Wetland Investigation and Delineation Report

Minnesota River Greenway

Eagan Alignment Feasibility Study

Dakota County, MN

September 24, 2013

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INTRODUCTION

As part of the feasibility study for the proposed Minnesota River Greenway trail system in Eagan, Bolton & Menk, Inc. has been asked by Dakota County to complete a delineation within the proposed project boundaries. This area lies within Fort Snelling State Park in the City of Eagan, along the south side of the Minnesota River, between Minnesota Truck Highway (MTH) 77 and Interstate 494. The study corridor is located within Township 27N, Range 23W, Sections 4, 8, 9, 17 and 18; Township 27N, Range 24W, Section 13.

The study corridor consists of a large Type 3/4 wetland with some wooded upland areas. The wetland is dominated by non-native hydrophytes. The study corridor follows the easterly limits of this wetland, paralleling the Union Pacific Railroad, as well as along Nichols Road and within the park along the Minnesota River at the MTH 77 bike crossing. This report represents the findings of the delineation conducted from August 28, 2013 to September 23, 2013.

Attached to this report as Exhibit I is the report submitted by Midwest Natural Resources (MNR). The MNR report concentrates specifically on the calcareous fens along the study corridor that were identified in 1993 by the Minnesota Biological Survey. The report details the fen conditions and viability. The fen investigation was conducted on August 28, 2013.

WETLAND DELINEATION METHODOLOGY

The wetland boundaries were delineated and staked in the field using methods described in the "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)". Wetlands identified were classified using "Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et al., 1979)", "Wetlands of the United States (United States Fish and Wildlife Service Circular No. 39, 1971 edition)" and "Wetland Plants and Plant Communities of Minnesota and Wisconsin" (Eggers and Reed Third Edition). Subsequently, the three mandatory technical criteria for wetland determinations are as follows:

1. ***Hydrophytic Vegetation***. A hydrophytic plant community is present when the dominant plant species present can endure prolonged inundation and/or soil saturation during the growing season. A plant's Wetland Indicator Status is determined using the 2012 National Wetland Plant List for Minnesota, published by the Army Corp of Engineers.

2. ***Hydric Soils.*** A hydric soil is defined as a soil that is formed under conditions of saturation, flooding or ponding long enough during the growing season (the portion of the year when there is above ground growth and development of vascular plants and/or soil temperature at 12 inches below the soil surface is

above 41 degrees Fahrenheit or higher) to develop anaerobic conditions in the upper part.

3. ***Wetland Hydrology*.** An area has wetland hydrology if it experiences 14 or more consecutive days of flooding, ponding or a water table within 12 inches of the surface during the growing season at a minimum frequency of five out of ten years. This is determined by using both primary and secondary Wetland Hydrology indicators.

BACKGROUND AND DELINEATION EXHIBITS

Prior to conducting a field investigation of this site, Exhibits A through E were used to complete a preliminary evaluation. The data gathered during the preliminary investigation was used as described below:

Exhibit A is a location map of the study area.

Exhibit B is a 2012 aerial photo with 2-foot LIDAR contours overlaid on it. It provides information regarding the topography of the site, helping to identify areas that may have wetland characteristics. This photo was also used to evaluate vegetation changes and hydrology on the site prior to the site visit.

Exhibit C is the National Wetlands Inventory of the site and surrounding properties. This information is used to complete a preliminary investigation of the wetlands that may or may not exist on the site.

Exhibit D is used to identify waters that are regulated by the DNR. This exhibit shows where there are DNR public waters relative to the site.

Exhibit E is used to complete a preliminary investigation of the soils found on the property. This is used to aid in determining the existence of soils that may be listed on either the State or National hydric soils list.

Delineation Exhibits F through I were prepared from the information gathered at the site.

Exhibit F is the site map showing the delineated wetland boundary.

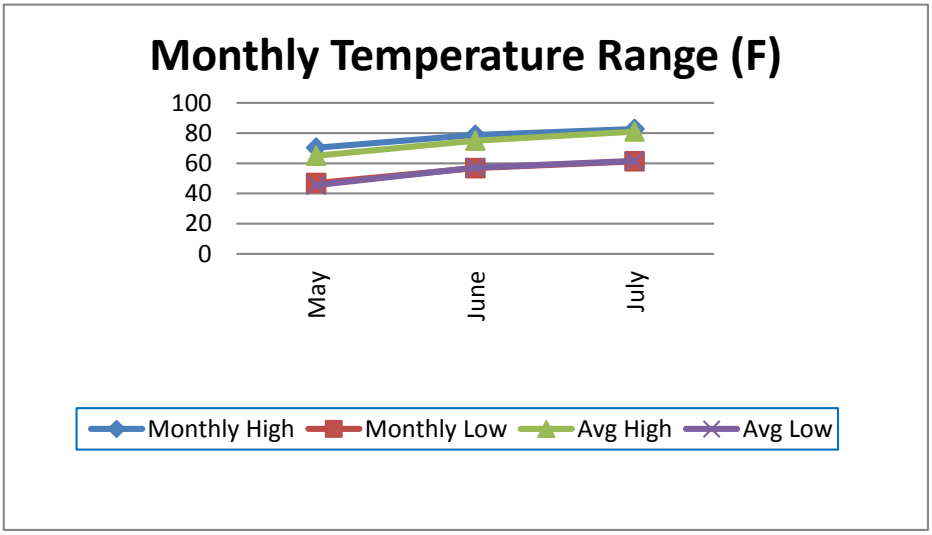
Exhibit G includes the delineation photographs and a map showing the location and direction where the photos were taken.

Exhibit H is includes the wetland delineation data sheets.

Exhibit I is the report produced by Midwest Natural Resources regarding the calcareous fen evaluation that they conducted.

CLIMATE DATA

The monthly temperature table below shows the average high and low temperatures for the months of May through July of 2013, along with the historical averages for these months. The monthly averages were roughly equal to the historical averages.



The precipitation worksheet below shows that for this delineation, the area was experiencing normal precipitation.

Precipitation Worksheet for August 28 through September 23, 2013:

	first month prior: **July 2013**	second month prior: **June 2013**	third month prior: **May 2013**
Total precipitation for the month	**3.65”**	**4.43”**	**5.48”**
30% chance will have less than	2.82”	2.83”	2.87”
30% chance will have more than	5.10”	5.36”	4.51”
Type of month:	Normal	Normal	Wet
Monthly score:	3 * 2 = 6	2 * 2 = 4	1 * 3 = 3
Multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)		13 - Normal	

This climatic data was gathered using the Climatology Working Group Website, **http://climate.umn.edu/**. The information for the investigation was retrieved from the WETS Station in Rosemount; Station ID – 217107.

SOILS

The Dakota County Soil Survey shows the following soils as mapped within the study corridor boundaries.

Symbol	Name	Slopes	Hydric Soil
7D	Hubbard loamy sand	12-18%	No
94C	Terril loam	4-12%	No
317	Oshawa silty clay loam	0-1%	Yes
463	Minneiska loam, occasionally flooded	0-1%	No*
522	Boots muck	0-1%	Yes
539	Palms muck	0-1%	Yes
540	Seelyeville muck	0-1%	Yes
545	Rondeau muck	0-1%	Yes
860C	Urband land –Lester complex	3-5%	No*
1022	Udorthents, wet		No*
1825C	Seelyeville muck, sloping	2-12%	Yes

**hydric inclusions*

FINDINGS

From August 28 to September 23, 2013 a field investigation was performed to evaluate and verify the boundaries of wetlands located within the study corridor of the proposed Minnesota River Greenway Trail.

Ten wetlands were identified, the following describes the wetlands found, together with a brief description of their types and observations made in determining the upper wetland limits.

Wetland 1:
Wetland 1 is located just east of the Minnesota River, on the southern section of the study corridor. This wetland is listed on the National Wetland Inventory (NWI) as a Palustrine Emergent Seasonally flooded ditched (PEMCd) wetland. This investigation concurs with this classification, having the characteristics of a Type 2– Shallow Marsh.

One transect and several sample points were taken to determine the wetland boundary. Vegetation, soils, hydrology and topography aided in determining the wetland boundary.

Both the wetland and upland plant communities, at the transect point, are dominated by reed canary grass. Both plant communities are considered hydrophytic.

According to the Dakota County Soil Survey, this wetland lies within Oshawa silty clay loam, which is considered hydric. The wetland pit exhibited hydric soil indicator A12 – Thick Dark Surface. The upland pit did not exhibit any hydric soils indicators, its location is shown to be in the Minneiska loam, which is considered to be a non-hydric soil.

The wetland pit was saturated at 30-inches, with the water table below 48-inches. The wetland pit location exhibited secondary hydrology indicators D2 – Geomorphic Position and D5 – FAC-Neutral Test. Soils in the upland pit were saturated at 36-inches, with the water table below 48-inches. The upland pit only exhibited secondary hydrology indicator D5.

The determining factor for this delineation was the lack of hydric soils and hydrology found at the upland sample pit. Hydrophytic vegetation was present at both locations.

Wetland 2:
Wetland 2 is the central wetland within the study corridor. It is listed on the NWI with several classifications. Transects for this investigation were located in areas labeled as Palustrine Forested Broad-leaved deciduous Seasonally flooded ditched (PFO1Cd), Palustrine Emergent Scrub-Shrub Broadleaf deciduous Seasonally Flooded ditched (PEM/SS1Cd), Palustrine Unconsolidated Bottom Intermittently exposed excavated (PUBGx), Lacustrine Littoral Unconsolidated Bottom Intermittently exposed excavated (L2UBGx), Palustrine Scrub-Shrub Deciduous broadleaf Seasonally flooded ditched (PSS1Cd) and PEMCd. This investigation concurs with these classifications, having characteristics of a Type 2, 3 and 6 – Wet Meadow, Shallow Marsh and Shrub Swamp.

Nineteen transects were taken, as well as several sample points to determine the wetland boundary. Vegetation, soils, hydrology and topography aided in determining the wetland boundary.

The dominant plant species at the wetland transect points are green ash, box elder, black willow, peach-leaf willow, common buckthorn, red-osier dogwood, grey dogwood, reed

canary grass, stinging nettle, giant reed grass, clearweed, beggartick, smartweed, cattail, wood nettle, wild cucumber, prairie cord grass, common duckweed, meadow horsetail and rough cuckle-bur. The dominant species in the upland plant communities, at the transect points, are green ash, American elm, box elder, quaking aspen, cottonwood, reed canary grass, stinging nettle, lesser burdock, hemp, wild geranium, green headed coneflower, bull thistle, wood nettle, clearweed, Canada goldenrod, field horsetail, smooth brome, bird's-foot-trefoil, Kentucky bluegrass, common ragweed and white snakeroot. Generally, both wetland and upland plant communities are hydrophytic.

According to the Dakota County Soil Survey, the transects were taken in Oshawa silty clay loam, Minneiska loam, Palms muck, Seelyeville muck, Rondeau muck, Udorthents and Urban land. All the wetland pits contained hydric soils, meeting hydric soil indicators A12, A6 – Redox Dark Surface or A1 – Histosol. All but four upland pits lacked hydric soils. Two of these four meet A1, one exhibited indicator S5 – Sandy Redox and the third met indicator A12.

All wetland pits meet hydrology indicators D2 and D5, some pits also met indicator A2 – High Water Table and A3 – Saturation. The upland pits, at a minimum, meet secondary indicator D5, therefore did not meet hydrology requirements.

A restrictive layer of bituminous was found at soil borings HH, JJ and LL, located in the northern section of the study corridor. This layer represents the remains of an abandoned trail. Hydric soil and hydrology are assumed not to be present due to the raised position above the wetland basin of these locations, as well as the lack of hydrophytic vegetation within these corridors.

Wetland 3:

Wetland 3 is located to the north of Wetland 1, separated by a gravel trail. Without this division, the wetlands would be joined. This wetland is not listed on the NWI. This investigation classifies it as a Palustrine Emergent Saturated (PEMB) wetland wetland, having the characteristics of a Type 1– Wet Meadow.

One transect and several sample points were taken to determine the wetland boundary. Vegetation, soils, hydrology and topography aided in determining the wetland boundary.

The wetland plant community, at the transect point, is dominated by reed canary grass and timothy. The upland plant community is dominated by green ash, cottonwood and reed canary grass. Both plant communities are considered hydrophytic.

According to the Dakota County Soil Survey, this wetland lies within Minneiska silty clay loam, which is not considered hydric. The wetland pit exhibited hydric soil indicator A12. The upland pit did not exhibit any hydric soils indicators.

The wetland pit was saturated at 29-inches, with the water table below 48-inches. The wetland pit location exhibited secondary hydrology indicators D2 and D5. Soils in the upland pit were saturated at 35-inches, with the water table below 48-inches. The upland pit only exhibit secondary hydrology indicator D5.

The determining factor for this delineation was the lack of hydric soils and hydrology found at the upland sample pit. Hydrophytic vegetation was present at both locations.

Wetland 4:
Wetland 4 is located to the southeast of the MTH 77 bridge, adjacent to the boat landing parking area. This wetland is not listed on the NWI. This investigation classifies it as a PEMC wetland, having the characteristics of a Type 2– Shallow Marsh.

One transect and several sample points were taken to determine the wetland boundary. Vegetation, soils, hydrology and topography aided in determining the wetland boundary.

The wetland plant community, at the transect point, is dominated by green ash, quaking aspen, silver maple, reed canary grass and smartweeds. The upland plant community is dominated by green ash, cottonwood and reed canary grass. Both plant communities are considered hydrophytic.

According to the Dakota County Soil Survey, this wetland lies within Minneiska silty clay loam, which is not considered hydric. The wetland pit exhibited hydric soil indicator A12. The upland pit did not exhibit any hydric soils indicators.

The wetland pit was saturated at 35-inches, with the water table below 48-inches. The wetland pit location exhibited secondary hydrology indicators D2 and D5. Saturated soils were not found in the upland pit. The upland pit only exhibit secondary hydrology indicator D5.

The determining factor for this delineation was the lack of hydric soils and hydrology found at the upland sample pit. Hydrophytic vegetation was present at both locations.

Wetland 5:
Wetland 5 is located on the southeast side of the MTH 77 bridge, within the boat ramp parking area. This wetland is not listed on the NWI. This investigation classifies it as a PFO1C wetland, having the characteristics of a Type 7 – Wooded Swamp.

One transect and several sample points were taken to determine the wetland boundary. Vegetation, soils, hydrology and topography aided in determining the wetland boundary.

The wetland plant community, at the transect point, is dominated green ash and silver maple. The upland plant community is dominated by green ash, box elder and sand bar willow. Both plant communities are considered hydrophytic.

According to the Dakota County Soil Survey, this wetland lies within Minneiska silty clay loam, which is not considered hydric. The wetland pit exhibited hydric soil indicator A12. The upland pit did not exhibit any hydric soils indicators.

The wetland pit was saturated at the surface, with the water table at 35-inches. The wetland pit location exhibited secondary hydrology indicators D2 and D5 as well as primary indicator B8 – Sparsely Vegetated Concave Surface. Saturated soils were not found in the upland pit. The upland pit only exhibit secondary hydrology indicator D5.

The determining factor for this delineation was the lack of hydric soils and hydrology found at the upland sample pit. Hydrophytic vegetation was present at both locations.

Wetland 6:

Wetland 6 is located on the southwest side of E. Black Dog Road. This wetland is listed on the NWI as a PFO1Ch (diked/impounded). This investigation concurs with this classification, having the characteristics of a Type 7 – Wooded Swamp.

One transect and several sample points were taken to determine the wetland boundary. Vegetation, soils, hydrology and topography aided in determining the wetland boundary.

The wetland plant community, at the transect point, is dominated green ash and cottonwood. The upland plant community is dominated by green ash, box elder and cottonwood. Both plant communities are considered hydrophytic.

According to the Dakota County Soil Survey, this wetland lies within Minneiska silty clay loam, which is not considered hydric. The wetland pit exhibited hydric soil indicator A12. The upland pit did not exhibit any hydric soils indicators.

The wetland pit was saturated at 19-inches, with the water table below 48-inches. The wetland pit location exhibited secondary hydrology indicators D2 and D5. Saturated soils were not found in the upland pit. The upland pit only exhibit secondary hydrology indicator D5.

