



KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Providing Sound, Balanced, Comprehensive Natural Resource Solutions

Memorandum

Date: October 1, 2018

To: Nick Tomczik, Rice Creek Watershed District
Project Manager, U.S. Army Corps of Engineers

CC: Marty Harstad, Project Representative

From: Melissa Barrett, Kjolhaug Environmental Services Company (KES)

Re: Site Assessment for Wetlands (KES# 2018-046)
SHERWOOD ROAD PROPERTIES, MOUNDS VIEW, MN

The 9.28-acre Sherwood Road Properties site was investigated for the presence and extent of wetland by Kjolhaug Environmental Services (KES) on September 13, 2018. The site was located in Section 6, Township 30N, Range 23W, Mounds View, Ramsey County, Minnesota. The site was located east of Eastwood Road, south of Ardan Avenue, west of Long Lake Road, and north of Sherwood Road (**Figure 1**), and corresponded to multiple Ramsey County PIDs listed in Part 5 of the attached joint application form (**Attachment A**). Areas of City-owned land were also present within the review area.

The site was comprised of a combination of large single-family lots or vacant parcels surrounded by single-family lots. That portion of the site that were not comprised of mowed lawn and landscape trees/shrubs was woodland (**Figure 2**).

Topography throughout the site was fairly level; however, topography was highest in the northwest at 914-feet msl and from there sloped downhill to the east to a land surface elevation of 904-feet. An intermittent drainageway was located within the southeast portion of the site.

No (0) wetlands were identified or delineation within site boundaries. The Joint Application Form for Activities Affecting Water Resources in MN is included as **Attachment A**.

Review of NWI, Soils, DNR, and NHD Information

The National Wetlands Inventory (NWI) (Minnesota Geospatial Commons 2009-2014 and U.S. Fish and Wildlife Service) showed on PEM1A wetland within site boundaries (**Figure 3**).

The Soil Survey (USDA NRCS 2015) showed Isanti (Predominantly Hydric) as the mapped hydric soil type on the property. Soil types mapped on or near the property are listed in **Table 1** and a map showing soil types is included in **Figure 4**.

Table 1. Soils present on the Sherwood Road Properties site

Map Unit Symbol	Map Unit Name	Hydric Rating	Acres in AOI	Percent of AOI
161	Isanti loamy fine sand, depressional	92	4.8	20.30%
162	Lino loamy fine sand	5	6.3	26.80%
863	Urban land-Lino complex, 0 to 3 percent slopes	0	12.5	52.90%

The Minnesota DNR Public Waters Inventory (Minnesota Department of Natural Resources 2015) showed DNR Public Wetland 62-168W (unnamed) approximately 1000 feet northwest of the site boundaries (**Figure 5**).

The National Hydrography Dataset (U.S. Geological Survey 2015) did not show any surface water features on or adjacent to the site (**Figure 6**).

Results/No Wetland Determination

The Sherwood Road Properties site was reviewed for the presence of wetland on September 13, 2018. At that time, trees and shrubs still had leaves and some herbaceous vegetation was actively growing while others were beginning to senesce. Climatic conditions were below typical (dry) based on the Gridded Database Method (**Attachment B**).

Other than mowed lawn areas, the majority of the site was woodland. Species observed included: bur oak, common buckthorn, green ash, boxelder, sugar maple, black walnut, catalpa, black cherry, quaking aspen, honeysuckle, red-berried elder, river-bank grape, Virginia creeper, hog peanut, big-leaf aster, motherwort, garlic mustard, black nightshade, catnip, white snakeroot, three-seed mercury, lilac, cinquefoil, raspberry, common plantain, stickseed, violet, clearweed, and common burdock.

One depressional area was observed in the northeast portion of the site. A sample point taken within the depression (**SPA; Figure 2 and Attachment C**). SPA was dominated by a canopy of sugar maple with a sparse understory of common buckthorn. Soils were light brown loamy sand to 24 inches. No primary or secondary indicators of wetland hydrology were observed, including geomorphic position which did not apply due to the presence of a functioning drainage system and high permeability soils. This depressional area was determined to be non-wetland based on the lack of a dominant hydrophytic plant community, lack of hydric soil, and lack of wetland hydrology.

An intermittent drainageway that flowed into the site from the south and flowed out of the site towards the east was observed. A curb cut at Sherwood Road allowed untreated roadway runoff to enter the drainageway. The bottom of the drainageway was unvegetated and was not saturated

or inundated at the time of the site visit. The bed of the south portion of the drainageway was level with the surrounding landscape (no bed or bank), while the bottom of the east portion of the drainageway was approximately one to two feet lower than the adjacent landscape (bed and bank present). Although this feature is not a wetland, it (at least the eastern portion) is likely a Water of the U.S. regulated under Section 404 of the CWA.

