Assured Wetland Delineation & Environmental Corridor Delineation Report

Gorelik Property

City of Mequon, Ozaukee County, Wisconsin

August 21, 2024

Project Number: 20241286

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Gorelik Property

City of Mequon, Ozaukee County, Wisconsin

August 21, 2024

Prepared for:

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1.0 Introduction

Heartland Ecological Group, Inc. ("Heartland") completed an assured wetland determination and delineation on the Gorelik Property on August 5, 2024, at the request of Vitaliy Gorelik. The environmental corridor was also refined and field delineated on August 5, 2024. Wetland and corridor delineation/refinement fieldwork was completed by Eric C. Parker, SPWS, an assured delineator qualified via the Wisconsin Department of Natural Resources' (WDNR's) Wetland Delineation Assurance Program (Appendix E, Qualifications). The 6.96-acre site (the "Study Area") is located northeast of the intersection of Lake Shore Drive and West Bonniwell Road, in the southeast ¼ of Section 5, T9N, R22E, City of Mequon, Ozaukee County, WI (Figure 1, Appendix A). The purpose of Heartland's investigation was to determine the location and extent of wetlands and environmental corridor within the Study Area.

Three (3) wetland areas totaling approximately 0.23 acres were delineated and mapped within the Study Area (Figure 7, Appendix A). No waterways or water bodies were observed in the Study Area. The outer boundary of primary environmental corridor (PEC) was refined and delineated within the Study Area. PEC was determined to be approximately 1.51 acres within the Study Area (Figure 7, Appendix A).

Wetlands discussed in this report may be subject to federal regulation under the jurisdiction of the U.S. Army Corps of Engineers (USACE), state regulation under the jurisdiction of the WDNR, and local zoning authorities. PEC is a designation created by the Southeastern Wisconsin Regional Planning Commission (SEWRPC) that is adopted by local zoning authorities such as municipalities, townships, and counties. The zoning authorities have jurisdiction over environmental corridors under the oversight of SEWRPC and WDNR. Heartland recommends this report be submitted to local authorities, the USACE, and SEWRPC for final review and confirmation.

2.0 Methods

2.1 Wetlands

Wetlands were determined and delineated using the criteria and methods described in the USACE Wetlands Delineation Manual, T.R. Y-87-1 ("1987 Corps Manual") and the applicable *Regional Supplement to the Corps of Engineers Wetland Delineation Manual*. In addition, the *Guidance for Submittal of Delineation Reports to the St. Paul District USACE and the WDNR* (WDNR, 2015) was followed in completing the wetland delineation and report.

Determinations and delineations utilized available resources including the U.S. Geological Survey's (USGS) *WI 7.5 Minute Series (Topographic) Map* (Figure 2, Appendix A), the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service's (NRCS) Soil Survey Geographic Database (SSURGO) *Web Soil Survey* (Figure 3, Appendix A), the WDNR's *Wetland Indicator* data layer (Figure 4, Appendix A), the WDNR's *Wisconsin Wetland Inventory* data layer (Figure 5, Appendix A), the WNDR's *24k Hydro Flowlines (Rivers and Streams)* data layer (Figure 2 and 5, Appendix A), the WDNR's *Color-Stretch LiDAR and Hillshade Image Service Layer* (Figure 6, Appendix A), and aerial imagery available through the USDA Farm Service Agency's (FSA) National Agriculture Imagery Program (NAIP).

Wetland determinations were completed on-site at sample points, often along transects, using the three (3) criteria (vegetation, soil, and hydrology) approach per the 1987 Corps Manual and the Regional Supplement. Procedures in these sources were followed to demonstrate that, under normal circumstances, wetlands were present or not present based on a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology.

Recent weather conditions influence the visibility or presence of certain wetland hydrology indicators. An assessment of recent precipitation patterns helps to determine if climatic/hydrologic conditions were typical when the field investigation was completed. Therefore, a review of antecedent precipitation in the 90 days leading up to the field investigation was completed. Using an Antecedent Precipitation Tool (APT) analysis developed by the USACE (Deters & Gutenson 2021), the amount of precipitation over these 90 days was compared to averages and standard deviation thresholds observed over the past 30 years to generally represent if conditions encountered during the investigation were normal, wet, or dry. Recent precipitation events in the weeks prior to the investigation were

also considered while interpreting wetland hydrology indicators. Additionally, the Palmer Drought Severity Index was checked for long-term drought or moist conditions (NOAA, 2018).

The uppermost wetland boundary and sample points were identified and marked with wetland flagging and located with a Global Navigation Satellite System (GNSS) receiver capable of sub-meter accuracy. In some cases, wetland flagging was not utilized to mark the boundary and the location was only recorded with a GNSS receiver, particularly in active agricultural areas. The GNSS data was then used to map the wetlands using ESRI ArcGIS Pro™ software.

2.2 Environmental Corridors

Per prior SEWRPC corridor determinations and boundary delineations, corridor areas are located within the Study Area. Because the corridor boundaries may need adjustment due to changing site conditions over time, a field inspection is often needed to refine them. Field work was completed by Eric C. Parker of Heartland on August 5, 2024.

The initial steps in the corridor delineation refinement process included a review of the following documents:

- NRCS Soil Survey of Ozaukee County, WI
- USGS 7.5-minute Wisconsin quadrangle map and available topographic maps
- Wisconsin Wetland Inventory (WWI) Mapping
- Aerial photography
- SEWRPC Mapping and Reports

These documents provide information on where wetlands/environmental corridors have been previously identified and identify areas that possess a high likelihood of containing corridors. These initially identified areas were then evaluated to make on-site determinations, and where necessary, complete delineations of the corridor boundary.

Heartland conducted a field review and applied the definitions, criteria, and guidelines outlined in "Refining the Delineation of Environmental Corridors in Southeastern Wisconsin" (Rubin and Emmerich, 2000). Field conditions were compared with aerial photography to assess changes in land use and/or vegetative cover. SEWRPC has identified the various corridor areas within southeastern Wisconsin by aerial photographic interpretation and, in many instances, field review. The following are definitions for these terms:

- Primary environmental corridor (PEC) contains concentrations of the most significant natural resources. They are at least 400 acres in size, at least two (2) miles long and at least 200 feet wide.
- Secondary environmental corridor (SEC) contains significant but smaller concentrations of natural resources. They are at least 100 acres in size and at least one (1) mile long, and 100 feet wide, unless serving to link primary corridors.
- Isolated natural resource areas (INRA) contain significant remaining resources apart from environmental corridors. They are at least five (5) acres in size and 200 feet wide.

The field inspection included a preliminary reconnaissance of the Study Area to determine the general topography, plant communities, and to confirm the presence of various resource features.

1) Plant species within the Study Area were identified to the species level and listed. Recent disturbances were recorded in field notes.
2) If soil limitations were part of the criteria, soil types were confirmed during the field inspection.
3) Changes in wildlife habitat and/or environmental corridor were recorded in field notes.
4) Heartland identified key natural resource base elements within the Study Area such as:

- Lakes, rivers, and streams
- Wetlands
- Prairie remnants
- Rugged terrain and steep slopes
- Poorly drained and organic soil
- Potential outdoor recreation sites
- Historic sites and structures
- Undeveloped shorelands and flood lands
- Woodlands
- Wildlife habitat
- Unique landforms
- Existing outdoor recreation sites
- Significant open spaces
- Outstanding scenic areas and vistas

Point values of each natural resource base element were then assigned and summed. Those areas with 10 or more points that also met the minimum size and width requirements were identified as corridor.

Heartland then located the boundary of PEC partially by finding the outer drip line of the tree canopy of woodlands. Woodlands are comprised of trees with at least a four-inch diameter at breast height (dbh), having a minimum density of 17 trees per acre, and producing greater than 50% canopy cover. Wetlands, woodlands, rugged terrain and steep slopes, and wildlife habitat elements were included in the PEC.

3.0 Results and Discussion

3.1 Desktop Review

Climatic Conditions

According to the APT analysis (Deters & Gutenson 2021) using the previous 90 days of precipitation data, conditions encountered at the time of the August 2024 wetland delineation fieldwork were expected to be in the wetter than normal range for the time of year (Appendix B). According to the Palmer Drought Severity Index, conditions were in the severe wetness range. Fieldwork was completed within the dry season based on long-term regional hydrology data utilized in the WebWIMP Climatic Water Balance and computed as part of the APT analysis.

General Topography and Land Use

The topography within the Study Area was generally sloping down east and west from the central and northeastern portions of the Study Area.. Topographic highs of approximately 715 feet above mean sea level (msl) are present in the northeastern portion of the Study Area, and a topographic low of approximately 696 feet above msl is present in the northwestern corner of the Study Area (Figures 2, 6, and 7, Appendix A). Land use/cover within the Study Area consists of vacant land comprised of woodlands, meadow, shrublands, and wetlands. Residential areas are present in the surrounding areas and Lake Michigan was located approximately 350ft. from the eastern Study Area boundary.

Soil Mapping.

Soils mapped by the NRCS Soil Survey within the Study Area, and their hydric status are summarized in Table 1. Wetlands identified during the field investigation are located primarily within areas mapped as hydric or partially hydric soils including wetland indicator soils (Figures 3 and 4, Appendix A).

Table 1. Summary of NRCS Mapped Soils within the Study Area

Soil symbol: Soil Unit Name	Soil Unit Component	Soil Unit Component Percentage	Landform	Hydric status
KnB2: Kewaunee silt loam, 2-6% slopes, eroded	Kewaunee-Eroded	85-91	Ground moraines	No
	Manawa	8-12	Drainageways	No

Soil symbol: Soil Unit Name	Soil Unit Component	Soil Unit Component Percentage	Landform	Hydric status
	Poygan-Occasionally ponded	1-3	Depressions	Yes
KoB2: Kewaunee silty clay loam, 2-6% slopes, eroded	Kewaunee-Eroded	85-95	Moraines	No
	Kewaunee	2-7	Moraines	No
	Manawa	3-8	Drainageways	No

Wetland Mapping

The Wisconsin Wetlands Inventory (WWI) mapping (Figure 5, Appendix A) depicts one (1) point symbol for a wetland area too small to delineate on the south-central edge of the Study Area.

Waterway and Water Body Mapping

The WDNR 24k Hydrography mapping (Figure 5, Appendix A) does not depict any waterways or water bodies within the Study Area.

Previous Delineations and Landowner Contacts

Heartland is not aware of any previous field-based wetland or corridor delineations within the Study Area. According to the landowner, there have been no changes made to the Study Area in the last several decades.

Aerial Photography

Available NAIP imagery of the Study Area from the period of 2005-2022 (Appendix A) was reviewed for evidence of wetland signatures and to gain insight into the site's recent history. The site has remained significantly unchanged with mostly undeveloped woodland, shrubby, and meadow areas throughout the review period.

3.2 Field Review

Three (3) wetlands were identified and delineated within the Study Area. Wetland determination data sheets (Appendix C) were completed at ten (10) sample points that were representative of the wetland and upland conditions near the boundary and where potential wetlands may be present based on the desktop review and field reconnaissance. Appendix D provides photographs, typically at the sample point locations of the wetlands,

adjacent uplands, water bodies, and waterways. The wetland boundary and sample point locations are shown on Figure 7 (Appendix A) and the wetlands are summarized in Table 2 and detailed in the following sections.

Table 2. Summary of Wetlands Identified within the Study Area

Wetland ID	Wetland Description	*Surface Water Connections	*NR151 Protective Area	Acreage (on-site)
W-1	Shrub-Carr	Appearing Isolated in the Landscape	Moderately Susceptible (50 feet)	0.03
W-2	Wet Meadow	Appearing Isolated in the Landscape	Moderately Susceptible (50 feet)	0.09
W-3	Shrub-Carr	Connected to a Ravine Tributary to Lake Michigan	Moderately Susceptible (50 feet)	0.11
**Classification based on Heartland's professional opinion. Jurisdictional authority of wetland and waterway protective areas under NR 151 lies with the WDNR. Local zoning authorities may have additional restrictions. USACE has authority for determining federal jurisdiction of wetlands and waterways.*				**10.23**

Wetland 1 (W-1)

Wetland W-1 is a depressional shrub-carr wetland located in the northern portion of the Study Area. W-1 continues outside the Study Area to the north. The boundary of W-1 followed a moderately well to poorly defined topographic break.

Dominant vegetation observed in W-1 included meadow willow (*Salix petiolaris*, FACW), green ash (*Fraxinus pennsylvanica*, FACW), fowl manna grass (*Glyceria striata*, OBL), Dudley's rush (*Juncus dudleyi*, FACW), and fowl bluegrass (*Poa palustris*, FACW). Therefore, the hydrophytic vegetation parameter was met.

The Depleted Matrix (F3) hydric soil indicator was observed within W-1, which is not consistent with the NRCS-mapped Kewaunee silty clay loam soil type. The hydric soil parameter was met in W-1 based on meeting an indicator.

The primary wetland hydrology indicators of Drift Deposits (B3), Algal Mat or Crust (B4), and Water-Stained Leaves (B9) were observed within W-1, while the secondary indicators of Geomorphic Position (D2) and a positive FAC-Neutral Test (D5) were noted. Therefore, the wetland hydrology parameter was met.

Wetland 2 (W-2)

Wetland W-2 is a depressional wet meadow located in the west-central portion of the Study Area. The boundary of W-2 followed a moderately well to poorly defined topographic break.

