Appendix C

Wetland Delineation Report



Wetland Delineation Report

Basset Creek Park Pond & Winnetka Pond - East

Prepared for Bassett Creek Watershed Management Commission

November 8, 2016

Wetland Delineation Report

November 8, 2016

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1.0 Introduction

The Bassett Creek Watershed Management Commission is submitting a Wetland Delineation Report in preparation for a sediment dredging project within Basset Creek Park Pond and Winnetka Pond. The project sites are located in the City of Crystal, Hennepin County, Minnesota. Basset Creek Park Pond is located at 32nd Avenue North and Xenia Avenue North within Section 21 of Township 118 North, Range 21 West. Winnetka Pond is located south of the Winnetka Village Apartments at 7710 36th Avenue North within Section 17 of Township 118 North, Range 21 West. See **Figure 1** for a project location map depicting both pond locations.

Bassett Creek Park Pond and Winnetka Pond were field delineated to identify the wetland extent of each pond. Wetland plant communities within each delineated pond were also identified.

This Wetland Delineation Report has been prepared in accordance with the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual ("1987 Manual", USACE, 1987), the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (USACE, 2010) and the requirements of the Minnesota Wetland Conservation Act (WCA) of 1991. Barr delineated the wetland boundary and determined wetland types within the evaluation area on October 11, 2016.

This report includes general environmental information (Section 2.0), descriptions of the delineated wetland area (Section 3.0), and a discussion of regulations and the administering authorities (Section 4.0). The **Tables** section includes the precipitation data. The **Figures** section includes the Site Location Map, Topography Maps, National Wetland Inventory (NWI) Maps, Public Waters Inventory (PWI), Soil Survey Maps, and Wetland Boundary Maps. **Appendix A** includes Wetland Data Forms, and site photographs are included in **Appendix B**.

2.0 General Environmental Setting

2.1 Site Description

The proposed dredging project sites are located in the City of Crystal. Bassett Creek Park Pond is located in Bassett Creek Park, which consists of open grassy fields used for sports and recreation, wooded uplands, and various wetland communities. Bassett Creek Park is surrounded by medium density residential area. Winnetka Pond is located south of the Winnetka Village Apartments and is partially surrounded by a narrow buffer of hardwood trees, and grasses with manicured lawn further upslope. Areas surrounding Winnetka Pond consist of commercial and industrial area with medium density residential area located further beyond (**Figure 1**).

2.2 Topography

The Bassett Creek Park Pond project site generally has steep topography in areas leading into the pond along the delineated edges. Topography within the basin generally has moderate undulations in areas that are not open water. Adjacent upland areas are generally flat or moderately undulating throughout most of the park area with the exception of some steep hilly areas to the west (**Figure 2**).

The Winnetka Pond project site generally has steep topography in areas leading into the pond along the delineated edges. Floodplain forest wetland has a more gradual topographic transition from upland to wetland and moderate undulations within it. Adjacent upland areas are generally flat in developed areas and hillier in areas of open greenspace (**Figure 3**).

2.3 Precipitation

Recent precipitation data were compared to historic data for evaluating annual and monthly deviations from normal conditions. Simulated precipitation data were obtained from the Minnesota Climatology Working Group, Wetland Delineation Precipitation Data Retrieval from a Gridded Database (http://climate.umn.edu/gridded_data/precip/wetland/wetland.asp) for wetlands in Hennepin County, Township 118 North, Range 21 West, Section 17.

Antecedent (preceding) moisture conditions were within the wetter than the normal range based on precipitation for the three months prior to the October 11, 2016 site visit. July through September were all within the wetter than the normal range. These data were obtained from NRCS climate station 215838, New Hope Weather Station (**Table 1**). The water year has varied between normal and wet for the past six years from 2011 through 2016 (**Table 2**).

2.4 National Wetland Inventory

The NWI Map has identified five wetland types at the Bassett Creek Park Pond project site: shallow open water community (PUBG), shrub swamp (PSS1A), floodplain forest (PFO1A), seasonally flooded basin (PEM1A), and deep marsh (PABG) (**Figure 4**). One wetland type was identified at the Winnetka Pond project site: shallow open water (PUBGx) (**Figure 5**).

2.5 Water Resources

The Minnesota Department of Natural Resources (MnDNR) Public Waters Inventory (PWI) has identified Basset Creek Park Pond (27-646P) and Winnetka Pond (27-629P) as public water wetlands, which are within the delineated wetland boundaries of both ponds (**Figure 6**). Bassett Creek Park Pond and Winnetka Pond are not identified by the Minnesota Pollution Control Agency (MPCA) as impaired waters.

2.6 Soil Resources

Soil information for the project site was obtained from the Natural Resources Conservation Service SSURGO Database. One soil map unit was identified within the Bassett Creek Park Pond project site: Udorthents, wet substratum, 0 to 2 percent slopes (U2A) (**Figure 7**). Four soil map units were identified within the Winnetka Pond project site: Udorthents wet substratum, complex, 0 to 2 percent slopes (U1A); Udorthents wet substratum, 0 to 2 percent slopes (U2A); Urban land-Udorthents (cut and fill) complex, 0 to 6 percent slopes (U6B); Urban land-Lester complex, 2 to 18 percent slopes (L52C) (**Figure 8**). Remaining areas within both pond sites are identified as Water (W) in the SSURGO Database. All soils within both of these project sites are identified as non-hydric.

3.0 Wetland Delineation

3.1 Wetland Delineation and Classification Methods

Wetlands within the Bassett Creek Park Pond and Winnetka Pond project sites were delineated and classified during a site visit on October 11, 2016. The wetland delineation was established according to the Routine On-Site Determination Method specified in the U.S. Army Corps of Engineers Wetlands Delineation Manual (1987 Edition) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (USACE, 2010).

The delineated wetland boundaries and sample points were surveyed using a Global Positioning System (GPS) with sub-meter accuracy (**Figures 9 & 10**).

Wetlands were classified using the U.S. Fish and Wildlife Service (USFWS) Cowardin System (Cowardin et al., 1979), the USFWS Circular 39 system (Shaw and Fredine, 1956), and the Eggers and Reed Wetland Classification System (Eggers and Reed, 1977).

Soil borings were placed in and around wetland areas, to a depth of at least 24 inches below the ground surface where possible. Representative soil samples from each boring were examined for the presence of hydric soil indicators using the Natural Resources Conservation Service (NRCS) hydric soil indicators (Version 7.0). Soil colors (e.g., 7.5YR 4/2, etc.) were determined using a Munsell® soil color chart and noted on the Wetland Data Forms **Appendix A**.

Hydrologic conditions were evaluated at each soil boring, and this information was also noted on the Wetland Data Forms. The dominant plant species were identified, and the corresponding wetland indicator status of each plant species was determined and noted on the Wetland Data Forms (**Appendix A**). Photographs taken at the time of the site visit are provided in **Appendix B**.

3.2 Wetland Descriptions

One wetland boundary was delineated within the Bassett Creek Park Pond project site consisting of five wetland communities. One wetland boundary was delineated within the Winnetka Pond project site consisting of two wetland communities. Descriptions and assessments of these wetland areas are provided below, with representative photographs in **Appendix B**.

3.2.1 Bassett Creek Park Pond

Bassett Creek Park Pond is an 11.3 acre wetland complex made up of five wetland communities (**Figure 9**). Each wetland community type within Bassett Creek Park Pond is identified below using Eggers & Reed, Circular 39, and Cowardin wetland classification systems respectively:

- Shallow Open Water, Type 5, PUBG
- Shrub Swamp, Type 6, PSS1A
- Shallow Marsh, Type 3, PEMC
- Floodplain Forest, Type 1L, PFO1A
- Deep Marsh, Type 4, PUBGx

Shallow open water community is the dominant wetland type within Bassett Creek Park Pond and totals approximately 9.3 acres. Shallow open water community is mostly located in the central and southern areas of Bassett Creek Park Pond and generally has a steep and abrupt wetland boundary. Dominant vegetation observed was lesser duckweed (*Lemna minor*) near the shoreline in some areas, but no other emergent, floating-leaf, or submerged aquatic vegetation was observed from the shoreline within shallow open water community. Reed canary grass (*Phalaris arundinacea*) was dominant along the periphery of shallow open water community.

Shrub swamp community is located on the northwest side of Bassett Creek Park Pond (0.9 acres); and in the west-central (0.3 acres) and southwest-central (0.1 acres) areas of the pond surrounded by shallow open water community. The total area of shrub swamp community located in Bassett Creek Park Pond is 1.2 acres. Dominant shrubs observed were sand-bar willow (*Salix interior*). Topography within both areas is generally flat or moderately undulating. Bassett Creek extends south through floodplain forest community and then through shrub swamp community toward the shallow open water areas of Bassett Creek Park Pond.

Floodplain forest community is located at the northwest tip of Bassett Creek Park Pond and totals approximately 0.3 acres. Dominant trees within the floodplain forest are ash-leaf maple (*Acer negundo*), quaking aspen (*Populus tremuloides*), and Eastern cottonwood (*Populus deltoides*). There is moderately undulating topography throughout the floodplain forest community but steep and abrupt slopes leading into it from the east side. Bassett Creek extends south through floodplain forest community and then through shrub swamp community toward the shallow open water areas of Bassett Creek Park Pond.

Shallow marsh community fringes portions of Bassett Creek Park Pond on the northeast, and western sides. The two shallow marsh areas are approximately 0.1 acres each totaling 0.2 acres. Both shallow marsh areas are dominated by narrow-leaf cattail (*Typha angustifolia*) and have flat topography.

Deep marsh community is located within the shrub swamp community on the northwest side of Bassett Creek Park Pond and totals approximately 0.2 acres. This area was likely excavated based on the steep and abrupt slopes leading into it from the shrub swamp community and its regular oval shape. Lesser duckweed covers the entire surface water area of the deep marsh community.

Sample data was collected along the delineated wetland boundary of Bassett Creek Park Pond. Sample data was collected within shallow marsh community on the northeast side, shrub swamp community on the north-central side, and floodplain forest area on the northwest side.

Dominant vegetation within shallow marsh community at wetland Sample Point B-1w was narrow-leaf cattail, stinging nettle (*Urtica dioica*), and fowl blue grass (*Poa palustris*). Primary hydrology indicators included high water table (A2) at 3 inches below the soil surface, and saturation (A3) at the soil surface. Secondary indicators of hydrology present were geomorphic position (D2), and a positive FAC-neutral test (D5). Soils had loamy textures with peat intermixed throughout the soil profile and a low chroma and value matrix with prominent redox features at the surface down to 8 inches. Hydric soil indicators identified were loamy mucky mineral (F1) and redox dark surface (F6). The transition to upland was defined by an absence of hydrology and hydric soil indicators at upland Sample Point B-1u.

Dominant vegetation within shrub swamp community at wetland Sample Point B-2w was sandbar willow, reed canary grass, water smartweed (*Persicaria amphibia*), and late goldenrod (*Solidago gigantea*). Saturation (A3) at the soil surface was the only primary indicator of hydrology present. Secondary indicators of hydrology present were geomorphic position (D2), and a positive FAC-neutral test (D5). Soil textures included silt loams at the surface and transitioned to peat soils. Low chroma and value matrix colors were present throughout the profile with prominent redox concentrations from 8 to 15 inches below the soil surface. The identified hydric soil indicator was redox dark surface (F6). The transition to upland was defined by an absence of vegetation, hydrology and hydric soil indicators at upland Sample Point B-2u.

Dominant trees and herbaceous vegetation within floodplain forest community at wetland Sample Point B-3w was Eastern cottonwood, quaking aspen, ash-leaf maple, reed canary grass and stinging nettle. There were no primary hydrology indicators, but secondary indicators of hydrology included geomorphic position (D2), and a positive FAC-neutral test (D5). Soils had silt loam textures with a low chroma and value matrix colors throughout the 40-inch soil profile and prominent redox concentrations from 7 to 40 inches. The identified hydric soil indicator was redox dark surface (F6). The transition to upland was defined by an absence of hydrology and hydric soil indicators at upland Sample Point B-3u.

3.2.2 Winnetka Pond

Winnetka Pond is a 3.5 acre wetland complex made up of two wetland communities (**Figure 10**). Both wetland community types within Winnetka Pond are identified below using Eggers & Reed, Circular 39, and Cowardin wetland classification systems respectively:

- Shallow Open Water, Type 5, PUBGx
- Floodplain Forest, Type 1L, PFO1A

Shallow open water community is the dominant wetland type within Winnetka Pond and totals approximately 3.2 acres. Topography is generally steep and abrupt along the wetland boundary leading into the pond. No emergent, floating-leaf, or submerged aquatic vegetation was observed within shallow open water community during the time of the site visit. Reed canary grass and Canada goldenrod was present along the fringes of the shallow open water community mostly in uplands.

Floodplain forest community is located along the eastern fringe of Winnetka Pond and totals approximately 0.3 acres. Dominant trees within the floodplain forest are ash-leaf maple, quaking aspen, and Eastern cottonwood. Topography is mostly flat throughout the floodplain forest community but is steep and abrupt leading into it from upland areas on the east side.

Dominant trees and herbaceous vegetation within floodplain forest community at wetland Sample Point W-1w was quaking aspen, ash-leaf maple, reed canary grass and river club-rush (*Schoenoplectus fluviatilis*). Primary hydrology indicators included high water table (A2) at 9 inches below the soil surface, saturation (A3) at 2 inches below the soil surface, and aquatic fauna (B13). Secondary indicators of hydrology present were geomorphic position (D2), and a positive FAC-neutral test (D5). Soils had clay loam textures at the surface and transitioned to clay textures from 10 inches to 24 inches. Soil matrix colors had a low chroma and value and had prominent redox concentrations throughout the 24-inch soil profile. The identified hydric soil indicator was redox dark surface (F6). The transition to upland was defined by an absence of hydrology and hydric soil indicators at upland Sample Point B-3u.

4.0 Regulatory Overview

The USACE regulates the placement of dredge or fill materials into wetlands that are located adjacent to or are hydrologically connected to interstate or navigable waters under the authority of Section 404 of the Clean Water Act. If the USACE has jurisdiction over any portion of a project, they may also review impacts to wetlands under the authority of the National Environmental Policy Act.

Filling, excavating, and draining wetlands are also regulated by the Minnesota Wetland Conservation Act (WCA), and the Minnesota Public Waters Work Permit Program, which are administered by the City of Crystal and the Minnesota Department of Natural Resources (MnDNR) respectively. The USACE, the City of Crystal and the DNR should be contacted before altering any wetlands. In addition, delineated wetland boundaries may be reviewed by a Technical Evaluation Panel (TEP) consisting of representatives from the City of Crystal, Minnesota Board of Water and Soil Resources, and Hennepin County. Representatives from the MnDNR, and the USACE may also review this wetland delineation and make a determination as to whether they will take jurisdiction.

5.0 References

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- U.S. Army Corps of Engineers. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region*. August 2010. Wetlands Regulatory Assistance Program.
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- U.S. Fish and Wildlife Service. 1956. *Wetlands of the United States Circular 39*. U.S. Government Printing Office, Washington, D.C.

