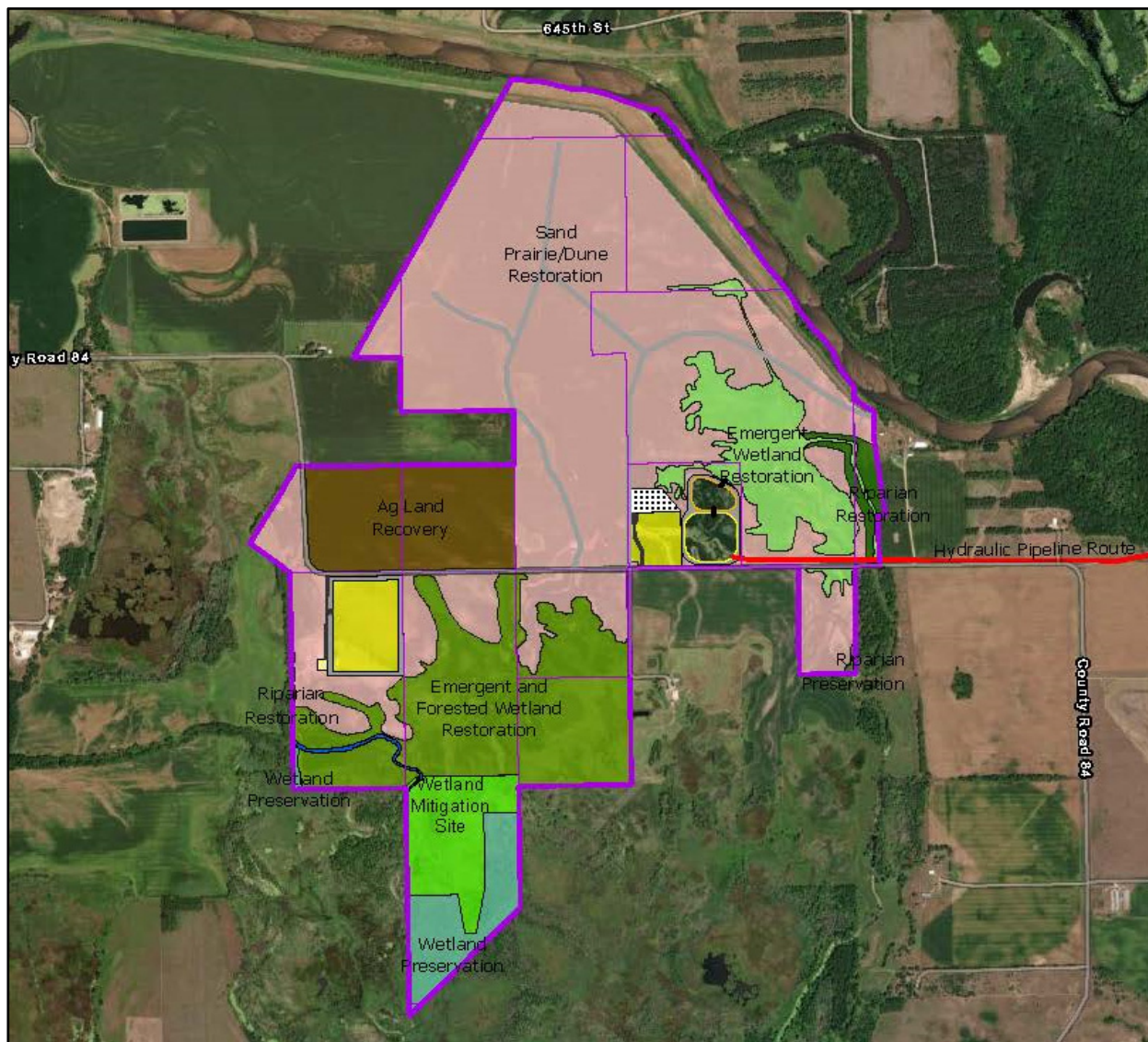


DRAFT LAND USE AND OPERATIONAL PLAN

ROLLING PRAIRIE PROPERTY DREDGED MATERIAL MANAGEMENT MIXED USE SITE

UPPER MISSISSIPPI RIVER POOL 5 DMMP
WABASHA COUNTY, MINNESOTA



**US Army Corps
of Engineers**
St. Paul District

**DRAFT PLAN
MAY 2023**

This page intentionally left blank

Contents

1	INTRODUCTION.....	1
1.1	Background	1
1.2	Rolling Prairie Project Area	1
1.3	Existing Land Use.....	3
1.4	Existing Easements	3
2	LAND USE PLAN	6
2.1	General Descriptions of Primary Land Use Categories	8
2.1.1	Sand Prairie Restoration Areas	8
2.1.2	Emergent and Forested Wetland Restoration Areas	8
2.1.3	Riparian Restoration Areas	8
2.1.4	Riparian Preservation Area	9
2.1.5	Wetland Preservation Areas.....	9
2.1.6	Wetland Mitigation Area	9
2.1.7	Gorman Creek Restoration Area	9
2.1.8	Ag Land Recovery/Beneficial Use Study Areas.....	10
2.1.9	Beneficial Use Area	10
2.1.10	Temporary Placement Area.....	11
2.1.11	Hydraulic Placement Area	11
2.2	Land Use Categories by Parcel	12
2.2.1	Parcel 1	12
2.2.2	Parcel 2	14
2.2.3	Parcel 3	16
2.2.4	Parcel 4 North Half	18
2.2.5	Parcel 4 South Half	19
2.2.6	Parcel 5	21
2.2.7	Parcel 6	23
2.2.8	Parcel 7	25
2.2.9	Parcel 8	27
2.2.10	Parcel 9	29
2.2.11	Parcel 10 North Half	31
2.2.12	Parcel 10 South Half	32
2.2.13	Parcel 11	34
2.2.14	Parcel 12	36
2.2.15	Parcel 14	38
2.2.16	Parcel 15	40
2.2.17	Parcel 16	42
3	PHASED APPROACH.....	1
3.1	Phase 1	2
3.1.1	Geographic Area	2
3.1.2	Proposed Use.....	2
3.1.3	Timing.....	2

3.1.4	Real Estate.....	2
3.1.5	Phase 1 Construction Plans	2
3.2	Phase 2	2
3.2.1	Geographic Area	2
3.2.2	Proposed Use.....	2
3.2.3	Timing.....	3
3.2.4	Real Estate.....	3
3.2.5	Phase 2 Construction Plans	3
3.3	Phase 3	3
3.3.1	Geographic Area	3
3.3.2	Proposed Use.....	3
3.3.3	Timing.....	3
3.3.4	Real Estate.....	3
3.3.5	Phase 3 Construction Plans	3
3.4	Phase 4	4
3.4.1	Geographic Area	4
3.4.2	Proposed Use.....	4
3.4.3	Timing.....	4
3.4.4	Real Estate.....	4
3.4.5	Phase 4 Construction Plans	4
3.5	Phase 5	4
3.5.1	Geographic Area	4
3.5.2	Proposed Use.....	4
3.5.3	Timing.....	4
3.5.4	Real Estate.....	5
3.5.5	Phase 5 Construction Plans	5

1 Introduction

1.1 Background

The mission of the U.S Army Corps of Engineers has been to operate and maintain the 9-foot Channel Navigation Project, which requires continuous removal of dredged material (river sand) from the bed of the main navigation channel to ensure sufficient depth for navigation of barges and other large commercial watercraft. Continuous removal of sand from the river requires sufficient capacity at designated locations to store excavated river sand either temporarily or permanently. Temporary sites are used until they reach capacity and are then typically offloaded to permanent placement sites. As permanent placement sites become filled, the identification and development of new placement sites is necessary. However, identifying and developing new permanent placement sites has become more and more difficult in recent years because suitable sites are either not for sale or are otherwise not feasible options due to cost, logistics, environmental impact concerns, or other reasons. Through the dredged material management planning process, the Corps developed an approach that included the purchase of a large 944-acre tract of land from willing sellers that could satisfy dredged material placement needs in Pool 5 for the next 100 years.

The final plan for the purchase of the large parcel, now called the Rolling Prairie Property, was completed in fiscal year 2020. This document outlines both Land Use Management and Operational Plans regarding how the Rolling Prairie Property will be managed and used over the next 100+ years. More specifically, Section 2 (Land Use Plan) outlines how the Rolling Prairie Property is expected to look at the end of construction and the cessation of placement activities, and Section 3 (Operational Plan) outlines the work that is planned to occur between now and the conclusion of construction and placement activities.

1.2 Rolling Prairie Project Area

The Rolling Prairie Property Project Area is located on the west side of the Mississippi River approximately 1 mile southeast of Kellogg, MN (Figure 1).

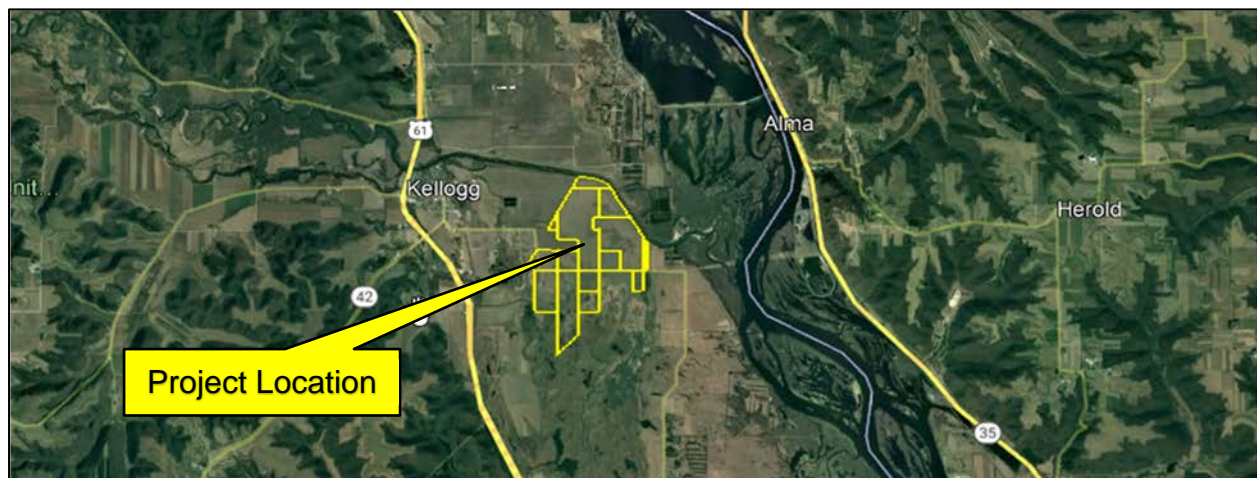


Figure 1 – Rolling Prairie Project Location

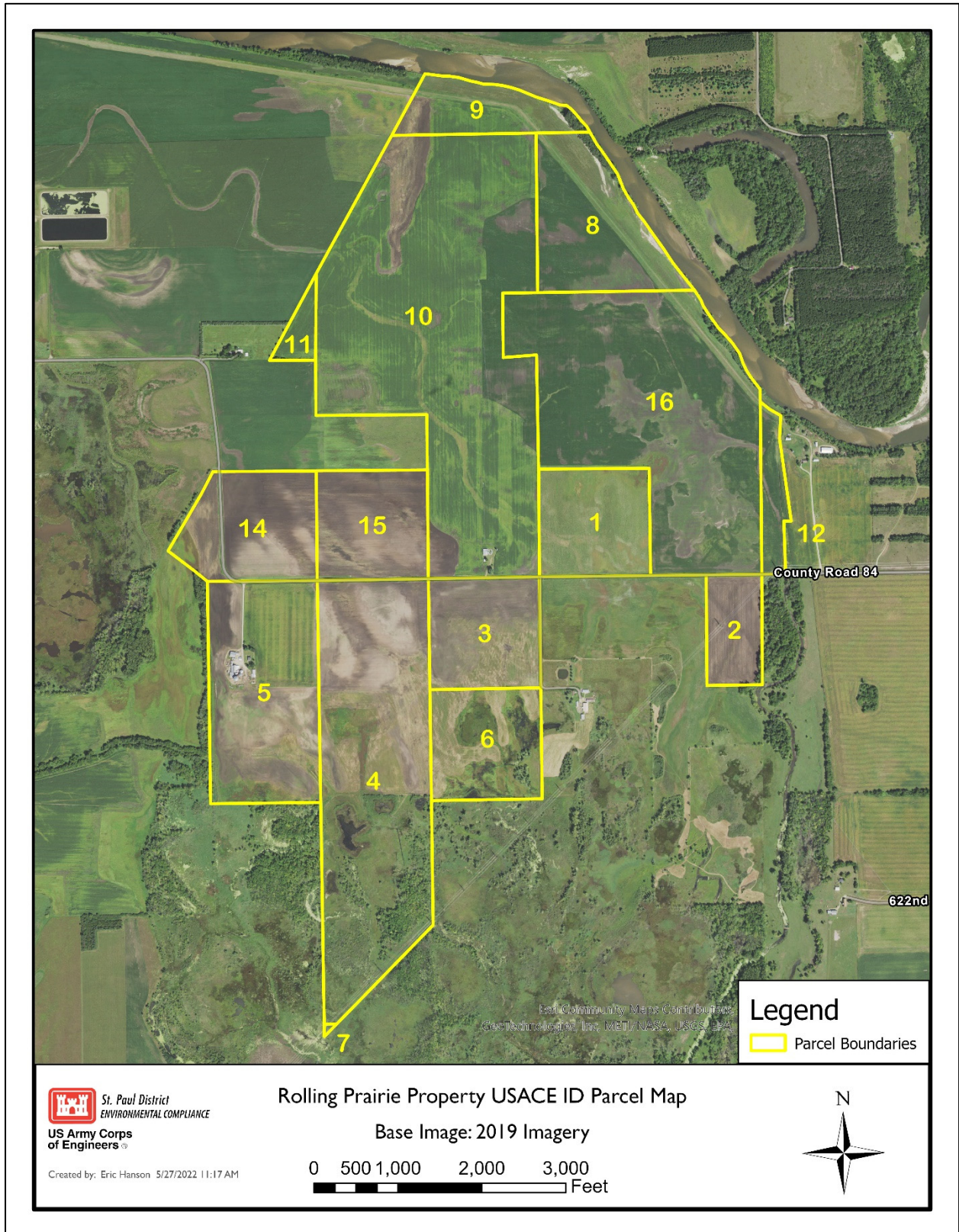


Figure 2 – Rolling Prairie Parcel Map

1.3 Existing Land Use

The majority of the Rolling Prairie Site is currently in agricultural production except for the southeasternmost part of parcel 3, the south half of parcel 4, the southernmost part of parcel 5, the south and east two-thirds of parcel 6, and all of parcel 7. These areas are typically too wet for successful agricultural production but are still classified as agricultural land use because they are plowed and planted on occasion during drier years. The only exceptions are the southern half of parcel 4 which now contains a wetland mitigation site under perpetual conservation easement in the north part of the south half (see Figure 11, Chapter 2), and the remaining lands in the south part of the south half of parcel 4, and all of parcel 7 because they are now cut-off from equipment access due to the wetland mitigation site boundary. The only other parts of the Rolling Prairie property with different land use are the primary farmstead and associated buildings in the northcentral-northwest part of parcel 5, the remnant farmstead buildings in the south part of parcel 10, and the agricultural levee in the far north and northeast parts of parcel 8, 9, 12, and 16 where the agricultural levee along the south bank of the Zumbro River now exists. Also of note is the presence of existing drain tile in the central and south portion of parcel 16 and a drain tile pumping station in the south part of parcel 16. These features are currently in operation for the purposes of draining much of the south part of parcel 16 and the northeast part of parcel 1 so that they may be plowed and planted annually. As a result of these drainage features, the natural wetland that existed previously in parcels 1 and 16 is now approximately 20% of its historic footprint.

1.4 Existing Easements

Existing easements on the Rolling Prairie property include easements for electric transmission lines, levee structure, roadway structure, and a conservation easement for a wetland mitigation site. Electric transmission line easements exist in the north and central part of parcel 2, the north and east part of parcel 3, the southeast part of parcel 4, and the south part of parcel 12. The levee structure easement is in the north and east parts of parcels 8, 9, 12 and 16. Wabasha County has an easement on the northwest end of the levee via a utility road that USACE staff use to gain access to the north part of the levee for inspection purposes (not illustrated). There is a roadway easement associated with county road 84 that runs through the west half of parcel 14, and along the southern boundary of parcels 15, 10, 1, 16, and 12, and along the northern boundary of parcels 5, 4, 3, and 2. The conservation easement for the wetland mitigation site is in the south part of parcel 4. See figures 3 and 4 below for more info.