The determining factor for this delineation was the lack of hydric soils and hydrology found at the upland sample pit. Hydrophytic vegetation was present at both locations.

Wetland 7:

Wetland 7 is located along the southwest side of Nichols Road. This wetland is listed on the NWI as a PEMCd. This investigation concurs with this classification, having the characteristics of a Type 3 – Shallow Marsh.

One transect and several sample points were taken to determine the wetland boundary. Vegetation, soils, hydrology and topography aided in determining the wetland boundary.

Both the wetland and upland plant communities, at the transect point, are dominated by reed canary grass and common buckthorn. Both plant communities are considered hydrophytic.

According to the Dakota County Soil Survey, this wetland lies within Seelyeville muck, which is considered hydric. The wetland pit exhibited hydric soil indicator A1. The upland pit did not exhibit any hydric soils indicators.

The wetland pit was saturated at 10-inches, with the water table was at 32-inches. The wetland pit location also exhibited secondary hydrology indicators D2 and D5. Saturated soils were not found in the upland pit. The upland pit only exhibit secondary hydrology indicator D5.

The determining factor for this delineation was the lack of hydric soils and hydrology found at the upland sample pit. Hydrophytic vegetation was present at both locations.

Wetland 8:
Wetland 8 is located west side of the quarry pits. This wetland is not listed on the NWI. This investigation classifies it as a Palustrine Emergent Saturated (PEMB) wetland, having the characteristics of a Type 2 – Wet Meadow.

One transect and several sample points were taken to determine the wetland boundary. Vegetation, soils, hydrology and topography aided in determining the wetland boundary.

Both the wetland plant community, at the transect point, are dominated by reed canary grass. Both plant communities are considered hydrophytic.

According to the Dakota County Soil Survey, this wetland lies within Udorthents, which are not considered hydric. The wetland pit exhibited hydric soil indicator A1. The upland pit did not exhibit any hydric soils indicators.

Neither wetland nor upland pit contained saturated soils. The wetland pit location exhibited secondary hydrology indicators D2 and D5. The upland pit only exhibit secondary hydrology indicator D5.

The determining factor for this delineation was the lack of hydric soils and hydrology found at the upland sample pit. Hydrophytic vegetation was present at both locations.

Wetland 9:
Wetland 9 consists of the excavated quarry pits located in the north central section of the study corridor. This wetland is listed on the NWI as a PUBGx and L2UBGx. This investigation concurs with this classification, having the characteristics of a Type 3 and 4 – Shallow Marsh and Deep Marsh.

Two transects and several sample points were taken to determine the wetland boundary. Vegetation, soils, hydrology and topography aided in determining the wetland boundary.

The wetland plant communities, at the transect points, are dominated by reed canary grass, smartweeds, American elm and common buckthorn. The dominant species at the upland pit locations are American elm, box elder, white snakeroot, lesser burdock and reed canary grass. Both plant communities are considered hydrophytic.

According to the Dakota County Soil Survey, this wetland lies within Udorthents, which are not considered hydric. The wetland pits exhibited hydric soil indicator A1. One upland pit did not exhibit any hydric soils indicators, while the other exhibited A1.

One wetland pit was saturated at the surface, the other at 20-inches, with the water table falling below 20-inches. The wetland pit locations also exhibited secondary hydrology indicators D2 and D5. Saturated soils were not found in the upland pits. The upland pits only exhibit secondary hydrology indicator D5.

The determining factor for this delineation was the lack of hydric soils at the upland sample pits. Hydrophytic vegetation was present at both locations and hydrology at one.

Wetland 10:
Wetland 10 is the only wetland located along the east side of the Union Pacific Railroad. This wetland is listed on the NWI as a PEMC/PFO1C. This investigation concurs with these classifications, having the characteristics of a Type 2 and 7 – Wet Meadow and Wooded Swamp.

One transect and several sample points were taken to determine the wetland boundary. Vegetation, soils, hydrology and topography aided in determining the wetland boundary.

The wetland plant community, at the transect point, is dominated by common buckthorn, red-osier dogwood, reed canary grass and common buckthorn. The dominant species at the upland pit are box elder, common buckthorn and Kentucky bluegrass. Both plant communities are considered hydrophytic.

According to the Dakota County Soil Survey, this wetland lies within Hubbard loamy sand, which is not considered hydric. The wetland pit exhibited hydric soil indicator A1. The upland pit did not exhibit any hydric soils indicators.

The wetland pit was saturated at the surface, with the water table at 18-inches. The wetland pit location also exhibited secondary hydrology indicators D2 and D5. Saturated soils were found at 35-inches in the upland pit. The upland pit did not exhibit any hydrology indicators.

The determining factor for this delineation was the lack of hydric soils and hydrology found at the upland sample pit. Hydrophytic vegetation was present at both locations.

Three manmade detention ponds are also found within the study corridor. These ponds are considered incidental, although they exhibit wetland characteristics. The following describes the ponds, together with a brief description of the observations made.

Stormwater Pond 1:
Stormwater Pond 1 is located along the south side of Nichols Road. This pond is listed on the NWI as a PEMCd. This investigation concurs with this classification, having the characteristics of a Type 3 – Shallow Marsh.

One transect and several sample points were taken to determine the wetland boundary. Vegetation, soils, hydrology and topography aided in determining the wetland boundary.

The wetland plant community, at the transect point, is dominated green ash, common buckthorn and reed canary grass. The upland plant community is dominated by Kentucky bluegrass, yellow sweet clover, bird's-foot-trefoil and clover. Only the wetland plant community is considered hydrophytic.

According to the Dakota County Soil Survey, this wetland lies within Seelyeville muck, which is considered hydric. The wetland pit exhibited hydric soil indicator A1. The upland pit did not exhibit any hydric soils indicators.

The wetland pit was saturated at 27-inches, with the water table below 48-inches. The wetland pit location exhibited secondary hydrology indicators D2 and D5. Saturated soils were not found in the upland pit. The upland pit did not exhibit any hydrology indicators.

The determining factor for this delineation was the lack of hydric soils and hydrology found at the upland sample pit. Hydrophytic vegetation was present at both locations.

Stormwater Ponds 2 and 3:
Stormwater Ponds 2 and 3 are located along the northwest side of the Union Pacific Railroad, along the south central section of the study corridor. These ponds are listed on the NWI as Palustrine Unconsolidated Bottom Artificially flooded excavated (PUBKx) wetlands. This investigation concurs with this classification, having the characteristics of a Type 4 – Deep Marsh.

One transect and several sample points were taken for each pond to determine the wetland boundary. Vegetation, soils, hydrology and topography aided in determining the wetland boundary.

The wetland plant communities, at the transect points, are dominated box elder, cattail and reed canary grass. The upland plant communities are dominated by box elder and reed canary grass. Only the wetland plant communities are considered hydrophytic.

According to the Dakota County Soil Survey, these ponds lie within Udorthents, which are not considered hydric. The wetland pit exhibited hydric soil indicator A1 and S5. One upland pit did not exhibit any hydric soils indicators, the second exhibited A12.

The wetland pits was saturated at the surface, with the water table within 10-inches. The wetland pit locations exhibited secondary hydrology indicators D2 and D5. Saturated soils were found below 27-inches with a water table below 42-inches in the upland pits. The upland pits only exhibit secondary hydrology indicator D5.

The determining factor for this delineation was the lack of hydrology found at the upland sample pits. Hydrophytic vegetation was present at both locations and hydric soils at one of them.

Several areas were investigated for the possibility of a wetland being present. No wetlands were found to exist in these areas. The following describes the conditions found, data sheets for these investigations are found in Exhibit H.

Areas 1 and 2:
Areas 1and 2 are located along the bluff on either side of an unnamed stream that connects Wetland 2 to the Minnesota River.

Several sample points were taken to determine the existence of a non-wetland area.

Both the plant communities, at the pit location, are dominated by reed canary grass and green-head coneflower. This plant community is considered hydrophytic.

According to the Dakota County Soil Survey, these areas lie within Minneiska loam, which is not considered hydric. Neither pit exhibited any hydric soil indicators.

The sample pits were saturated below 38-inches, with the water table below 48-inches. The only hydrology indicator present was secondary indicator D5.

The determining factor in calling the bluffs adjacent to the unnamed stream non-wetland was the lack of hydric soils and hydrology found at the sample pit. Hydrophytic vegetation was present.

Areas 3, 4 and 5:
Areas 3, 4 and 5 are located on along the bluff overlooking the Minnesota River.

Several sample points were taken to determine the existence of a non-wetland area.

The plant communities, at the pit locations, are dominated by sandbar willow, red-osier dogwood, quaking aspen, green ash, reed canary grass and lake sedge. The plant community along the bluff is considered hydrophytic.

According to the Dakota County Soil Survey, the bluff lies within Minneiska loam, which is not considered hydric. None of the sample pits exhibited any hydric soil indicators.

The sample pits were saturated below 36-inches, with the water table below 48-inches. The only hydrology indicator present was secondary indicator D5.

The determining factor in calling the bluff area non-wetland was the lack of hydric soils and hydrology found at the sample pit. Hydrophytic vegetation was present.

Area 6:
Area 6 is located within the study corridor that runs parallel with the Union Pacific Railroad.

Several sample points were taken to determine the existence of a non-wetland area.

The plant community, at the pit location, is dominated by reed canary grass. This plant community is considered hydrophytic.

According to the Dakota County Soil Survey, this area lies within Palms muck, which is considered hydric. The sample pit exhibited hydric soil indicator A1.

The sample pit was saturated below 22-inches, with the water table below 48-inches. The only hydrology indicator present was secondary indicator D5.

The determining factor in calling this area non-wetland was the lack of hydrology found at the sample pit. Hydrophytic vegetation and hydric soils were present.

Area 7:
Area 7 is located within the study corridor that runs parallel with the Union Pacific Railroad.

Several sample points were taken to determine the existence of a non-wetland area.

The plant community, at the pit location, is dominated by reed canary grass and box elder. This plant community is considered hydrophytic.

According to the Dakota County Soil Survey, this pit lies within Palms muck, which is considered hydric. The sample pit did not exhibit any hydric soil indicators.

The sample pit was saturated below 27-inches, with the water table below 48-inches. The only hydrology indicator present was secondary indicator D5.

The determining factor in calling this area non-wetland was the lack of hydrology and hydric soils found at the sample pit. Hydrophytic vegetation was present.

Area 8:
Area 8 is located between Stormwater Ponds 2 and 3 and the Union Pacific Railroad.

Several sample points were taken to determine the existence of a non-wetland area.

The plant community, at the pit location, is dominated by reed canary grass and lake sedge. This plant community is considered hydrophytic.

According to the Dakota County Soil Survey, this pit lies within Udortheents, which are not considered hydric. The sample pit did not exhibit any hydric soil indicators.

Saturated soils were not found in the sample pit. The only hydrology indicator present was secondary indicator D5.

The determining factor in calling this area non-wetland was the lack of hydrology and hydric soils found at the sample pit. Hydrophytic vegetation was present.

Area 9:
Area 9 is located on the south west bank of the excavated quarry pits.

Several sample points were taken to determine the existence of a non-wetland area.

The plant community, at the pit location, is dominated by reed canary grass and common buckthorn. This plant community is considered hydrophytic.

According to the Dakota County Soil Survey, this pit lies within Udorthents, which are not considered hydric. The sample pit did not exhibit any hydric soil indicators.

Saturated soils were found at 15-inches within the sample pit, with the water table below 32-inches. The only hydrology indicator present was secondary indicator D5.

The determining factor in calling this area non-wetland was the lack of hydrology and hydric soils found at the sample pit. Hydrophytic vegetation was present.

Area 10:
Area 10 is located on the east side of the Union Pacific Railroad, south of Wetland 10.

Several sample points were taken to determine the existence of a non-wetland area.

The plant community, at the pit location, is dominated by box elder, wood nettle and creeping charlie. This plant community is considered hydrophytic.

According to the Dakota County Soil Survey, this pit lies within Terril loam, which is not considered hydric. The sample pit did not exhibit any hydric soil indicators.

Saturated soils were not found in the sample pit and no hydrologic indicators were found to exist at the pit location.

The determining factor in calling this area non-wetland was the lack of hydrology and hydric soils found at the sample pit. Hydrophytic vegetation was present.

CONCLUSION

This delineation was performed from August 28 to September 23, 2013. The boundaries of the wetlands were staked in the field with three foot "Wetland Delineation" pin flags. The location of the pin flags were surveyed by Bolton & Menk, Inc. and tied to the Dakota County coordinate system. The delineated limits are believed to be the upper limits of where all three of the required criteria were present.

It should be noted that wetland boundaries may vary as a result of varied precipitation and evaporation rates from season to season. There is no guarantee that a future wetland delineation boundary will be in the same location.

Bolton & Menk, Inc., was asked to determine the boundaries of those jurisdictional wetlands that exist upon this property as defined by the Wetland Conservation Act.

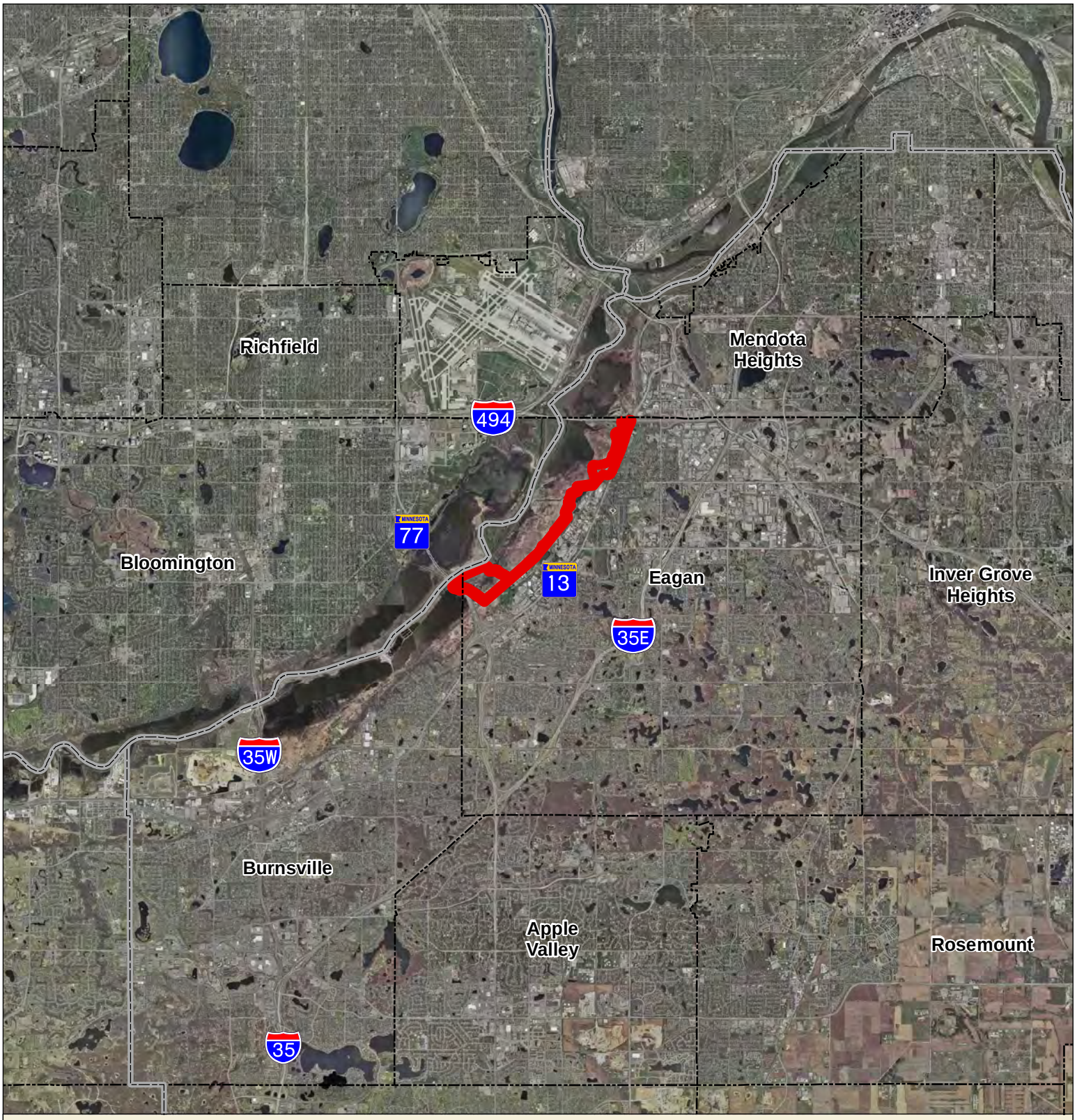
Based upon all available information, the existing conditions that currently prevail, and the on-site investigation, evidence supports the existence of ten wetlands within the Minnesota River Greenway study corridor.

