Minnesota Wetland Conservation Act Notice of Application

Local Government Unit (LGU) City of Plymouth	Address 3400 Plymouth Blvd. Plymouth, MN 55447						
Applicant Name Rodney Berg	PROJECT INFOR Project Name Berg Site	RMATION	Date of Application 8/30/13	Application Number NA			
Type of Application (check all that ap	oply):						
	☐ Exemp		Sequencing				
Summary and description of proposed project (attach additional sheets as necessary): Bopray Environmental Services LLC (BES) completed a wetland delineation on an approximately 4.25 acre site located in the NW 1/4 of Section 17, T118N, R22W in the City of Plymouth, Minnesota. Two wetlands were delineated on-site. Wetland A is described as a Type 3, shallow march, PEMCd wetland dominated by cattail. Wetland B is described as a seasonally flooded basin, PUBF, and is also know as Plymouth Creek, a MN DNR Public Waterbody.							
			-				
2. APPLIC Signing and mailing of this complete Subp. 3 provides notice that an applic specified above. A copy of the applic	cation was made to the	oriate recipients ne LGU under th	in accordance was Wetland Conso				
Name and Title of LGU Contact Pers Derek Asche Water Resources Manager	b	Comments must be received by (minimum 15 business-day comment period): September 30, 2013					
Address (if different than LGU) City of Plymouth 3400 Plymouth Blvd. Plymouth, MN 55426 Date, time, and location of decision: October 1, 2013 9AM Plymouth, City Hall							
Phone Number and E-mail Address 763-509-5526 dasche@plymouthmn.gov Decision-maker for this application: Staff Governing Board or Council							
Signature: Duh Anh	-		Date: <u>9/5/</u>	13			

BWSR Forms 7-1-10 Page 1 of 2

3. LIST OF ADDRESSEES

X	HCD TEP member: Ms. Stacey Lijewski, HCD, 701 Fourth Avenue South, Suite 700, Minneapolis, MN,
	55415-1600 (sent electronically)
X	BWSR TEP member: Ms. Lynda Peterson, BWSR, 520 Lafayette Rd. N., St. Paul, MN, 55155 (sent
elec	etronically)
	LGU TEP member (if different than LGU Contact):
\mathbf{X}	DNR TEP member: Melissa Doperalski, MN DNR, 1200 Warner Road, St. Paul, MN, 55106 (sent
	electronically)
	DNR Regional Office (if different than DNR TEP member)
	Ms. Kate Drewry, DNR Division of Ecological and Water Resources, 1200 Warner Road, St. Paul, MN,
	55106 (sent electronically)
X	WD or WMO (if applicable): BCWMC, c/o Laura Jester, Keystone Waters, LLC, 16415 Hillcrest Lane,
	Eden Prairie, MN, 55346 (sent electronically)
\mathbf{X}	Applicant and Landowner (if different):
	Rodney Berg, 4225 Dunkirk Lane North, Plymouth, MN, 55446
X	Members of the public who requested notice:
	Mr. Kelly Bopray, BES, N7831 920 th St., River Falls, WI, 54022 (sent electronically)
X	Corps of Engineers Project Manager: Melissa Jenny, Army Corps of Engineers, 180 5th Street East,
	Suite 700, St. Paul, MN, 55101-1678 (sent electronically)
	BWSR Wetland Bank Coordinator (wetland bank plan decisions only)

4. MAILING INFORMATION

>For a list of BWSR TEP representatives: www.bwsr.state.mn.us/contact/WCA areas.pdf

For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR TEP contacts.pdf

Department of Natural Resources Regional Offices:

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol.	Reg. Env. Assess. Ecol.	Reg. Env. Assess. Ecol.	Reg. Env. Assess. Ecol.
Div. Ecol. Resources	Div. Ecol. Resources	Div. Ecol. Resources	Div. Ecol. Resources
2115 Birchmont Beach Rd. NE	1201 E. Hwy. 2	1200 Warner Road	261 Hwy. 15 South
Bemidji, MN 56601	Grand Rapids, MN 55744	St. Paul, MN 55106	New Ulm, MN 56073

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr regions.pdf

➤ For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687 or send to:

US Army Corps of Engineers St. Paul District, ATTN: OP-R 180 Fifth St. East, Suite 700

St. Paul, MN 55101-1678

For Wetland Bank Plan applications, also send a copy of the application to:

Minnesota Board of Water and Soil Resources

Wetland Bank Coordinator 520 Lafayette Road North St. Paul, MN 55155

St. Paul, MN 55155	
5. ATTACHMENTS	
In addition to the application, list any other attachments: Wetland Delineation Report for 4225 Dunkirk Lane North dated July 24, 2013 by BES	

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

1. Project/Site Information

Project/Site Name:Berg Site, Dunkirk Ln.N Local Government Unit:Plymouth, MN

Location (address and/or T, R, Sec.): Sec 17, T118N, R22W

2. Applicant Information

Applicant Name:Rodney Berg
City, State, Zip:Plymouth, MN 55446

Address: 4225 Dunkirk Lane N.

E-mail: b_rberg@msn.com Phone:763-354-7182

3. Agent/Consultant Information

Company Name Bopray Environmental Services Contact Person: Kelly Bopray

Address: N7831 920th St. City, State, Zip:River Falls, WI 54022

E-mail: kjbopray@yahoo.com Phone:715-307-4577

4. Description of Request

Check all that apply: X Wetland Boundary (must attach wetland delineation report)

☐ Wetland Type (Eggers & Reed and/or Circular 39 type)

5. Signature

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

Applicant or Authorized Agent Signature

7/26/2013

Date

Important Notes:

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

For LGU use only

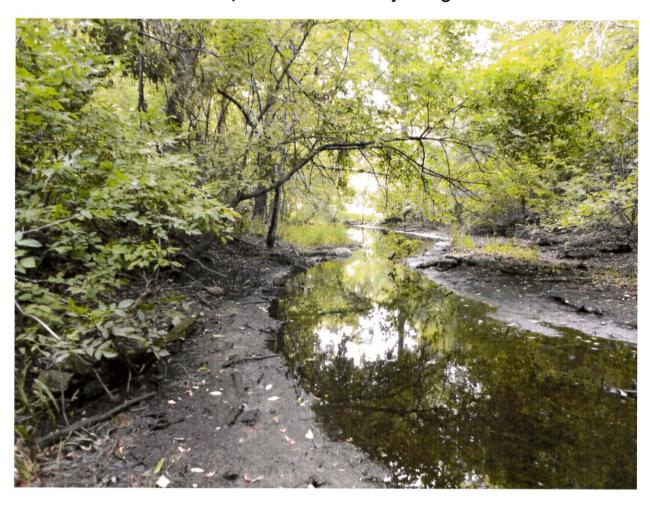
Date Received:

8/30/13 COMPLETE Dat ane

Wetland Delineation Report

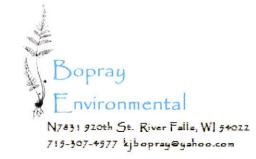
4225 Dunkirk Lane North Plymouth, Minnesota

Prepared for: Rodney Berg



General view of the creek in the south part of the site.

July 24, 2013





Wetland Delineation Report

Rodney Berg, 4225 Dunkirk Lane North Plymouth, Minnesota

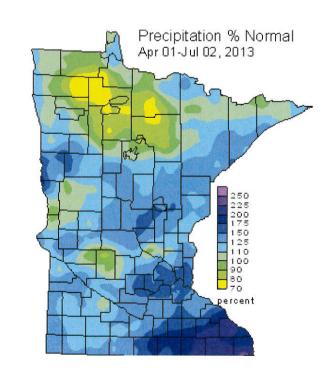
July 24, 2013

Background

Bopray Environmental Services LLC (BES) has completed a wetland delineation on an approximately 4.25 acre site located in the NW ¼, Sections 17, T118N, R22W, City of Plymouth, Hennepin County, Minnesota (**Figure 1**). The site consists of two residential lots. The topography of the site is nearly flat with a drainageway crossing the southwest corner of the site according to the U.S.G.S. quadrangle topographic map (**Figure 2**). The approximate site and wetland boundaries are shown on an aerial photo in **Figure 3**. The field wetland delineation was done on July 6, 2013. EDS surveyed the wetland boundaries and incorporated them into the site plans (**Appendix A**). The purpose of this delineation was to identify wetlands on the site for planning purposes for site development and for regulatory purposes.

Methodologies

The site was evaluated for wetlands based on the methods contained in the "Level 2 Routine Wetland Delineation" section of the U.S. Army Corps of Engineers "Wetland Delineation Manual" (Technical Report Y87-1, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region. This is the methodology currently used to determine wetlands by both the U.S. Army Corps of Engineers for implementation of Section 404 of the Clean Water Act and by the Minnesota Wetland Conservation Act. According to the Climatology Working Groups' webpage, the area was at 150-175% of normal year to date precipitation at the time of the site visit.



Wetland Delineation Report Rodney Berg, Plymouth, MN BES Project No. 2013-023 July 24, 2013

Results

Wetland A

Wetland A encroaches on the northeast corner of the site and drains via culvert to the east. This wetland is a Palustrine, Emergent, Seasonally flooded, Drained, (PEMCd) shallow marsh. Wetland A is dominated by cattails (*Typha angustifolia* and *T. latifolia*). Soils in the wetland consisted of 20 inches of N 2/0 clay loam, over 10Y 5/1 clay loam (A12). Free water was observed at a depth of 16 inches (C2) and saturated soil was at 12 inches (A3) in the soil pit at the time of the site visit. The other wetland hydrology indicators observed in the wetland included true aquatic plants (B14) and a positive FAC-neutral test (D5). The adjacent upland vegetation is dominated by Kentucky bluegrass (Poa pratensis) and white clover (*Trifolium repens*) and is maintained as mowed lawn. The upland soils consisted of 20 inches of N 2/0 clay loam, over 10Y 5/1 clay loam (A12). There was free water at a depth of 24 inches (C2) and saturated soil was at a depth of 20 inches in the upland soil pit. The wetland boundary on this part of the site was generally staked along the vegetation transition where the mowed wetland species gave way to mowed upland species.