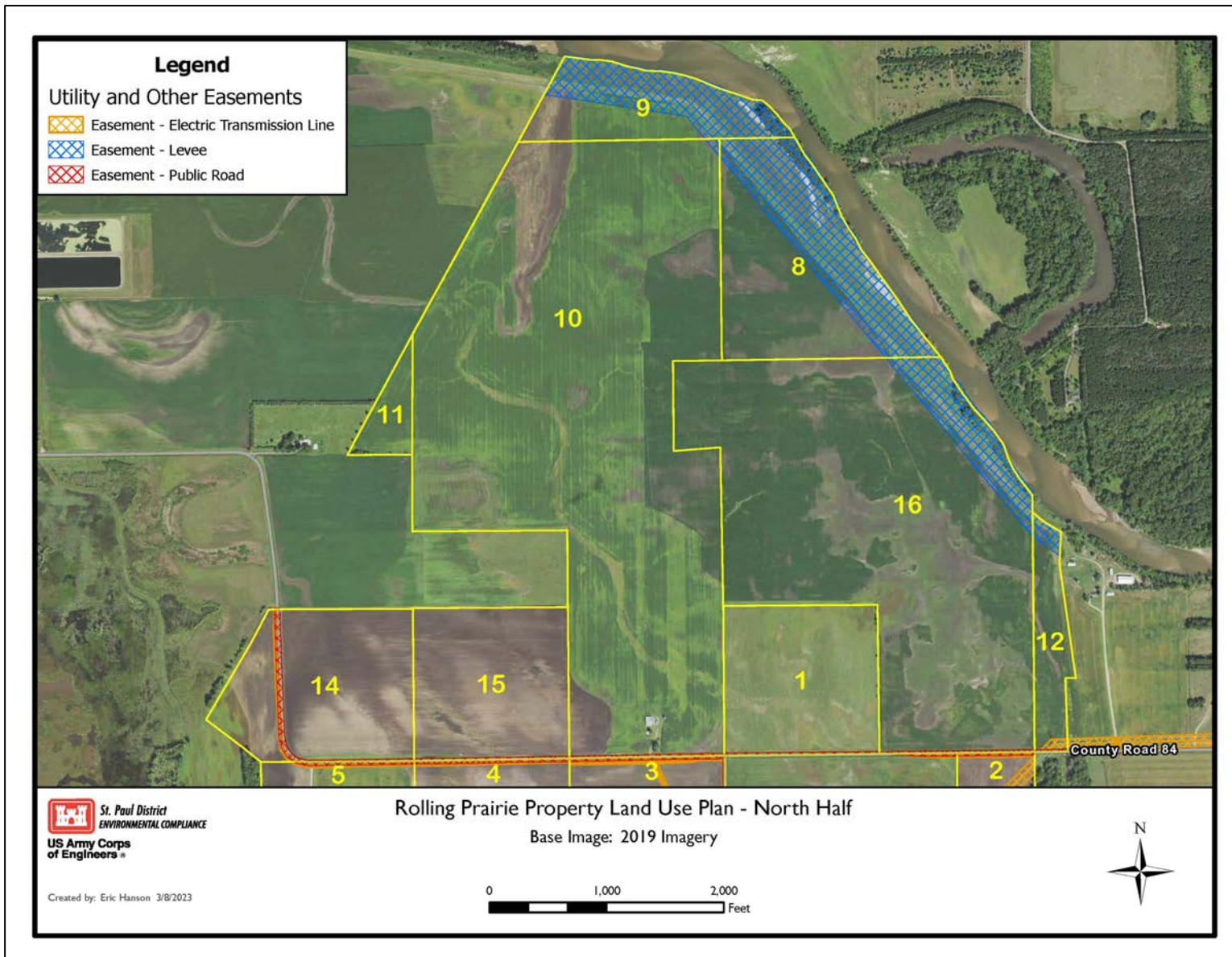


Figure 3 – Rolling Prairie Property Easements - North Half

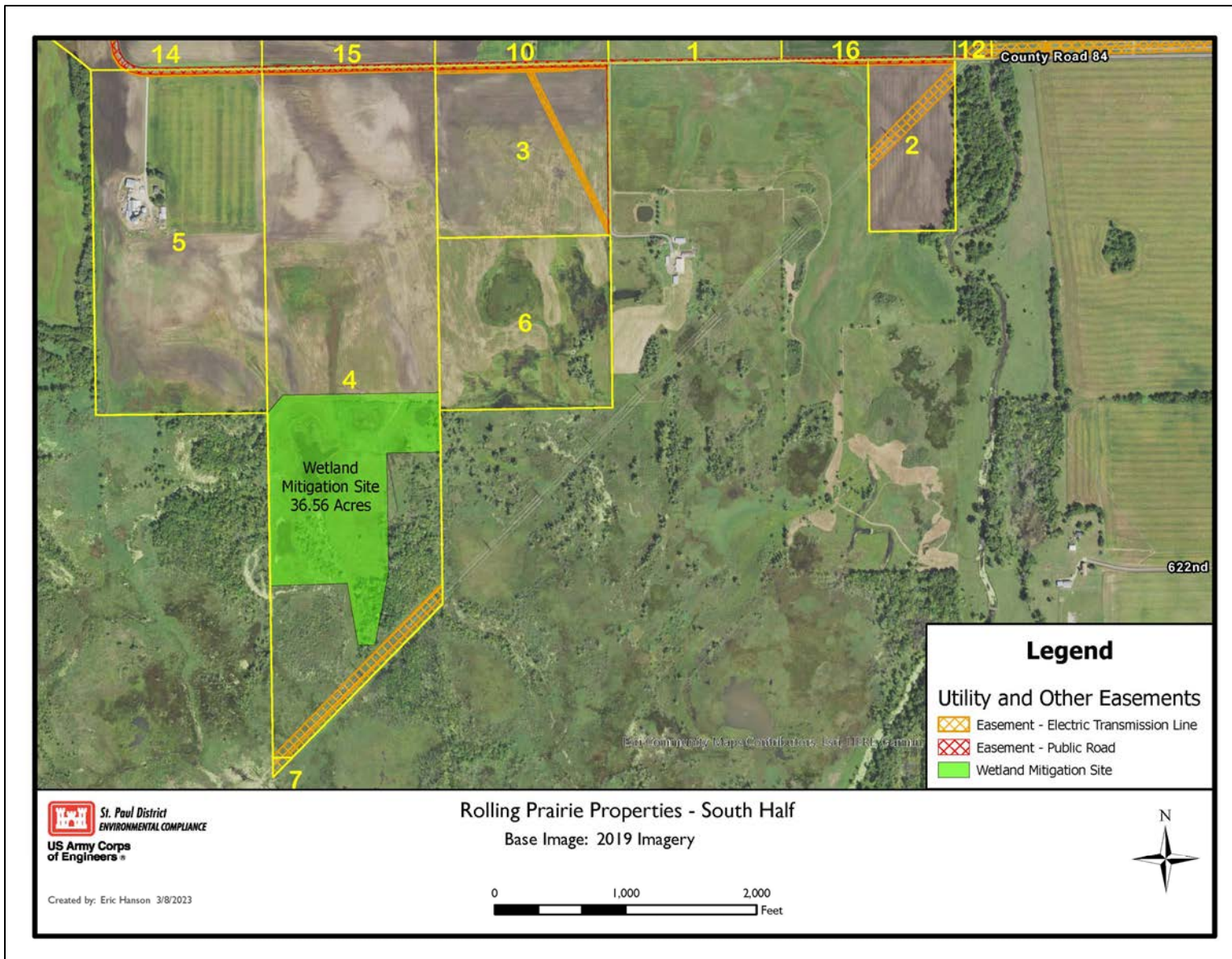


Figure 4 – Rolling Prairie Property Easements - South Half

2 Land Use Plan

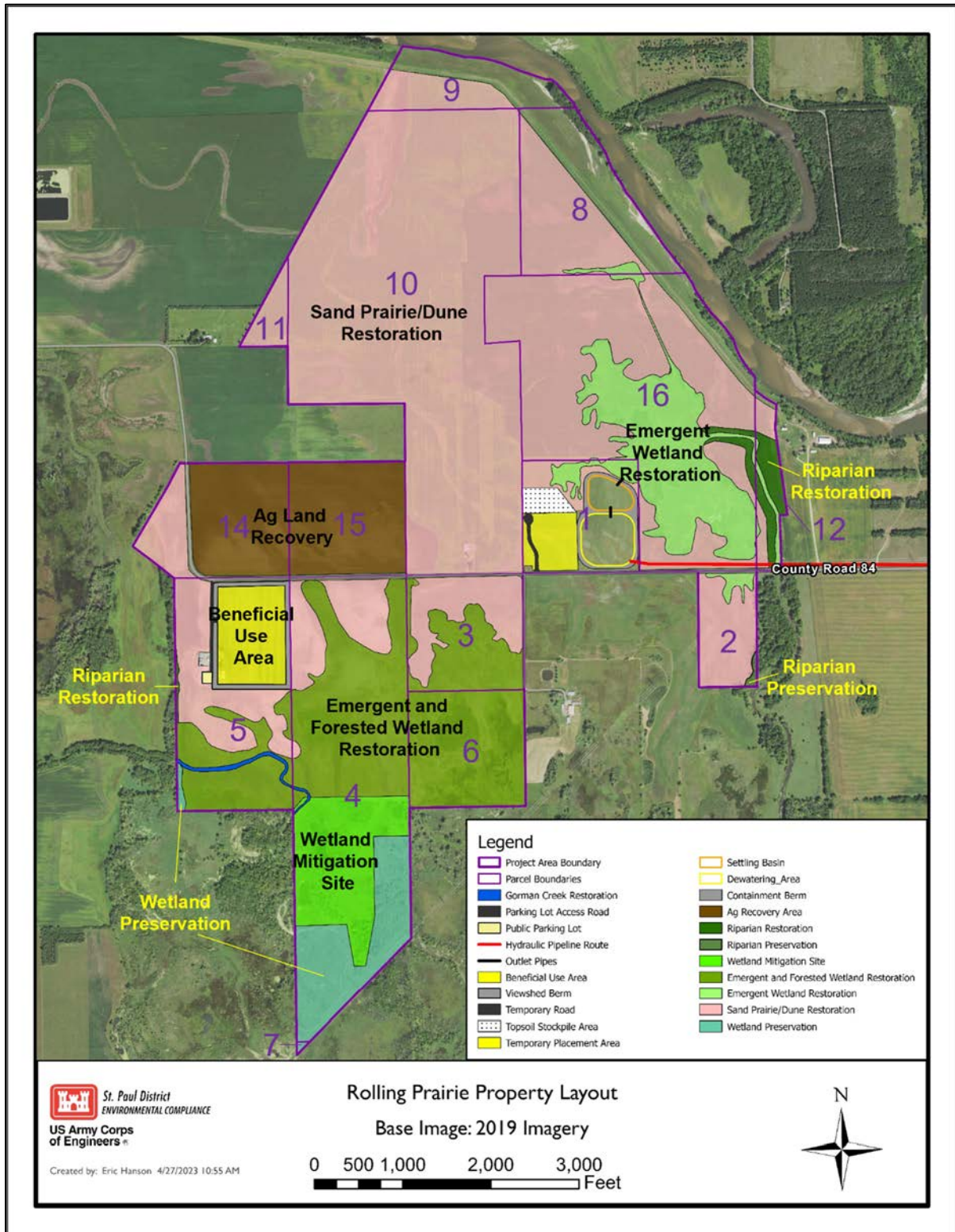


Figure 5 – Rolling Prairie Land Use Plan

Table 1 – Rolling Prairie Property Total Acreages and Capacities by Land Use

Rolling Prairie Site Totals		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	482.75	11,682,550
Ag Land Recovery*	70.78	1,712,876
Temporary Beneficial Use Area*	9.19	222,398
Temporary Stockpile Area*	3.31	80,102
Hydraulic Placement Dewatering Basin*	7.62	184,404
Hydraulic Placement Settling Basin*	3.70	89,540
Permanent Beneficial Use Area*	19.55	473,110
Containment/Viewshed Berm*	8.75	211,750
Emergent and Forested Wetland Restoration	203.71	0
Wetland Preservation	32.60	0
Riparian Restoration	9.51	0
Riparian Preservation	0.65	0
Wetland Mitigation Site	36.56	0
Parking Lot	0.34	0
Parking Lot Access Road	0.76	0
Road Ditch	9.82	0
Unprotected Side of Levee	44.58	0
Totals	944.18	14,656,730
*Will eventually become Sand Prairie Restoration after Ag Study and Hydraulic Operations cease.		

Wetlands		
Wetlands Delineated*	225.23	Acres
Wetlands Impacted**	12.95	Acres
Wetlands Kept**	212.28	Acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	214.21	Credits
Upland Buffer Credits (assumes 1:4 ratio)	54.57	Credits
Preservation Credits (assumes 1:8 ratio)	4.08	Credits
Total Potential Wetland Credits	272.86	
Stream Restoration (assumes 1:1 ratio)	2,150	Credits

2.1 General Descriptions of Primary Land Use Categories

2.1.1 Sand Prairie Restoration Areas

Sand Prairie/Dune Restoration Areas are planned to include parcels 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 14 and 16. Converting these areas progressively over time to Sand Prairie/Dune Areas allows the Corps to achieve its primary mission of maintaining the navigation channel by providing a long-term location to manage dredged material (aka river sand) while also supporting the concept of engineering with nature (EWN). Creating these areas would also support proposed wetland restoration efforts by providing a buffer between other Corps sand placement activities and proposed wetland restoration areas. It is anticipated that constructing these areas could generate up to 50 wetland credits if included as upland buffer in the wetland mitigation banking plan based on a typical 4:1 upland buffer crediting ratio. These credits could be used to offset other wetland impacts within the project area and potentially be carried forward to offset future wetland impacts associated with Corps projects in the region. Assuming an average placement height of 15 feet (with a range of 0-30 feet throughout), total capacity for these lands would be approximately 11.68 million cu yds. See Appendix A for more detailed information.

2.1.2 Emergent and Forested Wetland Restoration Areas

Wetland Restoration Areas identified in parcels 1, 2, 3, 4, 5, 6, 8, 12, and 16 were selected because those areas were historically wetland and have since been modified through agricultural practices by plowing and planting in drier years for lands south of CR 84, or by the installation of drain tile with pump station and plowing and planting on lands north of CR84. These areas were also selected because they are contiguous with other existing wetlands that comprise the larger McCarthy Lake wetland complex which is currently under ownership by the state of Minnesota and managed as a Wildlife Management Area by the MN Department of Natural Resources. Restoring these areas would support the McCarthy Lake wetland complex to the south and provide the Corps with adequate drainage avenues to control surface water flows away from other more valuable placement lands. It is anticipated that restoring these wetland areas would generate up to 204 wetland credits based upon a 1:1 crediting ratio if incorporated into a wetland mitigation banking plan. These credits could be used to offset other wetland impacts within the project area and potentially be carried forward to offset future wetland impacts associated with Corps projects in the region. See Appendix B for more detailed information.

2.1.3 Riparian Restoration Areas

Riparian restoration areas in parcels 5, 12 and 16 were selected to improve the habitat along existing tributaries that flow into McCarthy Lake. The addition of a riparian corridor in these areas would reduce erosion and nutrient inputs and support long-term preservation of the tributaries. Adding this habitat type in the project area will provide additional habitat not common in this area and improve overall flora and fauna diversity in the region. In addition, the riparian restoration area in parcel 12 was selected because it also would serve to provide a buffer between Corps sand placement activities and the private residence east of parcel 12. Restoring this riparian zone would also support habitat connectivity with the larger McCarthy Lake wetland area to the south along both tributaries. It is anticipated that restoring these riparian areas would

generate up to 9.51 forested wetland and/or riparian/stream mitigation credits based upon a 1:1 crediting ratio. These credits could be used to offset future riparian corridor impacts.

2.1.4 Riparian Preservation Area

A small 0.65-acre area in the SE corner of parcel 2 was selected for riparian preservation because it is currently forested and is contiguous with an existing riparian corridor along the unnamed tributary that flows south into McCarthy Lake. To use this area for sand placement, tree removal would be required, and wetland impacts would result. Consequently, this area is a better candidate for preservation.