Sincerely,

BOLTON & MENK, INC.

Dan Donayre
Certified Wetland Delineator, No. 1191

APPENDIX



0 2 Miles

Legend

- Study Corridor
- County Boundary
- City Boundary

Source: 2010 FSA Imagery, MnDOT

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Location Map

Exhibit A

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250Location_8.5x11.mxd
Date Saved: 9/13/2013 3:22:10 PM

Legend

Study Corridor

contours

Index

Intermediate

Source: 2012 USGS Imagery, Dakota County

BOLTON & MENK Engineers & Surveyors

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Site Topography
LIDAR Contours

Exhibit B-1

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250LIDAR_1_11x17.mxd
Date Saved: 9/12/2013 4:02:46 PM

0 500 Feet

Legend

Study Corridor

contours

Index

Intermediate

Source: 2012 USGS Imagery, Dakota County

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Site Topography
LIDAR Contours

Exhibit B-2

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250LIDAR_2_11x17.mxd
Date Saved: 9/12/2013 4:05:46 PM

0 500 Feet

Legend

Study Corridor

contours

Index

Intermediate

Source: 2012 USGS Imagery, Dakota County

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Site Topography
LIDAR Contours

Exhibit B-3

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250LIDAR_3_11x17.mxd
Date Saved: 9/12/2013 4:07:44 PM

PEMF
PSS1C
PEM/SS1Cd
PFO1C
PEMG
PEMF
PEMC
L2UBG
R2USC
PUBIEMFd
PFO1/EMC
PEMCd
R2UBH
PEMC
PFO1Cd
PFO1Cd
PAB4/FO5Gh
PFO1Ch
PUBGx
PEMCx
PUBGx
PSS1C
PEMCd
PEMB
L2USCh
L2UBGh
PEM/SS1Ch
PEMB
PEMF
PUBGx
PEM/SS1C
PEM/SS1C

0 500 Feet

Legend

- Study Corridor
- NWI Wetland

Source: 2012 USGS Imagery, MNDNR

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

National Wetlands Inventory

Exhibit C-1

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250NWI_1_11x17.mxd
Date Saved: 9/12/2013 4:00:31 PM

L2UBG
PEMF
PFO1C
PEM/FO1C
R2UBH
PFO1Cd
PSS/FO1Cd
PEMCd
L2UBGx
PUBGx
R2USC
PUBG
PFO1Cd
PEM/SS1Cd
PEMCd
PUB/EMFd
PUBF
PEMC
PEM/UBF
PUBKx
PEM/SS1C
PEMCd
PFO1Cd
PEMC
PEM/SS1C

0 500 Feet

BOLTON & MENK Engineers & Surveyors

Legend

- Study Corridor
- NWI Wetland

Source: 2012 USGS Imagery, MNDNR

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

National Wetlands Inventory

Exhibit C-2

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250NWI_2_11x17.mxd
Date Saved: 9/12/2013 3:58:13 PM

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

National Wetlands Inventory

Exhibit C-3

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250NWI_3_11x17.mxd
Date Saved: 9/12/2013 4:04:07 PM

0 500 Feet

Legend

- Study Corridor
- PWI Basin
- PWI_Watercourse

Source: 2012 USGS Imagery, MNDNR

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Public Waters Inventory

Exhibit D-1

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250PWI_1_11x17.mxd
Date Saved: 9/13/2013 3:51:00 PM

0 500 Feet

Legend

- Study Corridor
- PWI Basin
- PWI_Watercourse

Source: 2012 USGS Imagery, MNDNR

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Public Waters Inventory

Exhibit D-2

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250PWI_2_11x17.mxd
Date Saved: 9/13/2013 3:52:59 PM

0 500 Feet

Legend

- Study Corridor
- PWI Basin
- PWI_Watercourse

Source: 2012 USGS Imagery, MNDNR

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Public Waters Inventory

Exhibit D-3

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250PWI_3_11x17.mxd
Date Saved: 9/13/2013 3:54:14 PM

317, Oshawa
317, Oshawa
317, Oshawa
463, Minneiska
1027, Udorthents
540, Seelyeville
1055, Aquolls
522, Boots
W, Water
545, Rondeau
540, Seelyeville
463, Minneiska
317, Oshawa
539, Palms
545, Rondeau
1027, Udorthents
317, Oshawa
540, Seelyeville
1055, Aquolls
94C, Terril
1825C, Seelyeville
540, Seelyeville
W, Water
545, Rondeau
611F, Hawick
320B, Tallula
27B, Dickinson
465, Kalmarville
27B, Dickinson
94C, Terril
8A, Sparta
317, Oshawa
1029, Pits
540, Seelyeville
1825C, Seelyeville
8B, Sparta
320B, Tallula
1039, Urban land

0 500 Feet

Legend

Study Corridor

Soils

Non Hydric

Hydric

Source: 2012 USGS Imagery, MNDNR

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Dakota County
Soil Survey

Exhibit E-1

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250Soils_1_11x17.mxd
Date Saved: 9/13/2013 3:56:43 PM

317, Oshawa
W, Water
1029, Pits
W, Water
463, Minneiska
1055, Aquolls
W, Water
463, Minneiska
317, Oshawa
522, Boots
540, Seelyeville
94C, Terril
858C, Urban land
320B, Tallula
7D, Hubbard
454E, Mahtomedi
250, Kennebec
176, Garwin
8B, Sparta
8B, Sparta
W, Water
W, Water
27B, Dickinson
176, Garwin
865B, Urban land
545, Rondeau
320B, Tallula
858C, Urban land
1825C, Seelyeville
176, Garwin
7D, Hubbard
539, Palms
1027, Udorthents
8B, Sparta
865B, Urban land
7B, Hubbard
865B, Urban land
865B, Urban land
320B, Tallula
8B, Sparta
27B, Dickinson
888D, Kingsley

0 500 Feet

Legend

Study Corridor

Soils

Non Hydric

Hydric

Source: 2012 USGS Imagery, MNDNR

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Dakota County
Soil Survey

Exhibit E-2

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250Soils_2_11x17.mxd
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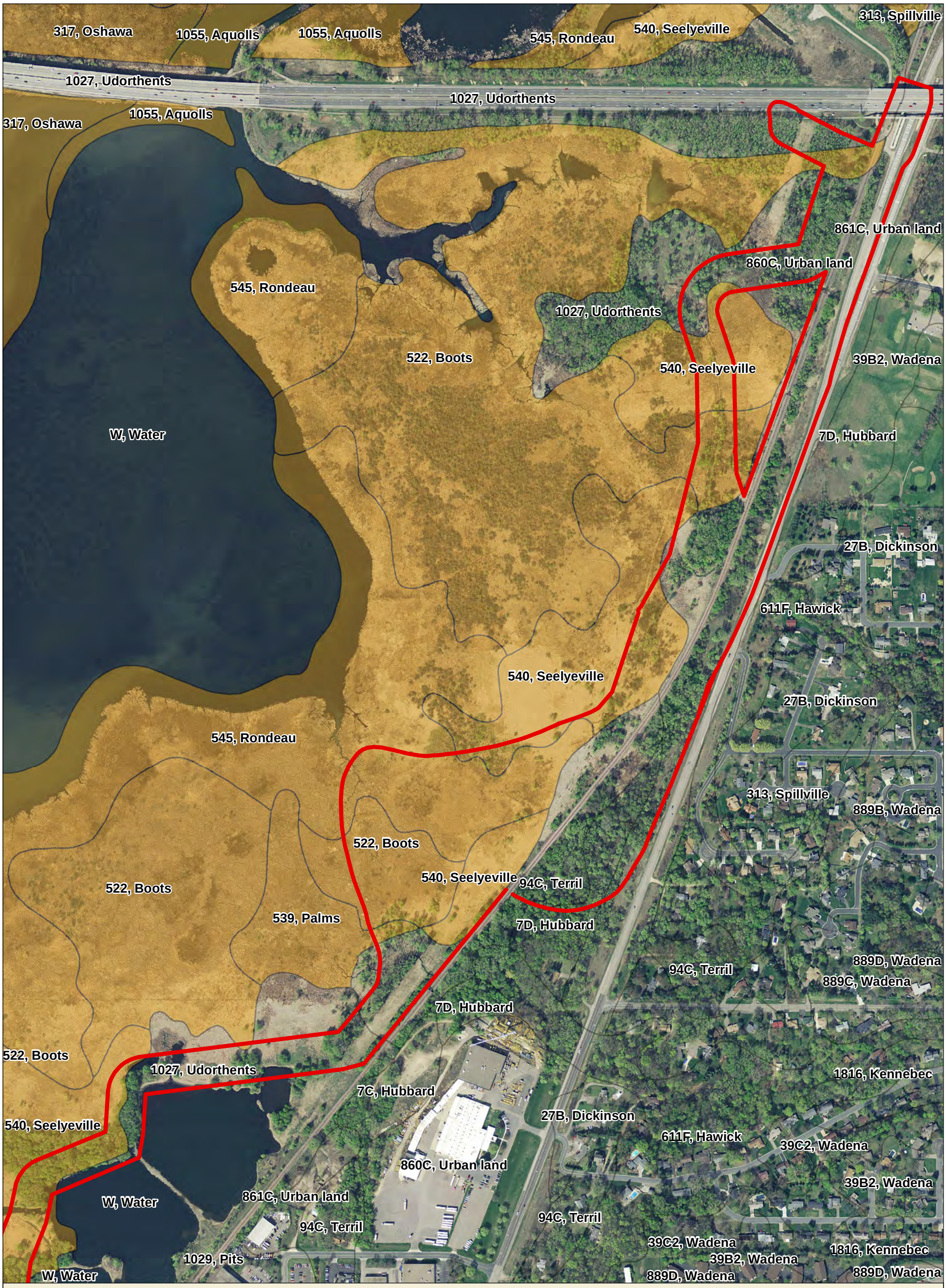

0 500 Feet

Legend

Study Corridor

Soils

Non Hydric

Hydric

Source: 2012 USGS Imagery, MNDNR

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Dakota County
Soil Survey

Exhibit E-3

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250Soils_3_11x17.mxd
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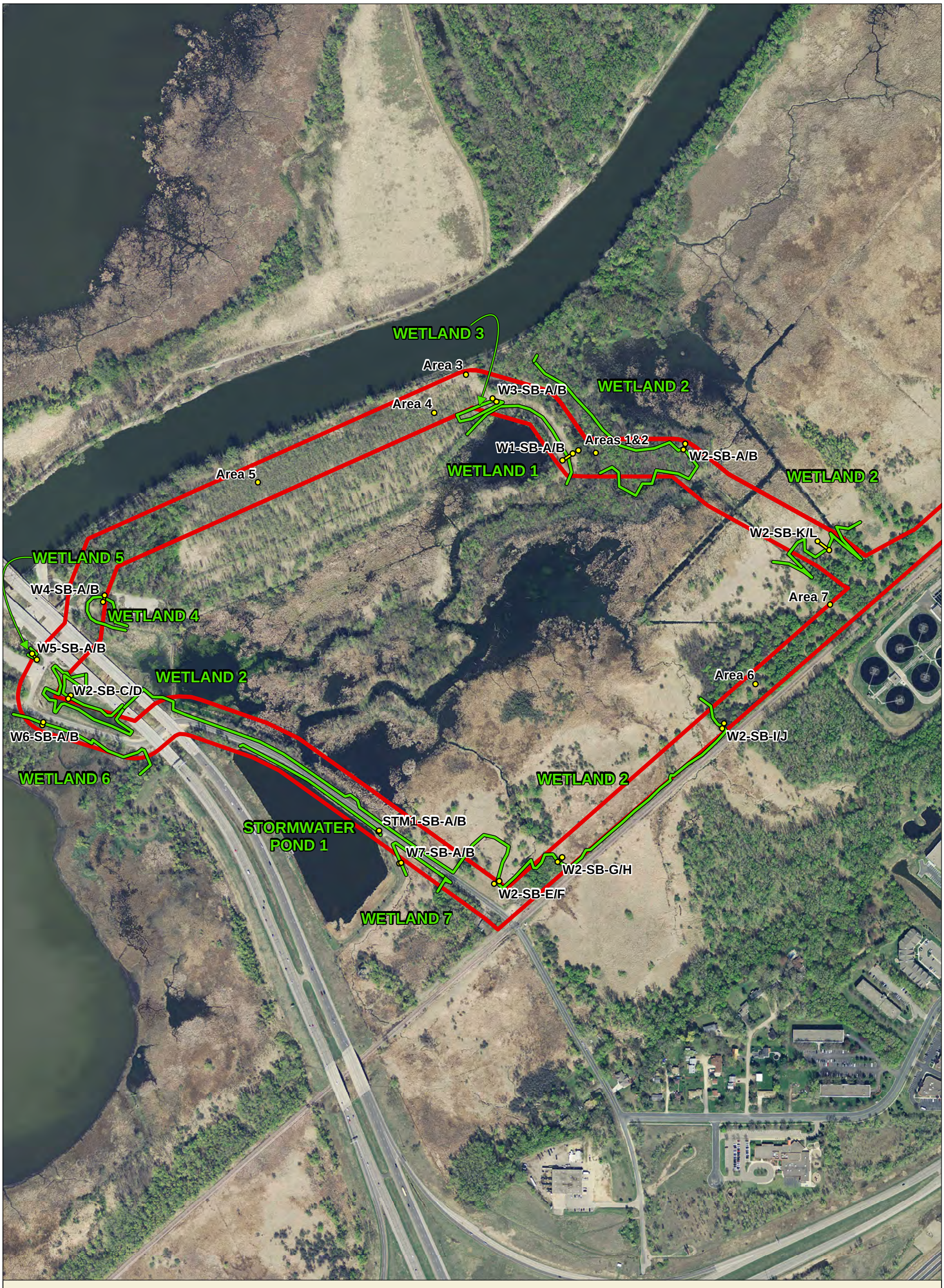

0 500 Feet

Legend

- Soil Borings
- Transects
- Delineated Wetlands
- Study Corridor

Source: 2012 USGS Imagery

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Delineated Wetland Boundaries

Exhibit F-1

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250Delineation_1_11x17.mxd
Date Saved: 9/24/2013 3:57:06 PM

W2-SB-W/X
W2-SB-U/V
WETLAND 9
W9-SB-C/D
Area 9
W9-SB-A/B
W8-SB-A/B
WETLAND 8
W2-SB-S/T
WETLAND 2
W2-SB-Q/R
Stormwater Ponds 3/4
STM3-SB-A/B
Area 8
STM2-SB-A/B
WETLAND 2
W2-SB-O/P
W2-SB-M/N

0 500 Feet

Legend

- Soil Borings
- Transects
- Delineated Wetlands
- Study Corridor

Source: 2012 USGS Imagery

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Delineated Wetland Boundaries

Exhibit F-2

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250Delineation_2_11x17.mxd
Date Saved: 9/24/2013 3:55:29 PM

WETLAND 2
W2-SB-KK/LL
W2-SB-II/JJ
WETLAND 2
W2-SB-GG/HH
W2-SB-EE/FF
WETLAND 2
WETLAND 10
W10-SB-A/B
Area 10
W2-SB-CC/DD
W2-SB-AA/BB
W2-SB-Y/Z
WETLAND 9

0 500 Feet

Legend

- Soil Borings
- Transects
- Delineated Wetlands
- Study Corridor

Source: 2012 USGS Imagery

BOLTON & MENK Engineers & Surveyors

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Delineated Wetland Boundaries

