

WETLAND DELINEATION REPORT

HEINZEROTH PROPERTY
LOT 2

TOWN OF DUNKIRK, DANE COUNTY, WISCONSIN

November 7, 2007



NRC Project # 007-0238-01



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Regulatory and Scientific Expertise — Wetlands, Soils, Ecology, Restoration

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Prepared For:

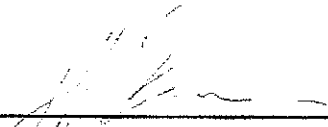
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NRC Project # 007-0238-01



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INTRODUCTION AND OBJECTIVE

Natural Resources Consulting, Incorporated (NRC) performed a wetland determination and delineation within Lot 2 of the Heinzeroth Property (the "Lot") on behalf of Ms. Lynelle Heinzeroth. The Lot is located in parts of Sections 8 & 9, Township 5 North, Range 11 East, Town of Dunkirk, Dane County, Wisconsin (Figure 1). The Lot consists of upland old-field and wetlands.

The objective of the wetland determination and delineation was to provide an estimate of the extent and spatial arrangement of wetlands within the Lot. One wetland area was identified within the Lot and is comprised primarily by a wet meadow community that transitions to floodplain forest adjacent to the Yahara River. The wetland boundaries are identified on Figure 4.

Most wetlands are considered waters of the U.S. and are therefore subject to regulation under the Clean Water Act (CWA). Specifically, non-isolated wetlands are regulated under Section 404 of the CWA and the jurisdictional regulatory authority lies with the United States Army Corps of Engineers (USACE). Additionally, the Wisconsin Department of Natural Resources (WDNR) has regulatory authority over wetlands, navigable waters, and adjacent lands under Chapter 30 Wisconsin State Statutes, Act 6, and NR 103 Wisconsin Administrative Code. NRC recommends this report be submitted to the U.S. Army Corps of Engineers and the Wisconsin Department of Natural Resources for final jurisdictional review and concurrence.

METHODS

The initial steps in the wetland determination and delineation process included a review of the following documents:

- Natural Resources Conservation Service (NRCS), formerly the Soil Conservation Service (SCS), excerpts from the *Soil Survey of Dane County, Wisconsin*;
- NRCS list of hydric soils for Dane County;
- U.S. Geological Survey 7.5-minute Wisconsin quadrangle maps;
- The Wisconsin Wetland Inventory (WWI) maps for the area; and
- 2005 Aerial Photography.

These documents provide information on where wetlands have been previously identified or areas that possess a high likelihood of wetlands occurring. These initially identified areas were then visited to make on-site determinations, and where necessary, complete delineations of the uppermost wetland boundary.

Wetland determinations were made using the criteria and methods outlined in the USACE Manual (USACE 1987), subsequent guidance documents (USACE 1991, 1992), Guidelines for Submitting Wetland Delineations in Wisconsin to the St. Paul District Corps of Engineers (USACE 1996), and the *Basic Guide to Wisconsin's Wetlands and their Boundaries* (Wisconsin Department of Administration Coastal Management Program 1995). The U.S. Army Corps of Engineers and U.S. Environmental Protection Agency wetland definition is included below.

“Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions.”

The State of Wisconsin wetland definition differs slightly; however, the Wisconsin Administrative Code also cites the usage of the 1987 Manual.

Wetland determinations were made using the three criteria of assessment approach defined in the 1987 Manual. According to procedures described in this Manual, areas that under normal circumstances reflect a predominance of hydrophytes (water-loving vegetation), hydric soils, and wetland hydrology (e.g., inundated or saturated soils) are considered wetlands. Since normal circumstances exist on the site, the Routine Method was employed.

A preliminary reconnaissance of the Lot was used to determine the general topography and plant communities within the Lot, and to identify suitable locations for sampling transects. In general, transects are linear features aligned perpendicular to site contours such that they cross representative locations of wetlands and adjacent uplands. The three criteria were evaluated by placing an observation point within a representative location of each plant community encountered along the transect.

At each observation point:

1. The presence or absence of normal circumstances was determined.
2. The plant community was characterized by identifying dominant plant species using the “50/20” rule. For each stratum in the plant community, dominant species are the most abundant (when ranked in descending order of abundance and cumulatively totaled) that immediately exceed 50% of the total dominance measure for the stratum, plus any additional species comprising 20% or more of the total dominance measure for the stratum.

Wetland indicator status is ranked by percent probability of the species occurrence in wetlands as follows:

OBL = Obligate Wetland, occurs with an estimated 99 percent probability of occurrence in wetlands

FACW = Facultative Wetland, estimated 67 to 99 percent probability of occurrence in wetlands

FAC = Facultative, equally likely to occur in wetlands and non-wetlands (34 to 66 percent probability)

FACU = Facultative Upland, 67 to 99 percent probability in non-wetlands, 1 to 33 percent in wetlands

UPL = Obligate Upland, greater than 99 percent probability in non-wetlands in this region

NI = No indicator, insufficient information available to determine an indicator status

Wetland indicator status can be modified with a positive sign (+) to indicate a frequency toward the higher end of the category, while a minus sign (-) indicates a frequency toward the lower end of the category (Resource Management Group, 1995);

3. Soil pits were typically dug to a depth of 18 inches and the soil was evaluated for hydric soil characteristics; and
4. Hydrology was assessed by observing for primary (i.e., inundation, saturation within the root zone, water marks, etc.) and secondary (i.e., oxidized pore linings, water-stained leaves, etc.) indicators of wetland hydrology.

A transect was initiated at a representative location within each wetland for the wetland determination. The uppermost wetland boundary was identified once an upland site was encountered along the transect. The uppermost wetland boundary was flagged using consecutively numbered surveyors flagging. Subject to weathering, the flagging will remain in the field for use during a USACE / WDNR site visit and for a guide during construction.

RESULTS

The Wisconsin Wetland Inventory map identifies a shrub-carr wetland complex within the floodplain of the Yahara River in the far western portion of the Lot (Figure 3). Soils identified within the Lot by the NRCS Soil Survey of Dane County include Salter sandy loam, wet variant (ShA) and Wacousta silty clay loam (Wa) (Figure 2). The Wacousta series is listed as a hydric soil and the Salter series is listed to contain hydric inclusions on the NRCS List of Hydric Soils for Dane County. The wetland identified in the field by NRC was in the same general location and extent as the mapped Wacousta soil series and more extensive than wetlands identified on the WWI map.

An on-site wetland delineation was completed on October 3, 2007 by Jeff Kraemer of NRC. USACE data sheets were completed for six (6) sample points and are included in Appendix A. The transect and sample point locations were chosen within representative plant communities and at various landscape positions.

Wetlands

Wetland 1

Wetland 1 (W-1) is largely comprised of a wet meadow community dominated heavily by reed canary grass (*Phalaris arundinacea*). The wetland transitions to a fringe of shrub-carr before descending into a floodplain forest adjacent to the Yahara River. The shrub-carr component is largely comprised of pussy willow (*Salix discolor*), red-osier dogwood (*Cornus stolonifera*), and grey dogwood (*C. racemosa*). The floodplain forest is comprised mostly of boxelder (*Acer negundo*). The wetland boundary is fairly distinct and occurs along a subtle topographic break that corresponds with a transition from reed canary grass to upland old-field mostly denoted by wild carrot (*Daucus carota*) and Canada goldenrod (*Solidago canadensis*).

The wetland complex contains seasonally saturated and inundated soils fed by local surface water runoff and seasonally high groundwater in the upper reaches and seasonal flooding of the Yahara River in the lower reaches. Primary indicators of wetland hydrology included saturated soils near the surface. Secondary indicators included a positive FAC-neutral tests and local soil survey data. The wetland complex is directly adjacent to the Yahara River.

The soils within the wetland are mapped as Wacousta silty clay loam (Figure 2). The Wacousta series consists of very deep, very poorly drained soils formed in silty lacustrine sediments. These soils are in broad depressions and swales on till plains, moraines, and stream terraces. The soils observed on-site tended to be consistent with the NRCS soil map. Hydric soil indicators observed within the wetland included a depleted matrix near the surface (F3) and below a thick dark surface (A12).

Table 1. Summary of Water Resources Identified within the Lot.

