NRCS Nutrient Management (590) Plan

Act 38-equivalent (content & format)

Implementation Requirements

for Comprehensive Nutrient Management Plan (CNMP)

For Crop Year(s)

2023 2024 2025

Prepared For

Operator's Name, Mailing Address, Telephone Number(s)

Kurtland Farms, LLC

4351 Main Street
Elverson, PA 19520
(610) 223-8062
Operation's Location Address (if different than above)

Prepared By

Nutrient Management Planner Name, Address, Phone Number(s)

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1557 Ridge Road
Elizabethtown, PA 17022
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Date of Plan Submission

2/10/2023

Scotch Hill
SOLUTIONS

Table of Contents

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 329.6 **Crop Year(s)** 2023

Whole Farm Note:

If manure runs out for any field, consult Appendix 4 of the plan for that field. The fertilizer required on any part of the field that does not receive manure can be determined from the 'Net Nutrients Required' for that field.

Fall manure applications require at least 25% cover unless the crop management unit is planted to a cover crop in time to allow for appropriate growth to control runoff until the next growing season, or the manure is injected or mechanically incorporated within 5 days using minimal soil disturbance techniques consistent with no-till farming practices.

Operation Acres:

Total Acres: 353 **Total Acres Available For Nutrient Application Under Operator's Control: Owned:** 133.5 **Rented:** 196.1

Animal Equivalent Units: 612.76 **Animal Equivalent Units Per Acre:** 1.86

								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
1	54.5	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-59	107
1	54.5	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-108	224
2	11.8	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-79	57
2	11.8	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-158	124

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
3	20	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-79	107
3	20	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-158	224
4	10.5	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-79	57
4	10.5	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-158	124
5	18.7	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-59	107
5	18.7	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-108	224
6	19	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-79	-43
6	19	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-158	-86
7	14.5	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-79	57

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8	12.5	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-79	97
8	12.5	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-158	204
30	1.4	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				105			0	-77	146
30	1.4	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				155			0	-154	302
P1	2	Established Pasture (without legume)	Field P1 - Grazing Calculator	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes				105			0	-17	-31
P2	10	Established Pasture (without legume)	Field P2 - Grazing Calculator	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes				105			0	-17	-31
P3	6	Established Pasture (without legume)	Field P3 - Grazing Calculator	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes				74			0	-62	-134
P4	6	Established Pasture (without legume)	Field P4 - Grazing Calculator	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes				74			0	-62	-134
CF5	3	Small Grain Silage	Pen Pack	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	10	tons/A				112			0	-29	269

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

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								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
CF5	3	Corn for Silage (No-till)	Pen Pack	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	10	tons/A				159			0	-58	558
CF6	7.5	Small Grain Silage	Pen Pack	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	10	tons/A				112			0	-29	269
CF6	7.5	Corn for Silage (No-till)	Pen Pack	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	10	tons/A				159			0	-58	558
CF7	7	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				47			0	-77	176
CF7	7	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				74			0	-154	372
CF9	3	Small Grain Silage	Pen Pack	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	10	tons/A				112			0	-29	269
CF9	3	Corn for Silage (No-till)	Pen Pack	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	10	tons/A				159			0	-58	558
S1	12	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				47			0	-77	146
S1	12	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				74			0	-154	302

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								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
S2-S4	24	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				47			0	-77	106
S2-S4	24	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				74			0	-154	222
S5	4.5	Small Grain Silage	Heifer Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				50			0	-54	22
S5	4.5	Corn for Silage (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				72			0	-78	44
S6	4	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				105			0	-37	136
S6	4	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				155			0	-44	272
S7	9.5	Small Grain Silage	Heifer Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				100			0	-54	22
S7	9.5	Corn for Silage (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				142			0	-78	44
C2	7	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				105			0	-37	-124

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

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								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
C2	7	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				155			0	-44	-248
HW3	3	Established Mixed Grasses	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	5000	gal/A									
HW3	3	Established Mixed Grasses	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	5000	gal/A				222			0	44	192
M1	2.9	Small Grain Silage	Heifer Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				70			0	-54	-28
M1	2.9	Corn for Silage (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				102			0	-68	-46
M2	7.1	Small Grain Silage	Heifer Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				57			0	-54	-28
M2	7.1	Corn for Silage (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				102			0	-68	-46
Orman1	17.5	Corn for Grain (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	6000	gal/A				176			0	68	-18
Orman2	16.4	Corn for Grain (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	6000	gal/A				176			0	48	-48
Orman3	9.3	Corn for Grain (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	6000	gal/A				181			0	88	47
Orman4	3	Established Mixed Grasses	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	6000	gal/A				251			0	118	237

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								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	**Acres**	**Crop**	**Manure Group**	**Application Season**	**Application Management**	**Planned Manure Rate[1]**		**N**	**P_2O_5**	**K_2O**	**N**	**P_2O_5**	**K_2O**	**N**	**P_2O_5**	**K_2O**
Orman5	2	Established Mixed Grasses	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	6000	gal/A				251			0	118	237

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NMP Summary Notes

Crop Years 2023

CMU/Field ID	Notes
1	
1	
2	
2	
3	
3	
4	
4	
5	
5	
6	
6	
7	
7	
8	
8	
30	
30	
P1	The grazing group includes the following animals on pasture: 18 dry cows from the Dry Cows (Fall) animal group,12 hours per day for 35 days,from Jun. to Oct.
P2	Grazing group includes the following animals on pasture: 18 dry cows from the Dry Cows (Fall) animal group,12 hours per day for 115 days,from Jun. to Oct. 18 dry cows from the Dry Cows (Spring) animal group,12 hours per day for 60 days,from Apr. to May.
P3	Grazing group includes the following animals on pasture: 80 dairy heifers from the Heifers (Fall) animal group,12 hours per day for 75 days,from Apr. to Oct. 80 dairy heifers from the Heifers (Spring) animal group,12 hours per day for 30 days,from Apr. to Oct.
P4	Grazing group includes the following animals on pasture: 80 dairy heifers from the Heifers (Fall) animal group,12 hours per day for 75 days,from Apr. to Oct. 80 dairy heifers from the Heifers (Spring) animal group,12 hours per day for 30 days,from Apr. to Oct.
CF5	
CF5	
CF6	
CF6	
CF7	
CF7	
CF9	
CF9	
S1	

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CMU/Field ID	Notes
S1	
S2-S4	
S2-S4	
S5	
S5	
S6	
S6	
S7	
S7	
C2	
C2	
HW3	
HW3	
M1	
M1	
M2	
M2	
Orman1	
Orman2	
Orman3	
Orman4	
Orman5	

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Nutrient Management Plan Summary

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1	54.5	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-108	224
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								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
CF5	3	Corn for Silage (No-till)	Pen Pack	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	10	tons/A				159			0	-58	558
CF6	7.5	Small Grain Silage	Pen Pack	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	10	tons/A				112			0	-29	269
CF6	7.5	Corn for Silage (No-till)	Pen Pack	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	10	tons/A				159			0	-58	558
CF7	7	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				47			0	-77	176
CF7	7	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				74			0	-154	372
CF9	3	Small Grain Silage	Pen Pack	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	10	tons/A				112			0	-29	269
CF9	3	Corn for Silage (No-till)	Pen Pack	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	10	tons/A				159			0	-58	558
S1	12	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				47			0	-77	146
S1	12	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				74			0	-154	302

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
S2-S4	24	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				47			0	-77	106
S2-S4	24	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				74			0	-154	222
S5	4.5	Small Grain Silage	Heifer Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				50			0	-54	22
S5	4.5	Corn for Silage (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				72			0	-78	44
S6	4	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				105			0	-37	136
S6	4	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				155			0	-44	272
S7	9.5	Small Grain Silage	Heifer Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				100			0	-54	22
S7	9.5	Corn for Silage (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				142			0	-78	44
C2	7	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				105			0	-37	-124

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
C2	7	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				155			0	-44	-248
HW3	3	Established Mixed Grasses	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	5000	gal/A									
HW3	3	Established Mixed Grasses	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	5000	gal/A				222			0	44	192
M1	2.9	Small Grain Silage	Heifer Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				70			0	-54	-28
M1	2.9	Corn for Silage (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				102			0	-68	-46
M2	7.1	Small Grain Silage	Heifer Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				57			0	-54	-28
M2	7.1	Corn for Silage (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				102			0	-68	-46
Orman1	17.5	Corn for Grain (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	6000	gal/A				176			0	68	-18
Orman2	16.4	Corn for Grain (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	6000	gal/A				176			0	48	-48
Orman3	9.3	Corn for Grain (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	6000	gal/A				181			0	88	47
Orman4	3	Established Mixed Grasses	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	6000	gal/A				251			0	118	237

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	**Acres**	**Crop**	**Manure Group**	**Application Season**	**Application Management**	**Planned Manure Rate[1]**		**N**	**P_2O_5**	**K_2O**	**N**	**P_2O_5**	**K_2O**	**N**	**P_2O_5**	**K_2O**
Orman5	2	Established Mixed Grasses	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	6000	gal/A				251			0	118	237

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NMP Summary Notes

Crop Years 2024

CMU/Field ID	Notes
1	
1	
2	
2	
3	
3	
4	
4	
5	
5	
6	
6	
7	
7	
8	
8	
30	
30	
P1	The grazing group includes the following animals on pasture: 18 dry cows from the Dry Cows (Fall) animal group,12 hours per day for 35 days,from Jun. to Oct.
P2	Grazing group includes the following animals on pasture: 18 dry cows from the Dry Cows (Fall) animal group,12 hours per day for 115 days,from Jun. to Oct. 18 dry cows from the Dry Cows (Spring) animal group,12 hours per day for 60 days,from Apr. to May.
P3	Grazing group includes the following animals on pasture: 80 dairy heifers from the Heifers (Fall) animal group,12 hours per day for 75 days,from Apr. to Oct. 80 dairy heifers from the Heifers (Spring) animal group,12 hours per day for 30 days,from Apr. to Oct.
P4	Grazing group includes the following animals on pasture: 80 dairy heifers from the Heifers (Fall) animal group,12 hours per day for 75 days,from Apr. to Oct. 80 dairy heifers from the Heifers (Spring) animal group,12 hours per day for 30 days,from Apr. to Oct.
CF5	
CF5	
CF6	
CF6	
CF7	
CF7	
CF9	
CF9	
S1	

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

CMU/Field ID	Notes
S1	
S2-S4	
S2-S4	
S5	
S5	
S6	
S6	
S7	
S7	
C2	
C2	
HW3	
HW3	
M1	
M1	
M2	
M2	
Orman1	
Orman2	
Orman3	
Orman4	
Orman5	

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 329.6 **Crop Year(s)** 2025

Whole Farm Note:

If manure runs out for any field, consult Appendix 4 of the plan for that field. The fertilizer required on any part of the field that does not receive manure can be determined from the 'Net Nutrients Required' for that field.

Fall manure applications require at least 25% cover unless the crop management unit is planted to a cover crop in time to allow for appropriate growth to control runoff until the next growing season, or the manure is injected or mechanically incorporated within 5 days using minimal soil disturbance techniques consistent with no-till farming practices.

Operation Acres:

Total Acres: 353 **Total Acres Available For Nutrient Application Under Operator's Control: Owned:** 133.5 **Rented:** 196.1

Animal Equivalent Units: 612.76 **Animal Equivalent Units Per Acre:** 1.86

								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
1	54.5	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-59	107
1	54.5	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-108	224
2	11.8	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-79	57
2	11.8	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-158	124

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
3	20	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-79	107
3	20	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-158	224
4	10.5	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-79	57
4	10.5	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-158	124
5	18.7	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-59	107
5	18.7	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-108	224
6	19	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-79	-43
6	19	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-158	-86
7	14.5	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-79	57

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
7	14.5	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-158	124
8	12.5	Small Grain Silage	Robot Barn Lagoon (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				32			0	-79	97
8	12.5	Corn for Silage (No-till)	Robot Barn Lagoon (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				44			0	-158	204
30	1.4	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				105			0	-77	146
30	1.4	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				155			0	-154	302
P1	2	Established Pasture (without legume)	Field P1 - Grazing Calculator	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes				105			0	-17	-31
P2	10	Established Pasture (without legume)	Field P2 - Grazing Calculator	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes				105			0	-17	-31
P3	6	Established Pasture (without legume)	Field P3 - Grazing Calculator	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes				74			0	-62	-134
P4	6	Established Pasture (without legume)	Field P4 - Grazing Calculator	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes				74			0	-62	-134
CF5	3	Small Grain Silage	Pen Pack	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	10	tons/A				112			0	-29	269

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
CF5	3	Corn for Silage (No-till)	Pen Pack	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	10	tons/A				159			0	-58	558
CF6	7.5	Small Grain Silage	Pen Pack	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	10	tons/A				112			0	-29	269
CF6	7.5	Corn for Silage (No-till)	Pen Pack	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	10	tons/A				159			0	-58	558
CF7	7	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				47			0	-77	176
CF7	7	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				74			0	-154	372
CF9	3	Small Grain Silage	Pen Pack	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	10	tons/A				112			0	-29	269
CF9	3	Corn for Silage (No-till)	Pen Pack	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	10	tons/A				159			0	-58	558
S1	12	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				47			0	-77	146
S1	12	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				74			0	-154	302

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
S2-S4	24	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				47			0	-77	106
S2-S4	24	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				74			0	-154	222
S5	4.5	Small Grain Silage	Heifer Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days	9000	gal/A				50			0	-54	22
S5	4.5	Corn for Silage (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated the same day	9000	gal/A				72			0	-78	44
S6	4	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				105			0	-37	136
S6	4	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				155			0	-44	272
S7	9.5	Small Grain Silage	Heifer Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				100			0	-54	22
S7	9.5	Corn for Silage (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				142			0	-78	44
C2	7	Small Grain Silage	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				105			0	-37	-124

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
C2	7	Corn for Silage (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				155			0	-44	-248
HW3	3	Established Mixed Grasses	Tiestall Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	5000	gal/A									
HW3	3	Established Mixed Grasses	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	5000	gal/A				222			0	44	192
M1	2.9	Small Grain Silage	Heifer Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				70			0	-54	-28
M1	2.9	Corn for Silage (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				102			0	-68	-46
M2	7.1	Small Grain Silage	Heifer Pit (Fall)	Early Fall: 1.2-12	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A				57			0	-54	-28
M2	7.1	Corn for Silage (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	9000	gal/A				102			0	-68	-46
Orman1	17.5	Corn for Grain (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	6000	gal/A				176			0	68	-18
Orman2	16.4	Corn for Grain (No-till)	Heifer Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	6000	gal/A				176			0	48	-48
Orman3	9.3	Corn for Grain (No-till)	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	6000	gal/A				181			0	88	47
Orman4	3	Established Mixed Grasses	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	6000	gal/A				251			0	118	237

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	**Acres**	**Crop**	**Manure Group**	**Application Season**	**Application Management**	**Planned Manure Rate[1]**		**N**	**P_2O_5**	**K_2O**	**N**	**P_2O_5**	**K_2O**	**N**	**P_2O_5**	**K_2O**
Orman5	2	Established Mixed Grasses	Tiestall Pit (Spring)	Spring: 1.2-12	Spring 1.2-12: Incorporated after 7 days	6000	gal/A				251			0	118	237

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NMP Summary Notes

Crop Years 2025

CMU/Field ID	Notes
1	
1	
2	
2	
3	
3	
4	
4	
5	
5	
6	
6	
7	
7	
8	
8	
30	
30	
P1	The grazing group includes the following animals on pasture: 18 dry cows from the Dry Cows (Fall) animal group,12 hours per day for 35 days,from Jun. to Oct.
P2	Grazing group includes the following animals on pasture: 18 dry cows from the Dry Cows (Fall) animal group,12 hours per day for 115 days,from Jun. to Oct. 18 dry cows from the Dry Cows (Spring) animal group,12 hours per day for 60 days,from Apr. to May.
P3	Grazing group includes the following animals on pasture: 80 dairy heifers from the Heifers (Fall) animal group,12 hours per day for 75 days,from Apr. to Oct. 80 dairy heifers from the Heifers (Spring) animal group,12 hours per day for 30 days,from Apr. to Oct.
P4	Grazing group includes the following animals on pasture: 80 dairy heifers from the Heifers (Fall) animal group,12 hours per day for 75 days,from Apr. to Oct. 80 dairy heifers from the Heifers (Spring) animal group,12 hours per day for 30 days,from Apr. to Oct.
CF5	
CF5	
CF6	
CF6	
CF7	
CF7	
CF9	
CF9	
S1	

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

CMU/Field ID	Notes
S1	
S2-S4	
S2-S4	
S5	
S5	
S6	
S6	
S7	
S7	
C2	
C2	
HW3	
HW3	
M1	
M1	
M2	
M2	
Orman1	
Orman2	
Orman3	
Orman4	
Orman5	

[1] See rate calibration table (Nutrient Management Plan Summary Notes).

[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Manure Spreader Calibration Notes

1

Crop Years 2023

Manure Application Rate	Manure Spreader Used	Spreader Settings	Tractor Used (if applicable)	Tractor Settings (speed, gear, rpm, pto, etc.)
6000 gal	Lauver Ag (1762-MH3)			
9000 gal	Lauver Ag (1762-MH3)			
9000 gal	PA Manure Pumping LLC	Dragline		
10 tons	New Holland 185		Case	540 PTO RPM, 6 mph

Additional Nutrient Management Plan Requirements

Manure Management and Stormwater BMP Implementation Summary

Best Management Practice	NRCS Practice Code [1]	BMP Location	Implementation Season & Year
Heavy Use Area Protection	561	Heifer Facility	Summer 2026
Roofs and Covers	567	Heifer Facility	Summer 2026
Roof Runoff Structure	558	Heifer Facility	Summer 2026
Animal Trails and Walkways	575	Heifer Facilty	Summer 2026
Underground Outlet	620	Heifer Facility	Summer 2026
Per Jeff Overstreet-BCCD See Appendix 6			

1 If applicable, enter USDA-NRCS Practice Code. For other non-technical BMPs, leave blank.

In-Field Manure Stacking Procedures

Manure must be applied to the field within 120 days of stacking or the stacks must be covered. Stacks must be implemented and maintained according to sound BMPs, addressing concerns such as soil type, soil slope, shape of the pile, setbacks, and rotation of piles.

N/A

Additional CAFO Requirements

In-field stacking criteria, winter storage requirements, and other issues identified by DEP's review of the nutrient management plan.

This operation is not a CAFO

Proposed Manure Storage Description

Type, dimensions, volume, freeboard and location on map.

N/A

Description of Planned Alternative Manure Technology Practices

Type of practice, volume of manure addressed, and result of practice.

N/A

Exported Manure Summary

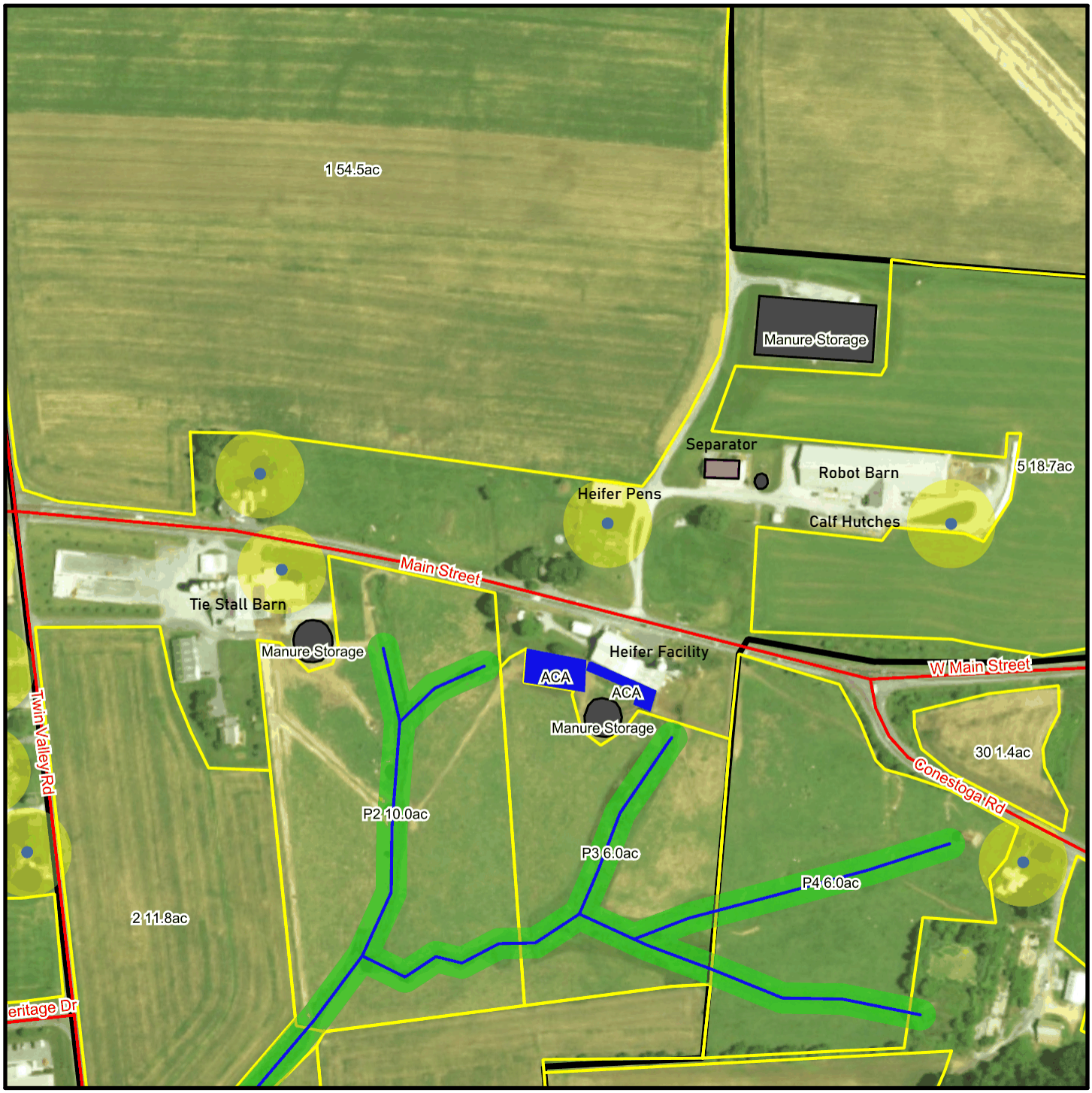
Summarize in a short paragraph the arrangements proposed for the manure to be exported from the operation. This information is described in more detail in Appendix 8 of this plan.

There is not any exported manure in this plan.

Operator Management Map

Three types of maps are required for a CNMP 590 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Operator Management Map** is to be included here in the Nutrient Management Plan Summary and must include field identification, acreage and boundaries, manure application setback areas and buffers and associated landscape features (streams and other water bodies, sinkholes and active water wells), location of existing and proposed structural BMPs (including manure storage facilities), location of existing or proposed emergency manure stacking areas and in-field manure stacking areas, and road names adjacent to and within the operation. All features on the map must be clearly identified and include a legend for setback areas and other features. The Topographic Map and Soils Map must be included in Appendix 9.

Farmstead



* 326.0 feet per inch

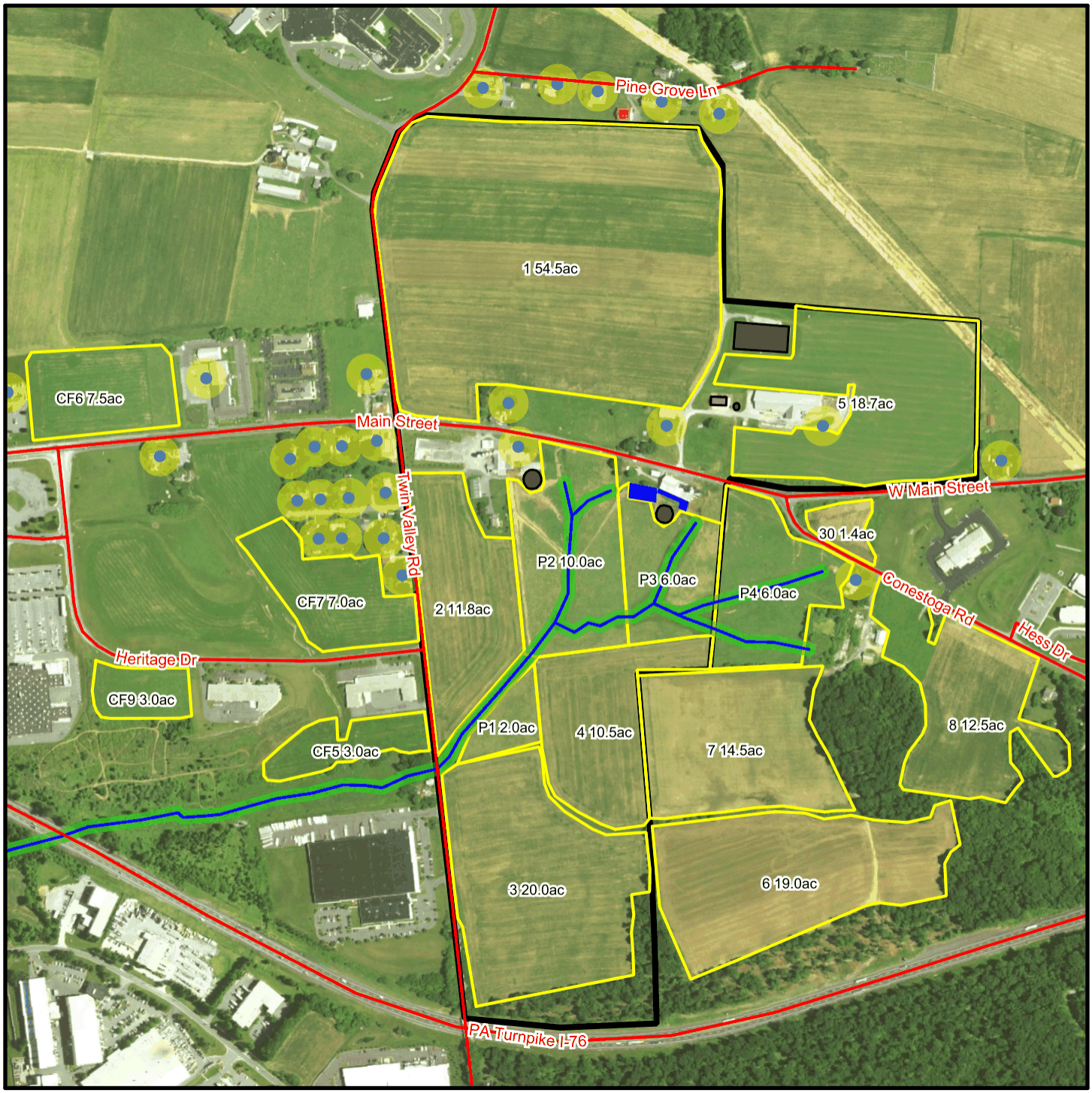
0 163 326 489 652 feet

Legend

- field / CMU
- farm boundary
- homestead
- forest
- water
- stream
- sinkhole area
- sinkhole
- manure stacking
- vegetative buffer
- 100' manure setback
- 150' manure setback
- AHUA
- well
- road

N

Home Farm and CF Fields



* 714.0 feet per inch

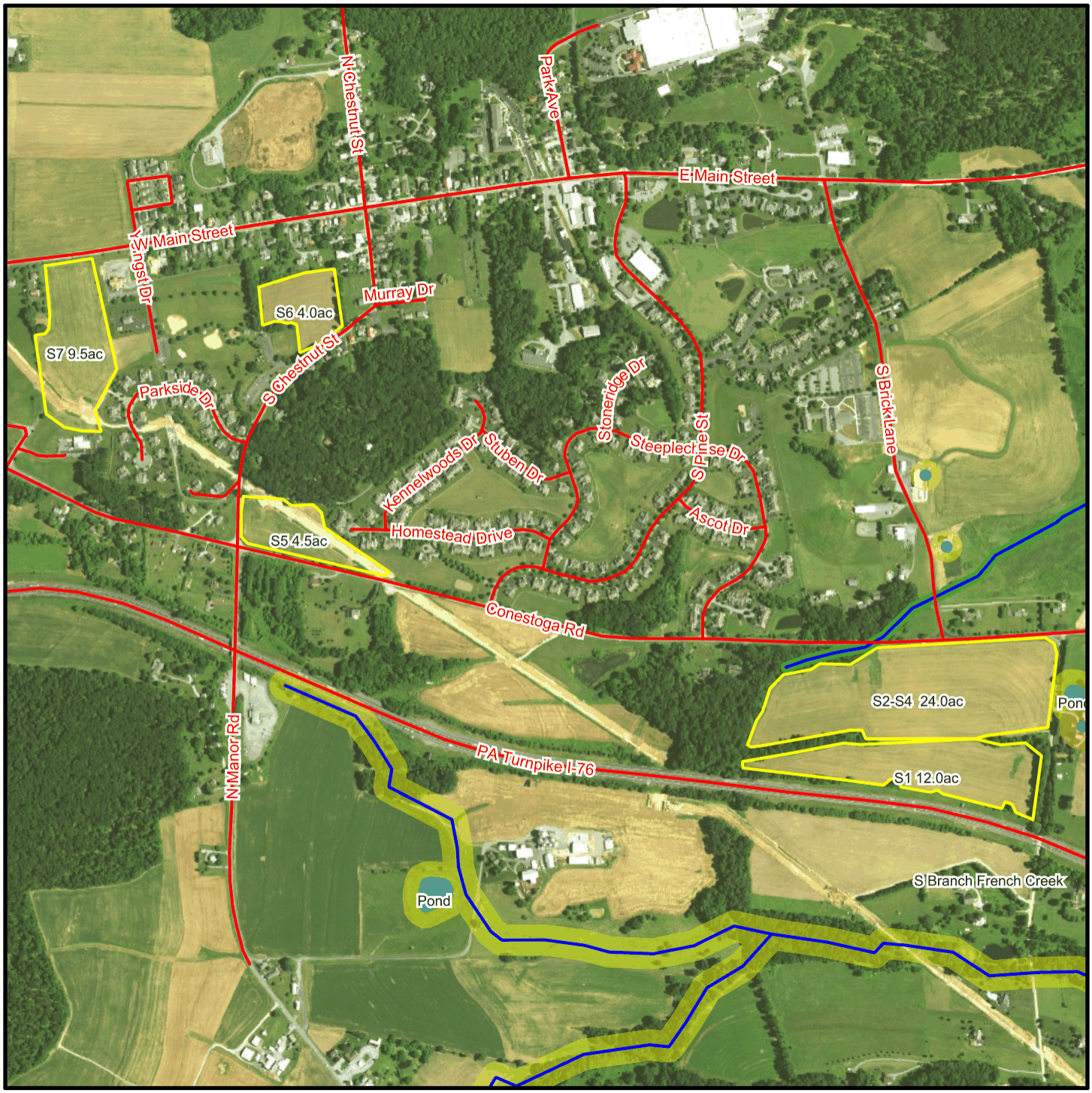
0 357 714 1071 1428 feet

Legend

field / CMU	water	manure stacking	AHUA
farm boundary	stream	vegetative buffer	well
homestead	sinkhole area	100' manure setback	road
forest	sinkhole	150' manure setback	