Wetlands B

This wetland occupies the stream channel, banks and low floodplain of Plymouth Creek in the woods in the southwest part of the site. Wetland B is a Palustrine, Unconsolidated Bottom, Seasonally Flooded, (PUBC) seasonally flooded basin. The channel bottom was generally unvegetated. The wetland edge is dominated by box elder (Acer negundo), green ash (Fraxinus pennsylvanica), common buckthorn (Rhamnus cathartica) and reed canary grass (Phalaris arundinacea). Soils in the wetland consisted of five inches of 10YR 2/1 loam, over five inches of 10YR 2/1 loam with 5% 10Y 5/1 iron depletions, over four inches of 10Y3/1 clay loam over 2.5Y 5/2 clay with 5% 2.5Y 5/4 iron concentrations (A12). Surface water was observed in the stream channel (A1). Free water was observed at a depth of 12 inch (C2) and saturated soil was at 6 inches (A3) in the soil pit at the time of the site visit. Other wetland hydrology indicators observed in the wetland included drift deposits (B3), sparsely vegetated concave surface (B8), crayfish burrows (C8), geomorphic position (D2) and a positive FAC-neutral test (D5). The adjacent upland vegetation is dominated by box elder, green ash and common buckthorn. The upland soils consisted of 12 inches of N 2/0 clay loam, over ten inches of 10YR 2/1 clay loam, over 10Y 5/1 clay loam. There was no free water or saturated soil within a depth of 26 inches in the upland soil pit. The wetland boundary was generally staked along the topographic break.

The National Wetlands Inventory (NWI) (**Figure 4**) identifies two wetlands in the general vicinity of Wetlands A and B as delineated by BES. The NWI map classifies Wetland A as a Palustrine, Emergent, Seasonally Flooded, (PEMC) wetland. Based on BES's field work, Wetland A was classified consistent with the NWI map. The NWI map classified Wetland B as a Palustrine,

Wetland Delineation Report Rodney Berg, Plymouth, MN BES Project No. 2013-023 July 24, 2013

Broadleaf Forested, Seasonally Flooded, drained (PFO1Cd) wetland. Based on BES's field work the wetland was generally limited to the stream channel and there were few trees actually growing in the wetland. The DNR Protected Waters Inventory map (**Figure 5**) does identify the Plymouth Creek as a public waters wetlands/public ditch on the site. The Hennepin County Soils Survey (**Figure 6**) shows the site is predominantly mapped as the Shorewood silty clay loam (L26B) soil map unit. The northeast part of the site is mapped as Glencoe loam, depressional (L24A), and area around the channel in the southwest part of the site is mapped as Hamel-Glencoe depressional (L132A). The Glencoe (L24A) soil map unit is the only one that is listed as a hydric soil map unit. All of the other soils are listed as partially hydric soil map units.

Wetland Classification

BES' classification of the wetlands is based on observations of the site and is include in Table 1 below.

Table 1. Summary of Wetland Characteristics

Basin	Class	Circ. 39 Type	Isolated Y/N	Comments
Wetland A	Shallow marsh, PEMCd	3	N	Wetland A is a cattail marsh that encroaches on the northeast corner of the site. The basin outlets to the east and eventually to Plymouth Creek via stormwater ponds and wetlands in the adjacent development.
Wetland B	Seasonally Flooded Basin PUBF	N/A	N	Wetland B is the channel of Plymouth Creek and adjacent wetlands that crosses the southwest corner of the site.

Jurisdiction

Table 1 indicates whether the wetlands are isolated or not for purposes of U.S. Army Corps of Engineers (COE) jurisdiction under Section 404 of the Clean Water Act. This determination is made by BES in the field at the time of the delineation and is essentially our best professional opinion based on the portion of the particular wetland we observed. In some cases, only a small portion of the wetland edge that is present on the property being delineated is evaluated. If no inlets or outlets are observed in the evaluated area, and none are evident on topographic maps or aerial photos, we are inclined to determine the wetland is isolated. However, since the entire wetland is sometimes not assessed, it is possible that inlets and/or outlets do exist and that the wetland has a surface connection to a federal "navigable" water and, thus, falls within the jurisdiction of Section 404. Therefore, a determination by BES of whether a particular wetland is isolated or not should not be considered a final determination with regard to COE

Wetland Delineation Report Rodney Berg, Plymouth, MN BES Project No. 2013-023 July 24, 2013

jurisdiction until the COE concurs with the determination. Wetland A drains east and eventually to Plymouth Creek (Wetland B) which drains to Medicine Lake and Basset Creek which in turn drains to the Mississippi River, and therefore the COE would likely take jurisdiction over the wetlands on this site.

Plymouth Creek (Wetland B) is identified on the protected waters inventory so the Minnesota Department of Natural Resources (DNR) will have jurisdiction this wetland. The Ordinary High Water (OHW) and limit of the DNR's jurisdiction is the top of the creek banks. Wetland A and any wetlands outside the banks of Plymouth Creek are regulated under the Minnesota Wetland Conservation Act (WCA) which is administered by the City of Plymouth as the Local Government Unit (LGU).

A copy of this report should be submitted to the Corps of Engineers and the LGU responsible for administering the WCA. Supplying these agencies with reports will serve the dual purpose of determining which agencies have jurisdiction and beginning the process of obtaining concurrence with the delineated wetland boundaries. If the on-site wetlands may be affected during site construction, all necessary permits should be obtained prior to construction.

Additional information regarding the wetlands' vegetation, soils and hydrology is included in **Appendix B**. The site survey with the wetland boundaries is included in **Appendix A**. Ground level photos of the wetlands are included in **Figure 7**.

The information contained herein represents the findings of BES during wetland evaluation activities conducted July 6, 2013 at the referenced site.

Respectfully,

Bopray Environmental Services LLC

Kelly J. Bopray

Professional Soil Scientist Certified Wetland Delineator Date

7/26/2013

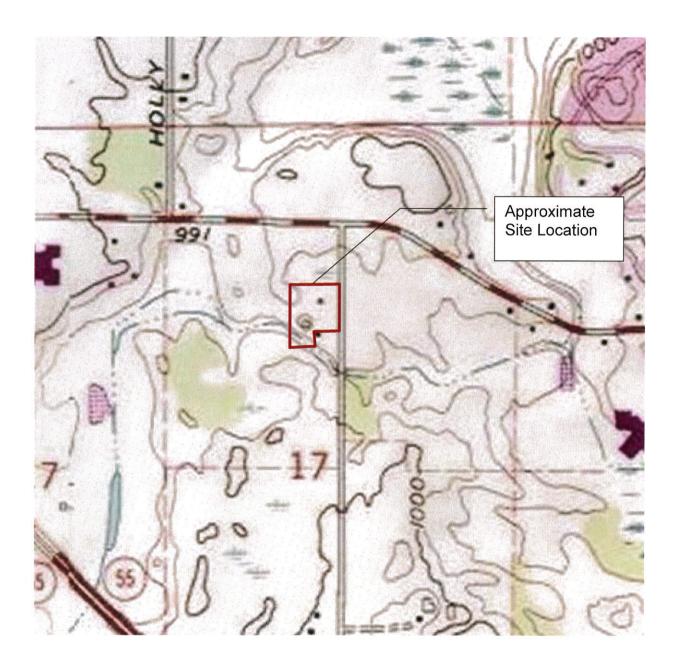
Enclosures





Figure 1. Location Map

Rodney Berg, 4225 Dunkirk Lane N. Plymouth, Minnesota





Not to Scale



Figure 2. U.S.G.S. Quadrangle Map

Rodney Berg, 4225 Dunkirk Lane N. Plymouth, Minnesota

Project No. 2013.023





Figure 3. Aerial Photo With Approximate Wetland Boundaries

Rodney Berg, 4225 Dunkirk Lane N. Plymouth, Minnesota

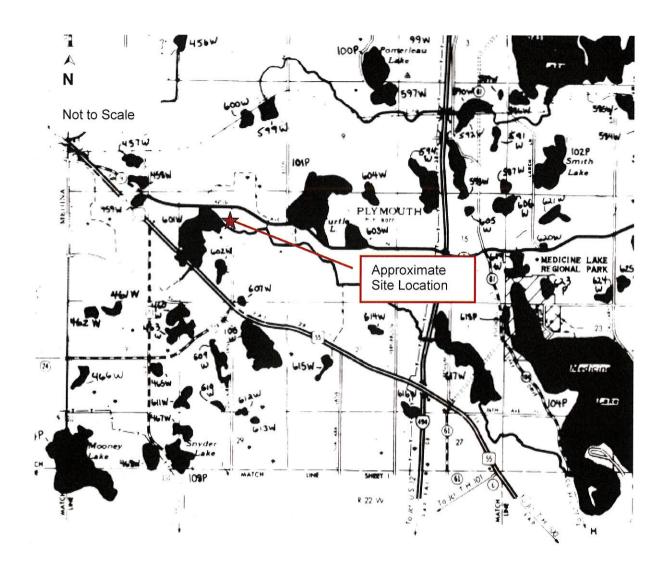




Figure 4. National Wetland Inventory Map

Rodney Berg, 4225 Dunkirk Lane N. Plymouth, Minnesota

Project No. 2013.023



N

Not to Scale



Figure 5. DNR Protected Waters Inventory Map

Rodney Berg, 4225 Dunkirk Lane N. Plymouth, Minnesota





Figure 6. Hennepin County Soil Survey Map

Rodney Berg, 4225 Dunkirk Lane N. Plymouth, Minnesota



Wetland A looking west. This wetland is dominated by cattail and extends a few feet into the mowed lawn area.