Water Resource ID	Water Resource Description	Acreage (on-site)
Wetland 1 (W-1)	Wet meadow/shrub carr/floodplain forest, degraded vegetation	2.5 acres

Uplands

The upland portions of the Lot are comprised of old-field that has not been recently mowed. The upland was dominated by wild carrot, Canada goldenrod, and Kentucky bluegrass (*Poa pratensis*). Soil profiles observed in the upland areas were not typical of the mapped Salter sandy loam and were more characteristic of the Wacousta series. Indicators of hydric soils were identified in upland areas near the wetland boundary, however these areas are dominated by upland vegetation and did not contain indicators of wetland hydrology.

Other Environmental Considerations

This report is limited to the identification of state and/or federally regulated wetlands within the Lot. In addition, there may be other regulated environmental features with the Lot or within other areas of the Lot. These environmental features may include but are not limited to historical or archeological features, endangered or threatened species, floodplains, and/or navigable waters. The federal, state, local unit of government and regional planning organization may restrict land use within or in close proximity to these features.

Wisconsin Administrative Code NR 151.12 requires that a “protective area” or buffer be determined from the top of the channel of lakes, streams and rivers, or at the delineated boundary of wetlands. NR 151.12 determines the width of the “protective buffer” for less susceptible wetlands by using 10% of the average wetland width, no less than 10 feet nor more than 30 feet. Lakes, perennial and intermittent streams, and highly susceptible wetlands and wetlands in areas of special natural resource interest may require buffers of 50 and 75 feet, respectively. The wetland identified within the Lot is dominated by invasive plant species; however the wetland complex is directly adjacent to the Yahara River which is designated as an Natural Heritage Inventory (NHI) waterway. Therefore, the wetlands are in an area of special natural resource interest and based on the “protective buffer” widths/standards provided by NR 151.12, it is NRC’s professional opinion that the wetland buffer will be 75 feet from the delineated wetland boundary. However, the jurisdictional authority on wetland buffers rests with the WDNR. The local unit of government and/or regional planning organization may have more restrictive buffers from wetlands than that imposed under NR 151.

Prior to beginning work at this site or disturbing or altering wetlands, waterways, or adjacent lands in any way, NRC strongly recommends that the owner obtain the necessary permits or other agency regulatory review and concurrence with regard to the proposed work in order to comply with applicable regulations. NRC would be happy to assist with any additional resources inventory or identification work at your request, to the extent that the work is within our range of expertise.

CONCLUSIONS

NRC performed a wetland determination and delineation within Lot 2 of the Heinzeroth Property (the "Lot") on behalf of Ms. Lynelle Heinzeroth. The Lot is located in parts of Sections 8 & 9, Township 5 North, Range 11 East, Town of Dunkirk, Dane County, Wisconsin (Figure 1). The Lot consists of upland old-field and wetlands. The objective of the wetland determination and delineation was to provide an estimate of the extent and spatial arrangement of wetlands within the Lot. One wetland area was identified within the Lot and is comprised primarily by a wet meadow community that transitions to floodplain forest adjacent to the Yahara River.

It is important to note that this delineation identified the wetland boundary per current federal and state guidelines. The USACE has regulatory authority over waters of the U.S. including adjacent wetlands, and the WDNR has regulatory authority over wetlands, navigable waters, and adjacent lands under Chapter 30 Wisconsin State Statutes, Act 6, and NR 103 Wisconsin Administrative Code. Local jurisdictions may have additional regulatory authority through shoreland or wetland zoning ordinances.

The information provided regarding wetland boundaries is an estimate of the wetland boundary and the opinions presented are best estimates of the conditions at the time the wetlands were viewed. The ultimate decision on the boundaries defining regulatory jurisdiction over wetlands rests with the USACE and, in some cases, the WDNR, or a local unit of government. As a result, there may be adjustments to boundaries based upon review of a regulatory agency. An agency determination can vary from time to time depending on various factors including, but not limited to, precipitation and the season of the year. In addition, the physical characteristics of the site can change with time, depending on the weather, vegetation patterns, drainage, activities on adjacent parcels, or other events. Any of these factors can change the nature and extent of wetlands on the site. It is recommended the Client obtain an opinion and authority from regulating government agencies before proceeding with any development or utilization of the Lot. If the Client proceeds to change, modify or utilize the Lot in question without obtaining authorization from the regulating governmental agency, it will be done at the Client's own risk and Natural Resources Consulting, Inc. will not be responsible or liable for any resulting damages.

REGULATORY REVIEW AND CONCURRENCE

The individual who was the lead field delineator and report author of this wetland delineation has been assured through the Wisconsin Department of Natural Resources - Wetland Delineation Professional Assurance Program. The goal of this program is to provide a high level of certainty about wetland boundaries for project planning, and save time in state review of wetland boundaries, while enhancing protection for Wisconsin's wetlands through more accurate identification of wetland boundaries overall. Therefore, concurrence from the WDNR for this wetland delineation is not required for purposes of waterway and wetland permit applications, shoreland-wetland zoning, and/or other state-mandated local wetland programs. Wetland delineations conducted by an assured delineator does not eliminate the need to obtain concurrence and jurisdiction determinations from the USACE. This is a key component of the program and benefit to the Client. However, assurance does not change the need for or decisions about wetland fill permits from the appropriate regulatory agencies. NRC believes this program provides an important tool to streamline the approval process at the state and local levels. NRC cautions the Client that with the limited review and approval necessary from regulatory agencies and with the infancy of the assurance program, no improvements, filling, and/or construction activities should take place until the Client has fully evaluated the risk.

The information provided regarding wetland boundaries is an estimate of the wetland boundary and the opinions presented are best estimates of the conditions at the time the wetlands were viewed. The ultimate decision on the boundaries defining regulatory jurisdiction over wetlands rests with the USACE and, in some cases, the WDNR, or a local unit of government. As a result, there may be adjustments to boundaries based upon review of a regulatory agency. An agency determination can vary from time to time depending on various factors including, but not limited to, precipitation and the season of the year. In addition, the physical characteristics of the site can change with time, depending on the weather, vegetation patterns, drainage, activities on adjacent parcels, or other events. Any of these factors can change the nature and extent of wetlands on the site. It is recommended the Client obtain an opinion and authority from regulating government agencies before proceeding with any development or utilization of the Lot. If the Client proceeds to change, modify or utilize the Lot in question without obtaining authorization from the regulating governmental agency, it will be done at the Client's own risk and Natural Resources Consulting, Inc. will not be responsible or liable for any resulting damages.