N

S Fields



* 930.0 feet per inch

0 465 930 1395 1860 feet

Legend

field / CMU	water	manure stacking	AHUA
farm boundary	stream	vegetative buffer	well
homestead	sinkhole area	100' manure setback	road
forest	sinkhole	150' manure setback	

N

C2

* 326.0 feet per inch

0 163 326 489 652 feet

Legend

- field / CMU
- farm boundary
- homestead
- forest
- water
- stream
- sinkhole area
- sinkhole
- manure stacking
- vegetative buffer
- 100' manure setback
- 150' manure setback
- AHUA
- well
- road

N

Hopewell

* 192.0 feet per inch

0 96 192 288 384 feet

Legend

- field / CMU
- farm boundary
- homestead
- forest
- water
- stream
- sinkhole area
- sinkhole
- manure stacking
- vegetative buffer
- 100' manure setback
- 150' manure setback
- AHUA
- well
- road

N

M1 & M2

* 192.0 feet per inch

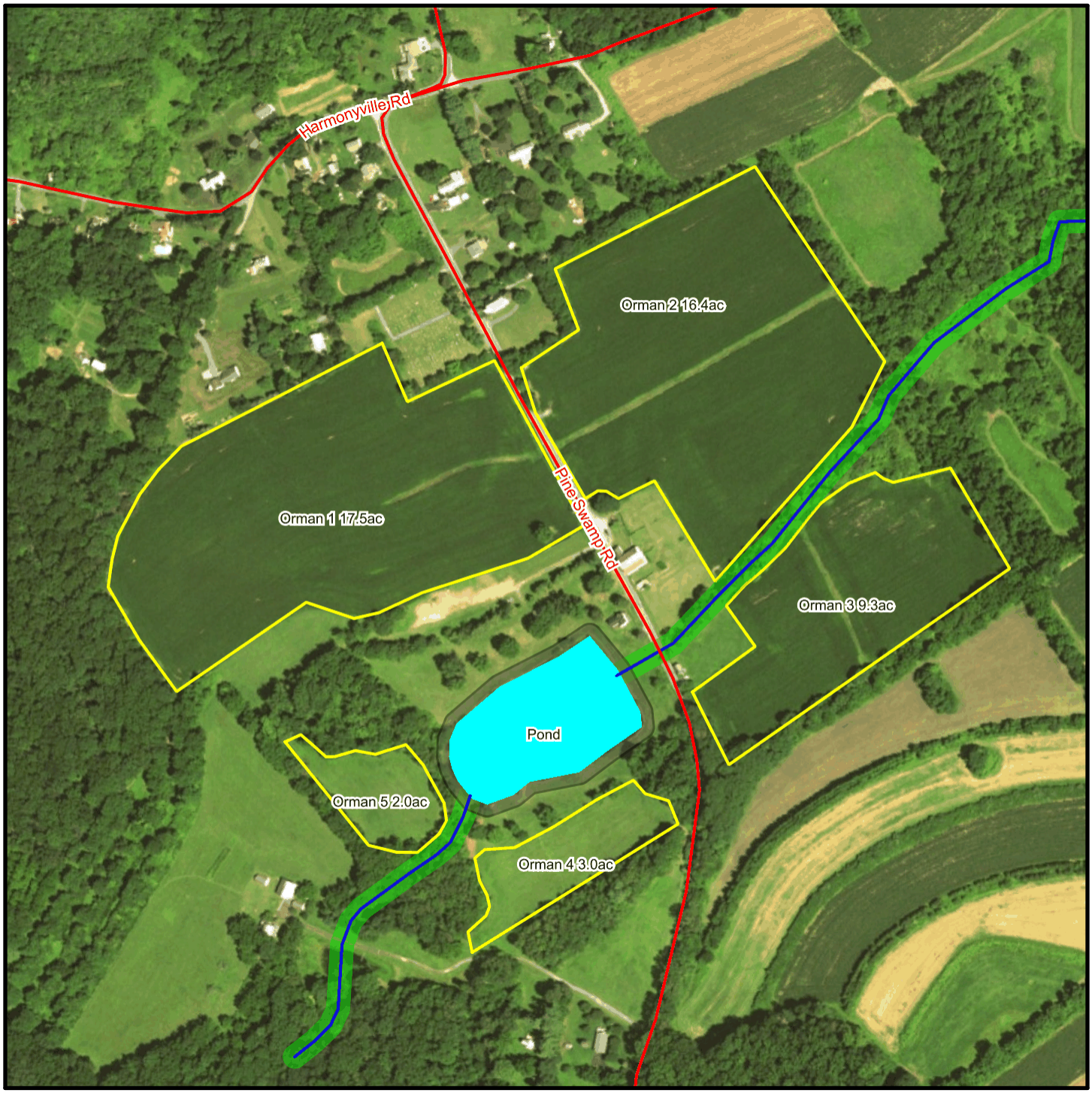
0 96 192 288 384 feet

Legend

- field / CMU
- farm boundary
- homestead
- forest
- water
- stream
- sinkhole area
- sinkhole
- manure stacking
- vegetative buffer
- 100' manure setback
- 150' manure setback
- AHUA
- well
- road

N

Orman Fields



* 422.0 feet per inch

0 211 422 633 844 feet

Legend

- field / CMU
- farm boundary
- homestead
- forest
- water
- stream
- sinkhole area
- sinkhole
- manure stacking
- vegetative buffer
- 100' manure setback
- 150' manure setback
- AHUA
- well
- road

N

Created by the Penn State Geospatial Technology Program, Land Analysis Lab. http://www.paonestop.org Created on: 02/02/23

NRCS Nutrient Management (590) Record Keeping Checklist

Comprehensive Nutrient Management Plans

The following records are required to be maintained on the operation:

_____ **Manure Test Results** – annually; manure analysis results for each manure group

_____ **Soil Test Results** – current within 3 years; current soil test results for each crop management unit

_____ **Land Application of Nutrients** – annually; location (ID) & number of acres, date of application, and application rate for each crop management unit

_____ **Crop Yields** – annually; approximate yield levels for each crop management unit

_____ **Uncollected Manure Information** – annually; number of animals, number of days, and average number of hours per day on each pasture unit

_____ **Manure Export Sheets** – (if applicable) completed manure export sheets for each importing operation (copy to importer; copy retained on exporting operation; small quantity exclusion only requires name, amount of manure transferred and date)

_____ **Exported Manure Applied Under Exporter Direction** – (if applicable) annually; application location (ID and notation of observation of application setbacks), number of acres, date of application, application methods, and application rate

_____ **Exported Manure Through Broker – Broker Responsible** – (if applicable) annually; broker is responsible for application records; application location (ID and notation of observation of application setbacks), number of acres, date of application, application methods, and application rate and provide copies to the importing operations

_____ **Alternative Manure Utilization Other Than Manure Export** – (if applicable) annually; amount and use of manure

Field Crop Record

NRCS Nutrient Management (590) requires an annual accounting of the application rate of nutrients and the resulting crop for each crop management unit.

	Crop Information		Manure & Fertilizer Application Information (lb/a, ton/a or gal/a)								
			Application 1			Application 2			Application 3		
CMU/ Field ID	Crop	Yield	Date	Manure or Fertilizer Type	Application Rate	Date	Manure or Fertilizer Type	Application Rate	Date	Manure or Fertilizer Type	Application Rate

Manure Group Application Record

NRCS Nutrient Management (590) requires the following land application information be recorded annually: application location, number of acres, date of application, and application rate for each crop management unit.

Manure Group		**Date**		**Manure Source/Location**	
Spreader ID [1]		**Spreader Calibrated Rates**			
Temperature [1]		**Wind Speed & Direction [1]**		**Weather Conditions**	
Applicator [1]			**Notes**		

[1] Optional information not required by 590.

Field Information			**Manure Application Information**			
CMU/Field ID	**Field Acres**	**Acres Covered**	**Application Rate**	**Application Method**	**Days to Incorporation (if < 7 days)**	**Total Amount Applied**

Field Information			Manure Application Information			
CMU/Field ID	Field Acres	Acres Covered	Application Rate	Application Method	Days to Incorporation (if < 7 days)	Total Amount Applied

Manure Sampling Record

NRCS Nutrient Management (590) requires annual sampling and analysis of each manure group listed in the nutrient management plan. To fulfill keeping requirements a file of all manure analysis reports must be maintained. In addition, the following table can be used (optional) to summarize the manure analysis results for easier reference and use.

Manure Group	Lab	Date Sampled	Total Nitrogen (N)	Ammonium N (NH_4-N)	Total Phosphate (P_2O_5)	Total Potash (K_2O)	Percent Solids	P Source Coefficient Value
			Note lb/ton or lb/1000 gal					

Pasture Uncollected Manure Record

NRCS Nutrient Management (590) requires that the number of animals, number of days and average number of hours per day be recorded for each pasture unit listed in the nutrient management plan.

Pasture ID	Period Dates	Animal Type	Number of Animals	Average Weight	Number of Days	Average Number of Hours Per Day

Soil Testing Record

NRCS Nutrient Management (590) requires that soil tests for each crop management unit or field be current within the last three years. To fulfill Act 38 record keeping requirements a file of all soil test reports must be maintained. In addition, the following table can be used (optional) to summarize the soil test results for easier reference and use.

CMU/Field ID	Lab	Date Sampled	Soil Test Levels			Soil Test Report Levels [1] (If not in ppm)	
			pH	ppm Mehlich-3 P	ppm K	Phosphorus (lbs P or lbs P_2O_5)	Potassium (lbs K or lbs K_2O)

[1] Complete only if laboratory did not report phosphorus and potassium levels in ppm. Indicate units used on the soil test report.

Appendix 1

CNMP 590 Nutrient Management Plan Agreement & Responsibilities

NRCS program participants must develop and provide a copy of an NRCS-approved Comprehensive Nutrient Management Plan (CNMP) including a 590 nutrient management plan before NRCS provides technical or financial assistance involving manure or wastewater handling, storage and treatment and nutrient management that involves the application of manure and wastewater associated with the operation.

Plan Implementation Requirements

This nutrient management plan meets the NRCS 590 Nutrient Management conservation practice standard. Implementation of this plan is required to maintain compliance with your conservation plan. Implementation includes adherence to manure and fertilizer application rates, timing, setbacks and conditions and record keeping obligations.

The following records are required to be maintained:

1. Annual crop yields by field
2. Manure and fertilizer application rates, locations and date of application
3. Soil test reports (testing required every 3 years per crop management unit)
4. Manure test reports (testing required once a year for each manure group)
5. Number of animals on pasture, number of days on pasture, and hours per day on pasture
6. Manure imports, exports, and internal transfers

Develop a revised CNMP 590 when significant changes in nutrient management occur on operation. Significant changes in nutrient management include implementation of practices that affect the planned time, rate, form, and placement of nutrients, such as a new waste storage facility.

Specialist Signature

I affirm that the information contained in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, based on information provided by the operator; that this plan has been developed in accordance with the criteria established for the Nutrient Management (code 590) Conservation Practice Standard; and that I have presented the final complete plan to the operator and discussed the content and implementation of this plan with the operator.

Specialist Signature

Date: 2/10/2023

Operator Signature

I understand and agree that I will implement the practices, procedures and record keeping obligations as outlined in this plan in order to protect water quality and address the nutrient needs of the crops associated with the operation. I agree that if I use a commercial hauler or broker for the application or export of manure, that only haulers or brokers that hold a valid certification issued by the Pa Department of Agriculture, under Act 49 of 2004, will be used. I affirm that all information provided in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, and reflects the current and planned activities of the operation; and that, if this plan was completed by a nutrient management specialist, I have reviewed the final completed plan and the specialist has discussed the content and implementation of this plan with me.

Operator Signature [signature]

Operator Title Owner

Date 2/13/2023

Appendix 2

Operation Information

Operation Description

Animal types and numbers; cropland, hayland and pastureland acreage; farmstead acreage; crop rotation (crops, sequence of crops, and number of years for each crop); manure group management (contributing animal groups, collection, storage and handling procedures); composting (including mortality) management.

Kurtland Farms is a Dairy operation located in Elverson, PA. The dairy facilities are located in Berks County but some of the owned and rented cropland is also in Chester County. The farm consists of 285 lactating Holstein Cows, 30 dry cows, 95 heifers (1-2yrs old) and 145 calves (0-1yr old). Total crop land included in the 590 NMP is 305.6 acres, pasture land is 24 acres and farmstead is 18.6 acres. Crop rotation consists of small grain silage and corn silage double crop on most of the acres with some permanent grass hay and some corn grain. The manure groups consist of: Fall/Spring liquid dairy from the robot barn stored in the HDPE lined lagoon; Fall/Spring liquid dairy from the tie stall facility in the circular concrete tank; Fall/Spring liquid heifer from the heifer facility in the circular concrete tank. Pen pack from the calf hutches and small heifer barn is storage in the stack shed. Manure from the Robot facility is collected in a 30' x 10' deep concrete tank and then is pumped to a separator. The separated liquid is pumped to the covered HDPE lagoon and the solids are being stored in the stack shed. The solids are recycled as bedding for the animals in all of the facilities. 80 bred heifers and 18 dry cows have access to pasture for 7 months out of the year (April-October). They are fed and watered in the barn but are free to use the pasture during these months. All pastures have stream bank fencing. A disposal service is used for animal mortalities.

County(s)

Berks, Chester

Name of Receiving Stream(s)/Watershed(s)

Marsh Creek(HQ-TSF), South Branch French Creek(WWF), UNT to Conestoga River(WWF), UNT to Hay Creek(CWF), UNT to Pine Creek (EV)

Notation of Special Protection Waters

CWF, WWF, HQ-TSF, EV

Operation Acres

Total Acres: 353

Total Acres Available for Nutrient Application Under Operator's Control

Owned: 133.5

Rented: 196.1

Names & Addresses of Owners of Rented or Leased Land and/or Facilities

Marle and David Stoltzfus, 26 East Main Street, PO Box 20, Elverson, PA 19520

Curt Malizzi, 142 Kratz Road, Birdsboro, PA 19508

Twin Valley School District, 4851 North Twin Valley Road, Elverson, PA 19520

Rod Merrill, 171 Creamery Road, Elverson, PA 19520

Joe Sullivan, 108 East Main Street, Elverson, PA 19520

Kevin Orman, 233 Pine Swamp Road, Elverson, PA 19520

Existing Manure Storages & Capacity

Type of storage, dimensions, useable capacity, freeboard, top or bottom loaded, dimensions and description of contributing runoff area, description of wastewater additions, types and amounts of bedding. Briefly describe, for each manure group, manure storage management during removal (degree of agitation, method of manure removal, extent the storage is emptied, type of unremoved manure, etc.) and manure sampling procedures.

Covered HDPE Lined Lagoon—250'x120'x15' deep = 1,570,000 gallons of storage with 1' freeboard and is not exposed to precipitation. Wash water from the Robot facility is transferred to this storage and is included in the records in Appendix 3.

Round Concrete Tank—93'x8' deep = 380,900 gallons of storage with 1' freeboard and is exposed to precipitation. This has a contributing runoff area of approx. 3000 SF. Wash water from the tie stall facility is transferred to this storage and is included in the records in Appendix 3.

Round Concrete Tank—85'x8'deep = 297,000 gallons of storage with 1' freeboard and is exposed to precipitation. This has a contributing runoff area of approx. 6500 SF.

Roofed Concrete Solids Storage—80' x 40' x 6' sides = 19,200 cu ft of storage and is not exposed to precipitation. The manure from the robot barn is separated and the manure solids are stored here. They are then used for bedding in the dairy and heifer facilities. A small amount of penpack manure from the calf hutches and small heifer barn is also stored here.

Liquid storages are agitated prior to hauling and pumped to either a dragline spreading system or manure tankers for land application in the spring and fall. The facilities are emptied two times per year. Grab samples are collected during load out and are combined into one comprehensive sample for each manure storage.

Manure Application Equipment Capacity & Practical Application Rates

Description of application equipment, practical application rates based on calibration and calibration method used, the data recorded during equipment calibration is to be retained on the farm.

The liquid manure is custom spread. The home farm and some adjacent land is spread with a dragline by PA Custom Haulers, LLC. They are capable of variable rates with 9000gal/ac being the most common. Other fields are hauled by tanker by Lauver Ag (1762-MH3) at either 5000 gal/ac 6000 gal/ac or 9000 gal/ac. The penpack is spread with a New Holland box spreader at 10 tons/acre. The swath area load method is used to calibrate the equipment.

Appendix 3 Manure Group Information Crop Yrs. 2023	Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Heifer Pit (Fall)		
Manure Report Date (note if averaging several reports)	5/17/2022			5/17/2022			5/17/2022			5/17/2023			5/17/2022		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Manure Type	Dairy			Dairy			Dairy			Dairy			Dairy		
Manure Unit (lbs/ton or 1000 gal)	lb/1000 gal			lb/1000 gal			lb/1000 gal			lb/1000 gal			lb/1000 gal		
Total Nitrogen (N) (lbs/ton or 1000 gal)	28.7			28.7			22.9			22.9			24		
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	13.6			13.6			12.8			12.8			11.1		
Total Organic N (lbs/ton or 1000 gal)	15.10			15.10			10.10			10.10			12.90		
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	8.8			8.8			8.6			8.6			10.4		
Total Potash (K_2O) (lbs/ton or 1000 gal)	19.2			19.2			13.8			13.8			26.4		
Percent Solids	5.5			5.5			6			6			8		
PSC Value (analytical or book value)	0.8			0.8			0.8			0.8			0.8		
Percent Moisture	94.50			94.50			94.00			94.00			92.00		
Manure Group AEU's	179.36			178.38			79.42			78.98			39.27		
Description: Site & Season Applied	Lagoon		Fall	Lagoon		Spring	Tiestall Pit		Fall	Tiestall Pit		Spring	Heifer Pit		Fall
Inventory Method	Records			Records			Records			Records			Records		
	Collected Calc.		Uncollected Calc.	Collected Calc.		Uncollected Calc.	Collected Calc.		Uncollected Calc.	Collected Calc.		Uncollected Calc.	Collected Calc.		Uncollected Calc.
Manure Group Identification	Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Tiestall Pit (Fall)		Tiestall Pit (Fall) - uncollected	Tiestall Pit (Spring)		Tiestall Pit (Spring) - uncollected	Heifer Pit (Fall)		Heifer Pit (Fall) - uncollected
CALCULATED: Total Manure Collected Per Manure Group	0.0			0.0			0.0		49.9	0.0		20.0	0.0		176.2
Units	gallons			gallons			gallons		Tons	gallons		Tons	gallons		Tons
RECORDS: Total Manure Collected Per Manure Group	1,400,000.0			1,400,000.0			500,000.0			500,000.0			200,000.0		
Unit	Gallons			Gallons			Gallons			Gallons			Gallons		
	Collected		Uncollected	Collected		Uncollected	Collected		Uncollected	Collected		Uncollected	Collected		Uncollected
Manure Used On-Farm	1,453,500.0		0.0	1,453,500.0		0.0	513,600.0		49.9	599,400.0		20.0	216,000.0		176.2
Units	Gallons			Gallons			Gallons		Tons	Gallons		Tons	Gallons		Tons
Manure Exported	0.0			0.0			0.0			0.0			0.0		
Units	gallons			gallons			gallons			gallons			gallons		
Manure Allocation Balance	-53,500.0		0.0	-53,500.0		0.0	-13,600.0		0.0	-99,400.0		0.0	-16,000.0		0.0
Units	Gallons			Gallons			Gallons		Tons	Gallons		Tons	Gallons		Tons
Manure Balance as a Percent of Total Manure Collected	-3.8%			-3.8%			-2.7%			-19.9%			-8.0%		
Total Rainfall and Runoff															

Appendix 3 Manure Group Information Crop Yrs. 2023	Robot Barn Lagoon (Fall)		Robot Barn Lagoon (Spring)		Tiestall Pit (Fall)		Tiestall Pit (Spring)		Heifer Pit (Fall)	
	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values
Animal Group 1	Lactating Cows		Lactating Cows		Lactating Cows		Lactating Cows		Heifers (Fall)	Heifers (Fall) - uncollected
Animal Type	Holstein Lactating Cow		Holstein Lactating Cow		Holstein Lactating Cow		Holstein Lactating Cow		*User Entered* Holstein Heifer (13-22months)	Total Nitrogen (N) lbs/ton
Animal Number	222		222		63		63		80	10.00
Animal Weight	1450 lbs		1450 lbs		1450 lbs		1450 lbs		979 lbs	Total Phosphate (P2O5) lbs/ton
Animal Group AUs	321.90 AUs		321.90 AUs		91.35 AUs		91.35 AUs		78.32 AUs	3.00
Animal Group AEUs	161.39 AEUs		160.51 AEUs		45.80 AEUs		45.55 AEUs		39.27 AEUs	Total Potash (K2O) lbs/ton
Daily Manure Production per AU	13.0 gal		13.0 gal		13.0 gal		13.0 gal		6.9 gal	7.00
Total Days Manure Produced	183 days		182 days		183 days		182 days		183 days	PSC Value
Total Manure Produced	Records		Records		Records		Records		Records	0.80
Days On Pasture	0 days		0 days		0 days		0 days		150 days	
Hours Per Day On Pasture	0 hrs		0 hrs		0 hrs		0 hrs		12 hrs	
Total Bedding	Records		Records		Records		Records		Records	
Total Washwater	Records		Records		Records		Records		Records	
CALCULATED - Total Uncollected Manure Per Animal Group									40,530.60 gal	176.22 - Tons
CALCULATED-Total Manure Collected Per Animal Group	Records		Records		Records		Records		Records	

Animal Group 2	Dry Cows		Dry Cows		Dry Cows (Fall)	Dry Cows (Fall) - uncollected	Dry Cows (Spring)	Dry Cows (Spring) - uncollected		
Animal Type	Holstein Dry Cow		Holstein Dry Cow		Holstein Dry Cow	Total Nitrogen (N) lbs/ton	Holstein Dry Cow	Total Nitrogen (N) lbs/ton		
Animal Number	12		12		18	9.00	18	9.00		
Animal Weight	1450 lbs		1450 lbs		1450 lbs	Total Phosphate (P2O5) lbs/ton	1450 lbs	Total Phosphate (P2O5) lbs/ton		
Animal Group AUs	17.40 AUs		17.40 AUs		26.10 AUs	3.00	26.10 AUs	3.00		
Animal Group AEUs	8.72 AEUs		8.68 AEUs		13.09 AEUs	Total Potash (K2O) lbs/ton	13.01 AEUs	Total Potash (K2O) lbs/ton		
Daily Manure Production per AU	6.0 gal		6.0 gal		6.0 gal	7.00	6.0 gal	7.00		
Total Days Manure Produced	183 days		182 days		183 days	PSC Value	182 days	PSC Value		
Total Manure Produced	Records		Records		Records	0.80	Records	0.80		
Days On Pasture	0 days		0 days		150 days		60 days			
Hours Per Day On Pasture	0 hrs		0 hrs		12 hrs		12 hrs			
Total Bedding	Records		Records		Records		Records			
Total Washwater	Records		Records		Records		Records			
CALCULATED - Total Uncollected Manure Per Animal Group					11,745.00 gal	49.92 - Tons	4,698.00 gal	19.97 - Tons		
CALCULATED-Total Manure Collected Per Animal Group	Records		Records		Records		Records			

Appendix 3 Manure Group Information Crop Yrs. 2023	Robot Barn Lagoon (Fall)		Robot Barn Lagoon (Spring)		Tiestall Pit (Fall)		Tiestall Pit (Spring)		Heifer Pit (Fall)	
	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values
Animal Group 3	Bred Heifer		Bred Heifer		Heifer		Heifer			
Animal Type	*User Entered* Holstein Heifer (23-24months)		*User Entered* Holstein Heifer (23-24months)		*User Entered* Holstein Calf (6-12months)		*User Entered* Holstein Calf (6-12months)			
Animal Number	15		15		70		70			
Animal Weight	1229 lbs		1229 lbs		585 lbs		585 lbs			
Animal Group AUs	18.44 AUs		18.44 AUs		40.95 AUs		40.95 AUs			
Animal Group AEUs	9.24 AEUs		9.19 AEUs		20.53 AEUs		20.42 AEUs			
Daily Manure Production per AU	6.9 gal		6.9 gal		9.2 gal		9.2 gal			
Total Days Manure Produced	183 days		182 days		183 days		182 days			
Total Manure Produced	Records		Records		Records		Records			
Days On Pasture	0 days		0 days		0 days		0 days			
Hours Per Day On Pasture	0 hrs		0 hrs		0 hrs		0 hrs			
Total Bedding	Records		Records		Records		Records			
Total Washwater	Records		Records		Records		Records			
CALCULATED - Total Uncollected Manure Per Animal Group										
CALCULATED-Total Manure Collected Per Animal Group	Records		Records		Records		Records			

Appendix 3 Manure Group Information Crop Yrs. 2023	Heifer Pit (Spring)		Pen Pack		Field P1 - Grazing Calculator		Field P2 - Grazing Calculator		Field P3 - Grazing Calculator	
Manure Report Date (note if averaging several reports)	5/17/2022		7/5/2022		Uncollected Book		Uncollected Book		Uncollected Book	
Laboratory Name	Waypoint		Waypoint		PSU Agronomy Guide		PSU Agronomy Guide		PSU Agronomy Guide	
Manure Type	Dairy		Dairy		Other		Other		Other	
Manure Unit (lbs/ton or 1000 gal)	lb/1000 gal		lb/ton		lb/ton		lb/ton		lb/ton	
Total Nitrogen (N) (lbs/ton or 1000 gal)	24		12.4		9		9		10	
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	11.1		2.6		0		0		0	
Total Organic N (lbs/ton or 1000 gal)	12.90		9.80		9.00		9.00		10.00	
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	10.4		2.9		3		3		3	
Total Potash (K_2O) (lbs/ton or 1000 gal)	26.4		3.14		7		7		7	
Percent Solids	8		37.4		0		0		0	
PSC Value (analytical or book value)	0.8		0.8		0.8		0.8		0.8	
Percent Moisture	92.00		62.60		100.00		100.00		100.00	
Manure Group AEU's	39.05		18.30		0.00		0.00		0.00	
Description: Site & Season Applied	Heifer Pit	Spring	Compost Shed	Spring and Fall	Grazing	Grazing	Grazing	Grazing	Grazing	Grazing
Inventory Method	Records		Records		Records		Records		Records	
	Collected Calc.	Uncollected Calc.	Collected Calc.	Uncollected Calc.	Collected Calc.	Uncollected Calc.	Collected Calc.	Uncollected Calc.	Collected Calc.	Uncollected Calc.
Manure Group Identification	Heifer Pit (Spring)	Heifer Pit (Spring) - uncollected	Pen Pack		Field P1 - Grazing Calculator		Field P2 - Grazing Calculator		Field P3 - Grazing Calculator	
CALCULATED: Total Manure Collected Per Manure Group	0.0	70.5	0.0		0.0		0.0		0.0	
Units	gallons	Tons	Tons		Tons		Tons		Tons	
RECORDS: Total Manure Collected Per Manure Group	250,000.0		200.0		11.6	11.6	58.2		123.4	
Unit	Gallons		Tons		Tons		Tons		Tons	
	Collected	Uncollected	Collected	Uncollected	Collected	Uncollected	Collected	Uncollected	Collected	Uncollected
Manure Used On-Farm	419,400.0	70.5	270.0	0.0	11.6	0.0	58.2	0.0	123.4	0.0
Units	Gallons	Tons	Tons		Tons		Tons		Tons	
Manure Exported	0.0		0.0		0.0		0.0		0.0	
Units	gallons		tons							
Manure Allocation Balance	-169,400.0	0.0	-70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Units	Gallons	Tons	Tons		Tons		Tons		Tons	
Manure Balance as a Percent of Total Manure Collected	-67.8%		-35.0%		0.1%		0.1%		0.0%	
Total Rainfall and Runoff										

Appendix 3 Manure Group Information Crop Yrs. 2023	Heifer Pit (Spring)		Pen Pack		Field P1 - Grazing Calculator		Field P2 - Grazing Calculator		Field P3 - Grazing Calculator	
	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values
Animal Group 1	Heifers (Spring)	Heifers (Spring) - uncollected	Calves							
Animal Type	*User Entered* Holstein Heifer (13-22months)	Total Nitrogen (N) lbs/ton	*User Entered* Holstein Calf (3-5months)							
Animal Number	80	10.00	45							
Animal Weight	979 lbs	Total Phosphate (P2O5) lbs/ton	310 lbs							
Animal Group AUs	78.32 AUs	3.00	13.95 AUs							
Animal Group AEUs	39.05 AEUs	Total Potash (K2O) lbs/ton	13.95 AEUs							
Daily Manure Production per AU	6.9 gal	7.00	80.0 lb							
Total Days Manure Produced	182 days	PSC Value	365 days							
Total Manure Produced	Records	0.80	Records							
Days On Pasture	60 days		0 days							
Hours Per Day On Pasture	12 hrs		0 hrs							
Total Bedding	Records		Records							
Total Washwater	Records		Records							
CALCULATED - Total Uncollected Manure Per Animal Group	16,212.24 gal	70.49 - Tons								
CALCULATED-Total Manure Collected Per Animal Group	Records		Records							
Animal Group 2			Calves							
Animal Type			*User Entered* Holstein Calf (0-2months)							
Animal Number			30							
Animal Weight			145 lbs							
Animal Group AUs			4.35 AUs							
Animal Group AEUs			4.35 AEUs							
Daily Manure Production per AU			80.0 lb							
Total Days Manure Produced			365 days							
Total Manure Produced			Records							
Days On Pasture			0 days							
Hours Per Day On Pasture			0 hrs							
Total Bedding			Records							
Total Washwater			Records							
CALCULATED - Total Uncollected Manure Per Animal Group										
CALCULATED-Total Manure Collected Per Animal Group			Records							

