specific criteria (SSC) contained in the Wisconsin River TMDL:

1) Monthly average TP mass limit of 7.96 lb/day; and
2) 12-month loading TP limit of 2,007 lb/year.

Figure 2-1 and Figure 2-2 show the WWTF TP effluent levels compared to the two impending limits. While the WWTF would not have exceeded either of the impending TP limits during the past 5 years, there were several months that approached the limit, particularly in 2020. Therefore, the Village is requesting to utilize WQT to provide a TP compliance buffer during periods of reduced plant performance and during increased flows as the WWTF approaches its rated capacity.

[1] WDNR has determined that the Village can comply with its new phosphorus limits (effective January 1, 2025) using the biological and chemical treatment processes currently in place at the facility. However, the WWTF's effluent data show that periods of reduced plant performance may result in violations of the new TP limits in the future. Accordingly, the Village seeks to execute the proposed water quality trade to provide a buffer for ensuring current and future compliance with its TP limits.

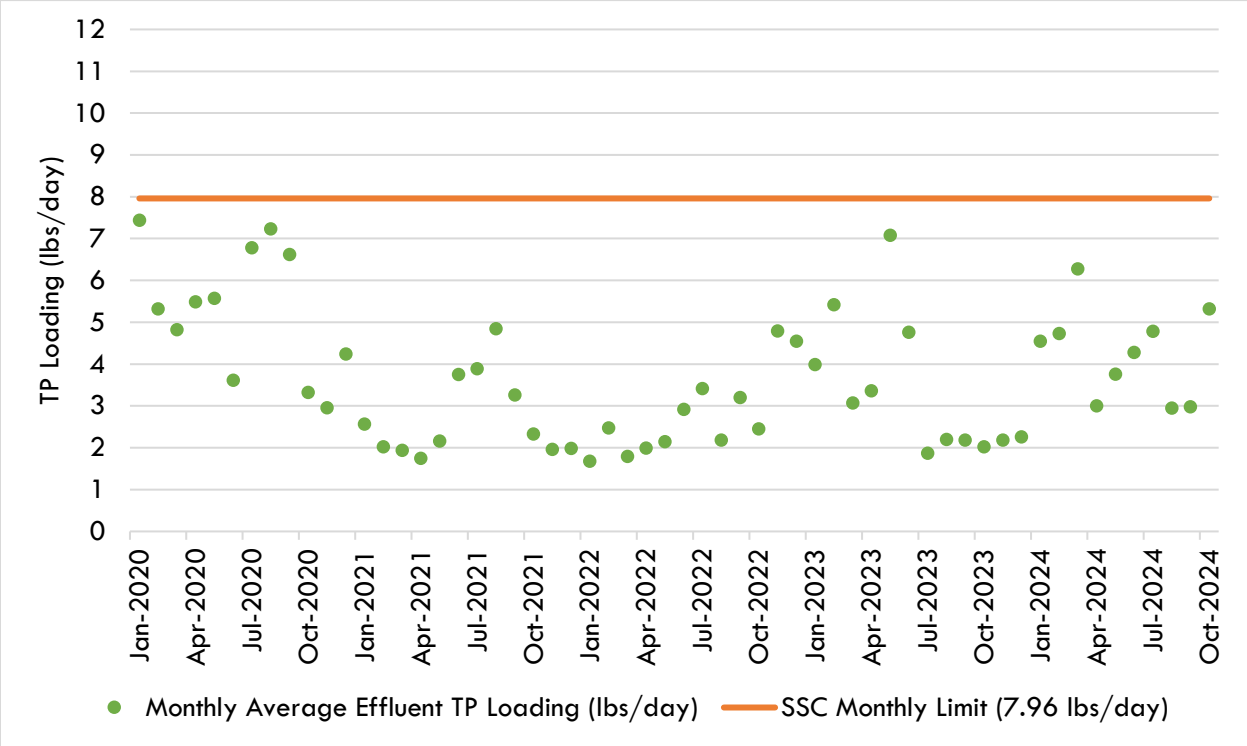


Figure 2-1 – Monthly Effluent TP Performance

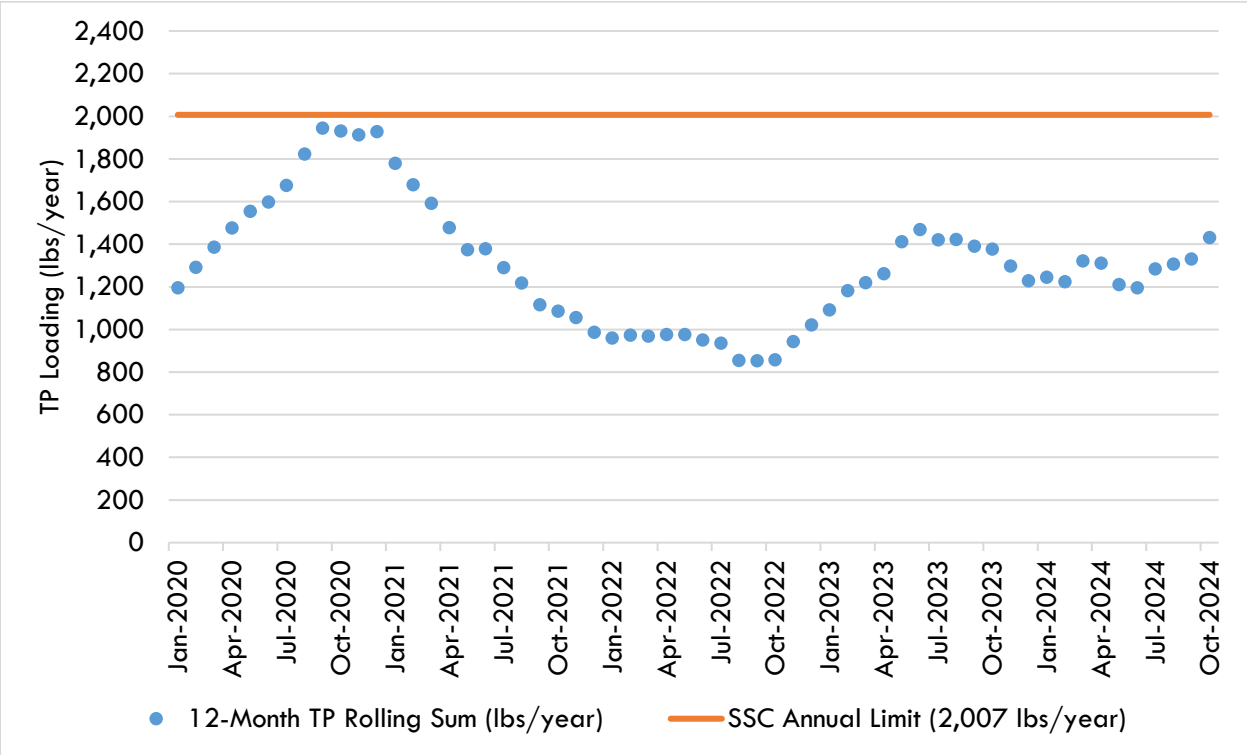


Figure 2-2 – 12-Month Rolling Sum Effluent TP Performance

2.2 COMPLIANCE BUFFER

To provide the desired compliance buffer through water quality trading, the Village is targeting water quality trading credits equivalent to 150-250 lbs. of phosphorus reduction. The current 12-month loading limit of 2,007 lbs./year equates to about a 0.366 mg/L TP concentration limit. Generating between 150-250 lbs. of phosphorus credits (after the applicable trade ratio is applied) would provide a compliance buffer of 0.03-0.05 mg/L TP in the WWTF's final effluent.

3. CREDIT GENERATOR AND GENERATION INFORMATION

The Village proposes to generate phosphorus credits by implementing conservation practices on agricultural fields in Portage County that are being converted to solar array fields for power generation. The parcels used for credit generation currently are farmed for various crops including potatoes, corn, beets, beans, and peas and will be seeded and established with native grass (see detailed discussion below in Section 4.1). The agricultural fields span approximately 1,700 acres within the Buena Vista Creek HUC-12, identified in the Wisconsin River TMDL, and located just downstream of the WWTF outfall. Appendix B shows the overall location where credits will be generated, and Appendix C shows a detailed map of the specific fields, including the field identification names used in SnapPlus modeling and referred to in this trading plan.

The Village is partnering with Portage Solar, LLC who will be the credit generator. Land within the Portage Solar Project is being leased to Portage Solar. Portage Solar has 30-year lease agreements with the landowners; therefore, the trade duration will be 30 years to match the Portage Solar lease agreements. Appendix D contains a copy of the Letter of Intent (LOI) between the Village and Portage Solar, LLC. A more detailed trade agreement will follow prior to application for permit modification to incorporate the water quality trading plan into the Village's WPDES permit. The Village expects their new permit to be reissued prior to the final approved trading plan and assumes that the WDNR will incorporate the trades into their WPDES permit using the permit modification process.

3.1 CREDIT THRESHOLD

Appendix N of the Wisconsin River TMDL provides edge-of-field (lbs./acre/year) agricultural TP targets by TMDL subbasin. These TP targets or "credit thresholds" are used to calculate interim and long-term credits for WQT. The Portage Solar project area is located in Wisconsin River TMDL subbasin 257, which has a credit threshold of 0.5 lbs./acre/year. The difference between current loading and the reduced loading due to best management practices within the subbasin will represent interim credits for the Village (credits available for ten years after credit generation begins). Any credits generated where the current loading is above 0.5 lbs./acre/year only produce long-term credits by the difference between 0.5 lbs./acre/year and the reduced loading due to best management practices.

3.2 TRADE RATIO CALCULATION

For non-point source trades, Wis. Stat. 283.84(1m)(a) requires a minimum trade ratio of 1.2:1 (1.2 pounds of load reduction required from a nonpoint source for every pound of credit generated/claimed by a point source). WDNR has published guidance identifying several factors that the agency will consider for establishing a trade ratio: 1) Delivery, 2) Downstream, 3) Equivalency, and 4) Uncertainty. Each of these factors is determined individually and then combined by the following equation:

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

3.2.1 DELIVERY FACTOR

Delivery factors account for physical distance between the credit generator and the credit user. The Wisconsin River TMDL (Appendix O) contains specific guidance for determining the delivery factor for credit users that are located within the TMDL watershed, the applicable delivery factor applicable to the Village's proposed trade is zero, because the credit generator and the credit user are not separated by any of the mainstem reservoirs identified in the Wisconsin River TMDL.

3.2.2 DOWNSTREAM FACTOR

Downstream trading (generating credits downstream of a credit user's discharge location) is permissible when TMDL limits are driven by a point of standards application located downstream of both the credit user's discharge point and the credit-generating location. In this case, the point of standards application identified in the Wisconsin River TMDL is Lake Pentenwell, which is located downstream of the credit generator and the Village's discharge point. See map attached as Appendix B. Additionally, the maximum downstream credits available to the WWTF is 3,477 lbs/year and the waste load allocation (WLA) for the WWTF is 2,007 lbs./year, which is less than 3,477 lbs./year. Given these circumstances, a downstream trading factor of zero is appropriate in this case.

3.2.3 EQUIVALENCY FACTOR

Phosphorus trading has an equivalency factor of zero.

3.2.4 UNCERTAINTY FACTOR

Converting cropland to permanent prairie/native grasslands carries an uncertainty factor of 1 (see Appendix H of the WNDR's WQT Guidance).

3.2.5 APPLICABLE TRADE RATIO

Using the above information and WDNR's trade ratio equation, the applicable trade ratio in this case would be 1:1 calculated as follows:

Trade Ratio = (0 + 0 + 0 + 1):1 = 1:1

However, because state law specifies a minimum trade ratio of 1.2:1, a trade ratio of 1.2:1 will be used to determine credit generation.

3.3 PHOSPHORUS CREDIT ANALYSIS

Generally, credit users proposing to generate phosphorus credits from agricultural fields can directly compare phosphorus baseline runoff to future runoff (after best management practice (BMP) implementation) to calculate the phosphorus load reduction to which the trade ratio will be applied before determining available credits. In this case, two caveats apply. First, credits derived from a baseline above the TMDL threshold (0.5 lbs./acre/year) will only generate interim credits for the Village. Second, Portage Solar, the entity that will be implementing the BMPs on the agricultural fields, is required to have and comply with a stormwater permit. Accordingly, long-term credits for the Village

are only available below the TMDL threshold and after taking into account the applicable reduction levels already specified in Portage Solar's stormwater permit.

Modeling was completed using SnapPlus Version 20.4 to quantify baseline and future (after BMP implementation) phosphorus runoff from agricultural fields to be utilized in calculating credits. The modeling considered two types of historical land uses:

1. Conventional farmland fields; and
2. Grassland/permanent vegetative areas that were located at the outer boundaries of the farmland fields but still within the land parcel.

Both of these historical land areas are being converted to permanent grassland and were modeled accordingly.

The farm names, field names, and historical land uses are listed in Table 3-1.

Table 3-1 – Credit Generator Field Descriptions

Farm Name	Field ID	Historical Land Use
Wasieleski	A-1	Conventional Farmland
Wasieleski	A-1-NC	Grassland/Vegetation
Wasieleski	A-4	Conventional Farmland
Wasieleski	A-4-NC	Grassland/Vegetation
Wasieleski	A-5	Conventional Farmland
Wasieleski	A-5-NC	Grassland/Vegetation
Wasieleski	A-6	Conventional Farmland
Wasieleski	A-6-NC	Grassland/Vegetation
Wolosek	B1	Conventional Farmland
Wolosek	B2	Conventional Farmland
Wolosek	B3	Conventional Farmland
Wolosek	B4	Conventional Farmland
Okray	O-1	Conventional Farmland
Okray	O-2	Conventional Farmland
Okray	O-3	Conventional Farmland
Okray	O-4-NC	Grassland/Vegetation
Worzella	W-1	Conventional Farmland
Worzella	W-2	Conventional Farmland
Worzella	W-3	Conventional Farmland
Worzella	W-3-NC	Grassland/Vegetation
Worzella	W-4	Conventional Farmland
Worzella	W-4-NC	Grassland/Vegetation
Worzella	W-5	Conventional Farmland
Worzella	W-6	Conventional Farmland
Worzella	W-6-NC	Grassland/Vegetation
Worzella	W-7A	Conventional Farmland

Farm Name	Field ID	Historical Land Use
Worzella	W-7B	Conventional Farmland
Worzella	W-7-NC	Grassland/Vegetation
Worzella	W-8	Conventional Farmland
Worzella	W-8-NC	Grassland/Vegetation

3.3.1 SOIL SAMPLING

Landowners were contacted to retrieve recent soil sampling. Soil sample results were collected from each of the credit generated fields. Sampling was performed using methods described in Sampling Soils For Testing publication A2100. Detailed sampling results are located in Appendix E.

3.3.2 BASELINE CONDITION AND REDUCTION CONDITION MODELING

Table 3-2 shows the cropping rotations for historical land uses modeled in SnapPlus. Historical crop rotation data was gathered from USDA-NASS Cropscape database as well as from existing landowners. Historical land with crops and land with grassland were modeled with a period of sod seeding and established sod for the first two years during the land use conversion. After the first two years of sod seeding and establishment (years 2025 and 2026), the Baseline Condition was modeled with established sod for subsequent years (years 2027-2034). This represents Portage Solar's minimum conservation efforts to meet their storm water obligations. The Future/Reduction Condition was modeled with Permanent Grassland for years 2027 to 2034. This modeling configuration is consistent with WDNR guidance when modeling solar fields for WQT. Appendix F contains email correspondence with WDNR discussing solar array modeling for WQT.

Table 3-2 – SnapPlus Modeling Sequence Matrix

Modeling Condition	Baseline Condition	Future/Improved Condition	Baseline Condition	Future/Improved Condition
Historical Field Type	Conventional Farmland	Conventional Farmland	Grassland/Vegetation	Grassland/Vegetation
Prior Year	Historical Crop (i.e. potatoes, corn, etc.)	Historical Crop (i.e. potatoes, corn, etc.)	Permanent Grassland	Permanent Grassland
Prior Year	Historical Crop (i.e. potatoes, corn, etc.)	Historical Crop (i.e. potatoes, corn, etc.)	Permanent Grassland	Permanent Grassland
2025	Sod, Seeding	Sod, Seeding	Sod, Seeding	Sod, Seeding
2026	Sod, Established	Sod, Established	Sod, Established	Sod, Established
2027	Sod, Established	Permanent Grassland	Sod, Established	Permanent Grassland
2028	Sod, Established	Permanent Grassland	Sod, Established	Permanent Grassland
2029	Sod, Established	Permanent Grassland	Sod, Established	Permanent Grassland
2030	Sod, Established	Permanent Grassland	Sod, Established	Permanent Grassland
2031	Sod, Established	Permanent Grassland	Sod, Established	Permanent Grassland
2032	Sod, Established	Permanent Grassland	Sod, Established	Permanent Grassland
2033	Sod, Established	Permanent Grassland	Sod, Established	Permanent Grassland
2034	Sod, Established	Permanent Grassland	Sod, Established	Permanent Grassland

3.3.3 MODELING RESULTS

Table 3-3 shows the SnapPlus-modeled interim and long-term credits available after applying the 1.2:1 trade ratio. Credits were reduced by 1% from the original model outputs to account for impervious access roads where native grasses will not be planted. It is assumed that about 0.5-1% of the fields will be access roads by area (see Appendix L for impervious access road ratio details). Overall, there are approximately 90-150 lbs./year phosphorus credits available to the Village during the first 10 years.[2] Appendix G contains detailed phosphorus credit calculations for each field. Appendix H contains the SnapPlus output P Trade Reports. SnapPlus cropping rotation reports are shown in Appendix I.

Table 3-3 - Interim and Long-Term Credits Generated

Farm	Total Acres	Credit Type	Credits Generated (lbs. P/year) by Year									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Wasieleski	292	Interim	0	0	7	9	6	4	3	2	2	2
		Long-term	0	0	12	22	26	25	23	22	21	20
		Total	0	0	19	31	31	29	26	25	23	21
Wolosek	382	Interim	0	0	14	15	9	5	2	1	0	0
		Long-term	0	0	12	28	35	36	35	35	33	32
		Total	0	0	26	43	44	41	36	35	33	32
Okray	363	Interim	0	0	0	0	0	0	0	0	0	0
		Long-term	0	0	3	4	5	5	3	3	3	3
		Total	0	0	3	4	5	5	3	3	3	3
Worzella	711	Interim	0	0	5	0	0	0	0	0	0	0
		Long-term	0	0	37	69	70	62	55	54	50	50
		Total	0	0	41	69	70	62	55	54	50	50
All Farms	1,748	Interim	0	0	26	24	15	9	5	3	2	2
		Long-term	0	0	63	123	135	128	116	115	108	105
		Total	**0**	**0**	**89**	**148**	**150**	**137**	**121**	**118**	**110**	**106**

4. PROJECT IMPLEMENTATION

4.1 CONTRACTING

The water quality trading agreement between the Village and Portage Solar, LLC will outline each party's responsibilities with respect to the WQT plan. Portage Solar, LLC will be responsible for seeding the permanent native vegetation after the completion of the solar array construction. Portage Solar is proposing three low-growing seed mixes for credit generating fields:

- Low Grow Native / Non-Native Graminoid Seed Mix for PV Panel Areas
- Pollinator Refuge Prairie Seed Mix – Select Buffer Areas
- Pollinator Refuge Wetland Native Seed Mix

[2] The Village plans to investigate other opportunities for water quality trading to generate the remainder of credits needed for the compliance buffer, as discussed above.

Appendix J of Portage Solar's Certificate of Public Convenience and Necessity, included as Appendix J to this trading plan, contains additional details on the specific seed mixes that will be used on credit generating fields.

4.2 PROJECT TIMELINE

The following timeline provides an overview of BMP implementation and the anticipated, associated credit generation:

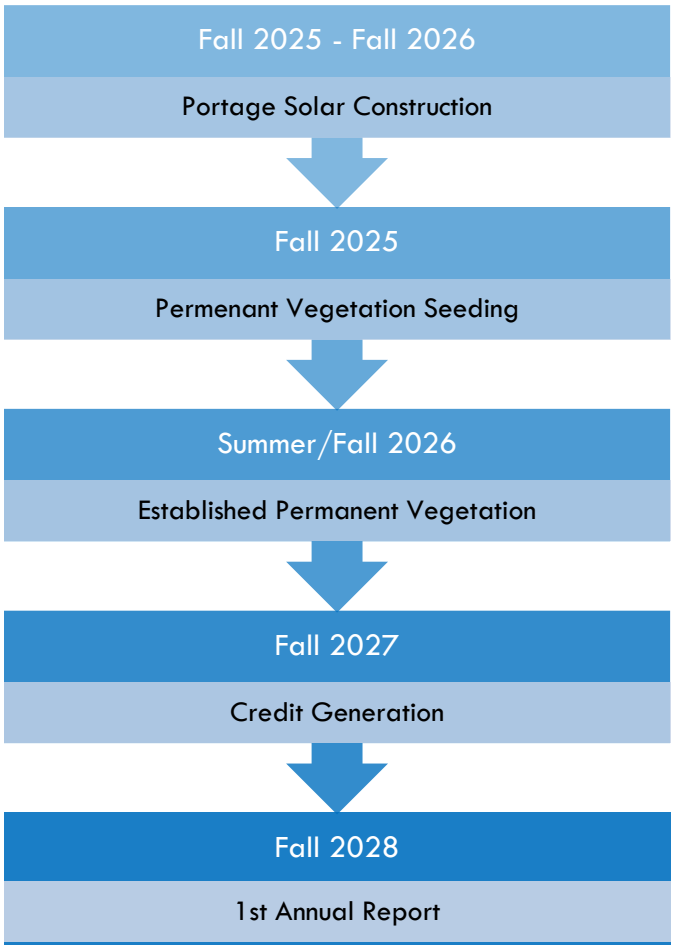


Figure 4-1 - Village of Plover WQT Proposed Project Timeline

4.3 MAINTENANCE, INSPECTION, AND TRACKING

After the credits are being generated, periodic inspection and maintenance of the fields is required to verify that the best management practice is functioning as intended. Inspections will occur annually and after any major storm events that have the potential to impact the fields. Any issues with the BMP will require correction to ensure credits continue to be generated as planned. The WDNR has the right to inspect the fields and management practice at any time upon giving reasonable notice to the Village of Plover to ensure the practices are in compliance with technical standards and the terms of this plan.

Permanent vegetation/prairie grass operation and maintenance is covered by Natural Resources Conservation Service (NRCS) manual 327. Generally, potential maintenance activities may include removal of some plants and trees, mowing, invasive species control, and revegetation of bare areas. The water quality trading agreement will address responsibility for maintenance activities. The Village will submit status and verification reports annually, and as otherwise required, to the WDNR to ensure compliance WPDES permit compliance. The annual reports will include photos of the site confirming the status of the credit generating fields.

A copy of form 3400-208 WQT Checklist is included in Appendix K.

Appendix A
WQT Notice of Intent

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

Notice of Intent to Conduct Water Quality Trading

Form 3400-206 (1/14)

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

Applicant Information

Permittee Name	Permit Number	Facility Site Number
Village of Plover	WI- 0027995-10-0	

Facility Address	City	State	ZIP Code
4496 Coolidge Ave.	Plover	WI	54467

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Lyle Lutz	4496 Coolidge Ave.	Plover	WI	54467

Project Name: Village of Plover / Portage Solar LLC Water Quality Trading Plan

Receiving Water Name	Parameter(s) being traded	HUC 12(s)
Wisconsin River	Total Phosphorus	070700030304

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

- ○ Point source dominated
- ◉ Nonpoint source dominated

Credit Generator Information

Credit generator type (select all that apply):

- ☐ Permitted Discharge (non-MS4/CAFO)
- ☐ Permitted MS4
- ☐ Permitted CAFO
- ☐ Urban nonpoint source discharge
- ☐ Agricultural nonpoint source discharge
- ☒ Other - Specify: Solar Development

Are any of the credit generators in a different HUC 12 than the applicant?

- ◉ Yes; HUC 12: 070700030401
- ○ No
- ○ Unsure

Are any of the credit generators downstream of the applicant?

- ◉ Yes
- ○ No
- ○ Unsure

Will a broker/exchange be used to facilitate trade?

- ○ Yes; Name:
- ◉ No
- ○ Unsure

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

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

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

List the practices that will be used to generate credits:

The solar development will be planted as permanent grassland instead of sod. Management of the grassland will be defined to minimize phosphorus. See attached figure identifying the solar project area.

Method for quantifying credits generated:

- ☐ Monitoring
- ☒ Modeling, Names: SNAP Plus
- ☐ Other: _____

Projected date credits will be available: 09/01/2026

The preparer certifies all of the following:

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

Signature of Preparer	Date Signed
	March 15, 2024

Authorized Representative Signature

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

Signature of Authorized Representative	Date Signed

PSC REF#:433638

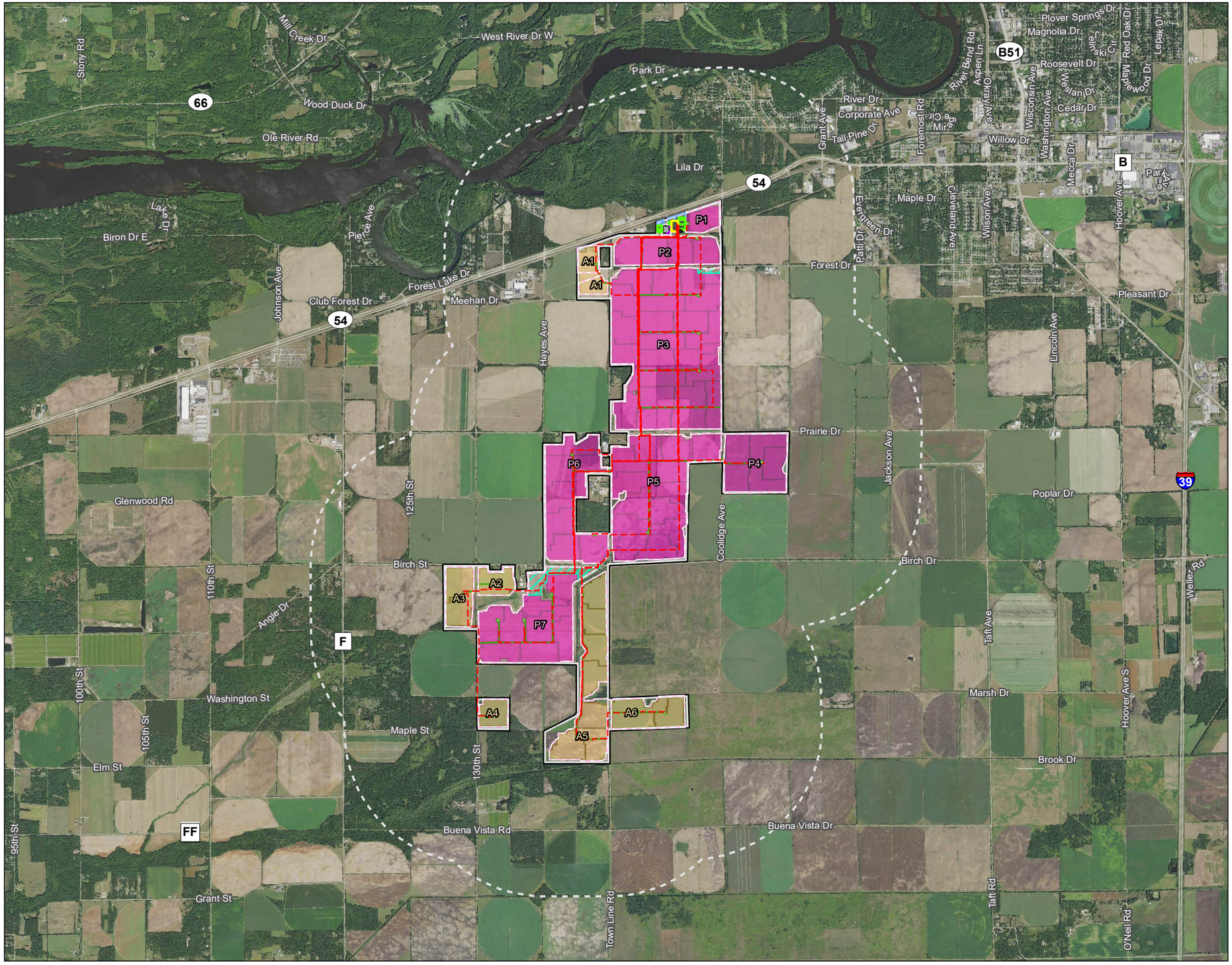


Figure No.
4.1.1

Title
General Project Area

Client/Project
National Grid Renewables
Portage Solar LLC Project

193708026

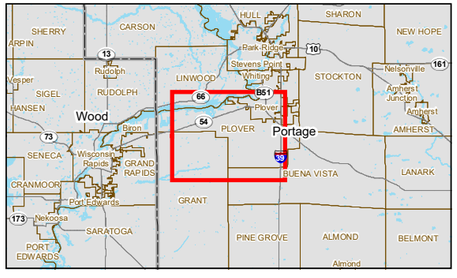
Project Location
T. of Grant and Plover
Portage Co., WI

Prepared by JM on 2022-01-25
TR by RA on 2022-01-28
IR by JW on 2022-03-11

N

0 2,000 4,000 Feet
(At original document size of 11x17)
1:48,000

Legend
- Project Area
- 1 Mile Buffer
- Generator Tie Line
- Collection System
- Access Road
- Boundary Fence
- Solar PV Array Area - Primary
- Solar PV Array Area - Alternate
- Substation
- O&M Building & Parking
- Stormwater Basin
- Battery Storage
- Lay-down Yard



Notes
1. Coordinate System: NAD 1983 HARN Wisconsin TM
2. Data Sources: Stantec, National Grid Renewables, WisDOT, WDNR
3. Background: 2020 NAIP

Stantec

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

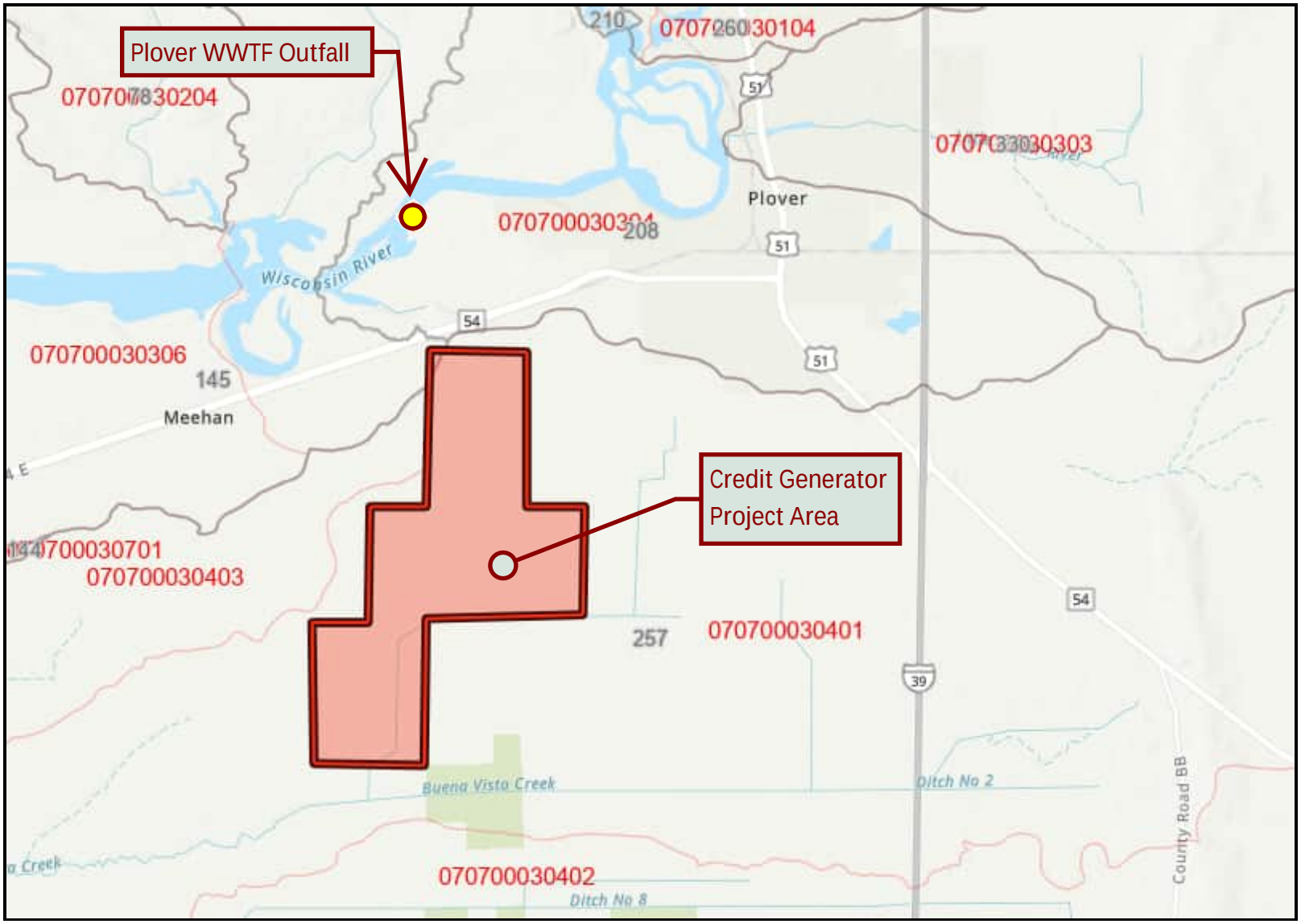
Public Service Commission of Wisconsin
RECEIVED: 03/25/2022 11:39:58 AM

\\corp.ads\data\Virtual_Workspace\workgroup\1937\Active\193708026\03_data\gis_cad\Portage_Solar_CPCN_Submittal\Mxds\Fig4-1_general_project_area_PortageSolar.mxd Revised: 2022-03-11 By: jmarty

Appendix B
Overall WQT Credit Generator Map

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

WQT Credit Generator Project Map



Legend

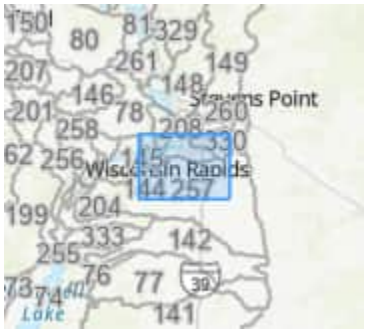
Restoration & TMDL

Specific TMDLs

Base Maps & Imagery

HUC 8, 10, & 12 Basins

Notes



1:119,613

0 1.5 3 mi

Service layer credits:
U. S. Department of Agriculture, Natural Resources Conservation Service | Luke Beringer, Aaron Fisch

This map is a product generated by a DNR mapping application
This map is for informational purposes only and may not have been prepared for or be suitable for legal, engineering or surveying purposes. The user is solely responsible for verifying the accuracy of information before using for any purpose. By using this product for any purpose user agrees to be bound by all disclaimers found here: **https://dnr.wisconsin.gov/legal**

Date Printed: 10/31/2024

Appendix C
Detailed Credit Generation Map with Field Names

Portage County Solar Farms

Solar Project Boundary

- Portage Solar
- Vista Sands Solar Farm
- Portage Solar (Non-array) or Alternate Area

N

0 0.25 0.5 1 Miles

Substation

Alternate Area

Alternate Area

Alternate Area

Alternate Area

Alternate Area

Alternate Area

Worzella - Allied West W-1

Worzella - Allied East W-2

Okray Farms PF East N 1/2 - O-1

Okray Farms PF West - O-2

Okray Farms PF East O-3

No Solar Facilities

Worzella - Connie East - W-4

Worzella - Connie West - W-3

Wolosek - B2

Wolosek - B4 Prairie Star

Wolosek - B3

Wolosek - B1

Worzella - Greg's Pit - W-8

Worzella - Chet's West - W-5

Worzella - Terry's West - W-6

Worzella - Terry's East - W-7A

Worzella - Terry's East - W-7B

Wasieleski A-4

Wasieleski A-2 - Alternate Area

Wasieleski A-5

Wasieleski - A-1

Wasieleski - A-6

Wasieleski A-3 - Alternate Area

Not Approved by PSC

LILA DR
PLOVER RD
SOUTH DR
LOCUST DR
MAPLE DR
PARK AVE
HOOVER AVE
PLEASANT DR
BOSTON DR
LINCOLN AVE
CLEVELAND AVE
JACKSON AVE
COOLIDGE AVE
GRANT AVE
FOREST DR
BEECH DR
FOREST LAKE DR
CLUB FOREST DR
JOHNSON AVE
MEEHAN DR
MONROE AVE
PRAIRIE DR
TOWN OF PLOVER
TOWN OF GRANT
BUCHANAN AVE
POPLAR DR
BIRCH DR
GLENWOOD RD
BAKER RD
ANGLE DR
WASHINGTON ST
MARSH DR
ELM ST
BROOK DR
BUENA VISTA DR
TOWN LINE RD
TAFT AVE
ONEIL RD
LAKE RD
LAKE RD W
TOWN OF BUENA VISTA
CODDINGTON RD
KELLNER RD
GRANT ST
GROVE AVE
FOUR MILE LN
SOUTH PARK RD
CEDAR LN
ARBOR LN
JUNIPER LN
GRIFFITH AVE
DEER RD
WHITE PINE DR
TOWN OF PINE GROVE
WEBER RD
54
51
66
39
B
F
FF
W
WW
60TH ST N
80TH ST N
90TH ST N
95TH ST N
100TH ST N
105TH ST N
110TH ST N
125TH ST N
130TH ST S
60TH ST S
80TH ST S
82ND ST S
83RD ST S
85TH ST S
86TH ST S
87TH ST S
90TH ST S
95TH ST S
100TH ST S
110TH ST S
194TH AVE S
Ditch Number 1
Ditch Number 2
Ditch Number 3
Ditch No. 1
Birch Flowage
Lake Dog
Pierce Lake

Appendix D

Letter of Intent with Portage Solar (Credit Generator)

Pending - Portage Solar and the Village of Plover are still negotiating the terms of the agreement

Appendix E
Soil Sampling Data

A-5

Field	YEAR (Fall)	SOIL PH	OM %	PHOSPHORUS PPM	POTASSIUM PPM	CALCIUM PPM	MAGNESIUM PPM	ZINC PPM
Wally Barn East	2023			DID NOT SAMPLE				
Wally Barn East	2022	6.1	2.0	295	114	841	140	4.7
Wally Barn East	2021	5.7	1.7	236	107	781	161	8.5
Wally Barn East	2020	6.3	1.8	241	102	635	134	
Wally Barn East	2019	6.4	1.6	292	115	662	115	8.1
Wally Barn East	2018	6.3	1.9	286	113	709	139	5.9
Wally Barn East	2017	6.2	2.2	271	135	861	161	
Wally Barn East	2016	6.2	1.7	283	153	764	112	
Wally Barn East	2015	5.9	1.8	254	98	663	112	7.5
Wally Barn East	2014	6.1	2.0	314	86	809	140	
Wally Barn East	2013	5.8	1.7	245	115	623	120	
Wally Barn East	2012	5.7	2.1	233	125	881	158	
Wally Barn East	2011	5.8	1.7	300	107	690	135	
Wally Barn East	2010	5.8	2.3	364	127	698	109	
Wally Barn East	2009	5.8	2.1	291	146	570	135	12.2
Wally Barn East	2008	5.7	2.9	367	147	645	129	
Wally Barn East	2007	5.6	2.7	253	244	600	115	
Wally Barn East	2006	5.6	2.5	281	207	650	108	12.5
Wally Barn Mid	2023			DID NOT SAMPLE				
Wally Barn Mid	2022	6.1	3.9	221	208	1330	147	5.2
Wally Barn Mid	2021	6.2	3.0	285	158	1743	170	8.8
Wally Barn Mid	2020	6.9	3.1	305	176	1547	148	10.2
Wally Barn Mid	2019	6.9	2.8	346	178	1711	136	
Wally Barn Mid	2018	6.6	3.5	316	188	1531	189	6.3
Wally Barn Mid	2017	5.8	1.8	137	112	850	113	
Wally Barn Mid	2016	6.4	3.9	307	208	1693	188	
Wally Barn Mid	2015	6.4	3.9	296	202	1427	188	9.2
Wally Barn Mid	2014	6.9	3.8	428	174	1514	182	
Wally Barn Mid	2013	6.2	4.0	247	247	1382	238	
Wally Barn Mid	2012	6.3	3.7	180	225	1654	282	
Wally Barn West	2023	5.9	2.7	163	190	813	108	2.8

A-4

Wally Barn Mid A-4

A-2

Field	YEAR (Fall)	SOIL PH	OM %	PHOSPHORUS PPM	POTASSIUM PPM	CALCIUM PPM	MAGNESIUM PPM	ZINC PPM
Wally Barn West	2022	5.6	2.1	147	123	823	117	2.5
Wally Barn West	2021	6.8	2.0	100	91	554	96	2.7
Wally Barn West	2020	6.0	2.3	124	123	820	127	
Wally Barn West	2019	6.2	2.1	114	104	858	137	4.1
Wally Barn West	2018	6.2	2.2	144	107	800	130	
Wally Barn West	2017	6.3	2.4	163	120	845	138	
Wally Barn West	2016	6.2	1.6	124	130	700	98	
Wally Barn West	2015	6.1	2.6	121	130	886	151	4.5
Wally Barn West	2014	6.3	2.7	121	86	928	152	
Wally Barn West	2013	5.9	2.3	125	121	920	140	
Wally Barn West	2012	5.8	2.2	128	148	1103	168	
Wally Barn West	2011	6.0	2.0	135	115	710	145	
Wally Barn West	2010	5.8	2.9	164	149	950	137	
Wally Barn West	2009	5.9	2.7	132	180	703	143	4.4
Wally Barn West	2008	5.7	3.2	160	153	779	147	
Wally Barn West	2007	5.7	3.8	134	207	700	115	
Wally Barn West	2006	6.0	3.0	114	178	775	125	5.1
Wally Big North	2023			DID NOT SAMPLE				
Wally Big North	2022	6.2	2.6	96	106	1177	120	4.2
Wally Big North	2021	5.9	2.2	129	129	909	81	7.1
Wally Big North	2020	6.1	2.4	127	92	879	114	
Wally Big North	2019	6.0	2.5	141	93	916	116	7.0
Wally Big North	2018	6.0	2.3	148	73	944	94	
Wally Big North	2017	6.0	2.5	127	96	1202	136	
Wally Big North	2016	6.4	2.0	137	118	982	104	
Wally Big North	2015	6.2	2.7	128	156	1057	148	9.6
Wally Big North	2014	6.1	2.7	115	71	1085	124	5.6
Wally Big North	2013	5.9	2.8	123	102	977	143	7.3
Wally Big North	2012	5.9	3.0	160	121	897	150	
Wally Big North	2011	6.3	2.9	135	128	1067	212	
Wally Big North	2010	6.3	2.4	126	92	855	168	7.3
Wally Big North	2009	5.8	2.5	132	148	887	143	
Wally Big North	2008	6.0	3.2	133	116	1001	173	5.7

A-1

A-1 (cont.)

Field	YEAR (Fall)	SOIL PH	OM %	PHOSPHORUS PPM	POTASSIUM PPM	CALCIUM PPM	MAGNESIUM PPM	ZINC PPM
Wally Big North	2007	6.1	4.0	102	135	917	165	
Wally Big North	2006	5.9	3.2	120	150	950	133	
Wally Big South	2023			DID NOT SAMPLE				
Wally Big South	2022	5.7	2.0	121	95	825	89	3.3
Wally Big South	2021	6.1	1.9	101	148	851	88	6.1
Wally Big South	2020	6.0	1.9	113	91	745	100	5.2
Wally Big South	2019	6.2	2.0	133	83	770	110	5.2
Wally Big South	2018	6.0	2.2	115	88	769	86	
Wally Big South	2017	6.0	2.2	119	107	1052	134	5.8
Wally Big South	2016	6.2	1.9	125	109	897	100	
Wally Big South	2015	6.2	2.0	119	114	979	108	7.4
Wally Big South	2014	5.8	2.2	120	89	902	104	6.0
Wally Big South	2013	5.8	2.3	108	112	908	130	5.3
Wally Big South	2012	5.9	2.2	96	80	1065	173	3.0
Wally Big South	2011	6.1	2.0	111	96	772	157	
Wally Big South	2010	5.9	2.1	120	119	680	109	
Wally Big South	2009	6.0	2.2	112	122	758	132	4.8
Wally Big South	2008	5.8	2.3	123	112	782	124	
Wally Big South	2007	5.8	2.7	107	186	800	117	
Wally Big South	2006	6.0	2.8	97	124	775	125	5.2
Wally Wiper	2023	6.3	1.7	83	100	795	161	2.5
Wally Wiper	2022	5.4	2.2	143	120	752	98	3.3
Wally Wiper	2021	6.1	2.4	136	84	631	110	4.0
Wally Wiper	2020	6.3	2.2	146	127	792	139	
Wally Wiper	2019	6.1	1.9	150	106	625	83	4.9
Wally Wiper	2018	6.2	2.5	138	88	721	103	3.6
Wally Wiper	2017	5.9	2.7	145	139	824	134	4.4
Wally Wiper	2016	6.2	2.2	129	105	756	123	
Wally Wiper	2015	5.9	3.0	124	142	911	134	8.8
Wally Wiper	2014	5.9	2.6	108	81	798	114	5.4
Wally Wiper	2013	5.7	2.6	130	113	750	138	4.9
Wally Wiper	2012	5.7	2.6	149	136	653	110	4 LB ZN

A-6

A-3

A-3

A-3 (cont.)

