

Eagle Bluff

Type & Boundary Application

Lime Township, Blue Earth County, Minnesota
Jim Hilgers
August 6, 2025



Real People. Real Solutions.

Prepared by:

Bolton & Menk, Inc.
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BMI Project No. 25X.137409.000

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2013 WETLAND DELINEATION (R. J. HANNA & ASSOCIATES INC.)
MANKATO PLANNING COMMISSION NOTES 2016
WETLAND DELINEATION REPORT

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name:	Jim Hilgers
Mailing Address:	171 Miranda Trail Madison Lake, MN 56063
Phone:	507-351-3265
E-mail Address:	Jihil63@gmail.com

Authorized Contact (do not complete if same as above):

Mailing Address:

Phone:

E-mail Address:

Agent Name:	Bolton & Menk, Inc. Cortiney Galuska Natural Resource Technician
Mailing Address:	1960 Premier Drive Mankato, MN 56001
Phone:	507-625-4171 ext 4074
E-mail Address:	Cortiney.galuska@bolton-menk.com

PART TWO: Site Location Information

County:	Blue Earth	City/Township:	Lime Township
Parcel ID and/or Address:	Note Exhibit A		
Legal Description (Section, Township, Range):	36, 109N, 26W		
Lat/Long (decimal degrees):	44.049090, -93.9021158		
Attach a map showing the location of the site in relation to local streets, roads, highways.			
Approximate size of site (acres) or if a linear project, length (feet):	8.59 ac		

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted **prior to** this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

PART FOUR: Aquatic Resource Impact¹ Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	Aquatic Resource Type (wetland, lake, tributary etc.)	Type of Impact (fill, excavate, drain, or remove vegetation)	Duration of Impact Permanent (P) or Temporary (T) ¹	Size of Impact ²	Overall Size of Aquatic Resource ³	Existing Plant Community Type(s) in Impact Area ⁴	County, Major Watershed #, and Bank Service Area # of Impact Area ⁵

¹If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".

²Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).

³This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".

⁴Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

⁵Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

N/A

PART FIVE: Applicant Signature

☐ Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature: _____ Date: _____

I hereby authorize **Bolton & Menk, Inc** to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

¹ The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Attachment A

Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

☒ **Wetland Type Confirmation**

☒ **Delineation Concurrence.** Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

☐ **Preliminary Jurisdictional Determination.** A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

☐ **Approved Jurisdictional Determination.** An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the *Guidelines for Submitting Wetland Delineations in Minnesota* (2013).

<http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx>

Attachment B

Supporting Information for Applications Involving Exemptions, No Loss Determinations, and Activities Not Requiring Mitigation

Complete this part *if* you maintain that the identified aquatic resource impacts in Part Four do not require wetland replacement/compensatory mitigation OR *if* you are seeking verification that the proposed water resource impacts are either exempt from replacement or are not under CWA/WCA jurisdiction.

Identify the specific exemption or no-loss provision for which you believe your project or site qualifies:

8420.0150.D- Incidental Wetlands

Provide a detailed explanation of how your project or site qualifies for the above. Be specific and provide and refer to attachments and exhibits that support your contention. Applicants should refer to rules (e.g. WCA rules), guidance documents (e.g. BWSR guidance, Corps guidance letters/public notices), and permit conditions (e.g. Corps General Permit conditions) to determine the necessary information to support the application. Applicants are strongly encouraged to contact the WCA LGU and Corps Project Manager prior to submitting an application if they are unsure of what type of information to provide:

8420.0105.D- Incidental Wetlands

The parcel in question is currently half industrial row cropped agriculture and half storm water pond. The entire property was farmed for generations before the storm water pond's construction in the late 2000's. The incidental wetland in question was constructed in non-hydric upland soil (Exhibit E) that previously did not show any wetland indicators (Exhibit 1). Therefore, the applicant is requesting that this wetland be considered incidental under the WCA. A 2013 delineation from R. J. Hannah Associates Inc. was conducted and found no wetland present at the location of the constructed storm pond. In addition, attached site construction plans for the storm water pond from the City of Mankato.

Appendix

Minnesota Wetland Conservation Act
Application for Approval of Wetland Type and Boundary

1. Project/Site Information

Project/Site Name: Re-plat of Hilgers Subdivison

Local Government Unit: Blue Earth County

Location: West-half of the NE Quarter of the NW Quarter of Govt. Lot 2, of Section 36, T109N, R26W.

2. Applicant Information

Applicant Name: James Hilgers

Address: 23401 597th Avenue, Madison Lake MN, 56063

E-mail: NA

Phone: NA

3. Agent/Consultant Information

Company Name: R. J. Hanna & Associates Inc.

Contact Person: Rick Hanna

Address: 217 Lincoln Street

City, State, Zip: Mankato, Mn 56001

E-mail: rjhanna@hickorytech.net

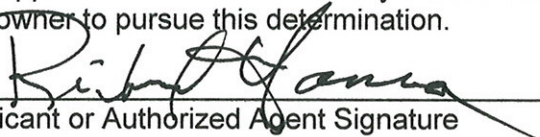
Phone: 507-345-7066

4. Description of Request

Check all that apply: ☒ Wetland Boundary (must attach wetland delineation report)
☐ Wetland Type (Eggers & Reed and/or Circular 39 type)

5. Signature

By signature below, the applicant requests a determination from the Local Government Unit under Minnesota Rules 8420.0225 on the submitted wetland boundary and type information in this application. The applicant also affirms that they are the owner of the subject property or have permission from the landowner to pursue this determination.


Applicant or Authorized Agent Signature

Date: June 12, 2013

Important Notes:

- The applicant may be required to submit multiple copies of the report/information to the LGU. The LGU may require the applicant to submit copies directly to Technical Evaluation Panel Members. **Check with your LGU regarding their submittal requirements.**
- The LGU decision must be made in compliance with Minnesota Statutes, section 15.99.

For LGU use only

Date Received:

RECEIVED

JUN 12 2013

Hilgers Development Site Wetland Investigation

Section 36 Lime Township

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Introduction

This wetland investigation was done at the request of James Hilgers 23401 597th Avenue, Madison Lake MN. The purpose was to identify and delineate any wetlands on the property located in the West-half of the Northeast Quarter of the Northwest Quarter of Govt. Lot 2, of Section 36, T109N, R26W, Blue Earth County, MN, (Figure 1). County Highway 26 is being moved to the north to modify the curve of the highway for safety purposes. In doing so it affects the existing Hilgers Subdivision and this is the reason for re-platting the property.

Method

The Federal Manual for Identifying and Delineating Jurisdictional Wetlands, 1987 and the Midwest Regional Supplement, 2008 were the basis of the investigation. Historical resources were reviewed and representative on-site locations were investigated. The routine level 2 method was used. Terry L. Bovee, Professional Soils Scientist, Minnesota License Number 30269, was the principal on-site investigator.

Results

R. J. Hanna & Associates Inc. conducted two field investigation of the property. The first was on September 14th 2012 and the second on May 12th 2013. The off-site historical record was researched and the on-site vegetation, soils and hydrology were examined. Based upon our investigation, it was determined that there are no wetlands on the site.

Off-Site Historical Findings

The following off-site historical resources were reviewed and are summarized below:

National Wetland Inventory, 1980.

In May of 1980, the U. S. Department of Interior produced a series of aerial photographs of Blue Earth County. From these aerial photographs, the National Wetland Inventory, NWI, was developed. The NWI represents a wetland inventory of Blue Earth County as of May of 1980. Since the inventory was produced, rivers have meandered and some mapped wetlands have been drained. At best, the NWI can only be used as a guide to on-site investigation. The NWI does not show any wetland on the property being platted. (Exhibit A)

USDA Soils Survey of Blue Earth County. The USDA Soils Survey of Blue Earth County, (Exhibit B), was reviewed and the principal soils found across the site are summarized below:

Cordova clay loam, 109 occupies 24.9 percent of the site. Cordova is found on the flats of moraines. The parent material is a fine-loamy till. The slope is 0 to 2 percent and the shape is linear. This soil is poorly drained and the depth to the seasonal water table is 6 to 18 inches.

Le Sueur clay loam, 239, occupies 24.3 percent of the site. Le Sueur is found on the rises of moraines in a summit position. The down slope, 1 to 3 percent, is convex and linear across slope. The parent material is a fine loamy till. This is moderately well drained soil and the depth to the seasonal water table is 18 to 30 inches. No ponding or flooding is associated with this soil during rainfall events.

Kilkenny clay loam, 238, occupies 22.8 percent of the site. Kilkenny is associated with hills on moraines. The parent material is clayey lacustrine deposits over fine-loamy till. The slope is 2 to 6 percent and the down slope shape is convex. Kilkenny is a well drained soil and the depth to the seasonal water table is 30 to 42 inches.

Blue Earth County Protected Waters and Wetland Inventory, 1984.

The inventory shows that Eagle Lake, PWI 7-60, is a protected water of the state. The lake is in minor watershed 320821 of the Le Sueur River. The highest recorded lake level is 989.75 feet, (04/24/1969), and the lowest, 986.2 feet, (04/12/1977). The water level range is 3.55 feet. The Ordinary High Water Level, (OHW), is 989.4 feet. Eagle Lake, (north), is classified as a Recreational Development Lake, (Exhibit C).

Wetland Delineation Precipitation Data Retrieval from a Gridded Data Base.

The University of Minnesota Wetland Precipitation Data Retrieval Table, the source of the 2012 precipitation data for this site, was used in conjunction with the USDA crop photos. The results of the comparison are shown on the Wetland Mapping Conventions Review Record, (Exhibit D).

Gridded Database Multi-month Rating, 2012. The multi-month rating for March, April and May was 17, Wet. The following three months, June, July and August, reflect the beginning of 2012 drought and the rating was 6, Dry. The data was retrieved from the Wetland Delineation Precipitation Data Retrieval from a Gridded Database: Minnesota Climatology Working Group University of Minnesota. A summary of the previous 17 years of data regarding the mean precipitation of Normal, Wet and Dry growing seasons furnished the following information:

Greater than Normal Precipitation. During the 8 years that were classified as being wet, 4 of the 8 years, 50%, of the time the vegetation appeared to be normal with very few areas of crop stress.

Normal Precipitation. Over the 6 years that had normal precipitation 1 year, 16.6%, appeared to have a lot of crop stress. Overall the vegetation appeared normal, but included a few areas of minor to very minor crop stress during the normal years.

Less than Normal Precipitation. Three of the years were classified as dry.

Gridded Database Multi-month Rating, 2013. As of June 10th 2013, no data has been entered into the gridded data base for this site during 2013. Since the rainfall data from the Wetland Delineation Precipitation Data Retrieval from a Gridded Data Base was not available for 2013, it was decided to use the precipitation records at the University of Minnesota Southern Research and Outreach Center at Waseca.

The cumulative total of precipitation data recorded between January 1st and May 31st 2013 at the Waseca center indicate that the rainfall was 18.24 inches during this period. The precipitation for these five months is 6.36 inches above average. From June 1st to June 10th the cumulative total increased to 19.77 inches. This suggest that we are having a "wetter than normal" Spring.

USDA Crop Photos, 1979-1995 & Wetland Mapping Conventions Review Record.

The USDA Aerial Crop Photographs, 1979–1995, of Section 36 of Lime Township were reviewed. The purpose of the review was to determine if any of the four sites shown on Figure 2 displayed wetland signatures during any growing season, (Exhibit E).

Comparison of Hilgers Tile Map, the Plat Map and Soils Map.

The property owner provided tile maps of the parcel under investigation (Exhibit F). The hand drawn tile maps were transposed over a soils map and proposed subdivision plat to provide an approximation of where the tile is located in relationship to the landscape.

A comparative study was conducted by Mr. Bovee, of Hilgers' tile map, the proposed plat map and the soils map of the site.

The tile map provided by Mr. Hilgers was sketched over the proposed plat map to approximate where the tile was located. Hilger's tile/plat map was then compared to the soils map of the site. From this comparison, Mr. Bovee formed the opinion that tile has been installed within the hydric soil mapping units of the plat and accomplishes the following:

- Eliminates surface ponding;

- Lowens the saturation zone within the soils in those concave areas of the plat; and therefore,

- The hydrology necessary to support a jurisdictional wetland is not present.

Further, the tile appears to be primarily located in those concave areas that would most likely be wetter in a normal rainfall year. It was noted that on Sept. 14, 2012 during a filed visit that there was no evidence of crop stress in the soybeans – and this was after a very wet spring and early summer this year.

On-site Findings

Landscape Setting.

The Hilgers property is located in a rural area that mainly cropland and shoreland. Soybeans were planted and harvested in 2012. The site has been extensively tiled with agricultural field tile to lower the water table where needed. Two field tile outlets go under the road and empty into the lake.

A residential dwelling, adjacent to the lake, is located on the north side of CSAH 26. Agricultural fields are on the north, east and west sides of the site. Eagle Lake on the south side. Overall, the terrain is gently rolling and appears to be well drained in the lower elevation areas.

Along the lake and between CSAH 26, the embankment is steep, except for a small narrow area that is a fishing spot. Most of the summer, anglers can be seen fishing from the shore. A series of ice ramparts, about 2 to 3 feet wide, (about 10 feet wide total), are between the water and the embankment.

On-site Investigation.

Mr. Bovee's on-site investigation included the following: A preliminary survey indicating the proposed lot lines and topographic data were used to establish four sites for further investigation. These sites are shown in Figures 2 & 3. Once on site, the terrain was examined for areas within the till uplands that are plane to concave-shaped that may be conducive to creating hydrologic conditions that can create hydric soils and support hydrophytic vegetation. Four sites were selected. A Wetland Determination Data Form, Midwest Region, was completed at each site (Exhibit G). Each site was marked with a red-tipped wooden lathe.

Results of the On-site Investigation

Site 1.

Vegetation.

Site 1 is within a cultivated field used for row crops. Currently, there is soybean stubble on the surface but no growing vegetation is present. The entire area surrounding Site 1 is managed for agriculture with the usage of herbicides. There are no hydrophytic vegetation indicators at this site.

Soils.

The soil observed at this site is consistent with the Lura soils (211) mapped in the Blue Earth Soil Survey and has a thick, dark-colored surface horizon with grayish subsoil colors. The soil is poorly to very poorly drained meaning under normal conditions, precipitation would tend to pond at the surface and move very slowly downward through the soil profile. Redoximorphic features become evident 35+" below the surface. The soil meets hydric soil indicator AI2.

Hydrology.

The site is near the middle of a concave-shaped swale at the base of surrounding steep slopes. This site receives surface water runoff from the surrounding slopes in addition to that precipitation that fall directly on the site. A surface tile inlet is present near this site which receives surface water runoff and routes the water to a buried tile line which then outlets near a culvert which routes water to the east under County Road 26. The property owner has stated the area is tiled extensively (Exhibit B). It is this observer's opinion that the tile is functioning adequately provided the amount of spring rainfall in this area. Consequently, there are no wetland hydrologic indicators evident at this site.

Site 2

Vegetation.

Site 2 is within a cultivated field used for row crops. Currently, there is soybean stubble on the surface but no growing vegetation is present. The entire area surrounding Site 2 is managed for agriculture with the usage of herbicides. There are no hydrophytic vegetation indicators at this site.

Soils.

The soil observed at this site is outside the range of properties of the Cordova soils (109) mapped in the Blue Earth Soil Survey. The soil observed at this site has an over-thickened dark-colored surface horizon extending to at least 44 inches below the surface. No redoximorphic features were present. The soil on this site is moderately well to well drained, which is consistent with being in an upper footslope landscape position adjacent to steeper slopes. The soil observed at this site does not meet any hydric soil criteria or indicators.

