

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

presented in the Summary Table (**Table 3**). Wetland Data Forms for Wetlands 1 and 12 are presented in **Appendix A**.

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

- Cowardin, L.M., V. Carter, F.C. Golet, and R.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service, FWS/OBS079/31, 103 pp.
- Eggers, S.D. and Reed, D.M. 1997. *Wetland Plants and Plant Communities of Minnesota and Wisconsin*. U.S. Army Corps of Engineers, St. Paul District. St. Paul, Minnesota.
- Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2014. *The National Wetland Plant List: 2014 Update of Wetland Ratings*. Phytoneuron 2014-41: 1-42.
- Shaw, S.P., and C.G. Fredine. 1956. *Wetlands of the United States*. U.S. Fish and Wildlife Service, Circular 39. 67pp.
- U.S. Army Corps of Engineers. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region*. August 2010. Wetlands Regulatory Assistance Program.
- U.S. Army Corps of Engineers. 1987. *1987 U.S. Army Corps of Engineers Wetland Delineation Manual*. Wetlands Research Program Technical Report Y-87-1 (on-line edition). Waterways Experiment Station, Vicksburg, Mississippi.
- U.S. Department of Agriculture, Natural Resources Conservation Service, 2017a. *Field Indicators of Hydric Soils in the United States, Version 8.1*. L. M. Vasilis, G. W. Hurt and C. V. Noble (eds.). USDA, NRCS in cooperation with the National Technical Committee for Hydric Soils.
- U.S. Department of Agriculture, Natural Resources Conservation Service, 2017b. Web Soil Survey. *Soil Survey of Hennepin County, MN*. <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>. Site Accessed October 2018.
- U.S. Fish and Wildlife Service. 1956. *Wetlands of the United States Circular 39*. U.S. Government Printing Office, Washington, D.C.

Tables

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: Hennepin **Township Number:** 118N
Township Name: Plymouth **Range Number:** 22W
Nearest Community: Medicine Lake **Section 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-of-Record Summary Statistics															
	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															
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	WARM	ANN	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 Improvement 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	Y	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 dominant hydrophytic vegetation and primary hydrology indicators. Upland soil borings were not completed within upland right-of-way 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 dominant hydrophytic 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 dominant hydrophytic vegetation and primary hydrology indicators. Upland soils were not sampled since they were located within manicured lawn of a private residence.
5	N	PEMA	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 dominant hydrophytic 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 Improvement Project