Field	YEAR (Fall)	SOIL PH	OM %	PHOSPHORUS PPM	POTASSIUM PPM	CALCIUM PPM	MAGNESIUM PPM	ZINC PPM
Wally Wiper	2011	6.2	2.8	125	87	859	185	
Wally Wiper	2010	6.3	2.7	106	114	798	157	
Wally Wiper	2009	5.7	2.5	112	156	645	113	
Wally Wiper	2008	6.0	2.8	135	155	821	159	5.0
Wally Wiper	2007	6.3	3.1	87	202	725	160	
Wally Wiper	2006	6.0	3.0	93	152	675	125	

B1

Robert Wolosek 715-340-1248

150

Soil Test Report - Field: Hermans North Acres: ~~114.7~~ 153.22 Acres

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

Account: 349
Precision Crop Service
200 E High Street
Plainfield, WI 54966

B-1

Report For:
Curt Soik
Myron Soik & Sons

030220805-06 07
05 06.01
2yrs potato 08.01
3yrs Sweet Corn 08.02

Lab #274523
County Portage
Received 9/21/2023
Field Hermans North

Acres 114.7
Plow Depth 8.0
Soil Name Friendship
Previous Crop

ASCS No 0

Cropping Sequence
Potato

Nutrient Recommendations (lbs/acre)

Yield Goal (per acre)	Crop Nutrient Need N	P2O5	K2O	Legume N Credit	Apply N	P2O5	K2O
500	180	30	280	0	180	30	280

The lime required for this rotation to reach pH 6 is 6.1 T/a of 60-69 lime or 4.6 T/a of 80-89 lime.

Laboratory Analysis for Field Hermans North, Lab No 274523

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
1	4.9	3.0	171	116	7.9	973	132	6					1.26	6.1
2	5.0	2.5	198	117	6.7	835	98	5					1.21	6.2
3	5.1	1.9	188	139	4.1	660	89	4					1.30	6.5
4	5.5	1.9	188	108	2.6	709	94	4					1.27	6.5
5	5.0	1.8	197	88	4.5	577	71	3					1.29	6.5
6	5.0	1.7	202	121	3.7	660	88	4					1.29	6.6
7	4.8	1.4	208	107	6.0	550	77	3					1.34	6.4
8	4.9	1.1	188	85	4.1	345	61	2					1.36	6.6
9	4.7	1.3	190	79	4.8	398	66	2					1.33	6.6
10	4.6	2.0	193	67	6.7	496	64	3					1.25	6.4
11	4.9	2.6	196	108	7.9	820	90	5					1.21	6.1
12	4.8	2.5	170	95	8.0	748	97	4					1.32	6.0
13	5.2	4.2	105	140	6.7	995	131	6					1.22	6.1
14	5.0	6.4	98	103	8.0	1336	173	9					1.11	6.0
15	4.9	13.3	65	96	8.0	1955	281	17					0.85	5.7
16	5.1	9.4	85	104	8.0	1866	280	15					0.94	5.9
17	5.3	4.0	97	119	4.1	1167	151	7					1.21	6.4
18	4.9	6.0	178	153	8.0	1425	167	9					1.11	5.9
19	5.3	4.4	108	124	5.6	1093	136	7					1.10	6.2
20	5.0	2.5	136	112	6.0	700	96	4					1.26	6.3
21	5.1	2.6	108	113	4.8	566	75	4					1.22	6.4
22	5.1	3.6	97	132	5.6	1141	125	7					1.17	6.3
23	5.5	5.4	73	164	4.9	1253	161	9					1.08	6.2
24	5.2	9.0	84	153	8.0	1959	275	15					0.98	5.9
25	5.2	11.9	71	144	8.0	2212	337	19					0.90	5.9
26	5.2	14.4	69	143	8.0	2344	371	21					0.83	5.8
27	5.1	11.2	64	137	8.0	1847	279	15					0.91	5.9
28	5.0	12.9	48	159	8.0	1863	256	16					0.89	5.7
29	5.2	2.6	198	159	5.2	752	100	5					1.23	6.3
30	4.8	2.2	200	144	8.0	634	91	4					1.30	6.1
31	5.1	1.9	190	114	6.4	435	67	3					1.31	6.2
32	5.1	1.7	202	77	4.1	501	71	3					1.35	6.5
33	5.0	1.4	214	77	3.7	419	60	2					1.37	6.6
34	4.9	1.1	210	87	4.8	438	67	3					1.32	6.5
35	5.1	1.2	221	122	2.6	490	80	3					1.32	6.7
36	4.8	1.3	225	86	6.7	418	61	2					1.36	6.3
37	5.1	1.4	224	60	4.8	365	61	2					1.31	6.4
38	4.7	1.3	218	81	7.1	400	65	2					1.37	6.3
39	4.6	1.9	213	89	8.0	481	66	3					1.29	6.2
40	5.0	1.7	211	87	5.2	621	91	4					1.27	6.4
41	4.7	1.6	191	69	7.1	557	63	3					1.30	6.3
42	4.7	1.8	195	85	7.9	570	83	3					1.28	6.2
43	5.0	1.7	189	72	4.5	544	75	3					1.31	6.5
44	4.7	1.7	220	68	6.4	514	75	3					1.32	6.4
45	4.8	1.9	204	78	5.2	618	91	4					1.21	6.5
46	4.3	1.6	219	90	8.0	440	62	3					1.25	6.2

Laboratory Analysis for Field Hermans North, Lab No 274523

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
[illegible]	4.5	1.3	226	52	8.0	450	63	3					1.34	6.0
[illegible]	5.1	1.2	223	74	4.1	453	66	3					1.30	6.5
[illegible]	5.0	1.4	225	81	3.7	380	74	2					1.39	6.6
[illegible]	5.0	1.0	217	69	4.5	552	98	3					1.32	6.5
[illegible]	4.7	1.4	211	66	6.4	463	65	3					1.26	6.4
[illegible]	5.3	2.0	216	68	4.1	543	77	3					1.33	6.4
[illegible]	5.1	1.8	210	85	4.8	598	95	4					1.32	6.4
[illegible]	5.3	2.4	196	94	3.3	643	100	4					1.34	6.5
[illegible]	5.2	2.8	221	111	3.7	708	111	5					1.24	6.5
[illegible]	4.6	2.0	190	112	8.0	509	70	3					1.29	6.1
Ad, Avg	5.0	3.4	172	101		821	115	5						

Base Saturation

Est CEC	Ca %	Mg %	K %
5	77.3	17.8	4.9

Test Interpretation for Field Hermans North, Lab No 274523

Crop Name	Very Low	Low	Optimum	High	Very High	Excessive	Very Low	Low	Optimum	High	Very High	Excessive
Potato	P						K					

Additional Information, Secondary & Micronutrient Recommendations

All: If a legume crop preceeds the first crop listed on the sample submission form, N credits should be subtracted from the N recommendation for the first crop listed. See Chapter 9 in UWEX Publication A2809 for more details.
All: If manure, biosolids, septage or other waste materials have been applied to this field, be sure to take nutrient credits and adjust fertilizer rate. See Chapter 9 in UWEX Publication A2809 for more details.
All:Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.
All:If lime has been applied in the last two years, more lime may not be needed due to incomplete reaction.
All:Lime recommendation may not achieve desired pH in 3 years. Retest then and apply as recommended.
Potato:Recommended soil pH for scab-susceptible potatoes is 5.2. Apply 2.2 T/a of 60-69 lime or 1.6 T/a of 80-89 lime.
All:Nitrogen should be sidedressed or split applied on sandy soils.
Potato:For potato, apply 25-50% of the N at emergence and the remainder at tuberization or apply the remaining nitrogen in multiple split applications.
Potato:Rates for potato include nitrogen in starter fertilizer. Reduce nitrogen rate by 25% if petiole nitrate test is used to guide in-season nitrogen applications.
Sweet corn or beans:Retest fields used for these high value crops every 2 years.
All:Ca test average value of 821.16 is in High category.
All:Mg test average value of 115.472 is in Optimum category.

B2

(120) 122

Soil Test Report - Field: Hermans 120 Acres: 114.7

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

Account: 349
Precision Crop Service
200 E High Street
Plainfield, WI 54966

B2

Report For:
Curt Soik
Myron Soik & Sons

Lab #250573
County Portage
Received 8/30/2021
Field Hermans 120
Acres 114.7
Plow Depth 8.0
Soil Name Friendship
Previous Crop

0302 30831-14 ~~0302 20806-05.01~~
0 -13 ~~0302 20806-07.01~~
-16

Sweet corn potatoes – 2yr prior

ASCS No 0

Nutrient Recommendations (lbs/acre)

Cropping Sequence	Yield Goal (per acre)	Crop Nutrient Need N	P2O5	K2O	Legume N Credit	Apply N	P2O5	K2O
Potato	500	220	30	325	0	220	30	325

There is no lime recommendation

Laboratory Analysis for Field Hermans 120, Lab No 250573

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
1	5.8	1.2	321	91		461	119	3					1.42	6.4
2	5.9	1.3	323	93		505	133	3					1.44	6.5
3	5.8	1.3	315	84		583	134	4					1.40	6.5
4	5.8	1.2	313	94		561	129	4					1.37	6.5
5	5.8	0.9	270	63		425	104	3					1.33	6.6
6	5.8	1.4	278	83		521	124	4					1.29	6.5
7	5.7	1.3	270	95	3.3	456	130	3					1.39	6.3
8	5.5	1.1	285	68	4.9	328	114	2					1.35	6.2
9	5.6	1.3	290	71	3.0	379	135	3					1.32	6.4
10	5.7	1.4	244	72	2.6	427	136	3					1.30	6.4
11	5.6	1.2	297	68	1.4	307	85	2					1.26	6.6
12	5.7	1.1	254	63	2.6	313	95	2					1.35	6.4
13	5.7	1.8	231	73	3.3	518	151	3					1.38	6.3
14	5.6	1.5	315	95	4.5	523	160	4					1.40	6.2
15	5.8	1.5	315	96		444	151	3					1.38	6.4
16	5.8	1.1	291	70		419	138	3					1.42	6.4
17	5.8	1.4	225	74		424	132	3					1.35	6.7
18	5.6	1.1	279	62	2.2	275	87	2					1.38	6.5
19	5.6	1.7	251	78	3.0	544	150	4					1.38	6.4
20	5.7	1.6	278	103	1.8	954	180	5					1.42	6.5
21	5.5	1.7	323	89	4.9	506	150	4					1.33	6.2
22	5.7	1.2	262	65	1.8	444	145	3					1.37	6.5
23	5.9	1.1	232	64		388	125	3					1.31	6.9
24	5.5	1.1	224	57	4.1	362	99	2					1.43	6.3
25	5.9	1.2	324	94		553	127	3					1.43	6.8
26	6.0	1.3	264	92		635	151	4					1.38	6.6
27	5.9	1.3	252	67		478	133	3					1.28	6.5
28	6.0	1.1	224	67		465	115	3					1.34	6.7
29	6.1	1.6	173	65		583	160	4					1.30	6.8
30	5.9	1.7	193	81		616	136	4					1.36	6.6
31	6.1	1.3	287	91		707	164	4					1.44	6.8
32	6.1	1.5	263	104		790	184	5					1.36	6.7
33	5.5	1.5	256	79	4.1	443	126	3					1.39	6.3
34	5.8	1.2	261	77		414	118	3					1.40	6.8
35	5.8	1.0	238	56		479	116	3					1.38	6.4
36	5.9	1.3	256	61		560	130	3					1.40	6.5
37	5.7	1.1	281	53	1.8	440	148	3					1.38	6.5
38	5.8	1.4	305	69		551	175	4					1.37	6.5
39	5.9	1.5	240	90		539	149	4					1.37	6.4
40	5.8	1.1	280	74		481	147	3					1.37	6.7
41	5.9	0.9	276	71		357	122	3					1.34	6.7
42	5.8	1.2	293	59		452	154	3					1.38	6.5
43	5.8	1.3	296	65		471	145	3					1.38	6.6
44	5.6	1.2	272	72	3.0	416	154	3					1.35	6.4
45	5.8	1.4	280	83		486	160	4					1.26	6.4
46	6.0	1.2	298	79		649	178	4					1.30	6.9

Laboratory Analysis for Field Hermans 120, Lab No 250573

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
47	5.8	1.2	252	56		427	144	3					1.28	6.5
48	5.6	1.4	294	72	3.0	488	157	3					1.38	6.4
Adj Avg	5.8	1.3	272	75		491	138	3						

Base Saturation

Est CEC	Ca %	Mg %	K %
3	65.0	29.9	5.1

Test Interpretation for Field Hermans 120, Lab No 250573

Crop Name	Very Low	Low	Optimum	High	Very High	Excessive	Very Low	Low	Optimum	High	Very High	Excessive
Potato	P						K					

Additional Information, Secondary & Micronutrient Recommendations

All:If a legume crop preceeds the first crop listed on the sample submission form, N credits should be subtracted from the N recommendation for the first crop listed. See Chapter 9 in UWEX Publication A2809 for more details.
All:If manure, biosolids, septage or other waste materials have been applied to this field, be sure to take nutrient credits and adjust fertilizer rate. See Chapter 9 in UWEX Publication A2809 for more details.
All:Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.
All:Parts of this field may benefit from liming. Please see the lime requirementsfor individual samples.
Potato:Recommended soil pH for scab-susceptible potatoes is 5.2. No lime is recommended for this crop.
All:Nitrogen should be sidedressed or split applied on sandy soils.
Corn:Nitrogen application rates for grain and silage corn reflect the maximum return to N (MRTN) at a 0.10 N:corn price ratio (eg. $0.30/lb N and $3.00/bu; or $0.40/lb N and $4.00/bu) and the range of rates that produce profitability within $1/a of the MRTN rate. N application rates can be adjusted to reflect different prices for N and grain. See Chapter 6 in UWEX Publication A2809 for more details.
Potato:For potato, apply 25-50% of the N at emergence and the remainder at tuberization or apply the remaining nitrogen in multiple split applications.
Potato:Rates for potato include nitrogen in starter fertilizer. Reduce nitrogen rate by 25% if petiole nitrate test is used to guide in-season nitrogen applications.
Corn:Starter fertilizer may accelerate early season corn development, which may not always translate into increased yield. Corn will benefit more from a complete starter fertilizer (e.g. 10+20+20 lbs N+P2O5+K2O/a) when grown on soils testing optimum or less in P and K.
Sweet corn or beans:Retest fields used for these high value crops every 2 years.
Corn, grain:If corn is harvested for silage instead of grain apply extra 90 lbs K2O per acre to next crop.
All:Ca test average value of 490.586 is in Optimum category.
All:Mg test average value of 137.542 is in Optimum category.

B3

106 Acres

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

Soil Test Report - Field: Chets Gator Acres: 97.3

Account: 349
Precision Crop Service
200 E High Street
Plainfield, WI 54966

B-3

Report For:
Curt Soik
Myron Soik & Sons

Gr Beans
potatoes -2yrs prior

Lab #250573
County Portage
Received 8/30/2021
Field Chets Gator

030220806 . 05.01
- 07.01

Acres 97.3
Plow Depth 8.0
Soil Name Meehan
Previous Crop

ASCS No 0

Nutrient Recommendations (lbs/acre)

Cropping Sequence	Yield Goal (per acre)	Crop Nutrient Need N	P2O5	K2O	Legume N Credit	Apply N	P2O5	K2O
Potato	500	220	30	345	0	220	30	345

There is no lime recommendation

Laboratory Analysis for Field Chets Gator, Lab No 250573

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
1	5.2	1.3	306	64	7.5	414	74	2					1.42	6.0
2	5.8	1.6	294	66		638	125	4					1.42	6.2
3	5.8	1.6	324	70		564	157	4					1.40	6.1
4	5.6	1.5	321	56	6.0	474	148	3					1.35	6.0
5	5.7	1.3	302	54	2.6	397	131	3					1.41	6.4
6	5.7	1.2	313	57	1.8	342	108	2					1.41	6.5
7	5.6	1.1	335	60	4.5	394	126	2					1.51	6.2
8	5.3	1.1	347	59	6.4	279	75	2					1.46	6.1
9	5.4	1.3	315	60	5.2	349	90	2					1.44	6.2
10	5.5	1.3	319	61	5.6	368	101	2					1.42	6.1
11	5.6	1.1	343	59	3.0	324	95	2					1.36	6.4
12	5.9	0.9	277	55		356	105	2					1.35	6.6
13	6.0	0.9	280	43		448	132	3					1.46	6.7
14	5.8	1.0	329	55		417	121	3					1.51	6.4
15	5.6	1.0	275	59	4.5	338	91	2					1.47	6.2
16	5.9	1.4	303	61		582	154	4					1.38	6.3
17	5.8	1.2	299	52		382	142	3					1.39	6.5
18	6.1	1.0	286	50		339	123	2					1.38	6.8
19	5.9	1.2	272	53		421	116	3					1.44	6.5
20	5.8	1.1	308	66		385	86	2					1.46	6.5
21	5.8	1.3	322	74		384	105	2					1.43	6.4
22	5.8	1.2	306	61		409	96	2					1.42	6.4
23	6.1	0.9	372	75		458	117	3					1.38	6.8
24	5.7	1.7	259	73	4.1	429	129	3					1.37	6.2
25	5.9	1.6	211	76		603	174	4					1.30	6.5
26	5.8	1.2	288	71		570	168	4					1.35	6.5
27	5.7	1.3	282	72	3.3	460	123	3					1.29	6.3
28	5.7	0.8	226	57	1.8	324	92	2					1.33	6.5
29	5.8	1.2	211	52		371	120	3					1.36	6.7
30	5.8	1.1	251	67		420	146	3					1.38	6.6
31	5.9	1.1	293	69		468	147	3					1.48	6.6
32	5.8	1.2	318	56		477	155	3					1.38	6.5
33	5.7	1.0	312	50	2.6	465	145	3					1.40	6.4
34	5.8	1.0	308	55		442	132	3					1.40	6.7
35	5.9	1.1	279	57		331	115	2					1.36	6.6
Adj Avg	5.7	1.2	297	61		424	122	3						

Base Saturation

Est CEC	Ca %	Mg %	K %
3	64.7	30.5	4.8

Test Interpretation for Field Chets Gator, Lab No 250573

Crop Name	Very Low	Low	Optimum	High	Very High	Excessive	Very Low	Low	Optimum	High	Very High	Excessive
Potato	P						K					

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

B4 (Updated)

SOIL TEST REPORT

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

Results also available on-line at http://not available
lab number: 2293 access code: pyng2

LAB #: 2293

County	Account No.
Portage	556265

Date Received	Date Processed
6/9/2025	6/30/2025

Village of Plover Wastewater Utility -
PO Box 37
Plover, WI 54467

This Report is for:
Logan Elsholtz
4496 Coolidge Ave
Plover, WI 54467

Slope	Acres	Plow Depth	Irrigated
0-3%	30	7"	No

Soil Name: Meehan — Tiled: No
sandy soil/sandy yield potential
Field Name: B4
Previous Crop: no crop

NUTRIENT RECOMMENDATIONS

Cropping Sequence	Yield Goal	Crop Nutrient Need			Fertilzer Credit				Nutrients to Apply		
		N	P2O5	K2O	Legume N	Manure N	P2O5	K2O	N	P2O5	K2O
	per acre	lbs/a			lbs/a	lbs/a			lbs/a		
CRP, grass	n/a	0	0	0	0	0	0	0	0	0	0
(no crop)	n/a										
(no crop)	n/a										
(no crop)	n/a										

There is no lime recommendation.

ADDITIONAL INFORMATION

Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.

Because of the low potassium buffering capacity of this soil, retest every 2 years.

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

The nitrogen recommendation should be applied in sidedressed or split application on sandy soils.

For CRP crops in the seeding year only, apply some nitrogen (15–30 lb N/a). See table 6.3 in publication A2809 for specific rates.

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

SOIL TEST INTERPRETATION FOR CROPPING SEQUENCE

Very Low — Low — Optimum — High — Very High — Excessive

Phosphorus PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
Potassium KKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKK

Rotation pH XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

LABORATORY ANALYSIS

Sample Identification	Soil pH	O.M %	Phosphorus ppm	Potassium ppm	60-69 Lime Req (T/a)	Calcium ppm	Magnesium ppm	Est. CEC (cmol/kg)	Boron ppm	Manganese ppm	Zinc ppm	Sulfate-Sulfur ppm		Texture Code	Sample Density	Buffer pH
1	6.6	1.6	312	124	0									1	1.32	N.R.
2	6.0	1.7	353	138	0									1	1.23	6.6
3	5.8	1.7	318	142	0									1	1.24	6.6
4	5.5	2.1	297	151	0									2	1.21	6.4
5	5.4	1.5	284	124	0									1	1.32	6.5
6	5.5	1.5	297	156	0									1	1.27	6.7
7	5.5	1.7	350	138	0									2	1.21	6.4
8	5.4	1.3	222	141	0									1	1.24	6.7
Adjusted Averages	5.7	1.6	304	139												

Recommendations based on UW Extension publication 'Nutrient Application Rate Guidelines for Field, Vegetable, and Fruit Crops in Wisconsin' (A2809). Farmer's Copy

O-1

Soil Test Report - Field: PF Eat N1/2 Acres: 84.7

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

Account: 349
Precision Crop Service
200 E High Street
Plainfield, WI 54966

Report For:
Jim Okray
Okray Family Farms

Plover , WI 54467

Lab #274133
County
Received 9/6/2023
Field PF Eat N1/2

Acres 84.7
Plow Depth 7.0
Soil Name
Previous Crop

Nutrient Recommendations (lbs/acre)

Cropping Sequence	Yield Goal (per acre)	Crop Nutrient Need N	P2O5	K2O	Legume N Credit	Apply N	P2O5	K2O
Corn, grain	170	125	0	90	0	125	0	90
Soybean, grain	60	0	0	130	0	0	0	130
Alfalfa, seeding	3.5	30	0	235	0	30	0	235
Alfalfa, established	6	0	0	415	0	0	0	415

The lime required for this rotation to reach pH 6.8 is 7 T/a of 60-69 lime or 5.5 T/a of 80-89 lime.

Laboratory Analysis for Field PF Eat N1/2, Lab No 274133

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
1	5.4	0.8	209	67	5.0	489	82	3					1.38	6.7
2	5.1	1.1	240	75	8.0	479	79	3					1.40	6.6
3	5.2	0.7	240	74	8.0	505	85	3					1.36	6.6
4	5.0	1.1	246	66	8.0	433	75	3					1.36	6.6
5	5.0	0.8	266	70	8.0	356	68	2					1.38	6.6
6	5.2	0.5	254	55	5.0	404	75	2					1.34	6.7
7	5.3	1.0	226	63	8.0	386	78	2					1.36	6.6
8	5.1	0.8	249	73	8.0	393	73	2					1.39	6.6
9	5.4	1.5	237	70	3.0	548	88	3					1.36	6.8
10	5.0	0.8	250	55	8.0	433	73	2					1.37	6.6
11	5.3	1.0	211	61	12.0	379	70	2					1.31	6.3
12	5.8	0.8	210	52	12.0	391	82	2					1.32	6.4
13	5.9	0.8	206	75	11.0	494	96	3					1.35	6.5
14	5.4	0.9	211	102	8.0	355	74	2					1.37	6.6
15	5.5	0.9	208	80	11.0	341	73	2					1.36	6.5
16	5.8	0.7	203	59	6.0	388	77	2					1.39	6.7
17	5.7	0.9	215	63	8.0	350	71	2					1.37	6.6
18	6.1	0.8	209	60	3.0	402	85	2					1.36	6.8
19	5.7	0.8	219	55	6.0	344	76	2					1.35	6.7
20	5.6	0.9	210	67	6.0	342	71	2					1.40	6.7
21	5.7	0.8	207	64	6.0	434	84	3					1.37	6.7
22	5.7	0.7	218	60	3.0	364	73	2					1.39	6.8
23	5.8	0.8	214	60	6.0	382	74	2					1.37	6.7
24	5.9	0.9	211	75	6.0	422	84	3					1.36	6.7
25	6.0	0.9	216	73	8.0	474	90	3					1.36	6.6
26	5.8	0.9	216	75	3.0	409	75	2					1.36	6.8
27	5.8	0.9	208	67	6.0	420	82	3					1.37	6.7
28	5.6	0.8	216	65	11.0	383	77	2					1.41	6.5
29	5.8	0.9	219	68	3.0	406	77	2					1.41	6.8
30	6.0	0.9	190	58	6.0	467	99	3					1.34	6.7
31	5.6	0.8	216	65	11.0	426	77	2					1.39	6.5
32	5.6	1.1	230	79	8.0	445	79	3					1.39	6.6
33	5.8	0.9	221	85	3.0	501	93	3					1.32	6.8
34	5.7	0.9	224	60	6.0	453	82	3					1.35	6.7
35	6.0	1.0	222	72	2.0	499	107	3					1.34	6.9
Adj Avg	5.6	0.9	221	67		420	80	3						

Base Saturation

Est CEC	Ca %	Mg %	K %
3	71.7	22.4	5.9

Test Interpretation for Field PF Eat N1/2, Lab No 274133

Crop Name	Very Low	Low	Optimum	High	Very High	Excessive	Very Low	Low	Optimum	High	Very High	Excessive
Alfalfa, seeding	P						K					

These recommendations are based on University of Wisconsin publication A2809. Data represents the soil sample, not necessarily the entire field.

O-2

Soil Test Report - Field: PF West Acres: 218.4

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

Account: 349
Precision Crop Service
200 E High Street
Plainfield, WI 54966

Report For:
Jim Okray
Okray Family Farms

Plover , WI 54467

Lab #274133
County
Received 9/6/2023
Field PF West

Acres 218.4
Plow Depth 7.0
Soil Name
Previous Crop

Nutrient Recommendations (lbs/acre)

Cropping Sequence	Yield Goal (per acre)	Crop Nutrient Need N	P2O5	K2O	Legume N Credit	Apply N	P2O5	K2O
Corn, grain	170	125	0	90	0	125	0	90
Soybean, grain	60	0	0	130	0	0	0	130
Alfalfa, seeding	3.5	30	0	235	0	30	0	235
Alfalfa, established	6	0	0	415	0	0	0	415

The lime required for this rotation to reach pH 6.8 is 2 T/a of 60-69 lime or 2 T/a of 80-89 lime.

Laboratory Analysis for Field PF West, Lab No 274133

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
1	6.6	1.2	126	55		701	188	5					1.28	N.R.
2	6.4	0.9	190	56	2.0	577	141	4					1.34	6.9
3	6.2	1.3	200	79	2.0	679	150	4					1.31	6.9
4	6.1	0.9	199	71	2.0	609	146	4					1.33	6.9
5	6.2	1.2	195	84	3.0	604	148	4					1.33	6.8
6	6.1	1.0	188	98	3.0	572	153	4					1.33	6.8
7	6.6	1.0	176	96		649	172	4					1.29	N.R.
8	6.6	1.2	205	115		712	193	5					1.31	N.R.
9	6.5	1.0	219	117	2.0	704	204	5					1.31	7.0
10	6.4	1.0	201	110	2.0	666	197	5					1.29	7.0
11	6.1	1.3	193	85	3.0	578	175	4					1.31	6.8
12	6.2	0.8	187	80	2.0	551	145	4					1.30	7.0
13	5.9	1.0	203	93	2.0	486	118	3					1.31	6.9
14	6.1	1.1	216	106	2.0	591	150	4					1.33	7.0
15	6.0	1.0	210	87	3.0	566	135	4					1.33	6.8
16	6.2	0.9	215	82	2.0	491	142	3					1.35	6.9
17	6.1	1.1	207	67	2.0	512	132	3					1.32	6.9
18	6.3	0.9	210	87	2.0	432	113	3					1.34	7.0
19	6.2	1.0	193	113	2.0	527	135	3					1.37	7.1
20	6.1	1.0	222	84	2.0	519	127	3					1.35	6.9
21	6.0	1.1	227	76	3.0	509	128	4					1.26	6.8
22	5.9	1.0	170	58	3.0	407	114	3					1.33	6.8
23	5.9	1.4	158	69	3.0	461	137	3					1.35	6.8
24	6.4	1.2	186	78	2.0	554	147	4					1.31	6.9
25	6.5	1.2	195	87	2.0	639	166	4					1.33	7.0
26	6.5	1.1	210	84	2.0	636	157	4					1.35	7.1
27	6.2	0.9	205	78	2.0	533	130	3					1.38	6.9
28	6.4	0.8	203	84	2.0	489	126	3					1.40	6.9
29	6.2	1.0	201	93	2.0	487	134	3					1.35	7.0
30	6.4	0.9	205	75	2.0	503	124	3					1.35	7.0
31	6.3	1.0	208	86	2.0	499	135	3					1.35	6.9
32	6.2	1.1	203	82	2.0	542	140	4					1.31	6.9
33	6.3	1.0	202	88	2.0	541	136	4					1.27	7.0
34	6.1	0.8	205	93	2.0	492	130	3					1.33	6.9
35	6.3	1.1	202	97	2.0	642	165	4					1.31	7.0
36	6.4	1.0	210	85	2.0	658	147	4					1.30	7.0
37	6.5	0.9	215	85	2.0	614	149	4					1.35	7.2
38	6.5	1.0	209	76	2.0	658	149	4					1.33	7.1
39	6.4	0.9	215	82	2.0	677	156	4					1.33	7.0
40	6.4	0.9	211	81	2.0	561	151	4					1.37	7.0
41	6.7	0.8	210	73		585	152	4					1.34	N.R.
42	6.3	0.8	208	92	2.0	546	140	4					1.34	6.9
43	6.2	1.0	211	88	2.0	556	148	4					1.35	7.0
44	6.3	1.1	212	77	2.0	617	164	4					1.33	7.0
45	6.3	0.9	211	68	2.0	589	150	4					1.34	6.9
46	6.3	1.0	137	54	6.0	444	123	3					1.34	6.7

These recommendations are based on University of Wisconsin publication A2809. Data represents the soil sample, not necessarily the entire field.

Laboratory Analysis for Field PF West, Lab No 274133

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
47	6.3	1.0	224	81	3.0	577	156	4					1.34	6.8
48	6.5	1.0	232	112	2.0	628	158	4					1.35	7.0
49	6.2	1.3	215	99	2.0	587	134	4					1.35	6.9
50	6.2	0.8	214	75	3.0	580	137	4					1.36	6.8
51	6.4	0.7	210	58	2.0	479	119	3					1.36	6.9
52	6.5	1.2	193	70	2.0	563	146	4					1.33	6.9
53	6.6	0.7	198	89		570	145	4					1.31	N.R.
54	6.6	0.4	205	88		620	145	4					1.33	N.R.
55	6.3	1.0	210	95	2.0	625	147	4					1.32	7.0
56	6.3	0.7	198	68	2.0	537	132	4					1.29	7.0
57	6.4	1.2	197	94	2.0	561	135	4					1.32	7.0
58	6.4	1.2	192	71	3.0	684	171	4					1.31	6.8
59	6.4	0.7	184	81	2.0	769	170	5					1.29	6.9
60	6.2	1.4	156	96	3.0	731	167	5					1.27	6.8
61	6.3	1.6	187	74	2.0	770	188	5					1.35	6.9
62	6.1	1.2	192	68	8.0	671	170	4					1.31	6.6
63	6.3	1.2	203	69	6.0	517	131	3					1.36	6.7
64	6.3	0.8	203	68	2.0	582	139	4					1.39	6.9
65	6.2	1.0	179	91	2.0	593	133	4					1.31	6.9
66	6.3	0.7	190	86	3.0	594	149	4					1.32	6.8
67	6.3	1.2	190	69	2.0	565	155	4					1.32	6.9
68	6.0	0.7	200	74	3.0	478	139	3					1.34	6.8
69	6.3	1.0	216	68	2.0	508	138	3					1.37	6.9
70	6.1	1.9	215	86	3.0	642	165	4					1.36	6.8
71	6.5	1.0	202	72	2.0	669	161	4					1.30	6.9
72	6.1	1.3	101	65	6.0	656	161	4					1.32	6.7
73	5.9	1.7	160	64	6.0	556	141	4					1.29	6.7
74	6.1	1.3	188	89	3.0	550	149	4					1.32	6.8
75	6.5	1.0	192	72	2.0	563	162	4					1.38	7.0
76	6.5	1.0	200	88	2.0	615	179	4					1.41	7.0
77	6.4	1.0	208	89	3.0	534	157	4					1.35	6.8
78	6.2	1.0	217	105	3.0	546	157	4					1.36	6.8
79	6.2	1.0	205	90	3.0	518	157	4					1.34	6.8
80	6.1	1.1	207	88	2.0	564	152	4					1.34	6.9
81	6.3	0.7	213	90	2.0	536	149	4					1.35	7.0
82	6.4	1.0	200	75	2.0	642	146	4					1.34	7.0
83	6.1	1.2	189	96	2.0	650	145	4					1.29	6.9
84	6.2	1.2	191	108	2.0	614	141	4					1.33	6.9
85	5.9	0.8	206	69	2.0	409	113	3					1.41	6.9
86	6.3	0.5	209	72	2.0	531	147	3					1.39	6.9
87	6.5	0.5	210	82	2.0	561	163	4					1.34	7.0
88	6.6	0.7	212	86		511	145	3					1.35	N.R.
89	6.5	0.8	210	87	2.0	522	151	4					1.36	7.1
90	6.4	1.2	207	97	2.0	565	168	4					1.35	7.0
91	6.5	1.0	205	75	2.0	509	158	3					1.36	7.1
92	6.5	0.7	196	67	2.0	534	129	3					1.40	7.0
93	6.4	0.7	196	68	2.0	552	148	4					1.36	6.9
94	6.3	1.2	195	77	3.0	462	133	3					1.34	6.8
95	6.2	1.5	159	79	2.0	561	164	4					1.29	6.9
Adj Avg	6.3	1.0	199	82		574	149	4						

Base Saturation

Est CEC	Ca %	Mg %	K %
4	66.8	28.3	4.9

Test Interpretation for Field PF West, Lab No 274133

Crop Name	Very Low	Low	Optimum	High	Very High	Excessive	Very Low	Low	Optimum	High	Very High	Excessive
Alfalfa, seeding	P						K					

These recommendations are based on University of Wisconsin publication A2809. Data represents the soil sample, not necessarily the entire field.

O-3

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

Soil Test Report - Field: PF East Acres: 169.4

Account: 349
Precision Crop Service
200 E High Street
Plainfield, WI 54966

Report For:
Jim Okray
Okray Family Farms
PO Box 489
Plover, WI 54467
ASCS No 0

Lab #250147
County Portage
Received 8/4/2021
Field PF East

Acres 169.4
Plow Depth 8.0
Soil Name Plainfield
Previous Crop Pea, canning

Nutrient Recommendations (lbs/acre)

Cropping Sequence	Yield Goal (per acre)	Crop Nutrient Need N	P2O5	K2O	Legume N Credit	Apply N	P2O5	K2O
Potato	500	220	30	280	0	220	30	280

The lime required for this rotation to reach pH 6 is 2.8 T/a of 60-69 lime or 2.2 T/a of 80-89 lime.

Laboratory Analysis for Field PF East, Lab No 250147

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
1	5.5	1.1	257	114		400	78	2					1.38	6.9
2	5.5	1.3	284	119	2.6	664	103	4					1.41	6.5
3	5.3	1.3	280	110	2.6	578	96	3					1.46	6.6
4	5.5	1.2	283	98	3.3	629	103	4					1.42	6.4
5	5.4	1.1	246	101	3.0	481	82	3					1.43	6.5
6	5.3	1.1	240	118	2.6	417	80	3					1.42	6.6
7	5.2	0.9	216	105	4.5	349	63	2					1.40	6.4
8	5.2	1.2	216	112	4.5	474	79	3					1.42	6.4
9	5.5	1.1	214	106	2.6	463	80	3					1.47	6.5
10	5.7	1.4	217	121	1.1	594	99	3					1.40	6.6
11	5.4	1.4	207	116	3.0	475	78	3					1.36	6.5
12	5.3	1.4	210	114	4.1	441	72	3					1.41	6.4
13	5.0	1.3	216	123	6.0	454	68	3					1.34	6.3
14	5.4	1.4	195	118	3.7	558	85	3					1.38	6.4
15	5.3	1.2	205	128	3.3	470	81	3					1.43	6.5
16	5.7	1.2	196	98	1.1	533	79	3					1.33	6.6
17	5.1	0.9	230	86	4.8	418	68	2					1.38	6.4
18	5.3	1.0	244	101	2.6	370	63	2					1.38	6.6
19	5.2	0.9	229	96	3.7	429	75	3					1.38	6.5
20	5.5	1.0	238	110	1.8	484	87	3					1.40	6.6
21	5.4	1.0	266	130	3.0	475	86	3					1.47	6.5
22	5.5	1.1	248	149	2.6	475	80	3					1.40	6.5
23	5.5	1.1	235	133	1.8	566	88	3					1.38	6.6
24	6.0	1.0	246	121		576	110	3					1.41	6.8
25	5.8	0.9	240	131		685	114	4					1.38	6.7
26	5.4	0.7	249	130	2.2	621	91	3					1.43	6.6
27	5.8	1.0	246	111		618	96	3					1.50	6.7
28	5.7	1.0	239	99	1.1	528	98	3					1.41	6.6
29	5.6	1.0	238	101	1.4	418	83	3					1.39	6.6
30	5.8	0.9	251	111		465	96	3					1.45	6.8
31	5.4	1.0	228	103	3.0	370	78	2					1.37	6.5
32	5.8	1.1	240	112		487	119	3					1.37	6.6
33	6.0	1.2	198	108		856	137	5					1.44	6.7
34	5.8	1.2	180	110		626	112	4					1.37	6.6
35	5.5	1.7	205	107	3.3	668	104	4					1.35	6.4
36	5.5	1.3	186	105	1.8	457	90	3					1.34	6.6
37	5.8	1.7	173	142		728	131	4					1.37	6.7
38	6.0	1.5	168	117		717	139	4					1.41	6.6
39	6.0	1.2	189	121		780	153	5					1.37	6.7
40	5.9	1.2	213	115		560	132	4					1.39	6.7
41	6.1	1.1	230	118		555	129	3					1.43	6.6
42	6.0	1.0	224	102		487	108	3					1.33	6.8
43	5.8	1.0	232	98		450	104	3					1.44	6.7
44	5.9	1.2	289	99		578	129	3					1.51	6.7
45	5.8	1.1	248	108		628	114	4					1.42	6.5
46	6.0	1.0	249	114		619	121	4					1.44	6.8

These recommendations are based on University of Wisconsin publication A2809. Data represents the soil sample, not necessarily the entire field.

Laboratory Analysis for Field PF East, Lab No 250147

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
47	6.0	1.0	236	96		551	115	3					1.44	6.7
48	5.9	0.8	251	125		458	96	3					1.49	6.7
49	5.9	0.9	250	107		487	107	3					1.41	6.8
50	6.1	0.9	264	127		610	117	3					1.51	6.8
51	6.0	1.0	242	118		507	105	3					1.40	6.7
52	5.9	0.9	245	120		521	106	3					1.42	6.8
53	5.9	1.0	247	91		441	104	3					1.44	6.8
54	5.7	0.7	253	99	0.3	461	99	3					1.57	6.7
55	5.6	0.9	247	94	1.4	384	86	2					1.40	6.6
56	5.7	1.1	199	96	1.1	467	98	3					1.50	6.6
57	5.6	1.2	178	118	2.2	498	98	3					1.39	6.5
58	5.8	1.4	167	127		583	130	4					1.38	6.6
59	5.8	1.6	143	128		574	118	4					1.36	6.6
60	5.6	1.1	173	119	2.2	452	94	3					1.41	6.5
61	5.6	1.4	219	116	2.2	554	107	3					1.35	6.5
62	5.6	1.4	217	113	2.2	573	113	3					1.45	6.5
63	5.6	1.4	209	108	2.2	553	101	3					1.35	6.5
64	5.7	1.2	197	99	0.3	494	114	3					1.39	6.7
65	5.6	1.0	217	103	0.7	406	94	2					1.45	6.7
66	5.5	1.0	250	102	1.8	425	84	3					1.17	6.6
67	5.7	1.1	275	105	1.1	528	107	3					1.38	6.6
68	5.7	1.0	304	111	1.1	553	111	3					1.44	6.6
69	5.7	1.2	314	115	1.8	528	107	3					1.40	6.5
70	5.8	1.0	318	106		523	121	3					1.39	6.7
Adj Avg	5.6	1.1	231	111		526	100	3						

Base Saturation

Est CEC	Ca %	Mg %	K %
3	70.5	21.9	7.6

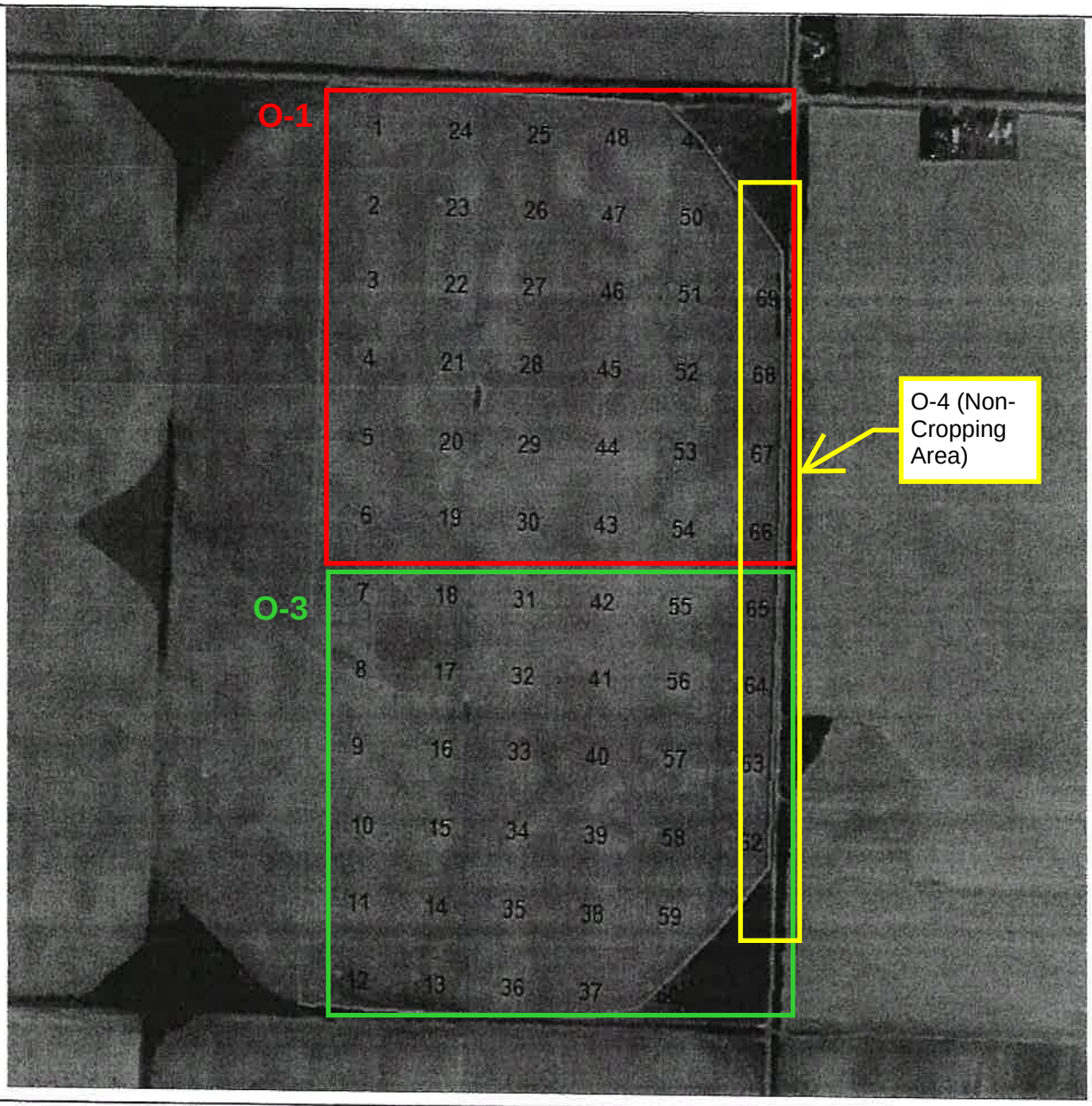
Test Interpretation for Field PF East, Lab No 250147

Crop Name	Very Low	Low	Optimum	High	Very High	Excessive	Very Low	Low	Optimum	High	Very High	Excessive
Potato	P						K					

Additional Information, Secondary & Micronutrient Recommendations

All:If a legume crop preceeds the first crop listed on the sample submission form, N credits should be subtracted from the N recommendation for the first crop listed. See Chapter 9 in UWEX Publication A2809 for more details.
All:If manure, biosolids, septage or other waste materials have been applied to this field, be sure to take nutrient credits and adjust fertilizer rate. See Chapter 9 in UWEX Publication A2809 for more details.
All:Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.
All:Apply lime at a higher rate to the more acid parts of the field.
All:If lime has been applied in the last two years, more lime may not be needed due to incomplete reaction.
All:Parts of this field may not benefit from liming. Please see the lime requirementsfor individual samples.
Potato:Recommended soil pH for scab-susceptible potatoes is 5.2. No lime is recommended for this crop.
All:Nitrogen should be sidedressed or split applied on sandy soils.
Corn:Nitrogen application rates for grain and silage corn reflect the maximum return to N (MRTN) at a 0.10 N:corn price ratio (eg. $0.30/lb N and $3.00/bu; or $0.40/lb N and $4.00/bu) and the range of rates that produce profitability within $1/a of the MRTN rate. N application rates can be adjusted to reflect different prices for N and grain. See Chapter 6 in UWEX Publication A2809 for more details.
Potato:For potato, apply 25-50% of the N at emergence and the remainder at tuberization or apply the remaining nitrogen in multiple split applications.
Potato:Rates for potato include nitrogen in starter fertilizer. Reduce nitrogen rate by 25% if petiole nitrate test is used to guide in-season nitrogen applications.
Corn:Starter fertilizer may accelerate early season corn development, which may not always translate into increased yield. Corn will benefit more from a complete starter fertilizer (e.g. 10+20+20 lbs N+P2O5+K2O/a) when grown on soils testing optimum or less in P and K.
Sweet corn or beans:Retest fields used for these high value crops every 2 years.
Corn, grain:If corn is harvested for silage instead of grain apply extra 90 lbs K2O per acre to next crop.
All:Ca test average value of 525.784 is in Optimum category.
All:Mg test average value of 99.877 is in Optimum category.