No depression or area dominated by hydrophytic vegetation was observed within that area shown on the NWI map as a PEM1A wetland. Instead, the intermittent drainageway bisected the area.

Requested Approvals

The Joint Application Form for Activities Affecting Water Resources in Minnesota is included in **Attachment A**, which is submitted in request for: (1) a delineation concurrence/no wetland determination under the Minnesota Wetland Conservation Act (WCA), and (2) concurrence from USACE that the site does not contain any wetlands but does contain one Water of the U.S. (i.e., the intermittent drainageway) regulated under Section 404 of the Federal Clean Water Act

Thank you.

Sherwood Road Properties, Mounds View

Wetland Delineation Report

Figures:

- Figure 1 – Site Location Map
- Figure 2 – Existing Conditions Map
- Figure 3 – NWI Map
- Figure 4 – Soil Survey Map
- Figure 5 – DNR Protected Waters Map
- Figure 6 – National Hydrography Dataset Map

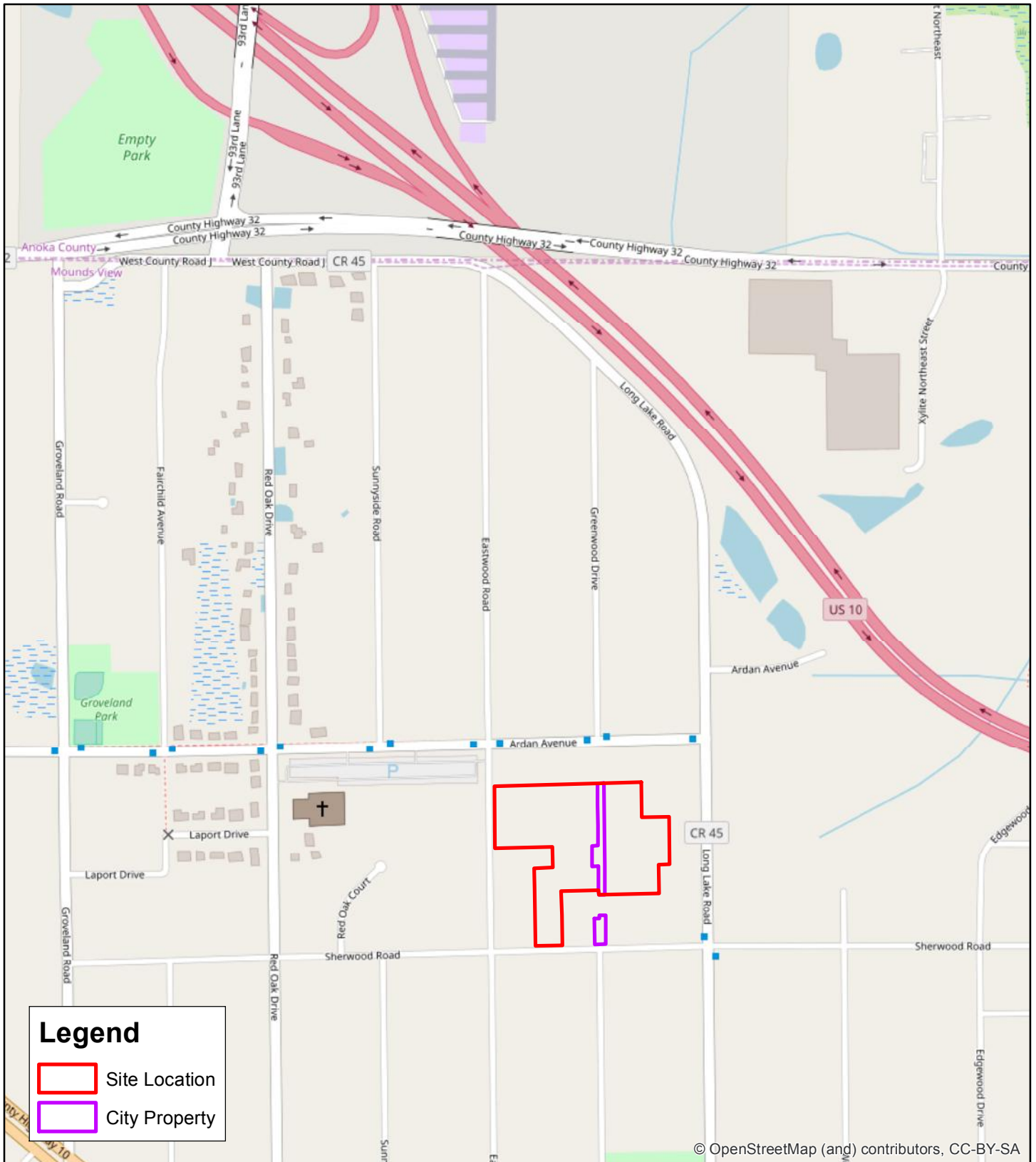


Figure 1 - Site Location



KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: ESRI Streets Basemap

N



0 500 Feet



Sherwood Road Properties (KES 2018-133)
Mounds View, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