Tables

Table 1 Antecedent Moisture Conditions Prior to October 11, 2016 Site Visit Bassett Creek Park Pond & Winnetka Pond Wetland Delineation Crystal, MN

Precipitation Worksheet Using Gridded Database

Precipitation data for target wetland location:

County: HennepinTownship Number: 118NTownship Name: Brooklyn CenterRange Number: 21WNearest Community: CrystalSection Number: 17

Aerial photograph or site visit date:

Tuesday, October 11, 2016

Score using 1981-2010 Summary Statistics

(value are in inches)	first prior month:	second prior month:	third prior month:
	September 2016	August 2016	July 2016
estimated precipitation total for this location:	6.58R	7.48R	6.53
there is a 30% chance this location will have less	2.34	3.48	2.82
than:	2.54	3.40	2.02
there is a 30% chance this location will have	3.91	5.07	4.39
more than:	5.91	3.07	4.33
type of month: dry normal wet	wet	wet	wet
monthly score	3 * <mark>3</mark> = 9	2 * <mark>3</mark> = 6	1 * <mark>3</mark> = 3
multi-month score:		19 (\Mot)	
6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)		18 (Wet)	

Table 2 Precipitation in Comparison to WETS Data Bassett Creek Park Pond & Winnetka Pond Wetland Delineation Crystal, MN

Precipitation data for target wetland location:

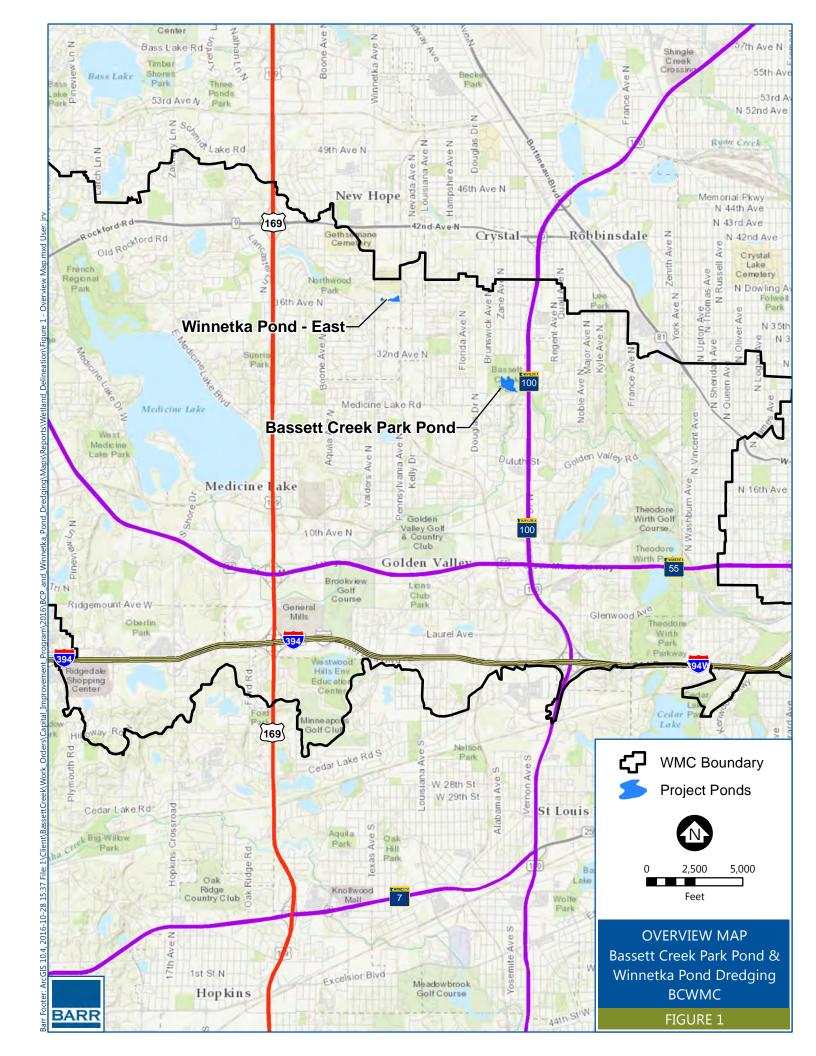
County:HennepinTownship Number:118NTownship Name:Brooklyn CenterRange Number:21WNearest Community:CrystalSection Number:17

Precipitation Totals are in Inches							
Color Key	Multi-month Totals:						
total is in lowest 30th percentile of the period-of-record distribution	WARM = warm season (May thru September)						
total is => 30th and <= 70th percentile	ANN = calendar year (January thru December)						
total is in highest 30th percentile of the period-of-record distribution	WAT = water year (Oct. previous year thru Sep. present year)						

A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.

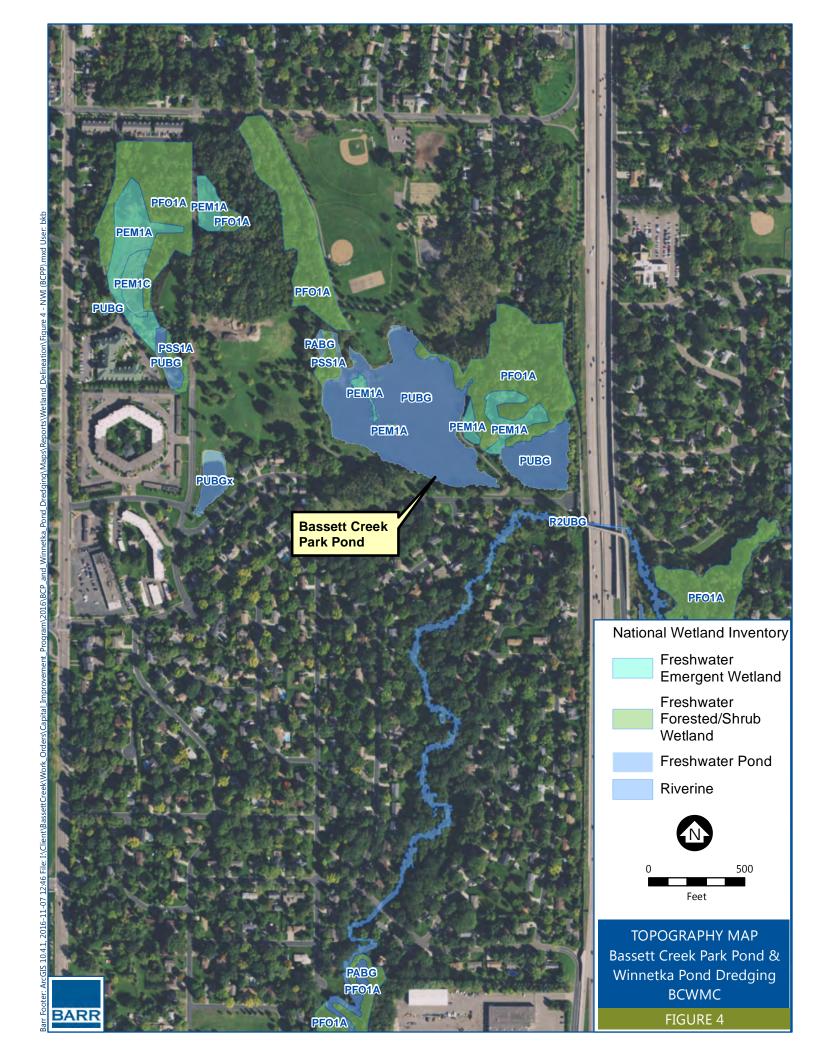
						Period-	of-Recor	d Summa	ry Statist	ics					
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	WARM	ANN	WAT
30%	0.53	0.50	1.14	1.63	2.61	3.23	2.38	2.75	1.89	1.20	0.74	0.57	16.16	26.01	26.07
70%	1.10	1.19	2.07	2.78	4.37	5.55	4.37	4.47	3.84	2.72	1.92	1.35	21.34	32.30	32.02
mean	0.89	0.90	1.66	2.44	3.69	4.48	3.85	3.66	3.08	2.21	1.53	1.03	18.76	29.35	29.45
	1981-2010 Summary Statistics														
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec WARM ANN										WAT					
30%	0.54	0.42	1.38	2.28	2.83	3.52	2.82	3.48	2.34	1.32	1.06	0.70	18.51	30.76	28.63
70%	1.21	1.03	2.10	3.14	4.61	5.77	4.39	5.07	3.91	3.60	2.15	1.40	22.46	35.08	35.77
mean	0.87	0.80	1.92	2.89	3.79	4.68	4.30	4.22	3.47	2.57	1.81	1.23	20.45	32.53	32.34
							Year-te	o-Year Da	ta						
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	WARM	ANN	WAT
2016	0.31	0.79	1.60	3.66	2.38	2.84	6.53	7.48R	6.58R				25.81		40.86
2015	0.33	0.27	0.63	2.07	4.40	3.31	6.95	3.48	3.94	2.82	4.19	1.68	22.08	34.07	28.80
2014	1.15	1.37	0.80	7.26	4.26	10.16	3.31	3.12	1.50	1.16	1.20	1.06	22.35	36.35	39.62
2013	0.68	1.20	2.12	4.60	4.80	7.81	4.21	1.31	1.27	4.44	0.61	1.64	19.40	34.69	32.00
2012	0.53	2.05	1.32	2.87	9.61	4.21	4.24	1.33	0.54	1.44	0.90	1.66	19.93	30.70	28.65
2011	0.93	0.89	2.20	3.21	6.38	3.92	7.83	4.46	0.49	0.91	0.17	0.87	23.08	32.26	37.66
2010	0.59	0.85	0.93	2.02	2.86	6.25	3.64	5.85	5.69	1.96	2.14	3.25	24.29	36.03	37.47
2009	0.48	1.02	1.87	1.53	0.45	3.90	1.07	6.41	0.71	5.95	0.57	2.27	12.54	26.23	21.76
2008	0.14	0.52	2.08	4.05	2.64	4.41	2.15	2.53	2.19	1.64	1.17	1.51	13.92	25.03	28.02
2007	0.59	1.40	3.53	2.51	3.22	2.10	2.32	5.89	5.02	5.39	0.06	1.86	18.55	33.89	30.89
2006	0.64	0.41	1.88	3.83	4.61	4.32	1.84	5.13	3.41	0.68	1.07	2.56	19.31	30.38	33.67
2005	1.27	1.06	1.32	2.53	3.62	6.26	2.52	4.00	7.54	4.34	1.86	1.40	23.94	37.72	35.23
2004	0.55	1.54	2.14	2.67	5.87	5.02	3.66	1.69	4.95	3.57	1.05	0.49	21.19	33.20	31.19
2003	0.27	0.98	1.66	3.05	5.61	8.29	1.74	0.35	2.43	1.00	1.12	0.98	18.42	27.48	28.65
2002	0.58	0.56	1.98	4.18	4.73	8.80	7.69	6.32	4.08	3.94	0.08	0.25	31.62	43.19	43.74
2001	1.38	1.49	1.01	7.52	5.30	4.66	2.59	3.61	3.84	0.97	3.22	0.63	20.00	36.22	37.78
2000	0.97	1.23	1.04	1.56	3.54	3.64	6.43	3.75	2.55	0.97	4.06	1.35	19.91	31.09	26.50
1999	1.34	0.35	1.75	3.40	5.94	5.57	4.87	3.88	2.40	0.63	0.80	0.36	22.66	31.29	34.89
1998	1.31	0.85	3.94	2.30	4.17	4.40	2.92	5.23	1.33	2.88	1.82	0.69	18.05	31.84	29.44
1997	1.79	0.23	1.40	1.13	1.85	2.95	10.93	4.39	2.61	1.98	0.75	0.26	22.73	30.27	38.08