Appendix 3 Manure Group Information Crop Yrs. 2024	Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Heifer Pit (Fall)		
Manure Report Date (note if averaging several reports)	5/17/2022			5/17/2022			5/17/2022			5/17/2023			5/17/2022		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Manure Type	Dairy			Dairy			Dairy			Dairy			Dairy		
Manure Unit (lbs/ton or 1000 gal)	lb/1000 gal			lb/1000 gal			lb/1000 gal			lb/1000 gal			lb/1000 gal		
Total Nitrogen (N) (lbs/ton or 1000 gal)	28.7			28.7			22.9			22.9			24		
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	13.6			13.6			12.8			12.8			11.1		
Total Organic N (lbs/ton or 1000 gal)	15.10			15.10			10.10			10.10			12.90		
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	8.8			8.8			8.6			8.6			10.4		
Total Potash (K_2O) (lbs/ton or 1000 gal)	19.2			19.2			13.8			13.8			26.4		
Percent Solids	5.5			5.5			6			6			8		
PSC Value (analytical or book value)	0.8			0.8			0.8			0.8			0.8		
Percent Moisture	94.50			94.50			94.00			94.00			92.00		
Manure Group AEU's	179.36			178.38			79.42			78.98			39.27		
Description: Site & Season Applied	Lagoon		Fall	Lagoon		Spring	Tiestall Pit		Fall	Tiestall Pit		Spring	Heifer Pit		Fall
Inventory Method	Records			Records			Records			Records			Records		
	Collected Calc.		Uncollected Calc.	Collected Calc.		Uncollected Calc.	Collected Calc.		Uncollected Calc.	Collected Calc.		Uncollected Calc.	Collected Calc.		Uncollected Calc.
Manure Group Identification	Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Tiestall Pit (Fall)		Tiestall Pit (Fall) - uncollected	Tiestall Pit (Spring)		Tiestall Pit (Spring) - uncollected	Heifer Pit (Fall)		Heifer Pit (Fall) - uncollected
CALCULATED: Total Manure Collected Per Manure Group	0.0			0.0			0.0		49.9	0.0		20.0	0.0		176.2
Units	gallons			gallons			gallons		Tons	gallons		Tons	gallons		Tons
RECORDS: Total Manure Collected Per Manure Group	1,400,000.0			1,400,000.0			500,000.0			500,000.0			200,000.0		
Unit	Gallons			Gallons			Gallons			Gallons			Gallons		
	Collected		Uncollected	Collected		Uncollected	Collected		Uncollected	Collected		Uncollected	Collected		Uncollected
Manure Used On-Farm	1,453,500.0		0.0	1,453,500.0		0.0	513,600.0		49.9	599,400.0		20.0	216,000.0		176.2
Units	Gallons			Gallons			Gallons		Tons	Gallons		Tons	Gallons		Tons
Manure Exported	0.0			0.0			0.0			0.0			0.0		
Units	gallons			gallons			gallons			gallons			gallons		
Manure Allocation Balance	-53,500.0		0.0	-53,500.0		0.0	-13,600.0		0.0	-99,400.0		0.0	-16,000.0		0.0
Units	Gallons			Gallons			Gallons		Tons	Gallons		Tons	Gallons		Tons
Manure Balance as a Percent of Total Manure Collected	-3.8%			-3.8%			-2.7%			-19.9%			-8.0%		
Total Rainfall and Runoff															

Appendix 3 Manure Group Information Crop Yrs. 2024	Robot Barn Lagoon (Fall)		Robot Barn Lagoon (Spring)		Tiestall Pit (Fall)		Tiestall Pit (Spring)		Heifer Pit (Fall)	
	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values
Animal Group 1	Lactating Cows		Lactating Cows		Lactating Cows		Lactating Cows		Heifers (Fall)	Heifers (Fall) - uncollected
Animal Type	Holstein Lactating Cow		Holstein Lactating Cow		Holstein Lactating Cow		Holstein Lactating Cow		*User Entered* Holstein Heifer (13-22months)	Total Nitrogen (N) lbs/ton
Animal Number	222		222		63		63		80	10.00
Animal Weight	1450 lbs		1450 lbs		1450 lbs		1450 lbs		979 lbs	Total Phosphate (P2O5) lbs/ton
Animal Group AUs	321.90 AUs		321.90 AUs		91.35 AUs		91.35 AUs		78.32 AUs	3.00
Animal Group AEUs	161.39 AEUs		160.51 AEUs		45.80 AEUs		45.55 AEUs		39.27 AEUs	Total Potash (K2O) lbs/ton
Daily Manure Production per AU	13.0 gal		13.0 gal		13.0 gal		13.0 gal		6.9 gal	7.00
Total Days Manure Produced	183 days		182 days		183 days		182 days		183 days	PSC Value
Total Manure Produced	Records		Records		Records		Records		Records	0.80
Days On Pasture	0 days		0 days		0 days		0 days		150 days	
Hours Per Day On Pasture	0 hrs		0 hrs		0 hrs		0 hrs		12 hrs	
Total Bedding	Records		Records		Records		Records		Records	
Total Washwater	Records		Records		Records		Records		Records	
CALCULATED - Total Uncollected Manure Per Animal Group									40,530.60 gal	176.22 - Tons
CALCULATED-Total Manure Collected Per Animal Group	Records		Records		Records		Records		Records	

Animal Group 2	Dry Cows		Dry Cows		Dry Cows (Fall)	Dry Cows (Fall) - uncollected	Dry Cows (Spring)	Dry Cows (Spring) - uncollected		
Animal Type	Holstein Dry Cow		Holstein Dry Cow		Holstein Dry Cow	Total Nitrogen (N) lbs/ton	Holstein Dry Cow	Total Nitrogen (N) lbs/ton		
Animal Number	12		12		18	9.00	18	9.00		
Animal Weight	1450 lbs		1450 lbs		1450 lbs	Total Phosphate (P2O5) lbs/ton	1450 lbs	Total Phosphate (P2O5) lbs/ton		
Animal Group AUs	17.40 AUs		17.40 AUs		26.10 AUs	3.00	26.10 AUs	3.00		
Animal Group AEUs	8.72 AEUs		8.68 AEUs		13.09 AEUs	Total Potash (K2O) lbs/ton	13.01 AEUs	Total Potash (K2O) lbs/ton		
Daily Manure Production per AU	6.0 gal		6.0 gal		6.0 gal	7.00	6.0 gal	7.00		
Total Days Manure Produced	183 days		182 days		183 days	PSC Value	182 days	PSC Value		
Total Manure Produced	Records		Records		Records	0.80	Records	0.80		
Days On Pasture	0 days		0 days		150 days		60 days			
Hours Per Day On Pasture	0 hrs		0 hrs		12 hrs		12 hrs			
Total Bedding	Records		Records		Records		Records			
Total Washwater	Records		Records		Records		Records			
CALCULATED - Total Uncollected Manure Per Animal Group					11,745.00 gal	49.92 - Tons	4,698.00 gal	19.97 - Tons		
CALCULATED-Total Manure Collected Per Animal Group	Records		Records		Records		Records			

Appendix 3 Manure Group Information Crop Yrs. 2024	Robot Barn Lagoon (Fall)		Robot Barn Lagoon (Spring)		Tiestall Pit (Fall)		Tiestall Pit (Spring)		Heifer Pit (Fall)	
	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values
Animal Group 3	Bred Heifer		Bred Heifer		Heifer		Heifer			
Animal Type	*User Entered* Holstein Heifer (23-24months)		*User Entered* Holstein Heifer (23-24months)		*User Entered* Holstein Calf (6-12months)		*User Entered* Holstein Calf (6-12months)			
Animal Number	15		15		70		70			
Animal Weight	1229 lbs		1229 lbs		585 lbs		585 lbs			
Animal Group AUs	18.44 AUs		18.44 AUs		40.95 AUs		40.95 AUs			
Animal Group AEUs	9.24 AEUs		9.19 AEUs		20.53 AEUs		20.42 AEUs			
Daily Manure Production per AU	6.9 gal		6.9 gal		9.2 gal		9.2 gal			
Total Days Manure Produced	183 days		182 days		183 days		182 days			
Total Manure Produced	Records		Records		Records		Records			
Days On Pasture	0 days		0 days		0 days		0 days			
Hours Per Day On Pasture	0 hrs		0 hrs		0 hrs		0 hrs			
Total Bedding	Records		Records		Records		Records			
Total Washwater	Records		Records		Records		Records			
CALCULATED - Total Uncollected Manure Per Animal Group										
CALCULATED-Total Manure Collected Per Animal Group	Records		Records		Records		Records			

Appendix 3 Manure Group Information Crop Yrs. 2024	Heifer Pit (Spring)		Pen Pack		Field P1 - Grazing Calculator		Field P2 - Grazing Calculator		Field P3 - Grazing Calculator	
Manure Report Date (note if averaging several reports)	5/17/2022		7/5/2022		Uncollected Book		Uncollected Book		Uncollected Book	
Laboratory Name	Waypoint		Waypoint		PSU Agronomy Guide		PSU Agronomy Guide		PSU Agronomy Guide	
Manure Type	Dairy		Dairy		Other		Other		Other	
Manure Unit (lbs/ton or 1000 gal)	lb/1000 gal		lb/ton		lb/ton		lb/ton		lb/ton	
Total Nitrogen (N) (lbs/ton or 1000 gal)	24		12.4		9		9		10	
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	11.1		2.6		0		0		0	
Total Organic N (lbs/ton or 1000 gal)	12.90		9.80		9.00		9.00		10.00	
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	10.4		2.9		3		3		3	
Total Potash (K_2O) (lbs/ton or 1000 gal)	26.4		3.14		7		7		7	
Percent Solids	8		37.4		0		0		0	
PSC Value (analytical or book value)	0.8		0.8		0.8		0.8		0.8	
Percent Moisture	92.00		62.60		100.00		100.00		100.00	
Manure Group AEU's	39.05		18.30		0.00		0.00		0.00	
Description: Site & Season Applied	Heifer Pit	Spring	Compost Shed	Spring and Fall	Grazing	Grazing	Grazing	Grazing	Grazing	Grazing
Inventory Method	Records		Records		Records		Records		Records	
	Collected Calc.	Uncollected Calc.	Collected Calc.	Uncollected Calc.	Collected Calc.	Uncollected Calc.	Collected Calc.	Uncollected Calc.	Collected Calc.	Uncollected Calc.
Manure Group Identification	Heifer Pit (Spring)	Heifer Pit (Spring) - uncollected	Pen Pack		Field P1 - Grazing Calculator		Field P2 - Grazing Calculator		Field P3 - Grazing Calculator	
CALCULATED: Total Manure Collected Per Manure Group	0.0	70.5	0.0		0.0		0.0		0.0	
Units	gallons	Tons	Tons		Tons		Tons		Tons	
RECORDS: Total Manure Collected Per Manure Group	250,000.0		200.0		11.6	11.6	58.2		123.4	
Unit	Gallons		Tons		Tons		Tons		Tons	
	Collected	Uncollected	Collected	Uncollected	Collected	Uncollected	Collected	Uncollected	Collected	Uncollected
Manure Used On-Farm	419,400.0	70.5	270.0	0.0	11.6	0.0	58.2	0.0	123.4	0.0
Units	Gallons	Tons	Tons		Tons		Tons		Tons	
Manure Exported	0.0		0.0		0.0		0.0		0.0	
Units	gallons		tons							
Manure Allocation Balance	-169,400.0	0.0	-70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Units	Gallons	Tons	Tons		Tons		Tons		Tons	
Manure Balance as a Percent of Total Manure Collected	-67.8%		-35.0%		0.1%		0.1%		0.0%	
Total Rainfall and Runoff										

Appendix 3 Manure Group Information Crop Yrs. 2024	Heifer Pit (Spring)		Pen Pack		Field P1 - Grazing Calculator		Field P2 - Grazing Calculator		Field P3 - Grazing Calculator	
	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values
Animal Group 1	Heifers (Spring)	Heifers (Spring) - uncollected	Calves							
Animal Type	*User Entered* Holstein Heifer (13-22months)	Total Nitrogen (N) lbs/ton	*User Entered* Holstein Calf (3-5months)							
Animal Number	80	10.00	45							
Animal Weight	979 lbs	Total Phosphate (P2O5) lbs/ton	310 lbs							
Animal Group AUs	78.32 AUs	3.00	13.95 AUs							
Animal Group AEUs	39.05 AEUs	Total Potash (K2O) lbs/ton	13.95 AEUs							
Daily Manure Production per AU	6.9 gal	7.00	80.0 lb							
Total Days Manure Produced	182 days	PSC Value	365 days							
Total Manure Produced	Records	0.80	Records							
Days On Pasture	60 days		0 days							
Hours Per Day On Pasture	12 hrs		0 hrs							
Total Bedding	Records		Records							
Total Washwater	Records		Records							
CALCULATED - Total Uncollected Manure Per Animal Group	16,212.24 gal	70.49 - Tons								
CALCULATED-Total Manure Collected Per Animal Group	Records		Records							
Animal Group 2			Calves							
Animal Type			*User Entered* Holstein Calf (0-2months)							
Animal Number			30							
Animal Weight			145 lbs							
Animal Group AUs			4.35 AUs							
Animal Group AEUs			4.35 AEUs							
Daily Manure Production per AU			80.0 lb							
Total Days Manure Produced			365 days							
Total Manure Produced			Records							
Days On Pasture			0 days							
Hours Per Day On Pasture			0 hrs							
Total Bedding			Records							
Total Washwater			Records							
CALCULATED - Total Uncollected Manure Per Animal Group										
CALCULATED-Total Manure Collected Per Animal Group			Records							

Appendix 3 Manure Group Information Crop Yrs. 2025	Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Heifer Pit (Fall)		
Manure Report Date (note if averaging several reports)	5/17/2022			5/17/2022			5/17/2022			5/17/2023			5/17/2022		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Manure Type	Dairy			Dairy			Dairy			Dairy			Dairy		
Manure Unit (lbs/ton or 1000 gal)	lb/1000 gal			lb/1000 gal			lb/1000 gal			lb/1000 gal			lb/1000 gal		
Total Nitrogen (N) (lbs/ton or 1000 gal)	28.7			28.7			22.9			22.9			24		
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	13.6			13.6			12.8			12.8			11.1		
Total Organic N (lbs/ton or 1000 gal)	15.10			15.10			10.10			10.10			12.90		
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	8.8			8.8			8.6			8.6			10.4		
Total Potash (K_2O) (lbs/ton or 1000 gal)	19.2			19.2			13.8			13.8			26.4		
Percent Solids	5.5			5.5			6			6			8		
PSC Value (analytical or book value)	0.8			0.8			0.8			0.8			0.8		
Percent Moisture	94.50			94.50			94.00			94.00			92.00		
Manure Group AEU's	179.36			178.38			79.42			78.98			39.27		
Description: Site & Season Applied	Lagoon		Fall	Lagoon		Spring	Tiestall Pit		Fall	Tiestall Pit		Spring	Heifer Pit		Fall
Inventory Method	Records			Records			Records			Records			Records		
	Collected Calc.		Uncollected Calc.	Collected Calc.		Uncollected Calc.	Collected Calc.		Uncollected Calc.	Collected Calc.		Uncollected Calc.	Collected Calc.		Uncollected Calc.
Manure Group Identification	Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Tiestall Pit (Fall)		Tiestall Pit (Fall) - uncollected	Tiestall Pit (Spring)		Tiestall Pit (Spring) - uncollected	Heifer Pit (Fall)		Heifer Pit (Fall) - uncollected
CALCULATED: Total Manure Collected Per Manure Group	0.0			0.0			0.0		49.9	0.0		20.0	0.0		176.2
Units	gallons			gallons			gallons		Tons	gallons		Tons	gallons		Tons
RECORDS: Total Manure Collected Per Manure Group	1,400,000.0			1,400,000.0			500,000.0			500,000.0			200,000.0		
Unit	Gallons			Gallons			Gallons			Gallons			Gallons		
	Collected		Uncollected	Collected		Uncollected	Collected		Uncollected	Collected		Uncollected	Collected		Uncollected
Manure Used On-Farm	1,453,500.0		0.0	1,453,500.0		0.0	513,600.0		49.9	599,400.0		20.0	216,000.0		176.2
Units	Gallons			Gallons			Gallons		Tons	Gallons		Tons	Gallons		Tons
Manure Exported	0.0			0.0			0.0			0.0			0.0		
Units	gallons			gallons			gallons			gallons			gallons		
Manure Allocation Balance	-53,500.0		0.0	-53,500.0		0.0	-13,600.0		0.0	-99,400.0		0.0	-16,000.0		0.0
Units	Gallons			Gallons			Gallons		Tons	Gallons		Tons	Gallons		Tons
Manure Balance as a Percent of Total Manure Collected	-3.8%			-3.8%			-2.7%			-19.9%			-8.0%		
Total Rainfall and Runoff															

Appendix 3 Manure Group Information Crop Yrs. 2025	Robot Barn Lagoon (Fall)		Robot Barn Lagoon (Spring)		Tiestall Pit (Fall)		Tiestall Pit (Spring)		Heifer Pit (Fall)	
	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values
Animal Group 1	Lactating Cows		Lactating Cows		Lactating Cows		Lactating Cows		Heifers (Fall)	Heifers (Fall) - uncollected
Animal Type	Holstein Lactating Cow		Holstein Lactating Cow		Holstein Lactating Cow		Holstein Lactating Cow		*User Entered* Holstein Heifer (13-22months)	Total Nitrogen (N) lbs/ton
Animal Number	222		222		63		63		80	10.00
Animal Weight	1450 lbs		1450 lbs		1450 lbs		1450 lbs		979 lbs	Total Phosphate (P2O5) lbs/ton
Animal Group AUs	321.90 AUs		321.90 AUs		91.35 AUs		91.35 AUs		78.32 AUs	3.00
Animal Group AEUs	161.39 AEUs		160.51 AEUs		45.80 AEUs		45.55 AEUs		39.27 AEUs	Total Potash (K2O) lbs/ton
Daily Manure Production per AU	13.0 gal		13.0 gal		13.0 gal		13.0 gal		6.9 gal	7.00
Total Days Manure Produced	183 days		182 days		183 days		182 days		183 days	PSC Value
Total Manure Produced	Records		Records		Records		Records		Records	0.80
Days On Pasture	0 days		0 days		0 days		0 days		150 days	
Hours Per Day On Pasture	0 hrs		0 hrs		0 hrs		0 hrs		12 hrs	
Total Bedding	Records		Records		Records		Records		Records	
Total Washwater	Records		Records		Records		Records		Records	
CALCULATED - Total Uncollected Manure Per Animal Group									40,530.60 gal	176.22 - Tons
CALCULATED-Total Manure Collected Per Animal Group	Records		Records		Records		Records		Records	

Animal Group 2	Dry Cows		Dry Cows		Dry Cows (Fall)	Dry Cows (Fall) - uncollected	Dry Cows (Spring)	Dry Cows (Spring) - uncollected		
Animal Type	Holstein Dry Cow		Holstein Dry Cow		Holstein Dry Cow	Total Nitrogen (N) lbs/ton	Holstein Dry Cow	Total Nitrogen (N) lbs/ton		
Animal Number	12		12		18	9.00	18	9.00		
Animal Weight	1450 lbs		1450 lbs		1450 lbs	Total Phosphate (P2O5) lbs/ton	1450 lbs	Total Phosphate (P2O5) lbs/ton		
Animal Group AUs	17.40 AUs		17.40 AUs		26.10 AUs	3.00	26.10 AUs	3.00		
Animal Group AEUs	8.72 AEUs		8.68 AEUs		13.09 AEUs	Total Potash (K2O) lbs/ton	13.01 AEUs	Total Potash (K2O) lbs/ton		
Daily Manure Production per AU	6.0 gal		6.0 gal		6.0 gal	7.00	6.0 gal	7.00		
Total Days Manure Produced	183 days		182 days		183 days	PSC Value	182 days	PSC Value		
Total Manure Produced	Records		Records		Records	0.80	Records	0.80		
Days On Pasture	0 days		0 days		150 days		60 days			
Hours Per Day On Pasture	0 hrs		0 hrs		12 hrs		12 hrs			
Total Bedding	Records		Records		Records		Records			
Total Washwater	Records		Records		Records		Records			
CALCULATED - Total Uncollected Manure Per Animal Group					11,745.00 gal	49.92 - Tons	4,698.00 gal	19.97 - Tons		
CALCULATED-Total Manure Collected Per Animal Group	Records		Records		Records		Records			

Appendix 3 Manure Group Information Crop Yrs. 2025	Robot Barn Lagoon (Fall)		Robot Barn Lagoon (Spring)		Tiestall Pit (Fall)		Tiestall Pit (Spring)		Heifer Pit (Fall)	
	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values
Animal Group 3	Bred Heifer		Bred Heifer		Heifer		Heifer			
Animal Type	*User Entered* Holstein Heifer (23-24months)		*User Entered* Holstein Heifer (23-24months)		*User Entered* Holstein Calf (6-12months)		*User Entered* Holstein Calf (6-12months)			
Animal Number	15		15		70		70			
Animal Weight	1229 lbs		1229 lbs		585 lbs		585 lbs			
Animal Group AUs	18.44 AUs		18.44 AUs		40.95 AUs		40.95 AUs			
Animal Group AEUs	9.24 AEUs		9.19 AEUs		20.53 AEUs		20.42 AEUs			
Daily Manure Production per AU	6.9 gal		6.9 gal		9.2 gal		9.2 gal			
Total Days Manure Produced	183 days		182 days		183 days		182 days			
Total Manure Produced	Records		Records		Records		Records			
Days On Pasture	0 days		0 days		0 days		0 days			
Hours Per Day On Pasture	0 hrs		0 hrs		0 hrs		0 hrs			
Total Bedding	Records		Records		Records		Records			
Total Washwater	Records		Records		Records		Records			
CALCULATED - Total Uncollected Manure Per Animal Group										
CALCULATED-Total Manure Collected Per Animal Group	Records		Records		Records		Records			

Appendix 3 Manure Group Information Crop Yrs. 2025	Heifer Pit (Spring)		Pen Pack		Field P1 - Grazing Calculator		Field P2 - Grazing Calculator		Field P3 - Grazing Calculator	
Manure Report Date (note if averaging several reports)	5/17/2022		7/5/2022		Uncollected Book		Uncollected Book		Uncollected Book	
Laboratory Name	Waypoint		Waypoint		PSU Agronomy Guide		PSU Agronomy Guide		PSU Agronomy Guide	
Manure Type	Dairy		Dairy		Other		Other		Other	
Manure Unit (lbs/ton or 1000 gal)	lb/1000 gal		lb/ton		lb/ton		lb/ton		lb/ton	
Total Nitrogen (N) (lbs/ton or 1000 gal)	24		12.4		9		9		10	
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	11.1		2.6		0		0		0	
Total Organic N (lbs/ton or 1000 gal)	12.90		9.80		9.00		9.00		10.00	
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	10.4		2.9		3		3		3	
Total Potash (K_2O) (lbs/ton or 1000 gal)	26.4		3.14		7		7		7	
Percent Solids	8		37.4		0		0		0	
PSC Value (analytical or book value)	0.8		0.8		0.8		0.8		0.8	
Percent Moisture	92.00		62.60		100.00		100.00		100.00	
Manure Group AEU's	39.05		18.30		0.00		0.00		0.00	
Description: Site & Season Applied	Heifer Pit	Spring	Compost Shed	Spring and Fall	Grazing	Grazing	Grazing	Grazing	Grazing	Grazing
Inventory Method	Records		Records		Records		Records		Records	
	Collected Calc.	Uncollected Calc.	Collected Calc.	Uncollected Calc.	Collected Calc.	Uncollected Calc.	Collected Calc.	Uncollected Calc.	Collected Calc.	Uncollected Calc.
Manure Group Identification	Heifer Pit (Spring)	Heifer Pit (Spring) - uncollected	Pen Pack		Field P1 - Grazing Calculator		Field P2 - Grazing Calculator		Field P3 - Grazing Calculator	
CALCULATED: Total Manure Collected Per Manure Group	0.0	70.5	0.0		0.0		0.0		0.0	
Units	gallons	Tons	Tons		Tons		Tons		Tons	
RECORDS: Total Manure Collected Per Manure Group	250,000.0		200.0		11.6	11.6	58.2		123.4	
Unit	Gallons		Tons		Tons		Tons		Tons	
	Collected	Uncollected	Collected	Uncollected	Collected	Uncollected	Collected	Uncollected	Collected	Uncollected
Manure Used On-Farm	419,400.0	70.5	270.0	0.0	11.6	0.0	58.2	0.0	123.4	0.0
Units	Gallons	Tons	Tons		Tons		Tons		Tons	
Manure Exported	0.0		0.0		0.0		0.0		0.0	
Units	gallons		tons							
Manure Allocation Balance	-169,400.0	0.0	-70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Units	Gallons	Tons	Tons		Tons		Tons		Tons	
Manure Balance as a Percent of Total Manure Collected	-67.8%		-35.0%		0.1%		0.1%		0.0%	
Total Rainfall and Runoff										

Appendix 3 Manure Group Information Crop Yrs. 2025	Heifer Pit (Spring)		Pen Pack		Field P1 - Grazing Calculator		Field P2 - Grazing Calculator		Field P3 - Grazing Calculator	
	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values
Animal Group 1	Heifers (Spring)	Heifers (Spring) - uncollected	Calves							
Animal Type	*User Entered* Holstein Heifer (13-22months)	Total Nitrogen (N) lbs/ton	*User Entered* Holstein Calf (3-5months)							
Animal Number	80	10.00	45							
Animal Weight	979 lbs	Total Phosphate (P2O5) lbs/ton	310 lbs							
Animal Group AUs	78.32 AUs	3.00	13.95 AUs							
Animal Group AEUs	39.05 AEUs	Total Potash (K2O) lbs/ton	13.95 AEUs							
Daily Manure Production per AU	6.9 gal	7.00	80.0 lb							
Total Days Manure Produced	182 days	PSC Value	365 days							
Total Manure Produced	Records	0.80	Records							
Days On Pasture	60 days		0 days							
Hours Per Day On Pasture	12 hrs		0 hrs							
Total Bedding	Records		Records							
Total Washwater	Records		Records							
CALCULATED - Total Uncollected Manure Per Animal Group	16,212.24 gal	70.49 - Tons								
CALCULATED-Total Manure Collected Per Animal Group	Records		Records							
Animal Group 2			Calves							
Animal Type			*User Entered* Holstein Calf (0-2months)							
Animal Number			30							
Animal Weight			145 lbs							
Animal Group AUs			4.35 AUs							
Animal Group AEUs			4.35 AEUs							
Daily Manure Production per AU			80.0 lb							
Total Days Manure Produced			365 days							
Total Manure Produced			Records							
Days On Pasture			0 days							
Hours Per Day On Pasture			0 hrs							
Total Bedding			Records							
Total Washwater			Records							
CALCULATED - Total Uncollected Manure Per Animal Group										
CALCULATED-Total Manure Collected Per Animal Group			Records							

App. 4: Crop Yrs. 2023	1			1			2			2			3		
CMU/Field ID															
Acres	54.5			54.5			11.8			11.8			20.0		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	44	80	6.9	44	80	6.9	90	108	6.8	90	108	6.8	135	77	6.4
P Index Part A Evaluation	No to All Part A			No to All Part A			<150ft			<150ft			No to All Part A		
Part A Result	N Based			N Based			Part B			Part B			N Based		
Crop	Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage		
Planned Yield	10 ton/A			28 ton/A			10 ton/A			28 ton/A			10 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	150	20	280	240	30	290	150	0	230	240	0	240	150	0	280
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	[27]	Winter Double Crop		27	Summer Double Crop		[27]	Winter Double Crop		27	Summer Double Crop		[27]	Winter Double Crop	
Manure History Description Residual Manure N (lb/A)	11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0			0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	139	20	280	189	-29	397	139	0	230	189	-79	297	139	0	280
Manure Group	Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)		
Application Season: Management (Incorporation, cover crops, etc.)	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.60	0.25		0.80	0.35		0.60	0.25		0.80	0.35		0.60	0.25
P Index Application Method							Starter or Injected			Starter or Injected					
N Balanced Manure Rate (ton; gal/A)	11642 gal/A			11688 gal/A			11642 gal/A			11688 gal/A			11642 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	20682 gal/A			11705 gal/A			20682 gal/A			11705 gal/A			20682 gal/A		
	Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 103.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 103.0			Crop P Removal (lb/A) 182.0		
P Index Value							42			42					
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	107	79	173	145	79	173	107	79	173	145	79	173	107	79	173
Nutrient Balance after Manure	32	-59	107	44	-108	224	32	-79	57	44	-158	124	32	-79	107
Supplemental Fertilizer (lb/A)	32	0	0	44	0	0	32	0	0	44	0	0	32	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-59**	**107**	**0**	**-108**	**224**	**0**	**-79**	**57**	**0**	**-158**	**124**	**0**	**-79**	**107**
Multiple Application															
Manure Utilized on CMU	490,500 gallons			490,500 gallons			106,200 gallons			106,200 gallons			180,000 gallons		

App. 4: Crop Yrs. 2023	3			4			4			5			5		
CMU/Field ID															
Acres	20.0			10.5			10.5			18.7			18.7		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	135	77	6.4	90	108	6.8	90	108	6.8	43	73	6.9	43	73	6.9
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			No to All Part A			No to All Part A		
Part A Result	N Based			N Based			N Based			N Based			N Based		
Crop	Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)		
Planned Yield	28 ton/A			10 ton/A			28 ton/A			10 ton/A			28 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	240	0	290	150	0	230	240	0	240	150	20	280	240	30	290
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	27	Summer Double Crop		[27]	Winter Double Crop		27	Summer Double Crop		[27]	Winter Double Crop		27	Summer Double Crop	
Manure History Description Residual Manure N (lb/A)	24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	189	-79	397	139	0	230	189	-79	297	139	20	280	189	-29	397
Manure Group	Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.80	0.35		0.60	0.25		0.80	0.35		0.60	0.25		0.80	0.35
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	11688 gal/A			11642 gal/A			11688 gal/A			11642 gal/A			11688 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	11705 gal/A			20682 gal/A			11705 gal/A			20682 gal/A			11705 gal/A		
	Crop P Removal (lb/A) 103.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 103.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 103.0		
P Index Value															
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	145	79	173	107	79	173	145	79	173	107	79	173	145	79	173
Nutrient Balance after Manure	44	-158	224	32	-79	57	44	-158	124	32	-59	107	44	-108	224
Supplemental Fertilizer (lb/A)	44	0	0	32	0	0	44	0	0	32	0	0	44	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-158**	**224**	**0**	**-79**	**57**	**0**	**-158**	**124**	**0**	**-59**	**107**	**0**	**-108**	**224**
Multiple Application															
Manure Utilized on CMU	180,000 gallons			94,500 gallons			94,500 gallons			168,300 gallons			168,300 gallons		