2.1.5 Wetland Preservation Areas

The wetland preservation areas in parcels 4, 5 and 7 were selected because these areas are currently wetland, and they are located adjacent to other wetlands in the McCarthy Lake Wildlife Management Area (WMA) or are adjacent to planned wetland restoration areas. In addition, the wetland preservation areas in parcels 4 and 7 are located in between wetlands within the McCarthy Lake WMA and an existing Wetland Mitigation Site to the North, which makes this area extremely difficult to access for river sand placement operations. In addition, all three planned preservation areas are also south of planned emergent wetland restoration areas making them even more difficult to access. Consequently, preservation for these three areas is the most cost-effective and logistically feasible option. In addition, preserving the 32.60-acres (total) would avoid unnecessary wetland impacts and support habitat connectivity with the larger wetland complex within the McCarthy Lake Wildlife Management Area. It is anticipated that the Corps could generate up to 4.07 wetland credits based upon a 1:8 crediting ratio. These credits could be used to offset other farmed wetland impacts within the project area and potentially could be carried forward to offset future wetland impacts.

2.1.6 Wetland Mitigation Area

The wetland mitigation area identified in parcel 4 is currently protected by a perpetual conservation easement and cannot be used for any other purpose. The conservation easement was signed as part of a wetland mitigation agreement between Menards Inc. and the previous landowner to mitigate for wetland impacts associated with the construction of a new Menards store nearby. Due to the existing real estate restrictions in this area, the current plan is to leave it as it is.

2.1.7 Gorman Creek Restoration Area

The natural channel for Gorman Creek initially passed through the southern portion of parcel 5 and the southwest portion of parcel 4 (Figure 6). However, Gorman Creek was previously rerouted directly south along the western edge of parcel 5 in the hopes that the reroute would allow more frequent use of existing agricultural land east of the rerouted creek. Since this part of the property is wholly contained within one of the planned emergent and forested wetland restoration areas and the streambed landform still exists, restoring Gorman Creek to its previous channel would be relatively easy and is well supported by agency partners. Although a stream mitigation bank program is not yet fully developed in MN, development is currently underway and is expected to occur within the next 2-3 years. Therefore, restoring Gorman Creek could provide stream mitigation credits that could be used to offset future stream impacts in the region.

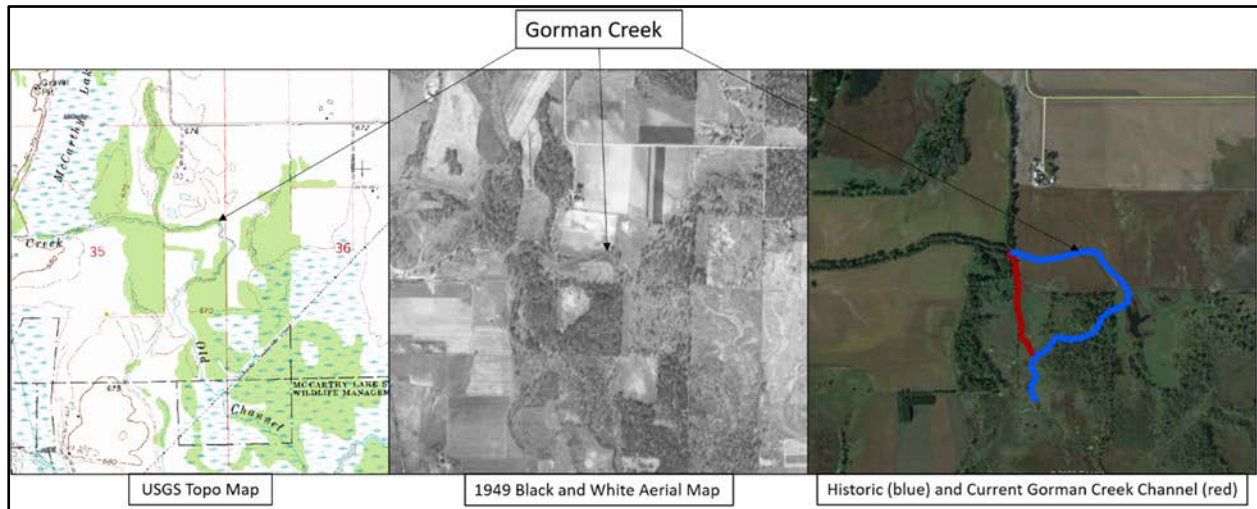


Figure 6 – Gorman Creek Restoration

2.1.8 Ag Land Recovery/Beneficial Use Study Areas

Parcels 14 and 15 were identified for use as test plots to study the potential for using dredged river sand as a soil amendment on agricultural lands to improve soil structure and function, and by extension - productivity. The proposed study would help to determine whether this alternative use of river sand would be a feasible solution to long-term placement needs. These two parcels were selected because of their soil type, depth of topsoil, and their proximity to County Road 84 to facilitate easier access to the site during the study. The proposed study will be a collaborative effort between St. Paul District, the Engineering Research Development Center (ERDC), and agricultural experts at the U of M. It is anticipated that this study could help to determine how and where the Corps places material in the future. If successful, this study model could be broadly applicable across many areas throughout the country but would especially support channel maintenance as it applies to dredged sand management activities in agricultural regions. After the study is completed, it is expected that these lands would revert to Sand Prairie/Dune Restoration areas and have capacity for approximately 1.7 million cu. yds. of material. This area may also be used to test other beneficial use applications as they are developed.

2.1.9 Beneficial Use Area

The Beneficial Use Area identified in parcel 5 was selected because of its proximity to an existing road and driveway which provides reasonable and easy access to the site. It was also selected because this area is 100% upland and is closest in proximity to potential users. Operationally, sand would be placed in the beneficial use area first, then sand would be placed in the Sand Prairie/Dune Restoration areas second if no room is available in the Beneficial Use Area. Assuming 3:1 sideslopes, the capacity of the Beneficial Use Area at 10 feet high would be 295,343 cu yds, at 15 feet high would be 428,469 cu yds, and at 20 feet high would be 552,340 cu yds providing maximum flexibility for placement operations over the next 10 or more decades. This area is expected to be one of the most enduring, potentially continuing as a beneficial use area for several years after all other permanent placement areas are filled.

2.1.10 Temporary Placement Area

The Temporary Placement Area shown in parcel 1 north of County Road 84 is earmarked for initial placement operations until the Permanent Beneficial Use Area and/or other Sand Prairie/Dune areas are developed and can receive river sand. This area was selected because parcel 1 is currently not under lease for agricultural production and is available immediately for the placement of river sand. This site can also accommodate temporary placement activities associated with hydraulic placement operations and is expected to be used more for hydraulic placement operations after the Permanent Beneficial Use Area and the Sand Prairie/Dune Restoration areas become more developed. It should be noted that temporary stockpile areas are likely to be available for beneficial use removal as each of the 15 parcel areas are developed throughout the entire Rolling Prairie property.

2.1.11 Hydraulic Placement Area

The Hydraulic Placement Area in parcel 1 is a combination of three land use features: the Dewatering Basin, the Settling Basin, and the Temporary Placement Area. These three areas would be used collectively during hydraulic placement operations to receive, dewater, and manage river sand that is hydraulically piped to the Rolling Prairie property. The establishment of this area is expected to facilitate larger river sand placement needs where the installation and use of hydraulic placement operations is more cost-effective.

2.2 Land Use Categories by Parcel

2.2.1 Parcel 1

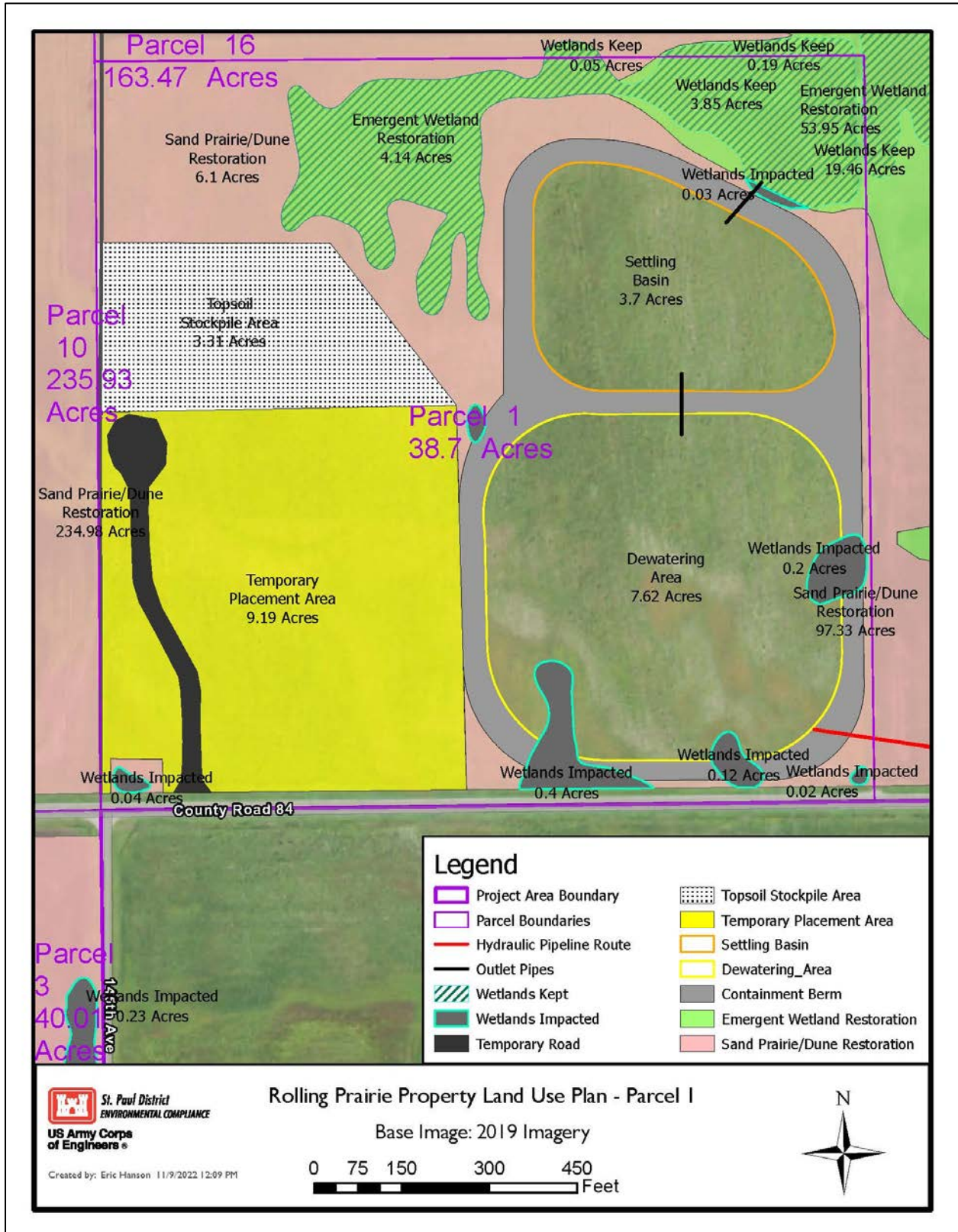


Figure 7 – Parcel 1 Map

Parcel 1		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	6.10	147,378
Ag Land Recovery	0.00	0
Temporary Beneficial Use Area	9.19	222,398
Temporary Stockpile Area	3.31	80,102
Hydraulic Placement Dewatering Basin	7.62	184,404
Hydraulic Placement Settling Basin	3.70	89,540
Permanent Beneficial Use Area	0.00	0
Containment/Viewshed Berm	3.80	91,960
Emergent Wetland Restoration	4.14	
Wetland Preservation	0.00	
Riparian Restoration	0.00	
Riparian Preservation	0.00	
Wetland Mitigation Site	0.00	
Parking Lot	0.00	
Parking Lot Access Road	0.00	
Road Ditch	0.85	
Unprotected Side of Levee	0.00	
Totals	38.70	815,782

Wetlands		
Wetlands Delineated*	4.72	acres
Wetlands Impacted**	0.84	acres
Wetlands Kept**	3.88	acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	4.14	Credits
Upland Buffer Credits (assumes 1:4 ratio)	1.04	Credits
Preservation Credits (assumes 1:8 ratio)	0.00	Credits
Total Wetland Credits	5.18	Credits
Stream Restoration (assumes 1:1 ratio)	0	Credits

2.2.2 Parcel 2

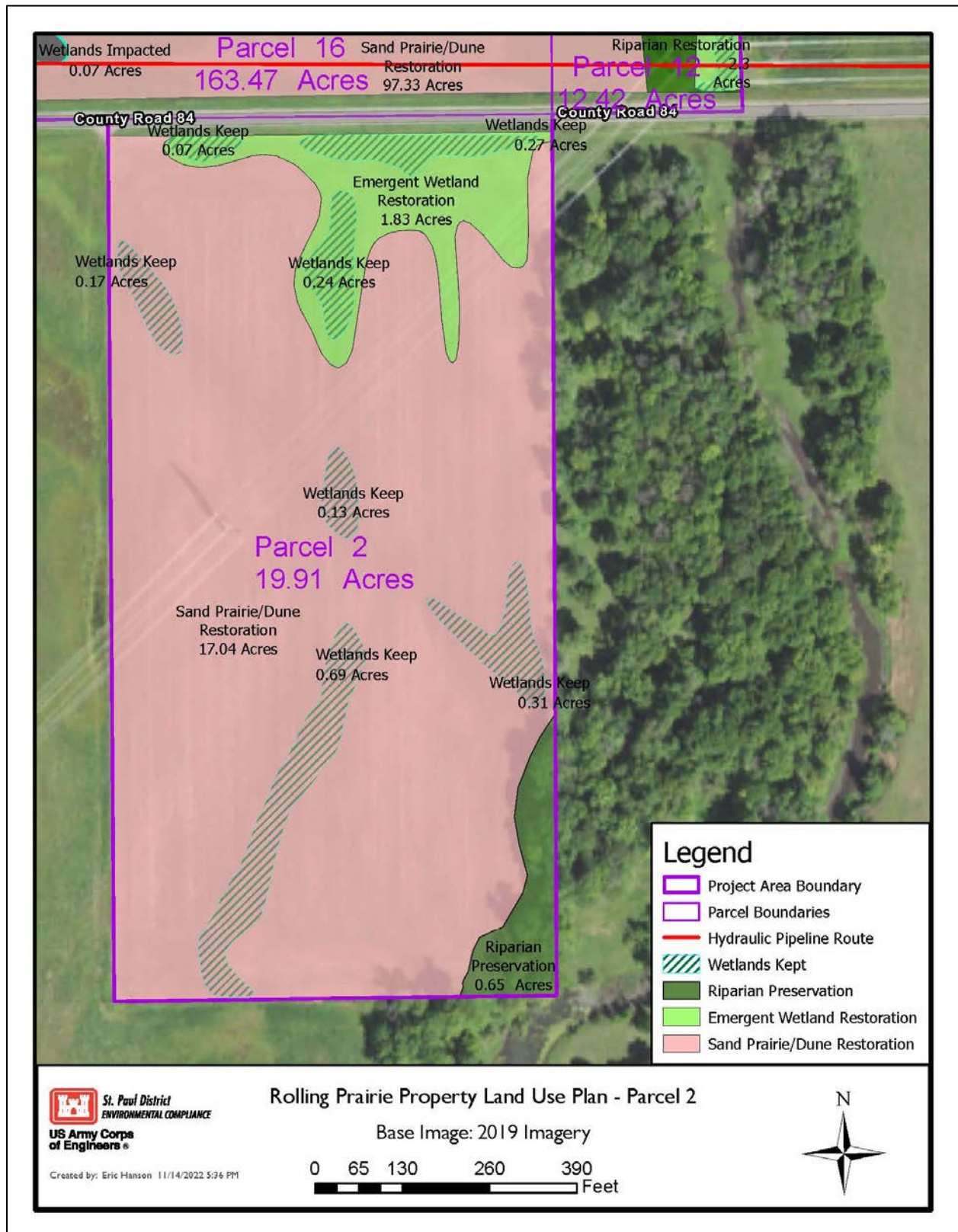


Figure 8 – Parcel 2 Map

Parcel 2		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	17.04	412,368
Ag Land Recovery	0.00	0
Temporary Beneficial Use Area	0.00	0
Temporary Stockpile Area	0.00	0
Hydraulic Placement Dewatering Basin	0.00	0
Hydraulic Placement Settling Basin	0.00	0
Permanent Beneficial Use Area	0.00	0
Containment/Viewshed Berm	0.00	0
Emergent Wetland Restoration	1.83	
Wetland Preservation	0.00	
Riparian Restoration	0.00	
Riparian Preservation	0.65	
Wetland Mitigation Site	0.00	
Parking Lot	0.00	
Parking Lot Access Road	0.00	
Road Ditch	0.39	
Unprotected Side of Levee	0.00	
Totals	19.91	412,368

Wetlands		
Wetlands Delineated*	1.88	Acres
Wetlands Impacted**	0.00	Acres
Wetlands Kept**	1.88	Acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	3.13	Credits
Upland Buffer Credits (assumes 1:4 ratio)	0.78	Credits
Preservation Credits (assumes 1:8 ratio)	0.00	Credits
Total Wetland Credits	3.91	Credits
Stream Restoration (assumes 1:1 ratio)	0	Credits