Hydrology.

The site is near the middle of a slightly concave to plane-shaped drainway on the sideslope of surrounding steeper slopes. This site receives surface water runoff from the surrounding slopes in

addition to that precipitation that fall directly on the site. The property owner has stated the area is tiled extensively which outlets near a culvert which routes water to the south under County Road 26. It is this observer's opinion that the tile is functioning adequately considering the amount of spring rainfall to date in this area. There are no wetland hydrologic indicators evident at this site.

Site 3

Vegetation.

Site 3 is within a cultivated field used for row crops. Currently, there is soybean stubble on the surface but no growing vegetation is present. The entire area surrounding Site 3 is managed for agriculture with the usage of herbicides. The wetland criteria required to meet a prevalence of hydrophytic vegetation is not met on Site 3.

Soils.

The soil observed at this site is outside the range of properties of the Lerdal soils (138B2) or Kilkenny soils (238B) mapped in the Blue Earth Soil Survey and has an over-thickened dark-colored surface horizon extending to at least 45 inches below the surface. No redoximorphic features were present. The soil is well drained which is consistent with being in an upper footslope landscape position adjacent to steeper slopes. The soil does not meet any hydric soil criteria or indicators.

Hydrology

The site is near the middle of a slightly concave to plane-shaped drainway on the sideslope of surrounding steeper slopes. This site receives surface water runoff from the surrounding slopes in addition to that precipitation that fall directly on the site. The property owner has stated the area is tiled extensively which outlets near a culvert which routes water to the south under County Road 26. It is this observer's opinion that the tile is functioning adequately considering the amount of spring rainfall to date in this area. There are no wetland hydrologic indicators evident at this site.

Site 4

Vegetation.

Site 4 is within a cultivated field used for row crops. Currently, there is soybean stubble on the surface but no growing vegetation is present. The entire area surrounding Site 4 is managed for agriculture with the usage of herbicides. There are no hydrophytic vegetation indicators at this site.

Soils.

The soil observed at this site is consistent with the range of properties of the Cordova soils (109) mapped in the Blue Earth Soil Survey. The soil observed at this site has a slightly over-thickened dark-colored surface horizon with a grayish, mottled subsoil with redoximorphic features present. The soil on this site is poorly drained, which is consistent with the flat landscape at this site. The soil observed at this site does meet hydric soil indicator A12.

Hydrology.

The site is near the within a broad flat area on a summit. Slope shape is slightly concave to plane-shaped. This site receives direct precipitation and likely a very small amount of surface water runoff from the immediately adjacent low gradient sideslopes. The property owner has stated the area is tiled extensively which routes tile water through the Site 2 area and hence to a culvert which routes water to the south under County Road 26. Also, new road construction adjacent to the north of this site likely intercepts any excessive subsoil water that existing tile may not collect immediately. The newly constructed road ditches route both surface and subsurface water eastward down the new right of way. It is this observer's opinion that the tile and the new road ditches are functioning adequately to lower the water table in this area considering the amount of spring rainfall to date in this area. There are no wetland hydrologic indicators evident at this site.

Opinions

^The following opinions are based upon the findings contained in this report:

1. That the dominant vegetation observed on the site is upland vegetation and not hydrophytic vegetation.
2. That because of field tiling and the development of transportation corridors, the hydrology has been altered and will no longer support a dominance of hydrophytic vegetation.
3. That there are no wetlands on this site as a result of the altered hydrology.

Conclusion

A jurisdictional wetland must exhibit hydrophytic vegetation, hydric soil and hydrologic indicators to be considered a wetland. Hydric soil indicators are present at Site 1 and Site 4 but there are no wetland hydrophytic vegetation nor wetland hydrology indicators present at any of the four sites examined. Therefore, it is this observer's opinion that no wetlands are present on this development site.

Jurisdictional Contact

Blue Earth County is responsible for administering the Wetland Conservation Act in the county. Stacey Feser and Tim Grant, telephone 507-304-4381, are the county contacts.

Final Wetland Authority

The final wetland authority, regarding the presence or absences of wetlands on this property is under the jurisdiction of Blue Earth County and is subject to verification by the county.

Literature Reviewed

Blue Earth County Wet Area Delineation as Indicators for Potential Wetland Restoration Sites, 1998.

Blue Earth County Protected Waters & Wetlands, Revised 1996.

Classification of Wetlands and Deepwater Habitats of the United States Cowardin, et al., 1979.

Grasses: Identification Guide Lauren Brown, Houghton Mifflin Company 1979.

Federal Manual for Identifying and Delineating Jurisdictional Wetlands U.S. Army Corps of Engineers, 1987. and
Midwest Regional Supplement, 2008.

National Wetland Inventory Maps, U. S. Fish and Wildlife Service.

NRCS Web Soil Survey of Blue Earth County, Minnesota U.S. Department of Agriculture, 2012.

Surface Water Hydrology Atlas, Blue Earth County, Water Resources Center, M. S. U. 1993

USDA Aerial Crop Photographs, 1979 – 1995

Wetland Plants and Plant Communities of Minnesota and Wisconsin U.S. Army Corps of Engineers, 1987

Wetlands of the United States U.S. Fish and Wildlife Service Circular 39

Wetland Delineation Precipitation Data Retrieval from a Gridded Database: Minnesota Climatology Working Group
University of Minnesota, 2012

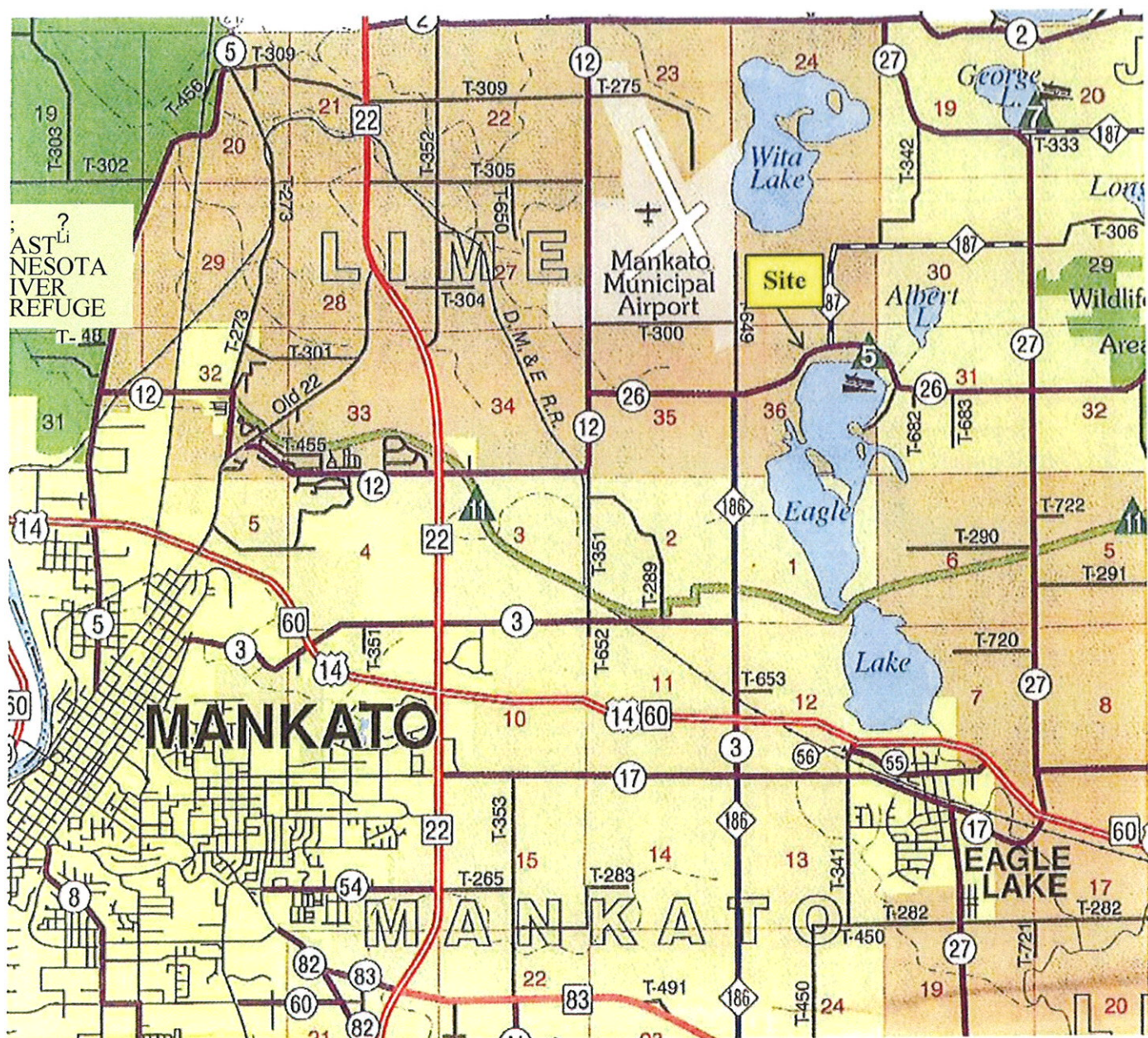
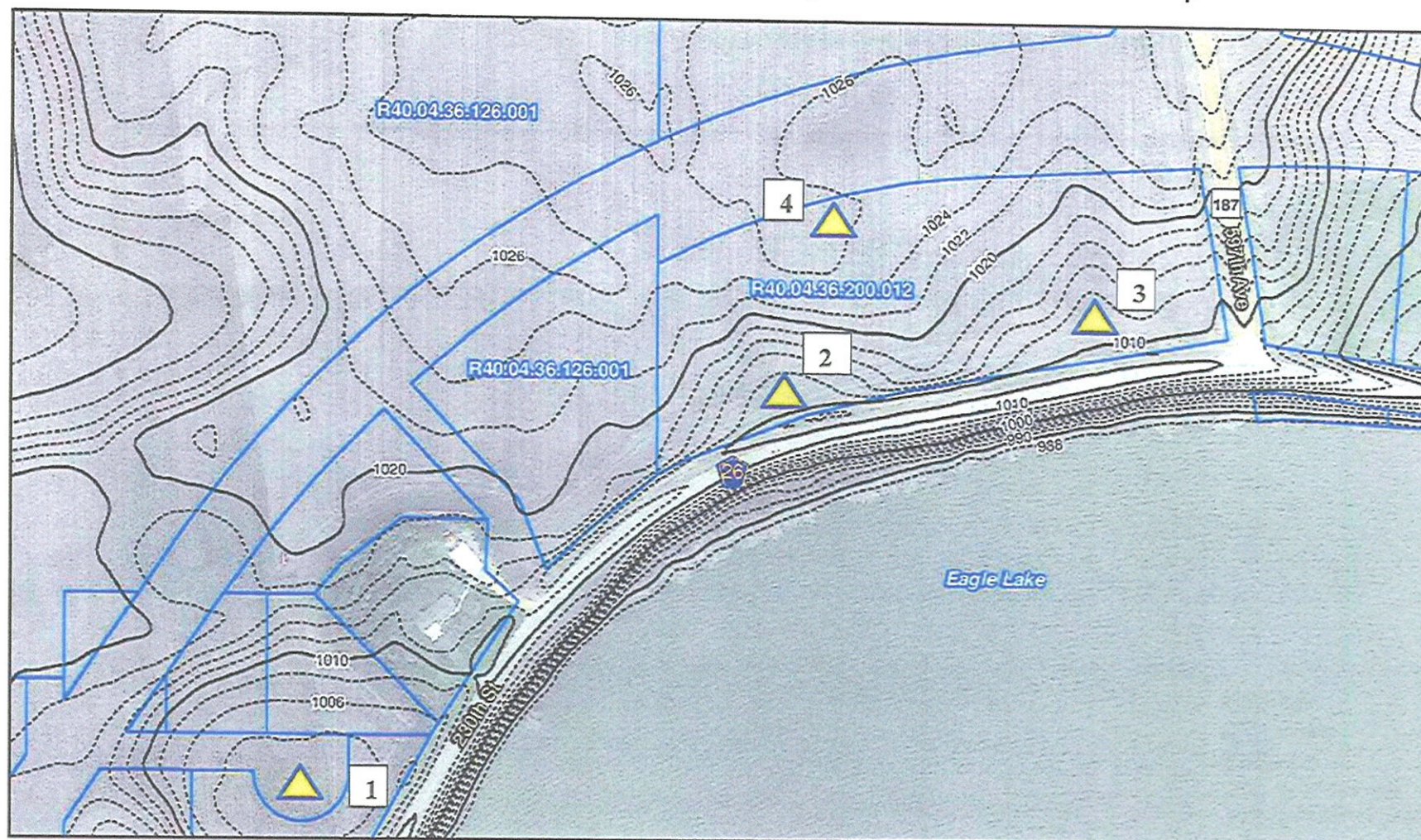


Figure 1

Hilger Development Site Location

Elevation Contours - Hilgers Property - Sec 36 Lime Township



Parcel

Elevation Contour

P_W, Index (10 Ft)

Intermediate (2 Ft)

0

500

1,000 Feet

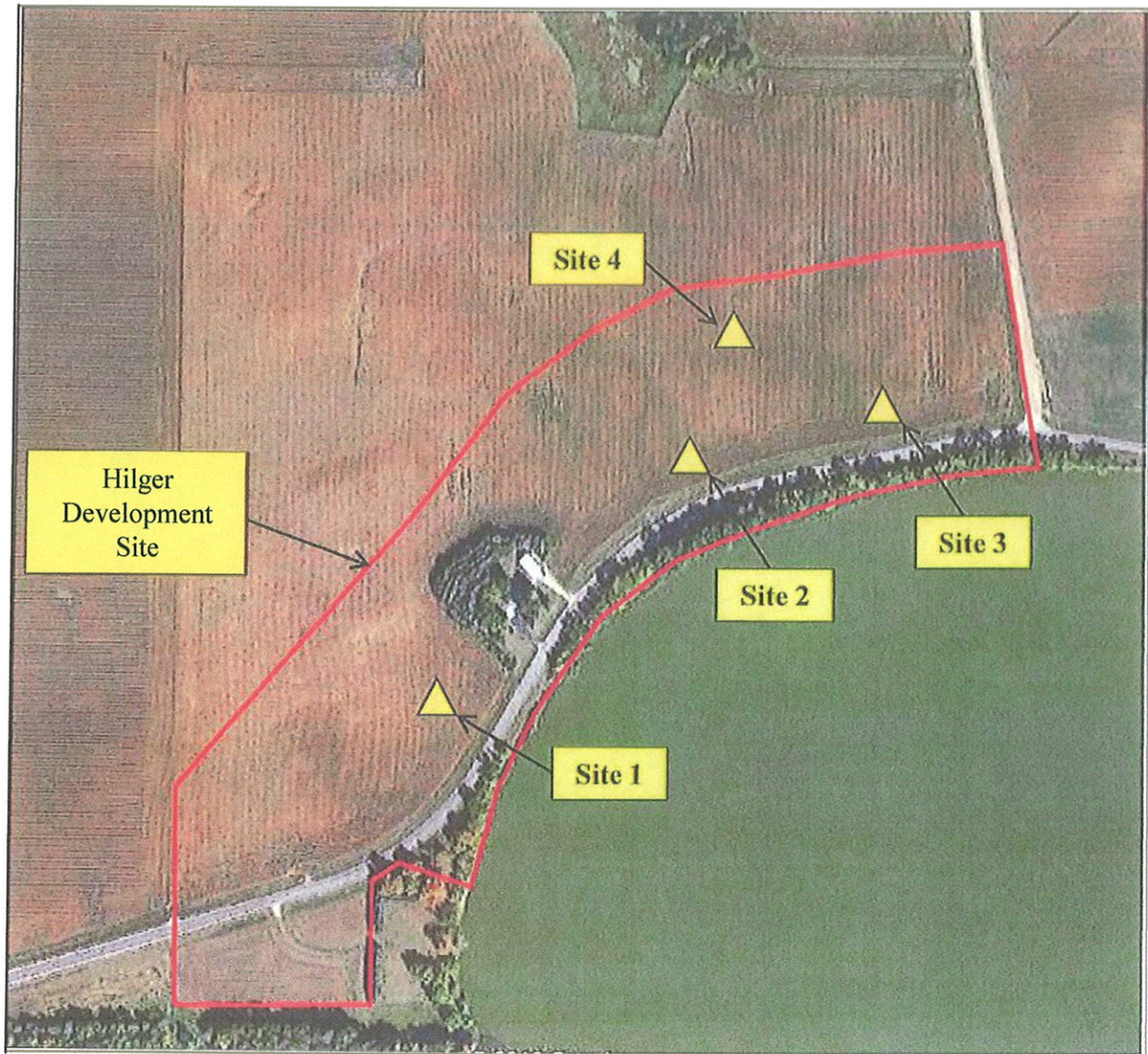
Source:

Contours - MN LIDAR 2012

Figure 2

Topographic Data — Hilger Development

Site Investigation Sites



North

Figure 3
Hilger Data Collection Sites

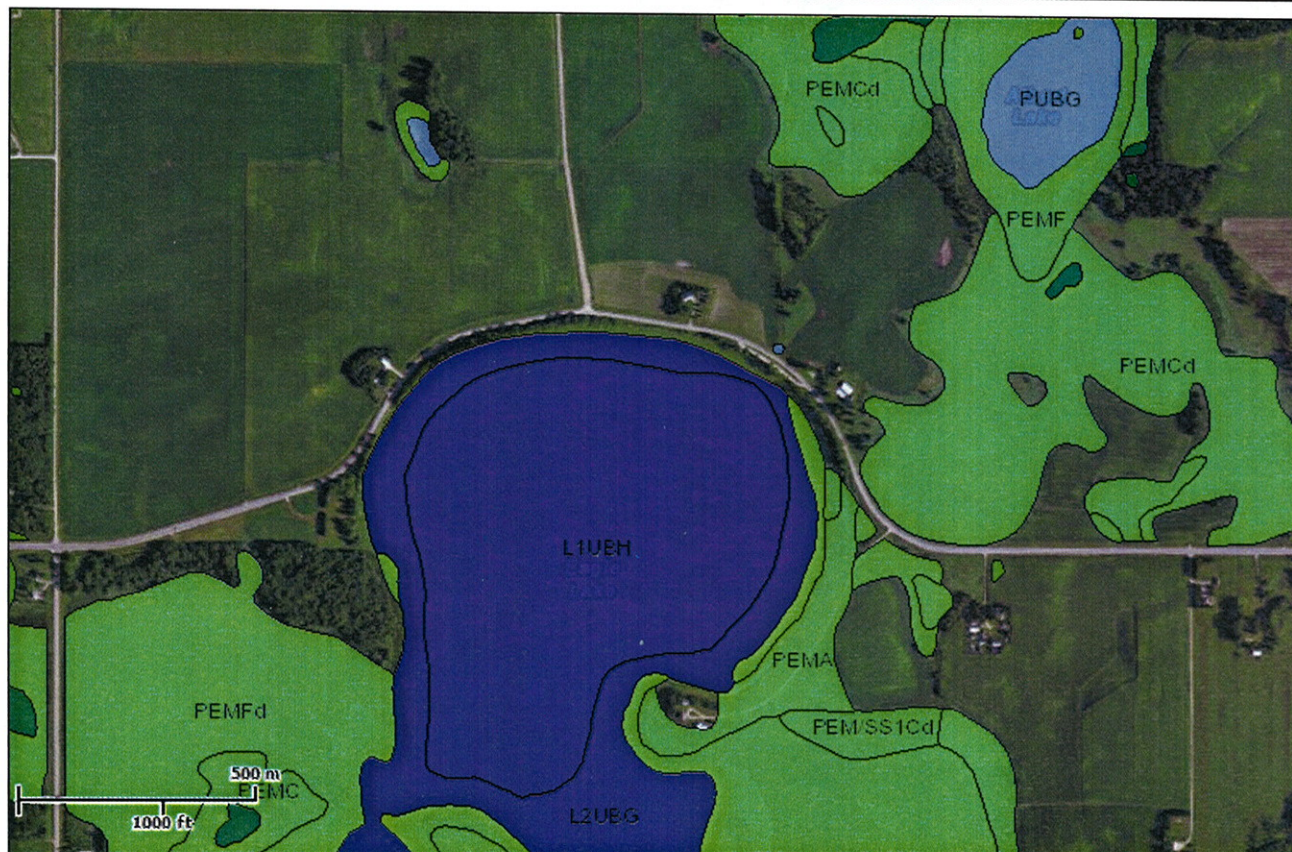


U.S. Fish and Wildlife Service

National Wetlands Inventory

Hilgers NWI Map

Jun 11, 2013



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

Exhibit A

[illegible]

Map Scale: 1:250,000 printed on folds (see APP. 1) sheet.

Meters

0 50 100 200 300

Feet

0 250 500 1,000 1,500

Map Unit Legend

Blue Earth County, Minnesota (MN013)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
94B	Terril loam, 2 to 6 percent slopes	4.2	8.1%
109	Cordova clay loam	9.5	18.4%
138B2	Lerdal silty clay loam, 2 to 6 percent slopes, eroded	4.3	8.3%
211	Lura silty clay	5.4	10.5%
238B	Kilkenny clay loam, 2 to 6 percent slopes	12.6	24.4%
238C	Kilkenny clay loam, 6 to 12 percent slopes	0.0	0.1%
239	Le Sueur clay loam, 1 to 3 percent slopes	12.4	24.1%
W	Water	3.2	6.2%
Totals for Area of Interest		51.5	100.0%

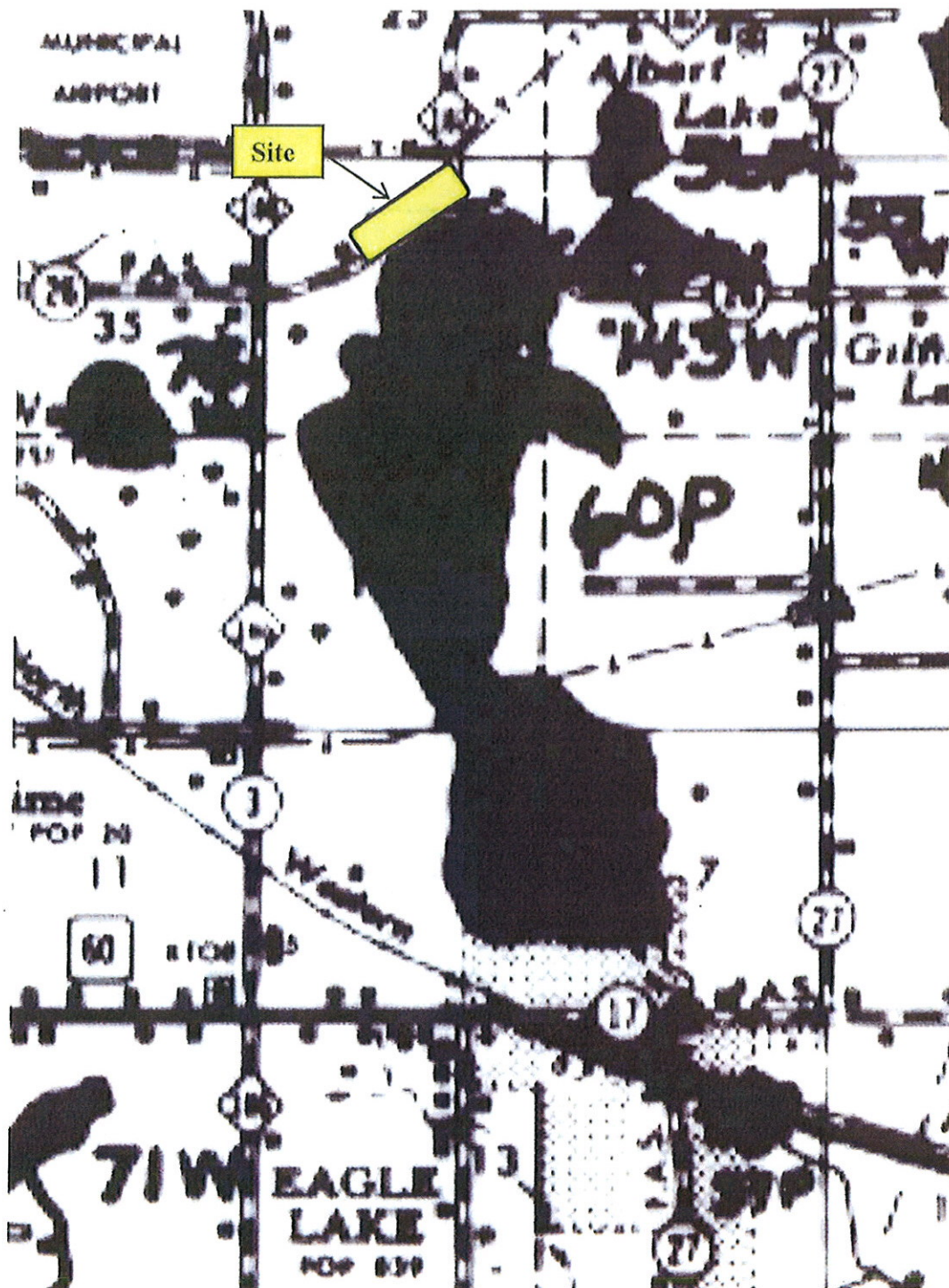


Exhibit A

MnDNR Protected Waters and Wetlands – Blue Earth County

Eagle Lake – 60P

Wetland Delineation Precipitation Data Retrieval from a Gridded Database: Section 36, T109N, R26W

1981-2010 Summary Statistics

multi-month totals: WARM: growing season (May thru Sep) ANN: calendar year (Jan thru Dec) WAT: water year (Oct. previous year thru Sep.)

Precipitation totals are in inches

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	WARM	ANN	WAT
30%	0.54	0.41	1.32	1.83	2.59	3.81	2.60	3.79	1.90	1.28	1.29	0.53	17.41	29.96	28.78
70%	1.07	0.90	2.40	3.48	4.46	5.99	5.35	4.90	3.19	3.21	2.27	1.38	21.31	34.19	32.98
mean	0.84	0.70	1.90	2.80	3.63	5.12	4.04	4.46	3.13	2.44	1.78	1.10	20.38	31.94	31.80

Year-to-Year Data

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	WARM	ANN	WAT
1995	0.15	0.06	2.74	2.76	3.11	3.93	6.33	3.63	4.01	4.62	0.70	0.84	21.01	32.88	31.87
1994	1.07	0.45	0.32	3.69	2.04	5.97	4.18	5.72	4.55	3.33	1.38	0.44	22.46	33.14	31.16
1993	0.80	0.60	1.26	2.99	5.76	9.93	7.22	9.13	3.16	0.42	1.83	0.92	35.20	44.02	48.30
1992	0.77	0.74	1.72	2.29	2.59	4.47	4.97	5.05	1.83	4.00	2.33	1.12	18.91	31.88	30.34
1991	0.23	0.65	2.65	4.86	6.59	3.99	5.25	4.62	4.64	1.14	4.23	0.54	25.09	39.39	36.36
1990	0.06	0.45	3.73	4.05	4.48	7.67	7.30	4.16	1.65	1.56	0.33	0.99	25.26	36.43	35.65
1989	0.23	0.52	2.36	3.23	2.07	3.54	2.50	2.62	1.84	0.28	1.51	0.31	12.57	21.01	22.23
1988	1.37	0.24	1.14	2.84	1.51	0.77	1.17	4.35	2.34	0.41	2.54	0.37	10.14	19.05	20.13
1987	0.63	0.00	1.12	0.27	2.25	2.67	5.57	4.21	1.73	0.75	2.29	1.36	16.43	22.85	21.67
1986	0.72	0.45	1.85	4.40	2.76	9.40	6.49	3.08	8.18	1.97	1.01	0.24	29.91	40.55	43.05
1985	0.56	0.31	3.65	3.46	1.76	2.91	2.22	4.86	5.23	3.12	1.47	1.13	16.98	30.68	34.30
1984	0.65	0.97	1.63	3.15	2.83	7.36	2.63	2.84	2.48	5.66	1.37	2.31	18.14	33.88	32.41
1983	0.53	0.87	2.73	2.77	4.32	5.02	2.80	4.62	2.64	3.16	3.56	1.15	19.40	34.17	35.89
1982	1.66	0.46	1.21	1.33	5.83	1.99	2.54	4.96	3.27	3.62	3.00	2.97	18.59	32.84	28.67
1981	0.20	1.50	0.82	2.28	3.51	4.94	6.59	7.97	1.62	3.16	1.35	0.91	24.63	34.85	31.28
1980	0.82	0.83	0.93	1.18	2.31	3.14	0.32	6.45	3.36	1.21	0.19	0.45	15.58	21.19	24.29
1979	1.65	1.05	3.29	1.38	2.53	4.49	3.11	7.59	1.68	2.73	1.92	0.30	19.40	31.72	30.34

Exhibit D

Wetland Delineation Precipitation Data Retrieval from a Gridded Database

WETLAND MAPPING CONVENTIONS REVIEW RECORD

Exhibit E

Project Name: Replat of Hilgers' Subdivision **Date:** 10/12/12 **Owner/Client:** Jim Hilgers

Investigator: Bovee/Hanna

Location: Lime Township, NE ¼, NW 1/4, Govt. Lot 2, Section 36, T109N, R26W

YEAR	Climate Condition	Symbols: CS -Crop Stress, MS -Minor Stress, DO -Drowned Out, NC -Not Cropped, SW -Standing Water, WS -Wetland Signature, AP -Altered Pattern, NV -Normal Vegetative Cover					
	Wet/Dry/Normal & Growing Season Rainfall	Overall	Site 1	Site 2	Site 3	Site 4	Comment
1979	W-19.40	NV	NV	NV	NV	NV	Very pale blue Slide
1980	D-15.58	NV	NV	NV	NV	NV	
1981	W-24.63	NV	NV	NV	NV	NV	
1982	N-18.59	NV	NV	NV	NV	NV	
1983	N-19.40	NV	NV	NV	NV	NV	
1984	N-18.14	NV	MS	MS	MS	MS	Very faint
1985	N-16.98	WS	WS	WS	WS	WS	xx
1986	W-29.91	WS	WS	NV	MS	NV	
1987	N-16.43	NV	NV	MS	NV	MS	
1988	D-10.14	CS	CS	CS	CS	CS	Very dry
1989	D-12.57	CS	WS	WS	NV	MS	
1990	W-25.26	WS	WS	NV	NV	NV	
1991	W-25.09	NV	NV	NV	NV	NV	
1992	N-18.91	MS	MS	MS	MS	MS	Dark
1993	W-35.20	SW	SW	NV	WS	WS	
1994	W-22.46	CS	WS	MS	MS	MS	
1995	W-21.01	NV	NV	NV	NV	NV	
Summary Normal Years							
# Normal Years*			6				
# Normal Years with wet signatures			1				
% Normal Years with wet signatures			16.6%				
Summary Wet Years							
# Wet Years*			8				
# Wet Years with Normal signatures			4				
% Wet Years with Normal signatures			50%				

N.