Dominant vegetation observed in W-2 included green ash (*Fraxinus pennsylvanica*, FACW), redtop grass (*Agrostis gigantea*, FACW), marsh straw sedge (*Carex echinodes*, FACW), and Dudley's rush (*Juncus dudleyi*, FACW). Therefore, the hydrophytic vegetation parameter was met.

The Depleted Below Dark Surface (A11), Depleted Matrix (F3), and Redox Dark Surface (F6) hydric soil indicators were observed within W-2, which are not consistent with the NRCS-mapped Kewaunee silty clay loam soil type. The hydric soil parameter was met in W-2 based on meeting an indicator.

Although no primary wetland hydrology indicators were observed within W-2, the secondary wetland hydrology indicators of Geomorphic Position (D2) and a positive FAC-Neutral Test (D5) were noted. Therefore, the wetland hydrology parameter was met.

Wetland 3 (W-3)

Wetland W-3 is a shrub-carr located near the eastern edge of the Study Area. The boundary of W-3 followed a moderately well-defined topographic break at the edges of upland woodlands. W-3 is contiguous with a ravine that is a tributary to Lake Michigan.

Dominant vegetation observed in W-3 included black ash (*Fraxinus nigra*, FACW), hybrid bush honeysuckle (*Lonicera x bella*, FACU), common buckthorn (*Rhamnus cathartica*, FAC), fowl manna grass, and Virginia bugleweed (*Lycopus virginicus*, OBL). Therefore, the hydrophytic vegetation parameter was met.

The Depleted Below Dark Surface (A11), Depleted Matrix (F3), and Redox Dark Surface (F6) hydric soil indicators were observed within W-3, which is consistent with depressional inclusions within the mapped Kewaunee silt loam soil type. The hydric soil parameter was met in W-3 based on meeting an indicator.

Although no primary wetland hydrology indicators were observed within W-3, the secondary wetland hydrology indicators of Geomorphic Position (D2) and a positive FAC-Neutral Test (D5) were noted. Therefore, the wetland hydrology parameter was met.

3.3 Environmental Corridor

Primary environmental corridor (PEC) areas in the Study Area were mostly comprised of woodlands. W-3 was entirely included in PEC (Figure 7, Appendix A). The corridor area was first identified in the SEWRPC publication *Sanitary Sewer Service Area for the city of Mequon and the Village of Thiensville* - CAPR-188, 1992, amended 1995, Map 7 (SEWRPC, 1995, Appendix F).

In 2024, Heartland refined the PEC boundary in the Study Area based on the natural resource elements in SEWRPC's guidance (Rubin & and Emmerich, 2000). The PEC boundaries in the Study Area were determined by the edge of woodland as represented by the outer dripline of the canopy. Other natural resource elements comprising PEC were observed to be present (e.g., wetlands, steep slopes, and wildlife habitat), however these elements did not define the PEC boundary.

The upland woodland portions of the PEC in the Study Area are found adjacent to the bluff of Lake Michigan. Per a floristic quality assessment using the Universal FQA Calculator web site (https://universalfqa.org/), the upland woodland portion of PEC was determined to have a native mean C of 3.7, a native FQI of 17.7, and a species richness of 28 (23 native). Appendix F includes plant species lists and metrics. Dominant canopy trees included mostly basswood (*Tilia americana*) and paper birch (*Betula papyrifera*). However, in a portion of the western side of the PEC white pine (*Pinus strobus*) and Norway spruce (*Picea abies*) were dominant. Shrubs dominating in the upland woodlands were mainly common buckthorn (*Rhamnus cathartica*) and hybrid bush honeysuckle (*Lonicera x bella*). Dominants in the herbaceous layer included enchanter's nightshade (*Circaea canadensis*), white avens (*Geum canadense*), calico aster (*Symphyotrichum lateriflorum*), and wood gray sedge (*Carex grisea*).

3.4 Other Considerations

This report is limited to the identification and delineation of wetlands and environmental corridors within the Study Area. Other regulated environmental resources that result in land use restrictions may be present within the Study Area that were not evaluated by Heartland (e.g., navigable waterways, floodplains, cultural resources, and threatened or endangered species).

Wisconsin Act 183 provides exemptions to permitting requirements for certain nonfederal wetlands. Nonfederal wetlands are wetlands that are not subject to federal jurisdiction. Exemptions apply to projects in urban areas with wetland impacts up to 1-acre per parcel. An urban area is defined as an incorporated area; an area within ½ mile of an incorporated area; or an area served by a sewerage system. Exemptions for nonfederal wetlands also apply to projects in rural areas with wetland impacts up to three (3) acres per parcel. Exemptions in rural areas only apply to structures with an agricultural purpose such as buildings, roads, and driveways. The determination of federal and nonfederal wetlands MUST be made by the USACE through an Approved Jurisdictional Determination (AJD). This report may be submitted to the USACE to assist with their determination.

Wis. Adm. Code NR 151 ("NR 151") requires that a "protective area" (buffer) be determined from the Ordinary High-Water Mark (OHWM) of lakes, streams, and rivers, or at the delineated boundary of wetlands. Per NR 151.12, the protective area width for "less susceptible" wetlands is determined by using 10% of the average wetland width, no less than 10 feet or more than 30 feet. "Moderately susceptible" wetlands, lakes, and perennial and intermittent streams identified on recent mapping require a protective area width of 50 feet; while "highly susceptible wetlands" are associated with outstanding or exceptional resource waters in areas of special natural resource interest and require protective area width of 75 feet. Table 2 above lists the potential wetland buffers per NR 151 for each wetland identified based on Heartland's professional opinion. Please note that jurisdictional authority on wetland and waterway protective areas under NR 151 lies with the WDNR. Local zoning authorities and regional planning organizations may have additional land use restrictions within or adjacent to wetlands.

4.0 Conclusion

Heartland completed an assured wetland determination and delineation on the Gorelik Property on August 5, 2024, at the request of Vitaliy Gorelik. The environmental corridor was also refined and field delineated on August 5, 2024. Wetland and corridor delineation/refinement fieldwork was completed by Eric C. Parker, SPWS, an assured wetland delineator qualified via the WDNR's Wetland Delineation Assurance Program (Appendix E, Qualifications). The 6.96-acre Study Area is located northeast of the

intersection of Lake Shore Drive and West Bonniwell Road, in the southeast ¼ of Section 5, T9N, R22E, City of Mequon, Ozaukee County, WI (Figure 1, Appendix A).

Three (3) wetland areas totaling approximately 0.23 acres were delineated and mapped within the Study Area (Figure 7, Appendix A). No waterways or water bodies were observed in the Study Area. The outer boundary of primary environmental corridor (PEC) was refined and delineated within the Study Area. PEC was determined to be approximately 1.51 acres within the Study Area (Figure 7, Appendix A).

Wetlands, waterways, and water bodies discussed in this report may be subject to federal regulation under the jurisdiction of the USACE, state regulation under the jurisdiction of the WDNR, and the local zoning authority. Heartland recommends this report be submitted to the USACE for final jurisdictional review and concurrence. Review by local authorities may be necessary for determination of any applicable zoning and setback restrictions. PEC boundaries are subject to review and confirmation by the municipality or SEWRPC.

Heartland recommends that all applicable regulatory agency reviews and permits are obtained prior to beginning work within the Study Area or within or adjacent to wetlands, waterways, and PEC. Heartland can assist with evaluating the need for additional environmental reviews, surveys, or regulatory agency coordination in consideration of the proposed activity and land use as requested but is outside of the scope of the wetland delineation and corridor refinement.

Experienced and qualified professionals completed the wetland determination and delineation, and corridor refinement using standard practices and professional judgment. Wetland and corridor boundaries may be affected by conditions present within the Study Area at the time of the fieldwork. All final decisions on wetlands and their boundaries are made by the USACE, the WDNR, and/or sometimes a local unit of government. Wetland and corridor determination and boundary reviews by regulatory agencies may result in modifications to the findings presented to the Client. These modifications may result from varying conditions between the time the wetland delineation and corridor refinements were completed and the time of the review. Factors that may influence the findings may include but are not limited to precipitation patterns, drainage modifications, changes or modification to vegetation, and the time of year.

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Gorelik Property
Vitaliy Gorelik
Project #: 20241286
August 21, 2024

Appendix A | Figures and NAIP Imagery

Section 31

Section 32 T10N R22E

Section 33

Section 6

Section 5

T9N R22E

Section 7

Section 8



Study Area (6.96 ac)

Township

Section

0 500 1,000 Ft

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Heartland ECOLOGICAL GROUP INC

Figure 1. Project Location

Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

OpenStreetMap
ESRI

LRR: NCNE

Figure Created: 8/17/2024

Section 31

Section 32 T10N R22E

Section 33

Section 6

Section 5

T9N R22E

Section 7

Section 8

Lake Michigan



Study Area (6.96 ac)
Township
Section
Perennial Streams
Intermittent Streams
Waterbodies

0 500 1,000 Ft

Heartland
ECOLOGICAL GROUP INC

Figure 2. USGS Topography
Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

USGSTopo
USGS
LRR: NCNE

Figure Created: 8/17/2024





Study Area (6.96 ac)

NRCS Soil Survey Data

- Hydric (100%)
- Predominantly Hydric (85-99%)
- Partially Hydric (16-84%)
- Predominantly Non-Hydric (1-15%)
- Non-Hydric (0%)

0 75 150 Ft

Heartland
ECOLOGICAL GROUP INC

Figure 3. NRCS Hydric Soils

Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

2022 NAIP
NRCS

LRR: NCNE

Figure Created: 8/20/2024





Study Area (6.96 ac)
SWDV Wetland Indicators

0 75 150 Ft

Heartland
ECOLOGICAL GROUP INC

Figure 4. SWDV Wetland Indicators
Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

2022 NAIP
WDNR
LRR: NCNE

Figure Created: 8/20/2024





Study Area (6.96 ac)
WWI Polygons
WWI Points
Perennial Streams (None in Map Extent)
Intermittent Streams (None in Map Extent)
Waterbodies (None in Map Extent)

0 75 150 Ft

Heartland
ECOLOGICAL GROUP INC

Figure 5. Wisconsin Wetland Inventory
Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

2022 NAIP
WDNR, USGS
LRR: NCNE

Figure Created: 8/20/2024





Study Area (6.96 ac)

Ozaukee Co 1' Contours

0 75 150 Ft

Heartland ECOLOGICAL GROUP INC

Figure 6. Color-Stretch Digital Elevation Model

Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

DNR Lidar Service
Ozaukee Co., WDNR

LRR: NCNE

Figure Created: 8/20/2024





Study Area (6.96 ac)

Ozaukee Co 1' Contours

Field Delineated Wetlands (0.23 ac)

PEC (1.51 ac)

Home Site

Sample Points

Upland

Wetland

Heartland
ECOLOGICAL GROUP INC

Figure 7. Field Delineated Wetlands

Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

2022 NAIP
Ozaukee Co, HEG

LRR: NCNE

Figure Created: 8/20/2024





Study Area (6.96 ac)

0 75 150 Ft

Heartland
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Appendix: 2005-06-02
NAIP Aerial Imagery
Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

2005 NAIP
USDA
LRR: NCNE

Figure Created: 8/20/2024





Study Area (6.96 ac)

0 75 150 Ft

Heartland
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Appendix: 2006-06-12
NAIP Aerial Imagery

Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

2006 NAIP
USDA

LRR: NCNE

Figure Created: 8/20/2024





Study Area (6.96 ac)

0 75 150 Ft

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Appendix: 2008-07-05
NAIP Aerial Imagery

Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

2008 NAIP
USDA

LRR: NCNE

Figure Created: 8/20/2024





Study Area (6.96 ac)

0 75 150 Ft

Heartland
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Appendix: 2010-06-28
NAIP Aerial Imagery
Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

2010 NAIP
USDA
LRR: NCNE

Figure Created: 8/20/2024





Study Area (6.96 ac)