2.2.3 Parcel 3

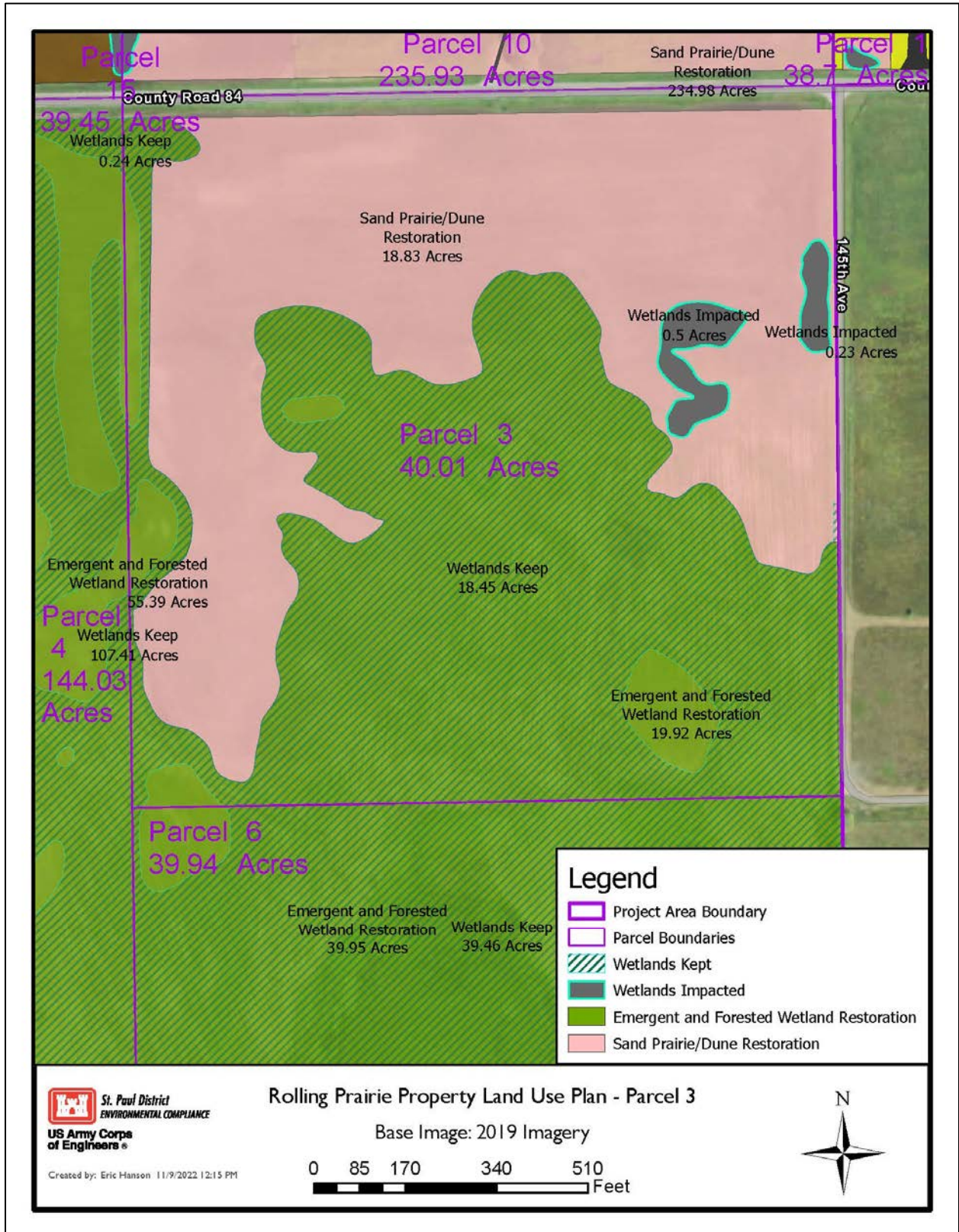


Figure 9 – Parcel 3 Map

Parcel 3		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	18.83	455,686
Ag Land Recovery	0.00	0
Temporary Beneficial Use Area	0.00	0
Temporary Stockpile Area	0.00	0
Hydraulic Placement Dewatering Basin	0.00	0
Hydraulic Placement Settling Basin	0.00	0
Permanent Beneficial Use Area	0.00	0
Containment/Viewshed Berm	0.00	0
Emergent and Forested Wetland Restoration	19.93	
Wetland Preservation	0.00	
Riparian Restoration	0.00	
Riparian Preservation	0.00	
Wetland Mitigation Site	0.00	
Parking Lot	0.00	
Parking Lot Access Road	0.00	
Road Ditch	1.25	
Unprotected Side of Levee	0.00	
Totals	40.01	455,686

Wetlands		
Wetlands Delineated*	19.20	Acres
Wetlands Impacted**	0.73	Acres
Wetlands Kept**	18.47	Acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	19.93	Credits
Upland Buffer Credits (assumes 1:4 ratio)	4.98	Credits
Preservation Credits (assumes 1:8 ratio)	0.00	Credits
Total Wetland Credits	24.91	Credits
Stream Restoration (assumes 1:1 ratio)	0	Credits

2.2.4 Parcel 4 North Half

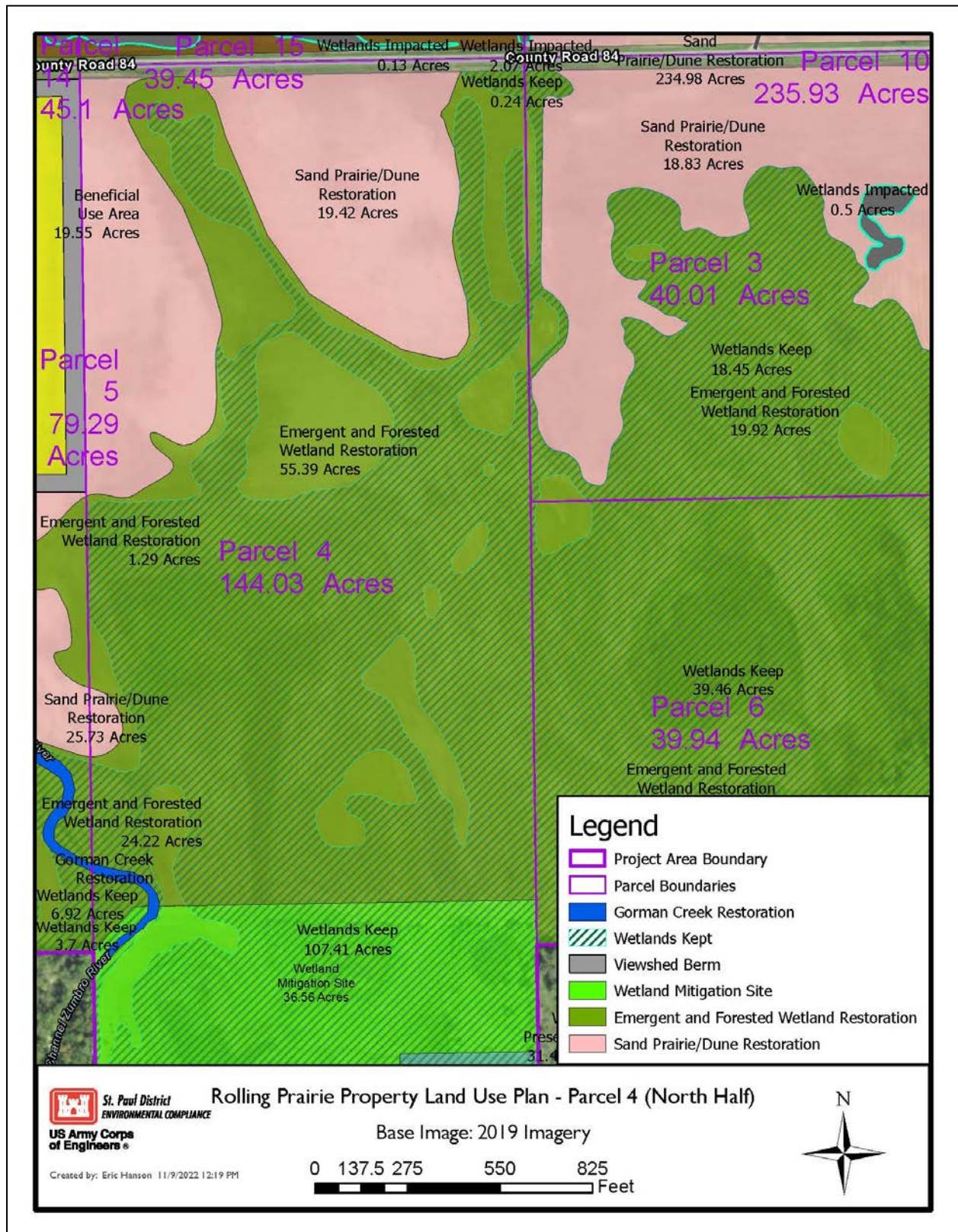


Figure 10 – Parcel 4 Map (North Half)

2.2.5 Parcel 4 South Half

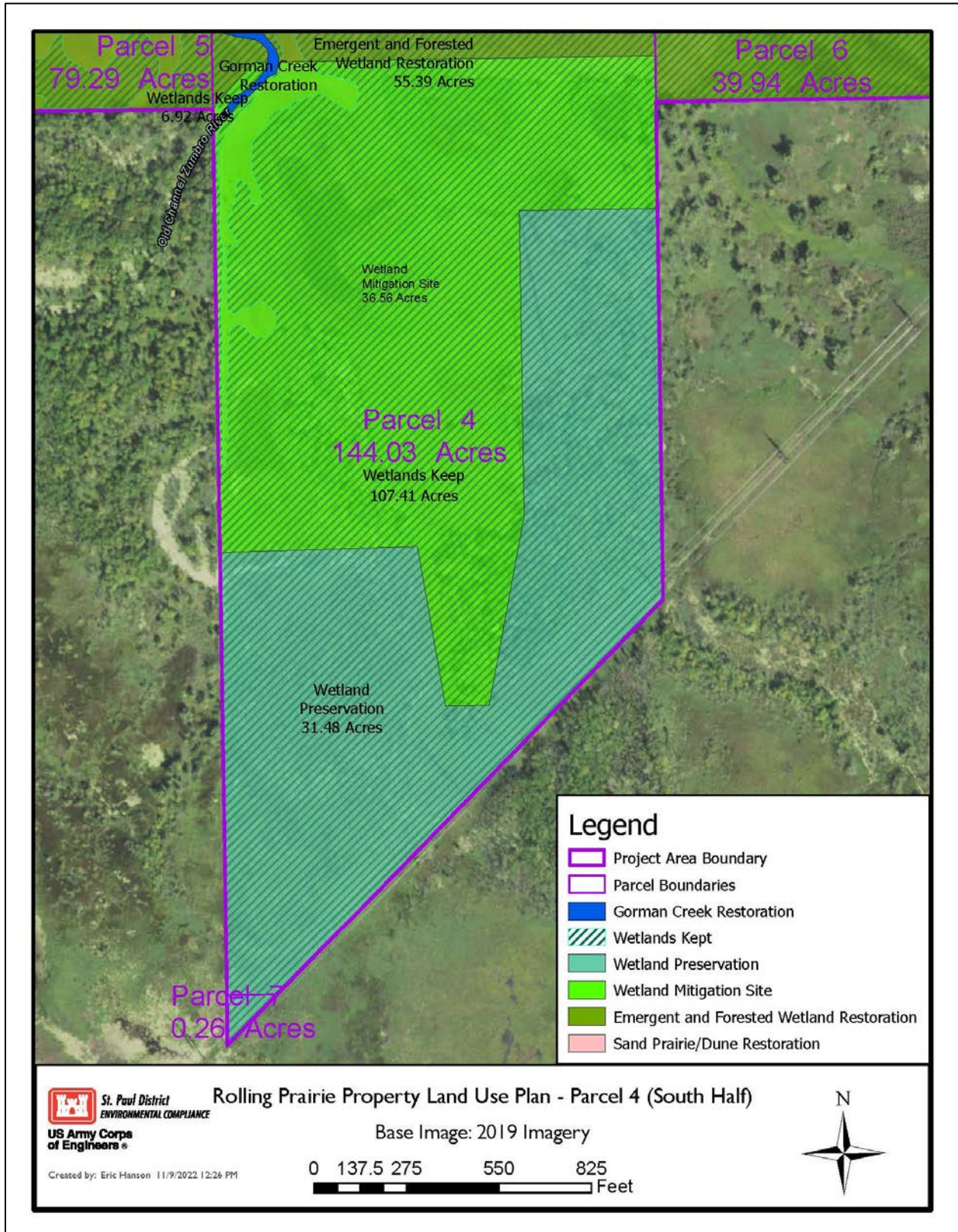


Figure 11 – Parcel 4 Map (South Half)

Parcel 4		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	19.42	469,964
Ag Land Recovery	0.00	0
Temporary Beneficial Use Area	0.00	0
Temporary Stockpile Area	0.00	0
Hydraulic Placement Dewatering Basin	0.00	0
Hydraulic Placement Settling Basin	0.00	0
Permanent Beneficial Use Area	0.00	0
Containment/Viewshed Berm	0.00	0
Emergent and Forested Wetland Restoration	55.39	
Wetland Preservation	31.48	
Riparian Restoration	0.00	
Riparian Preservation	0.00	
Wetland Mitigation Site	36.56	
Parking Lot	0.00	
Parking Lot Access Road	0.00	
Road Ditch	1.18	
Unprotected Side of Levee	0.00	
Totals	144.03	469,964

Wetlands		
Wetlands Delineated*	107.41	Acres
Wetlands Impacted**	0.00	Acres
Wetlands Kept**	107.65	Acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	55.39	Credits
Upland Buffer Credits (assumes 1:4 ratio)	14.83	Credits
Preservation Credits (assumes 1:8 ratio)	3.94	Credits
Total Wetland Credits	74.16	Credits
Stream Restoration (assumes 1:1 ratio)	492	Credits

2.2.6 Parcel 5

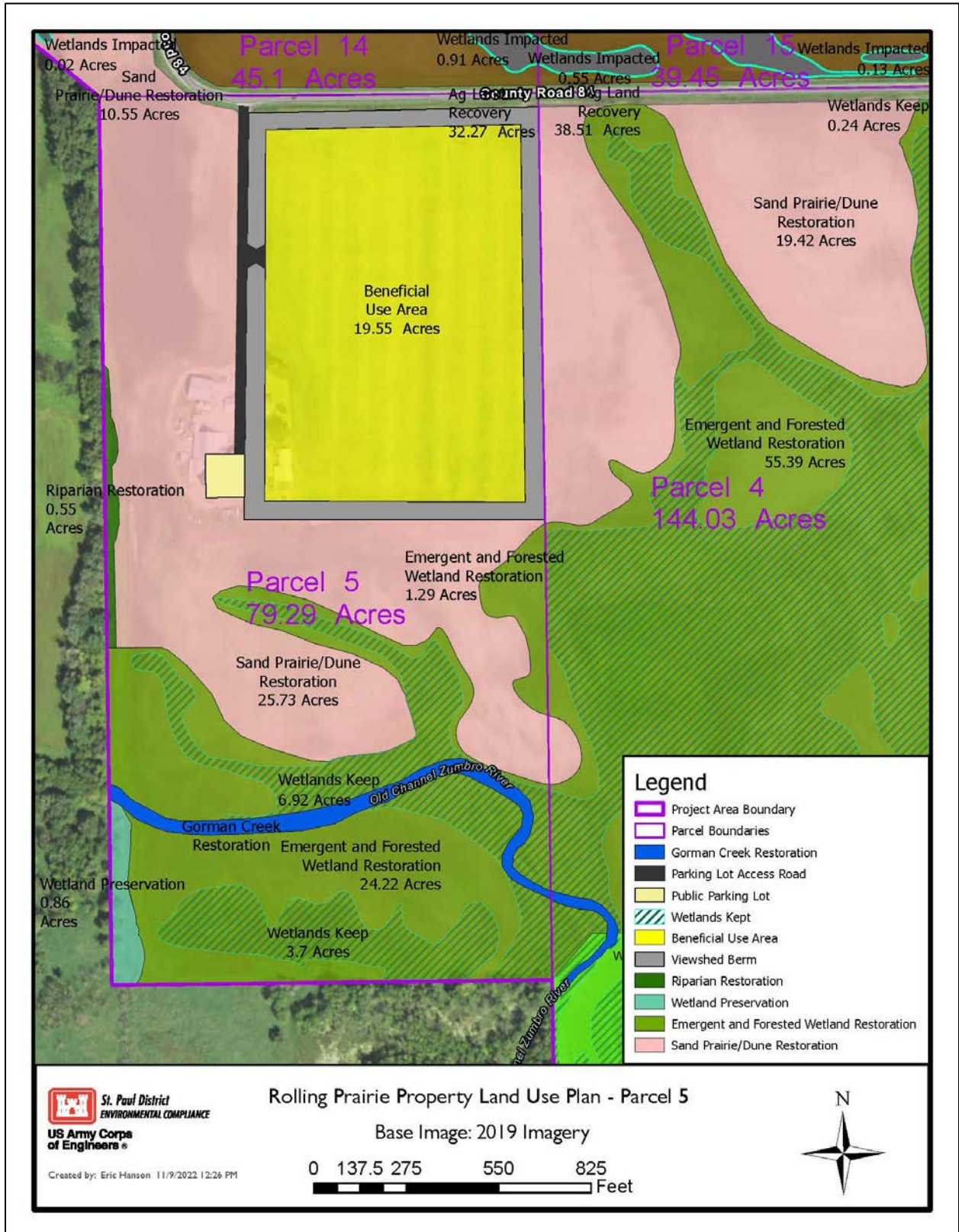


Figure 12 – Parcel 5 Map

Parcel 5		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	25.69	621,698
Ag Land Recovery	0.00	0
Temporary Beneficial Use Area	0.00	0
Temporary Stockpile Area	0.00	0
Hydraulic Placement Dewatering Basin	0.00	0
Hydraulic Placement Settling Basin	0.00	0
Permanent Beneficial Use Area	19.55	473,110
Containment/Viewshed Berm	4.95	119,790
Emergent and Forested Wetland Restoration	25.51	
Wetland Preservation	0.86	
Riparian Restoration	0.55	
Riparian Preservation	0.00	
Wetland Mitigation Site	0.00	
Parking Lot	0.34	
Parking Lot Access Road	0.76	
Road Ditch	1.08	
Unprotected Side of Levee	0.00	
Totals	79.29	1,214,598