Exhibit F-3

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250Delineation_3_11x17.mxd
Date Saved: 9/24/2013 3:48:27 PM

WETLAND 3
WETLAND 2
A-3
W3-1
W1-1
A-4
W2-1
WETLAND 1
A-2
A-1
A-5
WETLAND 2
WETLAND 5
W4-1
W2-5
A-7
WETLAND 4
W4-2
W5-1
WETLAND 2
W2-4
A-6
W6-1
W6-2
WETLAND 6
STM1-1
WETLAND 2
W2-3
STORMWATER
POND 1
W7-2
W2-2
W7-1
WETLAND 7

0 500 Feet

Legend

- Soil Borings
- Transects
- Delineated Wetlands
- Study Corridor

Source: 2012 USGS Imagery

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Photo Reference Map

Exhibit G-1

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250Photo_Reference_1_11x17.mxd
Date Saved: 9/16/2013 5:38:54 PM

W2-7
WETLAND 9
W9-1
A-9
WETLAND 8
W8-1
Stormwater
Ponds 3/4
STM2-1
A-8
STM3-1
W2-6
WETLAND 2
2-5

0 500 Feet

Legend

- Soil Borings
- Transects
- Delineated Wetlands
- Study Corridor

Source: 2012 USGS Imagery

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Photo Reference Map

Exhibit G-2

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250Photo_Reference_2_11x17.mxd
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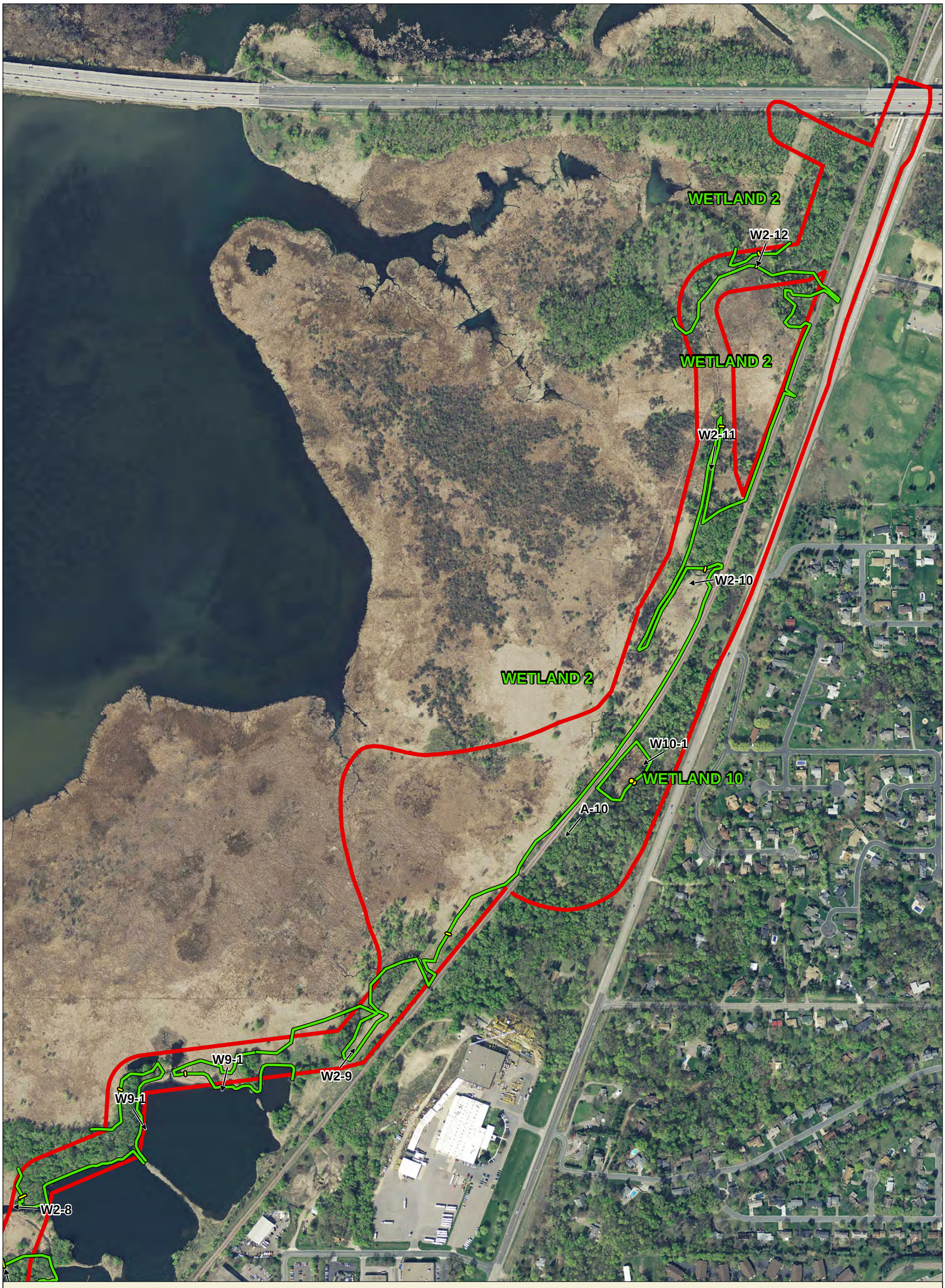


0 500 Feet

Legend

- Soil Borings
- Transects
- Delineated Wetlands
- Study Corridor

Source: 2012 USGS Imagery

MINNESOTA RIVER GREENWAY
EAGAN ALIGNMENT FEASIBILITY STUDY

Photo Reference Map

Exhibit G-3

September, 2013

Map Document: \\Arcserver1\GIS\DACO\T42106250\ESRI\Maps\Delineation\106250Photo_Reference_3_11x17.mxd
Date Saved: 9/24/2013 4:31:36 PM

EXHIBIT G - PHOTOGRAPHS

W1 – 1

W2-1

W2-2

W2-3

W2-4

W2-5

W2-6

W2-7

W2-8

W2-9

W2-10

W2-11

W2-12

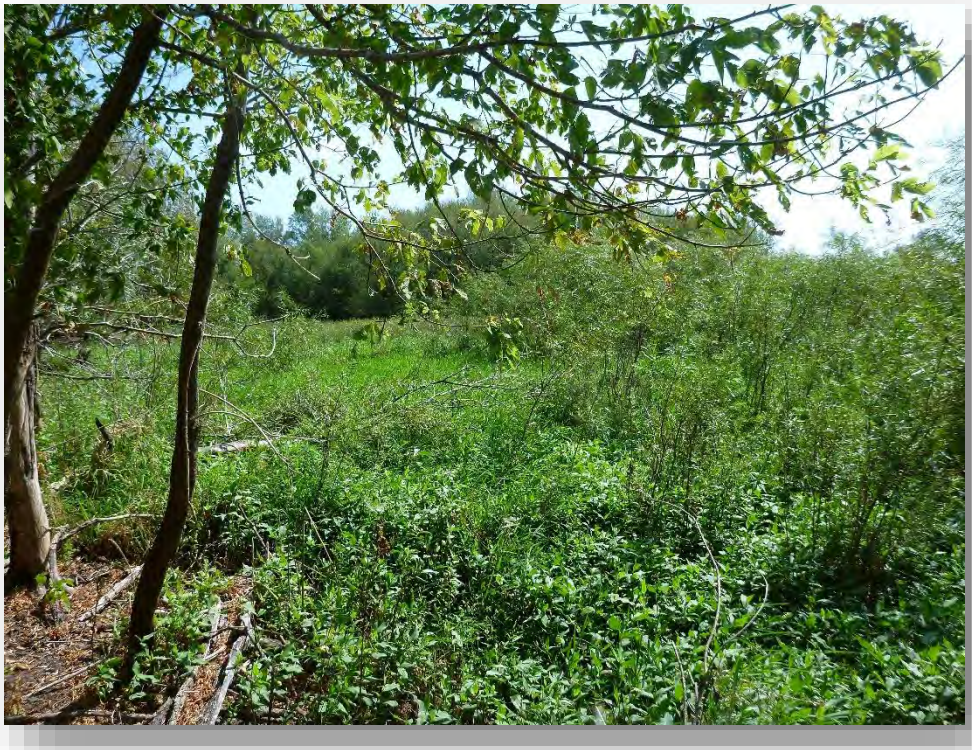
W3-1

W4-1

W4-2

W5-1

W6-1



W6-2

W7-1

W7-2

W8-1

W9-1

W9-2

W9-3

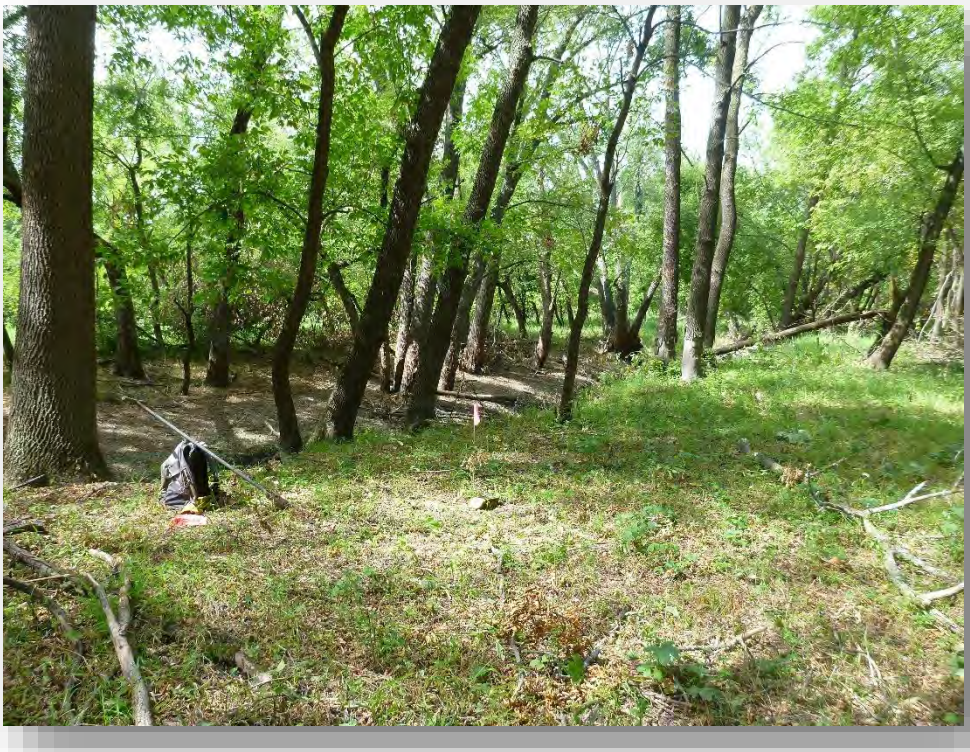
W10-1

STM1-1

STM2-1

STM3-1

A-1



A-2

A-3

A-4

A-5

A-6

A-7

A-8

A-9

A-10

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 8/28/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W1-SB-A

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Oshawa silty clay loam | NWI or WWI Classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsyvanica	50	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	50	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	=Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 32 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	150	x 2	300
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Total:	150 (A)		300 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-15	10 YR 2/1	100					SiCL	
15-30	10 YR 4/2	90	10 YR 4/4	10	RM	M	SiCL	
30+	10 YR 4/1	80	10 YR 4/4	20	RM	M	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☐ Yes ☒ No	Depth (in): _____
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 30

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 8/28/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W1-SB-B

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Acer negundo	15	☒ Yes ☐ No	FAC
2. Acer saccharinum	5	☒ Yes ☐ No	FACW
3. Fraxinus pennsyvanica	5	☒ Yes ☐ No	FACW
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	25	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. Fraxinus pennsyvanica	5	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	5	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Cirsium arvense	5	☐ Yes ☒ No	FACU
3. Asclepias syriaca	5	☐ Yes ☒ No	FACU
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	110	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	=Toal Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 5 (A)

Total number of dominant species across all strata: 5 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	115	x 2	230
FAC species:	15	x 3	45
FACU species:	10	x 4	40
UPL species:	_____	x 5	_____
Column Total:	140	(A)	315 (B)

Prevalence Index (B/A) = 2.3

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	10 YR 2/1	100					SiCL	
15-30	10 YR 4/2	100					SiCL	
30+	10 YR 5/2	99	10 YR 4/4	1	RM	M	SiCL	Redox features not distinct or prominent

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☐ Yes ☒ No	Depth (in): _____
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 36

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/3/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-A

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsyvanica	85	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	85	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Carex lacustris	20	☒ Yes ☐ No	OBL
2. Pilea pumila	5	☒ Yes ☐ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	25	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	=Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 4 (A)

Total number of dominant species across all strata: 4 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	20	x 1	20
FACW species:	90	x 2	180
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Total:	110	(A)	200 (B)

Prevalence Index (B/A) = 1.8

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/1	100					SiCL	
18-30	10 YR 4/1	90	7.5 YR 4/6	10	C	M	SiCL	
30+	2.5 Y 4/1	90	7.5 YR 4/6	20	C	M	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 30
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): Surface

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/3/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-B

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Backslope | Local Relief (concave, convex, none): Slope

Slope (%): 1-3 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsyvanica	40	☒ Yes ☐ No	FACW
2. Ulmus americana	5	☐ Yes ☒ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	45	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Phalaris arundinacea	90	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	90	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	=Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	135	x 2	270
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Total:	135 (A)		270 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	10 YR 3/1	100					SiCL	
15-19	10 YR 3/2	100					SiCL	
19+	2.5 Y 4/1	98	7.5 YR 4/8	2	C	M	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 35
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 15

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/6/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2 SB-C

Investigator(s): Dan Donayre | Sec, Twp, Ran: 13,27N,24W

Landform (hillside, terrace, etc.): Riverine basin | Local Relief (concave, convex, none): concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present? ☒ Yes ☐ No	
Wetland Hydrology Present? ☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	60	☒ Yes ☐ No	FACW
2. Xanthium strumarium	20	☒ Yes ☐ No	FAC
3. Cyperus esculentus	10	☐ Yes ☒ No	FACW
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata**:** 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	70	x 2	140
FAC species:	20	x 3	60
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	90	(A)	200 (B)

Prevalence Index (B/A) = 2.2

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-35	10 YR 2/1	100					SiCL	
35+	Gley 2 4/5B	100					SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 27

(includes capillary fringe)

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/6/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2 SB-D

Investigator(s): Dan Donayre | Sec, Twp, Ran: 13,27N,24W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	100	(A)	200 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	10 YR 2/1	100					SL	
15+	10 YR 4/4	100					SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/7/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2 SB-E

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present? ☒ Yes ☐ No	
Wetland Hydrology Present? ☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	100	(A)	200 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-20	10 YR 2/1	100					Muck	
20+		100					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 10

(includes capillary fringe)

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/7/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2 SB-F

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present? ☒ Yes ☐ No	
Wetland Hydrology Present? ☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Cirsium arvense	5	☐ Yes ☒ No	FACU
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	105	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	_____	x 3	_____
FACU species:	5	x 4	20
UPL species:	_____	x 5	_____
Column Totals:	105	(A)	220 (B)

Prevalence Index (B/A) = 2.1

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-38	10 YR 2/1	100					Muck	
38+		100					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): 22

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/5/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2 SB-G

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Convex

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyville muck, sloping | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	70	☒ Yes ☐ No	FACW
2. Acer negundo	20	☒ Yes ☐ No	FAC
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	90	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Phalaris arundinacea	80	☒ Yes ☐ No	FACW
2. Phragmities australis	20	☒ Yes ☐ No	FACW
3. Carex lacustris	5	☐ Yes ☒ No	OBL
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	105	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 4 (A)

Total number of dominant species across all strata: 4 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	5	x 1	5
FACW species:	170	x 2	340
FAC species:	20	x 3	60
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Total:	195	(A)	405 (B)

Prevalence Index (B/A) = 2.1

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0+	10 YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 40
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 10

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/5/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2 SB-H

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Backslope | Local Relief (concave, convex, none): Slope