Soil Test Points



Grower: Jim Okray
Farm: Okray Family Farms
Field: PF East
Area: 169.42 ac
Lat: 44.43721°N
Lon: 089.59324°W
Event Date(s): 7/27/2021

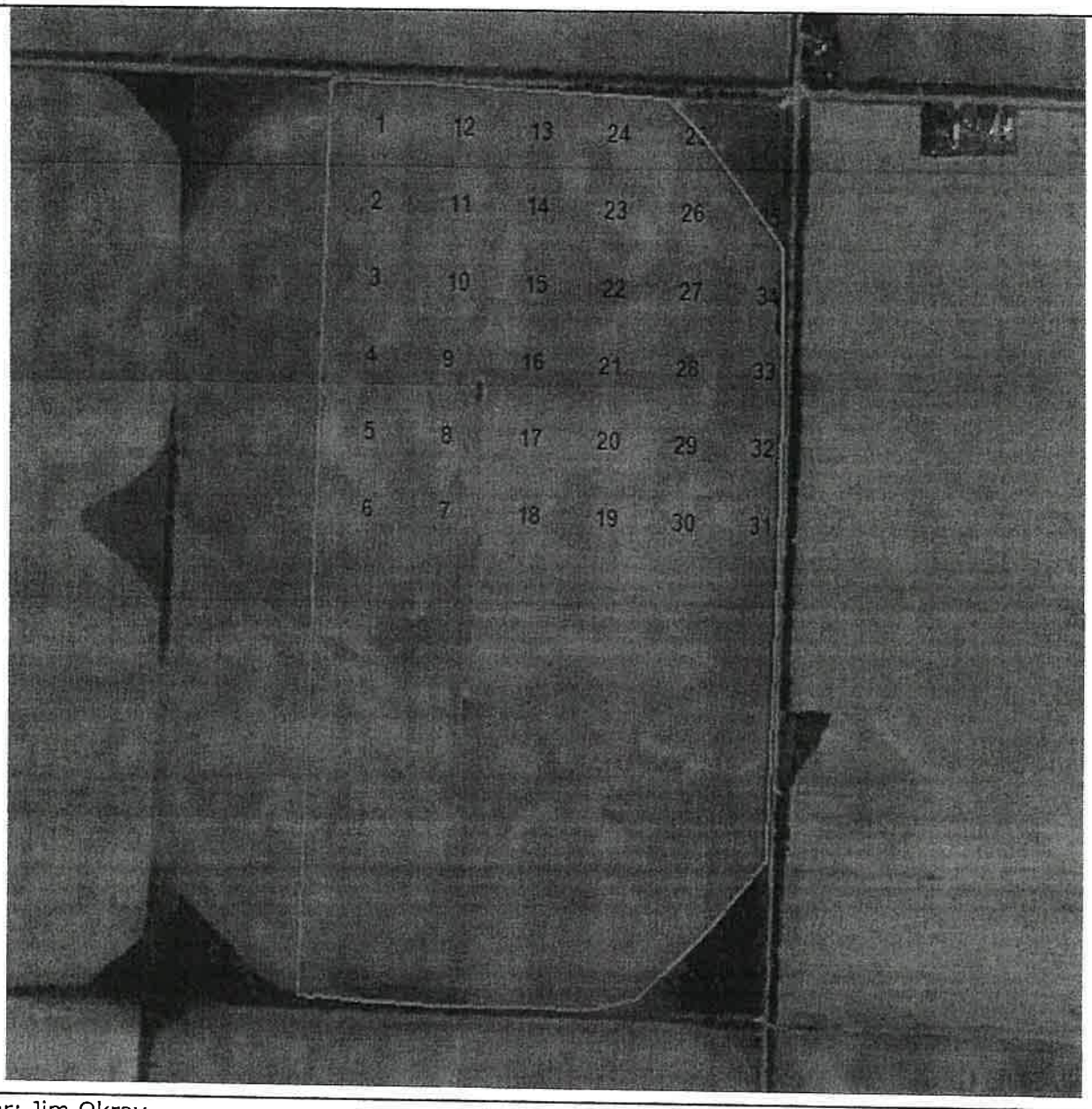
One in = 705 feet

0 319 638 957 1276 1595

Field Boundary
Soil Test Points

O-1

Soil Test Points



Grower: Jim Okray
Farm: Okray Family Farms
Field: PF East
Area: 169.42 ac
Lat: 44.43721°N
Lon: 089.59324°W
Event Date(s): 8/14/2023

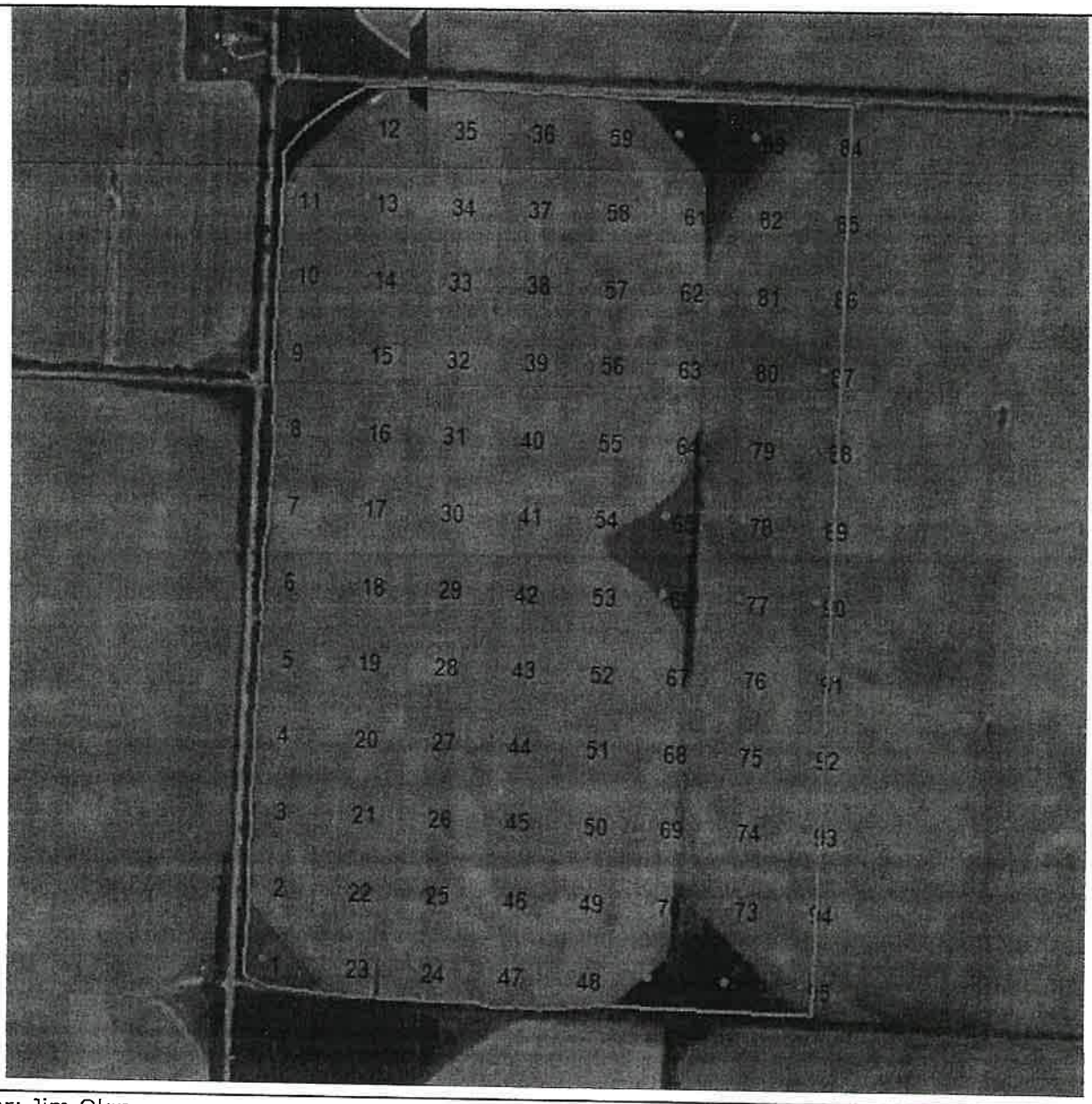
One in = 705 feet

0 319 638 957 1276 1595

Field Boundary
Soil Test Points

O-2

Soil Test Points



Grower: Jim Okray
Farm: Okray Family Farms
Field: PF West
Area: 218.37 ac
Lat: 44.43720°N
Lon: 089.60181°W
Event Date(s): 8/14/2023

One in = 711 feet

0 321 642 964 1285 1606

Field Boundary
Soil Test Points

W-1

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

Soil Test Report - Field: Allied West Acres: 49.5

Account: 579
Insight FS
16119 Hwy 81 West
Darlington, WI 53530

Report For:
Worzella & Sons
Prairie Star Farm

Lab #251461
County
Received 9/29/2021
Field Allied West

Acres 49.5
Plow Depth 7.0
Soil Name
Previous Crop

Nutrient Recommendations (lbs/acre)

Cropping Sequence	Yield Goal (per acre)	Crop Nutrient Need N	P2O5	K2O	Legume N Credit	Apply N	P2O5	K2O
Corn, grain	170	125	0	75	0	125	0	75
Soybean, grain	60	0	0	115	0	0	0	115
Alfalfa, seeding	3.5	30	0	220	0	30	0	220
Alfalfa, established	6	0	0	400	0	0	0	400

The lime required for this rotation to reach pH 6.8 is 9 T/a of 60-69 lime or 7 T/a of 80-89 lime.

Laboratory Analysis for Field Allied West, Lab No 251461

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
1	5.4	1.5	171	124	3.0	331	56	2					1.18	6.8
2	5.5	0.3	226	111	11.0	339	55	2					1.43	6.5
3	5.2	0.5	144	102	12.0	311	52	2					1.40	6.4
4	4.9	0.6	146	84	12.0	197	34	1					1.50	6.2
5	5.3	0.6	155	103	11.0	390	64	2					1.51	6.5
6	5.4	0.5	167	114	5.0	336	57	2					1.18	6.7
7	5.4	0.6	169	96	5.0	288	47	2					1.18	6.7
8	5.9	0.5	153	111	8.0	393	69	2					1.44	6.6
9	5.0	0.6	140	91	12.0	244	44	2					1.40	6.3
10	4.7	0.6	170	76	12.0	172	32	1					1.42	6.0
11	5.1	2.5	180	102	12.0	320	56	2					1.45	6.3
12	5.2	0.7	136	83	8.0	274	47	2					1.43	6.6
13	5.6	0.6	132	92	3.0	313	56	2					1.41	6.8
14	5.4	0.3	126	74	12.0	270	46	2					1.48	6.1
15	5.7	0.5	130	102	6.0	329	56	2					1.40	6.7
16	5.8	0.6	133	94	6.0	385	63	2					1.47	6.7
17	5.4	0.6	145	110	11.0	379	64	2					1.47	6.5
18	5.5	0.6	156	123	12.0	432	74	3					1.44	6.4
19	5.9	0.2	166	109	3.0	454	66	3					1.44	6.8
20	5.9	0.3	151	99	6.0	353	59	2					1.45	6.7
21	5.3	25.9	152	108	12.0	280	45	2					1.40	6.4
Adj Avg	5.4	1.8	155	98		323	54	2						

Base Saturation

Est CEC	Ca %	Mg %	K %
2	69.9	19.3	10.8

Test Interpretation for Field Allied West, Lab No 251461

Crop Name	Very Low	Low	Optimum	High	Very High	Excessive	Very Low	Low	Optimum	High	Very High	Excessive
Alfalfa, seeding	P						K					

LABORATORY, INC.
AGRICULTURAL ANALYSIS

Insight FS
3895 Crop Care Court
Amherst JCT, WI 54407

WORZELLA & SONS
Prairie Star

Lab #262484
County Portage
Received 9/21/2022
Field Allied East

W-2

Acres 59.9
Plow Depth 6.0
Soil Name
Previous Crop

Nutrient Recommendations (lbs/acre)

Cropping Sequence	Yield Goal (per acre)	Crop Nutrient Need N	P2O5	K2O	Legume N Credit	Apply N	P2O5	K2O
Corn, grain	170	125	0	45	0	125	0	45
Soybean, grain	60	0	0	85	0	0	0	85
Alfalfa, seeding	3.5	30	0	180	0	30	0	180
Alfalfa, established	6	0	0	360	0	0	0	360

The lime required for this rotation to reach pH 6.8 is 10 T/a of 60-69 lime or 7.5 T/a of 80-89 lime.

Laboratory Analysis for Field Allied East, Lab No 262484

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
1	5.2	1.1	185	103	12.0	334	68	2	0.4	16	7.9	5.3	1.45	6.3
2	6.0	0.5	198	113	6.0	465	89	3	0.4	18	17.9	2.8	1.38	6.7
3	5.6	1.0	154	144	8.0	332	69	2	0.4	19	8.2	2.4	1.39	6.6
4	5.6	0.5	138	110	2.0	337	66	2	0.4	18	7.3	2.4	1.41	6.9
5	5.9	0.5	162	105	11.0	412	83	3	0.4	19	7.5	2.3	1.35	6.5
6	5.1	0.8	142	101	12.0	307	59	2	0.4	20	7.1	4.1	1.39	5.9
7	5.8	0.8	152	143	12.0	387	84	2	0.4	18	7.6	2.8	1.40	6.4
8	5.8	0.8	143	110	12.0	297	59	2	0.3	15	4.9	3.1	1.40	6.3
9	5.9	0.9	144	115	8.0	334	81	2	0.3	15	4.9	3.1	1.33	6.6
10	5.7	0.5	162	115	12.0	321	61	2	0.4	16	6.7	3.2	1.34	6.4
11	6.0	0.2	154	149	6.0	379	74	3	0.4	18	7.2	2.3	1.34	6.7
12	5.4	1.3	169	115	11.0	346	59	2	0.4	18	7.4	3.2	1.33	6.5
13	6.0	0.8	170	114	3.0	406	68	3	0.4	18	8.0	1.7	1.35	6.8
14	5.9	0.5	169	106	6.0	371	83	2	0.4	16	6.9	3.0	1.35	6.7
15	5.4	1.0	197	103	8.0	347	74	2	0.4	16	6.4	4.0	1.34	6.6
16	5.7	0.9	179	149	11.0	354	75	3	0.4	19	7.3	3.9	1.28	6.5
17	5.8	1.8	182	104	11.0	386	84	3	0.4	18	6.9	3.1	1.33	6.5
18	5.6	0.7	183	129	12.0	429	81	3	0.4	20	9.4	2.8	1.33	6.3
19	5.9	1.0	206	146	11.0	439	75	3	0.4	20	8.7	3.2	1.34	6.5
20	5.6	1.1	190	166	12.0	444	83	3	0.4	20	9.0	2.9	1.39	6.4
21	5.6	0.5	186	94	12.0	344	69	2	0.4	18	6.8	2.9	1.39	6.3
22	5.9	0.4	187	115	2.0	420	79	3	0.4	18	8.9	2.9	1.37	6.9
23	6.0	1.0	177	150	3.0	397	76	3	0.4	19	6.8	2.3	1.32	6.8
24	5.6	0.8	180	133	6.0	447	79	3	0.4	19	9.1	3.8	1.37	6.7
25	5.6	1.0	197	126	12.0	390	67	2	0.4	18	7.7	3.7	1.38	6.4
26	5.3	1.3	182	123	12.0	328	60	2	0.4	19	9.9	3.5	1.34	6.4
Avg	5.7	0.8	173	119		375	73	2	0.4	18	7.9	3.1		

Recommendations are based on University of Wisconsin publication A2809. Data represents the soil sample, not necessarily the entire field.

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

W-3

SOIL TEST REPORT

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

Results also available on-line at http://not available
lab number: 2293 access code: pyng2

LAB #: 2293

County	Account No.
Portage	556265

Date Received	Date Processed
6/9/2025	6/30/2025

Village of Plover Wastewater Utility -
PO Box 37
Plover, WI 54467

This Report is for:
Logan Elsholtz
4496 Coolidge Ave
Plover, WI 54467

Slope	Acres	Plow Depth	Irrigated
0-3%	40	7"	No

Soil Name: Meehan — Tiled: No
sandy soil/sandy yield potential
Field Name: W-3
Previous Crop: no crop

NUTRIENT RECOMMENDATIONS

Cropping Sequence	Yield Goal	Crop Nutrient Need N	Crop Nutrient Need P2O5	Crop Nutrient Need K2O	Legume N	Fertilzer Credit Manure N	Fertilzer Credit P2O5	Fertilzer Credit K2O	Nutrients to Apply N	Nutrients to Apply P2O5	Nutrients to Apply K2O
	per acre	lbs/a			lbs/a	lbs/a			lbs/a		
CRP, grass	n/a	0	0	0	0	0	0	0	0	0	0
(no crop)	n/a										
(no crop)	n/a										
(no crop)	n/a										

There is no lime recommendation.

ADDITIONAL INFORMATION

Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.

Because of the low potassium buffering capacity of this soil, retest every 2 years.

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

The nitrogen recommendation should be applied in sidedressed or split application on sandy soils.

For CRP crops in the seeding year only, apply some nitrogen (15–30 lb N/a). See table 6.3 in publication A2809 for specific rates.

SOIL TEST INTERPRETATION FOR CROPPING SEQUENCE

	Very Low	Low	Optimum	High	Very High	Excessive
Phosphorus	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP		PPPPPPPPPPPPPPPPPP	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP		
Potassium	KKKKKKKKKKKKKKKKKKKKKKKKKKKKKKK		KKKKKKKKKKKKKKKKKK	KKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKK		
Rotation pH	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		XXXXXXXXXX			

LABORATORY ANALYSIS

Sample Identification	Soil pH	O.M %	Phosphorus ppm	Potassium ppm	60-69 Lime Req (T/a)	Calcium ppm	Magnesium ppm	Est. CEC (cmol/kg)	Boron ppm	Manganese ppm	Zinc ppm	Sulfate-Sulfur ppm		Texture Code	Sample Density	Buffer pH
9	5.8	1.2	237	140	0									1	1.25	6.8
10	5.4	1.4	219	126	0									1	1.25	6.8
11	5.7	1.1	267	127	0									1	1.35	6.9
12	5.9	1.4	263	159	0									1	1.33	7.0
13	5.8	1.1	318	153	0									1	1.33	6.9
14	5.8	1.6	309	148	0									1	1.26	6.7
15	6.0	1.1	323	155	0									1	1.30	6.9
16	5.6	1.3	305	145	0									1	1.29	6.7
Adjusted Averages	5.8	1.3	280	144												

Soil Test Report - Field: Connie East Acres: 35.2

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

Account: 146
Insight FS
3895 Crop Care Court
Amherst JCT, WI 54407

Report For:
WORZELLA & SONS
Prairie Star

#275771
County Portage
Received 10/17/2023
Field Connie East

W-4

Acres 35.2
Plow Depth 7.0
Soil Name
Previous Crop

Nutrient Recommendations (lbs/acre)

Cropping Sequence	Yield Goal (per acre)	Crop Nutrient Need N	P2O5	K2O	Legume N Credit	Apply N	P2O5	K2O
Corn, grain	170	125	0	90	0	125	0	90
Soybean, grain	60	0	0	130	0	0	0	130
Alfalfa, seeding	3.5	30	0	235	0	30	0	235
Alfalfa, established	6	0	0	415	0	0	0	415

The lime required for this rotation to reach pH 6.8 is 11 T/a of 60-69 lime or 8.5 T/a of 80-89 lime.

Laboratory Analysis for Field Connie East, Lab No 275771

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
1	5.2	1.7	228	74	11.0	239	44	2	0.4	10	5.9	6.0	1.29	6.5
2	5.5	1.8	230	95	12.0	292	61	2	0.4	9	6.7	6.3	1.32	6.4
3	5.2	1.7	179	97	12.0	295	49	2	0.4	9	6.6	21.1	1.30	6.4
4	4.8	1.1	225	67	12.0	168	42	1	0.4	6	3.7	7.0	1.41	6.4
5	5.1	1.1	221	59	8.0	199	41	1	0.4	7	5.8	6.0	1.43	6.6
6	5.1	1.1	286	54	8.0	189	42	1	0.4	8	5.5	3.9	1.44	6.6
7	5.0	1.0	281	61	11.0	191	46	1	0.4	10	5.5	8.8	1.42	6.5
8	5.1	1.8	271	79	12.0	275	57	2	0.5	10	9.5	7.4	1.23	6.1
9	5.0	1.3	200	65	8.0	161	34	1	0.4	6	4.0	7.8	1.37	6.6
10	5.0	1.1	155	73	12.0	265	56	2	0.4	9	5.7	5.6	1.39	6.4
11	5.1	0.9	201	67	12.0	209	42	1	0.4	8	5.6	6.0	1.43	6.4
12	5.0	0.9	181	37	8.0	165	34	1	0.4	8	5.3	3.5	1.46	6.6
13	5.2	1.4	200	77	12.0	263	61	2	0.5	7	4.7	5.4	1.37	6.4
14	5.0	1.2	175	87	12.0	208	36	1	0.4	7	4.2	9.0	1.34	6.0
15	5.1	1.1	170	107	11.0	234	53	2	0.4	7	6.2	10.7	1.36	6.5
Adj Avg	5.1	1.3	214	69		224	46	1	0.4	8	5.7	7.6		

Sample Num	Cu ppm	Fe ppm	Al ppm	Salt mmhos /cm	Na ppm	NO3 ppm	NH4 ppm	Olsen P ppm
1	1.00	151.75		0.08				
2	1.00	239.96		0.13				
3	0.94	191.68		0.12				
4	0.86	207.43		0.06				
5	0.56	177.65		0.06				
6	1.17	161.03		0.05				
7	1.63	201.57		0.06				
8	1.57	266.04		0.09				
9	0.47	164.36		0.06				
10	1.54	196.09		0.07				
11	0.96	168.71		0.07				
12	0.87	167.44		0.02				
13	1.05	236.74		0.09				
14	1.07	202.26		0.09				
15	1.30	198.45		0.13				

Base Saturation

Est CEC	Ca %	Mg %	K %
1	66.7	22.7	10.5

Test Interpretation for Field Connie East, Lab No 275771

Name	Very Low	Low	Optimum	High	Very High	Excessive	Very Low	Low	Optimum	High	Very High	Excessive
.alfa, seeding	P						K					

These recommendations are based on University of Wisconsin publication A2809. Data represents the soil sample, not necessarily the entire field.

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

Account: 146
Insight FS
3895 Crop Care Court
Amherst JCT, WI 54407

Report For:
WORZELLA & SONS
Prairie Star

Lab #275771
County Portage
Received 10/17/2023
Field ~~Connie West~~ **Chet's West**

W-5

Acres 68.6
Plow Depth 7.0
Soil Name
Previous Crop

Cropping Sequence

Nutrient Recommendations (lbs/acre)

Cropping Sequence	Yield Goal (per acre)	Crop Nutrient Need N	P2O5	K2O	Legume N Credit	Apply N	P2O5	K2O
Corn, grain	170	125	0	90	0	125	0	90
Soybean, grain	60	0	0	130	0	0	0	130
Alfalfa, seeding	3.5	30	0	235	0	30	0	235
Alfalfa, established	6	0	0	415	0	0	0	415

The lime required for this rotation to reach pH 6.8 is 7 T/a of 60-69 lime or 5 T/a of 80-89 lime.

Laboratory Analysis for Field Connie West, Lab No 275771

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
1	5.9	1.7	110	98	3.0	489	79	3	0.4	13	7.8	5.4	1.42	6.8
2	5.9	0.8	112	75	2.0	412	76	2	0.4	11	7.8	6.2	1.41	7.0
3	5.6	1.1	84	68	3.0	389	65	2	0.4	18	8.0	3.1	1.40	6.8
4	5.6	1.2	125	77	3.0	394	82	2	0.4	13	8.9	4.0	1.35	6.8
5	5.8	1.5	101	75	8.0	413	79	3	0.4	8	7.6	6.8	1.35	6.6
6	5.8	1.3	139	64	2.0	378	72	2	0.4	14	7.6	7.7	1.40	6.9
7	5.7	1.3	109	103	6.0	389	59	2	0.4	17	8.6	4.7	1.37	6.7
8	5.6	1.1	110	99	6.0	380	79	2	0.4	17	9.2	5.2	1.39	6.7
9	5.3	1.6	181	79	12.0	390	86	2	0.4	15	10.5	11.8	1.36	6.4
10	5.3	1.5	148	62	11.0	289	59	2	0.4	14	6.6	6.1	1.34	6.5
11	5.3	1.7	120	65	12.0	296	62	2	0.4	16	7.1	6.5	1.32	6.2
12	5.0	1.0	108	86	12.0	311	54	2	0.4	19	7.9	7.1	1.34	6.4
13	5.3	1.7	146	74	5.0	395	59	2	0.4	14	9.1	6.3	1.31	6.7
14	5.7	1.1	143	76	6.0	412	58	2	0.4	8	7.1	4.7	1.36	6.7
15	5.8	1.5	108	82	6.0	387	68	2	0.4	8	7.0	3.9	1.34	6.7
16	5.7	1.7	200	83	8.0	530	91	3	0.4	12	9.6	7.6	1.26	6.6
17	5.7	1.3	94	82	6.0	352	58	2	0.4	9	6.7	5.0	1.35	6.7
18	5.4	1.6	102	108	3.0	384	76	2	0.4	14	7.4	6.1	1.35	6.8
19	5.7	1.1	153	39	3.0	338	61	2	0.4	8	5.2	8.4	1.44	6.8
20	5.6	1.7	165	64	8.0	470	90	3	0.4	9	6.0	8.5	1.42	6.6
21	5.6	1.3	212	93	6.0	441	81	3	0.4	15	9.6	4.8	1.34	6.7
22	5.5	1.3	238	119	11.0	375	78	2	0.5	16	8.4	7.0	1.36	6.5
23	5.1	0.8	222	82	11.0	362	70	2	0.4	17	9.4	10.5	1.38	6.5
24	5.1	1.3	234	96	8.0	354	59	2	0.4	15	9.4	6.6	1.38	6.6
25	5.8	1.3	171	97	6.0	478	74	3	0.4	15	7.7	4.0	1.36	6.7
26	5.5	1.6	251	95	6.0	718	115	4	0.5	17	14.6	8.2	1.37	6.7
27	5.7	1.4	260	86	3.0	521	94	3	0.5	16	11.3	3.8	1.28	6.8
28	5.5	1.2	192	83	3.0	385	79	2	0.4	17	9.3	6.1	1.33	6.8
29	5.4	1.5	219	113	5.0	478	82	3	0.4	13	11.8	6.0	1.36	6.7
30	5.6	1.0	175	72	2.0	369	68	2	0.4	9	8.6	3.8	1.42	7.0
Adj Avg	5.6	1.3	158	81		409	74	2	0.4	14	8.5	6.2		

These recommendations are based on University of Wisconsin publication A2809. Data represents the soil sample, not necessarily the entire field.

Chet's West

Laboratory Analysis for Field ~~Connie West~~, Lab No 275771

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code

Sample Num	Cu ppm	Fe ppm	Al ppm	Salt mmhos /cm	Na ppm	NO3 ppm	NH4 ppm	Olsen P ppm
1	1.65	168.63		0.15				
2	1.05	166.30		0.12				
3	1.90	139.23		0.09				
4	1.57	166.28		0.11				
5	1.39	179.55		0.11				
6	1.27	152.04		0.09				
7	1.36	175.32		0.15				
8	2.17	181.06		0.14				
9	2.71	210.97		0.10				
10	1.58	178.89		0.07				
11	1.89	205.82		0.08				
12	1.85	204.15		0.09				
13	1.33	221.14		0.09				
14	0.92	160.35		0.11				
15	1.05	148.08		0.12				
16	1.58	139.47		0.12				
17	1.26	139.83		0.12				
18	1.84	164.50		0.14				
19	1.12	157.95		0.05				
20	1.18	208.25		0.09				
21	1.71	194.91		0.13				
22	1.99	235.88		0.17				
23	2.08	222.68		0.09				
24	1.99	202.83		0.11				
25	2.33	194.92		0.14				
26	2.64	254.61		0.13				
27	2.27	244.69		0.12				
28	1.60	210.90		0.11				
29	1.49	185.00		0.15				
)	1.87	151.16		0.10				

Base Saturation

Est CEC	Ca %	Mg %	K %
2	71.6	21.2	7.2

Test Interpretation for Field Connie West, Lab No 275771

Crop Name	Very Low	Low	Optimum	High	Very High	Excessive	Very Low	Low	Optimum	High	Very High	Excessive
Alfalfa, seeding	P						K					

These recommendations are based on University of Wisconsin publication A2809. Data represents the soil sample, not necessarily the entire field.

W-6

Soil Test Report - Field: Terry West Acres: 115.1

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

Account: 579
Insight FS
16119 Hwy 81 West
Darlington, WI 53530

Report For:
Worzella & Sons
Prairie Star Farm

Lab #251461
County
Received 9/29/2021
Field Terry West ✓

Acres 115.1
Plow Depth 7.0
Soil Name
Previous Crop

Nutrient Recommendations (lbs/acre)

Cropping Sequence	Yield Goal (per acre)	Crop Nutrient Need N	P2O5	K2O	Legume N Credit	Apply N	P2O5	K2O
Corn, grain	170	125	0	45	0	125	0	45
Soybean, grain	60	0	0	85	0	0	0	85
Alfalfa, seeding	3.5	30	0	180	0	30	0	180
Alfalfa, established	6	0	0	360	0	0	0	360

The lime required for this rotation to reach pH 6.8 is 8 T/a of 60-69 lime or 6 T/a of 80-89 lime.

Laboratory Analysis for Field Terry West, Lab No 251461

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
1	5.7	3.3	157	165	6.0	1052	186	7					1.19	6.7
2	5.6	0.5	105	88	2.0	236	58	2					1.44	7.2
3	5.3	1.1	130	92	3.0	356	67	2					1.42	6.8
4	5.8	1.5	111	131	6.0	514	122	3					1.42	6.7
5	5.5	1.5	175	111	11.0	397	81	3					1.38	6.5
6	5.3	5.4	232	169	12.0	785	136	6					1.07	5.8
7	5.4	1.1	161	93	8.0	357	72	2					1.41	6.6
8	5.3	0.8	152	93	3.0	274	63	2					1.36	6.8
9	5.3	1.7	202	117	12.0	443	80	3					1.38	6.3
10	5.3	1.0	167	114	2.0	389	83	2					1.46	6.9
11	5.6	1.6	174	123	11.0	486	98	3					1.37	6.5
12	5.7	2.1	248	156	11.0	751	136	5					1.30	6.5
13	5.8	1.6	191	145	8.0	678	109	4					1.39	6.6
14	5.5	1.4	128	124	11.0	364	80	2					1.33	6.5
15	5.6	1.4	156	144	2.0	456	90	3					1.35	7.1
16	5.5	2.2	171	169	12.0	576	128	4					1.29	6.2
17	5.9	0.9	170	133	6.0	376	85	2					1.40	6.7
18	5.9	2.0	129	188	6.0	615	140	4					1.28	6.7
19	5.8	1.5	204	166	11.0	467	102	3					1.31	6.5
20	5.5	1.1	173	131	12.0	403	73	3					1.30	6.4
21	5.6	1.2	162	132	11.0	444	85	3					1.41	6.5
22	5.6	1.2	184	122	11.0	362	73	2					1.43	6.5
23	6.0	1.0	173	97	3.0	470	87	3					1.39	6.8
24	5.7	1.3	179	133	6.0	454	97	3					1.37	6.7
25	5.8	1.1	186	132	8.0	370	80	2					1.39	6.6
26	5.7	0.9	142	102	8.0	332	69	2					1.31	6.6
27	5.8	1.3	159	158	8.0	535	98	4					1.30	6.6
28	5.7	1.2	180	138	11.0	479	94	3					1.39	6.5
29	5.9	1.0	109	123	3.0	406	98	3					1.37	6.8
30	6.1	1.0	173	120	2.0	510	117	3					1.33	6.9
31	6.1	1.0	143	135	3.0	452	97	3					1.43	6.8
32	6.1	0.7	140	100	2.0	435	86	3					1.36	7.0
33	5.7	1.2	188	138	12.0	446	97	3					1.33	6.4
34	5.9	0.8	176	150	2.0	482	105	3					1.48	6.9
35	5.7	1.3	237	143	11.0	416	88	3					1.36	6.5
36	6.0	1.6	190	132	6.0	667	116	4					1.37	6.7
37	5.8	1.3	147	138	8.0	429	90	3					1.33	6.6
38	5.6	1.5	88	138	12.0	411	84	3					1.38	6.4
39	5.7	0.8	136	119	3.0	399	90	2					1.53	6.8
40	5.4	1.2	66	117	8.0	280	66	2					1.41	6.6
41	5.5	1.3	154	112	6.0	363	78	2					1.35	6.7
42	5.9	1.5	84	105	8.0	467	89	3					1.40	6.6
43	5.8	1.4	155	138	12.0	493	90	3					1.32	6.4
44	6.0	1.1	152	113	6.0	464	108	3					1.48	6.7
45	5.6	1.1	125	112	6.0	404	84	2					1.46	6.7
46	5.8	2.0	208	160	11.0	556	134	4					1.26	6.5

These recommendations are based on University of Wisconsin publication A2809. Data represents the soil sample, not necessarily the entire field.

W-7

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

Soil Test Report - Field: Terry East Acres: 162.2

Account: 579
Insight FS
16119 Hwy 81 West
Darlington, WI 53530

Report For:
Worzella & Sons
Prairie Star Farm

Lab #237627
County Lafayette
Received 9/15/2020
Field Terry East

Acres 162.2
Plow Depth 6.0
Soil Name
Previous Crop

Nutrient Recommendations (lbs/acre)

Cropping Sequence	Yield Goal (per acre)	Crop Nutrient Need N	P2O5	K2O	Legume N Credit	Apply N	P2O5	K2O
Corn, grain	170	125	0	45	0	125	0	45
Soybean, grain	60	0	0	85	0	0	0	85
Alfalfa, seeding	3.5	0	0	180	0	0	0	180
Alfalfa, established	6	0	0	360	0	0	0	360

The lime required for this rotation to reach pH 6.8 is 10 T/a of 60-69 lime or 8 T/a of 80-89 lime.

Laboratory Analysis for Field Terry East, Lab No 237627

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
1	5.4	1.0	108	86	11.0	698	112	4					1.38	6.5
2	5.3	0.7	182	91	11.0	401	80	3					1.32	6.5
3	5.4	1.0	224	84	11.0	361	64	2					1.43	6.5
4	5.9	1.0	203	97	3.0	375	70	2					1.41	6.8
5	5.6	1.1	296	131	8.0	482	72	3					1.43	6.6
6	5.2	0.8	226	109	12.0	375	58	2					1.44	6.4
7	5.4	1.4	237	119	11.0	611	104	4					1.32	6.5
8	5.7	0.8	180	80	6.0	402	70	2					1.36	6.7
9	5.3	1.2	188	128	11.0	452	71	3					1.42	6.5
10	4.9	2.0	226	119	12.0	535	73	4					1.20	6.2
11	5.2	1.0	126	70	12.0	348	58	2					1.28	6.4
12	5.1	1.2	156	109	12.0	480	77	3					1.41	6.4
13	5.6	2.1	146	126	8.0	900	133	5					1.27	6.6
14	5.2	1.6	119	92	12.0	634	88	4					1.34	6.4
15	5.2	2.5	172	132	12.0	811	113	5					1.28	6.4
16	5.3	1.3	139	87	11.0	519	80	3					1.44	6.5
17	5.1	2.0	212	110	12.0	523	78	3					1.39	6.3
18	5.1	1.4	174	104	12.0	523	87	3					1.34	6.4
19	5.7	1.3	100	82	6.0	479	88	3					1.40	6.7
20	5.2	0.9	247	89	12.0	362	57	2					1.41	6.4
21	5.5	1.3	272	108	8.0	494	77	3					1.42	6.6
22	5.5	0.9	218	87	8.0	320	60	2					1.46	6.6
23	5.5	0.9	147	89	8.0	378	69	2					1.31	6.6
24	5.3	1.6	195	152	11.0	555	95	4					1.28	6.5
25	5.1	0.8	141	89	12.0	400	71	2					1.34	6.4
26	5.5	1.4	151	127	8.0	748	104	4					1.33	6.6
27	5.0	5.9	128	213	12.0	1419	173	9					1.23	6.1
28	5.6	3.7	126	139	11.0	1401	206	10					1.10	6.5
29	5.7	4.3	101	187	11.0	1531	225	11					1.09	6.5
30	5.3	3.0	110	172	12.0	1209	165	7					1.27	6.4
31	5.9	1.7	111	140	6.0	871	152	5					1.31	6.7
32	5.3	1.0	160	115	11.0	441	68	2					1.46	6.5
33	5.5	1.5	234	123	8.0	683	96	4					1.39	6.6
34	5.2	1.3	274	144	12.0	569	83	3					1.40	6.4
35	5.7	0.9	231	89	6.0	430	72	2					1.44	6.7
36	5.3	1.4	307	102	11.0	486	80	3					1.40	6.5
37	5.6	1.2	139	101	8.0	508	90	3					1.34	6.6
38	5.2	2.6	272	149	12.0	780	107	4					1.37	6.4
39	5.5	1.6	179	147	11.0	730	104	4					1.40	6.5
40	5.7	1.4	130	128	3.0	655	103	4					1.33	6.8
41	5.2	1.6	144	77	8.0	540	83	3					1.37	6.6
42	5.7	3.8	105	105	11.0	1266	184	8					1.16	6.5
43	5.7	3.7	128	125	8.0	1128	140	7					1.21	6.6
44	5.4	6.0	136	228	12.0	1906	254	12					1.20	6.1
45	5.3	3.1	99	107	12.0	1019	139	6					1.22	6.2
46	5.4	4.5	117	143	12.0	1365	164	9					1.13	6.2

These recommendations are based on University of Wisconsin publication A2809. Data represents the soil sample, not necessarily the entire field.

Soil Test Report - Field: Gregs Pit Acres: 88.1

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

Account: 146
Insight FS
3895 Crop Care Court
Amherst JCT, WI 54407

Report For:
WORZELLA & SONS
Prairie Star

#275772
County Portage
Received 10/17/2023
Field Gregs Pit ✓

W-8

Acres 88.1
Plow Depth 7.0
Soil Name
Previous Crop

Nutrient Recommendations (lbs/acre)

Cropping Sequence	Yield Goal (per acre)	Crop Nutrient Need N	P2O5	K2O	Legume N Credit	Apply N	P2O5	K2O
Corn, grain	170	125	0	75	0	125	0	75
Soybean, grain	60	0	0	115	0	0	0	115
Alfalfa, seeding	3.5	30	0	220	0	30	0	220
Alfalfa, established	6	0	0	400	0	0	0	400

The lime required for this rotation to reach pH 6.8 is 6 T/a of 60-69 lime or 4.5 T/a of 80-89 lime.

Laboratory Analysis for Field Gregs Pit, Lab No 275772

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code
1	5.6	1.1	171	57	3.0	310	59	2	0.4	6	6.4	3.6	1.37	6.8
2	5.6	1.2	214	109	11.0	383	58	2	0.4	7	8.2	4.1	1.43	6.5
3	5.8	1.0	245	129	2.0	388	58	2	0.4	9	10.1	4.3	1.42	6.9
4	5.6	2.7	251	93	8.0	373	59	2	0.4	8	9.0	5.0	1.36	6.6
5	5.6	0.8	172	70	3.0	304	56	2	0.4	8	9.0	2.1	1.42	6.8
6	5.8	0.9	204	70	3.0	322	53	2	0.4	5	6.3	2.6	1.46	6.8
7	5.7	1.0	178	76	3.0	323	68	2	0.4	6	6.4	2.8	1.39	6.8
8	5.5	2.1	164	98	8.0	611	115	4	0.5	6	10.1	5.1	1.34	6.6
9	5.8	1.7	208	107	3.0	546	94	3	0.5	6	9.0	3.4	1.32	6.8
10	6.1	0.9	232	81	2.0	433	85	3	0.4	8	8.5	3.3	1.32	6.9
11	5.5	1.6	248	111	11.0	433	69	3	0.5	6	10.0	3.0	1.33	6.5
12	5.4	1.4	225	91	8.0	364	63	2	0.5	7	8.1	3.6	1.38	6.6
13	5.5	1.3	230	85	8.0	350	65	2	0.4	7	8.0	6.0	1.40	6.6
14	5.5	1.4	262	67	8.0	435	73	2	0.5	7	9.9	3.6	1.41	6.6
15	5.7	2.2	158	89	3.0	518	102	3	0.4	8	7.2	5.6	1.29	6.8
16	5.5	1.7	251	238	11.0	808	122	5	0.5	8	14.5	8.2	1.28	6.5
17	5.5	1.0	284	87	8.0	398	54	2	0.4	8	10.9	5.5	1.41	6.6
18	5.8	1.2	267	97	3.0	384	62	2	0.4	6	8.9	3.7	1.42	6.8
19	5.5	1.4	281	87	6.0	407	68	2	0.5	8	9.2	7.6	1.38	6.7
20	5.7	1.1	234	95	3.0	449	82	3	0.4	10	10.4	5.9	1.39	6.8
21	5.8	1.0	230	93	2.0	408	64	2	0.4	9	10.3	2.7	1.35	6.9
22	5.5	1.2	232	102	8.0	351	59	2	0.4	6	8.4	6.6	1.33	6.6
23	6.2	1.5	239	156	2.0	644	108	4	0.5	7	5.8	3.6	1.33	6.9
24	5.8	1.1	228	93	6.0	648	103	4	0.4	7	5.8	3.5	1.38	6.7
25	5.6	1.5	283	140	11.0	502	75	3	0.5	7	8.5	4.2	1.33	6.5
26	5.9	1.2	273	113	8.0	447	67	3	0.4	7	7.6	3.9	1.36	6.6
27	6.5	1.6	133	90	2.0	753	114	4	0.4	6	6.2	4.7	1.35	6.9
28	5.8	2.0	150	112	2.0	766	107	5	0.5	8	10.2	5.1	1.25	6.9
29	5.9	1.9	113	111	2.0	728	105	4	0.5	7	8.7	5.6	1.36	6.9
30	5.5	2.2	132	95	12.0	570	75	3	0.5	6	10.0	3.2	1.31	6.4
31	5.6	1.2	142	94	3.0	431	61	2	0.4	4	6.8	5.1	1.44	6.8
32	5.9	1.4	159	106	3.0	475	68	3	0.4	7	7.8	3.5	1.37	6.8
33	5.8	1.4	125	114	3.0	466	78	3	0.4	5	7.4	4.5	1.34	6.8
34	5.8	1.4	141	89	3.0	525	76	3	0.4	6	6.7	4.2	1.33	6.8
35	5.5	2.4	123	133	8.0	865	105	5	0.5	7	12.2	4.1	1.32	6.6
Adj Avg	5.7	1.5	205	96		489	78	3	0.4	7	8.6	4.4		

These recommendations are based on University of Wisconsin publication A2809. Data represents the soil sample, not necessarily the entire field.