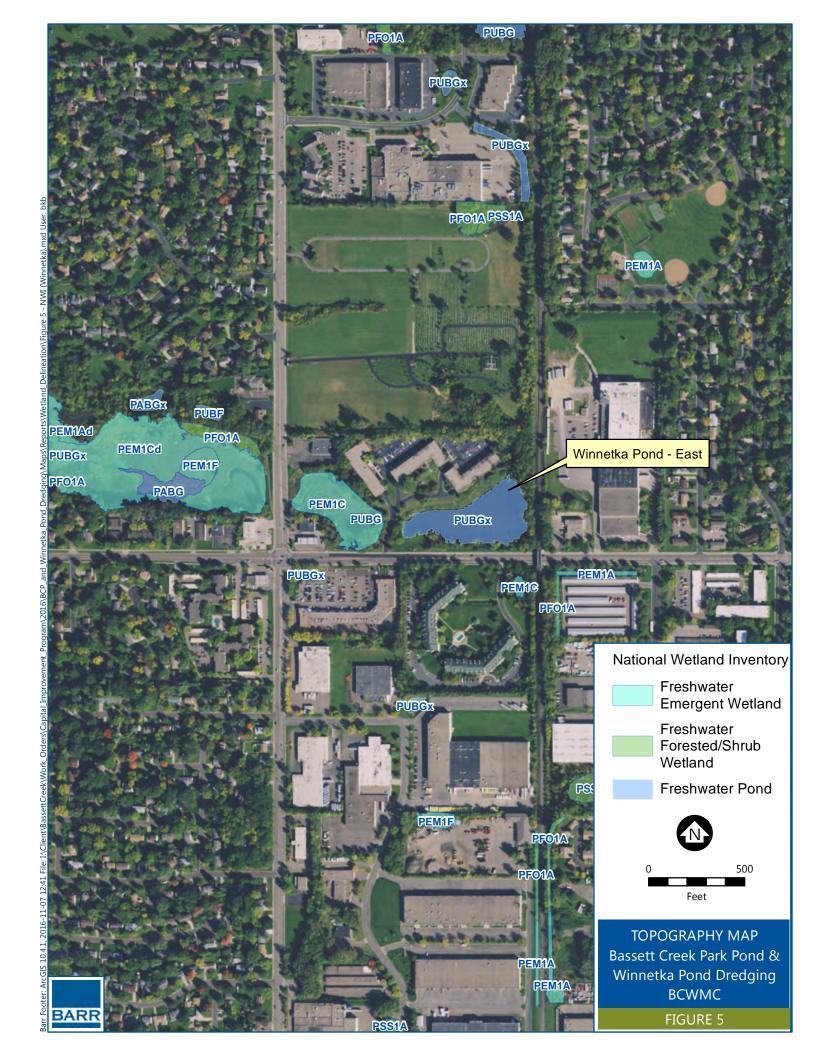
Figures

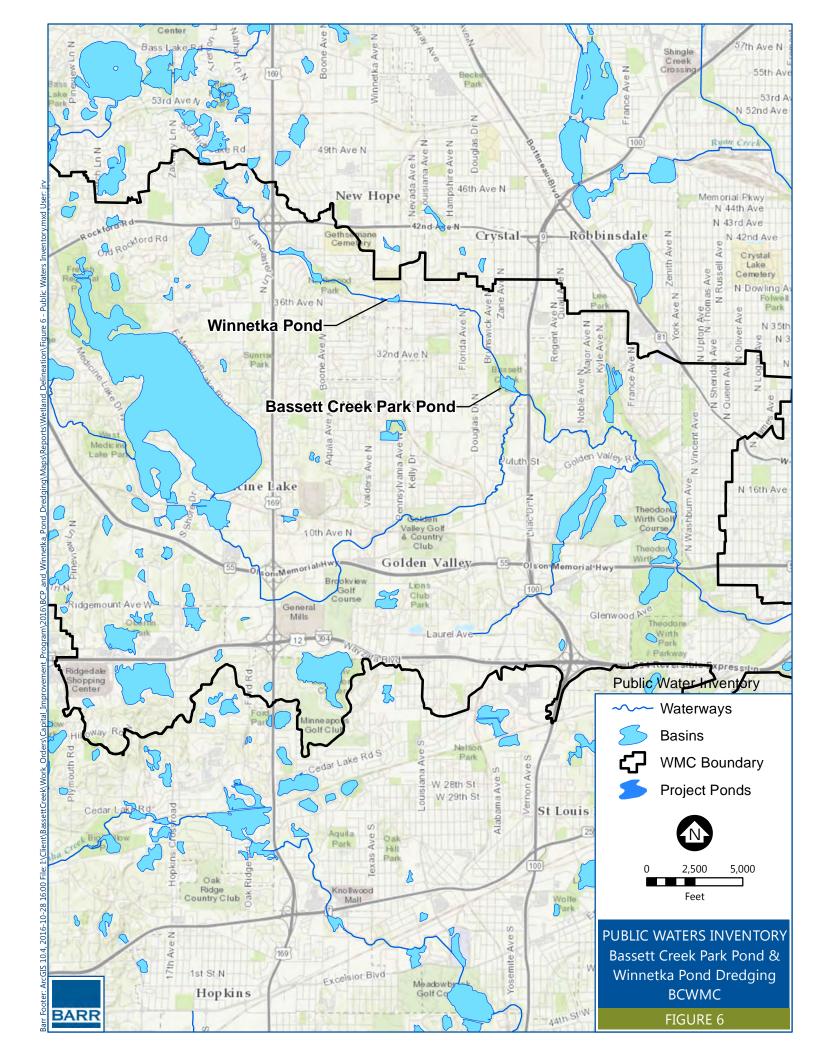


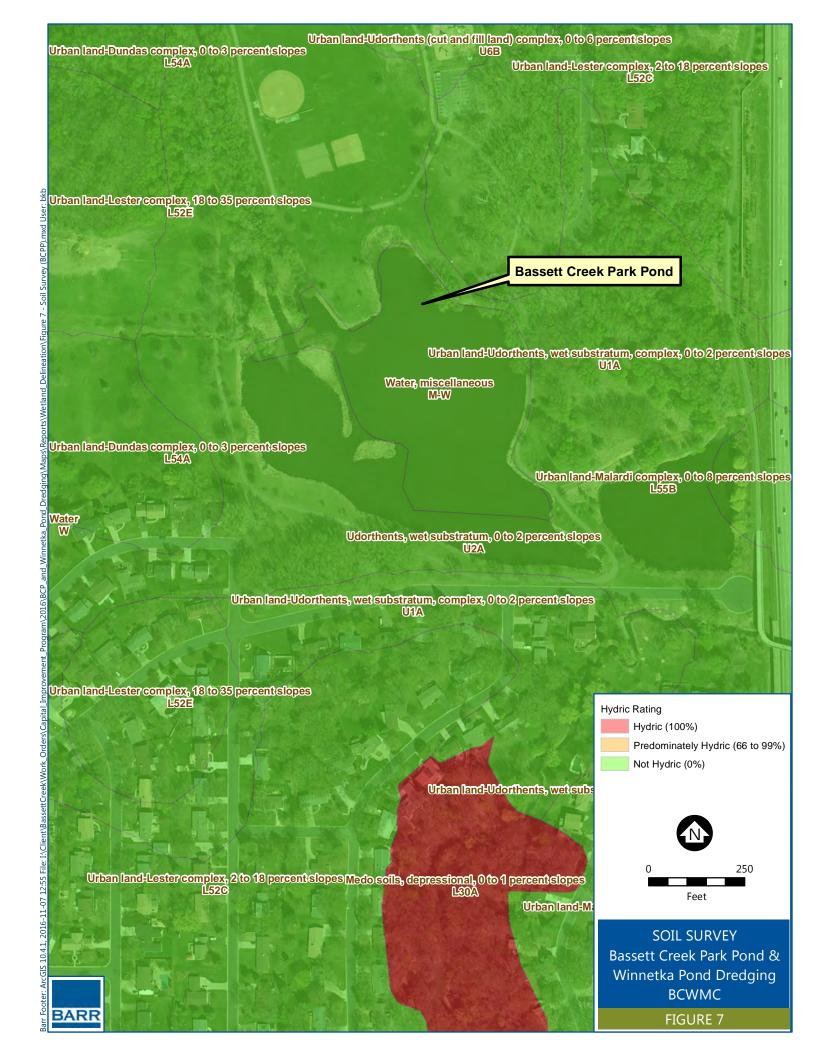


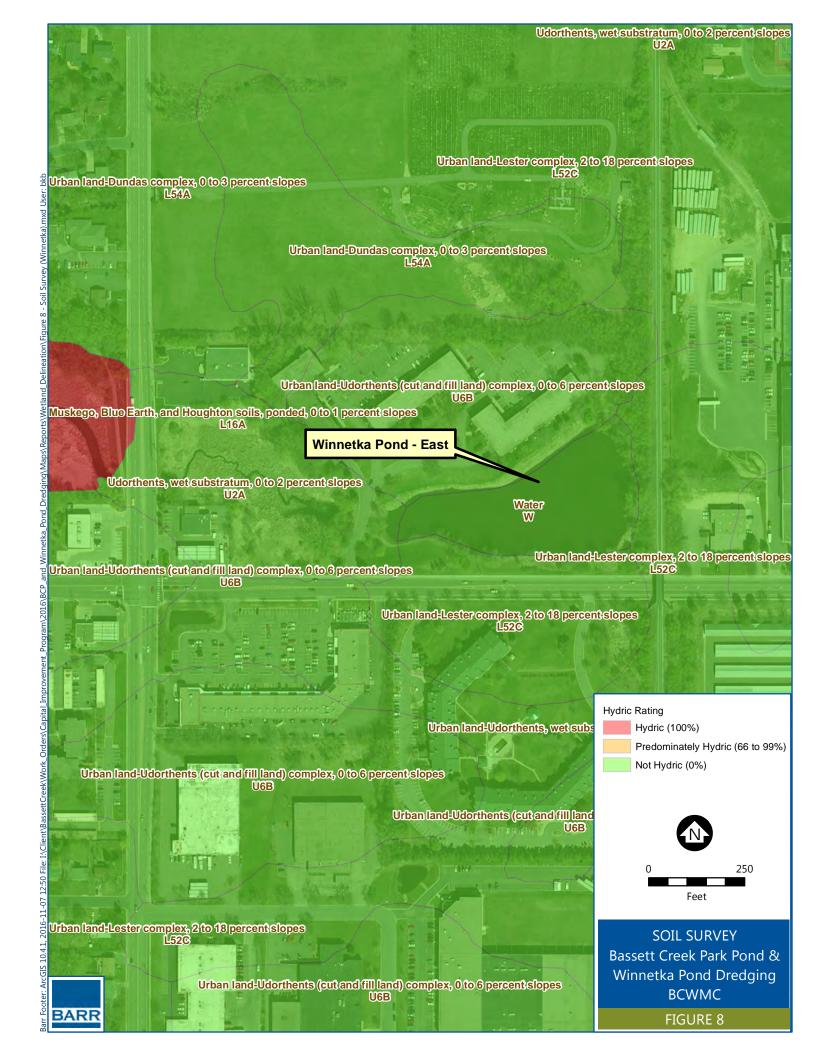


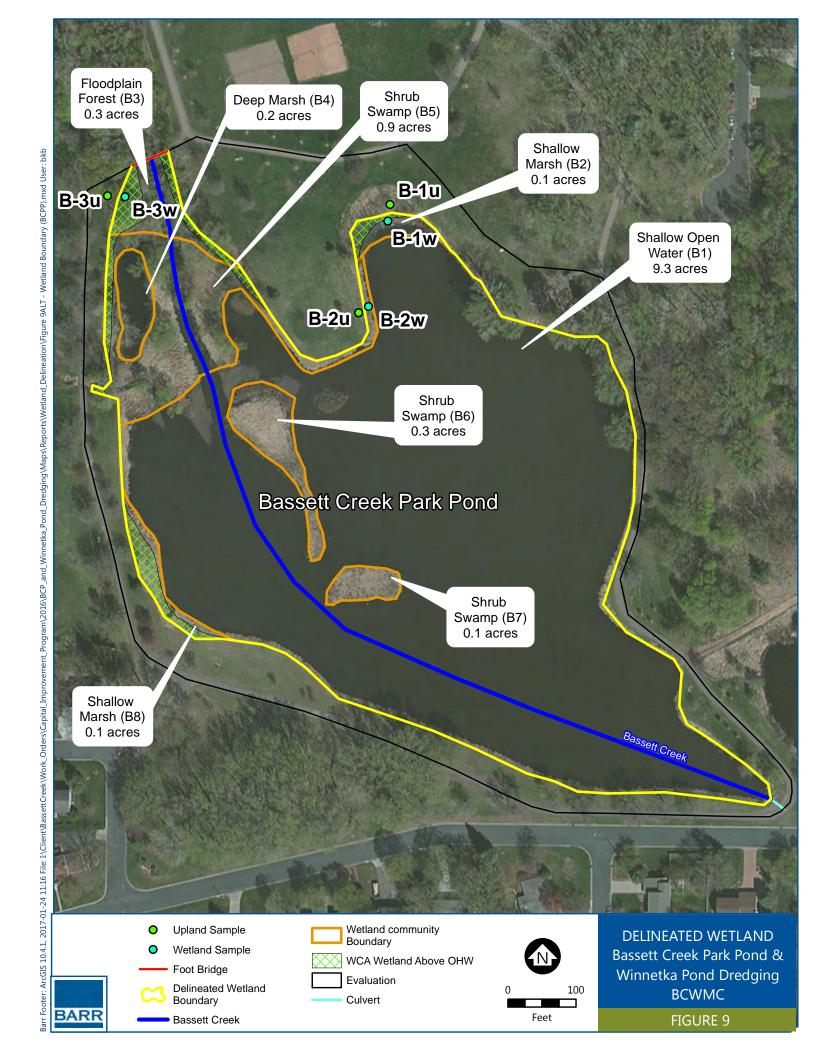


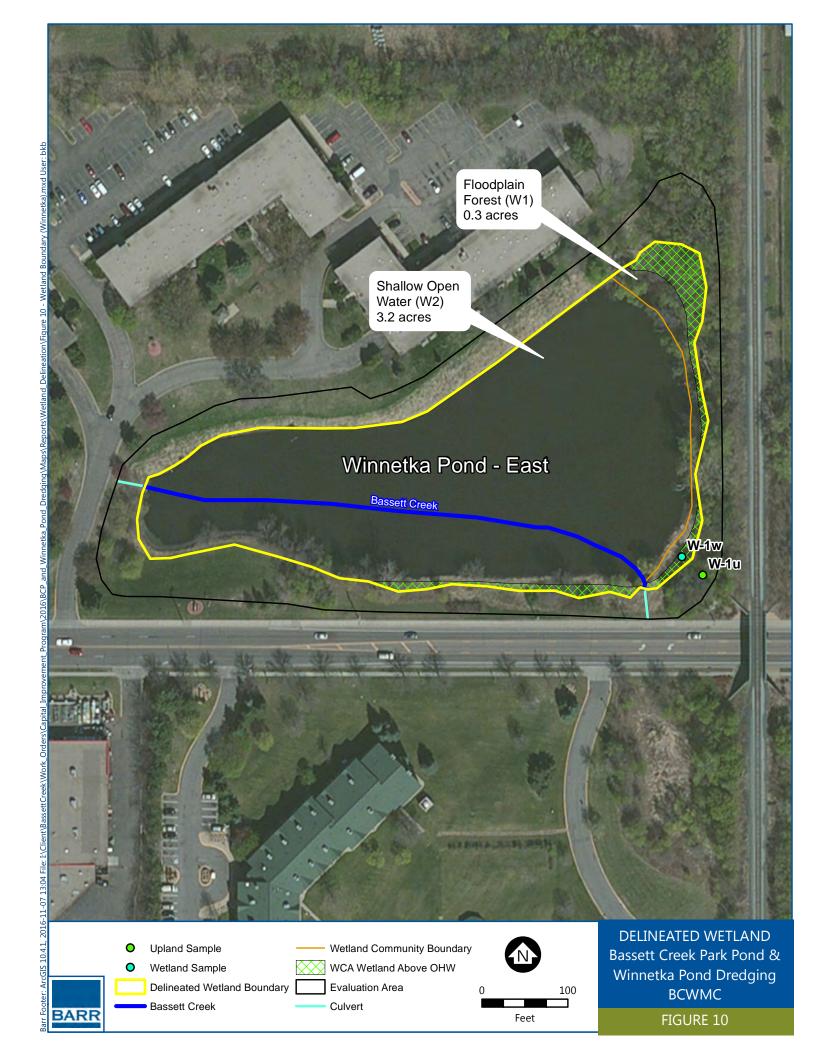












Appendix A Wetland Data Forms

WETLAND DETERI	MINATION D	ATA FOR	M - Midwest Region	n
Project/Site: Bassett Creek Park Pond & Winnetka Applicant/Ow Pond (East)	ner: <u>BCWMC</u>	City/County: Cry	stal/Hennepin State: <u>MN</u> Sam	npling Date: <u>10/11/16</u>
Investigator(s): BKB Section:	<u>21</u>	Township: 118N	. Range: <u>21W</u> San	npling Point: <u>B-1u</u>
Land Form: Hillslope Local Relief:	<u>Convex</u>	Slope %: <u>7</u>	Soil Map Unit Name: Udorthents	, wet sub, 0-2% slopes
Subregion (LRR): \underline{M} Latitude:	<u>4984296</u>	Longitude: 4721	47 Datum: <u>UTM Nad 83</u>	Zone 15N
Cowardin Classification: Upland Circular 39 C	lassification: <u>Upland</u>		Mapped NWI Classification:	<u>Upland</u>
Are climatic/hydrologic conditions on the site typical for this time of year?	No (If no, expla	ain in remarks)	00 1 37	<u>Upland</u>
Are vegetation No Soil No Hydrology No si	gnificantly disturbed?	Are "normal circumstances"	Yes Eggers & Reed (secondary):	
Are vegetation No Soil No Hydrology No na	turally problematic?	present?	Eggers & Reed (tertiary): Eggers & Reed (quaternary):	
SUMMARY OF FINDINGS - Attach site map sho		point locatio		features, etc.
Hydrophytic vegetation present? Yes General Remarks			thin the three months prior to the site vis	
Hydric soil present? No (explain any			· · · · · · · · · · · · · · · · · · ·	
Indicators of wetland hydrology present? No answers if neede	,			
Is the sampled area within a wetland? No If yes, optional V	Vetland Site ID: <u>Upla</u>	and .		
VEGETATION				
	Absolute Dominan	tIndicator_	50/20 Thresholds:	<u>20%</u> <u>50%</u>
<u>Tree Stratum</u> (Plot Size: 30 ft)	% Cover Species?		Tree Stratum	0 0
1.	0		Sapling/Shrub Stratum	0 0
2.	0		Herb Stratum	18.4 46
3.	0		Woody Vine Stratum	1 2.5
4.	0		<u>Dominance Test Worksheet:</u>	
Total Cover:	<u>0</u>		Number of Dominant Species That Are OBL, FACW or FAC:	3 (A)
<u>Sapling/Shrub Stratum</u> (Plot Size: <u>15 ft</u>)			Total Number of Dominant	
1.	0		Species Across All Strata:	4 (B)
2.	0		Percent of Dominant Species	75.00% (A/B)
3. <u> </u>	0		That Are OBL, FACW or FAC:	
5.	0		Prevalence Index Worksheet:	
Total Cover:	<u>0</u>		Total % Cover of:	Multiply by:
Herb Stratum (Plot Size: 5 ft			OBL Species0	X 1 0
Alliaria petiolata	35 Yes	FAC	FACW Species30	X 2 60
2. Urtica dioica	25 Yes	FACW	FAC Species35	X 3 105
3. Cirsium arvense	20 Yes	FACU	FACU Species32	X 4 128
 Parthenocissus quinquefolia Taraxacum officinale 	10 No No	FACU FACU	UPL Species0	X 5 0
5. Taraxacum officinale6. Arctium minus	1 No	FACU	Column Totals:97	(A) 293 (B)
7.	0	17100	Prevalence Index =	B/A = 3.02
8.	0		Hydrophytic Vegetation Indicators	<u>:</u>
Total Cover:	92		No Rapid Test for Hydropl	
Woody Vine Stratum (Plot Size: 30 ft)			Yes Dominance Test is >50	
1. Vitis riparia	5 Yes	FACW	No Prevalence Index ≤ 3.0 No Morphological Adaptat	ions [1] (provide supporting data
2.	0		in vegetation remarks	or on a separate sheet)
Total Cover:	<u>5</u>			tic Vegetation [1] (Explain)
% Bare Ground in Herb Stratum:	% Sphagnum Moss Co	ver:	[1] Indicators of hydric soil & wetland hy disturbed or problematic.	ydrology must be present, unless
Vegetation Remarks: (include photo numbers here or on a separate	sheet)		Hydrophytic vegetation present?	<u>Yes</u>