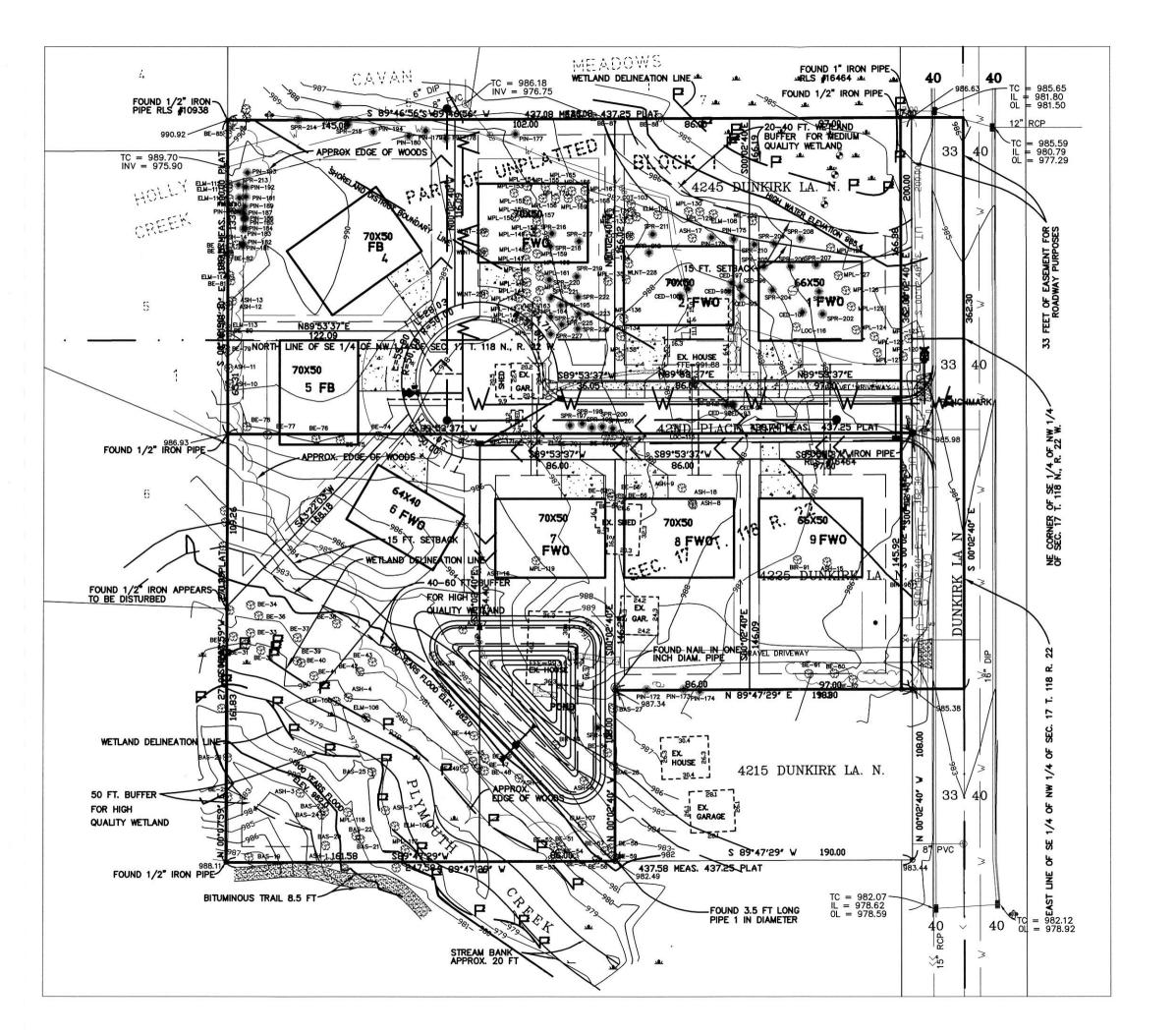


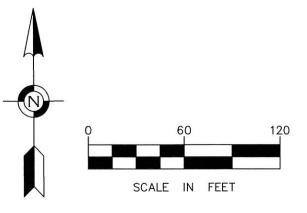
Wetland B looking west. This wetland consists of the creek channel and adjacent creek banks.



Figure 7. Ground Photos Rodney Berg, 4225 Dunkirk Lane N. Plymouth, Minnesota

Appendix A





Appendix B

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Project/Site 4225 Dunkirk Lne N.	City/Cour	nty: F	Plymouth/He	nnepin Sampling Date: July 6, 2013		
Applicant/Owner: Rodney Berg	8	State:	I Sampling Point: SA-W			
Investigator(s): Kelly Bopray, PSS, CWD	teritoria de la constitución de	Section, Township, Range: Sec. 17, T118N, R22V				
Landform (hillslope, terrace, etc.): depression	1	Local r	relief (concar	ve, convex, none): concave		
Slope (%): 0-1% Lat:	Lo	ing:		Datum:		
Soil Map Unit Name L24A, Glencoe loam, depressional		Service Children	IWI	Classification: PEMC		
Are climatic/hydrologic conditions of the site typical for this	s time of the	year?	N (If no, explain in remarks)		
Are vegetation , soil , or hydrology			y disturbed?	Are "normal circumstances"		
Are vegetation , soil X , or hydrology	PERSONAL PROPERTY AND ADDRESS OF THE PERSONS ASSESSED.		roblematic?	present? No		
SUMMARY OF FINDINGS		, ,		(If needed, explain any answers in remarks.)		
Hydrophytic vegetation present? Y						
Hydric soil present? Y		Is the s	ampled are	a within a wetland?		
Indicators of wetland hydrology present?	- 1		and the second second	nd site ID: Wetland A, PEMCd		
Remarks: (Explain alternative procedures here or in a sepa	arate report)				
Precipitation is 150 to 175	5% of aver	rage Y	ΓD totals.	Soils are mollisols.		
VEGETATION Use scientific names of plants.			Overland desired and service Water for			
	solute Do Cover t S	minan	Indicator Staus	Dominance Test Worksheet		
1 1 Plot size. 30 it) 76 it	Cover 15	pecies	Glaus	Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)		
2	PERSONAL ENGINEERING			Total Number of Dominant		
3	-			Species Across all Strata: 2 (B)		
4			***************************************	Percent of Dominant Species		
5			***************************************	that are OBL, FACW, or FAC: 100.00% (A/B)		
	0 = Tot	tal Cove	r			
Sapling/Shrub stratum (Plot size: 15 ft)	0.070			Prevalence Index Worksheet		
1 Fraxinus pennsylvanica	2		FACW_	Total % Cover of:		
2	-	-		OBL species 72 x 1 = 72		
3				FACW species 12 x 2 = 24 FAC species 2 x 3 = 6		
5				FACU species 6 x 4 = 24		
	2 = Tot	tal Cove	r	UPL species 0 x 5 = 0		
Herb stratum (Plot size: 5 ft)				Column totals 92 (A) 126 (B)		
Part of the state	40	Υ	OBL	Prevalence Index = B/A = 1.37		
	30	Y	OBL	10 Security		
3 Solidago gigantea	10	N	FACW	Hydrophytic Vegetation Indicators:		
4 Solidago canadensis	5	N	FACU	Rapid test for hydrophytic vegetation		
5 Carex lacustris	2	N	OBL	X Dominance test is >50%		
6 Poa pratensis	2	N	FAC	X Prevalence index is ≤3.0*		
7 Cirsium arvense	1	N	FACU	Morphogical adaptations* (provide		
8		harman de la companya		supporting data in Remarks or on a		
9			-	separate sheet)		
10	90 = Tot	tal Cove	r	Problematic hydrophytic vegetation* (explain)		
Woody vine stratum (Plot size: 30 ft)		tai Oove	ı			
1				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
2				Hydrophytic		
	0 = Tot	tal Cove	r	vegetation		
				present? Y		
Remarks: (Include photo numbers here or on a separate s	heet)					