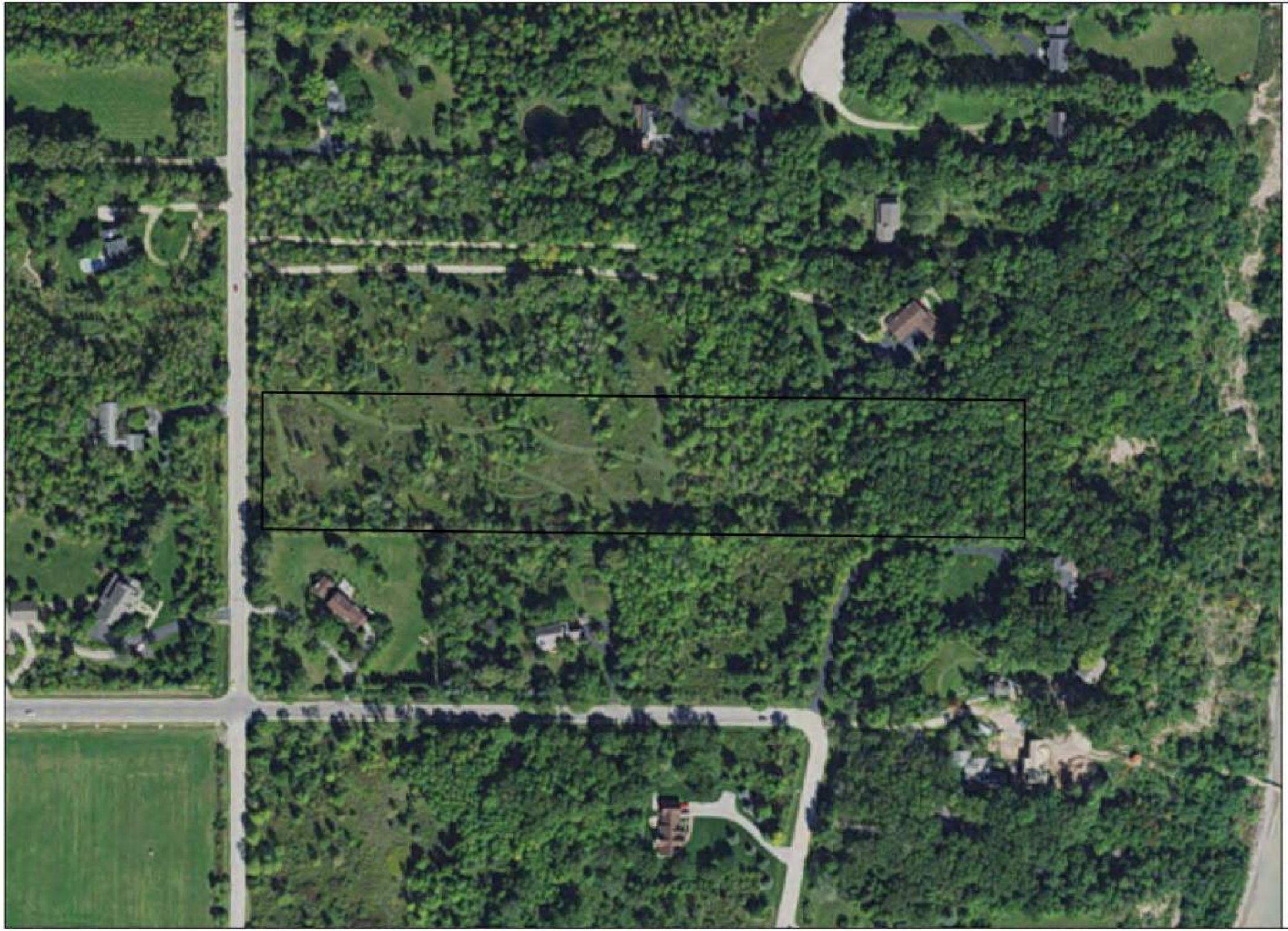
0 75 150 Ft

Heartland
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Appendix: 2013-06-19
NAIP Aerial Imagery
Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

2013 NAIP
USDA
LRR: NCNE

Figure Created: 8/20/2024





Study Area (6.96 ac)

0 75 150 Ft

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Appendix: 2015-09-22
NAIP Aerial Imagery
Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

2015 NAIP
USDA

LRR: NCNE

Figure Created: 8/20/2024





Study Area (6.96 ac)

0 75 150 Ft

Heartland
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Appendix: 2017-07-03
NAIP Aerial Imagery

Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

2017 NAIP
USDA

LRR: NCNE

Figure Created: 8/20/2024





Study Area (6.96 ac)

0 75 150 Ft

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Appendix: 2018-09-14
NAIP Aerial Imagery

Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

2018 NAIP
USDA

LRR: NONE

Figure Created: 8/20/2024





Study Area (6.96 ac)

0 75 150 Ft

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Appendix: 2020-09-02
NAIP Aerial Imagery
Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

2020 NAIP
USDA
LRR: NCNE

Figure Created: 8/20/2024





Study Area (6.96 ac)

0 75 150 Ft

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Appendix: 2022-06-23
NAIP Aerial Imagery
Gorelik Property
Project #20241286
T9N, R22E, S05
C Mequon, Ozaukee Co

2022 NAIP
USDA

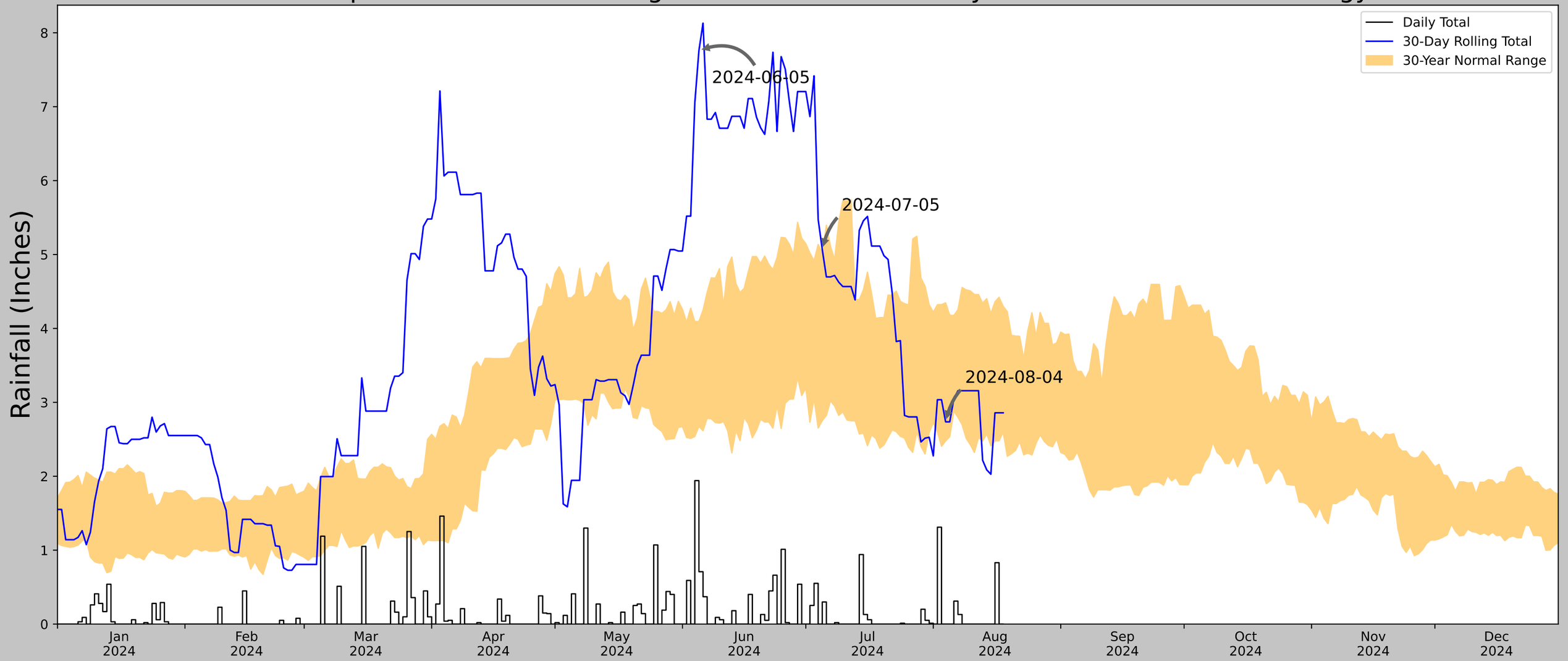
LRR: NONE

Figure Created: 8/20/2024

Gorelik Property
Vitaliy Gorelik
Project #: 20241286
August 20, 2024

Appendix B | APT Analysis

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	43.266503, -87.912639
Observation Date	2024-08-04
Elevation (ft)	701.83
Drought Index (PDSI)	Severe wetness (2024-07)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-04	2.476378	4.347244	2.736221	Normal	2	3	6
2024-07-05	2.751575	5.016142	5.066929	Wet	3	2	6
2024-06-05	2.675197	4.094488	7.759843	Wet	3	1	3
Result							Wetter than Normal - 15

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
GERMANTOWN WASTEWATER UTILITY	43.2389, -88.1222	870.079	10.717	168.249	6.626	11306	73
GERMANTOWN 0.6 S	43.2268, -88.1214	855.971	0.837	14.108	0.388	5	8
GERMANTOWN 1.2 NE	43.2313, -88.1023	895.013	1.131	24.934	0.537	4	9
HUBERTUS 3.1 E	43.2368, -88.1589	890.092	1.853	20.013	0.871	2	0
CEDARBURG 3.7 WSW	43.2788, -88.0566	878.937	4.301	8.858	1.974	2	0
JACKSON 0.5 SSE	43.3144, -88.1617	895.997	5.582	25.918	2.657	3	0
JACKSON	43.3197, -88.1681	892.06	6.041	21.981	2.851	4	0
WEST BEND	43.3681, -88.0858	939.961	9.113	69.882	4.738	20	0
W BEND FIRE STN #2	43.4319, -88.1603	895.013	13.472	24.934	6.398	4	0
MT MARY COLLEGE	43.0722, -88.0294	714.895	12.431	155.184	7.523	2	0

Gorelik Property
Vitaliy Gorelik
Project #: 20241286
August 20, 2024

Appendix C | Wetland Determination Data Sheets

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 20241286 Gorelik Property City/County: Ozaukee County Sampling Date: 2024-08-05

Applicant/Owner: Vitaliy Gorelik State: Wisconsin Sampling Point: P1

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 05 T009N R022E

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR L, MLRA 95 Lat: 43.266503 Long: -87.912639 Datum: WGS84

Soil Map Unit Name: Kewaunee silty clay loam, 2 to 6 percent slopes, eroded NWI classification: None Depicted (WWI)

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 ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
APT indicates climatic conditions are in the wetter than normal range.

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)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): ____
Water Table Present?	Yes ____	No ✓	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✓	Depth (inches): ____

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Historic aerial imagery via county and 2005-2022 NAIP imagery.

Remarks:
Seasonal hydrology

VEGETATION – Use scientific names of plants. Sampling Point: P1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Salix petiolaris*	20	Y	FACW
2. *Fraxinus pennsylvanica*	10	Y	FACW
3. *Cornus alba*	7	N	FACW
4.			
5.			
6.			
7.			
	37.0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Glyceria striata*	7	Y	OBL
2. *Carex radiata*	7	Y	FAC
3. *Juncus dudleyi*	5	Y	FACW
4. *Poa palustris*	5	Y	FACW
5. *Fraxinus pennsylvanica*	5	Y	FACW
6. *Carex cristatella*	3	N	FACW
7. *Ribes americanum*	3	N	FACW
8. *Geum aleppicum*	3	N	FAC
9. *Carex retrorsa*	2	N	OBL
10. *Carex gracillima*	2	N	FACU
11. *Epilobium coloratum*	2	N	OBL
12.			
	44.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	11.00	x 1 =	11.00
FACW species	58.00	x 2 =	116.00
FAC species	10.00	x 3 =	30.00
FACU species	2.00	x 4 =	8.00
UPL species	0.00	x 5 =	0.00
Column Totals:	81.00 (A)		165.00 (B)

Prevalence Index = B/A = 2.04

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.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ✓ **No** ___

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

Shrub carr

SOIL

Sampling Point: P1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 4/2	97	7.5YR 4/3	3	C	M	SICL	
6-10	7.5YR 4/1	93	7.5YR 4/3	7	C	M	SICL	
10-24	7.5YR 4/1	90	10YR 5/6	10	C	M	SIC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 20241286 Gorelik Property City/County: Ozaukee County Sampling Date: 2024-08-05

Applicant/Owner: Vitaliy Gorelik State: Wisconsin Sampling Point: P2

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 05 T009N R022E

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR L, MLRA 95 Lat: 43.266261 Long: -87.912655 Datum: WGS84

Soil Map Unit Name: Kewaunee silty clay loam, 2 to 6 percent slopes, eroded NWI classification: None Depicted (WWI)

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 ✓	If yes, optional Wetland Site ID: ____

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

APT indicates climatic conditions are in the wetter than normal range.

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)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): ____
Water Table Present?	Yes ____	No ✓	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✓	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** ✓

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

Historic aerial imagery via county GIS and 2005-2022 NAIP imagery.

Remarks:

No wetland hydrology indicators observed, no saturation.

VEGETATION – Use scientific names of plants. Sampling Point: P2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Viburnum lentago*	15	Y	FAC
2. *LONICERA X BELLA*	15	Y	FACU
3. *Fraxinus pennsylvanica*	7	N	FACW
4.			
5.			
6.			
7.			
	37.0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Juncus dudleyi*	25	Y	FACW
2. *Poa pratensis*	20	Y	FACU
3. *Solidago canadensis*	20	Y	FACU
4. *Solidago gigantea*	10	N	FACW
5. *RHAMNUS CATHARTICA*	7	N	FAC
6. *Circaea canadensis*	7	N	FACU
7. *Rubus occidentalis*	7	N	UPL
8. *Cornus alba*	7	N	FACW
9. *Fraxinus pennsylvanica*	5	N	FACW
10. *Solidago juncea*	5	N	UPL
11.			
12.			
	113.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	54.00	x 2 =	108.00
FAC species	22.00	x 3 =	66.00
FACU species	62.00	x 4 =	248.00
UPL species	12.00	x 5 =	60.00
Column Totals:	150.00 (A)		482.00 (B)

Prevalence Index = B/A = 3.21

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.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✓

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

Shrub thicket

SOIL Sampling Point: P2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 4/2	100					SICL	No redox
8-13	7.5YR 4/3	97	7.5YR 4/6	3	C	M	SICL	
13-24	5YR 4/4	95	5YR 4/6	5	C	M	SIC	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 20241286 Gorelik Property City/County: Ozaukee County Sampling Date: 2024-08-05

Applicant/Owner: Vitaliy Gorelik State: Wisconsin Sampling Point: P3

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 05 T009N R022E

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR L, MLRA 95 Lat: 43.266174 Long: -87.912895 Datum: WGS84

Soil Map Unit Name: Kewaunee silty clay loam, 2 to 6 percent slopes, eroded NWI classification: None Depicted (WWI)

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 ____	If yes, optional Wetland Site ID: ____

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

APT indicates climatic conditions are in the wetter than normal range.