Wetlands		
Wetlands Delineated*	9.99	Acres
Wetlands Impacted**	0.00	Acres
Wetlands Kept**	9.99	Acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	25.51	Credits
Upland Buffer Credits (assumes 1:4 ratio)	6.40	Credits
Preservation Credits (assumes 1:8 ratio)	0.11	Credits
Total Wetland Credits	32.02	Credits
Stream Restoration (assumes 1:1 ratio)	1,658	Credits

2.2.7 Parcel 6

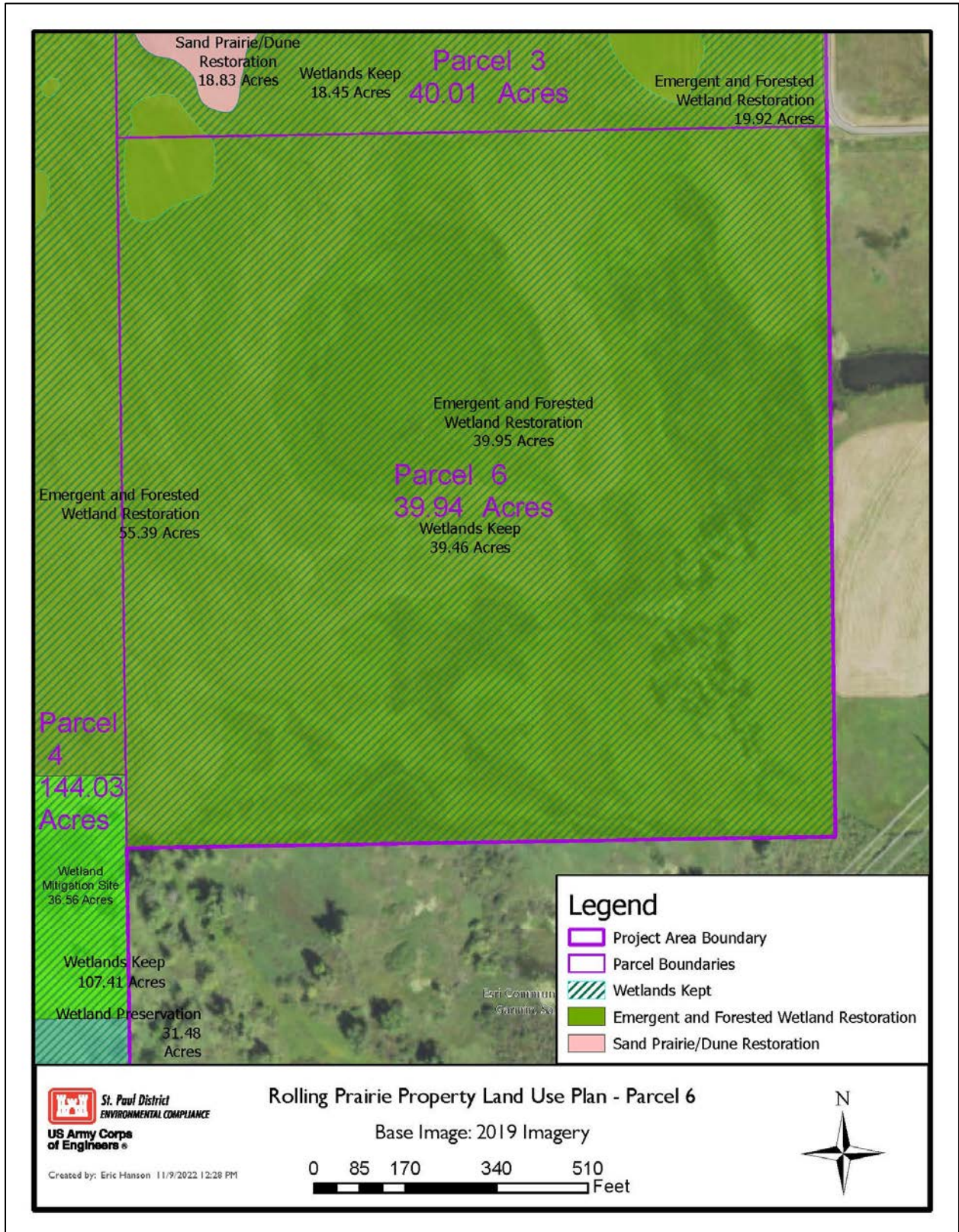


Figure 13 – Parcel 6 Map

Parcel 6		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	0.00	0
Ag Land Recovery	0.00	0
Temporary Beneficial Use Area	0.00	0
Temporary Stockpile Area	0.00	0
Hydraulic Placement Dewatering Basin	0.00	0
Hydraulic Placement Settling Basin	0.00	0
Permanent Beneficial Use Area	0.00	0
Containment/Viewshed Berm	0.00	0
Emergent and Forested Wetland Restoration	39.94	
Wetland Preservation	0.00	
Riparian Restoration	0.00	
Riparian Preservation	0.00	
Wetland Mitigation Site	0.00	
Parking Lot	0.00	
Parking Lot Access Road	0.00	
Road Ditch	0.00	
Unprotected Side of Levee	0.00	
Totals	39.94	0

Wetlands		
Wetlands Delineated*	39.44	Acres
Wetlands Impacted**	0.00	Acres
Wetlands Kept**	39.44	Acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	39.94	Credits
Upland Buffer Credits (assumes 1:4 ratio)	9.99	Credits
Preservation Credits (assumes 1:8 ratio)	0.00	Credits
Total Wetland Credits	49.93	Credits
Stream Restoration (assumes 1:1 ratio)	0	Credits

2.2.8 Parcel 7

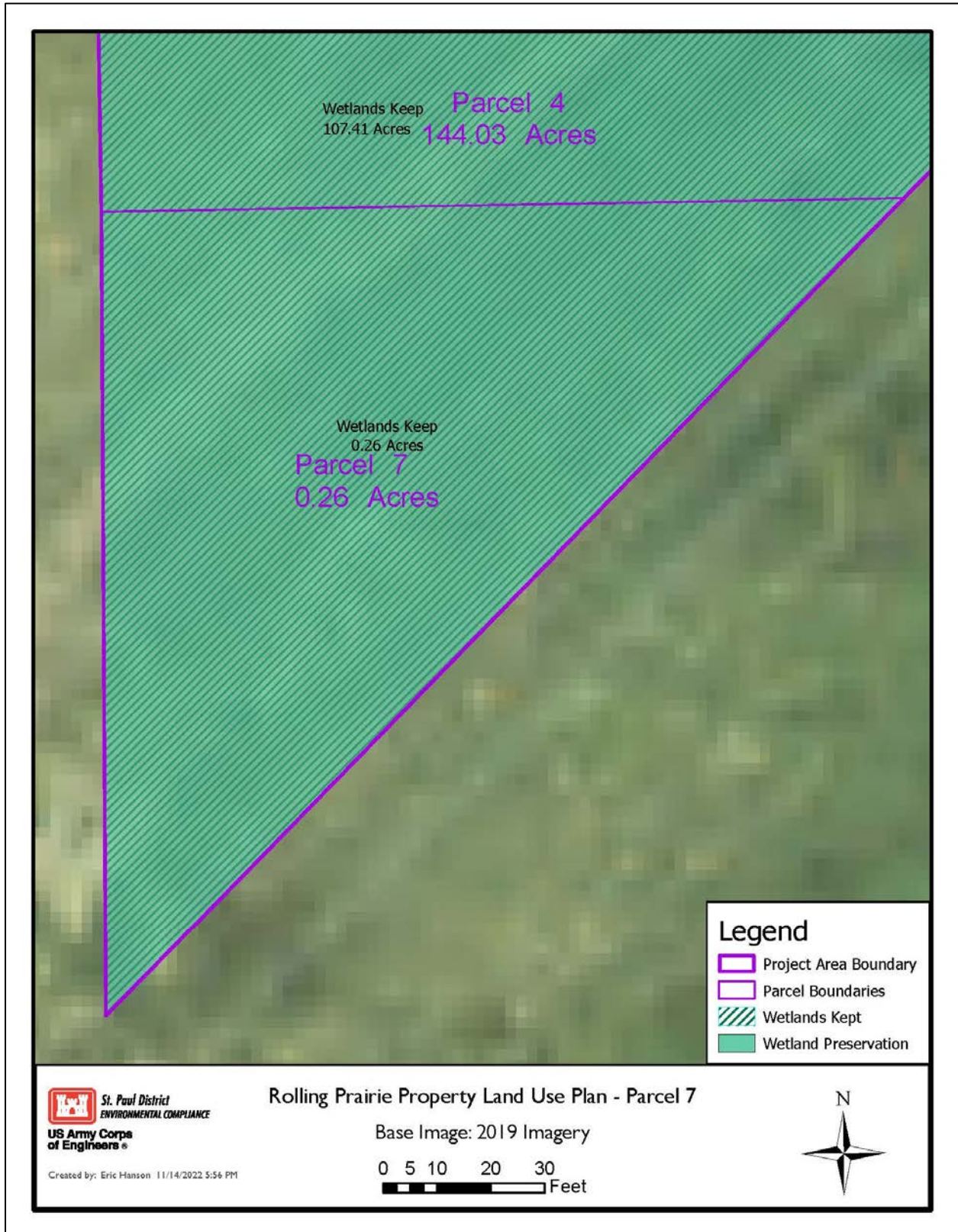


Figure 14 – Parcel 7 Map

Parcel 7		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	0.00	0
Ag Land Recovery	0.00	0
Temporary Beneficial Use Area	0.00	0
Temporary Stockpile Area	0.00	0
Hydraulic Placement Dewatering Basin	0.00	0
Hydraulic Placement Settling Basin	0.00	0
Permanent Beneficial Use Area	0.00	0
Containment/Viewshed Berm	0.00	0
Emergent Wetland Restoration	0.00	
Wetland Preservation	0.26	
Riparian Restoration	0.00	
Riparian Preservation	0.00	
Wetland Mitigation Site	0.00	
Parking Lot	0.00	
Parking Lot Access Road	0.00	
Road Ditch	0.00	
Unprotected Side of Levee	0.00	
Totals	0.26	0

Wetlands		
Wetlands Delineated*	0.26	Acres
Wetlands Impacted**	0.00	Acres
Wetlands Kept**	0.26	Acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	0.00	Credits
Upland Buffer Credits (assumes 1:4 ratio)	0.01	Credits
Preservation Credits (assumes 1:8 ratio)	0.03	Credits
Total Wetland Credits	0.04	Credits
Stream Restoration (assumes 1:1 ratio)	0	Credits

2.2.9 Parcel 8

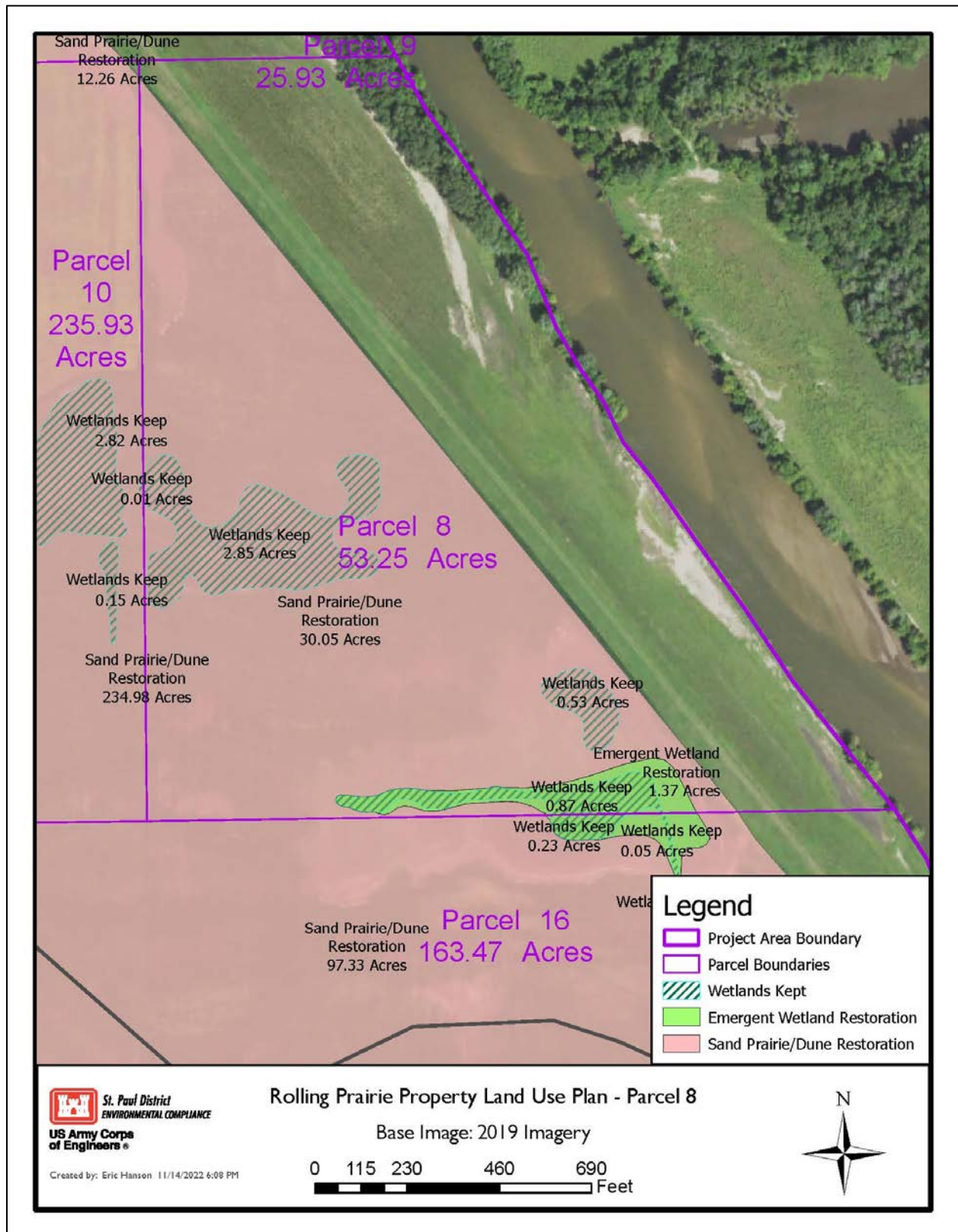


Figure 15 – Parcel 8 Map

Parcel 8		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	30.05	727,210
Ag Land Recovery	0.00	0
Temporary Beneficial Use Area	0.00	0
Temporary Stockpile Area	0.00	0
Hydraulic Placement Dewatering Basin	0.00	0
Hydraulic Placement Settling Basin	0.00	0
Permanent Beneficial Use Area	0.00	0
Containment/Viewshed Berm	0.00	0
Emergent Wetland Restoration	1.37	
Wetland Preservation	0.00	
Riparian Restoration	0.00	
Riparian Preservation	0.00	
Wetland Mitigation Site	0.00	
Parking Lot	0.00	
Parking Lot Access Road	0.00	
Road Ditch	0.00	
Unprotected Side of Levee	21.83	
Totals	53.25	727,210