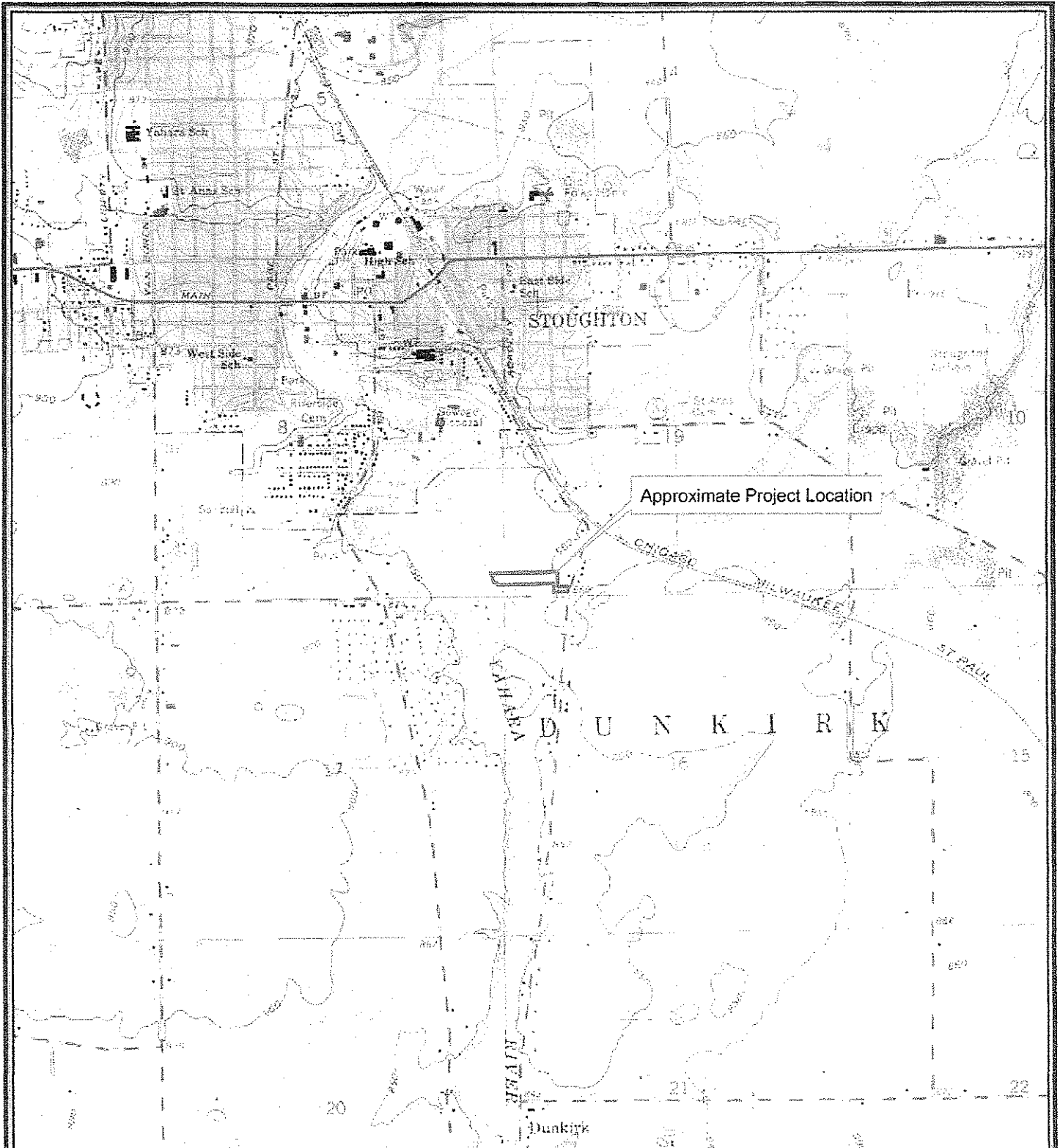
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Heinzeroth Property – Lot 2
Ms. Heinzeroth
November 7, 2007

Wetland Delineation Report
Town of Dunkirk, Dane County, Wisconsin
NRC Project # 007-0238-01

FIGURES



Approximate Project Location

FIGURE 1. PROJECT LOCATION & TOPOGRAPHY
Heinzeroth Parcel - Lot 2

	<p>Location Parts of Sections 8 & 9, T5N, R11E, Town of Dunkirk, Dane County, WI</p>	<p>Legend Approximate Project Location</p>	<p>NRC 110 South Main Street P.O. Box 128 Cottage Grove, WI 53527-0128 phone: 608-879-1998 fax: 608-879-1995</p>
	<p>Project Information NRC Project Number : 007-0192-01 Modified October 8, 2007</p>		
<p>0 1,000 2,000 Feet</p>			

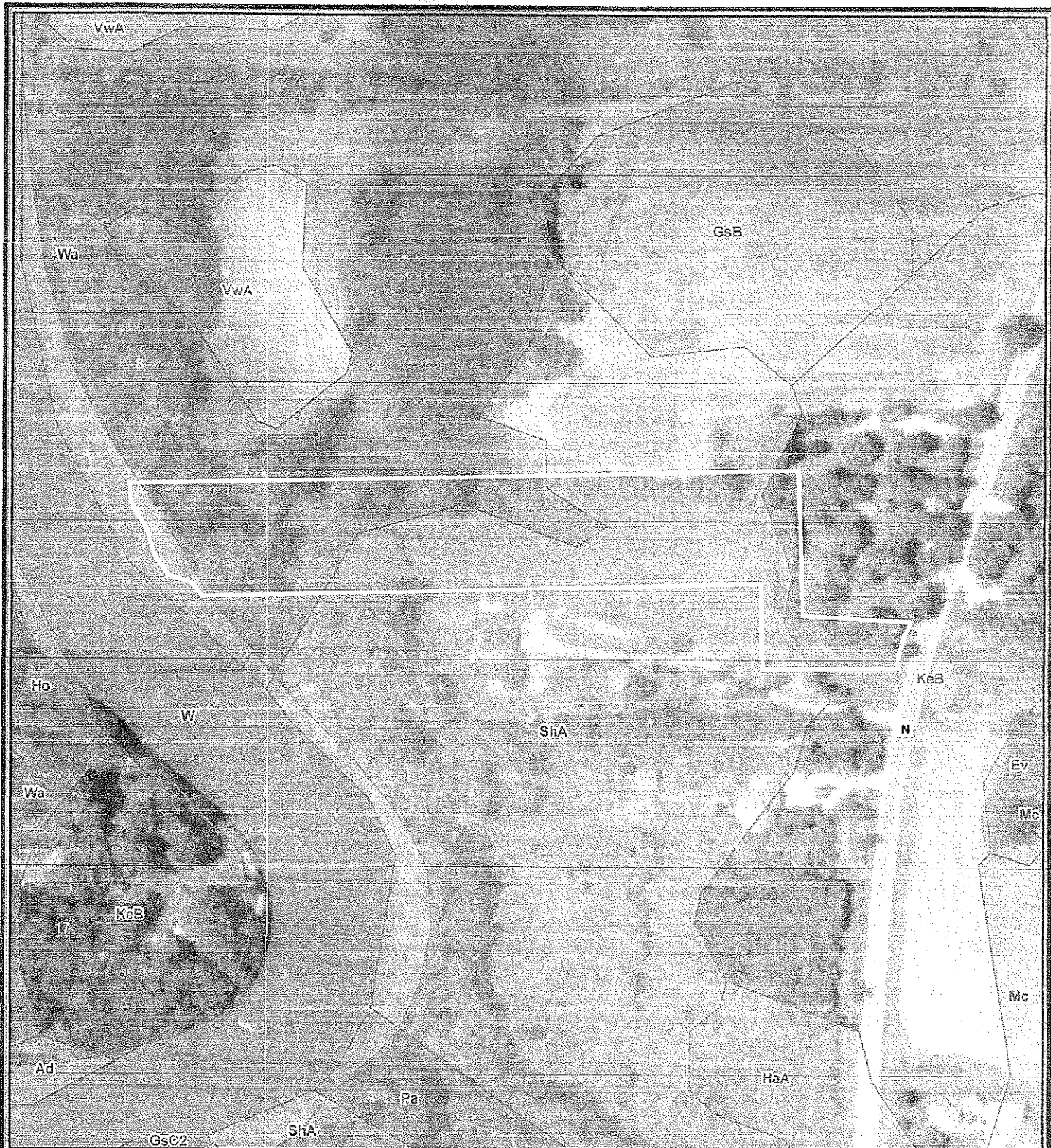


FIGURE 2. NRCS SOIL SURVEY DATA
Heinzeroth Parcel - Lot 2

<p>Map Area Shown in Red</p>	<p>Location Parts of Sections 8 & 9, T5N, R11E, Town of Dunkirk, Dane County, WI</p>	<p>Legend</p> <table border="0"> <tr> <td> Approximate Project Location</td> <td> NRCS Soil Survey Data</td> </tr> <tr> <td> 24K Hydro Layer</td> <td> Hydric Soils</td> </tr> <tr> <td> Section Line</td> <td> Poss. Hydric Inclusions</td> </tr> <tr> <td></td> <td> Non-Hydric Soils</td> </tr> </table>	Approximate Project Location	NRCS Soil Survey Data	24K Hydro Layer	Hydric Soils	Section Line	Poss. Hydric Inclusions		Non-Hydric Soils	<p>119 South Main Street P.O. Box 128 Cottage Grove, WI 53527-0128 phone: 608-839-1998 fax: 608-839-1995</p>
	Approximate Project Location		NRCS Soil Survey Data								
24K Hydro Layer	Hydric Soils										
Section Line	Poss. Hydric Inclusions										
	Non-Hydric Soils										
<p>Project Information NRC Project Number : 007-0192-01 Modified October 8, 2007</p> <p>0 100 200 Feet</p>											