App. 4: Crop Yrs. 2023	6			6			7			7			8		
CMU/Field ID															
Acres	19.0			19.0			14.5			14.5			12.5		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	75	145	6.5	75	145	6.5	90	108	6.8	90	108	6.8	81	84	6.6
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			No to All Part A			No to All Part A		
Part A Result	N Based			N Based			N Based			N Based			N Based		
Crop	Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage		
Planned Yield	10 ton/A			28 ton/A			10 ton/A			28 ton/A			10 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	150	0	130	240	0	130	150	0	230	240	0	240	150	0	270
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	[27]	Winter Double Crop		27	Summer Double Crop		[27]	Winter Double Crop		27	Summer Double Crop		[27]	Winter Double Crop	
Manure History Description Residual Manure N (lb/A)	11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	139	0	130	189	-79	87	139	0	230	189	-79	297	139	0	270
Manure Group	Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)		
Application Season: Management (Incorporation, cover crops, etc.)	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.60	0.25		0.80	0.35		0.60	0.25		0.80	0.35		0.60	0.25
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	11642 gal/A			11688 gal/A			11642 gal/A			11688 gal/A			11642 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	20682 gal/A			11705 gal/A			20682 gal/A			11705 gal/A			20682 gal/A		
	Crop P Removal (lb/A)	182.0		Crop P Removal (lb/A)	103.0		Crop P Removal (lb/A)	182.0		Crop P Removal (lb/A)	103.0		Crop P Removal (lb/A)	182.0	
P Index Value															
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	107	79	173	145	79	173	107	79	173	145	79	173	107	79	173
Nutrient Balance after Manure	32	-79	-43	44	-158	-86	32	-79	57	44	-158	124	32	-79	97
Supplemental Fertilizer (lb/A)	32	0	0	44	0	0	32	0	0	44	0	0	32	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-79**	**-43**	**0**	**-158**	**-86**	**0**	**-79**	**57**	**0**	**-158**	**124**	**0**	**-79**	**97**
Multiple Application															
Manure Utilized on CMU	171,000 gallons			171,000 gallons			130,500 gallons			130,500 gallons			112,500 gallons		

App. 4: Crop Yrs. 2023	8			30			30			P1			P2		
CMU/Field ID															
Acres	12.5			1.4			1.4			2.0			10.0		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
	81	84	6.6	81	84	6.6	81	84	6.6	111	182	6.7	111	182	6.7
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			<150ft			<150ft		
Part A Result	N Based			N Based			N Based			Part B			Part B		
Crop	Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Established Pasture (without legume)			Established Pasture (without legume)		
Planned Yield	28 ton/A			10 ton/A			28 ton/A			3 ton/A			3 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	240	0	280	150	0	270	240	0	280	150	0	10	150	0	10
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	27	Summer Double Crop		[18]	Winter Double Crop		18	Summer Double Crop		0			0		
Manure History Description Residual Manure N (lb/A)	24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	189	-79	377	139	0	270	198	-77	426	115	0	10	115	0	10
Manure Group	Robot Barn Lagoon (Spring)			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Field P1 - Grazing Calculator			Field P2 - Grazing Calculator		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.80	0.35		0.10	0.25		0.10	0.35	0.20			0.20		
P Index Application Method										April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	11688 gal/A			36483 gal/A			41079 gal/A			63.9 tons/A			63.9 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	11705 gal/A			21163 gal/A			12209 gal/A			15 tons/A			15 tons/A		
	Crop P Removal (lb/A) 103.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 105.0			Crop P Removal (lb/A) 45.0			Crop P Removal (lb/A) 45.0		
P Index Value										26			26		
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**5.82 tons/A**			**5.82 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	145	79	173	34	77	124	43	77	124	10	17	41	10	17	41
Nutrient Balance after Manure	44	-158	204	105	-77	146	155	-154	302	105	-17	-31	105	-17	-31
Supplemental Fertilizer (lb/A)	44	0	0	105	0	0	155	0	0	105	0	0	105	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-158**	**204**	**0**	**-77**	**146**	**0**	**-154**	**302**	**0**	**-17**	**-31**	**0**	**-17**	**-31**
Multiple Application															
Manure Utilized on CMU	112,500 gallons			12,600 gallons			12,600 gallons			12 tons			58 tons		

App. 4: Crop Yrs. 2023	P3			P4			CF5			CF5			CF6		
CMU/Field ID															
Acres	6.0			6.0			3.0			3.0			7.5		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
	111	182	6.7	111	182	6.7	96	57	7.1	96	57	7.1	96	57	7.1
P Index Part A Evaluation	<150ft			<150ft			<150ft			<150ft			No to All Part A		
Part A Result	Part B			Part B			Part B			Part B			N Based		
Crop	Established Pasture (without legume)			Established Pasture (without legume)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage		
Planned Yield	3 ton/A			3 ton/A			10 ton/A			28 ton/A			10 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	150	0	10	150	0	10	150	0	300	240	0	320	150	0	300
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	0			0			[20]	Winter Double Crop		20	Summer Double Crop		[20]	Winter Double Crop	
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	115	0	10	115	0	10	139	0	300	196	-29	589	139	0	300
Manure Group	Field P3 - Grazing Calculator			Field P4 - Grazing Calculator			Pen Pack			Pen Pack			Pen Pack		
Application Season: Management (Incorporation, cover crops, etc.)	Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
	0.20			0.20				0.10	0.25		0.10	0.35		0.10	0.25
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.					
N Balanced Manure Rate (ton; gal/A)	57.5 tons/A			57.5 tons/A			51.3 tons/A			53.1 tons/A			51.3 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	15 tons/A			15 tons/A			62.8 tons/A			52.8 tons/A			62.8 tons/A		
	Crop P Removal (lb/A) 45.0			Crop P Removal (lb/A) 45.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 153.0			Crop P Removal (lb/A) 182.0		
P Index Value	46			46			45			45					
Planned Manure Rate (ton or gal/A)	**20.56 tons/A**			**20.56 tons/A**			**10 tons/A**			**10 tons/A**			**10 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	41	62	144	41	62	144	27	29	31	37	29	31	27	29	31
Nutrient Balance after Manure	74	-62	-134	74	-62	-134	112	-29	269	159	-58	558	112	-29	269
Supplemental Fertilizer (lb/A)	74	0	0	74	0	0	112	0	0	159	0	0	112	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-62**	**-134**	**0**	**-62**	**-134**	**0**	**-29**	**269**	**0**	**-58**	**558**	**0**	**-29**	**269**
Multiple Application															
Manure Utilized on CMU	123 tons			123 tons			30 tons			30 tons			75 tons		

App. 4: Crop Yrs. 2023	CF6			CF7			CF7			CF9			CF9		
CMU/Field ID															
Acres	7.5			7.0			7.0			3.0			3.0		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	96	57	7.1	96	57	7.1	96	57	7.1	96	57	7.1	96	57	7.1
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			No to All Part A			No to All Part A		
Part A Result	N Based			N Based			N Based			N Based			N Based		
Crop	Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)		
Planned Yield	28 ton/A			10 ton/A			28 ton/A			10 ton/A			28 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	240	0	320	150	0	300	240	0	320	150	0	300	240	0	320
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	20	Summer Double Crop		[18]	Winter Double Crop		18	Summer Double Crop		[20]	Winter Double Crop		20	Summer Double Crop	
Manure History Description Residual Manure N (lb/A)	24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	196	-29	589	139	0	300	198	-77	496	139	0	300	196	-29	589
Manure Group	Pen Pack			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Pen Pack			Pen Pack		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.10	0.35		0.60	0.25		0.80	0.35		0.10	0.25		0.10	0.35
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	53.1 tons/A			13614 gal/A			14369 gal/A			51.3 tons/A			53.1 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	52.8 tons/A			21163 gal/A			12209 gal/A			62.8 tons/A			52.8 tons/A		
	Crop P Removal (lb/A) 153.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 105.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 153.0		
P Index Value															
Planned Manure Rate (ton or gal/A)	**10 tons/A**			**9000 gal/A**			**9000 gal/A**			**10 tons/A**			**10 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	37	29	31	92	77	124	124	77	124	27	29	31	37	29	31
Nutrient Balance after Manure	159	-58	558	47	-77	176	74	-154	372	112	-29	269	159	-58	558
Supplemental Fertilizer (lb/A)	159	0	0	47	0	0	74	0	0	112	0	0	159	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-58**	**558**	**0**	**-77**	**176**	**0**	**-154**	**372**	**0**	**-29**	**269**	**0**	**-58**	**558**
Multiple Application															
Manure Utilized on CMU	75 tons			63,000 gallons			63,000 gallons			30 tons			30 tons		

App. 4: Crop Yrs. 2023	S1			S1			S2-S4			S2-S4			S5		
CMU/Field ID															
Acres	12.0			12.0			24.0			24.0			4.5		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	141	88	6.6	141	88	6.6	91	102	6.5	91	102	6.5	36	98	6.6
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			No to All Part A			No to All Part A		
Part A Result	N Based			N Based			N Based			N Based			N Based		
Crop	Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage		
Planned Yield	10 ton/A			28 ton/A			10 ton/A			28 ton/A			10 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	150	0	270	240	0	280	150	0	230	240	0	240	150	40	260
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	[18]	Winter Double Crop		18	Summer Double Crop		[18]	Winter Double Crop		18	Summer Double Crop		[23]	Winter Double Crop	
Manure History Description Residual Manure N (lb/A)	11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	139	0	270	198	-77	426	139	0	230	198	-77	346	139	40	260
Manure Group	Tiestall Pit (Fall)			Tiestall Pit (Spring)			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Heifer Pit (Fall)		
Application Season: Management (Incorporation, cover crops, etc.)	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.60	0.25		0.80	0.35		0.60	0.25		0.80	0.35		0.60	0.25
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	13614 gal/A			14369 gal/A			13614 gal/A			14369 gal/A			14055 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	21163 gal/A			12209 gal/A			21163 gal/A			12209 gal/A			17500 gal/A		
	Crop P Removal (lb/A)	182.0		Crop P Removal (lb/A)	105.0		Crop P Removal (lb/A)	182.0		Crop P Removal (lb/A)	105.0		Crop P Removal (lb/A)	182.0	
P Index Value															
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	92	77	124	124	77	124	92	77	124	124	77	124	89	94	238
Nutrient Balance after Manure	47	-77	146	74	-154	302	47	-77	106	74	-154	222	50	-54	22
Supplemental Fertilizer (lb/A)	47	0	0	74	0	0	47	0	0	74	0	0	50	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-77**	**146**	**0**	**-154**	**302**	**0**	**-77**	**106**	**0**	**-154**	**222**	**0**	**-54**	**22**
Multiple Application															
Manure Utilized on CMU	108,000 gallons			108,000 gallons			216,000 gallons			216,000 gallons			40,500 gallons		

App. 4: Crop Yrs. 2023	S5			S6			S6			S7			S7		
CMU/Field ID															
Acres	4.5			4.0			4.0			9.5			9.5		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	36	98	6.6	36	98	6.6	36	98	6.6	36	98	6.6	36	98	6.6
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			No to All Part A			No to All Part A		
Part A Result	N Based			N Based			N Based			N Based			N Based		
Crop	Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)		
Planned Yield	28 ton/A			10 ton/A			28 ton/A			10 ton/A			28 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	240	70	260	150	40	260	240	70	260	150	40	260	240	70	260
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	23	Summer Double Crop		[18]	Winter Double Crop		18	Summer Double Crop		[23]	Winter Double Crop		23	Summer Double Crop	
Manure History Description Residual Manure N (lb/A)	24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	193	16	282	139	40	260	198	33	396	139	40	260	193	16	282
Manure Group	Heifer Pit (Spring)			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Heifer Pit (Fall)			Heifer Pit (Spring)		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.80	0.35		0.10	0.25		0.10	0.35		0.10	0.25		0.10	0.35
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	14403 gal/A			36483 gal/A			41079 gal/A			32028 gal/A			34281 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	8462 gal/A			21163 gal/A			12209 gal/A			17500 gal/A			8462 gal/A		
	Crop P Removal (lb/A) 88.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 105.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 88.0		
P Index Value															
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	121	94	238	34	77	124	43	77	124	39	94	238	51	94	238
Nutrient Balance after Manure	72	-78	44	105	-37	136	155	-44	272	100	-54	22	142	-78	44
Supplemental Fertilizer (lb/A)	72	0	0	105	0	0	155	0	0	100	0	0	142	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-78**	**44**	**0**	**-37**	**136**	**0**	**-44**	**272**	**0**	**-54**	**22**	**0**	**-78**	**44**
Multiple Application															
Manure Utilized on CMU	40,500 gallons			36,000 gallons			36,000 gallons			85,500 gallons			85,500 gallons		

App. 4: Crop Yrs. 2023	C2			C2			HW3			HW3			M1		
CMU/Field ID															
Acres	7.0			7.0			3.0			3.0			2.9		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	40	219	6.6	40	219	6.6	20	45	6.3	20	45	6.3	34	95	6.1
P Index Part A Evaluation	Special Prot.			Special Prot.			No to All Part A			No to All Part A			No to All Part A		
Part A Result	Part B			Part B			N Based			N Based			N Based		
Crop	Small Grain Silage			Corn for Silage (No-till)			Established Mixed Grasses			Established Mixed Grasses			Small Grain Silage		
Planned Yield	10 ton/A			28 ton/A			6 ton/A			6 ton/A			8 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	150	40	0	240	70	0	300	130	330	300	130	330	120	40	210
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	[18]	Winter Double Crop		18	Summer Double Crop		0			0			[23]	Winter Double Crop	
Manure History Description Residual Manure N (lb/A)	11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		35	Continuously - Summer Crop		0	Continuously - Summer Crop		11	Continuously - Winter Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	139	40	0	198	33	-124	265	130	330	246	87	261	109	40	210
Manure Group	Tiestall Pit (Fall)			Tiestall Pit (Spring)			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Heifer Pit (Fall)		
Application Season: Management (Incorporation, cover crops, etc.)	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.10	0.25		0.10	0.35		0.10	0.25		0.10	0.35		0.10	0.25
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.											
N Balanced Manure Rate (ton; gal/A)	36483 gal/A			41079 gal/A			69554 gal/A			51037 gal/A			25115 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	21163 gal/A			12209 gal/A			10465 gal/A			5465 gal/A			14231 gal/A		
	Crop P Removal (lb/A)	182.0		Crop P Removal (lb/A)	105.0		Crop P Removal (lb/A)	90.0		Crop P Removal (lb/A)	47.0		Crop P Removal (lb/A)	148.0	
P Index Value	88			88											
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**5000 gal/A**			**5000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	34	77	124	43	77	124	19	43	69	24	43	69	39	94	238
Nutrient Balance after Manure	105	-37	-124	155	-44	-248	246	87	261	222	44	192	70	-54	-28
Supplemental Fertilizer (lb/A)	105	0	0	155	0	0	0	0	0	222	0	0	70	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-37**	**-124**	**0**	**-44**	**-248**				**0**	**44**	**192**	**0**	**-54**	**-28**
Multiple Application							HW3.1 Multiple Initial			HW3.2 Multiple Final					
Manure Utilized on CMU	63,000 gallons			63,000 gallons			15,000 gallons			15,000 gallons			26,100 gallons		

App. 4: Crop Yrs. 2023	M1			M2			M2			Orman1			Orman2		
CMU/Field ID															
Acres	2.9			7.1			7.1			17.5			16.4		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	34	95	6.1	34	95	6.1	34	95	6.1	15	50	6.2	22	62	6.5
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			Special Prot.			Special Prot. <150ft		
Part A Result	N Based			N Based			N Based			Part B			Part B		
Crop	Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Corn for Grain (No-till)			Corn for Grain (No-till)		
Planned Yield	23 ton/A			8 ton/A			23 ton/A			200 bu/A			200 bu/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	200	80	220	120	40	210	200	80	220	230	130	140	230	110	110
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	23	Summer Double Crop		[23]	Winter Double Crop		23	Summer Double Crop		0			0		
Manure History Description Residual Manure N (lb/A)	24	Continuously - Summer Double Crop		24	Continuously - Summer Double Crop		24	Continuously - Summer Double Crop		20	Frequently - Summer Crop		20	Frequently - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0			0		
Net Nutrients Required (lb/A)	153	26	192	96	40	210	153	26	192	210	130	140	210	110	110
Manure Group	Heifer Pit (Spring)			Heifer Pit (Fall)			Heifer Pit (Spring)			Heifer Pit (Spring)			Heifer Pit (Spring)		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Spring 1.2-12: Incorporated after 7 days			Spring 1.2-12: Incorporated after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.10	0.35		0.10	0.25		0.10	0.35		0.10	0.35		0.10	0.35
P Index Application Method										April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	27176 gal/A			22120 gal/A			27176 gal/A			37300 gal/A			37300 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	5192 gal/A			14231 gal/A			5192 gal/A			7692 gal/A			7692 gal/A		
	Crop P Removal (lb/A) 54.0			Crop P Removal (lb/A) 148.0			Crop P Removal (lb/A) 54.0			Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 80.0		
P Index Value										24			30		
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**6000 gal/A**			**6000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	51	94	238	39	94	238	51	94	238	34	62	158	34	62	158
Nutrient Balance after Manure	102	-68	-46	57	-54	-28	102	-68	-46	176	68	-18	176	48	-48
Supplemental Fertilizer (lb/A)	102	0	0	57	0	0	102	0	0	176	0	0	176	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-68**	**-46**	**0**	**-54**	**-28**	**0**	**-68**	**-46**	**0**	**68**	**-18**	**0**	**48**	**-48**
Multiple Application															
Manure Utilized on CMU	26,100 gallons			63,900 gallons			63,900 gallons			105,000 gallons			98,400 gallons		

App. 4: Crop Yrs. 2023	Orman3			Orman4			Orman5		
CMU/Field ID									
Acres	9.3			3.0			2.0		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	9	52	6.7	9	52	6.7	9	52	6.7
P Index Part A Evaluation	Special Prot. <150ft			Special Prot. <150ft			Special Prot. <150ft		
Part A Result	Part B			Part B			Part B		
Crop	Corn for Grain (No-till)			Established Mixed Grasses			Established Mixed Grasses		
Planned Yield	200 bu/A			6 ton/A			6 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	230	140	130	300	170	320	300	170	320
User Soil Test Recommendation (lb/A)									
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)									
P Index Application Method									
Double Crop CarryOver N (lb/A)	0			0			0		
Manure History Description Residual Manure N (lb/A)	20	Frequently - Summer Crop		20	Frequently - Summer Crop		20	Frequently - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0			0			0		
Net Nutrients Required (lb/A)	210	140	130	280	170	320	280	170	320
Manure Group	Tiestall Pit (Spring)			Tiestall Pit (Spring)			Tiestall Pit (Spring)		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated after 7 days			Spring 1.2-12: Incorporated after 7 days			Spring 1.2-12: Incorporated after 7 days		
Availability Factors	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
(Total N or NH4-N & Organic N)		0.10	0.35		0.10	0.35		0.10	0.35
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	43568 gal/A			58091 gal/A			58091 gal/A		
P Removal Balance Manure Rate	9302 gal/A			10465 gal/A			10465 gal/A		
(ton or gal/A; If required by P Index)	Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 90.0			Crop P Removal (lb/A) 90.0		
P Index Value	23			23			23		
Planned Manure Rate (ton or gal/A)	**6000 gal/A**			**6000 gal/A**			**6000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	29	52	83	29	52	83	29	52	83
Nutrient Balance after Manure	181	88	47	251	118	237	251	118	237
Supplemental Fertilizer (lb/A)	181	0	0	251	0	0	251	0	0
P Index Application Method									
Final Nutrient Balance (lb/A)	**0**	**88**	**47**	**0**	**118**	**237**	**0**	**118**	**237**
Multiple Application									
Manure Utilized on CMU	55,800 gallons			18,000 gallons			12,000 gallons		

App. 4: Crop Yrs. 2024	1			1			2			2			3		
CMU/Field ID															
Acres	54.5			54.5			11.8			11.8			20.0		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	44	80	6.9	44	80	6.9	90	108	6.8	90	108	6.8	135	77	6.4
P Index Part A Evaluation	No to All Part A			No to All Part A			<150ft			<150ft			No to All Part A		
Part A Result	N Based			N Based			Part B			Part B			N Based		
Crop	Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage		
Planned Yield	10 ton/A			28 ton/A			10 ton/A			28 ton/A			10 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	150	20	280	240	30	290	150	0	230	240	0	240	150	0	280
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	[27]	Winter Double Crop		27	Summer Double Crop		[27]	Winter Double Crop		27	Summer Double Crop		[27]	Winter Double Crop	
Manure History Description Residual Manure N (lb/A)	11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0			0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	139	20	280	189	-29	397	139	0	230	189	-79	297	139	0	280
Manure Group	Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)		
Application Season: Management (Incorporation, cover crops, etc.)	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.60	0.25		0.80	0.35		0.60	0.25		0.80	0.35		0.60	0.25
P Index Application Method							Starter or Injected			Starter or Injected					
N Balanced Manure Rate (ton; gal/A)	11642 gal/A			11688 gal/A			11642 gal/A			11688 gal/A			11642 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	20682 gal/A			11705 gal/A			20682 gal/A			11705 gal/A			20682 gal/A		
	Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 103.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 103.0			Crop P Removal (lb/A) 182.0		
P Index Value							42			42					
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	107	79	173	145	79	173	107	79	173	145	79	173	107	79	173
Nutrient Balance after Manure	32	-59	107	44	-108	224	32	-79	57	44	-158	124	32	-79	107
Supplemental Fertilizer (lb/A)	32	0	0	44	0	0	32	0	0	44	0	0	32	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-59**	**107**	**0**	**-108**	**224**	**0**	**-79**	**57**	**0**	**-158**	**124**	**0**	**-79**	**107**
Multiple Application															
Manure Utilized on CMU	490,500 gallons			490,500 gallons			106,200 gallons			106,200 gallons			180,000 gallons		

App. 4: Crop Yrs. 2024	3			4			4			5			5		
CMU/Field ID															
Acres	20.0			10.5			10.5			18.7			18.7		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	135	77	6.4	90	108	6.8	90	108	6.8	43	73	6.9	43	73	6.9
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			No to All Part A			No to All Part A		
Part A Result	N Based			N Based			N Based			N Based			N Based		
Crop	Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)		
Planned Yield	28 ton/A			10 ton/A			28 ton/A			10 ton/A			28 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	240	0	290	150	0	230	240	0	240	150	20	280	240	30	290
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	27	Summer Double Crop		[27]	Winter Double Crop		27	Summer Double Crop		[27]	Winter Double Crop		27	Summer Double Crop	
Manure History Description Residual Manure N (lb/A)	24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	189	-79	397	139	0	230	189	-79	297	139	20	280	189	-29	397
Manure Group	Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.80	0.35		0.60	0.25		0.80	0.35		0.60	0.25		0.80	0.35
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	11688 gal/A			11642 gal/A			11688 gal/A			11642 gal/A			11688 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	11705 gal/A			20682 gal/A			11705 gal/A			20682 gal/A			11705 gal/A		
	Crop P Removal (lb/A) 103.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 103.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 103.0		
P Index Value															
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	145	79	173	107	79	173	145	79	173	107	79	173	145	79	173
Nutrient Balance after Manure	44	-158	224	32	-79	57	44	-158	124	32	-59	107	44	-108	224
Supplemental Fertilizer (lb/A)	44	0	0	32	0	0	44	0	0	32	0	0	44	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-158**	**224**	**0**	**-79**	**57**	**0**	**-158**	**124**	**0**	**-59**	**107**	**0**	**-108**	**224**
Multiple Application															
Manure Utilized on CMU	180,000 gallons			94,500 gallons			94,500 gallons			168,300 gallons			168,300 gallons		

App. 4: Crop Yrs. 2024	6			6			7			7			8		
CMU/Field ID															
Acres	19.0			19.0			14.5			14.5			12.5		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	75	145	6.5	75	145	6.5	90	108	6.8	90	108	6.8	81	84	6.6
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			No to All Part A			No to All Part A		
Part A Result	N Based			N Based			N Based			N Based			N Based		
Crop	Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage		
Planned Yield	10 ton/A			28 ton/A			10 ton/A			28 ton/A			10 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	150	0	130	240	0	130	150	0	230	240	0	240	150	0	270
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	[27]	Winter Double Crop		27	Summer Double Crop		[27]	Winter Double Crop		27	Summer Double Crop		[27]	Winter Double Crop	
Manure History Description Residual Manure N (lb/A)	11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	139	0	130	189	-79	87	139	0	230	189	-79	297	139	0	270
Manure Group	Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)		
Application Season: Management (Incorporation, cover crops, etc.)	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.60	0.25		0.80	0.35		0.60	0.25		0.80	0.35		0.60	0.25
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	11642 gal/A			11688 gal/A			11642 gal/A			11688 gal/A			11642 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	20682 gal/A			11705 gal/A			20682 gal/A			11705 gal/A			20682 gal/A		
	Crop P Removal (lb/A)	182.0		Crop P Removal (lb/A)	103.0		Crop P Removal (lb/A)	182.0		Crop P Removal (lb/A)	103.0		Crop P Removal (lb/A)	182.0	
P Index Value															
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	107	79	173	145	79	173	107	79	173	145	79	173	107	79	173
Nutrient Balance after Manure	32	-79	-43	44	-158	-86	32	-79	57	44	-158	124	32	-79	97
Supplemental Fertilizer (lb/A)	32	0	0	44	0	0	32	0	0	44	0	0	32	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-79**	**-43**	**0**	**-158**	**-86**	**0**	**-79**	**57**	**0**	**-158**	**124**	**0**	**-79**	**97**
Multiple Application															
Manure Utilized on CMU	171,000 gallons			171,000 gallons			130,500 gallons			130,500 gallons			112,500 gallons		

App. 4: Crop Yrs. 2024	8			30			30			P1			P2		
CMU/Field ID															
Acres	12.5			1.4			1.4			2.0			10.0		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
	81	84	6.6	81	84	6.6	81	84	6.6	111	182	6.7	111	182	6.7
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			<150ft			<150ft		
Part A Result	N Based			N Based			N Based			Part B			Part B		
Crop	Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Established Pasture (without legume)			Established Pasture (without legume)		
Planned Yield	28 ton/A			10 ton/A			28 ton/A			3 ton/A			3 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	240	0	280	150	0	270	240	0	280	150	0	10	150	0	10
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	27	Summer Double Crop		[18]	Winter Double Crop		18	Summer Double Crop		0			0		
Manure History Description Residual Manure N (lb/A)	24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	189	-79	377	139	0	270	198	-77	426	115	0	10	115	0	10
Manure Group	Robot Barn Lagoon (Spring)			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Field P1 - Grazing Calculator			Field P2 - Grazing Calculator		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.80	0.35		0.10	0.25		0.10	0.35	0.20			0.20		
P Index Application Method										April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	11688 gal/A			36483 gal/A			41079 gal/A			63.9 tons/A			63.9 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	11705 gal/A			21163 gal/A			12209 gal/A			15 tons/A			15 tons/A		
	Crop P Removal (lb/A) 103.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 105.0			Crop P Removal (lb/A) 45.0			Crop P Removal (lb/A) 45.0		
P Index Value										26			26		
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**5.82 tons/A**			**5.82 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	145	79	173	34	77	124	43	77	124	10	17	41	10	17	41
Nutrient Balance after Manure	44	-158	204	105	-77	146	155	-154	302	105	-17	-31	105	-17	-31
Supplemental Fertilizer (lb/A)	44	0	0	105	0	0	155	0	0	105	0	0	105	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-158**	**204**	**0**	**-77**	**146**	**0**	**-154**	**302**	**0**	**-17**	**-31**	**0**	**-17**	**-31**
Multiple Application															
Manure Utilized on CMU	112,500 gallons			12,600 gallons			12,600 gallons			12 tons			58 tons		

App. 4: Crop Yrs. 2024	P3			P4			CF5			CF5			CF6		
CMU/Field ID															
Acres	6.0			6.0			3.0			3.0			7.5		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
	111	182	6.7	111	182	6.7	96	57	7.1	96	57	7.1	96	57	7.1
P Index Part A Evaluation	<150ft			<150ft			<150ft			<150ft			No to All Part A		
Part A Result	Part B			Part B			Part B			Part B			N Based		
Crop	Established Pasture (without legume)			Established Pasture (without legume)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage		
Planned Yield	3 ton/A			3 ton/A			10 ton/A			28 ton/A			10 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	150	0	10	150	0	10	150	0	300	240	0	320	150	0	300
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	0			0			[20]	Winter Double Crop		20	Summer Double Crop		[20]	Winter Double Crop	
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	115	0	10	115	0	10	139	0	300	196	-29	589	139	0	300
Manure Group	Field P3 - Grazing Calculator			Field P4 - Grazing Calculator			Pen Pack			Pen Pack			Pen Pack		
Application Season: Management (Incorporation, cover crops, etc.)	Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
	0.20			0.20				0.10	0.25		0.10	0.35		0.10	0.25
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.					
N Balanced Manure Rate (ton; gal/A)	57.5 tons/A			57.5 tons/A			51.3 tons/A			53.1 tons/A			51.3 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	15 tons/A			15 tons/A			62.8 tons/A			52.8 tons/A			62.8 tons/A		
	Crop P Removal (lb/A) 45.0			Crop P Removal (lb/A) 45.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 153.0			Crop P Removal (lb/A) 182.0		
P Index Value	46			46			45			45					
Planned Manure Rate (ton or gal/A)	**20.56 tons/A**			**20.56 tons/A**			**10 tons/A**			**10 tons/A**			**10 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	41	62	144	41	62	144	27	29	31	37	29	31	27	29	31
Nutrient Balance after Manure	74	-62	-134	74	-62	-134	112	-29	269	159	-58	558	112	-29	269
Supplemental Fertilizer (lb/A)	74	0	0	74	0	0	112	0	0	159	0	0	112	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-62**	**-134**	**0**	**-62**	**-134**	**0**	**-29**	**269**	**0**	**-58**	**558**	**0**	**-29**	**269**
Multiple Application															
Manure Utilized on CMU	123 tons			123 tons			30 tons			30 tons			75 tons		

App. 4: Crop Yrs. 2024	CF6			CF7			CF7			CF9			CF9		
CMU/Field ID															
Acres	7.5			7.0			7.0			3.0			3.0		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	96	57	7.1	96	57	7.1	96	57	7.1	96	57	7.1	96	57	7.1
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			No to All Part A			No to All Part A		
Part A Result	N Based			N Based			N Based			N Based			N Based		
Crop	Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)		
Planned Yield	28 ton/A			10 ton/A			28 ton/A			10 ton/A			28 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	240	0	320	150	0	300	240	0	320	150	0	300	240	0	320
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	20	Summer Double Crop		[18]	Winter Double Crop		18	Summer Double Crop		[20]	Winter Double Crop		20	Summer Double Crop	
Manure History Description Residual Manure N (lb/A)	24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	196	-29	589	139	0	300	198	-77	496	139	0	300	196	-29	589
Manure Group	Pen Pack			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Pen Pack			Pen Pack		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.10	0.35		0.60	0.25		0.80	0.35		0.10	0.25		0.10	0.35
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	53.1 tons/A			13614 gal/A			14369 gal/A			51.3 tons/A			53.1 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	52.8 tons/A			21163 gal/A			12209 gal/A			62.8 tons/A			52.8 tons/A		
	Crop P Removal (lb/A) 153.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 105.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 153.0		
P Index Value															
Planned Manure Rate (ton or gal/A)	**10 tons/A**			**9000 gal/A**			**9000 gal/A**			**10 tons/A**			**10 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	37	29	31	92	77	124	124	77	124	27	29	31	37	29	31
Nutrient Balance after Manure	159	-58	558	47	-77	176	74	-154	372	112	-29	269	159	-58	558
Supplemental Fertilizer (lb/A)	159	0	0	47	0	0	74	0	0	112	0	0	159	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-58**	**558**	**0**	**-77**	**176**	**0**	**-154**	**372**	**0**	**-29**	**269**	**0**	**-58**	**558**
Multiple Application															
Manure Utilized on CMU	75 tons			63,000 gallons			63,000 gallons			30 tons			30 tons		