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyville muck, sloping | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	70	☒ Yes ☐ No	FACW
2. Acer negundo	20	☒ Yes ☐ No	FAC
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	90	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Glechoma hederacea	20	☒ Yes ☐ No	FACU
2. Geranium maculatum	10	☒ Yes ☐ No	FACU
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	30	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 4 (B)

Percent of dominant species that are OBL, FACW or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	70	x 2	140
FAC species:	20	x 3	60
FACU species:	30	x 4	120
UPL species:	_____	x 5	_____
Column Total:	120	(A)	320 (B)

Prevalence Index (B/A) = 2.7

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☒ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-30	10 YR 3/2	100					SiCL	
30+	10 YR 2/1	100					SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/5/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2 SB-I

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Rondeau muck | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Acer negundo	40	☒ Yes ☐ No	FAC
2. Rhamnus cathartica	20	☒ Yes ☐ No	FAC
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	60	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Phalaris arundinacea	85	☒ Yes ☐ No	FACW
2. Urtica dioica	10	☒ Yes ☐ No	FACW
3. Rudbeckia laciniata	5	☐ Yes ☒ No	FACW
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 4 (A)

Total number of dominant species across all strata: 4 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	60	x 3	180
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Total:	160	(A)	380 (B)

Prevalence Index (B/A) = 2.4

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-23	10 YR 2/1	100					Muck	
23+	10 YR 2/1	100					Mucky Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 22
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 10

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/5/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2 SB-J

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Backslope | Local Relief (concave, convex, none): Slope

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Rondeau muck | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? | Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☒ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Rhamnus cathartica	80	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	80	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Ageratina altissima	15	☒ Yes ☐ No	FACU
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	15	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	_____	x 2	_____
FAC species:	80	x 3	240
FACU species:	15	x 4	60
UPL species:	_____	x 5	_____
Column Total:	95	(A)	300 (B)

Prevalence Index (B/A) = 3.2

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☐ **Yes** ☒ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-40	10 YR 2/1	100					SiCL	
40+	10 YR 5/1	90	7.5 YR 4/6	C	M		SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 38

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/9/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2 SB-K

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Palms muck | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Urtica dioica	2	☐ Yes ☒ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	105	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	102	x 2	204
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	102 (A)		204 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0+	10 YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 20
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 6

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/9/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2 SB-L

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Palms muck | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	100	(A)	200 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-36	10 YR 2/1	100					SiCL	
36+	10 YR 5/2	100					SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 23

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/9/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2 SB-M

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Palms muck | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	100	(A)	200 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-24	10 YR 2/1	100					Muck	
24+		100					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 20
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 10

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/9/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2 SB-N

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Palms muck | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Cannabis sativa	5	☐ Yes ☒ No	FACU
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	105	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	_____	x 3	_____
FACU species:	5	x 4	20
UPL species:	_____	x 5	_____
Column Totals:	100	(A)	220 (B)

Prevalence Index (B/A) = 2.2

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	7.5 YR 4/6	100					SiCL	
18-36	10 YR 2/1	100					Muck	
36+	10 YR 5/2	100					SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 32
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 26

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2 SB-O

Investigator(s): Dan Donayre | Sec, Twp, Ran: 17,27N,23W

Landform (hillside, terrace, etc.): Riverine | Local Relief (concave, convex, none): Flat

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyville muck | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	5	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	5	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Persicaria spp.	5	☐ Yes ☒ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	105	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	105	x 2	210
FAC species:	5	x 3	15
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	110	(A)	235 (B)

Prevalence Index (B/A) = 2.1

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10 YR 2/1	100					SL	
4-30	10 YR 2/1	100					Muck	
30+		100					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 24
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): Surface

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2 SB-P

Investigator(s): Dan Donayre | Sec, Twp, Ran: 17,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyville muck | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☒ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	30	☒ Yes ☐ No	FACW
2. Ageratina altissima	20	☒ Yes ☐ No	FACU
3. Arctium minus	10	☐ Yes ☒ No	FACU
4. Cannabis sativa	10	☐ Yes ☒ No	FACU
5. Geranium maculatum	10	☐ Yes ☒ No	FACU
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	80	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	30	x 2	60
FAC species:	_____	x 3	_____
FACU species:	50	x 4	200
UPL species:	_____	x 5	_____
Column Totals:	80	(A)	260 (B)

Prevalence Index (B/A) = 3.3

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☐ **Yes** ☒ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-17	10 YR 2/2	100					SL	
17-30	10 YR 2/1	80	5 YR 4/6	20	C	PL	SL	
30+	10 YR 2/1	100					Mucky peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☐ Yes ☒ No	Depth (in): _____
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 15

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-Q

Investigator(s): Dan Donayre | Sec, Twp, Ran: 17,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Convex

Slope (%): 0-2% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: PEM/SS1Cd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	10	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	10	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	10	x 3	30
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	110	(A)	230 (B)

Prevalence Index (B/A) = 2.1

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq 3.0^1$

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-20	10 YR 2/1	100					SiL	
20+	10 YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 10

(includes capillary fringe)

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-R

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-2% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: PEM/SS1Cd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present? ☒ Yes ☐ No	
Wetland Hydrology Present? ☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	65	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	65	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	90	☒ Yes ☐ No	FACW
2. Ageratina altissima	10	☐ Yes ☒ No	FAC
3. Urtica dioica	10	☐ Yes ☒ No	FACW
4. Rudbeckia laciniata	10	☐ Yes ☒ No	FACW
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	120	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	110	x 2	220
FAC species:	75	x 3	225
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	185	(A)	445 (B)

Prevalence Index (B/A) = 2.4

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-26	10 YR 2/1	100					SiL	
26+	10 YR 5/1	100					SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 23

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-S

Investigator(s): Dan Donayre | Sec, Twp, Ran: 17,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-2% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: PEM/SS1Cd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	10	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	10	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	110	x 2	220
FAC species:	10	x 3	30
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	120	(A)	250 (B)

Prevalence Index (B/A) = 2.1

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq 3.0^1$

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-26	10 YR 2/1	100					SiL	
26+	10 YR 4/1	100					SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: Rock/Gravel

Depth (in): 30"

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks: A restrictive layer of rocl/gravel was encountered at approximately 28 to 32 inches in several pits that were dug. A transition layer of 10 YR 4/1 was encountered at these depths, the assumption that a depleted matrix exists under the restrictive layer is valid. Additionally, the presence of hydrodrophytic vegetation and hydrology help verify this determination.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in):
Water Table Present?	☐ Yes ☒ No	Depth (in):
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 10

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-T

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-2% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: PEM/SS1Cd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	5	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	5	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Cirsium vulgare	10	☐ Yes ☒ No	FACU
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	5	x 3	15
FACU species:	10	x 4	40
UPL species:	_____	x 5	_____
Column Totals:	115	(A)	255 (B)

Prevalence Index (B/A) = 2.2

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10 YR 2/1	100					SiL	
6-15	10 YR 2/1	80	7.5 YR 4/3	20	C	M	SiL	
15+	7.5 YR 4/6	100					S	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-U

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Convex

Slope (%): 0-2% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present? ☒ Yes ☐ No	
Wetland Hydrology Present? ☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	40	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	40	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Bidens spp.	15	☐ Yes ☒ No	FACW
3. Typha spp.	10	☐ Yes ☒ No	OBL
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	125	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	10	x 1	10
FACW species:	115	x 2	230
FAC species:	40	x 3	120
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	165	(A)	360 (B)

Prevalence Index (B/A) = 2.2

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq 3.0^1$

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10 YR 2/1	100					SiL	
6-18	10 YR 4/4	100					SL	
18+	10 YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☐ Yes ☒ No	Depth (in): _____
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 10

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-V

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Backslope | Local Relief (concave, convex, none): Slope

Slope (%): 2-6% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	90	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	90	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Lapotea canadensis	80	☒ Yes ☐ No	FACW
2. Bidens spp.	5	☐ Yes ☒ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	85	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	85	x 2	170
FAC species:	90	x 3	270
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	175	(A)	440 (B)

Prevalence Index (B/A) = 2.5

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-24	10 YR 2/1	100					L	
24+	10 YR 3/2	100					L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-W

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Convex

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Lapotea canadensis	100	☒ Yes ☐ No	FACW
2. Bidens spp.	10	☐ Yes ☒ No	FACW
3. Typha spp.	10	☐ Yes ☒ No	OBL
4. Echinocystis lobata	10	☐ Yes ☒ No	FACW
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	130	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	10	x 1	10
FACW species:	120	x 2	240
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	130	(A)	250 (B)

Prevalence Index (B/A) = 1.9

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-10	10 YR 2/1	100					Muck	
10+	10 YR 2/1	100					Mucky peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 15

(includes capillary fringe)

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-X

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Backslope | Local Relief (concave, convex, none): Slope

Slope (%): 2-6% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☒ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	85	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	85	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Arctium minus	60	☒ Yes ☐ No	FACU
2. Ageratina altissima	20	☒ Yes ☐ No	FACU
3. Rudbeckia laciniata	20	☒ Yes ☐ No	FACW
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 4 (B)

Percent of dominant species that are OBL, FACW or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	20	x 2	40
FAC species:	85	x 3	255
FACU species:	80	x 4	320
UPL species:	_____	x 5	_____
Column Totals:	185	(A)	615 (B)

Prevalence Index (B/A) = 3.3

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☐ **Yes** ☒ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-14	10 YR 2/1	100					L	
14-23	10 YR 3/2	100					L	
23+	10 YR 4/6	100					SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-Y

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present? ☒ Yes ☐ No	
Wetland Hydrology Present? ☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	10	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	10	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Urtica dioica	10	☐ Yes ☒ No	FACW
3. Typha spp.	5	☐ Yes ☒ No	OBL
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	115	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	5	x 1	5
FACW species:	100	x 2	200
FAC species:	10	x 3	30
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	115	(A)	235 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	10 YR 2/1	100					L	
15+	10 YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-Z

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Backslope | Local Relief (concave, convex, none): Concave

Slope (%): 2-6% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	20	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	20	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Arctium minus	10	☐ Yes ☒ No	FACU
3. Echinocystis lobata	10	☐ Yes ☒ No	FACW
4. Urtica dioica	5	☐ Yes ☒ No	FACW
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	125	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	115	x 2	230
FAC species:	20	x 3	60
FACU species:	10	x 4	40
UPL species:	_____	x 5	_____
Column Totals:	145	(A)	330 (B)

Prevalence Index (B/A) = 2.3

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-13	10 YR 2/1	100					L	
13-38	10 YR 4/6	100					L	
38+	10 YR 2/1	100					L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-AA

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: L2UBGx

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Typha spp.	20	☒ Yes ☐ No	OBL
3. Urtica dioica	10	☐ Yes ☒ No	FACW
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	130	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	20	x 1	20
FACW species:	110	x 2	220
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	130	(A)	240 (B)

Prevalence Index (B/A) = 1.8

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-14	10 YR 2/1	100					L	
14+	10 YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 20

(includes capillary fringe)

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-BB

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: L2UBGx

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	5	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	5	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	5	x 1	5
FACW species:	100	x 2	200
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	105	(A)	205 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	10 YR 2/1	100					L	
15+	10 YR 3/2	100					L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/23/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-CC

Investigator(s): Dan Donayre | Sec, Twp, Ran: 4,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Flat

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Spartina pectinata	5	☐ Yes ☒ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	105	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: _____ (A)

Total number of dominant species across all strata: _____ (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	105	x 2	210
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	105 (A)		210 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	10 YR 2/1	100					L	
15+	10 YR 2/1	100					Sandy muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 40
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 10

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/23/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-DD

Investigator(s): Dan Donayre | Sec, Twp, Ran: 4,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Flat

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Echinocystis lobata	10	☐ Yes ☒ No	FACW
3. Cirsium vulgare	5	☐ Yes ☒ No	FACU
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	115	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	110	x 2	220
FAC species:	_____	x 3	_____
FACU species:	5	x 4	20
UPL species:	_____	x 5	_____
Column Totals:	115	(A)	240 (B)

Prevalence Index (B/A) = 2.1

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-38	10 YR 2/1	100					L	
38+	10 YR 2/1	100					Sandy muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/23/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-EE

Investigator(s): Dan Donayre | Sec, Twp, Ran: 4,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Urban land | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present? ☒ Yes ☐ No	
Wetland Hydrology Present? ☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix nigra	50	☒ Yes ☐ No	OBL
2. Acer negundo	10	☐ Yes ☒ No	FAC
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	60	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Typha spp.	10	☐ Yes ☒ No	OBL
3. Pilea pumila	5	☐ Yes ☒ No	FACW
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	115	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	60	x 1	60
FACW species:	105	x 2	210
FAC species:	10	x 3	30
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	175	(A)	300 (B)

Prevalence Index (B/A) = 1.7

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	10 YR 3/2	100					SL	
15+	10 YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 10
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): sutface

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/23/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-FF

Investigator(s): Dan Donayre | Sec, Twp, Ran: 4,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Urban land | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	70	☒ Yes ☐ No	FAC
2. Salix nigra	10	☐ Yes ☒ No	OBL
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	80	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Rhamnus cathartica	10	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	10	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	80	☒ Yes ☐ No	FACW
2. Arctium minus	15	☐ Yes ☒ No	FACU
3. Cirsium vulgare	10	☐ Yes ☒ No	FACU
4. Pilea pumila	10	☐ Yes ☒ No	FACW
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	115	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 3 (A)

Total number of dominant species across all strata: 3 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	10	x 1	10
FACW species:	90	x 2	180
FAC species:	80	x 3	240
FACU species:	25	x 4	100
UPL species:	_____	x 5	_____
Column Totals:	205 (A)		530 (B)

Prevalence Index (B/A) = 2.6

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	10 YR 4/4	100					S	
15-23	10 YR 3/2	100					SL	
23+	10 YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 34

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/19/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-GG

Investigator(s): Dan Donayre | Sec, Twp, Ran: 4,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Flat

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix nigra	20	☒ Yes ☐ No	OBL
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	20	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Phragmites australis	10	☐ Yes ☒ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	20	x 1	20
FACW species:	110	x 2	220
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	130	(A)	240 (B)

Prevalence Index (B/A) = 1.8

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10 YR 2/1	100					SL	
6+	10 YR 4/1	98	7.5 YR 4/6	2	C	M	SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 10
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): surface

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/19/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-HH

Investigator(s): Dan Donayre | Sec, Twp, Ran: 4,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "normal circumstances" present? ☐ Yes ☒ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☒ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present? ☐ Yes ☒ No	
Wetland Hydrology Present? ☐ Yes ☒ No	

Remarks: This boring is located over an abandoned bituminous trail

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Rhamnus cathartica	50	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	50	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Arctium minus	20	☒ Yes ☐ No	FACU
2. Solidigo canadensis	20	☒ Yes ☐ No	FACU
3. Phalaris arundinacea	10	☐ Yes ☒ No	FACW
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	50	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 3 (B)

Percent of dominant species that are OBL, FACW or FAC: 33% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	10	x 2	20
FAC species:	50	x 3	150
FACU species:	40	x 4	160
UPL species:	_____	x 5	_____
Column Totals:	100	(A)	330 (B)

Prevalence Index (B/A) = 3.3

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☐ **Yes** ☒ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-5	10 YR 4/3	100					SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: Bituminous

Depth (in): 5

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks: Area is rasied above wetland basin, it consists of an old bituminous trail. Lack of hydrolphytic vegetation and raised nature of the area aid in the decision of hydric soils and hydrology not being present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks: See soils remarks.