FIGURE 3. WI WETLANDS INVENTORY DATA
Heinzeroth Parcel - Lot 2

<p>Map Area Shown in Red</p>	<p>Location Parts of Sections 8 & 9, T5N, R11E, Town of Dunkirk, Dane County, WI</p>	<p>Legend</p> <ul style="list-style-type: none"> Approximate Project Location WM Dane County 24K Hydro Layer Section Line 	<p>NRC <small>Natural Resources Conservation Council</small></p> <p>119 South Main Street P.O. Box 128 Cottage Grove, WI 53110-0128 phone: 608-836-1965 fax: 608-836-1991</p>
	<p>Project Information NRC Project Number : 007-0192-01 Modified October 8, 2007</p>		
	<p>0 100 200 Feet</p>		

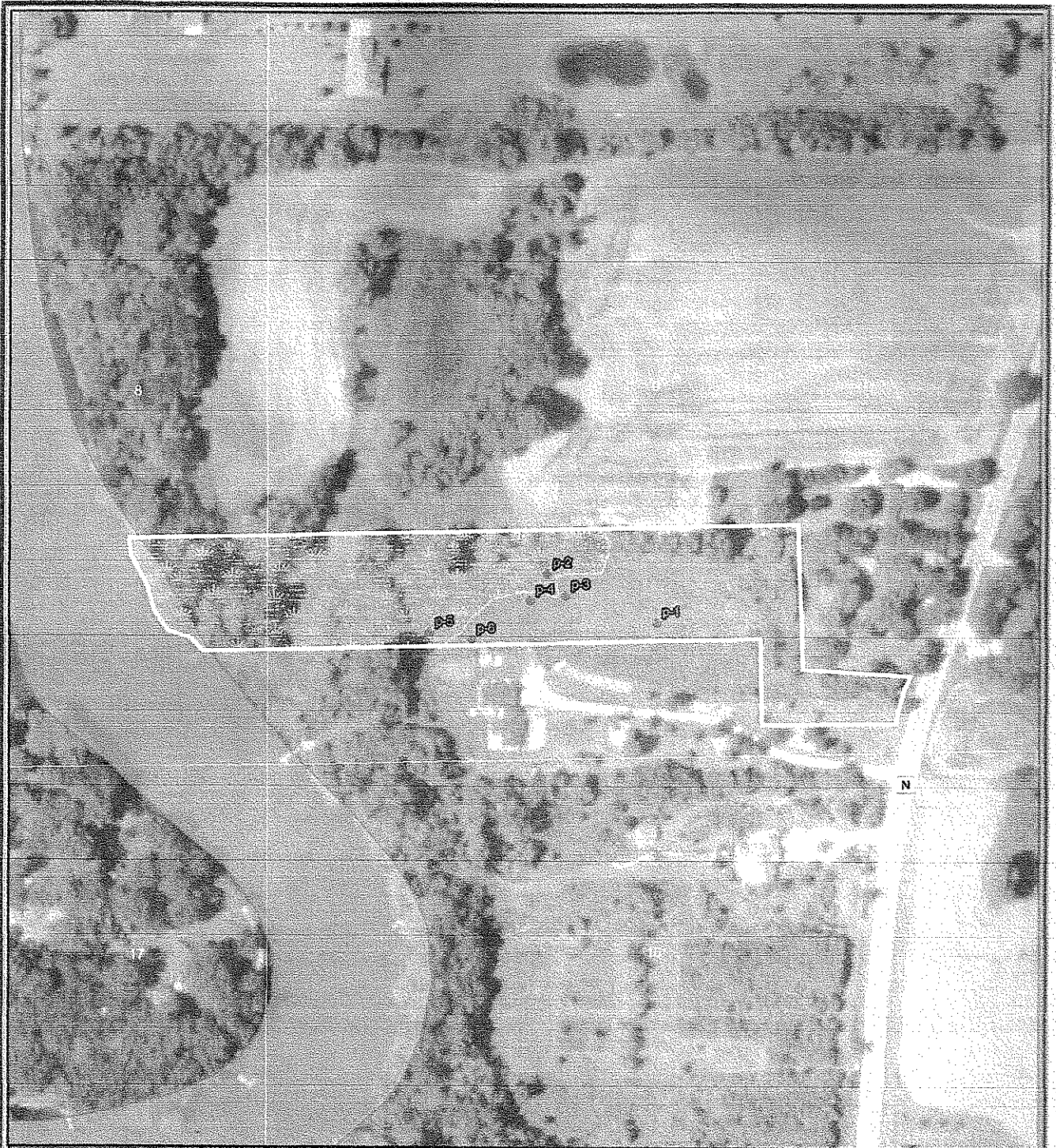


FIGURE 4. FIELD DELINEATED WETLAND DATA
Heinzeroth Parcel - Lot 2

<p>Dane</p> <p>Green</p> <p>Rock</p> <p>Map Area Shown in Red</p>	<p>Location</p> <p>Parts of Sections 8 & 9, T5N, R11E, Town of Dunkirk, Dane County, WI</p>	<p>Legend</p> <ul style="list-style-type: none"> ○ Approximate Project Location ⊗ Sample Point ▨ Field Delineated Wetland ▤ 24K Hydro Layer — Section Line 	<p>NRC</p> <p>119 South Main Street P.O. Box 125 Cottage Grove, WI 53024-0125 phone: 608-439-1465 fax: 608-439-1495</p>
	<p>Project Information</p> <p>NRC Project Number : 007-0192-01 Modified October 19, 2007</p>		

Heinzeroth Property – Lot 2
Ms. Heinzeroth
November 7, 2007

Wetland Delineation Report
Town of Dunkirk, Dane County, Wisconsin
NRC Project # 007-0238-01

APPENDIX A
US ARMY CORPS OF ENGINEERS DATA SHEETS



Data Form
Routine Wetland Determination

Job Number: 007-0238-01
 Town/Village/City: Dunkirk
 Wetland Data Point: P-1

Project/Site: Heinzeroth Parcel
 Applicant/Owner: Heinzeroth
 Investigator: J. Kraemer

Date: October 03, 2007
 County: Dane
 State: WI
 Community ID: Upland Old-field
 Station ID:
 Plot ID: P-1

[Yes] Do normal circumstances exist on the site?
 [No] Is the site significantly disturbed (Atypical Situation)?
 [No] Is the area a potential problem area?

Vegetation

Dominant Species	Common Name / CofC	% Cover	Indicator
Herbaceous			
PHLEUM PRATENSE	timothy	10	FACU
BROMUS INERMIS	smooth brome	2	UPL
DAUCUS CAROTA	Queen Anne's-lace	2	UPL
Geum canadense	white avens / 2	2	FAC
X Solidago canadensis	common goldenrod / 1	70	FACU
X POA PRATENSIS	Kentucky bluegrass	70	FAC-

% Species that are OBL, FACW, or FAC (except FAC-): 0 NOTE: Species in capital letters denote non-native species.

Remarks
 old field area, not mowed.

Hydrology

- Recorded Data (describe in remarks)
 - Stream, Lake, or Tide Gage
 - Aerial Photograph
 - Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
- Saturated in upper 12 inches
- Water marks
- Drift lines
- Sediment deposits
- Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
- Water-stained leaves
- Local soil survey data
- FAC-Neutral test
- Other (explain in remarks)

Field Observations:
 Depth of Surface Water(in.): -----
 Depth to Free Water in Pit(in.): >18
 Depth to Saturated Soils(in.): >18

Remarks

Soils

Unit Name: Salter sandy loam, wet variant
 Drainage Class: somewhat poorly

Taxonomy: Typic Eutrudepts
 Field Observations match map

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
0-14	1	10YR 3/2				Silty Clay Loam
14-19	2	2.5Y 4/3				Silty Clay Loam

Hydric Soils Indicators

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Probable Aquatic Moist Regime
- Reducing Conditions
- Gleyed or Low-Chroma Colors
- Concretions
- High Organic % in Surface Layer in Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on Local Hydric Soils List
- Listed on National Hydric Soils List
- Other (explain in remarks)

Remarks

Wetland Determination

[No] Hydrophytic Vegetation Present
 [No] Hydric Soils Present
 [No] Wetland Hydrology Present

[No] This Data Point is a Wetland

Remarks



Data Form
Routine Wetland Determination

Job Number: **007-0238-01**
 Town/Village/City: **Dunkirk**
 Wetland Data Point: **P-2**

Project/Site: **Heinzeroth Parcel**
 Applicant/Owner: **Heinzeroth**
 Investigator: **J. Kraemer**
 [Yes] Do normal circumstances exist on the site?
 [No] Is the site significantly disturbed (Atypical Situation)?
 [Yes] Is the area a potential problem area?