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)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): ____
Water Table Present?	Yes ____	No ✓	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✓	Depth (inches): ____

Wetland Hydrology Present? Yes ✓ No ____

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

Historic aerial imagery via county GIS and 2005-2022 NAIP imagery.

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: P3

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Fraxinus pennsylvanica*	5	Y	FACW
2. *Cornus alba*	1	N	FACW
3.			
4.			
5.			
6.			
7.			
	6.0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Fraxinus pennsylvanica*	30	Y	FACW
2. *Agrostis gigantea*	30	Y	FACW
3. *Carex echinodes*	20	Y	FAC
4. *Juncus dudleyi*	20	Y	FACW
5. *Poa pratensis*	15	N	FACU
6. *Cornus alba*	10	N	FACW
7. *Solidago gigantea*	7	N	FACW
8. *Poa palustris*	5	N	FACW
9. *Carex granularis*	3	N	FACW
10. *Euthamia graminifolia*	3	N	FAC
11. *Geum aleppicum*	3	N	FAC
12.			
	146.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	111.00	x 2 =	222.00
FAC species	26.00	x 3 =	78.00
FACU species	15.00	x 4 =	60.00
UPL species	0.00	x 5 =	0.00
Column Totals:	152.00 (A)		360.00 (B)

Prevalence Index = B/A = 2.37

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.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ✓ **No** ___

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

Wet meadow

SOIL Sampling Point: P3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/1	97	10YR 3/3	3	C	M	L	
8-12	10YR 5/2	95	10YR 5/6	5	C	M	SCL	
12-24	10YR 5/1	85	10YR 5/6	15	C	M	SCL	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ✓ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 20241286 Gorelik Property City/County: Ozaukee County Sampling Date: 2024-08-05

Applicant/Owner: Vitaliy Gorelik State: Wisconsin Sampling Point: P4

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 05 T009N R022E

Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): None Slope (%): 3-7

Subregion (LRR or MLRA): LRR L, MLRA 95 Lat: 43.266060 Long: -87.912722 Datum: WGS84

Soil Map Unit Name: Kewaunee silt loam, 2 to 6 percent slopes, eroded NWI classification: None Depicted (WWI)

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 ✓	If yes, optional Wetland Site ID: ____

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

APT indicates climatic conditions are in the wetter than normal range.

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)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): ____
Water Table Present?	Yes ____	No ✓	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✓	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** ✓

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

Historic aerial imagery via county GIS and 2005-2022 NAIP imagery.

Remarks:

No wetland hydrology indicators observed, no saturation.

VEGETATION – Use scientific names of plants. Sampling Point: P4

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Viburnum lentago*	15	Y	FAC
2. *LONICERA X BELLA*	15	Y	FACU
3. *Fraxinus pennsylvanica*	7	N	FACW
4.			
5.			
6.			
7.			
	37.0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Juncus dudleyi*	25	Y	FACW
2. *Poa pratensis*	20	Y	FACU
3. *Solidago canadensis*	20	Y	FACU
4. *Solidago gigantea*	10	N	FACW
5. *RHAMNUS CATHARTICA*	7	N	FAC
6. *Circaea canadensis*	7	N	FACU
7. *Rubus occidentalis*	7	N	UPL
8. *Cornus alba*	7	N	FACW
9. *Fraxinus pennsylvanica*	5	N	FACW
10. *Solidago juncea*	5	N	UPL
11.			
12.			
	113.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	54.00	x 2 =	108.00
FAC species	22.00	x 3 =	66.00
FACU species	62.00	x 4 =	248.00
UPL species	12.00	x 5 =	60.00
Column Totals:	150.00 (A)		482.00 (B)

Prevalence Index = B/A = 3.21

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.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✓

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

Shrub thicket

SOIL Sampling Point: P4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	7.5YR 4/2	100					SIL	No redox
7-17	7.5YR 5/3	95	7.5YR 5/6	5	C	M	SICL	
17-24	7.5YR 5/2	93	7.5YR 5/6	7	C	M	SIC	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 20241286 Gorelik Property City/County: Ozaukee County Sampling Date: 2024-08-05

Applicant/Owner: Vitaliy Gorelik State: Wisconsin Sampling Point: P5

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 05 T009N R022E

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3-7

Subregion (LRR or MLRA): LRR L, MLRA 95 Lat: 43.266549 Long: -87.911074 Datum: WGS84

Soil Map Unit Name: Kewaunee silty clay loam, 2 to 6 percent slopes, eroded NWI classification: None Depicted (WWI)

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 ✓	If yes, optional Wetland Site ID: ____

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

APT indicates climatic conditions are in the wetter than normal range.

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)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): ____
Water Table Present?	Yes ____	No ✓	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✓	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** ✓

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

Historic aerial imagery via county GIS and 2005-2022 NAIP imagery.

Remarks:

No wetland hydrology indicators observed, no saturation.

VEGETATION – Use scientific names of plants. Sampling Point: P5

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *RHAMNUS CATHARTICA*	20	Y	FAC
2. *Crataegus coccinea*	15	Y	UPL
3.			
4.			
5.			
6.			
7.			
	35.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *RHAMNUS CATHARTICA*	40	Y	FAC
2. *LONICERA X BELLA*	15	Y	FACU
3. *Fraxinus pennsylvanica*	5	N	FACW
4.			
5.			
6.			
7.			
	60.0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Carex rosea*	20	Y	FACU
2. *RHAMNUS CATHARTICA*	20	Y	FAC
3. *Solidago gigantea*	15	Y	FACW
4. *Viola sororia*	7	N	FAC
5. *Solidago canadensis*	5	N	FACU
6. *Prunella vulgaris*	5	N	FAC
7. *Carex grisea*	5	N	FAC
8. *Symphyotrichum lateriflorum*	5	N	FAC
9.			
10.			
11.			
12.			
	82.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.14 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	20.00	x 2 =	40.00
FAC species	102.00	x 3 =	306.00
FACU species	40.00	x 4 =	160.00
UPL species	15.00	x 5 =	75.00
Column Totals:	177.00 (A)		581.00 (B)

Prevalence Index = B/A = 3.28

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.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ✓ **No** ___

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

Shrub thicket

SOIL Sampling Point: P5

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	7.5YR 4/2	100					SIL	No redox
14-24	7.5YR 4/1	90	7.5YR 4/4	10	C	M	SIC	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 20241286 Gorelik Property City/County: Ozaukee County Sampling Date: 2024-08-05

Applicant/Owner: Vitaliy Gorelik State: Wisconsin Sampling Point: P6

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 05 T009N R022E

Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): None Slope (%): 3-7

Subregion (LRR or MLRA): LRR L, MLRA 95 Lat: 43.265978 Long: -87.911532 Datum: WGS84

Soil Map Unit Name: Kewaunee silt loam, 2 to 6 percent slopes, eroded NWI classification: Wetland Point Symbol (WWI)

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 ✓	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
APT indicates climatic conditions are in the wetter than normal range.

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)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): ____
Water Table Present?	Yes ____	No ✓	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✓	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Historic aerial imagery via county and 2005-2022 NAIP imagery.

Remarks:
No wetland hydrology indicators observed, no saturation.

VEGETATION – Use scientific names of plants. Sampling Point: P6

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tilia americana*	50	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	50.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *LONICERA X BELLA*	40	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	40.0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Solidago gigantea*	25	Y	FACW
2. *RHAMNUS CATHARTICA*	25	Y	FAC
3. *Symphyotrichum lateriflorum*	10	N	FAC
4. *LONICERA X BELLA*	10	N	FACU
5. *Toxicodendron radicans*	10	N	FAC
6. *Carex grisea*	7	N	FAC
7. *Circaea canadensis*	7	N	FACU
8.			
9.			
10.			
11.			
12.			
	94.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	25.00	x 2 =	50.00
FAC species	52.00	x 3 =	156.00
FACU species	107.00	x 4 =	428.00
UPL species	0.00	x 5 =	0.00
Column Totals:	184.00 (A)		634.00 (B)

Prevalence Index = B/A = 3.45

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.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✓

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

Shrub thicket-treeline

SOIL

Sampling Point: P6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 3/2	100					L	No redox
6-11	7.5YR 4/3	100					L	No redox
11-15	7.5YR 4/4	100					SCL	No redox
15-24	7.5YR 4/4	100					SIC	No redox

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 20241286 Gorelik Property City/County: Ozaukee County Sampling Date: 2024-08-05

Applicant/Owner: Vitaliy Gorelik State: Wisconsin Sampling Point: P7

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 05 T009N R022E

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR L, MLRA 95 Lat: 43.266283 Long: -87.910944 Datum: WGS84

Soil Map Unit Name: Kewaunee silt loam, 2 to 6 percent slopes, eroded NWI classification: None Depicted (WWI)

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 ✓	If yes, optional Wetland Site ID: ____

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

APT indicates climatic conditions are in the wetter than normal range.

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)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): ____
Water Table Present?	Yes ____	No ✓	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✓	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** ✓

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

Historic aerial imagery via county GIS and 2005-2022 NAIP imagery.

Remarks:

No wetland hydrology indicators observed, no saturation.

VEGETATION – Use scientific names of plants. Sampling Point: P7

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *MALUS PUMILA*	30	Y	UPL
2.			
3.			
4.			
5.			
6.			
7.			
	30.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *RHAMNUS CATHARTICA*	40	Y	FAC
2. *LONICERA X BELLA*	20	Y	FACU
3.			
4.			
5.			
6.			
7.			
	60.0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *RHAMNUS CATHARTICA*	20	Y	FAC
2. *LONICERA X BELLA*	10	Y	FACU
3. *POA PRATENSIS*	7	Y	FACU
4. *Taraxacum officinale*	7	Y	FACU
5. *Agrimonia gryposepala*	5	N	FACU
6. *Symphyotrichum lateriflorum*	5	N	FAC
7. *Carex grisea*	5	N	FAC
8. *Solidago gigantea*	3	N	FACW
9.			
10.			
11.			
12.			
	62.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 28.57 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	3.00	x 2 =	6.00
FAC species	70.00	x 3 =	210.00
FACU species	49.00	x 4 =	196.00
UPL species	30.00	x 5 =	150.00
Column Totals:	152.00 (A)		562.00 (B)

Prevalence Index = B/A = 3.7

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.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✓

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

Shrub thicket

SOIL Sampling Point: P7

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 3/1	100					SIL	No redox
12-15	7.5YR 3/1	100					SICL	No redox
15-24	7.5YR 5/2	93	7.5YR 5/4	7	C	M	SIC	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 20241286 Gorelik Property City/County: Ozaukee County Sampling Date: 2024-08-05

Applicant/Owner: Vitaliy Gorelik State: Wisconsin Sampling Point: P8

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 05 T009N R022E

Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): None Slope (%): 3-7

Subregion (LRR or MLRA): LRR L, MLRA 95 Lat: 43.266219 Long: -87.909558 Datum: WGS84

Soil Map Unit Name: Kewaunee silt loam, 2 to 6 percent slopes, eroded NWI classification: None Depicted (WWI)

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 ✓	If yes, optional Wetland Site ID: ____

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

APT indicates climatic conditions are in the wetter than normal range.

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)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): ____
Water Table Present?	Yes ____	No ✓	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✓	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** ✓

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

County GIS historic aerial imagery and 2005-2022 NAIP imagery.

Remarks:

No wetland hydrology indicators observed, no saturation.

VEGETATION – Use scientific names of plants. Sampling Point: P8

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tilia americana*	25	Y	FACU
2. *Ulmus americana*	10	Y	FACW
3. *Betula papyrifera*	5	N	FACU
4.			
5.			
6.			
7.			
	40.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *LONICERA X BELLA*	25	Y	FACU
2. *Rhamnus cathartica*	15	Y	FAC
3.			
4.			
5.			
6.			
7.			
	40.0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Carex hirtifolia*	40	Y	UPL
2. *Glyceria striata*	30	Y	OBL
3. *Solidago gigantea*	20	Y	FACW
4. *Fragaria virginiana*	15	N	FACU
5. *Symphyotrichum lateriflorum*	10	N	FAC
6. *Circaea canadensis*	10	N	FACU
7. *Geum canadense*	7	N	FAC
8. *Prunella vulgaris*	5	N	FAC
9. *Lysimachia ciliata*	3	N	FACW
10. *Agrimonia gryposepala*	3	N	FACU
11.			
12.			
	143.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.14 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30.00	x 1 =	30.00
FACW species	33.00	x 2 =	66.00
FAC species	37.00	x 3 =	111.00
FACU species	83.00	x 4 =	332.00
UPL species	40.00	x 5 =	200.00
Column Totals:	223.00 (A)		739.00 (B)

Prevalence Index = B/A = 3.31

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.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ✓ **No** ___

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

Shrub thicket in open woodland

SOIL Sampling Point: P8

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 3/1	100					SIL	No redox
10-16	7.5YR 5/3	90	7.5YR 5/6	10	C	M	SICL	
16-24	7.5YR 4/4	90	7.5YR 4/6	10	C	M	SIC	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 20241286 Gorelik Property City/County: Ozaukee County Sampling Date: 2024-08-05

Applicant/Owner: Vitaliy Gorelik State: Wisconsin Sampling Point: P9

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 05 T009N R022E

Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): Concave Slope (%): 3-7

Subregion (LRR or MLRA): LRR L, MLRA 95 Lat: 43.266470 Long: -87.909491 Datum: WGS84

Soil Map Unit Name: Kewaunee silt loam, 2 to 6 percent slopes, eroded NWI classification: None Depicted (WWI)

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 ____	If yes, optional Wetland Site ID: ____

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

APT indicates climatic conditions are in the wetter than normal range.

