

Wetland Delineation Report

Stanley Industrial Park
City of Stanley
Chippewa County, Wisconsin

June 2023

Prepared for:
CBS Squared, Inc
770 Technology Way
Chippewa Falls, WI 54729

Prepared by:
Ingraham Technical Services, Inc.
19775 55th Avenue
Chippewa Fall, WI 54729



WETLAND DELINEATION CONFIRMATION REQUEST CHECK LIST

WDNR WETLAND IDENTIFICATION PROGRAM

The following is the preferred order for all information provided in wetland delineation reports submitted for wetland confirmation. Please include this completed checklist with all wetland delineation report submittals. All of the following must be included with all wetland delineation reports that are submitted for confirmation:

- X **Introductory Section**
 - Why the delineation was undertaken
 - Date the field work was completed
 - Who conducted field work
 - Qualifications

- X **Methods used during the wetland delineation**
 - Description of methods
 - Sources Reviewed (WWI mapping, Soil Survey, etc.)
 - Description of any site specific agency guidance (site meetings, etc.)

- X **Results and Discussion**
 - Antecedent hydrologic condition analysis
 - Previous wetland delineation mapping
 - Existing environmental mapping (WWI mapping, Soil survey, etc.)
 - Amount and types of wetland located within the project area
 - Discussion explaining how the wetland/upland boundary was differentiated
 - Disturbed and problematic areas encountered during the delineation
 - Other water resources located in the project area (navigable streams, etc.)

- X **Topographic mapping** (Include map scale, clearly identified review area, a north arrow)
- X **WWI mapping** (Include map scale, clearly identified review area, a north arrow)
- X **Soil Survey mapping** (Include map scale, clearly identified review area, a north arrow)
- X **Wetland Delineation Map** showing an accurate depiction of wetland boundaries and data points identified during field investigation (Include map scale, clearly identified review area, a north arrow)
- X Complete, legible wetland delineation **data forms** from the appropriate regional supplement
- X **Site photos**
- X Any previous delineation information
- X **Areas that are currently, or were recently (less than three years prior to the delineation) under agricultural production must include a Farm Service Agency (FSA) Slide Review.** All FSA Slide Reviews should include the following:
 - Copies or photos of slides if available
 - A completed wetland documentation form (NRCS form NRCS-CPA-32W)
 - A copy of the draft NRCS Wetland Inventory map if available

- X **Literature Cited**

Please include this completed checklist with all wetland delineation report submittals.

Certification Page

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The procedures described in this report and the field methods used constitute an official wetland delineation in accordance with the 1987 U.S Army Corps of Engineers *Wetland Delineation Manual and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral Northeast Region* (version 2).

The field delineation was completed by Kerry Ingraham. The methodology meets the standards and criteria described in the manual and conforms to the application standards and regulations in force at the time of the fieldwork was completed. The results reflect conditions present at the time of the delineation.

I hereby certify that this report was prepared by me.

Prepared by: Kerry J. Ingraham June 12, 2023
Kerry Ingraham Date
WDNR Assured Wetland Delineator 2022
Ingraham Technical Services



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Wetland Delineation Check List

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Introduction

Ingraham Technical Services Inc of Chippewa Falls, Wisconsin (ITS) performed a wetland delineation for the CBS Squared Inc of Chippewa Falls, WI as part of the preliminary design for the Stanley Industrial Park project in Stanley, WI. The area of interest (AOI) for this delineation includes a roughly 82.4-acre parcel located at the intersection of 345th Street and State Highway 29 in the City of Stanley.

The AOI is located along the western edge of the City of Stanley, Chippewa County, Wisconsin. The property is owned by the City of Stanley (PIN# 22905-3411-00020002, PIN# 22905-3413-00020000A, PIN# 22905-3414-00020001). The AOI extends from the corner of the intersection of 345th Street and STH 29 on the southwest northward to 80th Street. The boundary of the AOI on the west, south and north is the road right-of-way (ROW) and did not include the roadside ditches. The boundary on the east is the parcel limits. The 40-acre parcel located northwest of the AOI was not included in the delineation (See Figures 1 - Project Location Map).

The purpose of this study was to investigate the subject properties, identify areas meeting the technical criteria for wetlands, delineate the jurisdictional extent of the wetland basin, and classify the wetland habitat. This report describes the methodology and results of the field delineation performed on May 17th-18th, 2023.

The wetland delineation was performed by Kerry Ingraham, Environmental Scientist/President with Ingraham Technical Services of Chippewa Falls, Wisconsin. Ms. Ingraham is a WDNR Assured Wetland Delineator.

Methods

According to the US Army Corps of Engineers, wetlands are, “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” This wetland delineation followed methods outlined in the *Corps of Engineers Wetland Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral Northeast Region* (Version 2.0) where the presence of a wetland is determined based on three hydric criteria - vegetation, soils, and hydrology. The boundary of a wetland is where these hydric criteria give way to upland features. The following offsite and field methods were used to complete this wetland delineation.

Off Site Resource Review

Prior to completing the field investigation, documents were reviewed which provided information on soils, topography, and areas where wetlands have been identified or are likely to occur. These resources included but are not limited to maps of known and potential wetlands, soil and geologic surveys, topographic maps (2 ft. contour intervals if possible), water resources and floodplain maps, and historical aerial photographs.

Weather data was assembled and reviewed prior to the field investigation. An NRCS Antecedent Rainfall Documentation (ARD) was completed for the three months prior to the field investigation. Recent precipitation data (within 7 days) was also reviewed prior to the field investigation.

Field Methods

The field investigation identified wetland and upland features within the project limits followed by the establishment of transects perpendicular to the wetland edge. The wetland boundary was determined in the field by identifying the presence/absence of hydrophytic vegetation, hydric soils and hydrology required to establish and support a wetland. The wetland boundary is where wetland features give way to upland features. The boundary was flagged and surveyed to within one meter for documentation.

A detailed description of the Off Site and Field Methods is included in Appendix F.

Results

The results of the Offsite Resource Review and Field Investigation were used to delineate and classify the wetlands within the AOI. The following sections describe the results of these efforts.

Site Description

The AOI is on the west side of the City of Stanley, Section 34 T29N R05W in Chippewa County Wisconsin. The area investigated was a rural, sparsely developed section of Stanley. Land use in the area is and has historically been agricultural. This area is proposed as a new industrial park. The AOI is bounded on the west and north by the ROW (33-ft from centerline) of 345th Street and 80th Avenue, respectively. The AOI extends to the adjacent parcel limits on the east and to the STH 29 ROW on the south. See Figure 1 – Site Location.

Recent use of the property has been for row crops. An historical farmstead is in the southwest corner of the AOI. An apparent wooded wet spot in the southeast area of the AOI is not used for crop production.

Site Topography and Drainage

The topography in the vicinity of the subject properties is relatively flat with rolling hills. The topography of the AOI includes a linear hill at the west and central area with the highest point 1130 ft. The topography slopes away from the high point toward the north and east at 2-5 % before flattening at the edges of the AOI. The wooded wet area and an offsite wetland to the east are allocated in these flatter slope areas. The low points of the AOI are located along the north and east at an elevation of approximately 1095 ft. (see Figure 2 - Topography).

Drainage in the AOI flows by sheet flow and/or is captured by a shallow grass-lined swales that convey drainage downslope from the top of the hill. Drainage toward the southeast includes a swale the discharges into the wooded wet area and offsite toward the east. A second drainage swale runs from the central part of the AOI east to an offsite wet area. Drainage toward the north flows by sheet flow (no swale) to a flat area prior to discharging to a culvert along 80th Avenue.

The surface water drainage from the AOI is conveyed north through wetlands toward the low-lying valley. The wet area drains into an unnamed stream (Wisconsin Body Identification Code (WBIC) 2146900) The drainage toward the south and east flows through wet areas to an unnamed stream (WBIC 2147000). Both unnamed streams flow into the Wolf River (WBIC 2146000). The drainage system extends south into the North Fork Eau Claire River, LC17 watershed. The AOI is not in the floodplain of any waterbody according to the Flood Hazard Zone Map review.

Historical Aerial Photograph Review:

A review of historical aerial photographs was completed to gain an understanding of the historical changes to land use, topography, drainage, or other factors influencing the presence of wetlands. The property has historically been used for agricultural purposes. Accordingly, each photograph was reviewed for the presence of wet signatures in general accordance with USACE Guidance July 1, 2016. Crop signatures of potential wetland hydrology were identified for further evaluation in the field. Aerial photographs from 1938, 1999, 2005, 2010, 2016 and 2019 were reviewed.

The 1938 photograph showed the entire AOI was used for agricultural purposes. The remainder of the photographs confirm that the AOI was used for agricultural purposes until the present. The primary farmstead was in the southwest corner of the AOI, Contour farm methods were used in some years to minimize the erosion from the fields. Grassed drainage swales were left fallow in two locations in the AOI. These swales flow toward the east and discharge into wetlands either onsite (wooded wet area) or offsite along the eastern project limits. Areas near the apparent wetlands show agricultural signatures of wetland hydrology or were left fallow.

The photographs were reviewed for indications of potential indicators of wetland hydrology. Areas identified included the following. All areas were reviewed onsite during the field investigation (See Figure 5):

- Drainage swales flowing east toward wet areas.
- Areas adjacent to mapped wetlands, typically at the toe of the steeper slopes of the agricultural field.
- Areas of the flatter topographic relief exhibiting wet signatures in one or more photographs.

Wetland Inventory Map Review:

The Wisconsin Wetland Inventory (WWI) Map (Figure 3) was reviewed to identify the presence of mapped wetlands, wetland indicators and hydric soils on or in the vicinity of the AOI.

The WWI Map identifies two wetlands within the AOI. A T3K is positioned at the foot slope of a drainage swale on the southeast border of the AOI. Hydric soil Cb lies within the borders of the mapped wetland on three sides, extending beyond the wetland and AOI to the southeast

The second mapped wetland is a S3/E1K. It is positioned along the eastern boundary of the AOI, midway between the north and south project limits. Only a small portion of this mapped wetland lies within the AOI.

Soils Map Review:

The Chippewa County Soil Survey Map (Figure 4) indicate the following four soil series present within the AOI:

Cb – Capitola-Cabana complex, 0 to 2 percent slopes, very stony. This soil is present in a small area on the southeast border of the AOI, extending southeast beyond the AOI. This soil series is poorly drained to very poorly drained and is listed on the Wisconsin Hydric Soil List as WI Predominantly Hydric.

LoC2 – Loyal silt loam, 6 to 12 percent slopes. This soil surrounds the Capitola-Cabana soil in the southeast corner of the AOI that is actively cropped. This soil series is moderately well drained and is listed on the Wisconsin Hydric Soil List as WI Nonhydric.

SrB – Spencer silt loam, 2 to 6 percent slopes. This soil is formed on ground moraines and is identified in the northern half of the AOI. This soil series is moderately well drained and is listed on the Wisconsin Hydric Soil List as WI Nonhydric.