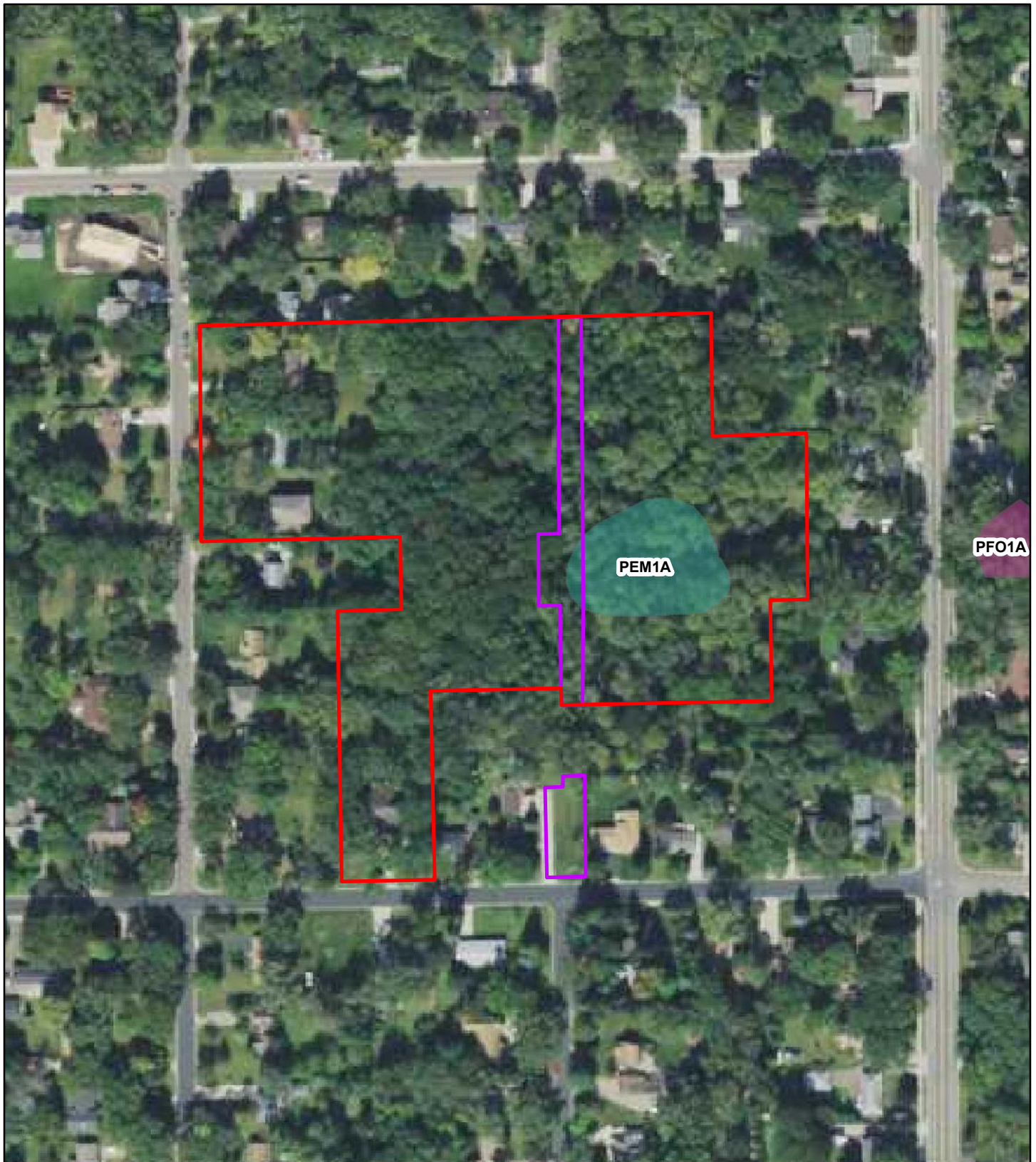


Figure 3 - National Wetlands Inventory

	<p>N</p> 	<p>0 250</p>  <p>Feet</p>	<p>Sherwood Road Properties (KES 2018-133) Mounds View, Minnesota</p>
	<p><i>KJOLHAUG</i> ENVIRONMENTAL SERVICES COMPANY</p> <p>Source: Minnesota DNR (2013), USFWS</p>		<p>Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.</p>