2/29.40 pm

1949

S25 L

(Hot wire
under ground)

1916

1983

1975

3 ft vertical road shot

NSP

1886

1885

S.36 L

1949

25 1/3 A.

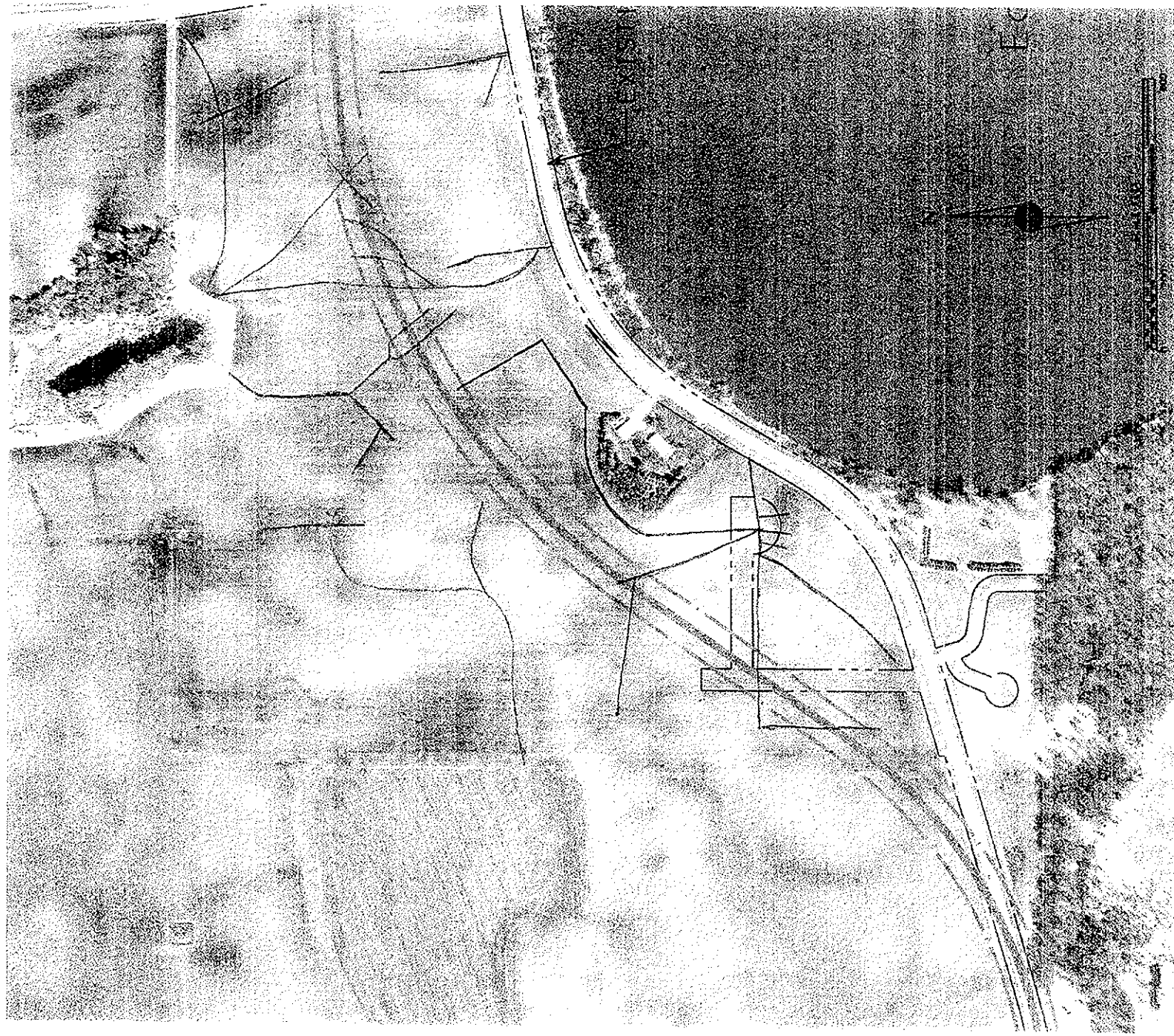
22:3 open -
Road taker some

R.
S.

E

R

P



CONCEPT PLAN REPLACEMENT OF JACKSON, SUELED & SUBDIVISION 2 AND PART OF 1/4 - NW 1/4 & GOVT. LOT 2. ALL IN SEC. 36, T109N, R126W	FOR SHEDS DATE: 04-20-2011 BY: 1000	1 2 3 4 5 6 7 8 9 10 11 12  1000-25081 NO CLASHES EXISTING MOBILE HOME 10
--	--	--

2. Walked this area, it is a swamp (m. 2.3 miles)
of ice ramparts (2-10' wide to 1') between
the 'beach' of the lake & steep slopes
on north side. Veg is crummet F&T
F&T, but also lots of poisonivy (RAC)
(more). There is a thin areas nearby
w/ thin ice. @ Horn, what is this for
Eagle Lake?
Mature trees are cottonwood,
green ash, a few willow next to water.
clumps of M.L. cattail along water.

I talked w/ Lady H. Iger re: getting a
t.l.e map. Gave him
Ries phone #.

3285

27-11

1261.47

5545 dard on

Read Ottawa
drawn on
this plot

EAGLE LAKE

No
wetland

No crop stress

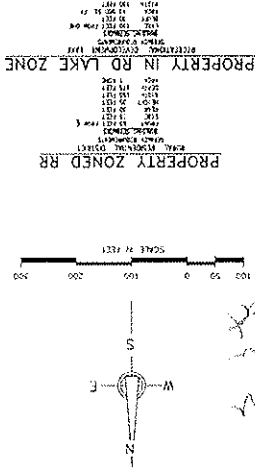


Exhibit C - Hilger Site 1
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hilger Development City/County: Mankato-Blue Earth Sampling Date: May 12, 2013
 Applicant/Owner: Hilger State: Minnesota Sampling Point: 1
 Investigator(s): Terry Bovee Section, Township, Range: Sec 36, T109N, R26W
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave
 Slope (%): 0 to 1 Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lura (211) VWI Classification: none

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation X, soil _____, or hydrology X significantly disturbed? Are "normal circumstances" present? No
 Are vegetation X, soil _____, or hydrology X naturally problematic? present? No
SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>Y</u>	
Wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)
 Site 1 is within a cultivated field managed for row crops. A surface tile intake is present in this small swale. Soybean stubble still present, but other parts of field are being prepared for corn planting.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>0</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
Sapling/Shrub stratum	(Plot size: _____)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: _____)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>0</u>	= Total Cover		
Woody vine stratum	(Plot size: _____)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)
 Site 1 area is managed for row crops, therefore, with herbicide useage no other vegetation present other than the intended crop. At time of field visit, no crops had been planted but preparation for seeding was underway.

Exhibit C - Hilger Site 1

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-9	10YR2/2	100					loam	slope wash deposits
9-35	N2/0	100					silty clay	original surface
35-44	5Y3/1	95	5Y4/2	5	D	M	silty clay	
44+	5Y4/1	95	5Y5/4	5	C	M	silty clay loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histisol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ 2 cm Muck (A10)
☐ Depleted Below Dark Surface (A11)
☒ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric soil present? Y

Remarks:

Cumulic epiaquoll, consistent with mapping unit. This site is located within a concave swale surrounded by steeper slopes and a roadway. Recent heavy rains have likely contributed to overwash deposits.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Water-Stained Leaves (B9)

- ☐ Aquatic Fauna (B13)
☐ True Aquatic Plants (B14)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Gauge or Well Data (D9)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? Yes No X Depth (inches):
 Water table present? Yes X No Depth (inches): 40
 Saturation present? Yes X No Depth (inches): 38
 (includes capillary fringe)

Wetland
hydrology
present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

This site receives surface runoff from adjacent hills to west, but there is a surface tile inlet which drains surface water quickly to an outlet exiting at the east side of site via a culvert under the road. This swale has been tiled extensively according to tile map provided by property owner.

Exhibit C - Hilger Site 2
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Hilger Development City/County: Mankato-Blue Earth Sampling Date: May 12, 2013
 Applicant/Owner: Hilger State: Minnesota Sampling Point: 2
 Investigator(s): Terry Bovee Section, Township, Range: Sec 36, T109N, R26W
 Landform (hillslope, terrace, etc.): footslope Local relief (concave, convex, none): plane
 Slope (%): 3 to 4 Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name Cordova (109) NWI Classification: none

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation X, soil _____, or hydrology X significantly disturbed? Are "normal circumstances" _____

Are vegetation X, soil _____, or hydrology X naturally problematic? present? No

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>N</u>	
Wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

Site 2 is within a cultivated field managed for row crops. Soybean stubble still present, but other parts of field are being prepared for corn planting. Area is tiled according to tile map provided by property owner. Culvert under road at edge of field is outlet for tile water.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>0</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
Sapling/Shrub stratum (Plot size: _____) 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ <u>0</u> = Total Cover					
Herb stratum (Plot size: _____) 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____ 9 _____ 10 _____ <u>0</u> = Total Cover					
Woody vine stratum (Plot size: _____) 1 _____ 2 _____ <u>0</u> = Total Cover					
_____ <u>0</u> = Total Cover					

Hydrophytic Vegetation Indicators:

____ Rapid test for hydrophytic vegetation

____ Dominance test is >50%

____ Prevalence index is ≤3.0*

____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

Site 2 area is managed for row crops, therefore, with herbicide usage no other vegetation present than the intended crop. At time of field visit, no crops had been planted but preparation for seeding was underway.

SOIL

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)							
Depth (Inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*		
0-9	10YR2/2	100				loam	
9-37	10YR2/1	100				loam	
37-44	10YR2/2	100				loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators: ☐ Histisol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Stratified Layers (A5) ☐ 2 cm Muck (A10) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ 5 cm Mucky Peat or Peat (S3)	☐ Sandy Gleyed Matrix (S4) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)	Indicators for Problematic Hydric Soils: ☐ Coast Prairie Redox (A16) (LRR K, L, R) ☐ Dark Surface (S7) (LRR K, L) ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) ☐ Iron-Manganese Masses (F12) (LRR K, L, R) ☐ Very Shallow Dark Surface (TF12) ☐ Other (explain in remarks) *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic
---	--	---

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric soil present? <u> N </u>
---	-----------------------------------

Remarks:
Well drained Cumulic hapludoll, not consistent with mapping unit. This site is located within a plane slope in a footslope position that is surrounded by steeper slopes and a roadway.

HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
☐ Surface Water (A1)	☐ Aquatic Fauna (B13)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ True Aquatic Plants (B14)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Presence of Reduced Iron (C4)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Thin Muck Surface (C7)	☐ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Gauge or Well Data (D9)	☐ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)		
☐ Sparsely Vegetated Concave Surface (B8)			
☐ Water-Stained Leaves (B9)			

Field Observations:				Wetland hydrology present? <u> N </u>
Surface water present?	Yes ☐	No ☒	Depth (inches): _____	
Water table present?	Yes ☐	No ☒	Depth (inches): _____	
Saturation present?	Yes ☐	No ☒	Depth (inches): _____	
(includes capillary fringe)				

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
This site receives surface runoff from adjacent hills to north that flows southward to edge of field where surface water drains to a culvert under the road to the south. In addition to runoff leaving site due to slopes, this minor drainway-sideslope area has been tiled according to tile map provided by property owner.

Exhibit C - Hilger Site 3
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Hilger Development City/County: Mankato-Blue Earth Sampling Date: May 12, 2013
Applicant/Owner: Hilger State: Minnesota Sampling Point: 3
Investigator(s): Terry Bovee Section, Township, Range: Sec 36, T109N, R26W
Landform (hillslope, terrace, etc.): footslope Local relief (concave, convex, none): plane
Slope (%): 3 to 4 Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name Lerdal 138B2 and Kilkenny (238B) VWI Classification: none

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation X, soil _____, or hydrology X significantly disturbed? Are "normal circumstances" present? No

Are vegetation X, soil _____, or hydrology X naturally problematic? present? No

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>N</u>	
Wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

Site 3 is within a cultivated field managed for row crops. Soybean stubble still present, but other parts of field are being prepared for corn planting. Area is tiled according to tile map provided by property owner. Culvert under road at edge of field is outlet for tile water.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>0</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
Sapling/Shrub stratum	(Plot size: _____)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: _____)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>0</u>	= Total Cover		
Woody vine stratum	(Plot size: _____)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)

Site 3 area is managed for row crops, therefore, with herbicide usage no other vegetation present other than the intended crop. At time of field visit, no crops had been planted but preparation for seeding was underway.

Exhibit C - Hilger Site 3
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Hilger Development City/County: Mankato-Blue Earth Sampling Date: May 12, 2013
 Applicant/Owner: Hilger State: Minnesota Sampling Point: 3
 Investigator(s): Terry Bovee Section, Township, Range: Sec 36, T109N, R26W
 Landform (hillslope, terrace, etc.): footslope Local relief (concave, convex, none): plane
 Slope (%): 3 to 4 Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lerdal 138B2 and Kilkenny (238B) NWI Classification: none

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation X, soil _____, or hydrology X significantly disturbed? Are "normal circumstances" present? No

Are vegetation X, soil _____, or hydrology X naturally problematic? present? No

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>N</u>	
Wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

Site 3 is within a cultivated field managed for row crops. Soybean stubble still present, but other parts of field are being prepared for corn planting. Area is tiled according to tile map provided by property owner. Culvert under road at edge of field is outlet for tile water.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>0</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
Sapling/Shrub stratum (Plot size: _____)					
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum (Plot size: _____)					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
		<u>0</u>	= Total Cover		Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
Woody vine stratum (Plot size: _____)					
1					
2					
		<u>0</u>	= Total Cover		Hydrophytic vegetation present? <u>N</u>

Remarks: (Include photo numbers here or on a separate sheet)

Site 3 area is managed for row crops, therefore, with herbicide usage no other vegetation present other than the intended crop. At time of field visit, no crops had been planted but preparation for seeding was underway.

Exhibit C - Hilger Site 3

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-9	10YR2/2	100					loam	
9-36	10YR2/1	100					loam	
36-45	10YR2/2	100					loam	
45-52	10YR3/2	100					loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils:	
☐ Histisoi (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redox (A16) (LRR K, L, R)	
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Dark Surface (S7) (LRR K, L)	
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ Iron-Manganese Masses (F12) (LRR K, L, R)	
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix (F2)	☐ Very Shallow Dark Surface (TF12)	
☐ 2 cm Muck (A10)	☐ Depleted Matrix (F3)	☐ Other (explain in remarks)	
☐ Depleted Below Dark Surface (A11)	☐ Redox Dark Surface (F6)		
☐ Thick Dark Surface (A12)	☐ Depleted Dark Surface (F7)		
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)		
☐ 5 cm Mucky Peat or Peat (S3)			

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric soil present? <u> N </u>
--	-----------------------------------

Remarks:
Well drained Cumulic hapludoll, may be considered a contrasting inclusion within mapping unit. This site is located within on a plane slope in a footslope position that is surrounded by steeper slopes and a roadway.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Aquatic Fauna (B13)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ True Aquatic Plants (B14)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Presence of Reduced Iron (C4)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Thin Muck Surface (C7)	☐ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Gauge or Well Data (D9)	☐ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)		
☐ Sparsely Vegetated Concave Surface (B8)			
☐ Water-Stained Leaves (B9)			

Field Observations:				Wetland hydrology present? <u> N </u>
Surface water present?	Yes ☐ No ☒	Depth (inches):	_____	
Water table present?	Yes ☐ No ☒	Depth (inches):	_____	
Saturation present? (includes capillary fringe)	Yes ☐ No ☒	Depth (inches):	_____	

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
This site receives surface runoff from adjacent hills to north that flows southward to edge of field where surface water drains to a culvert under the road to the south. In addition to runoff leaving this site due to slopes, this minor drainway-sideslope area has been tiled according to tile map provided by property owner.