App. 4: Crop Yrs. 2024	S1			S1			S2-S4			S2-S4			S5		
CMU/Field ID															
Acres	12.0			12.0			24.0			24.0			4.5		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	141	88	6.6	141	88	6.6	91	102	6.5	91	102	6.5	36	98	6.6
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			No to All Part A			No to All Part A		
Part A Result	N Based			N Based			N Based			N Based			N Based		
Crop	Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage		
Planned Yield	10 ton/A			28 ton/A			10 ton/A			28 ton/A			10 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	150	0	270	240	0	280	150	0	230	240	0	240	150	40	260
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	[18]	Winter Double Crop		18	Summer Double Crop		[18]	Winter Double Crop		18	Summer Double Crop		[23]	Winter Double Crop	
Manure History Description Residual Manure N (lb/A)	11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	139	0	270	198	-77	426	139	0	230	198	-77	346	139	40	260
Manure Group	Tiestall Pit (Fall)			Tiestall Pit (Spring)			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Heifer Pit (Fall)		
Application Season: Management (Incorporation, cover crops, etc.)	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.60	0.25		0.80	0.35		0.60	0.25		0.80	0.35		0.60	0.25
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	13614 gal/A			14369 gal/A			13614 gal/A			14369 gal/A			14055 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	21163 gal/A			12209 gal/A			21163 gal/A			12209 gal/A			17500 gal/A		
	Crop P Removal (lb/A)	182.0		Crop P Removal (lb/A)	105.0		Crop P Removal (lb/A)	182.0		Crop P Removal (lb/A)	105.0		Crop P Removal (lb/A)	182.0	
P Index Value															
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	92	77	124	124	77	124	92	77	124	124	77	124	89	94	238
Nutrient Balance after Manure	47	-77	146	74	-154	302	47	-77	106	74	-154	222	50	-54	22
Supplemental Fertilizer (lb/A)	47	0	0	74	0	0	47	0	0	74	0	0	50	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-77**	**146**	**0**	**-154**	**302**	**0**	**-77**	**106**	**0**	**-154**	**222**	**0**	**-54**	**22**
Multiple Application															
Manure Utilized on CMU	108,000 gallons			108,000 gallons			216,000 gallons			216,000 gallons			40,500 gallons		

App. 4: Crop Yrs. 2024	S5			S6			S6			S7			S7		
CMU/Field ID															
Acres	4.5			4.0			4.0			9.5			9.5		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	36	98	6.6	36	98	6.6	36	98	6.6	36	98	6.6	36	98	6.6
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			No to All Part A			No to All Part A		
Part A Result	N Based			N Based			N Based			N Based			N Based		
Crop	Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)		
Planned Yield	28 ton/A			10 ton/A			28 ton/A			10 ton/A			28 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	240	70	260	150	40	260	240	70	260	150	40	260	240	70	260
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	23	Summer Double Crop		[18]	Winter Double Crop		18	Summer Double Crop		[23]	Winter Double Crop		23	Summer Double Crop	
Manure History Description Residual Manure N (lb/A)	24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	193	16	282	139	40	260	198	33	396	139	40	260	193	16	282
Manure Group	Heifer Pit (Spring)			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Heifer Pit (Fall)			Heifer Pit (Spring)		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.80	0.35		0.10	0.25		0.10	0.35		0.10	0.25		0.10	0.35
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	14403 gal/A			36483 gal/A			41079 gal/A			32028 gal/A			34281 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	8462 gal/A			21163 gal/A			12209 gal/A			17500 gal/A			8462 gal/A		
	Crop P Removal (lb/A) 88.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 105.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 88.0		
P Index Value															
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	121	94	238	34	77	124	43	77	124	39	94	238	51	94	238
Nutrient Balance after Manure	72	-78	44	105	-37	136	155	-44	272	100	-54	22	142	-78	44
Supplemental Fertilizer (lb/A)	72	0	0	105	0	0	155	0	0	100	0	0	142	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-78**	**44**	**0**	**-37**	**136**	**0**	**-44**	**272**	**0**	**-54**	**22**	**0**	**-78**	**44**
Multiple Application															
Manure Utilized on CMU	40,500 gallons			36,000 gallons			36,000 gallons			85,500 gallons			85,500 gallons		

App. 4: Crop Yrs. 2024	C2			C2			HW3			HW3			M1		
CMU/Field ID															
Acres	7.0			7.0			3.0			3.0			2.9		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	40	219	6.6	40	219	6.6	20	45	6.3	20	45	6.3	34	95	6.1
P Index Part A Evaluation	Special Prot.			Special Prot.			No to All Part A			No to All Part A			No to All Part A		
Part A Result	Part B			Part B			N Based			N Based			N Based		
Crop	Small Grain Silage			Corn for Silage (No-till)			Established Mixed Grasses			Established Mixed Grasses			Small Grain Silage		
Planned Yield	10 ton/A			28 ton/A			6 ton/A			6 ton/A			8 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	150	40	0	240	70	0	300	130	330	300	130	330	120	40	210
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	[18]	Winter Double Crop		18	Summer Double Crop		0			0			[23]	Winter Double Crop	
Manure History Description Residual Manure N (lb/A)	11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		35	Continuously - Summer Crop		0	Continuously - Summer Crop		11	Continuously - Winter Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	139	40	0	198	33	-124	265	130	330	246	87	261	109	40	210
Manure Group	Tiestall Pit (Fall)			Tiestall Pit (Spring)			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Heifer Pit (Fall)		
Application Season: Management (Incorporation, cover crops, etc.)	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.10	0.25		0.10	0.35		0.10	0.25		0.10	0.35		0.10	0.25
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.											
N Balanced Manure Rate (ton; gal/A)	36483 gal/A			41079 gal/A			69554 gal/A			51037 gal/A			25115 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	21163 gal/A			12209 gal/A			10465 gal/A			5465 gal/A			14231 gal/A		
	Crop P Removal (lb/A)	182.0		Crop P Removal (lb/A)	105.0		Crop P Removal (lb/A)	90.0		Crop P Removal (lb/A)	47.0		Crop P Removal (lb/A)	148.0	
P Index Value	88			88											
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**5000 gal/A**			**5000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	34	77	124	43	77	124	19	43	69	24	43	69	39	94	238
Nutrient Balance after Manure	105	-37	-124	155	-44	-248	246	87	261	222	44	192	70	-54	-28
Supplemental Fertilizer (lb/A)	105	0	0	155	0	0	0	0	0	222	0	0	70	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-37**	**-124**	**0**	**-44**	**-248**				**0**	**44**	**192**	**0**	**-54**	**-28**
Multiple Application							HW3.1 Multiple Initial			HW3.2 Multiple Final					
Manure Utilized on CMU	63,000 gallons			63,000 gallons			15,000 gallons			15,000 gallons			26,100 gallons		

App. 4: Crop Yrs. 2024	M1			M2			M2			Orman1			Orman2		
CMU/Field ID															
Acres	2.9			7.1			7.1			17.5			16.4		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	34	95	6.1	34	95	6.1	34	95	6.1	15	50	6.2	22	62	6.5
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			Special Prot.			Special Prot. <150ft		
Part A Result	N Based			N Based			N Based			Part B			Part B		
Crop	Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Corn for Grain (No-till)			Corn for Grain (No-till)		
Planned Yield	23 ton/A			8 ton/A			23 ton/A			200 bu/A			200 bu/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	200	80	220	120	40	210	200	80	220	230	130	140	230	110	110
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	23	Summer Double Crop		[23]	Winter Double Crop		23	Summer Double Crop		0			0		
Manure History Description Residual Manure N (lb/A)	24	Continuously - Summer Double Crop		24	Continuously - Summer Double Crop		24	Continuously - Summer Double Crop		20	Frequently - Summer Crop		20	Frequently - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0			0		
Net Nutrients Required (lb/A)	153	26	192	96	40	210	153	26	192	210	130	140	210	110	110
Manure Group	Heifer Pit (Spring)			Heifer Pit (Fall)			Heifer Pit (Spring)			Heifer Pit (Spring)			Heifer Pit (Spring)		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Spring 1.2-12: Incorporated after 7 days			Spring 1.2-12: Incorporated after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.10	0.35		0.10	0.25		0.10	0.35		0.10	0.35		0.10	0.35
P Index Application Method										April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	27176 gal/A			22120 gal/A			27176 gal/A			37300 gal/A			37300 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	5192 gal/A			14231 gal/A			5192 gal/A			7692 gal/A			7692 gal/A		
	Crop P Removal (lb/A) 54.0			Crop P Removal (lb/A) 148.0			Crop P Removal (lb/A) 54.0			Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 80.0		
P Index Value										24			30		
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**6000 gal/A**			**6000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	51	94	238	39	94	238	51	94	238	34	62	158	34	62	158
Nutrient Balance after Manure	102	-68	-46	57	-54	-28	102	-68	-46	176	68	-18	176	48	-48
Supplemental Fertilizer (lb/A)	102	0	0	57	0	0	102	0	0	176	0	0	176	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-68**	**-46**	**0**	**-54**	**-28**	**0**	**-68**	**-46**	**0**	**68**	**-18**	**0**	**48**	**-48**
Multiple Application															
Manure Utilized on CMU	26,100 gallons			63,900 gallons			63,900 gallons			105,000 gallons			98,400 gallons		

App. 4: Crop Yrs. 2024	Orman3			Orman4			Orman5		
CMU/Field ID									
Acres	9.3			3.0			2.0		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	9	52	6.7	9	52	6.7	9	52	6.7
P Index Part A Evaluation	Special Prot. <150ft			Special Prot. <150ft			Special Prot. <150ft		
Part A Result	Part B			Part B			Part B		
Crop	Corn for Grain (No-till)			Established Mixed Grasses			Established Mixed Grasses		
Planned Yield	200 bu/A			6 ton/A			6 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	230	140	130	300	170	320	300	170	320
User Soil Test Recommendation (lb/A)									
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)									
P Index Application Method									
Double Crop CarryOver N (lb/A)	0			0			0		
Manure History Description Residual Manure N (lb/A)	20	Frequently - Summer Crop		20	Frequently - Summer Crop		20	Frequently - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0			0			0		
Net Nutrients Required (lb/A)	210	140	130	280	170	320	280	170	320
Manure Group	Tiestall Pit (Spring)			Tiestall Pit (Spring)			Tiestall Pit (Spring)		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated after 7 days			Spring 1.2-12: Incorporated after 7 days			Spring 1.2-12: Incorporated after 7 days		
Availability Factors	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
(Total N or NH4-N & Organic N)		0.10	0.35		0.10	0.35		0.10	0.35
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	43568 gal/A			58091 gal/A			58091 gal/A		
P Removal Balance Manure Rate	9302 gal/A			10465 gal/A			10465 gal/A		
(ton or gal/A; If required by P Index)	Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 90.0			Crop P Removal (lb/A) 90.0		
P Index Value	23			23			23		
Planned Manure Rate (ton or gal/A)	**6000 gal/A**			**6000 gal/A**			**6000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	29	52	83	29	52	83	29	52	83
Nutrient Balance after Manure	181	88	47	251	118	237	251	118	237
Supplemental Fertilizer (lb/A)	181	0	0	251	0	0	251	0	0
P Index Application Method									
Final Nutrient Balance (lb/A)	**0**	**88**	**47**	**0**	**118**	**237**	**0**	**118**	**237**
Multiple Application									
Manure Utilized on CMU	55,800 gallons			18,000 gallons			12,000 gallons		

App. 4: Crop Yrs. 2025	1			1			2			2			3		
CMU/Field ID															
Acres	54.5			54.5			11.8			11.8			20.0		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	44	80	6.9	44	80	6.9	90	108	6.8	90	108	6.8	135	77	6.4
P Index Part A Evaluation	No to All Part A			No to All Part A			<150ft			<150ft			No to All Part A		
Part A Result	N Based			N Based			Part B			Part B			N Based		
Crop	Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage		
Planned Yield	10 ton/A			28 ton/A			10 ton/A			28 ton/A			10 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	150	20	280	240	30	290	150	0	230	240	0	240	150	0	280
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	[27]	Winter Double Crop		27	Summer Double Crop		[27]	Winter Double Crop		27	Summer Double Crop		[27]	Winter Double Crop	
Manure History Description Residual Manure N (lb/A)	11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0			0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	139	20	280	189	-29	397	139	0	230	189	-79	297	139	0	280
Manure Group	Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)		
Application Season: Management (Incorporation, cover crops, etc.)	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.60	0.25		0.80	0.35		0.60	0.25		0.80	0.35		0.60	0.25
P Index Application Method							Starter or Injected			Starter or Injected					
N Balanced Manure Rate (ton; gal/A)	11642 gal/A			11688 gal/A			11642 gal/A			11688 gal/A			11642 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	20682 gal/A			11705 gal/A			20682 gal/A			11705 gal/A			20682 gal/A		
	Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 103.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 103.0			Crop P Removal (lb/A) 182.0		
P Index Value							42			42					
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	107	79	173	145	79	173	107	79	173	145	79	173	107	79	173
Nutrient Balance after Manure	32	-59	107	44	-108	224	32	-79	57	44	-158	124	32	-79	107
Supplemental Fertilizer (lb/A)	32	0	0	44	0	0	32	0	0	44	0	0	32	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-59**	**107**	**0**	**-108**	**224**	**0**	**-79**	**57**	**0**	**-158**	**124**	**0**	**-79**	**107**
Multiple Application															
Manure Utilized on CMU	490,500 gallons			490,500 gallons			106,200 gallons			106,200 gallons			180,000 gallons		

App. 4: Crop Yrs. 2025	3			4			4			5			5		
CMU/Field ID															
Acres	20.0			10.5			10.5			18.7			18.7		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	135	77	6.4	90	108	6.8	90	108	6.8	43	73	6.9	43	73	6.9
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			No to All Part A			No to All Part A		
Part A Result	N Based			N Based			N Based			N Based			N Based		
Crop	Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)		
Planned Yield	28 ton/A			10 ton/A			28 ton/A			10 ton/A			28 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	240	0	290	150	0	230	240	0	240	150	20	280	240	30	290
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	27	Summer Double Crop		[27]	Winter Double Crop		27	Summer Double Crop		[27]	Winter Double Crop		27	Summer Double Crop	
Manure History Description Residual Manure N (lb/A)	24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	189	-79	397	139	0	230	189	-79	297	139	20	280	189	-29	397
Manure Group	Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.80	0.35		0.60	0.25		0.80	0.35		0.60	0.25		0.80	0.35
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	11688 gal/A			11642 gal/A			11688 gal/A			11642 gal/A			11688 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	11705 gal/A			20682 gal/A			11705 gal/A			20682 gal/A			11705 gal/A		
	Crop P Removal (lb/A) 103.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 103.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 103.0		
P Index Value															
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	145	79	173	107	79	173	145	79	173	107	79	173	145	79	173
Nutrient Balance after Manure	44	-158	224	32	-79	57	44	-158	124	32	-59	107	44	-108	224
Supplemental Fertilizer (lb/A)	44	0	0	32	0	0	44	0	0	32	0	0	44	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-158**	**224**	**0**	**-79**	**57**	**0**	**-158**	**124**	**0**	**-59**	**107**	**0**	**-108**	**224**
Multiple Application															
Manure Utilized on CMU	180,000 gallons			94,500 gallons			94,500 gallons			168,300 gallons			168,300 gallons		

App. 4: Crop Yrs. 2025	6			6			7			7			8		
CMU/Field ID															
Acres	19.0			19.0			14.5			14.5			12.5		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	75	145	6.5	75	145	6.5	90	108	6.8	90	108	6.8	81	84	6.6
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			No to All Part A			No to All Part A		
Part A Result	N Based			N Based			N Based			N Based			N Based		
Crop	Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage		
Planned Yield	10 ton/A			28 ton/A			10 ton/A			28 ton/A			10 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	150	0	130	240	0	130	150	0	230	240	0	240	150	0	270
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	[27]	Winter Double Crop		27	Summer Double Crop		[27]	Winter Double Crop		27	Summer Double Crop		[27]	Winter Double Crop	
Manure History Description Residual Manure N (lb/A)	11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	139	0	130	189	-79	87	139	0	230	189	-79	297	139	0	270
Manure Group	Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)			Robot Barn Lagoon (Spring)			Robot Barn Lagoon (Fall)		
Application Season: Management (Incorporation, cover crops, etc.)	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.60	0.25		0.80	0.35		0.60	0.25		0.80	0.35		0.60	0.25
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	11642 gal/A			11688 gal/A			11642 gal/A			11688 gal/A			11642 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	20682 gal/A			11705 gal/A			20682 gal/A			11705 gal/A			20682 gal/A		
	Crop P Removal (lb/A)	182.0		Crop P Removal (lb/A)	103.0		Crop P Removal (lb/A)	182.0		Crop P Removal (lb/A)	103.0		Crop P Removal (lb/A)	182.0	
P Index Value															
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	107	79	173	145	79	173	107	79	173	145	79	173	107	79	173
Nutrient Balance after Manure	32	-79	-43	44	-158	-86	32	-79	57	44	-158	124	32	-79	97
Supplemental Fertilizer (lb/A)	32	0	0	44	0	0	32	0	0	44	0	0	32	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-79**	**-43**	**0**	**-158**	**-86**	**0**	**-79**	**57**	**0**	**-158**	**124**	**0**	**-79**	**97**
Multiple Application															
Manure Utilized on CMU	171,000 gallons			171,000 gallons			130,500 gallons			130,500 gallons			112,500 gallons		

App. 4: Crop Yrs. 2025	8			30			30			P1			P2		
CMU/Field ID															
Acres	12.5			1.4			1.4			2.0			10.0		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
	81	84	6.6	81	84	6.6	81	84	6.6	111	182	6.7	111	182	6.7
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			<150ft			<150ft		
Part A Result	N Based			N Based			N Based			Part B			Part B		
Crop	Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Established Pasture (without legume)			Established Pasture (without legume)		
Planned Yield	28 ton/A			10 ton/A			28 ton/A			3 ton/A			3 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	240	0	280	150	0	270	240	0	280	150	0	10	150	0	10
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	27	Summer Double Crop		[18]	Winter Double Crop		18	Summer Double Crop		0			0		
Manure History Description Residual Manure N (lb/A)	24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	189	-79	377	139	0	270	198	-77	426	115	0	10	115	0	10
Manure Group	Robot Barn Lagoon (Spring)			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Field P1 - Grazing Calculator			Field P2 - Grazing Calculator		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.80	0.35		0.10	0.25		0.10	0.35	0.20			0.20		
P Index Application Method										April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	11688 gal/A			36483 gal/A			41079 gal/A			63.9 tons/A			63.9 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	11705 gal/A			21163 gal/A			12209 gal/A			15 tons/A			15 tons/A		
	Crop P Removal (lb/A) 103.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 105.0			Crop P Removal (lb/A) 45.0			Crop P Removal (lb/A) 45.0		
P Index Value										26			26		
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**5.82 tons/A**			**5.82 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	145	79	173	34	77	124	43	77	124	10	17	41	10	17	41
Nutrient Balance after Manure	44	-158	204	105	-77	146	155	-154	302	105	-17	-31	105	-17	-31
Supplemental Fertilizer (lb/A)	44	0	0	105	0	0	155	0	0	105	0	0	105	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-158**	**204**	**0**	**-77**	**146**	**0**	**-154**	**302**	**0**	**-17**	**-31**	**0**	**-17**	**-31**
Multiple Application															
Manure Utilized on CMU	112,500 gallons			12,600 gallons			12,600 gallons			12 tons			58 tons		

App. 4: Crop Yrs. 2025	P3			P4			CF5			CF5			CF6		
CMU/Field ID															
Acres	6.0			6.0			3.0			3.0			7.5		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
	111	182	6.7	111	182	6.7	96	57	7.1	96	57	7.1	96	57	7.1
P Index Part A Evaluation	<150ft			<150ft			<150ft			<150ft			No to All Part A		
Part A Result	Part B			Part B			Part B			Part B			N Based		
Crop	Established Pasture (without legume)			Established Pasture (without legume)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage		
Planned Yield	3 ton/A			3 ton/A			10 ton/A			28 ton/A			10 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	150	0	10	150	0	10	150	0	300	240	0	320	150	0	300
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	0			0			[20]	Winter Double Crop		20	Summer Double Crop		[20]	Winter Double Crop	
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	115	0	10	115	0	10	139	0	300	196	-29	589	139	0	300
Manure Group	Field P3 - Grazing Calculator			Field P4 - Grazing Calculator			Pen Pack			Pen Pack			Pen Pack		
Application Season: Management (Incorporation, cover crops, etc.)	Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
	0.20			0.20				0.10	0.25		0.10	0.35		0.10	0.25
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.					
N Balanced Manure Rate (ton; gal/A)	57.5 tons/A			57.5 tons/A			51.3 tons/A			53.1 tons/A			51.3 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	15 tons/A			15 tons/A			62.8 tons/A			52.8 tons/A			62.8 tons/A		
	Crop P Removal (lb/A) 45.0			Crop P Removal (lb/A) 45.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 153.0			Crop P Removal (lb/A) 182.0		
P Index Value	46			46			45			45					
Planned Manure Rate (ton or gal/A)	**20.56 tons/A**			**20.56 tons/A**			**10 tons/A**			**10 tons/A**			**10 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	41	62	144	41	62	144	27	29	31	37	29	31	27	29	31
Nutrient Balance after Manure	74	-62	-134	74	-62	-134	112	-29	269	159	-58	558	112	-29	269
Supplemental Fertilizer (lb/A)	74	0	0	74	0	0	112	0	0	159	0	0	112	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-62**	**-134**	**0**	**-62**	**-134**	**0**	**-29**	**269**	**0**	**-58**	**558**	**0**	**-29**	**269**
Multiple Application															
Manure Utilized on CMU	123 tons			123 tons			30 tons			30 tons			75 tons		

App. 4: Crop Yrs. 2025	CF6			CF7			CF7			CF9			CF9		
CMU/Field ID															
Acres	7.5			7.0			7.0			3.0			3.0		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	96	57	7.1	96	57	7.1	96	57	7.1	96	57	7.1	96	57	7.1
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			No to All Part A			No to All Part A		
Part A Result	N Based			N Based			N Based			N Based			N Based		
Crop	Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)		
Planned Yield	28 ton/A			10 ton/A			28 ton/A			10 ton/A			28 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	240	0	320	150	0	300	240	0	320	150	0	300	240	0	320
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	20	Summer Double Crop		[18]	Winter Double Crop		18	Summer Double Crop		[20]	Winter Double Crop		20	Summer Double Crop	
Manure History Description Residual Manure N (lb/A)	24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	196	-29	589	139	0	300	198	-77	496	139	0	300	196	-29	589
Manure Group	Pen Pack			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Pen Pack			Pen Pack		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.10	0.35		0.60	0.25		0.80	0.35		0.10	0.25		0.10	0.35
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	53.1 tons/A			13614 gal/A			14369 gal/A			51.3 tons/A			53.1 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	52.8 tons/A			21163 gal/A			12209 gal/A			62.8 tons/A			52.8 tons/A		
	Crop P Removal (lb/A) 153.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 105.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 153.0		
P Index Value															
Planned Manure Rate (ton or gal/A)	**10 tons/A**			**9000 gal/A**			**9000 gal/A**			**10 tons/A**			**10 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	37	29	31	92	77	124	124	77	124	27	29	31	37	29	31
Nutrient Balance after Manure	159	-58	558	47	-77	176	74	-154	372	112	-29	269	159	-58	558
Supplemental Fertilizer (lb/A)	159	0	0	47	0	0	74	0	0	112	0	0	159	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-58**	**558**	**0**	**-77**	**176**	**0**	**-154**	**372**	**0**	**-29**	**269**	**0**	**-58**	**558**
Multiple Application															
Manure Utilized on CMU	75 tons			63,000 gallons			63,000 gallons			30 tons			30 tons		

App. 4: Crop Yrs. 2025	S1			S1			S2-S4			S2-S4			S5		
CMU/Field ID															
Acres	12.0			12.0			24.0			24.0			4.5		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	141	88	6.6	141	88	6.6	91	102	6.5	91	102	6.5	36	98	6.6
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			No to All Part A			No to All Part A		
Part A Result	N Based			N Based			N Based			N Based			N Based		
Crop	Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage		
Planned Yield	10 ton/A			28 ton/A			10 ton/A			28 ton/A			10 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	150	0	270	240	0	280	150	0	230	240	0	240	150	40	260
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	[18]	Winter Double Crop		18	Summer Double Crop		[18]	Winter Double Crop		18	Summer Double Crop		[23]	Winter Double Crop	
Manure History Description Residual Manure N (lb/A)	11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	139	0	270	198	-77	426	139	0	230	198	-77	346	139	40	260
Manure Group	Tiestall Pit (Fall)			Tiestall Pit (Spring)			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Heifer Pit (Fall)		
Application Season: Management (Incorporation, cover crops, etc.)	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days			Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp 0-2 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.60	0.25		0.80	0.35		0.60	0.25		0.80	0.35		0.60	0.25
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	13614 gal/A			14369 gal/A			13614 gal/A			14369 gal/A			14055 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	21163 gal/A			12209 gal/A			21163 gal/A			12209 gal/A			17500 gal/A		
	Crop P Removal (lb/A)	182.0		Crop P Removal (lb/A)	105.0		Crop P Removal (lb/A)	182.0		Crop P Removal (lb/A)	105.0		Crop P Removal (lb/A)	182.0	
P Index Value															
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	92	77	124	124	77	124	92	77	124	124	77	124	89	94	238
Nutrient Balance after Manure	47	-77	146	74	-154	302	47	-77	106	74	-154	222	50	-54	22
Supplemental Fertilizer (lb/A)	47	0	0	74	0	0	47	0	0	74	0	0	50	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-77**	**146**	**0**	**-154**	**302**	**0**	**-77**	**106**	**0**	**-154**	**222**	**0**	**-54**	**22**
Multiple Application															
Manure Utilized on CMU	108,000 gallons			108,000 gallons			216,000 gallons			216,000 gallons			40,500 gallons		

App. 4: Crop Yrs. 2025	S5			S6			S6			S7			S7		
CMU/Field ID															
Acres	4.5			4.0			4.0			9.5			9.5		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	36	98	6.6	36	98	6.6	36	98	6.6	36	98	6.6	36	98	6.6
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			No to All Part A			No to All Part A		
Part A Result	N Based			N Based			N Based			N Based			N Based		
Crop	Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)		
Planned Yield	28 ton/A			10 ton/A			28 ton/A			10 ton/A			28 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	240	70	260	150	40	260	240	70	260	150	40	260	240	70	260
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	23	Summer Double Crop		[18]	Winter Double Crop		18	Summer Double Crop		[23]	Winter Double Crop		23	Summer Double Crop	
Manure History Description Residual Manure N (lb/A)	24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	193	16	282	139	40	260	198	33	396	139	40	260	193	16	282
Manure Group	Heifer Pit (Spring)			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Heifer Pit (Fall)			Heifer Pit (Spring)		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated the same day			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.80	0.35		0.10	0.25		0.10	0.35		0.10	0.25		0.10	0.35
P Index Application Method															
N Balanced Manure Rate (ton; gal/A)	14403 gal/A			36483 gal/A			41079 gal/A			32028 gal/A			34281 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	8462 gal/A			21163 gal/A			12209 gal/A			17500 gal/A			8462 gal/A		
	Crop P Removal (lb/A) 88.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 105.0			Crop P Removal (lb/A) 182.0			Crop P Removal (lb/A) 88.0		
P Index Value															
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	121	94	238	34	77	124	43	77	124	39	94	238	51	94	238
Nutrient Balance after Manure	72	-78	44	105	-37	136	155	-44	272	100	-54	22	142	-78	44
Supplemental Fertilizer (lb/A)	72	0	0	105	0	0	155	0	0	100	0	0	142	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-78**	**44**	**0**	**-37**	**136**	**0**	**-44**	**272**	**0**	**-54**	**22**	**0**	**-78**	**44**
Multiple Application															
Manure Utilized on CMU	40,500 gallons			36,000 gallons			36,000 gallons			85,500 gallons			85,500 gallons		

App. 4: Crop Yrs. 2025	C2			C2			HW3			HW3			M1		
CMU/Field ID															
Acres	7.0			7.0			3.0			3.0			2.9		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	40	219	6.6	40	219	6.6	20	45	6.3	20	45	6.3	34	95	6.1
P Index Part A Evaluation	Special Prot.			Special Prot.			No to All Part A			No to All Part A			No to All Part A		
Part A Result	Part B			Part B			N Based			N Based			N Based		
Crop	Small Grain Silage			Corn for Silage (No-till)			Established Mixed Grasses			Established Mixed Grasses			Small Grain Silage		
Planned Yield	10 ton/A			28 ton/A			6 ton/A			6 ton/A			8 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	150	40	0	240	70	0	300	130	330	300	130	330	120	40	210
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	[18]	Winter Double Crop		18	Summer Double Crop		0			0			[23]	Winter Double Crop	
Manure History Description Residual Manure N (lb/A)	11	Continuously - Winter Double Crop		24	Continuously - Summer Double Crop		35	Continuously - Summer Crop		0	Continuously - Summer Crop		11	Continuously - Winter Double Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit	
Net Nutrients Required (lb/A)	139	40	0	198	33	-124	265	130	330	246	87	261	109	40	210
Manure Group	Tiestall Pit (Fall)			Tiestall Pit (Spring)			Tiestall Pit (Fall)			Tiestall Pit (Spring)			Heifer Pit (Fall)		
Application Season: Management (Incorporation, cover crops, etc.)	Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.10	0.25		0.10	0.35		0.10	0.25		0.10	0.35		0.10	0.25
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.											
N Balanced Manure Rate (ton; gal/A)	36483 gal/A			41079 gal/A			69554 gal/A			51037 gal/A			25115 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	21163 gal/A			12209 gal/A			10465 gal/A			5465 gal/A			14231 gal/A		
	Crop P Removal (lb/A)	182.0		Crop P Removal (lb/A)	105.0		Crop P Removal (lb/A)	90.0		Crop P Removal (lb/A)	47.0		Crop P Removal (lb/A)	148.0	
P Index Value	88			88											
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**5000 gal/A**			**5000 gal/A**			**9000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	34	77	124	43	77	124	19	43	69	24	43	69	39	94	238
Nutrient Balance after Manure	105	-37	-124	155	-44	-248	246	87	261	222	44	192	70	-54	-28
Supplemental Fertilizer (lb/A)	105	0	0	155	0	0	0	0	0	222	0	0	70	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-37**	**-124**	**0**	**-44**	**-248**				**0**	**44**	**192**	**0**	**-54**	**-28**
Multiple Application							HW3.1 Multiple Initial			HW3.2 Multiple Final					
Manure Utilized on CMU	63,000 gallons			63,000 gallons			15,000 gallons			15,000 gallons			26,100 gallons		