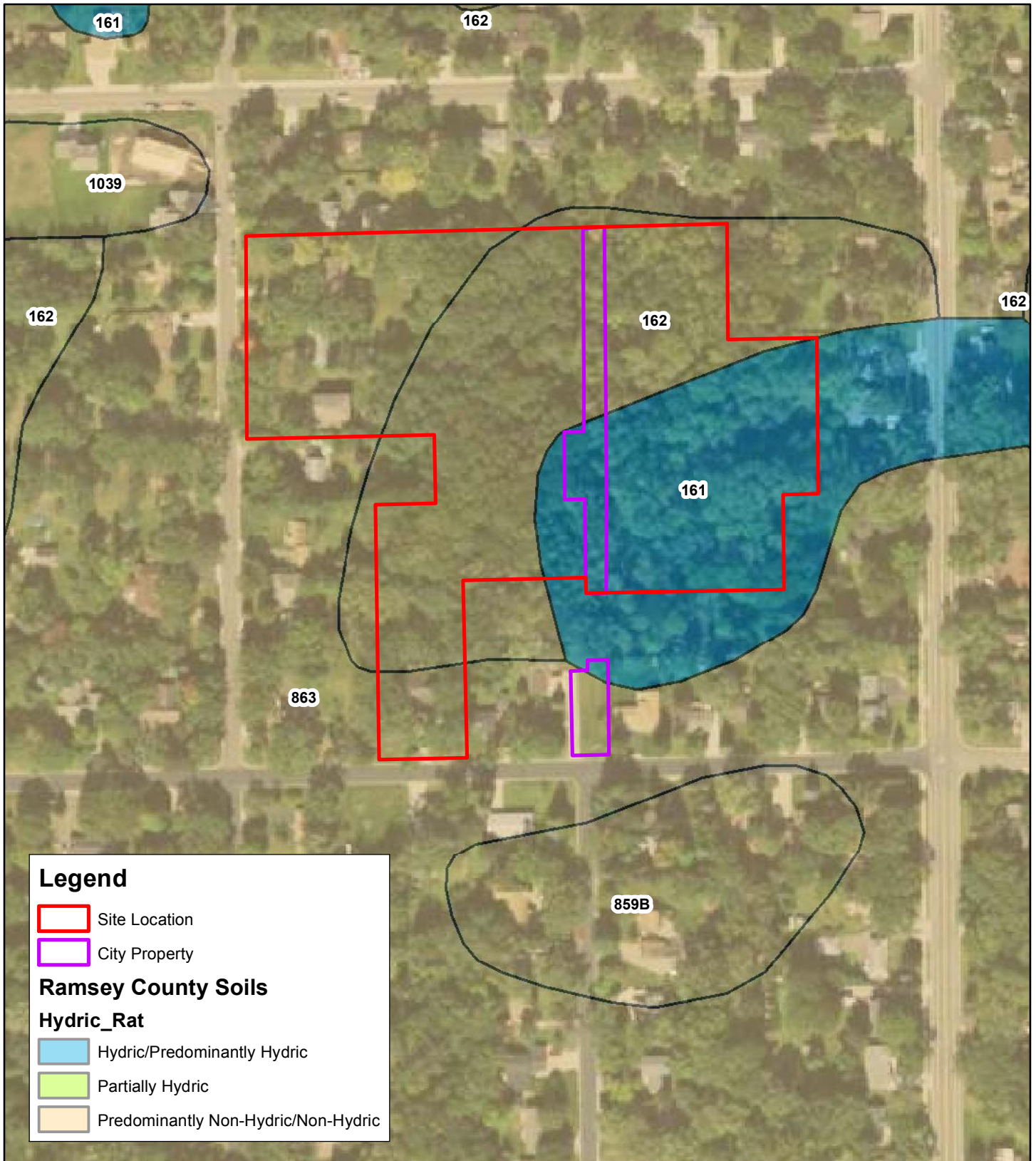


Figure 4 - Soil Survey



N



0 250 Feet



Sherwood Road Properties (KES 2018-133)
Mounds View, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