WeB – Withee silt loam, 0 to 3 percent slopes. This soil is formed on ground moraines and is the most prevalent soil within the AOI. This soil series is somewhat poorly drained and is listed on the Wisconsin Hydric Soil List as WI Predominantly Nonhydric.

Climate Data Summary:

An antecedent precipitation evaluation was conducted for the three months prior to the field investigation (Feb-April 2023). The results of an NRCS Antecedent Rainfall Documentation (ARD) evaluation using the Chippewa Valley Regional Airport weather station WETS data indicated conditions were Wetter than normal.

The Palmer Drought Index indicates hydrological conditions were Mid-range (-1.99 to +1.99) just prior to the site visit. In addition to the ARD and Palmer Index, the precipitation data just prior to the field investigation was reviewed. It appears that the precipitation in early May (within 14 days of the field visit) was Normal, trending toward Dry. (Appendix B).

Based on review of all meteorological data, climatic/hydrologic conditions were considered Normal at the time of the field investigation.

Field Investigation Results

Results of the offsite review, topographical position, observations of hydrophytic vegetation, soils and hydrology indicators, or lack thereof, along with best professional judgment were all used to identify wetlands versus upland in the AOI. Four wetland basins were identified in the AOI. The following section describes the four wetland basins and the basis for determining the wetland boundaries. See Table 1 (below), Appendix A for Wetland Delineation Data Forms, Wetland Delineation Map (Figure 5), and site photographs (Appendix D).

All landscape alterations within the AOI are associated with historic agricultural use. These alterations were conducted under normal farming practices and therefore, the AOI was considered to have normal circumstances. Topographical position, review of historical and recent aerial photographs, observation of soil and hydrology indicators (or lack thereof), along with best professional judgement were all used to identify the wetland boundary.

Table 1 – Wetland Classification

Wetland No.	Size (Sq. ft.)	WWI Classification	Cowardin Classification	Fish & Wildlife Service Circular 39	Basic Guide to Wisconsin Wetlands and Their Boundaries
1	17,500	E1K	PEM1C	Type 1: Seasonally flooded basin or flat	Fresh (Wet) Meadow
2	39,000	T3K	PFO1C	Type 7: Wooded Swamp	Lowland Hardwood Swamp
3	10,750	S3/E1K	PSS1/EM1C	Type 6: Shrub Swamp/Type 1: Seasonally Basin or Flat.	Shrub-Carr/Fresh (Wet) Meadow
4	5000	E1K	PEM1C	Type 1: Seasonally flooded basin or flat	Fresh (Wet) Meadow

*Wetland size refers only to the AOI; wetlands may extend outside the AOI

WWI Definitions:

E1K – Emergent/Wet Meadow (E); Persistent (1); Wet soil, Palustrine (K)
 S3K – Scrub/Shrub (S); Broad-leaved, deciduous (3); Wet soil, Palustrine (K)
 T3K – Forested; Broad-leaved, deciduous (3); Wet soil, Palustrine (K)

Cowardin Definitions:

PEM1C – Palustrine (P), Emergent (EM), Persistent (1), Seasonally Flooded (C)
 PSS1 – Palustrine (P); Scrub-shrub (SS); Broad-leaved, deciduous (1), Seasonally Flooded (C)
 PFO1C - Palustrine (P); Forested (FO); Broad-leaved, deciduous (1), Seasonally Flooded (C)

Wetland 1 (E1K)

Wetland 1 is in a depression on the footslope of a hillslope in an agricultural field. It includes the ditch at the base of the road slope. The Wetland Map (figure 3) does not identify a mapped wetland in this location. A large rectangular area appeared to have been sprayed with herbicide. The dead dominant vegetation was reed canary grass (*Phalaris arundinacea* – FACW). The road slope ditch was not sprayed with herbicide and was dominated by reed canary grass. Vegetation was significantly disturbed therefore it did not meet the technical criteria for hydrophytic vegetation. The wetland continues to the east outside the AOI.

Supporting documentation of field observations are found in Appendix A on data sheets labeled Sample Points (SP) 1-wet and SP 1-up.

Soils consisted of silty loam underlain by silty clay loam. Soils met the technical criteria for hydric soil indicators A11 – Depleted Below Dark Surface and F3 – Depleted Matrix.

Primary wetland hydrology indicators were high water table (A2) and saturation (A3). There was one secondary wetland hydrology indicator, geomorphic position (D2). Water table was encountered at 10 inches below ground surface. Saturation was observed at 8 inches below ground surface. The wetland sample point met wetland hydrology criteria.

The wetland sample point did not meet the criteria for hydrophytic vegetation due to the vegetation being significantly disturbed but did meet wetland criteria for hydrophytic soil and wetland hydrology therefore, the wetland sample point met wetland criteria.

The Upland sample point (SP 1-up) is upslope to the west of SP 1-wet. No live vegetation was present (same as SP 1-wet). The dead dominant vegetation was reed canary grass and foxtail. Vegetation was significantly disturbed and therefore, did not meet the technical criteria for hydrophytic vegetation. Soils did not meet the technical criteria for a hydric soil indicator. No primary or secondary hydrology indicators were observed.

Saturation nor water table were encountered. The upland sample point did not meet the technical criteria for hydrophytic soil or wetland hydrology therefore, the upland sample point did not meet wetland criteria.

Wetland 2 (T3K)

Wetland 2 is a wooded wetland in a depression on the footslope of a hillslope. The Wetland Map (Figure 3) shows this wetland as an isolated wetland, but field verification proved Wetland 2 (T3K) to be hydrologically connected to Wetland 1. Surface water flows from a drainage swale upslope to the west into the wetland and downslope to the east into Wetland 1.

Supporting documentation of field observations are found in Appendix A on data sheets labeled sample points (SP) 2-wet, 2.1-up, and 2.2-up.

Dominant vegetation in the tree stratum was white oak (*Quercus alba* – FACU) and American elm (*Ulmus americana* – FACW). Dominated vegetation in the shrub stratum was black cherry (*Prunus serotina* – FACU), buckthorn (*Rhamnus cathartica* – FAC), and Missouri gooseberry (*Ribes missouriense* – NI). Dominant vegetation in the herb layer was Virginia waterleaf (*Hydrophyllum virginianum* – FAC) and stinging nettle (*Urtica dioica* – FACW). Hydrophytic vegetation criteria was met with the Dominance Test.

Soils consisted of 10 inches of dark silty loam underlain by at least 12 inches of light gray silty loam with a depleted matrix. Soils met the technical criteria for hydric soil indicators A11 – Depleted Below Dark Surface and F3 – Depleted Matrix.

There was one primary wetland hydrology indicator, saturation (A3) and one secondary wetland hydrology indicator, geomorphic position (D2). Water table was encountered at 15 inches below ground surface. Saturation was observed at 12 inches below ground surface. The wetland sample point met wetland hydrology criteria.

The wetland sample point met the technical criteria for hydrophytic vegetation, hydrophytic soil and wetland hydrology therefore, the wetland sample point met wetland criteria.

Two upland sample points were taken (SP 2.1-up, SP 2.2-up). SP 2.1-up is located on the north side of the wetland where the cropped field meets the woodland. The field was planted in winter rye. The sample point is in a very shallow depression where the vegetation was sparse and appeared to have been washed out by heavy rainfall. Soil cracks were observed. SP 2.2-up is in a drainage swale west of the wetland. Historic aerial photographs show the drainage swale has never been plowed or planted.

Hydrophytic vegetation criteria was not met at SP 2.1-up due to it being significantly disturbed but was met at SP 2.2-up with reed canary grass being the dominant vegetation (*Phalaris arundinacea* – FACW) in the drainage swale. Soils did not meet the technical criteria for a hydric soil indicator. No primary or secondary hydrology indicators were observed. Saturation nor water table were encountered. Although SP 2.2-up met the criteria for hydrophytic vegetation and SP 2.1-up did not, neither sample point met wetland criteria for hydrophytic soil or wetland hydrology therefore, the upland sample points did not meet wetland criteria.

Wetland 3 (S3/E1K)

Wetland 3 is located on the eastern border, midway between the northern and southern border of the AOI. The Wetland Map (Figure 3) identifies this wetland as an isolated wetland. Only a small portion of the wetland lies within the AOI with the majority extending southeast, outside the AOI.

The wetland is in a cropped field positioned in a depression on the toeslope of a hillslope. Vegetation was significantly disturbed as it is a cropped field currently planted in winter rye. Therefore, the vegetation did not meet the technical criteria for hydrophytic vegetation. The crop was thin and washed out on the slope in and around the wetland border with surface soil cracks present. Downslope to the southeast, the field was left unplowed/unplanted and had deep tire ruts in the soil. Corn stubble remained from last year showing the soil had recently supported a crop. An herbicide application appeared to have been applied possibly last fall as

there was a distinct line of live and dead vegetation. The vegetation was dominated by reed canary grass (*Phalaris arundinacea* – FACW).

Supporting documentation of field observations are found in Appendix A on data sheets labeled sample points (SP) 3-wet, 3.1-wet and 3.2-up.

Soils consisted of 10 inches of dark silty loam underlain by at least 12 inches of light gray silty loam with a depleted matrix. Soils met the technical criteria for hydric soil indicators A11 – Depleted Below Dark Surface and F3 – Depleted Matrix.

SP 3-wet had no primary wetland hydrology indicators. Two secondary wetland hydrology indicators were met with surface soil cracks (B6) and geomorphic position (D2). Neither saturation nor water table observed. The wetland sample point met wetland hydrology criteria.

Two upland sample points were taken (SP 3.1-up, SP 3.2-up). SP 3.1-up is in the cropped field northwest of SP 3-wet. The field was planted in winter rye. The sample point is on an approximate 5 percent slope where the vegetation was sparse and appeared to have been washed out by heavy rainfall. Soil cracks were observed. SP 3.2-up is in a drainage swale west of the wetland. As with SP 2.2-up, historic aerial photographs show the drainage swale at SP 3.2-up has never been plowed or planted.

Hydrophytic vegetation criteria was not met at SP 3.1-up due to it being significantly disturbed but was met at SP 3.2-up with reed canary grass being the dominant vegetation (*Phalaris arundinacea* – FACW) in the drainage swale. Soils did not meet the technical criteria for a hydric soil indicator. No primary or secondary hydrology indicators were observed. Saturation nor water table were encountered. Although SP 3.2-up met the criteria for hydrophytic vegetation and SP 3.1-up did not, neither upland sample point met wetland criteria for hydrophytic soil or wetland hydrology therefore, the upland sample points did not meet wetland criteria.

Wetland 4 (E1K)

Wetland 4 is in a shallow depression on the northwest border of the AOI west of the entrance to the field. The Wetland Map (figure 3) does not identify a mapped wetland in this location. A cropped planting of winter rye dominated the plowed field portion of the wetland and reed canary grass (*Phalaris arundinacea* – FACW) dominated the unplowed portion adjacent to the road ditch in the road right of way. The wetland continues into the road ditch outside the AOI.

Supporting documentation of field observations are found in Appendix A on data sheets labeled Sample Points (SP) 4-wet and SP 4-up.