Date: **October 03, 2007**
 County: **Dane**
 State: **WI**
 Community ID: **Wet meadow**
 Station ID:
 Plot ID: **P-2**

Vegetation

Dominant Species	Common Name / CofC	% Cover	Indicator
Herbaceous			
<i>AGROSTIS STOLONIFERA</i>	creeping bent grass	15	FACW
<i>DAUCUS CAROTA</i>	Queen Anne's-lace	2	UPL
<i>Aster novae-angliae</i>	New England aster / 3	5	FACW
<i>CIRSIIUM ARVENSE</i>	Canada thistle	2	FACU
<i>Eupatorium maculatum</i>	spotted Joe-Pye-weed / 4	2	OBL
<i>POA PRATENSIS</i>	Kentucky bluegrass	10	FAC-
<i>PHLEUM PRATENSE</i>	timothy	2	FACU
<i>Urtica dioica</i>	stinging nettle / 1	2	FAC+
<i>Solidago canadensis</i>	common goldenrod / 1	2	FACU
X <i>PHALARIS ARUNDINACEA</i>	reed canary grass	80	FACW+

% Species that are OBL, FACW, or FAC (except FAC-): **100** NOTE: Species in capital letters denote non-native species.

Remarks

Hydrology

- [] Recorded Data (describe in remarks)
- [] Stream, Lake, or Tide Gage
- [] Aerial Photograph
- [] Other (describe in remarks)

Primary Wetland Hydrology Indicators

- [] Inundated
- [] Saturated in upper 12 inches
- [] Water marks
- [] Drift lines
- [] Sediment deposits
- [] Drainage patterns in wetlands

Secondary Hydrology Indicators

- [] Oxidized root channels
- [] Water-stained leaves
- [X] Local soil survey data
- [X] FAC-Neutral test
- [] Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): -----
 Depth to Free Water in Pit(in.): **>20**
 Depth to Saturated Soils(in.): **>20**

Remarks

denoted as problem area due to seasonal limitations of wetland hydrology occurrences.

Soils

Unit Name: **Wacousta silty clay loam**

Taxonomy: **Typic Endoaquolls**

Drainage Class: **very poorly**

[X] Field Observations match map

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-13	1	10YR 2/1				Silty Clay Loam
13-20	2	2.5Y 4/1				Silty Clay

Hydric Soils Indicators

- [] Histosol
- [] Histic Epipedon
- [] Sulfidic Odor
- [] Probable Aquatic Moist Regime
- [] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [] Concretions
- [] High Organic % in Surface Layer in Sandy Soils
- [] Organic Streaking in Sandy Soils
- [X] Listed on Local Hydric Soils List
- [] Listed on National Hydric Soils List
- [] Other (explain in remarks)

Remarks

A12. Thick dark surface. No redox concentrations observed.

Wetland Determination

- [Yes] Hydrophytic Vegetation Present
- [Yes] Hydric Soils Present
- [Yes] Wetland Hydrology Present

[Yes] This Data Point is a Wetland

Remarks



Data Form
Routine Wetland Determination

Job Number: 007-0238-01
 Town/Village/City: Dunkirk
 Wetland Data Point: P-3

Project/Site: Heinzeroth Parcel
 Applicant/Owner: Heinzeroth
 Investigator: J. Kraemer

Date: October 03, 2007
 County: Dane
 State: WI
 Community ID: Upland Old Field
 Station ID:
 Plot ID: P-3

[Yes] Do normal circumstances exist on the site?
 [No] Is the site significantly disturbed (Atypical Situation)?
 [No] Is the area a potential problem area?

Vegetation

Dominant Species	Common Name / CofC	% Cover	Indicator
Herbaceous			
BROMUS INERMIS	smooth brome	10	UPL
DAUCUS CAROTA	Queen Anne's-lace	20	UPL
Solidago canadensis	common goldenrod / 1	20	FACU
Aster novae-angliae	New England aster / 3	2	FACW
X POA PRATENSIS	Kentucky bluegrass	80	FAC-

% Species that are OBL, FACW, or FAC (except FAC-): 0

NOTE: Species in capital letters denote non-native species.

Remarks

old field area - not mowed.

Hydrology

- Recorded Data (describe in remarks)
 - Stream, Lake, or Tide Gage
 - Aerial Photograph
 - Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
- Saturated in upper 12 inches
- Water marks
- Drift lines
- Sediment deposits
- Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
- Water-stained leaves
- Local soil survey data
- FAC-Neutral test
- Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): ____
 Depth to Free Water in Pit(in.): >20
 Depth to Saturated Soils(in.): >20

Remarks

Soils

Unit Name: Salter sandy loam, wet variant
 Drainage Class: somewhat poorly

Taxonomy: Typic Eutrudepts

Field Observations match map

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-15	1	10YR 2/1				Silty Clay Loam
15-20	2	2.5Y 4/2				Silty Clay Loam

Hydric Soils Indicators

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Probable Aquatic Moist Regime
- Reducing Conditions
- Gleyed or Low-Chroma Colors
- Concretions
- High Organic % in Surface Layer in Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on Local Hydric Soils List
- Listed on National Hydric Soils List
- Other (explain in remarks)

Remarks

No redox observed - B-horizon marginal coloration between 4/2 and 4/3.

Wetland Determination

[No] Hydrophytic Vegetation Present
 [No] Hydric Soils Present
 [No] Wetland Hydrology Present

[No] This Data Point is a Wetland

Remarks



Data Form
Routine Wetland Determination

Job Number: 007-0238-01
 Town/Village/City: Dunkirk
 Wetland Data Point: P-4

Project/Site: Heinzeroth Parcel
 Applicant/Owner: Heinzeroth
 Investigator: J. Kraemer

Date: October 03, 2007
 County: Dane
 State: WI
 Community ID: Upland Old-field
 Station ID:
 Plot ID: P-4

[Yes] Do normal circumstances exist on the site?
 [No] Is the site significantly disturbed (Atypical Situation)?
 [No] Is the area a potential problem area?

Vegetation

Dominant Species	Common Name / CofC	% Cover	Indicator
<u>Herbaceous</u>			
CIRSIIUM ARVENSE	Canada thistle	10	FACU
POA PRATENSIS	Kentucky bluegrass	10	FAC-
PASTINACA SATIVA	wild parsnip	2	[UPL]
CIRSIIUM VULGARE	bull thistle	2	FACU-
PHALARIS ARUNDINACEA	reed canary grass	2	FACW+
X DAUCUS CAROTA	Queen Anne's-lace	60	UPL
X Solidago canadensis	common goldenrod / 1	25	FACU

% Species that are OBL, FACW, or FAC (except FAC-): 0

NOTE: Species in capital letters denote non-native species.

Remarks

Old field community - not mowed.

Hydrology

- Recorded Data (describe in remarks)
 - Stream, Lake, or Tide Gage
 - Aerial Photograph
 - Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
- Saturated in upper 12 inches
- Water marks
- Drift lines
- Sediment deposits
- Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
- Water-stained leaves
- Local soil survey data
- FAC-Neutral test
- Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): ----
 Depth to Free Water in Pit(in.): >20
 Depth to Saturated Soils(in.): >20

Remarks

Soils

Unit Name: **Salter sandy loam, wet variant**

Taxonomy: **Typic Eutrudepts**

Drainage Class: **somewhat poorly**

Field Observations match map

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-12	1	10YR 2/1				Silty Clay Loam
12-20	2	2.5Y 4/3	2.5Y 4/2	common	faint	Silty Clay Loam

Hydric Soils Indicators

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Probable Aquatic Moist Regime
- Reducing Conditions
- Gleyed or Low-Chroma Colors
- Concretions
- High Organic % in Surface Layer in Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on Local Hydric Soils List
- Listed on National Hydric Soils List
- Other (explain in remarks)

Remarks

Wetland Determination

[No] Hydrophytic Vegetation Present
 [No] Hydric Soils Present
 [No] Wetland Hydrology Present

[No] This Data Point is a Wetland

Remarks



Data Form
Routine Wetland Determination

Job Number: **007-0238-01**
 Town/Village/City: **Dunkirk**
 Wetland Data Point: **P-5**

Project/Site: **Heinzeroth Parcel**
 Applicant/Owner: **Heinzeroth**
 Investigator: **J. Kraemer**

Date: **October 03, 2007**
 County: **Dane**
 State: **WI**
 Community ID: **Wet meadow**
 Station ID:
 Plot ID: **P-5**

[Yes] Do normal circumstances exist on the site?
 [No] Is the site significantly disturbed (Atypical Situation)?
 [No] Is the area a potential problem area?