Profile Desc	cription: (Descri	be to th	e depth needed	to docu	ment the	indicat	or or confirm the absen	ce of indicators.)		
Depth	Matrix			dox Feat						
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks		
0-20	N 2/0						clay loam			
20-24+	10Y 5/1						clay loam			
20-24+	101 3/1						Ciay Idam			
							AND THE RESIDENCE OF THE PROPERTY OF THE PROPE			
		-					**************************************			
	To a control of the Park and Markey MS - Macked Sand Crains **Location: PL - Para Lining M - Matrix									
*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils:										
Hydric So	il Indicators:							-		
	tisol (A1)			ndy Gleye		(S4)	(1)	dox (A16) (LRR K, L, R)		
Hist	tic Epipedon (A2)			ndy Redo	15		Dark Surface (S			
Blac	ck Histic (A3)			pped Ma			(Control of Control of	t or Peat (S3) (LRR K, L, R)		
Hyd	lrogen Sulfide (A4	1)		my Muck				Masses (F12) (LRR K, L, R)		
Stra	atified Layers (A5))		my Gley			10 St. 10 St	rk Surface (TF12)		
2 cr	n Muck (A10)			oleted Ma			Other (explain in	remarks)		
Dep	leted Below Dark	Surface	(A11) Red	lox Dark	Surface	(F6)	S-200 5 FE)			
X Thic	ck Dark Surface (A12)	Dep	oleted Da	rk Surfa	ce (F7)	*Indicators of hydi	ophytic vegetation and weltand		
San	idy Mucky Minera	l (S1)	Rec	lox Depr	essions ((F8)	hydrology must b	e present, unless disturbed or		
			-					problematic		
Postrictivo	Layer (if observe	od).				T				
Type:	Layer (ii observe	cuj.					Hydric soil preser	nt? Y		
Depth (inche).						riyano don prodo.			
Depth (inche										
Remarks:										
HYDROLO	OGY									
Wetland Hy	drology Indicate	ors:								
Primary Indi	cators (minimum	of one is	required; check	all that a	pply)		Secondary Inc	dicators (minimum of two required)		
	Water (A1)				Fauna (B	113)	Surface	Soil Cracks (B6)		
	iter Table (A2)		X	True Aq			Drainage	e Patterns (B10)		
X Saturation			-			Odor (C		son Water Table (C2)		
	larks (B1)		***************************************					Burrows (C8)		
	nt Deposits (B2)			(C3)			Saturati	on Visible on Aerial Imagery (C9)		
	posits (B3)		-	Presenc	e of Red	uced Iron	(C4) Stunted	or Stressed Plants (D1)		
Algal Ma	at or Crust (B4)		Ex-stantage	Recent I	Iron Redu	action in 7	Filled Soils Geomor	phic Position (D2)		
	osits (B5)			(C6)			X FAC-Ne	utral Test (D5)		
Inundati	on Visible on Aeria	al Imager	y (B7)	Thin Mu	ck Surfac	ce (C7)	Australiante			
Sparsely	Vegetated Conca	ave Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)				
Water-S	tained Leaves (B9))	The second second	Other (E	xplain in	Remarks)			
Field Obser	vations:									
Surface wat		Yes	No	X	Depth (i	inches):				
Water table		Yes	X No		Depth (i	inches):	16 In	dicators of wetland		
Saturation p		Yes	X No		Depth (i	inches):	12 h	ydrology present? Y		
100	pillary fringe)		Name and Address of the Owner, where		-3					
	Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
	Social Colored and following and an analysis by a serial by a serial ser									
Remarks:	 					-				
I .										

Project/Site 4225 Dunkirk Lne N.	City/County: F	Plymouth/He	nnepin Sampling Date: July 6, 2013			
Applicant/Owner: Rodney Berg	State:	State: MN Sampling Point: SA-U				
Investigator(s): Kelly Bopray, PSS, CWD	Secti	Section, Township, Range: Sec. 17, T118N, R22W				
Landform (hillslope, terrace, etc.): hillslope	Local r	elief (conca	ve, convex, none): concave			
Slope (%): 2-6% Lat:	Long:		Datum:			
Soil Map Unit Name L24A Glencoe loam, depressional		JWI	Classification: not id'ed			
Are climatic/hydrologic conditions of the site typical for this	time of the year?	N (If no, explain in remarks)			
Are vegetation X , soil , or hydrology	significantly	y disturbed?	Are "normal circumstances"			
Are vegetation , soil X , or hydrology	naturally pr	oblematic?	present? Yes			
SUMMARY OF FINDINGS			(If needed, explain any answers in remarks	s.)		
Hydrophytic vegetation present? N						
Hydric soil present? Y	Is the s	ampled are	a within a wetland? NN			
Indicators of wetland hydrology present? N	f yes, op	otional wetlar	nd site ID: upland adj. to Wetland A			
Remarks: (Explain alternative procedures here or in a sepa	rate report.)					
Precipitation is at 150-175% of average YTD.	Soils are mollis	sols Vege	tation is maintained as a mowed lawn			
1 recipitation is at 100-17070 of average 110.	——————————————————————————————————————		action to maintained de dimensed lawn.			
VEGETATION Use scientific names of plants.						
1	olute Dominan	Indicator	Dominance Test Worksheet			
Tree Stratum (Plot size: 30 ft) % C	Cover t Species	Staus	Number of Dominant Species that are OBL, FACW, or FAC: 1 (A			
1	CALANT BARRIES	***************************************		٠)		
3			Total Number of Dominant Species Across all Strata: 2 (E	3)		
4	Name of Street, Street	****	Percent of Dominant Species	- /		
5	THE STREET PROPERTY OF THE STREET		대통 전 - 10 - 10 10 10 10 10 10 10 10 10 10 10 10 10	VB)		
	0 = Total Cove	r				
Sapling/Shrub stratum (Plot size: 15 ft)			Prevalence Index Worksheet			
1			Total % Cover of:			
2		-	OBL species $0 \times 1 = 0$ FACW species $0 \times 2 = 0$			
3		-	FAC species 50 x 3 = 150			
5		-	FACU species 70 x 4 = 280			
	0 = Total Cove	r	UPL species 0 x 5 = 0			
Herb stratum (Plot size: 5 ft)	-		Column totals 120 (A) 430 (E	3)		
1 Poa pratensis	30 Y	FAC	Prevalence Index = B/A = 3.58			
2 Trifolium repens	30 Y	FACU				
	20 N	FACU	Hydrophytic Vegetation Indicators:			
	20 N	FAC	Rapid test for hydrophytic vegetation Dominance test is >50%			
	20 N	FACU	Prevalence index is ≤3.0*			
6 7			Morphogical adaptations* (provide			
8	Managara and Managara and Managara		supporting data in Remarks or on a			
9			separate sheet)			
10			Problematic hydrophytic vegetation*			
2	20 = Total Cove	r	(explain)			
Woody vine stratum (Plot size:30 ft) 1			*Indicators of hydric soil and wetland hydrology mu- present, unless disturbed or problematic	st be		
2			Hydrophytic			
	0 = Total Cove	r	vegetation present? N			
Remarks: (Include photo numbers here or on a separate sh	neet)			-		
Themains, (include prioto numbers here of on a separate si	iout)					

	J

Profile Desc	ription: (Descri	ibe to th	e depth needed	to docu	ment the	indicat	or or confirm the absence	ce of indicators.)
Depth	Matrix			dox Feat				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-20	N 2/0						clay loam	
20-24+	10Y 5/1						clay loam	
2021	101 0/1							
			And the Local Desire of th				ACCOUNT OF THE PARTY OF THE PAR	
*Type: C = 0	Concentration, D =	Depleti	on. RM = Reduce	ed Matrix	. MS = N	lasked S	and Grains. **Locatio	on: PL = Pore Lining, M = Matrix
	il Indicators:	op						ematic Hydric Soils:
	isol (A1)		Sar	dy Gleye	ed Matrix	(S4)		dox (A16) (LRR K, L, R)
Toronto Contraction Contractio	ic Epipedon (A2)			dy Redo			Dark Surface (S7	
Name and Address of the Owner, when the Owner, which the Owner,	k Histic (A3)		***************************************	pped Ma				t or Peat (S3) (LRR K, L, R)
The state of the s	rogen Sulfide (A4	l)	Towns and the second	my Muck		al (F1)	Iron-Manganese	Masses (F12) (LRR K, L, R)
1	tified Layers (A5)			my Gley			Very Shallow Da	rk Surface (TF12)
The second secon	n Muck (A10)		The second secon	leted Ma			Other (explain in	remarks)
Name and Address of the Park o	leted Below Dark	Surface	(A11) Red	lox Dark	Surface	(F6)	-	***
	k Dark Surface (oleted Da	rk Surfac	ce (F7)	*Indicators of hydr	ophytic vegetation and weltand
San	dy Mucky Minera	I (S1)	Rec	lox Depre	essions ((F8)	hydrology must b	e present, unless disturbed or
			-					problematic
Restrictive	Layer (if observe	ed):	gran organism minimum processors Steeling to Law					
Туре:	,	,					Hydric soil presen	nt? Y
Depth (inche	s):							Manage and Comment of the State
Remarks:								
HYDROLO	GY							
	drology Indicato	rs.						
	cators (minimum		required: check	all that a	nnly)		Secondary Ind	licators (minimum of two required)
		of one is	required, check	Aquatic l		13)		Soil Cracks (B6)
	Water (A1) ter Table (A2)			True Aqu				e Patterns (B10)
Saturation			-			Odor (C1		son Water Table (C2)
	arks (B1)		-					Burrows (C8)
-	t Deposits (B2)			(C3)				on Visible on Aerial Imagery (C9)
	osits (B3)				e of Redu	uced Iron		or Stressed Plants (D1)
	t or Crust (B4)		MACADOM CO.	Recent I	ron Redu	ction in T	illed Soils Geomor	phic Position (D2)
Iron Dep	osits (B5)			(C6)			FAC-Net	utral Test (D5)
	on Visible on Aeria			Thin Mu	ck Surfac	e (C7)	- ALPHANISTON -	
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)		
Water-St	ained Leaves (B9)	ARTON - 114	Other (E	xplain in	Remarks)	
Field Obser						0 00 10		
Surface water	er present?	Yes	No	X	Depth (i			
Water table		Yes	X No		Depth (i			dicators of wetland
Saturation p		Yes	X No		Depth (i	nches):	20 hy	ydrology present? N
(includes car				-				
Describe rec	orded data (strea	am gauge	e, monitoring well	, aerial p	hotos, p	revious ir	nspections), if available:	
Remarks:								
inciliains.								