Laboratory Analysis for Field Gregs Pit, Lab No 275772

Sample Num	Soil pH	Om %	P ppm	K ppm	60-69 Lime Req(T/a)	Ca ppm	Mg ppm	Est Cec	B ppm	Mn ppm	Zn ppm	Sulfate-S ppm	Sample Density	Buffer Code

Sample Num	Cu ppm	Fe ppm	Al ppm	Salt mmhos /cm	Na ppm	NO3 ppm	NH4 ppm	Olsen P ppm
1	1.72	197.48		0.08				
2	2.16	195.20		0.15				
3	2.33	207.47		0.19				
4	2.41	202.93		0.13				
5	1.74	180.93		0.10				
6	1.42	177.78		0.10				
7	2.29	218.57		0.11				
8	2.45	314.22		0.13				
9	2.57	289.14		0.16				
10	1.91	242.19		0.13				
11	2.31	294.69		0.15				
12	2.55	266.31		0.12				
13	2.14	229.59		0.11				
14	2.14	291.33		0.09				
15	2.72	217.62		0.13				
16	4.48	285.78		0.34				
17	2.93	220.34		0.12				
18	1.84	177.56		0.14				
19	2.30	241.97		0.12				
20	2.21	232.39		0.14				
21	2.03	200.56		0.14				
22	1.16	205.16		0.14				
23	3.19	282.75		0.25				
24	3.14	260.90		0.14				
25	3.00	260.08		0.20				
26	2.84	200.46		0.17				
27	1.48	157.71		0.16				
28	1.32	271.04		0.17				
29	1.73	247.30		0.17				
30	1.36	263.95		0.13				
31	1.13	173.61		0.13				
32	0.97	195.67		0.16				
33	1.36	162.46		0.17				
34	0.97	166.72		0.13				
35	1.27	268.61		0.18				

Base Saturation

Est CEC	Ca %	Mg %	K %
3	73.4	19.2	7.4

Test Interpretation for Field Gregs Pit, Lab No 275772

Crop Name	Very Low	Low	Optimum	High	Very High	Excessive	Very Low	Low	Optimum	High	Very High	Excessive
Alfalfa, seeding	P						K					

Appendix F
WDNR Email Correspondence

Matthias, Stephen

From: Craig, Andrew D - DNR <Andrew.Craig@wisconsin.gov>
Sent: Friday, October 25, 2024 3:15 PM
To: Matthias, Stephen
Subject: RE: Water Quality Trading - SnapPlus input help - DNR response - 10-25-2024

Short Answer: Yes.

There should be the same in SNAP when same cropping inputs are used (baseline/future). Also, SNAP results often show a 'lag' period, in terms of P reduction, ranging from 1-2 years, after start year of BMPs. Your results are consistent with this.

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Andrew Craig
(pronouns: he/him/his)
Office Phone: (608) 267-7695
Mobile Phone: (608) 814-1499
Andrew.Craig@wisconsin.gov

From: Matthias, Stephen <smatthias@donohue-associates.com>
Sent: Friday, October 25, 2024 12:37 PM
To: Craig, Andrew D - DNR <Andrew.Craig@wisconsin.gov>
Subject: RE: Water Quality Trading - SnapPlus input help - DNR response -03-16-2024

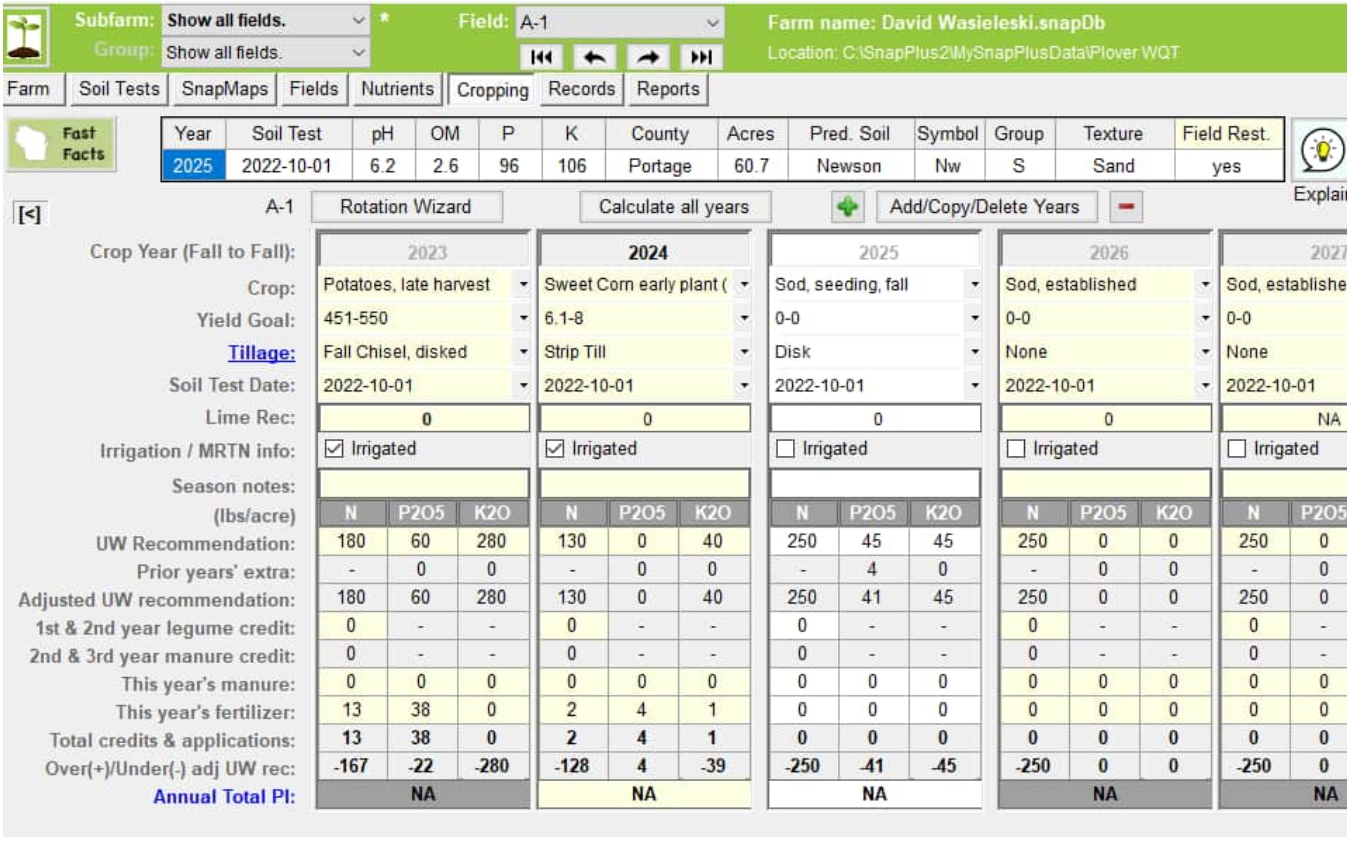
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Hi Andrew,

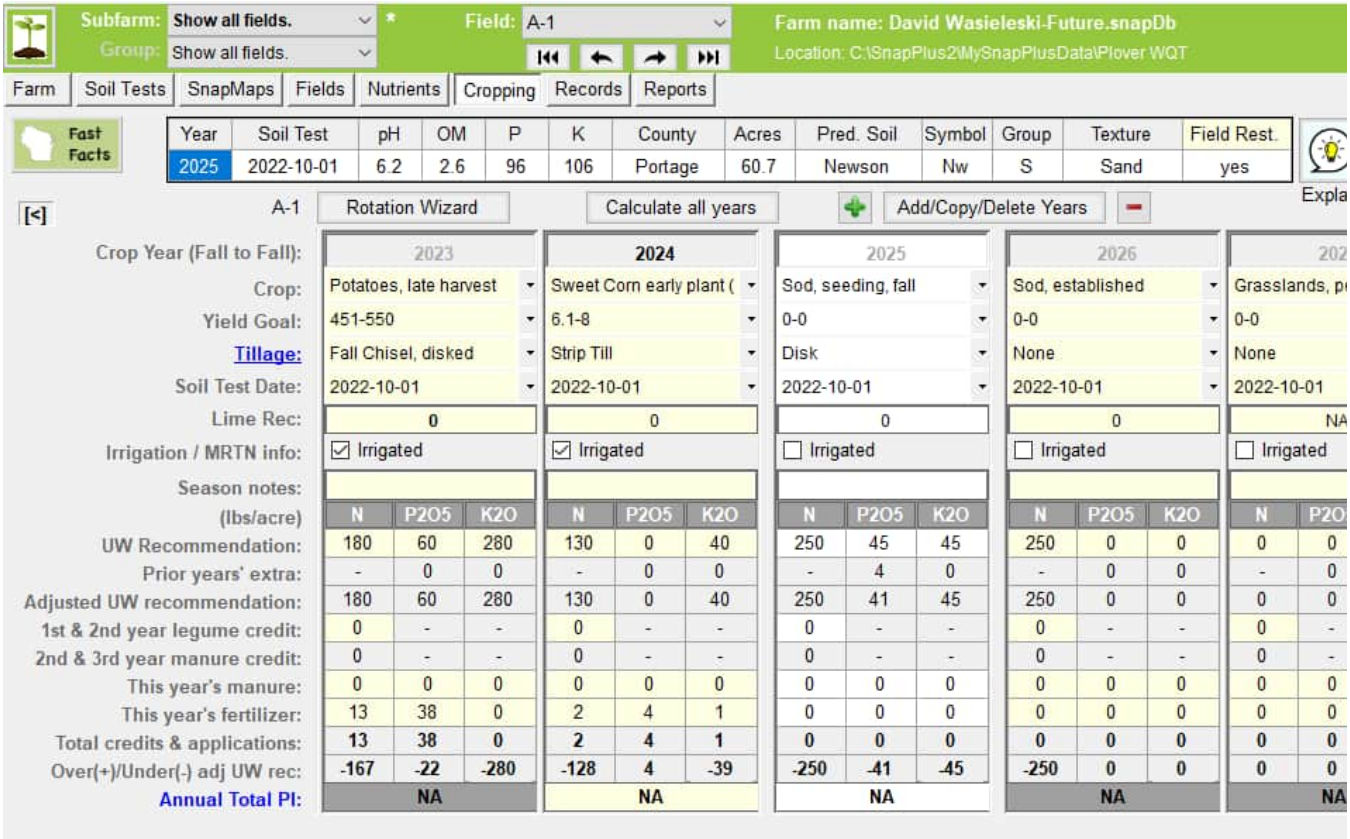
I have one follow-up question if you have minute to review. My one question with setting up the baseline and the future scenarios is that it seems the no P credits are generated during the first two years with a solar trade, as both scenarios have sod seeding and sod establishment during the first two years after crops are no longer being planted. Credits are then generated years 2027 and beyond since there is a PTP differential between the sod and the grasslands for the 2 scenarios. Does that seem consistent with what you would expect?

My SnapPlus Cropping screens are below for reference from one of the fields inside the solar SW permitted area.

Baseline Scenario:



Future Scenario:



Thanks!

Stephen Matthias, PE (WI) | Donohue & Associates, Inc.

3311 Weeden Creek Road, Sheboygan, WI 53081
D 920.803.7341

From: Matthias, Stephen
Sent: Friday, March 15, 2024 5:08 PM
To: Craig, Andrew D - DNR <Andrew.Craig@wisconsin.gov>
Cc: Claucherty, Matthew L - DNR <Matthew.Claucherty@wisconsin.gov>; Kirsch, Kevin J - DNR <Kevin.Kirsch@wisconsin.gov>; Lent, Nicholas M - DNR <Nicholas.Lent@wisconsin.gov>; Marquardt, Keith A - DNR <KeithA.Marquardt@wisconsin.gov>
Subject: RE: Water Quality Trading - SnapPlus input help - DNR response -03-16-2024

Thank you, Andrew. This was all very helpful.

Have a good weekend.

Stephen Matthias, PE (WI) | Donohue & Associates, Inc.
3311 Weeden Creek Road, Sheboygan, WI 53081
D 920.803.7341

From: Craig, Andrew D - DNR <Andrew.Craig@wisconsin.gov>
Sent: Friday, March 15, 2024 1:45 PM
To: Matthias, Stephen <smatthias@donohue-associates.com>
Cc: Claucherty, Matthew L - DNR <Matthew.Claucherty@wisconsin.gov>; Kirsch, Kevin J - DNR <Kevin.Kirsch@wisconsin.gov>; Lent, Nicholas M - DNR <Nicholas.Lent@wisconsin.gov>; Marquardt, Keith A - DNR <KeithA.Marquardt@wisconsin.gov>
Subject: RE: Water Quality Trading - SnapPlus input help - DNR response -03-16-2024

Hello Stephen,

I received your voice mail message from today (3/15). Sorry I missed your call.

After review of your email questions, here are some recommendations:

Please use the following crops in SNAP+ to capture the following land uses:

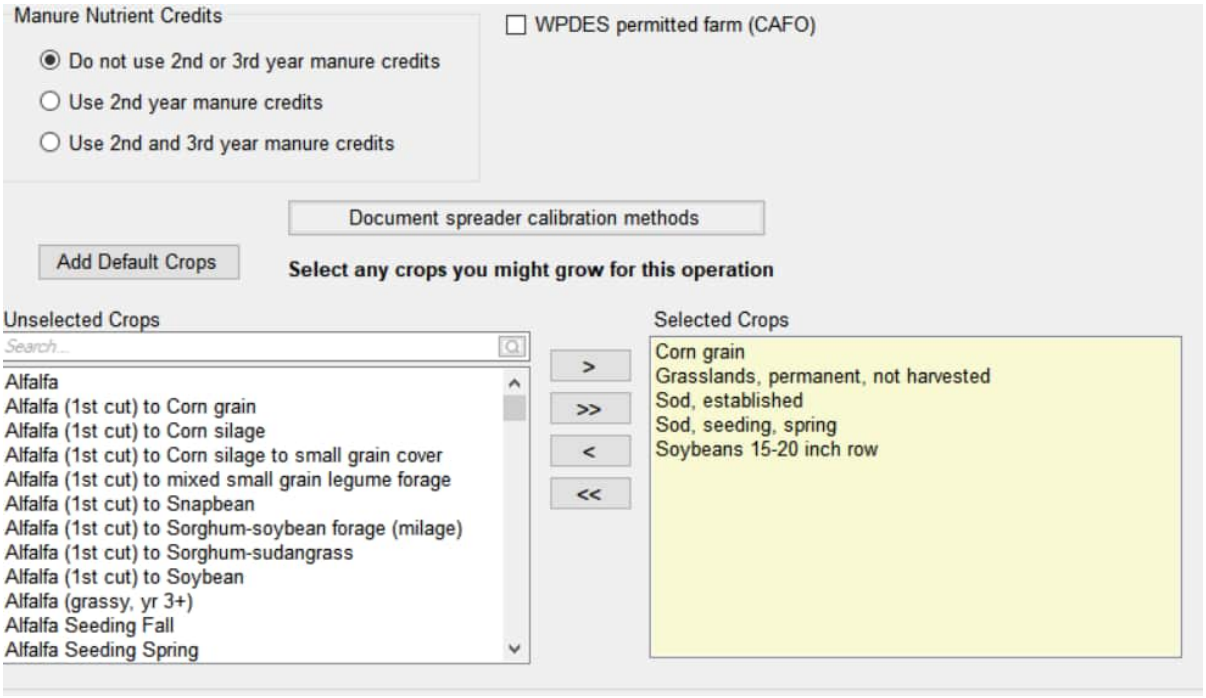
(1) Ag field cropland use = corn, soybeans + historical tillage methods/frequency, nutrients applied.
(2) Ag field converted to solar array and meets Construction SW permit = Sod seeding, spring and Sod established
(3) Solar array field then transition to permanent prairie/grassland = permanent grassland

For Solar Array fields, there are two methods for determining P reductions in SNAP+:

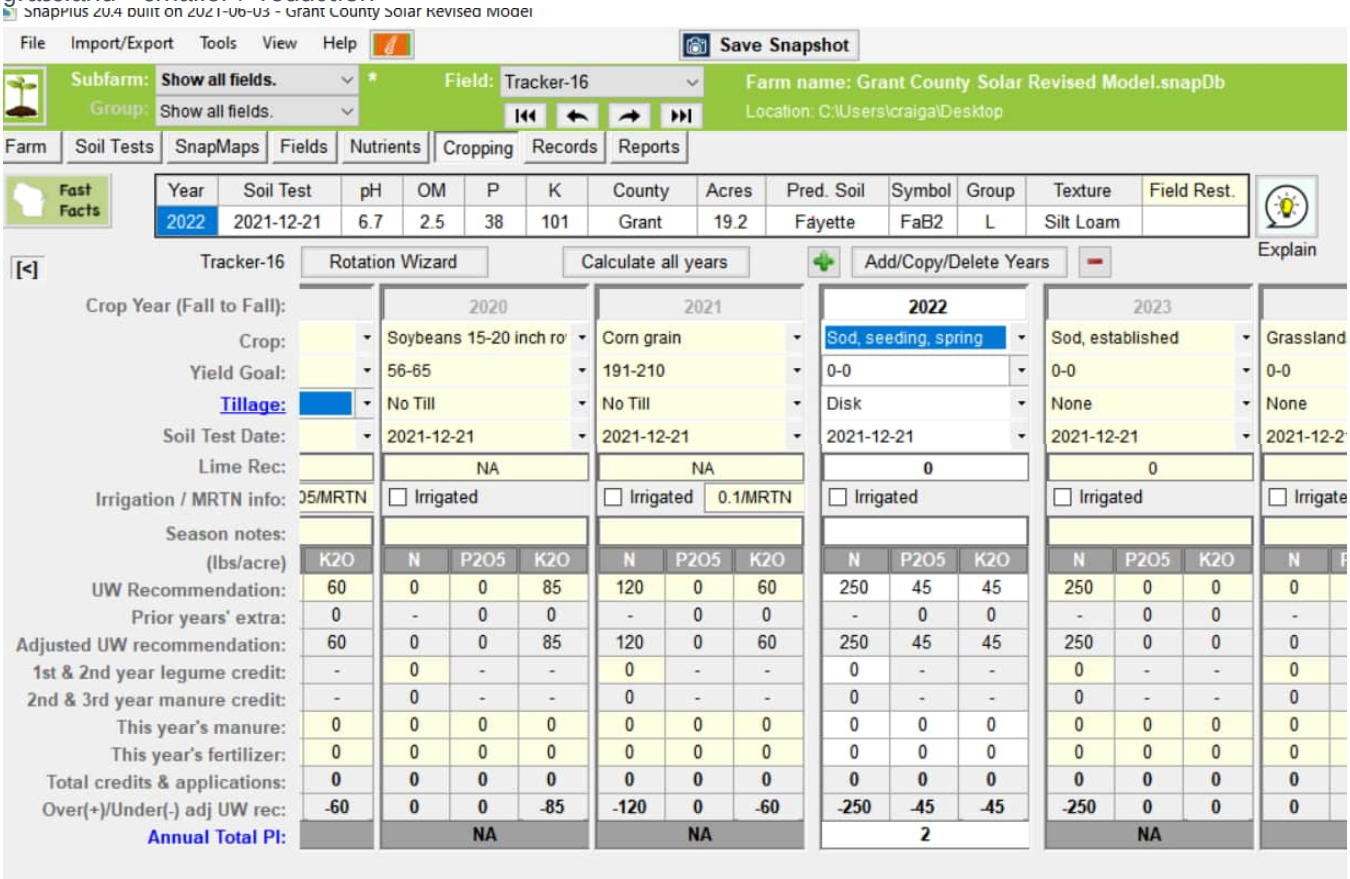
- Measure Ag field area(s) located outside of the Solar Array Construction SW Permit footprint area that is converted to permanent grassland/prairie. Use 1 and 3 to determine P reduction.

- Measure Ag field area(s) located within the Solar Array Construction SW permit footprint area – Model Condition 1, then 2 and 3 for the field; then use 2 and 3 to determine P reduction for areas converted from sod (permit requirement) to permanent grassland.

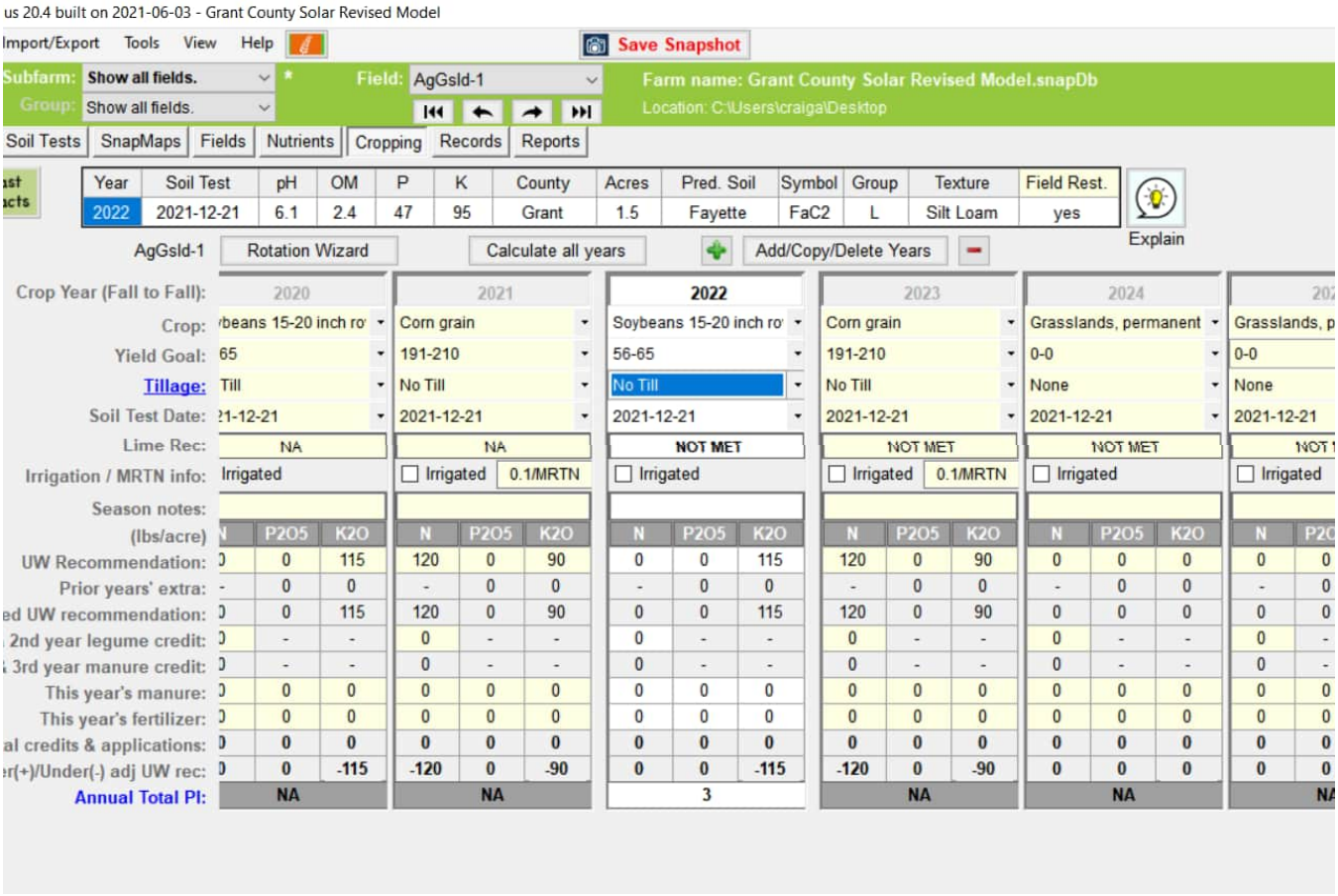
Below are screen shots from another SNAP file that show crops, and crop sequences described above. I think this will help you model the solar site(s) correctly in SNAP+ and then determine P reduction.



Ag field areas within the CSW permit area – these areas converted to sod (permit requirement) and then perm grassland = smaller P reduction



Ag field areas outside of CSW permit boundary and converted to perm grassland = larger P reduction



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Andrew Craig
(pronouns: he/him/his)
Nonpoint Source Watershed Planning Coordinator
Bureau of Watershed Management - Division of External Services
Wisconsin Department of Natural Resources

Office Phone: (608) 267-7695
Mobile Phone: (608) 814-1499
Andrew.Craig@wisconsin.gov

From: Matthias, Stephen <smatthias@donohue-associates.com>
Sent: Friday, March 15, 2024 11:35 AM
To: Craig, Andrew D - DNR <Andrew.Craig@wisconsin.gov>
Subject: Water Quality Trading - SnapPlus input help

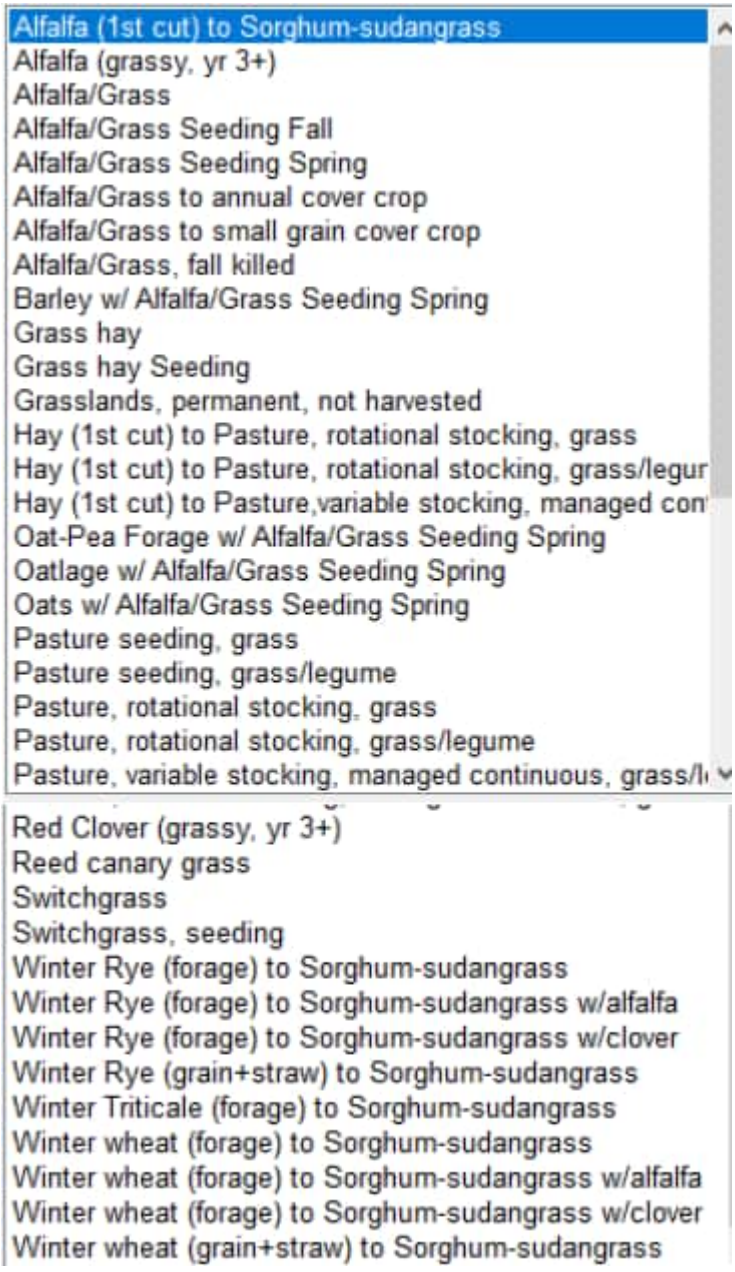
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Hi Andrew,

I left you voicemail a little bit ago on your cell. I figured I'd send an email too if it's easier.

I'm assisting a community with a potential water quality trade for phosphorus, which would look at improving a solar farm from their minimum requirement of turf grass (lawn) to natural prairie grass. The solar farm will be constructed on existing agricultural land and converted to a solar field. Essentially I'm trying to model "turf grass" against "prairie grass" to determine short-term and long-term credits generated, but it is not apparently obvious if these cropping inputs exist in SnapPlus (list below if I search 'grass').

Do you know which cropping inputs I should be using for each of these?



Thanks,

Stephen

Stephen Matthias, PE (WI) | Donohue & Associates, Inc.
3311 Weeden Creek Road, Sheboygan, WI 53081
D 920.803.7341

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Appendix G
Detailed Potentially Tradeable Phosphorus Calculations

Credits Generated Summary

Credits Generated - without subtracting acess roads areas

Farm	Total Acres	Credit Type	Credits Generated (lbs. P/year) by Year									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Wasieleski	295	Interim	0	0	8	9	6	4	3	3	2	2
		Long-term	0	0	12	23	26	25	23	23	22	20
		Total	0	0	19	32	32	29	27	25	23	22
Wolosek	386	Interim	0	0	14	15	9	5	2	1	0	0
		Long-term	0	0	12	28	35	37	35	35	33	33
		Total	0	0	26	43	44	42	37	36	33	33
Okray	367	Interim	0	0	0	0	0	0	0	0	0	0
		Long-term	0	0	3	4	5	5	3	3	3	3
		Total	0	0	3	4	5	5	3	3	3	3
Worzella	718	Interim	0	0	5	0	0	0	0	0	0	0
		Long-term	0	0	37	70	71	63	56	55	51	50
		Total	0	0	42	70	71	63	56	55	51	50
All Farms	1,766	Interim	0	0	26	25	15	9	5	3	2	2
		Long-term	0	0	64	125	137	129	118	116	109	106
		Total	0	0	90	149	152	138	123	119	111	108

Credits Generated - with subtracting access roads area (approx. 1% of solar project area)

Farm	Total Acres	Credit Type	Credits Generated (lbs. P/year) by Year									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Wasieleski	292	Interim	0	0	7	9	6	4	3	2	2	2
		Long-term	0	0	12	22	26	25	23	22	21	20
		Total	0	0	19	31	31	29	26	25	23	21
Wolosek	382	Interim	0	0	14	15	9	5	2	1	0	0
		Long-term	0	0	12	28	35	36	35	35	33	32
		Total	0	0	26	43	44	41	36	35	33	32
Okray	363	Interim	0	0	0	0	0	0	0	0	0	0
		Long-term	0	0	3	4	5	5	3	3	3	3
		Total	0	0	3	4	5	5	3	3	3	3
Worzella	711	Interim	0	0	5	0	0	0	0	0	0	0
		Long-term	0	0	37	69	70	62	55	54	50	50
		Total	0	0	41	69	70	62	55	54	50	50
All Farms	1,748	Interim	0	0	26	24	15	9	5	3	2	2
		Long-term	0	0	63	123	135	128	116	115	108	105
		Total	0	0	89	148	150	137	121	118	110	106

Wasieleski Farm

Field Name:	**A-1**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	100	100	100	100	100	100	100	100	100	100
P Runoff from Sod	lb/yr	28	25	24	22	20	19	17	17	16	16
P Runoff from Grasslands	lb/yr	28	25	19	14	12	11	10	10	10	10
P Reduction	lb/yr	0	0	5	8	8	8	7	7	6	6
P Discharge Yield (from Sod)	lb/acre/yr	0.280	0.250	0.240	0.220	0.200	0.190	0.170	0.170	0.160	0.160
P Discharge Yield (from Grasslands)	lb/acre/yr	0.280	0.250	0.190	0.140	0.120	0.110	0.100	0.100	0.100	0.100
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	4.2	6.7	6.7	6.7	5.8	5.8	5.0	5.0
Total Credits	lb/yr	0.0	0.0	4.2	6.7	6.7	6.7	5.8	5.8	5.0	5.0

Field Name:	**A-1-NC**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	17	17	17	17	17	17	17	17	17	17
P Runoff from Sod	lb/yr	3	4	4	4	4	3	3	3	3	3
P Runoff from Grasslands	lb/yr	3	4	3	2	2	2	2	2	2	2
P Reduction	lb/yr	0	0	1	2	2	1	1	1	1	1
P Discharge Yield (from Sod)	lb/acre/yr	0.176	0.235	0.235	0.235	0.235	0.176	0.176	0.176	0.176	0.176
P Discharge Yield (from Grasslands)	lb/acre/yr	0.176	0.235	0.176	0.118	0.118	0.118	0.118	0.118	0.118	0.118
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.8	1.7	1.7	0.8	0.8	0.8	0.8	0.8
Total Credits	lb/yr	0.0	0.0	0.8	1.7	1.7	0.8	0.8	0.8	0.8	0.8

Field Name:	**A-4**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	18	18	18	18	18	18	18	18	18	18
P Runoff from Sod	lb/yr	12	12	11	10	9	9	8	8	8	7
P Runoff from Grasslands	lb/yr	12	12	9	6	5	5	5	5	5	5
P Reduction	lb/yr	0	0	2	4	4	4	3	3	3	2
P Discharge Yield (from Sod)	lb/acre/yr	0.667	0.667	0.611	0.556	0.500	0.500	0.444	0.444	0.444	0.389
P Discharge Yield (from Grasslands)	lb/acre/yr	0.667	0.667	0.500	0.333	0.278	0.278	0.278	0.278	0.278	0.278
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	1.7	0.8	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.0	2.5	3.3	3.3	2.5	2.5	2.5	1.7
Total Credits	lb/yr	0.0	0.0	1.7	3.3	3.3	3.3	2.5	2.5	2.5	1.7

Field Name:	**A-4-NC**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	1	1	1	1	1	1	1	1	1	1
P Runoff from Sod	lb/yr	0	0	0	0	0	0	0	0	0	0
P Runoff from Grasslands	lb/yr	0	0	0	0	0	0	0	0	0	0
P Reduction	lb/yr	0	0	0	0	0	0	0	0	0	0
P Discharge Yield (from Sod)	lb/acre/yr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
P Discharge Yield (from Grasslands)	lb/acre/yr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Field Name:	**A-5**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	36	36	36	36	36	36	36	36	36	36
P Runoff from Sod	lb/yr	33	32	30	27	25	23	22	21	20	20
P Runoff from Grasslands	lb/yr	33	32	24	17	15	14	13	13	13	13
P Reduction	lb/yr	0	0	6	10	10	9	9	8	7	7
P Discharge Yield (from Sod)	lb/acre/yr	0.917	0.889	0.833	0.750	0.694	0.639	0.611	0.583	0.556	0.556
P Discharge Yield (from Grasslands)	lb/acre/yr	0.917	0.889	0.667	0.472	0.417	0.389	0.361	0.361	0.361	0.361
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interim Credits	lb/yr	0.0	0.0	5.0	7.5	5.8	4.2	3.3	2.5	1.7	1.7
Long Term Credits	lb/yr	0.0	0.0	0.0	0.8	2.5	3.3	4.2	4.2	4.2	4.2
Total Credits	lb/yr	0.0	0.0	5.0	8.3	8.3	7.5	7.5	6.7	5.8	5.8

Wasieleski Farm

Field Name:	**A-5-NC**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	4	4	4	4	4	4	4	4	4	4
P Runoff from Sod	lb/yr	2	3	3	3	2	2	2	2	2	2
P Runoff from Grasslands	lb/yr	2	3	2	2	1	1	1	1	1	1
P Reduction	lb/yr	0	0	1	1	1	1	1	1	1	1
P Discharge Yield (from Sod)	lb/acre/yr	0.500	0.750	0.750	0.750	0.500	0.500	0.500	0.500	0.500	0.500
P Discharge Yield (from Grasslands)	lb/acre/yr	0.500	0.750	0.500	0.500	0.250	0.250	0.250	0.250	0.250	0.250
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	Yes	Yes	Yes	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8
Total Credits	lb/yr	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

Field Name:	**A-6**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	106	106	106	106	106	106	106	106	106	106
P Runoff from Sod	lb/yr	45	38	35	32	29	27	25	24	24	23
P Runoff from Grasslands	lb/yr	45	38	28	20	17	16	15	15	15	15
P Reduction	lb/yr	0	0	7	12	12	11	10	9	9	8
P Discharge Yield (from Sod)	lb/acre/yr	0.425	0.358	0.330	0.302	0.274	0.255	0.236	0.226	0.226	0.217
P Discharge Yield (from Grasslands)	lb/acre/yr	0.425	0.358	0.264	0.189	0.160	0.151	0.142	0.142	0.142	0.142
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	5.8	10.0	10.0	9.2	8.3	7.5	7.5	6.7
Total Credits	lb/yr	0.0	0.0	5.8	10.0	10.0	9.2	8.3	7.5	7.5	6.7

Field Name:	**A-6-NC**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	13	13	13	13	13	13	13	13	13	13
P Runoff from Sod	lb/yr	3	3	4	3	3	3	3	3	3	3
P Runoff from Grasslands	lb/yr	3	3	3	2	2	2	2	2	2	2
P Reduction	lb/yr	0	0	1	1	1	1	1	1	1	1
P Discharge Yield (from Sod)	lb/acre/yr	0.231	0.231	0.308	0.231	0.231	0.231	0.231	0.231	0.231	0.231
P Discharge Yield (from Grasslands)	lb/acre/yr	0.231	0.231	0.231	0.154	0.154	0.154	0.154	0.154	0.154	0.154
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Total Credits	lb/yr	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

Wolosek Farm

Field Name:	**B1**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	144	144	144	144	144	144	144	144	144	144
P Runoff from Sod	lb/yr	66	64	60	54	49	46	43	41	40	40
P Runoff from Grasslands	lb/yr	66	64	48	34	29	27	26	25	25	25
P Reduction	lb/yr	0	0	12	20	20	19	17	16	15	15
P Discharge Yield (from Sod)	lb/acre/yr	0.458	0.444	0.417	0.375	0.340	0.319	0.299	0.285	0.278	0.278
P Discharge Yield (from Grasslands)	lb/acre/yr	0.458	0.444	0.333	0.236	0.201	0.188	0.181	0.174	0.174	0.174
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	10.0	16.7	16.7	15.8	14.2	13.3	12.5	12.5
Total Credits	lb/yr	0.0	0.0	10.0	16.7	16.7	15.8	14.2	13.3	12.5	12.5

Field Name:	**B2**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	116	116	116	116	116	116	116	116	116	116
P Runoff from Sod	lb/yr	19	20	19	17	16	16	15	15	15	15
P Runoff from Grasslands	lb/yr	19	20	17	14	14	13	13	13	13	13
P Reduction	lb/yr	0	0	2	3	2	3	2	2	2	2
P Discharge Yield (from Sod)	lb/acre/yr	0.164	0.172	0.164	0.147	0.138	0.138	0.129	0.129	0.129	0.129
P Discharge Yield (from Grasslands)	lb/acre/yr	0.164	0.172	0.147	0.121	0.121	0.112	0.112	0.112	0.112	0.112
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	1.7	2.5	1.7	2.5	1.7	1.7	1.7	1.7
Total Credits	lb/yr	0.0	0.0	1.7	2.5	1.7	2.5	1.7	1.7	1.7	1.7

Field Name:	**B3**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	100	100	100	100	100	100	100	100	100	100
P Runoff from Sod	lb/yr	77	75	70	64	58	54	51	49	48	47
P Runoff from Grasslands	lb/yr	77	75	56	41	34	32	31	30	30	30
P Reduction	lb/yr	0	0	14	23	24	22	20	19	18	17
P Discharge Yield (from Sod)	lb/acre/yr	0.770	0.750	0.700	0.640	0.580	0.540	0.510	0.490	0.480	0.470
P Discharge Yield (from Grasslands)	lb/acre/yr	0.770	0.750	0.560	0.410	0.340	0.320	0.310	0.300	0.300	0.300
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Interim Credits	lb/yr	0.0	0.0	11.7	11.7	6.7	3.3	0.8	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.0	7.5	13.3	15.0	15.8	15.8	15.0	14.2
Total Credits	lb/yr	0.0	0.0	11.7	19.2	20.0	18.3	16.7	15.8	15.0	14.2

Field Name:	**B4**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	26	26	26	26	26	26	26	26	26	26
P Runoff from Sod	lb/yr	18	19	18	17	16	15	14	14	13	13
P Runoff from Grasslands	lb/yr	18	19	15	11	9	9	9	8	8	8
P Reduction	lb/yr	0	0	3	6	7	6	5	6	5	5
P Discharge Yield (from Sod)	lb/acre/yr	0.692	0.731	0.692	0.654	0.615	0.577	0.538	0.538	0.500	0.500
P Discharge Yield (from Grasslands)	lb/acre/yr	0.692	0.731	0.577	0.423	0.346	0.346	0.346	0.308	0.308	0.308
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Interim Credits	lb/yr	0.0	0.0	2.5	3.3	2.5	1.7	0.8	0.8	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.0	1.7	3.3	3.3	3.3	4.2	4.2	4.2
Total Credits	lb/yr	0.0	0.0	2.5	5.0	5.8	5.0	4.2	5.0	4.2	4.2

Okray Farm

Field Name:	**O-1**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	85	85	85	85	85	85	85	85	85	85
P Runoff from Sod	lb/yr	12	11	10	9	9	9	8	8	8	8
P Runoff from Grasslands	lb/yr	12	11	9	8	8	7	7	7	7	7
P Reduction	lb/yr	0	0	1	1	1	2	1	1	1	1
P Discharge Yield (from Sod)	lb/acre/yr	0.141	0.129	0.118	0.106	0.106	0.106	0.094	0.094	0.094	0.094
P Discharge Yield (from Grasslands)	lb/acre/yr	0.141	0.129	0.106	0.094	0.094	0.082	0.082	0.082	0.082	0.082
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.8	0.8	0.8	1.7	0.8	0.8	0.8	0.8
Total Credits	lb/yr	0.0	0.0	0.8	0.8	0.8	1.7	0.8	0.8	0.8	0.8

Field Name:	**O-2**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	191	191	191	191	191	191	191	191	191	191
P Runoff from Sod	lb/yr	23	23	21	19	18	18	17	17	17	17
P Runoff from Grasslands	lb/yr	23	23	19	16	15	15	15	15	15	15
P Reduction	lb/yr	0	0	2	3	3	3	2	2	2	2
P Discharge Yield (from Sod)	lb/acre/yr	0.120	0.120	0.110	0.099	0.094	0.094	0.089	0.089	0.089	0.089
P Discharge Yield (from Grasslands)	lb/acre/yr	0.120	0.120	0.099	0.084	0.079	0.079	0.079	0.079	0.079	0.079
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	1.7	2.5	2.5	2.5	1.7	1.7	1.7	1.7
Total Credits	lb/yr	0.0	0.0	1.7	2.5	2.5	2.5	1.7	1.7	1.7	1.7

Field Name:	**O-3**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	81	81	81	81	81	81	81	81	81	81
P Runoff from Sod	lb/yr	10	10	9	8	8	7	7	7	7	7
P Runoff from Grasslands	lb/yr	10	10	8	7	6	6	6	6	6	6
P Reduction	lb/yr	0	0	1	1	2	1	1	1	1	1
P Discharge Yield (from Sod)	lb/acre/yr	0.123	0.123	0.111	0.099	0.099	0.086	0.086	0.086	0.086	0.086
P Discharge Yield (from Grasslands)	lb/acre/yr	0.123	0.123	0.099	0.086	0.074	0.074	0.074	0.074	0.074	0.074
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.8	0.8	1.7	0.8	0.8	0.8	0.8	0.8
Total Credits	lb/yr	0.0	0.0	0.8	0.8	1.7	0.8	0.8	0.8	0.8	0.8

Field Name:	**O-4-NC**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	10	10	10	10	10	10	10	10	10	10
P Runoff from Sod	lb/yr	1	1	1	1	1	1	1	1	1	1
P Runoff from Grasslands	lb/yr	1	1	1	1	1	1	1	1	1	1
P Reduction	lb/yr	0	0	0	0	0	0	0	0	0	0
P Discharge Yield (from Sod)	lb/acre/yr	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
P Discharge Yield (from Grasslands)	lb/acre/yr	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Worzella Farm

Field Name:	**W-1**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	52	52	52	52	52	52	52	52	52	52
P Runoff from Sod	lb/yr	4	4	4	4	3	3	3	3	3	3
P Runoff from Grasslands	lb/yr	4	4	3	3	3	3	3	3	3	3
P Reduction	lb/yr	0	0	1	1	0	0	0	0	0	0
P Discharge Yield (from Sod)	lb/acre/yr	0.077	0.077	0.077	0.077	0.058	0.058	0.058	0.058	0.058	0.058
P Discharge Yield (from Grasslands)	lb/acre/yr	0.077	0.077	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
Total Credits	lb/yr	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0