Wetlands		
Wetlands Delineated*	4.25	Acres
Wetlands Impacted**	0.00	Acres
Wetlands Kept**	4.25	Acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	4.75	Credits
Upland Buffer Credits (assumes 1:4 ratio)	1.19	Credits
Preservation Credits (assumes 1:8 ratio)	0.00	Credits
Total Wetland Credits	5.94	Credits
Stream Restoration (assumes 1:1 ratio)	0	Credits

2.2.10 Parcel 9

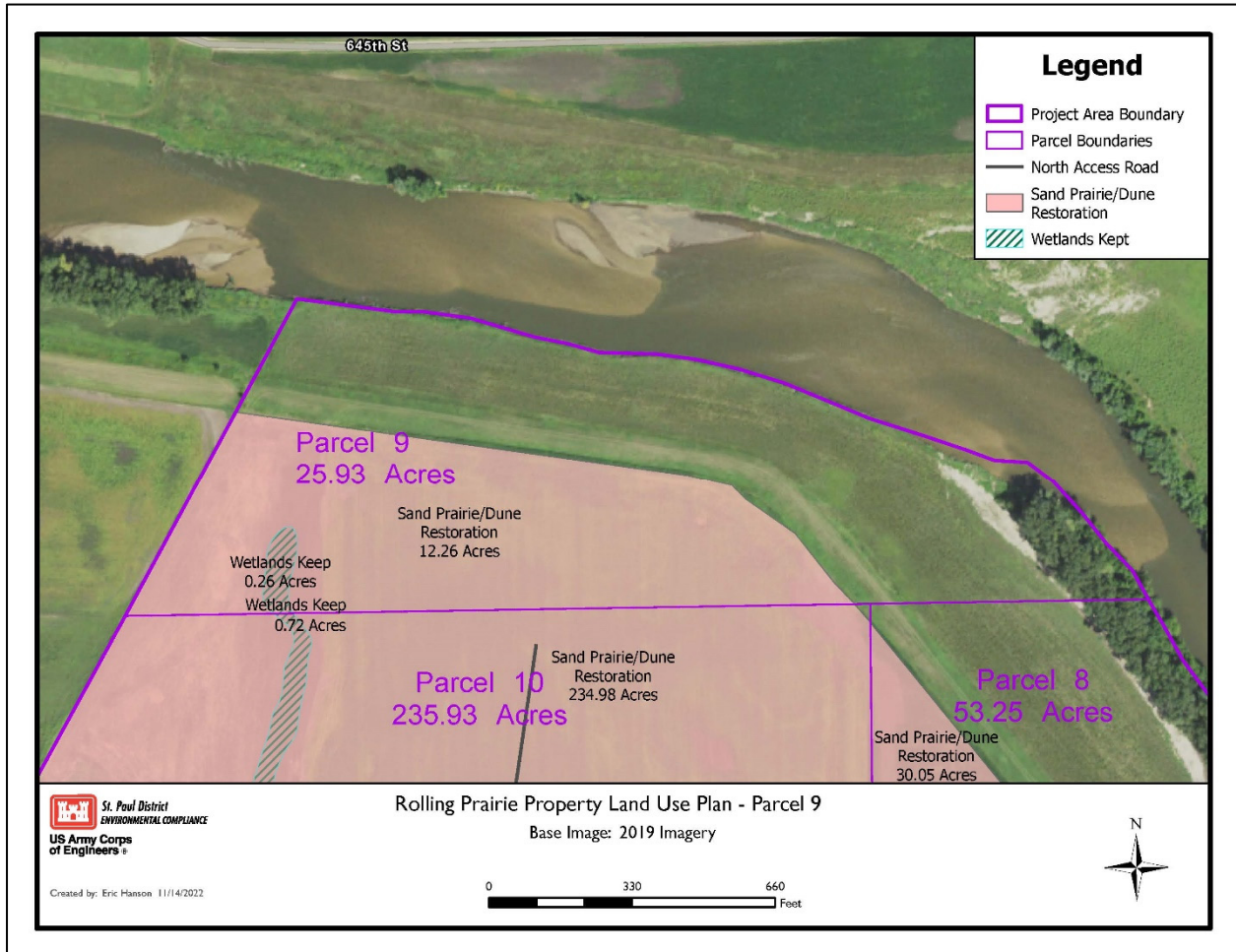


Figure 16 – Parcel 9 Map

Parcel 9		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	12.26	296,692
Ag Land Recovery	0.00	0
Temporary Beneficial Use Area	0.00	0
Temporary Stockpile Area	0.00	0
Hydraulic Placement Dewatering Basin	0.00	0
Hydraulic Placement Settling Basin	0.00	0
Permanent Beneficial Use Area	0.00	0
Containment/Viewshed Berm	0.00	0
Emergent Wetland Restoration	0.00	
Wetland Preservation	0.00	
Riparian Restoration	0.00	
Riparian Preservation	0.00	
Wetland Mitigation Site	0.00	
Parking Lot	0.00	
Parking Lot Access Road	0.00	
Road Ditch	0.00	
Unprotected Side of Levee	13.67	
Totals	25.93	296,692

Wetlands		
Wetlands Delineated*	0.26	Acres
Wetlands Impacted**	0.00	Acres
Wetlands Kept**	0.26	Acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	0.26	Credits
Upland Buffer Credits (assumes 1:4 ratio)	0.07	Credits
Preservation Credits (assumes 1:8 ratio)	0.00	Credits
Total Wetland Credits	0.33	Credits
Stream Restoration (assumes 1:1 ratio)	0	Credits

2.2.11 Parcel 10 North Half

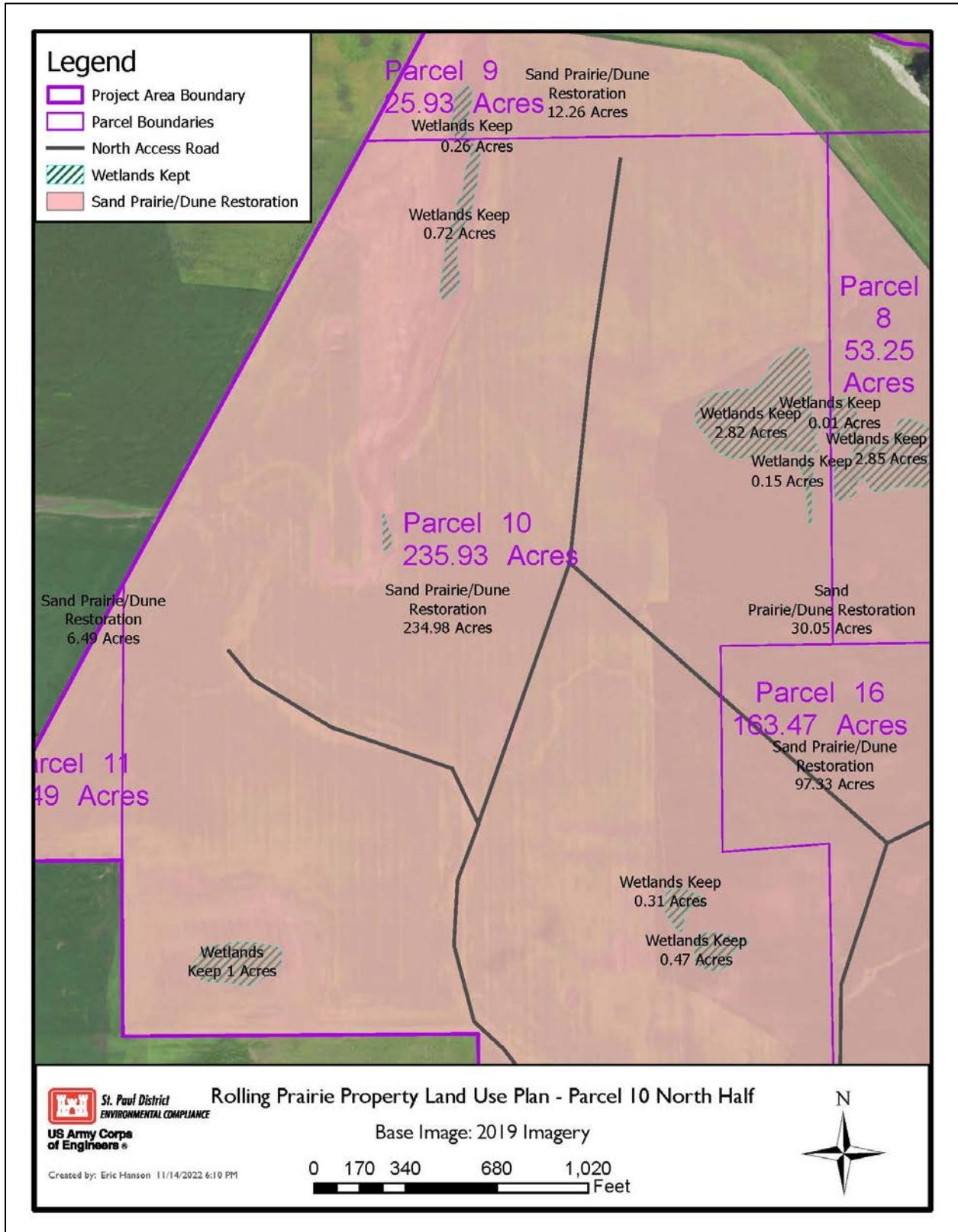


Figure 17 – Parcel 10 Map (North Half)

2.2.12 Parcel 10 South Half

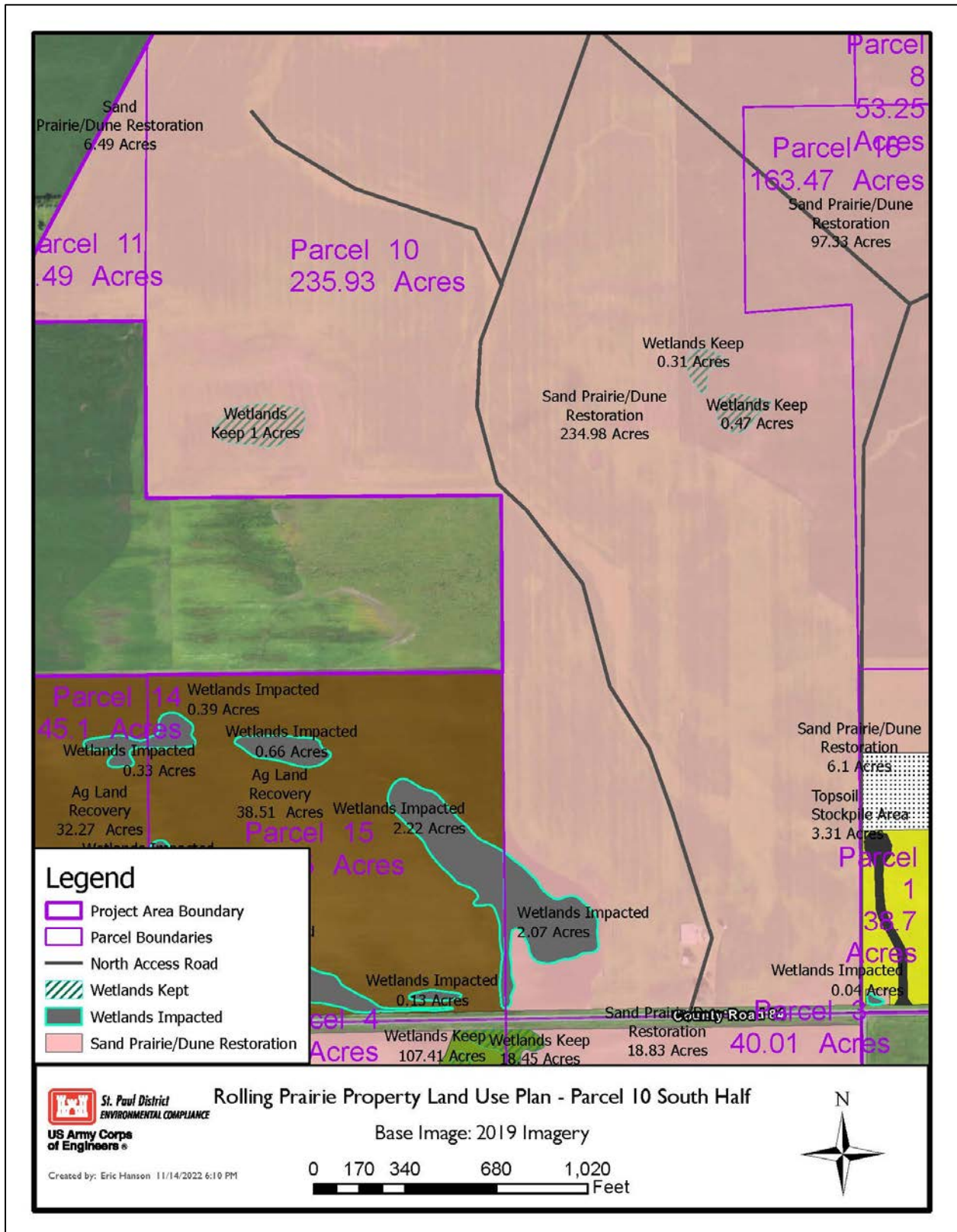


Figure 18 – Parcel 10 Map (South Half)

Parcel 10		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	234.98	5,686,516
Ag Land Recovery	0.00	0
Temporary Beneficial Use Area	0.00	0
Temporary Stockpile Area	0.00	0
Hydraulic Placement Dewatering Basin	0.00	0
Hydraulic Placement Settling Basin	0.00	0
Permanent Beneficial Use Area	0.00	0
Containment/Viewshed Berm	0.00	0
Emergent Wetland Restoration	0.00	
Wetland Preservation	0.00	
Riparian Restoration	0.00	
Riparian Preservation	0.00	
Wetland Mitigation Site	0.00	
Parking Lot	0.00	
Parking Lot Access Road	0.00	
Road Ditch	0.95	
Unprotected Side of Levee	0.00	
Totals	235.93	5,686,516

Wetlands		
Wetlands Delineated*	7.62	Acres
Wetlands Impacted**	2.06	Acres
Wetlands Kept**	5.56	Acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	5.56	Credits
Upland Buffer Credits (assumes 1:4 ratio)	1.39	Credits
Preservation Credits (assumes 1:8 ratio)	0.00	Credits
Total Wetland Credits	6.95	Credits
Stream Restoration (assumes 1:1 ratio)	0	Credits