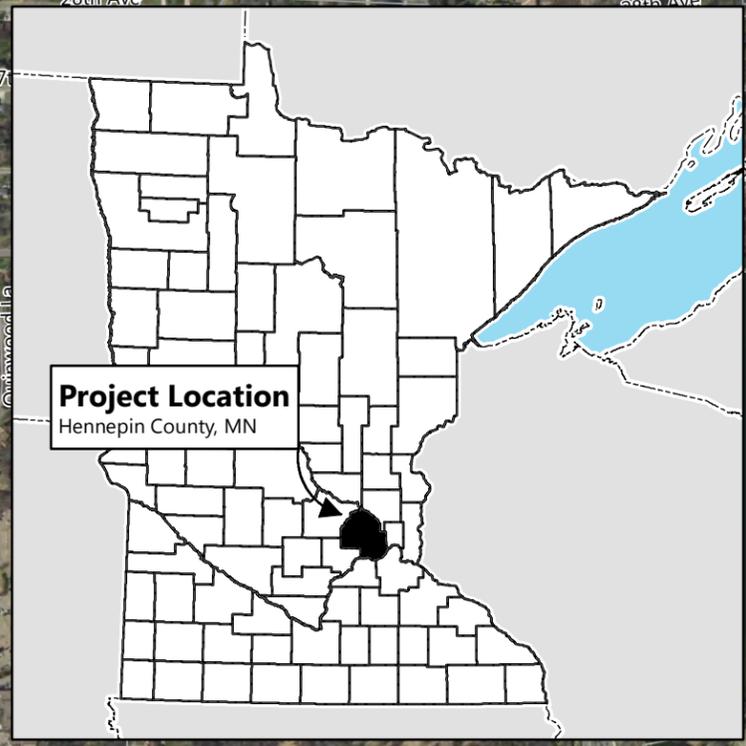
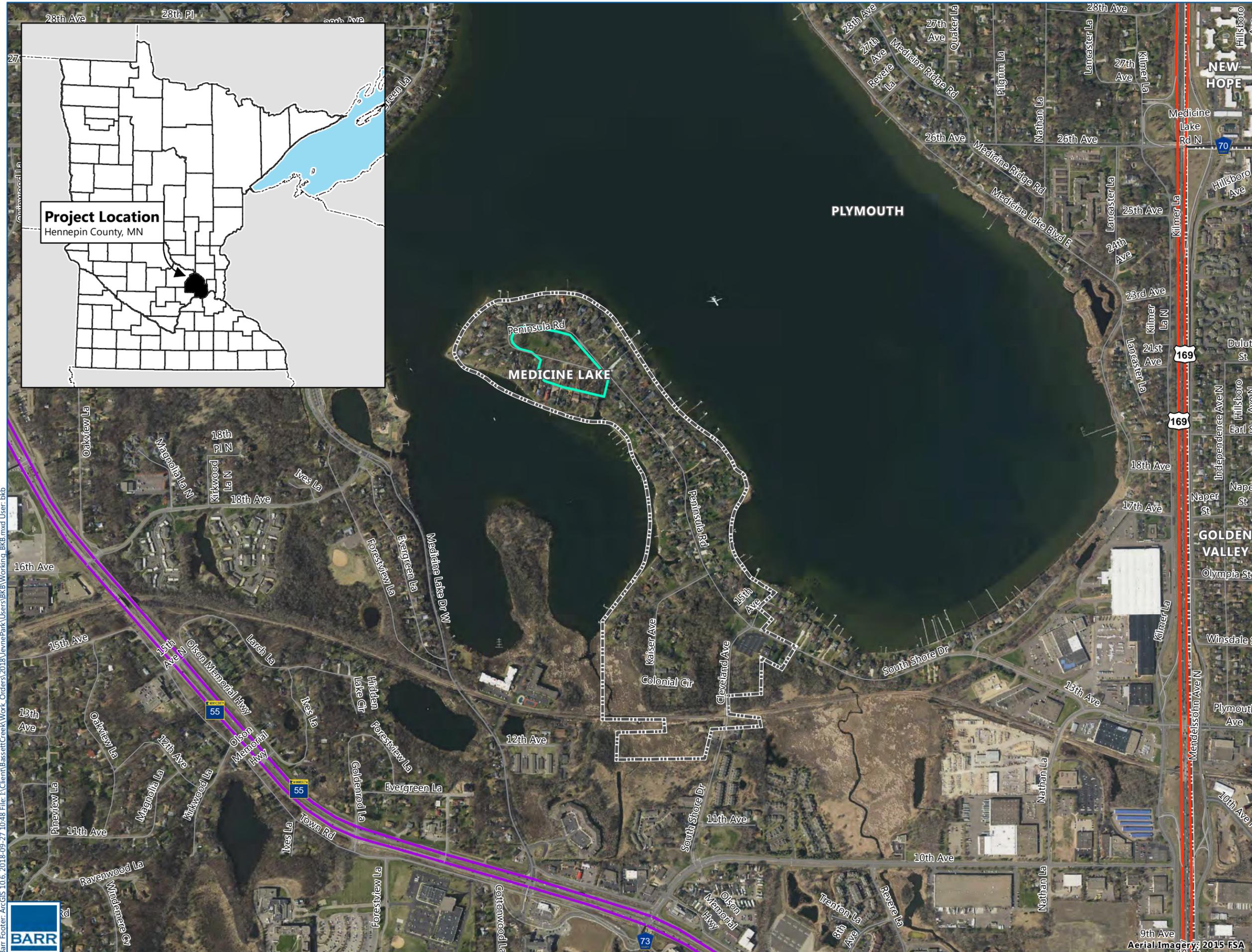
Wetland	Soil Borings (Y/N)	Cowardin Type	Circular 39 Type	Community Type (Eggers & Reed)	Dominant Wetland Vegetation	Corresponding Dominant Upland Vegetation	Wetland Hydric Soil Indicators	Wetland Hydrology Indicators	Wetland Area (acres)	Remarks
6	N	PSS1A	Type 6	Shrub-carr	Phalaris arundinacea Salix 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 dominant hydrophytic 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 dominant hydrophytic 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 dominant hydrophytic vegetation and primary hydrology indicators. Upland soils were not sampled since they were located within gravelly road grade.
9	N	PEMA	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 dominant hydrophytic 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 Improvement Project

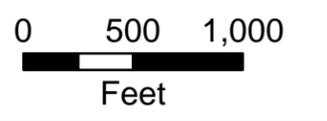
Wetland	Soil Borings (Y/N)	Cowardin Type	Circular 39 Type	Community Type (Eggers & Reed)	Dominant Wetland Vegetation	Corresponding Dominant Upland Vegetation	Wetland Hydric Soil Indicators	Wetland Hydrology Indicators	Wetland Area (acres)	Remarks
10	N	PFO1A	Type 1	Floodplain forest	Lemna minor Typha 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 dominant hydrophytic 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 dominant hydrophytic 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	Y	PEMH	Type 5	Shallow Open Water	Lemna minor Matteuccia struthiopteris	Rhamnus cathartica Sambucus 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.