Field Name:	**W-2**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	60	60	60	60	60	60	60	60	60	60
P Runoff from Sod	lb/yr	6	6	5	5	5	4	4	4	4	4
P Runoff from Grasslands	lb/yr	6	6	5	4	4	4	4	4	4	4
P Reduction	lb/yr	0	0	0	1	1	0	0	0	0	0
P Discharge Yield (from Sod)	lb/acre/yr	0.100	0.100	0.083	0.083	0.083	0.067	0.067	0.067	0.067	0.067
P Discharge Yield (from Grasslands)	lb/acre/yr	0.100	0.100	0.083	0.067	0.067	0.067	0.067	0.067	0.067	0.067
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0
Total Credits	lb/yr	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0

Field Name:	**W-3**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	73	73	73	73	73	73	73	73	73	73
P Runoff from Sod	lb/yr	14	14	13	11	11	10	10	10	10	10
P Runoff from Grasslands	lb/yr	14	14	11	9	9	9	9	9	9	9
P Reduction	lb/yr	0	0	2	2	2	1	1	1	1	1
P Discharge Yield (from Sod)	lb/acre/yr	0.192	0.192	0.178	0.151	0.151	0.137	0.137	0.137	0.137	0.137
P Discharge Yield (from Grasslands)	lb/acre/yr	0.192	0.192	0.151	0.123	0.123	0.123	0.123	0.123	0.123	0.123
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	1.7	1.7	1.7	0.8	0.8	0.8	0.8	0.8
Total Credits	lb/yr	0.0	0.0	1.7	1.7	1.7	0.8	0.8	0.8	0.8	0.8

Field Name:	**W-3-NC**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	17	17	17	17	17	17	17	17	17	17
P Runoff from Sod	lb/yr	1	2	2	2	1	1	1	1	1	1
P Runoff from Grasslands	lb/yr	1	2	1	1	1	1	1	1	1	1
P Reduction	lb/yr	0	0	1	1	0	0	0	0	0	0
P Discharge Yield (from Sod)	lb/acre/yr	0.059	0.118	0.118	0.118	0.059	0.059	0.059	0.059	0.059	0.059
P Discharge Yield (from Grasslands)	lb/acre/yr	0.059	0.118	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
Total Credits	lb/yr	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0

Field Name:	**W-4**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	35	35	35	35	35	35	35	35	35	35
P Runoff from Sod	lb/yr	21	21	19	18	16	15	14	14	13	13
P Runoff from Grasslands	lb/yr	21	21	15	11	9	9	9	8	8	8
P Reduction	lb/yr	0	0	4	7	7	6	5	6	5	5
P Discharge Yield (from Sod)	lb/acre/yr	0.600	0.600	0.543	0.514	0.457	0.429	0.400	0.400	0.371	0.371
P Discharge Yield (from Grasslands)	lb/acre/yr	0.600	0.600	0.429	0.314	0.257	0.257	0.257	0.229	0.229	0.229
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	1.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	2.1	5.4	5.8	5.0	4.2	5.0	4.2	4.2
Total Credits	lb/yr	0.0	0.0	3.3	5.8	5.8	5.0	4.2	5.0	4.2	4.2

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Field Name:	**W-4-NC**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	4	4	4	4	4	4	4	4	4	4
P Runoff from Sod	lb/yr	2	2	2	2	2	2	2	2	2	2
P Runoff from Grasslands	lb/yr	2	2	2	1	1	1	1	1	1	1
P Reduction	lb/yr	0	0	0	1	1	1	1	1	1	1
P Discharge Yield (from Sod)	lb/acre/yr	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500
P Discharge Yield (from Grasslands)	lb/acre/yr	0.500	0.500	0.500	0.250	0.250	0.250	0.250	0.250	0.250	0.250
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Total Credits	lb/yr	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8

Field Name:	**W-5**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	66	66	66	66	66	66	66	66	66	66
P Runoff from Sod	lb/yr	27	25	24	22	20	18	17	17	16	16
P Runoff from Grasslands	lb/yr	27	25	19	14	12	11	11	10	10	10
P Reduction	lb/yr	0	0	5	8	8	7	6	7	6	6
P Discharge Yield (from Sod)	lb/acre/yr	0.409	0.379	0.364	0.333	0.303	0.273	0.258	0.258	0.242	0.242
P Discharge Yield (from Grasslands)	lb/acre/yr	0.409	0.379	0.288	0.212	0.182	0.167	0.167	0.152	0.152	0.152
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	4.2	6.7	6.7	5.8	5.0	5.8	5.0	5.0
Total Credits	lb/yr	0.0	0.0	4.2	6.7	6.7	5.8	5.0	5.8	5.0	5.0

Field Name:	**W-6**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	115	115	115	115	115	115	115	115	115	115
P Runoff from Sod	lb/yr	43	48	47	43	40	37	35	34	33	32
P Runoff from Grasslands	lb/yr	43	48	38	27	23	22	21	21	20	20
P Reduction	lb/yr	0	0	9	16	17	15	14	13	13	12
P Discharge Yield (from Sod)	lb/acre/yr	0.374	0.417	0.409	0.374	0.348	0.322	0.304	0.296	0.287	0.278
P Discharge Yield (from Grasslands)	lb/acre/yr	0.374	0.417	0.330	0.235	0.200	0.191	0.183	0.183	0.174	0.174
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	7.5	13.3	14.2	12.5	11.7	10.8	10.8	10.0
Total Credits	lb/yr	0.0	0.0	7.5	13.3	14.2	12.5	11.7	10.8	10.8	10.0

Field Name:	**W-6-NC**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	6	6	6	6	6	6	6	6	6	6
P Runoff from Sod	lb/yr	2	2	2	2	2	2	2	2	2	2
P Runoff from Grasslands	lb/yr	2	2	2	1	1	1	1	1	1	1
P Reduction	lb/yr	0	0	0	1	1	1	1	1	1	1
P Discharge Yield (from Sod)	lb/acre/yr	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
P Discharge Yield (from Grasslands)	lb/acre/yr	0.333	0.333	0.333	0.167	0.167	0.167	0.167	0.167	0.167	0.167
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Total Credits	lb/yr	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8

Field Name:	**W-7A**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	84	84	84	84	84	84	84	84	84	84
P Runoff from Sod	lb/yr	41	41	39	35	32	30	28	27	26	26
P Runoff from Grasslands	lb/yr	41	41	31	22	19	18	17	17	17	16
P Reduction	lb/yr	0	0	8	13	13	12	11	10	9	10
P Discharge Yield (from Sod)	lb/acre/yr	0.488	0.488	0.464	0.417	0.381	0.357	0.333	0.321	0.310	0.310
P Discharge Yield (from Grasslands)	lb/acre/yr	0.488	0.488	0.369	0.262	0.226	0.214	0.202	0.202	0.202	0.190
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	6.7	10.8	10.8	10.0	9.2	8.3	7.5	8.3
Total Credits	lb/yr	0.0	0.0	6.7	10.8	10.8	10.0	9.2	8.3	7.5	8.3

Worzella Farm

Field Name:	**W-7B**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	82	82	82	82	82	82	82	82	82	82
P Runoff from Sod	lb/yr	33	37	36	33	31	28	27	26	25	25
P Runoff from Grasslands	lb/yr	33	37	29	21	18	17	16	16	16	16
P Reduction	lb/yr	0	0	7	12	13	11	11	10	9	9
P Discharge Yield (from Sod)	lb/acre/yr	0.402	0.451	0.439	0.402	0.378	0.341	0.329	0.317	0.305	0.305
P Discharge Yield (from Grasslands)	lb/acre/yr	0.402	0.451	0.354	0.256	0.220	0.207	0.195	0.195	0.195	0.195
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	5.8	10.0	10.8	9.2	9.2	8.3	7.5	7.5
Total Credits	lb/yr	0.0	0.0	5.8	10.0	10.8	9.2	9.2	8.3	7.5	7.5

Field Name:	**W-7-NC**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	14	14	14	14	14	14	14	14	14	14
P Runoff from Sod	lb/yr	5	5	5	5	5	5	4	4	4	4
P Runoff from Grasslands	lb/yr	5	5	4	3	3	3	3	3	3	3
P Reduction	lb/yr	0	0	1	2	2	2	1	1	1	1
P Discharge Yield (from Sod)	lb/acre/yr	0.357	0.357	0.357	0.357	0.357	0.357	0.286	0.286	0.286	0.286
P Discharge Yield (from Grasslands)	lb/acre/yr	0.357	0.357	0.286	0.214	0.214	0.214	0.214	0.214	0.214	0.214
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	0.8	1.7	1.7	1.7	0.8	0.8	0.8	0.8
Total Credits	lb/yr	0.0	0.0	0.8	1.7	1.7	1.7	0.8	0.8	0.8	0.8

Field Name:	**W-8**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	94	94	94	94	94	94	94	94	94	94
P Runoff from Sod	lb/yr	57	54	51	46	42	39	37	36	35	34
P Runoff from Grasslands	lb/yr	57	54	41	29	25	23	23	22	22	22
P Reduction	lb/yr	0	0	10	17	17	16	14	14	13	12
P Discharge Yield (from Sod)	lb/acre/yr	0.606	0.574	0.543	0.489	0.447	0.415	0.394	0.383	0.372	0.362
P Discharge Yield (from Grasslands)	lb/acre/yr	0.606	0.574	0.436	0.309	0.266	0.245	0.245	0.234	0.234	0.234
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	Yes	Yes	Yes	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	5.0	14.2	14.2	13.3	11.7	11.7	10.8	10.0
Total Credits	lb/yr	0.0	0.0	8.3	14.2	14.2	13.3	11.7	11.7	10.8	10.0

Field Name:	**W-8-NC**									
	Units	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Field Area	Acres	16	16	16	16	16	16	16	16	16	16
P Runoff from Sod	lb/yr	7	8	8	7	7	7	6	6	6	6
P Runoff from Grasslands	lb/yr	7	8	6	5	4	4	4	4	4	4
P Reduction	lb/yr	0	0	2	2	3	3	2	2	2	2
P Discharge Yield (from Sod)	lb/acre/yr	0.438	0.500	0.500	0.438	0.438	0.438	0.375	0.375	0.375	0.375
P Discharge Yield (from Grasslands)	lb/acre/yr	0.438	0.500	0.375	0.313	0.250	0.250	0.250	0.250	0.250	0.250
Credit Threshold (Edge-of-Field)	lb/acre/yr	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trade Ratio		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Interim Credits Available?	Yes/No	No	No	No	No	No	No	No	No	No	No
Interim Credits	lb/yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Credits	lb/yr	0.0	0.0	1.7	1.7	2.5	2.5	1.7	1.7	1.7	1.7
Total Credits	lb/yr	0.0	0.0	1.7	1.7	2.5	2.5	1.7	1.7	1.7	1.7

Appendix H
SnapPlus P Trade Reports

WQ1: P Trade Report

Reported For	David Wasieleski
Printed	2025-08-26
Plan Completion/Update Date	2024-08-28
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\David Wasieleski-Baseline.snapDb	

Prepared for:
David Wasieleski
attn:David Wasieleski

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

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

Questions? Please contact DNRphosphorus@wisconsin.gov

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

P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
A-1	NEWSON	Nw	100	67	28	25	24	22	20	19	17	17	16	16
A-1-NC	NEWSON	Nw	17	2	3	4	4	4	4	3	3	3	3	3
A-2	MEEHAN	MnA	37	52	16	15	15	13	12	11	11	10	10	10
A-2-NC	MEEHAN	MnA	9	2	3	3	3	3	3	3	3	2	2	2
A-3	MEEHAN	MnA	65	81	17	16	15	14	12	11	11	10	10	10
A-3-NC	MEEHAN	MnA	10	1	2	2	2	2	2	2	1	1	1	1
A-4	MEEHAN	MnA	18	49	12	12	11	10	9	9	8	8	8	7

P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
A-4-NC	MEEHAN	MnA	1	0	0	0	0	0	0	0	0	0	0	0
A-5	MEEHAN	MnA	36	105	33	32	30	27	25	23	22	21	20	20
A-5-NC	MEEHAN	MnA	4	2	2	3	3	3	2	2	2	2	2	2
A-6	MEEHAN	MnA	106	149	45	38	35	32	29	27	25	24	24	23
A-6-NC	NEWSON	Nw	13	2	3	3	4	3	3	3	3	3	3	3
Total			**414**	**512**	**165**	**153**	**145**	**132**	**121**	**113**	**107**	**102**	**100**	**98**

WQ1: P Trade Report

Reported For	David Wasieleski
Printed	2025-08-26
Plan Completion/Update Date	2024-08-28
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\David Wasieleski-Future.snapDb	

Prepared for:
David Wasieleski
attn:David Wasieleski

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

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

Questions? Please contact DNRphosphorus@wisconsin.gov

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P Trade Report				PTP											
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
A-1	NEWSON	Nw	100	67	28	25	19	14	12	11	10	10	10	10
A-1-NC	NEWSON	Nw	17	2	3	4	3	2	2	2	2	2	2	2
A-2	MEEHAN	MnA	37	52	16	15	12	8	7	7	6	6	6	6
A-2-NC	MEEHAN	MnA	9	2	3	3	3	2	2	2	2	2	1	1
A-3	MEEHAN	MnA	65	81	17	16	12	9	7	7	7	6	6	6
A-3-NC	MEEHAN	MnA	10	1	2	2	2	1	1	1	1	1	1	1
A-4	MEEHAN	MnA	18	49	12	12	9	6	5	5	5	5	5	5

P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
A-4-NC	MEEHAN	MnA	1	0	0	0	0	0	0	0	0	0	0	0
A-5	MEEHAN	MnA	36	105	33	32	24	17	15	14	13	13	13	13
A-5-NC	MEEHAN	MnA	4	2	2	3	2	2	1	1	1	1	1	1
A-6	MEEHAN	MnA	106	149	45	38	28	20	17	16	15	15	15	15
A-6-NC	NEWSON	Nw	13	2	3	3	3	2	2	2	2	2	2	2
Total			**414**	**512**	**165**	**153**	**116**	**84**	**71**	**67**	**64**	**63**	**62**	**62**

WQ1: P Trade Report

Reported For	Robert Wolosek
Printed	2025-08-26
Plan Completion/Update Date	2024-08-22
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Robert Wolosek-Baseline.snapDb	

Prepared for:
Robert Wolosek
attn:Robert Wolosek

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

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

Questions? Please contact DNRphosphorus@wisconsin.gov

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

P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
B1	NEWSON	Nw	144	161	66	64	60	54	49	46	43	41	40	40
B2	FRIENDSHIP	FrA	116	108	19	20	19	17	16	16	15	15	15	15
B3	MEEHAN	MnA	100	135	77	75	70	64	58	54	51	49	48	47
B4	MEEHAN	MnA	26	22	18	19	18	17	16	15	14	14	13	13
Total			**387**	**427**	**180**	**178**	**167**	**152**	**140**	**131**	**124**	**119**	**117**	**115**

WQ1: P Trade Report

Reported For	Robert Wolosek
Printed	2025-08-26
Plan Completion/Update Date	2024-08-22
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Robert Wolosek-Future.snapDb	

Prepared for:
Robert Wolosek
attn:Robert Wolosek

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.

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Questions? Please contact DNRphosphorus@wisconsin.gov

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P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
B1	NEWSON	Nw	144	161	66	64	48	34	29	27	26	25	25	25
B2	FRIENDSHIP	FrA	116	69	19	20	17	14	14	13	13	13	13	13
B3	MEEHAN	MnA	100	135	77	75	56	41	34	32	31	30	30	30
B4	MEEHAN	MnA	26	22	18	19	15	11	9	9	9	8	8	8
Total			**387**	**388**	**180**	**178**	**135**	**100**	**86**	**81**	**79**	**77**	**77**	**76**

WQ1: P Trade Report

Reported For	Okray Family Farms
Printed	2025-12-23
Plan Completion/Update Date	2024-09-06
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Okray Family Farms-Baseline.snapDb	

Prepared for:
Okray Family Farms
attn:Okray Family Farms

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

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

Questions? Please contact DNRphosphorus@wisconsin.gov

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P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
O-1	PLAINFIELD	PfA	85	38	12	11	10	9	9	9	8	8	8	8
O-2	PLAINFIELD	PfA	191	81	23	23	21	19	18	18	17	17	17	17
O-3	FRIENDSHIP	FrA	81	50	10	10	9	8	8	7	7	7	7	7
O-4-NC	FRIENDSHIP	FrA	10	1	1	1	1	1	1	1	1	1	1	1
Total			**367**	**169**	**46**	**45**	**42**	**38**	**36**	**35**	**34**	**33**	**33**	**32**

WQ1: P Trade Report

Reported For	Okray Family Farms
Printed	2025-12-23
Plan Completion/Update Date	2024-09-06
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Okray Family Farms-Future.snapDb	

Prepared for:
Okray Family Farms
attn:Okray Family Farms

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

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

Questions? Please contact DNRphosphorus@wisconsin.gov

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

P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
O-1	PLAINFIELD	PfA	85	38	12	11	9	8	8	7	7	7	7	7
O-2	PLAINFIELD	PfA	191	81	23	23	19	16	15	15	15	15	15	15
O-3	FRIENDSHIP	FrA	81	50	10	10	8	7	6	6	6	6	6	6
O-4-NC	FRIENDSHIP	FrA	10	1	1	1	1	1	1	1	1	1	1	1
Total			**367**	**169**	**46**	**45**	**37**	**31**	**30**	**30**	**30**	**29**	**29**	**29**

WQ1: P Trade Report

Reported For	Worzella and Sons
Printed	2025-08-26
Plan Completion/Update Date	2024-10-28
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Worzella and Sons-Baseline.snapDb	

Prepared for:
Worzella and Sons
attn:Worzella and Sons

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

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

Questions? Please contact DNRphosphorus@wisconsin.gov

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P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
W-1	PLAINFIELD	PfA	52	17	4	4	4	4	3	3	3	3	3	3
W-2	PLAINFIELD	PfA	60	21	6	6	5	5	5	4	4	4	4	4
W-3	FRIENDSHIP	FrA	73	87	14	14	13	11	11	10	10	10	10	10
W-3-NC	FRIENDSHIP	FrA	17	1	1	2	2	2	1	1	1	1	1	1
W-4	MEEHAN	MnA	35	54	21	21	19	18	16	15	14	14	13	13
W-4-NC	MEEHAN	MnA	4	1	2	2	2	2	2	2	2	2	2	2
W-5	MEEHAN	MnA	66	65	27	25	24	22	20	18	17	17	16	16

P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
W-6	MEEHAN	MnA	115	97	43	48	47	43	40	37	35	34	33	32
W-6-NC	MEEHAN	MnA	6	1	2	2	2	2	2	2	2	2	2	2
W-7A	MEEHAN	MnA	84	85	41	41	39	35	32	30	28	27	26	26
W-7B	NEWSON	Nw	82	76	33	37	36	33	31	28	27	26	25	25
W-7-NC	MEEHAN	MnA	14	3	5	5	5	5	5	5	4	4	4	4
W-8	MEEHAN	MnA	94	170	57	54	51	46	42	39	37	36	35	34
W-8-NC	MEEHAN	MnA	16	4	7	8	8	7	7	7	6	6	6	6
Total			**717**	**683**	**264**	**268**	**257**	**235**	**216**	**202**	**191**	**185**	**180**	**177**

WQ1: P Trade Report

Reported For	Worzella and Sons
Printed	2025-08-26
Plan Completion/Update Date	2024-10-28
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Worzella and Sons-Future.snapDb	

Prepared for:
Worzella and Sons
attn:Worzella and Sons

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.

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Questions? Please contact DNRphosphorus@wisconsin.gov

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P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
W-1	PLAINFIELD	PfA	52	17	4	4	3	3	3	3	3	3	3	3
W-2	PLAINFIELD	PfA	60	21	6	6	5	4	4	4	4	4	4	4
W-3	FRIENDSHIP	FrA	73	87	14	14	11	9	9	9	9	9	9	9
W-3-NC	FRIENDSHIP	FrA	17	1	1	2	1	1	1	1	1	1	1	1
W-4	MEEHAN	MnA	35	54	21	21	15	11	9	9	9	8	8	8
W-4-NC	MEEHAN	MnA	4	1	2	2	2	1	1	1	1	1	1	1
W-5	MEEHAN	MnA	66	65	27	25	19	14	12	11	11	10	10	10

P Trade Report				PTP										
Field Name	Soil Series	Soil Symbol	Acres	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
W-6	MEEHAN	MnA	115	97	43	48	38	27	23	22	21	21	20	20
W-6-NC	MEEHAN	MnA	6	1	2	2	2	1	1	1	1	1	1	1
W-7A	MEEHAN	MnA	84	85	41	41	31	22	19	18	17	17	17	16
W-7B	NEWSON	Nw	82	76	33	37	29	21	18	17	16	16	16	16
W-7-NC	MEEHAN	MnA	14	3	5	5	4	3	3	3	3	3	3	3
W-8	MEEHAN	MnA	94	170	57	54	41	29	25	23	23	22	22	22
W-8-NC	MEEHAN	MnA	16	4	7	8	6	5	4	4	4	4	4	4
Total			**717**	**683**	**264**	**268**	**208**	**153**	**132**	**125**	**121**	**119**	**117**	**117**

Appendix I
SnapPlus Cropping Reports

NM1: Narrative and Crops Report

Starting Year	**2023**
Reported For	**David Wasieleski**
Printed	**2025-08-26**
Plan Completion/Update Date:	**2024-08-28**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\David Wasieleski-Baseline.snapDb	

Prepared for:
David Wasieleski
attn:David Wasieleski

Farm has 12 fields totalling 414 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

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

Narrative and Crops:

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
A-1	99.5	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Winter Rye (grain +straw) Fall vertical tillage 31-50 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-1-NC	16.9	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-2	36.6	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sweet Corn early plant (before May 20) Strip Till 6.1-8 ton/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
A-2-NC	8.7	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-3	65.1	Peas to Snapbean Fall Chisel, disked 2501-4000/3.6-4.5 lb/acre/ton/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-3-NC	10	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-4	17.6	Beets table Spring Chisel, disked 10.1-15 ton/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-4-NC	0.7	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-5	35.6	Beets table Spring Chisel, disked 10.1-15 ton/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-5-NC	3.7	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
A-6	106.4	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Peas Fall Chisel, disked 2501-4000 lb/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-6-NC	13.2	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

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

Crops Grouped By Category		2023	2024	2025	2026	2027	2028	2029	2030
Potatoes, late harvest	Acres cwt	243 121,622	118 59,059						
Sod, established	Acres ton				414 0	414 0	414 0	414 0	414 0
Sod, seeding, fall	Acres ton			414 0					
Winter Rye (grain +straw)	Acres bu		100 4,050						
Grasslands, permanent, not harvested	Acres none	53 0	53 0						
Sweet Corn early plant (before May 20)	Acres ton		37 261						
Peas to Snapbean	Acres lb/ton	65 211,283/263							
Beets table	Acres ton	53 665							

Crops Grouped By Category		2023	2024	2025	2026	2027	2028	2029	2030
Peas	Acres lb		106 344,553						

NM1: Narrative and Crops Report

Starting Year	**2023**
Reported For	**David Wasieleski**
Printed	**2025-08-26**
Plan Completion/Update Date:	**2024-08-28**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\David Wasieleski-Future.snapDb	

Prepared for:
David Wasieleski
attn:David Wasieleski

Farm has 12 fields totalling 414 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

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

Narrative and Crops:

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
A-1	99.5	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Winter Rye (grain +straw) Fall vertical tillage 31-50 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-1-NC	16.9	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-2	36.6	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sweet Corn early plant (before May 20) Strip Till 6.1-8 ton/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
A-2-NC	8.7	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-3	65.1	Peas to Snapbean Fall Chisel, disked 2501-4000/3.6-4.5 lb/acre/ton/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-3-NC	10	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-4	17.6	Beets table Spring Chisel, disked 10.1-15 ton/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-4-NC	0.7	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-5	35.6	Beets table Spring Chisel, disked 10.1-15 ton/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-5-NC	3.7	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
A-6	106.4	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Peas Fall Chisel, disked 2501-4000 lb/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-6-NC	13.2	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

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

Crops Grouped By Category		2023	2024	2025	2026	2027	2028	2029	2030
Grasslands, permanent, not harvested	Acres none	53 0	53 0			414 0	414 0	414 0	414 0
Potatoes, late harvest	Acres cwt	243 121,622	118 59,059						
Sod, established	Acres ton				414 0				
Sod, seeding, fall	Acres ton			414 0					
Winter Rye (grain +straw)	Acres bu		100 4,050						
Sweet Corn early plant (before May 20)	Acres ton		37 261						
Peas to Snapbean	Acres lb/ton	65 211,283/263							

Crops Grouped By Category		2023	2024	2025	2026	2027	2028	2029	2030
Beets table	Acres ton	53 665							
Peas	Acres lb		106 344,553						

NM1: Narrative and Crops Report

Starting Year	**2031**
Reported For	**David Wasieleski**
Printed	**2025-08-26**
Plan Completion/Update Date:	**2024-08-28**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\David Wasieleski-Baseline.snapDb	

Prepared for:
David Wasieleski
attn:David Wasieleski

Farm has 12 fields totalling 414 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

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

Narrative and Crops:

Field Name	Field Acres	2031	2032	2033	2034
A-1	99.5	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-1-NC	16.9	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-2	36.6	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-2-NC	8.7	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

Field Name	Field Acres	2031	2032	2033	2034
A-3	65.1	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-3-NC	10	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-4	17.6	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-4-NC	0.7	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-5	35.6	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-5-NC	3.7	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-6	106.4	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
A-6-NC	13.2	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

Summary by Crop:

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

Crops Grouped By Category		2031	2032	2033	2034
Sod, established	Acres ton	414 0	414 0	414 0	414 0

NM1: Narrative and Crops Report

Starting Year	**2031**
Reported For	**David Wasieleski**
Printed	**2025-08-26**
Plan Completion/Update Date:	**2024-08-28**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\David Wasieleski-Future.snapDb	

Prepared for:
David Wasieleski
attn:David Wasieleski

Farm has 12 fields totalling 414 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

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

Narrative and Crops:

Field Name	Field Acres	2031	2032	2033	2034
A-1	99.5	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-1-NC	16.9	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-2	36.6	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Field Name	Field Acres	2031	2032	2033	2034
A-2-NC	8.7	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-3	65.1	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-3-NC	10	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-4	17.6	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-4-NC	0.7	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-5	35.6	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-5-NC	3.7	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Field Name	Field Acres	2031	2032	2033	2034
A-6	106.4	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
A-6-NC	13.2	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Summary by Crop:

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

Crops Grouped By Category		2031	2032	2033	2034
Grasslands, permanent, not harvested	Acres none	414 0	414 0	414 0	414 0

NM1: Narrative and Crops Report

Starting Year	**2023**
Reported For	**Robert Wolosek**
Printed	**2025-08-26**
Plan Completion/Update Date:	**2024-08-22**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Robert Wolosek-Baseline.snapDb	

Prepared for:
Robert Wolosek
attn:Robert Wolosek

Farm has 4 fields totalling 386.5 cropped acres.
Farm Narrative: B1 = Hermans North
B2 = Hermans 120
B3 = Chets Gator

Annual Farm Notes:

No Annual Farm Notes

Spreader Calibration Methods: Equipment calibration

Narrative and Crops:

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
B1	144.4	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
B2	116.3	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Corn grain No Till 151-170 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
B3	99.7	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
B4	26.1	Corn grain Strip Till 151-170 bu/acre	Soybeans 15-20 inch row No Till 46-55 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

Summary by Crop:

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

Crops Grouped By Category		2023	2024	2025	2026	2027	2028	2029	2030
Potatoes, late harvest	Acres cwt	360 180,180	244 122,122						
Sod, established	Acres ton				387 0	387 0	387 0	387 0	387 0
Sod, seeding, fall	Acres ton			387 0					
Corn grain	Acres bu	26 4,173	116 18,618						
Soybeans 15-20 inch row	Acres bu		26 1,313						

NM1: Narrative and Crops Report

Starting Year	**2023**
Reported For	**Robert Wolosek**
Printed	**2025-08-26**
Plan Completion/Update Date:	**2024-08-22**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Robert Wolosek-Future.snapDb	

Prepared for:
Robert Wolosek
attn:Robert Wolosek

Farm has 4 fields totalling 386.5 cropped acres.
Farm Narrative: B1 = Hermans North
B2 = Hermans 120
B3 = Chets Gator

Annual Farm Notes:

No Annual Farm Notes

Spreader Calibration Methods: Equipment calibration

Narrative and Crops:

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
B1	144.4	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
B2	116.3	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Corn grain Fall Chisel, disked 151-170 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
B3	99.7	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
B4	26.1	Corn grain Strip Till 151-170 bu/acre	Soybeans 15-20 inch row No Till 46-55 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Summary by Crop:

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

Crops Grouped By Category		2023	2024	2025	2026	2027	2028	2029	2030
Grasslands, permanent, not harvested	Acres none					387 0	387 0	387 0	387 0
Potatoes, late harvest	Acres cwt	360 180,180	244 122,122						
Sod, established	Acres ton				387 0				
Sod, seeding, fall	Acres ton			387 0					
Corn grain	Acres bu	26 4,173	116 18,618						
Soybeans 15-20 inch row	Acres bu		26 1,313						

NM1: Narrative and Crops Report

Starting Year	**2031**
Reported For	**Robert Wolosek**
Printed	**2025-08-26**
Plan Completion/Update Date:	**2024-08-22**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Robert Wolosek-Baseline.snapDb	

Prepared for:
Robert Wolosek
attn:Robert Wolosek

Farm has 4 fields totalling 386.5 cropped acres.
Farm Narrative: B1 = Hermans North
B2 = Hermans 120
B3 = Chets Gator

Annual Farm Notes:

No Annual Farm Notes

Spreader Calibration Methods: Equipment calibration

Narrative and Crops:

Field Name	Field Acres	2031	2032	2033	2034
B1	144.4	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
B2	116.3	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
B3	99.7	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
B4	26.1	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

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

Crops Grouped By Category		2031	2032	2033	2034
Sod, established	Acres ton	387 0	387 0	387 0	387 0

NM1: Narrative and Crops Report

Starting Year	**2031**
Reported For	**Robert Wolosek**
Printed	**2025-08-26**
Plan Completion/Update Date:	**2024-08-22**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Robert Wolosek-Future.snapDb	

Prepared for:
Robert Wolosek
attn:Robert Wolosek

Farm has 4 fields totalling 386.5 cropped acres.
Farm Narrative: B1 = Hermans North
B2 = Hermans 120
B3 = Chets Gator

Annual Farm Notes:

No Annual Farm Notes

Spreader Calibration Methods: Equipment calibration

Narrative and Crops:

Field Name	Field Acres	2031	2032	2033	2034
B1	144.4	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
B2	116.3	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Field Name	Field Acres	2031	2032	2033	2034
B3	99.7	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
B4	26.1	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Summary by Crop:

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

Crops Grouped By Category		2031	2032	2033	2034
Grasslands, permanent, not harvested	Acres none	387 0	387 0	387 0	387 0

NM1: Narrative and Crops Report

Starting Year	**2023**
Reported For	**Okray Family Farms**
Printed	**2025-12-23**
Plan Completion/Update Date:	**2024-09-06**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Okray Family Farms-Baseline.snapDb	

Prepared for:
Okray Family Farms
attn:Okray Family Farms

Farm has 4 fields totalling 366.8 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

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

Narrative and Crops:

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
O-1	85.3	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
O-2	191	Sweet Corn early plant (before May 20) Strip Till 6.1-8 ton/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
O-3	80.7	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
O-4-NC	9.8	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

Summary by Crop:

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

Crops Grouped By Category		2023	2024	2025	2026	2027	2028	2029	2030
Potatoes, late harvest	Acres cwt	166 83,083	357 178,679						
Sod, established	Acres ton				367 0	367 0	367 0	367 0	367 0
Sod, seeding, fall	Acres ton			367 0					
Sweet Corn early plant (before May 20)	Acres ton	191 1,347							
Grasslands, permanent, not harvested	Acres none	10 0	10 0						

NM1: Narrative and Crops Report

Starting Year	**2023**
Reported For	**Okray Family Farms**
Printed	**2025-12-23**
Plan Completion/Update Date:	**2024-09-06**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Okray Family Farms-Future.snapDb	

Prepared for:
Okray Family Farms
attn:Okray Family Farms

Farm has 4 fields totalling 366.8 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

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

Narrative and Crops:

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
O-1	85.3	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
O-2	191	Sweet Corn early plant (before May 20) Strip Till 6.1-8 ton/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
O-3	80.7	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
O-4-NC	9.8	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Summary by Crop:

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

Crops Grouped By Category		2023	2024	2025	2026	2027	2028	2029	2030
Grasslands, permanent, not harvested	Acres none	10 0	10 0			367 0	367 0	367 0	367 0
Potatoes, late harvest	Acres cwt	166 83,083	357 178,679						
Sod, established	Acres ton				367 0				
Sod, seeding, fall	Acres ton			367 0					
Sweet Corn early plant (before May 20)	Acres ton	191 1,347							

NM1: Narrative and Crops Report

Starting Year	**2031**
Reported For	**Okray Family Farms**
Printed	**2025-12-23**
Plan Completion/Update Date:	**2024-09-06**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Okray Family Farms-Baseline.snapDb	

Prepared for:
Okray Family Farms
attn:Okray Family Farms

Farm has 4 fields totalling 366.8 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

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

Narrative and Crops:

Field Name	Field Acres	2031	2032	2033	2034
O-1	85.3	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
O-2	191	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
O-3	80.7	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
O-4-NC	9.8	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

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

Crops Grouped By Category		2031	2032	2033	2034
Sod, established	Acres ton	367 0	367 0	367 0	367 0

NM1: Narrative and Crops Report

Starting Year	**2031**
Reported For	**Okray Family Farms**
Printed	**2025-12-23**
Plan Completion/Update Date:	**2024-09-06**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Okray Family Farms-Future.snapDb	

Prepared for:
Okray Family Farms
attn:Okray Family Farms

Farm has 4 fields totalling 366.8 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

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

Narrative and Crops:

Field Name	Field Acres	2031	2032	2033	2034
O-1	85.3	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
O-2	191	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
O-3	80.7	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Field Name	Field Acres	2031	2032	2033	2034
O-4-NC	9.8	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Summary by Crop:

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

Crops Grouped By Category		2031	2032	2033	2034
Grasslands, permanent, not harvested	Acres none	367 0	367 0	367 0	367 0

NM1: Narrative and Crops Report

Starting Year	**2023**
Reported For	**Worzella and Sons**
Printed	**2025-08-26**
Plan Completion/Update Date:	**2024-10-28**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Worzella and Sons-Baseline.snapDb	

Prepared for:
Worzella and Sons
attn:Worzella and Sons

Farm has 14 fields totalling 717.2 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

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

Narrative and Crops:

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
W-1	52.1	Sweet Corn early plant (before May 20) Strip Till 6.1-8 ton/acre	Corn grain Fall Chisel, disked 151-170 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-2	60.2	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-3	72.9	Dry Beans Fall Chisel, disked 21-30 cwt/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
W-3-NC	17	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-4	34.8	Dry Beans Fall Chisel, disked 21-30 cwt/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-4-NC	4.1	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-5	65.7	Dry Beans Fall Chisel, disked 21-30 cwt/acre	Soybeans 15-20 inch row Fall Chisel, no disk 56-65 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-6	115.4	Sweet Corn early plant (before May 20) Strip Till 6.1-8 ton/acre	Corn grain Fall Chisel, disked 151-170 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-6-NC	5.8	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-7A	83.8	Sweet Corn early plant (before May 20) Strip Till 6.1-8 ton/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
W-7B	82.4	Sweet Corn early plant (before May 20) Strip Till 6.1-8 ton/acre	Corn grain Fall Chisel, no disk 151-170 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-7-NC	14	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-8	93.5	Peas Fall Chisel, no disk 2501-4000 lb/acre	Soybeans 15-20 inch row Fall Chisel, no disk 56-65 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-8-NC	15.5	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

Summary by Crop:

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

Crops Grouped By Category		2023	2024	2025	2026	2027	2028	2029	2030
Corn grain	Acres bu		250 40,125						
Sod, established	Acres ton				717 0	717 0	717 0	717 0	717 0
Sod, seeding, fall	Acres ton			717 0					
Sweet Corn early plant (before May 20)	Acres ton	334 2,355							

Crops Grouped By Category		2023	2024	2025	2026	2027	2028	2029	2030
Potatoes, late harvest	Acres cwt	60 30,030	252 126,126						
Dry Beans	Acres cwt	173 4,412							
Grasslands, permanent, not harvested	Acres none	56 0	56 0						
Soybeans 15-20 inch row	Acres bu		159 9,620						
Peas	Acres lb	94 305,547							

NM1: Narrative and Crops Report

Starting Year	**2023**
Reported For	**Worzella and Sons**
Printed	**2025-08-26**
Plan Completion/Update Date:	**2024-10-28**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Worzella and Sons-Future.snapDb	

Prepared for:
Worzella and Sons
attn:Worzella and Sons

Farm has 14 fields totalling 717.2 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

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

Narrative and Crops:

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
W-1	52.1	Sweet Corn early plant (before May 20) Strip Till 6.1-8 ton/acre	Corn grain Fall Chisel, disked 151-170 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-2	60.2	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-3	72.9	Dry Beans Fall Chisel, disked 21-30 cwt/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
W-3-NC	17	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-4	34.8	Dry Beans Fall Chisel, disked 21-30 cwt/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-4-NC	4.1	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-5	65.7	Dry Beans Fall Chisel, disked 21-30 cwt/acre	Soybeans 15-20 inch row Fall Chisel, no disk 56-65 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-6	115.4	Sweet Corn early plant (before May 20) Strip Till 6.1-8 ton/acre	Corn grain Fall Chisel, disked 151-170 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-6-NC	5.8	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-7A	83.8	Sweet Corn early plant (before May 20) Strip Till 6.1-8 ton/acre	Potatoes, late harvest Fall Chisel, disked 451-550 cwt/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Field Name	Field Acres	2023	2024	2025	2026	2027	2028	2029	2030
W-7B	82.4	Sweet Corn early plant (before May 20) Strip Till 6.1-8 ton/acre	Corn grain Fall Chisel, no disk 151-170 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-7-NC	14	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-8	93.5	Peas Fall Chisel, no disk 2501-4000 lb/acre	Soybeans 15-20 inch row Fall Chisel, no disk 56-65 bu/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-8-NC	15.5	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Sod, seeding, fall Disk 0-0 ton/acre	Sod, established None 0-0 ton/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Summary by Crop:

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

Crops Grouped By Category		2023	2024	2025	2026	2027	2028	2029	2030
Corn grain	Acres bu		250 40,125						
Grasslands, permanent, not harvested	Acres none	56 0	56 0			717 0	717 0	717 0	717 0
Sod, established	Acres ton				717 0				
Sod, seeding, fall	Acres ton			717 0					

Crops Grouped By Category		2023	2024	2025	2026	2027	2028	2029	2030
Sweet Corn early plant (before May 20)	Acres ton	334 2,355							
Potatoes, late harvest	Acres cwt	60 30,030	252 126,126						
Dry Beans	Acres cwt	173 4,412							
Soybeans 15-20 inch row	Acres bu		159 9,620						
Peas	Acres lb	94 305,547							

NM1: Narrative and Crops Report

Starting Year	**2031**
Reported For	**Worzella and Sons**
Printed	**2025-08-26**
Plan Completion/Update Date:	**2024-10-28**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Worzella and Sons-Baseline.snapDb	

Prepared for:
Worzella and Sons
attn:Worzella and Sons

Farm has 14 fields totalling 717.2 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

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

Narrative and Crops:

Field Name	Field Acres	2031	2032	2033	2034
W-1	52.1	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-2	60.2	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-3	72.9	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-3-NC	17	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

Field Name	Field Acres	2031	2032	2033	2034
W-4	34.8	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-4-NC	4.1	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-5	65.7	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-6	115.4	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-6-NC	5.8	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-7A	83.8	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-7B	82.4	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-7-NC	14	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-8	93.5	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre
W-8-NC	15.5	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre	Sod, established None 0-0 ton/acre

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

Crops Grouped By Category		2031	2032	2033	2034
Sod, established	Acres ton	717 0	717 0	717 0	717 0

NM1: Narrative and Crops Report

Starting Year	**2031**
Reported For	**Worzella and Sons**
Printed	**2025-08-26**
Plan Completion/Update Date:	**2024-10-28**
SnapPlus Version 20.4 built on 2021-06-03	
C:\SnapPlus2\MySnapPlusData\Plover WQT\Worzella and Sons-Future.snapDb	

Prepared for:
Worzella and Sons
attn:Worzella and Sons

Farm has 14 fields totalling 717.2 cropped acres.
Farm Narrative: None

Annual Farm Notes:

No Annual Farm Notes

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

Narrative and Crops:

Field Name	Field Acres	2031	2032	2033	2034
W-1	52.1	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-2	60.2	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-3	72.9	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Field Name	Field Acres	2031	2032	2033	2034
W-3-NC	17	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-4	34.8	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-4-NC	4.1	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-5	65.7	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-6	115.4	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-6-NC	5.8	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-7A	83.8	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

Field Name	Field Acres	2031	2032	2033	2034
W-7B	82.4	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-7-NC	14	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-8	93.5	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre
W-8-NC	15.5	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre	Grasslands, permanent, not harvested None 0-0 none/acre

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

Crops Grouped By Category		2031	2032	2033	2034
Grasslands, permanent, not harvested	Acres none	717 0	717 0	717 0	717 0

Appendix J
Portage Solar Vegetative Management Plan

Public Service Commission of Wisconsin
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Appendix J

Vegetation Management Plan

Vegetation Management Plan

Portage Solar, LLC
Portage County, Wisconsin
Stantec Project No: 193708026

February 17, 2022

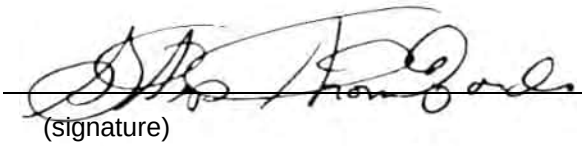
Prepared for:

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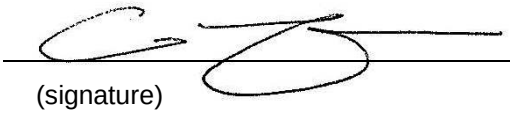
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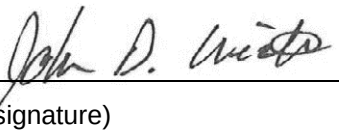
This document entitled Vegetation Management Plan was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Portage Solar, LLC (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others.

Prepared by 
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Reviewed by 
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Aaron Feggestad, Senior Ecologist

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John Wiater, Associate

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EXECUTIVE SUMMARY

Portage Solar, LLC (Portage Solar) is proposing a 250-megawatt (MW) alternating current (AC) photovoltaic (PV) solar project on approximately 2,580 acres in the Town of Plover and Town of Grant in Portage County Wisconsin (Project). The Project includes a new substation, 138 kilovolt (kV) transmission line, a Project O&M Building, and a roughly 137.5 MW Battery Energy Storage System (BESS). The Point of Interconnection (POI) will be the existing American Transmission Company (ATC) Plover 138-kV substation.

Portage Solar has notified staff of the Wisconsin Department of Natural Resources (WDNR) and the Public Service Commission of Wisconsin (PSCW) of its intent to file for a Certificate of Public Convenience and Necessity for the Project (CPCN). This Vegetation Management Plan (Plan) is provided for WDNR and PSCW review to address revegetation following construction and for the creation of pollinator-friendly habitat within select areas around the solar arrays.

Stantec Consulting Services Inc. (Stantec) has worked with Portage Solar to create this Plan. The Plan is compatible with the Project's Preliminary Erosion Control and Stormwater Management Plan (ECSWMP) and provides further guidance on site seeding preparation, seed installation during and immediately following construction, and vegetation management activities over the anticipated 25-year lifespan of the facility. Site preparation typically consists of soil amendments, such as discing or tilling to reduce compaction from construction activities. Management of noxious and invasive plant species, if any, and other weedy species may also be conducted to reduce competition and improve establishment of permanent seed mixes. Temporary seed mixes consist of annual grasses for soil erosion control during or immediately after construction. Permanent seed mixes compatible with the solar arrays and local environmental conditions are installed after construction and site preparation, and include:

- Low growing graminoids (native and non-native grasses and grass-like plants) are proposed for solar array areas;
- Pollinator-friendly vegetation is proposed for select array access roads, perimeter areas, and corridors between array areas; and
- Native wetland vegetation is proposed for existing farmed wetlands (only if wetlands are disturbed during construction).

No seeding is proposed for the transmission line right-of-way unless disturbed.

Following permanent seeding, ongoing management of regulated noxious and invasive plant species and other weedy species may be required to maintain compatibility with PV panels. Vegetation management activities typically consist of cutting (mowing) and targeted herbicide applications over the 25-year window.