SP 4-wet is in the unplowed area of the wetland adjacent to the road ditch. Dominant vegetation was reed canary grass (*Phalaris arundinacea* – FACW) which met the technical criteria for hydrophytic vegetation.

Soils at SP 4-wet consisted of 8 inches of dark silty loam underlain by at least 14 inches of silty loam and silty clay loam with a depleted matrix. Soils met the technical criteria for hydric soil indicator F3 – Depleted Matrix.

SP 4-wet had no primary wetland hydrology indicators. Three secondary wetland hydrology indicators were met with surface soil cracks (B6), geomorphic position (D2), and FAC-neutral test (D5). Neither saturation nor water table observed. The wetland sample point met wetland hydrology criteria.

The wetland sample point met the technical criteria for hydrophytic vegetation, hydrophytic soil and wetland hydrology therefore, the wetland sample point met wetland criteria.

The upland sample point (SP 4-up) is in the cropped field upslope to the south of SP 4-wet. Vegetation was significantly disturbed due to cropping. Hydrophytic vegetation criteria was not met at SP 4-up due to it being significantly disturbed. Soils consisted of silty loam underlain by silty clay loam. Soils at SP 4-up did not meet the technical criteria for a hydric soil indicator. No primary hydrology indicators were observed. There was one secondary hydrology indicator, surface soil cracks (B6). Saturation nor water table were encountered. The

upland sample point did not meet the technical criteria for hydrophytic vegetation, hydric soil, or wetland hydrology therefore, the upland sample point did not meet wetland criteria.

Regulatory Considerations

Kerry Ingraham, Environmental Scientist/President with Ingraham Technical Services is a WDNR Assured Wetland Delineator. A letter describing her authority and the use of this report under the Wetland Delineation Professional Assurance Program is provided in Appendix F.

Wetlands in the project area are regulated by agencies at the local, state, and federal levels including the USACE and USEPA at the federal level and the WDNR at the state level. The findings of this wetland delineation report are based on the site conditions which existed at the time of this investigation and may not be valid if conditions change. Wetland boundaries presented in this report may be subject to confirmation by the WDNR and potentially USACE (depending on jurisdiction). The final authority for wetland boundaries and permit requirements is regulated by the government agencies which have jurisdiction over this project. Construction plans that propose any direct alteration or indirect impact to wetlands or watercourses within the project area will require approvals from the appropriate regulatory agencies (potentially including local zoning requirements). Violation of the wetland regulations can result in substantial civil and/or criminal penalties.

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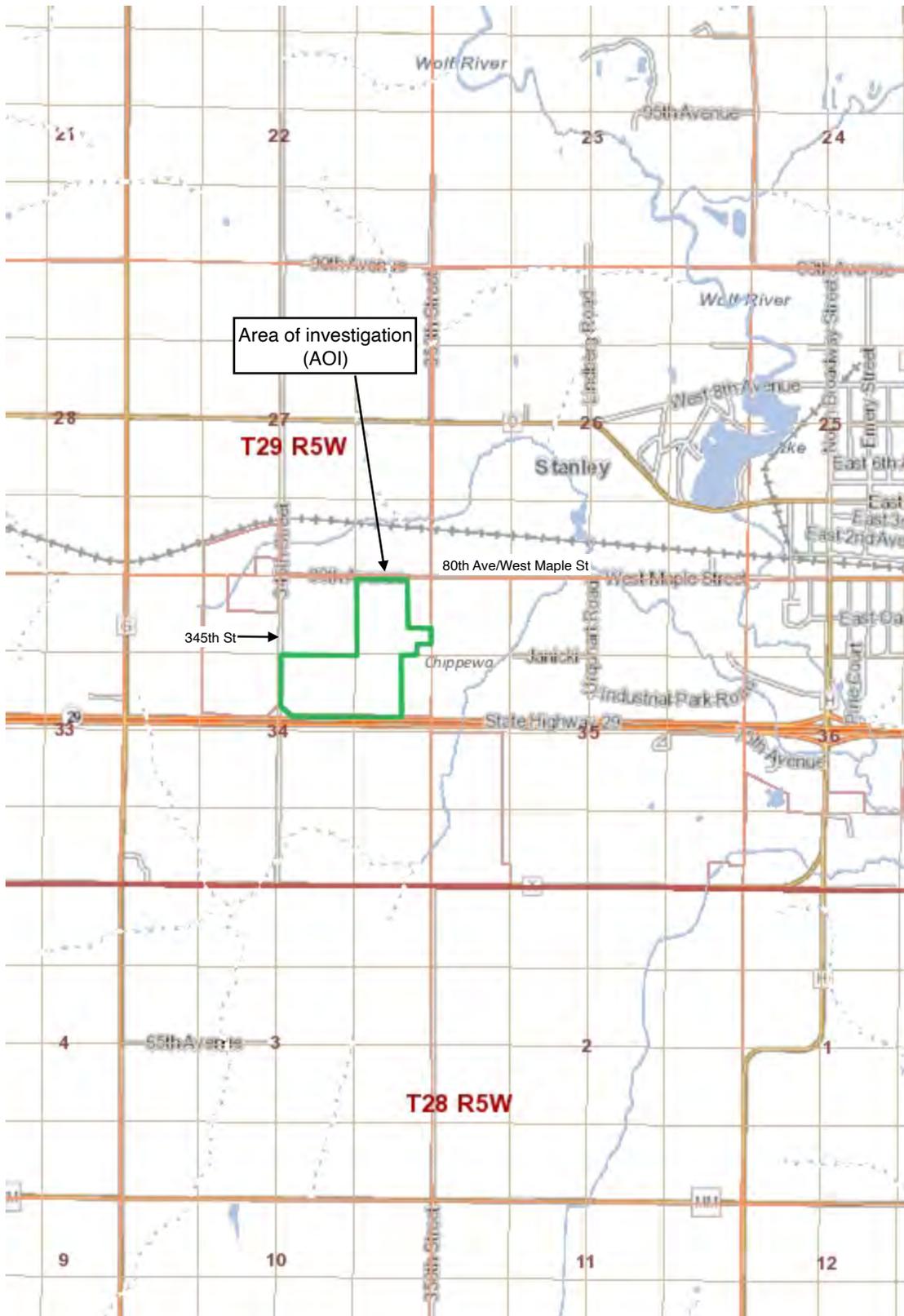
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Figure 6B	Wetland 3 Delineation Map
Figure 6C	Wetland 4 Delineation Map



Project Location Map **Figure 1**



Legend

- Township
- Section
- Quarter-Quarter
- County Boundary
- Cities, Towns & Villages**
- City
- Village
- Civil Town
- Municipality
- State Boundaries
- County Boundaries
- Major Roads**
- Interstate Highway
- State Highway
- US Highway
- County and Local Roads**
- County HWY
- Local Road
- Railroads
- Tribal Lands
- Rivers and Streams
- Intermittent Streams
- Lakes and Open water

1.0 0 0.50 1.0 Miles

1: 31,680

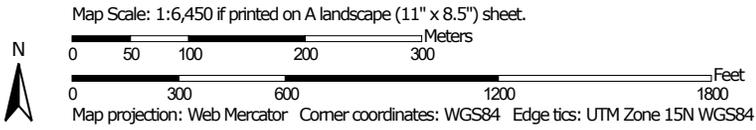
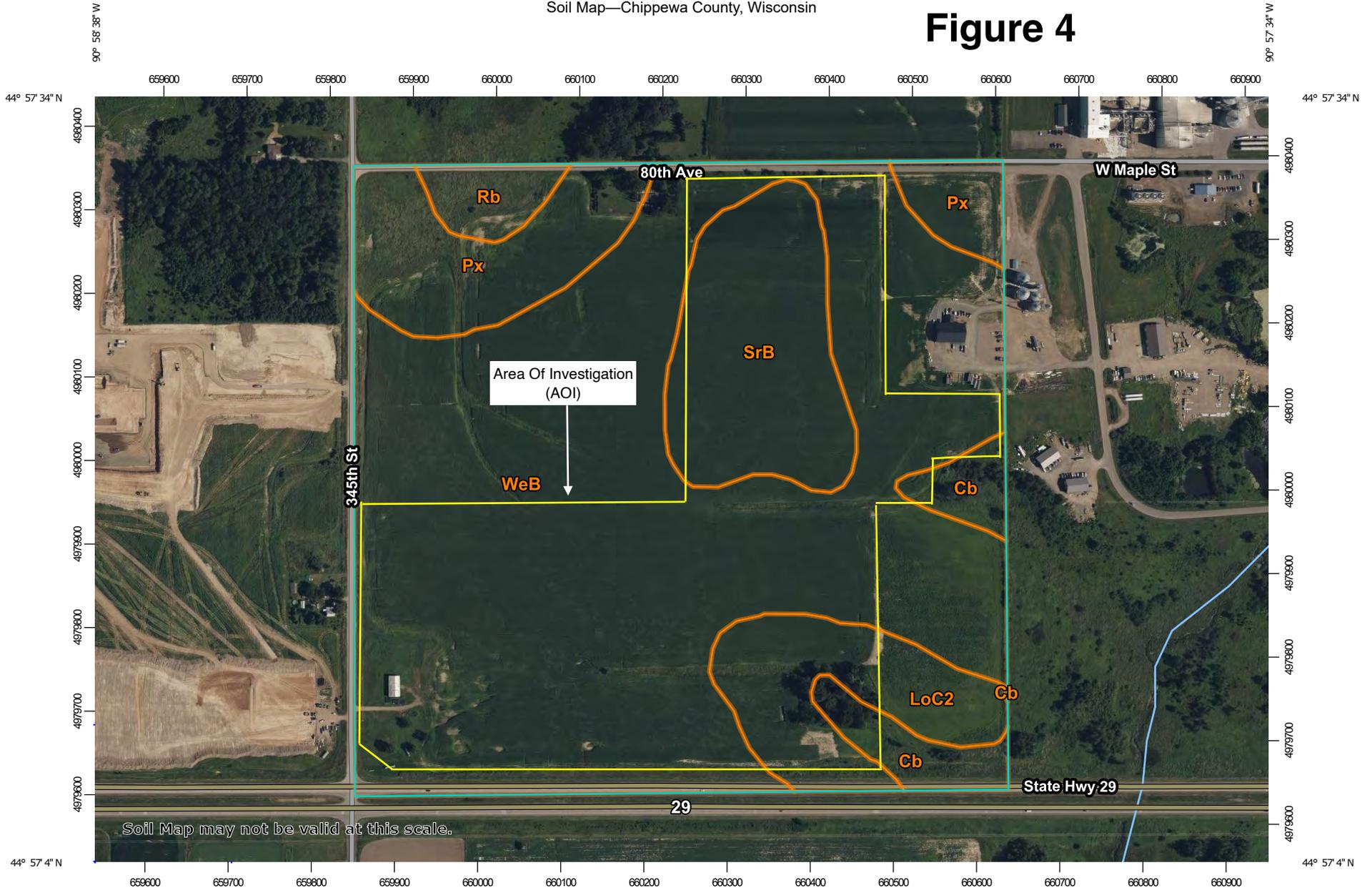
NAD_1983_HARN_Wisconsin_TM

DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: <http://dnr.wi.gov/legal/>

Notes

City of Stanley
Chippewa County, WI
Section 34, T29N, R5W

Figure 4



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Chippewa County, Wisconsin

Survey Area Data: Version 19, Sep 15, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 21, 2022—Sep 13, 2022

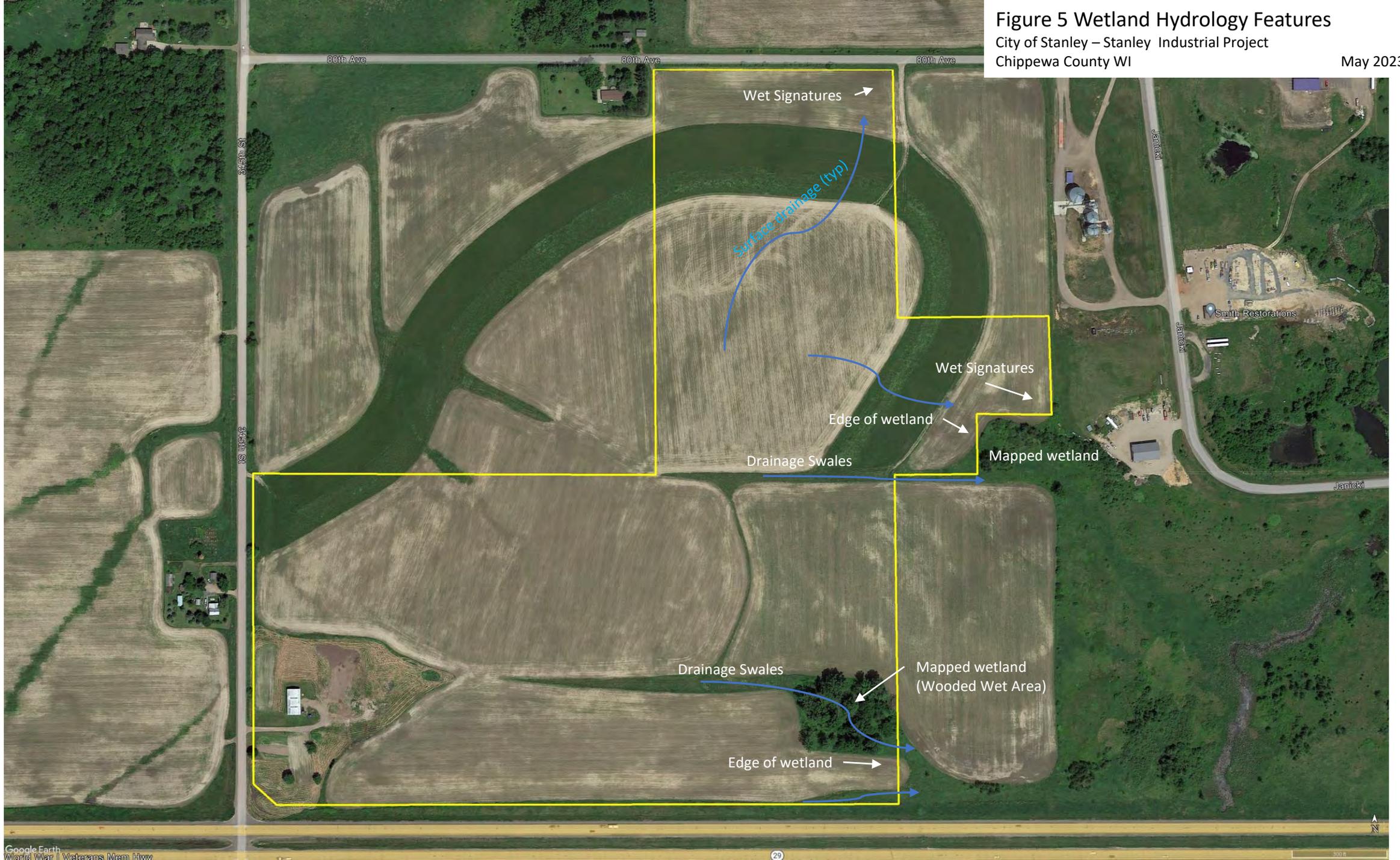
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cb	Capitola-Cebana complex, 0 to 2 percent slopes, very stony	5.7	3.9%
LoC2	Loyal silt loam, 6 to 12 percent slopes	11.4	7.8%
Px	Poskin silt loam, 0 to 2 percent slopes	14.4	9.8%
Rb	Rib silt loam, 0 to 2 percent slopes	3.0	2.0%
SrB	Spencer silt loam, 2 to 6 percent slopes	16.0	10.9%
WeB	Withee silt loam, 0 to 3 percent slopes	96.1	65.6%
Totals for Area of Interest		146.6	100.0%

Figure 5 Wetland Hydrology Features
City of Stanley – Stanley Industrial Project
Chippewa County WI