Kjølhaug ENVIRONMENTAL SERVICES COMPANY
 Source: USDA, NRCS

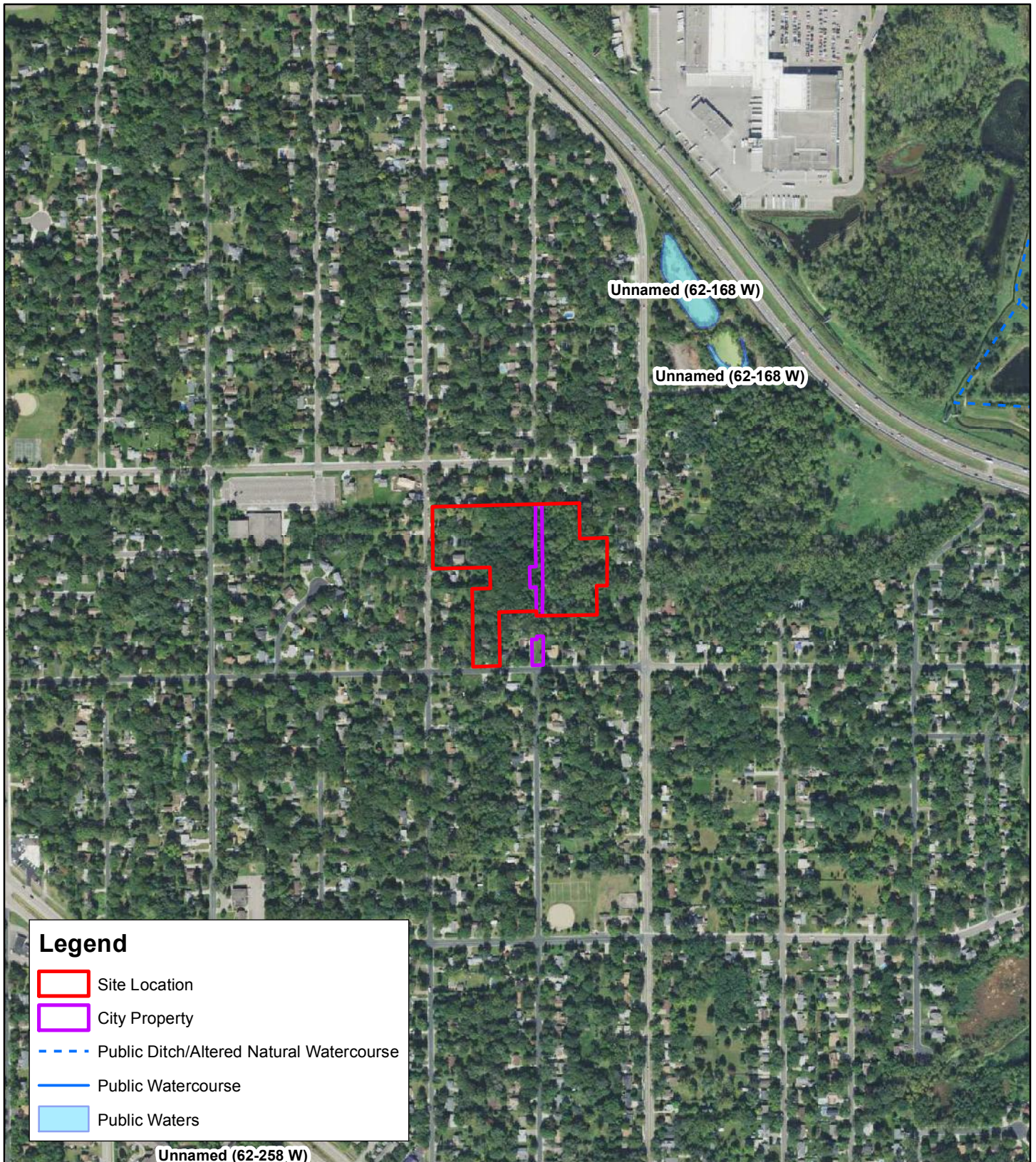




Figure 5 - DNR Public Waters Inventory




KJOLHAUG ENVIRONMENTAL SERVICES COMPANY
Source: Minnesota DNR

N



0 1,000



Feet

Sherwood Road Properties (KES 2018-133)
Mounds View, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