Exhibit C - Hilger Site 4
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Hilger Development City/County: Mankato-Blue Earth Sampling Date: May 12, 2013
 Applicant/Owner: Hilger State: Minnesota Sampling Point: 4
 Investigator(s): Terry Bovee Section, Township, Range: Sec 36, T109N, R26W
 Landform (hillslope, terrace, etc.): summit Local relief (concave, convex, none): concave to plane
 Slope (%): 1 to 2 Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name Cordova (109) VWI Classification: none

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation X, soil _____, or hydrology X significantly disturbed? Are "normal circumstances" present? No
 Are vegetation X, soil _____, or hydrology X naturally problematic? present? No

SUMMARY OF FINDINGS (If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>Y</u>	
Wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

Site 4 is within a cultivated field managed for row crops. Soybean stubble still present, but other parts of field are being prepared for corn planting. Area is tiled according to tile map provided by property owner. A new roadway w/associated deep road ditches is under construction adjacent to this site.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>0</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
Sapling/Shrub stratum	(Plot size: _____)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: _____)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1					
2					
3					
4					
5					
6					
7					
8					
9					
		<u>0</u>	= Total Cover		
Woody vine stratum	(Plot size: _____)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)

Site 4 area is managed for row crops, therefore, with herbicide usage no other vegetation present other than the intended crop. At time of field visit, no crops had been planted but preparation for seeding was underway.

Exhibit C - Hilger Site 4

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-10	10YR2/1	100					clay loam	
10-18	10YR3/1	100					clay loam	
18-35	2.5Y5/2	95	2.5Y5/4	5	C	M	clay loam	
35-44	5Y5/2	95	2.5Y5/6	5	C	M	clay loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ☐ Histisol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ 2 cm Muck (A10)
☐ Depleted Below Dark Surface (A11)
☒ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Dark Surface (S7) (LRR K, L)
☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Very Shallow Dark Surface (TF12)
☐ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

 Type: _____
 Depth (inches): _____
Hydric soil present? Y

Remarks:

Cumulic epiaquoll, surface horizon is thicker than mapped unit but drainage and subsoil is similar to Cordova. This site is located within a slightly concave to plane shaped area within a broad flat area. Area is extensively tiled according to tile map provided by property owner.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
☐ True Aquatic Plants (B14)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Gauge or Well Data (D9)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? Yes _____ No X Depth (inches): _____
 Water table present? Yes _____ No X Depth (inches): _____
 Saturation present? Yes _____ No X Depth (inches): _____
 (includes capillary fringe)

 Wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

This site receives direct precipitation but little surface runoff from adjacent area. This flat area has been tiled extensively according to tile map provided by property owner. New road construction w/associated deep road ditches has likely reduced any subsoil water that the tile is not already draining away. No saturation or water table observed in soil profile.



MANKATO PLANNING COMMISSION
Regular Meeting June 22, 2016 - 6:30 p.m.
Mankato Room, First Floor, Intergovernmental Center

Any person speaking to the Commission shall give to the Secretary of the Commission the NAME and HOME ADDRESS of such person prior to speaking.

1. **CALL TO ORDER**

2. **APPROVAL OF AGENDA**

3. APPROVAL OF MINUTES

May 2016 Minutes

4. **OLD BUSINESS**

CY26-16 **FINAL PLAT REVIEW OF EAGLE BLUFF SUBDIVISION...THE PROPERTY IS DESCRIBED AS PART OF SECTION 36, TOWNSHIP 109 NORTH, RANGE 26 WEST (LIME TOWNSHIP)...JAMES L. HILGERS**

5. **NEW BUSINESS**

CY27-16 **PRELIMINARY AND FINAL PLAT . . . VAN TOL PROPERTIES ADDITION . . . TRACT B, RLS 171, PART OF LOTS 1 AND 2, AND LOT 3 HILLTOP ADDITION . . . VAN TOL PROPERTIES LLC**

Anticipated date of Council action will be July 11, 2016

CY28-16 **CERTIFICATE OF DESIGN COMPLIANCE IN THE DOWNTOWN DESIGN DISTRICT.... CARNEGIE ART CENTER... MANKATO AREA ARTS COUNCIL...LOTS 7 & 8, BLOCK 27, CITY OF MANKATO (120 SOUTH BROAD STREET)**

Meeting Date: 06/22/2016

Title

FINAL PLAT REVIEW OF EAGLE BLUFF SUBDIVISION...THE PROPERTY IS DESCRIBED AS PART OF SECTION 36, TOWNSHIP 109 NORTH, RANGE 26 WEST (LIME TOWNSHIP)...JAMES L. HILGERS

Applicant

The applicant, James L. Hilgers, owns the property.

Request

The applicant, James L. Hilgers, is requesting a final plat review of Eagle Bluff Subdivision, a ten-lot subdivision. The property is described as part of Section 36, Township 109 North, Range 26 West (Lime Township).

Location

The property is described as part of Section 36, Township 109 North, Range 26 West (Lime Township).

Existing Land Use

The property has most recently been used for row crops.

Zoning

The property is zoned Agricultural.

Other Board or Commission

The Lime Township Board met on June 14, 2016 and recommended approval of the final plat.

Site Plan Review Comments

The Site Plan and Traffic Advisory Committee met on June 14, 2016 and stated that the flight zones shall be depicted on the plat.

Review

The applicant, James L. Hilgers, is requesting a final plat review of Eagle Bluff Subdivision, a ten-lot subdivision. The property is described as part of Section 36, Township 109 North, Range 26 West (Lime Township).

Block 1 of the subdivision is on the western portion of the site. Block 1 contains Lots 1, 2, and 3. Lot sizes range from 94,500 square feet to 130,000 square feet. Lot 1 will have access off of the proposed Cody Lane. Lots 2 and 3 will have a shared driveway accessed via County Road 26. A drainage facility for the subdivision will be constructed on Lots 1 & 2.

Block 2 of the subdivision is on the eastern portion of the site. Block 2 contains seven lots (1-7). Lot sizes range from 83,400 square feet to 130,500 square feet. Proposed Lot 7 contains the applicant's dwelling. Access to Block 2 will be provided via Miranda Trail which connects to County Road 26. A drainage facility will be constructed on Lots 6 and 7, Block 2.

The site contains 10 lots. 6 of the lots are being relocated from a more restrictive flight zone into the proposed plat. It should be noted that the applicant is only allowed to transfer lots approved or conditionally approved in the airport flight zone. The lots within this flight zone will be changed to outlots and become non-buildable lots (Outlots A, B, and C). 3 of the lots are allowed based on the number of quarter-quarter sections within the plat. The applicant

also is granted a bonus lot from 1 of the aforementioned quarter-quarter sections because the applicant owns more than 20 acres in the quarter-quarter section.

Outlots D and E are remnant parcels of land that are not buildable. Outlots F and G will be retained for farming.

During the original review a number of issues were identified including parcels included in the plat under separate ownership, drainage, an unsealed well, and street naming.

Mr. Hilgers is subdividing the property which has been previously approved by the Lime Township Board and the Lime Township Planning Board as a preliminary plat. During the previous reviews of the plat, a piece of Mankato Regional Airport property was included in the plat which raised concerns from an abutting property owner. That lot has been removed from the plat. The Mankato Regional Airport property is in the disposal process.

The applicant has submitted a drainage report that identifies improvements needed as the property is developed.

The unsealed well that was discussed in the preliminary review of the project was identified. The well is not on property within the subdivision and the property owner is working with Blue Earth County to have the well sealed.

Staff contacted Blue Earth County staff regarding the street naming scheme. Blue Earth County staff stated the street naming scheme is acceptable and conforms to the standard. County staff considered other properties within the zip code prior to making this determination.

The applicant is working with a septic installer to determine a new location for the secondary septic systems.

Findings

Staff submits the following findings:

1. The final plat conforms to the Lime Township Zoning Ordinance.
2. The final plat conforms to the City of Mankato and ?Lime Township Orderly Annexation Agreement.

Recommendation

Staff recommends the approval of the final plat.

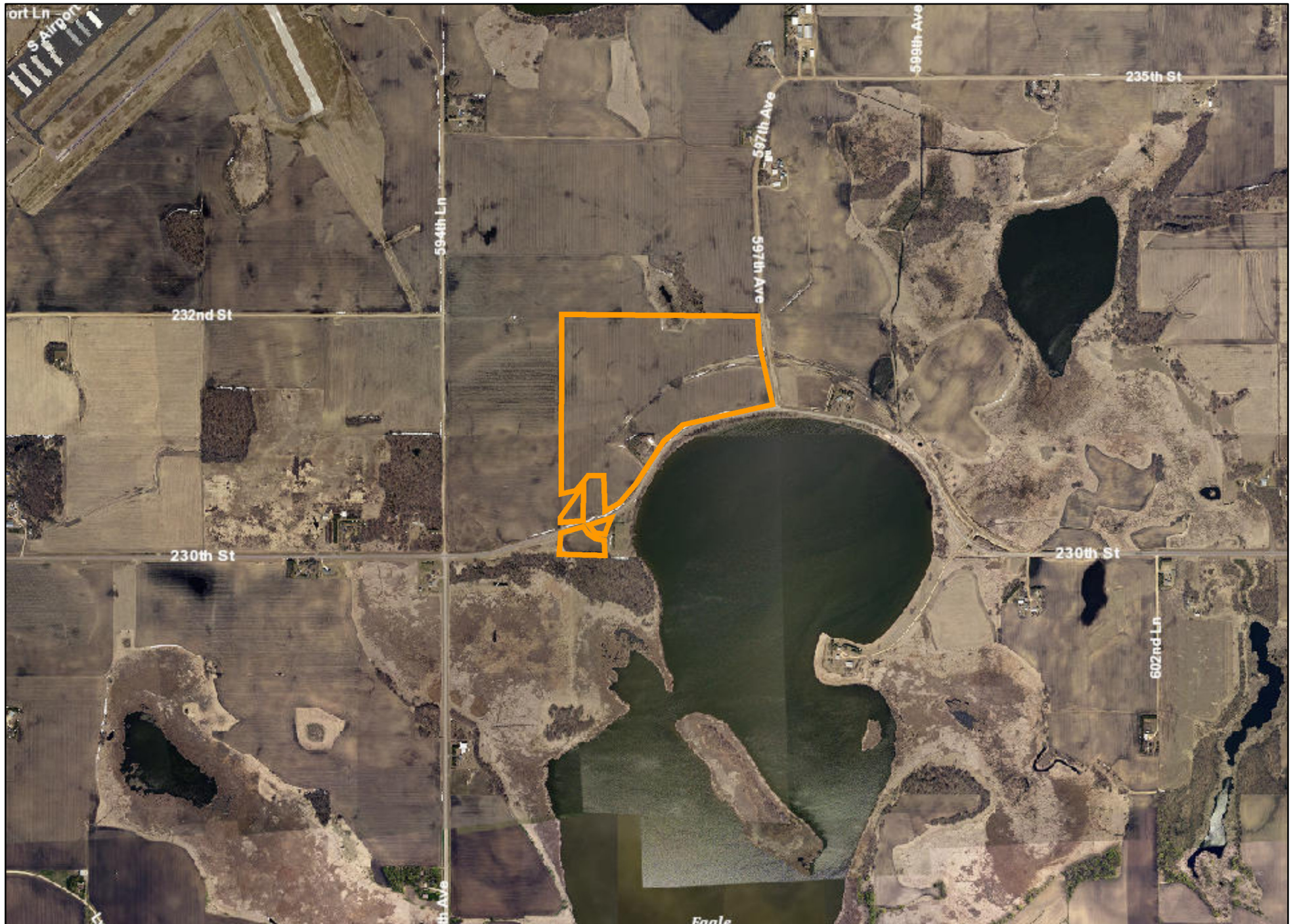
Attachments

General Location Map

Final Plat

Drainage Report

General Location Map



Date: May 2016

Author:

This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation.

EAGLE BLUFF
BLUE EARTH COUNTY, MINNESOTA

INSTRUMENT OF DEDICATION

Know all men by these presents that we, Eagle Bluff Properties, LLC, a Minnesota limited liability company, owners of the following described property to wit:

That part of Lots 1 and 2, Block No. One and part of Lot 1, Block No. Two and part of vacated North Road, all according to the plat of Hilgers' Subdivision No. 2, on file and of record with the Blue Earth County Recorder and that part of the Northeast Quarter of the Northwest Quarter of Section 36 and that part of Government Lots 4 and 5 of Section 36, all in Township 109 North Range 26 West, Blue Earth County, Minnesota all more particularly described as:

Beginning at an iron pipe monument designating the North Quarter corner of said Section 36; thence South 89 degrees 50 minutes 09 seconds East, (Minnesota County Coordinate System - Blue Earth County Zone - NAD83 - 1996), along the north line of said Government Lot 4, a distance of 867.4 feet to the northwest corner of said Government Lot 4, Blue Earth County, Minnesota, said corner of said Government Lot 4, Blue Earth County Recorder; thence South 02 degrees 16 minutes 40 seconds East, along the northerly line of said Parcel E, 325.69 feet; thence South 40 degrees 04 minutes 14 seconds West, along said northerly line, 111.10 feet; thence South 82 degrees 16 minutes 51 seconds West, along said northerly line, 203.25 feet to the point of tangency of a circular arc, the center of which is the northeast corner of said Parcel D, along the northwestern line of said Parcel D, a distance of 148.48 feet to the High Point of Way 10, Blue Earth County Recorder; thence along a circular arc, the center of which is the northeast corner of said Parcel D, 28, along a 2143.48 foot radius curve, central angle = 47 degrees 48 minutes 29 seconds , an arc distance of 1788.53 feet to the point of tangency of said curve; thence South 34 degrees 28 minutes 23 seconds West, along the tangent of said curve, along said northwesterly line and along the northwesterly lines of Parcel D, 786.46 feet to the point of intersection with the west line of said Government Lot 5; thence North 00 degrees 00 minutes 33 seconds West, along said west line, 681.25 feet to the northwest corner of said Government Lot 5; thence continuing North 00 degrees 00 minutes 33 seconds West, along said west line of the Northeast Quarter of the Northwest Quarter of said Section 36, a distance of 1322.25 feet to the northeast corner of the Northeast Quarter of the North Quarter of said Section 36; thence South 89 degrees 49 minutes 21 seconds East, along the north line of the Northwest Quarter of said Section 36, a distance of 1317.19 feet to the point of beginning. Containing 45.18 acres.

ALSO

Lot 1, Block 1 and Lots 1, 2, 3, and Block 2 and part of Outlot B and vacated Loretto Court, all according to the plat of Hilgers' Subdivision, on file and of record with the Blue Earth County Recorder and part of Lots 2 and 3, Block No. One and part of Lots 1 and 2 and all of Lot 3, Block No. Two and all of Lot 2, Block No. Three and part of vacated North Road and part of vacated East Court, all according to the plat of Hilgers' Subdivision, No. 1, on file and of record with the Blue Earth County Recorder and Parts 1, 5 and 6 of Blue Earth County Highway Right Of Way Plat No. 28, on file and of record with the Blue Earth County Recorder and that part of the Northeast Quarter of the Northwest Quarter of Section 36 and that part of Government Lots 4 and 5 of Section 36, all in Township 109 North Range 26 West, Blue Earth County, Minnesota, and that part of vacated County State Aid Highway No. 26, all more particularly described as:

[illegible]

do hereby declare that we have caused the above described property to be surveyed and platted and monuments to be set, that we have named said platted area EAGLE BLUFF, and that we dedicate to the public use the public ways and easements as shown hereon.