2.2.13 Parcel 11

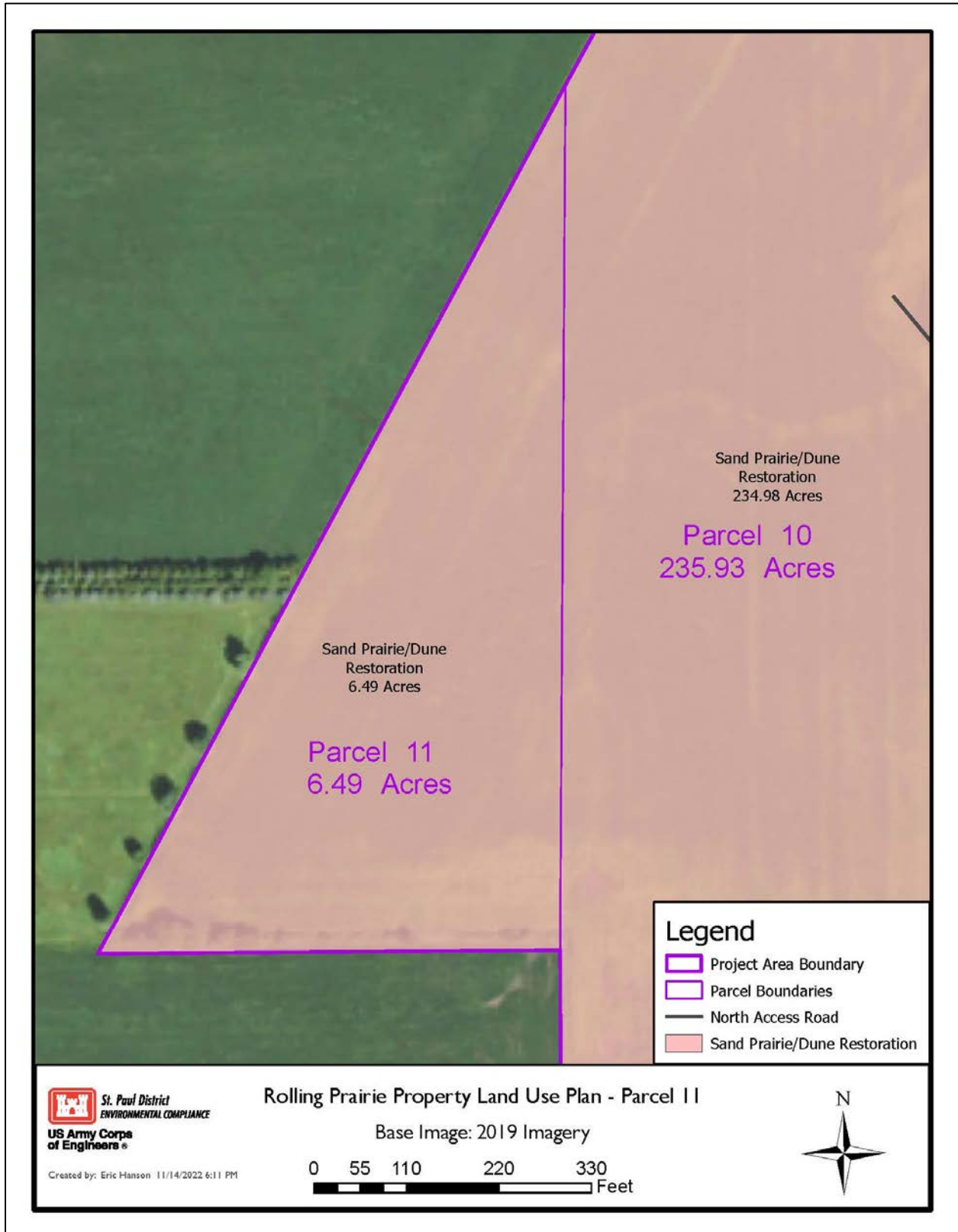


Figure 19 – Parcel 11 Map

Parcel 11		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	6.49	157,058
Ag Land Recovery	0.00	0
Temporary Beneficial Use Area	0.00	0
Temporary Stockpile Area	0.00	0
Hydraulic Placement Dewatering Basin	0.00	0
Hydraulic Placement Settling Basin	0.00	0
Permanent Beneficial Use Area	0.00	0
Containment/Viewshed Berm	0.00	0
Emergent Wetland Restoration	0.00	
Wetland Preservation	0.00	
Riparian Restoration	0.00	
Riparian Preservation	0.00	
Wetland Mitigation Site	0.00	
Parking Lot	0.00	
Parking Lot Access Road	0.00	
Road Ditch	0.00	
Unprotected Side of Levee	0.00	
Totals	6.49	157,058

Wetlands		
Wetlands Delineated*	0.00	Acres
Wetlands Impacted**	0.00	Acres
Wetlands Kept**	0.00	Acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	0.00	Credits
Upland Buffer Credits (assumes 1:4 ratio)	0.00	Credits
Preservation Credits (assumes 1:8 ratio)	0.00	Credits
Total Wetland Credits	0.00	Credits
Stream Restoration (assumes 1:1 ratio)	0	Credits

2.2.14 Parcel 12

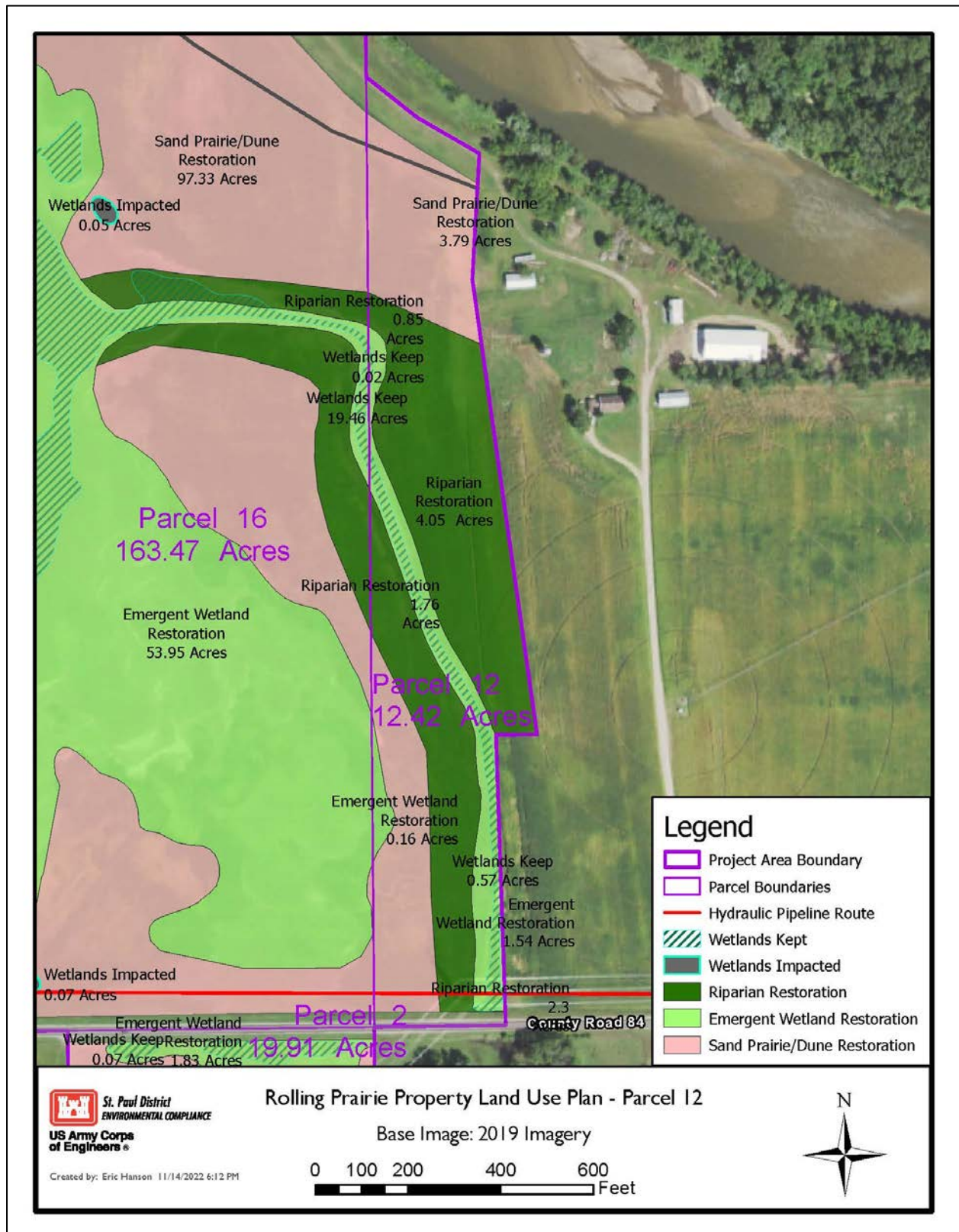


Figure 20 – Parcel 12 Map

Parcel 12		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	3.79	91,718
Ag Land Recovery	0.00	0
Temporary Beneficial Use Area	0.00	0
Temporary Stockpile Area	0.00	0
Hydraulic Placement Dewatering Basin	0.00	0
Hydraulic Placement Settling Basin	0.00	0
Permanent Beneficial Use Area	0.00	0
Containment/Viewshed Berm	0.00	0
Emergent Wetland Restoration	1.70	
Wetland Preservation	0.00	
Riparian Restoration	6.35	
Riparian Preservation	0.00	
Wetland Mitigation Site	0.00	
Parking Lot	0.00	
Parking Lot Access Road	0.00	
Road Ditch	0.58	
Unprotected Side of Levee	0.00	
Totals	12.42	91,718

Wetlands		
Wetlands Delineated*	0.57	Acres
Wetlands Impacted**	0.00	Acres
Wetlands Kept**	0.57	Acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	1.70	Credits
Upland Buffer Credits (assumes 1:4 ratio)	0.43	Credits
Preservation Credits (assumes 1:8 ratio)	0.00	Credits
Total Wetland Credits	2.13	Credits
Stream Restoration (assumes 1:1 ratio)	0	Credits

2.2.15 Parcel 14

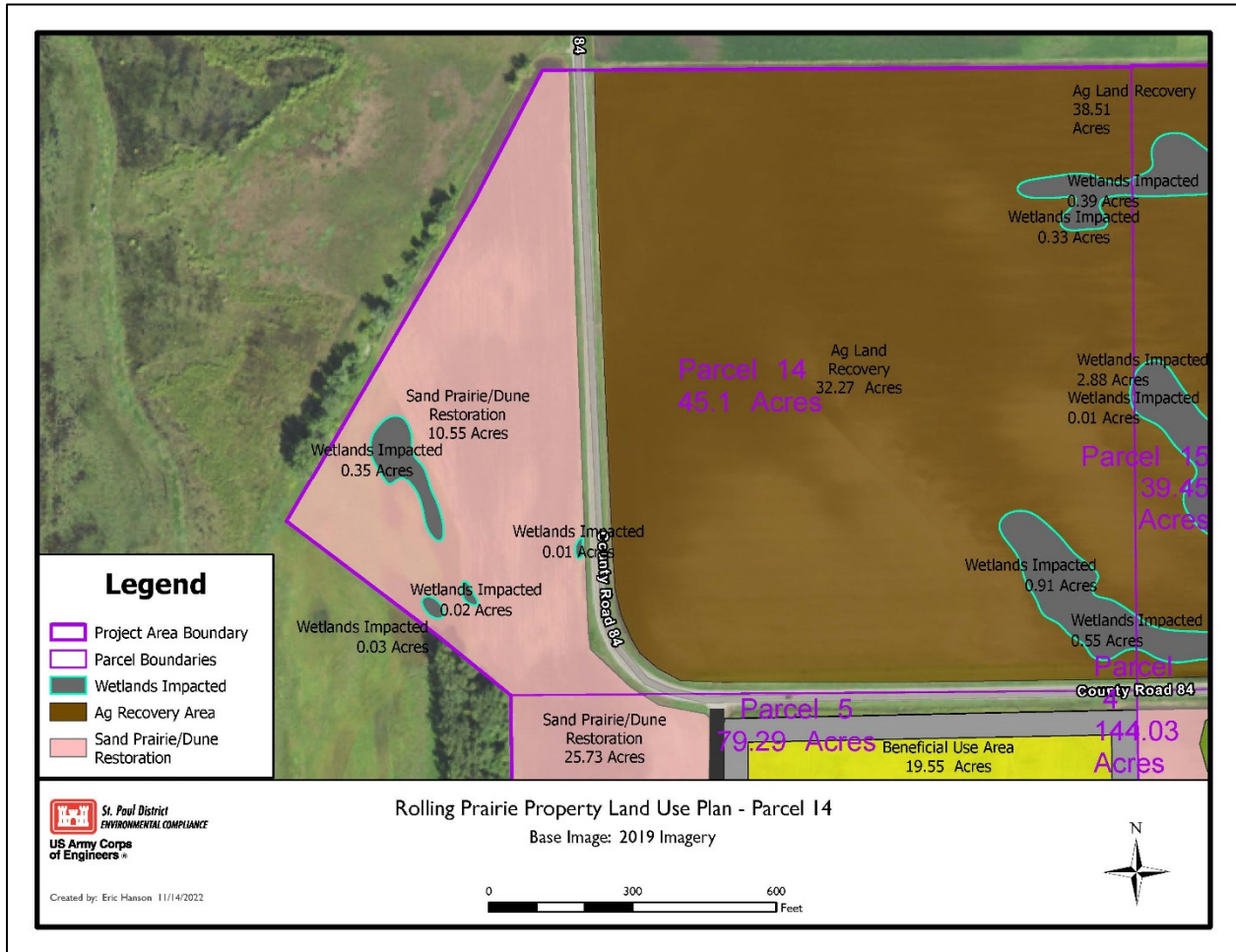


Figure 21 – Parcel 14 Map

Parcel 14		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	10.55	255,310
Ag Land Recovery	32.27	780,934
Temporary Beneficial Use Area	0.00	0
Temporary Stockpile Area	0.00	0
Hydraulic Placement Dewatering Basin	0.00	0
Hydraulic Placement Settling Basin	0.00	0
Permanent Beneficial Use Area	0.00	0
Containment/Viewshed Berm	0.00	0
Emergent Wetland Restoration	0.00	
Wetland Preservation	0.00	
Riparian Restoration	0.00	
Riparian Preservation	0.00	
Wetland Mitigation Site	0.00	
Parking Lot	0.00	
Parking Lot Access Road	0.00	
Road Ditch	2.28	
Unprotected Side of Levee	0.00	
Totals	45.10	1,036,244

Wetlands		
Wetlands Delineated*	1.66	Acres
Wetlands Impacted**	1.66	Acres
Wetlands Kept**	0.00	Acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	0.00	Credits
Upland Buffer Credits (assumes 1:4 ratio)	0.00	Credits
Preservation Credits (assumes 1:8 ratio)	0.00	Credits
Total Wetland Credits	0.00	Credits
Stream Restoration (assumes 1:1 ratio)	0	Credits

2.2.16 Parcel 15

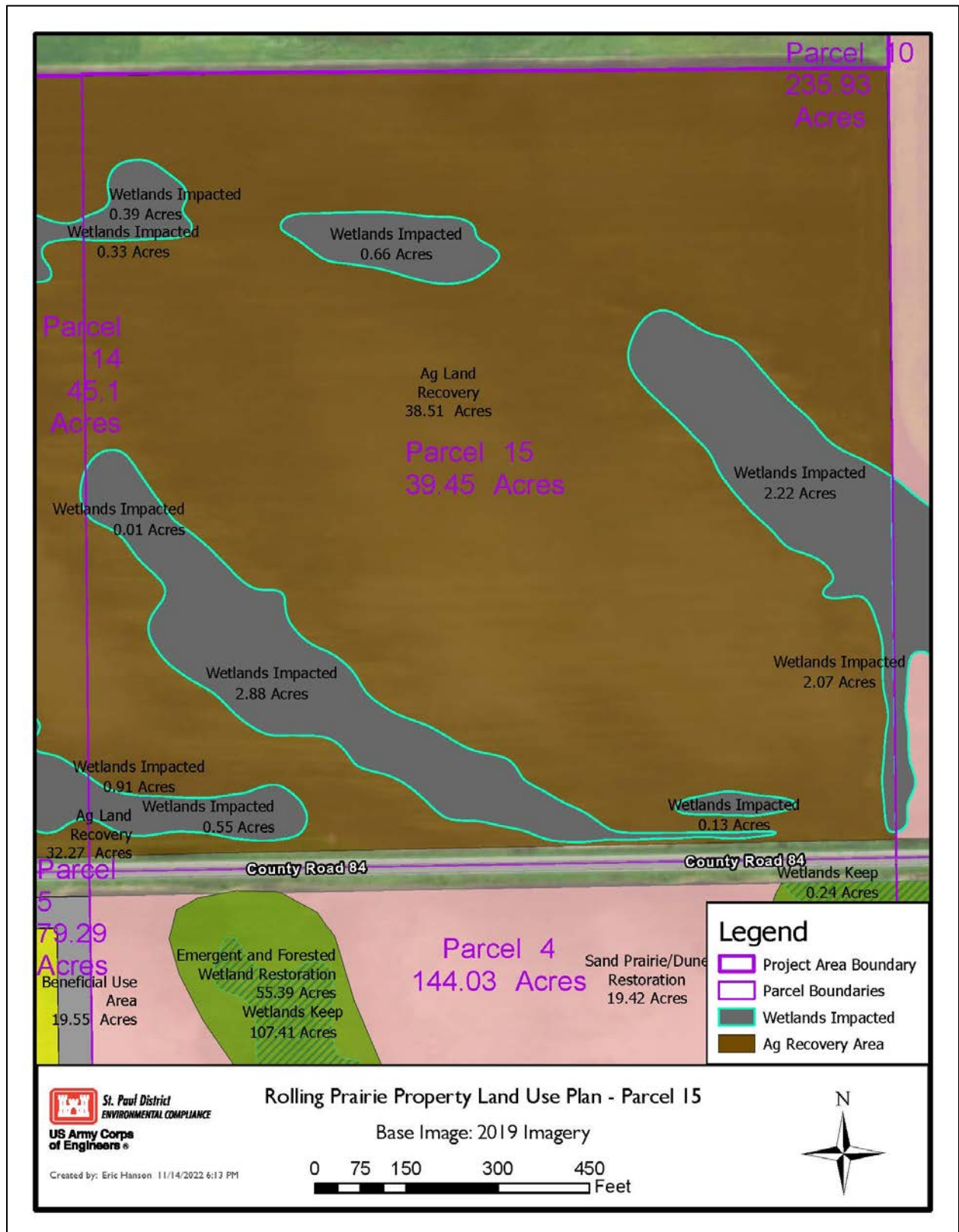


Figure 22 – Parcel 15 Map

Parcel 15		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	0.00	0
Ag Land Recovery	38.51	931,942
Temporary Beneficial Use Area	0.00	0
Temporary Stockpile Area	0.00	0
Hydraulic Placement Dewatering Basin	0.00	0
Hydraulic Placement Settling Basin	0.00	0
Permanent Beneficial Use Area	0.00	0
Containment/Viewshed Berm	0.00	0
Emergent Wetland Restoration	0.00	
Wetland Preservation	0.00	
Riparian Restoration	0.00	
Riparian Preservation	0.00	
Wetland Mitigation Site	0.00	
Parking Lot	0.00	
Parking Lot Access Road	0.00	
Road Ditch	0.94	
Unprotected Side of Levee	0.00	
Totals	39.45	931,942