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)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): ____
Water Table Present?	Yes ____	No ✓	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✓	Depth (inches): ____

Wetland Hydrology Present? Yes ✓ No ____

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

Historic aerial imagery via county GIS and 2005-2022 NAIP imagery.

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: P9

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Fraxinus nigra*	15	Y	FACW
2. *LONICERA X BELLA*	15	Y	FACU
3. *RHAMNUS CATHARTICA*	10	Y	FAC
4. *Fraxinus pennsylvanica*	5	N	FACW
5.			
6.			
7.			
	45.0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Glyceria striata*	40	Y	OBL
2. *Lycopus virginicus*	30	Y	OBL
3. *Cicuta maculata*	15	N	OBL
4. *Bidens frondosa*	7	N	FACW
5. *Solidago gigantea*	5	N	FACW
6. *Impatiens capensis*	5	N	FACW
7. *Symphyotrichum lateriflorum*	5	N	FAC
8. *Equisetum arvense*	3	N	FAC
9.			
10.			
11.			
12.			
	110.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	85.00	x 1 =	85.00
FACW species	37.00	x 2 =	74.00
FAC species	18.00	x 3 =	54.00
FACU species	15.00	x 4 =	60.00
UPL species	0.00	x 5 =	0.00
Column Totals:	155.00 (A)		273.00 (B)

Prevalence Index = B/A = 1.76

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.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ✓ **No** _____

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

Shrub carr. Dead Fraxinus once dominant and wooded wetland.

SOIL Sampling Point: P9

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 3/1	95	7.5YR 3/2	5	C	M	SIL	Faint redox
6-10	7.5YR 3/1	95	7.5YR 3/3	5	C	M	SICL	
10-17	7.5YR 4/2	95	7.5YR 4/4	5	C	M	SICL	
17-24	7.5YR 5/3	90	7.5YR 5/8	10	C	M	SIC	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ✓ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 20241286 Gorelik Property City/County: Ozaukee County Sampling Date: 2024-08-05

Applicant/Owner: Vitaliy Gorelik State: Wisconsin Sampling Point: P10

Investigator(s): Eric C Parker, SPWS Section, Township, Range: sec 05 T009N R022E

Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): None Slope (%): 3-7

Subregion (LRR or MLRA): LRR L, MLRA 95 Lat: 43.266457 Long: -87.909620 Datum: WGS84

Soil Map Unit Name: Kewaunee silt loam, 2 to 6 percent slopes, eroded NWI classification: None Depicted (WWI)

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 ✓	If yes, optional Wetland Site ID: ____

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

APT indicates climatic conditions are in the wetter than normal range.

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)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): ____
Water Table Present?	Yes ____	No ✓	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✓	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** ✓

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

County GIS historic aerial imagery and 2005-2022 NAIP imagery.

Remarks:

No wetland hydrology indicators observed, no saturation.

VEGETATION – Use scientific names of plants. Sampling Point: P10

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tilia americana*	15	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	15.0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *LONICERA X BELLA*	25	Y	FACU
2. *Rhamnus cathartica*	10	Y	FAC
3.			
4.			
5.			
6.			
7.			
	35.0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. *Carex hirtifolia*	50	Y	UPL
2. *Solidago gigantea*	20	Y	FACW
3. *Symphyotrichum lateriflorum*	15	N	FAC
4. *Geranium maculatum*	15	N	FACU
5. *Agrimonia gryposepala*	7	N	FACU
6. *Circaea canadensis*	7	N	FACU
7. *Prunella vulgaris*	5	N	FAC
8. *Poa pratensis*	5	N	FACU
9.			
10.			
11.			
12.			
	124.0 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1 =	0.00
FACW species	20.00	x 2 =	40.00
FAC species	30.00	x 3 =	90.00
FACU species	74.00	x 4 =	296.00
UPL species	50.00	x 5 =	250.00
Column Totals:	174.00 (A)		676.00 (B)

Prevalence Index = B/A = 3.89

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.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✓

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

Shrub thicket in open woodland

SOIL Sampling Point: P10

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 4/2	100					SIL	No redox
12-16	7.5YR 4/2	95	7.5YR 4/4	5	C	M	SICL	
16-24	7.5YR 5/3	90	7.5YR 5/6	10	C	M	SIC	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

Gorelik Property
Vitaliy Gorelik
Project #: 20241286
August 20, 2024

Appendix D | Site Photographs



Photo #1 Sample point P1



Photo #2 Sample point P1



Photo #3 Sample point P1



Photo #4 Sample point P1



Photo #5 Sample point P2



Photo #6 Sample point P2



Photo #7 Sample point P2



Photo #8 Sample point P2



Photo #9 Sample point P3



Photo #10 Sample point P3



Photo #11 Sample point P3



Photo #12 Sample point P3



Photo #13 Sample point P4



Photo #14 Sample point P4



Photo #15 Sample point P4



Photo #16 Sample point P4



Photo #17 Sample point P5



Photo #18 Sample point P5



Photo #19 Sample point P5



Photo #20 Sample point P5



Photo #21 Sample point P6



Photo #22 Sample point P6



Photo #23 Sample point P6



Photo #24 Sample point P6



Photo #25 Sample point P7



Photo #26 Sample point P7



Photo #27 Sample point P7



Photo #28 Sample point P7



Photo #29 Sample point P8



Photo #30 Sample point P8



Photo #31 Sample point P8



Photo #32 Sample point P8



Photo #33 Sample point P9



Photo #34 Sample point P9



Photo #35 Sample point P9



Photo #36 Sample point P9



Photo #37 Sample point P10



Photo #38 Sample point P10



Photo #39 Sample point P10



Photo #40 Sample point P10



Photo #41 Interior view of primary environmental corridor woodland



Photo #42 Interior view of primary environmental corridor woodland



Photo #43 Interior view of primary environmental corridor woodland



Photo #44 Interior view of primary environmental corridor w/Picea-Pinus



Photo #45 Interior view of primary environmental corridor w/Picea-Pinus



Photo #46 Narrow south end of wetland W-1 where a narrow drainage pattern was observed.

Gorelik Property
Vitaliy Gorelik
Project #: 20241286
August 20, 2024

Appendix E | Delineator Qualifications

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
1027 W St Paul Ave
Milwaukee WI, WI, 53233

Tony Evers, Governor
Adam N. Payne, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

March 22, 2024

Eric Parker, SPWS, CWS
Heartland Ecological Group, Inc.
4821 Elm Island Circle
Waterford, WI 53185

Subject: 2024 Assured Wetland Delineator Confirmation

Mr. Parker:

This letter provides Wisconsin Department of Natural Resources (WDNR) confirmation for the wetland delineations you conduct during the 2024 growing season. You and your clients will not need to wait for the WDNR to review your wetland delineations before moving forward with project planning. This will help expedite the review process for WDNR's wetland regulatory program. Your name and contact information will continue to be listed on our website at: http://dnr.wi.gov/topic/wetlands/assurance.html.

In the instance where a municipality may require a letter of confirmation for your work prior to moving forward in the local regulatory process, this letter shall serve as that confirmation. Although your wetland delineations do not require WDNR field review, inclusion of a Wetland Delineation Report is required for projects needing State authorized wetland, waterway and/or storm water permit approvals.

To comply with Chapter 23.321, State Statutes, please supply the department with a polygon shapefile of the wetland boundaries delineated within the project area. Please do not include data such as parcel boundaries, project limits, wetland graphic representation symbols, etc. If internal upland polygons are found within a wetland polygon, then please label as UPLAND. The shapefile should utilize a State Plane Projection and be overlain onto recent aerial photography. If a different projection system is used, please indicate in which system the data are projected. In the correspondence sent with the shapefile, please supply a brief description of each wetland's plant community (eg: wet meadow, floodplain forest, etc.). Please send these data to Calvin Lawrence (608-266-0756 or email at calvin.lawrence@wisconsin.gov).

If you or any client has a question regarding your status in the Wetland Delineation Professional Assurance Program, contact me by email at kara.brooks@wisconsin.gov or phone at 414-308-6780. Thank you for all your hard work and best wishes for the upcoming field season.

Sincerely,

Kara Brooks
Wetland Identification Coordinator
Bureau of Watershed Management

Eric C. Parker, SPWS

Principal Scientist
506 Springdale Street
Mount Horeb, WI 53572
eric@heartlandecological.com
(414) 380-0269



Mr. Parker is a Senior Professional Wetland Scientist and Professionally Assured Wetland Delineator in Wisconsin with 35 years of experience assisting public and private clientele. He has completed wetland projects in other states including IL, IN, OH, MI, ND, MO, PA, TX, MD, VA, and NC. His work has supported thousands of institutional, commercial, utility, residential, industrial & transportation projects. Mr. Parker's natural resource specialties include botanical surveys, wetland science, restoration and mitigation, and environmental corridor mapping. He has a widespread understanding of the scientific, technical, and regulatory aspects of natural resources projects. His interests also include floristic quality assessment (FQA) and wetness categorization of plant species.

Mr. Parker's experience includes the following: Botanical / Biological Surveys and Natural Resource Inventories; Rare Species Surveys, Conservation Plans and Monitoring; Wetland Determination, Delineation and Functional Assessment; Wetland Exemptions; Environmental Corridor Determinations/Mapping; Wetland Restoration, Mitigation, Banking and Monitoring; Habitat Restoration, Wildlife Surveys, SCAT surveys, Environmental Assessments; Local, state, federal permit applications; Expert Witness testimony; and Regulatory permit compliance.

Education

BS, Watershed Management, Soils Minor
University of WI - Stevens Point, 1983

Wetland Ecosystems (including delineation & assessment), USEPA Graduate School Washington DC, 1988

Field Oriented Wetland Delineation Course (1987 Corps Manual) Wetlands Training Institute (WTI) St. Paul, MN, 1994

Basic Wetland Delineation Training Wisconsin Dept. of Administration Waukesha, WI, 1997

Vegetation Description, UWM Cedarburg Bog Field Station, Saukville, WI, 1998

Advanced Wetland Delineation, U. of WI - La Crosse, Bayfield County, WI, 2001

Critical Methods in Wetland Delineation, University of WI - La Crosse Continuing Education and Extension, Madison, WI, 2006, 2008, 2010, 2014, 2016-2020

Mosses ID & Ecology, UWM Cedarburg Bog Field Station, Saukville, WI, 1998

Sedges ID & Ecology, UWM Cedarburg Bog Field Station, Saukville, WI, 2002, 2006, 2010

Grasses ID & Ecology, UWM Cedarburg Bog Field Station, Saukville, WI, 1998

Registrations

Senior Professional Wetland Scientist #838, (SPWS), Society of Wetland Scientists Professional Certification Program, 1995-current

Certified Wetland Scientist #C-058, (CWS), Stormwater Management Commission Lake County, IL, 2002-current

Qualified Wetland Review Specialist #W-057, (QWRS), Kane County, IL, 2006-current