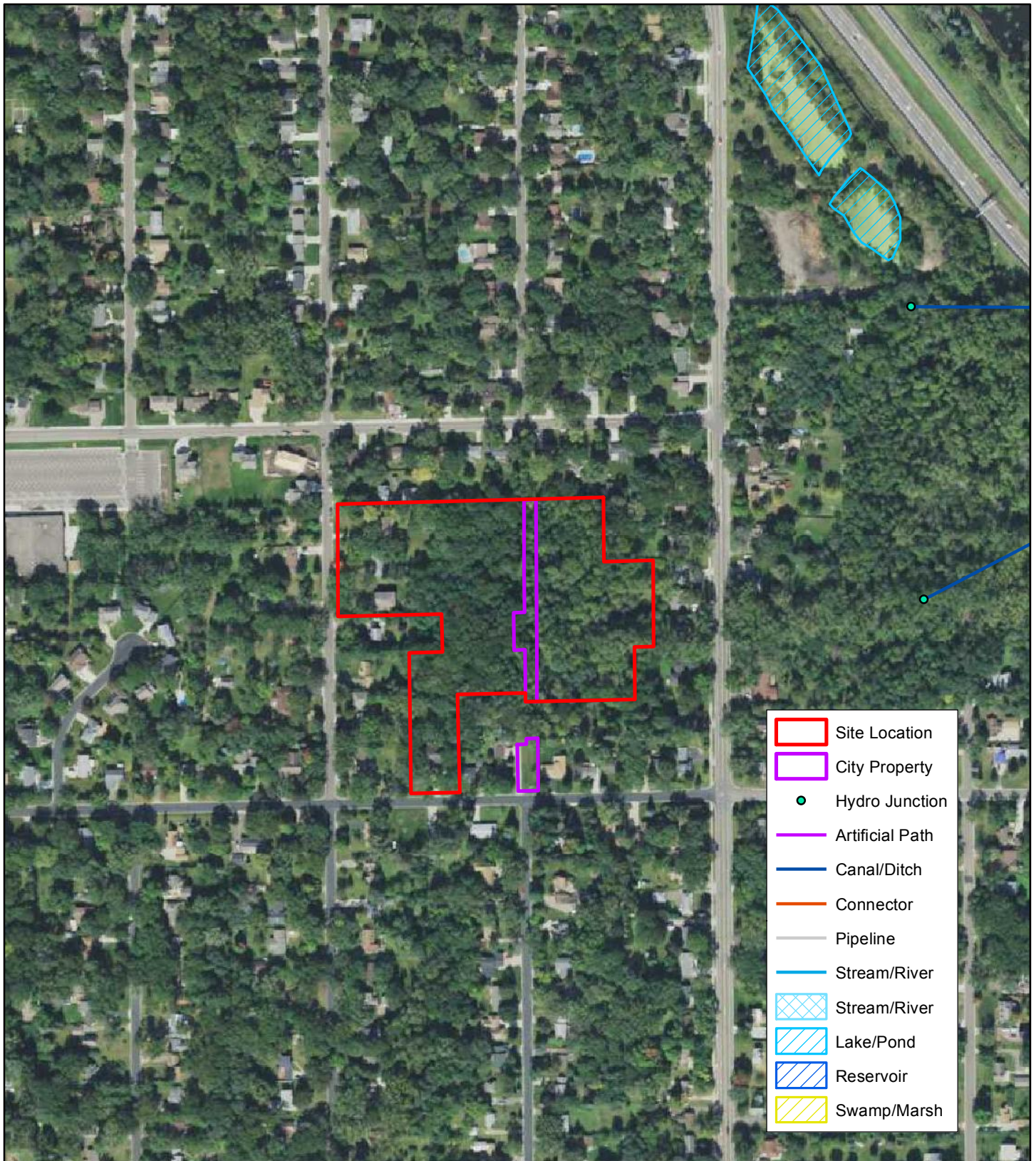


Figure 6 - National Hydrography Dataset



KJOLHAUG ENVIRONMENTAL SERVICES COMPANY
Source: USGS

N



0 500
Feet



Sherwood Road Properties (KES 2018-133)
Mounds View, Minnesota

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

Sherwood Road Properties, Mounds View

ATTACHMENT A

PART ONE: Applicant Information

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

Applicant/Landowner Name:

Mailing Address:

Phone:

E-mail Address:

Authorized Contact (do not complete if same as above): Marty Harstad, Harstad Hills, Inc.

Mailing Address: 2195 Silver Lake Road, New Brighton, MN 55112

Phone: (651) 636-9991

E-mail Address: mharstad@comcast.net

Agent Name: Melissa Barrett, Kjolhaug Environmental

Mailing Address: 2500 Shadywood Road, Suite 130, Orono, MN 55331

Phone: 952-401-8757

E-mail Address: melissa@kjolhaugenv.com

PART TWO: Site Location Information

County: Ramsey

City/Township: Mounds View

Parcel ID and/or Address: See Page 5

Legal Description (Section, Township, Range): Sec 6, T30, R23

Lat/Long (decimal degrees): 45°07'00.08"N, 93°12'40.89"W

Attach a map showing the location of the site in relation to local streets, roads, highways.

Approximate size of site (acres) or if a linear project, length (feet): ~10.5-acres

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

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

PART THREE: General Project/Site Information

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

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

Application is for delineation review/approval.