1.0 PROJECT OVERVIEW

Portage Solar is proposing (the Project near the Village of Plover, Portage County, Wisconsin (Figure 1, Appendix A). The Project is a 250-MW AC solar installation that includes solar array blocks containing PV panels attached to a single-axis tracking system mounted to steel piles. The PV panels will track the sun during the day. Direct current (DC) electricity from the PV panels will be routed underground through collection wiring to Power Conversion Units (PCUs) located throughout the PV array areas. Each PV array area will be fenced and have gated access at the road entrances. Constructed access roads will be gravel and approximately 12 to 15 feet wide. Construction is anticipated to begin as early as Q2 2024 and be completed by the end of 2025.

The total Project area is approximately 2,580 acres, including both primary and alternate array locations. For this Plan, the Project Development Area will refer to only areas within the primary and alternate array fences and any areas that are cleared of trees and also not included in the impervious surfaces of the substation, O&M building, and BESS facility. Areas that are disturbed for Project purposes will be re-vegetated per the ECSWMP. This Plan supplements and does not replace the guidance provided in the ECSWMP.

The typical minimum leading-edge height between the PV panels and the ground is between 30 and 42 inches. Post-to-post spacing between rows is approximately 27 feet. Final spacing within the arrays will be determined once equipment selection is finalized and the detailed engineering plan is complete. The installation of low-growing plant species and performance of vegetation management practices within the PV panel areas will be conducted to minimize vegetation touching the panels.

The existing topography within the Project area is relatively level, with 0 – 3% slopes; minor grading is anticipated to occur for Project installation. The Project area is comprised of mainly cropland including potato, sugar beets and alfalfa fields. Soils within the primary and alternate array areas are mapped by Natural Resource Conservation Service (NRCS). Primary soils include Meehan sand loams (MnA 34% coverage), Plainfield sand loams (PfA 28% coverage), Friendship sand loams (FrA 21% coverage), and Newsome muck sand loams (Nw 17% coverage). These soils range in drainage characteristics from poorly to excessively drained; however, all primary soils exhibit low water holding capacity; therefore, for vegetation purposes, these soils support Dry to Dry-Mesic plant communities (e.g., short-grass prairie).

This Plan is based on information to date and is subject to change based on final Project design, schedule, budget, and seed availability.

2.0 PLAN GOALS

Specific goals of this Plan include the following:

- Compatibility, adaptability, and compliance with the Project ECSWMP once that is written;
- Maintaining compliance with Wisconsin Administrative Code ch. NR 216 requirements regarding revegetation after construction of the Project;
- Maintaining soil health so that Project lands may be returned to productive agricultural land use after Project decommissioning, if such use is desired by the landowner;
- Managing populations of existing noxious and invasive species within the Project Development Area, as feasible;
- Developing and installing permanent seed mixes that support the following objectives:
    - Low growth, quickly established, low maintenance species that can tolerate routine mowing and traffic,
    - A mix of species adaptable to the wide range of environmental parameters (soils, drainage, sun and shade, and local climate) that are expected to develop in paneled areas,
    - Compatible with engineering objectives including height restrictions as well as capacity to form continuous, dense vegetation stands; and
    - Use of native species, including pollinator-friendly, in select areas.
- Preparing seed beds and employing seed installation methods suitable for temporary and permanent seed; and
- Establishing and maintaining vegetation for the Project Development Area through the anticipated 25-year life span of the facility.

3.0 PLAN IMPLEMENTATION

3.1 SITE PREPARATION

The following section describes site preparation tasks that may be conducted prior to the installation of the permanent seed mixes. All site preparation activities shall maintain compliance with the ECSWMP.

3.1.1 Seedbed Preparation and Temporary Cover

When construction is complete, soils will be disced or chisel harrowed to reduce surface compaction typically associated with construction disturbance. A firm, smooth seedbed will be prepared by dragging or rolling following surface de-compaction. An initial temporary cover crop will be installed into the prepared seedbed (Table B.1-A, Appendix B). The Project will be maintained in temporary cover until permanent seeding occurs. It is assumed that no further seed bed preparation will be required prior to the installation of the permanent seed and that the permanent seed can be installed over the temporary cover crop.

3.1.2 Invasive and Weed Species Management

For this Plan, invasive and weed species are defined under the following two categories:

1. Compliance – includes species covered under State of Wisconsin Noxious Weeds law (Wis. Stat. sec. 66.0407) and Wisconsin Administrative Code ch. NR 40, Invasive Species Identification, Classification and Control. These species will be referred to in this Plan as 'invasive species.'
2. Compatibility – includes species that are not legally defined as noxious or 'invasive' but may interfere with the solar panels due to plant height, may interfere with ecological goals and the establishment of native species, or may pose vegetation management concerns. These species will be referred to in this Plan as 'weeds.'

Invasive and weed species management will be conducted as needed to

- Minimize the spread of invasive species from existing populations, if present;
- Prepare the seeding areas for permanent vegetation to reduce competition and improve establishment and success of the permanent seed mixes; and
- Reduce vegetation impacts to the PV panels and solar facility infrastructure. Flowering non-native species that are not considered invasive and do not have heights that would interfere with the Project operations will not be actively managed.

Invasive and weed species management may consist of spot cutting, mowing, and herbicide treatments.

3.1.3 Cutting and Mowing

Vegetation cutting shall be appropriately timed to assist with control of invasive and weedy species (e.g., mow biennial species during flowering but prior to seed production) and to remove vegetation to assist with site seedbed preparation. Methods will be selected based on aerial extent of vegetation and site accessibility.

3.1.4 Herbicides

Herbicide treatments are recommended for management of perennial invasive species, as mowing alone is not typically sufficient for adequate control. Ongoing management of invasive species may be required for compliance with existing invasive plant species regulations. Herbicides are also used to remove undesirable vegetation to prepare seeding areas for permanent seed installation.

Herbicide Types

There are three general types of herbicides that are applicable for use within the Project: non-selective, broadleaf-selective, and grass-selective.

Non-Selective Herbicides

Non-selective herbicides injure or kill all types of vegetation, including broadleaves, grasses, sedges, rushes, and woody plants. Glyphosate is commonly used to remove all vegetation to prepare areas for permanent seeding.

Broadleaf-Selective Herbicides

Broadleaf-selective herbicides are intended to injure or kill only broadleaf plants. There are many types of broadleaf herbicides. Two types commonly used in natural settings include 2,4-D and triclopyr. Both 2,4-D and triclopyr are used to remove broadleaf plants from grass-stands and turf lawns. Other broadleaf herbicides are highly selective and effective for specific invasive species. For example, the active ingredient clopyralid is very effective for controlling noxious Canada thistle (*Cirsium arvense*), other invasive Asters (Asteraceae), and invasive legumes (Fabaceae). These herbicides are all appropriate for controlling invasive broadleaf weeds within the PV panel arrays where only graminoid (grass and grass-like plants such as sedges and rushes) species will be installed. Extra caution should be taken to avoid injury to desirable graminoid species by waiting to apply herbicides after grasses, sedges, and rushes have matured and flowered. Triclopyr is also effectively used to target many woody species.

Grass-Selective Herbicides

Grass-selective herbicides are intended to injure or kill only grasses. The most common grass-selective herbicide is clethodim. It is used to selectively target undesirable grasses growing among desirable broadleaf plants. These herbicides may be appropriate for controlling certain invasive grasses in areas with pollinator-friendly vegetation.

Herbicide Application Methods and Timing

There are two primary methods to apply herbicides: low volume/spot applications and broadcast applications. Methods and timing should be based on a site-specific evaluation of target species, vegetation composition, and sensitivity of adjacent areas to herbicide applications.

Low Volume/Spot Applications

This method utilizes a hand-held sprayer mounted to small (3.5 to 25 gallon) tanks to selectively deliver herbicide to individual plants or small clumps of plants. Backpack sprayers are suitable for small areas while pistol sprayers mounted to an all-terrain vehicle or utility terrain vehicle (UTV) are suitable for larger areas or large clumps of vegetation. Wicks may also be used for ultra-low volume delivery of herbicide to undesirable plants growing in sensitive ecological areas. This method may be appropriate for managing discrete populations of weedy and invasive species before and during construction.

Broadcast Applications

This method utilizes a boom or boomless sprayer tanks mounted to a UTV or tractor to broadcast herbicide to large areas. This method is appropriate for large-scale site preparation to remove weedy and invasive vegetation from large areas using a non-selective herbicide.

Proposed Herbicides

The herbicides that may be used in the Project are listed below in Table 1. These herbicides are frequently used in natural area settings to assist with management of species that would be expected to occur in the Project area. These herbicides have a relatively short half-life and moderate to very unlikely potential to reach shallow groundwater.

Table 1. Environmental Information for Proposed Herbicides

Active Ingredient	Herbicide Type	Potential Uses	Environmental Fate[1,2]			
			Water Solubility	Soil Half- life	Mineral Soil Sorption Coefficient KOC / FAO Mobility Classification[3]	Groundwater Ubiquity Score (GUS)[4] / Potential to Reach Shallow Groundwater
Glyphosate	Non- selective systemic foliar	Non-selective treatment of grasses and broadleaf plants	Very soluble	3.6 days	40,000 in silty/loam soils / Immobile	-0.25 in silty/loam soils / Very unlikely
2,4-D	Broadleaf systemic foliar	Selective treatment of weedy and invasive broadleaf plants	Moderately soluble	2.9 days	88 in silty/loam soils / Mobile	1.13 in silty/loam soils / Unlikely
Triclopyr	Broadleaf selective foliar	Selective treatment of woody plants	Moderately soluble	13 days in unknown soil	93.5 in unknown soil / Mobile	2.26 in unknown soil / Moderate potential
Aminopyralid	Broadleaf selective foliar Species selective	Specific noxious and invasive weeds	Very soluble	81.5 days in unknown soil	2.33 in unknown soil / Highly Mobile[5]	6.94 in unknown soil / Likely[5]
Clopyralid	Broadleaf selective foliar Species selective	Specific noxious and invasive weeds Asters and legumes	Very soluble	12.8 days	2.64 in silt loam / Highly Mobile[5]	3.96 in silt loam / Likely[5]
Clethodim	Grass-selective systemic foliar	Selective treatment of weedy and invasive grasses	Very soluble	3 days in unknown soil	137.5 in unknown soil / Moderately mobile	0.89 in unknown soil / Unlikely

[1] Information from Herbicide Properties Tool at the National Pesticide Information Center – Oregon State University. Accessed online on 8/7/2020 at http://npic.orst.edu/HPT/#.

[2] Reported for silty/loam or silt loam soils unless otherwise stated in the Herbicide Properties Tool search results.

[3] Based on FAO Mobility Classification in *Guidance for Reporting on the Environmental Fate and Transport of the Stressor Concern in Problem Formulations*. https://www.epa.gov/pesticide- science-and-assessing-pesticide-risks/guidance-reporting-environmental-fate-and-transport#II_C.

[4] Potential to Reach Shallow Groundwater based on discussion in the Herbicide Properties Tool search results.

[5] Appropriate for low volume foliar herbicide applications targeting individual plants or clumps of plants.

Herbicide Adjuvants

Adjuvants are typically added to herbicide mixes to improve herbicide performance. Adjuvants typically used for natural areas management include hard water treatment additives, surfactants, and penetrants. Herbicide labels should be consulted for recommendations on the types of adjuvants to add to a mix. In general, aquatic-approved adjuvants should be used to minimize potential impacts on wildlife, including pollinators. Aquatic-approved adjuvants should always be used in and near areas of standing water.

Herbicide Standard Industry Practices

Herbicides are a valuable vegetation management tool when used according to the manufacturer's instructions and following standard industry practices. The following practices are recommended when using herbicides to manage undesirable vegetation:

1. Vegetation managers should apply principles of integrated vegetation management. Herbicides will be used as one of several available 'tools in the toolbox' to manage vegetation and habitats in an ecologically sensitive manner, in addition to cutting, engineering controls, and cultural controls.
2. The lowest volume of herbicides and adjuvants necessary to complete a vegetation management task should be utilized. This consists of use of targeted application techniques, when practicable, and use of properly calibrated equipment to minimize environmental effects.
3. The lowest concentrations of herbicides and adjuvants as recommended by product labels should be used to achieve intended outcomes.
4. Selective herbicides should be used to limit effects on non-target plants.
5. Herbicide applications should be conducted during favorable weather conditions to minimize off-site drift and run-off.
6. Herbicide labels and Safety Data Sheets should be read prior to mixing, loading, and application.
7. Herbicide should be applied to plants when plants are most physiologically prone to injury by active ingredients. Plants are most prone to herbicide injury when they are actively growing. Plant life cycles targetable for herbicide application include the flower bud-stage and the cool season photosynthesizing rosette stage. Plants that have senesced following flowering or are inactive due to high heat or drought should not be treated.

Additional practices may be developed, as needed, based on Project area conditions.

Herbicide Permitting

Herbicide treatments shall be performed by individuals with a current Commercial Pesticide Applicator certification and license issued through Wisconsin Department of Agricultural, Trade, and Consumer Protection, and in accordance with all applicable laws, regulations, and herbicide label instructions.

Herbicide use in wetlands and other aquatic areas (regulated in Wisconsin under Wisconsin Administrative Code ch. NR 107, Aquatic Plant Management, and the Wisconsin Pollution Discharge Elimination System general permit) is not anticipated.

4.0 VEGETATION INSTALLATION

4.1 SEEDING PLAN

The seeding plan for this Project includes temporary seed installation and permanent seed installation, as described in detail in the following sections. These seed mixes are customized to be compatible with PV panels and adapted to Project area environmental constraints that are expected to develop following PV panel installation.

4.1.1 Temporary Seed

Temporary seeding of cover crops is employed to stabilize soils disturbed by Project construction or to stabilize bare soils following removal from agriculture production. Temporary cover crops are replaced by permanent vegetation following installation of PV panels. Temporary cover crop rates are higher when permanent seed is not installed to provide adequate vegetative cover and protection from soil erosion. Cover crop seed mixes are designed to meet two primary objectives:

1. Compliance with the ECSWMP; and
2. Stabilization of soils to assist with establishment of permanent vegetation.

Cover crops are composed of annual grasses that establish quickly, provide erosion control, establish residue for later permanent seedings, build soil organic matter, and assist with weed suppression. Three annual grasses – winter wheat (*Triticum aestivum*), seed oats (*Avena sativa*), and annual rye grass (*Lolium multiflorum*) are utilized, depending on installation timing. Each of these species is listed on the WDNR Technical Standard 1059 – Seeding for Construction Site Erosion Control, and each species has a relatively wide tolerance of soil conditions.

Specific species and installation rates are selected based on installation timing, mechanism (drilled versus broadcast seeded), and whether cover crops are installed with or without permanent seed. Cover crop mixes, rates, strategies, and timings are provided in Tables B.1-A through B.1-D (Appendix B).

For sites developed on infertile soils, or on highly disturbed soils, the addition of legumes in cover crops can enhance fertility for permanent vegetation establishment. Soils in the Project area have been cropped with legumes including soybeans and alfalfa and have likely been augmented with nitrogen fertilizer. As such, legume cover crops will not likely be needed unless local conditions warrant usage. Native legumes are included in the permanent pollinator-friendly seed mix as they assist with natural nutrient cycling in native plant communities.

Solar Production Area

The solar production area is comprised of areas under and between the PV panel arrays. Temporary seeding in this area is completed in phases, starting concurrently with site preparation.

- Phase 1 – Late summer/fall 2023 (August-September) phased with active site seeding preparation. The temporary fall cover crop seed mix (Table B.1-A, Appendix B) is installed to establish vegetation cover that will overwinter and provide residue for additional temporary seeding in the 2024 growing season. Installation by drilling into exposed soils is preferred for seed establishment but may include broadcasting at higher rates.
- Phase 2 – Spring 2024 (mid-April-June). The temporary spring-summer cover crop seed mix (Table B.1-C, Appendix B) is installed across the entire Project area by drilling and broadcasting.
- Phase 3 – Spring-fall 2024 (mid-April-September). The aforementioned cover crop seed mixes (Tables A.1-A and A.1-C, Appendix B) will be installed, as needed, to revegetate areas disturbed by construction activities.

4.1.2 Permanent Seed

Proposed permanent seed mixes are provided in Tables B.2-B.4 (Appendix B). A description of the mixes and installation location is provided below, and a map of proposed seeding areas is provided as Figure 2 (Appendix A). Proposed seeding locations are dependent on the final design (e.g., distance between panels, fence placement).

Pollinator habitat is proposed for select array access roads, perimeter areas, and corridors between array areas where taller growing vegetation will not encroach on PV panels.

Three permanent seed mixes are proposed for the Project area as follows:

1. Low Grow Native / Non-Native Graminoid Seed Mix for PV Panel Areas (Table B.2)
2. Pollinator Refuge Prairie Seed Mix – Select Buffer Areas (Table B.3)
3. Pollinator Refuge Wetland Native Seed Mix (Table B.4)

Low Grow Native / Non-Native Graminoid Seed Mix for PV Panel Areas (Table B.2)

The seed mix is intended to provide permanent low maintenance and low stature vegetation over a variety of environmental conditions. Additionally, this mix is designed to be cost-effective, while providing deep-rooted plant cover and diversity in locations where native wildflowers and tall vegetation are not suitable. Once established, this seed mix has the potential to offer a variety of wildlife benefits including nesting habitat and food resources for pollinators.

This mix blends native and non-native perennial graminoids with common low growing clovers. Non-native species in this mix may act as surrogates for historic native cool season species or varieties, such as blue grasses (*Poa* spp.), bent grasses, (*Agrostis* spp.), and fescue grasses (*Festuca* spp.). Inclusion of these species is intended to fill the functional cool-season niche in grasslands including providing active growth during the cool seasons (e.g. vernal and autumnal) and suppression of cool season invasive and weedy species. Together, the proposed species are adapted to compacted soils, well drained to poorly drained soils, wet and drought conditions, sun and shade, cool and warm seasons, and cold and hot weather. In addition, growth habitat is diversified by inclusion of species that are bunch forming and turf forming. None of the species are considered invasive or noxious under State of Wisconsin Noxious Weeds law (Wis. Stat. sec. 66.0407) or the Wisconsin Invasive Species Rule (Wis. Admin. Code ch. NR 40).

Pollinator Refuge Native Prairie Seed Mix – Select Buffer Areas (Table B.3)

This mix contains native grasses, sedges, rushes, and wildflowers. The mix is intended to promote a diversity of wildflowers, with flowering occurring over each of the three blooming periods (spring, summer, and fall), along with native bunch grasses and sedges that provide benefits to pollinators and other wildlife. The seed mix is intended to be cost-effective, provide short to medium stature native plant cover and diversity, and improve long-term soil health. This mix is intended for areas outside a 20-foot buffer from the PV panel arrays in areas including select access roads, perimeter, and corridors between main arrays.

Pollinator Refuge Wetland Native Seed Mix (Table B.4)

This mix contains native grasses, sedges, rushes, bulrushes, and wildflowers of short to medium stature suitable for wetlands (hydric and partially hydric soils). The mix is intended to promote development of native wetland plant communities and pollinator habitat in areas that are presently farmed. No field delineated wetlands are located within array fences. Wetlands outside the array fence will only be seeded if disturbed during construction

Each of three mixes are compared in Table 2 below.

Table 2. Seed Mix Comparison

Attributes	Low Grow Native / Non-Native Graminoid Mix	Pollinator Refuge Native Prairie Mix	Pollinator Refuge Native Wetland Mix
Dominated by native species	**Yes**	**Yes**	**Yes**
Growth height below 30 inches	**Yes**	**Yes**	**Yes**
Wildflowers / multi-season blooms	**No**	**Yes**	**Yes**
Pollinator habitat	**Yes**	**Yes**	**Yes**
Wildlife habitat	**Yes**	**Yes**	**Yes**
For moderately to poorly drained soils	**Yes**	**Yes**	**Yes**
For well drained soils	**Yes**	**Yes**	**No**
Shade tolerant	**Yes**	**No**	**No**
Sun tolerant	**Yes**	**Yes**	**Yes**
ECSWMP Compliant	**Yes**	**Yes**	**Yes**
Project Compatible	**Yes**	**Yes**	**Yes**
Contributes to Soil Health	**Yes**	**Yes**	**Yes**

Permanent Seed Installation

Permanent seed will be installed following construction and seeding preparation. Since preparation work will be conducted prior to the temporary seeding, no further seed bed preparation earthwork is anticipated beyond the shallow disc harrowing, raking, and/or rolling that will be conducted when construction is completed. It is assumed that the permanent seed can be installed directly into the temporary cover crop thatch.

Timing

Native seed is best installed during the spring seeding window (approximately March 15-June 30) or the fall/frost seeding window (October 30-snow cover or during a period of light snow cover in the winter). Dormant season seeding (October thru March) should increase seed rates by 20%.

A cover crop should be installed with the permanent seed. If permanent seed is installed during fall through winter, the cover crop should consist of winter wheat and annual ryegrass (Table B.1-B, Appendix B). If permanent seeding occurs in the spring through early summer, the cover crop should consist of oats and annual ryegrass (Table B.1-D, Appendix B). Cover crop is installed at a lower rate when combined with permanent seed.

Installation Methods

Seed can be installed with a drill, a broadcast seeder or broadcast by hand within and between the PV panel rows and near above-ground structures. Outside of the PV panel arrays, seed may be installed with a seed drill or broadcast seeded. Broadcast seeding should increase seed rates by 20%. For erosion control, permanent seed is seeded into standing cover crop thatch and or seeded with a cover crop as described above. Areas without remnant temporary cover crop thatch may need mulching.

5.0 MONITORING AND MAINTENANCE PLAN

All areas will require ongoing maintenance to establish and maintain desirable vegetation that is compatible with PV panels and Project operations. Maintenance is expected to be most intensive in the establishment phase, or approximately two years following seeding, as desirable species germinate, grow, and mature. In general, native species take longer to mature than non-native species. Vegetation cutting and herbicide applications are typical management activities as discussed below. Monitoring will occur to confirm compatibility of vegetation with facility goals concurrently with routine vegetation maintenance activities.

5.1 VEGETATION CUTTING

Cutting, by mowing or hand-trimming, is the primary management tool used to aid in the establishment of desirable vegetation. Cutting is employed to reduce height, reduce flowering of undesirable vegetation, and maintain sunlight at the ground surface to encourage germination and growth of desirable species. Mowing using a deck mower is applicable in areas that are accessible with a small tractor and mower. Flail mowers are preferred but rotary mowers are acceptable if significant clumping of grass clippings is minimized. A 3-point side-mounted trimmer mower attached to a small tractor may also be used to cut vegetation around steel piles and under panels if areas are accessible with equipment.

5.1.1 Mowing Frequency and Timing

Establishment Phase

Frequent cutting is typically required in all seeding areas during the establishment phase (post-seeding years 1 and 2) to reduce fast-growing (annual and biennial) weeds, minimize vegetation height under the PV panels, and assist with growth of desirable species. Following permanent seeding, anticipate establishment mowing to occur 4 weeks following seeding and about every 4-6 weeks thereafter from mid-spring to mid-fall.

Transition Phase

By the third growing season, desirable vegetation should be established. Years 3-5 represent a transition phase where desirable vegetation becomes increasingly established but remains susceptible to weed growth. The frequency of cutting may be reduced, or transition to selective mowing to target specific areas of weed growth and minimize vegetation height under the PV panels.

Long-Term Maintenance

Over the long-term (years 6-25), mowing should occur at least once every other year in mid-summer or in late fall to reduce thatch and minimize the establishment of woody vegetation.

Actual mowing frequency is dependent upon soil moisture; dry periods will reduce mowing frequency.

5.1.2 Mowing Height

Specific recommendations for mowing height vary by seed mix.

Low Grow Native / Non-Native Graminoid Seed Mix for PV Panel Areas (Table B.2)

During the establishment phase, these areas should be mowed when vegetation reaches a height of 8-12 inches and be cut back to a height of 4-6 inches, starting the growing season when permanent seed is installed. Installed species within the mix will likely stay below 32 inches in height (typically 12 - 24 inches) at maturity. Mowing during the transition phase and for long-term maintenance should be done as needed to a height of 6-8 inches.

Native Seed Mixes (Tables B.3 and B.4)

Native seed mixes include the Pollinator Refuge Prairie Mix (Table B.3) and the Pollinator Refuge Wetland Mix (Table B.4). In general, these areas should be mowed when vegetation reaches a height of 12-16 inches, starting the growing season immediately following permanent seeding. Vegetation in native planting areas should be cut to a height of 6-8 inches during the first growing season following seeding. During the

transition phase, as more native plants are established, mowing height should be raised to 10-12 inches and done selectively to target only tall and/or invasive and weedy species. Routinely mowing and mowing lower than 6-8 inches after the establishment phase will harm native plants and should be minimized. Long-term maintenance mowing should be conducted every other year and vegetation should be cut back to 6-10 inches. Routine mowing and short mowing of native species should be avoided.

5.2 HERBICIDE APPLICATIONS

Herbicides may be used for long-term maintenance of areas planted with each seed mix. Herbicide type and method of application are highly dependent on target species and vegetation maintenance goals. Low volume / spot applications are appropriate for use in all areas during the establishment period (years 1 and 2) to spot treat invasive and incompatible species. Beyond the establishment period, this method is also appropriate for use in areas planted in pollinator-friendly seed mixes to minimize impacts on desirable vegetation and wildlife. Broadcast applications are generally not appropriate in areas planted with the native species and near PV panels. A combination of herbicides and application techniques is typically required to manage large areas. Herbicide use will be minimized to the extent practicable and will be conducted by trained and licensed personnel in accordance with label directions and standard industry practices.

6.0 PRELIMINARY SCHEDULE OF ACTIVITIES

The table below provides a preliminary schedule of activities that will occur up to permanent seed installation.

Table 3. Preliminary Schedule of Vegetation Management Activities

Activity	Timeframe[1]
Contract with nursery to procure native seeds	Late winter 2023
Start of construction	June 2024
Initial temporary seed installation following vegetation removal, grading, and as-needed seed bed preparation	June-August 2024
Secondary temporary seed installation	Spring 2025
As-needed temporary seed installation to stabilize soils impacted by construction	Growing season 2025
Project COD, start of 25-year facility life period	September 2025
Install permanent native seed mixes (Mixed Native & Non- Native Graminoid Seed Mix, and Upland Pollinator-friendly Seed Mix)	October 2025 - November 2025
Maintain permanent vegetation	November 2025 - September 2050

[1] Timing for vegetation management activities may be based on construction sequencing. Actual schedules for temporary seed installation, seed bed preparation, and permanent seeding may be based on construction timing within each array area.

7.0 SUMMARY

This Vegetation Management Plan was prepared to outline revegetation tasks after construction of the Project area. This Plan provides guidance to Portage Solar on 25 years of maintenance following the installation of permanent vegetation. The Plan recommends the installation of three seed mixes:

1. Low Grow Native / Non-Native Graminoid Seed Mix for installation under and between the PV panels in moderately to poorly drained soils. This mix is anticipated to be compatible with minimum leading-edge height of 30 inches to 36 inches and shading from the panels, as well as provide low maintenance and hardy vegetative cover
2. Pollinator Refuge Prairie Seed Mix in select buffer areas, where feasible, that includes pollinator-friendly wildflowers, bunch grasses, and sedges.
3. Pollinator Refuge Wetland Seed Mix in existing farmed wetlands that includes pollinator friendly vegetation.

The implementation and maintenance tasks provided in this Plan will assist Portage Solar in maintaining compliance with PSCW requirements for Project revegetation. It is anticipated that implementation of the recommendations in this Plan will result in improved plant species diversity and soil health compared to the pre-construction agricultural land use conditions.

APPENDICES

APPENDIX A FIGURES

Figure 1. Location and Solar Array Map
Figure 2. Vegetation Management Plan

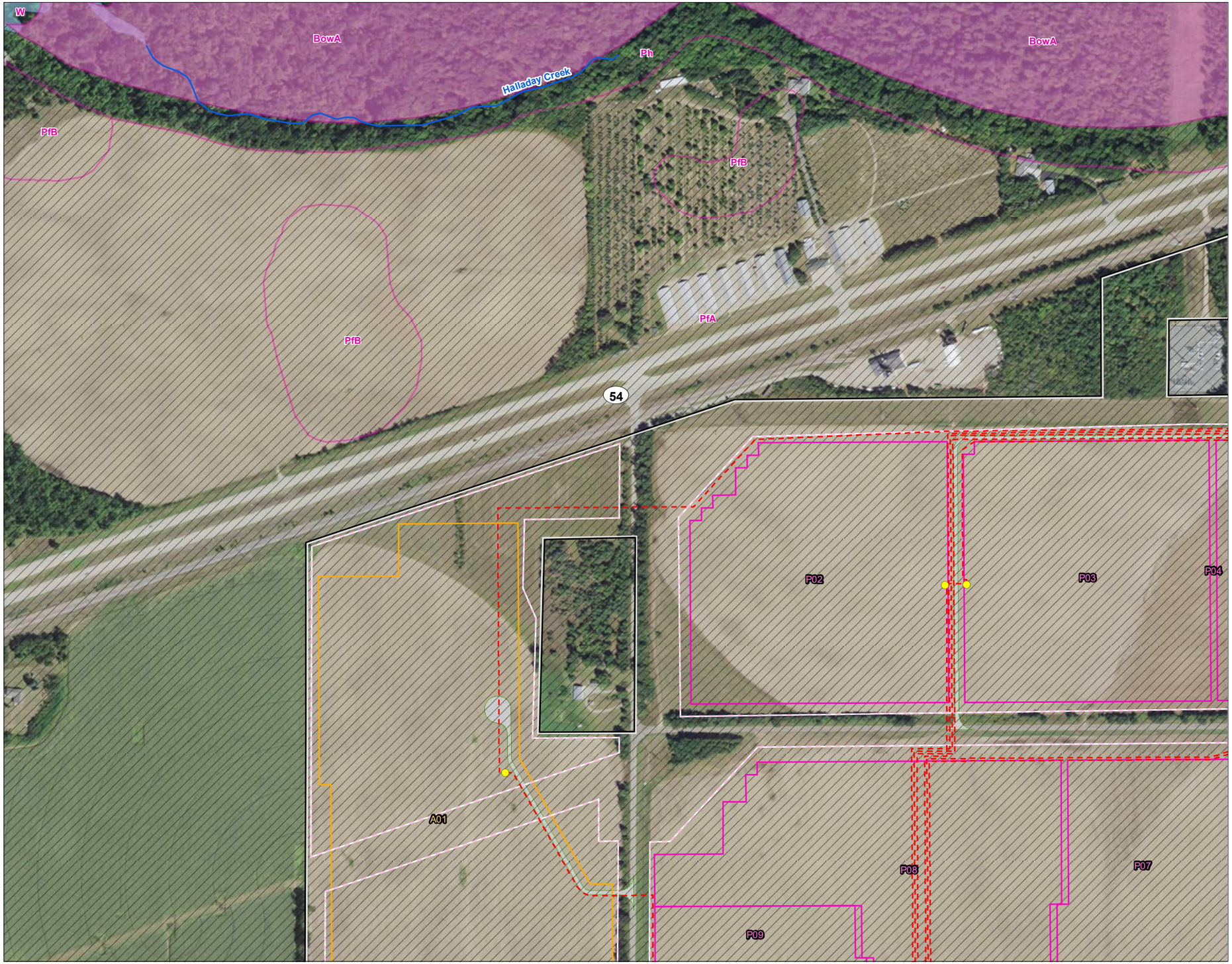


Figure No.
1

Title
Contextual Overview

Client/Project 193708026
National Grid Renewables
Portage Solar LLC Project

Project Location
T. of Grant and Plover
Portage Co., WI

Prepared by JM on 2022-01-25
TR by RA on 2022-01-28
IR by XX on 2022-XX-XX

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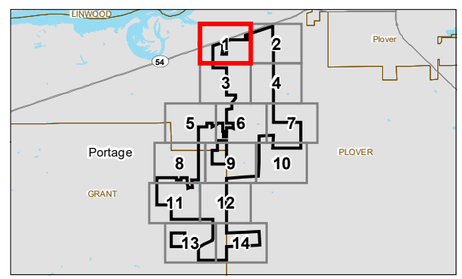
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- Collection System
- Access Road
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NRCS Soil Survey Data
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NRCS Soil Survey Data
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- Well Drained Soil*

DNR 24k Hydrography
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*No features within data frame



Notes
1. Coordinate System: NAD 1983 HARN Wisconsin TM
2. Data Sources: Stantec, National Grid Renewables, WisDOT, WDNR, NRCS
3. Background: 2020 NAIP

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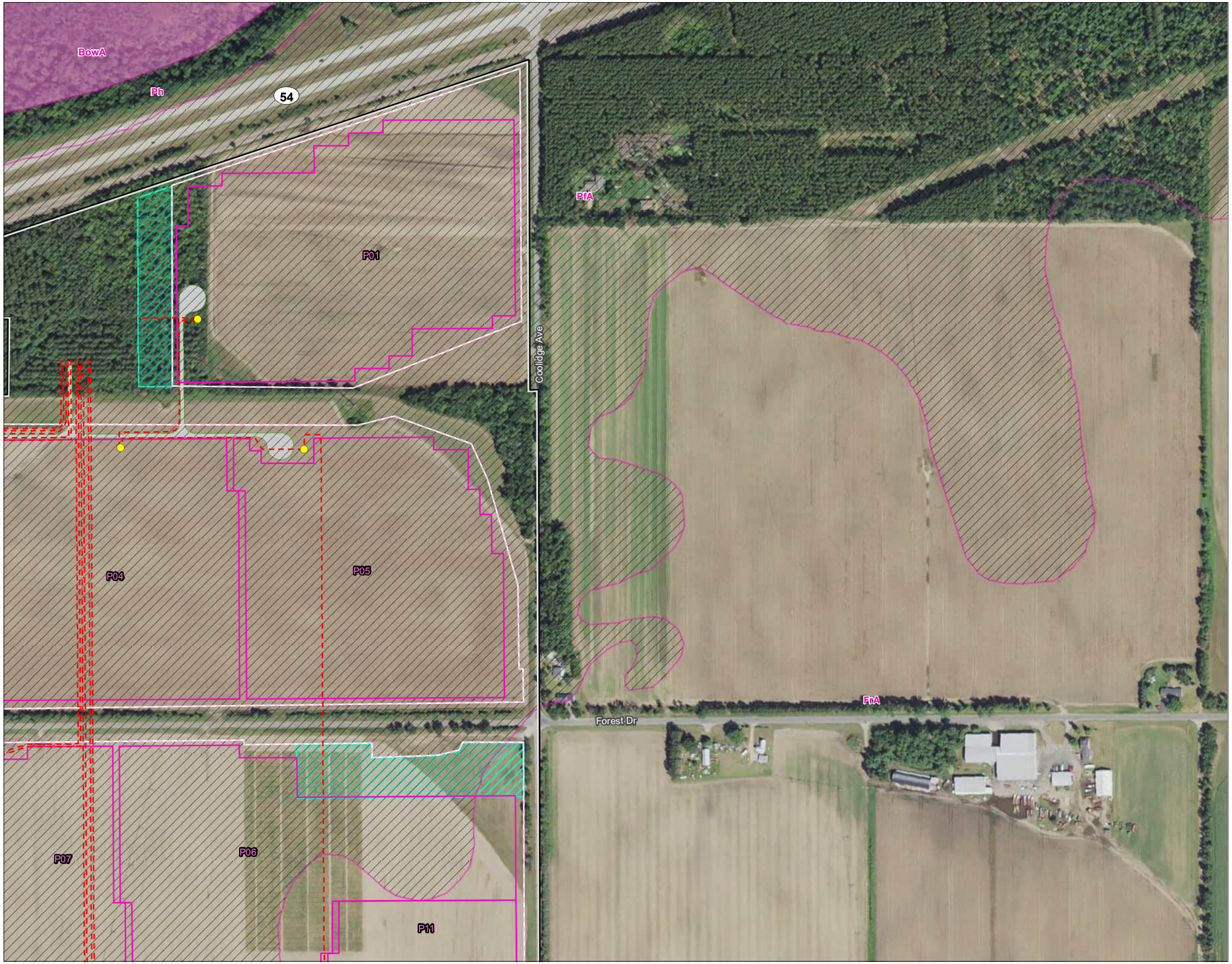


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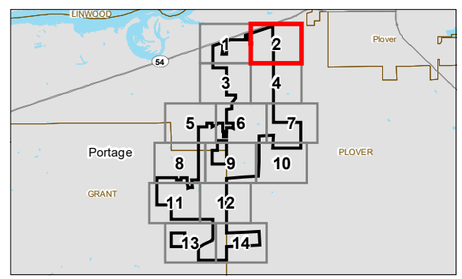
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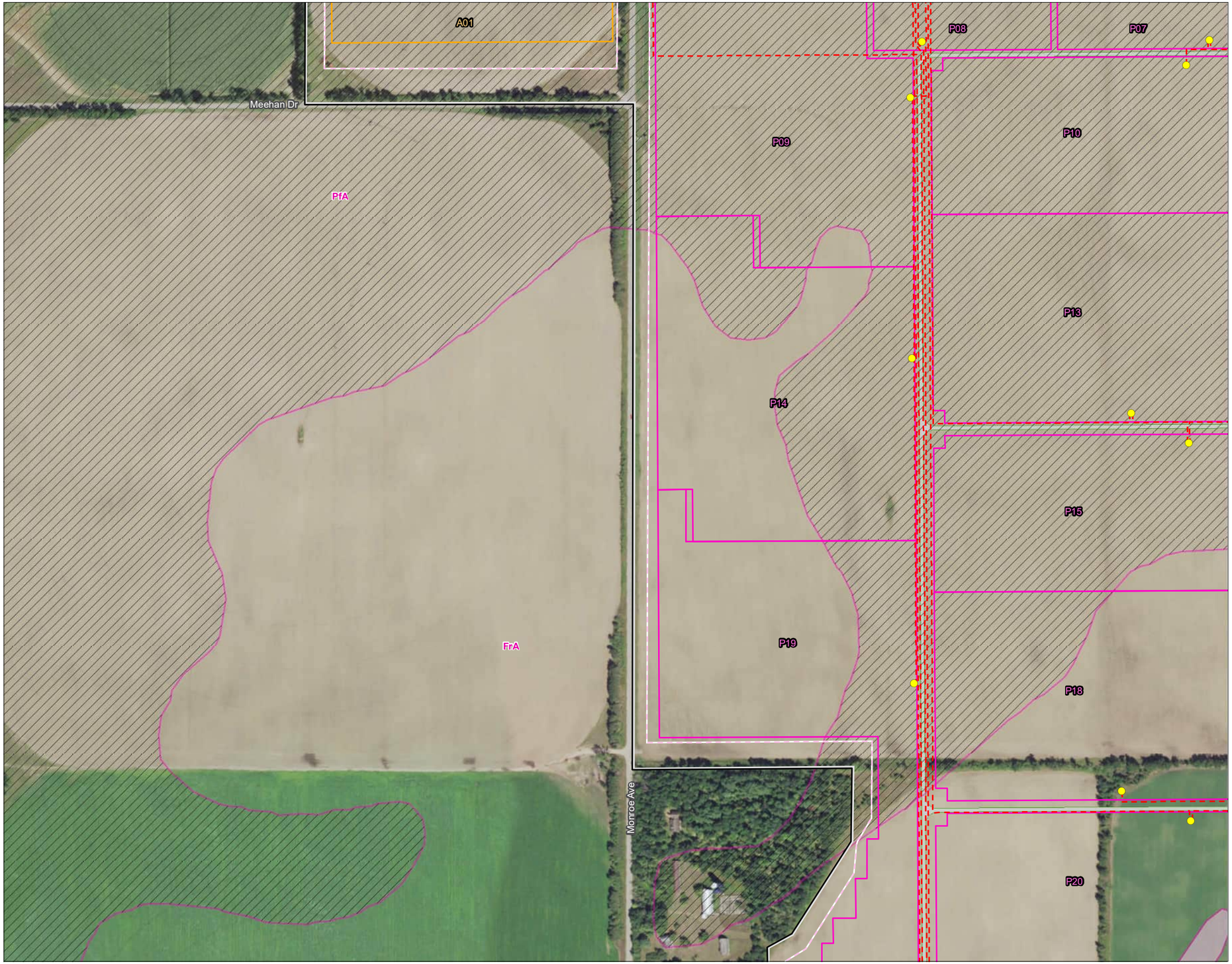


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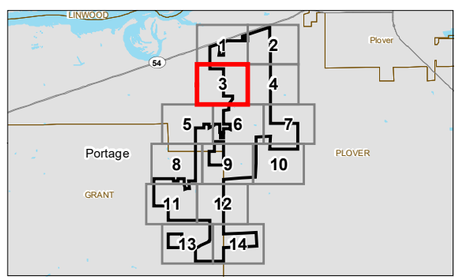
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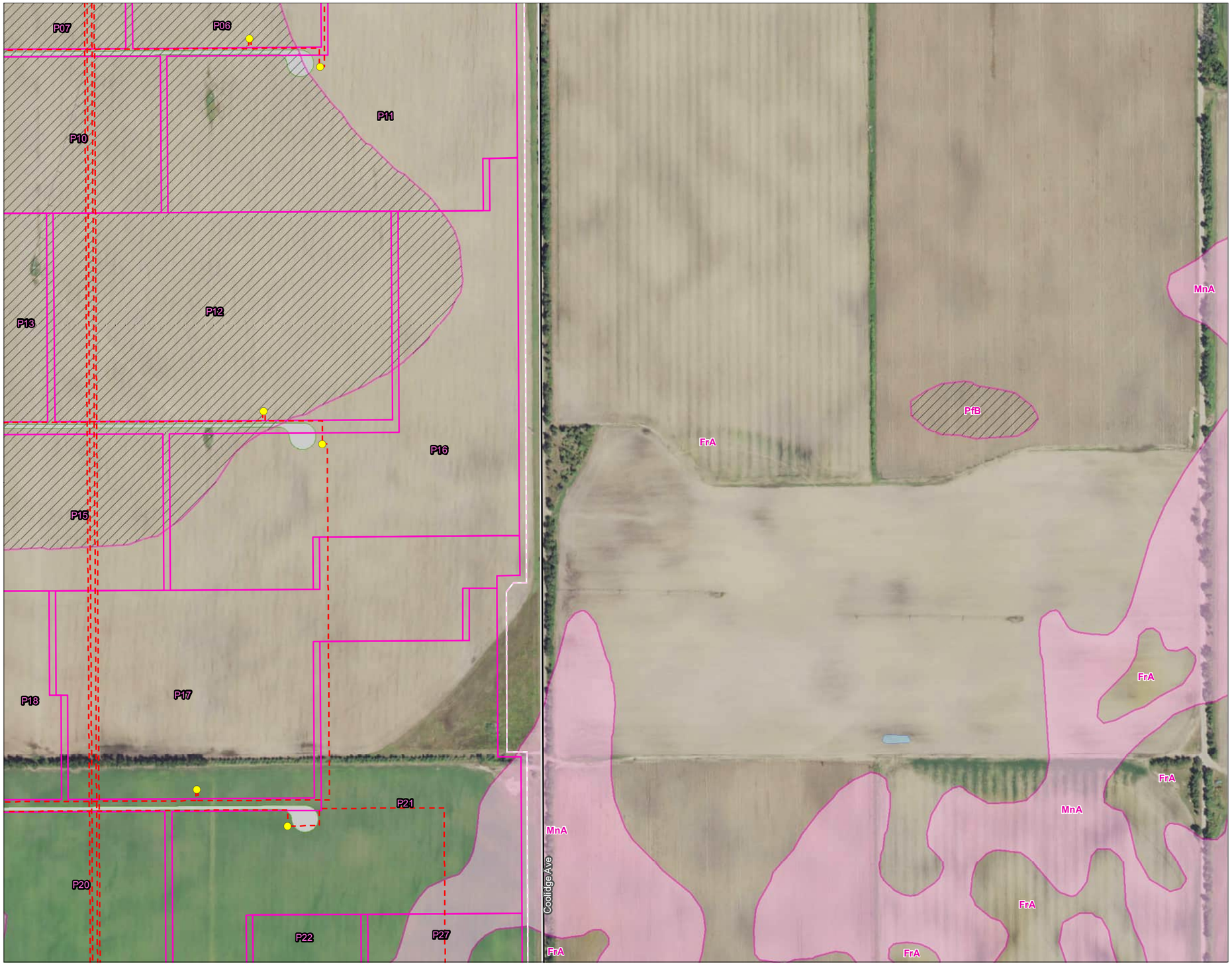


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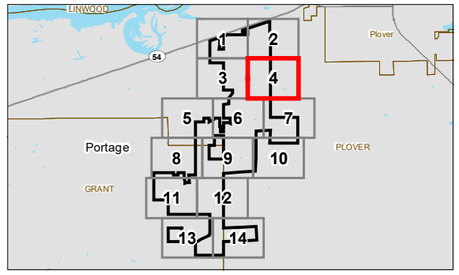
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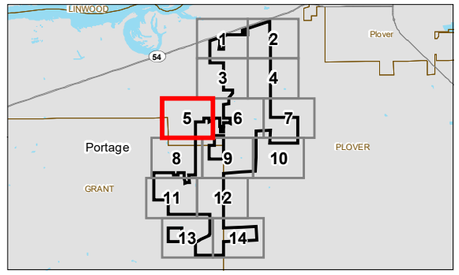
Legend
- Project Area
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NRCS Soil Survey Data
Hydric Ratings
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- Partially Hydric Soil
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NRCS Soil Survey Data
Drainage Class
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DNR 24k Hydrography
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*No features within data frame