Project/Site 4225 Dunkirk Lne N.	City/County: F		8 			
Applicant/Owner: Rodney Berg	***********	State: MN Sampling Point: SB-W				
Investigator(s): Kelly Bopray, PSS, CWD	-	Section, Township, Range: Sec. 17, T118N, R22W				
Landform (hillslope, terrace, etc.): stream channel		(M) (M)	e, convex, none): concave			
Slope (%): 1-4% Lat:			Deliver			
Soil Map Unit Name L132A Hamel-Glencoe depressional com		VIV/I (Classification: PFO1C, PEMC			
Are climatic/hydrologic conditions of the site typical for this tin			f no, explain in remarks)			
Are vegetation , soil , or hydrology		y disturbed?	SOLDANDER - \$00 PORT - \$ - \$000 PORT - \$0			
Are vegetation , soil X , or hydrology		roblematic?	Are "normal circumstances" present? Yes			
SUMMARY OF FINDINGS	Haturany pi	obicinatio:	(If needed, explain any answers in remarks.)			
Hydrophytic vegetation present?	T		(in nooded, oxpain any			
Hydric soil present?	Is the s	ampled area	within a wetland?			
Indicators of wetland hydrology present?			d site ID: Wetland B, PUBC			
			Total D, Toda			
Remarks: (Explain alternative procedures here or in a separate	te report.)					
Precipitation is 150-175	% of average	YTD. Soils	are mollisols.			
VEGETATION Use scientific names of plants.						
Absolu		Indicator	Dominance Test Worksheet			
Tree Stratum (Plot size: 30 ft) % Cov		Staus FAC	Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)			
1 Acer negundo 35 2 Fraxinus pennsylvanica 20		FACW	Total Number of Dominant			
3		171077	Species Across all Strata: 4 (B)			
4			Percent of Dominant Species			
5		Name and Address of the Address of the Owner	that are OBL, FACW, or FAC: 100.00% (A/B)			
55	= Total Cove	r				
Sapling/Shrub stratum (Plot size: 15 ft)			Prevalence Index Worksheet			
1 Rhamnus cathartica 80		FAC	Total % Cover of:			
2 Ribes cynosbati 5	N	FAC	OBL species $0 \times 1 = 0$ FACW species $60 \times 2 = 120$			
3			FAC species 120 x 3 = 360			
5		-	FACU species 0 x 4 = 0			
85	= Total Cove	r	UPL species 0 x 5 = 0			
Herb stratum (Plot size: 5 ft)			Column totals 180 (A) 480 (B)			
1 Phalaris arundinacea 40	Υ	FACW	Prevalence Index = B/A = 2.67			
2						
3			Hydrophytic Vegetation Indicators:			
4		-	Rapid test for hydrophytic vegetation			
5		DESCRIPTION OF THE PERSON	X Dominance test is >50% X Prevalence index is ≤3.0*			
6 7						
8			Morphogical adaptations* (provide supporting data in Remarks or on a			
9			separate sheet)			
10			Problematic hydrophytic vegetation*			
40	= Total Cove	r	(explain)			
Woody vine stratum (Plot size: 30 ft)			*Indicators of hydric soil and wetland hydrology must be			
1			present, unless disturbed or problematic			
2		endense in the second country	Hydrophytic vegetation			
0	= Total Cove	er	present? Y			
Remarks: (Include photo numbers here or on a separate shee	at)		Management of the second of th			
Themains. (molude photo numbers here of on a separate sheet						

SB-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			Redox Feat	ures				
(Inches)	Color (moist)	%	Color (mois	st) %	Type*	Loc**	Texture	Remarks	
0-5	10YR 2/1						loam		
5-10	10YR 2/1		10Y 5/1	5	D	M	loam		
10-14	10Y 3/1	-					clay loam		
14-18+	2.5Y 5/2		2.5Y 5/4	5	С	М	clay		
	2.01 0.2				1				
					 				
					-	<u> </u>			
					 	<u> </u>			
		L	<u></u>		<u></u>				
*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix									
Hydric Soil Indicators: Indicators for Problematic Hydric Soils: Histisol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) (LRR K, L, R)									
Histisol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) (LRR K, L, R) Histic Epipedon (A2) Sandy Redox (S5) Dark Surface (S7) (LRR K, L)									
THE PERSON NAMED IN COLUMN 1	ic Epipedon (A2) ck Histic (A3)			Stripped Ma			The state of the s	eat or Peat (S3) (LRR K, L, R)	
(1) 10 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	rogen Sulfide (A	1)		Loamy Muc	. 1050	al (F1)		e Masses (F12) (LRR K, L, R)	
	tified Layers (A5)			Loamy Gley	100			Park Surface (TF12)	
	n Muck (A10)	,	-	Depleted M			Other (explain		
***************************************	leted Below Dark	Surface	***************************************	Redox Dark					
National Confession (Confession Confession C	k Dark Surface (Depleted D	ark Surfa	ce (F7)	*Indicators of hy	drophytic vegetation and weltand	
San	dy Mucky Minera	I (S1)		Redox Dep	ressions ((F8)	hydrology must	be present, unless disturbed or	
***************************************								problematic	
Restrictive	Layer (if observe	ed):	A SHEET OF MICHIGAN STREET			T			
Type:	, ,	•					Hydric soil prese	ent? Y	
Depth (inche	es):				-			Addition to the state of the st	
Remarks:						L			
r comance.									
HYDROLO	OGY								
Wetland Hy	drology Indicate	ors:							
Primary Indi	cators (minimum	of one is	required; che	ck all that a	apply)		Secondary I	ndicators (minimum of two required)	
X Surface	Water (A1)			Aquatic	Fauna (B	13)	Surfac	e Soil Cracks (B6)	
High Wa	iter Table (A2)				quatic Plar		***************************************	ge Patterns (B10)	
X Saturation					en Sulfide			ason Water Table (C2)	
	arks (B1)				d Rhizosp	heres on		sh Burrows (C8)	
Constitution of the Consti	nt Deposits (B2)			(C3)	ce of Red	uced Iron	WARRANTON .	tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)	
X Drift Dep	it or Crust (B4)		-	-				orphic Position (D2)	
	osits (B5)			(C6)	non reac	1011011 111 1		eutral Test (D5)	
	on Visible on Aeria	al Imager	y (B7)		uck Surfac	ce (C7)	************	, ,	
	Vegetated Conca		NOT TO THE REPORT OF THE PARTY	Gauge	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (I	Explain in	Remarks)		
Field Obser	vations:								
Surface wat		Yes	X N	and the same of th	2000	inches):	0-6		
Water table		Yes	X N			inches):	Catalogue Contract Co	ndicators of wetland	
Saturation p		Yes	X N	0	_Depth (inches):	6	hydrology present? Y	
	(includes capillary fringe)								
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks:					-				
	water was pres	ent in th	he channel.						
	eessaase siitaa Eiliji								
1									

Project/Site 4225 Dunkirk Lne N.	City/	County: F	lymouth/Hei	nnepin Sampling Date: July 6, 2013
Applicant/Owner: Rodney Berg	_	State:	MN	
Investigator(s): Kelly Bopray, PSS, CWD	position in a second construction	Section	on, Townshi	page and a second secon
Landform (hillslope, terrace, etc.): terrace		Local r	elief (concav	ve, convex, none): convex
Slope (%): 2-6% Lat:		Long:		Datum:
Soil Map Unit Name L26B Shorwood silty clay loam		-	VWI (Classification: not Id'ed
Are climatic/hydrologic conditions of the site typical for the	his time c	of the year?	N (I	f no, explain in remarks)
Are vegetation , soil , or hydrolog		significantly	disturbed?	Are "normal circumstances"
Are vegetation , soil X , or hydrolog	Jy	naturally pr	oblematic?	present? Yes
SUMMARY OF FINDINGS	-			(If needed, explain any answers in remarks.)
Hydrophytic vegetation present? Y			500 montación de manera (a	
Hydric soil present?		Is the s	ampled area	a within a wetland?
Indicators of wetland hydrology present?		f yes, op	tional wetlar	nd site ID: upland adj. to Wetland B
Remarks: (Explain alternative procedures here or in a se	eparate re	eport.)		
		50 * 0 5000 500 500 500 500 500 500 500 500		
Precipitation is 150-	-175% c	of average \	YTD. Soils	s are mollisols.
VEGETATION Use scientific names of plants.				
production and the second seco	Absolute	Dominan	Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: 30 ft)	% Cover	t Species	Staus	Number of Dominant Species
1 Acer negundo	30	<u> </u>	FAC	that are OBL, FACW, or FAC:3 (A)
2 Fraxinus pennsylvanica	30	<u>Y</u>	FACW	Total Number of Dominant
3		College Carrier Desprise College		Species Across all Strata: 3 (B)
5	-	Management of the Parket of th	-	Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)
3	60	= Total Cover		tilat are OBE, I AOVI, OF AO. 100.0078 (AIB)
Sapling/Shrub stratum (Plot size: 15 ft)		70101 00701		Prevalence Index Worksheet
1 Rhamnus cathartica	90	Υ	FAC	Total % Cover of:
2 Acer saccharum	10	N	FACU	OBL species0 x 1 =0
3				FACW species 30 x 2 = 60
4		No.	-	FAC species 120 x 3 = 360
5	100	= Total Cover		FACU species 10 x 4 = 40 UPL species 0 x 5 = 0
Herb stratum (Plot size: 5 ft)	100	- Total Cover		Column totals 160 (A) 460 (B)
1 1erb stratum (Flot size. 3 it				Prevalence Index = B/A = 2.88
2				Trevalence muex = B/A = 2.00
3				Hydrophytic Vegetation Indicators:
4		***************************************		Rapid test for hydrophytic vegetation
5				X Dominance test is >50%
6				X Prevalence index is ≤3.0*
7			***************************************	Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9		-		separate sheet) Problematic hydrophytic vegetation*
	0	= Total Cover		(explain)
Woody vine stratum (Plot size: 30 ft)		, , , , , , , , , , , , , , , , , , , ,		*Indicators of hydric soil and wetland hydrology must be
1				present, unless disturbed or problematic
2		Amenic of the desired and the second of the		Hydrophytic
	0	= Total Cover	•	vegetation present? Y
				present:
Remarks: (Include photo numbers here or on a separate	sheet)			