PART FOUR: Aquatic Resource Impact¹ Summary

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

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

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

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

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

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

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

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


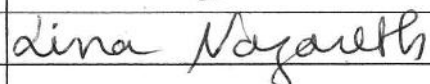
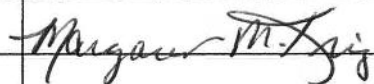
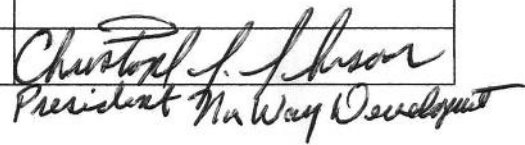
¹ The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

PART FIVE: Applicant Signature

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

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

Signature: _____ Date: _____

PID	Address	Size	Owner	Signature
PID: 063023140016	8193 EASTWOOD RD	1.17 Acres	MICHAEL J LAUTERBACH	
			PATRICK J LAUTERBACH	
			Stephen B Lauterbach	
PID: 063023140015	8185 EASTWOOD RD	1.17 Acres	HAZEL JENNINGS	
PID: 063023140017	8171 EASTWOOD RD	1.17 Acres	CARLOS NAZARETH	
			LINA NAZARETH	
PID: 063023140019	0 GREENWOOD DR	0.46 Acres	HANS L MELGAARD	
PID: 063023140067	2617 SHERWOOD RD	1.54 Acres	MARGARET M KRIG	
PID: 063023140068	0 SHERWOOD RD	0.5 Acres	BENJAMIN T DOLL	
PID: 063023140075	2573 SHERWOOD RD	0.42 Acres	JOSEPH S HOLL	
			NICOLE R HOLL	
PID: 063023140073	0 GREENWOOD DR	0.78 Acres	DANIEL A BEHNKEN	
			GWEN BEHNKEN	
PID: 063023140066	0 UNASSIGNED	2.4 Acres	NUWAY DEVELOPMENT INC	

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

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Attachment A

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

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

Wetland Type Confirmation

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

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

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

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

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

Sherwood Road Properties, Mounds View

ATTACHMENT B

Minnesota State Climatology Office

State Climatology Office - DNR Division of Ecological and Water Resources

University of Minnesota

home | current conditions | journal | past data | summaries | agriculture | other sites | about us 

Precipitation Worksheet Using Gridded Database

Precipitation data for target wetland location:

county: **Ramsey** township number: **30N**
 township name: **unnamed** range number: **23W**
 nearest community: **Mounds View** section number: **6**

Aerial photograph or site visit date:

Thursday, September 13, 2018

Score using 1981-2010 normal period

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: August 2018	second prior month: July 2018	third prior month: June 2018
estimated precipitation total for this location:	3.49R	4.02R	4.27R
there is a 30% chance this location will have less than:	3.54	2.77	3.24
there is a 30% chance this location will have more than:	5.13	5.02	5.23
type of month: dry normal wet	dry	normal	normal
monthly score	3 * 1 = 3	2 * 2 = 4	1 * 2 = 2
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	9 (Dry)		

Other Resources:

- [retrieve daily precipitation data](#)
- [view radar-based precipitation estimates](#)
- [view weekly precipitation maps](#)
- [Evaluating Antecedent Precipitation Conditions](#) (BWSR)

Sherwood Road Properties, Mounds View, MN: Precipitation Summary

Source: Minnesota Climatology Working Group

Monthly Total s: 2018

Target: T30 R23 S6 (Latitude: 45.11499 Longitude: 93.21735)

mon year	cc	tttN	rrW	ss	nnnn	oooooooo	pre (i nches)
Jan 2018	62	30N	23W	7	SWCD		.86
Feb 2018	62	30N	23W	7	SWCD		1.73
Mar 2018	62	30N	23W	7	SWCD		1.93
Apr 2018	62	30N	23W	7	SWCD		2.33
May 2018	62	30N	23W	6	BYRG		3.64
Jun 2018	62	30N	23W	6	BYRG		3.94
Jul 2018	62	30N	23W	6	BYRG		4.63
Aug 2018	62	30N	23W	6	BYRG		3.53
Sep 2018	62	30N	23W	2	SWCD		4.93