WETLAND DETERMINATION DATA FORM - Midwest Region

OIL						San	mpling Point:			
rofile Description: (Describe to the depth nee	eded to a				of indicator:	s).				
Depth Matrix (inches) Color (moist)	%	Color (moist)	dox Featu %	res Type [1]	Loc [2]	Texture	Rema	rks		
0 - 10 10YR 3/2	98	10YR 4/3			M	Sandy Loam				
10 - 16 10 10 17 3/2 10 17 3/2	100	10110 4/3			101	Sandy Loan				
16 - 25 10YR 3/1	100				-	Sand	gravelly			
					-	-				
True C Consentation D Depletion DM	Daduas	d Matrix MC Maakad Cons		[2] contin	- DI Dava	Links M. Mately				
] Type: C=Concentration, D=Depletion, RM=			GIAIIIS	[2] LUCAIIO		Lining, M=Matrix.				
ydric Soil Indicators: (applicable to all LRRs,	unless	_			In	dicators for Problematic Hy	dric Soils [3]:			
Histosol (A1)		_	leyed Mati			Coast Prairie Redox (A16)				
☐ Histic Epipedon (A2)			edox (S5)			Dark Surface (S7)				
Black Histic (A3)			Matrix (Sé			Iron-Manganese Masses (F				
Hydrogen Sulfide (A4)		Loamy M	lucky Mine	eral (F1)		Very Shallow Dark Surface	(TF12)			
Stratified Layers (A5)		Loamy G	ileyed Mat	trix (F2)		Other (explain in soil remari	ks)			
2 cm Muck (A10)		☐ Depleted	l Matrix (F.	3)						
Depleted Below Dark Surface (A11)		Redox Da	ark Surfac	ce (F6)						
Thick Dark Surface (A12)		Depleted	l Dark Sur	face (F7)	[2]	[3] Indicators of hydrophytic vegetation and wetland hydrolog				
Sandy Mucky Mineral (S1)		Redox De	epression:	s (F8)	ls. m	must be present, unless disturbed or problematic.				
5 cm Mucky Peat or Peat (S3)										
Restrictive Layer (if present): Type:		Dept	th (inche	es):		Hydric soil preser	nt? <u>No</u>			
Soil Remarks:										
VDDOLOCV										
YDROLOGY										
Vetland Hydrology Indicators:	chack a	II that apply)			C.	econdary Indicators (minim	um of two required)			
Primary Indicators (minimum of one required;	THECK AL					<u> </u>	uni oi two requirea)	_		
Surface Water (A1)		Water-Stained Leave	es (B9)			Surface Soil Cracks (B6)				
High Water Table (A2)		Aquatic Fauna (B13,)			Drainage Patterns (B10)				
Saturation (A3)		True Aquatic Plants	(B14)			Dry-Season Water Table (C	02)			
Water Marks (B1)		☐ Hydrogen Sulfide Od	dor (C1)			Crayfish Burrows (C8)				
Sediment Deposits (B2)		Oxidized Rhizospher	res on Liv	ring Roots (C3)	Saturation Visible on Aerial	Imagery (C9)			
Drift Deposits (B3)		Presence of Reduce	ed Iron (C4	4)		Stunted or Stressed Plants	(D1)			
Algal Mat or Crust (B4)		Recent Iron Reduction	on in Tille	d Soils (C6)		Geomorphic Position (D2)				
] Iron Deposits (B5)		Thin Muck Surface ((C7)		✓	FAC-Neutral Test (D5)				
Inundation Visible on Aerial Imagery (B7)		Gauge or Well Data	(D9)							
Sparsely Vegetated Concave Surface (B8)		Other (explain in ren	narks)							
ield Observations:						Indicators of wetland h	nydrology present?	<u>No</u>		
Surface water present?] Surface Water Depth (ii	nches):			Describe Recorded Da	ıta:			
Vater table present?] Water Table Depth (inc	:hes):							
Saturation present? (includes capillary fringe)	✓	Saturation Depth (inch	es):	15						
Recorded Data: Aerial Photo N	Monitorii		ae \square	Previous Ins	pections					
Hydrology Remarks:	20111	J. J. C. Gam Gade	ν- <u></u>							
Tydrology Nemarks.										

WETLAND DETE	RMINATION D	ATA FORM - Midwest Reg	gion
Project/Site: Bassett Creek Park Pond & Winnetka Applicant/ Pond (East)	Owner: BCWMC	City/County: Crystal/Hennepin State: MN	Sampling Date: 10/11/16
Investigator(s): BKB Land Form: Toeslope Subregion (LRR): M Cowardin Classification: PEMC Are climatic/hydrologic conditions on the site typical for this time of yether vegetation No Soil No Hydrology No Are vegetation No Soil No Hydrology No SUMMARY OF FINDINGS - Attach site map s	4984289 9 Classification: Type 3 ar? No (If no, explasing significantly disturbed? naturally problematic?	Longitude: 472146 Mapped NWI Classification ain in remarks) Are "normal Yes circumstances" Eggers & Reed (tertiary): Eggers & Reed (quaterna)	n: PUBG Shallow Marsh ry):
Hydrophytic vegetation present? Hydric soil present? Indicators of wetland hydrology present? Is the sampled area within a wetland? Yes General Rem. (explain any answers if new Yes If yes, option) YEGETATION	eded):	tter than normal within the three months prior to the s sett Cr Park Pond	ite visit.
Tree Stratum (Plot Size: 30 ft 1	Absolute Dominan) % Cover Species?		20% 50% 0 0 0 0 17 42.5 3 7.5
3) 0 0 cc	Dominance Test Worksheet. Number of Dominant Specie That Are OBL, FACW or FAC Total Number of Dominant	es (a)
2. 3. 4. 5. This	0 0	Species Across All Strata: Percent of Dominant Specie That Are OBL, FACW or FAC Prevalence Index Worksheet	S 100.00% (A/B)
Total Cove <u>Herb Stratum</u> (Plot Size: <u>5 ft</u> 1. Typha angustifolia	r: <u>0</u>) 20 Yes	OBL Species OBL Species FACW Species	30 X 1 30 55 X 2 110

15

15

10

10

10

5

0

85

15

0

% Sphagnum Moss Cover:

Total Cover:

Total Cover:

(Plot Size: 30 ft

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

Yes

Yes

No

No

No

No

Yes

FACW

FACW

FACW

FACU

OBL

FAC

FACW

FAC Species

FACU Species

UPL Species

No

Yes

Yes

No

disturbed or problematic.

Hydrophytic vegetation present?

Column Totals:

Hydrophytic Vegetation Indicators:

Urtica dioica

Poa palustris

Phalaris arundinacea

Cirsium arvense

Alliaria petiolata

Woody Vine Stratum

% Bare Ground in Herb Stratum:

Vitis riparia

Lemna minor

8.

15

40

0

195 (B)

1.95

5

10

0 X 5

100

Rapid Test for Hydrophytic Vegetation

Prevalence Index = B/A =

Dominance Test is >50%

Prevalence Index ≤ 3.0 [1]

X 3

X 4

(A)

Morphological Adaptations [1] (provide supporting data

<u>Yes</u>

in vegetation remarks or on a separate sheet)

[1] Indicators of hydric soil & wetland hydrology must be present, unless

Problematic Hydrophytic Vegetation [1] (Explain)

WETLAND DETERMINATION DATA FORM - Midwest Region

Profile Description: (Describe to the depth ne	eeded to d	document the indicator	or confirm the abs	scence o	f indicators	s).			
Depth Matrix			Redox Features	. [1]	1 [0]	Tarakana	D	- ulu-	
(inches) Color (moist)	<u>%</u>	Color (moist)		e [1]	Loc [2]	Texture	Rem	narks —————	
0 - 8 10YR 2/1 8 - 20 N 2.5/0	98 100	10YR 4/3		С	M	Sandy Loam Silt Loam	mucky peat intermixed	1	
20 - 30 10 10 10 10 10 10 10 10 10 10 10 10 10	100				-	Silt Loam	shells present	<i>x</i>	
-									
<u> </u>									
<u> </u>									
] Type: C=Concentration, D=Depletion, RM	1=Reduced	l Matrix, MS=Masked Sa	and Grains [2] L	ocation:	PL=Pore	Lining, M=Matrix.			
ydric Soil Indicators: (applicable to all LRR	Rs, unless	otherwise noted)			Ind	dicators for Problematic Hy	rdric Soils [3]:		
] Histosol (A1)		☐ Sandy	Gleyed Matrix (S4))		Coast Prairie Redox (A16)			
] Histic Epipedon (A2)		☐ Sandy	Redox (S5)			Dark Surface (S7)			
Black Histic (A3)		Stripp	ed Matrix (S6)			Iron-Manganese Masses (F	12)		
Hydrogen Sulfide (A4)						Very Shallow Dark Surface	(TF12)		
Stratified Layers (A5) Loamy Gleyed Matrix (F2)						Other (explain in soil remark	ks)		
2 cm Muck (A10)		☐ Deple	ted Matrix (F3)						
Depleted Below Dark Surface (A11)		✓ Redox	(Dark Surface (F6)						
Thick Dark Surface (A12)	☐ Deple	ted Dark Surface (F	7)	fo:	(01)				
Sandy Mucky Mineral (S1)		Redox	Depressions (F8)			[3] Indicators of hydrophytic vegetation and wetland hydrolog must be present, unless disturbed or problematic.			
5 cm Mucky Peat or Peat (S3)									
Postrictive Layer (if present): Tune		D	41. (:1).			Hydric soil preser	nt? Voc		
Restrictive Layer (if present): Type:		<i>D</i>	epth (inches):			riyane son preser	nt? <u>Yes</u>		
Soil Remarks:			epin (inches):		_	riyane son preser	u: <u>162</u>		
ioil Remarks:			epin (inches): _		_ _	Tryunc son preser	n: <u>165</u>		
oil Remarks: YDROLOGY			epin (inches): _		_ _	Tryunc son preser	165		
oil Remarks: YDROLOGY /etland Hydrology Indicators:	d chack al		epin (inches):						
oil Remarks: YDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required	d; check al	l that apply)				econdary Indicators (minimi			
oil Remarks: YDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1)	d; check al	I that apply) Water-Stained Le	eaves (B9)			econdary Indicators (minimi Surface Soil Cracks (B6)		_	
oil Remarks: YDROLOGY Tetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	d; check al	l that apply) ☐ Water-Stained Le ☐ Aquatic Fauna (E	eaves (B9)			econdary Indicators (minimi Surface Soil Cracks (B6) Drainage Patterns (B10)	um of two required)		
oil Remarks: YDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3)	d; check al	I that apply) Water-Stained Le Aquatic Fauna (E	eaves (B9) 313) nts (B14)			econdary Indicators (minim Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C	um of two required)	_	
oil Remarks: YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	d; check al	l that apply) ☐ Water-Stained Le ☐ Aquatic Fauna (E	eaves (B9) 313) nts (B14)			econdary Indicators (minimi Surface Soil Cracks (B6) Drainage Patterns (B10)	um of two required)		
oil Remarks: YDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3)	d; check al	I that apply) Water-Stained Le Aquatic Fauna (E True Aquatic Plai	eaves (B9) 313) nts (B14)	ots (C3)		econdary Indicators (minim Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C	um of two required)		
oil Remarks: YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	d; check al	I that apply) Water-Stained Le Aquatic Fauna (E True Aquatic Plai	eaves (B9) 813) Ints (B14) Odor (C1) Theres on Living Ro	ots (C3)		econdary Indicators (minimal Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C Crayfish Burrows (C8)	um of two required) C2) Imagery (C9)		
oil Remarks: YDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required] Surface Water (A1) [] High Water Table (A2) [] Saturation (A3) [] Water Marks (B1) [] Sediment Deposits (B2)	d; check al	I that apply) Water-Stained Le Aquatic Fauna (E True Aquatic Plat Hydrogen Sulfide Oxidized Rhizosp	eaves (B9) 813) Ints (B14) Odor (C1) Theres on Living Ro			econdary Indicators (minimal Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C Crayfish Burrows (C8) Saturation Visible on Aerial Stunted or Stressed Plants	um of two required) C2) Imagery (C9)		
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	d; check al	I that apply) Water-Stained Le Aquatic Fauna (E True Aquatic Plat Hydrogen Sulfide Oxidized Rhizosp	eaves (B9) 813) Ints (B14) Odor (C1) Theres on Living Ro Juced Iron (C4) Juction in Tilled Soils			econdary Indicators (minimal Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Carayfish Burrows (C8) Saturation Visible on Aerial Stunted or Stressed Plants Geomorphic Position (D2)	um of two required) C2) Imagery (C9)		
oil Remarks: YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	d; check al	I that apply) Water-Stained Let Aquatic Fauna (E True Aquatic Plat Hydrogen Sulfide Oxidized Rhizosp Presence of Redu	eaves (B9) B13) Ints (B14) Odor (C1) Theres on Living Roluced Iron (C4) Sec (C7)			econdary Indicators (minimal Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Carayfish Burrows (C8) Saturation Visible on Aerial Stunted or Stressed Plants Geomorphic Position (D2)	um of two required) C2) Imagery (C9)		
oil Remarks: /DROLOGY Tetland Hydrology Indicators: Timary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	d; check al	I that apply) Water-Stained Le Aquatic Fauna (E True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu	eaves (B9) 13) 15 (B14) 16 Odor (C1) 16 Odor (C4) 17 Odor (C4) 18 Odor (C4) 18 Odor (C4) 18 Odor (C7) 18 Odor (C7) 18 Odor (C7) 18 Odor (C9)			econdary Indicators (minimal Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Carayfish Burrows (C8) Saturation Visible on Aerial Stunted or Stressed Plants Geomorphic Position (D2)	um of two required) C2) Imagery (C9)		
oil Remarks: YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	d; check al	I that apply) Water-Stained Let Aquatic Fauna (E True Aquatic Plat Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac	eaves (B9) 13) 15 (B14) 16 Odor (C1) 16 Odor (C4) 17 Odor (C4) 18 Odor (C4) 18 Odor (C4) 18 Odor (C7) 18 Odor (C7) 18 Odor (C7) 18 Odor (C9)			econdary Indicators (minimal Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Carayfish Burrows (C8) Saturation Visible on Aerial Stunted or Stressed Plants Geomorphic Position (D2)	um of two required) C2) Imagery (C9) (D1)	<u>Yes</u>	
Foil Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	d; check al	I that apply) Water-Stained Let Aquatic Fauna (E True Aquatic Plat Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac	eaves (B9) 113) 100or (C1) 10heres on Living Rocuced Iron (C4) 10tion in Tilled Soils 10te (C7) 10te (D9) 10teremarks)			econdary Indicators (minimal Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C Crayfish Burrows (C8) Saturation Visible on Aerial Stunted or Stressed Plants Geomorphic Position (D2) FAC-Neutral Test (D5)	um of two required) (22) Imagery (C9) (D1)	<u>Yes</u>	
Soil Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	d; check al	I that apply) Water-Stained Le Aquatic Fauna (E True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surface Gauge or Well Da	eaves (B9) B13) Ints (B14) Odor (C1) Wheres on Living Rocuced Iron (C4) Suction in Tilled Soils See (C7) Bata (D9) Temarks) In (inches):			econdary Indicators (minimal Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Carayfish Burrows (C8) Saturation Visible on Aerial Stunted or Stressed Plants Geomorphic Position (D2) FAC-Neutral Test (D5)	um of two required) (22) Imagery (C9) (D1)	<u>Yes</u>	
YDROLOGY Vetland Hydrology Indicators: Verimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) itield Observations: Furface water present?		I that apply) Water-Stained Let Aquatic Fauna (E True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Gauge or Well Da Other (explain in Surface Water Depth (eaves (B9) 113) 100dor (C1) 10heres on Living Rocuced Iron (C4) 10tion in Tilled Soils 10te (C7) 10te (C7) 10te (C9) 10te (C7) 10te (C9) 10te (C7) 10te (C9)	: (C6)		econdary Indicators (minimal Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Carayfish Burrows (C8) Saturation Visible on Aerial Stunted or Stressed Plants Geomorphic Position (D2) FAC-Neutral Test (D5)	um of two required) (22) Imagery (C9) (D1)	<u>Yes</u>	
Poil Remarks: YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) ield Observations: urface water present? Vater table present?	<u> </u>	I that apply) Water-Stained Le Aquatic Fauna (E True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surface Gauge or Well De Other (explain in Surface Water Depth Water Table Depth (in	eaves (B9) 133) Ints (B14) Odor (C1) Inheres on Living Roll Luced Iron (C4) Luction in Tilled Soils Live (C7) Live (3		econdary Indicators (minimal Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Carayfish Burrows (C8) Saturation Visible on Aerial Stunted or Stressed Plants Geomorphic Position (D2) FAC-Neutral Test (D5)	um of two required) (22) Imagery (C9) (D1)	Yes	