May 2023



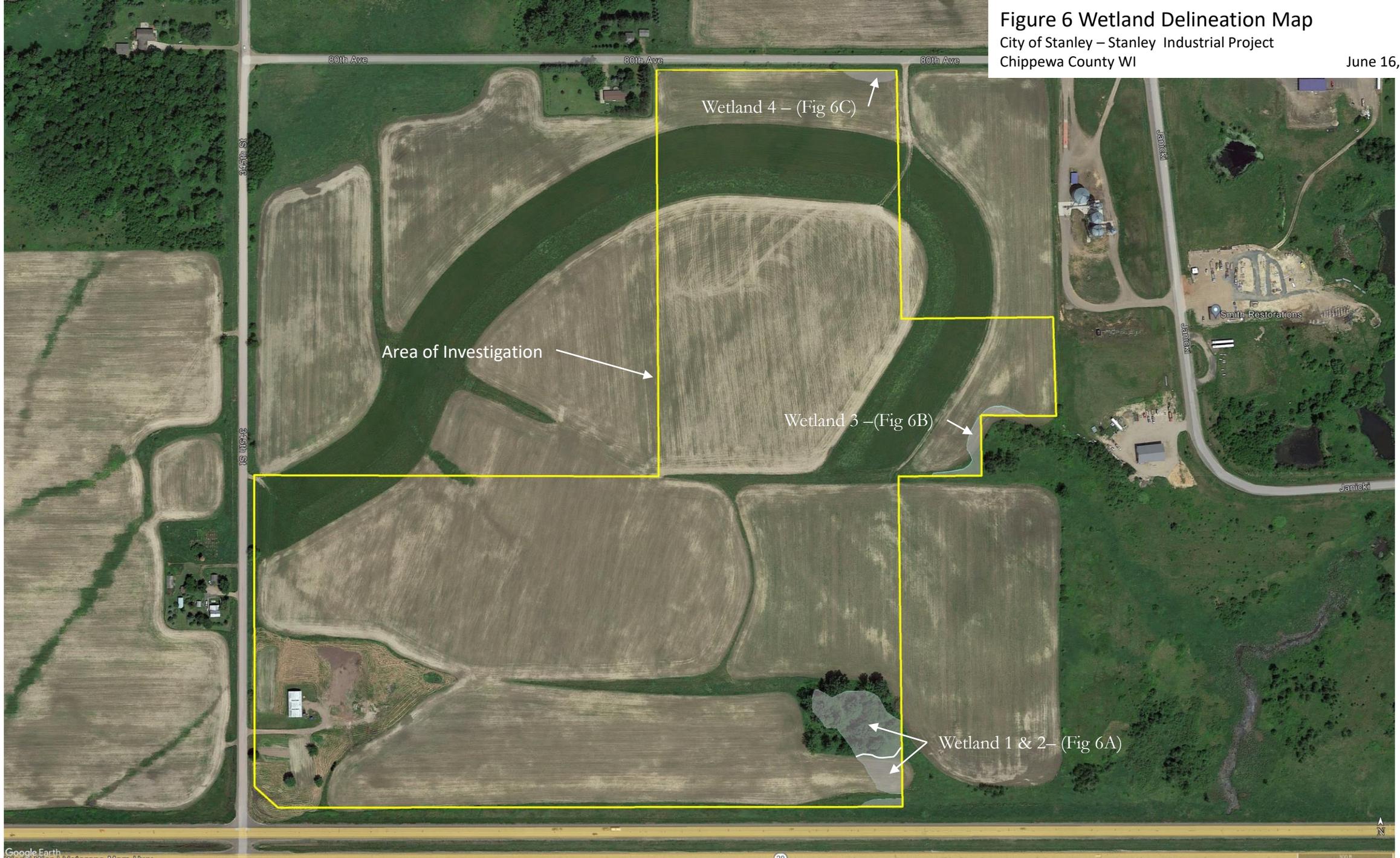


Figure 6A Wetland 1 & 2 Delineation Map

City of Stanley – Stanley Industrial Project
Chippewa County WI

June 16, 2023



Figure 6B Wetland 3 Delineation Map

City of Stanley – Stanley Industrial Project

Chippewa County WI

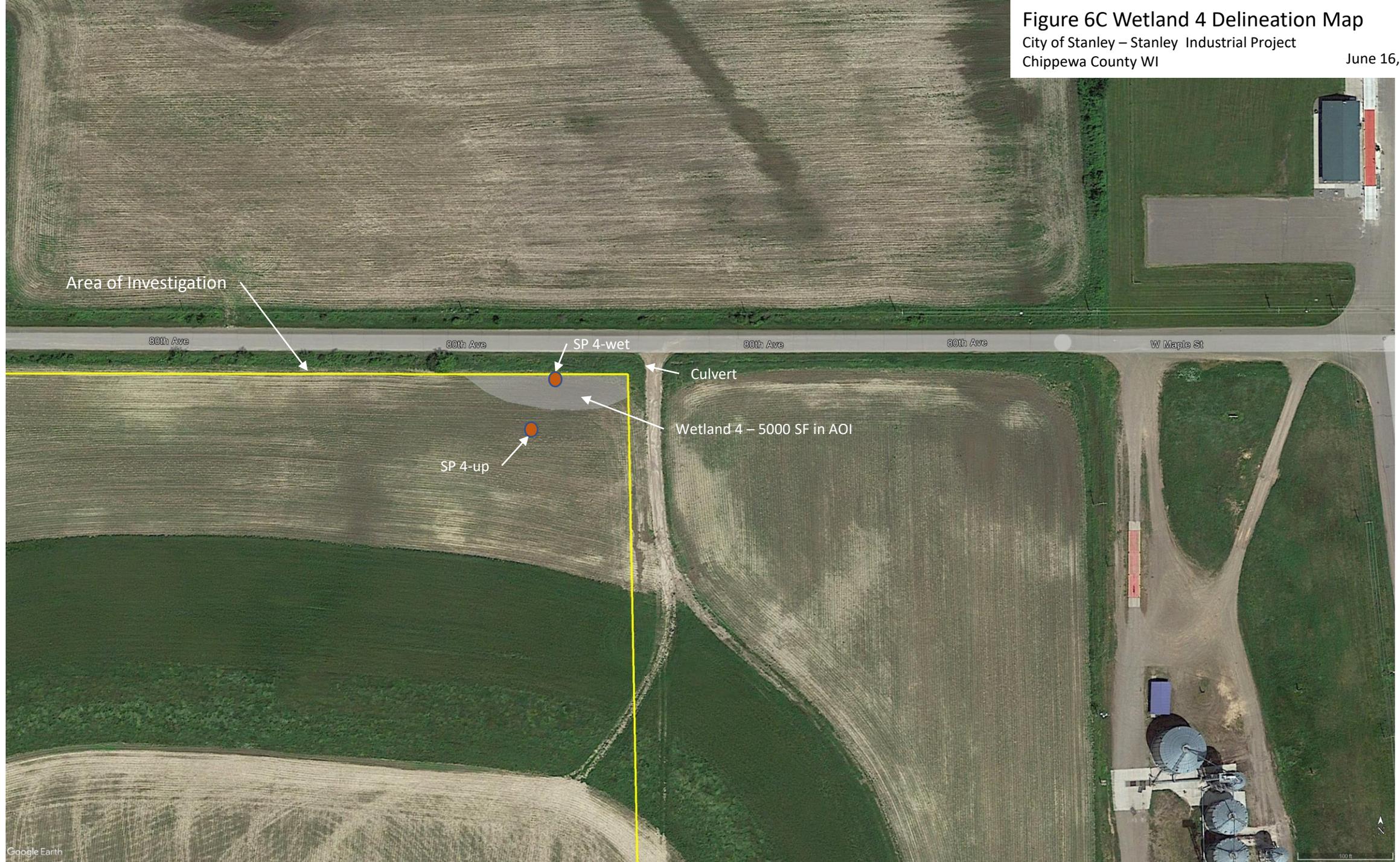
June 16, 2023



Figure 6C Wetland 4 Delineation Map

City of Stanley – Stanley Industrial Project
Chippewa County WI

June 16, 2023



Area of Investigation

80th Ave

80th Ave

SP 4-wet

80th Ave

80th Ave

W Maple St

Culvert

Wetland 4 – 5000 SF in AOI

SP 4-up

Appendix A

Wetland Delineation Data Forms

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Stanley Industrial Park City/County: Chippewa County Sampling Date: 5/17/23
 Applicant/Owner: Neil Bowe, CBS Squared, Inc State: WI Sampling Point: 1-wet
 Investigator(s): Kerry Ingraham Section, Township, Range: Section 34, T29N, R5W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave
 Slope (%): 5 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Capitola-Cabana complex, 0 to 2 percent slopes, very stony (Cb) NWI Classification: E1K
 Are climatic/hydrologic conditions of the site typical for this time of the year? YES (If no, explain in remarks)
 Are vegetation X, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> N </u> Hydric soil present? <u> Y </u> Indicators of wetland hydrology present? <u> Y </u>	Is the sampled area within a wetland? <u> Y </u> If yes, optional wetland site ID <u> Wetland 1 </u>
Remarks: (Explain alternative procedures here or in a separate report.) <u>Wetland 1 is in a depression on the toeslope of a hillslope in an agricultural field. It includes the road slope ditch. Vegetation was significantly disturbed. A large rectangular area appeared to have been sprayed with herbicide. The dead dominant vegetation was reed canary grass. The wetland continues to the east outside the AOI.</u>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils <input type="checkbox"/> Inundation Visible on Aerial Imagery <input type="checkbox"/> (C6) <input type="checkbox"/> (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave Surface <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u> </u> No <u> X </u> Depth (inches): _____ Water table present? Yes <u> X </u> No <u> </u> Depth (inches): <u> 10 </u> Saturation present? Yes <u> X </u> No <u> </u> Depth (inches): <u> 8 </u> (includes capillary fringe)	Indicators of wetland hydrology present? <u> Y </u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: <u>See Photos: 1-3</u>	

SOIL

Sampling Point: 1-wet

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-4	10YR 4/2	60					sily loam	
	10YR 3/2	40						
4-10	10YR 3/2	95	7.5YR 3/4	5	C	M	silty clay loam	distinct concentrations
10-22	10YR 5/2	80	7.5YR 4/6	20	C	M	silty clay loam	prominent concetrations

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histisol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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:

- 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)

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Stanley Industrial Park City/County: Chippewa County Sampling Date: 5/17/23
 Applicant/Owner: City of Stanley State: WI Sampling Point: 1-up
 Investigator(s): Kerry Ingraham Section, Township, Range: Section 34, T29N, R5W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
 Slope (%): 5 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Loyal silt loam, 6 to 12 percent slopes (LoC2) NWI Classification: none
 Are climatic/hydrologic conditions of the site typical for this time of the year? YES (If no, explain in remarks)
 Are vegetation X, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> N </u> Hydric soil present? <u> N </u> Indicators of wetland hydrology present? <u> N </u>	<p align="center">Is the sampled area within a wetland? <u> N </u></p> If yes, optional wetland site ID _____
Remarks: (Explain alternative procedures here or in a separate report.) SP 1-up is in an agricultural field upslope from Wetland 1 and SP 1-wet. Vegetation was significantly disturbed. A large rectangular area appeared to have been sprayed with herbicide. The dead dominant vegetation was reed canary grass and foxtail. See Photos: 1-3	

HYDROLOGY

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) _____ FAC-Neutral Test (D5) _____ Microtopographic Relief (D4)
--	--	---

Field Observations: Surface water present? Yes _____ No <u> X </u> Depth (inches): _____ Water table present? Yes _____ No <u> X </u> Depth (inches): _____ Saturation present? Yes _____ No <u> X </u> Depth (inches): _____ (includes capillary fringe)	<p align="center">Indicators of wetland hydrology present? <u> N </u></p>
--	--

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

Remarks:

SOIL

Sampling Point: 1-up

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR 3/2						sily loam	
6-12	10YR 3/1	99	7.5YR 4/4	1	C	M	sily loam	
12-18	10YR 5/1	95	7.5YR 5/4	5	D	M	silty clay loam	
18-22	10YR 5/1	90	7.5YR 5/4	10	D	M	silty clay loam	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histisol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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:

- 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)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Stanley Industrial Park City/County: Dunn county Sampling Date: 5/17/2023
 Applicant/Owner: City of Stanley State: WI Sampling Point: 2-wet
 Investigator(s): Kerry Ingraham Section, Township, Range: Section 34, T29N, R5W
 Landform (hillslope, terrace, etc.): depression on footslope Local relief (concave, convex, none): concave
 Slope (%): 3 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Capitola-cebana complex, 0 to 2 percent slopes, very stony (Cb) NWI Classification: T3K
 Are climatic/hydrologic conditions of the site typical for this time of the year? YES (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID <u>Wetland 2</u>
Remarks: (Explain alternative procedures here or in a separate report.) Wetland 2 is a wooded wetland in a depression on a footslope of a hillslope. Surface water flows from a drainage swale upslope to the west into the wetland and downslope to the east into Wetland 1. See Photos: 4-6	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): _____ Water table present? Yes <u>X</u> No _____ Depth (inches): <u>15</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>12</u> (includes capillary fringe)		Indicators of wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION - Use scientific names of plants

Sampling Point: 2-wet

Tree Stratum					50/20 Thresholds		
Plot Size (30 ft. radius)		Absolute % Cover	Dominant Species	Indicator Status	20%	50%	
1	<u>Quercus alba</u>	40	Y	FACU	Tree Stratum	12	30
2	<u>Ulmus americana</u>	20	Y	FACW	Sapling/Shrub Stratum	8	21
3	_____	_____	_____	_____	Herb Stratum	31	79
4	_____	_____	_____	_____	Woody Vine Stratum	0	0
5	_____	_____	_____	_____			
6	_____	_____	_____	_____			
7	_____	_____	_____	_____			
8	_____	_____	_____	_____			
9	_____	_____	_____	_____			
10	_____	60	= Total Cover				
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (15 ft. radius)		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A)		
1	<u>Prunus serotina</u>	20	Y	FACU	Total Number of Dominant Species Across all <u>7</u> (B)		
2	<u>Rhamnus cathartica</u>	10	Y	FAC	Percent of Dominant Species that are OBL, FACW, or FAC: <u>57.14%</u> (A/B)		
3	<u>Ribes missouriense</u>	10	Y	NI			
4	<u>Sambucus racemosa</u>	2	N	FACU			
5	_____	_____	_____	_____			
6	_____	_____	_____	_____			
7	_____	_____	_____	_____			
8	_____	_____	_____	_____			
9	_____	_____	_____	_____			
10	_____	42	= Total Cover				
Herb Stratum					Prevalence Index Worksheet		
Plot Size (5 ft. radius)		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:		
1	<u>Hydrophyllum virginianum</u>	75	Y	FAC	OBL species	0	x 1 = 0
2	<u>Urtica dioica</u>	50	Y	FAC	FACW species	50	x 2 = 100
3	<u>Impatiens capensis</u>	30	N	FACW	FAC species	135	x 3 = 405
4	<u>Arctium minus</u>	2	N	FACU	FACU species	64	x 4 = 256
5	_____	_____	_____	_____	UPL species	0	x 5 = 0
6	_____	_____	_____	_____	Column totals	249	(A) 761 (B)
7	_____	_____	_____	_____	Prevalence Index = B/A =	<u>3.06</u>	
8	_____	_____	_____	_____			
9	_____	_____	_____	_____			
10	_____	_____	_____	_____			
11	_____	_____	_____	_____			
12	_____	_____	_____	_____			
13	_____	_____	_____	_____			
14	_____	_____	_____	_____			
15	_____	157	= Total Cover				
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size (30 ft. radius)		Absolute % Cover	Dominant Species	Indicator Status	<input type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
1	_____	_____	_____	_____	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 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.		
2	_____	_____	_____	_____			
3	_____	_____	_____	_____			
4	_____	_____	_____	_____			
5	_____	0	= Total Cover				
					Hydrophytic vegetation present? <u>Y</u>		

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

SOIL

Sampling Point: 2-wet

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR 3/2	80					silty loam	
	10YR 2/2	20						
6-10	10YR 3/2	100					silty loam	
10-17	10YR 5/1	90	10YR 5/4	10	D	M	silty loam	Distinct concentrations
17-22	10YR 5/2	80	7.5YR 5/6	20	D	M	silty loam	Prominent concentrations

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- Histisol (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)

- 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)