App. 4: Crop Yrs. 2025	M1			M2			M2			Orman1			Orman2		
CMU/Field ID															
Acres	2.9			7.1			7.1			17.5			16.4		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	34	95	6.1	34	95	6.1	34	95	6.1	15	50	6.2	22	62	6.5
P Index Part A Evaluation	No to All Part A			No to All Part A			No to All Part A			Special Prot.			Special Prot. <150ft		
Part A Result	N Based			N Based			N Based			Part B			Part B		
Crop	Corn for Silage (No-till)			Small Grain Silage			Corn for Silage (No-till)			Corn for Grain (No-till)			Corn for Grain (No-till)		
Planned Yield	23 ton/A			8 ton/A			23 ton/A			200 bu/A			200 bu/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	200	80	220	120	40	210	200	80	220	230	130	140	230	110	110
User Soil Test Recommendation (lb/A)															
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)															
P Index Application Method															
Double Crop CarryOver N (lb/A)	23	Summer Double Crop		[23]	Winter Double Crop		23	Summer Double Crop		0			0		
Manure History Description Residual Manure N (lb/A)	24	Continuously - Summer Double Crop		24	Continuously - Summer Double Crop		24	Continuously - Summer Double Crop		20	Frequently - Summer Crop		20	Frequently - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Legume Residual N Credit		0	No Legume Residual N Credit		0	No Legume Residual N Credit		0			0		
Net Nutrients Required (lb/A)	153	26	192	96	40	210	153	26	192	210	130	140	210	110	110
Manure Group	Heifer Pit (Spring)			Heifer Pit (Fall)			Heifer Pit (Spring)			Heifer Pit (Spring)			Heifer Pit (Spring)		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated after 7 days			Early Fall 1.2-12: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-12: Incorporated after 7 days			Spring 1.2-12: Incorporated after 7 days			Spring 1.2-12: Incorporated after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.10	0.35		0.10	0.25		0.10	0.35		0.10	0.35		0.10	0.35
P Index Application Method										April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	27176 gal/A			22120 gal/A			27176 gal/A			37300 gal/A			37300 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	5192 gal/A			14231 gal/A			5192 gal/A			7692 gal/A			7692 gal/A		
	Crop P Removal (lb/A) 54.0			Crop P Removal (lb/A) 148.0			Crop P Removal (lb/A) 54.0			Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 80.0		
P Index Value										24			30		
Planned Manure Rate (ton or gal/A)	**9000 gal/A**			**9000 gal/A**			**9000 gal/A**			**6000 gal/A**			**6000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	51	94	238	39	94	238	51	94	238	34	62	158	34	62	158
Nutrient Balance after Manure	102	-68	-46	57	-54	-28	102	-68	-46	176	68	-18	176	48	-48
Supplemental Fertilizer (lb/A)	102	0	0	57	0	0	102	0	0	176	0	0	176	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)	**0**	**-68**	**-46**	**0**	**-54**	**-28**	**0**	**-68**	**-46**	**0**	**68**	**-18**	**0**	**48**	**-48**
Multiple Application															
Manure Utilized on CMU	26,100 gallons			63,900 gallons			63,900 gallons			105,000 gallons			98,400 gallons		

App. 4: Crop Yrs. 2025	Orman3			Orman4			Orman5		
CMU/Field ID									
Acres	9.3			3.0			2.0		
Soil Test Report Date	February 6, 2023			February 6, 2023			February 6, 2023		
Laboratory Name	Waypoint			Waypoint			Waypoint		
Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10)	ppm P	ppm K	pH	ppm P	ppm K	pH	ppm P	ppm K	pH
	9	52	6.7	9	52	6.7	9	52	6.7
P Index Part A Evaluation	Special Prot. <150ft			Special Prot. <150ft			Special Prot. <150ft		
Part A Result	Part B			Part B			Part B		
Crop	Corn for Grain (No-till)			Established Mixed Grasses			Established Mixed Grasses		
Planned Yield	200 bu/A			6 ton/A			6 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	230	140	130	300	170	320	300	170	320
User Soil Test Recommendation (lb/A)									
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)									
P Index Application Method									
Double Crop CarryOver N (lb/A)	0			0			0		
Manure History Description Residual Manure N (lb/A)	20	Frequently - Summer Crop		20	Frequently - Summer Crop		20	Frequently - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0			0			0		
Net Nutrients Required (lb/A)	210	140	130	280	170	320	280	170	320
Manure Group	Tiestall Pit (Spring)			Tiestall Pit (Spring)			Tiestall Pit (Spring)		
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-12: Incorporated after 7 days			Spring 1.2-12: Incorporated after 7 days			Spring 1.2-12: Incorporated after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.10	0.35		0.10	0.35		0.10	0.35
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	43568 gal/A			58091 gal/A			58091 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	9302 gal/A			10465 gal/A			10465 gal/A		
	Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 90.0			Crop P Removal (lb/A) 90.0		
P Index Value	23			23			23		
Planned Manure Rate (ton or gal/A)	**6000 gal/A**			**6000 gal/A**			**6000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	29	52	83	29	52	83	29	52	83
Nutrient Balance after Manure	181	88	47	251	118	237	251	118	237
Supplemental Fertilizer (lb/A)	181	0	0	251	0	0	251	0	0
P Index Application Method									
Final Nutrient Balance (lb/A)	**0**	**88**	**47**	**0**	**118**	**237**	**0**	**118**	**237**
Multiple Application									
Manure Utilized on CMU	55,800 gallons			18,000 gallons			12,000 gallons		

Appendix 5 - P Index

Crop Yrs. 2023 Pennsylvania P Index Version 2

PART A: SCREENING TOOL CMU/Field ID		PART A: SCREENING TOOL	CMU/Field ID	2	P1
Is the CMU in a Special Protection watershed?		Is the CMU in a Special Protection watershed?	If the answer is Yes to any of these questions, Part B must be used.	**No**	**No**
A significant farm management change as defined by Act 38?		Is there a significant farm management change as defined by Act 38?		**No**	**No**
Soil Test Mehlich 3 P greater than 200 ppm P?		Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P)		**90**	**111**
Contributing Distance from CMU to receiving water <150 ft.?		Is the Contributing Distance from this CMU to receiving water less than 150 ft.?		**Yes**	**Yes**
Is winter manure application planned for this field ?		Is winter manure application planned for this field ?		**No**	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)		Run P Index Part B voluntarily? (Answers are No to all Part A questions.)		**No**	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	Mehlich 3 Soil Test P (ppm P)			90	111
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)				18	22
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)			Fertilizer P (lb P2O5/acre)	0, 0	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE[3]	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil	-, -	-
SUPPLEMENTAL P FERTILIZER				Fertilizer P (lb P2O5/acre)	0, 0	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil	-, -	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method						0	0
MANURE P RATE				Manure P (lb P2O5/acre)	79, 79	17
MANURE APPLICATION METHOD[3]	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil	0.2, 0.2	0.6
P SOURCE COEFFICIENT[3]	Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1					0.8, 0.8	0.8
Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient						26	8
Source Factor Sum						44	30
PART B: TRANSPORT FACTORS EROSION	Soil Loss (ton/acre/yr)					1.5	0.5
RUNOFF POTENTIAL	0 *Drainage Class is* Excessively	2 *Drainage Class is* Somewhat Excessively	4 *Drainage Class is* Well/Moderately Well	6 *Drainage Class is* Somewhat Poorly	8 *Drainage Class is* Poorly/Very Poorly	4	4
SUBSURFACE DRAINAGE	0 None		1 Random		2[1] Patterned	0	0
CONTRIBUTING DISTANCE	0 > 500 ft.	2 350 to 500 ft.	4 200 to 349 ft.	6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer	9[2] < 100 ft.	6	6
Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance						12	11
MODIFIED CONNECTIVITY	0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT		1.0 Grassed Waterway or None	1.1 Direct Connection APPLIES TO DIST > 100 FT		1	1
Transport Sum x Modified Connectivity / 24						0.48	0.44
P Index Value = 2 x Source x Transport						**42**	**26**

Low: 59 or less
Nitrogen based management

Medium: 60 to 79
Nitrogen based management

High: 80 to 99
Phosphorus limited to crop removal

Very High: 100 or greater
No Phosphorus applied

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Appendix 5 - P Index

Crop Yrs. 2023

PART A: SCREENING TOOL CMU/Field ID	P2	P3	P4	CF5	C2	Orman1	Orman2
Is the CMU in a Special Protection watershed?	**No**	**No**	**No**	**No**	**Yes**	**Yes**	**Yes**
A significant farm management change as defined by Act 38?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Soil Test Mehlich 3 P greater than 200 ppm P?	**111**	**111**	**111**	**96**	**40**	**15**	**22**
Contributing Distance from CMU to receiving water <150 ft.?	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**No**	**Yes**
Is winter manure application planned for this field ?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)	**No**	**No**	**No**	**No**	**No**	**No**	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	111	111	111	96	40	15	22
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	22	22	22	19	8	3	4
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)	0	0	0	0, 0	0, 0	0	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE[3]	-	-	-	-, -	-, -	-	-
SUPPLEMENTAL P FERTILIZER	0	0	0	0, 0	0, 0	0	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	-	-	-	-, -	-, -	-	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	0	0	0	0	0	0	0
MANURE P RATE	17	62	62	29, 29	77, 77	62	62
MANURE APPLICATION METHOD[3]	0.6	0.6	0.6	0.6, 0.6	0.6, 0.6	0.6	0.6
P SOURCE COEFFICIENT[3]	0.8	0.8	0.8	0.8, 0.8	0.8, 0.8	0.8	0.8
Manure Rating = Manure Rate x Manure Application Metho	8	30	30	28	74	30	30
Source Factor Sum	30	52	52	47	82	33	34
PART B: TRANSPORT FACTORS EROSION	0.5	0.5	0.5	1.5	2.95	0.65	0.58
RUNOFF POTENTIAL	4	4	4	4	4	4	4
SUBSURFACE DRAINAGE	0	0	0	0	0	0	0
CONTRIBUTING DISTANCE	6	6	6	6	6	4	6
Transport Sum = Erosion + Runoff Potential + Subsurface D	11	11	11	12	13	9	11
MODIFIED CONNECTIVITY	1	1	1	1	1	1	1
Transport Sum x Modified Connectivity / 24	0.44	0.44	0.44	0.48	0.54	0.36	0.44
P Index Value = 2 x Source x Transport	**26**	**46**	**46**	**45**	**88**	**24**	**30**

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no corresponding

Appendix 5 - P Index

Crop Yrs. 2023

PART A: SCREENING TOOL CMU/Field ID	Orman3	Orman4	Orman5
Is the CMU in a Special Protection watershed?	**Yes**	**Yes**	**Yes**
A significant farm management change as defined by Act 38?	**No**	**No**	**No**
Soil Test Mehlich 3 P greater than 200 ppm P?	**9**	**9**	**9**
Contributing Distance from CMU to receiving water <150 ft.?	**Yes**	**Yes**	**Yes**
Is winter manure application planned for this field ?	**No**	**No**	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)	**No**	**No**	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	9	9	9
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	2	2	2
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)	0	0	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE[3]	-	-	-
SUPPLEMENTAL P FERTILIZER	0	0	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	-	-	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	0	0	0
MANURE P RATE	52	52	52
MANURE APPLICATION METHOD[3]	0.6	0.6	0.6
P SOURCE COEFFICIENT[3]	0.8	0.8	0.8
Manure Rating = Manure Rate x Manure Application Metho	25	25	25
Source Factor Sum	27	27	27
PART B: TRANSPORT FACTORS EROSION	0.38	0.16	0.17
RUNOFF POTENTIAL	4	4	4
SUBSURFACE DRAINAGE	0	0	0
CONTRIBUTING DISTANCE	6	6	6
Transport Sum = Erosion + Runoff Potential + Subsurface D	10	10	10
MODIFIED CONNECTIVITY	1	1	1
Transport Sum x Modified Connectivity / 24	0.43	0.42	0.42
P Index Value = 2 x Source x Transport	**23**	**23**	**23**

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no corresponding

Appendix 5 - P Index

Crop Yrs. 2024 Pennsylvania P Index Version 2

PART A: SCREENING TOOL CMU/Field ID		PART A: SCREENING TOOL	CMU/Field ID	2	P1
Is the CMU in a Special Protection watershed?		Is the CMU in a Special Protection watershed?	If the answer is Yes to any of these questions, Part B must be used.	**No**	**No**
A significant farm management change as defined by Act 38?		Is there a significant farm management change as defined by Act 38?		**No**	**No**
Soil Test Mehlich 3 P greater than 200 ppm P?		Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P)		**90**	**111**
Contributing Distance from CMU to receiving water <150 ft.?		Is the Contributing Distance from this CMU to receiving water less than 150 ft.?		**Yes**	**Yes**
Is winter manure application planned for this field ?		Is winter manure application planned for this field ?		**No**	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)		Run P Index Part B voluntarily? (Answers are No to all Part A questions.)		**No**	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	Mehlich 3 Soil Test P (ppm P)			90	111
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)				18	22
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)			Fertilizer P (lb P2O5/acre)	0, 0	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE[3]	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil	-, -	-
SUPPLEMENTAL P FERTILIZER			Fertilizer P (lb P2O5/acre)	0, 0	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil	-, -	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method				0	0
MANURE P RATE			Manure P (lb P2O5/acre)	79, 79	17
MANURE APPLICATION METHOD[3]	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil	0.2, 0.2	0.6
P SOURCE COEFFICIENT[3]	Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1					0.8, 0.8	0.8
Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient						26	8
Source Factor Sum						44	30
PART B: TRANSPORT FACTORS EROSION	Soil Loss (ton/acre/yr)					1.5	0.5
RUNOFF POTENTIAL	0 *Drainage Class is* Excessively	2 *Drainage Class is* Somewhat Excessively	4 *Drainage Class is* Well/Moderately Well	6 *Drainage Class is* Somewhat Poorly	8 *Drainage Class is* Poorly/Very Poorly	4	4
SUBSURFACE DRAINAGE	0 None		1 Random		2[1] Patterned	0	0
CONTRIBUTING DISTANCE	0 > 500 ft.	2 350 to 500 ft.	4 200 to 349 ft.	6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer	9[2] < 100 ft.	6	6
Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance						12	11
MODIFIED CONNECTIVITY	0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT		1.0 Grassed Waterway or None	1.1 Direct Connection APPLIES TO DIST > 100 FT		1	1
Transport Sum x Modified Connectivity / 24						0.48	0.44
P Index Value = 2 x Source x Transport						**42**	**26**

Low: 59 or less
Nitrogen based management

Medium: 60 to 79
Nitrogen based management

High: 80 to 99
Phosphorus limited to crop removal

Very High: 100 or greater
No Phosphorus applied

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Appendix 5 - P Index

Crop Yrs. 2024

PART A: SCREENING TOOL CMU/Field ID	P2	P3	P4	CF5	C2	Orman1	Orman2
Is the CMU in a Special Protection watershed?	**No**	**No**	**No**	**No**	**Yes**	**Yes**	**Yes**
A significant farm management change as defined by Act 38?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Soil Test Mehlich 3 P greater than 200 ppm P?	**111**	**111**	**111**	**96**	**40**	**15**	**22**
Contributing Distance from CMU to receiving water <150 ft.?	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**No**	**Yes**
Is winter manure application planned for this field ?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)	**No**	**No**	**No**	**No**	**No**	**No**	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	111	111	111	96	40	15	22
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	22	22	22	19	8	3	4
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)	0	0	0	0, 0	0, 0	0	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE[3]	-	-	-	-, -	-, -	-	-
SUPPLEMENTAL P FERTILIZER	0	0	0	0, 0	0, 0	0	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	-	-	-	-, -	-, -	-	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	0	0	0	0	0	0	0
MANURE P RATE	17	62	62	29, 29	77, 77	62	62
MANURE APPLICATION METHOD[3]	0.6	0.6	0.6	0.6, 0.6	0.6, 0.6	0.6	0.6
P SOURCE COEFFICIENT[3]	0.8	0.8	0.8	0.8, 0.8	0.8, 0.8	0.8	0.8
Manure Rating = Manure Rate x Manure Application Metho	8	30	30	28	74	30	30
Source Factor Sum	30	52	52	47	82	33	34
PART B: TRANSPORT FACTORS EROSION	0.5	0.5	0.5	1.5	2.95	0.65	0.58
RUNOFF POTENTIAL	4	4	4	4	4	4	4
SUBSURFACE DRAINAGE	0	0	0	0	0	0	0
CONTRIBUTING DISTANCE	6	6	6	6	6	4	6
Transport Sum = Erosion + Runoff Potential + Subsurface D	11	11	11	12	13	9	11
MODIFIED CONNECTIVITY	1	1	1	1	1	1	1
Transport Sum x Modified Connectivity / 24	0.44	0.44	0.44	0.48	0.54	0.36	0.44
P Index Value = 2 x Source x Transport	**26**	**46**	**46**	**45**	**88**	**24**	**30**

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no corresponding

Appendix 5 - P Index

Crop Yrs. 2024

PART A: SCREENING TOOL CMU/Field ID	Orman3	Orman4	Orman5
Is the CMU in a Special Protection watershed?	**Yes**	**Yes**	**Yes**
A significant farm management change as defined by Act 38?	**No**	**No**	**No**
Soil Test Mehlich 3 P greater than 200 ppm P?	**9**	**9**	**9**
Contributing Distance from CMU to receiving water <150 ft.?	**Yes**	**Yes**	**Yes**
Is winter manure application planned for this field ?	**No**	**No**	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)	**No**	**No**	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	9	9	9
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	2	2	2
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)	0	0	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE[3]	-	-	-
SUPPLEMENTAL P FERTILIZER	0	0	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	-	-	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	0	0	0
MANURE P RATE	52	52	52
MANURE APPLICATION METHOD[3]	0.6	0.6	0.6
P SOURCE COEFFICIENT[3]	0.8	0.8	0.8
Manure Rating = Manure Rate x Manure Application Metho	25	25	25
Source Factor Sum	27	27	27
PART B: TRANSPORT FACTORS EROSION	0.38	0.16	0.17
RUNOFF POTENTIAL	4	4	4
SUBSURFACE DRAINAGE	0	0	0
CONTRIBUTING DISTANCE	6	6	6
Transport Sum = Erosion + Runoff Potential + Subsurface D	10	10	10
MODIFIED CONNECTIVITY	1	1	1
Transport Sum x Modified Connectivity / 24	0.43	0.42	0.42
P Index Value = 2 x Source x Transport	**23**	**23**	**23**

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no corresponding

Appendix 5 - P Index

Crop Yrs. 2025 Pennsylvania P Index Version 2

PART A: SCREENING TOOL CMU/Field ID		PART A: SCREENING TOOL	CMU/Field ID	2	P1
Is the CMU in a Special Protection watershed?		Is the CMU in a Special Protection watershed?	If the answer is Yes to any of these questions, Part B must be used.	**No**	**No**
A significant farm management change as defined by Act 38?		Is there a significant farm management change as defined by Act 38?		**No**	**No**
Soil Test Mehlich 3 P greater than 200 ppm P?		Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P)		**90**	**111**
Contributing Distance from CMU to receiving water <150 ft.?		Is the Contributing Distance from this CMU to receiving water less than 150 ft.?		**Yes**	**Yes**
Is winter manure application planned for this field ?		Is winter manure application planned for this field ?		**No**	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)		Run P Index Part B voluntarily? (Answers are No to all Part A questions.)		**No**	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	Mehlich 3 Soil Test P (ppm P)			90	111
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)				18	22
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)			Fertilizer P (lb P2O5/acre)	0, 0	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE[3]	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil	-, -	-
SUPPLEMENTAL P FERTILIZER			Fertilizer P (lb P2O5/acre)	0, 0	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil	-, -	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method				0	0
MANURE P RATE			Manure P (lb P2O5/acre)	79, 79	17
MANURE APPLICATION METHOD[3]	0.2 Placed or injected 2" or more deep	0.4 Incorporated <1 week following application	0.6 Incorporated > 1 week or not incorporated following application in April - October	0.8 Incorporated >1 week or not incorporated following application in Nov. - March	1.0 Surface applied to frozen or snow covered soil	0.2, 0.2	0.6
P SOURCE COEFFICIENT[3]	Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1					0.8, 0.8	0.8
Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient						26	8
Source Factor Sum						44	30
PART B: TRANSPORT FACTORS EROSION	Soil Loss (ton/acre/yr)					1.5	0.5
RUNOFF POTENTIAL	0 *Drainage Class is* Excessively	2 *Drainage Class is* Somewhat Excessively	4 *Drainage Class is* Well/Moderately Well	6 *Drainage Class is* Somewhat Poorly	8 *Drainage Class is* Poorly/Very Poorly	4	4
SUBSURFACE DRAINAGE	0 None		1 Random		2[1] Patterned	0	0
CONTRIBUTING DISTANCE	0 > 500 ft.	2 350 to 500 ft.	4 200 to 349 ft.	6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer	9[2] < 100 ft.	6	6
Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance						12	11
MODIFIED CONNECTIVITY	0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT		1.0 Grassed Waterway or None	1.1 Direct Connection APPLIES TO DIST > 100 FT		1	1
Transport Sum x Modified Connectivity / 24						0.48	0.44
P Index Value = 2 x Source x Transport						**42**	**26**

Low: 59 or less
Nitrogen based management

Medium: 60 to 79
Nitrogen based management

High: 80 to 99
Phosphorus limited to crop removal

Very High: 100 or greater
No Phosphorus applied

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Appendix 5 - P Index

Crop Yrs. 2025

PART A: SCREENING TOOL CMU/Field ID	P2	P3	P4	CF5	C2	Orman1	Orman2
Is the CMU in a Special Protection watershed?	**No**	**No**	**No**	**No**	**Yes**	**Yes**	**Yes**
A significant farm management change as defined by Act 38?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Soil Test Mehlich 3 P greater than 200 ppm P?	**111**	**111**	**111**	**96**	**40**	**15**	**22**
Contributing Distance from CMU to receiving water <150 ft.?	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**No**	**Yes**
Is winter manure application planned for this field ?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)	**No**	**No**	**No**	**No**	**No**	**No**	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	111	111	111	96	40	15	22
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	22	22	22	19	8	3	4
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)	0	0	0	0, 0	0, 0	0	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE[3]	-	-	-	-, -	-, -	-	-
SUPPLEMENTAL P FERTILIZER	0	0	0	0, 0	0, 0	0	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	-	-	-	-, -	-, -	-	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	0	0	0	0	0	0	0
MANURE P RATE	17	62	62	29, 29	77, 77	62	62
MANURE APPLICATION METHOD[3]	0.6	0.6	0.6	0.6, 0.6	0.6, 0.6	0.6	0.6
P SOURCE COEFFICIENT[3]	0.8	0.8	0.8	0.8, 0.8	0.8, 0.8	0.8	0.8
Manure Rating = Manure Rate x Manure Application Metho	8	30	30	28	74	30	30
Source Factor Sum	30	52	52	47	82	33	34
PART B: TRANSPORT FACTORS EROSION	0.5	0.5	0.5	1.5	2.95	0.65	0.58
RUNOFF POTENTIAL	4	4	4	4	4	4	4
SUBSURFACE DRAINAGE	0	0	0	0	0	0	0
CONTRIBUTING DISTANCE	6	6	6	6	6	4	6
Transport Sum = Erosion + Runoff Potential + Subsurface D	11	11	11	12	13	9	11
MODIFIED CONNECTIVITY	1	1	1	1	1	1	1
Transport Sum x Modified Connectivity / 24	0.44	0.44	0.44	0.48	0.54	0.36	0.44
P Index Value = 2 x Source x Transport	**26**	**46**	**46**	**45**	**88**	**24**	**30**

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no corresponding

Appendix 5 - P Index

Crop Yrs. 2025

PART A: SCREENING TOOL CMU/Field ID	Orman3	Orman4	Orman5
Is the CMU in a Special Protection watershed?	**Yes**	**Yes**	**Yes**
A significant farm management change as defined by Act 38?	**No**	**No**	**No**
Soil Test Mehlich 3 P greater than 200 ppm P?	**9**	**9**	**9**
Contributing Distance from CMU to receiving water <150 ft.?	**Yes**	**Yes**	**Yes**
Is winter manure application planned for this field ?	**No**	**No**	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)	**No**	**No**	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	9	9	9
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	2	2	2
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)	0	0	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE[3]	-	-	-
SUPPLEMENTAL P FERTILIZER	0	0	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	-	-	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	0	0	0
MANURE P RATE	52	52	52
MANURE APPLICATION METHOD[3]	0.6	0.6	0.6
P SOURCE COEFFICIENT[3]	0.8	0.8	0.8
Manure Rating = Manure Rate x Manure Application Metho	25	25	25
Source Factor Sum	27	27	27
PART B: TRANSPORT FACTORS EROSION	0.38	0.16	0.17
RUNOFF POTENTIAL	4	4	4
SUBSURFACE DRAINAGE	0	0	0
CONTRIBUTING DISTANCE	6	6	6
Transport Sum = Erosion + Runoff Potential + Subsurface D	10	10	10
MODIFIED CONNECTIVITY	1	1	1
Transport Sum x Modified Connectivity / 24	0.43	0.42	0.42
P Index Value = 2 x Source x Transport	**23**	**23**	**23**

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no corresponding

Appendix 6

Manure Management

Date of Site Evaluation:

1/17/2023

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated.

All manure storages, animal housing facilities, and feed storages were evaluated at the Robot Farm, Tie Stall Facility, and the Heifer Facility

Identification of Inadequate Manure Management Practices and Conditions

List of each specific inadequate manure management practice or condition identified.

Heifer barn facility—there is a problem with ACA concrete lot runoff reaching the pasture to the west of the lot causing the area to be wet and damaging the vegetation between the lot and the stream.

BMPs to Address Manure Management Problem Areas

List of specific BMPs (including PA Technical Guide standard name and number) and management changes that will be implemented to address each of the inadequate practices listed above

In discussion with Jeff Overstreet at Berks Co. Conservation District, these BMP's are being proposed:

561-Heavy Use Area Protection

567-Roofs and Covers

558-Roof Runoff Structure

575-Animal Trails and Walkways

620-Underground Outlet

Appendix 7

Stormwater Control

Date of Site Evaluation:

1/17/2023

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated

Fields and Pastures close adjacent to streams were evaluated. Specific Fields include: P1,P2,P3,P4, 1,2,3,4,7,CF5,CF7,S2,C2,Orman Farm,M1,M2,HW3

Identification of Critical Runoff Problem Areas

List of each specific critical runoff problem area identified.

None

BMPs to Address Critical Runoff Problem Areas

List of BMPs (including PA Technical Guide standard name and number) and specific management changes that will be implemented to address each of the critical runoff problem areas listed above.

None

Appendix 8

Importer/Broker Agreements & NBSs

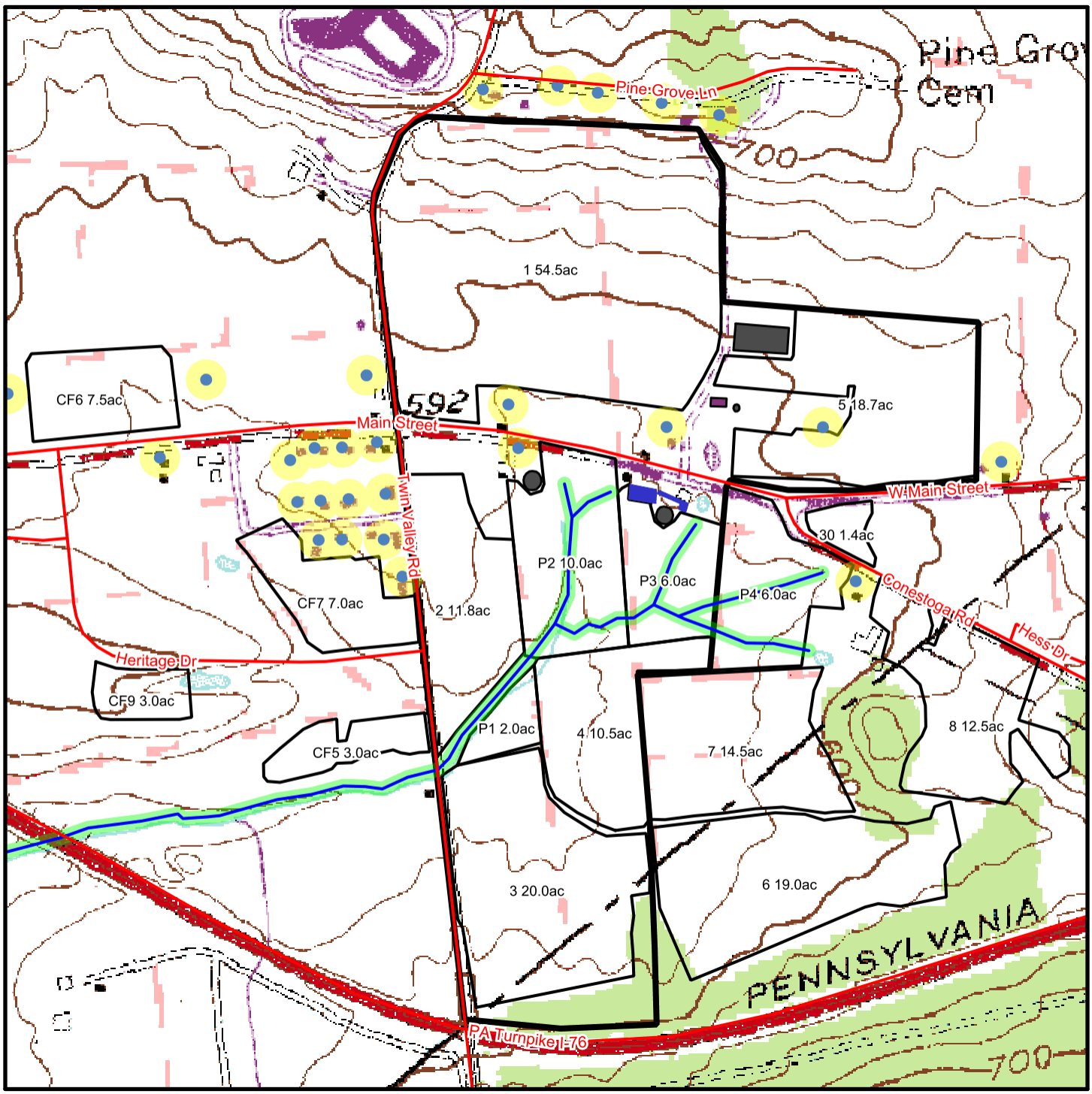
Nutrient Balance Sheets are not required for importers that have an approved Nutrient Management Plan.