Vegetation

Dominant Species	Common Name / CofC	% Cover	Indicator
Herbaceous			
X Aster lanceolatus	white panicle aster / 4	5	[FACW]
X Aster firmus	shining aster / 6	2	FACW+
X PHALARIS ARUNDINACEA	reed canary grass	90	FACW+
Shrub			
X Salix discolor	pussy willow / 2	5	FACW

% Species that are OBL, FACW, or FAC (except FAC-): **100** NOTE: Species in capital letters denote non-native species.

Remarks

Hydrology

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
[] Recorded Data (describe in remarks)	[] Inundated	[] Oxidized root channels
[] Stream, Lake, or Tide Gage	[X] Saturated in upper 12 inches	[] Water-stained leaves
[] Aerial Photograph	[] Water marks	[X] Local soil survey data
[] Other (describe in remarks)	[] Drift lines	[X] FAC-Neutral test
Field Observations:	[] Sediment deposits	[] Other (explain in remarks)
Depth of Surface Water(in.): -----	[] Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): 14		
Depth to Saturated Soils(in.): 10		

Remarks

Soils

Unit Name: **Salter sandy loam, wet variant** Taxonomy: **Typic Eutrudepts**
 Drainage Class: **somewhat poorly** [X] Field Observations match map

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-9	1	GLE Y 1 2.5/N				Silty Clay Loam high organic content
9-18	2	2.5Y 4/1	10YR 5/6	common	prominent	SiC

Hydric Soils Indicators

- | | |
|-----------------------------------|----------------------------------------------------|
| [] Histosol | [] Concretions |
| [] Histic Epipedon | [] High Organic % in Surface Layer in Sandy Soils |
| [] Sulfidic Odor | [] Organic Streaking in Sandy Soils |
| [] Probable Aquatic Moist Regime | [X] Listed on Local Hydric Soils List |
| [] Reducing Conditions | [] Listed on National Hydric Soils List |
| [X] Gleyed or Low-Chroma Colors | [] Other (explain in remarks) |

Remarks

F3. Depleted matrix. Matches Wacousta hydric inclusion.

Wetland Determination

[Yes] Hydrophytic Vegetation Present [Yes] This Data Point is a Wetland
 [Yes] Hydric Soils Present
 [Yes] Wetland Hydrology Present

Remarks



Job Number: 007-0238-01
 Town/Village/City: Dunkirk
 Wetland Data Point: P-6

Data Form
Routine Wetland Determination

Project/Site: Heinzeroth Parcel
 Applicant/Owner: Heinzeroth
 Investigator: J. Kraemer

Date: October 03, 2007
 County: Dane
 State: WI
 Community ID: Upland Old Field
 Station ID:
 Plot ID: P-6

[Yes] Do normal circumstances exist on the site?
 [No] Is the site significantly disturbed (Atypical Situation)?
 [No] Is the area a potential problem area?

Vegetation

Dominant Species	Common Name / CofC	% Cover	Indicator
<u>Herbaceous</u>			
<i>CIRSIIUM ARVENSE</i>	Canada thistle	15	FACU
<i>PASTINACA SATIVA</i>	wild parsnip	2	[UPL]
<i>PHALARIS ARUNDINACEA</i>	reed canary grass	2	FACW+
<i>POA PRATENSIS</i>	Kentucky bluegrass	5	FAC-
<i>BROMUS INERMIS</i>	smooth brome	2	UPL
X <i>DAUCUS CAROTA</i>	Queen Anne's-lace	40	UPL
X <i>Solidago canadensis</i>	common goldenrod / 1	20	FACU
% Species that are OBL, FACW, or FAC (except FAC-): 0		NOTE: Species in capital letters denote non-native species.	

Remarks

old field community, not mowed

Hydrology

- Recorded Data (describe in remarks)
 - Stream, Lake, or Tide Gage
 - Aerial Photograph
 - Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
- Saturated in upper 12 inches
- Water marks
- Drift lines
- Sediment deposits
- Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
- Water-stained leaves
- Local soil survey data
- FAC-Neutral test
- Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): ----
 Depth to Free Water in Pit(in.): >18
 Depth to Saturated Soils(in.): >18

Remarks

Soils

Unit Name: **Salter sandy loam, wet variant**
 Drainage Class: **somewhat poorly**

Taxonomy: **Typic Eutrudepts**

Field Observations match map

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-12		10YR 3/2				SiCL
12-18	2	2.5Y 4/4	2.5Y 4/3	common	faint	SiCL

Hydric Soils Indicators

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Probable Aquatic Moist Regime
- Reducing Conditions
- Gleyed or Low-Chroma Colors
- Concretions
- High Organic % in Surface Layer in Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on Local Hydric Soils List
- Listed on National Hydric Soils List
- Other (explain in remarks)

Remarks

Wetland Determination

[No] Hydrophytic Vegetation Present
 [No] Hydric Soils Present
 [No] Wetland Hydrology Present

[No] This Data Point is a Wetland

Remarks

Heinzeroth Property – Lot 2
Ms. Heinzeroth
November 7, 2007

Wetland Delineation Report
Town of Dunkirk, Dane County, Wisconsin
NRC Project # 007-0238-01