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Stanley Industrial Park City/County: Chippewa County Sampling Date: 5/17/2023
 Applicant/Owner: City of Stanley State: WI Sampling Point: 2.1-up
 Investigator(s): Kerry Ingraham Section, Township, Range: Section 34, T29N, R5W
 Landform (hillslope, terrace, etc.): depression on slope Local relief (concave, convex, none): concave
 Slope (%): 1 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Loyal silt loam, 6 to 12 percent slopes (LoC2) NWI Classification: none
 Are climatic/hydrologic conditions of the site typical for this time of the year? YES (If no, explain in remarks)
 Are vegetation X, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> N </u> Hydric soil present? <u> N </u> Indicators of wetland hydrology present? <u> N </u>	<p align="center">Is the sampled area within a wetland? <u> N </u></p> If yes, optional wetland site ID _____
Remarks: (Explain alternative procedures here or in a separate report.) SP 2.1-up is located on the north side of Wetland 2 where the cropped field meets the woodland. The field was planted in winter rye. The SP iwhere the vegetation was sparse and looked to have been washed out from heavy rain. Soil cracks were present. See Photos: 4-6	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
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Field Observations: Surface water present? Yes _____ No <u> X </u> Depth (inches): _____ Water table present? Yes _____ No <u> X </u> Depth (inches): _____ Saturation present? Yes _____ No <u> X </u> Depth (inches): _____ (includes capillary fringe)	<p align="center">Indicators of wetland hydrology present? <u> N </u></p>
---	--

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

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: 2.1-up

Tree Stratum	Plot Size (30 ft. radius)	Absolute % Cover	Dominant Species	Indicator Status	50/20 Thresholds		
1 _____					Tree Stratum	20% 0	50% 0
2 _____					Sapling/Shrub Stratum	0	0
3 _____					Herb Stratum	2	5
4 _____					Woody Vine Stratum	0	0
5 _____					Dominance Test Worksheet		
6 _____					Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A)		
7 _____					Total Number of Dominant Species Across all <u>4</u> (B)		
8 _____					Percent of Dominant Species that are OBL, FACW, or FAC: <u>25.00%</u> (A/B)		
9 _____					Prevalence Index Worksheet		
10 _____		0	= Total Cover		Total % Cover of:		
					OBL species <u>0</u> x 1 = <u>0</u>		
					FACW species <u>2</u> x 2 = <u>4</u>		
					FAC species <u>0</u> x 3 = <u>0</u>		
					FACU species <u>8</u> x 4 = <u>32</u>		
					UPL species <u>0</u> x 5 = <u>0</u>		
					Column totals <u>10</u> (A) <u>36</u> (B)		
					Prevalence Index = B/A = <u>3.60</u>		
					Hydrophytic Vegetation Indicators:		
					<input type="checkbox"/> Rapid test for hydrophytic vegetation		
					<input type="checkbox"/> Dominance test is >50%		
					<input type="checkbox"/> Prevalence index is ≤3.0*		
					<input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
					<input type="checkbox"/> Problematic hydrophytic vegetation* (explain)		
					*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 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? <u>N</u>		
					Remarks: (Include photo numbers here or on a separate sheet)		
					Sparsley vegetated area in a depression in agricultural field at the edge of the woods.		

SOIL

Sampling Point: 2.1-up

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-12	10YR 3/2	100					silty loam	
12-20	10YR 4/2	100					silty loam	
20-22	10YR 4/1	90	7.5YR 3/3	10			silty loam	prominent concentrations

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histisol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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:

- 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)

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Stanley Industrial Park City/County: Chippewa County Sampling Date: 5/17/2023
 Applicant/Owner: City of Stanley State: WI Sampling Point: 2.2-up
 Investigator(s): Kerry Ingraham Section, Township, Range: Section 34, T29N, R5W
 Landform (hillslope, terrace, etc.): drainage swale on hillslope Local relief (concave, convex, none): concave
 Slope (%): 5 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Loyal Silt Loam, 6 to 12 percent slopes (LoC2) NWI Classification: none
 Are climatic/hydrologic conditions of the site typical for this time of the year? YES (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="margin-left: 40px;">SP 2.2-up is located in a drainage swale upslope to the west of Wetland 2. The drainage swale is left fallow. See Photos: 4-6</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils <input type="checkbox"/> Inundation Visible on Aerial Imagery <input type="checkbox"/> (C6) <input type="checkbox"/> (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave Surface <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Indicators of wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <hr/>	
Remarks:	

SOIL

Sampling Point: 2.2-up

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR 3/1	60					silty loam	
	10YR 3/2	40						
6-10	10YR 3/2	100					silty loam	
10-14	10YR 3/2	69	7.5YR 4/3	2	C	M	silty loam	faint concentrations
	10YR 4/2	30						
14-22	10YR 4/2	75	7.5YR 4/4	5	C	M	silty loam	prominent concentrations
	10YR 5/2	20						

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- Histisol (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)

- 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)

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Stanley Industrial Park City/County: Chippewa County Sampling Date: 5/18/2023
 Applicant/Owner: City of Stanley State: WI Sampling Point: 3-wet
 Investigator(s): Kerry Ingraham Section, Township, Range: Section 34, T29N, R5W
 Landform (hillslope, terrace, etc.): depression on footslope Local relief (concave, convex, none): concave
 Slope (%): _____ Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Capitola-cebana complex, 0 to 2 percent slopes, very stony (Cb) NWI Classification: S3/E1K
 Are climatic/hydrologic conditions of the site typical for this time of the year? YES (If no, explain in remarks)
 Are vegetation X, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> N </u> Hydric soil present? <u> Y </u> Indicators of wetland hydrology present? <u> Y </u>	<p align="center">Is the sampled area within a wetland? <u> N </u></p> <p>If yes, optional wetland site ID <u> Wetland 3 </u></p>
Remarks: (Explain alternative procedures here or in a separate report.) Wetland 3 is located on the eastern border of the AOI, midway between the northern and southern border. Only a small portion lies within the AOI with the majority of the wetland extending southeast outside the AOI. The wetland is in a depression on a cropped field of winter rye on the toeslope of a hillslope. Photos 7-10	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
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Field Observations: Surface water present? Yes _____ No <u> X </u> Depth (inches): _____ Water table present? Yes _____ No <u> X </u> Depth (inches): _____ Saturation present? Yes _____ No <u> X </u> Depth (inches): _____ (includes capillary fringe)	<p align="center">Indicators of wetland hydrology present? <u> Y </u></p>
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Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

The crop was thin with surface soil cracks present in and near the wetland border. Wetter areas downslope had were left unplowed/planted and had deep tractor ruts. Corn stubble remained from last year.
 See Photos 7-10

VEGETATION - Use scientific names of plants

Sampling Point: 3-wet

Tree Stratum					50/20 Thresholds		
Tree Stratum	Plot Size (30 ft. radius)	Absolute % Cover	Dominant Species	Indicator Status		20%	50%
1	_____	_____	_____	_____	Tree Stratum	0	0
2	_____	_____	_____	_____	Sapling/Shrub Stratum	0	0
3	_____	_____	_____	_____	Herb Stratum	0	0
4	_____	_____	_____	_____	Woody Vine Stratum	0	0
5	_____	_____	_____	_____			
6	_____	_____	_____	_____			
7	_____	_____	_____	_____			
8	_____	_____	_____	_____			
9	_____	_____	_____	_____			
10	_____	_____	_____	_____			
		0	= Total Cover				
Sapling/Shrub Stratum					Dominance Test Worksheet		
Sapling/Shrub Stratum	Plot Size (15 ft. radius)	Absolute % Cover	Dominant Species	Indicator Status			
1	_____	_____	_____	_____	Number of Dominant Species that are OBL, FACW, or FAC:	0	(A)
2	_____	_____	_____	_____	Total Number of Dominant Species Across all	0	(B)
3	_____	_____	_____	_____	Percent of Dominant Species that are OBL, FACW, or FAC:	0.00%	(A/B)
4	_____	_____	_____	_____			
5	_____	_____	_____	_____			
6	_____	_____	_____	_____			
7	_____	_____	_____	_____			
8	_____	_____	_____	_____			
9	_____	_____	_____	_____			
10	_____	_____	_____	_____			
		0	= Total Cover				
Herb Stratum					Prevalence Index Worksheet		
Herb Stratum	Plot Size (5 ft. radius)	Absolute % Cover	Dominant Species	Indicator Status			
1	_____	_____	_____	_____	Total % Cover of:		
2	_____	_____	_____	_____	OBL species	0	x 1 = 0
3	_____	_____	_____	_____	FACW species	0	x 2 = 0
4	_____	_____	_____	_____	FAC species	0	x 3 = 0
5	_____	_____	_____	_____	FACU species	0	x 4 = 0
6	_____	_____	_____	_____	UPL species	0	x 5 = 0
7	_____	_____	_____	_____	Column totals	0	(A) 0 (B)
8	_____	_____	_____	_____	Prevalence Index = B/A =		
9	_____	_____	_____	_____			
10	_____	_____	_____	_____			
11	_____	_____	_____	_____			
12	_____	_____	_____	_____			
13	_____	_____	_____	_____			
14	_____	_____	_____	_____			
15	_____	_____	_____	_____			
		0	= Total Cover				
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Woody Vine Stratum	Plot Size (30 ft. radius)	Absolute % Cover	Dominant Species	Indicator Status			
1	_____	_____	_____	_____	___ Rapid test for hydrophytic vegetation		
2	_____	_____	_____	_____	___ Dominance test is >50%		
3	_____	_____	_____	_____	___ Prevalence index is ≤3.0*		
4	_____	_____	_____	_____	___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
5	_____	_____	_____	_____	___ Problematic hydrophytic vegetation* (explain)		
6	_____	_____	_____	_____	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
7	_____	_____	_____	_____			
8	_____	_____	_____	_____			
9	_____	_____	_____	_____			
10	_____	_____	_____	_____			
11	_____	_____	_____	_____			
12	_____	_____	_____	_____			
13	_____	_____	_____	_____			
14	_____	_____	_____	_____			
15	_____	_____	_____	_____			
		0	= Total Cover				
Woody Vine Stratum					Definitions of Vegetation Strata:		
Woody Vine Stratum	Plot Size (30 ft. radius)	Absolute % Cover	Dominant Species	Indicator Status			
1	_____	_____	_____	_____	Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
2	_____	_____	_____	_____	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
3	_____	_____	_____	_____	Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
4	_____	_____	_____	_____	Woody vines - All woody vines greater than 3.28 ft in height.		
5	_____	_____	_____	_____			
		0	= Total Cover				
Woody Vine Stratum					Hydrophytic vegetation present?		
Woody Vine Stratum	Plot Size (30 ft. radius)	Absolute % Cover	Dominant Species	Indicator Status			
1	_____	_____	_____	_____			
2	_____	_____	_____	_____			
3	_____	_____	_____	_____			
4	_____	_____	_____	_____			
5	_____	_____	_____	_____			
		0	= Total Cover		N		

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

Vegetation was significantly disturbed as it is in a cropped field currently planted in winter rye. The crop was thin and washed out on the slope in and around the wetland border. Downslope to the southeast, the field was left unplowed/unplanted with deep tire ruts. Corn stubble remained from last year showing the soil has recently supported crop growth. Herbicide had been applied, possibly last fall as there was a distinct line of live and dead vegetation. Veg dominated by reed canary grass (*Phalaris arundinacea* - FACW)

SOIL

Sampling Point: 3-wet

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-10	10YR 4/2	93	7.5YR 3/4	7	C	M	silty loam	prominent concentrations
10-12	10YR 4/1	90	7.5YR 4/6	10	C	M		prominent concentrations
12-20	10YR 4/1	70	7.5YR 4/6	30	C	M	silty loam	prominent concentrations
20-24	10YR 4/1	50	7.5YR 4/6	10	C	M	silty loam	prominent concentrations
	10YR 5/1	40						