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2. Data Sources: Stantec, National Grid Renewables, WisDOT, WDNR, NRCS
3. Background: 2020 NAIP

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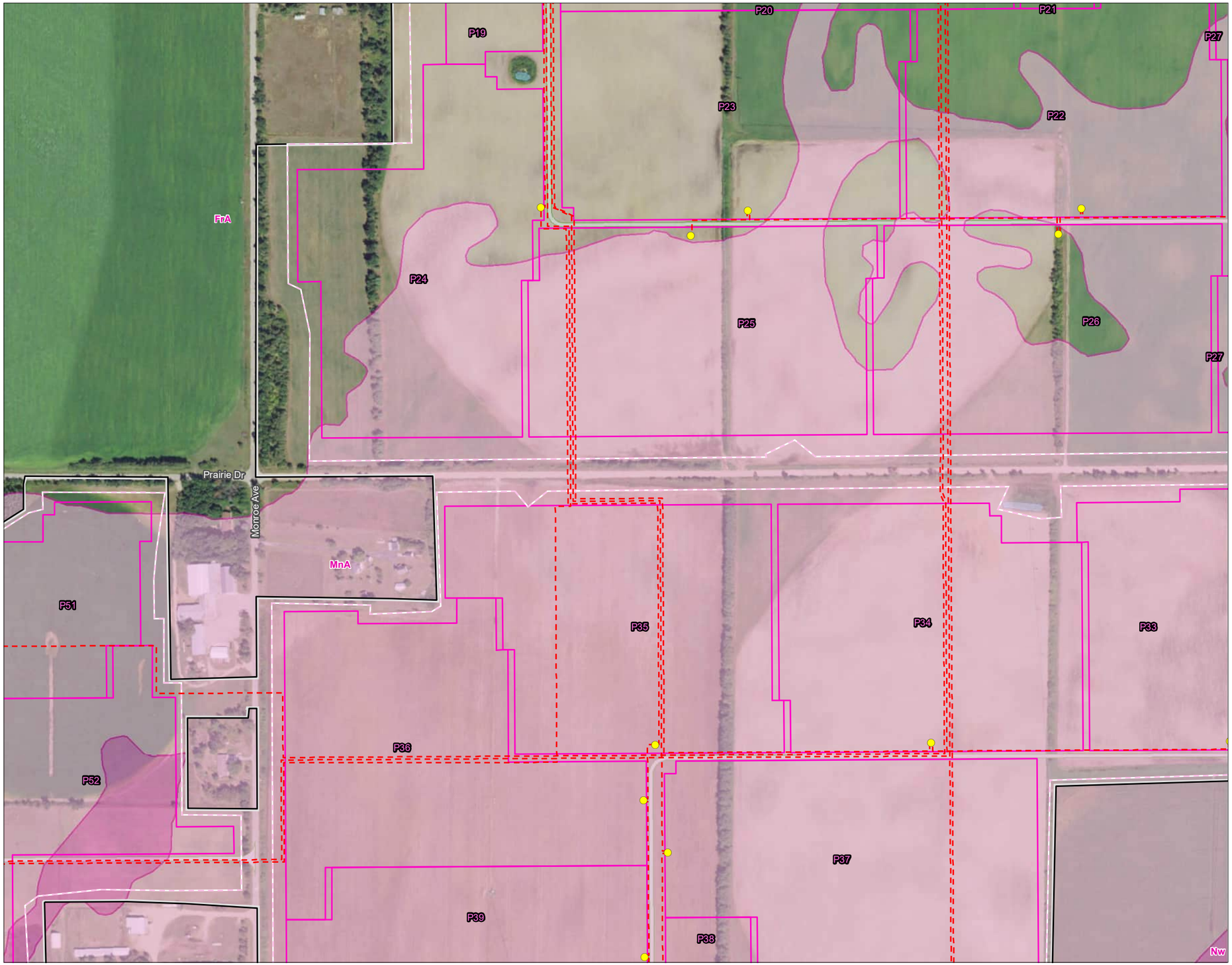


Figure No.
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Title
Contextual Overview

Client/Project 193708026
National Grid Renewables
Portage Solar LLC Project

Project Location
T. of Grant and Plover
Portage Co., WI

Prepared by JM on 2022-01-25
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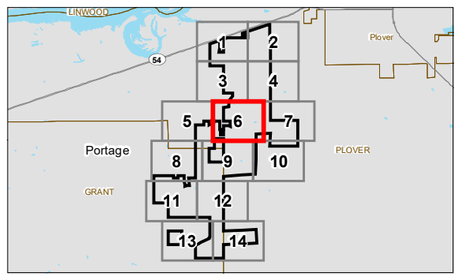
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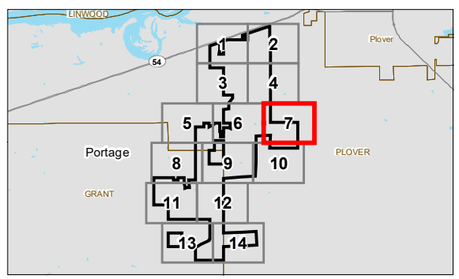
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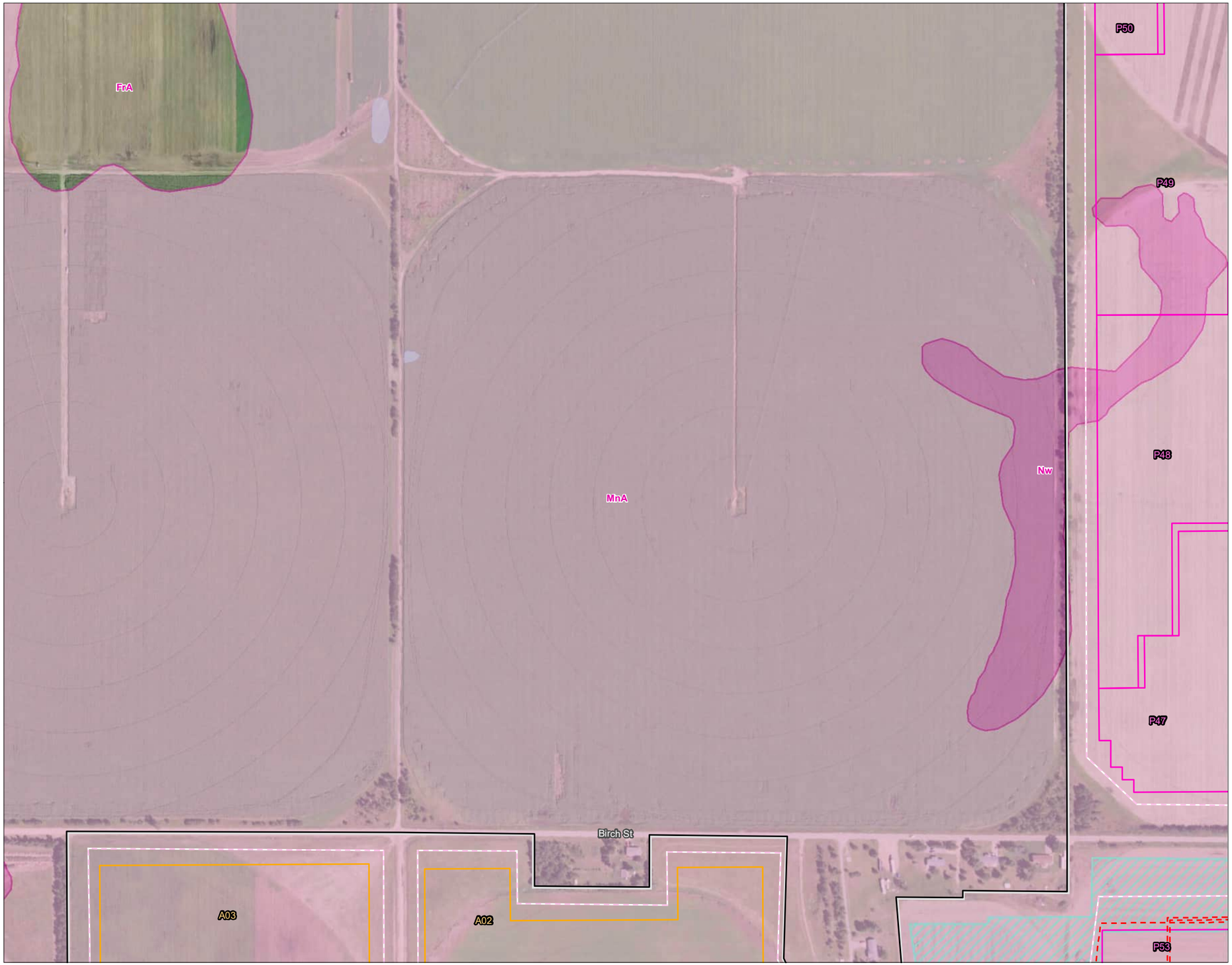


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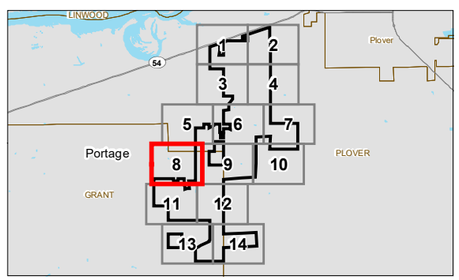
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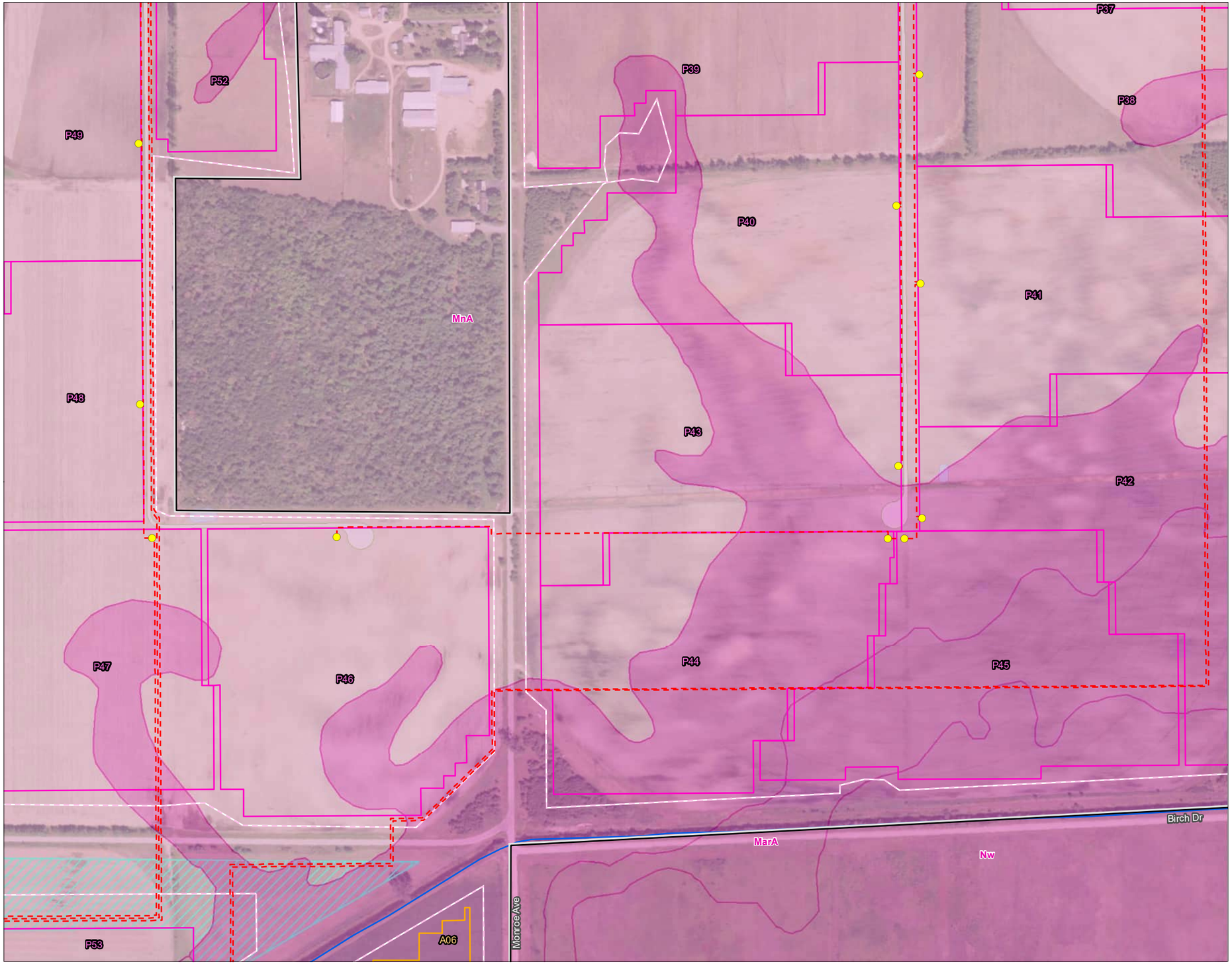


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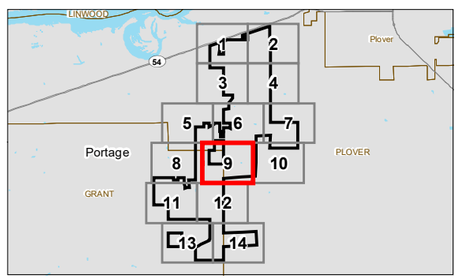
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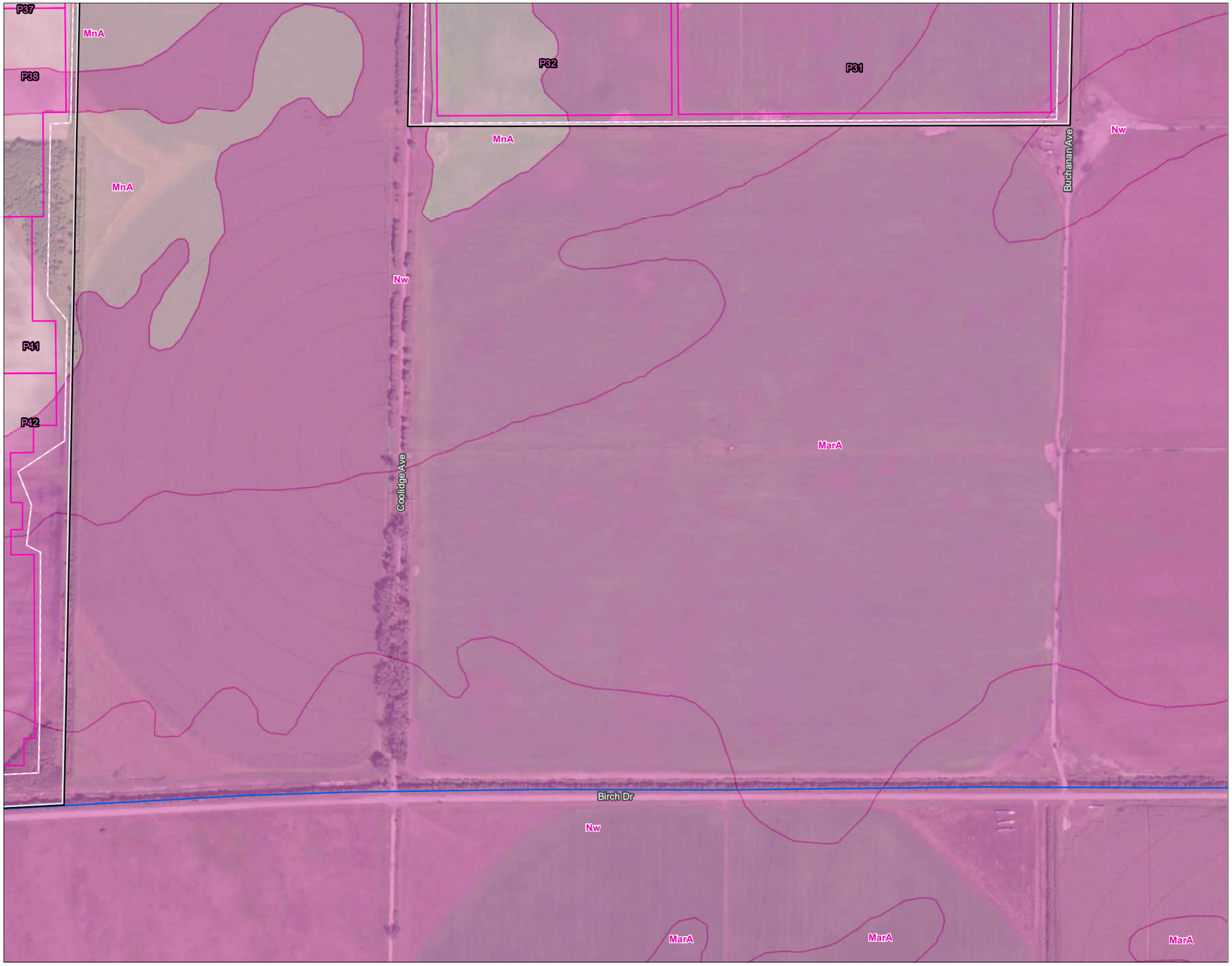


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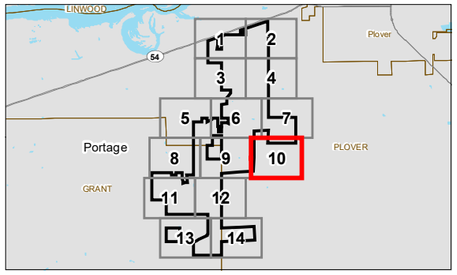
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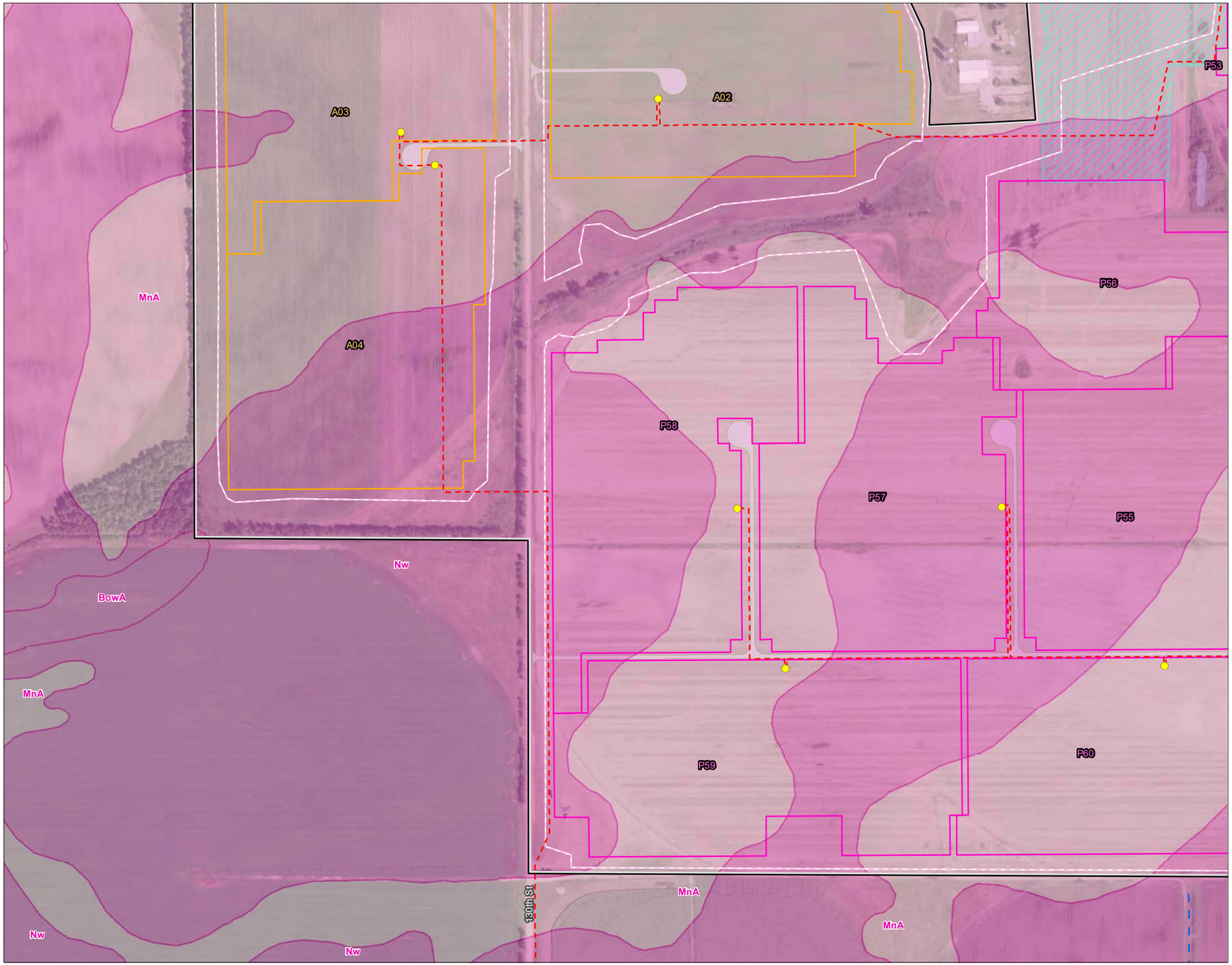


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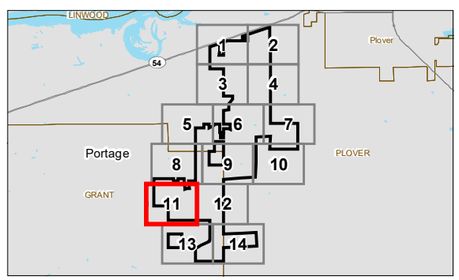
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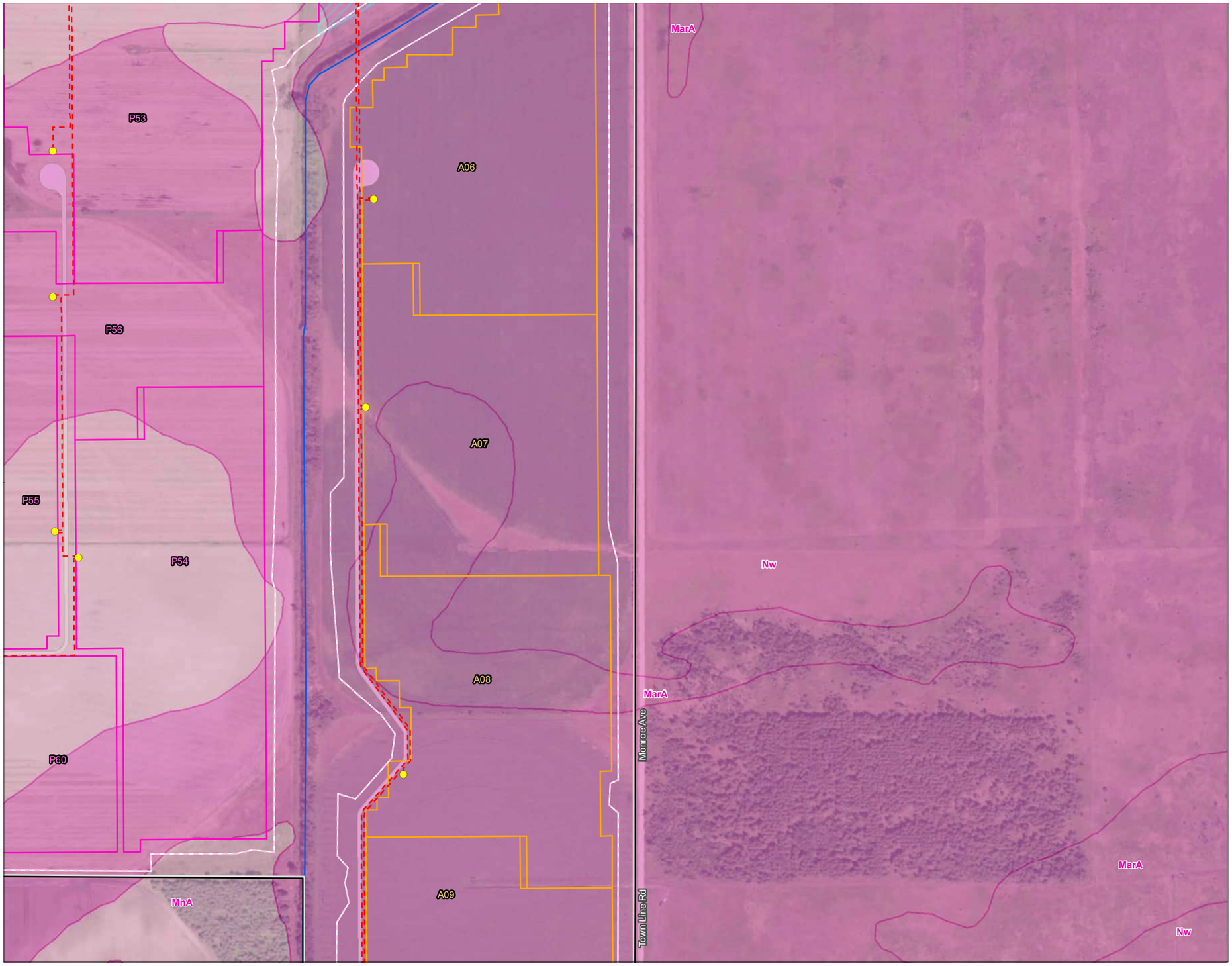


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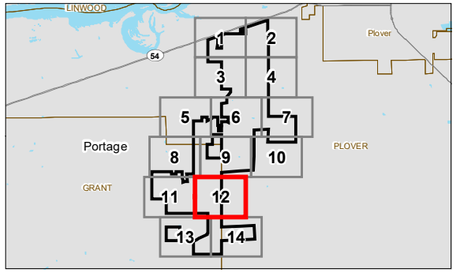
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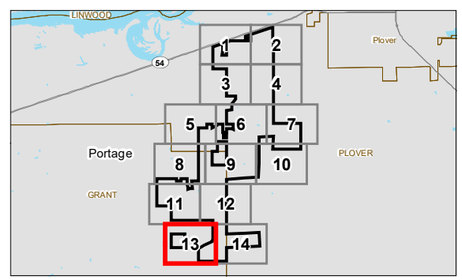
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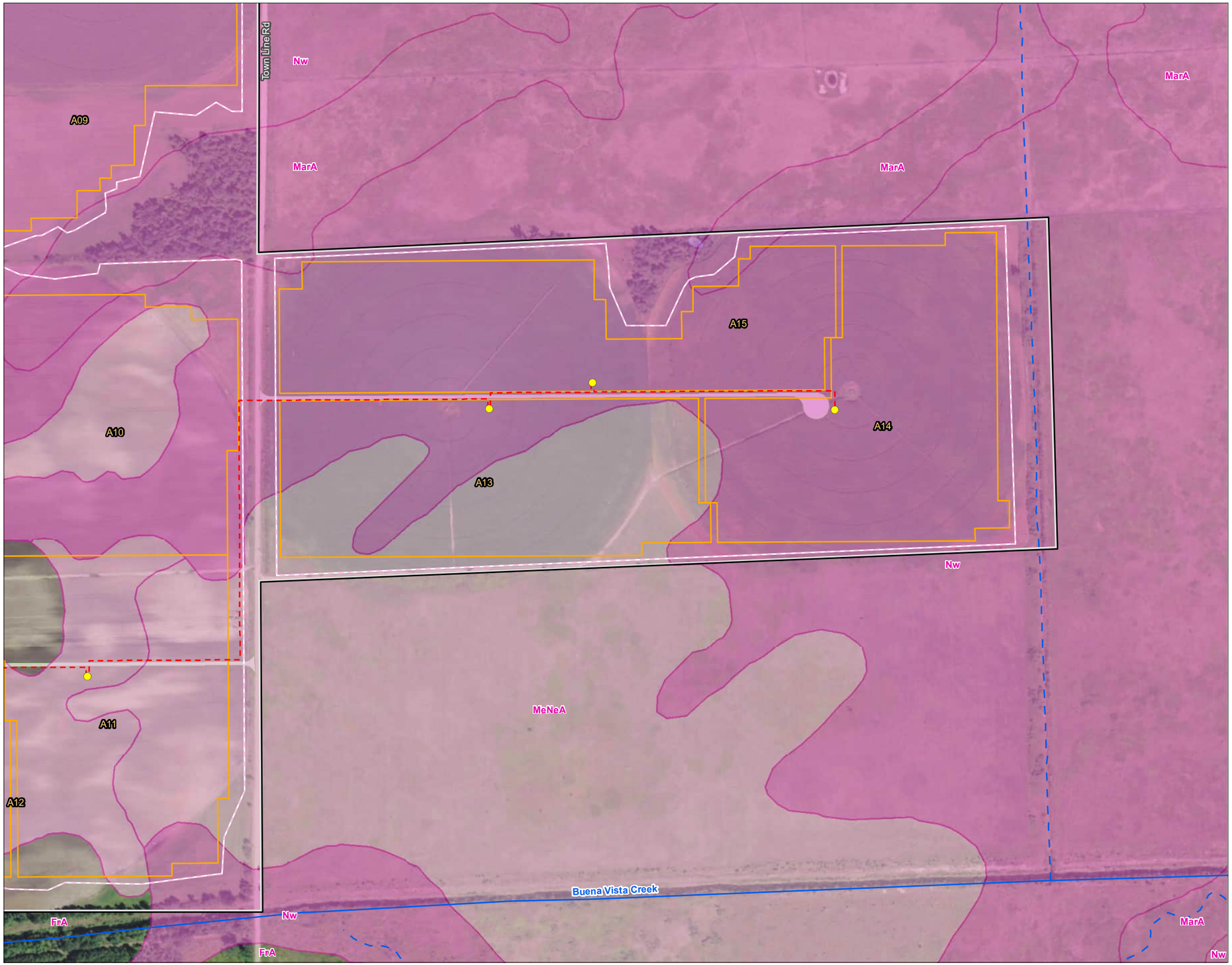


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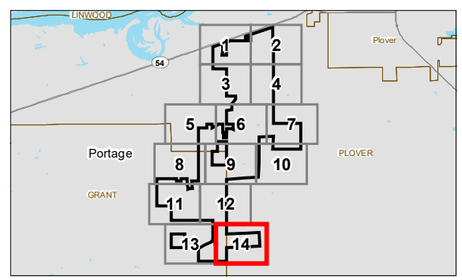
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Figure No.

2

Title

Vegetation Overlay Based on Soils and Physical Structures

Client/Project 193708026

National Grid Renewables
Portage Solar LLC Project

Project Location
T. of Grant and Plover
Portage Co., WI

Prepared by JM on 2022-01-25
TR by RA on 2022-01-28
IR by ST on 2022-02-15

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Legend

- Project Area
- Inverter
- Collection System
- Access Road
- Boundary Fence
- Solar Panel
- Lay-down Yard

Seed Mix

- Low Grow Native / Non-Native Graminoid Seed Mix
- Pollinator Refuge Prairie Seed Mix
- Pollinator Refuge Wetland Native Seed Mix

NRCS Soil Survey Data

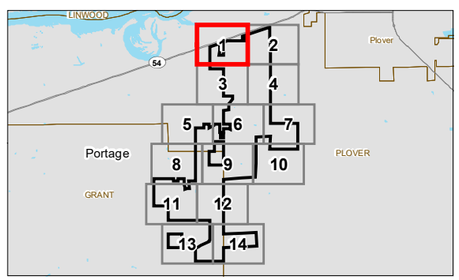
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Figure No.

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NRCS Soil Survey Data

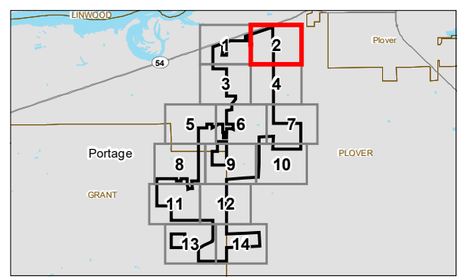
Hydric Ratings

- Predominantly Hydric Soil
- Partially Hydric Soil
- Non-Hydric Soil

DNR 24k Hydrography

- Perennial Stream
- Intermittent Stream
- Waterbody

*No features within data frame



Notes

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2. Data Sources: Stantec, National Grid Renewables, WisDOT, WDNR, NRCS
3. Background: 2020 NAIP

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Figure No.

2

Title

Vegetation Overlay Based on Soils and Physical Structures

Client/Project 193708026

National Grid Renewables
Portage Solar LLC Project

Project Location
T. of Grant and Plover
Portage Co., WI

Prepared by JM on 2022-01-25
TR by RA on 2022-01-28
IR by ST on 2022-02-15

N

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(At original document size of 11x17)
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Legend

- Project Area
- Inverter
- Collection System
- Access Road
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- Solar Panel
- Lay-down Yard

Seed Mix

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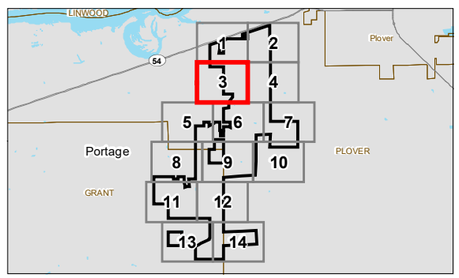
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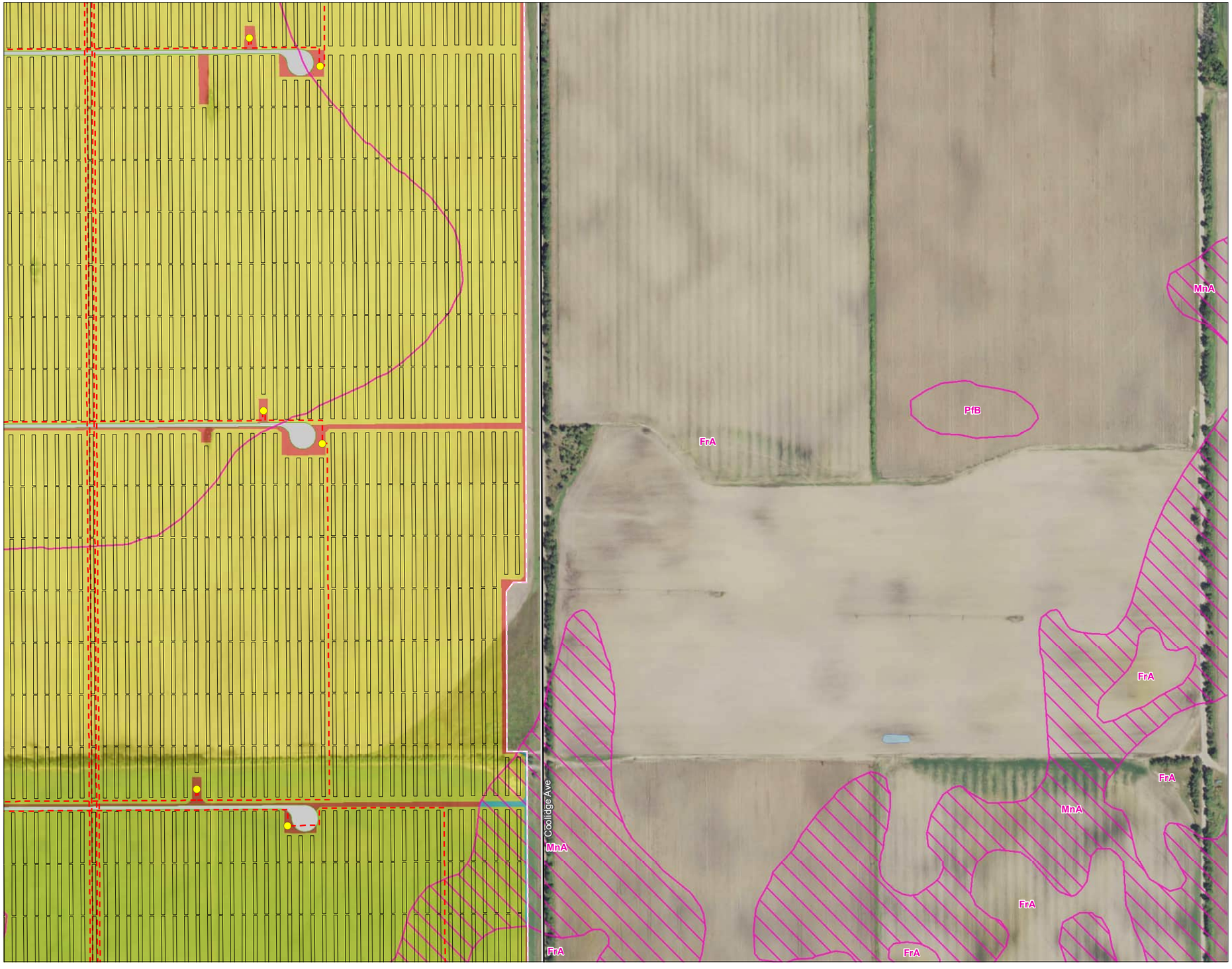


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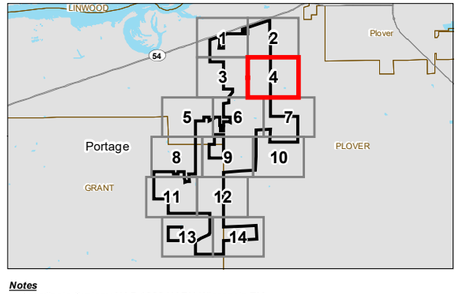
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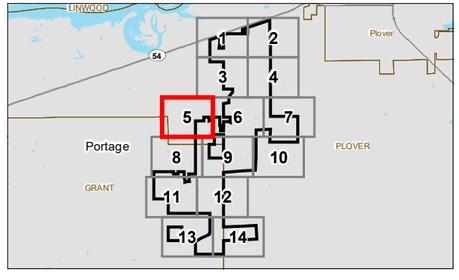
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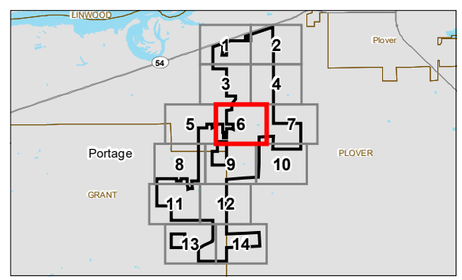
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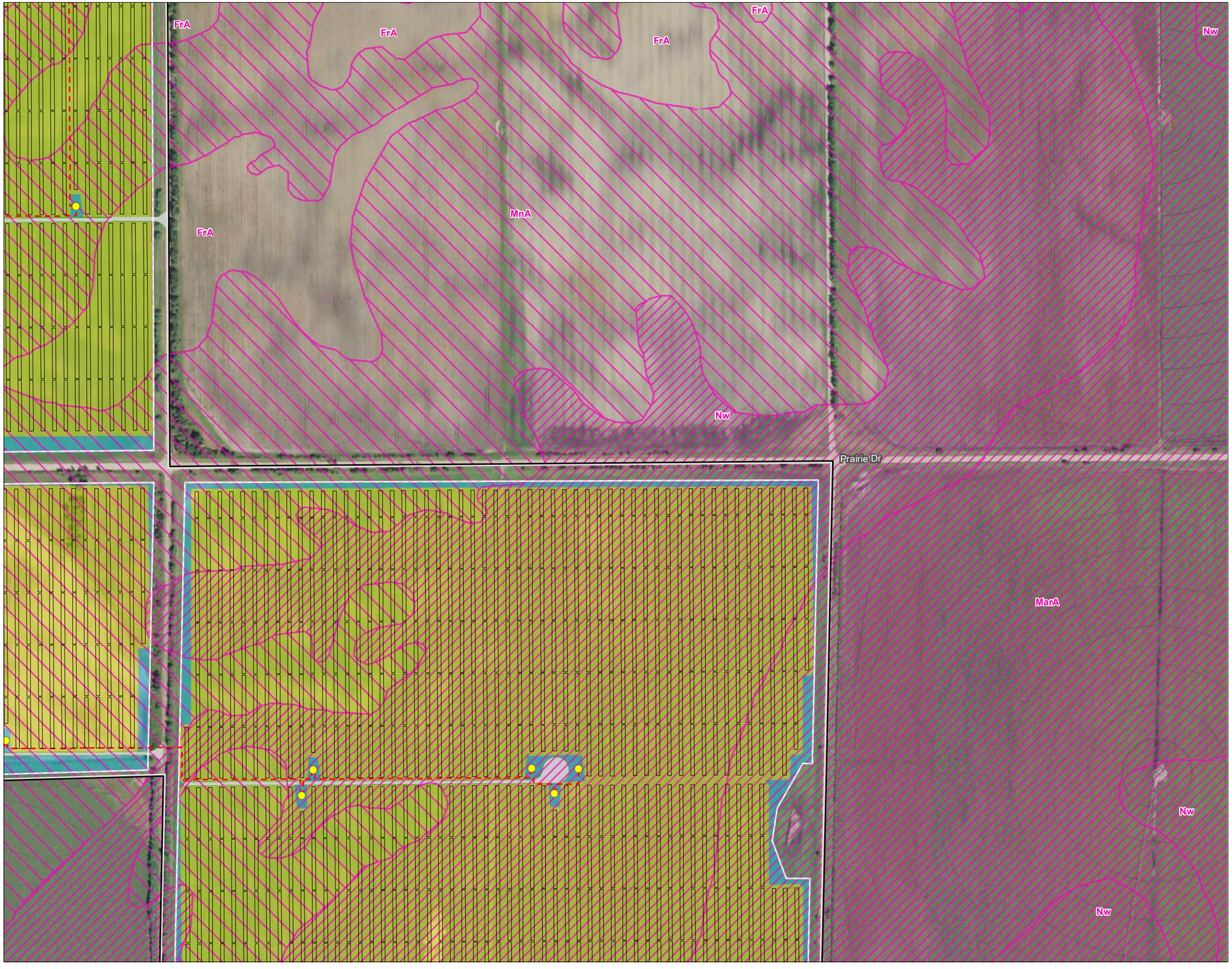


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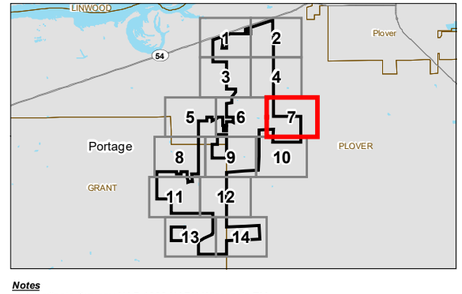
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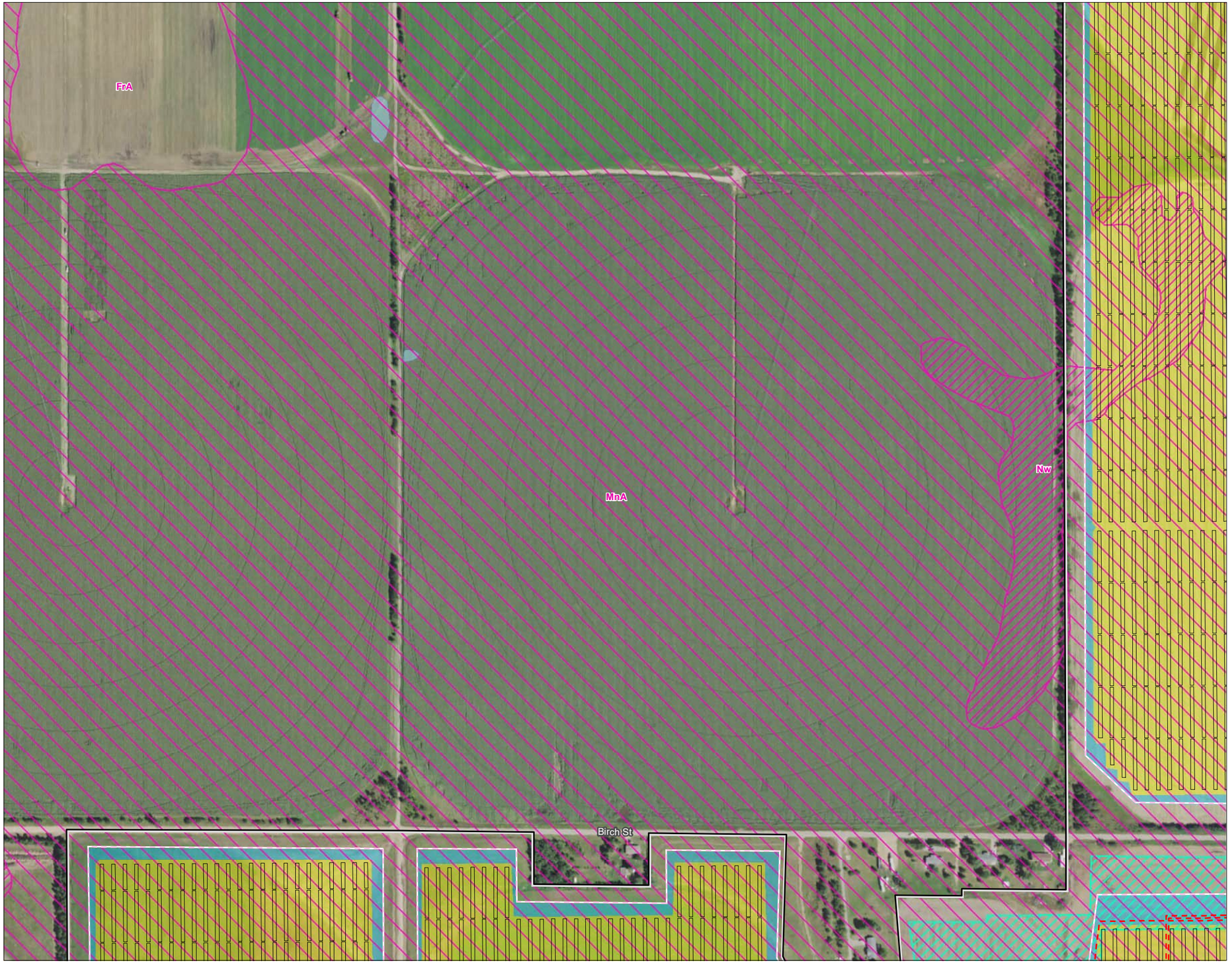


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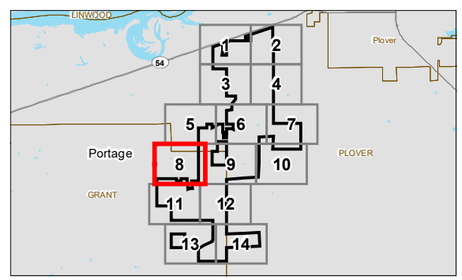
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NRCS Soil Survey Data
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Figure No.