Appendix 9

Operation Maps

Three types of maps are required for a CNMP 590 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Topographic Map and Soils Map** must be included here. The Topographic map must be drawn to scale and identify the land included in the plan with operation boundaries. The Soils Map must include the field identification and boundaries, soil types and slopes with soil legend. Adding P Index lines can be helpful on the Topographic or Soils map but are not required. The Operator Management Map must be included in the Nutrient Management Plan Summary.

Home Farm and CF Fields



* 714.0 feet per inch

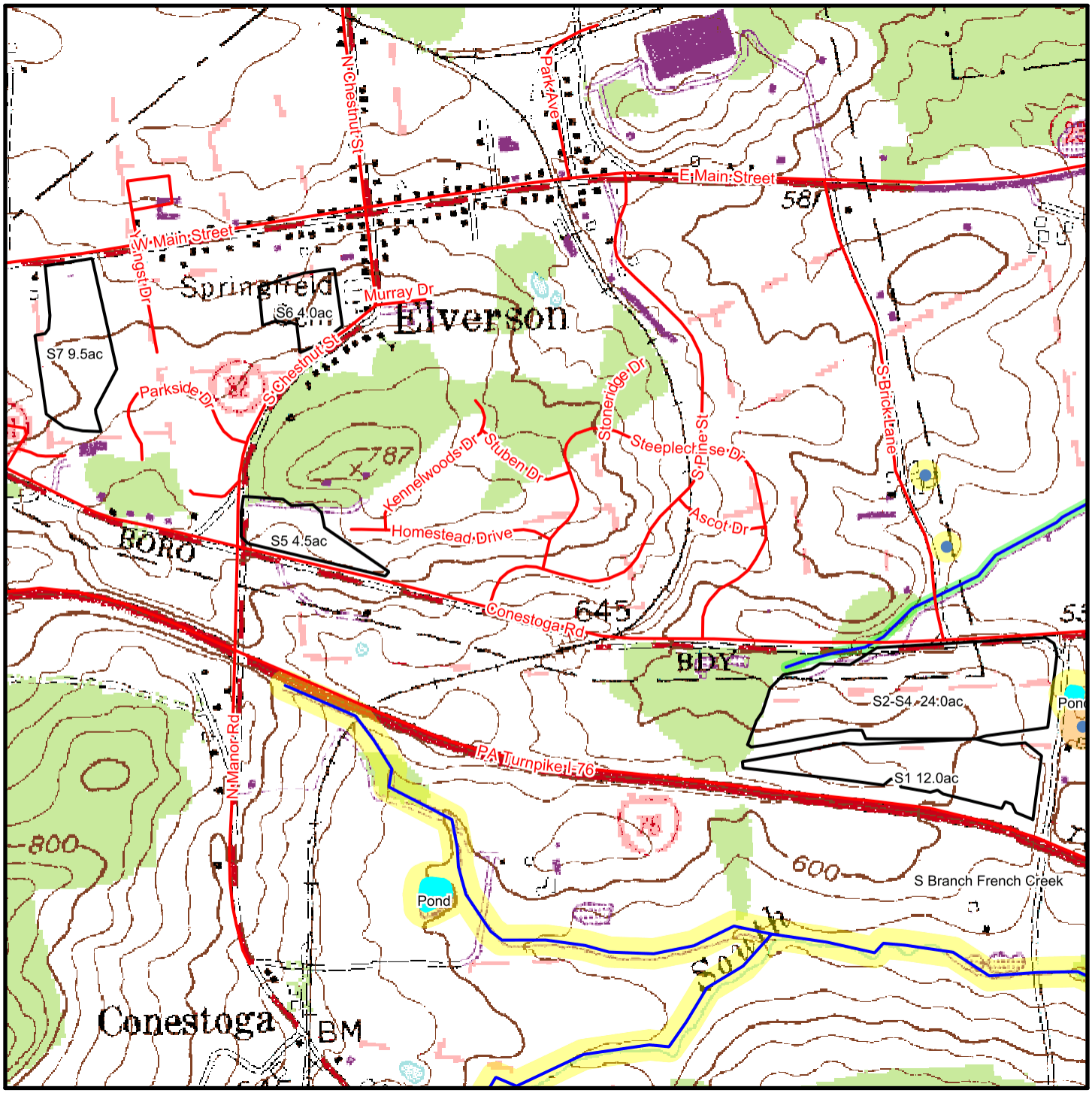
0 357 714 1071 1428 feet

Legend

field / CMU	water	manure stacking	AHUA
farm boundary	stream	vegetative buffer	well
homestead	sinkhole area	100' manure setback	road
forest	sinkhole	150' manure setback	

N

S Fields



* 930.0 feet per inch

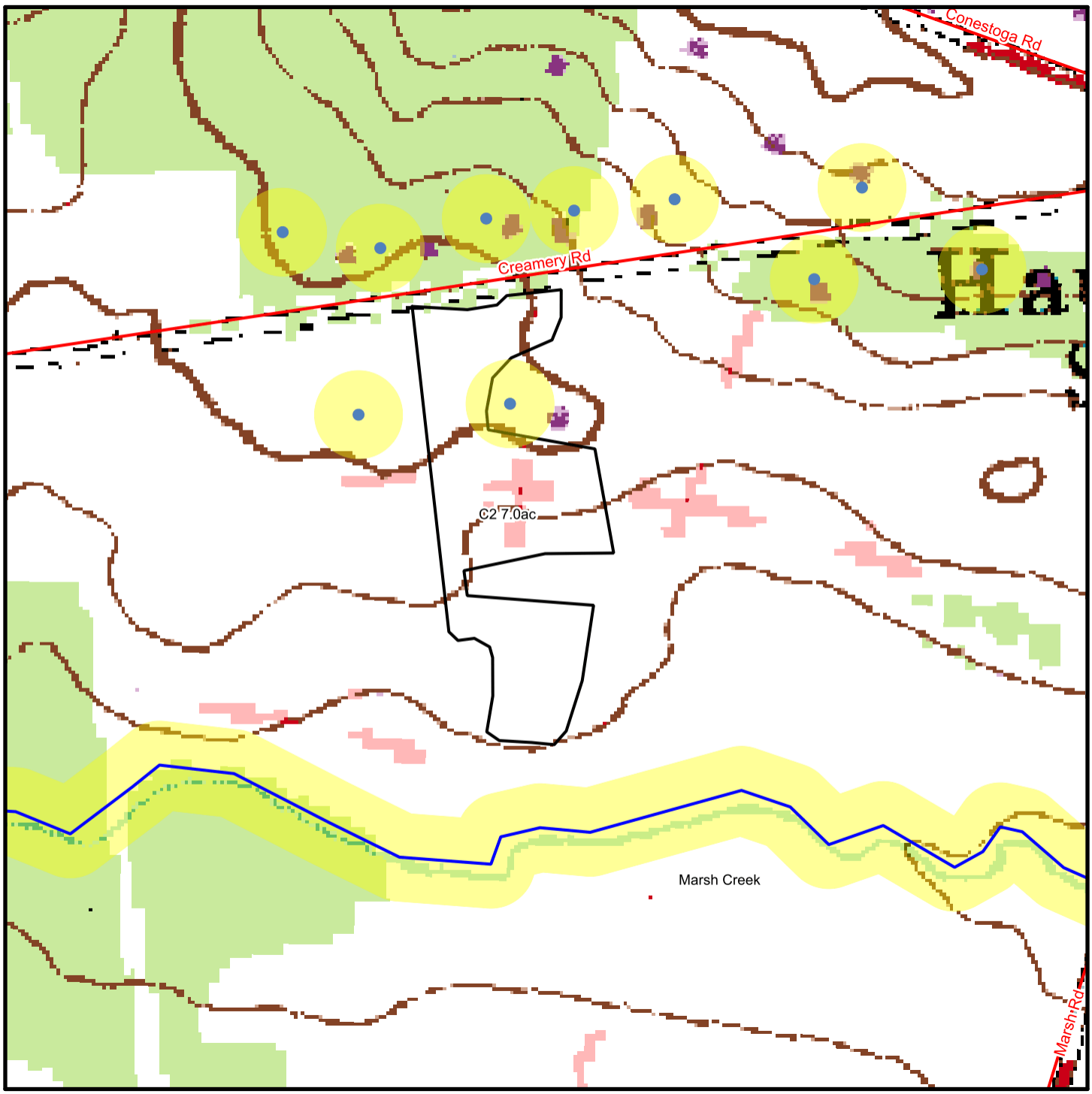
0 465 930 1395 1860 feet

Legend

field / CMU	water	manure stacking	AHUA
farm boundary	stream	vegetative buffer	well
homestead	sinkhole area	100' manure setback	road
forest	sinkhole	150' manure setback	

N

C2



* 326.0 feet per inch

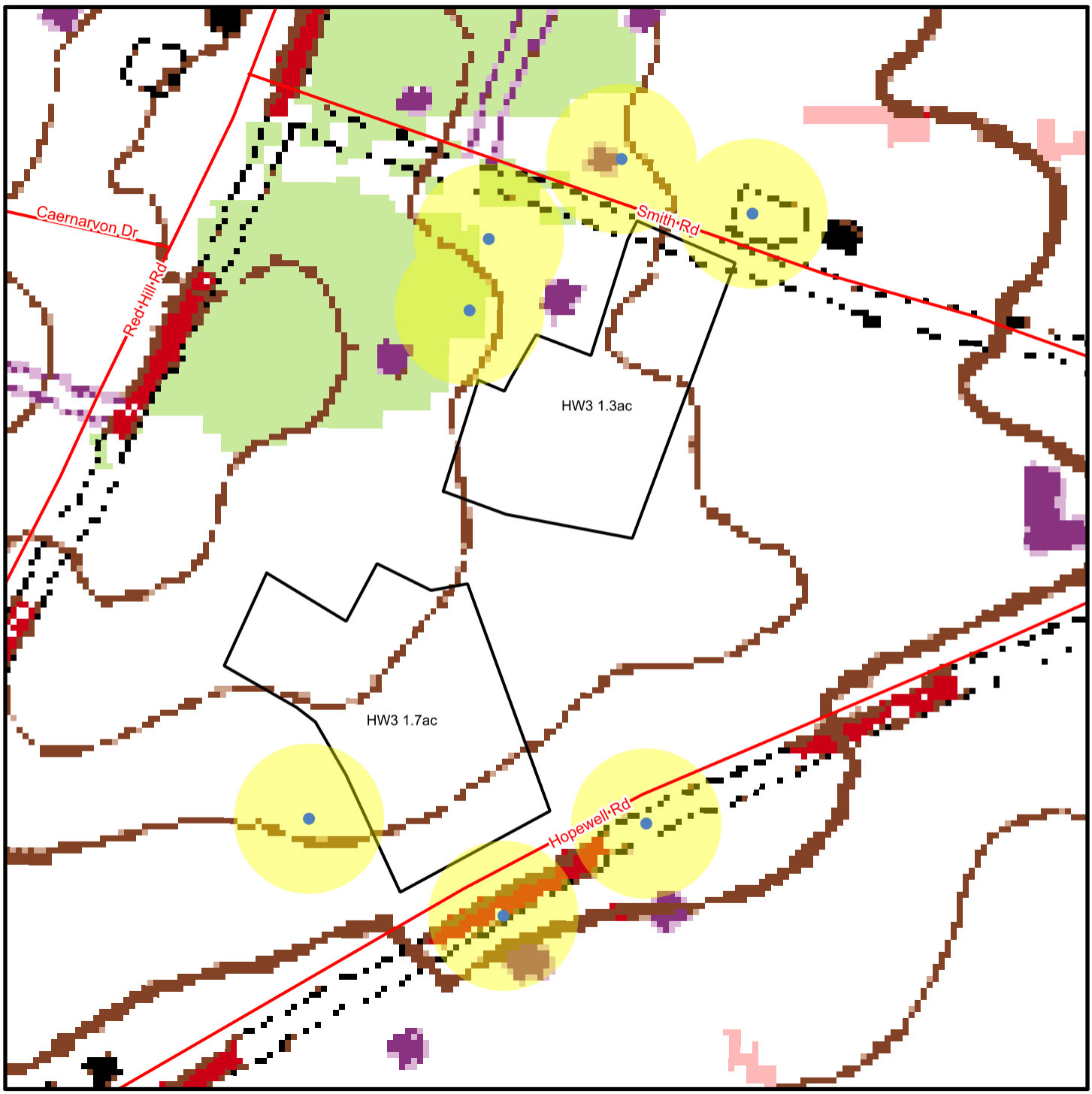
0 163 326 489 652 feet

Legend

- field / CMU
- farm boundary
- homestead
- forest
- water
- stream
- sinkhole area
- sinkhole
- manure stacking
- vegetative buffer
- 100' manure setback
- 150' manure setback
- AHUA
- well
- road

N

Hopewell



* 192.0 feet per inch

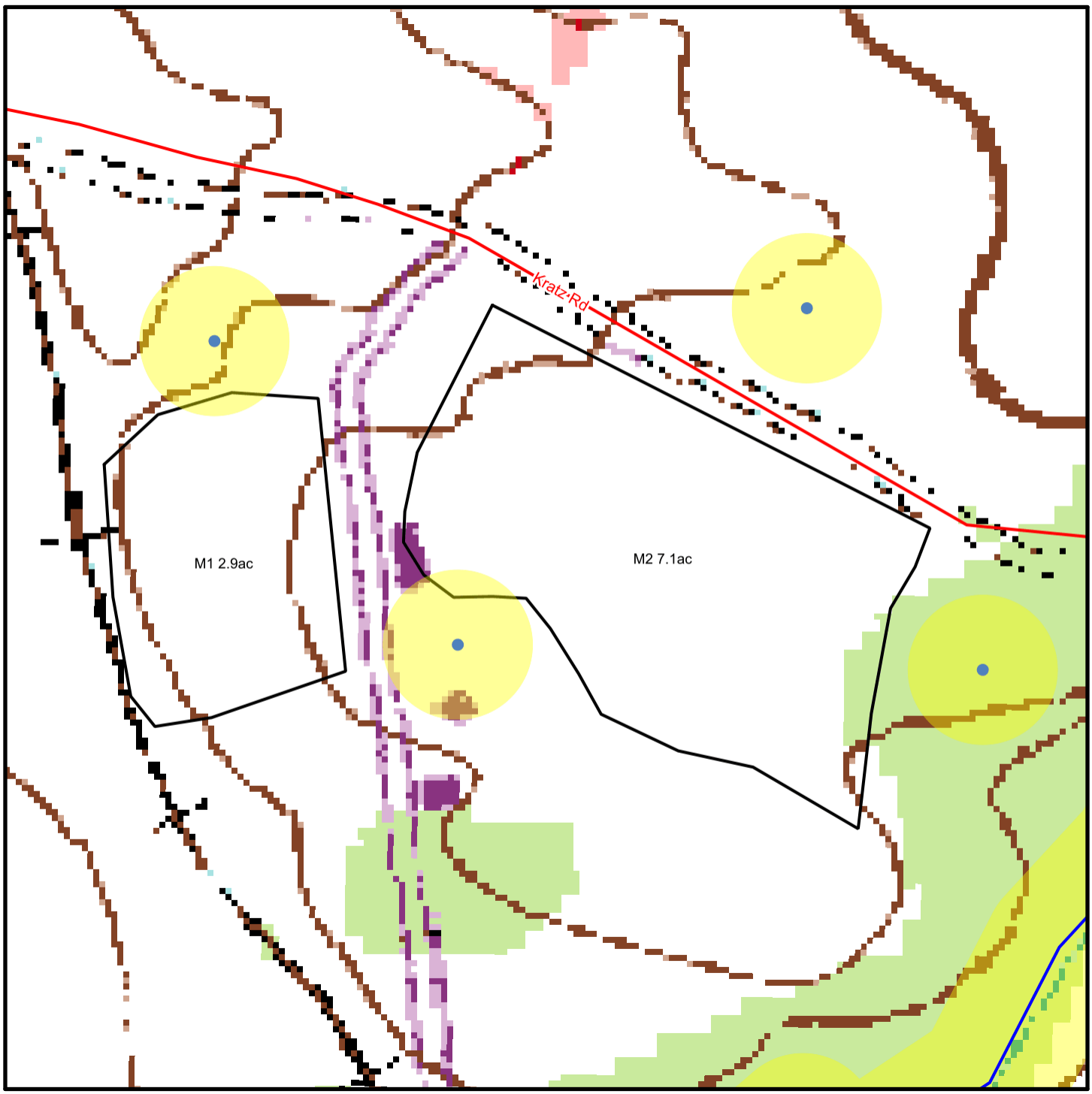
0 96 192 288 384 feet

Legend

field / CMU	water	manure stacking	AHUA
farm boundary	stream	vegetative buffer	well
homestead	sinkhole area	100' manure setback	road
forest	sinkhole	150' manure setback	

N

M1 & M2



* 192.0 feet per inch

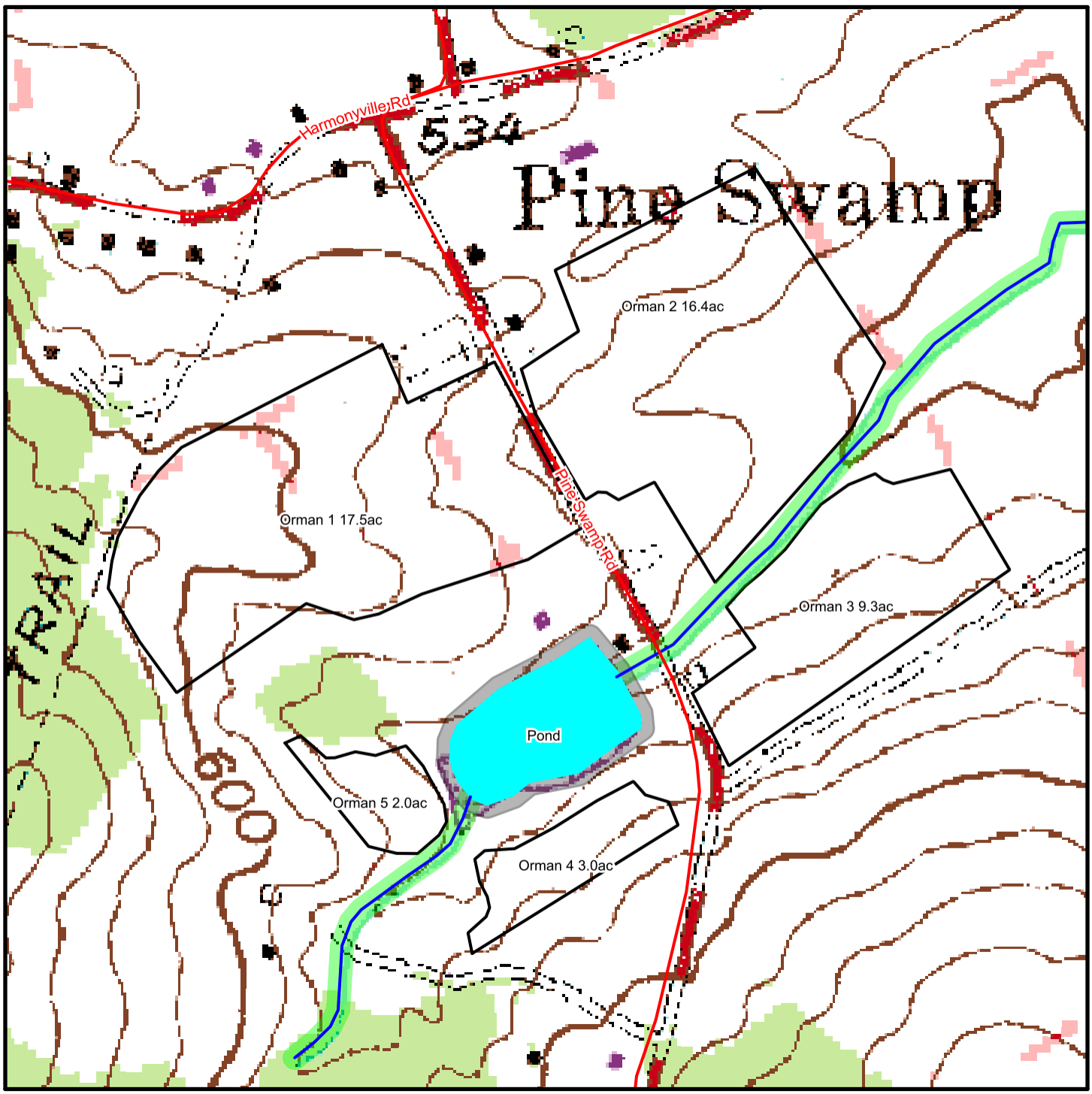
0 96 192 288 384 feet

Legend

- field / CMU
- farm boundary
- homestead
- forest
- water
- stream
- sinkhole area
- sinkhole
- manure stacking
- vegetative buffer
- 100' manure setback
- 150' manure setback
- AHUA
- well
- road

N

Orman Fields



* 422.0 feet per inch

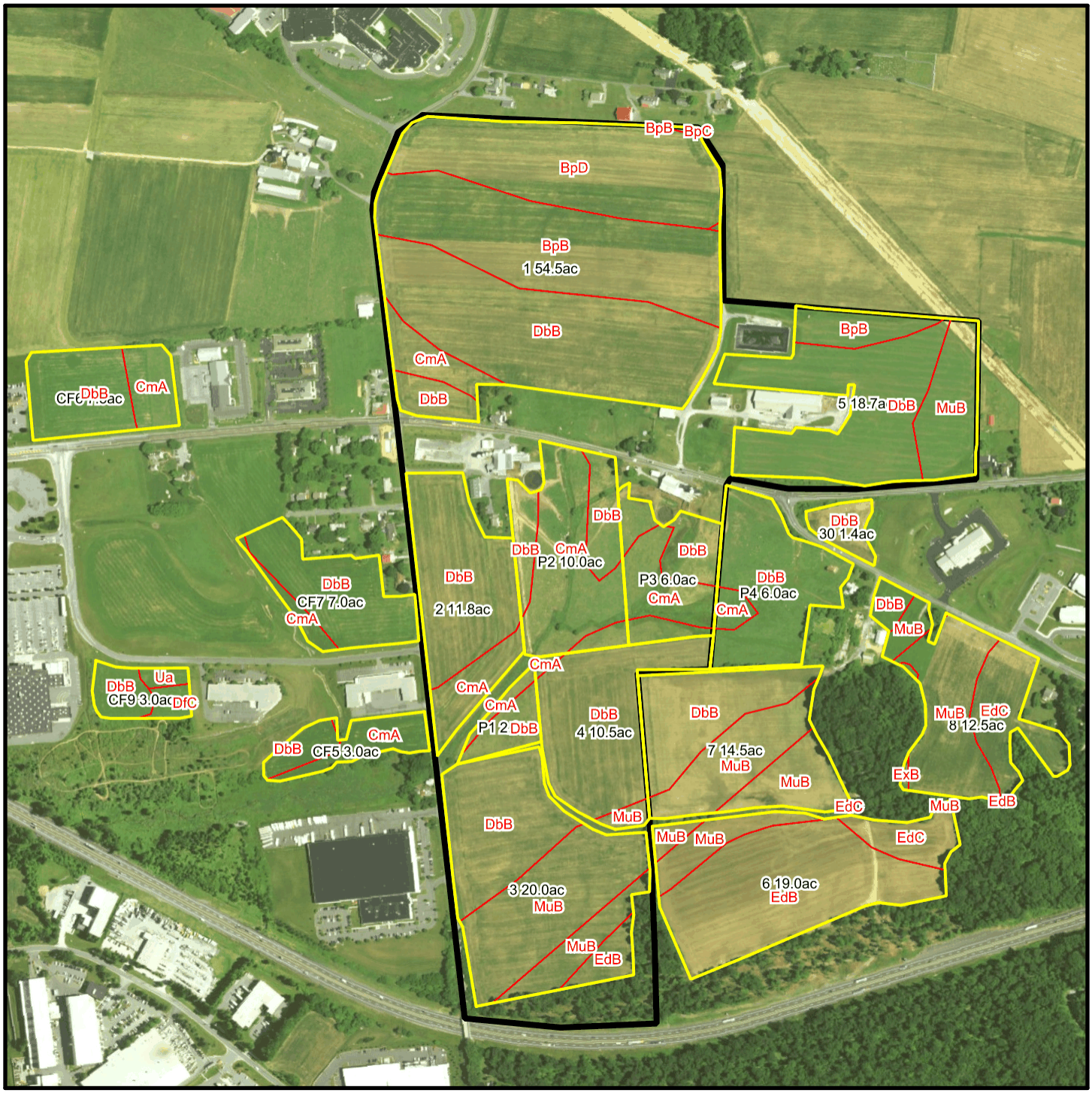
0 211 422 633 844 feet

Legend

- field / CMU
- farm boundary
- homestead
- forest
- water
- stream
- sinkhole area
- sinkhole
- manure stacking
- vegetative buffer
- 100' manure setback
- 150' manure setback
- AHUA
- well
- road

N

Home Farm and CF Fields



* 714.0 feet per inch

0 357 714 1071 1428 feet

N

S Fields

* 930.0 feet per inch

0 465 930 1395 1860 feet

N

C2

* 326.0 feet per inch

0 163 326 489 652 feet

N

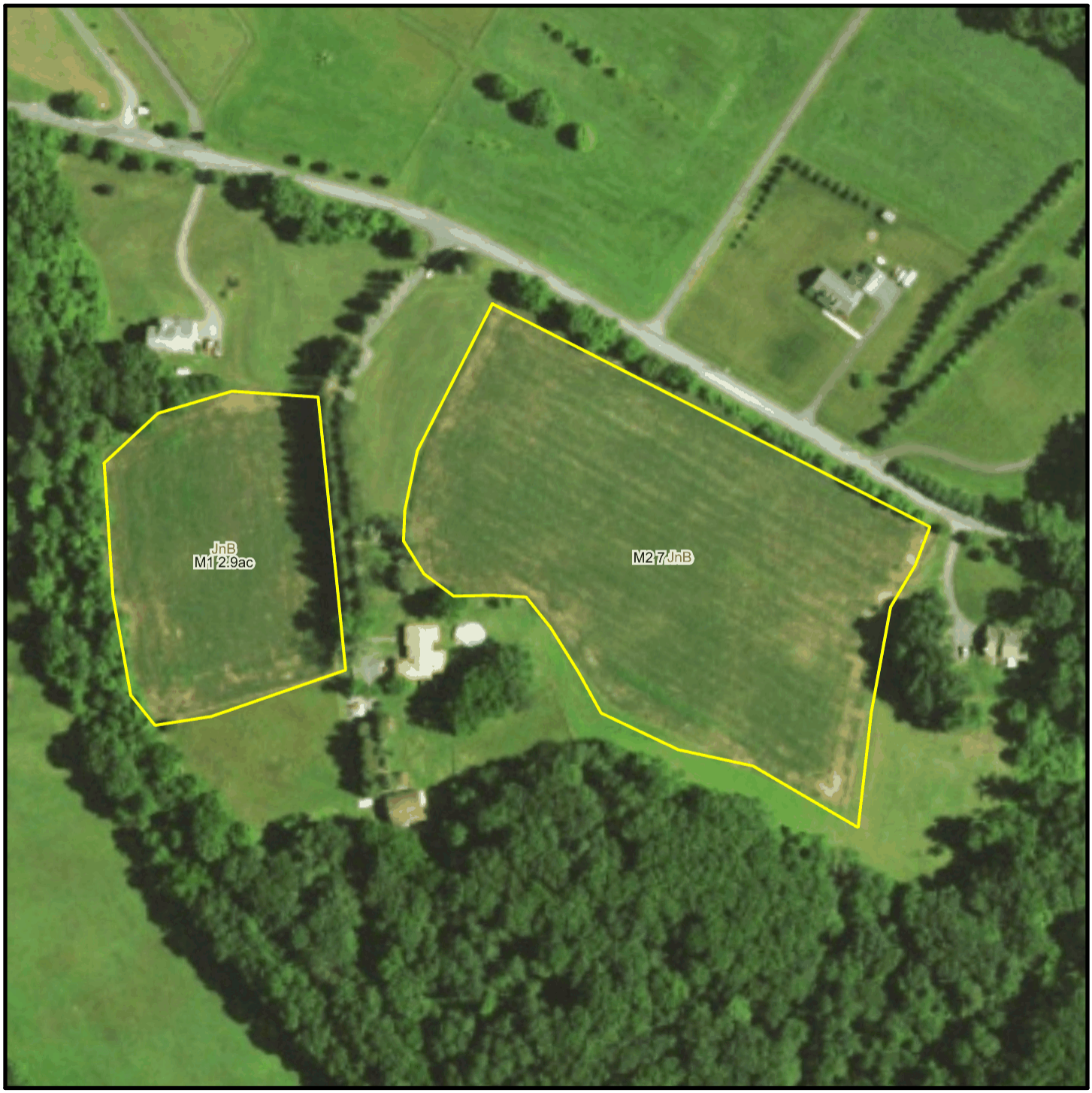
Hopewell

* 192.0 feet per inch

0 96 192 288 384 feet

N

M1 & M2

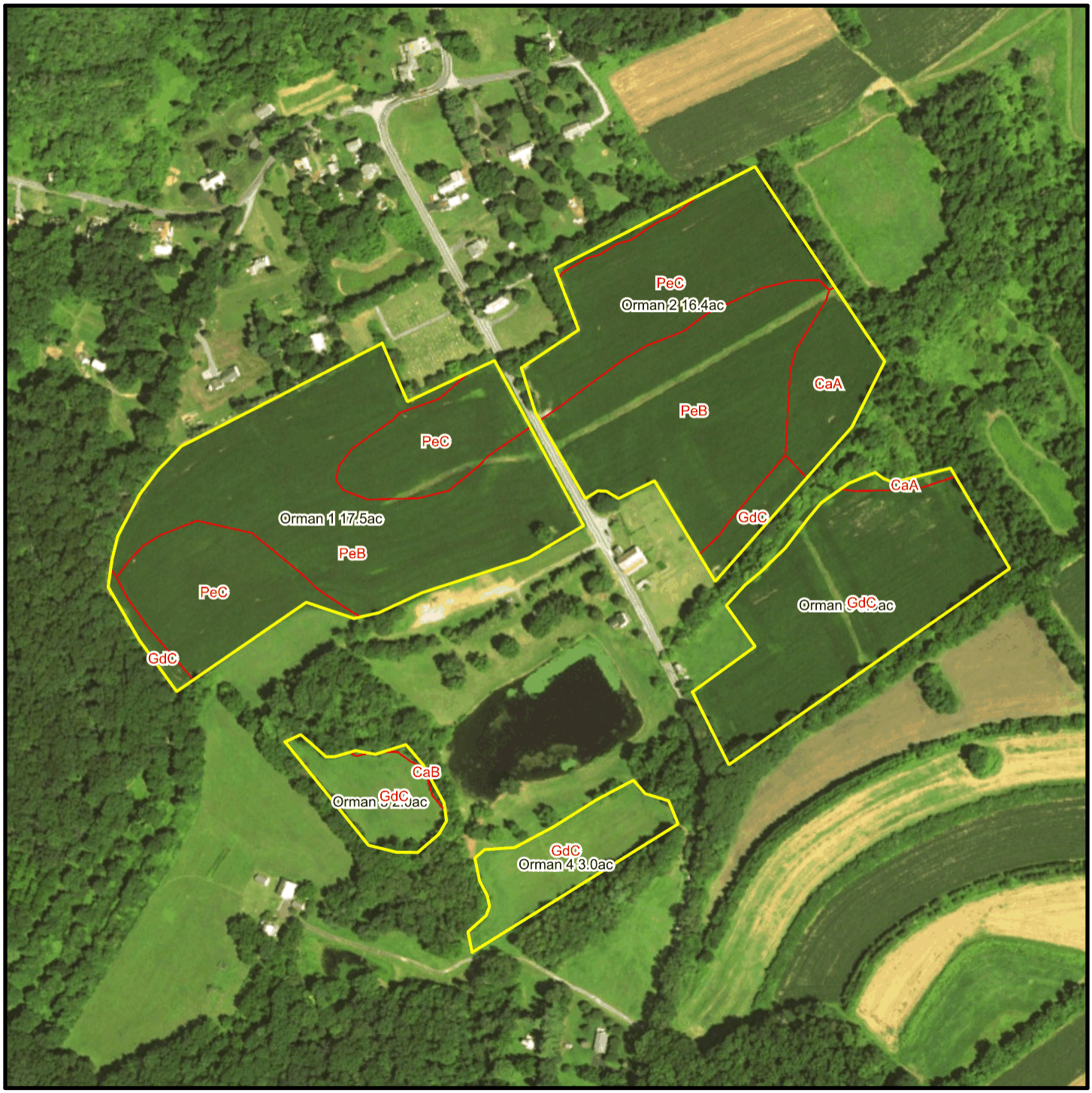


* 192.0 feet per inch

0 96 192 288 384 feet

N

Orman Fields



* 422.0 feet per inch

0 211 422 633 844 feet

N

Created by the Penn State Geospatial Technology Program, Land Analysis Lab. http://www.paonestop.org Created on: 02/02/23