Project Experience

Wetland Delineation & Regulatory Support

2022 Wetland Delineations, Exemption Submittals, and Permitting (104 sites)

Capitol Dr Property, Waukesha Co., WI (Jan); Puetz Rd Property, Milwaukee Co., WI (Jan); Glas Driveway Wetlands and GP, Kenosha Co., (Mar); 19555 W Lincoln Ave GP, Waukesha Co., WI (Mar); Northern Oaks Subd GP-AWER, Waukesha Co., WI (Mar);Workman Properties, Waukesha Co., WI (Apr); 5732 W Rawson Av, Milwaukee Co., WI (Apr); 2705 West Rd, Racine Co., WI (Apr); CTH CW Site, Dodge Co., WI (Apr); 4-Mile Rd Property, Racine Co., WI (Apr); Kurtze Ln Property, Waukesha Co., WI (Apr); 128th St Parcel, Kenosha Co., WI (Apr); Thomas Property Wetlands-PEC-Navigability, Waukesha Co., WI (Apr); Ament Property, Racine Co., WI (Apr); W3970 South Shore Dr, Walworth Co., WI (Apr); N2280 Temperance Tr, Walworth Co., WI (Apr); S Clark St Parcel, Dodge Co., WI (Apr); Deer Haven GC, Waukesha Co., WI (May); Petrie Rd 7.5 Ac Parcel, Walworth Co., WI (Apr); 5.5Ac Parcel Mukwonago, Waukesha Co., WI (Apr); S107 W16311 Loomis Rd Parcel, Waukesha Co., WI (Apr); CTH A & USH 12 Property, Walworth Co., WI (Apr); Cape Crossing NFE, Milwaukee Co., WI (Apr); Teipner Parcel, Waukesha Co., WI (Apr); Lichner Parcel, Waukesha Co., WI (Apr); Biocut Systems Site AWER, Waukesha Co., WI (Apr); Spring St Parcels, Racine Co., WI (May); US41 Corridor, Waukesha Co., WI (Apr); Reddelien Rd Parcel, Waukesha Co., WI (May); Watertown Rd Property, Waukesha Co., WI (May); 10027 Camelot Dr, Racine Co., WI (May); Koller Property, Ozaukee Co., WI (May); Altschaefl Property, Waukesha Co., WI (May); Pipito Property Pond, Dodge Co., WI (May); Kenora Rd Parcels, Waukesha Co., WI (May); Moorland & Greenfield Wetlands-AWER, Waukesha County, WI (May); Alliant Edgewater GS, Sheboygan Co., WI (May); Arbet North Parcel, Kenosha Co., WI (May); Pleasant Prairie Police Station, Kenosha Co., WI (May); 3rd Ave Pleasant Prairie Site, Kenosha Co., WI (May); 10766 N Torrey Dr Property, Ozaukee Co., WI (Jun); Kolnick Parcel, Kenosha Co., WI (Jun); Gateway Dr Watertown, Jefferson Co., WI (Jun); Green Bay Gardens Site, Kenosha Co., WI (Jun); DuCharme Property Wetlands-PEC, Waukesha Co., WI (Jun); 2301 Lakeshore Dr. GP-Tree Survey, Ozaukee Co., WI (Jun); 641 Drexel Wetlands-GP, Milwaukee Co., WI (Jun); Quigley Farm, Washington Co., WI (Jun); Big Bend Business Park, Waukesha Co., WI (Jun); Lad Lake Property, Waukesha Co., WI (Jun); Pleasant Prairie PP Utility Corridor, Kenosha Co., WI (Jul); Pleasant Prairie Fire Station 3, Kenosha Co., WI (Jul); CTH H Parcels, Walworth Co., WI (Jul); Oakwood Rd Parcels, Milwaukee Co., WI (Jul); Big Bend Rd Property, Waukesha Co., WI (Jul); Heartland Communities, Racine Co., WI (Jul); Leo Living Bristol Wetlands-PEC, Kenosha Co., WI (Jul); Stream Conservation Union Grove, Racine Co., WI (Jul); 8979 S 42nd St Franklin, Milwaukee Co., WI (Jul); 2205 Silvernail Rd, Waukesha Co., WI (Jul); East Wolf Run Mukwonago, Waukesha Co., WI (Jul); 1302 Roundtable Dr, Racine Co., WI (Jul); Corporation Parcel Dover, Racine Co., WI (Jul); 11925 W Lake Park Dr, Milwaukee Co., WI (Jul); 17905 W Capitol Dr Parcel, Waukesha Co., WI (Jul); Mosconi West Property, Kenosha Co., WI (Jul); Promise Builders Site, Kenosha Co., WI (Jul); Highland Dr Menomonee Falls Botanical Survey, Waukesha Co., WI (Aug); METRO RDF Expansion, Milwaukee Co., WI (Aug); 5.53 Ac Mukwonago Site, Waukesha Co., WI (Aug); Northstar Beloit Site, Rock Co., WI (Aug); Wirth Farm PEC-AWER-Tree Survey, Ozaukee Co., WI (Aug); Olympia Fields Wetlands-AWER, Waukesha Co., WI (Aug); Maple Rd Softball Field, Washington Co., WI (Aug); Blise Property Pond, Washington Co., WI (Aug); St. Johns NW Military Academy Wetlands-PEC, Waukesha Co., WI (Aug); Wildwood Property Wetlands-Navigability, Walworth Co., WI (Aug); Goldendale Rd Property, Washington Co., WI (Aug); 6951 S Lovers Lane, Milwaukee Co., WI (Aug); Klumb Property Wetlands-Corridor, Waukesha Co., WI (Aug); Ulao Creek Residential, Ozaukee Co., WI (Sep); Grand Hills Castle Expansion GP, Waukesha Co., WI (Sep); 31110 82nd St Property, Kenosha Co., WI (Sept); Miller Property Wetlands-SEC, Waukesha Co., WI (Sep); Townline Rd Water Main Wetlands-GP, Waukesha Co., WI (Sep); Sanctuary at Good Hope East PEC, Waukesha Co., WI (Oct); Kutzler Express Property, Kenosha Co., WI (Oct); 47th Ave Property, Kenosha Co., WI (Oct); Steinbrink Property, Kenosha Co., WI (Oct); Caledonia Developments, Racine Co., WI (Oct); DeGrave Farm, Racine Co., WI (Oct); Nettesheim Farm Pewaukee, Waukesha Co., WI (Oct); Fisher-Barton Property, Waukesha Co., WI (Oct); BRP shipyard Sturtevant, Racine Co., WI (Oct); CTH C Site Sheboygan Falls, Sheboygan Co., WI (Oct); Willabay Meadows Residential, Walworth Co., WI (Oct); Thode Dr Property, Waukesha Co., WI (Oct); Middle Rd Property Wetlands-AWER, Racine Co., WI (Oct); Three Pillars Dousman Ph1A, Waukesha Co., WI (Oct); Primrose School Site Brookfield, Waukesha Co., WI (Oct); Grand Geneva Housing Site, Walworth Co., WI (Nov); 2651 Fuller Rd Site, Rock Co., WI (Nov); Willis Ray Rd Property, Walworth Co., WI (Nov); Harding Dr Menomonee Falls Site, Waukesha Co., WI (Nov).

2021 Wetland Delineations, Exemption Submittals, and Permitting (95 sites)

CTH CW Property Exemption, Jefferson Co., WI (Jan); BP Parcel Determination, Kenosha Co., WI (Mar); Narula Property, Kenosha Co., WI (Apr); So Wi Veterans Mem Cemetery, Racine Co., WI (Apr); N. 70th St. Site, Milwaukee Co., WI (Apr); 6th & Grange Site, Milwaukee Co., WI (Apr); North Lake Dr Site, Racine Co.,

WI (Apr); E. Lakeshore Dr Property, Kenosha Co., WI (Apr); Deaton Parcel Exemption, Kenosha Co., WI (Apr); Alliant Energy Solar Site, Sheboygan Co., WI (Apr); Breg-3 Site Exemptions, Milwaukee Co., WI (Feb); Bristol Highlands, Kenosha Co., WI (Apr); Sandalwood Lot 20, Oconto Co., WI (Apr); Martin Rd Parcels, Waukesha Co., WI (Apr); Fair Meadow Subd Exemption, Walworth Co., WI (Apr); Will Rose Haven GP, Waukesha Co., WI (Apr); Bristol Property Wetlands & Exemption, Kenosha Co., WI (Apr); 11900 N Port Washington Rd, Ozaukee Co., WI (Apr); Gibbs Parcel, Kenosha Co., WI (May); Schaefer Farm, Racine Co., WI (May); Lisbon 12-Ac Parcel, Waukesha Co., WI (May); Coach Hills Exemptions, Racine Co., WI (May); Ventimiglia Property, Oconto Co., WI (May); Case HS Property, Racine Co., WI (May); Warntjes North-South Parcels, Kenosha Co., WI (May/Jul); CSM 3325 Dover, Racine Co., WI (May); STH 175 Parcel, Washington Co., WI (May); Holy Hill Rd Property, Washington Co., WI (May); Lyons Parcel Determination, Walworth Co., WI (May); CSM 3591 Mequon, Ozaukee Co., WI (May); Parcel 293-0965 Pleasant Prairie, Kenosha County, WI (May); Denoon Country Estates Muskego, Waukesha Co., WI (May); Blaze Landscaping Lisbon Parcel Wetlands-Exemption, Waukesha Co., WI (Jun); Hughes Parcel wetlands-Woodlands-PEC, Racine Co., WI (Jun); Logan Parcel, Washington Co., WI (May); CTH LL Property, Ozaukee Co., WI (Jun); Steenburg Farm Oakridge, Fond du Lac Co., WI (Jun); Steenburg Farm Dallman, Fond du Lac Co., WI (Jun); UW Parkside Utility Renovations, Kenosha County, WI (May); Salem Lakes Parcel 70412, Kenosha County, WI (Jun); Russet Ct Muskego Site, Waukesha Co., WI (Jun); Kazmierczak Property, Washington Co., WI (Jun); Parcel 152-0100 Pleasant Prairie, Kenosha Co., WI (Jun); 59-Acre Parcel Lisbon Property, Waukesha Co., WI (Jun); 98th St Parcel Randall, Kenosha Co., WI (Jun); Ryan Rd 80-Ac Site, Milwaukee Co., WI (Jul); Hickory Hill West Wetland-PEC Lisbon, Waukesha Co. WI (Jun); Cranberry Creek Landvill, Wood Co., WI (Jul); Christina Estates Outlot 1 Exemption, Racine Co., WI (Jul); LG House of Music Property, Walworth Co., WI (Jul); STH 158-I94 Property, Kenosha Co., WI (Aug); 3-Mile Rd Property, Racine Co., WI (Jul); Price Parcel Ottawa, Waukesha Co., WI (Jul); Lot 1 Lilac Rd Rubicon, Dodge Co., WI (Aug); 633 Progress Dr Determination, Ozaukee Co., WI (Jul); I41 & STH60 Property Slinger, Washington Co., WI (Aug); Summit Parcel 0708985 Determination, Waukesha Co., WI (Aug); Timberline Trail Landfill Wetlands and Exemption, Rusk Co., WI (Aug); Seasons at Mt Pleasant Sewer, Racine Co., WI (Aug); Kenny Dr Lots 1-2, Washington Co., WI (Aug); Bliffert Lumber Germantown, Washington Co., WI (Aug); Gibson Parcels Eagle Site, Waukesha Co., WI (Aug); Clover Run Stables, Racine Co., WI (Sep); Pink Property Salem Lakes GP, Kenosha Co., WI (Sep); Albano Property Carol Beach, Kenosha Co., WI (Sep); Mosconi Parcel Somers, Kenosha Co., WI (Sep); Petrie Rd Property Geneva, Walworth Co., WI (Sep); NML Property Oak Creek, Milwaukee Co., WI (Sep); Carol Beach Estates, Kenosha Co., WI (Sep); Mt. Pleasant Business Ctr Site, Racine Co., WI (Sep); Pleasant Prairie Power Plant, Kenosha Co., WI (Sep); STH 31 Property, Racine Co., WI (Sep); 112th St Expansion Parcel, Milwaukee Co., WI (Oct); Glacier Ridge Landfill EC Site, Dodge Co., WI (Sep); City-View Subdivision Horicon, Dodge Co., WI (Sep); Rock Rd Co Beloit, Rock Co., WI (Oct); Glass Parcels Richfield, Washington Co., WI (Oct); Alliant Clinton Substation, Rock Co., WI (Oct); Triggs Property Delafield, Waukesha Co., WI (Oct); Singh Parcel Franklin, Milwaukee Co., WI (Oct); Hilmer Property Muskego, Waukesha Co., WI (Oct); Baseler Property Muskego, Waukesha Co., WI (Oct); ALDI Property Oak Creek, Milwaukee Co., WI (Oct); Plank Rd Property Burlington, Racine Co., WI (Oct); Jackson Marsh Restoration Site, Washington Co., WI (Oct); Pilgrim Rd Parcel Brookfield, Waukesha Co., WI (Oct); Henneberry Parcel Muskego, Waukesha Co., WI (Oct); Ewig Parcel Franklin, Milwaukee Co., WI (Oct); STH 120 Site L Geneva, Walworth Co., WI (Oct); KMHS Wales, Waukesha Co., WI (Oct); 184th Ave Bristol Property, Kenosha Co., WI (Oct); 144th Ave Bristol Property, Kenosha Co., Pabst Rd Oconomowoc Site, Waukesha County, WI (Oct); N Lake Shore Dr Mequon, Ozaukee Co., WI (Nov); 28414 Wilmot Rd Salem Lakes, Kenosha Co., WI (Nov); 819 E Drexel Site, Milwaukee Co., WI (Nov).

2020 Wetland Delineations, Exemption Submittals, and Permitting (90 sites)

Courtney Street Storage Buildings, Racine Co., WI (Feb); 86th Ave & STH 165 Parcel, Kenosha Co., WI (Feb-Apr); Harris Gravel Pit, Dane Co., WI (Mar-Apr); Alliant Birnamwood Substation, Shawano Co., WI (Apr); Rolling Meadows Drive Parcel, Fond du Lac Co., WI (Apr); Lieds Nursery Site, Waukesha Co., WI (Apr); Plas-Tech Engineering Site, Walworth Co., WI (Apr); Fink Parcel, Racine Co., WI (Apr); Lot 1 Proposed CSM 3258, Racine Co., WI (Apr); Harris Gravel Pit, Dane Co., WI (May); Schumacher Rd Reconstruction, Dane Co., WI (Apr); Whitetail Ridge Ph2, Kenosha Co., WI (Apr), Kelly Pit Addition, Dane Co., WI (Apr); Myrtle Way Road Improvements, Rock Co., WI (Apr); Pewaukee Industrial Park South, Waukesha Co., WI (May); Mueller Property, Fond du Lac Co., WI (Apr); 3901 Kipp Street Site, Dane Co., WI (Apr); Witte Parcels, Dane Co., WI (Apr); Sandalwood Lots 7-8, Oconto Co., WI (Apr); Yellowstone Outdoor Resort, Lafayette Co., WI (Apr); S&L Underground Expansion, Columbia Co., WI (May); 200 Baraboo Street, Sauk Co., WI (May); Jefferson Pit, Jefferson Co., WI (May); Rock Point Village, Waukesha Co., WI (May); Blanchardville Coop Oil & NGSD Parcels, Green Co., WI (May); Logtown Development, Sauk Co., WI (Jun); Maple Ave Property, Waukesha Co., WI (May); Wanasek Property, Racine Co., WI (May); Meier Farms, Dane Co., WI (Jun); 76th & Ryan Site, Sauk Co., WI (May); Milton Townline Road Site, Rock County, WI (May); Somers Multi-family Site, Kenosha