WETLAND DETER	RMINATION D	ATA FORI	M - Midwest Regio	on .
Project/Site: Bassett Creek Park Pond & Winnetka Applicant/O Pond (East) Applicant/O	wner: <u>BCWMC</u>	City/County: Cryst	al/Hennepin State: <u>MN</u> Sar	mpling Date: 10/11/16
Investigator(s): BKB Section:	<u>21</u>	Township: 118N	Range: 21W Sa	mpling Point: <u>B-2u</u>
Land Form: Summit Local Relie	f: None	Slope %: <u>3</u>	Soil Map Unit Name: Udorthent:	s, wet sub, 0-2% slopes
Subregion (LRR): \underline{M} Latitude:	<u>4984248</u>	Longitude: 472133	3 Datum: UTM Nad 83	3 Zone 15N
Cowardin Classification: Upland Circular 39	Classification: Upland		Mapped NWI Classification:	<u>Upland</u>
Are climatic/hydrologic conditions on the site typical for this time of year	? <u>No</u> (If no, expla	ain in remarks)	Eggers & Reed (primary):	<u>Upland</u>
Are vegetation No Soil No Hydrology No	significantly disturbed?	Are "normal \(\) circumstances"	Yes Eggers & Reed (secondary):	
Are vegetation No Soil No Hydrology No r.	naturally problematic?	present?	Eggers & Reed (tertiary): Eggers & Reed (quaternary):	
SUMMARY OF FINDINGS - Attach site map sh		point location		features, etc.
Hydrophytic vegetation present? No General Remar	ks Conditions are we	etter than normal with	nin the three months prior to the site vi	isit.
Hydric soil present? No (explain any			'	
Indicators of wetland hydrology present? No answers if need				
<u> </u>	l Wetland Site ID: <u>Upla</u>	and		
VEGETATION		_		
	Absolute Dominan	t Indicator	50/20 Thresholds:	<u>20%</u> <u>50%</u>
<u>Tree Stratum</u> (Plot Size: <u>30 ft</u>) % Cover Species?	<u>Status</u>	Tree Stratum	0 0
1.	0		Sapling/Shrub Stratum	0.2 0.5
2.	0		Herb Stratum Woody Vine Stratum	
3.	0			<u> </u>
4.	0		<u>Dominance Test Worksheet:</u>	
Total Cover:	<u>0</u>		Number of Dominant Species That Are OBL, FACW or FAC:	1 (A)
Sapling/Shrub Stratum (Plot Size: 15 ft)		Total Number of Dominant	- (-)
 Salix interior 	1 No	FACW	Species Across All Strata:	2 (B)
3.	0		Percent of Dominant Species That Are OBL, FACW or FAC:	50.00% (A/B)
4.	0		That Arc ODE, I ACW OF TAC.	
5.	0		<u>Prevalence Index Worksheet:</u>	
Total Cover:	1		Total % Cover of:	Multiply by:
<u>Herb Stratum</u> (Plot Size: <u>5 ft</u>)		OBL Species0	
1. Glechoma hederacea	70 Yes	FACU	FACW Species 1	
2. Poa pratensis	30 Yes	FAC	FAC Species30	
3. 4.	0		FACU Species70	
5.	0		UPL Species0	
6.	0		Column Totals: 101	
7.	0		Prevalence Index	
8.	0		Hydrophytic Vegetation Indicator	
Total Cover:	<u>100</u>		No Rapid Test for Hydrop No Dominance Test is >5	, ,
Woody Vine Stratum (Plot Size: 30 ft)		No Prevalence Index \leq 3.	
1.				ations [1] (provide supporting data
2. Total Cover:	0		ŭ	or on a separate sheet) ytic Vegetation [1] (Explain)
, otal cover.			[1] Indicators of hydric soil & wetland h	
% Bare Ground in Herb Stratum:	% Sphagnum Moss Co	over:	disturbed or problematic.	.y = 1.59y mast 50 prototity arrives
Vegetation Remarks: (include photo numbers here or on a separat	te sheet)		Hydrophytic vegetation present?	<u>No</u>
		''		

WETLAND DETERMINATION DATA FORM - Midwest Region

SOIL						Sam	pling Point:	<u>B-2</u>
Profile Description: (Describe to the depth ne	eeded to	document the indicator or	confirm th	ne abscence	of indicators	5).		
Depth Matrix			dox Featu			,		
(inches) Color (moist)	%	Color (moist)	%	Type [1]	Loc [2]	Texture	Rema	arks
1. 0 - 10 N 2.5/0	100					Silt Loam		
2. <u>10 - 24</u> <u>N 2.5/0</u>	98	10YR 3/3	2	C	M	Silt Loam	Peat intermixed	
3								
4					-			
6					-	-		
[1] Type: C=Concentration, D=Depletion, RM	=Reduce	d Matrix, MS=Masked Sand	d Grains	[2] Locatio	n: PL=Pore	Lining, M=Matrix.		
Hydric Soil Indicators: (applicable to all LRR	s, unless	otherwise noted)			Inc	dicators for Problematic Hyc	Iric Soils [3]:	
Histosol (A1)		☐ Sandy G	leyed Matr	ix (S4)		Coast Prairie Redox (A16)		
☐ Histic Epipedon (A2)		☐ Sandy R	edox (S5)			Dark Surface (S7)		
☐ Black Histic (A3)		☐ Stripped	Matrix (S6)		Iron-Manganese Masses (F1	2)	
☐ Hydrogen Sulfide (A4)		☐ Loamy N	lucky Mine	ral (F1)		Very Shallow Dark Surface (TF12)	
☐ Stratified Layers (A5) ☐ Loamy Gleyed Matrix (F2)						Other (explain in soil remarks	s)	
2 cm Muck (A10)		☐ Depleted	d Matrix (F3	3)				
Depleted Below Dark Surface (A11)		☐ Redox E	ark Surfac	e (F6)				
☐ Thick Dark Surface (A12)		☐ Depleted	l Dark Surf	ace (F7)				
Sandy Mucky Mineral (S1)		☐ Redox D	epressions	s (F8)		Indicators of hydrophytic v ust be present, unless distur		1 hydrology
5 cm Mucky Peat or Peat (S3)					,,,,	ast be present, amess distar	bod of problematic.	
Restrictive Layer (if present): Type:		Dev	th (inches	s):		Hydric soil present	? <u>No</u>	
		<u>·</u>	`	<u></u>				
Soil Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of one required	; check a	II that apply)			Se	econdary Indicators (minimu	m of two required)	
Surface Water (A1)	,	☐ Water-Stained Leav	(DO)			Surface Soil Cracks (B6)		_
High Water Table (A2)		Aquatic Fauna (B13				Drainage Patterns (B10)		
Saturation (A3)		True Aquatic Plants				Dry-Season Water Table (C2	2)	
Water Marks (B1)		Hydrogen Sulfide O				Crayfish Burrows (C8)	.)	
Sediment Deposits (B2)		Oxidized Rhizosphe		na Poots (Ca	2)	Saturation Visible on Aerial II	magany (CO)	
		=		_	" <u> </u>			
☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4)		Presence of Reduce				Stunted or Stressed Plants (I	J1)	
		Recent Iron Reduct		1 3011S (CO)		Geomorphic Position (D2) FAC-Neutral Test (D5)		
	Iron Deposits (B5) ☐ Thin Muck Surface (C7)							
Inundation Visible on Aerial Imagery (B7)		Gauge or Well Data						
Sparsely Vegetated Concave Surface (B8)		Other (explain in rer	marks)					
Field Observations:		T. Confere Water Double	to along A			Indicators of wetland hy	drology present?	<u>No</u>
Surface water present?	L	Surface Water Depth (Describe Recorded Data	3:	
Water table present?		Water Table Depth (inc						
Saturation present? (includes capillary fringe	?)	Saturation Depth (inch	nes):					
Recorded Data: Aerial Photo	Monitori	ing Well 🔲 Stream Gau	ge 🔲 F	Previous Ins	pections			
Hydrology Remarks:								

	V	NETLAND [DETERMI	NATIO	N DA	TA FORI	M - Mid	west	Regio	n		
Project/Site:	Bassett Creek F Pond (East)	Park Pond & Winnetka	Applicant/Owner:	<u>BCWMC</u>	C	City/County: Cryst	tal/Hennepin	State:	MN Sa	mpling Date:	<u>10/11/16</u>	
Investigator(s):	BKB		Section: 21		Ī	Township: 118N		Range:	<u>21W</u> Sa	mpling Point:	<u>B-2w</u>	
Land Form:	<u>Footslope</u>		Local Relief: Co	ncave_	9	Slope %: <u>1</u>	Soil Map L			s, wet sub, 0-2	2% slopes	<u> </u>
Subregion (LRR)): <u>M</u>		Latitude: 49	342 <u>51</u>		ongitude: <u>47213</u>			UTM Nad 8	3 Zone 15N		
Cowardin Classii	fication: PSS	<u>1A</u>	Circular 39 Class	ification:	Type 6	-	Manne		ssification:	<u>Upland</u>		
		— on the site typical for this	time of year?			in remarks)		& Reed (p		Shrub-Carr		
_			-	antly disturb	. 4				secondary):			
Are vegetation	<u>No</u> Soil		_	,	C	ircumstances" present?		& Reed (t	-			
Are vegetation	<u>No</u> Soil	<u>No</u> Hydrology	<u>No</u> natural	ly problemati	ic?	oresent:	Eggers	& Reed (d	quaternary):			
SUMMARY (OF FINDING	GS - Attach site	map showi	ng samp	oling po	oint locatior	ns, transe	ects, in	nportant	features	, etc.	
	nt? and hydrology pre	Yes (examples and yes)	neral Remarks plain any swers if needed):			er than normal with	nin the three m	onths prio	r to the site v	isit.		
·	rea within a wetlar	nd? <u>Yes</u> If y	es, optional Wetl	and Site ID:	Basse	tt Cr Park Pond						
VEGETATION	ON					ı						
			<u>A</u>	<u>bsolute</u> <u>E</u>	<u>Oominant</u>	<u>Indicator</u>	50/20 Thre:	sholds:			<u>20%</u>	<u>50%</u>
Tree Stratu	<u>ım</u>	(Plot Size: 30 ft) <u>%</u>	<u>Cover</u> <u>S</u>	Species?	<u>Status</u>	Tree Stratu	ım			0	0
1.				0			Sapling/Sh		um		3	7.5
2.				0			Herb Stratu Woody Vin		1		21 0	52.5
3.				0								
4.			Fatal Cayan	0			<u>Dominance</u>					
Sanling/Sh	rub Stratum	(Plot Size: 15 ft	Total Cover:	<u>0</u>			Number of That Are O				4 (/	4)
Salix interior		(F101 S12e. 1511		15	Yes	FACW	Total Numi			'	4 (E	3)
2.				0			Species Ad Percent of			-	_ `	,
3.				0			That Are O			100.00)% (/	4/B)
4.				0			Prevalence	Inday Ma	and color of the			
5.				0							A.A. Jahrah	to
			Fotal Cover:	<u>15</u>			-	al % Cove	20 <u>20</u>		Multiply	<u>Dy:</u>
<u>Herb Stratu</u>		(Plot Size: <u>5 ft</u>)				OBL Speci		85	-		170
	rundinacea			20	Yes Yes	FACW	FACW Spe		5	•		15
2. Persicaria3. Solidago g				20	Yes	OBL FACW	FAC Speci		10	-		40
4. Urtica dioid				10	No	FACW	FACU Spec	· ·		•		0
	maculatum			10	No	FACU	UPL Speci		0	•		
6. Alliaria pet	iolata			5	No	FAC	Column To		120 lence Index	•		245 (B) 2.04
			1.6	1 -		1 7 1		FIEVA	TELLE THUEX	- D/M =		4.U4

0

0

% Sphagnum Moss Cover:

<u>105</u>

Total Cover:

Total Cover:

(Plot Size: 30 ft

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

Woody Vine Stratum

% Bare Ground in Herb Stratum:

Hydrophytic Vegetation Indicators:

Hydrophytic vegetation present?

Rapid Test for Hydrophytic Vegetation

[1] Indicators of hydric soil & wetland hydrology must be present, unless disturbed or problematic.

Morphological Adaptations [1] (provide supporting data in vegetation remarks or on a separate sheet)

Problematic Hydrophytic Vegetation [1] (Explain)

Dominance Test is >50%

Prevalence Index ≤ 3.0 [1]

No

Yes

Yes

No

WETLAND DETERMINATION DATA FORM - Midwest Region

Profite Description: Describe to the dight revoked to document the indicator or continue the electronic or indicators; Notice Noti			<i>a</i>		61 11 1	,		
Tour less Color (monist) % Color (monist) % Type 1 1 or 6 Teature Remarks	Profile Description: (Describe to the depth needs	ed to document the indicator	or confirm th	ne abscence	of indicators	5).		
Sit Learn Post Information 1	·							
2. 8. 15 N 2.50 98 VYR 3/3 2 C M Sill Loam Peat Intermised Peat 4		6 Color (moist)	<u></u> %	Type [1]	Loc [2]	-	Rema	arks —————
15 - 30 N.2.510 Peat	le <u></u>	00 10VD 2/2					Doot intermixed	
10 Type: C-Concentration: D-Depletion: RM-Reduced Matrix, MrS-Mesked Sand Grains [2] Location: PL-Proxe Lining, M-Metrix:	15 20 N 2 E/O	90 101K 3/3			IVI	SIII LUdIII		
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted) Historio (A1)	1							
Hydric Soli indicators: (populicable to all LRRs; unless otherwise noted) Histosol (A1)	5					· 		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted) Historial (A1)	6							
Histoscot (A11)	[1] Type: C=Concentration, D=Depletion, RM=Re	duced Matrix, MS=Masked Sa	and Grains	[2] Locatio	n: PL=Pore I	Lining, M=Matrix.		
Histo Epipedon (A2)	Hydric Soil Indicators: (applicable to all LRRs, u	nless otherwise noted)			Inc	dicators for Problematic Hyd	dric Soils [3]:	
Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) Hydrogen Sulfide (A44) Coamy Mucky Mineral (F1) Very Shallow Dark Surface (TF12) Stratified Layers (A5) Coamy Gleyed Matrix (F3) Other (explain in soil remarks) Depleted Below Dark Surface (A17) Depleted Matrix (F3) Depleted Below Dark Surface (A17) Depleted Matrix (F3) Depleted Below Dark Surface (A17) Depleted Matrix (F3) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) Soil Remarks: Primary Indicators of hydrophytic vegetation and weriand hydrology must be present; unless disturbed or problematic. Primary Indicators (infinimum of one required: check all that apply) Secondary Indicators (infinimum of two required) Surface Water (A1) Water Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Surface Soil Cracks (B6) Drainage Patterns (B10) Water Marks (B1) Hydrogen Suifide Odor (C1) CrayRis Burrows (C8) Drift Deposits (B2) Oxidized Rizisopheres on Living Roots (C3) Sutuation Visible on Aerial Imagery (C9) Into Deposits (B3) Presence of Reduced Iron (C4) Sunder of Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Recomption (D2) Iron Deposits (B3) Other (explain in remarks) Indicators of wetland hydrology present? Surface Water Depth (inches): Burlace Water Present? Surface Water Depth (inches): Burlace Water (Batch Crust (B4) Describe Recorded Data: Indicators of wetland hydrology present? Surface Water Depth (inches):	Histosol (A1)	☐ Sandy	Gleyed Matri	rix (S4)		Coast Prairie Redox (A16)		
Pydrogen Sulfide (A4)	Histic Epipedon (A2)	☐ Sandy	Redox (S5)			Dark Surface (S7)		
Stratified Layers (A5)	Black Histic (A3)	☐ Stripp	ed Matrix (S6))		Iron-Manganese Masses (F	12)	
2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) [3] Indicators of hydrophylic vegetation and wetland hydrology must be present, unless disturbed or problematic. 5 cm Mucky Peat or Peat (S3) Pepth (inches): Hydric soil present? Yes	Hydrogen Sulfide (A4)	Loamy	y Mucky Minei	eral (F1)		Very Shallow Dark Surface ((TF12)	
Depleted Below Dark Surface (A11) Proceed Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Sendy Mucky Peat or Peat (S3) Redox Depressions (F8) Surface Water (If present): Type:	Stratified Layers (A5)	☐ Loamy	Gleyed Matr	rix (F2)		Other (explain in soil remark	s)	
Thick Dark Surface (A12)	2 cm Muck (A10)	☐ Deple	ted Matrix (F3	3)				
Sandy Mucky Mineral (S1)	Depleted Below Dark Surface (A11)	✓ Redox	Dark Surface	e (F6)				
Sarady Mucky Meat (S1) Sem Mucky Peat or Peat (S3) Som Mucky Peat or Peat (S3) Restrictive Layer (if present): Type: Depth (inches): Hydric soil present? Yes	Thick Dark Surface (A12)	☐ Deple	ted Dark Surfa	face (F7)				
Restrictive Layer (if present): Type: Depth (inches): Hydric soil present? Yes Soil Remarks: WDROLOGY Wettand Hydrology Indicators: Primary Indicators (minimum of one required: check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aqualic Fauna (B13) Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) Drys-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Craylish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced fron (C4) Stunded or Stressed Plants (D1) Algal Mat or Crust (B4) Recent fron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (explain in remarks) Field Observations: Surface Water Table Depth (inches): Water Table Depth (inches):	Sandy Mucky Mineral (S1)	Redox	Depressions	s (F8)				l hydrology
Restrictive Layer (if present): Type: Depth (inches): Hydric soil present? Yes Soil Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required: check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Flauna (B13) Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Cradish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunded or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (explain in remarks) Field Observations: Surface Water Depth (inches): Water Table Depth (inches): Water Table Depth (inches):							roca or problematic.	
### Apply Company Indicators: ### Welland Hydrology Indicators: ### Welland Hydrology Indicators: ### Primary Indicators (minimum of one required: check all that apply) Surface Water (A1)	5 cm Mucky Peat or Peat (S3)				7776		•	
### Wetland Hydrology Indicators: ### Wetland Hydrology Indicators: ### Primary Indicators (minimum of one required: check all that apply) Surface Water (A1)	5 cm Mucky Peat or Peat (S3)				7776	, , , , , , , , , , , , , , , , , , , ,	·	
### Wetland Hydrology Indicators: ### Wetland Hydrology Indicators: ### Primary Indicators (minimum of one required: check all that apply) Surface Water (A1)			epth (inches	s):			t? <u>Yes</u>	
Wetland Hydrology Indicators: Primary Indicators (minimum of one required: check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) True Aquatic Plants (B14) Pty-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Sediment Deposits (B3) Presence of Reduced Iron (C4) Iton Deposits (B5) Thin Muck Surface (C7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (explain in remarks) Field Observations: Water Table Pepth (inches): Water Table Pepth (inches): Water Table present? Water Table present? Water Table Depth (inches): Water Table Pepth (inches):	Restrictive Layer (If present): Type:	D	epth (inches	s):			t? <u>Yes</u>	
Primary Indicators (minimum of one required: check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (explain in remarks) Field Observations: Surface Water Depth (inches): Water Table Depth (inches):	Restrictive Layer (If present): Type:	D	epth (inches	s):			t? <u>Yes</u>	
Surface Water (A1)	Restrictive Layer (if present): Type: Soil Remarks:	D	epth (inches	s):			t? <u>Yes</u>	
High Water Table (A2)	Restrictive Layer (if present): Type: Soil Remarks: HYDROLOGY		epth (inches	s):			t? <u>Yes</u>	
High Water Table (A2)	Restrictive Layer (if present): Type: Soil Remarks: HYDROLOGY Wetland Hydrology Indicators:		epth (inches	s):		Hydric soil presen		
✓ Saturation (A3) ☐ True Aquatic Plants (B14) ☐ Dry-Season Water Table (C2) ☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) ☐ Crayfish Burrows (C8) ☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4) ☐ Stunted or Stressed Plants (D1) ☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☑ Geomorphic Position (D2) ☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☑ FAC-Neutral Test (D5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Gauge or Well Data (D9) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Other (explain in remarks) Indicators of wetland hydrology present? Yes Describe Recorded Data: Describe Recorded Data:	Restrictive Layer (if present): Type: Soil Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch	eck all that apply)		s):	Se	Hydric soil presen		
Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) ✓ FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (explain in remarks) Indicators of wetland hydrology present? Yes Describe Recorded Data: Water Table Depth (inches): Water Table Depth (inches): This provides the present? Water Table Depth (inches): Water Ta	Restrictive Layer (if present): Type: Soil Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required: ch	eck all that apply)	eaves (B9)	s):	Se	Hydric soil presen condary Indicators (minimu		_
Sediment Deposits (B2) □ Oxidized Rhizospheres on Living Roots (C3) □ Drift Deposits (B3) □ Presence of Reduced Iron (C4) □ Stunted or Stressed Plants (D1) □ Algal Mat or Crust (B4) □ Recent Iron Reduction in Tilled Soils (C6) □ Iron Deposits (B5) □ Thin Muck Surface (C7) □ FAC-Neutral Test (D5) □ Inundation Visible on Aerial Imagery (B7) □ Sparsely Vegetated Concave Surface (B8) □ Other (explain in remarks) Field Observations: Surface water present? □ Surface Water Depth (inches): Water table present? □ Water Table Depth (inches): □ Describe Recorded Data: □ Describe Recorded Data:	Restrictive Layer (if present): Type: Soil Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2)	eck all that apply) Water-Stained Le	paves (B9)	s):	Se	Hydric soil presen condary Indicators (minimu Surface Soil Cracks (B6) Drainage Patterns (B10)	ım of two required)	_
Drift Deposits (B3) □ Presence of Reduced Iron (C4) □ Stunted or Stressed Plants (D1) □ Algal Mat or Crust (B4) □ Recent Iron Reduction in Tilled Soils (C6) □ Iron Deposits (B5) □ Thin Muck Surface (C7) □ FAC-Neutral Test (D5) □ Inundation Visible on Aerial Imagery (B7) □ Sparsely Vegetated Concave Surface (B8) □ Other (explain in remarks) Field Observations: Surface water present? □ Surface Water Depth (inches): Water Table Depth (inches): □ Stunted or Stressed Plants (D1) □ Geomorphic Position (D2) □ FAC-Neutral Test (D5) □ Indicators of wetland hydrology present? Yes □ Describe Recorded Data: □ Describe Recorded Data:	Restrictive Layer (if present): Type: Soil Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required: ch Surface Water (A1) High Water Table (A2) Saturation (A3)	eck all that apply) Water-Stained Le Aquatic Fauna (E	eaves (B9) 113) nts (B14)	s):	Se	Hydric soil presen condary Indicators (minimularise Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C	ım of two required)	_
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (explain in remarks) Field Observations: Surface water present? Surface Water Depth (inches): Water Table Depth (inches): Water Table Depth (inches):	Restrictive Layer (if present): Type: Soil Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	eck all that apply) Water-Stained Le Aquatic Fauna (E True Aquatic Plai	eaves (B9) 113) nts (B14) Odor (C1)			Hydric soil presen condary Indicators (minimu Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C Crayfish Burrows (C8)	ım of two required) '2)	_
Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ FAC-Neutral Test (D5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Gauge or Well Data (D9) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Other (explain in remarks) Field Observations: Surface water present? ☐ Surface Water Depth (inches): ☐ Describe Recorded Data: Water table present? ☐ Water Table Depth (inches): ☐ Describe Recorded Data:	Restrictive Layer (if present): Type: Soil Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required: ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	eck all that apply) Water-Stained Le Aquatic Fauna (E True Aquatic Plate Hydrogen Sulfide	eaves (B9) B13) Ints (B14) Odor (C1) Inheres on Livir	ng Roots (C3		Hydric soil presen condary Indicators (minimularia Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Cayfish Burrows (C8) Saturation Visible on Aerial (Cayfish Saturation Visible (Cayfish Visi	um of two required) 2) Imagery (C9)	
Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (explain in remarks) Field Observations: Surface water present? Surface Water Depth (inches): Water Table Depth (inches): Water Table Depth (inches):	Restrictive Layer (if present): Type: Soil Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	eck all that apply) Water-Stained Le Aquatic Fauna (E True Aquatic Plat Hydrogen Sulfide Oxidized Rhizosp	eaves (B9) 113) nts (B14) Odor (C1) theres on Livir uced Iron (C4,	ng Roots (C3		Condary Indicators (minimus Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C Crayfish Burrows (C8) Saturation Visible on Aerial of Stunted or Stressed Plants (um of two required) 2) Imagery (C9)	
Sparsely Vegetated Concave Surface (B8) Other (explain in remarks) Field Observations: Surface water present? Surface Water Depth (inches): Water table present? Water Table Depth (inches): Describe Recorded Data:	Restrictive Layer (if present): Type: Soil Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	eck all that apply) Water-Stained Let Aquatic Fauna (E True Aquatic Plat Hydrogen Sulfide Oxidized Rhizosp Presence of Redu	eaves (B9) B13) Ints (B14) Odor (C1) Theres on Livir Luced Iron (C4, Juction in Tilled	ng Roots (C3		Condary Indicators (minimusurface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Conception of the Content o	um of two required) 2) Imagery (C9)	
Field Observations: Surface water present? Surface Water Depth (inches): Water table present? Water Table Depth (inches): Indicators of wetland hydrology present? Describe Recorded Data:	Restrictive Layer (if present): Type: Soil Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	eck all that apply) Water-Stained Le Aquatic Fauna (E True Aquatic Plat Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu	eaves (B9) 13) Ints (B14) Odor (C1) Theres on Livir Luced Iron (C4, Luction in Tillea	ng Roots (C3		Hydric soil present condary Indicators (minimus Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Concept of Control of	um of two required) 2) Imagery (C9)	
Surface water present? Surface Water Depth (inches): Water table present? Describe Recorded Data: Describe Recorded Data:	Restrictive Layer (if present): Type: Soil Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required: ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	eck all that apply) Water-Stained Let Aquatic Fauna (E True Aquatic Plat Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Gauge or Well Da	eaves (B9) B13) Ints (B14) Odor (C1) Theres on Living action in Tilled the (C7) There (C7) There (C9) There (C9)	ng Roots (C3		Hydric soil present condary Indicators (minimus Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Concept of Control of	um of two required) 2) Imagery (C9)	
Water table present? Water Table Depth (inches):	Restrictive Layer (if present): Type: Soil Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required: ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	eck all that apply) Water-Stained Let Aquatic Fauna (E True Aquatic Plat Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Gauge or Well Da	eaves (B9) B13) Ints (B14) Odor (C1) Theres on Living action in Tilled the (C7) There (C7) There (C9) There (C9)	ng Roots (C3		Hydric soil present condary Indicators (minimus Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Concept of Control of	um of two required) 2) Imagery (C9)	
	Restrictive Layer (if present): Type: Soil Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations:	eck all that apply) Water-Stained Le Aquatic Fauna (E True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redi Recent Iron Redu Thin Muck Surfac	eaves (B9) ats (B14) door (C1) cheres on Livir cuced Iron (C4, action in Tilled te (C7) ata (D9) remarks)	ng Roots (C3		Condary Indicators (minimus Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C Crayfish Burrows (C8) Saturation Visible on Aerial of Stunted or Stressed Plants (Geomorphic Position (D2) FAC-Neutral Test (D5)	um of two required) 2) Imagery (C9) (D1)	<u>Yes</u>
Saturation present? (includes capillary fringe) Saturation Depth (inches): 6	Restrictive Layer (if present): Type: Soil Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations:	eck all that apply) Water-Stained Le Aquatic Fauna (E True Aquatic Plai Hydrogen Sulfide Oxidized Rhizosp Presence of Redi Recent Iron Redu Thin Muck Surfac	eaves (B9) ats (B14) door (C1) cheres on Livir cuced Iron (C4, action in Tilled te (C7) ata (D9) remarks)	ng Roots (C3		Condary Indicators (minimusurface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Control of the Control of t	um of two required) 2) Imagery (C9) (D1) ydrology present?	Yes
	Restrictive Layer (if present): Type: Soil Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface water present?	eck all that apply) Water-Stained Let Aquatic Fauna (E True Aquatic Plan Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Gauge or Well Date Other (explain in	eaves (B9) B13) Ints (B14) Odor (C1) Wheres on Livir Luced Iron (C4, Luction in Tilled Lice (C7) Leata (D9) Licemarks) Linches (Cinches)	ng Roots (C3		Condary Indicators (minimusurface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Control of the Control of t	um of two required) 2) Imagery (C9) (D1) ydrology present?	Yes

	W	ETLAND D	ETERM	INATI	ON D	ATA FOR	RM - Mid	west Re	gion			
Project/Site:	Bassett Creek Parl Pond (East)	k Pond & Winnetka	Applicant/Owne	r: BCWMC	2	City/County: Cry	rstal/Hennepin	State: MN	Samp	ling Date: 10	<u>/11/16</u>	
Investigator(s):	BKB		Section: 2	<u>!1</u>		Township: 118N	1	Range: 21W	Samp	ling Point: <u>B-</u>	<u>3u</u>	
Land Form:	Hillslope			- Concave		Slope %: 2	- Soil Map U	9	orthents, v	vet sub, 0-2%	slopes	
Subregion (LRF	~ R): <u>M</u>		Latitude: 4	984301		Longitude: 4720) <u>21</u>	Datum: <u>UTM</u>	Nad 83 Z	one 15N		
Cowardin Class			Circular 39 Clas	ssification:	Upland	<u> </u>		 I NWI Classificat		pland		
	Irologic conditions on t			No		ain in remarks)		& Reed (primary		pland		
		3.	,			Are "normal		& Reed (second	_			
Are vegetation	<u>No</u> Soil <u>N</u>	No Hydrology	_	ificantly dist		circumstances" present?		& Reed (tertiary				
Are vegetation	<u>No</u> Soil <u>N</u>	No Hydrology	<u>No</u> natur	ally problem	natic?	ргезепт:	Eggers	& Reed (quateri	nary):			
SUMMARY	OF FINDINGS	- Attach site	map show	ing sar	mpling p	point locatio	ons, transe	cts, impor	rtant fe	eatures, e	etc.	
Hydric soil prese	getation present? ent? tland hydrology preser	No (exp	neral Remarks blain any wers if needed):		tions are we	tter than normal wi	ithin the three mo	onths prior to the	e site visit.			
Is the sampled a	area within a wetland?	No If ye	es, <mark>optional W</mark> e	tland Site I	D: <u>Upla</u>	and .						
VEGETATI	ION											
					D .		50/20 Thres	sholds:			20%	<u>50%</u>
Tree Strat	tum (E	Plot Size: 30 ft		<u>Absolute</u> <u>% Cover</u>	<u>Dominan</u> <u>Species?</u>		Tree Stratu			•	4	10
	<u> </u>	101 312c. <u>30 11</u>	, ,					rub Stratum			0	0
Acer negr Describes A				10	Yes Yes	FAC FAC	Herb Stratu				16	40
2. Populus t	tremuloides			0	162	FAC	Woody Vine	e Stratum		_	0	0
4.				0			<u>Dominance</u>	Test Workshe	et:			
	la mada. Charata ma		otal Cover:	20			Number of That Are Ol	Dominant Spec BL, FACW or F	cies AC:	2	(A)	
Sapiing/Si	<u>hrub Stratum</u> (F	Plot Size: <u>15 ft</u>	,	0			Total Numb	er of Dominan	t	_	(D)	
2.				0			Species Ac	ross All Strata:		3	(B)	
3.				0				Dominant Spec BL, FACW or F		66.67%	(A/B))
4.				0			mat Are Of	DL, FACW UI FA	4C.			
5.				0			<u>Prevalence</u>	Index Workshe	et:			
		To	otal Cover:	0			Tota	al % Cover of:			ıltiply by:	
<u>Herb Strat</u>	<u>tum</u> (F	Plot Size: <u>5 ft</u>)				OBL Specie	es	0	X 1		0
1. Glechoma	a hederacea			65	Yes	FACU	FACW Spec	cies	0	X 2		0
2. Taraxacu	m officinale			5	No	FACU	FAC Specie	es	25	X 3		75
3. Poa prate				5	No	FAC	FACU Spec	ies	75	X 4	3	00
4. Parthenoo	cissus quinquefolia			5	No	FACU	UPL Specie	9S	0	X 5		0

0

80

0

0

% Sphagnum Moss Cover:

Total Cover:

Total Cover:

(Plot Size: 30 ft

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

7.

Woody Vine Stratum

% Bare Ground in Herb Stratum:

375 (B)

3.75

100 (A)

Rapid Test for Hydrophytic Vegetation

[1] Indicators of hydric soil & wetland hydrology must be present, unless

Morphological Adaptations [1] (provide supporting data in vegetation remarks or on a separate sheet)

Yes

Problematic Hydrophytic Vegetation [1] (Explain)

Prevalence Index = B/A =

Dominance Test is >50%

Prevalence Index ≤ 3.0 [1]

Column Totals:

No

Yes

No

No

disturbed or problematic.

Hydrophytic vegetation present?

Hydrophytic Vegetation Indicators:

SOIL						Sampling F	Point:	<u>B-3</u>
Profile Description: (Describe to the depth ne	eded to	document the indicator or c	confirm th	ne abscence	of indicators	S).		
Depth Matrix			dox Featu			,		
(inches) Color (moist)	%	Color (moist)	%	Type [1]	Loc [2]	Texture	Remarks	;
1. 0 - 15 N 2.5/0						Silt Loam		
2. <u>15 - 30</u> N 2.5/0	95	10YR 3/3	5	C	M	Silt Loam		
3					-			
5								
6								
[1] Type: C=Concentration, D=Depletion, RM:	=Reduce	d Matrix, MS=Masked Sand	Grains	[2] Locatio	n: PL=Pore	Lining, M=Matrix.		
Hydric Soil Indicators: (applicable to all LRRs	s, unless	otherwise noted)			Inc	dicators for Problematic Hydric Sc	oils [3]:	
Histosol (A1)		Sandy Gle	eyed Matr	ix (S4)		Coast Prairie Redox (A16)		
☐ Histic Epipedon (A2)		☐ Sandy Re	edox (S5)			Dark Surface (S7)		
☐ Black Histic (A3)		Stripped I	Matrix (S6,)		Iron-Manganese Masses (F12)		
☐ Hydrogen Sulfide (A4)		Loamy Mu	ucky Mine	ral (F1)		Very Shallow Dark Surface (TF12)		
Stratified Layers (A5)		☐ Loamy GI	leyed Matr	rix (F2)		Other (explain in soil remarks)		
2 cm Muck (A10)		Depleted	Matrix (F3	3)				
Depleted Below Dark Surface (A11)		Redox Da	ark Surface	e (F6)				
☐ Thick Dark Surface (A12)		Depleted	Dark Surfa	ace (F7)				
Sandy Mucky Mineral (S1)		☐ Redox De	epressions	s (F8)		Indicators of hydrophytic vegeta ust be present, unless disturbed o		drology
5 cm Mucky Peat or Peat (S3)						aot so procent, amose aistaisea e	, problematio.	
Restrictive Layer (if present): Type:		Dept	h (inches	s):		Hydric soil present?	<u>No</u>	
Soil Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of one required,	: check a	ll that apply)			Se	econdary Indicators (minimum of t	wo required)	
Surface Water (A1)		☐ Water-Stained Leave	es (R9)			Surface Soil Cracks (B6)		
High Water Table (A2)		Aquatic Fauna (B13)				Drainage Patterns (B10)		
Saturation (A3)		True Aquatic Plants (Dry-Season Water Table (C2)		
Water Marks (B1)		Hydrogen Sulfide Od				Crayfish Burrows (C8)		
Sediment Deposits (B2)		Oxidized Rhizospher		na Roots (C3	2)	Saturation Visible on Aerial Imager	n/ (C0)	
Drift Deposits (B3)		Presence of Reduced		_	,	Stunted or Stressed Plants (D1)	y (C)	
Algal Mat or Crust (B4)		Recent Iron Reduction				Geomorphic Position (D2)		
Iron Deposits (B5)				1 30113 (00)				
		Thin Muck Surface (C				FAC-Neutral Test (D5)		
Inundation Visible on Aerial Imagery (B7)		Gauge or Well Data						
Sparsely Vegetaled Concave Surface (B8)		Other (explain in rem	iaiks)			<u> </u>		
Field Observations:	_	Curface Water Depth (i	nobool.			Indicators of wetland hydrolo	gy present? <u>N</u>	<u>Vo</u>
Surface water present?	L	Surface Water Depth (in				Describe Recorded Data:		
Water table present?	\	Water Table Depth (incl						
Saturation present? (includes capillary fringe		Saturation Depth (inche						
	Monitori	ing Well Stream Gaug	je 🔲 F	Previous Ins	pections			
Hydrology Remarks:								

		WETL	AND D	ETER	MINA	TION D	ATA FO	ORM - Mic	lwest	: Regi	on			
Project/Site	e: <u>Bassett Creek</u> Pond (East)	Park Pond &	Winnetka	Applicant/O	wner: BC\	<u>WMC</u>	City/County:	Crystal/Hennepin	State:	MN S	Sampling Date.	10/11	<u>/16</u>	
Investigato				Section:	<u>21</u>		Township:	118N	Range:	<u>21W</u>	Sampling Point	t: <u>B-3w</u>		
Land Forn	• • •			Local Relie	f: Concave)	Slope %:	4 Soil Map	Unit Name	: Udorthe	ents, wet sub, C)-2% slc	pes	
	(LRR): <u>M</u>			Latitude:	4984300	-	Longitude:	-			1 83 Zone 15N		-	
_)1 A		Circular 39		•	_				Upland			
	olassineation. —		inical for this				=		ed NWI Cla			Forcet		
Are ciimati	c/hydrologic conditions	on the site ty	рісаі іог ігііѕ	ume or year	? <u>No</u>	(іі по, ехр	lain in remarks) Are "normal	00	s & Reed (s & Reed (primary): secondary)	<u>Floodplain</u>	rorest		
Are vegeta	tion <u>No</u> Soil	<u>No</u>	Hydrology	<u>No</u>	significantly	disturbed?	circumstance		s & Reed (
Are vegeta	tion <u>No</u> Soil	<u>No</u>	Hydrology	No r	naturally pro	blematic?	present?			quaternary,):			
SUMMA	RY OF FINDIN	GS - Att:	ach site	man sh	owina s	sampling	noint loca	ations trans	ects ir	mportai	nt feature	s etc		
				•			•			•		5, 010	J.	
Hydric soil	c vegetation present?			neral Remar plain any	ks C	onditions are w	etter than norm	nal within the three r	nontris pric	or to the site	e visit.			
-	present: of wetland hydrology pr	esent?	Yes ans	swers if need	ded):									
	oled area within a wetla			es, optional	I Wetland S	Site ID: <u>Ba</u>	ssett Cr Park P	<u>ond</u>						
VEGET.	ΛΤΙΩΝ													
VLUL1.	ATION													
					<u>Absolu</u>			<u>50/20 Thre</u>	<u>esholds:</u>			<u>209</u>	<u>%</u>	<u>50%</u>
<u>Tree</u>	<u>Stratum</u>	(Plot Size:	<u>30 ft</u>) <u>% Cove</u>	<u>Species</u>	? <u>Status</u>	Tree Strat				4		10
1. Pop	ulus deltoides				1	0 Yes	FAC	Sapling/Si		um		0		0
2. Pop	ulus tremuloides					5 Yes	FAC	—— Herb Strai —— Woody Vi		n		0		50 0
3. Ace	negundo					5 Yes	FAC							
4.						0		<u>Dominano</u>						
Sapli	ng/Shrub Stratum	(Plot Size:		Fotal Cover:	<u>2</u> (<u>0</u>		Number o That Are (5	(A)	
1.)		Total Num Species A				5	(B)	
2.)		Percent of	f Dominan	t Species	400		(A (D)	
3.					_			That Are 0	OBL, FAC	N or FAC:	100.0	10%	(A/B)	
4.								Prevalence	e Index Wo	orksheet.				
5.			7	otal Cover:) <u> </u>			tal % Cove			Multi	ply by:	
Harb	Stratum	(Plot Size:		otar cover.	7	<u>2</u>		OBL Spec		57 01.	0 X1	mann		0
	<u>Stratum</u>	(F101 3126.	<u>311</u>)	- //] [[[] [] []			9	95 X 2		19	0
	aris arundinacea a dioica				75	-	FACW FACW				20 X3		6	
	a gioica nenocissus quinquefoli	2			20	No No	FACW							
4. Part	ienocissus quinqueioii	<u></u>					FACU	FACU SPE	·		5 X 4		2	_
5.)		—— UPL Spec	ies _		0 X 5			0
6.							1	Column T	otals: _	12	20 (A)		27	0 (B)
7.						<u></u>			Preva	alence Inde	ex = B/A =		2.2	5
8.								<u>Hydrophyt</u>	ic Vegetat	ion Indicat	tors:	_		
			7	otal Cover:	100			No	Rapid Tes	st for Hydr	ophytic Vege	tation		

0

% Sphagnum Moss Cover:

Total Cover:

Woody Vine Stratum

% Bare Ground in Herb Stratum:

(Plot Size: 30 ft

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

Yes

Yes

No

Dominance Test is >50%

Prevalence Index ≤ 3.0 [1]

Hydrophytic vegetation present?

Morphological Adaptations [1] (provide supporting data in vegetation remarks or on a separate sheet)

Yes

Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil & wetland hydrology must be present, unless disturbed or problematic.

SOIL						Sampling F	Point:	<u>B-3</u>
Profile Description: (Describe to the depth ne	eeded to	document the indicator or	confirm th	ne abscence	of indicators	S).		
Depth Matrix			edox Featu			,		
(inches) Color (moist)	%	Color (moist)	%	Type [1]	Loc [2]	Texture	Remar	·ks
1. 0 - 7 N 2.5/0	100					Silt Loam		
2. 7 - 40 N 2.5/0	95	10YR 3/3	5	C	M	Silt Loam		
3								
4 5								
6								
[1] Type: C=Concentration, D=Depletion, RM	=Reduce	d Matrix, MS=Masked San	d Grains	[2] Locatio	n: PL=Pore	Lining, M=Matrix.		
Hydric Soil Indicators: (applicable to all LRR.	s, unless	otherwise noted)			Inc	dicators for Problematic Hydric So	oils [3]:	
Histosol (A1)		☐ Sandy C	Gleyed Matr	ix (S4)		Coast Prairie Redox (A16)		
Histic Epipedon (A2)		☐ Sandy F	Redox (S5)			Dark Surface (S7)		
Black Histic (A3)		☐ Strippec	d Matrix (S6,)		Iron-Manganese Masses (F12)		
☐ Hydrogen Sulfide (A4)		☐ Loamy I	Mucky Mine	ral (F1)		Very Shallow Dark Surface (TF12)		
Stratified Layers (A5)		Loamy (Gleyed Matr	rix (F2)		Other (explain in soil remarks)		
2 cm Muck (A10)		☐ Deplete	d Matrix (F3	3)				
Depleted Below Dark Surface (A11)		✓ Redox E	Dark Surface	e (F6)				
Thick Dark Surface (A12)		☐ Deplete	d Dark Surf	ace (F7)	12	The disease of boundaries the constant	Al and a second constitution of the	la contra a la acco
Sandy Mucky Mineral (S1)		Redox [Depressions	s (F8)] Indicators of hydrophytic vegeta ust be present, unless disturbed c		nyarology
5 cm Mucky Peat or Peat (S3)								
Restrictive Layer (if present): Type:		Dep	oth (inches	s):		Hydric soil present?	<u>Yes</u>	
Soil Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of one required	; check a	I that apply)			Se	econdary Indicators (minimum of t	wo required)	_
Surface Water (A1)		Water-Stained Lea	ves (B9)			Surface Soil Cracks (B6)		
☐ High Water Table (A2)		Aquatic Fauna (B1)				Drainage Patterns (B10)		
Saturation (A3)		True Aquatic Plants	s (B14)			Dry-Season Water Table (C2)		
☐ Water Marks (B1)		Hydrogen Sulfide C				Crayfish Burrows (C8)		
Sediment Deposits (B2)		Oxidized Rhizosphe	eres on Livi	ng Roots (C3	2)	Saturation Visible on Aerial Imager	y (C9)	
Drift Deposits (B3)		Presence of Reduc		_		Stunted or Stressed Plants (D1)		
☐ Algal Mat or Crust (B4)		Recent Iron Reduci			✓			
☐ Iron Deposits (B5)		Thin Muck Surface	(C7)		✓	FAC-Neutral Test (D5)		
Inundation Visible on Aerial Imagery (B7)		Gauge or Well Data	a (D9)					
Sparsely Vegetated Concave Surface (B8)		Other (explain in re	marks)					
Field Observations:						Indicators of wetland hydrolo	gy present?	<u>Yes</u>
Surface water present?		Surface Water Depth ((inches):			Describe Recorded Data:		
Water table present?] Water Table Depth (in	ches):					
Saturation present? (includes capillary fringe) _] Saturation Depth (incl	hes):					
Recorded Data: Aerial Photo	Monitori	ng Well Stream Gau	ıge ☐ F	Previous Ins	pections	•		
Hydrology Remarks:								

WETLAND DETER	MINATION D	ATA FORI	M - Midwest Region	
Project/Site: Bassett Creek Park Pond & Winnetka Applicant/Over Pond (East)	vner: <u>BCWMC</u>	City/County: Crys	tal/Hennepin State: <u>MN</u> Sampl	ling Date: 10/11/16
Investigator(s): BKB Section:	<u>17</u>	Township: 118N	Range: 21W Samp	ling Point: <u>W-1u</u>
Land Form: Shoulder Local Relief.	Convex	Slope %: <u>18</u>	Soil Map Unit Name: <u>Urban land-U</u>	dorthents, wet sub, complex
Subregion (LRR): M Latitude:	<u>4985483</u>	Longitude: 47042	<u>7</u> Datum: <u>UTM Nad 83 Z</u>	one 15N
Cowardin Classification: Circular 39 (Classification:		Mapped NWI Classification: Ц	<u>pland</u>
Are climatic/hydrologic conditions on the site typical for this time of year?	No (If no, expla	ain in remarks)	Eggers & Reed (primary):	
Are vegetation No Soil No Hydrology No s	ignificantly disturbed?	Are "normal circumstances"	Yes Eggers & Reed (secondary):	
	aturally problematic?	present?	Eggers & Reed (tertiary): Eggers & Reed (quaternary):	
SUMMARY OF FINDINGS - Attach site map sho		point location		eatures, etc.
Hydrophytic vegetation present? Yes General Remark			nin the three months prior to the site visit.	
Hydric soil present? No (explain any		ator than normal with	in the three months profite the site visit.	
Indicators of wetland hydrology present? No answers if neede	ed):			
Is the sampled area within a wetland? No If yes, optional	Wetland Site ID: <u>Upla</u>	and		
/EGETATION				
	Absolute_ Dominan	t Indicator	50/20 Thresholds:	<u>20%</u> <u>50%</u>
<u>Tree Stratum</u> (Plot Size: 30 ft) % Cover Species?		Tree Stratum	10 25
Acer negundo	50 Yes	FAC	Sapling/Shrub Stratum	8 20
2.	0		Herb Stratum	11 27.5
3.	0		Woody Vine Stratum	0 0
4.	0		<u>Dominance Test Worksheet:</u>	
Total Cover:	<u>50</u>		Number of Dominant Species That Are OBL, FACW or FAC:	3 (A)
<u>Sapling/Shrub Stratum</u> (Plot Size: <u>15 ft</u>)		Total Number of Dominant	
1. Rhamnus cathartica	40 Yes	FAC	Species Across All Strata:	4 (B)
2. 3.	0		Percent of Dominant Species	75.00% (A/B)
4.	0		That Are OBL, FACW or FAC:	73.0076 (PVD)
5.	0		Prevalence Index Worksheet:	
Total Cover:	<u>40</u>		Total % Cover of:	Multiply by:
Herb Stratum (Plot Size: 5 ft)		OBL Species 0	X 1 0
Glechoma hederacea	35 Yes	FACU	FACW Species0	X 2 <u>0</u>
2. Rhamnus cathartica	20 Yes	FAC	FAC Species110	X 3 330
3.	0		FACU Species35	X 4 140
5.	0		UPL Species0	X 5 <u>0</u>
6.			Column Totals:145	(A) 470 (B)
7.	0		Prevalence Index = B	8/A = 3.24
8.	0		<u>Hydrophytic Vegetation Indicators:</u>	
Total Cover:	<u>55</u>		No Rapid Test for Hydrophy	•
Woody Vine Stratum (Plot Size: 30 ft)		Yes Dominance Test is >50%	
1.	0		No Prevalence Index ≤ 3.0 [1 No Morphological Adaptatio	ns [1] (provide supporting data
2.	0		in vegetation remarks or	on a separate sheet)
Total Cover:	<u>0</u>		No Problematic Hydrophytic	9
% Bare Ground in Herb Stratum:	% Sphagnum Moss Co	over:	[1] Indicators of hydric soil & wetland hydr disturbed or problematic.	rology must be present, unless
Vegetation Remarks: (include photo numbers here or on a separate	e sheet)		Hydrophytic vegetation present?	<u>Yes</u>

SOIL						Sampling Po	oint:	<u>W-1</u>
Profile Description: (Describe to the depth n	eeded to	document the indicator or col	nfirm th	ne abscence	of indicators	S).		
Depth Matrix			x Featu			•		
(inches) Color (moist)	%	Color (moist)	%	Type [1]	Loc [2]	Texture	Rem	arks
1. 0 - 6 10YR 2/1	100					Loam		
2. 6 - 18 10YR 5/3	100	10) (5) 0 (0)				Loamy Sand		
3. 18 - 24 10YR 3/1	98	10YR 3/3	2	C	M	Sandy Clay Loam		
4					-			
6								
[1] Type: C=Concentration, D=Depletion, RN	=Reduce	d Matrix, MS=Masked Sand G	rains	[2] Location	n: PL=Pore	Lining, M=Matrix.		
Hydric Soil Indicators: (applicable to all LRR	s, unless	otherwise noted)			Inc	dicators for Problematic Hydric Soil	ls [3]:	
Histosol (A1)		Sandy Gley	ed Matr	ix (S4)		Coast Prairie Redox (A16)		
Histic Epipedon (A2)		☐ Sandy Redo	ox (S5)			Dark Surface (S7)		
Black Histic (A3)		Stripped Ma	atrix (S6,)		Iron-Manganese Masses (F12)		
☐ Hydrogen Sulfide (A4)		Loamy Muc	ky Mine	ral (F1)		Very Shallow Dark Surface (TF12)		
Stratified Layers (A5)		☐ Loamy Gley	ed Matr	ix (F2)		Other (explain in soil remarks)		
2 cm Muck (A10)		☐ Depleted Ma	atrix (F3	3)				
Depleted Below Dark Surface (A11)		Redox Dark	Surface	e (F6)				
☐ Thick Dark Surface (A12)		☐ Depleted Da	ark Surf	ace (F7)				
Sandy Mucky Mineral (S1)		Redox Depr	essions	(F8)		Indicators of hydrophytic vegetation at the present, unless disturbed or the present, unless disturbed or the present.		d hydrology
5 cm Mucky Peat or Peat (S3)					777	ust be present, unless distarbed or	рговістанс.	
Restrictive Layer (if present): Type:		Depth	(inches	r):		Hydric soil present?	No	
Call Barranta			-					
Soil Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of one required	l; check a	II that apply)			Se	econdary Indicators (minimum of tw	o required)	
Surface Water (A1)		☐ Water-Stained Leaves	(B9)			Surface Soil Cracks (B6)	·	
High Water Table (A2)		Aquatic Fauna (B13)	(07)			Drainage Patterns (B10)		
Saturation (A3)		☐ True Aquatic Plants (B	11)			Dry-Season Water Table (C2)		
Water Marks (B1)		Hydrogen Sulfide Odor				Crayfish Burrows (C8)		
Sediment Deposits (B2)		Oxidized Rhizospheres		na Poots (C3)	Saturation Visible on Aerial Imagery	(C0)	
		=		-	<i>'</i>		(07)	
Drift Deposits (B3)		Presence of Reduced I				Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)		Recent Iron Reduction		1 SOIIS (C6)		Geomorphic Position (D2)		
☐ Iron Deposits (B5)		Thin Muck Surface (C7				FAC-Neutral Test (D5)		
Inundation Visible on Aerial Imagery (B7)		Gauge or Well Data (D						
Sparsely Vegetated Concave Surface (B8)		Other (explain in remar	rks)					
Field Observations:		7 Comference 147 / 5 / 7 / 7	t N			Indicators of wetland hydrolog	y present?	<u>No</u>
Surface water present?		Surface Water Depth (inc.				Describe Recorded Data:		
Water table present?	, _] Water Table Depth (inche						
Saturation present? (includes capillary fringe] Saturation Depth (inches,): 	<u> </u>				
Recorded Data: Aerial Photo	Monitori	ng Well 🔲 Stream Gauge		Previous Ins _i	pections			
Hydrology Remarks:								

WETLAND DE	ETERMINATION DA	ATA FORM - Midwest Region	
Project/Site: Bassett Creek Park Pond & Winnetka Append (East)	oplicant/Owner: <u>BCWMC</u>	City/County: Crystal/Hennepin State: MN Sampling Date.	10/11/16
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	ocal Relief: Concave atitude: 4985483 ircular 39 Classification: Type 1L ne of year? No (If no, explain No significantly disturbed? No naturally problematic?	Township: 118N Range: 21W Sampling Point Slope %: 8 Soil Map Unit Name: Water Longitude: 470427 Datum: UTM Nad 83 Zone 15N Mapped NWI Classification: Upland in in remarks) Eggers & Reed (primary): Floodplain Are "normal Yes Eggers & Reed (secondary): circumstances" Eggers & Reed (tertiary):	<u>Forest</u>
Hydrophytic vegetation present? Hydric soil present? Indicators of wetland hydrology present? Yes (explain answer)	ral Remarks in any ers if needed): Conditions are wet	ter than normal within the three months prior to the site visit.	
VEGETATION			
Tree Stratum (Plot Size: 30 ft 1. Populus tremuloides	Absolute Dominant) % Cover Species?	Indicator 50/20 Thresholds: Status Tree Stratum Sapling/Shrub Stratum	20% 50% 5 12.5 2 5
Acer negundo 3.	10 Yes 0	FAC Herb Stratum Woody Vine Stratum	19 47.5 0 0
4. Tot Sapling/Shrub Stratum (Plot Size: 15 ft	al Cover: 25	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW or FAC:	4 (A)
Rhamnus cathartica 3.	10 Yes 0	FAC Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW or FAC: 100.0	4 (B) 00% (A/B)
4. 5. <i>Tot.</i>	0 0 0 al Cover: 10	Prevalence Index Worksheet: Total % Cover of:	Multiply by:
Herb Stratum (Plot Size: 5 ft 1. Phalaris arundinacea 2. Schoenoplectus fluviatilis 3. Solidago canadensis) 75 Yes No No No	FACW OBL Species 10 X 1 FACW Species 75 X 2 FAC Species 35 X 3 FACU Species 10 X 4	10 150 105 40
4. 5. 6. 7.	0 0	FACU FACU Species 10 X 4	0 305 (B) 2.35
8. Tota Woody Vine Stratum (Plot Size: 30 ft	0 0 al Cover: 95	Hydrophytic Vegetation Indicators: No Rapid Test for Hydrophytic Vege Yes Dominance Test is >50% Yes Prevalence Index ≤ 3.0 [1]	tation
1	0 0 al Cover: 0	No Morphological Adaptations [1] (print in vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on a set in the problematic Hydrophytic Vegetation remarks or on the hydrophytic Vegetation r	parate sheet)

% Sphagnum Moss Cover:

% Bare Ground in Herb Stratum:

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

[1] Indicators of hydric soil & wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic vegetation present?

SOIL						Sampling	Point:			
Profile Description: (Describe to the depth need	ded to	document the indicator or	confirm th	ne abscence	of indicators	5).				
Depth Matrix	200 10		edox Featu		o, marcators	T.				
(inches) Color (moist)	%	Color (moist)	%	Type [1]	Loc [2]	Texture	Remarks			
1. 0 - 10 10YR 3/1	96	10YR 4/3	2	С	М	Sandy Clay Loam				
2. 0 - 10		10YR 5/2	2	D	М					
3. <u>10 - 18</u> 10YR 2/1	98	10YR 4/3	2	C	M	Sandy Clay				
4. 18 - 24 10Y 3/1	98	10YR 5/2	2	D	M	Sandy Clay				
5										
[1] Type: C=Concentration, D=Depletion, RM=R	educe		d Grains	[2] Locatio	n: PL=Pore	Lining, M=Matrix.	-			
Hydric Soil Indicators: (applicable to all LRRs,	unless	otherwise noted)			Inc	dicators for Problematic Hydric S	 oils [3]:			
Histosol (A1)		☐ Sandy G	Gleyed Matr	ix (S4)		Coast Prairie Redox (A16)				
☐ Histic Epipedon (A2)		☐ Sandy R	Redox (S5)			Dark Surface (S7)				
☐ Black Histic (A3)		☐ Strippea	Matrix (S6,)		Iron-Manganese Masses (F12)				
☐ Hydrogen Sulfide (A4)		Loamy N	Лиску Mine	ral (F1)		Very Shallow Dark Surface (TF12))			
Stratified Layers (A5)			Gleyed Matr			Other (explain in soil remarks)				
2 cm Muck (A10)			d Matrix (F3			()				
Depleted Below Dark Surface (A11)			Dark Surface	•						
☐ Thick Dark Surface (A12)		<u></u>	d Dark Surf							
Sandy Mucky Mineral (S1)			Depressions			Indicators of hydrophytic vegeta				
5 cm Mucky Peat or Peat (S3)		//Cubx L	сргсээюнэ	s (1 <i>0)</i>	mı	ust be present, unless disturbed o	or problematic.			
_ canada radi (ca)										
Restrictive Layer (if present): Type:		Dor	oth (inches	e)·		Hydric soil present?	Yes			
Tresumente Edyer (in present).			in (inches			Trydrie son present.	163			
Soil Remarks:										
HYDROLOGY										
Wetland Hydrology Indicators:	, ,									
Primary Indicators (minimum of one required; c	heck a	ll that apply)			Se	econdary Indicators (minimum of	two required)			
Surface Water (A1)		☐ Water-Stained Leav	ves (B9)			Surface Soil Cracks (B6)				
✓ High Water Table (A2)		✓ Aquatic Fauna (B1)	3)			☐ Drainage Patterns (B10)				
✓ Saturation (A3)		True Aquatic Plants	s (B14)			Dry-Season Water Table (C2)				
Water Marks (B1)		☐ Hydrogen Sulfide C	odor (C1)			Crayfish Burrows (C8)				
Sediment Deposits (B2)		Oxidized Rhizosphe	eres on Livii	ng Roots (C3	3)	Saturation Visible on Aerial Image	ry (C9)			
☐ Drift Deposits (B3)		Presence of Reduc	ed Iron (C4 ₎)		Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4)		Recent Iron Reduct	tion in Tilled	d Soils (C6)	✓	Geomorphic Position (D2)				
☐ Iron Deposits (B5)		Thin Muck Surface			✓					
Inundation Visible on Aerial Imagery (B7)		Gauge or Well Data				, ,				
Sparsely Vegetated Concave Surface (B8)		Other (explain in re								
Field Observations:			/			Indicators of wetland hydrolo	ogy present? Yes			
Surface water present?		Surface Water Depth ((inches):			Describe Recorded Data:	193 present: 103			
Water table present?				9		Describe Recorded Data:				
Saturation present? (includes capillary fringe)										
	•	,		-						
	onitori	ng Well Stream Gau	ıge 🔲 F	Previous Ins	pections					
Hydrology Remarks:										

Appendix B Site Photographs

Appendix B – Bassett Creek Park Pond & Winnetka - East Wetland Delineation Site Photos

Photo 1 – October 11, 2016

Bassett Creek Park Pond

General view of the shallow open water community of Bassett Creek Park Pond.



Photo 2 – October 11, 2016

Bassett Creek Park Pond

Shallow marsh fringe area located on the west side of the pond.



Photo 3 – October 11, 2016

Bassett Creek Park Pond

Excavated deep marsh community located on the northwest side of the basin within shrub swamp.



Appendix B – Bassett Creek Park Pond & Winnetka - East Wetland Delineation Site Photos

Photo 4 – October 11, 2016

Bassett Creek Park Pond

Shrub swamp "island" community surrounded by shallow open water community located beyond open water.



Photo 5 – October 11, 2016

Bassett Creek Park Pond

Bassett Creek extending through floodplain forest community on the northwest side of the basin.



Photo 6 – October 11, 2016

Winnetka Pond

Typical view of the shallow open water community.



Appendix B – Bassett Creek Park Pond & Winnetka - East Wetland Delineation Site Photos

Photo 7 – October 11, 2016

Winnetka Pond

Steep and abrupt wetland edge leading into shallow open water community on the north side.



Photo 8 – October 11, 2016

Winnetka Pond

Typical view of floodplain forest community on the west side of the basin.