July/August/September Dai l y Records

Jul 1, 2018	.04	Aug 1, 2018	.06	Sep 1, 2018	0
Jul 2, 2018	1.42	Aug 2, 2018	.02	Sep 2, 2018	0
Jul 3, 2018	.03	Aug 3, 2018	0	Sep 3, 2018	.13
Jul 4, 2018	.05	Aug 4, 2018	1.06	Sep 4, 2018	.03
Jul 5, 2018	.36	Aug 5, 2018	.06	Sep 5, 2018	.83
Jul 6, 2018	0	Aug 6, 2018	0	Sep 6, 2018	0
Jul 7, 2018	0	Aug 7, 2018	0	Sep 7, 2018	0
Jul 8, 2018	0	Aug 8, 2018	.02	Sep 8, 2018	0
Jul 9, 2018	0	Aug 9, 2018	0	Sep 9, 2018	0
Jul 10, 2018	0	Aug 10, 2018	0	Sep 10, 2018	0
Jul 11, 2018	0	Aug 11, 2018	0	Sep 11, 2018	0
Jul 12, 2018	0	Aug 12, 2018	0	Sep 12, 2018	0
Jul 13, 2018	1.51	Aug 13, 2018	0	Sep 13, 2018	0
Jul 14, 2018	.11	Aug 14, 2018	0	Sep 14, 2018	0
Jul 15, 2018	0	Aug 15, 2018	0	Sep 15, 2018	0
Jul 16, 2018	0	Aug 16, 2018	0	Sep 16, 2018	0
Jul 17, 2018	0	Aug 17, 2018	0	Sep 17, 2018	0
Jul 18, 2018	0	Aug 18, 2018	0	Sep 18, 2018	.32
Jul 19, 2018	0	Aug 19, 2018	0	Sep 19, 2018	T
Jul 20, 2018	.19	Aug 20, 2018	0	Sep 20, 2018	.14
Jul 21, 2018	.84	Aug 21, 2018	.43	Sep 21, 2018	3.02
Jul 22, 2018	0	Aug 22, 2018	0	Sep 22, 2018	0
Jul 23, 2018	0	Aug 23, 2018	0	Sep 23, 2018	0
Jul 24, 2018	0	Aug 24, 2018	.07	Sep 24, 2018	0
Jul 25, 2018	0	Aug 25, 2018	1.17	Sep 25, 2018	.37
Jul 26, 2018	.03	Aug 26, 2018	0	Sep 26, 2018	.09
Jul 27, 2018	.05	Aug 27, 2018	0	Sep 27, 2018	0
Jul 28, 2018	0	Aug 28, 2018	.28		
Jul 29, 2018	0	Aug 29, 2018	.26		
Jul 30, 2018	0	Aug 30, 2018	0		
Jul 31, 2018	m	Aug 31, 2018	.10		

1981-2010 Summary Statistics

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	WARM	ANN	WAT
30%	0.50	0.40	1.34	1.95	2.97	3.24	2.77	3.54	2.19	1.42	1.00	0.69	17.50	29.39	28.29
70%	1.21	0.95	1.98	3.22	4.66	5.23	5.02	5.13	3.86	3.68	2.22	1.30	22.52	34.86	35.43
mean	0.86	0.77	1.82	2.79	3.82	4.39	4.23	4.19	3.47	2.66	1.77	1.16	20.09	31.93	31.75

Sherwood Road Properties, Mounds View

ATTACHMENT C

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Sherwood Road Properties City/County: Mounds View/Ram Sampling Date: 9-13-2018
 Applicant/Owner: various owners - see joint form State: MN Sampling Point: SPA
 Investigator(s): M. Barrett Section, Township, Range: Sec 6, T30, R23
 Landform (hillslope, terrace, etc.): slight depression Local relief (concave, convex, none): Concave
 Slope (%): 0-1 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Lino loamy fine sand NWI Classification: none
 Are climatic/hydrologic conditions of the site typical for this time of the year? N (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> 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;">Climatic conditions atypical (dry) based on gridded database method.</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 <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Living 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 <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface (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 <input type="checkbox"/> (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: <p style="text-align: center;">D2 NA due to due to the presence of a functioning drainage system and high permeability soils.</p>		
Remarks: <p style="text-align: center;">Dry to 24 inches.</p>		

VEGETATION - Use scientific names of plants

Sampling Point: SPA

Tree Stratum					Plot Size (30)		Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer saccharum</i>					40	Y	FACU	
2									
3									
4									
5									
6									
7									
8									
9									
10									
						40	= Total Cover		
Sapling/Shrub Stratum					Plot Size (15)		Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rhamnus cathartica</i>					15	Y	FAC	
2									
3									
4									
5									
6									
7									
8									
9									
10									
						15	= Total Cover		
Herb Stratum					Plot Size (5)		Absolute % Cover	Dominant Species	Indicator Status
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
						0	= Total Cover		
Woody Vine Stratum					Plot Size (30)		Absolute % Cover	Dominant Species	Indicator Status
1									
2									
3									
4									
5									
						0	= Total Cover		

50/20 Thresholds		20%	50%
Tree Stratum		8	20
Sapling/Shrub Stratum		3	8
Herb Stratum		0	0
Woody Vine Stratum		0	0

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A)	
Total Number of Dominant Species Across all Strata: <u>2</u> (B)	
Percent of Dominant Species that are OBL, FACW, or FAC: <u>50.00%</u> (A/B)	

Prevalence Index Worksheet	
Total % Cover of:	
OBL species	<u>0</u> x 1 = <u>0</u>
FACW species	<u>0</u> x 2 = <u>0</u>
FAC species	<u>15</u> x 3 = <u>45</u>
FACU species	<u>40</u> x 4 = <u>160</u>
UPL species	<u>0</u> x 5 = <u>0</u>
Column totals	<u>55</u> (A) <u>205</u> (B)
Prevalence Index = B/A = <u>3.73</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>
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Remarks: (Include photo numbers here or on a separate sheet)
Prevalence index > 3.