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Vegetation Overlay Based on Soils and Physical Structures

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National Grid Renewables
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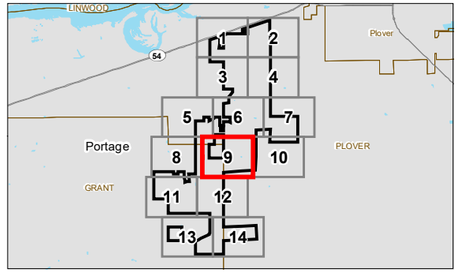
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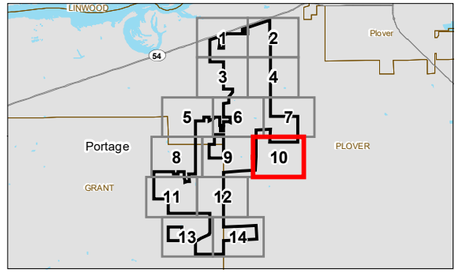
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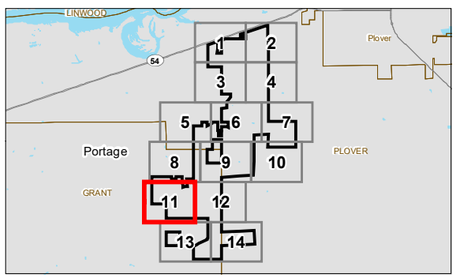
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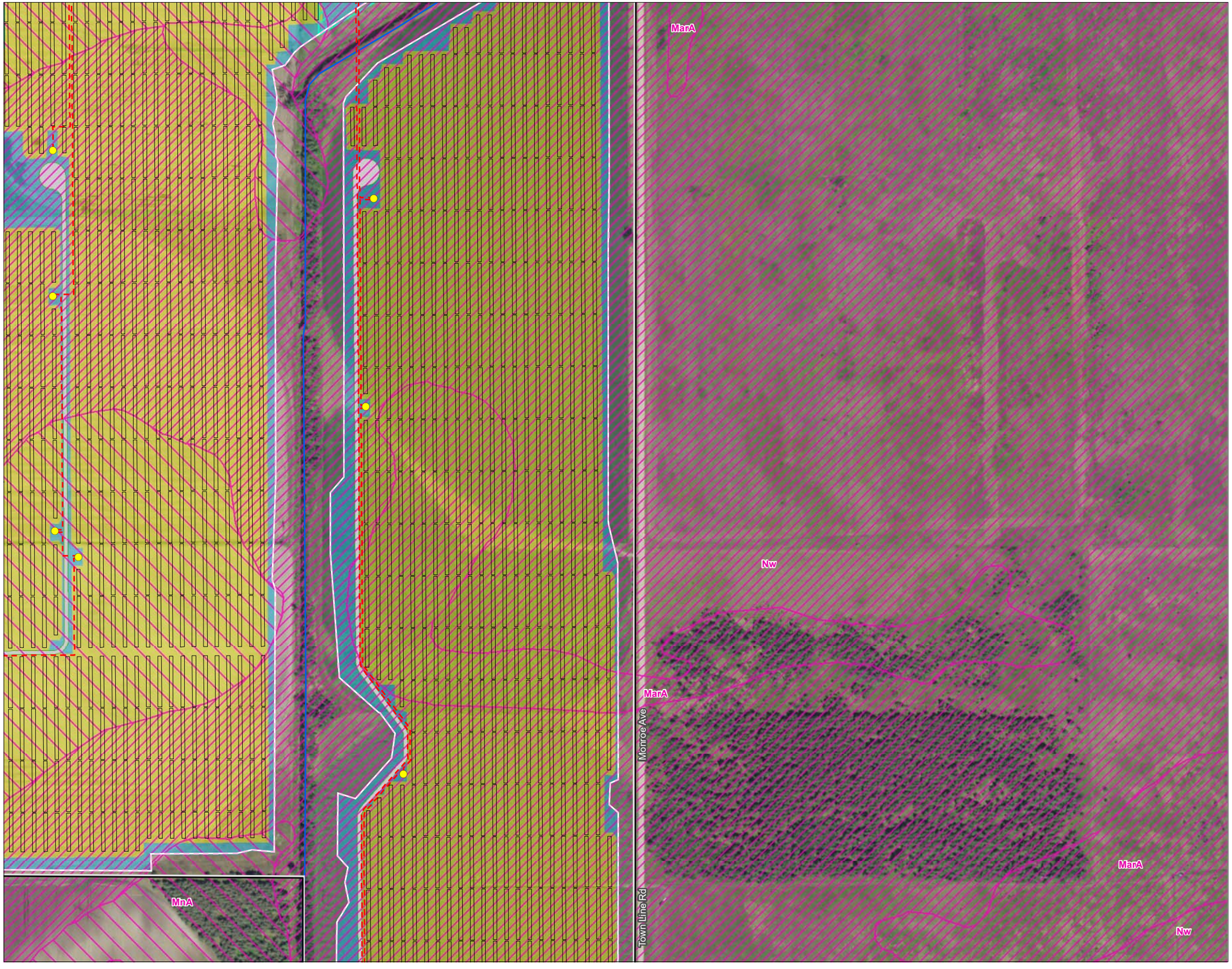


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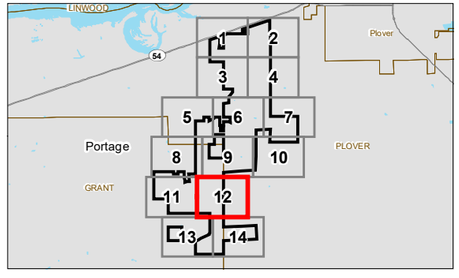
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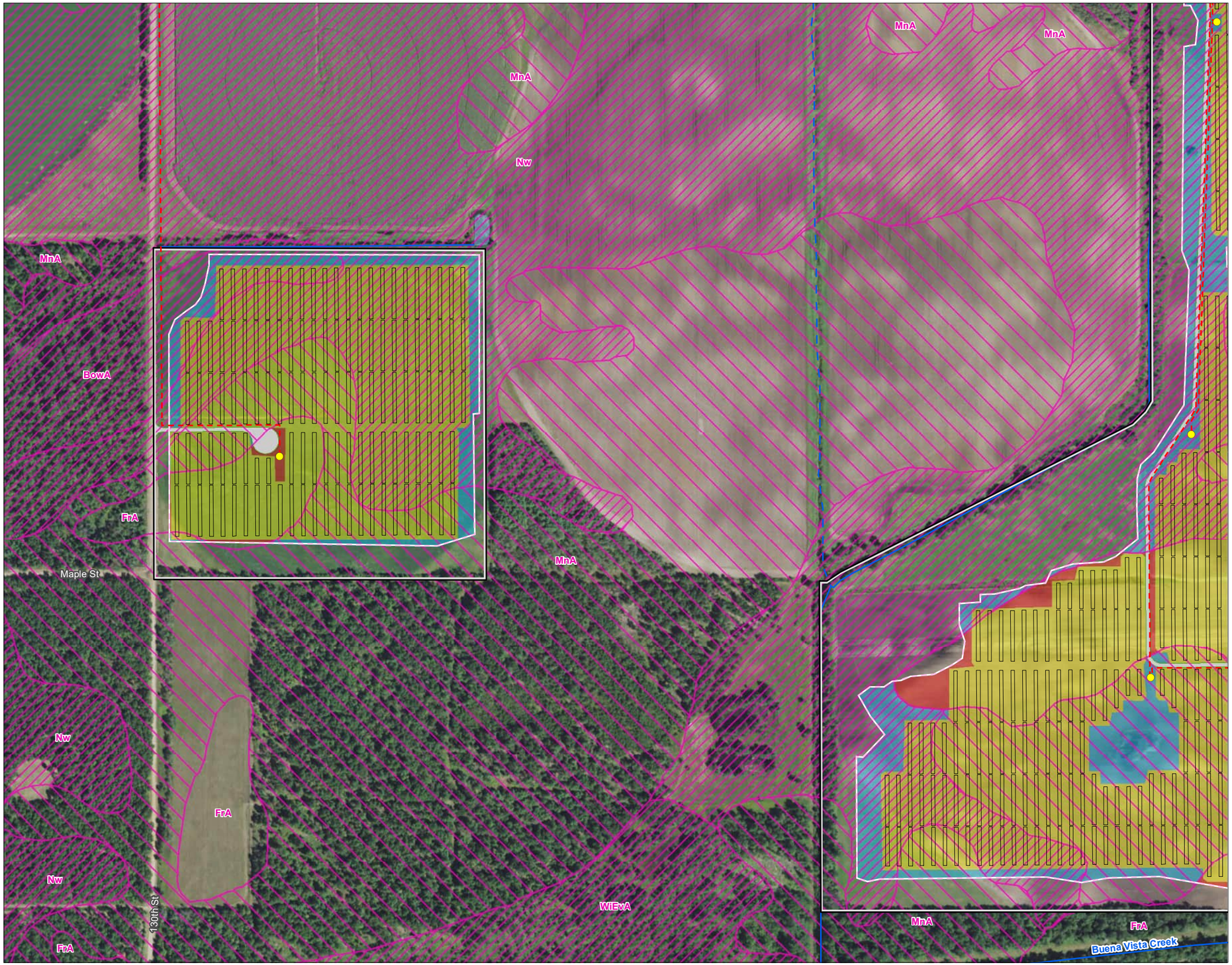


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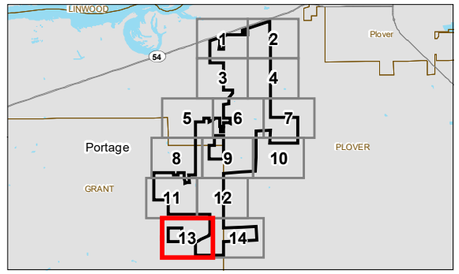
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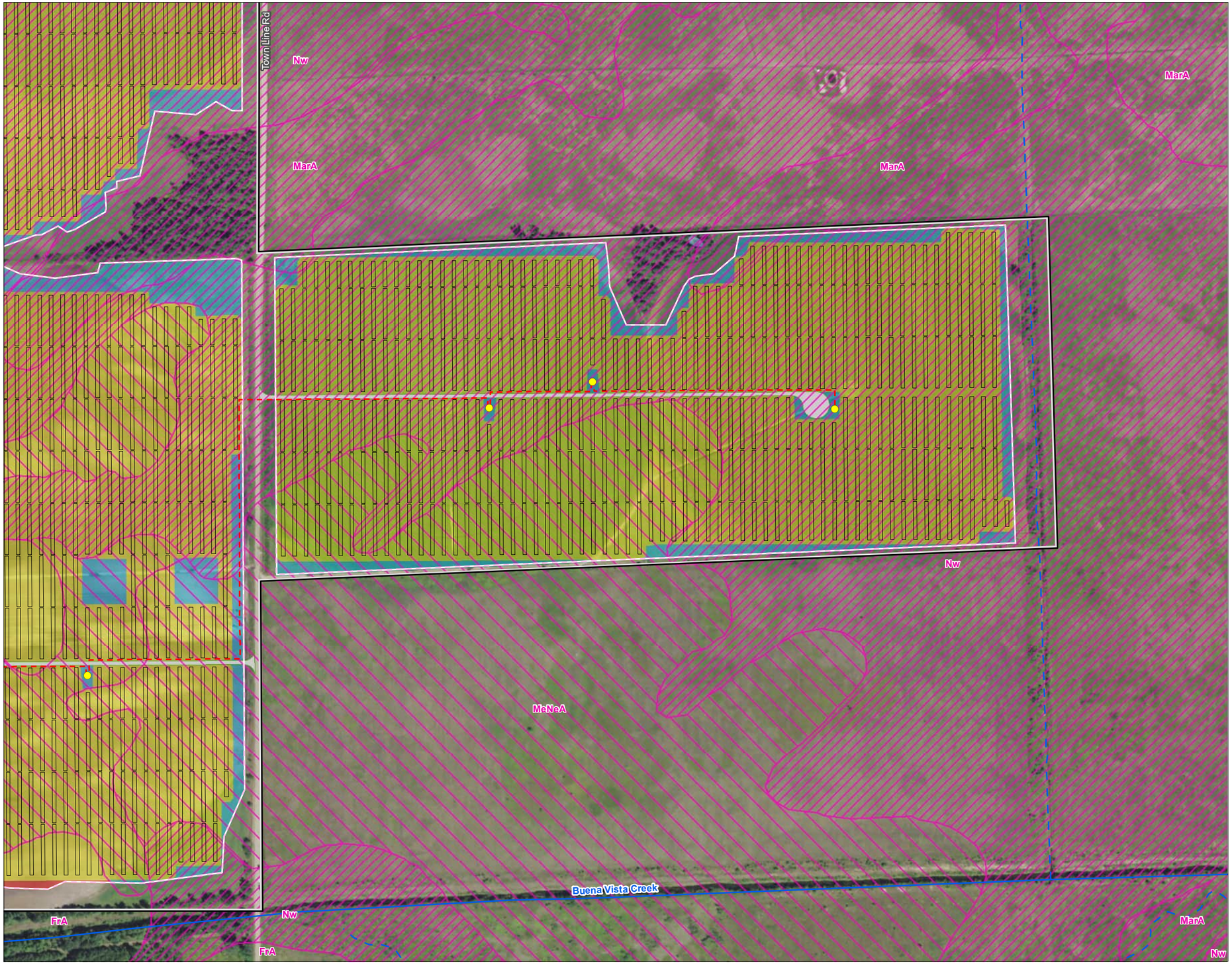


Figure No.

2

Title

Vegetation Overlay Based on Soils and Physical Structures

Client/Project 193708026

National Grid Renewables
Portage Solar LLC Project

Project Location
T. of Grant and Plover
Portage Co., WI

Prepared by JM on 2022-01-25
TR by RA on 2022-01-28
IR by ST on 2022-02-15

N

0 200 400 Feet
(At original document size of 11x17)
1:4,800

Legend

- Project Area
- Inverter
- Collection System
- Access Road
- Boundary Fence
- Solar Panel
- Lay-down Yard

Seed Mix

- Low Grow Native / Non-Native Graminoid Seed Mix
- Pollinator Refuge Prairie Seed Mix
- Pollinator Refuge Wetland Native Seed Mix

NRCS Soil Survey Data

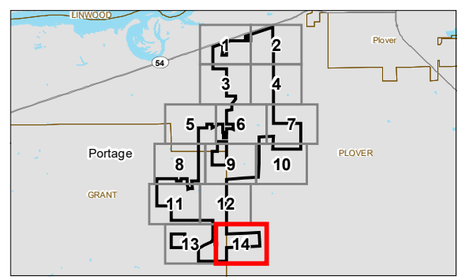
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- Predominantly Hydric Soil
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DNR 24k Hydrography

- Perennial Stream
- Intermittent Stream
- Waterbody

*No features within data frame



Notes
1. Coordinate System: NAD 1983 HARN Wisconsin TM
2. Data Sources: Stantec, National Grid Renewables, WisDOT, WDNR, NRCS
3. Background: 2020 NAIP

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APPENDIX B SEED MIX TABLES

Table B.1-A – Table B.1-D. Temporary Seed Mixes*

Table A.1-A Temporary Fall (Late August – Early November) Project Area Cover Crop Seed Mix without Permanent Seed*			
Scientific Name	**Common Name**	**Pounds / Acre**	**Seeds / Sq Ft**
Triticum aestivum	Winter Wheat	60.00	20.66

Table A.1-B Temporary Fall (Late August – Early November) Project Area Cover Crop Seed Mix with Permanent Seed*			
Scientific Name	**Common Name**	**Pounds / Acre**	**Seeds / Sq Ft**
Triticum aestivum	Winter Wheat	25.00	8.60

Table A.1-C Temporary Spring-Summer (Mid-April – Mid-August) Project Area Cover Crop Seed Mix without Permanent Seed*			
Scientific Name	**Common Name**		
Avena sativa	Seed Oats	60.00	19.28

Table A.1-D Spring-Summer and Early Fall (Mid-April – Mid-August) Project Area Cover Crop Seed Mix with Permanent Seed*			
Scientific Name	**Common Name**		
Avena sativa	Seed Oats	25.00	8.03

*All seed mixes calculated at Pure Live Seed (PLS). Seeding rates are designed for drilling seed in spring through summer. Broadcasting seed and seeding during the dormant season will require 20% increase in PLS rates. Broadcast seed should be packed or harrowed into the soils.

Table B.2 Low Grow Native / Non-Native Graminoid Seed Mix for PV Panel Areas

Scientific Name	Common Name	Ounces / Acre	Seeds / Sq Ft
Grasses and Sedges			
Agropyron smithii (Pascopyrum smithii)	Western Wheat Grass	16.0	2.5
Agrostis perennans	Upland bent	2.0	23.0
Bouteloua curtipendula	Side-oats Grama	32.0	4.4
Carex bicknellii	Copper Sedge	0.25	0.1
Carex brevior	Plains Sedge	0.35	0.25
Carex vulpinoidea	Brown Fox Sedge	0.25	0.57
Deschampsia cespitosa	Tufted Hair Grass	2.0	3.15
Elymus trachycaulus	Slender Wheat Grass	8.0	1.7
Elymus villosus	Silky Wildrye	0.5	0.06
Eragrostis spectabilis	Sand Love Grass	0.25	1.5
Festuca brevipila	Hard Fescue	32.0	27.2
Festuca rubra	Red Fescue	32.0	27.90
Festuca subverticillata	Nodding Fescue	0.25	0.11
Hordeum jubatum	Squirrel Tail Grass	0.25	0.07
Koeleria macrantha	June Grass	0.25	1.15
Muhlenbergia mexicana	Upland Timothy	0.25	1.0
Poa palustris	Meadow Bluegrass	3.0	9.0
Poa pratensis (var. “Park”)	Park	3.0	10.0
Poa trivialis	Woodland Bluegrass	3.0	10.75
Schizachyrium scoparium	Little Bluestem	16.0	8.0
Sporobolus compositus	Rough Dropseed	2.0	1.2
	Subtotal	**121.6**	**133.61**
Forbs			
Blephilia hirsuta	Hairy Wood Mint	0.15	0.8
Chamaecrista fasciculata	Partridge Pea	4.0	0.25
Dalea candida	White Prairie Clover	2	0.87
Dalea purpurea	Purple Prairie Clover	3	0.96
Trifolium pratense	Red Clover	1.0	0.4
Trifolium repans	White Clover	1.0	1.1
	Subtotal	**7.15**	**4.38**
	Total	**128.75**	**137.99**

*WPL anticipates further discussion with Stacy Rowe at WDNR regarding specifics of the seed mix and overall vegetation

management plan during that construction planning period. Final cover crop seed selection will occur when tentative seeding dates are known, and actual species composition and rates will be based on availability at the time of

Table B.3 Pollinator Refuge Prairie Seed Mix – Select Buffer Areas*

Scientific Name	Common Name	Ounces / Acre	Seeds / Sq Ft
Grasses and Sedges			
Agropyron smithiii	Western Wheat Grass	8.0	1.2
Agrostis perennans	Upland bent	0.25	2.8
Bouteloua curtipendula	Side oats Grama	40.0	5.5
Bromus kalmii	Prairie Brome	0.5	0.1
Calamagrostis canadensis	Blue Joint Grass	0.15	1.0
Carex annectens	Yellow-headed Fox Sedge	0.25	0.5
Carex bicknellii	Bicknell's Oval Sedge	0.25	1.0
Carex brevior	Plains Oval Sedge	0.25	0.7
Deschampsia cespitosa	Tufted Hair Grass	5.0	8.0
Elymus canadensis	Canada Wildrye	5.0	0.6
Elymus trachycaulus	Slender Wheat Grass	5.0	1.0
Juncus dudleyi	Dudley's Rush	0.0625	4.6
Juncus tenuis	Path Rush	0.0625	1.4
Koeleria cristata	June grass	0.125	0.6
Muhlenbergia mexicana	Leafy Satin Grass	0.3	1.2
Schizachyrium scoparium	Little Bluestem	24.0	8.0
Sporobolus compositus	Rough Dropseed	1.0	0.65
Sporobolus heterolepis	Prairie Dropseed	0.3	0.1
	Subtotal	**90.50**	**38.95**
Forbs			
Scientific Name	**Common Name**	**Ounces / Acre**	**Seeds / Sq Ft**
Agastache foeniculum	Anise Hyssop	0.75	1.0
Allium cernuum	Nodding onion	0.35	0.13
Amorpha canescans	Lead Plant	0.5	0.2
Anemone cylindrica	Thimbleweed	0.2	0.1
Artemisia ludoviciana	Sage	0.05	0.3
Asclepias tuberosa	Butterflyweed	0.25	0.025
Asclepias verticillata	Whorled milkweed	0.125	0.03
Astragalus canadensis	Canadian Milk Vetch	1.25	0.5
Baptisia alba	White Wild Indigo	0.5	0.002
Chaemecrista fasciculata	Partridge Pea	4.0	0.25

Coreopsis lanceolata	Lance-leaf Coreopsis	2.0	0.65

Table B.3 (cont.) Pollinator Refuge Prairie Seed Mix – Select Perimeter Areas*

Scientific Name	Common Name	Ounces / Acre	Seeds / Sq Ft
Forbs			
Coreopsis palmata	Prairie Coreopsis	0.125	0.03
Dalea candida	White Prairie Cover	1.0	0.45
Dalea purpurea	Purple Prairie Clover	3.0	1.0
Drymocallis arguta	Prairie Cinquefoil	0.2	1.0
Echinacea pallida	Pale Purple Coneflower	1.0	0.15
Eryngium yuccifolium	Rattlesnake Master	0.5	0.08
Gentiana andrewsii	Bottle Gentian	0.125	0.8
Geum aleppicum	Yellow Avens	0.125	0.06
Lespedeza capitata	Prairie Bush Clover	0.5	0.1
Liatris aspera	Rough Blazing Star	0.125	0.05
Lupinus perennis	Prairie Lupine	0.125	0.003
Monarda punctata	Spotted Beebalm	0.5	1.0
Oenothera rhombipetala	Sand Primrose	0.25	0.6
Penstemon digitalis	Foxglove Beardtongue	0.75	2.25
Penstemon grandiflorus	Large Flower Penstemon	0.75	0.25
Pseudognaphalium obtusifolium	Sweet Everlasting	0.0625	0.7
Rosa blanda	Meadow Rose	0.25	0.01
Rudbeckia hirta	Black-eyed Susan	1.25	2.65
Solidago juncea	Early Goldenrod	0.0625	0.4
Solidago rigida (*Oligoneuron rigidum*)	Stiff Goldenrod	0.5	0.5
Symphyotrichum ericoides	Heath Aster	0.0625	0.3
Symphyotrichum laeve	Smooth Blue Aster	0.2	0.25
Symphyotrichum oolantangiense	Sky Blue Aster	0.2	0.37
Teucrium canadense	Germander	0.125	0.06
Tradescantia ohiensis	Ohio Spiderwort	0.5	0.1
Zizia aptera	Heart-leaf Alexander	0.5	0.25
	Subtotal	**22.7625**	**16.6**
	Total	**113.2625**	**55.55**

* Final seed mixes will be determined based on factors such as site conditions and market availability.

Table B.4 Pollinator Refuge Wetland Native Seed Mix*

Scientific Name	Common Name	Ounces / Acre	Seeds / Sq Ft
Grasses and Sedges			
Agropyron smithiii	Western Wheat Grass	8.0	1.25
Agrostis perennans	Native Bent Grass	2.0	23.0
Beckmannia syzigachne	American Slough Grass	2.0	2.25
Calamagrostis canadensis	Blue Joint Grass	0.35	2.2
Carex annectens	Yellow-headed Fox Sedge	0.5	1.0
Carex bicknellii	Bicknell's Sedge	0.25	0.1
Carex cristatella	Crested Oval Sedge	0.25	0.3
Carex scoparia	Lance-fruited Oval Sedge	0.35	1.0
Carex stipata	Common Fox Sedge	0.25	0.2
Carex vulpinoidea	Brown Fox Sedge	1.0	2.25
Deschampsia cespitosa	Tufted Hair Grass	2.25	1.2
Eleocharis obtusa	Bald Spikerush	0.25	0.6
Glyceria striata	Fowl Manna Grass	0.5	1.0
Juncus dudleyi	Dudley's Rush	0.0625	4.6
Poa palustris	Meadow Bluegrass	8.0	24.0
	Subtotal	**26.0125**	**64.95**
Forbs			
Scientific Name	**Common Name**	**Ounces / Acre**	**Seeds / Sq Ft**
Asclepias incarnata	Marsh Milkweed	1.0	0.11
Astragalus canadensis	Canadian Milk Vetch	1.5	0.58
Bidens cernua	Nodding Bur Marigold	0.75	0.36
Boltonia asteroides	False Aster	0.75	2.75
Eupatorium perfoliatum	Boneset	0.5	1.8
Geum aleppicum	Yellow Avens	0.2	0.1
Gentiana andrewsii	Bottle Gentian	0.125	0.8
Liatris spicata	Marsh Blazing Star	2.0	0.37
Lobelia siphilitica	Blue Lobelia	0.125	1.4
Monarda fistulosa	Wild Bergamot	1.5	2.4
Penstemon digitalis	Foxglove Beardtongue	0.75	2.25
Penthorum sedoides	Ditch Stonecrop	0.5	1.5
Pycnanthemum virginianum	Mountain Mint	0.25	1.25

Scientific Name	Common Name	Ounces / Acre	Seeds / Sq Ft
Rudbeckia hirta	Black-eyed Susan	1.25	2.65
Zizia aurea	Golden Alexanders	1.0	0.25
	Subtotal	**12.2**	**18.57**
	Total	**38.2125**	**83.52**

* Final seed mixes will be determined based on factors such as site conditions and market availability.

Appendix K
Water Quality Trading Checklist

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

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	Permit Number	Facility Site Number
Village of Plover	WI- 0027995-10	

Facility Address	City	State	ZIP Code
4496 Coolidge Ave.	Plover	WI	54467

Project Contact Name (if applicable)	Address	City	State	ZIP Code
Lyle Lutz	4496 Coolidge Ave.	Plover	WI	54467

Project Name
Village of Plover / Portage Solar LLC Water Quality Trading Plan

Receiving Water Name	Parameter(s) being traded	HUC 12(s)
Wisconsin River	Total Phosphorus (TP)	070700030304

Credit Generator Information

Credit generator type (select all that apply):
- ☐ Permitted Discharge (non-MS4CAFO)
- ☐ Permitted MS4
- ☐ Permitted CAFO
- ☐ Urban nonpoint source discharge
- ☐ Agricultural nonpoint source discharge
- ☒ Other - Specify: Solar Development

Are any of the credit generators in a different HUC 12 than the applicant?
- ◉ Yes; HUC 12: 070700030401
- ○ No

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

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

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

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

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

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

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

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

Discharge Type	Practices Used to Generate Credits	Method of Quantification	Trade Agreement Number	Have the practice(s) been formally registered?
◯ Urban NPS ◉ Agricultural NPS ◯ Other	Conservation Easement	SnapPlus		◯ Yes ◉ No ◯ Only in part
◯ Urban NPS ◯ Agricultural NPS ◯ Other				◯ Yes ◯ No ◯ Only in part
◯ Urban NPS ◯ Agricultural NPS ◯ Other				◯ Yes ◯ No ◯ Only in part
◯ Urban NPS ◯ Agricultural NPS ◯ Other				◯ Yes ◯ No ◯ Only in part
◯ Urban NPS ◯ Agricultural NPS ◯ Other				◯ Yes ◯ No ◯ Only in part
◯ Urban NPS ◯ Agricultural NPS ◯ Other				◯ Yes ◯ No ◯ Only in part
◯ Urban NPS ◯ Agricultural NPS ◯ Other				◯ Yes ◯ No ◯ Only in part
◯ Urban NPS ◯ Agricultural NPS ◯ Other				◯ Yes ◯ No ◯ Only in part

Does plan have a narrative that describes:			Plan Section
a. Description of existing land uses	◉ Yes	◯ No	3.3
b. Management practices used to generate credits	◉ Yes	◯ No	3.3.2
c. Amount of credit being generated	◉ Yes	◯ No	3.3.3
d. Description of applicable trade ratio per agreement/management practice	◉ Yes	◯ No	3.2
e. Location where credits will be generated	◉ Yes	◯ No	3.
f. Timeline for credits and agreements	◉ Yes	◯ No	4.2
g. Method for quantifying credits	◉ Yes	◯ No	3.3.2

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

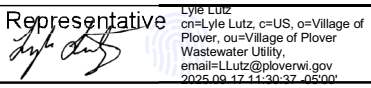
The preparer certifies all of the following:

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

Signature of Preparer	Date Signed
	27 Aug 2025

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
 Lyle Lutz cn=Lyle Lutz, c=US, o=Village of Plover, ou=Village of Plover Wastewater Utility, email=LLutz@ploverwi.gov 2025.09.17 11:30:37 -05'00'	9/17/2025

Appendix L
Access Road Area Calculations

Figure 2 of Appendix A of Portage Solar Vegetative Management Plan (Stantec)

Spot-checked access road area on the first three page of Figure 2:

Area on Key	Page	Access Road Area (acres)	Solar Project Area (acres)	% of Access Road **
1	1 of 14	1.06	138.51	0.76%
2	2 of 14	0.83	123.14	0.68%
3	3 of 14	2.07	193.55	1.07%
			Average	**0.87%**

** Access Road ratio calcualted from the first three maps was assumed to be representative of the entire project area and rounded up to 1%.

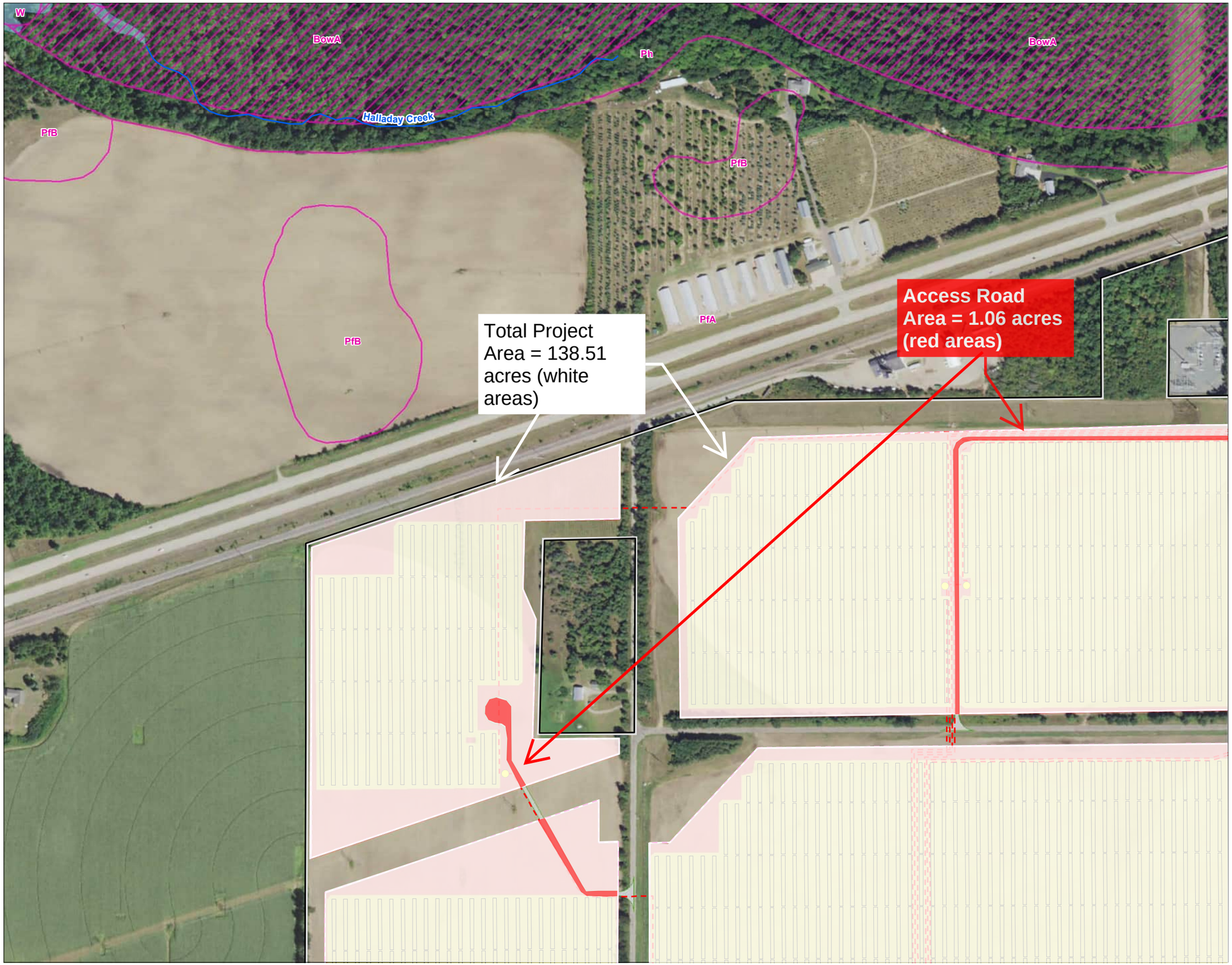


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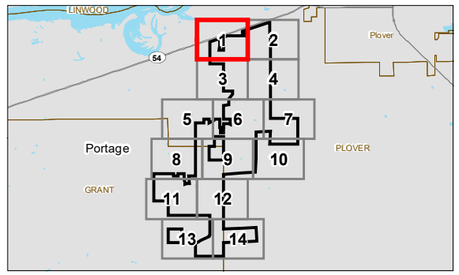
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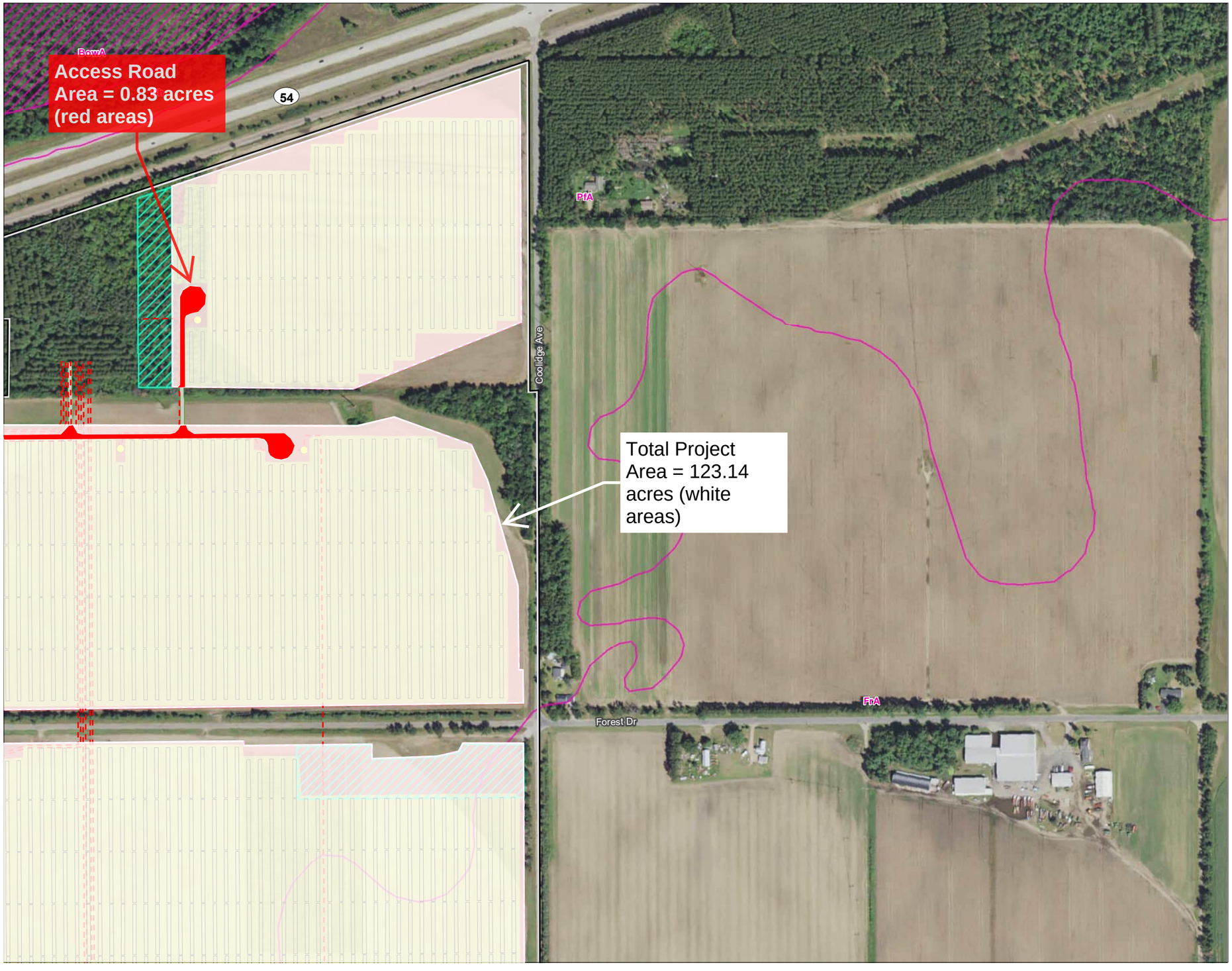


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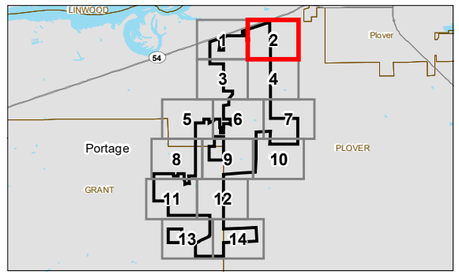
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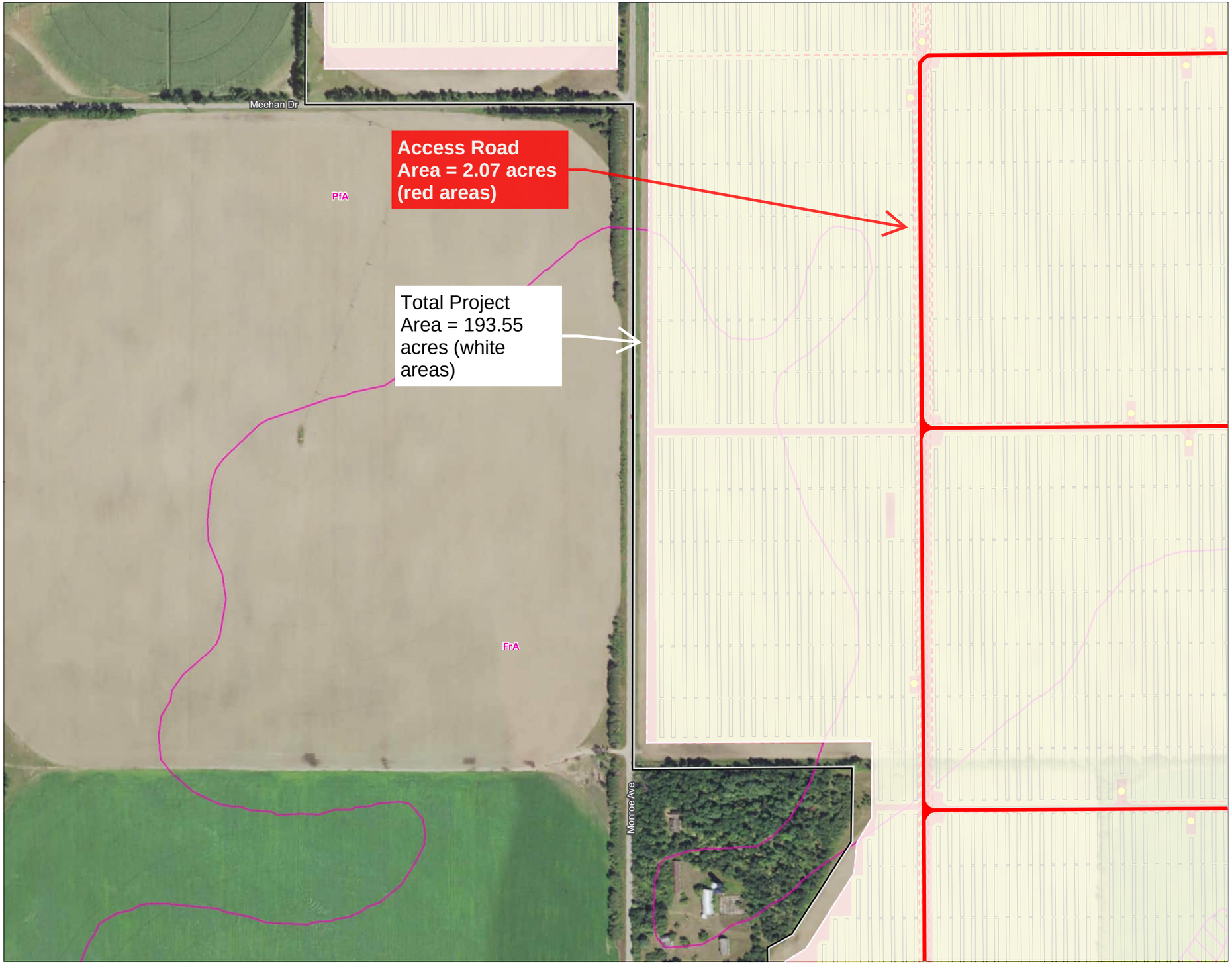


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T. of Grant and Plover
Portage Co., WI

Prepared by JM on 2022-01-25
TR by RA on 2022-01-28
IR by ST on 2022-02-15

N

0 200 400 Feet
(At original document size of 11x17)
1:4,800

Legend

- Project Area
- Inverter
- Collection System
- Access Road
- Boundary Fence
- Solar Panel
- Lay-down Yard

Seed Mix

- Low Grow Native / Non-Native Graminoid Seed Mix
- Pollinator Refuge Prairie Seed Mix
- Pollinator Refuge Wetland Native Seed Mix

NRCS Soil Survey Data

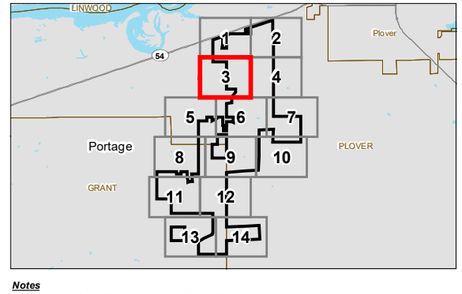
Hydric Ratings

- Predominantly Hydric Soil
- Partially Hydric Soil
- Non-Hydric Soil

DNR 24k Hydrography

- Perennial Stream
- Intermittent Stream
- Waterbody

*No features within data frame



Notes

1. Coordinate System: NAD 1983 HARN Wisconsin TM
2. Data Sources: Stantec, National Grid Renewables, WisDOT, WDNR, NRCS
3. Background: 2020 NAIP

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