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- Histisol (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)

- 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)

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric soil present? Y N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Stanley Industrial Park City/County: Chippewa County Sampling Date: 5/18/2023
 Applicant/Owner: City of Stanley State: WI Sampling Point: 3.1-up
 Investigator(s): Kerry Ingraham Section, Township, Range: Section 34, T29N, R5W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
 Slope (%): 5 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Loyal silt loam, 6 to 12 percent slopes (LoC2) NWI Classification: none
 Are climatic/hydrologic conditions of the site typical for this time of the year? YES (If no, explain in remarks)
 Are vegetation X, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> N </u> Hydric soil present? <u> N </u> Indicators of wetland hydrology present? <u> N </u>	Is the sampled area within a wetland? <u> N </u> If yes, optional wetland site ID _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="margin-left: 40px;">SP 3.1-up is in a cropped field of winter rye upslope to the northwest of SP 3-wet and Wetland 3. Vegetation is significantly disturbed as it is a cropped agricultural field. See Photos 7-10</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils <input type="checkbox"/> Inundation Visible on Aerial Imagery <input type="checkbox"/> (C6) <input type="checkbox"/> (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave Surface <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> (B8)	Secondary Indicators (minimum of two required) <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	
Field Observations: Surface water present? Yes _____ No <u> X </u> Depth (inches): _____ Water table present? Yes _____ No <u> X </u> Depth (inches): _____ Saturation present? Yes _____ No <u> X </u> Depth (inches): _____ (includes capillary fringe)	Indicators of wetland hydrology present? <u> N </u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <hr/>		
Remarks:		

SOIL

Sampling Point: 3.1-up

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR 3/2							
6-14	10YR 3/2	98	7.5YR 4/4	2	C	M	silty loam	distinct concentration
14-19	10YR 4/2	95	7.5YR 4/4	5	C	M	silty loam	distinct concentration
19-22	10YR 4/2	90	7.5YR 4/6	10	C	M	silty loam	prominent concentrations

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histisol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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:

- 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)

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Stanley Industrial Park City/County: Chippewa County Sampling Date: 5/18/2023
 Applicant/Owner: City of Stanley State: WI Sampling Point: 3.2-up
 Investigator(s): Kerry Ingraham Section, Township, Range: Section 34, T29N, R5W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
 Slope (%): 3 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Loyal silt loam, 6 to 12 percent slopes (LoC2) NWI Classification: none
 Are climatic/hydrologic conditions of the site typical for this time of the year? YES (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID <u>Wetland 3</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center;">SP 3.2-up is located in the drainage swale west of Wetland 3. See Photos 7-10</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils <input type="checkbox"/> Inundation Visible on Aerial Imagery <input type="checkbox"/> (C6) <input type="checkbox"/> (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave Surface <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Indicators of wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <hr/> Remarks:	

SOIL

Sampling Point: 3.2-up

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-4	10YR 3/3						silty loam	
4-12	10YR 3/2						silty loam	
12-16	10YR 4/2	68	7.5YR 4/6	2	C	M	silty loam	prominent concentrations
	10YR 5/2	30						
16-22	10YR 4/2	65	7.5YR 4/6	5			silty loam	prominent concentrations
	10YR 5/2	30						

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- Histisol (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)

- 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)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Stanley Industrial Park City/County: Chippewa County Sampling Date: 5/18/2023
 Applicant/Owner: City of Stanley State: WI Sampling Point: 4-wet
 Investigator(s): Kerry Ingraham Section, Township, Range: Section 34, T29N, R5W
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
 Slope (%): _____ Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Withee silt loam, 0 to 3 percent slopes (WeB) NWI Classification: E1K
 Are climatic/hydrologic conditions of the site typical for this time of the year? YES (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID <u>Wetland 4</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p style="margin-left: 20px;">Wetland 4 is in a shallow depression on the NW border of the AOI, west of the field entrance. The wetland continues outside the AOI, into the road side ditch and culvert. The wetland map does not identify a wetland in this area. A portion of the wetland is plowed and planted. SP 4-wet is in the unplowed area next to the ditch.</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Indicators of wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <p style="margin-left: 20px;">See Photos 11-13</p>		

SOIL

Sampling Point: 4-wet

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-8	10YR 3/2	100					silty loam	
8-14	10YR 4/2	60	7.5YR 3/4	7			silty loam	prominent concentrations
	10YR 3/2	33						
14-19	10YR 5/2	80	7.5YR 4/6	20			silty clay loam	prominent concentrations
19-22	10YR 5/1	50	7.5YR 4/6	30			silty clay loam	prominent concentrations
	10YR 5/2	20						

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histisol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 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:

- 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)

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric soil present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Stanley Industrial Park City/County: Chippewa County Sampling Date: 5/18/2023
 Applicant/Owner: City of Stanley State: WI Sampling Point: 4-up
 Investigator(s): Kerry Ingraham Section, Township, Range: Section 34, T29N, R5W
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
 Slope (%): _____ Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Withee silt loam, 0 to 3 percent slopes (WeB) NWI Classification: E1K
 Are climatic/hydrologic conditions of the site typical for this time of the year? YES (If no, explain in remarks)
 Are vegetation X, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> N </u> Hydric soil present? <u> N </u> Indicators of wetland hydrology present? <u> N </u>	Is the sampled area within a wetland? <u> N </u> If yes, optional wetland site ID _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center;">SP 4-up is south of SP 4-wet in the cropped winter rye field. See Photos 11-13</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u> X </u> Depth (inches): _____ Water table present? Yes _____ No <u> X </u> Depth (inches): _____ Saturation present? Yes _____ No <u> X </u> Depth (inches): _____ (includes capillary fringe)		Indicators of wetland hydrology present? <u> N </u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

SOIL

Sampling Point: 4-up

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-4	10YR 3/2	100					silty loam	
4-8	10YR 3/2	95	7.5YR 3/3	5	C	M	silty loam	faint concentrations
8-12	10YR 3/2	75	7.5YR 3/3	5	C	M	silty loam	faint concentrations
	10YR.4/2	20						
12-16	10YR 5/1	80	7.5YR 4/6	20	C	M	silty clay loam	distinct concentrations
16-22	10YR 5/1	70	7.5YR 4/6	30	C	M	silty clay loam	distinct concentrations

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- Histisol (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)

- 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)

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric soil present? N

Remarks:

Appendix B
Climate Summary Data

NRCS Antecedent Rainfall Documentation Method

Project: City of Stanley Ind Park
 Location: Chippewa County
 WETS Station: CVRA
 Years: 1989-2020
 Field Dates

Result	Score	Condition
	6-9	Drier than normal
	10-14	Normal
15	15-18	Wetter than normal
Comments:	2 weeks prior to field work appears normal precipitation.	

Month	Avg Precip	30% chance precip <	30% chance precip >	2023	Condition	Condition Value	Monthly Weight	Weighted Score
Feb	1.08	0.65	1.30	2.02	Wet	3	1	3
Mar	1.98	1.24	2.39	3.22	Wet	3	2	6
Apr	3.02	2.14	3.58	2.92	Normal	2	3	6
							SCORE	15

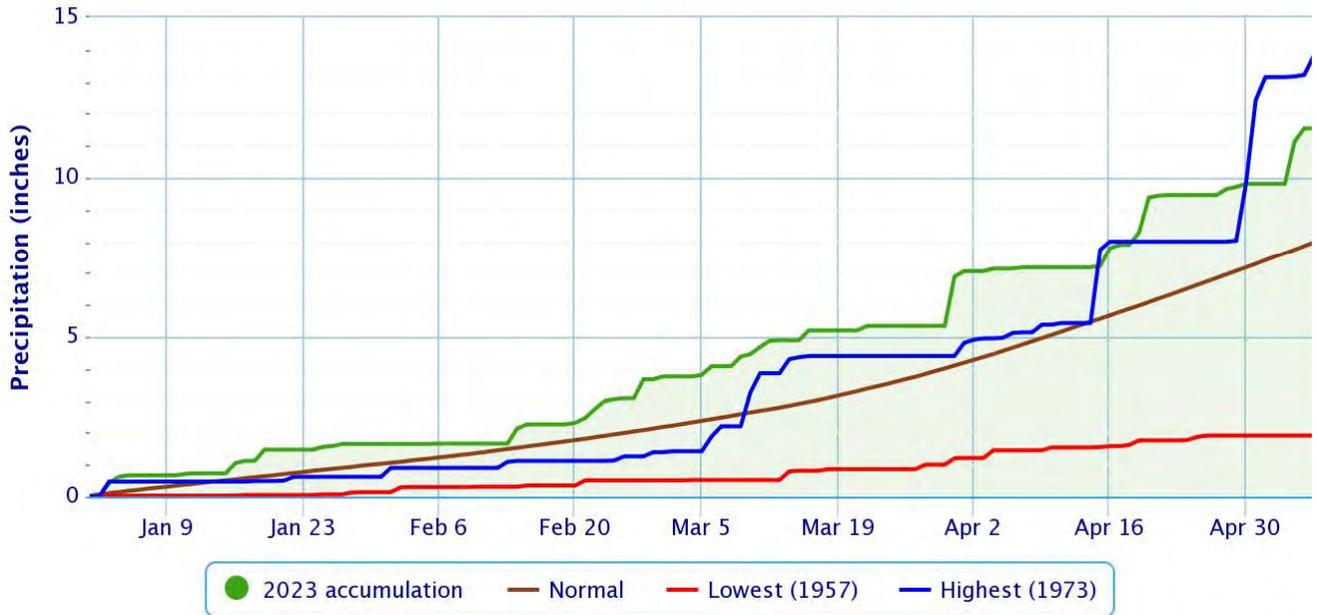
Daily Record

Date	Precipitation
4/23/2023	0.00
4/24/2023	0.00
4/25/2023	0.00
4/26/2023	T
4/27/2023	0.19
4/28/2023	0.06
4/29/2023	0.10
4/30/2023	0.00
5/1/2023	0.00
5/2/2023	0.00
5/3/2023	0.00
5/4/2023	1.32
5/5/2023	0.41
5/6/2023	0.00
5/7/2023	0.00