Wetland Total (acres): 1.97

Figures



-  Project Area
-  Municipal Boundary



PROJECT LOCATION MAP
 Feasibility Study for
 Jevne Park
 Stormwater Improvement Project
 BCWMC

FIGURE 1

Barr Footer: ArcGIS 10.6, 2018-09-27 10:48 File: I:\Client\BassettCreek\Work Orders\2018\JevnePark\Users\BKB\Working_BKB.mxd User: bbb

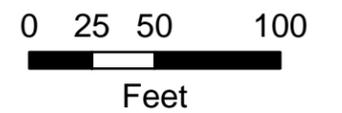


Aerial Imagery © 2015 FSA

Barr Footer: ArcGIS 10.6, 2018-10-22 15:52 File: I:\Client\BassettCreek\Work Orders\2018\LevinePark\Users\BK\B\Figure 2 - Topography.mxd User: bkb



- Project Area
- No Access Parcels
- LiDAR Elevations (2011)**
- 10-Foot Contour
- 2-Foot Contour



TOPOGRAPHY
Feasibility Study for
Jevne Park
Stormwater Improvement Project
BCWMC

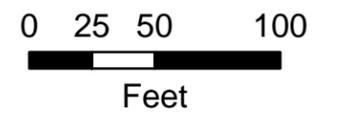
FIGURE 2



Aerial Imagery: 2015 FSA



- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine
- Project Area
- No Access Parcels



NATIONAL WETLAND INVENTORY
 Feasibility Study for
 Jevne Park
 Stormwater Improvement Project
 BCWMC

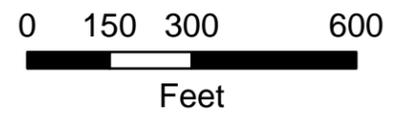
FIGURE 3



Barr Footer: ArcGIS 10.6, 2018-10-22 16:21 File: I:\Client\BassettCreek\Work Orders\2018\JevnePark\Users\BK\B\Figure 4 - PWM.mxd User: bkb



- Project Area
- Public Water Inventory Watercourses
- Public Water Inventory Basins



PUBLIC WATERS INVENTORY
Feasibility Study for
Jevne Park
Stormwater Improvement Project
BCWMC

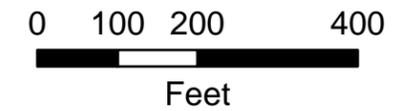
FIGURE 4

Aerial Imagery: 2015 FSA

Barr Footer: ArcGIS 10.6, 2018-10-22 16:34 File: I:\Client\BassettCreek\Work Orders\2018\LevnePark\Users\BK\B\Figure 5 - Soils.mxd User: bkb



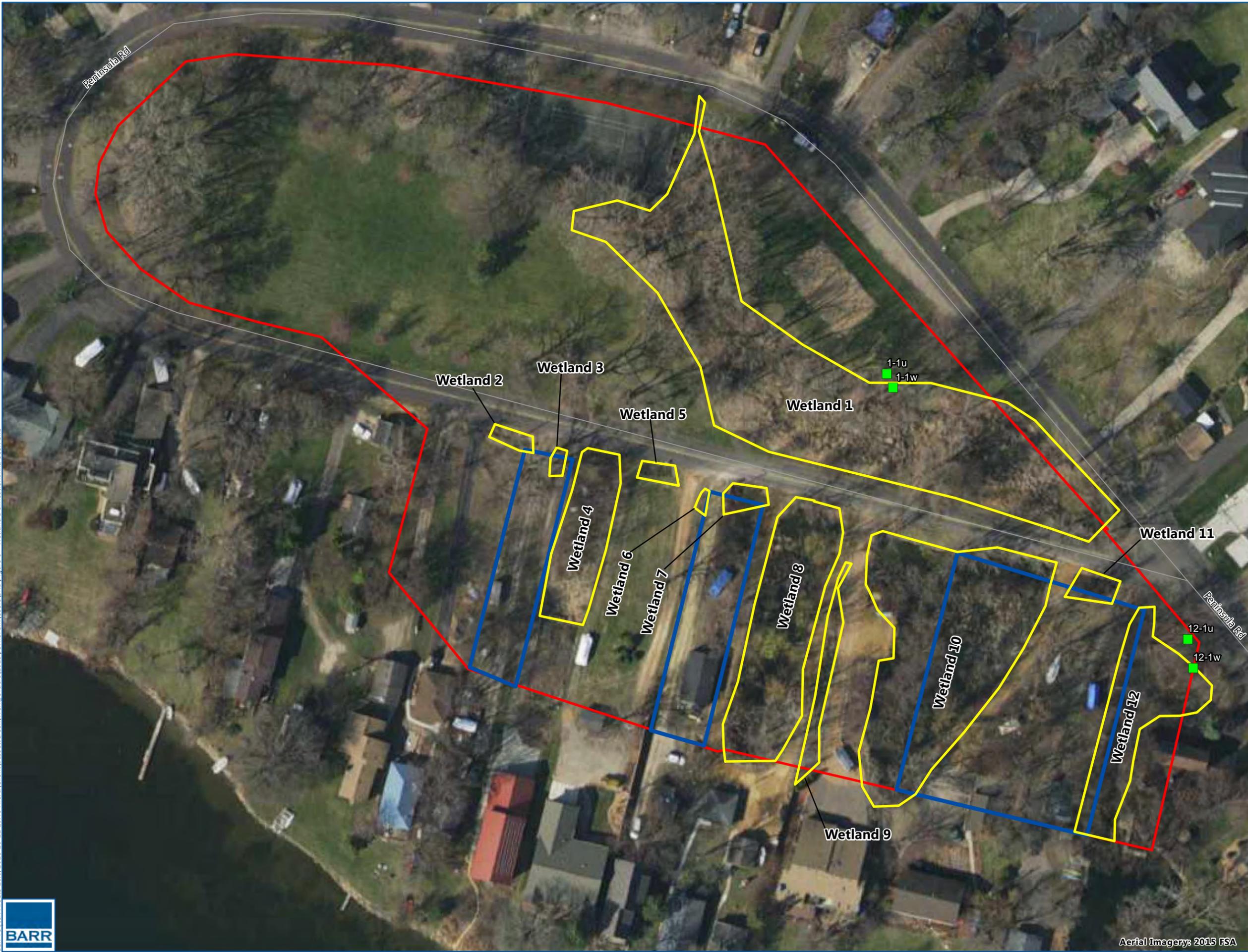
-  Project Area
-  Soil Survey (MN SSURGO Data)