Soil Acreages By Field

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
1	1 54.5ac	BpB	Brecknock channery silt loam, 3 to 8 percent slopes	Brecknock	93	15.9	Well drained	All areas are prime farmland	3	0.37
1	1 54.5ac	BpC	Brecknock channery silt loam, 8 to 15 percent slopes	Brecknock	91	0.13	Well drained	Farmland of statewide importance	3	0.37
1	1 54.5ac	BpD	Brecknock channery silt loam, 15 to 25 percent slopes	Brecknock	97	14.13	Well drained	Not prime farmland	3	0.37
1	1 54.5ac	CmA	Clarksburg silt loam, 0 to 3 percent slopes	Clarksburg	95	2.08	Moderately well drained	All areas are prime farmland	4	0.37
1	1 54.5ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	19.29	Well drained	All areas are prime farmland	5	0.32
2	2 11.8ac	CmA	Clarksburg silt loam, 0 to 3 percent slopes	Clarksburg	95	2.37	Moderately well drained	All areas are prime farmland	4	0.37
2	2 11.8ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	9.07	Well drained	All areas are prime farmland	5	0.32
3	3 20.0ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	7.95	Well drained	All areas are prime farmland	5	0.32
3	3 20.0ac	MuB	Murrill gravelly loam, 3 to 8 percent slopes	Murrill	90	11.47	Well drained	All areas are prime farmland	5	0.28
3	3 20.0ac	EdB	Edgemont channery loam, 3 to 8 percent slopes	Edgemont	93	1.34	Well drained	All areas are prime farmland	5	0.28
30	30 1.4ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	1.5	Well drained	All areas are prime farmland	5	0.32
4	4 10.5ac	CmA	Clarksburg silt loam, 0 to 3 percent slopes	Clarksburg	95	0.2	Moderately well drained	All areas are prime farmland	4	0.37
4	4 10.5ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	9.99	Well drained	All areas are prime farmland	5	0.32

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
4	4 10.5ac	MuB	Murrill gravelly loam, 3 to 8 percent slopes	Murrill	90	0.53	Well drained	All areas are prime farmland	5	0.28
5	5 18.7ac	BpB	Brecknock channery silt loam, 3 to 8 percent slopes	Brecknock	93	2.34	Well drained	All areas are prime farmland	3	0.37
5	5 18.7ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	12.19	Well drained	All areas are prime farmland	5	0.32
5	5 18.7ac	MuB	Murrill gravelly loam, 3 to 8 percent slopes	Murrill	90	4.4	Well drained	All areas are prime farmland	5	0.28
6	6 19.0ac	MuB	Murrill gravelly loam, 3 to 8 percent slopes	Murrill	90	2.82	Well drained	All areas are prime farmland	5	0.28
6	6 19.0ac	EdB	Edgemont channery loam, 3 to 8 percent slopes	Edgemont	93	13.69	Well drained	All areas are prime farmland	5	0.28
6	6 19.0ac	EdC	Edgemont channery loam, 8 to 15 percent slopes	Edgemont	93	2.34	Well drained	Farmland of statewide importance	5	0.28
7	7 14.5ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	6.43	Well drained	All areas are prime farmland	5	0.32
7	7 14.5ac	MuB	Murrill gravelly loam, 3 to 8 percent slopes	Murrill	90	8.04	Well drained	All areas are prime farmland	5	0.28
7	7 14.5ac	EdC	Edgemont channery loam, 8 to 15 percent slopes	Edgemont	93	0.04	Well drained	Farmland of statewide importance	5	0.28
8	8 12.5ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	0.78	Well drained	All areas are prime farmland	5	0.32
8	8 12.5ac	MuB	Murrill gravelly loam, 3 to 8 percent slopes	Murrill	90	7.39	Well drained	All areas are prime farmland	5	0.28
8	8 12.5ac	EdB	Edgemont channery loam, 3 to 8 percent slopes	Edgemont	93	0.03	Well drained	All areas are prime farmland	5	0.28
8	8 12.5ac	EdC	Edgemont channery loam, 8 to 15 percent slopes	Edgemont	93	4.26	Well drained	Farmland of statewide importance	5	0.28

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
8	8 12.5ac	ExB	Edgemont channery sandy loam, 0 to 8 percent slopes, extremely stony	Edgemont	90	0.18	Well drained	Not prime farmland	5	0.15
C2	C2 7.0ac	CaB	Califon loam, 3 to 8 percent slopes	Califon	82	< 0.01	Moderately well drained	All areas are prime farmland	4	0.32
C2	C2 7.0ac	CpA	Cokesbury silt loam, 0 to 3 percent slopes	Cokesbury	85	0.16	Poorly drained	Not prime farmland	4	0.37
C2	C2 7.0ac	EdC	Edgemont channery loam, 8 to 15 percent slopes	Edgemont	93	1.22	Well drained	Farmland of statewide importance	5	0.28
C2	C2 7.0ac	GdB	Gladstone gravelly loam, 3 to 8 percent slopes	Gladstone	85	4.33	Well drained	All areas are prime farmland	5	0.28
CF5	CF5 3.0ac	CmA	Clarksburg silt loam, 0 to 3 percent slopes	Clarksburg	95	2.19	Moderately well drained	All areas are prime farmland	4	0.37
CF5	CF5 3.0ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	1.3	Well drained	All areas are prime farmland	5	0.32
CF6	CF6 7.5ac	CmA	Clarksburg silt loam, 0 to 3 percent slopes	Clarksburg	95	2.08	Moderately well drained	All areas are prime farmland	4	0.37
CF6	CF6 7.5ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	4.83	Well drained	All areas are prime farmland	5	0.32
CF7	CF7 7.0ac	CmA	Clarksburg silt loam, 0 to 3 percent slopes	Clarksburg	95	0.81	Moderately well drained	All areas are prime farmland	4	0.37
CF7	CF7 7.0ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	6.16	Well drained	All areas are prime farmland	5	0.32
CF9	CF9 3.0ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	1.55	Well drained	All areas are prime farmland	5	0.32
CF9	CF9 3.0ac	DfC	Duffield-Ryder silt loams, 8 to 15 percent slopes	Ryder	30	0.23	Well drained	Farmland of statewide importance	2	0.37
CF9	CF9 3.0ac	DfC	Duffield-Ryder silt loams, 8 to 15 percent slopes	Duffield	60	0.47	Well drained	Farmland of statewide importance	5	0.32

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
HW3	HW3 1.3ac	JnB	Joanna loam, 3 to 8 percent slopes	Joanna	90	0.96	Well drained	All areas are prime farmland	5	0.28
HW3	HW3 1.7ac	JnB	Joanna loam, 3 to 8 percent slopes	Joanna	90	1.06	Well drained	All areas are prime farmland	5	0.28
HW3	HW3 1.7ac	JnC	Joanna loam, 8 to 15 percent slopes	Joanna	90	0.2	Well drained	Farmland of statewide importance	5	0.28
M1	M1 2.9ac	JnB	Joanna loam, 3 to 8 percent slopes	Joanna	90	2.66	Well drained	All areas are prime farmland	5	0.28
M2	M2 7.1ac	JnB	Joanna loam, 3 to 8 percent slopes	Joanna	90	5.96	Well drained	All areas are prime farmland	5	0.28
Orman 1	Orman 1 17.5ac	GdC	Gladstone gravelly loam, 8 to 15 percent slopes	Gladstone	85	0.39	Well drained	Farmland of statewide importance	5	0.24
Orman 1	Orman 1 17.5ac	PeB	Penn silt loam, 3 to 8 percent slopes	Penn	85	11.17	Well drained	All areas are prime farmland	2	0.37
Orman 1	Orman 1 17.5ac	PeC	Penn silt loam, 8 to 15 percent slopes	Penn	85	6.57	Well drained	Farmland of statewide importance	2	0.37
Orman 2	Orman 2 16.4ac	CaA	Califon loam, 0 to 3 percent slopes	Califon	90	2.12	Moderately well drained	All areas are prime farmland	4	0.32
Orman 2	Orman 2 16.4ac	GdC	Gladstone gravelly loam, 8 to 15 percent slopes	Gladstone	85	0.79	Well drained	Farmland of statewide importance	5	0.24
Orman 2	Orman 2 16.4ac	PeB	Penn silt loam, 3 to 8 percent slopes	Penn	85	8.09	Well drained	All areas are prime farmland	2	0.37
Orman 2	Orman 2 16.4ac	PeC	Penn silt loam, 8 to 15 percent slopes	Penn	85	5.89	Well drained	Farmland of statewide importance	2	0.37
Orman 3	Orman 3 9.3ac	CaA	Califon loam, 0 to 3 percent slopes	Califon	90	0.24	Moderately well drained	All areas are prime farmland	4	0.32

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
Orman 3	Orman 3 9.3ac	GdC	Gladstone gravelly loam, 8 to 15 percent slopes	Gladstone	85	8.48	Well drained	Farmland of statewide importance	5	0.24
Orman 4	Orman 4 3.0ac	GdC	Gladstone gravelly loam, 8 to 15 percent slopes	Gladstone	85	2.73	Well drained	Farmland of statewide importance	5	0.24
Orman 5	Orman 5 2.0ac	CaB	Califon loam, 3 to 8 percent slopes	Califon	82	0.1	Moderately well drained	All areas are prime farmland	4	0.32
Orman 5	Orman 5 2.0ac	GdC	Gladstone gravelly loam, 8 to 15 percent slopes	Gladstone	85	1.94	Well drained	Farmland of statewide importance	5	0.24
P1	P1 2.0ac	CmA	Clarksburg silt loam, 0 to 3 percent slopes	Clarksburg	95	0.51	Moderately well drained	All areas are prime farmland	4	0.37
P1	P1 2.0ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	1.72	Well drained	All areas are prime farmland	5	0.32
P2	P2 10.0ac	CmA	Clarksburg silt loam, 0 to 3 percent slopes	Clarksburg	95	7.37	Moderately well drained	All areas are prime farmland	4	0.37
P2	P2 10.0ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	4.17	Well drained	All areas are prime farmland	5	0.32
P3	P3 6.0ac	CmA	Clarksburg silt loam, 0 to 3 percent slopes	Clarksburg	95	3.11	Moderately well drained	All areas are prime farmland	4	0.37
P3	P3 6.0ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	3.72	Well drained	All areas are prime farmland	5	0.32
P4	P4 6.0ac	CmA	Clarksburg silt loam, 0 to 3 percent slopes	Clarksburg	95	0.74	Moderately well drained	All areas are prime farmland	4	0.37
P4	P4 6.0ac	DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	8.52	Well drained	All areas are prime farmland	5	0.32
S1	S1 12.0ac	GdB	Gladstone gravelly loam, 3 to 8 percent slopes	Gladstone	85	11.72	Well drained	All areas are prime farmland	5	0.28
S1	S1 12.0ac	GdC	Gladstone gravelly loam, 8 to 15 percent slopes	Gladstone	85	0.02	Well drained	Farmland of statewide importance	5	0.24

Field	Label	Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
S2-S4	S2-S4 24.0ac	CaA	Califon loam, 0 to 3 percent slopes	Califon	90	0.11	Moderately well drained	All areas are prime farmland	4	0.32
S2-S4	S2-S4 24.0ac	CpA	Cokesbury silt loam, 0 to 3 percent slopes	Cokesbury	85	0.81	Poorly drained	Not prime farmland	4	0.37
S2-S4	S2-S4 24.0ac	GdB	Gladstone gravelly loam, 3 to 8 percent slopes	Gladstone	85	22.44	Well drained	All areas are prime farmland	5	0.28
S5	S5 4.5ac	EdB	Edgemont channery loam, 3 to 8 percent slopes	Edgemont	93	0.96	Well drained	All areas are prime farmland	5	0.28
S5	S5 4.5ac	EdC	Edgemont channery loam, 8 to 15 percent slopes	Edgemont	93	3	Well drained	Farmland of statewide importance	5	0.28
S5	S5 4.5ac	EdD	Edgemont channery loam, 15 to 25 percent slopes	Edgemont	93	1.16	Well drained	Not prime farmland	5	0.28
S6	S6 4.0ac	EdB	Edgemont channery loam, 3 to 8 percent slopes	Edgemont	93	4.27	Well drained	All areas are prime farmland	5	0.28
S7	S7 9.5ac	EdB	Edgemont channery loam, 3 to 8 percent slopes	Edgemont	93	9.46	Well drained	All areas are prime farmland	5	0.28

Soil Acreages For Farm

Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
BpB	Brecknock channery silt loam, 3 to 8 percent slopes	Brecknock	93	18.24	Well drained	All areas are prime farmland	3	0.37
BpC	Brecknock channery silt loam, 8 to 15 percent slopes	Brecknock	91	0.13	Well drained	Farmland of statewide importance	3	0.37
BpD	Brecknock channery silt loam, 15 to 25 percent slopes	Brecknock	97	14.13	Well drained	Not prime farmland	3	0.37
CmA	Clarksburg silt loam, 0 to 3 percent slopes	Clarksburg	95	21.46	Moderately well drained	All areas are prime farmland	4	0.37

Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
DbB	Duffield silt loam, 3 to 8 percent slopes	Duffield	90	99.17	Well drained	All areas are prime farmland	5	0.32
MuB	Murrill gravelly loam, 3 to 8 percent slopes	Murrill	90	34.65	Well drained	All areas are prime farmland	5	0.28
EdB	Edgemont channery loam, 3 to 8 percent slopes	Edgemont	93	29.75	Well drained	All areas are prime farmland	5	0.28
EdC	Edgemont channery loam, 8 to 15 percent slopes	Edgemont	93	10.86	Well drained	Farmland of statewide importance	5	0.28
DfC	Duffield-Ryder silt loams, 8 to 15 percent slopes	Ryder	30	0.23	Well drained	Farmland of statewide importance	2	0.37
DfC	Duffield-Ryder silt loams, 8 to 15 percent slopes	Duffield	60	0.47	Well drained	Farmland of statewide importance	5	0.32
GdB	Gladstone gravelly loam, 3 to 8 percent slopes	Gladstone	85	38.49	Well drained	All areas are prime farmland	5	0.28
GdC	Gladstone gravelly loam, 8 to 15 percent slopes	Gladstone	85	14.35	Well drained	Farmland of statewide importance	5	0.24
CaA	Califon loam, 0 to 3 percent slopes	Califon	90	2.47	Moderately well drained	All areas are prime farmland	4	0.32
CpA	Cokesbury silt loam, 0 to 3 percent slopes	Cokesbury	85	0.97	Poorly drained	Not prime farmland	4	0.37
EdD	Edgemont channery loam, 15 to 25 percent slopes	Edgemont	93	1.16	Well drained	Not prime farmland	5	0.28
CaB	Califon loam, 3 to 8 percent slopes	Califon	82	0.1	Moderately well drained	All areas are prime farmland	4	0.32
JnB	Joanna loam, 3 to 8 percent slopes	Joanna	90	10.64	Well drained	All areas are prime farmland	5	0.28

Musym	Muname	Comp	%	Acres	Drainage Class	Farmland Class	Tfact	Kfact
JnC	Joanna loam, 8 to 15 percent slopes	Joanna	90	0.2	Well drained	Farmland of statewide importance	5	0.28
ExB	Edgemont channery sandy loam, 0 to 8 percent slopes, extremely stony	Edgemont	90	0.18	Well drained	Not prime farmland	5	0.15
PeB	Penn silt loam, 3 to 8 percent slopes	Penn	85	19.26	Well drained	All areas are prime farmland	2	0.37
PeC	Penn silt loam, 8 to 15 percent slopes	Penn	85	12.46	Well drained	Farmland of statewide importance	2	0.37

Appendix 10
Supporting Information & Documentation

Includes if applicable the Rainfall Additions Worksheet, Winter Application Matrix, Residual N Calculation Worksheet and other supplemental worksheets included in the NMP Spreadsheet. Attach information and documentation necessary to support plan content not included elsewhere in the NMP Spreadsheet or appendices. Examples include, but are not limited to, documentation of animal weights if Agronomy Facts 54 is not used, bedding calculations, or calculations for irrigation rates.

Manure Analysis 5 Year Running Average

Manure Average for Crop Years. 2023	Robot Barn Lagoon (Fall)					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**May 17 2022**	May 17 2022				
Laboratory Name	**Waypoint**	Waypoint				
Manure Type	**Dairy**	Dairy				
Manure Unit (lbs/ton or 1000 gal)	**lb/1000 gal**	lb/1000 gal				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**28.70**	28.70				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	**13.60**	13.60				
Total Organic N (lbs/ton or 1000 gal)	**15.10**	15.10				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**8.80**	8.80				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**19.20**	19.20				
Percent Solids	**5.50**	5.50				
PSC Value (Enter analytical or book value)	**0.80**	0.80				

Manure Average for Crop Years. 2023	Robot Barn Lagoon (Spring)					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**May 17 2022**	May 17 2022				
Laboratory Name	**Waypoint**	Waypoint				
Manure Type	**Dairy**	Dairy				
Manure Unit (lbs/ton or 1000 gal)	**lb/1000 gal**	lb/1000 gal				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**28.70**	28.70				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	**13.60**	13.60				
Total Organic N (lbs/ton or 1000 gal)	**15.10**	**15.10**				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**8.80**	8.80				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**19.20**	19.20				
Percent Solids	**5.50**	5.50				
PSC Value (Enter analytical or book value)	**0.80**	0.80				

Manure Analysis 5 Year Running Average

Manure Average for Crop Years. 2023	Tiestall Pit (Fall)					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**May 17 2022**	May 17 2022				
Laboratory Name	**Waypoint**	Waypoint				
Manure Type	**Dairy**	Dairy				
Manure Unit (lbs/ton or 1000 gal)	**lb/1000 gal**	lb/1000 gal				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**22.90**	22.90				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	**12.80**	12.80				
Total Organic N (lbs/ton or 1000 gal)	**10.10**	**10.10**				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**8.60**	8.60				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**13.80**	13.80				
Percent Solids	**6.00**	6.00				
PSC Value (Enter analytical or book value)	**0.80**	0.80				

Manure Average for Crop Years. 2023	Tiestall Pit (Spring)					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**May 17 2023**	May 17 2023				
Laboratory Name	**Waypoint**	Waypoint				
Manure Type	**Dairy**	Dairy				
Manure Unit (lbs/ton or 1000 gal)	**lb/1000 gal**	lb/1000 gal				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**22.90**	22.90				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	**12.80**	12.80				
Total Organic N (lbs/ton or 1000 gal)	**10.10**	**10.10**				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**8.60**	8.60				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**13.80**	13.80				
Percent Solids	**6.00**	6.00				
PSC Value (Enter analytical or book value)	**0.80**	0.80				

Manure Analysis 5 Year Running Average

Manure Average for Crop Years. 2023	Heifer Pit (Fall)					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**May 17 2022**	May 17 2022				
Laboratory Name	**Waypoint**	Waypoint				
Manure Type	**Dairy**	Dairy				
Manure Unit (lbs/ton or 1000 gal)	**lb/1000 gal**	lb/1000 gal				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**24.00**	24.00				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	**11.10**	11.10				
Total Organic N (lbs/ton or 1000 gal)	**12.90**	**12.90**				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**10.40**	10.40				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**26.40**	26.40				
Percent Solids	**8.00**	8.00				
PSC Value (Enter analytical or book value)	**0.80**	0.80				

Manure Average for Crop Years. 2023	Heifer Pit (Spring)					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**May 17 2022**	May 17 2022				
Laboratory Name	**Waypoint**	Waypoint				
Manure Type	**Dairy**	Dairy				
Manure Unit (lbs/ton or 1000 gal)	**lb/1000 gal**	lb/1000 gal				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**24.00**	24.00				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	**11.10**	11.10				
Total Organic N (lbs/ton or 1000 gal)	**12.90**	**12.90**				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**10.40**	10.40				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**26.40**	26.40				
Percent Solids	**8.00**	8.00				
PSC Value (Enter analytical or book value)	**0.80**	0.80				

Manure Analysis 5 Year Running Average

Manure Average for Crop Years. 2023	Pen Pack					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**Jul 05 2022**	Jul 05 2022				
Laboratory Name	**Waypoint**	Waypoint				
Manure Type	**Dairy**	Dairy				
Manure Unit (lbs/ton or 1000 gal)	**lb/ton**	lb/ton				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**12.40**	12.40				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	**2.60**	2.60				
Total Organic N (lbs/ton or 1000 gal)	**9.80**	**9.80**				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**2.90**	2.90				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**3.14**	3.14				
Percent Solids	**37.40**	37.40				
PSC Value (Enter analytical or book value)	**0.80**	0.80				

Manure Average for Crop Years. 2023	Field P1 - Grazing Calculator					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**Uncollected Book**	Uncollected Book				
Laboratory Name	**PSU Agronomy Guide**	PSU Agronomy Guide				
Manure Type	**Other**	Other				
Manure Unit (lbs/ton or 1000 gal)	**lb/ton**	lb/ton				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**9.00**	9.00				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)						
Total Organic N (lbs/ton or 1000 gal)	**9.00**	**9.00**				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**3.00**	3.00				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**7.00**	7.00				
Percent Solids						
PSC Value (Enter analytical or book value)	**0.80**	0.80				

Manure Analysis 5 Year Running Average

Manure Average for Crop Years. 2023	Field P2 - Grazing Calculator					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**Uncollected Book**	Uncollected Book				
Laboratory Name	**PSU Agronomy Guide**	PSU Agronomy Guide				
Manure Type	**Other**	Other				
Manure Unit (lbs/ton or 1000 gal)	**lb/ton**	lb/ton				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**9.00**	9.00				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)						
Total Organic N (lbs/ton or 1000 gal)	**9.00**	**9.00**				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**3.00**	3.00				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**7.00**	7.00				
Percent Solids						
PSC Value (Enter analytical or book value)	**0.80**	0.80				

Manure Average for Crop Years. 2023	Field P3 - Grazing Calculator					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**Uncollected Book**	Uncollected Book				
Laboratory Name	**PSU Agronomy Guide**	PSU Agronomy Guide				
Manure Type	**Other**	Other				
Manure Unit (lbs/ton or 1000 gal)	**lb/ton**	lb/ton				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**10.00**	10.00				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)						
Total Organic N (lbs/ton or 1000 gal)	**10.00**	10.00				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**3.00**	3.00				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**7.00**	7.00				
Percent Solids						
PSC Value (Enter analytical or book value)	**0.80**	0.80				

Manure Analysis 5 Year Running Average

Manure Average for Crop Years. 2023	Field P4 - Grazing Calculator					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**Uncollected Book**	Uncollected Book				
Laboratory Name	**PSU Agronomy Guide**	PSU Agronomy Guide				
Manure Type	**Other**	Other				
Manure Unit (lbs/ton or 1000 gal)	**lb/ton**	lb/ton				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**10.00**	10.00				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)						
Total Organic N (lbs/ton or 1000 gal)	**10.00**	**10.00**				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**3.00**	3.00				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**7.00**	7.00				
Percent Solids						
PSC Value (Enter analytical or book value)	**0.80**	0.80				

Growing Animal Weight Calculator

Animal Type	Beginning Age		Ending Age		Calculated average weight based on production age range	
Dairy: Holstein/ Brown Swiss-Calf/Heifer 0-24 mo	0	Months	2	Months	145.00	lbs.
Dairy: Holstein/ Brown Swiss-Calf/Heifer 0-24 mo	3	Months	5	Months	310.00	lbs.
Dairy: Holstein/ Brown Swiss-Calf/Heifer 0-24 mo	6	Months	12	Months	585.00	lbs.
Dairy: Holstein/ Brown Swiss-Calf/Heifer 0-24 mo	13	Months	22	Months	979.00	lbs.
Dairy: Holstein/ Brown Swiss-Calf/Heifer 0-24 mo	23	Months	24	Months	1229.00	lbs.

Calculator to determine manure nutrients deposited by grazing animals

	Field or CMU ID	Acres	Field and Grazing Group Name	Animal Group	Animal Number	Days on Pasture	Grazing Season Information: Begin Month	Grazing Season Information: End Month	Grazing Season Information: Hours / Day on Pasture	Total Uncollected Manure deposited on the field Tons	Planned Manure Rate: Uncollected Manure Tons/A	Weighted Average Manure Nutrients (lb/ton): N	Weighted Average Manure Nutrients (lb/ton): P_2O_5	Weighted Average Manure Nutrients (lb/ton): K_2O	Grazing Note
1	**P1**	**2.0**	**Field P1 - Grazing Calculator**	Dry Cows (Fall) - Uncollected	18	35	Jun.	Oct.	12	**11.65**	**5.82**	**9**	**3**	**7**	The grazing group includes the following animals on pasture: 18 dry cows from the Dry Cows (Fall) animal group,12 hours per day for 35 days,from Jun. to Oct.

Calculator to determine manure nutrients deposited by grazing animals

						Grazing Season Information			Total Uncollected Manure deposited on the field Tons	Planned Manure Rate	Weighted Average Manure Nutrients (lb/ton)			
	Field or CMU ID	Acres	Field and Grazing Group Name	Animal Group	Animal Number	Days on Pasture	**Begin Month**	**End Month**	**Hours / Day on Pasture**		Uncollected Manure Tons/A	**N**	**P_2O_5**	**K_2O**	Grazing Note
2	**P2**	**10.0**	**Field P2 - Grazing Calculator**	Dry Cows (Fall) - Uncollected	18	115	Jun.	Oct.	12	**58.24**	**5.82**	**9**	**3**	**7**	Grazing group includes the following animals on pasture: 18 dry cows from the Dry Cows (Fall) animal group,12 hours per day for 115 days,from Jun. to Oct. 18 dry cows from the Dry Cows (Spring) animal group,12 hours per day for 60 days,from Apr. to May.
				Dry Cows (Spring) - Uncollected	18	60	Apr.	May.	12						

Calculator to determine manure nutrients deposited by grazing animals

	Field or CMU ID	Acres	Field and Grazing Group Name	Animal Group	Animal Number	Days on Pasture	Grazing Season Information: Begin Month	Grazing Season Information: End Month	Grazing Season Information: Hours / Day on Pasture	Total Uncollected Manure deposited on the field Tons	Planned Manure Rate: Uncollected Manure Tons/A	Weighted Average Manure Nutrients (lb/ton): N	Weighted Average Manure Nutrients (lb/ton): P_2O_5	Weighted Average Manure Nutrients (lb/ton): K_2O	Grazing Note
3	**P3**	**6.0**	**Field P3 - Grazing Calculator**	Heifers (Fall) - Uncollected	80	75	Apr.	Oct.	12	**123.35**	**20.56**	**10**	**3**	**7**	Grazing group includes the following animals on pasture: 80 dairy heifers from the Heifers (Fall) animal group,12 hours per day for 75 days,from Apr. to Oct. 80 dairy heifers from the Heifers (Spring) animal group,12 hours per day for 30 days,from Apr. to Oct.
				Heifers (Spring) - Uncollected	80	30	Apr.	Oct.	12						

Calculator to determine manure nutrients deposited by grazing animals

	Field or CMU ID	Acres	Field and Grazing Group Name	Animal Group	Animal Number	Days on Pasture	Grazing Season Information: Begin Month	Grazing Season Information: End Month	Grazing Season Information: Hours / Day on Pasture	Total Uncollected Manure deposited on the field Tons	Planned Manure Rate: Uncollected Manure Tons/A	Weighted Average Manure Nutrients (lb/ton): N	Weighted Average Manure Nutrients (lb/ton): P_2O_5	Weighted Average Manure Nutrients (lb/ton): K_2O	Grazing Note
4	**P4**	**6.0**	**Field P4 - Grazing Calculator**	Heifers (Fall) - Uncollected	80	75	Apr.	Oct.	12	**123.35**	**20.56**	**10**	**3**	**7**	Grazing group includes the following animals on pasture: 80 dairy heifers from the Heifers (Fall) animal group,12 hours per day for 75 days,from Apr. to Oct. 80 dairy heifers from the Heifers (Spring) animal group,12 hours per day for 30 days,from Apr. to Oct.
				Heifers (Spring) - Uncollected	80	30	Apr.	Oct.	12						

Summary of Total Uncollected Manure Deposited by Animal Groups

Information from Appendix 3			Animal Days		Uncollected manure allocated vs generated	
Animal Group	**Animal Number**	**Days on Pasture**	Total Animal Days on Pasture from Appendix 3 Values	Sum of Animal Days entered in the Grazing Calculator	Tons Uncollected manure **Allocated** in the Grazing Calculator	Tons Uncollected manure **Generated** in Appendix 3
Dry Cows (Fall) - Uncollected	18	150	2700	2700	49.92	49.92
Dry Cows (Spring) - Uncollected	18	60	1080	1080	19.97	19.97
Heifers (Fall) - Uncollected	80	150	12000	12000	176.22	176.22
Heifers (Spring) - Uncollected	80	60	4800	4800	70.49	70.49