		ibe to th				indicat	or or confirm the absence	ce of indicators.)
Depth	Matrix	0/		lox Feat		100**	Touturo	Pamarka
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	N 2/0		***************************************		ļ	ļ	clay loam	
12-22	10YR 2/1						clay loam	
22-26+	10Y 5/1						clay loam	
	A							
*Typo: C = C	Concentration D	- Donloti	on, RM = Reduce	d Matrix	MS - N	lacked S	and Graine **Locatio	n: PL = Pore Lining, M = Matrix
	il Indicators:	Dopicti	on, rue roddoc	- Tricking	., 1110	idonod o		ematic Hydric Soils:
	isol (A1)		San	dy Gleye	ed Matrix	(S4)		dox (A16) (LRR K, L, R)
-	ic Epipedon (A2)			dy Redo		, ,	Dark Surface (S	
Annual Contract of the Contrac	k Histic (A3)			oped Ma			5 cm Mucky Pea	t or Peat (S3) (LRR K, L, R)
Hyd	rogen Sulfide (A4	1)	Loa	my Muck	ky Minera	al (F1)		Masses (F12) (LRR K, L, R)
Stra	tified Layers (A5))	Annual Control		ed Matrix			rk Surface (TF12)
	n Muck (A10)				atrix (F3)		Other (explain in	remarks)
	leted Below Dark				Surface		555	2 2 2 2 2 2 2
-	k Dark Surface (ark Surfa			ophytic vegetation and weltand
San	dy Mucky Minera	1 (\$1)	Rec	iox Depr	essions ((F8)	nydrology must b	e present, unless disturbed or problematic
						_		problematic
	Layer (if observe	ed):						40
Type:							Hydric soil presen	it?
Depth (inche	s):				•			
Remarks:								
HVDDOLG	VOV							
HYDROLO								
	drology Indicato						20 2 10 1	
		of one is	required; check		AND THE RESERVE	40)		licators (minimum of two required)
	Water (A1)		Name and Associated States	SS 65	Fauna (B	9.5		Soil Cracks (B6) e Patterns (B10)
Saturatio	ter Table (A2)		No. of Contract of	(C)	uatic Plar	Odor (C1	NAME AND ADDRESS OF THE PARTY O	son Water Table (C2)
Water M			-					Burrows (C8)
	t Deposits (B2)			(C3)				on Visible on Aerial Imagery (C9)
- Communications	osits (B3)		-	Presenc	e of Redu	uced Iron	(C4) Stunted	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)		-	Recent I	ron Redu	iction in T		phic Position (D2)
	osits (B5)		N220122	(C6)	0 820 2	Name of the last	X FAC-Ne	utral Test (D5)
1	on Visible on Aeria		The state of the s	· Comment	ck Surfac			
	Vegetated Conca		ce (B8)		or Well Da		\	
	ained Leaves (B9)	-	Other (E	хріані ін	Remarks)	
Field Obser		Voc	No	V	Depth (i	inchoc):		
Surface wate Water table	Control of the Contro	Yes Yes	No	$\frac{x}{x}$	Depth (i		Inc	dicators of wetland
Saturation pr		Yes	No	$\frac{\lambda}{X}$	Depth (i		CONTROL DESCRIPTION OF THE PROPERTY OF THE PRO	/drology present? N
(includes car					• ' `	,		
		am gauge	e, monitoring well	, aerial p	hotos, p	revious ir	nspections), if available:	
	,	0 0			35005			
						4		
Remarks:								
l .								

Minnesota Wetland Conservation Act Notice of Application

Local Government Unit (LGU) City of Plymouth		Address 3400 Plymouth,		
		STATE OF THE PROPERTY OF THE P		
1.	PROJECT INFO	RMATION		
Applicant Name Rafik Moore	Project Name 11 Saratoga Lane		Date of Application 8/19/13	Application Number NA
Type of Application (check all that ap	oply):			
	☐ No-Loss	☐ Exemp	otion] Sequencing
☐ Replacement	Plan	☐ Banking	g Plan	
Summary and description of proposed	d project (attach addi	tional sheets as	necessary):	
On July 18 th , 2013 Arrowhead Enviro	9	•	ed a wetland delin	eation at 11
Saratoga Lane in Plymouth, MN. On	e wetiand was define	eated on-site.		
Wetland 1 is a Seasonnally Flooded,	Type 1L, PFO1A bas	sin dominated by	green ash, boxel	der, crrant.
and common buckthorn.		enderte tredition i America de la secule com trede a diagram de major de major de major de major de partir gr		,
		AND MALE PARTY OF THE SECOND		
2. APPLIC	CATION REVIE	W AND DECI	SION	
Signing and mailing of this complete Subp. 3 provides notice that an applie specified above. A copy of the applie	cation was made to the	he LGU under th	he Wetland Conse	
Name and Title of LGU Contact Pers	on (Comments must	be received by	(minimum 15
Derek Asche		ousiness-day cor		
Water Resources Manager Address (if different than LGU)		September 23, 2	ocation of decision	
Plymouth City Hall		September 24, 2		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
3400 Plymouth Blvd.	1 7	PAM		
Plymouth, MN 55447		Plymouth City		
Phone Number and E-mail Address 763-509-5526	I =	Decision-maker Staff	for this application	on:
dasche@plymouthmn.gov	j		oard or Council	
			28	
Signature: Denh Osc	le		Date: 8/29	1,3
Signature: V			Date: 0/0/	113

BWSR Forms 7-1-10 Page 1 of 2

3. LIST OF ADDRESSEES

X HCD TEP member: Ms. Se	tacey Lijewski, HCD, 701 F	ourth Avenue South, Suite	e 700, Minneapolis, MN,
55415-1600 (sent electronic	ally)	•	• • •
X BWSR TEP member: Ms. electronically)	Lynda Peterson, Dwok, 52	U Laiayette Ku. iv., St. ra	.ul, MIN, 55155 (sent
☐ LGU TEP member (if diffe	,		
X DNR TEP member: Meliss	a Doperalski, MN DNR, 12	00 Warner Road, St. Paul	l, MN, 55106 (sent
electronically) DNR Regional Office (if d	lifferent than DNR TEP me	emher)	
Ms. Kate Drewry, DNR Div			er Road, St. Paul, MN,
55106 (sent electronically)			
X WD or WMO (if applicable Eden Prairie, MN, 55346 (s		ster, Keystone Waters, LL	C, 16415 Hillcrest Lane,
X Applicant and Landowner			
Mr. Rafik, Moore, 11 Sarat	oga Lane, Plymouth, MN, 5		
Investors Capital, LLC., 33 X Members of the public wh		olis, MN, 55406	·
	ad Environmental Consulti	ng, 2909 Meadow Lane, N	Iound, MN, 55364 (sent
electronically)		,	, , ,
X Corps of Engineers Projec Suite 700, St. Paul, MN, 551			s, 180 5 th Street East,
BWSR Wetland Bank Coo	,	• *	
	4. MAILING INFO	DMATION	
NE 11-4 - CDWCD TED norma			10
For a list of BWSR TEP repres			
For a list of DNR TEP represe	ntatives: <u>www.bwsr.state.n</u>	nn.us/wetlands/wca/DNF	₹ TEP_contacts.pdf
Department of Natural Resour	,	7	
NW Region: Reg. Env. Assess. Ecol.	NE Region: Reg. Env. Assess. Ecol.	Central Region: Reg. Env. Assess. Ecol.	Southern Region: Reg. Env. Assess. Ecol.
Div. Ecol. Resources	Div. Ecol. Resources	Div. Ecol. Resources	Div. Ecol. Resources
2115 Birchmont Beach Rd. NE	1201 E. Hwy. 2	1200 Warner Road	261 Hwy. 15 South
Bemidji, MN 56601 For a map of DNR Administra	Grand Rapids, MN 55744	St. Paul, MN 55106	New Ulm, MN 56073
•	,		
For a list of Corps of Project N or send to:	lanagers: <u>www.mvp.usace</u>	.army.mil/regulatory/det	ault.asp?pageid=687
or send to.			
US Army Cor	ps of Engineers		
	ct, ATTN: OP-R		
180 Fifth St. F	•		
St. Paul, MN			
For Wetland Bank Plan application			
Minnesota Bo Wetland Bank	ard of Water and Soil Resc Coordinator	ources	
520 Lafayette			
St. Paul, MN			
	5. ATTACHN	TENTS	
In addition to the application,	-		
🔀 Wetland Delineation Rep	port dated July 30, 2013 b	oy AEC	
님			
 			

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11 Saratoga Lane – Plymouth, MN

Wetland Delineation Report For:

Rafik Moore 11 Saratoga Lane Plymouth, MN 55441



Wetland Consulting Services Performed by: Ben Carlson, WDC (#1125)

AEC Project # 2013-038

July 30, 2013

Arrowhead Environmental Consulting 1545 Minnie Avenue Orono, MN 55364

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Field Data Collection Forms (Data Sheets) Photo Log	

Project Overview

On July 18th, 2013 Arrowhead Environmental Consulting (AEC) performed a wetland delineation at the 11 Saratoga Lane property located in Plymouth, MN.