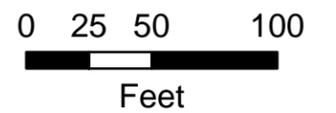
SOIL SURVEY
Feasibility Study for
Levne Park
Stormwater Improvement Project
BCWMC

FIGURE 5

Barr Footer: ArcGIS 10.6, 2018-10-22 16:46 File: I:\Client\BassettCreek\Work Orders\2018\JevnePark\Users\BKB\Figure 6 - Wetland Delineation.mxd User: bkb



- Project Area
- Wetland Delineation
- Sample Points
- No Access Parcels



WETLAND BOUNDARIES
 Feasibility Study for
 Jevne Park
 Stormwater Improvement Project
 BCWMC

FIGURE 6

Aerial Imagery, 2015 FSA

Appendix A

Wetland Data Forms

WETLAND DETERMINATION DATA FORM - Midwest Region

SOIL

Sampling Point: _____

1-1u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

	Depth (inches)	Matrix		Redox Features				Texture	Remarks
		Color (moist)	%	Color (moist)	%	Type [1]	Loc [2]		
1.	0 - 4	10YR 3/1	100					sandy clay loam	
2.	4 - 8	10YR 3/1	95	10YR 3/3	5	C	M	sandy clay	
3.	8 - 14	10YR 5/2	95	10YR 5/6	5	C	M	sandy clay	
4.	14 - 18	N2.5/0	95	10YR 3/2	5	C	M	sandy clay loam	
5.	-								
6.	-								

[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)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- Coast Prairie Redox (A16)
- Dark Surface (S7)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)
- Other (explain in soil remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Type: _____	Depth (inches): _____	Hydric soil present?	<u>Yes</u>
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)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (explain in remarks)	
Field Observations:		Indicators of wetland hydrology present? <u>Yes</u>
Surface water present? <input type="checkbox"/>	Surface Water Depth (inches): _____	Describe Recorded Data:
Water table present? <input checked="" type="checkbox"/>	Water Table Depth (inches): <u>8</u>	
Saturation present? (includes capillary fringe) <input checked="" type="checkbox"/>	Saturation Depth (inches): <u>7</u>	
Recorded Data: <input type="checkbox"/> Aerial Photo <input type="checkbox"/> Monitoring Well <input type="checkbox"/> Stream Gauge <input type="checkbox"/> Previous Inspections		
Hydrology Remarks: Primary hydrology was likely present due to the rain event that occurred the day prior to the site visit on September 20, 2018.		

WETLAND DETERMINATION DATA FORM - Midwest Region

SOIL

Sampling Point:

1-1w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

	Depth (inches)	Matrix		Redox Features				Texture	Remarks
		Color (moist)	%	Color (moist)	%	Type [1]	Loc [2]		
1.	0 - 6	10YR 4/2	98	10YR 4/4	2	C	M	sandy clay	
2.	6 - 10	10YR 3/1	100					loam	mucky
3.	10 - 20	10YR 3/1	50					sandy clay	
4.	10 - 20	10YR 5/2	45	10YR 5/6	5	C	M	sandy clay	
5.	-								
6.	-								

[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)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- Coast Prairie Redox (A16)
- Dark Surface (S7)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)
- Other (explain in soil remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Type: _____	Depth (inches): _____	Hydric soil present?	<u>Yes</u>
--	-------------	-----------------------	-----------------------------	------------

Soil Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- 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)

- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (explain in remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)

Field Observations:

- Surface water present? **Surface Water Depth (inches):** _____
- Water table present? **Water Table Depth (inches):** 2
- Saturation present? (includes capillary fringe) **Saturation Depth (inches):** 0

Indicators of wetland hydrology present? Yes

Describe Recorded Data:

Recorded Data: Aerial Photo Monitoring Well Stream Gauge Previous Inspections

Hydrology Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

SOIL

Sampling Point: _____

12-1u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

	Depth (inches)	Matrix		Redox Features				Texture	Remarks
		Color (moist)	%	Color (moist)	%	Type [1]	Loc [2]		
1.	0 - 5	10YR 2/1	100					loam	
2.	5 - 16	10YR 2/1	100					silty clay loam	
3.	16 - 21	10YR 6/3	48	10YR 5/4	2	C	M	sandy clay loam	
4.	16 - 21	10YR 7/1	48	10YR 5/4	2	C	M	sandy clay loam	
5.	-								
6.	-								

[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)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- Coast Prairie Redox (A16)
- Dark Surface (S7)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)
- Other (explain in soil remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Type: _____	Depth (inches): _____	Hydric soil present?	No
--	-------------	-----------------------	-----------------------------	-----------

Soil Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- 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)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (explain in remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)

Field Observations:

- Surface water present?
- Surface Water Depth (inches): _____
- Water table present?
- Water Table Depth (inches): _____
- Saturation present? (includes capillary fringe)
- Saturation Depth (inches): _____

Indicators of wetland hydrology present?

No

Describe Recorded Data:

Recorded Data: Aerial Photo Monitoring Well Stream Gauge Previous Inspections

Hydrology Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

SOIL

Sampling Point:

12-1w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

	Depth (inches)	Matrix		Redox Features				Texture	Remarks
		Color (moist)	%	Color (moist)	%	Type [1]	Loc [2]		
1.	0 - 10	N2.5/0	100					silt loam	mucky
2.	10 - 18	10YR 3/1	98	10YR 3/3	2	C	M	loam	mucky
3.	-								
4.	-								
5.	-								
6.	-								

[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)

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- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

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- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)
- Other (explain in soil remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Type: _____	Depth (inches): _____	Hydric soil present?	<u>Yes</u>
--	-------------	-----------------------	-----------------------------	------------

Soil Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- 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)

- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (explain in remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)

Field Observations:

- Surface water present?
- Water table present?
- Saturation present? (includes capillary fringe)
- Surface Water Depth (inches): _____
- Water Table Depth (inches): 2
- Saturation Depth (inches): 0

Indicators of wetland hydrology present? Yes

Describe Recorded Data:

Recorded Data: Aerial Photo Monitoring Well Stream Gauge Previous Inspections

Hydrology Remarks:

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-way and 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
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1. PROJECT INFORMATION

Applicant Name Bassett Creek Watershed Management Commission, Laura Jester	Project Name Jevne Park Stormwater Improvement Project	Date of Application 10/29/2018	Application Number
<input checked="" type="checkbox"/> Attach site locator map.			

Type of Decision:

<input checked="" type="checkbox"/> Wetland Boundary or Type	<input type="checkbox"/> No-Loss	<input type="checkbox"/> Exemption	<input type="checkbox"/> Sequencing
<input type="checkbox"/> Replacement Plan	<input type="checkbox"/> Banking Plan		

Technical Evaluation Panel (TEP) Findings and Recommendation (if any):

<input type="checkbox"/> Approve	<input type="checkbox"/> Approve with conditions	<input type="checkbox"/> Deny
Summary (or attach):		

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: 12/07/2018
<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Approved with conditions (include below) <input type="checkbox"/> Denied

LGU Findings and Conclusions (attach additional sheets as necessary):

On behalf of the Bassett Creek Watershed Management Commission, Barr Engineering submitted a wetland delineation report for the Jevne Park Stormwater Improvement Project in the City of Medicine Lake, Section 26, Township 118N, Range 22W, within Hennepin County.				
Twelve wetlands were delineated within the evaluation area with the following wetland type designations:				
Wetland	Cowardin Type	Circular 39 Type	Community Type (Eggers & Reed)	Wetland Area (acres)
1	PFO1A PEMC	Type 1/3	Floodplain forest Shallow marsh	0.85
2	PEMA PSS1A	Type 1/6	Seasonally flooded Shrub-carr	0.01

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	Type 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	PEMH	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.

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 Wetland Replacement Plan is conditional upon the following:

- Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).
- Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR “Declaration of Restrictions and Covenants” and “Consent to Replacement Wetland” forms have been filed with the county recorder’s office in which the replacement 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 12/07/2018	Phone Number and E-mail 952-832-2707 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.

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:

Check one:

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

4. LIST OF ADDRESSEES

<input checked="" type="checkbox"/> SWCD TEP member: Stacey Lijewski, Hennepin County <input checked="" type="checkbox"/> BWSR TEP member: Ben Carlson <input checked="" type="checkbox"/> DNR TEP member: Becky Horton, Jason Spiegel <input checked="" type="checkbox"/> WD or WMO (if applicable): Laura Jester (Keystone Waters, BCWMC administrator), Karen Chandler (Barr Engineering, BCWMC engineer), Clint Carlson (BCWMC commissioner) <input checked="" type="checkbox"/> Applicant and Landowner (if different) Laura Jester, Brian Burgner (Barr Engineering) <input checked="" type="checkbox"/> City of Medicine Lake: Gary Holter (Mayor), Brad Scheib (Hoisington Koegler Group Inc.) <input checked="" type="checkbox"/> 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:

<u>NW Region:</u> Reg. Env. Assess. Ecol. Div. Ecol. Resources 2115 Birchmont Beach Rd. NE Bemidji, MN 56601	<u>NE Region:</u> Reg. Env. Assess. Ecol. Div. Ecol. Resources 1201 E. Hwy. 2 Grand Rapids, MN 55744	<u>Central Region:</u> Reg. Env. Assess. Ecol. Div. Ecol. Resources 1200 Warner Road St. Paul, MN 55106	<u>Southern Region:</u> Reg. Env. Assess. Ecol. Div. Ecol. Resources 261 Hwy. 15 South New Ulm, MN 56073
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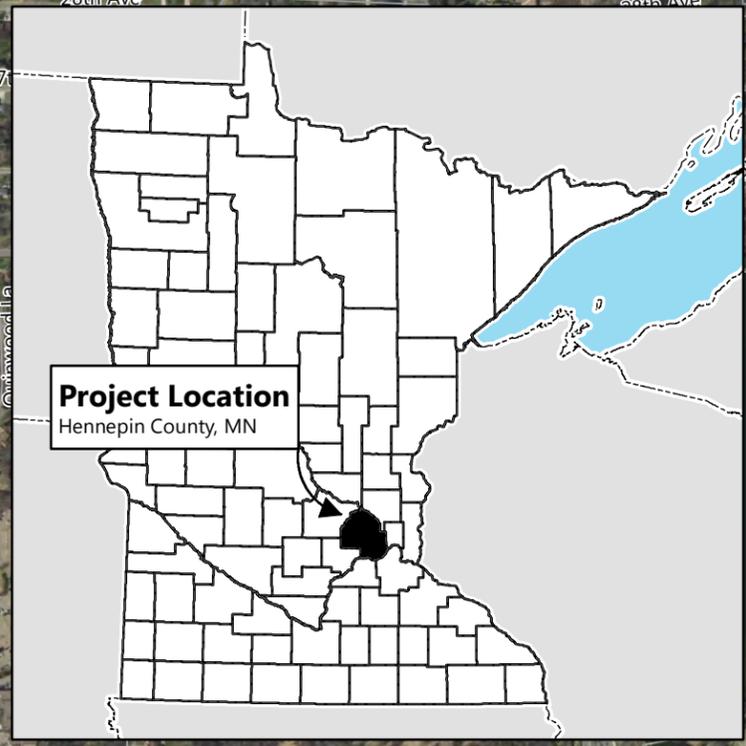
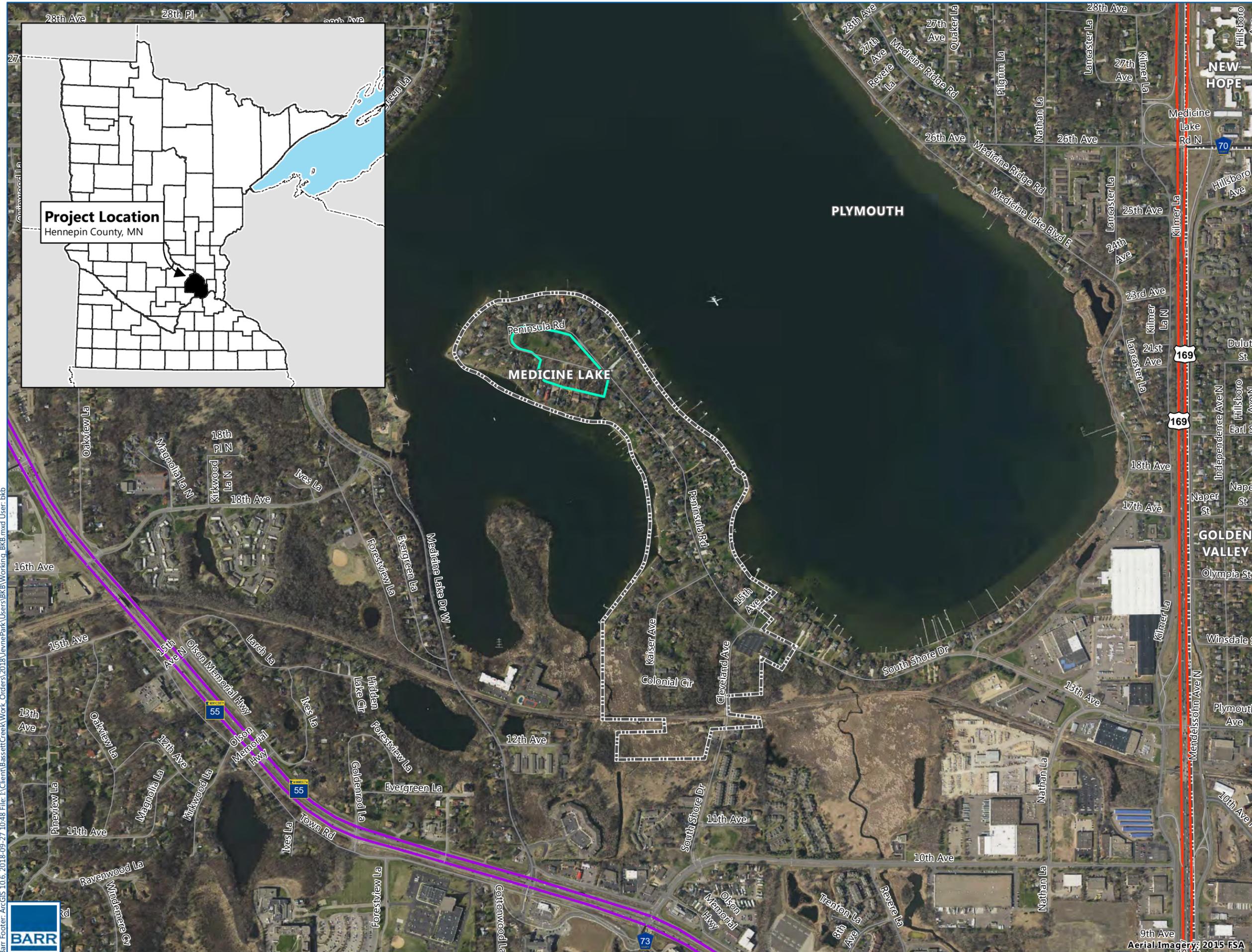
- For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf
- For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687 or send to:

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

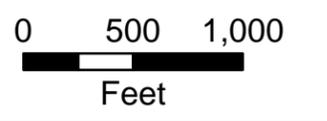
- For Wetland Bank Plan applications, also send a copy of the application to:
 Minnesota Board of Water and Soil Resources
 Wetland Bank Coordinator
 520 Lafayette Road North
 St. Paul, MN 55155

6. ATTACHMENTS

In addition to the site locator map, list any other attachments: <input checked="" type="checkbox"/> Wetland Delineation Figure <input checked="" type="checkbox"/> Figure showing culverts, surface elevations, wetland boundaries, and OHWL



-  Project Area
-  Municipal Boundary



PROJECT LOCATION MAP
 Feasibility Study for
 Jevne Park
 Stormwater Improvement Project
 BCWMC

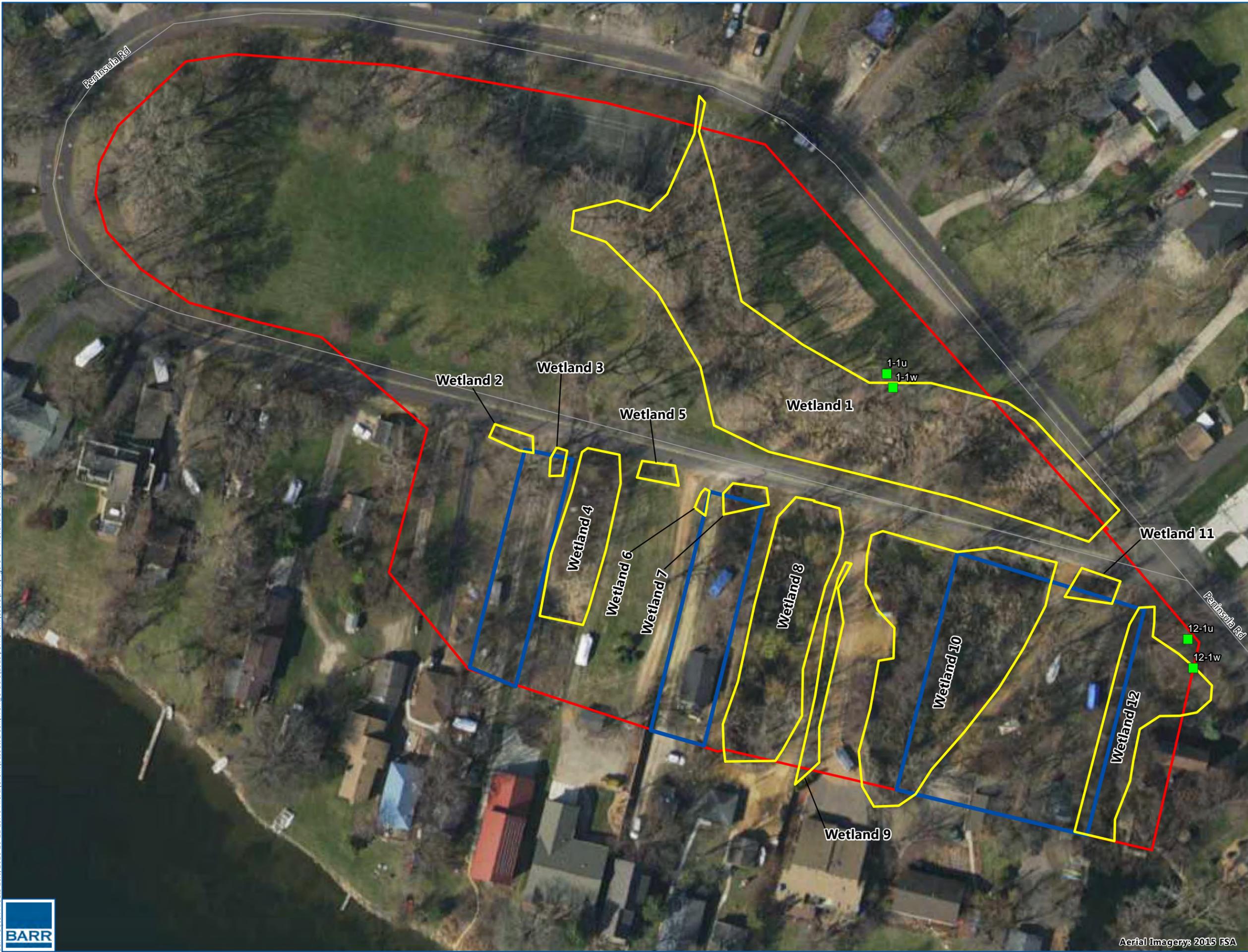
FIGURE 1

Barr Footer: ArcGIS 10.6, 2018-09-27 10:48 File: I:\Client\BassettCreek\Work Orders\2018\JevnePark\Users\BKB\Working_BKB.mxd User: bbb

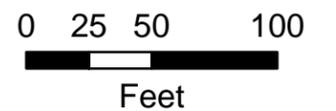


Aerial Imagery © 2015 FSA

Barr Footer: ArcGIS 10.6 - 2018-10-22 16:46 File: I:\Client\BassettCreek\Work Orders\2018\JevnePark\Users\BKB\Figure 6 - Wetland Delineation.mxd User: bkb



-  Project Area
-  Wetland Delineation
-  Sample Points
-  No Access Parcels



WETLAND BOUNDARIES
 Feasibility Study for
 Jevne Park
 Stormwater Improvement Project
 BCWMC

FIGURE 6

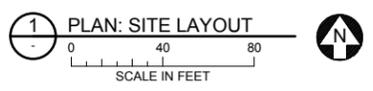
Aerial Imagery: 2015 FSA

CAD USER: Eric P. Fitzgerald; FILE: M:\DESIGN\23270051_44_C-01_EXISTING CONDITIONS.DWG; PLOT SCALE: 1:2; PLOT DATE: 11/8/2018 11:31 AM
 BARR: M:\AutoCAD\2011\AutoCAD 2011\Support\Temp\TempBarr_2011_Template.dwt; Plot at 1: 10/05/2010 14:03:50



SYMBOL AND PATTERN LEGEND	
— 910 —	EXISTING 10' CONTOUR
- - - 908 - - -	EXISTING 2' CONTOUR
— OE —	EXISTING OVERHEAD ELECTRIC
— SAN —	EXISTING SANITARY SEWER
— GAS —	EXISTING GAS LINE
—	EXISTING CULVERT
— WT —	WETLAND DELINEATION
	ORDINARY HIGH WATER LEVEL (EL. 889.28)

- GENERAL NOTES:**
1. TOPO AND CONTROL GROUND SURVEY CONDUCTED BY BARR ENGINEERING IN 2018 IN HENNEPIN COUNTY FEET PROJECTION. VERTICAL DATUM IN NAVD88.
 2. IMAGERY: COPYRIGHT PICTOMETRY INTERNATIONAL CORP AND HENNEPIN COUNTY, MINNESOTA, 2015.
 3. PARCELS LINE WORK PROVIDED BY THE CITY OF MEDICINE LAKE. BOUNDARIES ARE APPROXIMATE AND FOR REFERENCE ONLY.



PRELIMINARY DRAFT
NOT FOR CONSTRUCTION

		I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		CLIENT 10/25/18				Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435		Scale AS SHOWN		JEVNE PARK STORMWATER IMPROVEMENT PROJECT MEDICINE LAKE, MINNESOTA		BARR PROJECT No. 23/27-0051.44	
		PRINTED NAME JENNIFER KOEHLER		CONSTRUCTION				Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Ph: 1-800-632-2277		Date 10/25/2018		EXISTING CONDITIONS WETLANDS AND MnDNR OHWL		CLIENT PROJECT No.	
		SIGNATURE		RELEASED TO/FOR		A B C 0 1 2 3		Ph: 1-800-632-2277 Ph: (952) 832-2601 www.barr.com		Checked JAK1		BASSETT CREEK WATERSHED MANAGEMENT COMMISSION		DWG. No. C-01	
NO.		BY		CHK		APP.		DATE		REVISION DESCRIPTION		REV. No. A			