Dated this _____ day of _____, 2016 by James L. Hilgers,
Chief Manager of Eagle Bluff Properties, LLC.

By: James L. Hilgers, Chief Manager

NOTARY CERTIFICATE

State of Minnesota
County of Blue Earth

On this the _____ day of _____, 2016, before me a Notary Public within and for said County, personally appeared James L. Hilgers, who being duly sworn did say that he is the Chief Manager of Eagle Bluff Properties, LLC, the Minnesota limited liability company named in the foregoing instrument, and that said instrument was signed in behalf of said company by authority of its board of governors, and said James L. Hilgers acknowledged said instrument to be the free act and deed of said company.

Notary Public

SURVEYOR'S CERTIFICATE

I, Warren P. Smith, Licensed Land Surveyor, do hereby certify that I have surveyed or directly supervised the survey of the property described on this plat; prepared this plat or directly supervised the preparation of this plat of EAGLE BLUFF; that this plat is a correct representation of the boundary survey; that all land shown on this plat is the land of the State of Minnesota; that all monuments indicated on this plat have been set; that all water boundaries and wet lands, as defined in Minnesota Statutes, Section 505.01, Subd. 3, as of the date of the surveyor's certification are shown and labeled on this plat; and all public ways are shown and labeled on this plat.

Dated this _____ day of _____, 2016.

Surveyor Warren P. Smith, Licensed Land

State of Minnesota
County of Blue Earth

The foregoing Surveyor's Certificate was acknowledged before me this _____ day of _____, 2016, by Warren P. Smith, a Licensed Land Surveyor.

Notary Public,
Blue Earth County, Minnesota

APPROVAL - LIME TOWNSHIP PLANNING BOARD

Be it known that on this the ____ day of _____, 2016, the Lime Township Planning Board, Blue Earth County, Minnesota did duly approve this plat of EAGLE BLUFF, and that, as per Minnesota Statutes 505.03 Subd. 2, this plat has been submitted to and written comments and recommendations have been received from the Blue Earth County Highway Engineer.

Chair person: _____ Secretary: _____

Be it known that on this the _____ day of _____, 2016, the County Sanitarian of Blue Earth County, Minnesota, did duly review this plot of EAGLE BLUFF, and confirmed that two suitable on-site sewage treatment sites exist on each lot based on information submitted by J.R. Bruender Construction, Inc., an MPCA Certified on-site septic system designer.

County Sanitarian

TITLE OPINION

I, Karl O. Friedrichs, Licensed Attorney, State of Minnesota, do hereby certify that the owners as indicated hereon represents all ownership interest in the land encompassed by this plat.

Karl O. Friedrichs, Licensed Attorney

TAXPAYER SERVICES DEPARTMENT

I hereby certify that there are no delinquent taxes and/or delinquent special assessments, that the current taxes have been paid and that the transfer has been entered on the land described herein on the ____ day of _____, 2016.

Taxpayer Services Director

COUNTY RECORDER

I hereby certify that this instrument was filed in my office for record on this, the ____ day of _____, 2016, at ____ o'clock, ____ m., and that it was duly recorded on _____ Plots, Number _____.

County Recorder

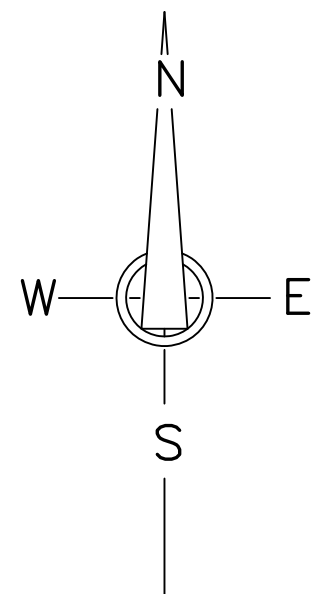
SHEET 1 OF 2 SHEETS

THIS PLAT WAS PREPARED BY SURVEY SERVICES, INC.

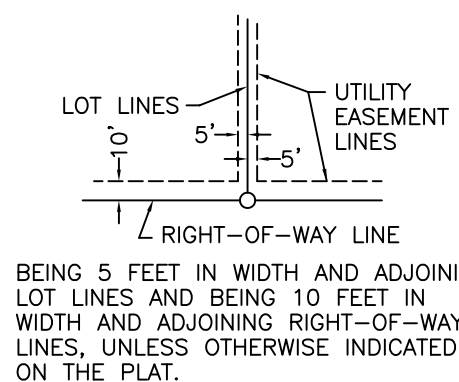
EAGLE BLUFF

BLUE EARTH COUNTY, MINNESOTA

BASIS OF BEARINGS
(MINNESOTA COUNTY COORDINATE SYSTEM —
BLUE EARTH COUNTY ZONE — NAD83 — 1986)



INDICATES 1/2" DIA. X 20" LONG IRON PIPE SET WITH PLASTIC CAP MARKED BY LICENSE NO. 14701.
INDICATES IRON PIPE MONUMENTS FOUND.

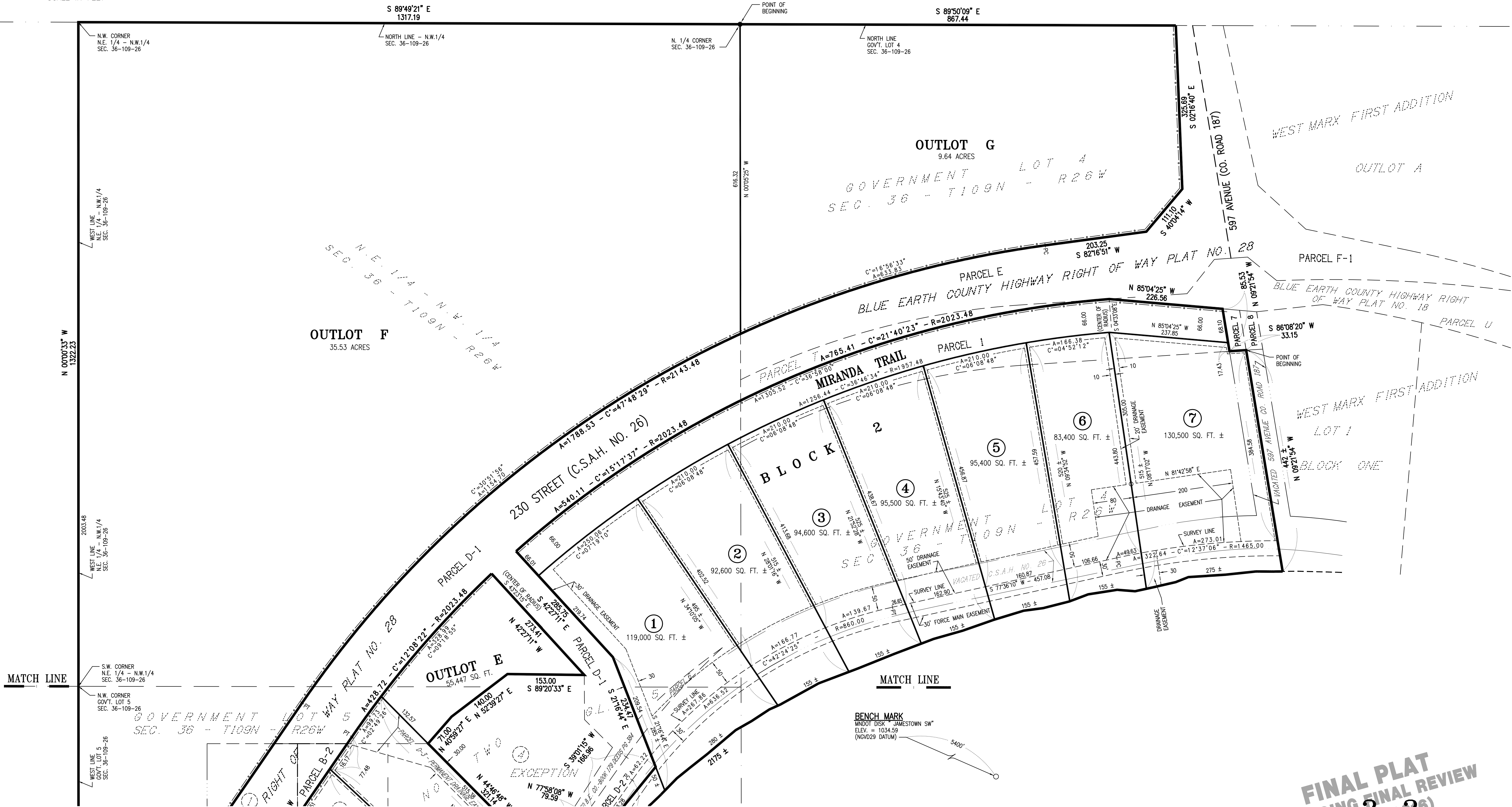


LEGEND

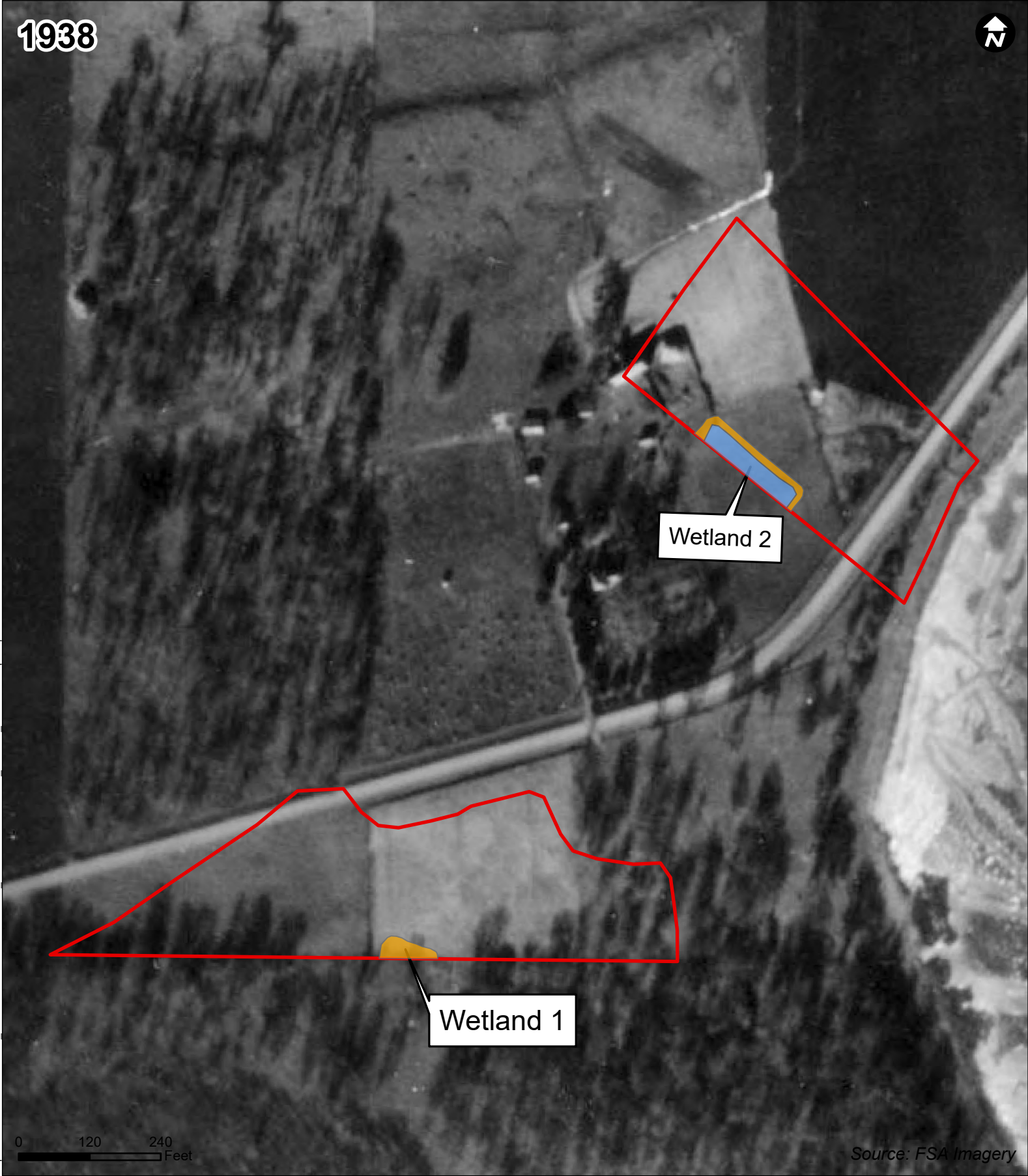
A=100.00' INDICATES ARC DISTANCE
R=100.00' INDICATES RADIUS LENGTH
C=90°00'00" INDICATES CENTRAL ANGLE
PC INDICATES POINT OF CURVATURE
PT INDICATES POINT OF TANGENCY
PRC INDICATES POINT OF REVERSE CURVE

INDICATES CONTROLLED ACCESS AS PER B.E. CO. HWY R.O.W. PLAT NO. 28

100 50 0 100 200 300
SCALE IN FEET



FINAL PLAT
PENDING FINAL REVIEW
SHEET 2 OF 2 SHEETS
THIS PLAT WAS PREPARED BY SURVEY SERVICES, INC.



Eagle Bluff

Wetland Delineation Report

Lime Township, Blue Earth County, Minnesota
Jim Hilgers
August 6, 2025



Real People. Real Solutions.

Prepared by:

Bolton & Menk, Inc.
1960 Premier Drive
Mankato, MN 56001
P: (507) 625-4171
BMI Project No. 25X.137409.000

Table of Contents

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Appendix

Appendix: Exhibits

I. Introduction

Jim Hilgers is proposing site improvements to his property located South of Highway 26 in Lime Township, Minnesota. This report details the findings of the field delineation completed on July 30th, 2025.

The project is found in Section 36, in Township 109 North of Range 26 West.

II. Wetland Delineation Methodology

The wetland boundaries were delineated and staked in the field in July 2025, using methods described in the “Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)”. Wetlands identified were classified using “Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et al., 1979)”, “Wetlands of the United States (United States Fish and Wildlife Service Circular No. 39, 1971 edition)” and “Wetland Plants and Plant Communities of Minnesota and Wisconsin” (Eggers and Reed Third Edition). Subsequently, the three mandatory technical criteria for wetland determinations are as follows:

Hydrophytic Vegetation. A hydrophytic plant community is present when the dominant plant species present can endure prolonged inundation and/or soil saturation during the growing season. A plant’s Wetland Indicator Status is determined using the 2016 National Wetland Plant List for Minnesota, published by the Army Corp of Engineers.

Hydric Soils. A hydric soil is defined as a soil that is formed under conditions of saturation, flooding or ponding long enough during the growing season (the portion of the year when there is above ground growth and development of vascular plants and/or soil temperature at 12 inches below the soil surface is above 41 degrees Fahrenheit or higher) to develop anaerobic conditions in the upper part.

Wetland Hydrology. An area has wetland hydrology if it experiences 14 or more consecutive days of flooding, ponding or a water table within 12 inches of the surface during the growing season at a minimum frequency of five out of ten years. This is determined by using both primary and secondary Wetland Hydrology indicators.

III. Background Information

Prior to conducting a field investigation of this site, Exhibits A through E were used to complete a preliminary evaluation. The data gathered during the preliminary investigation was used as described below:

Exhibit A is a location map of the study area.

Exhibits B is an aerial photo with topographic information overlaid on it. This provides information regarding topography of the site, helping to identify areas that may have wetland characteristics.