Co., WI (May); Cazenovia WWTP Expansion, Waukesha Co., WI (Jun); Waukegan Property, Lake Co., IL (Jun); Ozaukee Christian School, Washington Co., WI (Jun); Kohler Distribution Center, Sheboygan Co., WI (Jun); Veterans Memorial Park West Site, Kenosha County, WI (Jun); Veterans Memorial Park East Site, Kenosha County, WI (Oct); Bristol Commons Site, Kenosha Co., WI (Jun); Barels Property, Racine Co., WI (Jun); Rogich Property, Milwaukee Co., WI (Jun); CTH MM Intersection Reconstruction, Dane Co., WI (Jul); Rose Property, Racine Co., WI (Jun); Baldev Court Property, Ozaukee Co., WI (Jul); Paul-Meghan Dominie Property, Dane Co., WI (Jul); Union Court Site, Kenosha Co., WI (Jul); Webcrafters Parcels, Dane Co., WI (Jul); Site Security Upgrades Site, Waukesha Co., WI (Jul); Scuppernong Creek Site, Waukesha Co., WI (Jul); W9030 Oak Ridge Road Property, Jackson Co., WI (Jul); Cherokee Golf Course, Dane Co., WI (Aug); W3948 South Shore Drive, Walworth Co., WI (Aug); Caledonia Multifamily Site, Racine Co., WI (Aug), Mittelstaedt Property, Sauk Co., WI (Aug); 1525 Bryce Drive Parcel, Winnebago Co., WI (Sep); Platten Property, Outagamie Co., WI (Sep); St. Mary's Springs Site, Fond du Lac Co., WI (Sep); Fairway Village Site, Ozaukee Co., WI (Sep); Quarry Park Site, Waukesha Co., WI (Sep); CTH F-Concord Site, Jefferson Co., WI (Sep); HJ Williams Farm, Adams Co., WI (Oct); STH 16-Lisbon Rd Parcel, Waukesha Co., WI (Sep); Golden Lake Road Property, Waukesha Co., WI (Sep); 4522 CTH P Parcel, Washington Co., WI (Sep); Darby Farms, Kenosha Co., WI (Sep); 227 Sussex Street, Waukesha Co., WI (Sep); Lexus of Brookfield Site, Milwaukee Co., WI (Sep); Wesner Greenfield Ave Parcels, Waukesha Co., WI (Sep); Oriole Lane Parcels, Ozaukee Co., WI (Oct); Wayside Parkview Estates, Brown Co., WI (Sep); Wind Point Parcel, Racine Co., WI (Oct); Geneva National Lot 18-23, Walworth Co., WI (Oct); Badger Farm, Racine Co., WI (Oct); Dorset Corners Substation, Monroe Co., WI (Sep); Covered Bridge Rd Site, Ozaukee Co., WI (Oct); Trek Distribution Center, Jefferson Co., WI (Oct); Craftsman Drive Parcel, Waukesha Co., WI (Oct); Village Green Subdivision, Ozaukee Co., WI (Oct); Ansay Farm, Ozaukee Co., WI (Oct); Zenner Farm Property, Racine Co., WI (Oct); West Snell Rd Site, Winnebago Co., WI (Oct); Kenosha County Bridges, Kenosha Co., WI (Oct); Confidential Site Janesville, Rock Co., WI (Oct); Janesville Airport Site, Rock Co., WI (Oct); 10920 West Liberty Drive, Milwaukee Co., WI (Oct); V of River Hills 53-Acre Site, Milwaukee Co., WI (Oct); Hwy 14 & Lacy Rd Site, Dane Co., WI (Oct); Wilderness Way Parcel, Waukesha County, WI (Oct); Hummingbird Lane Parcel, Sheboygan Co., WI (Oct); Plainview Rd Site, Waukesha Co., WI (Nov); Delimat Property, Kenosha Co., WI (Nov); 11900 N Port Washington Rd Parcel, Ozaukee Co., WI (Nov); Canopy Hills Artificial Wetland, Racine Co., WI (Dec); Strauss Brands Facility, Milwaukee County, WI (Dec).

2019 Wetland Delineations, Exemption Submittals, and Permitting (39 sites)

North Hills Subdivision, Waukesha Co., WI (Jan); Prairie Walk Subdivision, Waukesha Co., WI (Apr); Loomis Parcel Determination, WI (Mar-Apr); Lamminem Parcel, Kenosha Co., WI (Apr); Lot 103 Burlington, Racine Co., WI (Apr); 7220 Ryan Rd Parcel, Milwaukee Co., WI (Apr); 1-Acre Franklin Parcel, Milwaukee Co., WI (June); 256th Ave Site, Kenosha Co., WI (May); 915 Main St Mukwonago, Waukesha Co., WI (May); Muskego Lakes CC, Muskego, Waukesha Co., WI (June), Bonniwell Road Parcel, Ozaukee Co., WI (July); 333 Portland Rd Site, City of Waterloo, Jefferson Co., WI (May); Thompson Lane Parcel, Village of Chenequa, Waukesha Co., WI (May); Schmitz Redi-Mix Site, Village of Mt. Pleasant, Racine Co., WI (June); New Berlin Redi-Mix Site, City of New Berlin, Waukesha Co., WI (May); Elm Grove Road Basin, City of New Berlin, Waukesha Co., WI (May); Lathrop-Meacham Parcels Mitigation Site, Village of Mt. Pleasant, Racine Co., WI (May-July); Lot 18-31 Geneva National Site, Town of Geneva, Walworth Co., WI (July); Bohner's Lake Parcel, Town of Burlington, Racine Co., WI (Sept); 6970 South 6th St., City of Oak Creek, Milwaukee Co., WI (Aug); Weatherstone Meadows site, City of New Berlin, Waukesha Co., WI (Aug); Parkview Apartments site, Village of Somers, Kenosha Co., WI (Aug); Volkswagen Expansion site, Village of Pleasant Prairie, Kenosha Co., WI (Aug); Pewaukee-Brookfield Trail, Waukesha Co., WI (Aug-Sept); Parcel 1268-993, City of New Berlin, Waukesha Co., WI (Aug); Germantown Industrial Business Park, Washington Co., WI (Oct); Haasch- Finger site, City of Brookfield, Waukesha Co., WI (Oct); Kennedy Property, Village of Waunakee, Dane Co., WI (Oct); Jefferson County Interurban Trail, Towns of Watertown and Ixonia, Jefferson Co., WI (Oct); Mukwonago Residential Parcel, Village of Mukwonago, Waukesha Co., WI (Oct); Pine Ridge Estates, City of Oconomowoc, Waukesha Co., WI (Oct); Silver Lake Parcels, Village of Salem Lakes, Kenosha Co., WI (Oct); New Berlin Trail Phase II, City of Waukesha, Waukesha Co., WI (Oct); 1910 W Puetz Road site, City of Oak Creek, Milwaukee County, WI (Oct); Project Redline, Village of Menomonee Falls, WI (Oct); CSM 3232 Oulot 1, Village of Mt. Pleasant, Racine Co., WI (Oct); Plant Community Mapping and Assessment, City of Oak Creek, Milwaukee Co., WI (Nov); Faber Property, Village of Williams Bay, Walworth Co., WI (Nov); Campus Drive Property, Village of Hartland, Waukesha Co., WI (Dec).

Example 2018 Wetland Delineations in WI and IL (50 sites)

Homestead Acres, Racine Co., WI (Apr); Greenmeadows, Racine Co., WI (Apr), Wind Point School, Racine Co., WI (Apr); Vintage Parc East, Kenosha Co., WI (Apr); Nelson-Heckel, Kenosha Co., WI (Apr); Caledonia Storage, Racine Co., WI (Apr); New Berlin Storage, Waukesha Co., WI (Mar); Manke Gravel Pit, Columbia

Co., WI (May); Drissel-Wallace, Kenosha Co., WI (May); LaBelle Golf Course, Waukesha Co., WI (May); Waterloo Aluminum, Jefferson Co., WI (May); Salem Business Park, Kenosha Co., WI (May); Audubon Arboretum, Racine Co., WI (May); Briarwood, Racine Co., WI (May); Basting-Brown Parcels, Waukesha Co., WI (May); 84-Acre Site, Racine Co., WI (May); Jolenta Lane, Waukesha Co., WI (Apr); Rock Road Storage, Walworth Co., WI (May); Wildwood Creek, Winnebago Co., WI (Jun); Green Bay Site, Brown Co., WI (Jun); Main Street Market, Kenosha Co., WI (Jul), Armstrong Eddy Park, Rock Co., WI (May), Hickory St Site, Ozaukee Co., WI (Jun), Parcel DW 800004, Walworth Co. (Jun); Lot 8 Parcel WCA-0003, Walworth Co., WI (Jun); RRR Grundy, Kane Co., IL (Jul); Coleman Norris Parcel, Waukesha Co., WI (Jul); Deaton Parcel, Kenosha Co., WI (Aug); Hintz Parcel, Washington Co., WI (Aug); Loomis-Ryan Rds Site, Milwaukee Co., WI (Aug); Grass Parcels, Waukesha Co., WI (Sep); Mallard Ridge Landfill Pipeline, Walworth Co., WI (Sep); Glacier Ridge Landfill Pipeline, Dodge Co., WI (Sep); Ravenwoods, Waukesha Co., WI (Aug); Canopy Hills, Racine Co., WI (Sep); Duck Pond, Kenosha Co., WI (Sep); Splinter Parcels, Racine Co., WI (Oct); Berget Parcel, Walworth Co., WI (Sep); Saylesville Rd Parcel, Waukesha Co., WI (Oct); Racine Ave-Lawnsdale Rd Parcel, Waukesha Co., WI (Oct); Braun Rd-90th St Parcel, Racine Co., WI (Oct); Grafton Parcels, Ozaukee Co., WI (Dec); Crawford Parcel, Racine Co., WI (Nov); Kotas Parcels, Racine Co., WI (Nov); Altamount Acres South, Racine Co., WI (Dec); Christina Estates, Racine Co., WI (Dec); Christina Estates NE, Racine Co., WI (Dec); Lathrop Parcel, Racine Co., WI (Dec); Hillside Ridge, Waukesha Co., WI (Dec); Stolz Property, Waukesha Co., WI (Dec).

Example 2017 Wetland Delineations in WI, MI, IN, and IL (31 Sites)

Back 40 Mine, Menominee Co., MI (Jan); Oakdale Rd Site, Waukesha Co., WI (Sep), Birds Eye Foods, Walworth Co., WI (Sep); Boss Property, Leelanau Co., MI (Jul); Brighton Estates, Waukesha Co., WI (Sep); Saltzman North, Waukesha Co., WI (Sep); Susnar Parcel, Waukesha Co., WI (Sep); Wrenwood Site, Washington Co., WI; Chorneyko Site, Walworth Co., WI (Apr); CN Railroad Bridges-6 Sites, Fond du Lac & Winnebago Co's, WI; CN Railroad Freeport Culvert, Kane Co., IL (May); Herrling Site, Dane Co., WI (Sep); MMSD Sewerage Project, Milwaukee Co., WI (May); Spring St Site, Racine Co., WI (Oct); Goshen Midway Cell Tower, Elkhart Co., IN (Apr); Two Creeks Utility Site, Manitowoc Co., WI (Nov); Suncast Site, Kane Co., IL (Dec); Lot 51 Lakeview Corp Park, Kenosha Co., WI (Oct); Lakefront Gun Range, Racine Co., WI (Oct); WI Club Golf Course, Milwaukee Co., WI (Apr); WisDOT Improvements, STH 32 Racine Co (Aug), STH 67 Walworth Co. (Sep), STH 20, Racine Co. (Oct), 27th St, Milwaukee Co. (Sep); Conference Point Boat Launch, Walworth Co., WI (Oct); Lake View RR Corridor, Portage Co., WI (Sep).

Example 2016 Wetland Delineations in WI, OH, MI and IL (Mostly Large Projects)
AEP Wavery-Adams-Seaman 138 kV Trans. Line Rebuild, Adams & Pike Co's, OH (Dec); Kansas West-Faraday Trans. Line Rebuild-Macon, Moultrie, & Coles Co's, IL (Jan), Riveredge Nature Center Preliminary, Ozaukee Co., WI (Feb); Lost Creek Mitigation Site, Portage Co., WI (Jun); I-41 Burleigh to Good Hope Corridor WisDOT, Milwaukee Co., WI (Jul); STH 60 Corridor, Ozaukee & Washington Co's, WI (Aug–Oct); Erin Hills Golf Course, Washington Co., WI (Sep); Back 40 Mine, Menominee Co., MI; Lake Zurich SW Cell Tower, Lake Co., IL (Oct); Acme Steel Coke Site, Cook Co., IL (Dec).

Example 2015 Wetland Delineations in WI, IL, and MO (Mostly Large Projects)
Bolser Street MO33211-M Cell Tower Site, Grundy Co., MO (Sep); Section 9 Site, Dane Co., WI (Apr); Franzel Rd Site, Bayfield Co., WI (Apr); Big Eau Pleine Mitigation Site, Marathon Co., WI (Aug); Taylor Road Siding Track, Jackson Co., WI (Nov); UPS-CACH Site, Cook Co., IL (Jun); Eggers Woods Forest Preserve, Cook Co., IL (Mar).

Example 2014 Wetland Delineations in WI, IL, and MI (Mostly Large Projects)
Emerald Park Western Expansion, Waukesha Co., WI (Oct); Arcadia Mining Site-Trempealeau Co., WI (Apr); Kalamazoo River Parcel, Kalamazoo and Calhoun Co's, MI (Jul); G2 Mitigation Site - Winnebago Co., WI (May); Line 6A MP 378.94, McHenry Co., IL (Sep); Geneva National Site, Walworth Co., WI (Nov); Nortrax Site -Lincoln Co., WI (Oct); Toberman Parcel- Crawford Co., WI (Oct).