- One wetland basin was delineated within the parcel bounds; Wetland 1 is a Seasonally Flooded Basin located in the northern half of the property
- Wetland 1 is not indicated on the NWI map.
- Wetland 1 is not indicated on the Minnesota Department of Natural Resources Public Water Inventory Map (PWI).
- Wetland 1 is mapped in the Hamel hydric soil series.
- Wetland 1 is dominated by green ash, box elder, currant and common buckthorn.
- The wetland boundary was generally placed along the vegetative transition from hydrophytic to non-hydrophytic vegetation (which correlated to a rise in topography) and where hydrology indicators were present.

Introduction

On July 18th, 2013 Arrowhead Environmental Consulting (AEC) performed a wetland delineation at the 11 Saratoga Lane property located in Plymouth, MN. The legal description of the project location is: A part of the SW ¼ of Section 36, T118N, R22W, Hennepin County, Plymouth, Minnesota. The parcel is a total of 0.41 acres (according to the Hennepin County Website).

Methods

AEC utilized the 1987 US Army Corps of Engineers Wetlands Delineation Manual and Midwest Regional Supplement to perform the wetland delineation. A United States Geological Survey (USGS) Map (Hopkins Quad) (Figure 1), the Minnesota Department of Natural Resources (MN DNR) Public Water Inventory (PWI) Map (Figure 2), the Hennepin County Soil Survey Map (Figure 3), and the National Wetland Inventory (NWI) Map (Figure 4) were reviewed prior to the site visit and used in the delineation process. The delineated wetland boundary (approximate) is indicated on Figure 5 and is overlaid on a 2012 aerial image. AEC used the routine delineation method.

Wetland classification followed methods described by the USACOE - St. Paul District; Eggers and Reed "Wetland Plants and Plant Communities of MN and WI". The Circular 39 and Cowardin et al. classifications are given as well. The indicator status of plants was determined using the State of Minnesota – 2012 National Wetlands Plant List Final Ratings provided by the U.S. Army Corps of Engineers, Cold Regions Research and Engineering Laboratory.

Pink pinflags were used to delineate the wetlands and were numbered sequentially; flagging was hung from adjacent vegetation to aid in location of the pinflags. Sample points were taken to document the vegetation, soils, and hydrology indicators within representative upland and wetland locations.

Results

Office Results

Wetland 1 is not indicated on the NWI map. Wetland 1 is mapped in the Hamel soil series; the Hamel soil series is classified as hydric soil (SCS Hydric Soils of the United States). Wetland 1 is not indicated on the Minnesota Department of Natural Resources Public Water Inventory Map (PWI).

Field Results

Wetland 1

AEC classified Wetland 1 as a Seasonally Flooded Basin (Type 1L, PFO1A) wetland. Wetland 1 is dominated by green ash (Fraxinus pennsylvanica), boxelder (Acer negundo), currant (Ribes) species and common buckthorn (Rhamnus cathartica). The adjacent upland area is dominated by green ash, broad-leaf enchanter's nightshade (Circaea canadensis), and Virginia creeper (Parthenocissus quinquefolia).

The boundary for Wetland 1 exhibited rather broad slopes (a mild transition in topography); in general there was a defined transition between the currant and green ash (wetland) and the nightshade and Virginia creeper (upland). The wetland soil boring met the A12 (Thick dark surface) hydric soil indicator with Water Marks, Drift Deposits, Sparsely Vegetated Concave Surface, Geomorphic Position, and FAC — Neutral Test hydrology indicators present. The upland soil boring did not meet a hydric soil indicator and was lacking hydrology indicators. In general, the wetland boundary was placed where the nightshade and Virginia creeper were no longer dominant.

Discussion

One wetland basin was delineated within the parcel bounds. Areas delineated as wetland met the three criteria required for a wetland delineation; dominance of hydrophytic vegetation, presence of hydric soil, and (at a minimum) one primary hydrology indicator or two secondary hydrology indicators under normal conditions.

In order to be official the wetland delineation must be reviewed and approved by the Local Government Unit (LGU) and potentially other agencies (Local, State, Federal). Any work within or adjacent to a wetland will require Wetland Conservation Act (WCA) permits (and potentially other permits). Please consult with AEC if you plan on filling, draining, excavating wetlands within your project location.

If you have any questions regarding this report or any questions about our services please feel free to contact Ben Carlson at any time (612-237-5996).

Thank you,

Ben Carlson, WDC

Ben Coulson

Ecologist/Owner

Arrowhead Environmental Consulting

Data Sources:

USGS Quadrangle Map - Hopkins 7.5-Minute Quadrangle, Minnesota, U.S.A.

Minnesota Department of Natural Resources Protected Waters Inventory Map, Hennepin County 1983 (Revised 1996 data from the Mn DNR Data Deli, online).

Soil Survey of Hennepin County. U.S.D.A. Data obtained from the NRCS/SSURGO website.

United States Fish and Wildlife Service National Wetland Inventory Map – Hopkins Quadrangle. 1991. (Taken from May 1980 aerial photographs).

Aerial Photos were obtained the Land Management Information Center website (2012).

Literature Referenced/Technical Documents:

Environmental Laboratory. 1987. 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

U.S. Army Engineer Research and Development Center. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region. US Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

Eggers, Steve D. and Donald M. Reed. 1997. Wetland Plants and Plant Communities of Minnesota and Wisconsin. US Army Corps of Engineers, St. Paul District. 263pp, unclassified.

Shaw, S.P., and C.G. Fredine. 1956. Wetlands of the United States. U.S. Fish and Wildlife Service, Circular 39. 67pp.

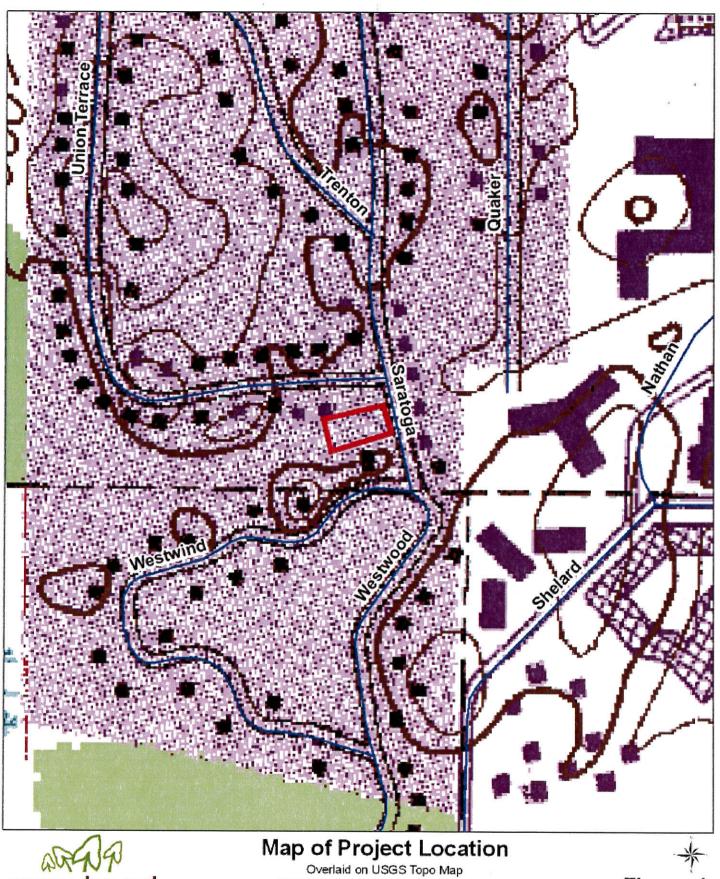
Cowardin, L.M., V. Carter, F.C. Golet, and R.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service, FWS/OBS-79/31. 103pp.

Sabine, B. J. 1999. National List of Plant Species that Occur in Wetlands: Region 3 – North Central (Indiana, Illinois, Iowa, Michigan, Minnesota, Missouri, Wisconsin). Resource Management Group, Inc. 77pp.

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National Technical Committee for Hydric Soils. 1991. *Hydric Soils of the United States*. USDA Soil Conservation Service, Washington, D.C., Misc. Publication Number 1491. 1991.

Figures





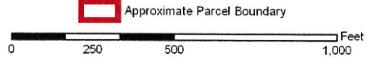
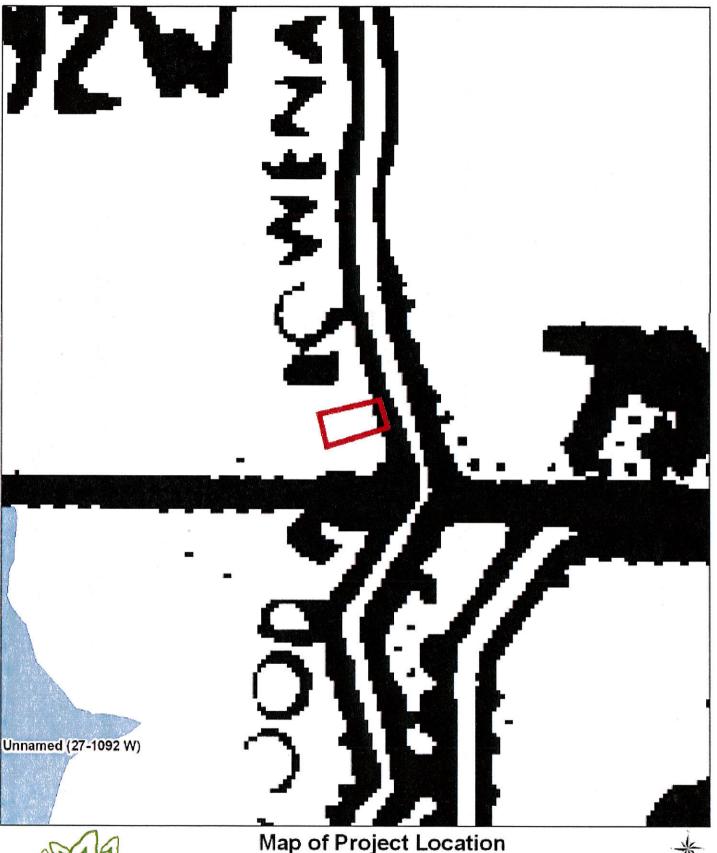