Accumulated Precipitation – CHIPPEWA VALLEY REGIONAL AIRPORT, WI

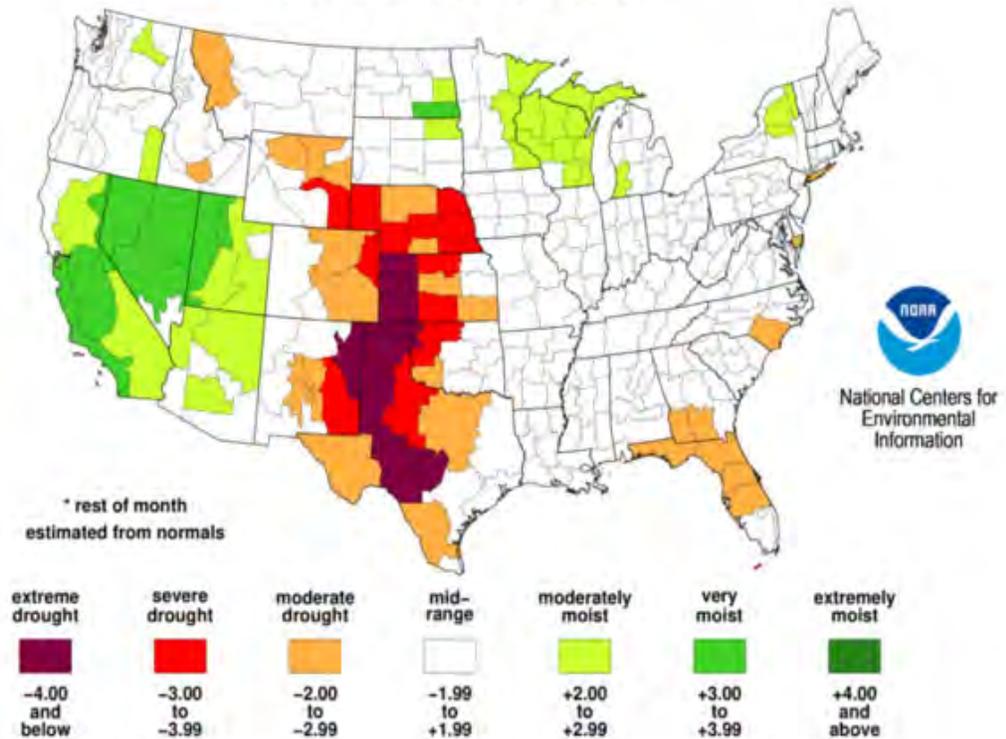
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



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Palmer Hydrological Drought Index Long-Term (Hydrological) Conditions

May 2023: through May 13 2023*



Appendix C
Site Photographs



Photo 1: Wetland 1 looking south along STH 29 ROW



Photo 2: Wetland 1 looking north.



Photo 3: Wetland 1 looking SE at SP 1-wet



Photo 4: Looking W at Wetland 1/Wetland 2 boundary.



Photo 5: Wetland 2 boundary. Upland on right



Photo 6: looking south at SP 2.2 Up



Photo 7: Looking East along north Wetland 3 Boundary.



Photo 8: Looking East at SP 3.2 Up



Photo 9: Looking East at Wetland 3 Boundary and SP 3.1 Wet beyond

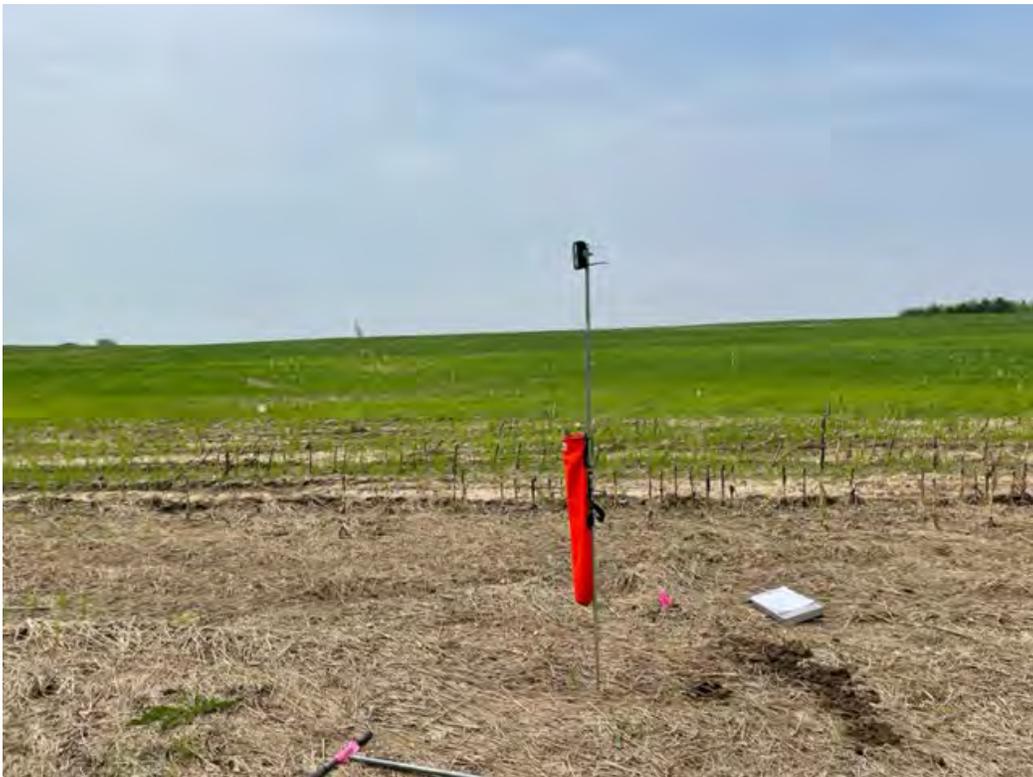


Photo 10: Looking West at SP 3.1 Up



Photo 11: Looking East at Wetland 4



Photo 12: Looking West at Wetland 4



Photo 13: Looking south at SP 4-Wet

Appendix E

Methods



Wetland Delineation Methods - 2023 **Ingraham Technical Services Inc**

According to the US Army Corps of Engineers, wetlands are, “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. This wetland delineation followed methods outlined in the *Corps of Engineers Wetland Delineation Manual* (USACE 1987) and the *Regional Supplements to the Corps of Engineers Wetland Delineation Manual* where the project is located (*i.e., Midwest or Northeast/Northcentral*) (Version 2.0). Based on these methods, the presence of a wetland is determined based on three hydric criteria - vegetation, soils, and hydrology. The boundary of a wetland is where these hydric criteria give way to upland features.

The delineation procedures in the *Corps Manual* (*i.e., the Routine Onsite Determination Method*), in combination with wetland indicators and guidance provided in the *Regional Supplement* were applied for this delineation. Where differences in the two documents occur, the *Regional Supplement* takes precedence over the *Corps Manual* for applications in the specific *Corps Region* where the project is located (USACE 2012).

Off Site Resource Review

Prior to completing the field investigation, documents were reviewed which provided information on soils, topography, and areas where wetlands have been identified or are likely to occur. The following resources were reviewed:

- Wisconsin Department of Natural Resources (WDNR) Surface Water Data Viewer (SWDV)
 - Wisconsin Wetland Inventory (WWI) Map for Wetlands
 - Hydric Soil Indicator Map
 - Topographic Map (may be sourced from other locations – 2 ft contour min.)
 - Flood Hazard Map
- Natural Resources Conservation Service (NRCS) Web Soil Survey
 - Soil Map
 - Custom Soil Resource Report
 - Hydric Soils Report
- WEX Bedrock Geology of Wisconsin Maps
- Climate Data
 - WETS
 - Palmer Drought Index
- NRCS and Google Earth Historic Aerial Photographs

An NRCS Antecedent Rainfall Documentation (ARD) is conducted for the three months prior to the field investigation. The closest NOAA Regional Climate Centers agACIS site with complete WETS data (20 years minimum data) is used to assess the precipitation history of the area.

The Palmer Drought Index indicates hydrological conditions for the area in the previous 2-week period prior to the site visit. In addition to the ARD and Palmer Index, the precipitation data for the week prior to the field investigation is reviewed. The review of all meteorological data is used to assess if precipitation conditions at the time of field work are considered to be Wetter, Drier or Normal compared to historical conditions.

Field Methods

The field investigation identified wetland and upland features within the project limits followed by the establishment of transects perpendicular to the wetland edge. The wetland boundary was identified where wetland features gave way to upland features.

The wetland boundary was determined in the field by identifying the presence/absence of hydrophytic vegetation, hydric soils and hydrology required to establish and support a wetland.

The three wetland criteria were analyzed using the following methods:

- Hydrophytic (Wetland) Vegetation: Wetland plant species nomenclature follows the *US Army Corps of Engineers National Wetland Plant List: 2020 Update of Wetland Ratings*. Wetland vegetation data was collected using nested circular sample plot sizes of 5-feet for the herbaceous stratum, 15-feet for sapling/shrub stratum, and 30-feet for the tree and woody vine stratum. Rectangular plots of equal size were used in place of circular plots in areas where abrupt slopes and short distances between upland and wetland sampling points exist.
- Hydric (Wetland) Soils: Soils were observed for hydric soil characteristics. Soils were examined in cores taken with a core auger and pits dug with a tile spade. Soil profiles were observed at a depth necessary to confirm hydric soil characteristics. Soil profile depths are typically within 16-20 inches below ground surface to allow for: (1) observation of an adequate portion of the soil profile to determine presence/absence of hydric soil characteristics; (2) observation of hydrology including depth to water table and saturated soils; and, (3) identification of disturbances (*e.g.* buried horizon, plow line, etc.). Soil color determinations were made using MUNSELL Soil Color Charts (2009). Site soil characteristics were compared to those mapped and described in the Soil Survey for County where the project is located (USDA Web Soil Survey). Hydric soil characteristics were compared to those identified in the *Regional Supplement* (USACE 2012) and the most recent version of the Natural Resources Conservation Service (NRCS) publication *Field Indicators of Hydric Soils in the United States, Version 8.2* (USDA 2018).
- Hydrology: Primary and secondary indicators of hydrology were identified in the field to determine the presence or absence of wetland hydrology. Subsurface wetland hydrology indicators were examined using the soil cores and/or soil pits as deep as 24 inches to confirm soil saturation in the upper 12 inches of the soil profile.

Field Records: The transects were documented at two sample points and one boundary marking. The sample points (Upland and Wetland) were analyzed and the boundary was identified between those points. The sample points were recorded on Wetland Determination Data Forms (Appendix A). Each data sheet is referenced to a sample location along the identified wetland boundary by the plot ID number. Numbers ending in “W” identify data collected within the wetland basin. Numbers ending in “U” identify data collected outside the wetland basin.

Wetland boundaries were located and marked with white “Wetland Boundary” pin flags. Fluorescent pink flags were used to mark upland and wetland sample points. The wetland edge is considered the highest extent of the wetland basin; areas above the boundary fail to meet the three required wetland parameters while areas below the edge meet the wetland parameters required by the field delineation methodology.

The sample points and boundary flags were surveyed in the field with the use of a Trimble R1 GNSS Receiver. The accuracy of this instrument and software is less than one meter of variance in the horizontal plane.

Appendix E

Assured Wetland Delineator Confirmation (2023)

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



April 3, 2023

Kerry Ingraham
Ingraham Technical Services, Inc.
19775 55th Avenue
Chippewa Falls, WI 54729

Subject: 2023 Assured Wetland Delineator Confirmation

Dear Ms. Ingraham:

This letter provides Wisconsin Department of Natural Resources (WDNR) confirmation for the wetland delineations you conduct during the 2023 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,

A handwritten signature in black ink that reads 'Kara Brooks'.

Kara Brooks
Wetland Identification Coordinator
Bureau of Watershed Management