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/19/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-II

Investigator(s): Dan Donayre | Sec, Twp, Ran: 4,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Urban land | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Lemna minor	80	☒ Yes ☐ No	OBL
2. Bidens spp.	50	☒ Yes ☐ No	FACW
3. Typha spp.	20	☐ Yes ☐ No	OBL
4. Equisetum pratense	20	☐ Yes ☐ No	FACW
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	170	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	100	x 1	100
FACW species:	70	x 2	140
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	170	(A)	240 (B)

Prevalence Index (B/A) = 1.4

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-8	10 YR 2/1	100					SiCL	
8+	Gley 5/10BG	100					SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 10
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): surface

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/19/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-JJ

Investigator(s): Dan Donayre | Sec, Twp, Ran: 4,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Urban land | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "normal circumstances" present? ☐ Yes ☒ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☒ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present? ☐ Yes ☒ No	
Wetland Hydrology Present? ☐ Yes ☒ No	

Remarks: This boring is located over an abandoned bituminous trail

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Lotus corniculatus	40	☒ Yes ☐ No	FACU
2. Equisetum arvense	20	☒ Yes ☐ No	FAC
3. Phalaris arundinacea	10	☐ Yes ☒ No	FACW
4. Arctium minus	10	☐ Yes ☒ No	FACU
5. Bromus inermus	10	☐ Yes ☒ No	FACU
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	10	x 2	20
FAC species:	20	x 3	60
FACU species:	60	x 4	240
UPL species:	_____	x 5	_____
Column Totals:	90	(A)	320 (B)

Prevalence Index (B/A) = 3.6

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☐ **Yes** ☒ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10 YR 4/3	100					SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: Bituminous

Depth (in): 6

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks: Area is rasied above wetland basin, it consists of an old bituminous trail. Lack of hydrolphytic vegetation and raised nature of the area aid in the decision of hydric soils and hydrology not being present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks: See soils remarks.

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/19/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-KK

Investigator(s): Dan Donayre | Sec, Twp, Ran: 4,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Urban land | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix nigra	70	☒ Yes ☐ No	OBL
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	70	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Cornus alba	50	☒ Yes ☐ No	FACW
2. Salix amygdaloides	30	☒ Yes ☐ No	FACW
3. Rhamnus cathartica	30	☒ Yes ☐ No	FAC
4. Cornus racemosa	10	☐ Yes ☒ No	FAC
5. _____	_____	☐ Yes ☐ No	_____
	120	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Typha spp.	70	☒ Yes ☐ No	OBL
2. Equisetum palustre	20	☐ Yes ☒ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 5 (A)

Total number of dominant species across all strata: 5 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	140	x 1	140
FACW species:	100	x 2	200
FAC species:	40	x 3	120
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	280	(A)	460 (B)

Prevalence Index (B/A) = 1.6

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0+	10 YR 2/1	100					Mucky peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 10
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): surface

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/19/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W2-SB-LL

Investigator(s): Dan Donayre | Sec, Twp, Ran: 4,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Urban land | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "normal circumstances" present? ☐ Yes ☒ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present? ☐ Yes ☒ No	
Wetland Hydrology Present? ☐ Yes ☒ No	

Remarks: This boring is located over an abandoned bituminous trail

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix nigra	40	☒ Yes ☐ No	OBL
2. Salix amygdaloides	20	☒ Yes ☐ No	FACW
3. Populus tremuloides	20	☒ Yes ☐ No	FAC
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	80	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Salix amygdaloides	30	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	30	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Poa pratensis	80	☒ Yes ☐ No	FAC
2. Solidago canadensis	40	☒ Yes ☐ No	FACU
3. Phalaris arundinacea	20	☐ Yes ☒ No	FACW
4. Ambrosia artemisiifolia	10	☐ Yes ☒ No	FACU
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	150	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 5 (A)

Total number of dominant species across all strata: 6 (B)

Percent of dominant species that are OBL, FACW or FAC: 83% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	40	x 1	40
FACW species:	70	x 2	140
FAC species:	100	x 3	300
FACU species:	50	x 4	200
UPL species:	_____	x 5	_____
Column Totals:	260	(A)	480 (B)

Prevalence Index (B/A) = 1.8

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq 3.0^1$

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10 YR 4/3	100					SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: Bituminous

Depth (in): 6

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks: Area is rasied above wetland basin, it consists of an old bituminous trail. Lack of hydrolphytic vegetation and raised nature of the area aid in the decision of hydric soils and hydrology not being present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks: See soils remarks.

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/4/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W3-SB-A

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. Salix interior	10	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Phalaris arundinacea	75	☒ Yes ☐ No	FACW
2. Phleum prantense	25	☒ Yes ☐ No	FACU
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	=Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	75	x 1	75
FACW species:	35	x 2	70
FAC species:	2	x 3	6
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Total:	112	(A)	151 (B)

Prevalence Index (B/A) = 1.3

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-20	10 YR 2/1	100					SiCL	
20+	10 YR 4/1	95	10 YR 4/6	5	C	M	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☐ Yes ☒ No	Depth (in): _____
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 29

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/4/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W3-SB-B

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	5	☒ Yes ☐ No	FACW
2. Populus deltoides	5	☒ Yes ☐ No	FAC
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	10	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. Fraxinus pennsylvanica	2	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	2	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	=Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 4 (A)

Total number of dominant species across all strata: 4 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	107	x 2	214
FAC species:	5	x 3	15
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Total:	112	(A)	229 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-20	10 YR 2/1	100					SiCL	
20-35	10 YR 3/2	100					SiCL	
35+	2.5 Y 4/2	100					SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☐ Yes ☒ No	Depth (in): _____
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 35

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/4/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W4 SB-A

Investigator(s): Dan Donayre | Sec, Twp, Ran: 13,27N,24W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	30	☒ Yes ☐ No	FACW
2. Populus tremuloides	10	☒ Yes ☐ No	FAC
3. Acer saccharinum	10	☒ Yes ☐ No	FACW
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	50	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Phalaris arundinacea	60	☒ Yes ☐ No	FACW
2. Persicaria spp.	10	☐ Yes ☒ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	70	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 4 (A)

Total number of dominant species across all strata: 4 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	110	x 2	220
FAC species:	10	x 3	30
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Total:	120	(A)	250 (B)

Prevalence Index (B/A) = 2.1

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq 3.0^1$

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-37	10 YR 2/1	100					SiCL	
37+	Gley 4/5GY	100					SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☐ Yes ☒ No	Depth (in): _____
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 35

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/4/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W4 SB-B

Investigator(s): Dan Donayre | Sec, Twp, Ran: 13,27N,24W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	40	☒ Yes ☐ No	FACW
2. Acer negundo	20	☒ Yes ☐ No	FAC
3. Acer saccharinum	20	☒ Yes ☐ No	FACW
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	80	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	70	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 3 (A)

Total number of dominant species across all strata: 3 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	60	x 2	120
FAC species:	20	x 3	60
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Total:	80	(A)	180 (B)

Prevalence Index (B/A) = 2.3

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	10 YR 3/3	100					SiCL	
12+	10 YR 4/4	100					SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/6/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W5 SB-A

Investigator(s): Dan Donayre | Sec, Twp, Ran: 13,27N,24W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	40	☒ Yes ☐ No	FACW
2. Acer saccharum	30	☒ Yes ☐ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	70	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Fraxinus pennsylvanica	30	☒ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	30	= Total Cover	
Herb Stratum (Plot size: 5)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 3 (A)

Total number of dominant species across all strata: 3 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	100	(A)	200 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-30	10 YR 3/1						SiCL	
30+	Gley 2 4/5B						SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 35
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): surface

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/6/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W5 SB-B

Investigator(s): Dan Donayre | Sec, Twp, Ran: 13,27N,24W

Landform (hillside, terrace, etc.): Backslope | Local Relief (concave, convex, none): slope

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharum	80	☒ Yes ☐ No	FACW
2. Acer negundo	10	☐ Yes ☒ No	FAC
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	90	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Fraxinus pennsylvanica	50	☒ Yes ☐ No	FACW
2. Salix interior	10	☐ Yes ☒ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	60	= Total Cover	
Herb Stratum (Plot size: 5)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	140	x 2	280
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	100	(A)	200 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-19	10 YR 2/1	100					SiCL	
19-32	10 YR 4/2	100					SiCL	
32+	10 YR 3/2	95	10 YR 5/8	5	C	M	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/6/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W6 SB-A

Investigator(s): Dan Donayre | Sec, Twp, Ran: 13,27N,24W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: PFO1Ch

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharum	40	☒ Yes ☐ No	FACW
2. Populus deltoides	40	☒ Yes ☐ No	FAC
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	80	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	40	x 2	80
FAC species:	40	x 3	120
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	80	(A)	200 (B)

Prevalence Index (B/A) = 2.5

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-10	10 YR 4/6	100					SiCL	
10-34	10 YR 3/1	100					SiCL	
34+	Gley 4/5B	100					SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks: Top 10" of 10 YR 4/6 material most likely due to erosion of adjacent slope.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 19

(includes capillary fringe)

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/6/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W6 SB-B

Investigator(s): Dan Donayre | Sec, Twp, Ran: 13,27N,24W

Landform (hillside, terrace, etc.): Backslope | Local Relief (concave, convex, none): slope

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus deltoides	70	☒ Yes ☐ No	FAC
2. Acer saccharum	10	☒ Yes ☐ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	80	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Acer negundo	5	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	5	= Total Cover	
Herb Stratum (Plot size: 5)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 3 (A)

Total number of dominant species across all strata**:** 3 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	10	x 2	20
FAC species:	75	x 3	150
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	85	(A)	170 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0+	10 YR 4/6	100					SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks: Pit dug to 30". Lack of hydrology at this depth and geomorphic position lead to assumption that no hydric soils are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/7/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W7 SB-A

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Basin - riverine | Local Relief (concave, convex, none): Flat

Slope (%): 0-2% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present? ☒ Yes ☐ No	
Wetland Hydrology Present? ☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Rhamnus cathartica	10	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	10	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	10	x 3	30
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	110	(A)	230 (B)

Prevalence Index (B/A) = 2.1

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq 3.0^1$

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10 YR 2/1	100					SiCL	
6-12	10 YR 4/4	100					SL	
12+	10 YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks: Pit dug to 40".

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 32
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 10

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/7/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W7 SB-B

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Backslope | Local Relief (concave, convex, none): Slope

Slope (%): 2-6% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Rhamnus cathartica	30	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	30	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	30	x 3	90
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	130	(A)	290 (B)

Prevalence Index (B/A) = 2.2

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10 YR 2/1	100					SiCL	
6+	10 YR 4/4	100					SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks: Pit dug to 40".

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/18/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W8-SB-A

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Persicaria spp.	25	☐ Yes ☒ No	FACW
3. Urtica dioica	15	☐ Yes ☒ No	FACU
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	140	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	125	x 2	250
FAC species:	_____	x 3	_____
FACU species:	15	x 4	60
UPL species:	_____	x 5	_____
Column Totals:	140	(A)	310 (B)

Prevalence Index (B/A) = 2.2

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	10 YR 2/1	100					SiL	
15+	10 YR 2/1	100					Mucky peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks: Pit dug to 40".

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☐ Yes ☒ No	Depth (in): _____
Saturation Present? (includes capillary fringe)	☐ Yes ☒ No	Depth (in): _____

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/18/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W8-SB-B

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Backslope | Local Relief (concave, convex, none): Slope

Slope (%): 6-12% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Setaria viridis	10	☐ Yes ☒ No	UPL
3. Cannabis sativa	10	☐ Yes ☒ No	FACU
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	120	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	_____	x 3	_____
FACU species:	10	x 4	40
UPL species:	10	x 5	50
Column Totals:	120	(A)	290 (B)

Prevalence Index (B/A) = 2.4

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-40	10 YR 3/2	100					SiL	
40+	10 YR 2/1	100					Mucky peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/18/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W9-SB-A

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Ravine | Local Relief (concave, convex, none): Slope

Slope (%): 2-6% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: PUBGx

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Rhamnus cathartica	10	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	10	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Solidago gigantea	10	☐ Yes ☒ No	FACW
3. Persicaria spp.	10	☐ Yes ☒ No	FACW
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	120	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	120	x 2	240
FAC species:	10	x 3	30
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	130	(A)	270 (B)

Prevalence Index (B/A) = 2.1

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq 3.0^1$

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	10 YR 2/1	100					L	
15+	10 YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 20

(includes capillary fringe)

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/18/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W9-SB-B

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Backslope | Local Relief (concave, convex, none): Slope

Slope (%): 2-6% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: PUBGx

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Solidago canadensis	5	☐ Yes ☒ No	FACU
3. Setaria virdis	5	☐ Yes ☒ No	UPL
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	_____	x 3	_____
FACU species:	5	x 4	20
UPL species:	5	x 5	25
Column Totals:	110	(A)	245 (B)

Prevalence Index (B/A) = 2.2

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq 3.0^1$

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-36	10 YR 2/1	100					L	
36+	10 YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/18/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W9-SB-C

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: PUBGx

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus americana	30	☒ Yes ☐ No	FACW
2. Rhamnus cathartica	10	☒ Yes ☐ No	FAC
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	40	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	0	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	30	☒ Yes ☐ No	FACW
2. Bidens spp.	10	☒ Yes ☐ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	40	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 4 (A)

Total number of dominant species across all strata: 4 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	70	x 2	140
FAC species:	10	x 3	30
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	80	(A)	170 (B)

Prevalence Index (B/A) = 2.1

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10 YR 2/1	100					SiL	
2-15	10 YR 3/2	100					S	
15+	10 YR 3/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 20
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): surface

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/18/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W9-SB-D

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Backslope | Local Relief (concave, convex, none): Slope

Slope (%): 6-12% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: PUBGx

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus americana	80	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	80	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Acer negundo	50	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	50	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Ageratina altissima	30	☒ Yes ☐ No	FACU
2. Arctium minus	10	☒ Yes ☐ No	FACU
3. Phalaris arundinacea	10	☒ Yes ☐ No	FACW
4. Bidens spp.	5	☐ Yes ☒ No	FACW
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	55	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 3 (A)

Total number of dominant species across all strata: 5 (B)

Percent of dominant species that are OBL, FACW or FAC: 60% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	95	x 2	190
FAC species:	50	x 3	150
FACU species:	40	x 4	160
UPL species:	_____	x 5	_____
Column Totals:	185	(A)	500 (B)

Prevalence Index (B/A) = 2.7

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0+	10 YR 2/1	100					Mucky peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/23/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W10-SB-A

Investigator(s): Dan Donayre | Sec, Twp, Ran: 4,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Hubbard loamy sand | NWI or WWI Classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Rhamnus cathartica	40	☒ Yes ☐ No	FAC
2. Cornus alba	10	☒ Yes ☐ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	50	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Phragmites australis	10	☐ Yes ☒ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 3 (A)

Total number of dominant species across all strata: 3 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	120	x 2	240
FAC species:	40	x 3	120
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	160	(A)	360 (B)

Prevalence Index (B/A) = 2.3

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0+	10 YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☐ Yes ☒ No	Depth (in): _____
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): surface

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/23/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: W10-SB-B

Investigator(s): Dan Donayre | Sec, Twp, Ran: 4,27N,23W

Landform (hillside, terrace, etc.): Backslope | Local Relief (concave, convex, none): Slope

Slope (%): 2-6% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Hubbard loamy sand | NWI or WWI Classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	10	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	10	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Rhamnus cathartica	90	☒ Yes ☐ No	FAC
2. Fraxinus pennsylvanica	10	☐ Yes ☒ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Poa pratensis	20	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	20	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 3 (A)

Total number of dominant species across all strata: 3 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	10	x 2	20
FAC species:	130	x 3	390
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	140	(A)	410 (B)

Prevalence Index (B/A) = 2.9

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-20	10 YR 3/2	100					L	
20-38	10 YR 3/1	100					SiL	
38+	10 YR 3/2	100					SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 35

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/7/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: STM1 SB-A

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Basin - Stormwater Pond | Local Relief (concave, convex, none): Concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: PEMCx

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☒ Yes ☐ No Hydric Soil Present? ☒ Yes ☐ No Wetland Hydrology Present? ☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**

Remarks: Man made detention pond.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Rhamnus cathartica	30	☒ Yes ☐ No	FAC
2. Fraxinus penneslyvanica	10	☒ Yes ☐ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	40	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	95	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 3 (A)

Total number of dominant species across all strata: 3 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	105	x 2	210
FAC species:	10	x 3	30
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	115	(A)	240 (B)

Prevalence Index (B/A) = 2.1

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-36	10 YR 2/1	100					SiCL	
36+	Gley 2 4/5B	100					SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 27

(includes capillary fringe)

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/7/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: STM1 SB-B

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Backslope - Roadway | Local Relief (concave, convex, none): Slope