Wetlands		
Wetlands Delineated*	6.84	Acres
Wetlands Impacted**	6.84	Acres
Wetlands Kept**	0.00	Acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	0.00	Credits
Upland Buffer Credits (assumes 1:4 ratio)	0.00	Credits
Preservation Credits (assumes 1:8 ratio)	0.00	Credits
Total Wetland Credits	0.00	Credits
Stream Restoration (assumes 1:1 ratio)	0	Credits

2.2.17 Parcel 16

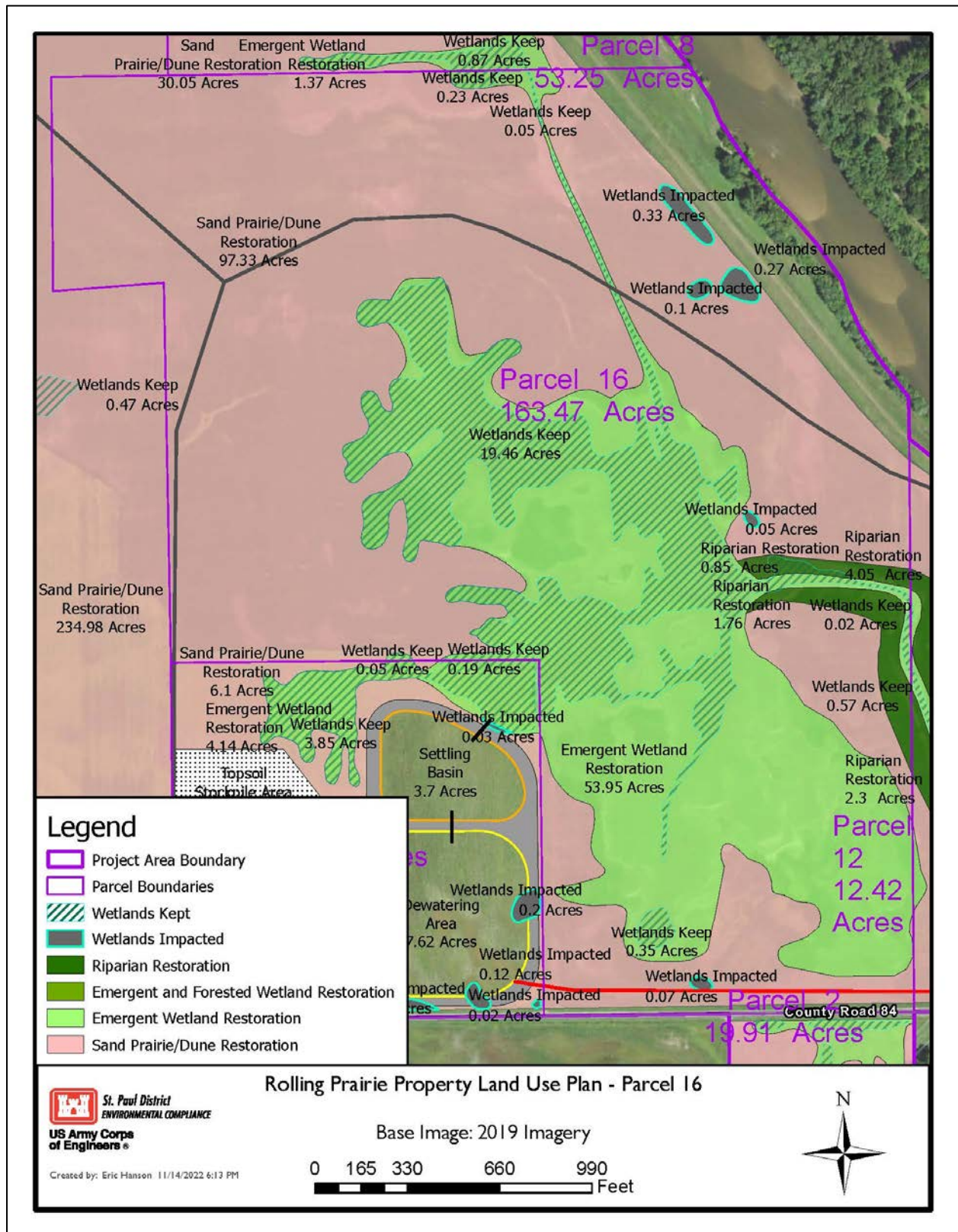


Figure 23 – Parcel 16 Map

Parcel 16		
Land Use Type	Acres	Placement Capacity (cu. yds.)
Sand Prairie Restoration	97.34	2,360,952
Ag Land Recovery	0.00	0
Temporary Beneficial Use Area	0.00	0
Temporary Stockpile Area	0.00	0
Hydraulic Placement Dewatering Basin	0.00	0
Hydraulic Placement Settling Basin	0.00	0
Permanent Beneficial Use Area	0.00	0
Containment/Viewshed Berm	0.00	0
Emergent Wetland Restoration	53.95	
Wetland Preservation	0.00	
Riparian Restoration	2.61	
Riparian Preservation	0.00	
Wetland Mitigation Site	0.00	
Parking Lot	0.00	
Parking Lot Access Road	0.00	
Road Ditch	0.31	
Unprotected Side of Levee	9.08	
Totals	163.47	2,360,952

Wetlands		
Wetlands Delineated*	20.89	Acres
Wetlands Impacted**	0.82	Acres
Wetlands Kept**	20.07	Acres
*Not included in total land use acres.		
**Incorporated as part of other features (Sand Prairie, Emergent Wetland, Dewatering Area, Settling Basin, Containment Berm etc.)		

Potential Wetland Bank Credits		
Wetland Restoration Credits (assumes 1:1 ratio)	53.90	Credits
Upland Buffer Credits (assumes 1:4 ratio)	13.48	Credits
Preservation Credits (assumes 1:8 ratio)	0.00	Credits
Total Wetland Credits	67.38	Credits
Stream Restoration (assumes 1:1 ratio)	0	Credits

3 Phased Approach

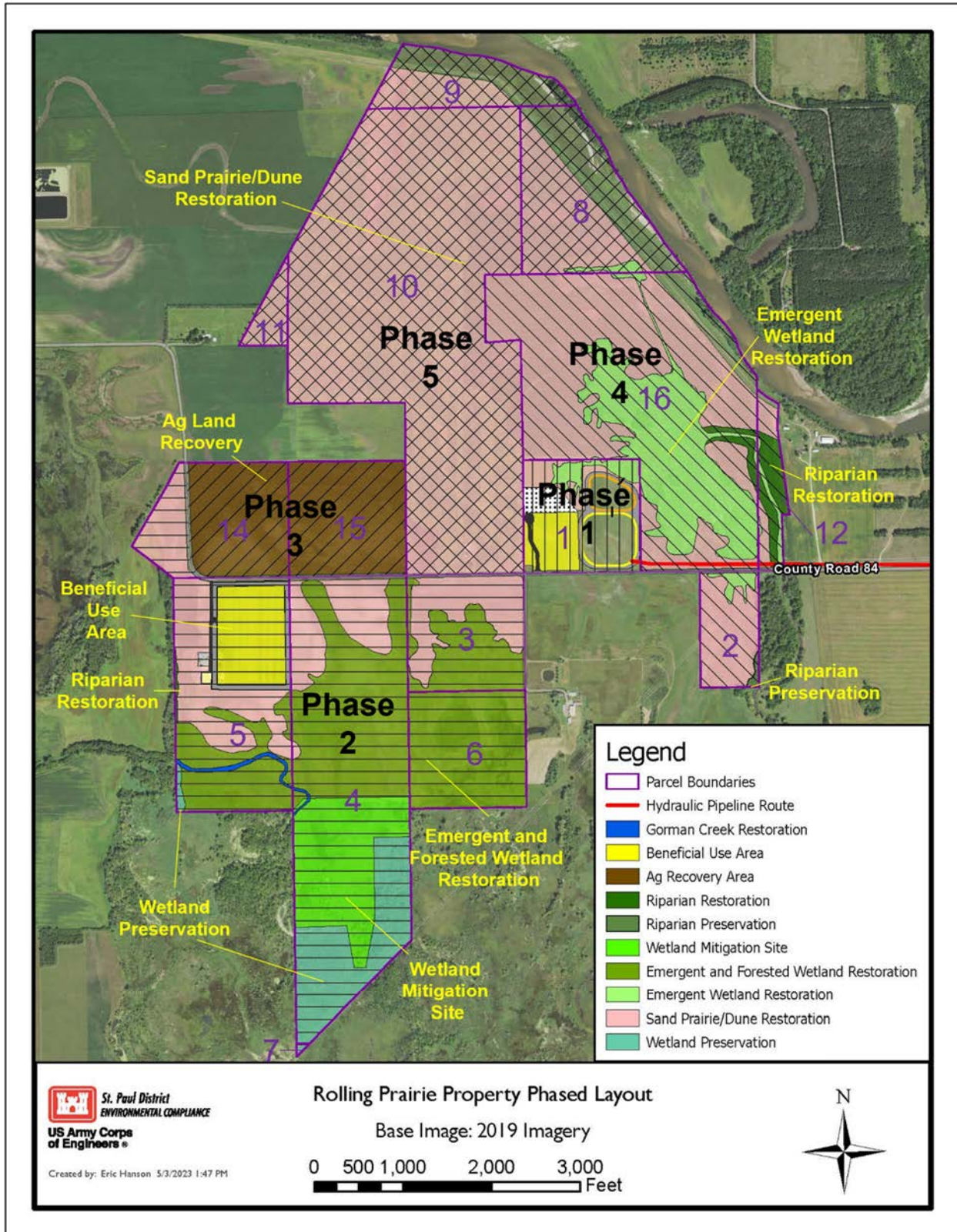


Figure 24 – Rolling Prairie Phase Map

3.1 Phase 1

3.1.1 Geographic Area

Phase 1 includes most of parcel 1 except for the northeast part of the property that is ear-marked for emergent wetland restoration.

3.1.2 Proposed Use

The proposed use of this property is a temporary river sand placement site, beneficial use area, and hydraulic placement area to accommodate immediate river sand placement needs in accordance with the Pool 5 Dredged Material Management Plan (DMMP). Once the permanent beneficial use area is fully operational in parcel 5, this area will be more focused around hydraulic placement, but will still be available for use as a temporary placement area for mechanical placement, a material handling area for hydraulic placement, or a beneficial use area as needed.

3.1.3 Timing

Phase 1 will be the focus of efforts during the first several years of implementation to allow for initial placement, beneficial use, and hydraulic placement when the need arises. Long-term, this portion of the site may continue to be used for these same three activities until site capacity is reached or it may be converted to other uses as needed. This portion of the site is expected to be the most flexible about its use throughout the life of the project.

3.1.4 Real Estate

Parcel 1 is not part of an existing agricultural lease. Therefore, Phase 1 activities may begin at any time without any additional real estate actions.

3.1.5 Phase 1 Construction Plans

Construction plans for Phase 1 include topsoil removal and stockpiling and access road construction. Detailed construction plans are available in Appendix A for reference.

3.2 Phase 2

3.2.1 Geographic Area

Phase 2 includes most of the land south of CR 84 except parcel 2.

3.2.2 Proposed Use

Phase 2 will consist of a mixed-use area with wetland preservation and restoration activities being the highest priority due to the smaller amount of work associated with those components. Sand Prairie/Dune Restoration activities will take place after construction plans for that portion of the site are completed but may occur concurrent with restoration activities. Phase 2 is also planned to include Gorman Creek restoration activities and the establishment of the long-term beneficial use area in parcel 5.

3.2.3 Timing

Phase 2 is planned to begin after Phase 1 activities have already started, but Phase 2 activities may occur concurrently with Phase 1 activities depending on project needs and the availability of funds.

3.2.4 Real Estate

Phase 2 lands are currently under an annually renewable agricultural lease. These lands are expected to remain under lease until Phase 2 begins but will be removed from future lease considerations prior to the start of Phase 2 activities.

3.2.5 Phase 2 Construction Plans

To be developed. Will be placed in Appendix A when completed. Construction plans for this phase will include wetland restoration, Gorman creek restoration, sand prairie restoration, and beneficial use site construction plans.

3.3 Phase 3

3.3.1 Geographic Area

Phase 3 includes the Beneficial Use of Dredged Material to Improve Agricultural Land Study. The study involves lands north of CR84 adjacent to the road and along the western portion of the property area in parts of parcel 14 and all of parcel 15.

3.3.2 Proposed Use

Phase 3 will initially consist of a planned study to test alternative beneficial uses for river sand and may continue to be used as a testing area for several more years after the initial study is completed. Ultimately though, the plan is to use this property river sand placement and incorporate it into sand prairie/dune restoration habitat.

3.3.3 Timing

Phase 3 is planned to begin after Phase 1 and 2 activities have already started, but Phase 3 activities may occur concurrently with Phase 1 and 2 activities depending on project needs and the availability of funds.

3.3.4 Real Estate

Phase 3 lands are currently under an annually renewable agricultural lease. These lands are expected to remain under lease until Phase 3 begins but will be removed from future lease considerations prior to the start of Phase 3 activities.

3.3.5 Phase 3 Construction Plans

To be developed. Will be placed in Appendix A when completed. Construction plans for this phase will include Beneficial Use of Dredged Material to Improve Agricultural Land Study design documents.

3.4 Phase 4

3.4.1 Geographic Area

Phase 4 primarily includes wetland and riparian restoration work north of CR84 along the east half of the property in the northeast part of parcel 1, a small part of parcel 12, and most of the southcentral and southeast part of parcel 16. Wetland restoration work in parcel 2 will also likely occur as part of this phase.

3.4.2 Proposed Use

Phase 4 will consist primarily of wetland restoration activities for the large remnant wetland complex in parcels 1 and 16 that are currently mostly drained due to existing drain tile and drain tile pump station. To facilitate the proposed use of this property, the drain tile and drain tile pump station will be decommissioned prior to restoration activities.

3.4.3 Timing

The proposed construction of Phase 4 is expected to begin after Phase 1, 2, and 3 activities have started, but some or all portions of Phase 4 activities may begin prior to the completion and Phase 1, 2, and 3 activities, and may occur concurrently with Phase 1, 2 and 3 activities depending on the availability of funds.

3.4.4 Real Estate

Parcel 1 is not currently under lease but parcels 2, 12, and 16 are currently under an annually renewable agricultural lease. These parcels are expected to remain under lease until Phase 4 begins but will be removed from future lease considerations prior to the start of Phase 4 activities.

3.4.5 Phase 4 Construction Plans

To be developed. Will be placed in Appendix A when completed. Construction plans for this phase will include wetland restoration plan documents.

3.5 Phase 5

3.5.1 Geographic Area

Phase 5 includes the remainder of the land north of CR 84 not already included in a previous Phase.

3.5.2 Proposed Use

Phase 5 will consist primarily of sand prairie/dune restoration activities on property north of County Road 84.

3.5.3 Timing

The proposed construction of Phase 5 is expected to begin after Phase 1, 2, 3, and 4 activities have started, but some or all portions of Phase 5 activities may begin prior to the completion and Phase 1, 2, 3, and 4 activities, and may occur concurrently with Phase 1, 2, 3, and 4 activities depending on the availability of funds.

3.5.4 Real Estate

Phase 5 lands are currently under an annually renewable agricultural lease. These lands are expected to remain under lease until Phase 5 begins but will be removed from future lease considerations prior to the start of Phase 5 activities.

3.5.5 Phase 5 Construction Plans

To be developed. Will be placed in Appendix A when completed. Construction plans for this phase will include sand prairie/sand dune restoration plan documents.