Figure 1

Rafik Moore 11 Saratoga Lane Plymouth, MN 55441





Map of Project Location

Overlaid on MN DNR PWI Map

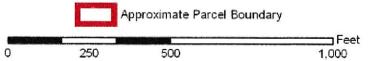




Figure 2

Rafik Moore 11 Saratoga Lane Plymouth, MN 55441





Hennepin County Soil Survey

Overlaid on 2012 Aerial Image

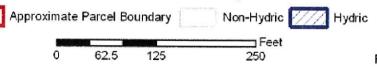
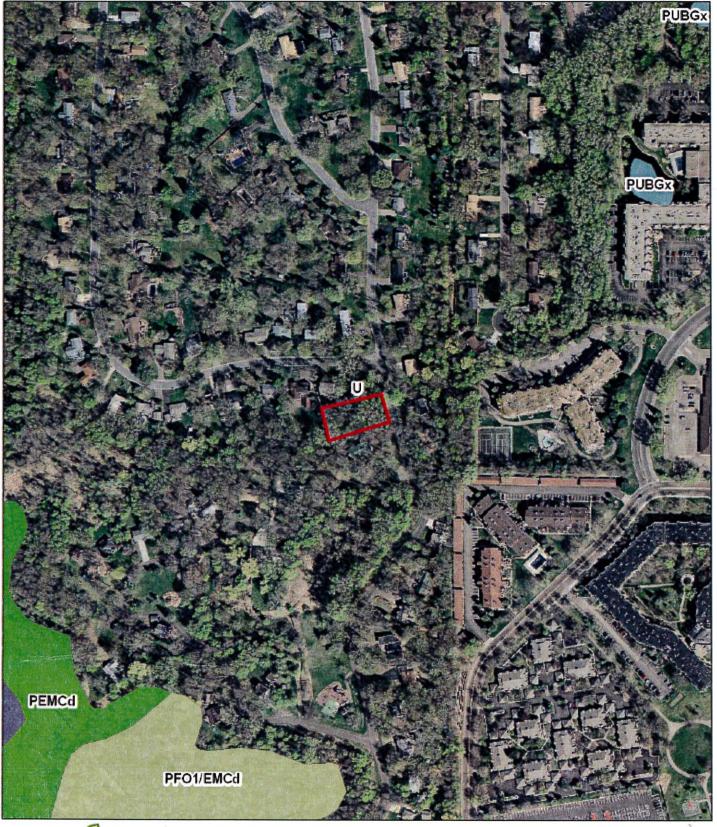




Figure 3 Rafik Moore 11 Saratoga Lane Plymouth, MN 55441





National Wetland Inventory Map

Overlaid on 2012 Aerial Image

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250

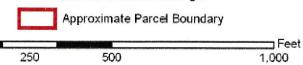




Figure 4 Rafik Moore 11 Saratoga Lane Plymouth, MN 55441





Wetland Delineation Map

Overlaid on 2012 Aerial Image

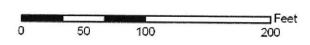




Figure 5

Rafik Moore 11 Saratoga Lane Plymouth, MN 55441

Supporting Data

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WETLAND D	ETEF	₹MIN	ATI(ON DA	AΤΑ	FORM	1 - Mi	idwest	Regio	n				
Project/Site 11 Saratoga				County:		Plymout				ng Date:		7/18/2	2013	
Applicant/Owner: Rafik Moore	V				ate:		MN	•		g Point:		1-1		
Investigator(s): BPC (VVDC #1125)					ecti	on, Tow	/nship	, Range:		Sec. 36		N, R22	 2V/V	
Landform (hillslope, terrace, etc.):	Slop	pe		.00				, convex	···			псауе		
Slope (%): 1 Lat:				Long:					Datum:					
Soil Map Unit Name Hamel (Hydric)							MM C	lassificat	ion:		No	ne		
Are climatic/hydrologic conditions of the site t	/pical	for thi	is time	of the	yea	r N	(11	f no, expl	ain in re	marks)				
Are vegetation , soil , or I	hydrok	ogy		signif	icant	ly distu	rbed?		\re "nor	mal circ	umstar	nces"		
	hydrol	ogy		natur	ally p	roblema	atic?					sent?	Yes	;
SUMMARY OF FINDINGS								(If need	led, exp	lain any	answ	ers in	rema	rks.)
Hydrophytic vegetation present?	N	1												
Hydric soil present?	N			ls	the	sampl	ed ar	ea withi	n a wet	tland?	ŀ	vi .		
Indicators of wetland hydrology present?	N	11		уе	s, or	tional v	vetlan	d site ID:						
Remarks: (Explain alternative procedures here	or in	a sep	arate)	report										7
4 4 4 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6									l		h			
Above a	/erag	e pre	cipit	ation 1	for 2	013 gr	ʻowin;	g seasc	n.					
VEGETATION Use scientific names	of pi	ants.										\top		
	T	· · · · · · · · · · · · · · · · · · ·	olute	t		Indica	tor	Domin	ance T	est Wo	rkshe	et		Т
Tree Stratum (Plot size: 30'	5	-	over	Spec	-	Stau	-	1	ecies th					-
1 Fraxinus pennsylvanica		2	20	Y	7	FAC	W			W, or F		2	(,	A)
2 Ulmus americana		1	0	Y		FAC	W	Total N	lumber o	of Domin	nant			
3								Specie	s Acros	s all Str	ata:	4	(1	B)
4		-						Sp	ecies th				-	
5	1	 				<u> </u>		T T	FAC	W, or F	AC:	50.009	% (/	A/B)
Sapling/Shrub stratu (Plot size: 15'	Щ,	ال.	80	= Total	Cove	<u># </u>	<u> </u>	Depart		-1 3.60				
1						-			ence in Cover d)[K:SIII	eet		
2	-	-		-		-	-	OBL sp); 	x 1 =	0		
3			\rightarrow	+		 		FACA:		30	x 2 =	60		
4				1		<u> </u>		FAC sp		10	×3=	30		-
5								FACU s		65	× 4 =	26	ō	-
			0 :	= Total •	Cove	r		UPL sp	~		x5=	0		
<u>Herb stratum</u> (Plot size: 5')	41.						Column	totals	105	(A)	35	(i	B)
1 Parthenocissus quinquefolia			0	Y		FAC	——	Prevale	nce Inde	ex = B/A	, =	3.33		
2 Circaea canadensis		31		Y		FAC								
3 Alliaria petiolata		11		N		FAC			hytic V	************				_
4 Arctium minus 5		 	5	N		FAC	<u>U </u>		id test f			; veg e l	tation	1
8		 	-	-		-			ninance valence					
7		+-	-	-	-	-		+ + -					<u>_</u> _L_	
8	_	\vdash			-	-		: 1	phogica porting	-		***		
9		\vdash			_	-		_ , ,	ıporung: aratesh		(Ciliari	is ur o	lia	
10						-			blematic		hvtic v	edetat	inn*	
	T	7:	5 :	Total	Cove	r		7 1	plain)	111			.1011	
Woody vine stratum (Plot size: 30')				H				ors of hyd	rie soil a	nd wetla	and hade	ologii	must
1									present, u					
2								,	irophyt	ž.				
	1	0) :	Total	Cove	r			retation	i				
	 -	igspace		+-+-	1-+			h: z	sent?	ŀ	-	++		
Remarks: (Include photo numbers here or on a	separ	rate si	heet)	<u> </u>										

	scription: (Des	crib e to	the dep	pth i	neede	d to	docur	nent th	e ind	icator :	or co	erfir	m th	ie al:)se	nce	of it
Depth	<u>Matrix</u>				Redox	Featu	<u>ires</u>										
(Inches)	Color (moist)	%	Color (mois	it)	%	Туре	* Loc*	*	Te	xture	•					Rem
0-20	10YR 2/1	100								Loam							
20 -26	2.5Y 8/3	98	7.5YF	R 4/6	3	2	U	M		Sandy o	lay k	oam					
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*Type: C = 0	l Concentration, D	I ≖ Deplet	ion, RM =	Rec	luced I	vlatrix	. MS =	Masked	San	l Grains		**L(ocatio	on: Pl	L = 1	Pore	: Linii
	oil Indicators:		· · · · · · · · · · · · · · · · · · ·					TT		Indica							
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	ic Epipedon (A2))		_	Sandy	-				- 	~~~~~~		ce (S				
(ck Histic (A3)	*********		-	Strippe				_		~~~~~~		y Pea	*****			
h	lrogen Sulfide (A	(4)						eral (F1)		- 			nese	******	-		
	atified Layers (A						·	rix (F2)	1				ow D				
	n Muck (A10)			\rightarrow	Deplet						*******	***	lain ir	damment des auf ma	A		
Dep	leted Below Dar	k Surfac	e (A11)		-			e (F6)	1		<u>-</u>	T	7				
Thic	k Dark Surface	(A12)		Ħ	Deplet	ed Da	rk Sur	face (F7	<u> </u>	*India	ator	s of	hydr	ophy	tic \	/eae	tatio
San	idy Mucky Minera	al (S1)		-				s (F8)					ust b			_	
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Photo 1: View of Wetland 1 edge at transect 1-1 location facing north.



Photo 2: View of Wetland 1 from the center of the basin facing west.