Slope (%): 2-6% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Seelyeville muck | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☒ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: Man made detention pond.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Poa pratensis	30	☒ Yes ☐ No	FAC
2. Melilotus officinales	20	☒ Yes ☐ No	FACU
3. Lotus corniculatus	20	☒ Yes ☐ No	FACU
4. Trifolium repens	10	☐ Yes ☒ No	FACU
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	80	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 0 (A)

Total number of dominant species across all strata: 0 (B)

Percent of dominant species that are OBL, FACW or FAC: 0% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	_____	x 2	_____
FAC species:	30	x 3	90
FACU species:	50	x 4	200
UPL species:	_____	x 5	_____
Column Totals:	80	(A)	290 (B)

Prevalence Index (B/A) = 3.6

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is >50%

☐ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☐ **Yes** ☒ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0+	10 YR 4/4	100					SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks: Lack of hydrology and position along the road bank led to assumuption that hydric soils do not exist.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: STM2-SB-A

Investigator(s): Dan Donayre | Sec, Twp, Ran: 17,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: PUBKx

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "normal circumstances" present? ☐ Yes ☒ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present? ☒ Yes ☐ No	
Wetland Hydrology Present? ☒ Yes ☐ No	

Remarks: Man made detention pond.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	100	(A)	200 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0+	10 YR 2/1	80	7.5 YR 5/8	20	C	M	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks: Pit dug to 20 inches

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 15
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): surface

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: STM2-SB-B

Investigator(s): Dan Donayre | Sec, Twp, Ran: 17,27N,23W

Landform (hillside, terrace, etc.): Backslope | Local Relief (concave, convex, none): Slope

Slope (%): 6-12% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: PUBKx

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "normal circumstances" present? ☐ Yes ☒ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present? ☒ Yes ☐ No	
Wetland Hydrology Present? ☐ Yes ☒ No	

Remarks: Man made detention pond.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 1 (A)

Total number of dominant species across all strata: 1 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	_____	x 3	_____
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	100	(A)	200 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-37	10 YR 2/1	100					SiL	
37+	10 YR 4/1	90	7.5 YR 5/8	10	C	M	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks: Pit dug to 20 inches

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 27

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: STM3-SB-A

Investigator(s): Dan Donayre | Sec, Twp, Ran: 17,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: PUBKx

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "normal circumstances" present? ☐ Yes ☒ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☒ Yes ☐ No	**Is the Sampled Area within a wetland? ☒ Yes ☐ No**
Hydric Soil Present? ☒ Yes ☐ No	
Wetland Hydrology Present? ☒ Yes ☐ No	

Remarks: Man made detention pond.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	70	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	70	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	50	☒ Yes ☐ No	FACW
2. Typha sp.	15	☒ Yes ☐ No	OBL
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	65	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 3 (A)

Total number of dominant species across all strata: 3 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	15	x 1	15
FACW species:	50	x 2	100
FAC species:	70	x 3	210
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	135	(A)	325 (B)

Prevalence Index (B/A) = 2.4

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	7.5 YR 3/4	100					SiL	
15+	10 YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks: Top 15" horizon most likely due to erosion fom the adjacent upland slope.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☒ Yes ☐ No	Depth (in): 10
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): surface

Wetland Hydrology Present? ☒ **Yes** ☐ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: STM3-SB-B

Investigator(s): Dan Donayre | Sec, Twp, Ran: 17,27N,23W

Landform (hillside, terrace, etc.): Backslope | Local Relief (concave, convex, none): Slope

Slope (%): 6-12% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: PUBKx

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "normal circumstances" present? ☐ Yes ☒ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present? ☐ Yes ☒ No	
Wetland Hydrology Present? ☐ Yes ☒ No	

Remarks: Man made detention pond.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	40	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	40	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. Vitis riparia	5	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
	5	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 3 (A)

Total number of dominant species across all strata: 3 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	105	x 2	210
FAC species:	40	x 3	120
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	145	(A)	330 (B)

Prevalence Index (B/A) = 2.3

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	7.5 YR 3/4	100					SL	
15+	10 YR 7/4	100					SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): surface

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/3/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: Area 1

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsyvanica	70	☒ Yes ☐ No	FACW
2. Acer negundo	10	☐ Yes ☒ No	FAC
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	80	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Phalaris arundinacea	20	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	20	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	=Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 4 (A)

Total number of dominant species across all strata: 4 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	90	x 2	180
FAC species:	10	x 3	30
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Total:	100	(A)	210 (B)

Prevalence Index (B/A) = 2.1

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 4/2	100					SiCL	
18-35	10 YR 3/2	100					SiCL	
35+	10 YR 4/2	80	7.5 YR 4/6	20	C	M	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☐ Yes ☒ No	Depth (in): _____
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 38

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 8/28/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: Area 2

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsyvanica	50	☒ Yes ☐ No	FACW
2. Acer negundo	20	☒ Yes ☐ No	FAC
3. Acer saccharinum	10	☐ Yes ☒ No	FACW
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	80	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Rudbeckia laciniata	15	☒ Yes ☐ No	FACW
2. Phalaris arundinacea	10	☒ Yes ☐ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	25	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	=Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 4 (A)

Total number of dominant species across all strata: 4 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	85	x 2	170
FAC species:	20	x 3	60
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Total:	105 (A)		230 (B)

Prevalence Index (B/A) = 2.2

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq 3.0^1$

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 4/2	100					SiCL	
18-42	10 YR 5/2	100					SiCL	
42+	10 YR 5/2	95	10 YR 4/4	5	C	M	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☐ Yes ☒ No	Depth (in): _____
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 42

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/4/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: Area 3

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Acer negundo	50	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	50	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. Salix interior	10	☒ Yes ☐ No	FACW
2. Cornus alba	5	☒ Yes ☐ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	15	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. Carex lacustris	20	☒ Yes ☐ No	OBL
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	120	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 5 (A)

Total number of dominant species across all strata: 5 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	20	x 1	20
FACW species:	115	x 2	230
FAC species:	50	x 3	50
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Total:	185	(A)	400 (B)

Prevalence Index (B/A) = 2.2

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-20	10 YR 4/2	100					SiCL	
20-35	10 YR 4/3	100					SiCL	
35+	2.5 Y 4/2	100					SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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?	☐ Yes ☒ No	Depth (in): _____
Water Table Present?	☐ Yes ☒ No	Depth (in): _____
Saturation Present? (includes capillary fringe)	☒ Yes ☐ No	Depth (in): 40

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/4/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: Area 4

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	20	☒ Yes ☐ No	FAC
2. Fraxinus pennsylvanica	20	☒ Yes ☐ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	40	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. Populus tremuloides	10	☒ Yes ☐ No	FAC
2. Fraxinus pennsylvanica	10	☒ Yes ☐ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	20	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Phalaris arundinacea	20	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☒ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	20	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 5 (A)

Total number of dominant species across all strata: 5 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	50	x 2	100
FAC species:	30	x 3	90
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Total:	80	(A)	190 (B)

Prevalence Index (B/A) = 2.4

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-24	10 YR 3/2	100					SiCL	
24-42	10 YR4/3	100					SiCL	
42+	10 YR 5/2	98	10 YR 5/8	2	C	M	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 38

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/4/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: Area 5

Investigator(s): Dan Donayre | Sec, Twp, Ran: 13,27N,24W

Landform (hillside, terrace, etc.): Terrace | Local Relief (concave, convex, none): Flat

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Minneiska loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	20	☒ Yes ☐ No	FAC
2. Fraxinus pennsylvanica	20	☒ Yes ☐ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	40	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. Populus tremuloides	10	☒ Yes ☐ No	FAC
2. Fraxinus pennsylvanica	10	☒ Yes ☐ No	FACW
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	20	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Phalaris arundinacea	20	☒ Yes ☐ No	FACW
2. Carex lacustris	20	☒ Yes ☐ No	OBL
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	20	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 6 (A)

Total number of dominant species across all strata: 6 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	20	x 1	20
FACW species:	50	x 2	100
FAC species:	10	x 3	30
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Total:	80	(A)	150 (B)

Prevalence Index (B/A) = 1.9

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq 3.0^1$

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/2	100					SiCL	
18-36	10 YR4/3	100					SiCL	
36+	10 YR 5/2	98	10 YR 5/8	2	C	M	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 36

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/5/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: Area 6

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Slope

Slope (%): 0-1 | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Palms muck | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status
1. Acer negundo	20	☒ Yes ☐ No	FAC
2. Rhamnus cathartica	10	☒ Yes ☐ No	FAC
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	30	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 3 (A)

Total number of dominant species across all strata: 3 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	30	x 3	90
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Total:	130	(A)	290 (B)

Prevalence Index (B/A) = 2.2

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is ≤ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-40	10 YR 2/1	100					SiCL	
40+	10 YR 5/1	90	7.5 YR 4/6	C	M		SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ 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)
- ☐ Iron-Manganese Masses (F12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B3)
- ☐ 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?	☐ Yes	☒ No	Depth (in): _____
Water Table Present?	☐ Yes	☒ No	Depth (in): _____
Saturation Present? (includes capillary fringe)	☒ Yes	☐ No	Depth (in): 22

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/9/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: Area 7

Investigator(s): Dan Donayre | Sec, Twp, Ran: 18,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): concave

Slope (%): 0-1% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Palms muck | NWI or WWI Classification: PEMCd

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Acer negundo	20	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	20	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	105	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	20	x 3	60
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	120	(A)	260 (B)

Prevalence Index (B/A) = 2.2

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is < 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-36	10 YR 2/1	100					SiCL	
36+	10 YR 5/2	100					SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 27

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/17/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: Area 8

Investigator(s): Dan Donayre | Sec, Twp, Ran: 17,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 0-2% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	50	☒ Yes ☐ No	FACW
2. Carex lacustris	40	☒ Yes ☐ No	OBL
3. Phragmites australis	10	☐ Yes ☒ No	FACW
4. Cirsium vulgare	2	☐ Yes ☒ No	FACU
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	102	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	40	x 1	40
FACW species:	60	x 2	120
FAC species:	_____	x 3	_____
FACU species:	2	x 4	8
UPL species:	_____	x 5	_____
Column Totals:	102	(A)	168 (B)

Prevalence Index (B/A) = 1.6

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-19	7.5 YR 3/1	100					SiL	
19+	10 YR 3/2	100					SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/18/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: Area 9

Investigator(s): Dan Donayre | Sec, Twp, Ran: 8,27N,23W

Landform (hillside, terrace, etc.): Basin | Local Relief (concave, convex, none): Concave

Slope (%): 2-6% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Udorthents | NWI or WWI Classification: PUBGx

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. Rhamnus cathartica	5	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	5	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	100	☒ Yes ☐ No	FACW
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	110	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 2 (B)

Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	100	x 2	200
FAC species:	5	x 3	15
FACU species:	_____	x 4	_____
UPL species:	_____	x 5	_____
Column Totals:	105	(A)	215 (B)

Prevalence Index (B/A) = 2.0

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-8	10 YR 2/1	100					SiL	
8-20	10 YR 5/4	100					SiL	
20+	10 YR 4/6	100					SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☒ Yes ☐ No Depth (in): 15

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

Project/Site: Minnesota River Greenway - Eagan Alignment | City/County: Eagan/Dakota | Sampling Date: 9/23/13

Applicant/Owner: Dakota County | State: MN | Sampling Point: Area 10

Investigator(s): Dan Donayre | Sec, Twp, Ran: 4,27N,23W

Landform (hillside, terrace, etc.): Channel | Local Relief (concave, convex, none): Concave

Slope (%): 2-6% | Lat: _____ | Long: _____ | Datum: _____

Soil Map Unit Name: Terril loam | NWI or WWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (if no explain in remarks)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a wetland?** ☐ **Yes** ☒ **No**
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: _____

VEGETATION – Use scientific names of plants

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	90	☒ Yes ☐ No	FAC
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	90	= Total Cover	
Saplings/Shrub Stratum (Plot Size: 15)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
3. _____	_____	☐ Yes ☐ No	_____
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Laportea canadensis	30	☒ Yes ☐ No	FACW
2. Glechoma hederacea	30	☒ Yes ☐ No	FACU
3. Phalaris arundinacea	10	☐ Yes ☒ No	FACW
4. _____	_____	☐ Yes ☐ No	_____
5. _____	_____	☐ Yes ☐ No	_____
6. _____	_____	☐ Yes ☐ No	_____
7. _____	_____	☐ Yes ☐ No	_____
8. _____	_____	☐ Yes ☐ No	_____
9. _____	_____	☐ Yes ☐ No	_____
10. _____	_____	☐ Yes ☐ No	_____
	70	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. _____	_____	☐ Yes ☐ No	_____
2. _____	_____	☐ Yes ☐ No	_____
	_____	= Total Cover	

Dominance Test Worksheet:

Number of dominant species that are OBL, FACW, or FAC: 2 (A)

Total number of dominant species across all strata: 3 (B)

Percent of dominant species that are OBL, FACW or FAC: 67% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species:	_____	x 1	_____
FACW species:	40	x 2	80
FAC species:	90	x 3	270
FACU species:	30	x 4	120
UPL species:	_____	x 5	_____
Column Totals:	160	(A)	470 (B)

Prevalence Index (B/A) = 2.9

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is >50%

☒ Prevalence Index is $\leq$ 3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on separate sheet)

☐ Problematic Hydrophytic Vegetation (Explain in Remarks)

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

Hydrophytic Vegetation Present? ☒ **Yes** ☐ **No**

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

EXHIBIT H:
WETLAND DETERMINATION DATA FORM
(Midwest Region)

SOILS

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

Depth (in)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	10 YR 3/2	100					SiL	
15+	10 YR 3/3	100					SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ 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)
- ☐ 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) (**LRR K, L, R**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR, K, L, R**)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive layer (if observed):

Type: _____

Depth (in): _____

Hydric Soil Present? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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? ☐ Yes ☒ No Depth (in): _____

Water Table Present? ☐ Yes ☒ No Depth (in): _____

Saturation Present? ☐ Yes ☒ No Depth (in): _____

(includes capillary fringe)

Wetland Hydrology Present? ☐ **Yes** ☒ **No**

Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Mr. Dan Donayre
Wetland Specialist
Bolton & Menk, Inc.
Consulting Engineers & Surveyors
1960 Premier Drive
Mankato, MN 56001

September 15, 2013

Mr. Donayre,

Midwest Natural Resources, Inc. (MNR) is pleased to provide the following report regarding our findings associated with the calcareous fen evaluation for the Dakota County Greenway Eagan Project.

Background Data

The project site is associated with the Minnesota River and Fort Snelling State Park in Eagan (**Figure 1**). This area had been evaluated originally in 1993 by the Minnesota Biological Survey (formerly the Minnesota County Biological Survey). These past survey efforts resulted in the mapping of several calcareous fen features within the proposed Greenway project area (**Figure 2**). The fen boundaries are based on relevé data which is typically collected for purposes of site documentation and the classification of native plant communities. These data in turn are used to guide digitizing efforts of native plant community boundaries based on vegetative signatures.

Methodology

Meander surveys were conducted throughout the project corridor in areas that had been mapped as calcareous fen (OPp93) by the Minnesota Biological Survey. Additionally, the survey limits for our field review involved evaluating outside of the survey corridor in the area near the northernmost MBS mapped fen. MNR survey efforts involved conducting targeted meander searches for calciphiles as well as categorizing the native plant communities within areas that had been mapped as calcareous fen by the MN DNR. These recent surveys were conducted by Otto Gockman and Scott Milburn on August 28, 2013.

The "Calciphile Species Occurrence Method" was used to calculate the points associated with the flora of potential fen areas based on this methodology's species list. These points are based on the "Test of the Technical Criteria for Identifying and Delineating Calcareous Fens in Minnesota" document (Leete and Smith 2005). The typical numerical threshold under this system is a calciphile score of 50. A species list was compiled for each individual survey location and a calciphile score was generated for each of these areas (**Appendix A**).

Results and Discussion

Two rare plant occurences were observed during the August survey. A population of *Berula erectua* (MN Threatened) was located at the southern end of the study corridor as well as a population of *Carex sterilis* (MN Threatened) at the northern end (**Figure 3**). The locations and extent of each species were recorded using GPS with sub-meter accuracy.