APPENDIX B
SITE PHOTOGRAPHS

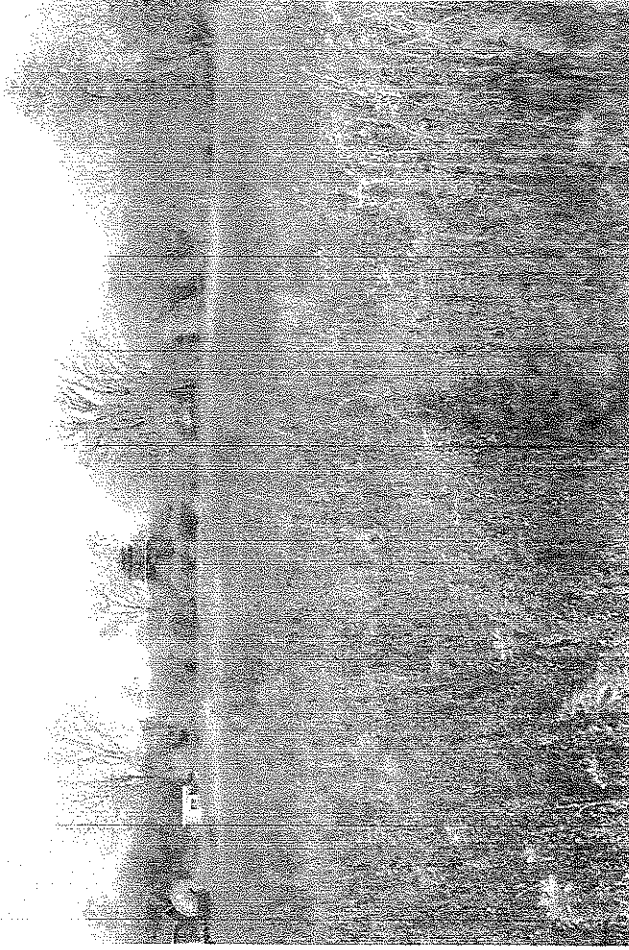


Photo 02. Old field View W from E. JPG



Photo 04. Meadow View from E. View 0401. JPG



Photo 01. Old field View SW from E. JPG

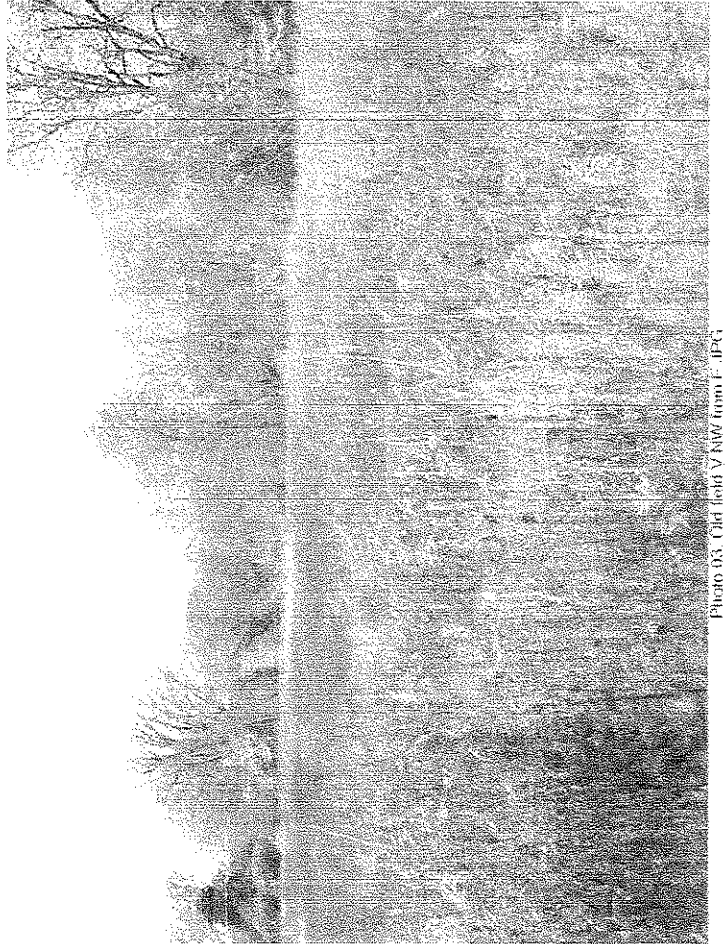


Photo 03. Old field V NW from E. JPG

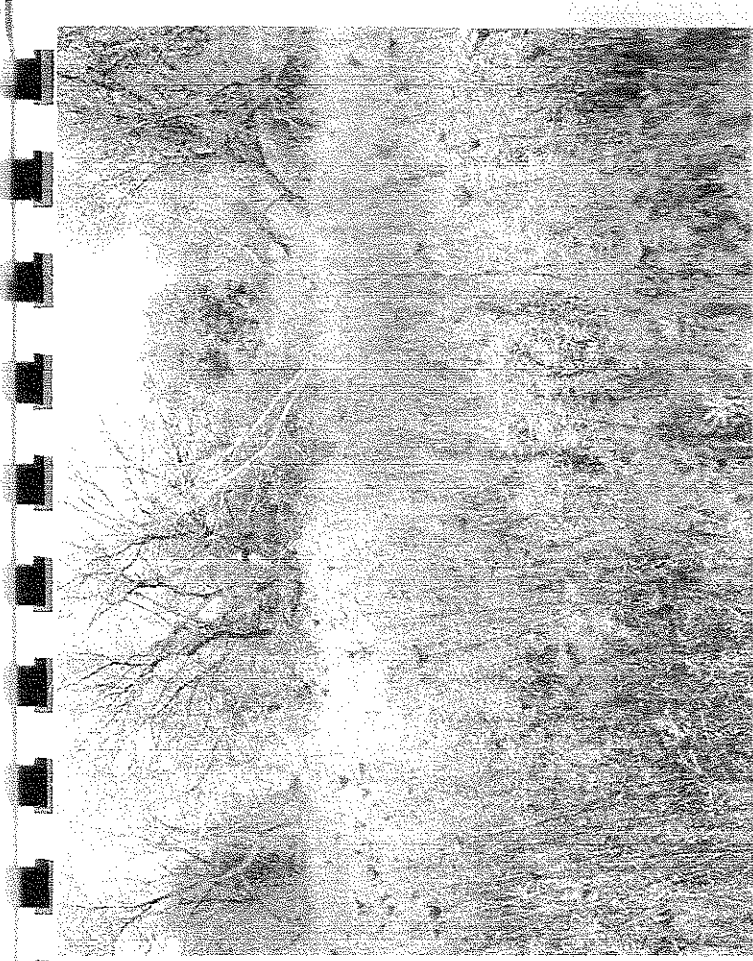


Photo 06. Wetland Edges View NW from P-4 .JPG

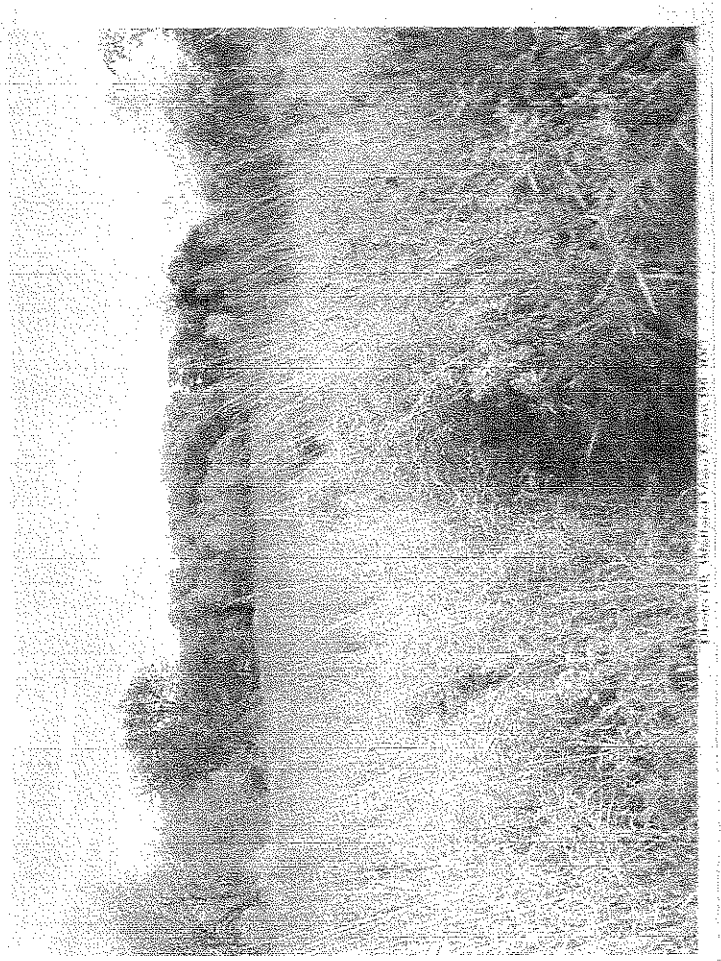


Photo 07. Wetland Edges View NW from P-4 .JPG

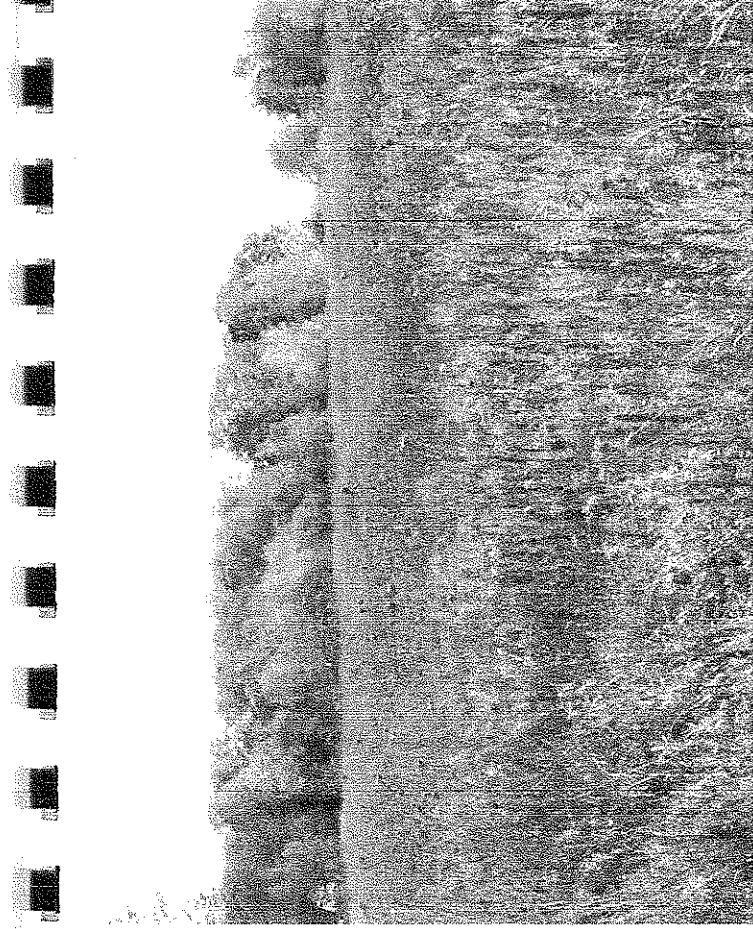


Photo 05. Old field View E from P3.JPG



Photo 07. Wetland View NE from P-4 .JPG

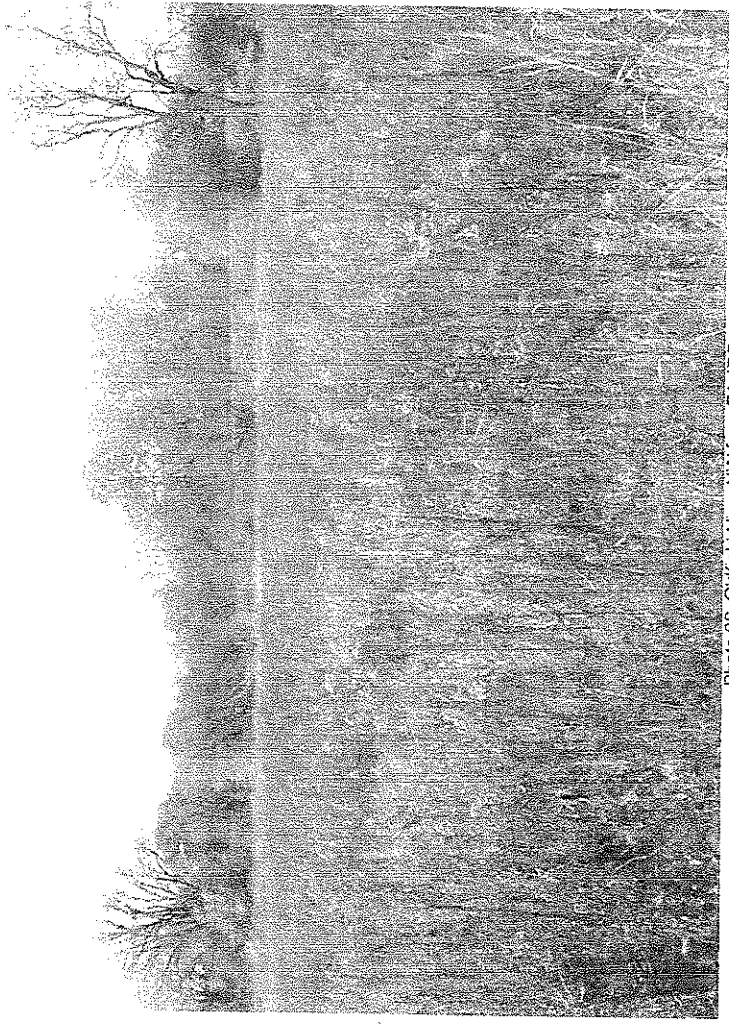


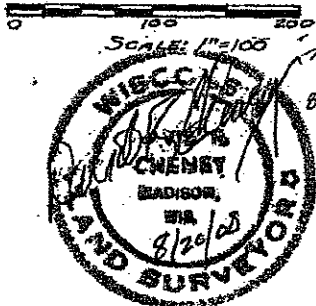
Photo 09: Oldfield View NW from P1.JPG

Doc # 446418
CSM # 12528

Sheet 1 of 3 Sheets

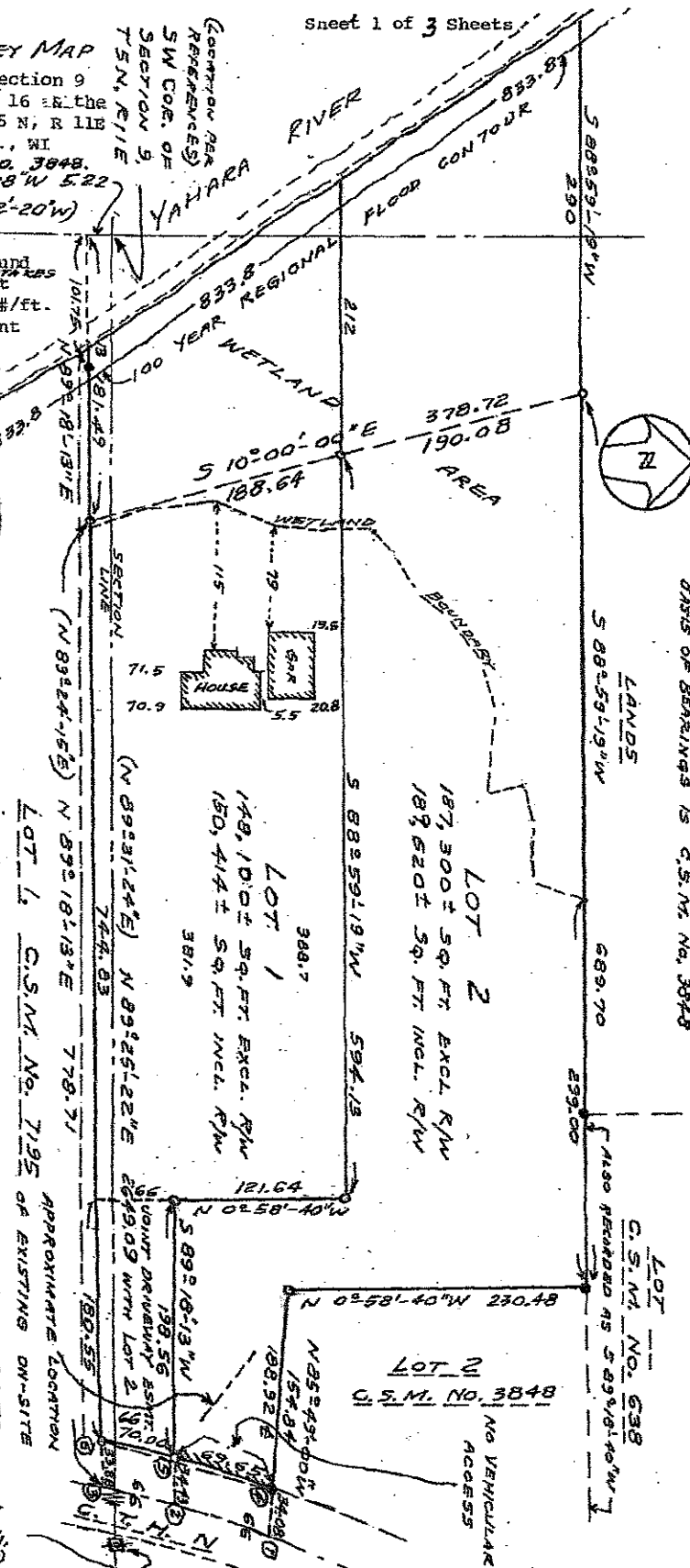
CERTIFIED SURVEY MAP
Part of the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 9