Exhibit C is the National Wetlands Inventory of the site and surrounding properties. This information is used to complete a preliminary investigation of the wetlands that may or may not exist on the site.

Exhibit D is used to identify waters that are regulated by the DNR. This exhibit shows where there are DNR public waters relative to the site.

Exhibit E is the Blue Earth County Soil Survey and is used to identify hydric soils that may lie within the study area.

Delineation Exhibits F and G were prepared from the information gathered at the site.

Exhibit F is the site map showing the delineated aquatic resources.

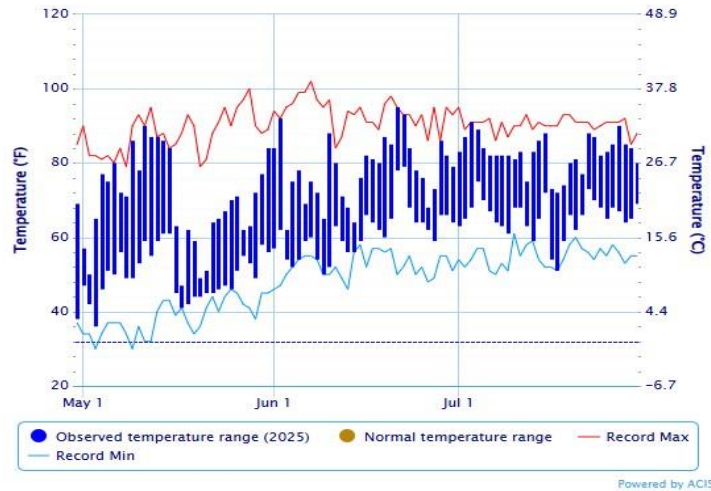
Exhibit G includes the wetland delineation data sheets.

IV. Climate Data

The table below shows the average temperature range for the three months before the field delineation, along with the daily maximums and minimums. While there were some notable cold periods in May. A majority of days in June and July exceeded the normal temperature range.

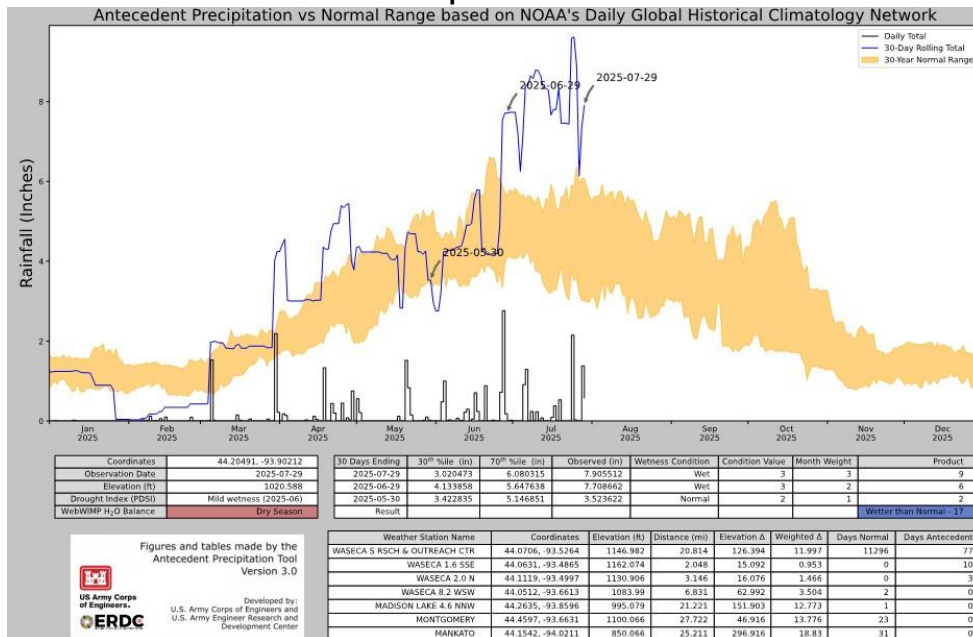
Temperature Range

Daily Temperature Data – MANKATO MUNICIPAL AP, MN



Antecedent precipitation was evaluated using a combination of the NRCS Method and the Rolling Totals Method. The analysis found that precipitation was well above normal over the past three months, prior to the site visit.

Antecedent Precipitation Conditions



This climatic data was gathered using the National Weather Service (Climate (weather.gov)), Minnesota State Climatology Office, Nearest Station Precipitation Data Retrieval (High DENSITY radius retrieval 071210 (state.mn.us), and Precipitation Data Retrieved from a Gridded Database (Precipitation Data Retrieval (state.mn.us)). As well as the ACIS NOAA Regional Climate Centers

Website (AgACIS (rcc-acis.org). The information was retrieved from the WETS station, Mankato.

V. Findings

On July 30, 2025, a field investigation was performed to evaluate and verify the existence and boundary of any aquatic resources located within the study area. Two wetlands were found to exist within the study area. The following describes the aquatic resources identified, together with a brief description of wetland types and observations made during the field investigation.

Wetland 1:

NWI Cowardin: None

PWI (Hydro) ID: None

HGM: Lacustrine

Field Observation Circular 39: Type 2

Field Observation Eggers and Reed:

Fresh Wet Meadow

Soil Mapping Unit(s): 94B-Terril loam, 238B-Kilkenny clay loam, 211-Lura silty clay

Wetland 1 is located along the Southern border of study area block 1. It lies just to the north of NWI POF1A.

The field investigation found that the site has met all three wetland indicators, and this wetland complex should be considered a combination of a HGM Classification Lacustrine, palustrine emergent nonpersistent seasonally saturated (PEM2B). Two sample points were taken to determine the wetland boundary. The wetland boundary was largely drawn based on the changes in topography.

At the W1-A wetland pit location, the plant community was dominated by Reed canary grass. The W1-B upland pit location was also Reed canary grass with some Stinging nettle. Both locations met hydrophytic vegetation.

Soils in the W1-A wetland pit location met the hydric soil indicator A12-Thick Dark Surface. Soils in the W1-B upland pit location met the hydric soil indicator A12-Thick Dark Surface. Depletion below 34 inches of both pits is assumed to be present.

The W1-A wetland location met the hydrology indicators A3-Saturation, D5-FAC-Neutral Test, and D2-Geomorphic Position. The W1-B upland pit location met D5-FAC-neutral Test. W1-B did not meet hydrology.



Photo 1: View of the W1-A & W1-B sample points looking into the wetland (West).



Photo 2: View of the Fresh Wet Meadow, facing West

Wetland 2:

NWI Cowardin: None

PWI (Hydro) ID: None

HGM: Depression

Field Observation Circular 39: Type 2&3

Field Observation Eggers and Reed: Fresh
Wet Meadow, Shallow Marsh

Soil Mapping Unit(s): 238B-Kilkenny clay
loam, 211-Lura silty clay, 239-Le Sueur
loam

Wetland 2 is located along the Western edge of study block 2. It is a constructed drainage pond that sits between two properties.

The field investigation found that the site has met all three wetland indicators, and this wetland complex should be considered a combination of a HGM Classification Depression, palustrine emergent nonpersistent seasonally saturated (PEM2B) and palustrine emergent persistent semi permanently flooded (PEM1F). Two sample points were taken to determine the wetland boundary. The wetland boundary was largely drawn based on the changes in topography and vegetation.

At the W2-A wetland pit location, the plant community was dominated by Narrow-leaf cattails and Spotted touch-me-not. W2-A met hydrophytic vegetation. The W2-B upland pit location was a mixture of Perennial sow thistle, Canadian thistle, Kentucky bluegrass, Timothy, and Smooth brome. W2-B did not meet hydrophytic vegetation.

Soils in the W2-A wetland pit location met the hydric soil indicator A12-Thick Dark Surface. Soil in the W2-B upland pit location did not meet the hydric soil indicators.

The W2-A wetland location met A2-High water Table and A3-Saturation, the secondary hydrology indicator D5- FAC-Neutral Test. The W2-B upland pit location did not meet hydrology.



Photo 3: View of the W2-A & W2-B sample points



Photo 3: View of the Wetland 2, facing North.

VI. Conclusion

The delineation was performed on July 30, 2025. The boundaries of the wetlands were staked in the field with three foot "Wetland Delineation" pin flags. The location of the pin flags were surveyed by Bolton & Menk, Inc. using a Juniper Geode Data Collector and tied to the Blue Earth County coordinate system. The delineated limits are believed to be the upper limits of where all three of the required wetland criteria were present.

Bolton & Menk, Inc., was asked to determine the boundaries of those jurisdictional wetlands that exist upon this property as defined by the Wetland Conservation Act.

Based upon all available information, the existing conditions that currently prevail, and the on-site investigation, evidence supports the presence of two wetlands within the boundaries of the study area.

Wetland Summary		
Id #	Wetland Type ^	Size*
W1	Type 2	0.06 ac
W2	Type 2, 3	0.44 ac
Total:		0.5 ac

**size measured within study area*

^wetland type within study area

Sincerely,

Bolton & Menk, Inc.



Cortiney Galuska

Certified Wetland Delineator (Wetland Delineator In-Training), No. 5499

Appendix: Exhibits



Map Document: H:\Hill GER\JL PR25X137409000\GIS\Natural Resources\Proj137409 Wetland Delineation.aprx | Exhibit F: Wetland Delineation Map | Username: noah.wilmes | Date Saved: 8/6/2025 9:20 AM



Map Document: H:\HILGER\J\PR25X137409000\GIS\Natural Resources\Pro\137409_Wetland_Delineation.aprx | Exhibit E: Wetland Delineation Map | Date Saved: 8/6/2025 9:20 AM | Username: noah.willmes





Map Document: H:\HILGER\JL_PR25X137409000\GIS\Natural Resources\Pro\137409_Wetland_Delineation.aprx | Exhibit E: Wetland Delineation Map | Username: noah.willmes | Date Saved: 8/6/2025 9:20 AM



Name	Slope	Hydric Rating	Hydric Class
94B-Terril loam	2-6%	8	No
211-Lura silty clay	0-1%	100	Yes
238B-Kilkenny clay loam	2-6%	0	No
239-Le Sueur loam	1-3%	15	No



Legend

 Study Area

County Soils

 Water

 Non-Hydric Soils

 Unranked

 Hydric Soils



0

350

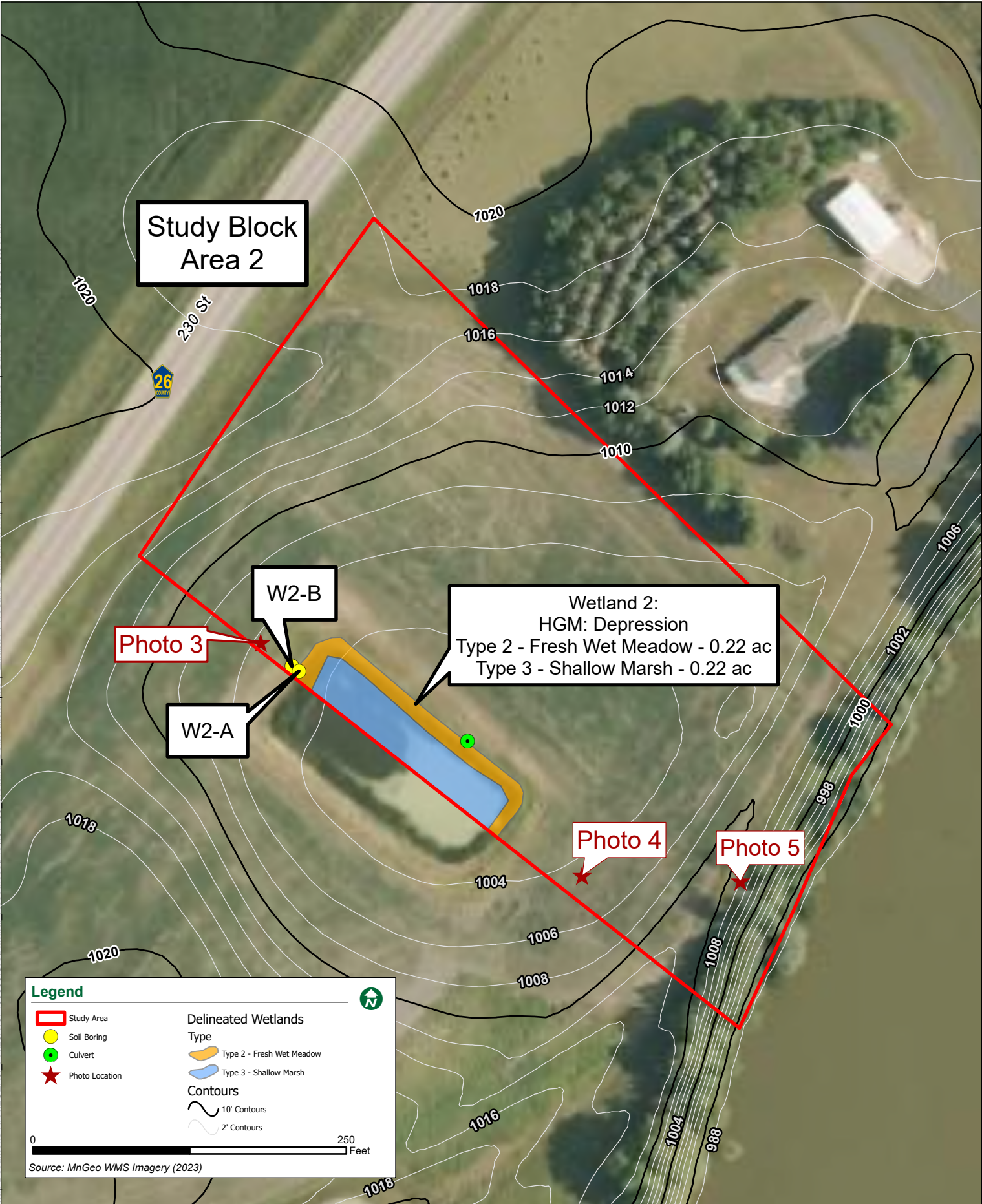
Feet

Source: MnGeo WMS Imagery (2023)

Map Document: H:\HILGER\JL\PR25\137409000\GIS\Natural Resources\Pro\137409 Wetland Delineation.aprx | Exhibit F-1: Wetland Delineation Map | Date Saved: 8/6/2025 10:34 AM



Map Document: H:\HILGER\JL_P\25X137409000\GIS\Natural Resources\Pro\137409 Wetland Delineation.aprx | Exhibit F: Wetland Delineation Map | User: noah.wilmes | Date Saved: 8/6/2025 10:34 AM