Only one location appeared representative of the calcareous fen community (Area 3) during our evaluation this past August (**Figures 4/5**). This particular area would not satisfy the 50 point numerical threshold based on our species inventory, having only a score of 46. However, it is assumed that there are likely other calciphiles present but undetected that would add to the total calciphile score given spring surveys. The calciphiles observed were *Betula pumila*, *Bromus ciliatus*, *Carex hystericina*, *Carex sterilis*, *Eriophorum angustifolium*, and *Oxypolis rigidior*. This area was fairly small and surrounded by encroaching shrubs. It is very likely that *C. sterilis* is more abundant than reported here, but most of the various Carices were lacking fruiting/flowering structures which aid in the accurate identification of individual plants.

Area 1 is a degraded wet meadow complex primarily dominated by *Phalaris arundinacea*. There was one particular area of interest with a significant population of *Berula erecta* (MN Threatened) and this was the one of only two calciphile species observed during recent survey efforts. There is obvious groundwater discharge associated with the *B. erecta*, but this was not considered a calcareous fen feature.

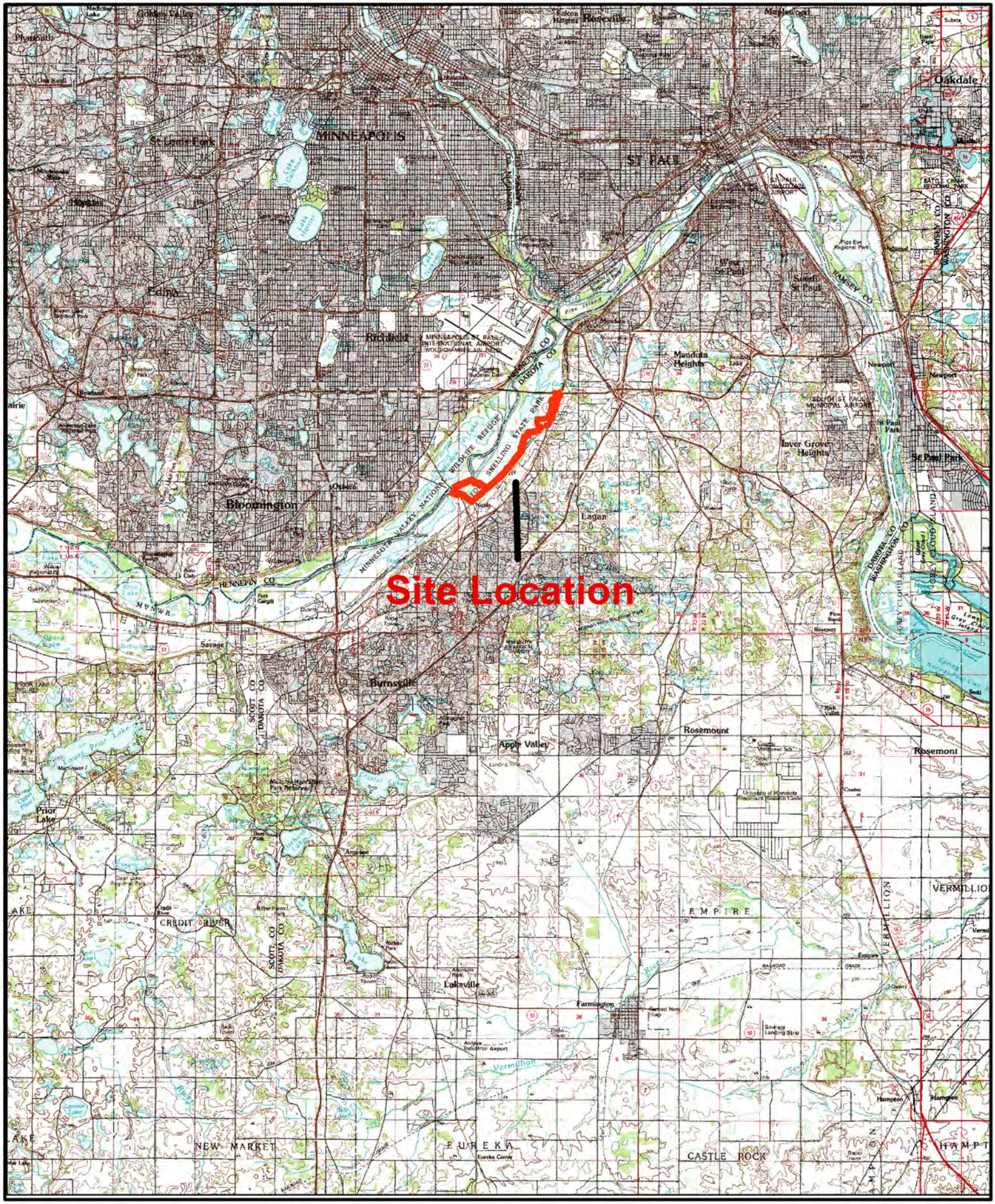
The majority of Area 2 is dominated by non-native cattail (indicative of hydrologic bounce); the photo included in **Appendix B** (Representative photos) depicts a small component of the wetland that remains comprised of native vegetation. This particular area is most similar to the Southern Seepage Meadow/Carr (WMs83) native plant community and is primarily dominated by *Carex stricta*.

Area 4 appears to be a WMs83 community with dense shrub cover to the south, but fairly open to the north as the shrub cover dissipates. The open component of the complex is dominated by graminoid cover (primarily *Carex lacustris*) with *Bidens trichosperma*, *Equisetum fluviatile*, and *Impatiens capensis*.

At this point in time, MNR staff only delineated one area as a calcareous fen community which contradicts the work conducted by the MBS. The timing of our survey efforts made it difficult to identify key calciphiles, particularly Carices that are typically associated with calcareous fen features in the Minnesota River Valley. Ideally the wetland features on the northern end of the study corridor should be revisited during the late spring in order to more accurately map such species as *Carex sterilis* as well as allow a more detailed assessment of the various native plant communities. However, it is possible that the results will not change with future field efforts with issues such as municipal water use, transporation infrastructure, and commercial/residential development in the surrounding area. Calcareous fen features are extremely sensitive to hydrologic alterations directly tied to the recharge zone, and this particular system is likely to be affected by all three issues. This then brings major concern to the persistence of calcareous fens in this region of Minnesota.

Respectfully submitted,

Scott A. Milburn, M.S., PWS
Sr. Botanist/President
Midwest Natural Resources, Inc.



Project Location
Dakota County Greenway Eagan Project
Dakota County, Minnesota

Figure 01

Midwest Natural Resources

MBS Mapped Calcareous Fens
Dakota County Greenway Eagan Project
Dakota County, Minnesota

0 0.2 0.4 0.8 Miles

Figure 02

Midwest Natural Resources

Rare Plant Locations
Dakota County Greenway Eagan Project
Dakota County, Minnesota

0 0.2 0.4 0.8 Miles

Figure 03

Midwest Natural Resources

August 28, 2013 Field Results
Dakota County Greenway Eagan Project
Dakota County, Minnesota

0 0.175 0.35 0.7 Miles

Figure 04

Midwest Natural Resources

August 28, 2013 Field Results
Dakota County Greenway Eagan Project
Dakota County, Minnesota

0 0.05 0.1 0.2 Miles

Figure 05

Midwest Natural Resources

August 28, 2013 Field Results
Dakota County Greenway Eagan Project
Dakota County, Minnesota

0 0.05 0.1 0.2 Miles

Figure 05

Appendix A

Species List

Wetland ID	Plant Species 8-28-2013	Fen Points
Area 1	*Acorus americanus*	
Area 1	*Arctium minus*	
Area 1	*Artemisia serrata*	
Area 1	*Berula erecta*	5
Area 1	*Bolboschoenus fluviatilis*	
Area 1	*Bromus ciliatus*	
Area 1	*Calamagrostis canadensis*	
Area 1	*Calystegia sepium*	
Area 1	*Carex lacustris*	
Area 1	*Carex stricta*	
Area 1	*Carex utriculata*	
Area 1	*Cicuta maculata var. maculata*	
Area 1	*Cirsium muticum*	
Area 1	*Cornus sericea*	
Area 1	*Doellingeria umbellata*	
Area 1	*Epilobium leptophyllum*	
Area 1	*Equisetum arvense*	
Area 1	*Equisetum fluviatile*	
Area 1	*Eutrochium maculatum*	
Area 1	*Fragaria virginiana*	
Area 1	*Frangula alnus*	
Area 1	*Helianthus giganteus*	
Area 1	*Impatiens capensis*	
Area 1	*Lathyrus palustris*	
Area 1	*Lycopus americanus*	
Area 1	*Lycopus asper*	
Area 1	*Oxypolis rigidior*	5
Area 1	*Phalaris arundinacea*	
Area 1	*Phragmites australis subsp. americanus*	
Area 1	*Pilea pumila*	
Area 1	*Poa pratensis*	
Area 1	*Populus deltoides subsp. monilifera*	
Area 1	*Rhamnus cathartica*	
Area 1	*Rorippa sp.*	
Area 1	*Rubus pubescens*	
Area 1	*Rumex britannica*	
Area 1	*Salix bebbiana*	
Area 1	*Salix discolor*	
Area 1	*Salix petiolaris*	
Area 1	*Saxifraga pensylvanica*	
Area 1	*Silphium perfoliatum*	
Area 1	*Solanum dulcamara*	
Area 1	*Solidago canadensis var. canadensis*	
Area 1	*Solidago gigantea*	
Area 1	*Spartina pectinata*	
Area 1	*Taraxacum officinale*	
Area 1	*Thalictrum dasycarpum*	
Area 1	*Typha sp.*	
Area 1	*Viola nephrophylla*	
Area 2	*Ambrosia artemisiifolia*	
Area 2	*Amphicarpaea bracteata*	
Area 2	*Andropogon gerardii*	
Area 2	*Apocynum sibiricum*	
Area 2	*Asclepias syriaca*	
Area 2	*Bidens connata*	
Area 2	*Boehmeria cylindrica*	
Area 2	*Bolboschoenus fluviatilis*	
Area 2	*Bromus ciliatus*	5
Area 2	*Calamagrostis canadensis*	
Area 2	*Caltha palustris*	
Area 2	*Campanula aparinoides*	
Area 2	*Carex hystericina*	5

Area 2	*Carex lacustris*	
Area 2	*Carex sartwellii*	
Area 2	*Carex stricta*	
Area 2	*Chelone glabra*	
Area 2	*Cicuta bulbifera*	
Area 2	*Cicuta maculata var. maculata*	
Area 2	*Cirsium discolor*	
Area 2	*Cirsium muticum*	
Area 2	*Cornus sericea*	
Area 2	*Cuscuta sp.*	
Area 2	*Doellingeria umbellata*	
Area 2	*Eleocharis erythropoda*	
Area 2	*Epilobium sp.*	
Area 2	*Equisetum fluviatile*	
Area 2	*Eupatorium perfoliatum*	
Area 2	*Eutrochium maculatum*	
Area 2	*Frangula alnus*	
Area 2	*Helianthus giganteus*	
Area 2	*Helianthus tuberosus*	
Area 2	*Impatiens capensis*	
Area 2	*Impatiens pallida*	
Area 2	*Juncus torreyi*	
Area 2	*Lathyrus palustris*	
Area 2	*Leersia oryzoides*	
Area 2	*Lemna sp.*	
Area 2	*Lycopus americanus*	
Area 2	*Lycopus uniflorus*	
Area 2	*Lythrum salicaria*	
Area 2	*Mentha arvensis var. canadensis*	
Area 2	*Muhlenbergia sp.*	
Area 2	*Onoclea sensibilis*	
Area 2	*Oxypolis rigidior*	5
Area 2	*Phalaris arundinacea*	
Area 2	*Pilea fontana*	
Area 2	*Poa compressa*	
Area 2	*Poa palustris*	
Area 2	*Populus alba*	
Area 2	*Prenanthes alba*	
Area 2	*Salix amygdaloides*	
Area 2	*Salix discolor*	
Area 2	*Salix interior*	
Area 2	*Schoenoplectus tabernaemontani*	
Area 2	*Scirpus atrovirens*	
Area 2	*Scutellaria lateriflora*	
Area 2	*Solidago gigantea*	
Area 2	*Symphyotrichum lanceolatum*	
Area 2	*Thelypteris palustris var. pubescens*	
Area 2	*Urtica dioica subsp. gracilis*	
Area 2	*Verbena urticifolia*	
Area 3	*Agrostis gigantea*	
Area 3	*Andropogon gerardii*	
Area 3	*Asclepias incarnata var. incarnata*	
Area 3	*Betula pumila*	5
Area 3	*Bidens frondosa*	
Area 3	*Bromus ciliatus*	5
Area 3	*Campanula aparinoides*	
Area 3	*Carex hystericina*	5
Area 3	*Carex sartwellii*	
Area 3	*Carex sterilis*	25
Area 3	*Carex stricta*	
Area 3	*Cirsium arvense*	
Area 3	*Cirsium muticum*	
Area 3	*Comandra umbellata*	

Area 3	*Conyza canadensis*	
Area 3	*Cornus sericea*	
Area 3	*Doellingeria umbellata*	
Area 3	*Equisetum arvense*	
Area 3	*Erechtites hieraciifolius var. hieraciifolius*	
Area 3	*Eriophorum angustifolium subsp. angustifolium*	1
Area 3	*Eupatorium perfoliatum*	
Area 3	*Eutrochium maculatum*	
Area 3	*Glyceria striata*	
Area 3	*Helianthus giganteus*	
Area 3	*Impatiens capensis*	
Area 3	*Lobelia siphilitica*	
Area 3	*Lycopus americanus*	
Area 3	*Lycopus uniflorus*	
Area 3	*Lysimachia quadriflora*	
Area 3	*Maianthemum stellatum*	
Area 3	*Muhlenbergia richardsonis*	
Area 3	*Muhlenbergia sp.*	
Area 3	*Oxypolis rigidior*	5
Area 3	*Pedicularis canadensis*	
Area 3	*Phragmites australis subsp. americanus*	
Area 3	*Poa palustris*	
Area 3	*Prenanthes alba*	
Area 3	*Pycnanthemum virginianum*	
Area 3	*Salix discolor*	
Area 3	*Schoenoplectus tabernaemontani*	
Area 3	*Solidago canadensis var. canadensis*	
Area 3	*Solidago gigantea*	
Area 3	*Solidago riddellii*	
Area 3	*Sonchus arvensis subsp. arvensis*	
Area 3	*Spartina pectinata*	
Area 3	*Symphyotrichum novae-angliae*	
Area 3	*Thelypteris palustris var. pubescens*	
Area 3	*Typha sp.*	
Area 3	*Viola nephrophylla*	
Area 4	*Angelica atropurpurea*	
Area 4	*Bidens connata*	
Area 4	*Bidens trichosperma*	5
Area 4	*Bolboschoenus fluviatilis*	
Area 4	*Calamagrostis canadensis*	
Area 4	*Carex lacustris*	
Area 4	*Cornus sericea*	
Area 4	*Cuscuta sp.*	
Area 4	*Cyperus strigosus*	
Area 4	*Epilobium leptophyllum*	
Area 4	*Equisetum fluviatile*	
Area 4	*Eutrochium maculatum*	
Area 4	*Galium trifidum var. trifidum*	
Area 4	*Helianthus giganteus*	
Area 4	*Impatiens capensis*	
Area 4	*Lycopus asper*	
Area 4	*Mentha arvensis var. canadensis*	
Area 4	*Phalaris arundinacea*	
Area 4	*Phragmites australis subsp. americanus*	
Area 4	*Physostegia virginiana var. virginiana*	
Area 4	*Rumex britannica*	
Area 4	*Salix petiolaris*	
Area 4	*Scutellaria lateriflora*	
Area 4	*Sparganium eurycarpum*	
Area 4	*Symphyotrichum lanceolatum*	
Area 4	*Typha sp.*	
Area 4	*Ulmus americana*	
Area 4	*Verbena hastata*	

Appendix B

Photos

Photo 01 – Site 1

Photo 02 – Site 2

Photo 03 – Site 3

Photo 04 – Site 4