& the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 16 in the
SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 8, T 5 N, R 11 E
Town of Dunkirk, Dane Co., WI
BEING PART OF C.S.M. NO. 3848.
5 0°26'18"W 522
(5 0°32'20"W)

- Denotes iron stake found
- Denotes iron stake set
- 3/4" x 24" rebar 1.5 #/ft.
- * Denotes survey monument



CURVE	RADIUS	CHORD BRG	DIST.	ARC	CENTRAL ANGLE
1-2	1400	N 17°28'21"E	66.77	66.77	2°43'58"
2-3	1400	N 49°40'16"E	70.12	70.13	2°52'12"
1-3	1400	N 62°02'15"E	156.85	156.90	5°36'10"
4-5	1433	N 17°06'03"E	69.65	69.66	2°47'07"
5-6	1433	N 142°18'31"E	70.00	70.01	2°47'57"
4-6	1433	N 152°42'04"E	139.61	139.67	5°23'20"
TANG. BRG. AT PT. ①	S 182°50'17"W		TANG. BRG. AT PT. ②		S 182°29'57"W
TANG. BRG. AT PT. ③	S 13°14'10"W		TANG. BRG. AT PT. ④		S 122°54'33"W

S/4 CORNER OF
SECTION 9, T 5 N
R 11 E, DANE Co. WI,
(ALUMINUM MONUMENT)



FEE: \$ 3/15