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region See ERDC/EL TR-10-16; the proponent agency is CECW-COR	OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Eagle Bluff City/County: Blue Earth County Sampling Date: 2025-07-30
Applicant/Owner: Jim Hilger State: Minnesota Sampling Point: W1-A
Investigator(s): Noah Wilmes, Cortiney Galuska Section, Township, Range: sec 36 T109N R026W
Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): None
Slope (%): 0-2 Lat: 44.199171 Long: -93.907628 Datum: WGS84
Soil Map Unit Name: Muskego soils, 0 to 1 percent slopes NWI classification: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soil Present? Yes ☒ No ☐	
Wetland Hydrology Present? Yes ☒ No ☐	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>) 1. <u>Fraxinus pennsylvanica</u> Absolute % Cover <u>20</u> Dominant Species? <u>Y</u> Indicator Status <u>FACW</u> 2. _____ 3. _____ 4. _____ 5. _____ <u>20.0</u> =Total Cover	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)																	
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>) 1. <u>Phalaris arundinacea</u> Absolute % Cover <u>95</u> Dominant Species? <u>Y</u> Indicator Status <u>FACW</u> 2. <u>Urtica dioica</u> Absolute % Cover <u>5</u> Dominant Species? <u>N</u> Indicator Status <u>FACW</u> 3. _____ 4. _____ 5. _____ <u>100.0</u> =Total Cover		Prevalence Index worksheet: <table><tr><td>Total % Cover of:</td><td>Multiply by:</td></tr><tr><td>OBL species <u>0</u></td><td>x 1 = <u>0</u></td></tr><tr><td>FACW species <u>120</u></td><td>x 2 = <u>240</u></td></tr><tr><td>FAC species <u>0</u></td><td>x 3 = <u>0</u></td></tr><tr><td>FACU species <u>0</u></td><td>x 4 = <u>0</u></td></tr><tr><td>UPL species <u>0</u></td><td>x 5 = <u>0</u></td></tr><tr><td>Column Totals: <u>120</u> (A)</td><td><u>240.00</u> (B)</td></tr><tr><td colspan="2">Prevalence Index = B/A = <u>2.0</u></td></tr></table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>120</u>	x 2 = <u>240</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>120</u> (A)	<u>240.00</u> (B)	Prevalence Index = B/A = <u>2.0</u>	
Total % Cover of:			Multiply by:															
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>120</u>	x 2 = <u>240</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>120</u> (A)	<u>240.00</u> (B)																	
Prevalence Index = B/A = <u>2.0</u>																		
Herb Stratum (Plot size: <u>5' radius</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ <u>0</u> =Total Cover																		
Woody Vine Stratum (Plot size: <u>30' radius</u>) 1. _____ 2. _____ <u>0</u> =Total Cover	Hydrophytic Vegetation Indicators: ☒ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☒ 3 - Prevalence Index is ≤3.0 ¹ ☐ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																	
Remarks: (Include photo numbers here or on a separate sheet.)	Hydrophytic Vegetation Present? Yes ☒ No ☐																	

SOIL

Sampling Point: W1-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-34	10YR	2/1	100				SIL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Iron-Manganese Masses (F12)
☐ Histic Epipedon (A2)	☐ Red Parent Material (F21) Very
☐ Black Histic (A3)	☐ Shallow Dark Surface (F22)
☐ Hydrogen Sulfide (A4)	☐ Other (Explain in Remarks)
☐ Stratified Layers (A5)	
☐ 2 cm Muck (A10)	
☐ Depleted Below Dark Surface (A11)	
☒ Thick Dark Surface (A12)	
☐ Iron Monosulfide (A18)	
☐ Sandy Mucky Mineral (S1)	
☐ 5 cm Mucky Peat or Peat (S3)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☒ No ☐
---	---

Remarks:
Assuming depletion below

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☒ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☒ No ☐ Depth (inches): 24 Saturation Present? Yes ☒ No ☐ Depth (inches): 3 (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No ☐
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region See ERDC/EL TR-10-16; the proponent agency is CECW-COR	OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
---	--

Project/Site: Eagle Bluff City/County: Blue Earth County Sampling Date: 2025-07-30
Applicant/Owner: Jim Hilger State: Minnesota Sampling Point: W1-B
Investigator(s): Noah Wilmes, Cortiney Galuska Section, Township, Range: sec 36 T109N R026W
Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): None
Slope (%): 3-7 Lat: 44.203461 Long: -93.903768 Datum: WGS84
Soil Map Unit Name: Lura silty clay, 0 to 1 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
---	--

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 0 =Total Cover	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 0 =Total Cover	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>100</u> x 2 = <u>200</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>200.00</u> (B) Prevalence Index = B/A = <u>2.0</u>
Herb Stratum (Plot size: <u>5' radius</u>) 1. <u>Phalaris arundinacea</u> <u>100</u> <u>Y</u> <u>FACW</u> 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ <u>100.0</u> =Total Cover	Hydrophytic Vegetation Indicators: ☒ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☒ 3 - Prevalence Index is ≤3.0 ¹ ☐ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: <u>30' radius</u>) 1. _____ 2. _____ 0 =Total Cover	Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W1-B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR	2/2	100				SIL	
14-34	10YR	2/1	100				SICL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Iron-Manganese Masses (F12)	
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Red Parent Material (F21) Very	
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Shallow Dark Surface (F22)	
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)	☐ Other (Explain in Remarks)	
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)		
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)		
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)		
☒ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)		
☐ Iron Monosulfide (A18)	☐ Depleted Dark Surface (F7)		
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)		
☐ 5 cm Mucky Peat or Peat (S3)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present?
Type: _____ Depth (inches): _____	Yes ☒ No ☐

Remarks:
Went down 34" assumed depleted matrix below

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present? Yes ☐ No ☒
Surface Water Present?	Yes ☐ No ☒	Depth (inches):		
Water Table Present?	Yes ☐ No ☒	Depth (inches):		
Saturation Present?	Yes ☒ No ☐	Depth (inches):	34	

(includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region See ERDC/EL TR-10-16; the proponent agency is CECW-COR	OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Eagle Bluff City/County: Blue Earth County Sampling Date: 2025-07-30
Applicant/Owner: Jim Hilger State: Minnesota Sampling Point: W2-A
Investigator(s): Noah Wilmes, Cortiney Galuska Section, Township, Range: sec 36 T109N R026W
Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): None
Slope (%): 0-2 Lat: 44.205060 Long: -93.901272 Datum: WGS84
Soil Map Unit Name: Le Sueur loam, 1 to 3 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
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Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 0 =Total Cover	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)																
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 0 =Total Cover	Prevalence Index worksheet: <table><tr><td>Total % Cover of:</td><td>Multiply by:</td></tr><tr><td>OBL species <u>90</u></td><td>x 1 = <u>90</u></td></tr><tr><td>FACW species <u>30</u></td><td>x 2 = <u>60</u></td></tr><tr><td>FAC species <u>0</u></td><td>x 3 = <u>0</u></td></tr><tr><td>FACU species <u>3</u></td><td>x 4 = <u>12</u></td></tr><tr><td>UPL species <u>0</u></td><td>x 5 = <u>0</u></td></tr><tr><td>Column Totals: <u>123</u> (A)</td><td><u>162.00</u> (B)</td></tr><tr><td colspan="2">Prevalence Index = B/A = <u>1.32</u></td></tr></table>	Total % Cover of:	Multiply by:	OBL species <u>90</u>	x 1 = <u>90</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>3</u>	x 4 = <u>12</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>123</u> (A)	<u>162.00</u> (B)	Prevalence Index = B/A = <u>1.32</u>	
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Prevalence Index = B/A = <u>1.32</u>																	
Herb Stratum (Plot size: <u>5' radius</u>) 1. <u>Typha angustifolia</u> <u>90</u> <u>Y</u> <u>OBL</u> 2. <u>Impatiens capensis</u> <u>30</u> <u>Y</u> <u>FACW</u> 3. <u>Sonchus arvensis</u> <u>3</u> <u>N</u> <u>FACU</u> 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ <u>123.0</u> =Total Cover	Hydrophytic Vegetation Indicators: ☒ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☒ 3 - Prevalence Index is ≤3.0 ¹ ☐ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
Woody Vine Stratum (Plot size: <u>30' radius</u>) 1. _____ 2. _____ 0 =Total Cover	Hydrophytic Vegetation Present? Yes ☒ No ☐																

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W2-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix			Redox Features						
(inches)	Color (moist)		%	Color (moist)		%	Type ¹	Loc ²	Texture	Remarks
0-28	10YR	2/1	100						SICL	
28-35	10YR	4/1	70	7.5YR	5/8	30	D	M	SCL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Iron-Manganese Masses (F12)	
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Red Parent Material (F21) Very	
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Shallow Dark Surface (F22)	
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)	☐ Other (Explain in Remarks)	
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)		
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)		
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)		
☒ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)		
☐ Iron Monosulfide (A18)	☐ Depleted Dark Surface (F7)		
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)		
☐ 5 cm Mucky Peat or Peat (S3)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present?
Type: _____ Depth (inches): _____	Yes ☒ No ☐

Remarks:
Depletion at 30 inches

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☒ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
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☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present? Yes ☒ No ☐
Surface Water Present?	Yes ☐ No ☒	Depth (inches):		
Water Table Present?	Yes ☒ No ☐	Depth (inches):	14	
Saturation Present?	Yes ☒ No ☐	Depth (inches):	8	

(includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region See ERDC/EL TR-10-16; the proponent agency is CECW-COR	OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Eagle Bluff City/County: Blue Earth County Sampling Date: 2025-07-30
Applicant/Owner: Jim Hilger State: Minnesota Sampling Point: W2-B
Investigator(s): Noah Wilmes, Cortiney Galuska Section, Township, Range: sec 25 T109N R026W
Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): None
Slope (%): 3-7 Lat: 44.213906 Long: -93.898614 Datum: WGS84
Soil Map Unit Name: Hamel loam, 0 to 2 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No ☒ (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>☒</u> Hydric Soil Present? Yes <u> </u> No <u>☒</u> Wetland Hydrology Present? Yes <u> </u> No <u>☒</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>☒</u>
Remarks:	

VEGETATION – Use scientific names of plants.

<table><tr><td><u>Tree Stratum</u> (Plot size: <u>30' radius</u>)</td><td>Absolute % Cover</td><td>Dominant Species?</td><td>Indicator Status</td></tr><tr><td>1. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td>2. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td>3. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td>4. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td>5. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td></td><td><u>0</u> =Total Cover</td><td></td><td></td></tr><tr><td><u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)</td><td></td><td></td><td></td></tr><tr><td>1. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td>2. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td>3. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td>4. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td>5. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td></td><td><u>0</u> =Total Cover</td><td></td><td></td></tr><tr><td><u>Herb Stratum</u> (Plot size: <u>5' radius</u>)</td><td></td><td></td><td></td></tr><tr><td>1. <u>Sonchus arvensis</u></td><td><u>65</u></td><td><u>Y</u></td><td><u>FACU</u></td></tr><tr><td>2. <u>Cirsium arvense</u></td><td><u>45</u></td><td><u>Y</u></td><td><u>FACU</u></td></tr><tr><td>3. <u>Poa pratensis</u></td><td><u>20</u></td><td><u>N</u></td><td><u>FAC</u></td></tr><tr><td>4. <u>Phleum pratense</u></td><td><u>15</u></td><td><u>N</u></td><td><u>FACU</u></td></tr><tr><td>5. <u>Bromus inermis</u></td><td><u>10</u></td><td><u>N</u></td><td><u>FACU</u></td></tr><tr><td>6. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td>7. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td>8. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td>9. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td>10. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td></td><td><u>155.0</u> =Total Cover</td><td></td><td></td></tr><tr><td><u>Woody Vine Stratum</u> (Plot size: <u>30' radius</u>)</td><td></td><td></td><td></td></tr><tr><td>1. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td>2. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr><tr><td></td><td><u>0</u> =Total Cover</td><td></td><td></td></tr></table>	<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	5. <u> </u>	<u> </u>	<u> </u>	<u> </u>		<u>0</u> =Total Cover			<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u>)				1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	5. <u> </u>	<u> </u>	<u> </u>	<u> </u>		<u>0</u> =Total Cover			<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)				1. <u>Sonchus arvensis</u>	<u>65</u>	<u>Y</u>	<u>FACU</u>	2. <u>Cirsium arvense</u>	<u>45</u>	<u>Y</u>	<u>FACU</u>	3. <u>Poa pratensis</u>	<u>20</u>	<u>N</u>	<u>FAC</u>	4. <u>Phleum pratense</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	5. <u>Bromus inermis</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	9. <u> </u>	<u> </u>	<u> </u>	<u> </u>	10. <u> </u>	<u> </u>	<u> </u>	<u> </u>		<u>155.0</u> =Total Cover			<u>Woody Vine Stratum</u> (Plot size: <u>30' radius</u>)				1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	2. <u> </u>	<u> </u>	<u> </u>	<u> </u>		<u>0</u> =Total Cover			Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B) Prevalence Index worksheet: <table><tr><td>Total % Cover of:</td><td>Multiply by:</td></tr><tr><td>OBL species <u>0</u></td><td>x 1 = <u>0</u></td></tr><tr><td>FACW species <u>0</u></td><td>x 2 = <u>0</u></td></tr><tr><td>FAC species <u>20</u></td><td>x 3 = <u>60</u></td></tr><tr><td>FACU species <u>135</u></td><td>x 4 = <u>540</u></td></tr><tr><td>UPL species <u>0</u></td><td>x 5 = <u>0</u></td></tr><tr><td>Column Totals: <u>155</u> (A)</td><td><u>600.00</u> (B)</td></tr><tr><td colspan="2">Prevalence Index = B/A = <u>3.87</u></td></tr></table> Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0¹ <u> </u> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u> </u> No <u>☒</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>20</u>	x 3 = <u>60</u>	FACU species <u>135</u>	x 4 = <u>540</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>155</u> (A)	<u>600.00</u> (B)	Prevalence Index = B/A = <u>3.87</u>	
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10. <u> </u>	<u> </u>	<u> </u>	<u> </u>																																																																																																																																						
	<u>155.0</u> =Total Cover																																																																																																																																								
<u>Woody Vine Stratum</u> (Plot size: <u>30' radius</u>)																																																																																																																																									
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>																																																																																																																																						
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>																																																																																																																																						
	<u>0</u> =Total Cover																																																																																																																																								
Total % Cover of:	Multiply by:																																																																																																																																								
OBL species <u>0</u>	x 1 = <u>0</u>																																																																																																																																								
FACW species <u>0</u>	x 2 = <u>0</u>																																																																																																																																								
FAC species <u>20</u>	x 3 = <u>60</u>																																																																																																																																								
FACU species <u>135</u>	x 4 = <u>540</u>																																																																																																																																								
UPL species <u>0</u>	x 5 = <u>0</u>																																																																																																																																								
Column Totals: <u>155</u> (A)	<u>600.00</u> (B)																																																																																																																																								
Prevalence Index = B/A = <u>3.87</u>																																																																																																																																									
Remarks: (Include photo numbers here or on a separate sheet.)																																																																																																																																									

SOIL

Sampling Point: W2-B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-36	10YR	2/1	100				SICL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Iron-Manganese Masses (F12)
☐ Histic Epipedon (A2)	☐ Red Parent Material (F21) Very
☐ Black Histic (A3)	☐ Shallow Dark Surface (F22)
☐ Hydrogen Sulfide (A4)	☐ Other (Explain in Remarks)
☐ Stratified Layers (A5)	
☐ 2 cm Muck (A10)	
☐ Depleted Below Dark Surface (A11)	
☐ Thick Dark Surface (A12)	
☐ Iron Monosulfide (A18)	
☐ Sandy Mucky Mineral (S1)	
☐ 5 cm Mucky Peat or Peat (S3)	
☐ Sandy Gleyed Matrix (S4)	
☐ Sandy Redox (S5)	
☐ Stripped Matrix (S6)	
☐ Dark Surface (S7)	
☐ Loamy Mucky Mineral (F1)	
☐ Loamy Gleyed Matrix (F2)	
☐ Depleted Matrix (F3)	
☐ Redox Dark Surface (F6)	
☐ Depleted Dark Surface (F7)	
☐ Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present?
Type: _____	Yes _____ No ☒
Depth (inches): _____	

Remarks:
Soils most likely disturbed during the construction of retention pond. Soils show upland characteristics below 34". Soils were dryer and more compacted.

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present? Yes _____ No ☒
Surface Water Present?	Yes _____	No ☒	Depth (inches): _____	
Water Table Present?	Yes _____	No ☒	Depth (inches): _____	
Saturation Present?	Yes ☒	No _____	Depth (inches): 24	

(includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: