Appendix A

Wetland Delineation Report (October 2018)



Wetland Delineation Report

Jevne Park Stormwater Improvement Project Feasibility Study

Prepared for Bassett Creek Watershed Management Commission

October 2018

Wetland Delineation Report

October 2018

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1.0 Introduction

Bassett Creek Watershed Management Commission (BCWMC) is submitting a Wetland Delineation Report as part of a feasibility study for a proposed Stormwater Improvement Project (Project) in Jevne Park in the City of Medicine Lake. The Project area is approximately 6.89 acres and includes residential and recreational park area. The Project area is located in Section 26 of Township 118 North, Range 22 West, Medicine Lake, Hennepin County, Minnesota (**Figure 1**).

This Wetland Delineation Report was 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 wetland boundaries and determined wetland types within the Project area on September 21, 2018.

This report includes a general environmental information section (Section 2.0), descriptions of the delineated wetlands (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 Project Location Map, Topography Map, National Wetland Inventory (NWI), Public Waters Inventory (PWI), Soil Survey Map, and the Wetland Delineation Map. **Appendix A** includes Wetland Data Forms, and **Appendix B** includes site photographs taken at the time of the site visit.

2.0 General Environmental Setting

2.1 Site Description

The Project area is located on the peninsula of the city of Medicine Lake, Minnesota. It is made up of emergent and forested wetlands, and a maintained grassed recreational area (known as Jevne Park) that contains a volleyball court and parking area on the north side. The south side of the Project area is made up of private parcels with single family homes. The Project area only encompasses the north sections of the private parcels and excludes the houses and shoreline on Medicine Lake. The surrounding area is medium density housing located along the shoreline of the peninsula (**Figure 1**).

2.2 Topography

The majority of the Project area maintains a flat topography with slight depressions in wetland areas. Topography outside of the Project area and throughout the remainder of the peninsula is generally higher in elevation with more undulating topography (**Figure 2**).

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 118N North, Range 22 West, Section 26.

In 2018, antecedent moisture conditions were within the dryer than normal range based on precipitation for the three months prior to the September 21, 2018 site visit. However, an intense rain event the day prior to the site visit (September 20) yielded 4.53 inches of rain. Precipitation for the 20 days preceding the September 21 site visit was 7.15 inches which is above normal precipitation for the entire month of September by 3.39 inches. These data were obtained from a provisional value derived from radar-based estimates. Data for September was obtained from NWS New Hope weather station (**Table 1**). The warm season, and water year totals are mostly in the wetter than normal range for the six years prior to 2018 (**Table 2**).

2.4 National Wetland Inventory

The National Wetland Inventory (NWI) has identified two emergent wetlands and one forested wetland within the Project area (**Figure 3**).

2.5 Water Resources

The Minnesota Department of Natural Resources (MnDNR) Public Waters Inventory (PWI) has not identified any public waters within the Project area (**Figure 4**).

2.6 Soil Resources

Soil information located within the Project area and in surrounding areas was obtained from the Natural Resources Conservation Service SSURGO Database (USDA, 2017b) (**Figure 5**). Three soil map units were identified within the Project area:

- Houghton and Muskego soils, depressional, 0 to 1 percent slopes (L50A)
- Lester-Malardi complex, 6 to 12 percent slopes, eroded (L70C2)
- Urban land-Udorthents, wet substratum, complex, 0 to 2 percent slopes (U1A)

Other soil map units in areas surrounding the Project area include:

- Lester-Malardi complex, 6 to 10 percent slopes, moderately eroded (L22C2)
- Tadkee-Tadkee, depressional, complex, 0 to 2 percent slopes (L64A)
- Water (W) (identified on the soil survey map but not a soil unit)

Houghton and Muskego soils, depressional is the only soil map unit within the Project area that is hydric. Tadkee-Tadkee, depressional is the only hydric soil map unit located in the vicinity of the Project area.

3.0 Wetland Delineation

3.1 Wetland Delineation and Classification Methods

Wetlands within the Project area were delineated and classified during a site visit on September 21, 2018. 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 (**Figure 6**).

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 two wetlands, to a depth of at least 20 inches below the ground surface where possible. Representative soil samples from each boring were examined for the presence of hydric soil indicators using Version 8.1 of the Natural Resources Conservation Service (NRCS) Field Indicators of Hydric Soils in the United States guide (USDA, 2017a). 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

Twelve wetlands were delineated within the Project area (**Figure 6**). Four parcels located on the south side of the Project area were not investigated because landowner access was not granted. Wetland boundaries shown on **Figure 6** that are within these four parcels were estimated with the aid of LiDAR data and wetland signature appearing on recent aerial photos.

Wetlands 1 and 12 were the only two wetlands where upland and wetland data plots were established. Soil borings were not collected for the remaining ten wetlands (Wetlands 2 through 11) within the Project area because each of these wetlands was inundated with at least 3 inches of water along the wetland edges and dominated by hydrophytic vegetation so hydric soils were assumed, or they were road ditch wetlands within the right-of-way. Soil borings were not collected in uplands associated with Wetlands 2 through 11 because most areas immediately upland from the wetland boundaries were graded gravel or paved driveway, gravelly fill areas located along upland areas of roadside ditches, or within manicured lawn areas maintained by private landowners. Detailed descriptions for Wetlands 1 through 12 are

Appendix A.	mmary Table (Table 3) . We	2 3 (2) 5 (11) 5 (6) 1	

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 Inventory Program, which are administered by the BCWMC on behalf of the City of Medicine Lake and the Minnesota Department of Natural Resources (DNR) respectively. The USACE, the BCWMC (City of Medicine Lake), and the DNR should be contacted before altering any wetlands on the site. In addition, delineated wetland boundaries may be reviewed, if needed, by a Technical Evaluation Panel (TEP) consisting of representatives from the Minnesota Board of Water and Soil Resources, and Hennepin County. The MnDNR and the USACE may also be present at the TEP meeting if requested.

5.0 References

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Tables

Table 1

Antecedent Moisture Conditions Prior to September 21, 2018 Site Visit Jevne Park Stormwater Improvement Project Bassett Creek Watershed Management Commission

Precipitation Worksheet Using Gridded Database

Precipitation data for target wetland location:

County:HennepinTownship Number:118NTownship Name:PlymouthRange Number:22WNearest Community:Medicine LakeSection Number:26

Aerial photograph or site visit date:

Friday, September 21, 2018

Score using 1981-2010 normal period

(value are in inches)	first prior month: August 2018	second prior month: July 2018	third prior month: June 2018			
estimated precipitation total for this location:	3.19R*	3.66R*	4.32			
there is a 30% chance this location will have less than:	3.31	2.67	3.30			
there is a 30% chance this location will have more than:	5.11	4.14	5.19			
type of month: dry normal wet	dry	normal	normal			
monthly score	3 * 1 = 3	2 * 2 = 4	1 * 2 = 2			
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	9 (dry)					

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

Table 2 Precipitation in Comparison to WETS Data Jevne Park Stormwater Improvement Project Bassett Creek Watershed Management Commission

Precipitation data for target wetland location:

County:HennepinTownship Number:118NTownship Name:PlymouthRange Number:22WNearest Community:Medicine LakeSection Number:26

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)							

						Period-o	f-Record	Summa	ary Statis	tics					
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	WARM	ANN	WAT
30%	0.53	0.52	1.14	1.70	2.57	3.17	2.45	2.82	1.84	1.18	0.72	0.60	16.24	26.09	25.89
70%	1.06	1.19	1.95	2.81	4.28	5.61	4.47	4.54	3.76	2.67	1.93	1.35	21.20	32.73	31.93
mean	0.90	0.91	1.65	2.42	3.68	4.47	3.83	3.69	3.05	2.22	1.53	1.04	18.73	29.40	29.43
	1981-2010 Summary Statistics														
	, , , , , , , , , , , , , , , , , , ,														WAT
30%	0.52	0.39	1.31	2.17	2.85	3.30	2.67	3.31	2.33	1.26	1.09	0.73	18.06	29.44	27.79
70%	1.19	0.98	2.11	2.93	4.06	5.19	4.14	5.11	3.88	3.56	2.05	1.42	21.67	34.11	35.17
mean	0.87	0.81	1.90	2.73	3.62	4.53	4.23	4.16	3.41	2.50	1.80	1.22	19.95	31.78	31.58
Year-to-Year Data															
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	WARM	ANN	WAT
2018	0.93	1.33	1.29	2.24	2.44	4.32	3.66R	3.19R	7.53**				20.14		33.30
2017	0.73	0.71	0.69	3.46	6.26	3.82	3.88	7.05	1.79	5.22	0.40	0.75	22.80	34.76	35.94
2016	0.30	0.86	1.49	3.64	2.23	3.02	5.93	9.77	6.73	3.21	2.42	1.92	27.68	41.52	42.76
2015	0.35	0.32	0.67	1.97	4.28	3.44	7.22	3.44	3.86	2.76	4.31	1.72	22.24	34.34	28.81
2014	1.28	1.42	0.75	7.35	4.44	10.70	3.12	3.07	1.73	1.11	1.12	1.03	23.06	37.12	40.45
2013	0.68	1.18	1.99	4.40	4.92	7.76	4.82	1.55	1.35	4.38	0.58	1.63	20.40	35.24	32.59
2012	0.49	2.14	1.29	2.93	9.55	4.17	4.29	1.44	0.53	1.43	0.89	1.62	19.98	30.77	28.80
2011	0.95	0.97	1.93	3.11	6.19	4.05	6.60	3.87	0.48	0.94	0.19	0.84	21.19	30.12	35.37
2010	0.60	0.85	0.97	1.97	2.85	6.07	3.83	5.88	6.05	2.02	2.00	3.20	24.68	36.29	37.63
2009	0.47	0.99	1.95	1.29	0.43	3.71	0.96	6.60	0.83	5.76	0.60	2.20	12.53	25.79	21.47
2008	0.15	0.52	2.08	3.98	2.57	4.36	2.23	2.90	2.32	1.52	1.23	1.49	14.38	25.35	28.18
2007	0.63	1.37	3.52	2.41	3.13	1.74	2.42	6.89	4.89	5.20	0.09	1.78	19.07	34.07	31.42
2006	0.66	0.39	1.68	3.16	3.62	4.10	2.09	5.27	3.18	0.68	1.11	2.63	18.26	28.57	31.74
2005	1.28	0.97	1.27	2.56	3.55	6.24	2.68	3.44	6.65	4.52	1.68	1.39	22.56	36.23	33.89
2004	0.51	1.46	2.22	2.71	6.04	5.18	3.96	1.46	4.82	3.71	1.08	0.46	21.46	33.61	31.36
2003	0.26	0.97	1.66	2.85	5.13	7.44	1.97	0.36	2.34	0.94	1.16	0.90	17.24	25.98	27.07
2002	0.58	0.57	1.92	3.98	4.06	8.27	6.36	6.81	4.16	3.75	0.07	0.27	29.66	40.80	41.29
2001	1.34	1.36	0.98	7.51	5.46	4.94	2.42	3.12	3.76	0.89	3.07	0.62	19.70	35.47	36.89
2000	0.93	1.19	1.04	1.43	3.73	3.35	6.13	3.30	2.41	0.89	3.80	1.31	18.92	29.51	25.27
1999	1.31	0.35	1.68	3.28	6.19	5.22	4.48	3.72	2.59	0.60	0.84	0.32	22.20	30.58	33.79

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

^{**} Monthly data obtained from NWS New Hope.

Table 3 Wetland Delineation Summary Jevne Park Stormwater Inprovement Project

Wetland	Soil Borings (Y/N)	Cowardin Type	Circular 39 Type	Community Type (Eggers & Reed)	Dominant Wetland Vegetation	Corresponding Dominant Upland Vegetation	Wetland Hydric Soil Indicators	Wetland Hydrology Indicators	Wetland Area (acres)	Remarks
1	Υ	PFO1A PEMC	Type 1/3	Floodplain forest Shallow marsh	Populus deltoides (t) Acer saccharinum (t) Phalaris arundinacea Carex lacustris Typha angustifolia	Poa pratensis Glechoma hederacea	Depleted matrix	Surface water High water table Saturation Geo position FAC-neutral test	0.85	Wetland 1 is a floodplain forest wetland with several shallow marsh openings dominated by cattails.
2	N	PEMA PSS1A	Type 1/6	Seasonally flooded Shrub-carr	Cornus alba (s) Bolboschoenus fluviatilis Phalaris arundinacea	Poa pratensis	Assumed Hydric	Surface water Fac-neutral test Geo-position	0.01	Wetland 2 is an excavated roadside ditch within the right-of-way. Soils assumed hydric within wetland based on dominent hydropytic vegetation and primary hydrology indicators. Upland soil borings were not completed within upland right-ofway areas.
3	N	PEMA PSS1A	Type 1/6	Seasonally flooded Shrub-carr	Fraxinus pennsylvanica (s) Cornus alba (s) Phalaris arundinacea	Glechoma hederacea Poa pratensis Taraxacum officinale	Assumed Hydric	Surface water Fac-neutral test Geo-position	0.01	Wetland 3 is located within a drainageway mostly inside of a parcel that was not granted access to field staff. Only the portion of Wetland 3 located outside of this parcel was delineated. Soils assumed hydric within wetland based on dominent hydropytic vegetation and primary hydrology indicators. Upland soils were not sampled since they were located within gravelly road grade.
4	N	PFO1A	Type 1	Floodplain Forest	Acer saccharinum (t) Populus deltoides (t) Fraxinus pennsylvanica (t) Phalaris arundinacea Impatiens capensis Salix interior (s) Cornus alba (s) Impatiens capensis	Poa pratensis gravel driveway	Assumed Hydric	Surface water Fac-neutral test Geo-position	0.12	Soils assumed hydric within wetland based on dominent hydropytic vegetation and primary hydrology indicators. Upland soils were not sampled since they were located within manicured lawn of a private residence.
5	N	РЕМА	Type 1	Seasonally flooded	Bolboschoenus fluviatilis Lemna minor	Poa pratensis	Assumed Hydric	Surface water Fac-neutral test Geo-position	0.01	Wetland 5 consists of excavated roadside ditch right-of-way. Soils assumed hydric within wetland based on dominent hydropytic vegetation and primary hydrology indicators. Upland soils were not sampled since they were located within manicured lawn of a private residence.

Table 3 Wetland Delineation Summary Jevne Park Stormwater Inprovement Project

Wetland	Soil Borings (Y/N)	Cowardin Type	Circular 39 Type	Community Type (Eggers & Reed)	Dominant Wetland Vegetation	Corresponding Dominant Upland Vegetation	Wetland Hydric Soil Indicators	Wetland Hydrology Indicators	Wetland Area (acres)	Remarks
6	Ν	PSS1A	Type 6	Shrub-carr	Phalaris arundinacea Salix interior (s) Acer negundo (s)	paved driveway	Assumed Hydric	Surface water Fac-neutral test Geo-position	0.003	Wetland 6 is located within a drainageway mostly inside of a parcel that was not granted access to field staff. Only the portion of Wetland 6 located outside of this parcel was delineated. Soils assumed hydric within wetland based on dominent hydropytic vegetation and primary hydrology indicators. Upland soils were not sampled since they were located within a paved and gravelly road grade.
7	N	PFO1A PSS1A	Type 1/6	Floodplain forest Shrub-carr	Lemna minor Salix interior (s) Phalaris arundinacea Populus deltoides (t) Acer saccharinum (t)	gravel driveway	Assumed Hydric	Surface water Fac-neutral test Geo-position	0.01	Wetland 7 is located mostly within a parcel without access permissions. The portion of Wetland 6 that was delineated was within the roadside ditch right-of-way. Soils assumed hydric within wetland based on dominent hydropytic vegetation and primary hydrology indicators. Upland soils were not sampled since they were located within gravelly road grade.
8	N	PFO1A PSS1A	Type 1/6	Floodplain forest Shrub-carr	Lemna minor Phalaris arundinacea Fraxinus pennsylvanica (t) Salix babylonica (t) Salix interior (s) Ulmus americana (s) Acer negundo (s) Cornus alba (s)	gravel driveway	Assumed hydric	Surface water Fac-neutral test Geo-position	0.25	Soils assumed hydric within wetland based on dominent hydropytic vegetation and primary hydrology indicators. Upland soils were not sampled since they were located within gravelly road grade.
9	N	РЕМА	Type 1	Seasonally flooded	Lemna minor Phalaris arundinacea Cornus alba (s) Acer saccharinum (t)	gravel driveway	Assumed hydric	Surface water Fac-neutral test Geo-position	0.04	Wetland 9 is located within a drainageway. Soils assumed hydric within wetland based on dominent hydropytic vegetation and primary hydrology indicators. Upland soils were not sampled since they were located within gravelly road grade.

Table 3 **Wetland Delineation Summary** Jevne Park Stormwater Inprovement Project

Wetland	Soil Borings (Y/N)	Cowardin Type	Circular 39 Type	Community Type (Eggers & Reed)	Dominant Wetland Vegetation	Corresponding Dominant Upland Vegetation	Wetland Hydric Soil Indicators	Wetland Hydrology Indicators	Wetland Area (acres)	Remarks
10	Z	PFO1A	Type 1	Floodplain forest	Lemna minor Typha angustifolia Phalaris arundinacea Populus deltoides (t) Fraxinus pennsylvanica (t) Acer saccharinum (s) Salix interior (s)	gravel driveway	Assumed hydric	Surface water Fac-neutral test Geo-position	0.48	Wetland 10 is partially located within a parcel without access permissions. The area shown on Figure 6 that is within this no-access parcel was completed in the office using wetland signature on recent aerial photography and LiDAR data. Soils assumed hydric within wetland based on dominent hydropytic vegetation and primary hydrology indicators. Upland soils were not sampled since they were located within gravelly road grade or within road right-of-way.
11	N	PEMA	Type 1	Seasonally flooded	Lemna minor	Poa pratensis	Assumed hydric	Surface water Fac-neutral test Geo-position	0.02	Wetland is an excavated roadside ditch right-of- way partially within a parcel without access permissions. Soils assumed hydric within wetland based on dominent hydropytic vegetation and primary hydrology indicators. Upland soils were not sampled since they were located within gravelly road grade or within road right-of-way.
12	Υ	РЕМН	Type 5	Shallow Open Water	Lemna minor Matteuccia struthiopteris	Rhamnus cathartica Sambucas racemosa Morus alba Fraxinus pennsylvanica	Loamy mucky mineral	High water table Saturation Geo position FAC-neutral test	0.17	Wetland 12 is a channel that connects to Medicine Lake. It is most likely permanently flooded. Wetland 12 is partially located within a parcel without access permissions. The area shown on Figure 6 that is within this no-access parcel was completed in the office using wetland signature on recent aerial photography and LiDAR data.
		1		<u> </u>	<u> </u>	<u> </u>	1	Wetland Total (acres):	1.97	1

Figures













Appendix A Wetland Data Forms

Project/Site:	Jevne Pa	ırk Feas	sibility Study	L	Applicant/C	Owner: BCWMC		City/County:	Medicine Lake/He		State:	<u>MN</u>	Sampling Date:	09/21/18
Investigator(s):	<u>BKB</u>				Section:	<u>26</u>		Township:	<u>118N</u>		Range:	<u>22W</u>	Sampling Point:	<u>1-1u</u>
Land Form:	<u>Summit</u>				Local Relie	ef: None		Slope %:	2	Soil Map U	nit Name.	See S	ummary Remarks	i
Subregion (LRR)	: <u>M</u>				Latitude:	<u>4983281</u>		Longitude:	<u>466727</u>		Datum:	NAD 83		
Cowardin Classif	ication:	N/A			Circular 39	Classification: N	<u>/A</u>			Mapped	NWI Cla	ssification	: <u>Upland</u>	
Are climatic/hydro	ologic condi	itions o	n the site ty	pical for this	time of yea	r? <u>No</u> (If no	o, expla	in in remarks	s)	Eggers	& Reed (j	orimary):	N/A	
Are vegetation	No	Soil <u>No</u>	No	Hydrology	No	significantly disturbed	anificantly disturbed?		Yes	Eggers	& Reed (secondary	/): <u>N/A</u>	
Are vegetation in	110		110	riyarology	ito signinountly disturbed:		u.	circumstanc	es"	Eggers	& Reed (t	tertiary):	<u>N/A</u>	
Are vegetation	<u>No</u>	Soil	<u>No</u>	Hydrology	<u>Yes</u>	naturally problematic?	?	present?		Eggers	& Reed (quaternar	y): <u>N/A</u>	

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present?	<u>No</u>	General Remarks	Soil Map Unit Name: Houghton and Muskego soils, depressional, 0 to 1 percent slopes. Precipitation was
Hydric soil present?	<u>Yes</u>	(explain any	below the normal range for the three months prior to the site visit, however a rain event the day prior to the
Indicators of wetland hydrology present?	Yes	answers if needed):	site visit yielded 4.35" of precipitation.
Is the sampled area within a wetland?	<u>No</u>	If yes, optional Wetla	and Site ID: N/A

VEGETATION

Tree Stratum	(Plot Size:	30 ft)	Absolute % Cover	Dominant Species?	<u>Indicator</u> <u>Status</u>	50/20 Thresholds: Tree Stratum		<u>)%</u>)	<u>50%</u> 0
	`					Sapling/Shrub Stratum			0
			0			Herb Stratum	2	1	52.5
			0			Woody Vine Stratum) –	0
			0			Dominance Test Worksheet:			
		Total Cover:	<u>0</u>			Number of Dominant Species		(A)	
Sapling/Shrub Stratum	(Plot Size:	<u>15 ft</u>)				That Are OBL, FACW or FAC:	1	(A)	
			0			Total Number of Dominant Species Across All Strata:	2	(B)	
			0			Percent of Dominant Species			
			0			That Are OBL, FACW or FAC:	50.00%	(A/B)	
			0			Prevalence Index Worksheet:			
		Total Cover:	<u>0</u>			Total % Cover of:	Mult	iply by:	
Herb Stratum	(Plot Size:	<u>5 ft</u>				OBL Species 0	X 1	(0
Poa pratensis			70	Yes	FAC	FACW Species0	X 2	(0
Glechoma hederacea			30	Yes	FACU	FAC Species70	X 3	210)
Taraxacum officinale			5	No	FACU	FACU Species 35	X 4	140)
			0			UPL Species0	X 5	(0
			0			Column Totals: 105	(A)	350	<u> </u>
			0			Prevalence Index =	B/A =	3.33	3
			0			Hydrophytic Vegetation Indicators			
		Total Cover:	105			No Rapid Test for Hydroph	ytic Vegetation		
Woody Vine Stratum	(Plot Size:	<u>30 ft</u>)				No Dominance Test is >50	%		
			0			No Prevalence Index ≤ 3.0			
			0			No Morphological Adaptation in vegetation remarks of			ıng da
		Total Cover:	<u>0</u>			No Problematic Hydrophyt	•	,)
Bare Ground in Herb Strate	ım:	_	% Sphagnu	m Moss Cove	or:	[1] Indicators of hydric soil & wetland hy disturbed or problematic.	rdrology must be p	resent, unle	988
getation Remarks: (include	e photo number	s here or on a separate	sheet)			Hydrophytic vegetation present?	No		

SOIL Sampling Point: 1-1u Profile Description: (Describe to the depth needed to document the indicator or confirm the abscence of indicators). Depth Matrix Redox Features (inches) Color (moist) Color (moist) Type [1] Loc [2] **Texture** Remarks 0 - 4 10YR 3/1 100 sandy clay loam 4 - 8 10YR 3/1 95 10YR 3/3 5 С Μ sandy clay 2 95 5 С 8 - 14 10YR 5/2 10YR 5/6 Μ sandy clay 3. 14 - 18 N2.5/0 95 10YR 3/2 5 С Μ sandy clay loam [1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2] Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (applicable to all LRRs, unless otherwise noted) Indicators for Problematic Hydric Soils [3]: Histosol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Histic Epipedon (A2) Sandy Redox (S5) Dark Surface (S7) Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) ☐ Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Very Shallow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleved Matrix (F2) Other (explain in soil remarks) 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 hydrophytic vegetation and wetland hydrology Sandy Mucky Mineral (S1) Redox Depressions (F8) must be present, unless disturbed or problematic. 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if present): Hydric soil present? Depth (inches): Yes Type: Soil Remarks: Auger refusal at 18 inches. **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 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) 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) Gauge or Well Data (D9) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (explain in remarks) Field Observations: Indicators of wetland hydrology present? <u>Yes</u> Surface water present? Surface Water Depth (inches): Describe Recorded Data: Water table present? Water Table Depth (inches): 8 **✓** Saturation present? (includes capillary fringe) Saturation Depth (inches): 7 **✓** Recorded Data: Aerial Photo Monitoring Well Stream Gauge **Previous Inspections**

Primary hydrology was likely present due to the rain event that occurred the day prior to the site visit on September 20, 2018.

Project/Site:	Jevne Pa	rk Feas	sibility Study	<u>!</u> .	Applicant/C	Owner: BCWMC		City/County:	Medicine Lake/He		State:	MN	Sampling Date:	09/21/18
Investigator(s):	<u>BKB</u>				Section:	<u>26</u>		Township:	<u>118N</u>		Range:	<u>22W</u>	Sampling Point:	<u>1-1w</u>
Land Form:	<u>Flat</u>				Local Relie	ef: Concave		Slope %:	<u>0</u>	Soil Map U	nit Name:	See Su	ummary Remarks	<u> </u>
Subregion (LRR)	: <u>M</u>				Latitude:	<u>4983277</u>		Longitude:	<u>466728</u>		Datum:	NAD 83		
Cowardin Classii	ication:	PEM/S	SS1/FO1C		Circular 39	Classification: <u>Ty</u>	pe 1/3			Mapped	NWI Clas	ssification	PFO1A	
Are climatic/hydro	ologic condi	tions or	the site typ	oical for this	time of yea	r? <u>No</u> (If no	, explai	in in remarks	s)	Eggers	& Reed (µ	orimary):	Floodplain F	orest
Are vegetation	No	Soil	<u>No</u>	Hydrology	No	significantly disturbed	10	Are "normal		Eggers	& Reed (s	secondary): Shallow Mai	<u>rsh</u>
Are regetation	110	OOII	140	Trydrology	110	significantly disturbed		circumstanc	es"	Eggers	& Reed (t	ertiary):	<u>N/A</u>	
Are vegetation	<u>No</u>	Soil	<u>No</u>	Hydrology	Yes I	naturally problematic?	1	present?		Eggers	& Reed (d	quaternary	<u>/): N/A</u>	

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present?	<u>Yes</u>	General Remarks	Soil Map Unit Name: Houghton and Muskego soils, depressional, 0 to 1 percent slopes. Precipitation was
Hydric soil present?	<u>Yes</u>	(explain any	below the normal range for the three months prior to the site visit, however a rain event the day prior to the
Indicators of wetland hydrology present?	<u>Yes</u>	answers if needed):	site visit yielded 4.35" of precipitation.
Is the sampled area within a wetland?	<u>Yes</u>	If yes, optional Wetla	nd Site ID: Wetland 1

VEGETATION

Tree Stratum	(Plot Size:	<u>30 ft</u>)	Absolute <u>% Cover</u>	<u>Dominant</u> <u>Species?</u>	<u>Indicator</u> <u>Status</u>	50/20 Thresholds: Tree Stratum			<u>20%</u> 4	_	50% 10
Populus deltoides				20	Yes	FAC	Sapling/Shrub Stra	tum		4		10
				0			Herb Stratum Woody Vine Stratu	m		18 0		45 0
				0						-	_	
				0			Dominance Test W	orksheet:				
Sapling/Shrub Stratum	(Plot Size:		al Cover:	<u>20</u>			Number of Domina That Are OBL, FAC			4 (4	4)	
Cornus alba	(1.10101201	<u> 70 K</u>		15	Yes	FACW	Total Number of Do			4 (E	3)	
Acer negundo				5	Yes	FAC	Species Across All				,	
7 tool nogame				0			Percent of Dominal That Are OBL, FAC		100.00	% (A	A/B)	
				0			Prevalence Index W	/orksheet:				
		Tota	I Cover:	<u>20</u>			Total % Cov	rer of:		Multiply	by:	
Herb Stratum	(Plot Size:	<u>5 ft</u>)	_			OBL Species	10	X 1		10	_
Phalaris arundinacea				75	Yes	FACW	FACW Species	95	X 2		190	
Typha angustifolia				10	No	OBL	FAC Species	25	X 3		75	
Impatiens capensis				5	No	FACW	FACU Species	0	X 4		0	
				0			UPL Species	0	X 5		0	
				0			Column Totals:	130	(A)		275	(E
				0			 	alence Index =	. ,		2.12	`
				0			Hydrophytic Vegeta		-			
		Tota	l Cover:]	est for Hydroph		tion		
Woody Vine Stratum	(Plot Size:		0070	<u>90</u>			II — ·	nce Test is >509				
Woody vine Stratum	(1 101 0120.	<u>50 II.</u>	,				Yes <i>Prevaler</i>	ice Index ≤ 3.0	[1]			
				0				ogical Adaptati				g da
		Total	I Cover:	0			<u> </u>	ation remarks o				
		1014	i cover.	ū				atic Hydrophyt	_			
Bare Ground in Herb Stratu	m:			% Sphagnu	m Moss Cove	or:	[1] Indicators of hydric disturbed or problemat		drology must	be presen	it, unles:	5
egetation Remarks: (include	photo number	s here or on a	separate	sheet)			Hydrophytic vegetati	ion present?	<u>Yes</u>			

Depth Matrix		dox Featui	res						
(inches) Color (moist)	% Color (moist)	%	Type [1]	Loc [2]	Texture	Remarks			
0 - 6 10YR 4/2	98 10YR 4/4	2	С	М	sandy clay				
6 - 10 10YR 3/1	100				loam	mucky			
10 - 20 10YR 3/1 10 - 20 10YR 5/2	50 45 10YR 5/6			M	sandy clay				
10 - 20 10YR 5/2	45 101 R 3/0			IVI	sandy clay				
-									
Type: C=Concentration, D=Depletion, RM=R	Reduced Matrix, MS=Masked Sand	d Grains	[2] Location	n: PL=Pore L	Lining, M=Matrix.				
rdric Soil Indicators: (applicable to all LRRs,	unless otherwise noted)			Inc	dicators for Problematic Hydr	ic Soils [3]:			
] Histosol (A1)	Sandy G	leyed Matri	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 (F12))			
Hydrogen Sulfide (A4)	Loamy N	lucky Mine	ral (F1)		Very Shallow Dark Surface (T	F12)			
Stratified Layers (A5)	Loamy G	Gleyed Matr	rix (F2)		Other (explain in soil remarks)				
2 cm Muck (A10)	✓ Depleted	Matrix (F3	3)						
Depleted Below Dark Surface (A11)	Redox D	ark Surface	e (F6)						
Thick Dark Surface (A12)	Depleted								
Sandy Mucky Mineral (S1)	= '				Indicators of hydrophytic ve				
7 5 44 4 5 4 5 4 (20)			Redox Depressions (F8) must be present, unless disturbed or problematic.						
	Dep	th (inches	s):		Hydric soil present?	Yes Yes			
destrictive Layer (if present): Type:	<i>Dep</i>	th (inches	ş):		Hydric soil present?	Yes Yes			
estrictive Layer (if present): Type: oil Remarks: YDROLOGY	Dep	th (inches	s):		Hydric soil present?	Yes Yes			
estrictive Layer (if present): Type: oil Remarks: YDROLOGY /etland Hydrology Indicators:		th (inches	s):						
estrictive Layer (if present): Type: oil Remarks: YDROLOGY //etland Hydrology Indicators:		th (inches	s):	Se	Hydric soil present?				
estrictive Layer (if present): Type: oil Remarks: YDROLOGY //etland Hydrology Indicators:			ş):						
restrictive Layer (if present): Type: oil Remarks: YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required; c	check all that apply)	ves (B9)	s):	Se	condary Indicators (minimun				
Cestrictive Layer (if present): Type: Oil Remarks: YDROLOGY Vetland Hydrology Indicators: Orimary Indicators (minimum of one required; compared) Surface Water (A1) High Water Table (A2)	check all that apply) Water-Stained Leav	res (B9)	s):	Se	condary Indicators (minimun Surface Soil Cracks (B6)	n of two required)			
Cestrictive Layer (if present): Type: Oil Remarks: YDROLOGY Vetland Hydrology Indicators: Orimary Indicators (minimum of one required; compared) Surface Water (A1) High Water Table (A2)	check all that apply) Water-Stained Leav	res (B9) 3) (B14)	ş):	Se	condary Indicators (minimun Surface Soil Cracks (B6) Drainage Patterns (B10)	n of two required)			
Pestrictive Layer (if present): Type: Oil Remarks: YDROLOGY Vetland Hydrology Indicators: Virinary Indicators (minimum of one required; compared of the present of the	check all that apply) Water-Stained Leav Aquatic Fauna (B13	res (B9) 3) 1 (B14) dor (C1)			Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)	n of two required)			
Restrictive Layer (if present): Type: Soil Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	check all that apply) Water-Stained Leav Aquatic Fauna (B13) True Aquatic Plants Hydrogen Sulfide O	res (B9) 3) (B14) dor (C1) vres on Livir	ng Roots (C3		Condary Indicators (minimun Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)	n of two required)			
Pestrictive Layer (if present): Type: Oil Remarks: YDROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one required; c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	check all that apply) Water-Stained Leav Aquatic Fauna (B13) True Aquatic Plants Hydrogen Sulfide O	res (B9) 3) (B14) dor (C1) vres on Livir ed Iron (C4)	ng Roots (C3		Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial In	n of two required)			
Restrictive Layer (if present): Type: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	### Check all that apply) ### Water-Stained Leav ### Aquatic Fauna (B13) ### True Aquatic Plants ### Hydrogen Sulfide O ### Oxidized Rhizosphe ### Presence of Reduce	res (B9) 3) (B14) dor (C1) eres on Livir ed Iron (C4) ion in Tilled	ng Roots (C3		Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Im	n of two required)			
Restrictive Layer (if present): Type: Foil Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; comparison of the property of the primary Indicators (minimum of the present of the primary Indicators (Minimum of the pr	Check all that apply) Water-Stained Leav Aquatic Fauna (B13) True Aquatic Plants Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduct Recent Iron Reduct	res (B9) (B14) dor (C1) eres on Livir ed Iron (C4) ion in Tilled	ng Roots (C3		Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial In Stunted or Stressed Plants (D Geomorphic Position (D2)	n of two required)			
Poil Remarks: YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required; compared of the second of th	### Water-Stained Leav ### Water-Stained Leav ### Aquatic Fauna (B13 ### True Aquatic Plants ### Hydrogen Sulfide O ### Oxidized Rhizosphe ### Presence of Reduct ### Recent Iron Reduct ### Thin Muck Surface	res (B9) 3) dor (C1) res on Livir ed Iron (C4) ion in Tilled (C7)	ng Roots (C3		Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial In Stunted or Stressed Plants (D Geomorphic Position (D2)	n of two required)			
Restrictive Layer (if present): Type: Soil Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; comparison of the property of the	Check all that apply) Water-Stained Leav Aquatic Fauna (B13) True Aquatic Plants Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduct Recent Iron Reduct Thin Muck Surface Gauge or Well Data	res (B9) 3) dor (C1) res on Livir ed Iron (C4) ion in Tilled (C7)	ng Roots (C3		Condary Indicators (minimum Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Im Stunted or Stressed Plants (D Geomorphic Position (D2) FAC-Neutral Test (D5)	n of two required) nagery (C9)			
Restrictive Layer (if present): Type: Soil Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; comparison of the property of the	check all that apply) Water-Stained Leav Aquatic Fauna (B13) True Aquatic Plants Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduct Recent Iron Reduct Thin Muck Surface Gauge or Well Data Other (explain in rer	res (B9) (B14) dor (C1) res on Livir ed Iron (C4) ion in Tilled (C7) (D9) marks)	ng Roots (C3		Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial In Stunted or Stressed Plants (D Geomorphic Position (D2) FAC-Neutral Test (D5)	n of two required) hagery (C9) 1) drology present? Yes			
Restrictive Layer (if present): Type: Soil Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; comparison of the property of the	Check all that apply) Water-Stained Leav Aquatic Fauna (B13) True Aquatic Plants Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduct Recent Iron Reduct Thin Muck Surface Gauge or Well Data	res (B9) 3) (B14) dor (C1) res on Livir ed Iron (C4) ion in Tilled (C7) (C9) marks)	ng Roots (C3		Condary Indicators (minimum Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Im Stunted or Stressed Plants (D Geomorphic Position (D2) FAC-Neutral Test (D5)	n of two required) hagery (C9) 1) drology present? Yes			

Project/Site:	Jevne Par	rk Feas	ibility Study		Applicant/O	wner: BCWM0	<u>2</u>	City/County:	Medicine Lake/Her	-	State:	MN	Sampling Date:	09/21/18
Investigator(s):	BKB				Section:	<u>26</u>		Township:	<u>118N</u>		Range:	<u>22W</u>	Sampling Point:	<u>12-1u</u>
Land Form:	<u>Hillslope</u>				Local Relie	f: Convex		Slope %:	2 3	Soil Map Ur	nit Name:	See Si	ummary Remarks	
Subregion (LRR):	<u>M</u>				Latitude:	<u>4983216.</u>		Longitude:	<u>466800</u>		Datum:	NAD 83		
Cowardin Classifi	cation:	N/A			Circular 39	Classification:	N/A			Mapped	NWI Cla	ssification	<u>Upland</u>	
Are climatic/hydro	logic condit	tions or	the site typ	oical for this	time of year	? <u>No</u>	(If no, expla	nin in remarks	:)	Eggers 8	& Reed (µ	orimary):	<u>N/A</u>	
Are vegetation	No	Soil	<u>No</u>	Hydrology	No	significantly dist	turhed?	Are "normal		Eggers 8	& Reed (s	secondary	/): <u>N/A</u>	
7 ii o vogotation	140	Oon	110	riyarology	110	orgrimourity disc	urbou.	circumstanc	es"	Eggers 8	& Reed (t	ertiary):	<u>N/A</u>	
Are vegetation	<u>No</u>	Soil	<u>No</u>	Hydrology	<u>No</u> r	naturally problen	natic?	present?		Eggers 8	& Reed (d	quaternar	y): <u>N/A</u>	

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present? Hydric soil present? Indicators of wetland hydrology present?	Yes No No	General Remarks (explain any answers if needed):	Soil Map Unit Name: Urban land-Udorthents, wet substratum, complex, 0 to 2 percent slopes. Precipitation was below the normal range for the three months prior to the site visit, however a rain event the day prior to the site visit yielded 4.35" of precipitation.
Is the sampled area within a wetland?	No	If yes, optional Wetla	and Site ID: N/A

VEGETATION

Tree Stratum	(Plot Size:	<u>30 ft</u>)	Absolute % Cover	<u>Dominant</u> <u>Species?</u>	<u>Indicator</u> <u>Status</u>	50/20 Thresholds: Tree Stratum		4	10
Fraxinus pennsylvanica			20	Yes	FACW	Sapling/Shrub Stratum Herb Stratum		<u>6</u> 4	15 10
			0			Woody Vine Stratum		-4 0	0
			0			II			
			0			<u>Dominance Test Worksheet:</u>			
Sapling/Shrub Stratum	(Plot Size:	Total Cover:	<u>20</u>			Number of Dominant Species That Are OBL, FACW or FAC:		3 (A)	
Cornus alba	(1.101.01201	<u>1016</u> /	20	Yes	FACW	Total Number of Dominant		4 (B)	
Rhamnus cathartica			10	Yes	FAC	Species Across All Strata:			
			0			Percent of Dominant Species That Are OBL, FACW or FAC:	75.0	0% (A/	B)
			0			Prevalence Index Worksheet:			
		Total Cover:	30			Total % Cover of:		Multiply b	y:
Herb Stratum	(Plot Size:	<u>5 ft</u>	_			OBL Species	0 X 1		0
Parthenocissus quinquef	olia	,	20	Yes	FACU	FACW Species4	0 X 2		80
Mentha arvensis			0		FACW	FAC Species1	0 X 3		30
			0			FACU Species2	0 X4		80
			0			· · · · · · · · · · · · · · · · · · ·	0 X 5		0
			0			III	0 (A)		190 (
			0			Prevalence Inde	 x = B/A =	-	2.71
			0			Hydrophytic Vegetation Indicate	ors:		
		Total Cover:	20			No Rapid Test for Hydro	phytic Veget	ation	
Woody Vine Stratum	(Plot Size:	30 ft	<u></u>			Yes Dominance Test is >	50%		
	`		0			Yes Prevalence Index ≤			
			0			No Morphological Adap in vegetation remark	tations [1] (p.	rovide supp arate sheet	orting a
		Total Cover:	<u>0</u>			No Problematic Hydrop			
Bare Ground in Herb Stratu	ım:	_	% Sphagnu	m Moss Cove	er:	[1] Indicators of hydric soil & wetland disturbed or problematic.	l hydrology mus	st be present,	unless
egetation Remarks: (include	photo number	s here or on a separate	sheet)			Hydrophytic vegetation present?	<u>Yes</u>		
% hostas in the herbaceous						Ш			

SOIL						Sampling F	Point:	<u>12-</u>
Profile Description: (Describe to the dept	h needed to	document the indicator or	confirm th	e abscence	of indicators	·).		
Depth Matrix			dox Featui					
(inches) Color (moist)	%	Color (moist)	%	Type [1]	Loc [2]	Texture	Remai	rks
1. 0 - 5 10YR 2/1	100					loam		
2. 5 - 16 10YR 2/1 10YR 6/3	<u>100</u> 48	10YR 5/4			M	silty clay loam sandy clay loam		
3. 16 - 21 10YR 7/1	48	10YR 5/4	2		M	sandy clay loam		
5								
6								
[1] Type: C=Concentration, D=Depletion,	RM=Reduce	ed Matrix, MS=Masked Sand	l Grains	[2] Locatio	n: PL=Pore l	Lining, M=Matrix.		
Hydric Soil Indicators: (applicable to all L	.RRs, unless	otherwise noted)			Inc	licators for Problematic Hydric So	oils [3]:	
Histosol (A1)		Sandy G	leyed Matri	ix (S4)		Coast Prairie Redox (A16)		
Histic Epipedon (A2)		Sandy Re	edox (S5)			Dark Surface (S7)		
Black Histic (A3)		☐ Stripped	Matrix (S6))		Iron-Manganese Masses (F12)		
Hydrogen Sulfide (A4)		Loamy M	lucky Mine	ral (F1)		Very Shallow Dark Surface (TF12)		
Stratified Layers (A5)		Loamy G	leyed Matr	ix (F2)		Other (explain in soil remarks)		
2 cm Muck (A10)			Matrix (F3	, ,		,		
Depleted Below Dark Surface (A11)			ark Surface	•				
☐ Thick Dark Surface (A12)	<u> </u>							
Thick Dark Surface (A12)						Indicators of hydrophytic vegetal		hydrology
5 cm Mucky Peat or Peat (S3)		Nodox Bi	орговолого	(1 0)	mı	ıst be present, unless disturbed o	r problematic.	
Restrictive Layer (if present): Type:		Dept	th (inches	s):		Hydric soil present?	<u>No</u>	
Soil Remarks:								
IVDDOL OOV								
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of one requ	ired; check a					condary Indicators (minimum of t	wo required)	_
Surface Water (A1)		☐ Water-Stained Leav				Surface Soil Cracks (B6)		
☐ 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 Od	dor (C1)			Crayfish Burrows (C8)		
Sediment Deposits (B2)		Oxidized Rhizosphe	res on Livir	ng Roots (C3)	Saturation Visible on Aerial Imager	y (C9)	
Drift Deposits (B3)		Presence of Reduce	ed Iron (C4))		Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)		Recent Iron Reduction	on in Tilled	Soils (C6)		Geomorphic Position (D2)		
☐ Iron Deposits (B5)					✓	FAC-Neutral Test (D5)		
☐ Inundation Visible on Aerial Imagery (B7)	Gauge or Well Data	(D9)					
Sparsely Vegetated Concave Surface (B		Other (explain in ren	narks)					
Field Observations:						Indicators of wetland hydrolo	gy present?	<u>No</u>
Surface water present?		Surface Water Depth (i	inches):			Describe Recorded Data:		
Water table present?		Water Table Depth (inc	ches):					
Saturation present? (includes capillary from	inge)	Saturation Depth (inch	es):					
Recorded Data: Aerial Photo	Monitor	ing Well Stream Gau	ge F	Previous Ins	pections	1		
Hydrology Remarks:								

Project/Site:	Jevne Pa	rk Feas	sibility Study		Applicant/C)wner:	BCWMC	2	City/County:	Medicine Lake/Her	-	State:	MN	Sampling Date:	09/21/18
Investigator(s):	<u>BKB</u>				Section:	<u>26</u>			Township:	<u>118N</u>		Range:	<u>22W</u>	Sampling Point:	<u>12-1w</u>
Land Form:	Toeslope	<u>1</u>			Local Relie	ef: <u>Co</u>	<u>oncave</u>		Slope %:	1 5	Soil Map U	nit Name:	See Su	ummary Remarks	
Subregion (LRR)	: <u>M</u>				Latitude:	<u>49</u>	83209		Longitude:	<u>466801</u>		Datum:	NAD 83		
Cowardin Classii	ication:	PEME	<u>l</u>		Circular 39	Class	ification:	Type 5			Mapped	NWI Clas	ssification	Upland	
Are climatic/hydro	ologic condi	tions or	the site typ	oical for this	time of year	r?	<u>No</u>	(If no, expla	in in remarks)	Eggers	& Reed (p	orimary):	Shallow, Op	en Water
Are vegetation	<u>No</u>	Soil	<u>No</u>	Hydrology	<u>No</u>	signifi	cantly dist	urbed?	Are "normal circumstance	Yes es"	00	& Reed (s & Reed (t	secondary ertiary):	r): <u>N/A</u> <u>N/A</u>	
Are vegetation	<u>No</u>	Soil	<u>No</u>	Hydrology	<u>Yes</u>	natura	lly problem	natic?	present?		Eggers	& Reed (d	quaternar	y): <u>N/A</u>	

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present? Hydric soil present?	<u>Yes</u> Yes	General Remarks (explain any	Soil Map Unit Name: Urban land-Udorthents, wet substratum, complex, 0 to 2 percent slopes. Precipitation was below the normal range for the three months prior to the site visit, however a rain event the day prior to
Indicators of wetland hydrology present?	Yes	answers if needed):	the site visit yielded 4.35" of precipitation.
Is the sampled area within a wetland?	<u>Yes</u>	If yes, optional Wetla	and Site ID: Wetland 12

VEGETATION

Tree Stratum	(Plot Size:	<u>30 ft</u>	Absolute % Cover	Dominant Species?	<u>Indicator</u> <u>Status</u>	50/20 Thresholds: Tree Stratum		=	<u>20%</u> 4	<u>50%</u> 10
Fraxinus pennsylvanio	a		20	Yes	FACW	Sapling/Shrub Strat	um	-	4	10
			0			Herb Stratum		-	10	25
			0			Woody Vine Stratun	1	-	0	0
			0			Dominance Test Wo	rksheet:			
Sapling/Shrub Stratun	ı (Plot Size:	Total Cover:	<u>20</u>			Number of Dominar That Are OBL, FAC			3 (A)	
Cornus alba	<u>r (F101 3126.</u>	1011	20	Yes	FACW	Total Number of Do			4 (B)	
			0			Percent of Dominan	t Species		_	
			0			That Are OBL, FACI		75.00	% (A/B) —	1
			0			Prevalence Index We	orksheet:			
		Total Cover:	<u>20</u>			Total % Cove	er of:	1	Multiply by:	
Herb Stratum	(Plot Size:	<u>5 ft</u>)			OBL Species _	5	X 1		5
Parthenocissus quinqu	efolia	•	20	Yes	FACU	FACW Species _	65	X 2	1	30
Matteuccia struthiopter	ris		20	Yes	FACW	FAC Species	0	X 3		0
Phalaris arundinacea			5	No	FACW	FACU Species _	20	X 4		80
Carex lacustris			5	No	OBL	UPL Species	0	X 5		0
			0			Column Totals:	90	(A)	2	15 (I
			0			_	lence Index =	B/A =	2.	39
			0			Hydrophytic Vegetat	ion Indicators:			
		Total Cover:	<u>50</u>			No Rapid Te	st for Hydroph	∕tic Vegetat	ion	
Woody Vine Stratum	(Plot Size:	30 ft))			Yes Dominan	ce Test is >50%	6		
			0			III 	ce Index ≤ 3.0	•		
			0				gical Adaptati tion remarks o			rting da
L		Total Cover:	<u>0</u>			·	tic Hydrophyti			in)
Bare Ground in Herb Str	atum:	_	% Sphagnu	m Moss Cove	er:	[1] Indicators of hydric s		irology must	be present, u	nless
getation Remarks: (inclu	de photo number	s here or on a separate	sheet)			Hydrophytic vegetation	n present?	Yes		

	N# - 41		document the indicator or co			•	•		
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Featur	res Type [1]	Loc [2]	Texture	Ren	narks
<u> </u>	N2.5/0	100					silt loam	mucky	rai no
	10YR 3/1	98	10YR 3/3			M	loam	mucky	
-									
-									
-									
-							-		
ype: C=Conce	entration, D=Depletion, RI	M=Reduced	d Matrix, MS=Masked Sand G	Grains	[2] Locatio	n: PL=Pore L	ining, M=Matrix.		
ic Soil Indicate	ors: (applicable to all LR	Rs, unless	otherwise noted)			Ind	licators for Problematic Hyd	Iric Soils [3]:	
Histosol (A1)			Sandy Gle	yed Matri	ix (S4)		Coast Prairie Redox (A16)		
Histic Epipedon	(A2)		Sandy Red	lox (S5)			Dark Surface (S7)		
Black Histic (A3)	1		Stripped M	atrix (S6))		Iron-Manganese Masses (F1	2)	
Hydrogen Sulfid	e (A4)		✓ Loamy Mu	cky Mine	ral (F1)		Very Shallow Dark Surface (TF12)	
Stratified Layers	(A5)		Loamy Gle	yed Matr	rix (F2)		Other (explain in soil remarks	s)	
2 cm Muck (A10)		Depleted N	latrix (F3	3)				
Depleted Below	Dark Surface (A11)		Redox Dar	k Surface	e (F6)				
Thick Dark Surfa	ace (A12)		Depleted D	ark Surfa	ace (F7)				
Sandy Mucky M	ineral (S1)		Redox Dep	ressions	: (F8)		Indicators of hydrophytic v ast be present, unless distur		d hydro
5 cm Mucky Pea						ma	st be present, unless distai	bed of problematic.	
trictive Layer (i	f present): Type:		Depth	(inches	s):		Hydric soil present	? <u>Yes</u>	
strictive Layer (i			Depth	(inches	s):		Hydric soil present	? <u>Yes</u>	
trictive Layer (i	/		Depth	(inches	ş):		Hydric soil present	? <u>Yes</u>	
Remarks: DROLOG	/ / Indicators:	di chook a		(inches	s):	So			
trictive Layer (in Remarks: DROLOG Value of the second se	/ · Indicators: (minimum of one require	d; check a	ll that apply)		s):	Sec	condary Indicators (minimu		
Strictive Layer (in the layer (in the layer) (in th	Indicators: (minimum of one require	d; check a	Il that apply) Water-Stained Leaves		s):	Sec	condary Indicators (minimu Surface Soil Cracks (B6)		
I Remarks: DROLOG Value of the state of the	Indicators: (minimum of one require	rd; check a	Il that apply) Water-Stained Leaves Aquatic Fauna (B13)	s (B9)	s):	Sec	condary Indicators (minimu Surface Soil Cracks (B6) Drainage Patterns (B10)	m of two required)	
Remarks: DROLOGY Hand Hydrology mary Indicators Surface Water (A High Water Table Saturation (A3)	I Indicators: (minimum of one require A1) le (A2)	d; check a	Il that apply) Water-Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (E	s (B9) 314)	s):	Set	condary Indicators (minimu Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2	m of two required)	
PROLOGY Idand Hydrology mary Indicators Surface Water (A High Water Table Saturation (A3) Water Marks (B)	I Indicators: (minimum of one require A1) le (A2)	rd; check a	Il that apply) Water-Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (E	s (B9) 314) or (C1)			Condary Indicators (minimu Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2 Crayfish Burrows (C8)	m of two required)	
I Remarks: DROLOGY Itland Hydrology mary Indicators Surface Water (A High Water Table Saturation (A3) Water Marks (B ³ Sediment Depos	I Indicators: (minimum of one require A1) le (A2) 1) sits (B2)	d; check a	I that apply) Water-Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (E Hydrogen Sulfide Odo	s (B9) 314) vr (C1) s on Livir	ng Roots (C3		Condary Indicators (minimu Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2 Crayfish Burrows (C8) Saturation Visible on Aerial I	m of two required) 2) magery (C9)	
DROLOGY tland Hydrology mary Indicators Surface Water (A) High Water Table Saturation (A3) Water Marks (B: Sediment Deposits (B)	Indicators: (minimum of one require A1) (e (A2) (f) (sits (B2)	d; check a	Il that apply) Water-Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (E	s (B9) 314) vr (C1) s on Livir	ng Roots (C3		Condary Indicators (minimu Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2 Crayfish Burrows (C8)	m of two required) 2) magery (C9)	
DROLOGY tland Hydrology mary Indicators Surface Water (A) High Water Table Saturation (A3) Water Marks (B: Sediment Deposits (B)	Indicators: (minimum of one require A1) (e (A2) (f) (sits (B2)	rd; check a	I that apply) Water-Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (E Hydrogen Sulfide Odo	s (B9) 314) or (C1) s on Livir Iron (C4)	ng Roots (C3		Condary Indicators (minimu Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Ca Crayfish Burrows (C8) Saturation Visible on Aerial In Stunted or Stressed Plants (In Geomorphic Position (D2)	m of two required) 2) magery (C9)	
DROLOGY tland Hydrology mary Indicators Surface Water (A) High Water Table Saturation (A3) Water Marks (B: Sediment Deposits (B)	Indicators: (minimum of one require A1) le (A2) 1) sits (B2) 3) st (B4)	d; check a	Il that apply) Water-Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (E Hydrogen Sulfide Odo Oxidized Rhizosphere Presence of Reduced	s (B9) 314) or (C1) s on Livir Iron (C4)	ng Roots (C3)	Condary Indicators (minimu Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2 Crayfish Burrows (C8) Saturation Visible on Aerial II Stunted or Stressed Plants (I	m of two required) 2) magery (C9)	
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IRemarks: DROLOGY Itland Hydrology mary Indicators Surface Water (in High Water Table Saturation (A3) Water Marks (Basediment Deposits (Basediment Opposits	Indicators: (minimum of one require A1) le (A2) f) sits (B2) st (B4)	d; check a	Il that apply) Water-Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (E Hydrogen Sulfide Odo Oxidized Rhizosphere Presence of Reduced Recent Iron Reductior Thin Muck Surface (C	G (B9) 314) or (C1) s on Livir Iron (C4) n in Tilled 7)	ng Roots (C3		Condary Indicators (minimu Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Ca Crayfish Burrows (C8) Saturation Visible on Aerial In Stunted or Stressed Plants (In Geomorphic Position (D2)	m of two required) 2) magery (C9)	
IREMARKS: DROLOGY Itland Hydrology mary Indicators Surface Water (i. High Water Table Saturation (A3) Water Marks (B: Sediment Deposits (B Algal Mat or Cru Iron Deposits (B	Indicators: (minimum of one require) (A1) (be (A2) (1) (sits (B2) (3) (st (B4) (5) (be on Aerial Imagery (B7) (ated Concave Surface (B8)	d; check a	Ithat apply Water-Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (E Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reductior Thin Muck Surface (C Gauge or Well Data (L	G (B9) 314) or (C1) s on Livir Iron (C4) n in Tilled 7)	ng Roots (C3		Condary Indicators (minimu Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (Ca Crayfish Burrows (C8) Saturation Visible on Aerial In Stunted or Stressed Plants (In Geomorphic Position (D2)	m of two required) 2) magery (C9) D1)	Yes
I Remarks: DROLOGY Itland Hydrology mary Indicators Surface Water (A.) High Water Table Saturation (A.3) Water Marks (B.) Sediment Deposits (B.) Algal Mat or Cru Iron Deposits (B.) Inundation Visib. Sparsely Vegeta	Indicators: (minimum of one require (A1) le (A2) (B2) sits (B2) st (B4) (B4) (B5) le on Aerial Imagery (B7) sted Concave Surface (B8)	rd; check a	Ithat apply Water-Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (E Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reductior Thin Muck Surface (C Gauge or Well Data (L	s (B9) 314) or (C1) s on Livir Iron (C4) n in Tilled 7) D9)	ng Roots (C3		Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (City Crayfish Burrows (C8) Saturation Visible on Aerial In Stunted or Stressed Plants (In Geomorphic Position (D2) FAC-Neutral Test (D5)	m of two required) 2) magery (C9) D1)	Yes
I Remarks: DROLOGY I and Hydrology mary Indicators Surface Water (i High Water Tabi Saturation (A3) Water Marks (Ba) Sediment Deposits (B Algal Mat or Cru Iron Deposits (B Inundation Visib Sparsely Vegeta	Indicators: (minimum of one require A1) de (A2) de (A2) sits (B2) st (B4) f) le on Aerial Imagery (B7) ated Concave Surface (B8) de ent?	d; check a	Water-Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (E Hydrogen Sulfide Odo Oxidized Rhizosphere Presence of Reduced Recent Iron Reductior Thin Muck Surface (C Gauge or Well Data (L	s (B9) 314) or (C1) s on Livir Iron (C4) n in Tilled 7) D9) orks)	ng Roots (C3		Condary Indicators (minimu Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2 Crayfish Burrows (C8) Saturation Visible on Aerial II Stunted or Stressed Plants (II Geomorphic Position (D2) FAC-Neutral Test (D5)	m of two required) 2) magery (C9) D1)	Yes

Appendix B Site Photographs

Appendix A Jevne Park Stormwater Improvement Project Wetland Delineation Site Photos – September 21, 2018



Photo 1: Wetland 1 facing southwest on the north side of the boundary. Upland areas are open recreation areas dominated by manicured Kentucky bluegrass.



Photo 2: Wetland 1 facing northeast on the south side of the boundary. Adjacent upland areas are manicured lawn and pavement.



Photo 3: Wetland 2 facing southeast. This wetland is within a road ditch right-of-way.



Photo 4: Wetland 3 facing south. This wetland is located partially within a road ditch right-of-wayand extends south within a parcel with no access permissions.



Photo 5: Wetland 4 facing southwest. Upland areas are manicured lawn and graded driveway.



Photo 6: Wetland 5 facing east. This wetland is a roadside ditch right-of-way.

Appendix A Jevne Park Stormwater Improvement Project Wetland Delineation Site Photos – September 21, 2018



Photo 7: Wetland 6 facing south. This wetland is mostly a drainage way located partially with road ditch right-of-way dominated by shrubs. It extends south into a parcel with no access permissions.



Photo 8: Wetland 7 facing west. The section of the wetland pictured is located within road ditch right-of-way. It extends south into a parcel with no access permissions.



Photo 9: Wetland 8 facing north. Upland areas are graded driveway.



Photo 10: Wetland 9 facing northwest. Upland areas are graded gravel driveway.



Photo 11: Wetland 10 facing southwest. Surrounding uplands are manicured lawn and graded gravel driveway.



Photo 12: Wetland 10 facing northeast along the driveway within the interior of the parcel.

Appendix A Jevne Park Stormwater Improvement Project Wetland Delineation Site Photos – September 21, 2018



Photo 13: Wetland 11 facing east. Wetland is partially located entirely within a roadside ditch right-of-way. Surrounding uplands are gravel driveway. The south end of the wetland is located within a parcel without access permissions.



Photo 14: Wetland 12 facing southeast. This wetland is part of a channel that connects to Medicine Lake. Surrounding uplands are forested with a shrub understory.

Minnesota Wetland Conservation Act Notice of Decision

Local Government Unit (LGU)

Bassett Creek Watershed Management
Commission (BCWMC)

Address
7800 Golden Valley Road
Golden Valley, MN 55427

		1.]	PRO	JECT INFORM	ATION					
Applicant				ect Name		Date of		Application		
					Applica 10/29/ 2		Number			
Jester	ent Commiss.	ion, Laura	ımpı	rovement Project		10/29/2	2010			
Attach site locator map.										
Type of De	Type of Decision:									
⊠ Wetlan	∑ Wetland Boundary or Type ☐ No-Loss ☐ Exemption ☐ Sequencing									
	I	Replacement 1	Plan		Banking Pl	an				
Technical 1	Evaluation Pa	nel (TEP) Fin	dings	and Recommendat	ion (if any):					
Approv		,		pprove with condit	•			Deny		
Summary ((or attach):									
		2. LOCAL	GOV	VERNMENT UN	IT DECISIO)N				
Date of De	ecision: 12/07/	2018								
Approv	red	ПАр	prove	d with conditions (include below)			☐ Denied		
LGU Findi	ings and Conc	lusions (attac	h addi	tional sheets as nec	cessary):					
a wetland Medicine	delineation r Lake, Section etlands were o	eport for the 26, Townsh	Jevno ip 118	d Management Co e Park Stormwate SN, Range 22W, w he evaluation area	r Improvemei ithin Hennepi	nt Proje n Count	ct in th	e City of		
Wetland	Cowardin Type	Circular 39 Type	9	Community Typ	pe (Eggers &	Reed)	Wetla (acres	and Area		
, comin										
1	PFO1A	Type 1/3		Floodplain forest	Shallow man	·c h	0.85			
	PEMC	1 ype 1/3		r 100upiani 101esi	. Shanow mar	511	0.65			
2	PEMA PSS1A	Type 1/6		Seasonally flood	ed Shrub-carr		0.01			

BWSR Forms 7-1-10 Page 1 of 4

3	PEMA PSS1A	Type 1/6	Seasonally flooded Shrub-carr	0.01
4	PFO1A	Type 1	Floodplain Forest	0.12
5	PEMA	Type 1	Seasonally flooded	0.01
6	PSS1A	Туре 6	Shrub-carr	0.003
7	PFO1A PSS1A	Type 1/6	Floodplain forest Shrub-carr	0.01
8	PFO1A PSS1A	Type 1/6	Floodplain forest Shrub-carr	0.25
9	PEMA	Type 1	Seasonally flooded	0.04
10	PFO1A	Type 1	Floodplain forest	0.48
11	PEMA	Type 1	Seasonally flooded	0.02
12	РЕМН	Type 5	Shallow Open Water	0.17

Wetland Total (acres): 1.97

As the Local Government Unit responsible for administration of the Minnesota Wetland Conservation Act (WCA) within the City of Medicine Lake, BCWMC has conducted the wetland boundary and type notification and decision process. However, based on communication with area hydrologist Jason Spiegel from the Minnesota Department of Natural Resources (DNR) during a preliminary meeting held 11/06/2018 and email communication on 11/26/2018, the majority of the wetland areas have a hydrologic connection with and are at or below the Ordinary High Water Elevation (OHWL) of Medicine Lake, so would likely be under DNR jurisdiction as shown in the attached figure showing culverts, surface elevations, wetland delineation boundaries, and OHWL. The wetland delineation report and joint application form were provided to TEP members on 11/09/2018 along with a Notice of Application.

A site review of the wetland delineation was conducted on 11/16/2018. Present at the site review were TEP members Ben Carlson, Minnesota Board of Water and Soil Resources and Karen Wold, Barr Engineering for the BCWMC and delineator Brian Burgner, Barr Engineering representing the BCWMC as the applicant.

BWSR Forms 7-1-10 Page 2 of 4

The wetland boundaries and types were found to be accurate, based on the requirements of the 1987 USACE Wetland Delineation Manual, the 2010 Midwest Regional Supplement, and the 2015 Guidance for Submittal of Delineation Reports to the USACE and WCA LGU in Minnesota, Version 2.0.

The comment period ended on 12/06/2018 and no comments were received.

For Replacement Plans using credits from the State Wetland Bank:

Bank Account #	Bank Service Area	County	Credits Approved for
			Withdrawal (sq. ft. or nearest .01
			acre)

Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a <u>Wetland Replacement Plan</u> is conditional upon the following:

☐ Financia	l Assuran	ce: Fo	r project	t-specif	c repla	cement	that	is	not	in-adva	nce, a	ı fina	ncial
assurance spe	ecified by	the LO	GU must	be su	omitted	to the	LGU	in	acc	ordance	with	MN	Rule
8420.0522, St	abp. 9 (List	t amour	it and typ	e in LC	U Find	ings).							

	Deed R	ecording:	For pr	oject-specifi	c rep	olacement, e	viden	ce must be	prov	vided to the	LGU that
the	BWSR	"Declarat	ion of	Restrictions	and	Covenants	" and	"Consent	to R	eplacement	Wetland"
forn	ns have	been filed	with th	ne county rec	orde	's office in	which	the replac	emen	t wetland is	located.

Credit Withdrawal: For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

Wetlands may not be impacted until all applicable conditions have been met!

LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.

Name Karen Wold	Title Senior Environmental Scientist, Barr Engineering Co Engineers					
	for the BCWMC					
Signature	Date	Phone Number and E-mail				
000,000	12/07/2018	952-832-2707				
Americ Suca)		kwold@barr.com				
		Barr Engineering Co., 4300 MarketPointe Drive				
		Minneapolis, MN 55435				

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for five years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

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3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

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Appeal of an LGU staff decision. Send	Appeal of LGU governing body decision. Send
petition and \$TBD fee (if applicable) to:	petition and \$500 filing fee to:
BCWMC	Executive Director
7800 Golden Valley Road	Minnesota Board of Water and Soil Resources
Golden Valley, MN 55427	520 Lafayette Road North
	St. Paul, MN 55155

4. LIST OF ADDRESSEES

\geq	SWCD TEP member: Stacey Lijewski, Hennepin County
\geq	BWSR TEP member: Ben Carlson
$\overline{}$	DND TED member: Reeky Harton, Josep Spiegel

◯ DNR TEP member: **Becky Horton, Jason Spiegel**

WD or WMO (if applicable): Laura Jester (Keystone Waters, BCWMC administrator), Karen

Chandler (Barr Engineering, BCWMC engineer), Clint Carlson (BCWMC commissioner)

☐ Applicant and Landowner (if different) Laura Jester, Brian Burgner (Barr Engineering)

☐ City of Medicine Lake: Gary Holter (Mayor), Brad Scheib (Hoisington Koegler Group Inc.)

Corps of Engineers Project Manager Melissa Jenny

5. MAILING INFORMATION

➤ For a list of BWSR TEP representatives: www.bwsr.state.mn.us/aboutbwsr/workareas/WCA_areas.pdf

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

➤ Department of Natural Resources Regional Offices:

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

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf
For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687
or send to:

US Army Corps of Engineers St. Paul District, ATTN: OP-R 180 Fifth St. East, Suite 700 St. Paul, MN 55101-1678

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

Minnesota Board of Water and Soil Resources Wetland Bank Coordinator 520 Lafayette Road North

St. Paul, MN 55155

6. ATTACHMENTS

In addition to the site locator map, list any other attachments:
◯ Wetland Delineation Figure
Figure showing culverts, surface elevations, wetland boundaries, and OHWL

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DATE 10/25/2018 LICENSE #