Example 2013 Wetland Delineations in WI, IL, OH, and MI (Mostly Large Projects)
West Central Lateral - Eau Claire, Clark, Jackson & Monroe Co's, WI (Apr-May); Walker Cranberry 80- acre Parcel – Jackson Co., WI (Sept - Oct); Berne to Natrium Pipeline, Monroe Co., OH (Oct); CNX Noble Pipeline – Noble Co., OH (Oct); Deer Grove Forest Preserve, Cook Co., IL (Nov).

Example 2012 Wetland Delineations in WI, IL, IN, and TX (Mostly Large Projects)
West Central Lateral (190 miles), Eau Claire, Clark, Jackson & Monroe Co's, WI (Sep-Nov); Morrison Creek

Cranberry Parcel, Jackson Co., WI (Aug); London Mitigation Site, Jefferson Co., WI (July); Southern Access Pipeline, Sawyer & Washburn Co's, WI (Jun); I-80 Interchange, LaPorte Co., IN (Mar); Eagle-Ford Shale Plays, LaSalle & McMullen Co's, TX (Jan-Feb).

I-94 Corridor Wetland and Primary Environmental Corridor Mapping and Endangered Species Study, Milwaukee, Racine, and Kenosha Counties, WI (Project Manager and Lead Scientist)

Primary Environmental Corridor Delineation Parkview Site, Village of Somers, WI (Lead Scientist)

Elm Road Generating Station, Oak Creek & Caledonia, WI (Project Manager & Lead Scientist)

Tri-State Tollway, Deerfield Plaza Wetland and Endangered Species Investigation, Lake and Cook Counties, IL (Lead Scientist)

Guardian II Laterals, Fox Valley, Hartford and West Bend, WI (Project Manager and Lead Scientist)

ATC Paris to St. Martins (KK3025) 138KV Line Rebuild, Kenosha, Racine and Milwaukee Counties, WI (Project Manager and Lead Scientist)

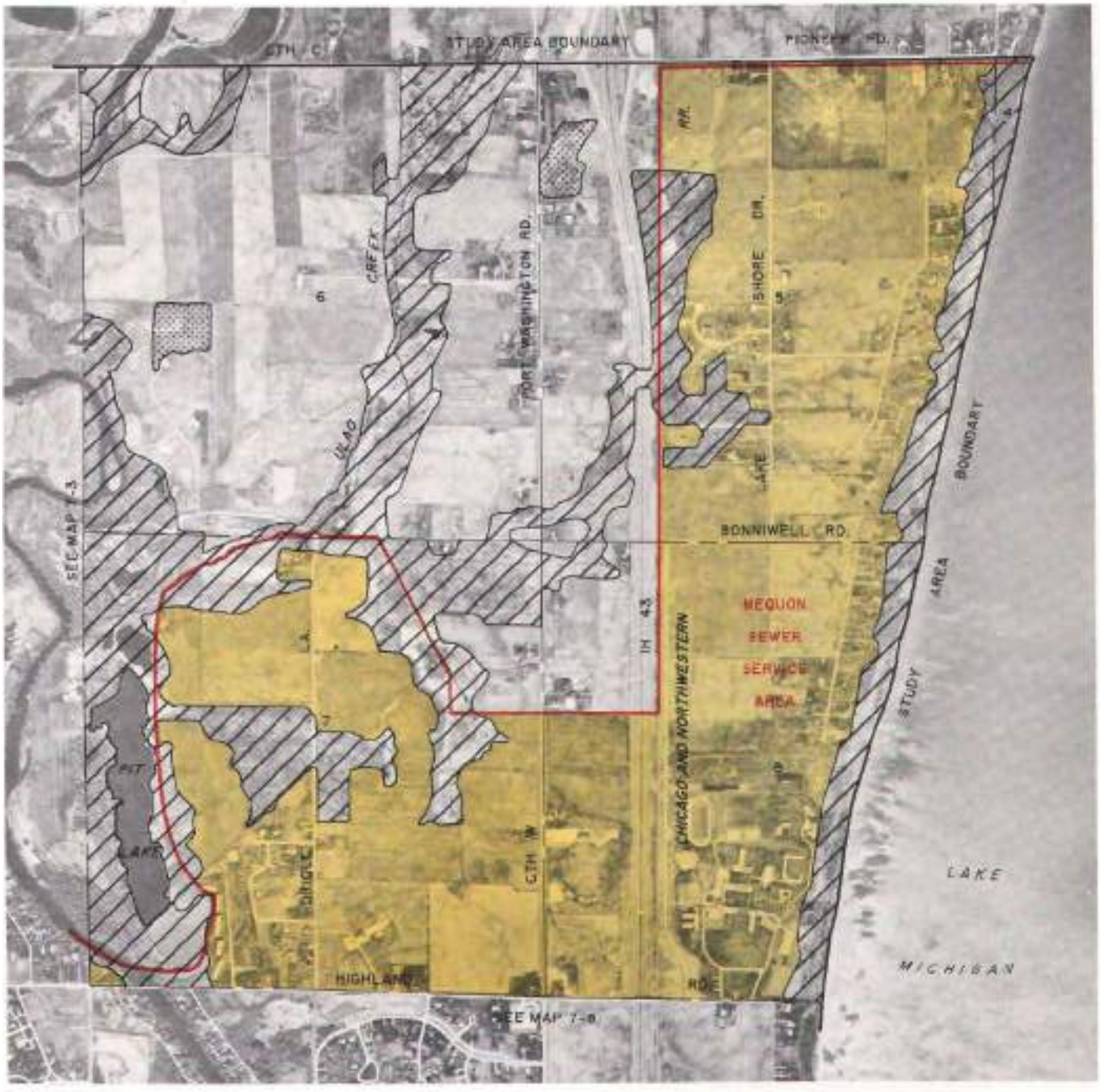
Gorelik Property
Vitaliy Gorelik
Project #: 20241286
August 20, 2024

Appendix F | Environmental Corridor Mapping and Plant Lists

Map 7-4

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE CITY OF MEQUON AND THE VILLAGE OF THIENSVILLE

U. S. Public Land Survey Sections 4, 5, 6, 7, and 8
Township 9 North, Range 22 East



LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL AREA
- PLANNED SANITARY SEWER SERVICE AREA
- GROSS SANITARY SEWER SERVICE AREA BOUNDARY

Source: SEWRPC.

Map 7

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE CITY OF MEQUON AND THE VILLAGE OF THIENSVILLE

U. S. Public Land Survey Sections 4, 5, 6, 7, and 8
Township 9 North, Range 22 East



LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREA
- PLANNED SANITARY SEWER SERVICE AREA
- GROSS SANITARY SEWER SERVICE AREA BOUNDARY

NOTE: This map replaces Map 7-4, page 24 of SEWRPC Community Assistance Planning Report No. 168, Sanitary Sewer Service Area for the City of Mequon and the Village of Thiensville, Ozaukee County, Wisconsin, dated January 1982.

Source: SEWRPC.

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Inventory Assessment

Edit This Inventory | Download Report | Done

Upland Thin Woodland-Shrub Thicket

» Date & Location:

2024-08-05
Gorelik Property
C Mequon
Ozaukee County, WI

» FQA Database:

Region: **Wisconsin - Northcentral-Northeast Region**
Year Published: **2014**
Description:
Parker E.C., Curran M., Waechter Z.S, Grosskopf E.A. 2014. Wisconsin FQA (Floristic Quality Assessment) Databases for Midwest and Northcentral-Northeast Regions for Universal FQA Calculator Web site (http://universalfqa.org/).

» Details:

Practitioner: **Eric C. Parker, SPWS**
Latitude:
Longitude:
Weather Notes:
Duration Notes:
Community Type Notes:
Other Notes:
This assessment is **private** (viewable only by you).

» Conservatism-Based Metrics:

Total Mean C: **3**
Native Mean C: **3.7**
Total FQI: **15.9**
Native FQI: **17.7**
Adjusted FQI: **33.5**
% C value 0: **17.9%**
% C value 1-3: **42.9%**
% C value 4-6: **32.1%**
% C value 7-10: **7.1%**
Native Tree Mean C: **4.4**
Native Shrub Mean C: **n/a**
Native Herbaceous Mean C: **3**

» Species Richness:

Total Species: **28**
Native Species: **23 (82.1%)**
Non-native Species: **5 (17.9%)**

» Species Wetness:

Mean Wetness: **1.2**
Native Mean Wetness: **1**

» Physiognomy Metrics:

Tree: **13 (46.4%)**
Shrub: **2 (7.1%)**
Vine: **1 (3.6%)**
Forb: **9 (32.1%)**
Grass: **1 (3.6%)**
Sedge: **2 (7.1%)**
Rush: **0 (0%)**
Fern: **0 (0%)**
Bryophyte: **0 (0%)**

» Duration Metrics:

Annual: **0 (0%)**
Perennial: **28 (100%)**
Biennial: **0 (0%)**

Native Annual: **0 (0%)**
Native Perennial: **23 (82.1%)**
Native Biennial: **0 (0%)**

» Species:

Scientific Name	Family	Acronym	Native?	C	W	Physiognomy	Duration	Common Name
Agrimonia gryposepala	Rosaceae	AGRGRY	native	2	3	forb	perennial	common agrimony

Betula papyrifera; betula alba var. elobata; betula alba var. papyrifera; betula papyracea	Betulaceae	BETPAP	native	3	3	tree	perennial	paper birch
Carex grisea; carex amphibola var. turgida	Cyperaceae	CXGRIS	native	4	0	sedge	perennial	eastern narrow-leaved sedge
Carex hirtifolia	Cyperaceae	CXHIRI	native	5	5	sedge	perennial	hairy wood sedge
Carya ovata; hicoria alba; hicoria ovata	Juglandaceae	CAROVT	native	5	3	tree	perennial	shagbark hickory
Circaea canadensis; circaea lutetiana; circaea latifolia; circaea quadrisulcata var. canadensis	Onagraceae	CIRCAA	native	2	3	forb	perennial	broad-leaf enchanters-nightshade
Fragaria virginiana; fragaria canadensis; fragaria glauca; fragaria ovalis; fragaria sibbaldifolia; potentilla ovalis	Rosaceae	FRAVIR	native	1	3	forb	perennial	wild strawberry
Fraxinus pennsylvanica; fraxinus pennsylvanica var. subintegerrima; fraxinus campestris; fraxinus juglandifolia var. subintegerrima; fraxinus lanceolata; fraxinus smallii	Oleaceae	FRAPEN	native	2	-3	tree	perennial	green ash
Geum canadense; geum canadense var. camporum	Rosaceae	GEUCAN	native	2	0	forb	perennial	white avens
Glyceria striata; glyceria nervata; panicularia nervata; poa nervata	Poaceae	GLYSTR	native	4	-5	grass	perennial	fowl manna grass
Lonicera x bella	Caprifoliaceae	LONXBEL	non-native	0	3	shrub	perennial	bells invasive honeysuckle

Lysimachia ciliata; steironema ciliatum; steironema pumilum	Primulaceae	LYSCIL	native	5	-3	forb	perennial	fringed loosestrife
Picea abies	Pinaceae	PICABI	non-native	0	5	tree	perennial	norway spruce
Picea glauca	Pinaceae	PICGLA	native	7	3	tree	perennial	white spruce
Pinus resinosa	Pinaceae	PINRES	native	7	3	tree	perennial	red pine
Pinus strobus	Pinaceae	PINSTR	native	5	3	tree	perennial	eastern white pine
Populus tremuloides; populus tremula ssp. tremuloides; populus aurea	Salicaceae	POPTRE	native	2	0	tree	perennial	quaking aspen
Prunella vulgaris ssp. vulgaris	Lamiaceae	PRUVULSV	non-native	0	0	forb	perennial	european heal-all
Quercus rubra; quercus borealis; quercus rubra var. rubra; quercus rubra var. borealis; quercus rubra var. ambigua	Fagaceae	QUERUB	native	5	3	tree	perennial	northern red oak
Rhamnus cathartica	Rhamnaceae	RHACAT	non-native	0	0	tree	perennial	common invasive buckthorn
Rosa multiflora; rosa cathayensis; rosa watsoniana; rosa japonica; rosa thunbergii	Rosaceae	ROSMUL	non-native	0	3	shrub	perennial	multiflora invasive rose
Solidago gigantea; solidago serotina; solidago serotinoides	Asteraceae	SOLGIG	native	3	-3	forb	perennial	giant goldenrod

Symphyotrichum lateriflorum; aster lateriflorus; aster horizontalis; aster pendulus; aster vimineus; aster hirsuticaulis; aster tradescantii; aster acadiensis	Asteraceae	SYMLAT	native	3	0	forb	perennial	calico aster
Symphyotrichum urophyllum; aster sagittifolius; aster urophyllus; aster hirtellus; cordifolius var. sagittifolius	Asteraceae	SYMURO	native	3	5	forb	perennial	white arrow-leaved aster
Tilia americana; tilia glabra; tilia neglecta; tilia palmeri; tilia truncata; tilia venulosa	Tiliaceae	TILAME	native	5	3	tree	perennial	american basswood
Ulmus americana; ulmus floridana	Ulmaceae	ULMAME	native	3	-3	tree	perennial	american elm
Viburnum lentago; viburnum x vetteri	Caprifoliaceae	VIBLEN	native	4	0	tree	perennial	nannyberry
Vitis riparia; vitis vulpina ssp. riparia; vitis vulpina var. praecox; vitis vulpina var. syrticola	Vitaceae	VITRIP	native	2	0	vine	perennial	riverbank grape