

Wetland Investigation and Delineation Report

Minnesota River Greenway Eagan Alignment Feasibility Study Dakota County, MN

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Submitted by:

Bolton & Menk, Inc. 1960 Premier Drive Mankato, MN 56001-5900

P: 507-625-4171 F: 507-625-4177





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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

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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.

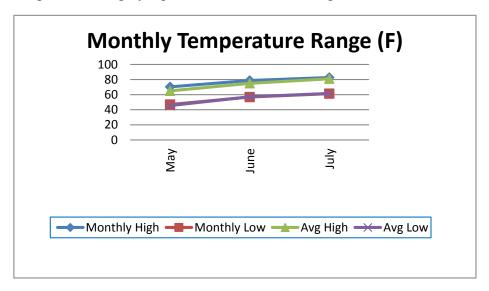
Exhibit G includes the delineation photographs and a map showing the location and direction where the photos were taken.

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:	second month prior:	third month prior:
	July 2013	June 2013	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.

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Wetland 1:

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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

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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.

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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.

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> 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.

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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.

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> 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.

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> 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.

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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 1 and 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.

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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.

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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.

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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.

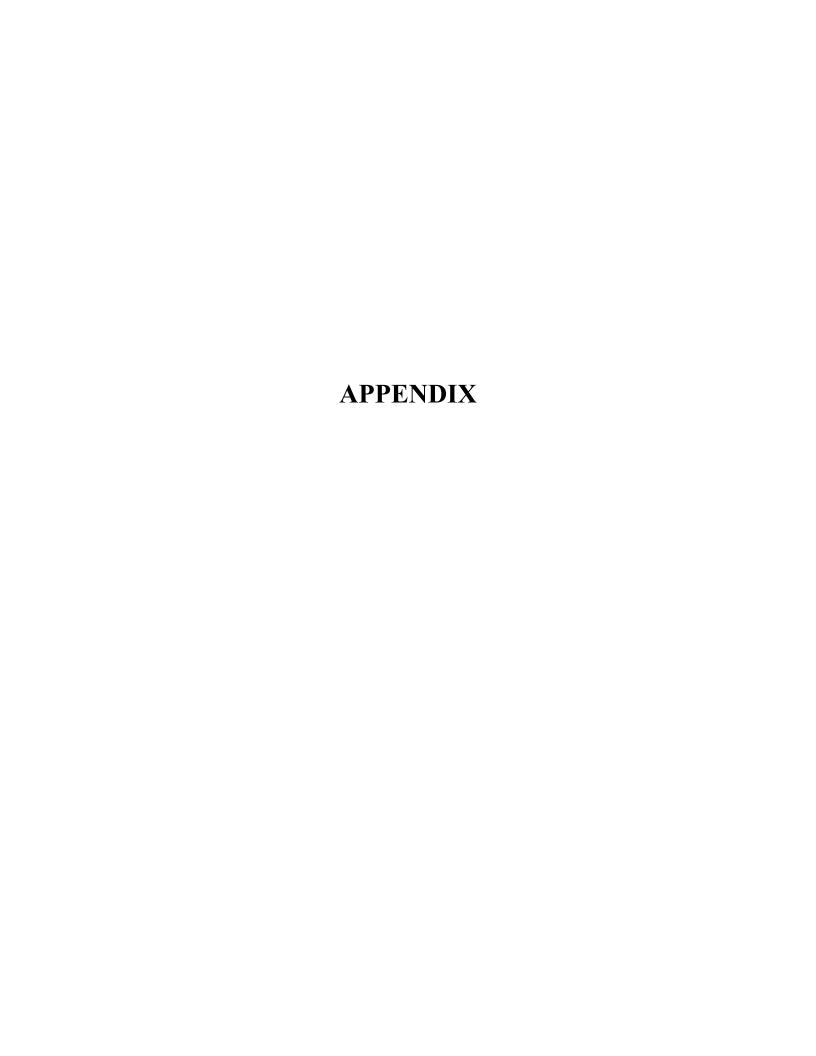
Based upon all available information, the existing conditions that currently prevail, and the on-site investigation, evidence supports the existence of ten wetlands within the Minnesota River Greenway study corridor.

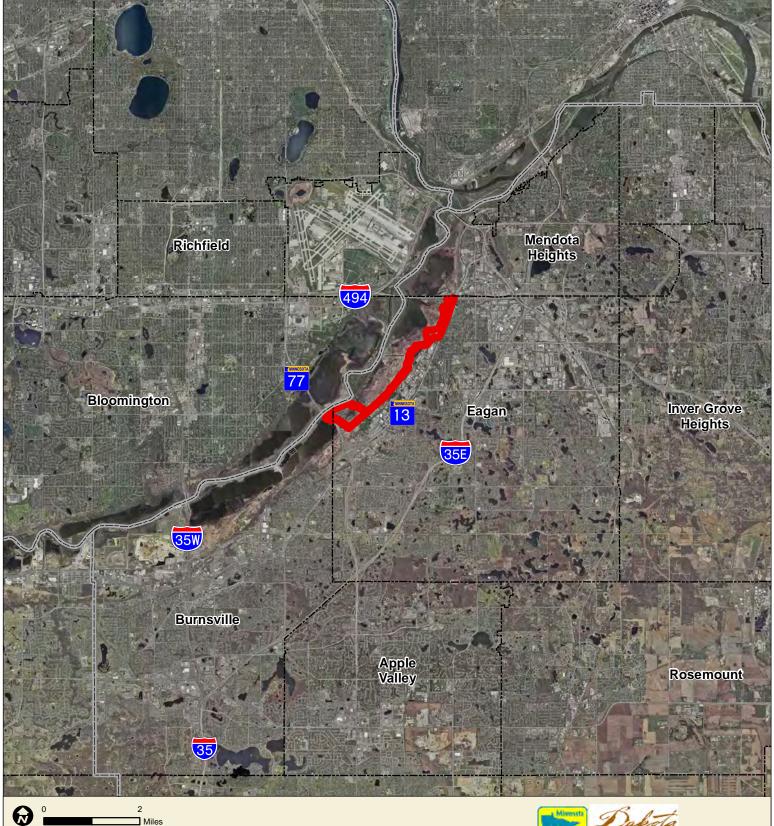
Sincerely,

BOLTON & MENK, INC.

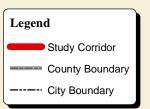
Dan Donayre

Certified Wetland Delineator, No. 1191









Source: 2010 FSA Imagery, MnDOT



MINNESOTA RIVER GREENWAY EAGAN ALIGNMENT FEASIBILITY STUDY

Location Map

Exhibit A





contours Index

Intermediate

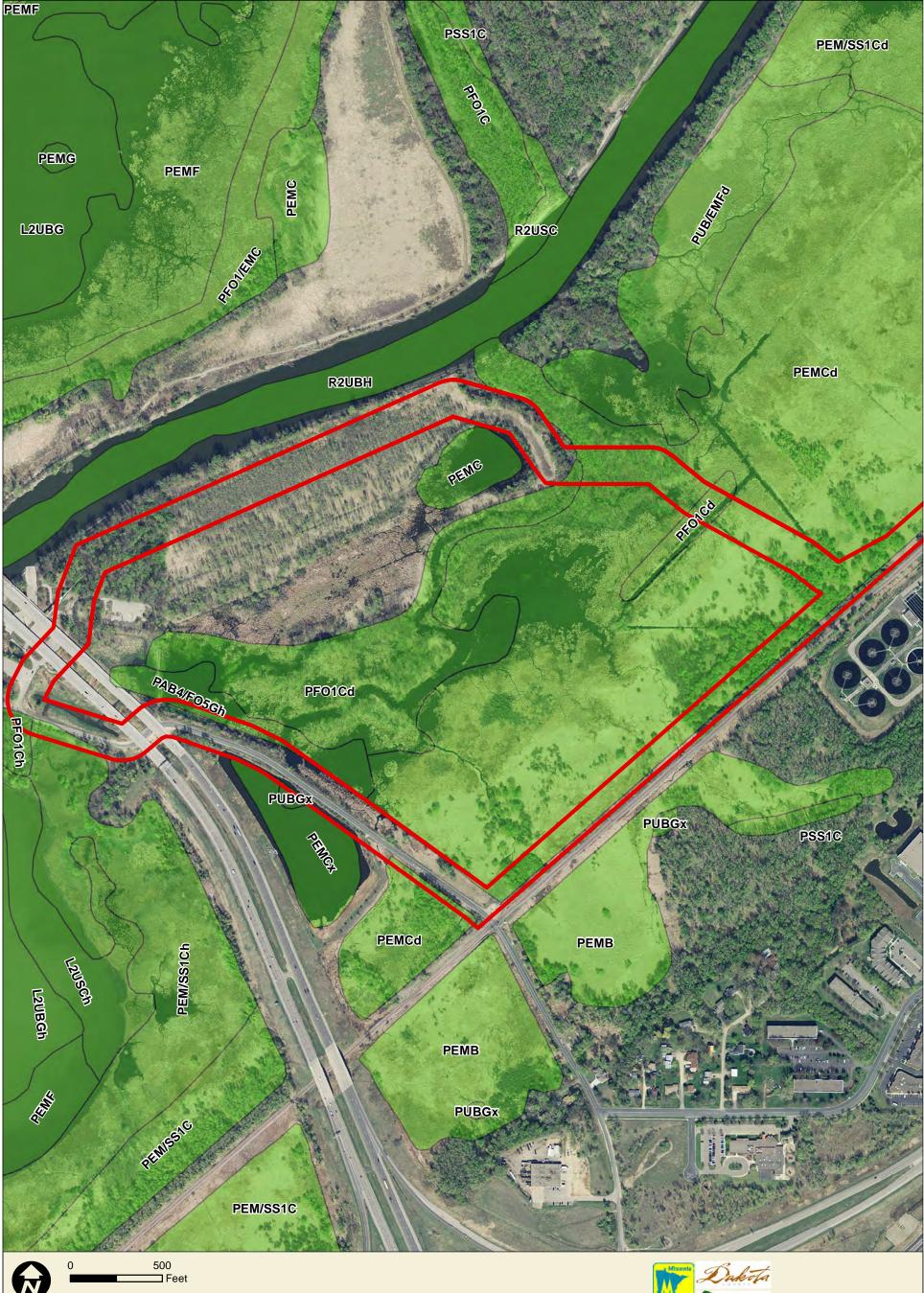
EAGAN ALIGNMENT FEASIBILITY STUDY

Site Topography LIDAR Contours

Exhibit B-1











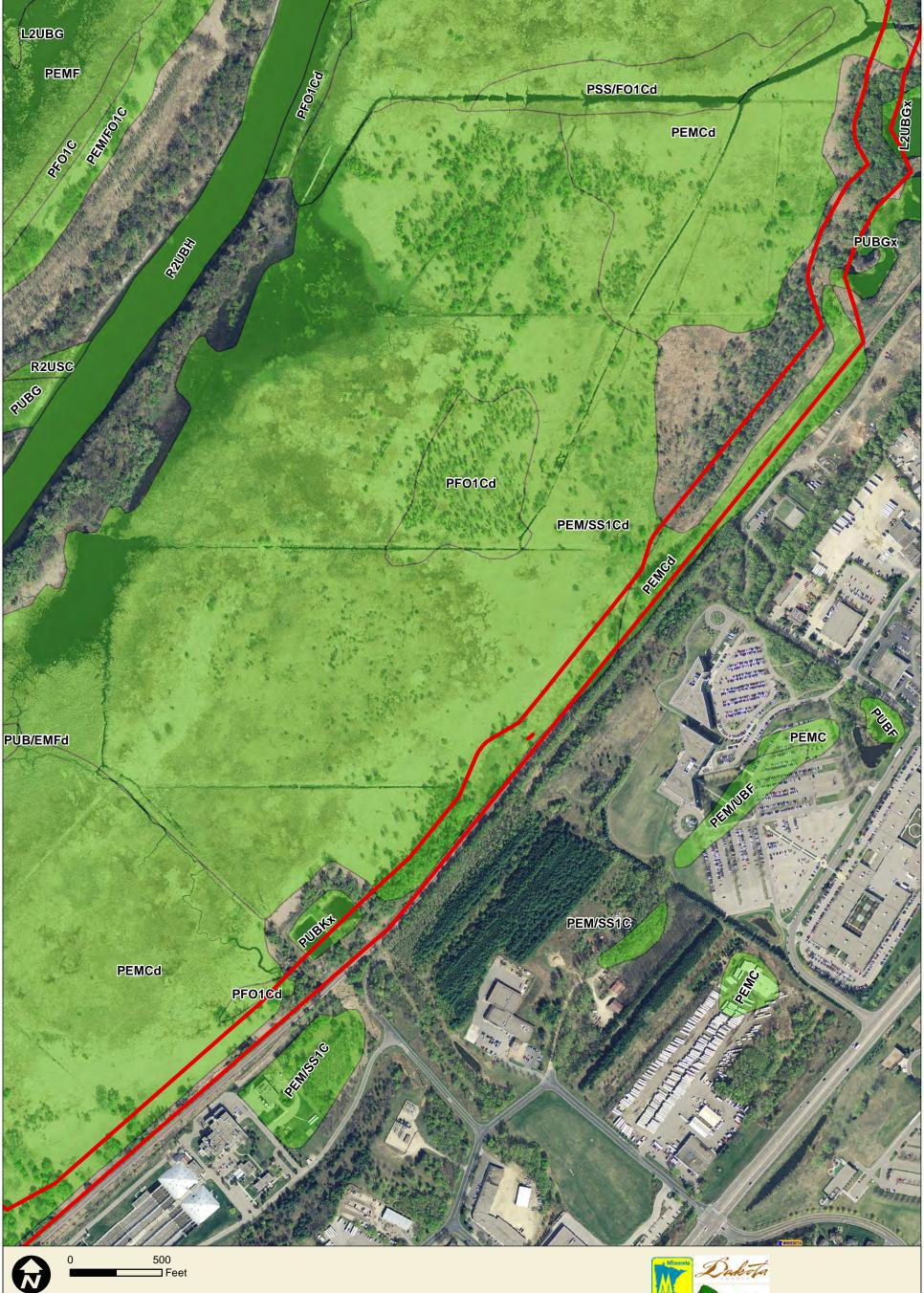
Source: 2012 USGS Imagery, MNDNR



MINNESOTA RIVER GREENWAY EAGAN ALIGNMENT FEASIBILITY STUDY

National Wetlands Inventory

Exhibit C-1



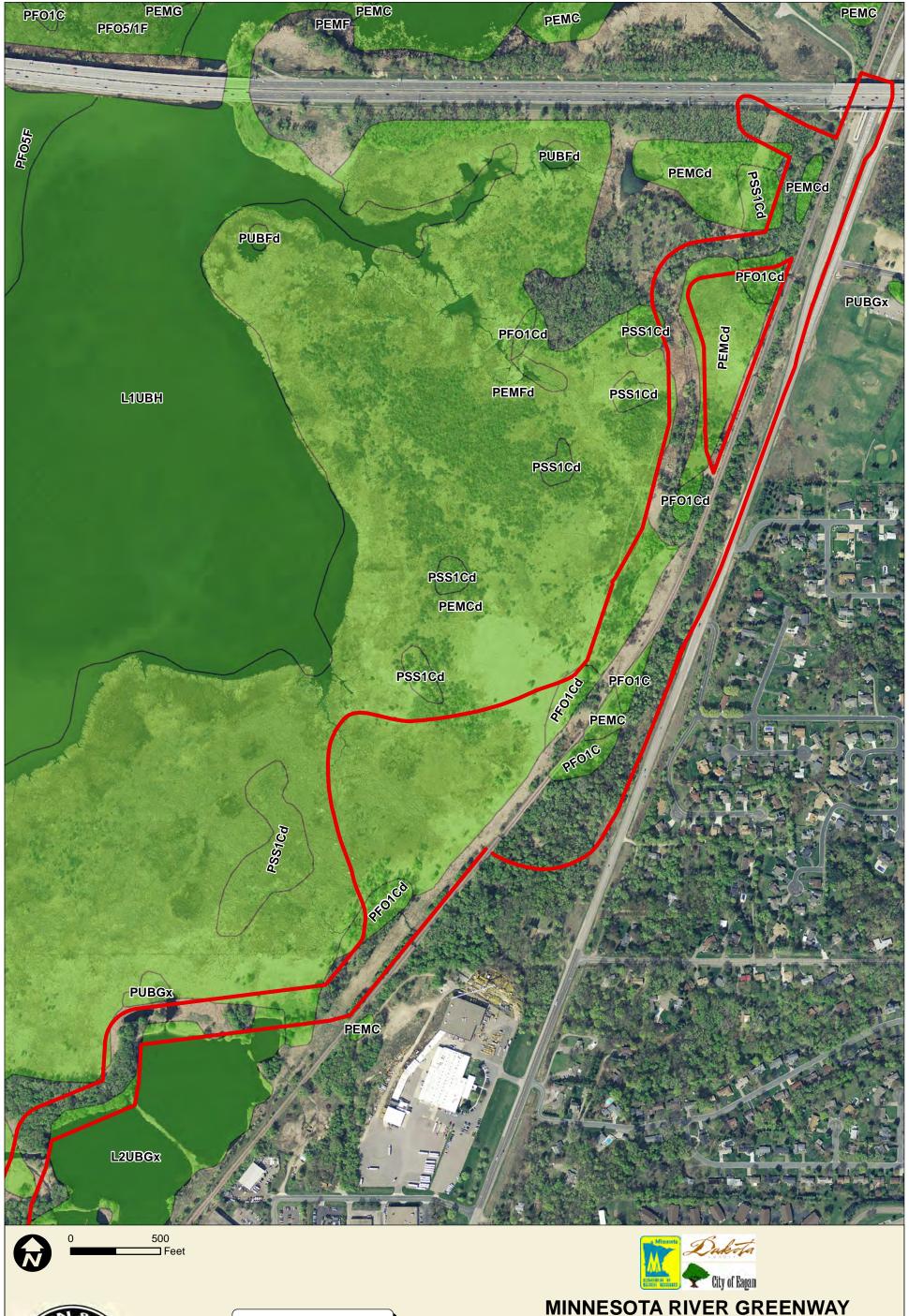






MINNESOTA RIVER GREENWAY EAGAN ALIGNMENT FEASIBILITY STUDY National Wetlands Inventory

Exhibit C-2







Source: 2012 USGS Imagery, MNDNR

EAGAN ALIGNMENT FEASIBILITY STUDY National Wetlands

Inventory Exhibit C-3







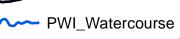


Legend

Study Corridor



PWI Basin



Source: 2012 USGS Imagery, MNDNR



MINNESOTA RIVER GREENWAY EAGAN ALIGNMENT FEASIBILITY STUDY

Public Waters Inventory

Exhibit D-1



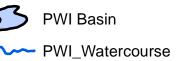






Legend

Study Corridor



Source: 2012 USGS Imagery, MNDNR



MINNESOTA RIVER GREENWAY EAGAN ALIGNMENT FEASIBILITY STUDY

Public Waters Inventory

Exhibit D-2



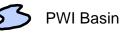






Legend

Study Corridor



PWI_Watercourse

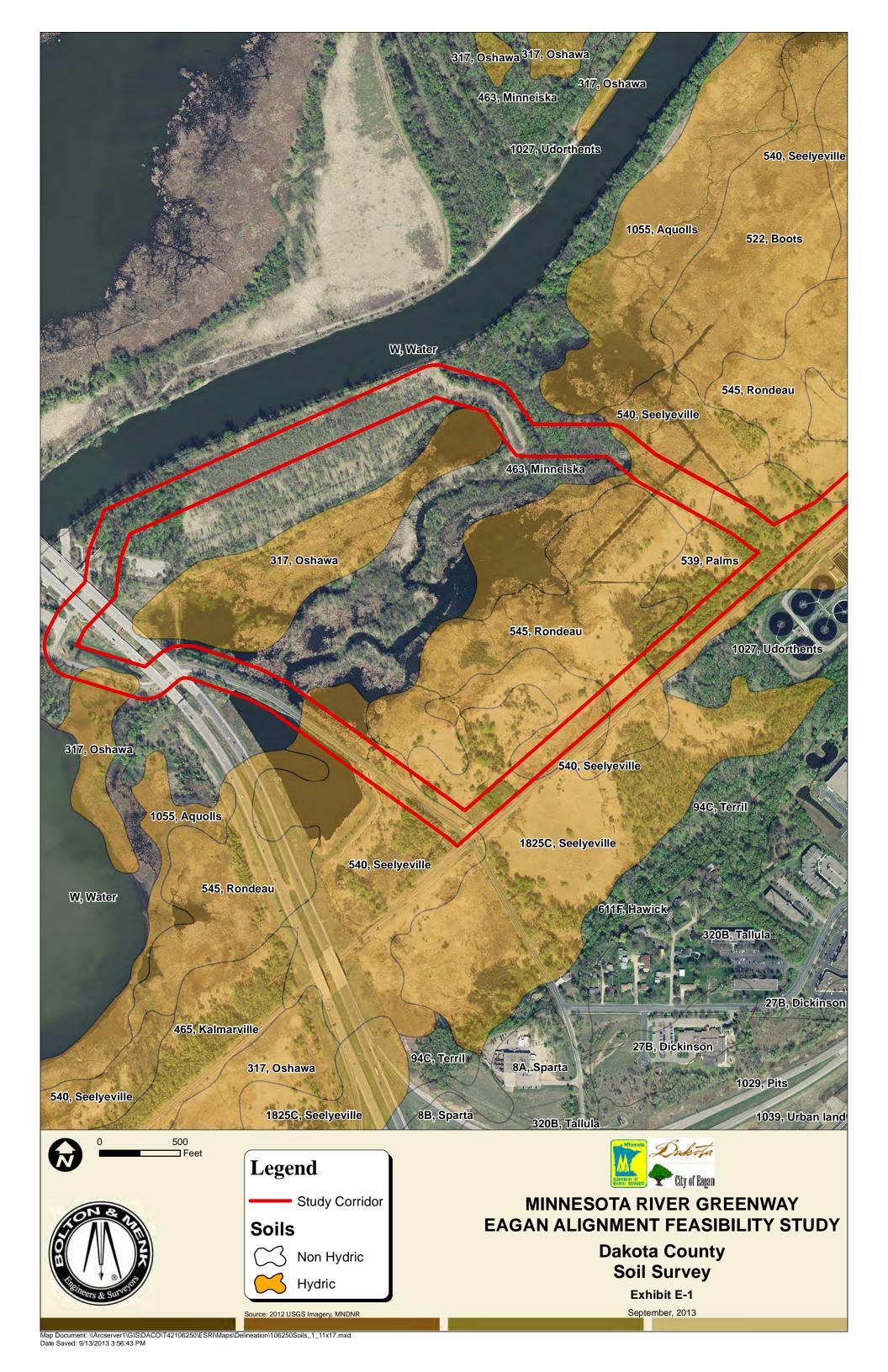
Source: 2012 USGS Imagery, MNDNR

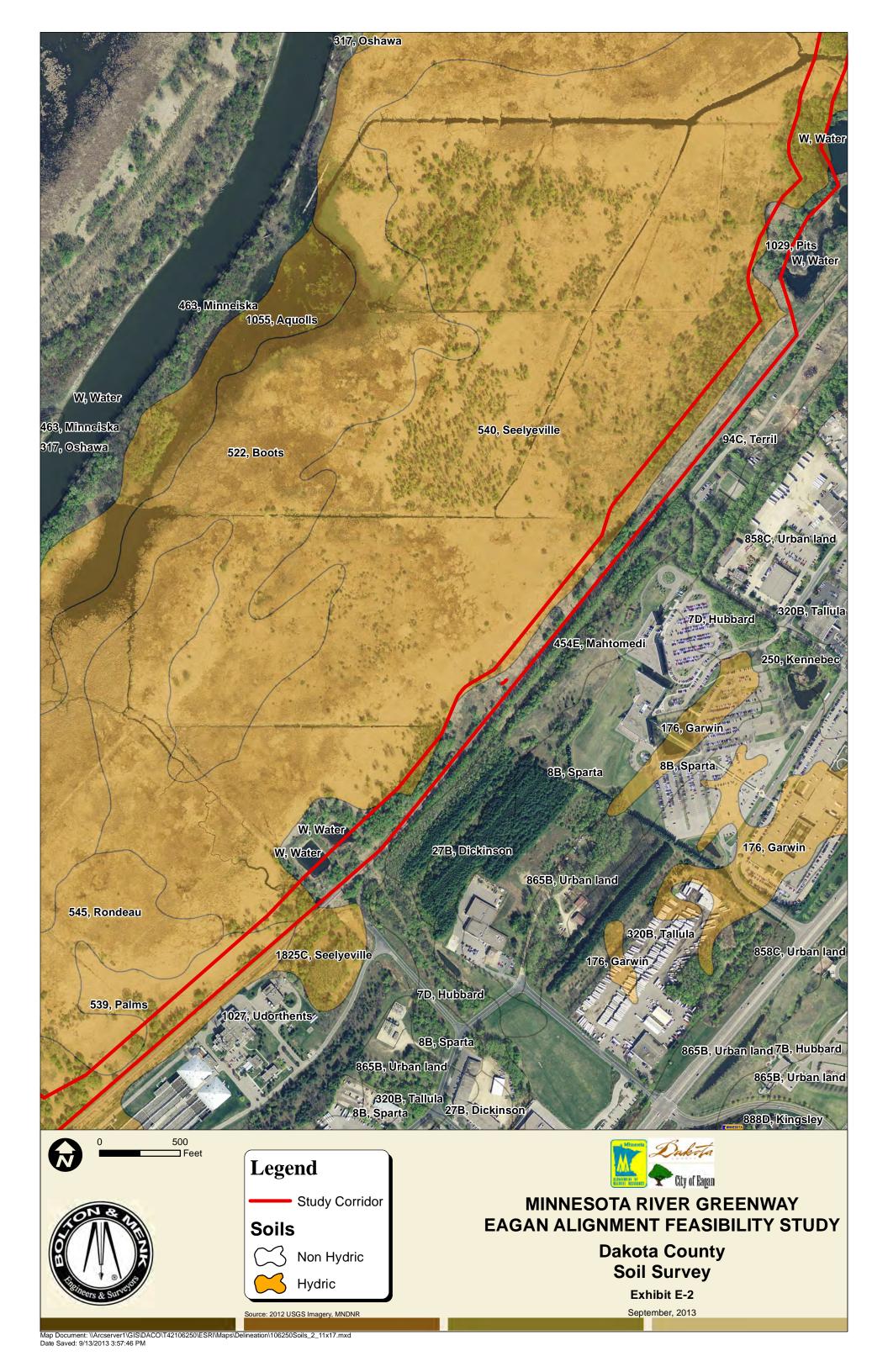


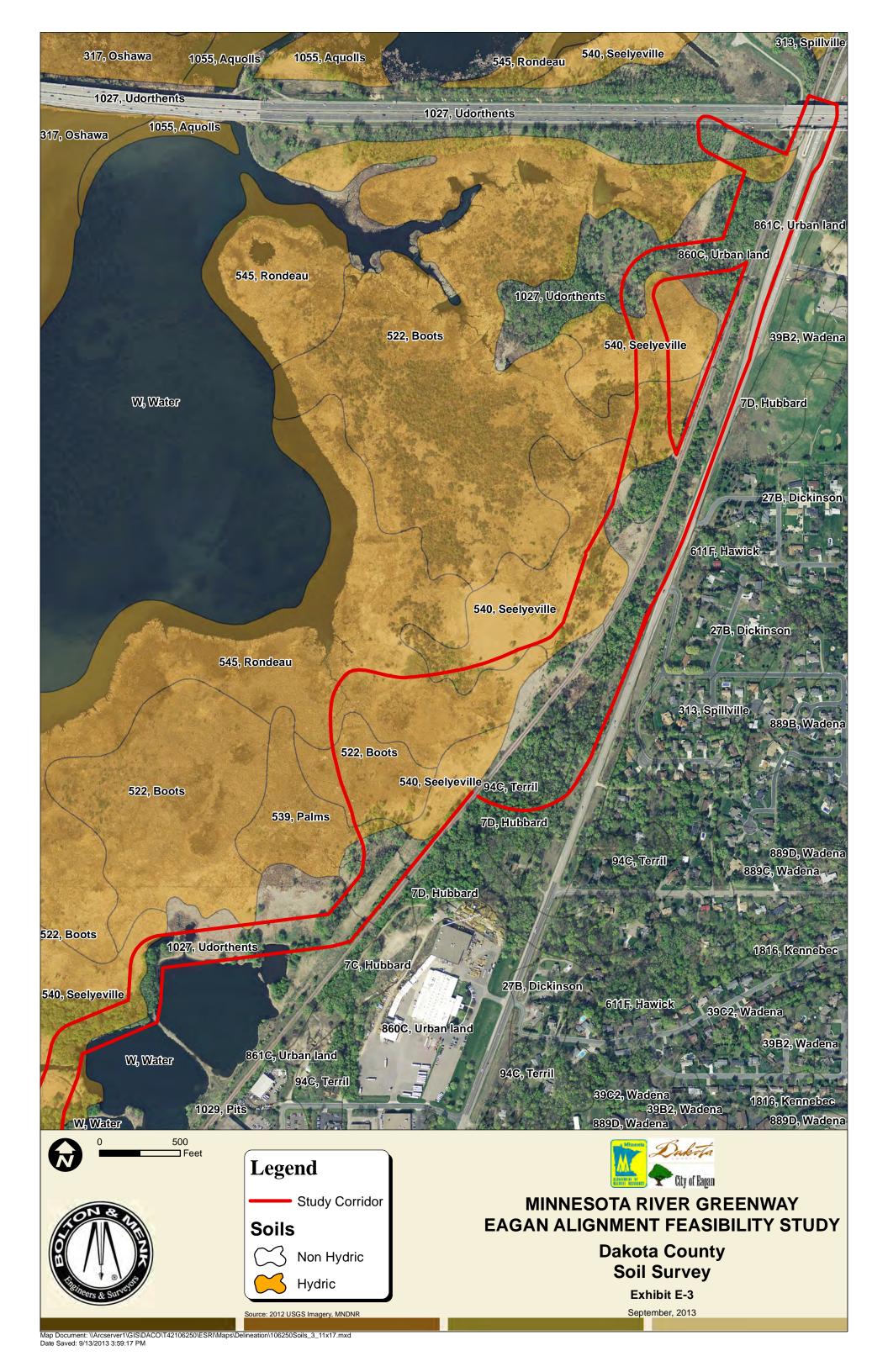
MINNESOTA RIVER GREENWAY EAGAN ALIGNMENT FEASIBILITY STUDY

Public Waters Inventory

Exhibit D-3

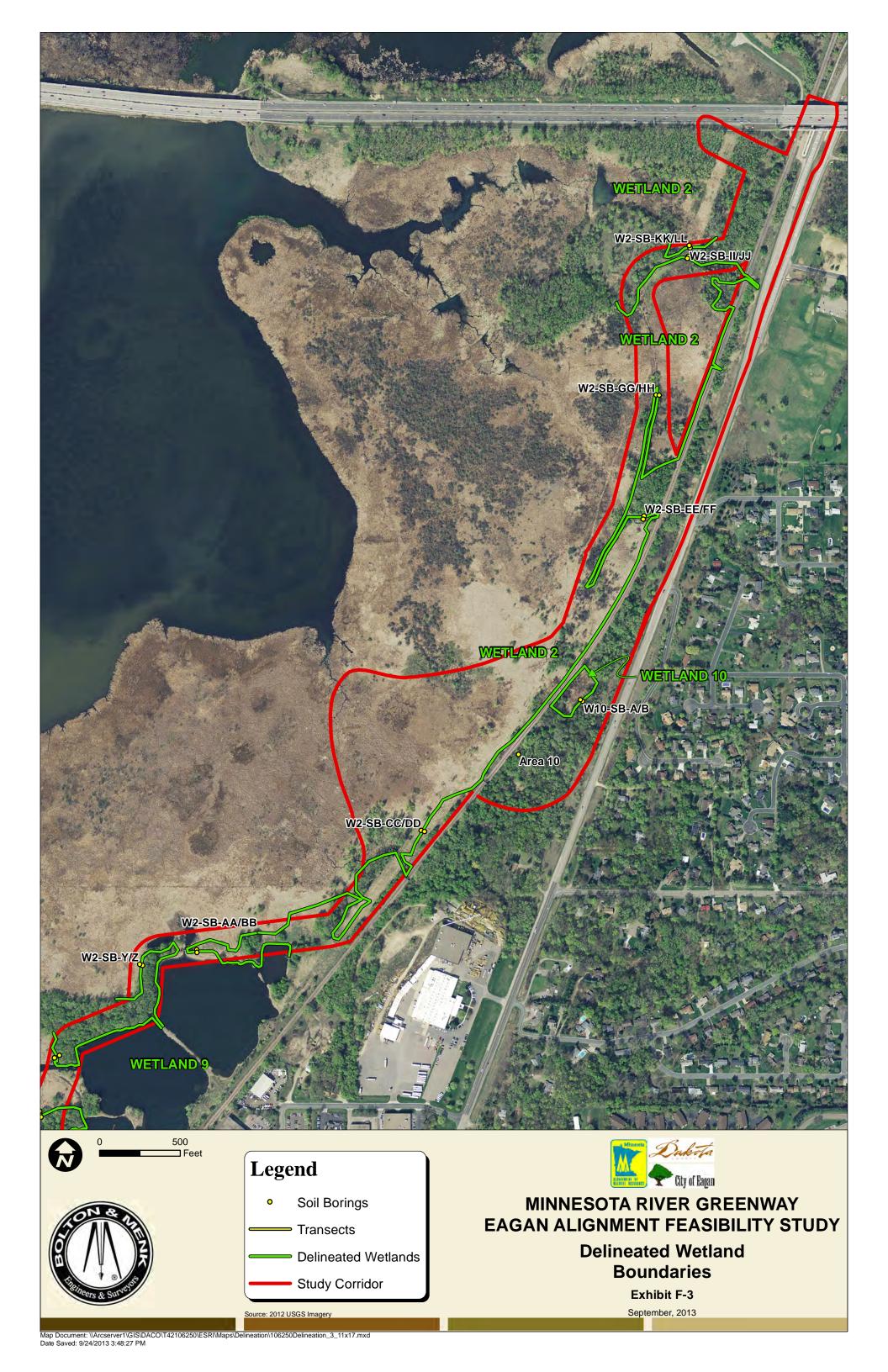
















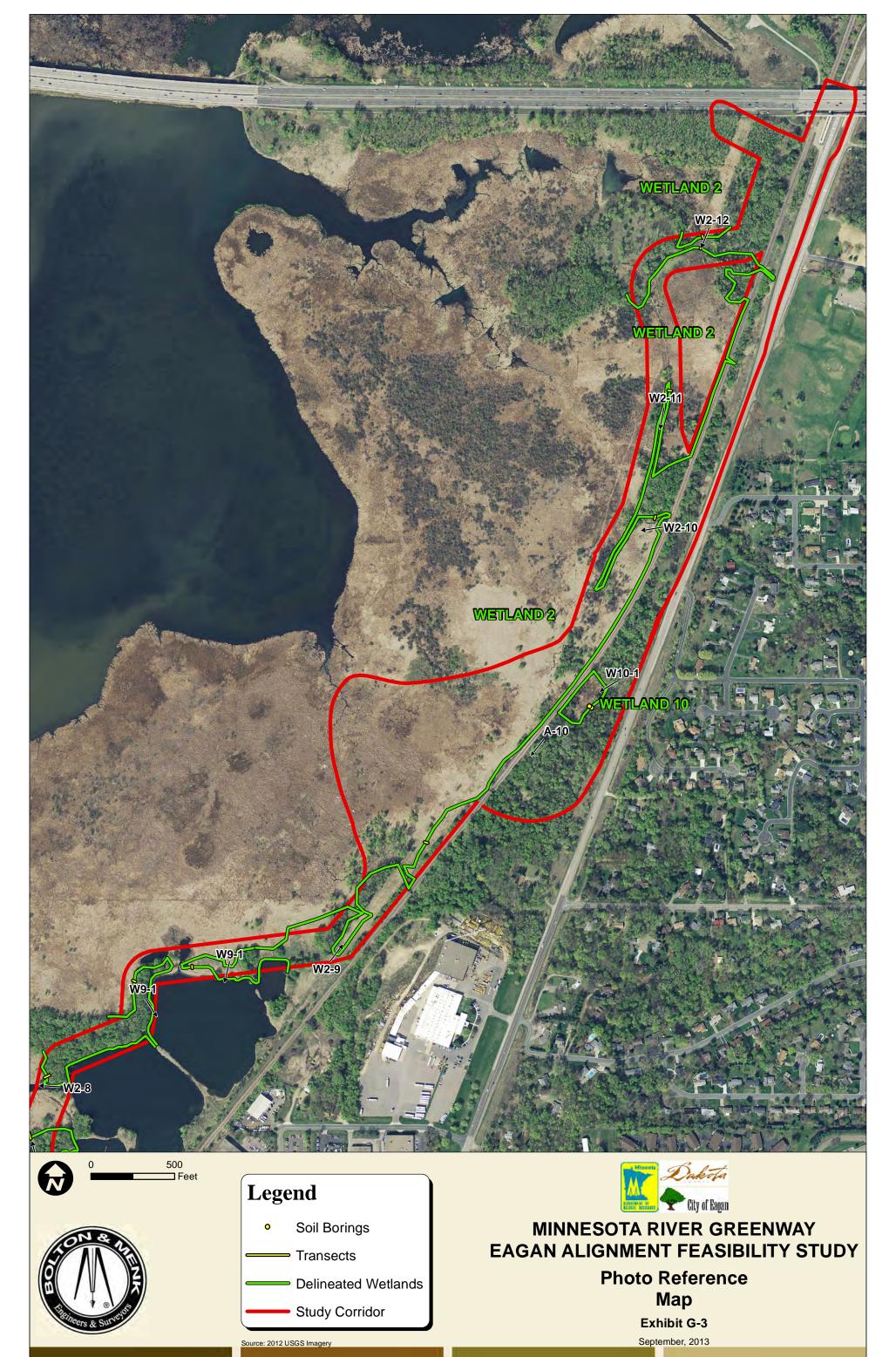


EXHIBIT G - PHOTOGRAPHS



W1-1





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-2





A-4



A-5



A-6



A-7







A-10



100 St. St.								
Project/Site: Minnesota River Gree	nway - Eagan Alignment		City/Count	y: Eagan/Dak	tota	Sampling Date: 8/28/	13	
Applicant/Owner: Dakota County			State: MN			Sampling Point: W1-S	SB-A	
Investigator(s): Dan Donayre			Sec, Twp,	Ran: 18,27N,2	23W			
Landform (hillside, terrace, etc.): B	Basin		Local Relie	ef (concave, co	onvex, none): Conca	ive		
Slope (%): 0-1	Lat:		Long:			Datum:		
Soil Map Unit Name: Oshawa silty	clay loam		NWI or W	WI Classificati	ion: PEMC			
Are climatic/hydrologic conditions Are Vegetation □, Soil □, or Hy	• •	•	⊠ Yes		no explain in remark	ent? 🛛 Yes 🗌 No		
Are Vegetation □, Soil □, or H					xplain any answers in			
	, g,		MARY O	F FINDING		,		
Hydrophytic Vegetation Present?	∑ Yes □ No							
Hydric Soil Present?	∑ Yes □ No				ed Area within	⊠ Yes □ No		
Wetland Hydrology Present?	⊠ Yes □ No			a wetland?				
Remarks:								
	VI	GETATIO	N – Use sc	ientific nam	es of plants			
Tree Stratum (Plot Size: 30 ft)		% Cover	Domina	nt Species?	Indicator Status	Dominance Test V	Vorksheet:	
Fraxinus pennsyvanica		50	⊠ Ye	es 🗌 No	FACW	Number of dominar	nt	
2			П Ү	es 🗌 No		species that are OB FACW, or FAC:	L, 2 (A)	
3				es 🗌 No		Total number of	2 (A)	
						dominant species		
4			_	es 🗌 No		across all strata:	32 (B)	
5			∐ Ye	es 🗌 No		Percent of dominan species that are OB		
		50	= Total	Cover		FACW or FAC:	100% (A/B)
Saplings/Shrub Stratum (Plot Size:	15 ft)					Prevalence Index	Worksheet:	
1				es 🗌 No		Total % Cover	of:	Multiply By:
2			☐ Yee	es 🗌 No		OBL species:	x 1	
3			□ Ye	es 🗌 No		FACW species:	150 x 2	300
4			☐ Yee	es 🗌 No		FAC species:	x 3	<u> </u>
5			□ Ye	es 🗌 No		FACU species:	x 4	·
			= Total	Cover		UPL species:	x 5	
Herb Stratum (Plot size: 5 ft)						Column Total:	150 (A)	300 (B)
Phalaris arundinacea		100	⊠ Ye	es 🗌 No	FACW	Prevalenc	e Index (B/A)	= 2.0
			_	_		Hydrophytic Vege	tation Indicat	ors:
2			☐ Ye	es 🗌 No		☐ Rapid Test for		
3			□ Ye	es 🗌 No		□ Dominance Test □ Dominance Test	st is >50%	
4			□ Ye	es 🗌 No		□ Prevalence Index	ex is < 3.01	
5				es 🗌 No	<u></u> -	☐ Morphological	Adaptations1 (Provide
6				es 🗌 No		supporting data in F		
7				es 🗌 No		Duchlamatic III	. d	
8				es 🗌 No		☐ Problematic Hy (Explain in Remark		etation
9						¹ Indicators of hydri	c soil and wetl	and hydrology
				es 🗌 No		must be present, un		
10				es No				
		100	= Tot	tal Cover				
Woody Vine Stratum (Plot size: 1	5 ft <u>)</u>					Hydrophytic		
1			☐ Yee	es 🗌 No		Vegetation Presen	t? Xes	s 🗌 No
2			☐ Yee	es 🗌 No				
			=Tot	al Cover				
Remarks:								



				50	DILS			
Profile Description:	: (Describe to the dep	th needed t	o document the indi	cator or co	onfirm the a	bsence of	indicators	.)
Danth (in)	<u>Matrix</u>		<u>R</u>	edox Featu	res		Т	Remarks
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
0-15	10 YR 2/1	100					SiCL	
		90	10 YR 4/4	10	RM	М	SiCL	
15-30	10 YR 4/2			10		M		
30+	10 YR 4/1	80	10 YR 4/4	20	RM	M	SiCL	
		· 	· 	-			-	
								
¹ Type: C=Concentra	tion, D=Depletion, RM	=Reduced N	Matrix, CS=Covered	or Coated S	Sand Grains.	² Locati	ion: PL=P	ore Lining, M=Matrix
Hydric Soil Indicat	ors:							Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)			☐ Sandy Gley		(S4)			Coast Prairie Redox (A16)
☐ Histic Epipedon			☐ Sandy Red					☐ Iron-Manganese Masses (F12)
Black Histic (A3			☐ Stripped M					Other (Explain in Remarks)
Hydrogen Sulfid			Loamy Mu	•				
☐ Stratified Layers			Loamy Gle	-	(F2)			
2 cm Muck (A10	*		☐ Depleted M					
Depleted Below			Redox Darl	•	*			
Thick Dark Surf			☐ Depleted D					³ Indicators of hydrophytic vegetation and wetland
Sandy Mucky M			☐ Redox Dep	ressions (F	8)			hydrology must be present, unless disturbed
5 cm Mucky Pea								or problematic.
Restrictive layer (if	observed):							
Type:								Hydric Soil Present? ☐ Yes ☐ No
Depth (in):								
Remarks:							ı	
				HYDR	ROLOGY			
Wetland Hydrology	/ Indicators:							
, , coming 11, at ology		(::	. C	11 41 4	1)			C
		(minimum c	of one is required; che					Secondary Indicators (minimum of two required)
Surface Water (A	,		☐ Water Stair		(B9)			Surface Soil Cracks (B6)
High Water Table	le (A2)		☐ Aquatic Fa		11.40			Drainage Patterns (B10)
Saturation (A3)	1)		True Aquat	`	,			Dry-Season Water Table (C2)
☐ Water Marks (B☐ Sediment Depos	*		☐ Hydrogen S		or (C1) s on Living F	Poots (C3)		☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (I			☐ Presence of	-	_	(C3)		Stunted or Stressed Plants (D1)
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B			☐ Thin Muck			113 (CO)		✓ FAC-Neutral Test (D5)
	ole on Aerial Imagery (B7)	☐ Gauge or W					Z The reductive (Bb)
	ted Concave Surface (H		Other (Exp	,	· ·			
Field Observations:		/						
		N N	B 4 ()					
Surface Water Prese	 -	No	Depth (in):					
Water Table Present	? \(\sum \text{Yes}	No No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☐ No
Saturation Present?	⊠ Yes	No No	Depth (in): 30					
(includes capillary f								
Describe Recorded I	Data (stream gage, mon	itoring well,	, aerial photos, previo	ous inspecti	ons), if avail	able:		
Remarks:								
Tomarko.								



Meers & Survey					
Project/Site: Minnesota River Gree	enway - Eagan Alignment		City/County: Eagan/Dal	cota	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.): T	errace		Local Relief (concave, co	onvex, none): Flat	
Slope (%): 0-1	Lat:		Long:		Datum:
Soil Map Unit Name: Minneiska lo	oam		NWI or WWI Classificat	tion:	
Are climatic/hydrologic conditions Are Vegetation , Soil , or H	ydrology significantly	disturbed?	Are "normal	_	ent? ⊠ Yes □ No
Are Vegetation ☐, Soil ☐, or H	ydrology 🔲 naturally prol			xplain any answers i	n Remarks.)
		SUM	MARY OF FINDING	3 8	
Hydrophytic Vegetation Present?	⊠ Yes □ No		Is the Sampl	led Area within	
Hydric Soil Present?	☐ Yes ⊠ No		a wetland?	ica mica within	☐ Yes ⊠ No
Wetland Hydrology Present?	☐ Yes ☒ No				
Remarks:					
-	V		N – Use scientific nam	•	1
Tree Stratum (Plot Size: 30 ft)		% Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
Acer negundo		15	Yes □ No	FAC	Number of dominant species that are OBL,
Acer saccharinum		5	Yes □ No	FACW	FACW, or FAC: 5 (A)
3. Fraxinus pennsyvanica		5	Yes □ No	FACW	Total number of
4			☐ Yes ☐ No		dominant species across all strata: 5 (B)
5			☐ Yes ☐ No		Percent of dominant
		25	= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)
Saplings/Shrub Stratum (Plot Size:	15 ft)				Prevalence Index Worksheet:
Fraxinus pennsyvanica		5	∑ Yes □ No	FACW	Total % Cover of: Multiply By:
2			☐ Yes ☐ No		OBL species: x 1
3			☐ Yes ☐ No		FACW species: 115 x 2 230
4			☐ Yes ☐ No		FAC species: 15 x 3 45
5			☐ Yes ☐ No		FACU species: 10 x 4 40
		5	= Total Cover		UPL species: x 5
Herb Stratum (Plot size: 5 ft)					Column Total: 140 (A) 315 (B)
Phalaris arundinacea		100	∑ Yes □ No	FACW	Prevalence Index $(B/A) = 2.3$
					Hydrophytic Vegetation Indicators:
2. Cirsium arvense		5	☐ Yes ☒ No	FACU	Rapid Test for Hydrophytic Vegetation
Asclepias syriaca		5	☐ Yes ☒ No	FACU	☑ Dominance Test is >50%
4			☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$
5			☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide
6			☐ Yes ☐ No		supporting data in Remarks or on separate sheet)
7			☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation
8			☐ Yes ☐ No	_	(Explain in Remarks)
9			☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology
10			☐ Yes ☐ No		must be present, unless disturbed or problematic.
		110	= Total Cover		
Woody Vine Stratum (Plot size: 1	5 ft)				
1	-		☐ Yes ☐ No	_	Hydrophytic ⊠ Yes □ No
2			Yes No		Vegetation Present?
			=Toal Cover		
Remarks:			-10ai C0vci		



(Midwest Region)

Duofile Descriptions	(Deceribe to the dec	nth pooded to	dogument the indi		oils	haanaa af	indicator	
Profile Description:	(Describe to the dep					osence of	maicator	5.)
Depth (in)	Matrix Color (moist)	<u>%</u>	Color (moist)	edox Featu <u>%</u>	Type ¹	Loc2	Textur	<u>Remarks</u>
0.15			Color (moist)	<u>70</u>	1 ype-	Loc-	G: GI	
0-15	10 YR 2/1	100					SiCL	
15-30	10 YR 4/2	100	10 VD 4/4		DM.		SiCL	P. L. Cotton and Paris of a constitution
30+	10 YR 5/2	99	10 YR 4/4	1	RM	M	SiCL	Redox features not distinct or prominent
								· · · · · · · · · · · · · · · · · · ·
								· · · · · · · · · · · · · · · · · · ·
						-	-	
							-	
	tion, D=Depletion, RN	M=Reduced M	fatrix, CS=Covered	or Coated S	Sand Grains.	² Locati	ion: PL=P	ore Lining, M=Matrix
Hydric Soil Indicate	ors:		_					Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	(AQ)		☐ Sandy Gley		(S4)			Coast Prairie Redox (A16)
Histic Epipedon			☐ Sandy Redo					☐ Iron-Manganese Masses (F12)
Black Histic (A3			Stripped M		1 (E1)			Other (Explain in Remarks)
☐ Hydrogen Sulfid☐ Stratified Layers			Loamy Muc					
2 cm Muck (A10	` '		☐ Depleted M	•	(F2)			
Depleted Below	*		☐ Redox Dark		E6)			
☐ Thick Dark Surfa			☐ Depleted D					³ Indicators of hydrophytic vegetation and wetland
☐ Sandy Mucky M			Redox Dep					hydrology must be present, unless disturbed
5 cm Mucky Pea			recon zep	100010110 (1	0)			or problematic.
Restrictive layer (if								
Type:	,							Hydric Soil Present? ☐ Yes ☒ No
Depth (in):								
Remarks:								
				HYDE	ROLOGY			
Wetland Hydrology	Indicators:							
	Primary Indicators	s (minimum o	f one is required; che	eck all that	apply)			Secondary Indicators (minimum of two required)
☐ Surface Water (A	A1)		☐ Water Stain	ned Leaves	(B9)			☐ Surface Soil Cracks (B6)
☐ High Water Tabl	e (A2)		☐ Aquatic Fat					☐ Drainage Patterns (B10)
☐ Saturation (A3)			☐ True Aquat	ic Plants (E	314)			☐ Dry-Season Water Table (C2)
☐ Water Marks (B)			☐ Hydrogen S					☐ Crayfish Burrows (C8)
Sediment Deposi			Oxidized R		- C	Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)
Drift Deposits (E			Presence of					Stunted or Stressed Plants (D1)
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B.			☐ Thin Muck					☐ FAC-Neutral Test (D5)
	le on Aerial Imagery	. ,	Gauge or W					
	ted Concave Surface (B8)	Other (Expl	laın ın Rem	narks)			
Field Observations:		_						
Surface Water Preser	nt? ∐ Ye	s 🛛 No	Depth (in):					
Water Table Present	?	s 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No
Saturation Present?	⊠ Ye	es 🔲 No	Depth (in): 36					V
(includes capillary fi								
Describe Recorded D	Data (stream gage, mor	nitoring well,	aerial photos, previo	ous inspecti	ons), if availa	able:		
Remarks:								



Meers & Survey							
Project/Site: Minnesota River Gree	enway - Eagan Alignment		City/Coun	ty: Eagan/Dak	cota	Sampling Date: 9/3/13	
Applicant/Owner: Dakota County			State: MN	I		Sampling Point: W2-SB-A	
Investigator(s): Dan Donayre			Sec, Twp,	Ran: 18,27N,2	23W		
Landform (hillside, terrace, etc.): E	Basin		Local Reli	ef (concave, co	onvex, none): Conca	ve	
Slope (%): 0-1	Lat:		Long:			Datum:	
Soil Map Unit Name: Seelyeville n	nuck		NWI or W	WI Classificat	ion: PEMCd		
Are climatic/hydrologic conditions Are Vegetation , Soil , or H	• •	•	⊠ Yes		no explain in remark	ss) ent? ⊠ Yes □ No	
Are Vegetation ☐, Soil ☐, or H	ydrology naturally probler	natic?		(If needed, ex	xplain any answers in	n Remarks.)	
			MARY O	F FINDING	SS		
Hydrophytic Vegetation Present?	⊠ Yes □ No						
Hydric Soil Present?	⊠ Yes □ No				ed Area within	⊠ Yes □ No	
Wetland Hydrology Present?	⊠ Yes □ No			a wetland?			
Remarks:							
	VEC	GETATIO	N – Use sc	cientific nam	es of plants		
Tree Stratum (Plot Size: 30 ft)		% Cover	Domina	ant Species?	Indicator Status	Dominance Test Worksheet:	
Fraxinus pennsyvanica		85	⊠ Y	es 🗌 No	FACW	Number of dominant	
2			□ Y	es 🗌 No		species that are OBL, FACW, or FAC: 4 (A)	
3				es 🗌 No		Total number of	
4				es 🗌 No		dominant species	
						across all strata: 4 (B) Percent of dominant	
5				es 🗌 No		species that are OBL,	
		85	= Total	Cover		FACW or FAC: 100% (A/I	B)
Saplings/Shrub Stratum (Plot Size:	15 ft)					Prevalence Index Worksheet:	
1			□ Y	es 🗌 No		Total % Cover of: Mu	ıltiply By:
2			□ Y	es 🗌 No		OBL species: 20 x 1	20
3			□ Y	es 🗌 No		FACW species: 90 x 2	180
4			□ Y	es 🗌 No		FAC species: x 3	
5			□ Y	es 🗌 No		FACU species: x 4	
			= Total	Cover		UPL species: x 5	
Herb Stratum (Plot size: 5 ft)						Column Total: 110 (A)	200 (B)
Carex lacustris		20	⊠ Y	es 🗌 No	OBL	Prevalence Index (B/A) =	1.8
Pilea pumila		5	⊠ v	es 🗌 No	EACW	Hydrophytic Vegetation Indicators	s:
•		3		es 🔲 No	FACW	Rapid Test for Hydrophytic Vege	etation
3			□ Y	es 🗌 No		☑ Dominance Test is >50%	
4			□ Y	es 🗌 No		\square Prevalence Index is $\leq 3.0^{1}$	
5			□ Y	es 🗌 No		☐ Morphological Adaptations¹ (Pro	
6			□ Y	es 🗌 No		supporting data in Remarks or on sep	parate sheet)
7			□ Y	es 🗌 No		☐ Problematic Hydrophytic Vegeta	ıtion
8			□ Y	es 🗌 No		(Explain in Remarks)	
9			□ Y	es 🗌 No		¹ Indicators of hydric soil and wetland	
10			□ Y	es 🗌 No		must be present, unless disturbed or p	problematic.
		25		tal Cover			
Woody Vine Stratum (Plot size: 1	5 ft)						
1			ПУ	es 🗌 No		Hydrophytic Vacatation Proceeds Yes [□ No
2				es 🗌 No		Vegetation Present?	
				tal Cover			
Remarks:			-10	00,01			



				50	JILS			
Profile Description:	: (Describe to the dep	th needed t	o document the indi	cator or co	onfirm the a	bsence of	indicators	i.)
Depth (in)	Matrix		<u> </u>	ledox Featu	res		Texture	Remarks
<u>Beptir (III)</u>	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	Kemarks
0-18	10 YR 3/1	100					SiCL	
18-30	10 YR 4/1	90	7.5 YR 4/6	10	С	M	SiCL	
30+	2.5 Y 4/1	90	7.5 YR 4/6	20	С	M	SiCL	
301	2.5 1 4/1	70	7.5 TK 4/0	20	C	141	SICL	
								
								
				-				
¹Type: C=Concentra	tion, D=Depletion, RM	I=Reduced N	Matrix. CS=Covered	or Coated S	and Grains.	² Locati	ion: PL=P	ore Lining, M=Matrix
Hydric Soil Indicat		- Treduced I	autin, ob covered	or coured b	una Granisi	20041		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)			☐ Sandy Gley	ed Matrix ((S4)			Coast Prairie Redox (A16)
Histic Epipedon	(A2)		☐ Sandy Red		(51)			☐ Iron-Manganese Masses (F12)
☐ Black Histic (A3			☐ Stripped M					Other (Explain in Remarks)
☐ Hydrogen Sulfid			Loamy Mu		1 (F1)			
☐ Stratified Layers			☐ Loamy Gle	yed Matrix	(F2)			
2 cm Muck (A10	0)		☐ Depleted M	Iatrix (F3)				
Depleted Below	Dark Surface (A11)		☐ Redox Dar	k Surface (I	F6)			
☐ Thick Dark Surf			☐ Depleted D					³ Indicators of hydrophytic vegetation and wetland
Sandy Mucky M			☐ Redox Dep	ressions (F	8)			hydrology must be present, unless disturbed
5 cm Mucky Pea							1	or problematic.
Restrictive layer (if	observed):							
Type:								Hydric Soil Present? ⊠ Yes □ No
Depth (in):								
Remarks:							Į.	
				HYDE	OLOGY			
Wetland Hydrology	Indicators:							
	Primary Indicators	(minimum c	of one is required; ch	eck all that	apply)			Secondary Indicators (minimum of two required)
Surface Water (A	-		☐ Water Stair					Surface Soil Cracks (B6)
☐ High Water Table	,		Aquatic Fa		(2))			Drainage Patterns (B10)
			☐ True Aquat		314)			☐ Dry-Season Water Table (C2)
☐ Water Marks (B	1)		☐ Hydrogen S	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)
☐ Sediment Depos	its (B3)		Oxidized R	hizosphere	s on Living I	Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (I			☐ Presence of	Reduced I	ron (C4)			☐ Stunted or Stressed Plants (D1)
Algal Mat or Cru			☐ Recent Iron	Reduction	in Tilled So	ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B			Thin Muck					☐ FAC-Neutral Test (D5)
	ole on Aerial Imagery (Gauge or V					
_ 1 , c	ted Concave Surface (I	38)	Other (Exp	lain in Rem	arks)		1	
Field Observations:	•							
Surface Water Prese	nt?	No 🛚 No	Depth (in):					
Water Table Present	? Xes	No 🗌 No	Depth (in): 30					Wetland Hydrology Present? ☐ Yes ☐ No
Saturation Present?	⊠ Yes	s 🔲 No	Depth (in): Sur	rface				victianu fryurology Frescht:
(includes capillary f								
	Data (stream gage, mon	itoring well,	aerial photos, previo	ous inspecti	ons), if avail	able:	l l	
Domortos								
Remarks:								



Whites & Survey						
Project/Site: Minnesota River Gree	enway - Eagan Alignment		City/Coun	ity: Eagan/Dak	ota	Sampling Date: 9/3/13
Applicant/Owner: Dakota County			State: MN	1		Sampling Point: W2-SB-B
Investigator(s): Dan Donayre			Sec, Twp,	Ran: 18,27N,2	23W	
Landform (hillside, terrace, etc.): B	Backslope		Local Reli	ief (concave, co	onvex, none): Slope	
Slope (%): 1-3	Lat:		Long:			Datum:
Soil Map Unit Name: Seelyeville n	nuck		NWI or W	WI Classificati	ion: PEMCd	
Are climatic/hydrologic conditions Are Vegetation □, Soil □, or Hy	• •	•	⊠ Yes		no explain in remark	ss) ent? ⊠ Yes □ No
Are Vegetation ☐, Soil ☐, or Hy	ydrology naturally problen	natic?		(If needed, ex	plain any answers ir	n Remarks.)
		SUMN	MARY O	F FINDING	S	
Hydrophytic Vegetation Present?	⊠ Yes □ No					
Hydric Soil Present?	☐ Yes ⊠ No				ed Area within	☐ Yes ⊠ No
Wetland Hydrology Present?	☐ Yes ⊠ No			a wetland?		
Remarks:						
	VEG	ETATION	V – Use so	cientific nam	es of plants	
Tree Stratum (Plot Size: 30 ft)	(% Cover	Domin	ant Species?	Indicator Status	Dominance Test Worksheet:
Fraxinus pennsyvanica		40	⊠ Y	es 🗌 No	FACW	Number of dominant
2. Ulmus americana		5	□ Y	es 🛛 No	FACW	species that are OBL, FACW, or FAC: 2 (A)
3			ПΥ	es 🗌 No		Total number of
4				'es □ No		dominant species
				_		across all strata: 2 (B) Percent of dominant
5				es No		species that are OBL,
		45	= Total	Cover		FACW or FAC: 100% (A/B)
Saplings/Shrub Stratum (Plot Size:	15 ft)					Prevalence Index Worksheet:
1			□ Y	es 🗌 No		Total % Cover of: Multiply By:
2			□ Y	es 🗌 No		OBL species: x 1
3			□ Y	'es 🗌 No		FACW species: 135 x 2 270
4			□ Y	es 🗌 No		FAC species: x 3
5			□ Y	'es 🗌 No		FACU species: x 4
			= Total	Cover		UPL species: x 5
Herb Stratum (Plot size: 5 ft)						Column Total: 135 (A) 270 (B)
Phalaris arundinacea		90	⊠ Y	es 🗌 No	FACW	Prevalence Index $(B/A) = 2.0$
2						Hydrophytic Vegetation Indicators:
2			ЦΥ	es 🗌 No		□ Rapid Test for Hydrophytic Vegetation
3			□ Y	es 🗌 No		☑ Dominance Test is >50%
4			□ Y	es 🗌 No		☐ Prevalence Index is < 3.01
5			□ Y	es 🗌 No		☐ Morphological Adaptations¹ (Provide
6			□ Y	es 🗌 No		supporting data in Remarks or on separate sheet)
7				es 🗌 No		☐ Problematic Hydrophytic Vegetation
8				es 🗌 No		(Explain in Remarks)
9			_	es No		¹ Indicators of hydric soil and wetland hydrology
10				es 🗌 No		must be present, unless disturbed or problematic
···				otal Cover		
Woody Vinc Charter (D)	5 ft)	90	- 10	nai Covei		
Woody Vine Stratum (Plot size: 1	J 11 <u>)</u>			_		Hydrophytic NA NA
1				es 🗌 No		Vegetation Present?
2				es 🗌 No		
			=To	tal Cover		
Remarks:						



(Midwest Region)

Profile Description:	(Describe to the de	pth needed to	o document the indi	cator or co	nfirm the al	osence of	indicators	.)
5 4 (1)	Matrix		<u>R</u>	ledox Featu	res			5
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
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	
							<u></u>	
							-	
						·	-	
¹Type: C=Concentrat	tion, D=Depletion, RM	 ∕I=Reduced N	Matrix. CS=Covered	or Coated S	and Grains.	² Locati	ion: PL=P	ore Lining, M=Matrix
Hydric Soil Indicate								Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16)
Histic Epipedon	(A2)		☐ Sandy Red		,			☐ Iron-Manganese Masses (F12)
☐ Black Histic (A3	3)		☐ Stripped M	atrix (S6)				Other (Explain in Remarks)
☐ Hydrogen Sulfid	le (A4)		☐ Loamy Mu	cky Minera	l (F1)			
☐ Stratified Layers	(A5)		☐ Loamy Gle	yed Matrix	(F2)			
2 cm Muck (A10			Depleted M					
Depleted Below			Redox Dar	,	,			
Thick Dark Surfa			☐ Depleted D					³ Indicators of hydrophytic vegetation and wetland
☐ Sandy Mucky M☐ 5 cm Mucky Pea			☐ Redox Dep	ressions (F	5)			hydrology must be present, unless disturbed or problematic.
Restrictive layer (if								
Type:	,,,							Hydric Soil Present? ☐ Yes ☒ No
Depth (in):								Ilyune Bull Testene.
Remarks:								
Romans.								
				HYDR	OLOGY			
Wetland Hydrology	Indicators:							
	Primary Indicators	s (minimum o	of one is required; ch					Secondary Indicators (minimum of two required)
Surface Water (A			Water Stair		(B9)			Surface Soil Cracks (B6)
High Water Tabl	le (A2)		Aquatic Fa					Drainage Patterns (B10)
Saturation (A3)			☐ True Aquat					Dry-Season Water Table (C2)
☐ Water Marks (B:☐ Sediment Deposit			☐ Hydrogen S			Poots (C2)		☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (E			☐ Presence of		Ü	10018 (C3)		Stunted or Stressed Plants (D1)
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B			☐ Thin Muck			15 (00)		☐ Geomorphic Fosition (B2) ☐ FAC-Neutral Test (D5)
	ole on Aerial Imagery	(B7)	☐ Gauge or V					
☐ Sparsely Vegetat	ted Concave Surface (B8)	Other (Exp					
Field Observations:	:							
Surface Water Preser	nt?	s 🛛 No	Depth (in):					
Water Table Present	? 🛛 Ye	s 🗌 No	Depth (in): 35					Westland Hydrology Present?
Saturation Present?	⊠ Ye	s 🗌 No	Depth (in): 15					Wetland Hydrology Present? ☐ Yes ☒ No
(includes capillary f	ringe)							
Describe Recorded I	Data (stream gage, mor	nitoring well,	aerial photos, previo	ous inspection	ons), if availa	able:		
Remarks:								
1								



193.620						
Project/Site: Minnesota River Greenway - Eagan Alignme	nt	City/Coun	nty: Eagan/Dak	ota	Sampling Date: 9/6/13	
Applicant/Owner: Dakota County		State: MN	N		Sampling Point: W2 SB-C	
Investigator(s): Dan Donayre		Sec, Twp,	Ran: 13,27N,2	24W		
Landform (hillside, terrace, etc.): Riverine basin		Local Reli	ief (concave, co	onvex, none): concav	e	
Slope (%): 0-1% Lat:		Long:			Datum:	
Soil Map Unit Name: Minneiska loam			WI Classificati			
•	:	⊠ Yes	_		-)	
Are climatic/hydrologic conditions on the site typical for the Are Vegetation , Soil , or Hydrology significan	-	△ 1es		no explain in remark	nt? 🛛 Yes 🗌 No	
Are Vegetation , Soil , or Hydrology naturally p	-			plain any answers in		
Ale vegetation [1, 501], of Hydrology [1] naturally [IARY O	F FINDING		Remarks.)	
Hydrophytic Vegetation Present? ✓ Yes No	5011211					
Hydric Soil Present?			Is the Sample	ed Area within	⊠ Yes □ No	
			a wetland?			
Wetland Hydrology Present? Yes No Remarks:						
Remarks.						
	VEGETATION	I – Use so	cientific nam	es of plants		
Tree Stratum (Plot Size: 30)	Absolute % Cover		ant Species?	Indicator Status	Dominance Test Worksheet:	
	Absolute // Cover		es No	indicator Status	Number of dominant	
1					species that are OBL,	
2			'es □ No		FACW, or FAC: 2 (A)	
3			es 🗌 No		Total number of dominant species	
4		□ Y	'es 🗌 No		across all strata: 2 (B)	
5		□ Y	'es 🗌 No		Percent of dominant	
		= Total	Cover		species that are OBL, FACW or FAC: 100% (A	A/B)
Saplings/Shrub Stratum (Plot Size: 15)					Prevalence Index Worksheet:	<u> </u>
1		□ Y	es No		Total % Cover of: N	Iultiply By:
2		— П Y	es □ No		OBL species: x 1	
3			es □ No		FACW species: 70 x 2	140
4			es □ No		FAC species: 20 x 3	60
5			'es □ No		FACU species: x 4	
J		= Total			UPL species: x 5	
Harl Charles (Diet sies 5)		= Total	Cover		·	200 (D)
Herb Stratum (Plot size: 5)					,	200 (B)
1. Phalaris arundinacea	60		'es 🗌 No	FACW	Prevalence Index (B/A) :	
2. Xanthium strumarium	20	⊠ Y	'es 🗌 No	FAC	Hydrophytic Vegetation Indicato	
3. Cyperus esculentus	10	□ Y	es 🛛 No	FACW	Rapid Test for Hydrophytic Ve	egetation
4		□ Y	es 🗌 No		☑ Dominance Test is >50%	
5		□ Y	'es 🗌 No		Prevalence Index is $\leq 3.0^{1}$	
6		□ Y	'es 🗌 No		☐ Morphological Adaptations¹ (P	
7		□ Y	'es 🗌 No		supporting data in Remarks or on s	eparate sheet)
8		□ Y	'es 🗌 No		☐ Problematic Hydrophytic Vege	etation
9		□ Y	es No		(Explain in Remarks)	
10		ПΥ	es No		¹ Indicators of hydric soil and wetla	
	90		otal Cover		must be present, unless disturbed o	r problematic.
Woody Vine Stratum (Plot size: 30)	20					
1		Пν	Zos □ No		W 1 1 2	
2			es □ No		Hydrophytic Vegetation Present?	Yes 🗌 No
<u></u>			es No		<u> </u>	
Damada (Indude shate much at home		= 10	otal Cover			
Remarks (Include photo numbers here or on a separate shee	et):					



(Midwest Region)

Profile Description:	(Describe to the de	oth needed to d	locument the indi	icator or co	nfirm the a	bsence of	indicators	.)
_	Matrix			Redox Featu				
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
0-35	10 YR 2/1	100					SiCL	
35+	Gley 2 4/5B	100					SiCL	
35+	Gicy 2 4/3B	100					SICL	
								
¹Type: C=Concentrat	ion, D=Depletion, RN	∕I=Reduced Ma	trix, MS = Masked	d Sand Grai	ns. ² Loca	tion: PL=l	Pore Lining	g, M=Matrix
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils3:
☐ Histosol (A1)			☐ Sandy Gley	yed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)
☐ Histic Epipedon	(A2)		☐ Sandy Red	ox (S5)				☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Black Histic (A3)		☐ Stripped M	latrix (S6)				☐ Dark Surface (S7) (LRR K, L)
☐ Hydrogen Sulfide	e (A4)		☐ Loamy Mu	cky Minera	l (F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)
2 cm Muck (A10			☐ Depleted M		10)			Other (Explain in Remarks)
☐ Depleted Below I ☐ Thick Dark Surfa			Redox Darl					31. di catano of hardroub di caracteti ca and acatan d
Sandy Mucky Mi	, ,		☐ Depleted D ☐ Redox Dep					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed
Sandy Wideky Wil	merar (31)		□ Redox Dep	ressions (17	"			or problematic.
Restrictive layer (if	observed):							
-	obser (eu).							Hydric Soil Present? ⊠ Yes □ No
Type:								Hydric Son Fresent:
Depth (in):								
Remarks:								
				HYDR	OLOGY			
Wetland Hydrology	Indicators:							
	Primary Indicators	(minimum of o	one is required; ch	eck all that	apply)			Secondary Indicators (minimum of two required)
☐ Surface Water (A	.1)		☐ Water Stair	ned Leaves	(B9)			Surface Soil Cracks (B6)
High Water Table			Aquatic Fa					☐ Drainage Patterns (B10)
☐ Saturation (A3)			☐ True Aquat	tic Plants (B	14)			☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)		☐ Hydrogen S	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)
Sediment Deposi			Oxidized R	-	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B			Presence of					Stunted or Stressed Plants (D1)
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B:☐ Inundation Visib		(D7)	☐ Thin Muck ☐ Gauge or V					☐ FAC-Neutral Test (D5)
l	ed Concave Surface (Other (Exp	,				
Field Observations:		/						
Surface Water Presen	nt? □ V△	s 🛛 No	Depth (in):					
			Depth (in):					
Water Table Present?		s 🛛 No	Depth (in): 27					Wetland Hydrology Present? ⊠ Yes □ No
Saturation Present?		s 🗌 No	Depui (iii). 27					
(includes capillary fr Describe Recorded D	•	nitoring well a	erial photos provid	nis inspecti	ons) if avail	ahle:		
Describe Recorded D	am (sucam gage, moi	mornig wen, at	zim pilotos, pievie	лаз тізрест	,110), 11 avall	aoic.		
Remarks:								



Project/Site: Minnesota River Greenway - Eagan Alignm	ent	City/Count	y: Eagan/Dak	tota	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,2	24W	
Landform (hillside, terrace, etc.): Terrace		Local Relie	ef (concave, co	onvex, none): Flat	
Slope (%): 0-1% Lat:		Long:			Datum:
Soil Map Unit Name: Minneiska loam		NWI or W	WI Classificati	ion:	
•	this time of year?	⊠ Yes	_		lra)
Are climatic/hydrologic conditions on the site typical for the Vegetation □, Soil □, or Hydrology □ significations in the site typical for the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, Soil □, or Hydrology □ significations in the Vegetation □, soil □, or Hydrology □ significations in the Vegetation □, soil □, or Hydrology □ significations in the Vegetation □, soil □, or Hydrology □ significations in the Vegetation □, soil □, or Hydrology □ significations in the Vegetation □, soil □, or Hydrology □ significations in the Vegetation □, soil □, or Hydrology □ significations in the Vegetation □, soil □, or Hydrology □ significations in the Vegetation □, soil □, or Hydrology □ significations in the Vegetation □, soil □, or Hydrology □ significations in the Vegetation □, soil □, or Hydrology □ significations in the Vegetation □, soil □, or Hydrology □ significations in the Vegetation □, soil □, or Hydrology □ significations in the Vegetation □, soil □, or Hydrology □ signification □, soil □, or Hydrology □ signification □, soil □, or Hydrology □ signification □, soil □, soi	•			no explain in remar	ent? ⊠ Yes □ No
Are Vegetation , Soil , or Hydrology anaturally	•			plain any answers i	
Are vegetation [], son [], or Hydrology [] naturally	•	# A DX7 O1			ii Keiliaiks.)
	SUMN	IAKY OI	F FINDING	iS .	
Hydrophytic Vegetation Present? X Yes No			Ic the Sample	ed Area within	_
Hydric Soil Present? ☐ Yes ☒ No			a wetland?	cu Area within	☐ Yes ⊠ No
Wetland Hydrology Present?					
Remarks:					
	VEGETATION	l – Use sc	ientific nam	es of plants	
<u>Tree Stratum</u> (Plot Size: 30)	Absolute % Cover	Domina	nt Species?	Indicator Status	Dominance Test Worksheet:
1		□ Ye	es 🗌 No		Number of dominant
2		_	es 🗆 No		species that are OBL,
					FACW, or FAC: 1 (A)
3		∐ Ye	es 🗌 No		Total number of dominant species
4		☐ Yee	es 🗌 No		across all strata: 1 (B)
5		□ Yee	es 🗌 No		Percent of dominant
		= Total	Cover		species that are OBL, FACW or FAC: 100% (A/B)
Saplings/Shrub Stratum (Plot Size: 15)					Prevalence Index Worksheet:
1		∏ Ye	es 🗌 No		Total % Cover of: Multiply By:
2			es 🗌 No		OBL species: x 1
3			es 🗆 No		FACW species: 100 x 2 200
4			es 🗌 No		FAC species: x 3
5		_	es 🗌 No		FACU species: x 4
		= Total	Cover		UPL species: x 5
<u>Herb Stratum</u> (Plot size: 5)					Column Totals: 100 (A) 200 (B)
Phalaris arundinacea	100	X Ye	es 🗌 No	FACW	Prevalence Index (B/A) = 2.0
2		□ Ye	es 🗌 No		Hydrophytic Vegetation Indicators:
3		□ Ye	es 🗌 No		□ Rapid Test for Hydrophytic Vegetation
4		☐ Yee	es 🗌 No	<u></u>	☑ Dominance Test is >50%
5		П Ү	es 🗌 No		\boxtimes Prevalence Index is $\leq 3.0^{1}$
6			es 🗌 No		☐ Morphological Adaptations¹ (Provide
7			es 🗌 No		supporting data in Remarks or on separate sheet)
8			es 🗌 No		
9					Problematic Hydrophytic Vegetation (Explain in Remarks)
			es 🗌 No		, ,
10			es 🗌 No		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	100	= Tot	tal Cover		
Woody Vine Stratum (Plot size: 30)					
1		□ Ye	es 🗌 No		Hydrophytic N. N.
2			es 🗌 No		Vegetation Present?
			tal Cover		
Remarks (Include photo numbers here or on a separate sh	eet):				_1
Flore Name of the department of the separate sin	· · · · /•				



Profile Description: (Descri	he to the dent	h needed to	document the indi	cator or co		heanca of	indicators	,)	
Trome Description. (Descri	Matrix	n needed to		edox Featur		osence of 1	muicators	o.)	
Depth (in)	r (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Re</u>	<u>marks</u>
	YR 2/1	100	Color (moisty	<u>70</u>	<u> 13pc</u>	<u> 200</u>	CI		
							SL		
15+ 10 3	YR 4/4	100					SL		
¹ Type: C=Concentration, D=D	epletion, RM:	=Reduced Ma	atrix, MS = Masked	Sand Grain	s. ² Loca	tion: PL=I	Pore Linin	g, M=Matrix	
Hydric Soil Indicators:	•		,					Indicators for Problematic 1	Hydric Soils ³ :
Histosol (A1)			☐ Sandy Gley	ed Matrix (S	S4)			☐ Coast Prairie Redox (A16	() (LRR K, L, R)
☐ Histic Epipedon (A2)			☐ Sandy Redo		,			☐ Iron-Manganese Masses (
☐ Black Histic (A3)			☐ Stripped Ma	atrix (S6)				☐ Dark Surface (S7) (LRR	K, L)
Hydrogen Sulfide (A4)			Loamy Muc					5 cm Mucky Peat or Peat	
Stratified Layers (A5)			Loamy Gley		(F2)			☐ Very Shallow Dark Surfa	
2 cm Muck (A10)	C (A 11)		☐ Depleted M					Other (Explain in Remark	as)
Depleted Below Dark Surf			Redox Dark					37 - 4:	
☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1			☐ Depleted Da					³ Indicators of hydrophytic veg hydrology must be preser	
Sandy Mucky Mineral (S1	,		☐ Redox Depi	essions (1 o	,			or problematic.	it, uniess disturbed
Restrictive layer (if observed	D:							, ,	
								Hydric Soil Present?	☐ Yes ⊠ No
Type:								flydric Son Fresent:	
Depth (in):									
Remarks:									
				HYDR	OLOGY				
Wetland Hydrology Indicato	ors:								
Prima	ry Indicators (minimum of	one is required; che	ck all that a	pply)			Secondary Indicators (min	nimum of two required)
Surface Water (A1)	*		☐ Water Stain					Surface Soil Cracks (B6)	<u> </u>
☐ High Water Table (A2)			☐ Aquatic Fat	,	/			☐ Drainage Patterns (B10)	
☐ Saturation (A3)			☐ True Aquati		14)			☐ Dry-Season Water Table	(C2)
☐ Water Marks (B1)			☐ Hydrogen S	ulfide Odor	(C1)			☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)			☐ Oxidized R	-	_	Roots (C3)		☐ Saturation Visible on Aer	• • •
Drift Deposits (B3)			Presence of		. ,			Stunted or Stressed Plants	
Algal Mat or Crust (B4)			Recent Iron			ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B5)	5.1 T	17)	☐ Thin Muck	,	*			☐ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aer ☐ Sparsely Vegetated Conca			☐ Gauge or W☐ Other (Expl						
_ 1	ve surrace (b	6)	☐ Other (Expi	ani in Kenia	uks)				
Field Observations:		N N	Donate C. S.						
Surface Water Present?	Yes		Depth (in):						
Water Table Present?	Yes		Depth (in):					Wetland Hydrology Present	? ☐ Yes ⊠ No
Saturation Present?	☐ Yes	⊠ No	Depth (in):	<u></u>				· 	
(includes capillary fringe)					\				
Describe Recorded Data (strea	m gage, moni	toring well, a	erial photos, previo	us inspectio	ns), if avail	able:			
Remarks:									
Remarks:									



16.50 W 2011										
Project/Site: Minnesota River Greenway - Eagan Alignment			ty: Eagan/Dak	ota	Sampling Date: 9/7/13					
Applicant/Owner: Dakota County			1		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 the	is time of year?	Yes No (if no explain in remarks)								
Are Vegetation □, Soil □, or Hydrology □ significan	-	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?				ed Area within	⊠ Yes □ No					
Wetland Hydrology Present? ✓ Yes No			a wetland?							
Remarks:										
	VEGETATION	V – Use sc	cientific nam	es of plants						
Tree Stratum (Plot Size: 30)	Absolute % Cover		ant Species?	Indicator Status	Dominance Test Worksheet:					
1			es 🗌 No		Number of dominant					
2.			es 🗌 No		species that are OBL,					
					FACW, or FAC: 1 (A)					
3		☐ Y	es 🗌 No		Total number of dominant species					
4		□ Y	es 🗌 No		across all strata: 1 (B)					
5		□ Y	es 🗌 No		Percent of dominant					
		= Total	Cover		species that are OBL, FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)	aplings/Shrub Stratum (Plot Size: 15)									
1		□ Y	es 🗌 No		Total % Cover of: Multiply By:					
2		□ Y	es 🗌 No		OBL species: x 1					
3		— П у	es 🗌 No		FACW species: 100 x 2 200					
4			es 🗌 No		FAC species: x 3					
5			es 🗌 No		FACU species: x 4					
J			otal Cover		UPL species: x 5					
Harl Charles (Diet sies 5)		= Total	Cover							
Herb Stratum (Plot size: 5)					()					
Phalaris arundinacea	100		es 🗌 No	FACW	Prevalence Index (B/A) = 2.0					
2		□ Y	es 🗌 No		Hydrophytic Vegetation Indicators:					
3		☐ Y	es 🗌 No		Rapid Test for Hydrophytic Vegetation					
4		□ Y	es 🗌 No		☑ Dominance Test is >50%					
5		□ Yellow	es 🗌 No		Prevalence Index is < 3.01					
6		□ Y	es 🗌 No		☐ Morphological Adaptations¹ (Provide					
7		□ Y	es 🗌 No		supporting data in Remarks or on separate sheet)					
8		□ Y	es 🗌 No		☐ Problematic Hydrophytic Vegetation					
9		Пу	es 🗌 No		(Explain in Remarks)					
10			es 🗌 No		¹ Indicators of hydric soil and wetland hydrology					
	100		tal Cover		must be present, unless disturbed or problematic.					
Woody Vine Stratum (Plot size: 30)	100	10								
1 2			es 🗌 No		Hydrophytic Vegetation Present?					
			es 🗌 No							
David and david and david		= То	tal Cover							
Remarks (Include photo numbers here or on a separate sheet	et):									



(Midwest Region)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
_		edox Featur								
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>		
0-20	10 YR 2/1	100					Muck			
20+		100					Peat			
20+		100					1 cat			
¹Type: C=Concentration	on, D=Depletion, RM	I=Reduced Mat	rix, MS = Masked	Sand Grain	ns. ² Loca	tion: PL=I	Pore Lining	g, M=Matrix		
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. *Location: PL=Pore Lining, M=Matrix Indicators for Problematic Hydric Soils3:										
Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)		
☐ Histic Epipedon (A	A2)		☐ Sandy Redo		ĺ			☐ Iron-Manganese Masses (F12) (LRR K, L, R)		
☐ Black Histic (A3)			☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)		
☐ Hydrogen Sulfide	(A4)		☐ Loamy Mu	cky Mineral	(F1)			5 cm Mucky Peat or Peat (S3) (LRR , K , L , R)		
Stratified Layers (Loamy Gle	•	(F2)			☐ Very Shallow Dark Surface (TF12)		
2 cm Muck (A10)			☐ Depleted M					Other (Explain in Remarks)		
Depleted Below D			Redox Dark					27 12		
☐ Thick Dark Surface	, ,		☐ Depleted D ☐ Redox Dep					³ Indicators of hydrophytic vegetation and wetland		
☐ Sandy Mucky Mir	ierai (S1)		☐ Kedox Dep.	iessions (Fo	')			hydrology must be present, unless disturbed or problematic.		
Restrictive layer (if o	hserved).							of problematic.		
	bber ved).							Hadrig Cail Broson49 No. 1 No.		
Type:								Hydric Soil Present? ⊠ Yes □ No		
Depth (in):										
Remarks:										
				HYDR	OLOGY					
Wetland Hydrology	Indicators:									
Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required)										
☐ Surface Water (A)	-		☐ Water Stain					Surface Soil Cracks (B6)		
☐ High Water Table								☐ Drainage Patterns (B10)		
☐ Saturation (A3)	` ′		☐ True Aquat		14)			☐ Dry-Season Water Table (C2)		
☐ Water Marks (B1)	1		☐ Hydrogen S	Sulfide Odor	(C1)			☐ Crayfish Burrows (C8)		
☐ Sediment Deposits	s (B2)		☐ Oxidized R	hizospheres	on Living F	Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3			Presence of					Stunted or Stressed Plants (D1)		
Algal Mat or Crus								Geomorphic Position (D2)		
	☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)							☐ FAC-Neutral Test (D5)		
☐ Inundation Visible on Aerial Imagery (B7) ☐ Gauge or Well Data (D9) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Other (Explain in Remarks)										
Field Observations:	d Colicave Surface (1	100)	☐ Other (Expi	iaiii iii Keiiia	uks)					
	9 □ 3 7.	. M . M.	Donald Co.							
Surface Water Present		s 🛛 No	Depth (in):							
Water Table Present?	_	s 🛛 No	Depth (in):					Wetland Hydrology Present? ⊠ Yes □ No		
Saturation Present?	⊠ Yes	s 🗌 No	Depth (in): 10							
(includes capillary fringe)										
Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:										
Remarks:										



0.8.1										
Project/Site: Minnesota River Greenway - Eagan Alignment			nty: Eagan/Dak	ota	Sampling Date: 9/7/13					
Applicant/Owner: Dakota County			N		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:					Datum:					
Soil Map Unit Name: Seelyeville muck			WI Classificati	ion: PEMCd						
Are climatic/hydrologic conditions on the site typical for this time of year?										
Are Vegetation □, Soil □, or Hydrology □ significant	•	 ✓ Yes ☐ No (if no explain in remarks) Are "normal circumstances" present? ☐ Yes ☐ No 								
Are Vegetation □, Soil □, or Hydrology □ naturally p	-			plain any answers in						
SUMMARY OF FINDINGS										
Hydrophytic Vegetation Present? ☐ Yes ☐ No	301111	/MAKY OF FINDINGS								
			Is the Sample	ed Area within	D. V M.N.					
Hydric Soil Present? ✓ Yes No			a wetland?		☐ Yes ⊠ No					
Wetland Hydrology Present? Yes 🛛 No										
Remarks:										
	VEGETATION	I – Use so	cientific nam	es of plants						
<u>Tree Stratum</u> (Plot Size: 30)	Absolute % Cover	Domin	ant Species?	Indicator Status	Dominance Test Worksheet:					
1		□ Y	'es 🗌 No		Number of dominant					
2		□ Y	'es 🗌 No		species that are OBL, FACW, or FAC: 1 (A)					
3		Пу	es 🗌 No		Total number of					
4		☐ Yes ☐ No			dominant species					
			_		across all strata: 1 (B) Percent of dominant					
5			es 🗌 No		species that are OBL,					
		= Total	l Cover		FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)					Prevalence Index Worksheet:					
1		□ Y	'es 🗌 No		Total % Cover of: Multiply By:					
2		□ Y	'es 🗌 No		OBL species: x 1					
3		□ Y	'es 🗌 No		FACW species: 100 x 2 200					
4		□ Y	'es 🗌 No		FAC species: x 3					
5		□ Y	es No	<u></u>	FACU species: 5 x 4 20					
		= Total	l Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)					Column Totals: 105 (A) 220 (B)					
Phalaris arundinacea	100	M v	es □ No	FACW	Prevalence Index $(B/A) = 2.1$					
Cirsium arvense			es ∐ No ′es ⊠ No		Hydrophytic Vegetation Indicators:					
	n arvense 5			FACU						
3			'es □ No		Rapid Test for Hydrophytic Vegetation					
4			es 🗌 No		Dominance Test is >50%					
5		□ Y	'es 🗌 No		\square Prevalence Index is $\leq 3.0^{1}$					
6		□ Y	'es 🗌 No		☐ Morphological Adaptations¹ (Provide					
7		□ Y	'es 🗌 No		supporting data in Remarks or on separate sheet)					
8		□ Y	'es 🗌 No		☐ Problematic Hydrophytic Vegetation					
9		□ Y	'es 🗌 No		(Explain in Remarks)					
10		□ Y	'es 🗌 No		¹ Indicators of hydric soil and wetland hydrology					
	105		otal Cover		must be present, unless disturbed or problematic.					
Woody Vine Stratum (Plot size: 30)										
1		-	es 🗌 No		**					
2.					Hydrophytic					
<u> </u>			'es ☐ No							
Damada (Indude share a street		= 10	otal Cover							
Remarks (Include photo numbers here or on a separate shee	et):									



Profile Description	(Describe to the dep	ath peeded to	document the indi	ootor or co		bearea of	indicators	
Trome Description.	Matrix	om needed to		edox Featur		osence of 1	muicators	·· <i>)</i>
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>		Loc2	Texture	<u>Remarks</u>
0.20			Color (moist)	70	Type ¹	<u>L0C-</u>		
0-38	10 YR 2/1	100					Muck	
38+		100					Peat	
		· 						
								
								
	tion, D=Depletion, RM	1=Reduced M	atrix, $MS = Masked$	Sand Grain	is. ² Loca	tion: PL=I	Pore Linin	g, M=Matrix
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			Sandy Gley		S4)			Coast Prairie Redox (A16) (LRR K, L, R)
Histic Epipedon			☐ Sandy Redo					☐ Iron-Manganese Masses (F12) (LRR K, L, R)
Black Histic (A3			☐ Stripped M		(F1)			Dark Surface (S7) (LRR K, L)
☐ Hydrogen Sulfid☐ Stratified Layers			Loamy Muc Loamy Gle					☐ 5 cm Mucky Peat or Peat (S3) (LRR, K, L, R) ☐ Very Shallow Dark Surface (TF12)
2 cm Muck (A10			☐ Depleted M		(F2)			☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
☐ Depleted Below			☐ Redox Dark		6)			Odici (Explain in Kellidiks)
☐ Thick Dark Surfa			☐ Depleted D					³ Indicators of hydrophytic vegetation and wetland
☐ Sandy Mucky M			Redox Dep					hydrology must be present, unless disturbed
			•					or problematic.
Restrictive layer (if	observed):							
Type:								Hydric Soil Present? ⊠ Yes □ No
Depth (in):								
Remarks:								
Kemarks.								
				HYDR	OLOGY			
Wetland Hydrology	Indicators:							
Wettana Hydrology		(minimum of	ono is required, she	als all that a	annler)			Secondary Indicators (minimum of two required)
П с «С		(IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	one is required; che					Secondary Indicators (minimum of two required)
☐ Surface Water (A☐ High Water Tabl			☐ Water Stain ☐ Aquatic Fai		B9)			☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10)
Saturation (A3)	le (A2)		☐ Aquatic Fat		14)			☐ Dry-Season Water Table (C2)
☐ Water Marks (B)	1)		☐ Hydrogen S					Crayfish Burrows (C8)
☐ Sediment Deposi			☐ Oxidized R			Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (E			☐ Presence of	-	_			Stunted or Stressed Plants (D1)
☐ Algal Mat or Cru			☐ Recent Iron	Reduction	in Tilled So	ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B.	5)		☐ Thin Muck	Surface (C	7)			☐ FAC-Neutral Test (D5)
	le on Aerial Imagery (☐ Gauge or W	ell Data (D	9)			
☐ Sparsely Vegetat	ted Concave Surface (B8)	Other (Expl	ain in Rema	arks)			
Field Observations:	:							
Surface Water Preser	nt?	s 🛛 No	Depth (in):					
Water Table Present	?	s 🛛 No	Depth (in):					W. (1 W. 1 D. 10 D. 17 M. 17 17 17 17 17 17 17 1
Saturation Present?		s 🛛 No	Depth (in): 22					Wetland Hydrology Present? ☐ Yes ☒ No
(includes capillary fi	_							
	Data (stream gage, mor	nitoring well,	aerial photos, previo	us inspection	ons), if avail	able:		
	20.	= '	_ • •	•				
D								
Remarks:								



Meers & Survey									
Project/Site: Minnesota River Gree	nway - Eagan Alignment	City/C	ounty: Eagan/Dak	cota	Sampling Date: 9/5/13				
Applicant/Owner: Dakota County		State:	MN		Sampling Point: W2 SB-G				
Investigator(s): Dan Donayre		Sec, T	wp, Ran: 18,27N,2	23W					
Landform (hillside, terrace, etc.): E	asin	Local	Local Relief (concave, convex, none): Convex						
Slope (%): 0-1	Lat:	Long:			Datum:				
Soil Map Unit Name: Seelyville m	uck, sloping	NWI o	or WWI Classificati	ion: PEMCd					
Are climatic/hydrologic conditions Are Vegetation , Soil , or H	**	-		no explain in remark circumstances" prese					
Are Vegetation ☐, Soil ☐, or H	ydrology 🔲 naturally problema	tic?	(If needed, ex	xplain any answers in	Remarks.)				
		SUMMARY	OF FINDING	SS					
Hydrophytic Vegetation Present?	⊠ Yes □ No								
Hydric Soil Present?	Yes □ No		Is the Sample a wetland?	ed Area within	⊠ Yes □ No				
Wetland Hydrology Present?	Yes □ No		u wetana.						
Remarks:									
	VEGE	TATION – Use	e scientific name	es of plants					
Tree Stratum (Plot Size: 30 ft)	<u>%</u>	Cover Doi	minant Species?	Indicator Status	Dominance Test Worksheet:				
Fraxinus pennsylvanica		70	Yes 🗌 No	FACW	Number of dominant				
Acer negundo		20	Yes 🗌 No	FAC	species that are OBL, FACW, or FAC: 4 (A)				
3] Yes □ No		Total number of				
4	_		Yes No		dominant species across all strata: 4 (B)				
5	-		Yes No		Percent of dominant				
J	-				species that are OBL,				
Canlings/Charle Ctastons (Dist Cine)	THE HOLLING								
Saplings/Shrub Stratum (Plot Size:	13 11)	_	I Van □ Na		Prevalence Index Worksheet:				
1	=		Yes No		Total % Cover of: Multiply By:				
2	_		Yes No		OBL species: 5 x 1 5				
3 4	=		Yes No		FACW species: 170 x 2 340 FAC species: 20 x 3 60				
	-] Yes □ No] Yes □ No		*				
5	_		otal Cover		FACU species: x 4 V1 Lypecies: x 5				
Harly Chartern (Diet sines 5 ft)	-	= 1	otai Covei		*				
Herb Stratum (Plot size: 5 ft)									
Phalaris arundinacea		80	Yes 🗌 No	FACW	Prevalence Index (B/A) = 2.1				
2. Phragmities australis		20	Yes 🗌 No	FACW	Hydrophytic Vegetation Indicators: ☑ Rapid Test for Hydrophytic Vegetation				
Carex lacustris		5 🗆	Yes 🛛 No	OBL	☑ Dominance Test is >50%				
4			Yes No	022	 ✓ Prevalence Index is ≤ 3.0¹ 				
5	-		Yes No		☐ Morphological Adaptations¹ (Provide				
6	-		Yes No		supporting data in Remarks or on separate sheet)				
7	-		Yes No		☐ Problematic Hydrophytic Vegetation				
8	=		Yes No		(Explain in Remarks)				
9	_		Yes No		¹ Indicators of hydric soil and wetland hydrology				
10	-		Yes No		must be present, unless disturbed or problematic.				
10.	-		Total Cover						
Woody Vine Stratum (Plot size: 1		105 =	- Tomi Covei						
•	J 11 <u>1</u>	_	1 v 🗆 ×		Hydrophytic Voc No				
1	=		Yes No		Vegetation Present?				
2	_		Yes No						
Pamarks	_	=	= Total Cover						
Remarks:									



		SOILS			
Profile Description: (Desc	cribe to the depth needed t	o document the indicator or confirm	the absence of i	indicators.)	
Danth (in)	<u>Matrix</u>	Redox Features		Т	Demonto
Depth (in)	olor (moist) %	Color (moist) % Type	pe¹ Loc²	<u>Texture</u>	<u>Remarks</u>
0+ 1	0 YR 2/1 100			Muck	
	100			Muck	
			_		
				<u></u>	
					
			_		
¹ Type: C=Concentration, D	=Depletion, RM=Reduced I	Matrix, CS=Covered or Coated Sand G	rains. ² Location	on: PL=Por	e Lining, M=Matrix
Hydric Soil Indicators:				Iı	ndicators for Problematic Hydric Soils3:
Histosol (A1)		☐ Sandy Gleyed Matrix (S4)			Coast Prairie Redox (A16)
☐ Histic Epipedon (A2)		☐ Sandy Redox (S5)			Iron-Manganese Masses (F12)
☐ Black Histic (A3)		☐ Stripped Matrix (S6)			Other (Explain in Remarks)
☐ Hydrogen Sulfide (A4)		☐ Loamy Mucky Mineral (F1)			
☐ Stratified Layers (A5)		☐ Loamy Gleyed Matrix (F2)			
2 cm Muck (A10)		☐ Depleted Matrix (F3)			
☐ Depleted Below Dark S	Surface (A11)	☐ Redox Dark Surface (F6)			
☐ Thick Dark Surface (A)	,	☐ Depleted Dark Surface (F7)		3I	ndicators of hydrophytic vegetation and wetland
Sandy Mucky Mineral		Redox Depressions (F8)			hydrology must be present, unless disturbed
5 cm Mucky Peat or Pe	at (S3)				or problematic.
Restrictive layer (if observ	ved):				
Type:				Н	lydric Soil Present?
Depth (in):					
Remarks:					
		HYDROLO	OGY		
Wetland Hydrology Indic	ators:				
Pri	mary Indicators (minimum	of one is required; check all that apply)			Secondary Indicators (minimum of two required)
Surface Water (A1)	*	☐ Water Stained Leaves (B9)		Г	Surface Soil Cracks (B6)
☐ High Water Table (A2)		Aquatic Fauna (B13)		_	` ′
Saturation (A3)		☐ True Aquatic Plants (B14)		_	Dry-Season Water Table (C2)
☐ Water Marks (B1)		☐ Hydrogen Sulfide Odor (C1)			Crayfish Burrows (C8)
Sediment Deposits (B3))	Oxidized Rhizospheres on Li	ving Roots (C3)	Ē	
☐ Drift Deposits (B3)		☐ Presence of Reduced Iron (C	4)		Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Till	led Soils (C6)	Σ	Geomorphic Position (D2)
☐ Iron Deposits (B5)		☐ Thin Muck Surface (C7)		D	FAC-Neutral Test (D5)
☐ Inundation Visible on A	Aerial Imagery (B7)	☐ Gauge or Well Data (D9)			
☐ Sparsely Vegetated Cor	ncave Surface (B8)	☐ Other (Explain in Remarks)			
Field Observations:					
Surface Water Present?	☐ Yes ☒ No	Depth (in):			
Water Table Present?	∑ Yes □ No	Depth (in): 40			
		Depth (in): 10		V	Vetland Hydrology Present? ☐ Yes ☐ No
Saturation Present?	Yes □ No	20pm (m). 10			
(includes capillary fringe)	room gago, monitoring wall	aerial photos, previous inspections), if	f available:		
Describe Recorded Data (St	ream gage, monnormy wen	actiai pilotos, previous inspections), ii	avanavie.		
Remarks:					



The State of the S									
Project/Site: Minnesota River Greenway - Eagan Align	ment	City/County: Eagan/Dak	cota	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 fo Are Vegetation ☐, Soil ☐, or Hydrology ☐ signific	•	Yes ☐ No (if no explain in remarks) Are "normal circumstances" present? ☐ Yes ☐ No							
Are Vegetation □, Soil □, or Hydrology □ natural	-		xplain any answers in						
The vegenment, or Hydrology minute.	* *	MARY OF FINDING		i Tomarks.)					
Hydrophytic Vegetation Present? ☐ Yes ☐ No									
Hydric Soil Present? ☐ Yes ☒ No			led Area within	☐ Yes ⊠ No					
Wetland Hydrology Present? ☐ Yes ☒ No		a wetland?							
Remarks:									
	VEGETATIO	N – Use scientific nam	nes of plants						
<u>Tree Stratum</u> (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:					
Fraxinus pennsylvanica	70	⊠ Yes □ No	FACW	Number of dominant					
2. Acer negundo	20	Yes □ No	FAC	species that are OBL,					
	20		1710	FACW, or FAC: 2 (A) Total number of					
3		Yes No		dominant species					
4		☐ Yes ☐ No		across all strata: 4 (B)					
5		☐ Yes ☐ No		Percent of dominant species that are OBL,					
	90	= Total Cover		FACW or FAC: 50% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15 ft)				Prevalence Index Worksheet:					
1		☐ Yes ☐ No		Total % Cover of: Multiply By	<u>/:</u>				
2		☐ Yes ☐ No		OBL species: x 1					
3		☐ Yes ☐ No		FACW species: 70 x 2 140					
4		☐ Yes ☐ No		FAC species: 20 x 3 60					
5		☐ Yes ☐ No		FACU species: 30 x 4 120					
		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5 ft)		701111 00 101		Column Total: 120 (A) 320 (B)	١				
Glechoma hederacea	20		EACH	Prevalence Index (B/A) = 2.7	'				
1. Glechonia nederacea	20	Yes □ No	FACU	<u> </u>					
2. Geranium maculatum	10	Yes □ No	FACU	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation					
3		☐ Yes ☐ No		Dominance Test is >50%					
4				☐ Prevalence Index is ≤ 3.0¹					
5		Yes No							
		Yes No		☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on separate she	eet)				
6		☐ Yes ☐ No		supporting data in remarks of on separate site	λ(ι)				
7		☐ Yes ☐ No		Problematic Hydrophytic Vegetation (Explain in Remarks)					
8		☐ Yes ☐ No		,					
9		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrolo must be present, unless disturbed or problema					
10		☐ Yes ☐ No		must be present, unless disturbed of problema					
	30	= Total Cover							
Woody Vine Stratum (Plot size: 15 ft)									
1		☐ Yes ☐ No		Hydrophytic Vegetation Present? ✓ Yes ☐ No					
2		☐ Yes ☐ No		Vegetation Present?					
		= Total Cover	_						
Remarks:		10 00101							



(Midwest Region)

Profile Description:	: (Describe to the de	pth needed to	document the indi	cator or co	nfirm the al	osence of	indicators	.)		
Danth (in)	Matrix		<u>R</u>	edox Featu	res		T	Damada		
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>		
0-30	10 YR 3/2	100					SiCL			
30+	10 YR 2/1	100					SiCL			
										
										
										
¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix										
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils ³ :		
☐ Histosol (A1)			☐ Sandy Gley	ed Matrix ((S4)			☐ Coast Prairie Redox (A16)		
☐ Histic Epipedon	(A2)		☐ Sandy Red	ox (S5)				☐ Iron-Manganese Masses (F12)		
☐ Black Histic (A3			☐ Stripped M					Other (Explain in Remarks)		
Hydrogen Sulfid			Loamy Mu	-	, ,					
☐ Stratified Layers	* /		Loamy Gle		(F2)					
2 cm Muck (A10			☐ Depleted M							
Depleted Below			☐ Redox Dari	•				27 . 1'		
☐ Thick Dark Surf	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed									
Sandy Mucky Mineral (S1) Redox Depressions (F8) hydrology must be present, unless or problematic.										
Restrictive layer (if								· · ·		
Type:	•							Hydric Soil Present? ☐ Yes ☒ No		
Depth (in):								<u> </u>		
Remarks:										
Remarks.										
				HYDR	OLOGY					
Wetland Hydrology	Indicators:									
	Primary Indicators	s (minimum of	one is required; che	eck all that a	apply)			Secondary Indicators (minimum of two required)		
☐ Surface Water (A	A 1)		■ Water Stair	ed Leaves	(B9)			☐ Surface Soil Cracks (B6)		
☐ High Water Tabl	le (A2)		☐ Aquatic Fa	ına (B13)				☐ Drainage Patterns (B10)		
☐ Saturation (A3)			☐ True Aquat					☐ Dry-Season Water Table (C2)		
Water Marks (B			Hydrogen S					Crayfish Burrows (C8)		
Sediment Depos			Oxidized R	-	_	Roots (C3)		Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (F			☐ Presence of			1. (00)		Stunted or Stressed Plants (D1)		
☐ Algal Mat or Cru ☐ Iron Deposits (B			☐ Recent Iron ☐ Thin Muck			lls (C6)		☐ Geomorphic Position (D2) ☐ FAC-Neutral Test (D5)		
	ole on Aerial Imagery	(B7)	Gauge or V					FAC-Neutral Test (D5)		
	ted Concave Surface (. ,	Other (Exp	,	*					
Field Observations:		20)								
Surface Water Preser		s 🛛 No	Depth (in):							
Water Table Present		s 🛛 No	Depth (in):							
Saturation Present?		s 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☐ No		
(includes capillary f		3 🖂 110	1 \ /							
	Oata (stream gage, mo	nitoring well.	aerial photos, previo	ous inspectio	ons), if availa	able:				
	(6.6., 11		I, F-2/10		-,,					
Domortou										
Remarks:										



1000000									
Project/Site: Minnesota River Gree	nway - Eagan Alignment		City/Coun	ty: Eagan/Dak	cota	Sampling Date: 9/5/13			
Applicant/Owner: Dakota County			State: MN	ſ		Sampling Point: W2 SB-I			
Investigator(s): Dan Donayre			Sec, Twp,	Ran: 18,27N,	23W				
Landform (hillside, terrace, etc.): B	asin		Local Relief (concave, convex, none): Concave						
Slope (%): 0-1	Lat:		Long: Datum:						
Soil Map Unit Name: Rondeau mu	ck		NWI or W	WI Classificat	tion: PEMCd				
Are climatic/hydrologic conditions	on the site typical for this time	of year?	⊠ Yes	□ No (if	no explain in remarl	(2)			
Are Vegetation □, Soil □, or Hy	•	23 100		-	ent? X Yes No				
Are Vegetation □, Soil □, or H				xplain any answers in					
			MARY O	F FINDING		,			
Hydrophytic Vegetation Present?	∑ Yes □ No	Benz		THIDIT					
Hydric Soil Present?	Yes □ No			Is the Sampl	led Area within	⊠ Yes □ No			
Wetland Hydrology Present?	⊠ Yes □ No			a wetland?		Z 163 Z 160			
Remarks:	⊠ Tes □ No								
Remarks.									
	VFC	FTATIO	N Use so	vientific nam	nes of plants				
Tree Stratum (Plot Size: 30 ft)		% Cover		ant Species?	Indicator Status	Dominance Test Worksheet:			
,	2	40	-	es No	FAC	Number of dominant			
1. Acer negundo			_	_		species that are OBL,			
2. Rhamnus cathartica		20		es 🗌 No	FAC	FACW, or FAC: 4 (A)			
3				es 🗌 No		Total number of dominant species			
4			☐ Y	es 🗌 No		across all strata: 4 (B)			
5			□ Yeel	es 🗌 No		Percent of dominant			
		60	= Total	Cover		species that are OBL, FACW or FAC: 100% (A	/B)		
Saplings/Shrub Stratum (Plot Size:					Prevalence Index Worksheet:				
1			□ Ye	es 🗌 No		Total % Cover of: M	Iultiply By:		
2			□ Y	es 🗌 No		OBL species: x 1			
3			□ Y	es 🗌 No		FACW species: 100 x 2	200		
4			□ Ye	es 🗌 No		FAC species: 60 x 3	180		
5			□ Y	es 🗌 No		FACU species: x 4			
			= Total	Cover		UPL species: x 5			
Herb Stratum (Plot size: 5 ft)						Column Total: 160 (A)	380 (B)		
Phalaris arundinacea		85	⊠ v	es 🗌 No	FACW	Prevalence Index (B/A) =	, ,		
		03		C3 🔲 110	1716 W	Hydrophytic Vegetation Indicator			
2. Urtica dioica		10	X Y	es 🗌 No	FACW	☐ Rapid Test for Hydrophytic Veg			
Rudbeckia laciniata		5	□ Ye	es 🛛 No	FACW	☑ Dominance Test is >50%			
4			— П у	es 🗌 No		☐ Prevalence Index is < 3.01			
5				es 🗌 No		☐ Morphological Adaptations¹ (Pr	rovide		
6				es 🗌 No		supporting data in Remarks or on se			
7				es 🗌 No		☐ Problematic Hydrophytic Veget	tation		
8				es 🗌 No		(Explain in Remarks)	ation		
9						¹ Indicators of hydric soil and wetlar	nd hydrology		
10			_	es No		must be present, unless disturbed or			
10				es No					
W 1 W 2	5 C)	100	= 10	tal Cover					
Woody Vine Stratum (Plot size: 1	5 ft <u>)</u>					Hydrophytic	_		
1			☐ Y	es 🗌 No		Vegetation Present?	∐ No		
2			□ Ye	es 🗌 No					
		<u></u> _	= To	tal Cover					
Remarks:									



(Midwest Region)

D 61. D	. (D 4 4 4		J 4 4b		JILS		·	-)
Profile Description	: (Describe to the de	ptn needed to				osence of	indicator	s.)
Depth (in)	Matrix	0/	_	Redox Featu		T 2	Textur	<u>Remarks</u>
	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2		
0-23	10 YR 2/1	100					Muck	
23+	10 YR 2/1	100					Mucky Peat	
							reat	
								·
							-	·
¹Type: C=Concentra	ation, D=Depletion, RN	M=Reduced M	latrix. CS=Covered	or Coated S	and Grains.	² Locati	ion: PL=P	ore Lining, M=Matrix
Hydric Soil Indicat	-	. Troduced I	iamin, es es rerea	or couled a	and Granisi		12 1	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	.015.		☐ Sandy Gley	ed Matrix ((\$4)			Coast Prairie Redox (A16)
☐ Histic Epipedon	(A2)		☐ Sandy Red		(54)			☐ Iron-Manganese Masses (F12)
☐ Black Histic (A3			☐ Stripped M					Other (Explain in Remarks)
☐ Hydrogen Sulfid	,		☐ Loamy Mu		1 (F1)			_ Carpania in Terminal
☐ Stratified Layers			Loamy Gle					
2 cm Muck (A10			☐ Depleted M		` '			
·	Dark Surface (A11)		Redox Dar	, ,	F6)			
☐ Thick Dark Surf			☐ Depleted D					³ Indicators of hydrophytic vegetation and wetland
☐ Sandy Mucky M	, ,		Redox Dep		, ,			hydrology must be present, unless disturbed
5 cm Mucky Pea			_					or problematic.
Restrictive layer (if	observed):							
Туре:								Hydric Soil Present? ⊠ Yes □ No
								Injune point research 2 Tes 2 Tes
Depth (in):								
Remarks.								
				HYDE	ROLOGY			
Wetland Hydrolog	v Indicators							
wettand frydrology		,						
_	•	s (minimum o	f one is required; ch					Secondary Indicators (minimum of two required)
Surface Water (A	,		Water Stair		(B9)			Surface Soil Cracks (B6)
High Water Tab	le (A2)		Aquatic Fa					Drainage Patterns (B10)
Saturation (A3)			☐ True Aquat					Dry-Season Water Table (C2)
Water Marks (B			☐ Hydrogen S					Crayfish Burrows (C8)
Sediment Depos			Oxidized R	_		Roots (C3)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (I			☐ Presence of		` '	1 (00)		Stunted or Stressed Plants (D1)
Algal Mat or Cr			Recent Iron			ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B		(D7)	☐ Thin Muck					☐ FAC-Neutral Test (D5)
	ole on Aerial Imagery		Gauge or V					
	ted Concave Surface (D0)	Other (Exp	iaiii iii Kem	ai KS)			
Field Observations		—						
Surface Water Prese	_	s 🛛 No	Depth (in):	<u>—</u>				
Water Table Present	? Xe	es 🗌 No	Depth (in): 22					Wetland Hydrology Present? ☐ Yes ☐ No
Saturation Present?	⊠ Ye	es 🔲 No	Depth (in): 10					
(includes capillary f	fringe)							
Describe Recorded I	Data (stream gage, mor	nitoring well,	aerial photos, previo	ous inspecti	ons), if avail	able:	N.	
Remarks:								
Tomarko.								



Mindry & Survey										
Project/Site: Minnesota River Gree	nway - Eagan Alignment		City/Coun	ty: Eagan/Dak	tota	Sampling Date: 9/5/13				
Applicant/Owner: Dakota County			State: MN	I		Sampling Point: W2 SB-J				
Investigator(s): Dan Donayre			Sec, Twp,	Ran: 18,27N,2	23W					
Landform (hillside, terrace, etc.): B	ackslope		Local Relief (concave, convex, none): Slope							
Slope (%): 0-1	Lat:		Long:			Datum:				
Soil Map Unit Name: Rondeau mu	ck		NWI or WWI Classification: PEMCd							
Are climatic/hydrologic conditions Are Vegetation □, Soil □, or Hy	• •	•	⊠ Yes		no explain in remar- circumstances" pres	ks) ent? ⊠ Yes □ No				
Are Vegetation ☐, Soil ☐, or Hy	ydrology naturally problem	matic?		(If needed, ex	xplain any answers i	n Remarks.)				
		SUM	MARY O	F FINDING	SS					
Hydrophytic Vegetation Present?	☐ Yes ⊠ No									
Hydric Soil Present?	⊠ Yes □ No				ed Area within	☐ Yes ⊠ No				
Wetland Hydrology Present?	☐ Yes ⊠ No			a wetland?						
Remarks:										
	VEC	GETATIO1	N – Use so	cientific nam	es of plants					
Tree Stratum (Plot Size: 30 ft)		% Cover	Domina	ant Species?	Indicator Status	Dominance Test Work	sheet:			
Rhamnus cathartica		80	⊠ Y	es 🗌 No	FAC	Number of dominant				
2			□ Y	es 🗌 No		species that are OBL, FACW, or FAC:	1 (A)			
3			□ Y	es 🗌 No		Total number of	· /			
4				es 🗌 No	· 	dominant species across all strata:	2 (B)			
5				es 🗌 No		Percent of dominant	2 (B)			
J		80				species that are OBL,				
	45.00	80	= Total	Cover		FACW or FAC:	50% (A/B)			
Saplings/Shrub Stratum (Plot Size:	15 ft)					Prevalence Index World				
1				es 🗌 No		Total % Cover of:	Multiply By:			
2				es No		OBL species:	x 1			
3				es No		FACW species:	x 2			
4				es 🗌 No		FAC species: 80	x 3 240			
5			□ Y	es 🗌 No		FACU species: 15	5 x 4 60			
			= Total	Cover		UPL species:	x 5			
Herb Stratum (Plot size: 5 ft)						Column Total: 95	(A) 300 (B)			
Ageratina altissima		15	⊠ Y	es 🗌 No	FACU	Prevalence Inc	dex (B/A) = 3.2			
2			ПΥ	es 🗌 No		Hydrophytic Vegetatio				
						Rapid Test for Hydr				
3			□ Y	es 🗌 No		Dominance Test is				
4				es 🗌 No		☐ Prevalence Index is	$\leq 3.0^{1}$			
5			□ Y	es 🗌 No		☐ Morphological Adap				
6			□ Y	es 🗌 No		supporting data in Rema	rks or on separate sheet)			
7			□ Y	es 🗌 No		☐ Problematic Hydrop	hytic Vegetation			
8			□ Y	es 🗌 No		(Explain in Remarks)				
9			□ Y	es 🗌 No		Indicators of hydric soil	l and wetland hydrology disturbed or problematic.			
10			□ Y	es 🗌 No		must be present, unless t	and or production.			
		15	= To	tal Cover						
Woody Vine Stratum (Plot size: 1	5 ft <u>)</u>									
1			□ Y	es 🗌 No		Hydrophytic Vegetation Present?	☐ Yes ⊠ No			
2			□ Y	es 🗌 No		, egennon i resent.				
				tal Cover						
Remarks:										



(Midwest Region)

Profile Description:	(Describe to the de	pth needed to	o document the indi	cator or co	onfirm the a	osence of	indicators	s.)				
Danth (in)	Matrix		<u>R</u>	edox Featu	res		Т		D			
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	2	Remarks .			
0-40	10 YR 2/1	100					SiCL					
40+	10 YR 5/1	90	7.5 YR 4/6	С	M		SiCL					
						· <u></u>						
												
												
			· 									
												
¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix												
Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :												
☐ Histosol (A1)			☐ Sandy Gley	ed Matrix	(S4)			☐ Coast Prairie Redox (A	16)			
☐ Histic Epipedon	(A2)		☐ Sandy Red	ox (S5)				☐ Iron-Manganese Masse	s (F12)			
☐ Black Histic (A3			☐ Stripped M					Other (Explain in Rema	arks)			
Hydrogen Sulfid			Loamy Mu	•	. ,							
Stratified Layers	* /		☐ Loamy Gle		(F2)							
2 cm Muck (A10			☐ Depleted M		70)							
☐ Depleted Below ☐ Thick Dark Surf			☐ Redox Darl ☐ Depleted D					³ Indicators of hydrophytic	vegetation and wetland			
Sandy Mucky M			Redox Dep					hydrology must be pres	· ·			
☐ 5 cm Mucky Peat or Peat (S3)												
Restrictive layer (if								•				
Type:								Hydric Soil Present?	⊠ Yes □ No			
Depth (in):								,	2 2			
Remarks:												
Romans.												
Γ				HYDE	ROLOGY							
Wetland Hydrology	Indicators:											
	Primary Indicators	s (minimum o	f one is required; che	eck all that	apply)			Secondary Indicators (1	minimum of two required)			
☐ Surface Water (A			□ Water Stair	ned Leaves	(B9)			☐ Surface Soil Cracks (B6)				
High Water Tabl	le (A2)		Aquatic Fa					☐ Drainage Patterns (B10)				
Saturation (A3)			☐ True Aquat					☐ Dry-Season Water Tab				
Water Marks (B			Hydrogen S			(62)		Crayfish Burrows (C8)				
Sediment Depos			Oxidized R	-	-	coots (C3)		Saturation Visible on A	• • •			
☐ Drift Deposits (E☐ Algal Mat or Cru			☐ Presence of ☐ Recent Iron			ile (C6)		☐ Stunted or Stressed Pla ☐ Geomorphic Position (
☐ Iron Deposits (B			☐ Thin Muck			iis (CO)		FAC-Neutral Test (D5)				
	ole on Aerial Imagery	(B7)	☐ Gauge or V					I The reduction rest (B3)				
	ted Concave Surface (Other (Exp									
Field Observations:												
Surface Water Preser	nt?	s 🛛 No	Depth (in):									
Water Table Present		s 🛭 No	Depth (in):									
Saturation Present?		s 🗆 No	Depth (in): 38					Wetland Hydrology Prese	ent?			
(includes capillary f	_	3 🔲 110	* ` '									
	Oata (stream gage, moi	nitoring well.	aerial photos, previo	ous inspecti	ons), if avail	able:						
	. 6.6.,	<i>5</i> ·······	1, 1		,,							
D. ann and an												
Remarks:												



693 6 200									
Project/Site: Minnesota River Greenway - Eagan Alignme	ent	City/County: Eagan/Dak	tota	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 Classificat							
•		_							
Are climatic/hydrologic conditions on the site typical for the	-		no explain in remark						
Are Vegetation , Soil , or Hydrology significant	•		circumstances" prese						
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	_	(If needed, explain any answers in Remarks.)							
	SUMN	MARY OF FINDING	SS						
Hydrophytic Vegetation Present? ☐ Yes ☐ No									
Hydric Soil Present? ☐ Yes ☒ No		a wetland?	ed Area within	☐ Yes ⊠ No					
Wetland Hydrology Present? ☐ Yes ☒ No									
Remarks:		<u> </u>							
	VEGETATION	N – Use scientific nam	es of plants						
Tree Stratum (Plot Size: 30)	Absolute % Cover		Indicator Status	Dominance Test Worksheet:					
1		☐ Yes ☐ No		Number of dominant					
2		☐ Yes ☐ No		species that are OBL,					
				FACW, or FAC: 1 (A)					
3		☐ Yes ☐ No		Total number of dominant species					
4		☐ Yes ☐ No		across all strata: 1 (B)					
5		☐ Yes ☐ No		Percent of dominant					
		= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:					
1		☐ Yes ☐ No		Total % Cover of: Multiply By:					
2		☐ Yes ☐ No		OBL species: x 1					
3		☐ Yes ☐ No		FACW species: 102 x 2 204					
4		Yes No		*					
				•					
5		☐ Yes ☐ No		FACU species: x 4					
		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)				Column Totals: 102 (A) 204 (B)					
Phalaris arundinacea	100	🛛 Yes 🗌 No	FACW	Prevalence Index $(B/A) = 2.0$					
2. Urtica dioica	2	☐ Yes ⊠ No	FACW	Hydrophytic Vegetation Indicators:					
3		☐ Yes ☐ No		☑ Rapid Test for Hydrophytic Vegetation					
4		☐ Yes ☐ No	<u></u>	☑ Dominance Test is >50%					
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$					
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
7		Yes No		supporting data in Remarks or on separate sheet)					
8									
		☐ Yes ☐ No		Problematic Hydrophytic Vegetation (Explain in Remarks)					
9		Yes No							
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
	105	= Total Cover							
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No		Hydrophytic Voc No					
2		☐ Yes ☐ No		Vegetation Present?					
		= Total Cover							
Remarks (Include photo numbers here or on a separate she	et):								
*									



Profile Description	: (Describe to the dep	th peeded to	document the indi		ofirm the e	beares of i	indicators	•)
Trome Description.	Matrix	in necueu to		edox Featur		osence of 1	muicators	b.)
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc2	Texture	<u>Remarks</u>
0.			Color (moist)	<u>/0</u>	Турс	Loc		
0+	10 YR 2/1	100					Muck	
<u> </u>								, <u> </u>
								
	tion, D=Depletion, RM	1=Reduced M	atrix, MS = Masked	Sand Grain	s. ² Loca	tion: PL=I	Pore Linin	g, M=Matrix
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			Sandy Gley		54)			Coast Prairie Redox (A16) (LRR K, L, R)
Histic Epipedon			☐ Sandy Redo					☐ Iron-Manganese Masses (F12) (LRR K, L, R)
Black Histic (A3			☐ Stripped Ma		(F1)			Dark Surface (S7) (LRR K, L)
☐ Hydrogen Sulfid☐ Stratified Layers			☐ Loamy Muc ☐ Loamy Gley					☐ 5 cm Mucky Peat or Peat (S3) (LRR , K , L , R) ☐ Very Shallow Dark Surface (TF12)
2 cm Muck (A10			☐ Depleted M		1.72)			
☐ Depleted Below			☐ Redox Dark		5)			Other (Explain in Remarks)
☐ Thick Dark Surfa			☐ Depleted D					³ Indicators of hydrophytic vegetation and wetland
☐ Sandy Mucky M			Redox Depr					hydrology must be present, unless disturbed
			_					or problematic.
Restrictive layer (if	observed):							
Type:								Hydric Soil Present? ⊠ Yes □ No
Depth (in):								
Remarks:								
Remarks.								
				HYDR	OLOGY			
Wetland Hydrology	Indicators:							
	Primary Indicators	(minimum of	one is required; che	eck all that a	pply)			Secondary Indicators (minimum of two required)
☐ Surface Water (A		(IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	☐ Water Stain					Surface Soil Cracks (B6)
☐ High Water Tabl			Aquatic Fat		D))			Drainage Patterns (B10)
Saturation (A3)	(112)		☐ True Aquat		14)			Dry-Season Water Table (C2)
☐ Water Marks (B:	1)		☐ Hydrogen S					☐ Crayfish Burrows (C8)
☐ Sediment Depos			Oxidized R	hizospheres	on Living I	Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (E			☐ Presence of	Reduced Ir	on (C4)			☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Cru			☐ Recent Iron			ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B			Thin Muck	,	•			FAC-Neutral Test (D5)
	ole on Aerial Imagery (☐ Gauge or W					
	ted Concave Surface (1	B8)	Other (Expl	ain in Rema	irks)		 	
Field Observations:								
Surface Water Preser	nt?	s 🛛 No	Depth (in):	_				
Water Table Present	? Xes	s 🗌 No	Depth (in): 20					Wetland Hydrology Present? ☑ Yes □ No
Saturation Present?	⊠ Yes	s 🗌 No	Depth (in): 6					rectand Hydrology Present: M 168 110
(includes capillary f	ringe)							
Describe Recorded D	Data (stream gage, mor	nitoring well, a	erial photos, previo	us inspectio	ns), if avail	able:		
Remarks:								



Cost of 2m									
Project/Site: Minnesota River Greenway - Eagan Alignm	nent	City/County: Eagan/Dal	cota	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 Classificat	tion: PEMCd						
Are climatic/hydrologic conditions on the site typical for	this time of year?		no explain in remarl	ke)					
Are Vegetation □, Soil □, or Hydrology □ significa	•	`	-	ent? ⊠ Yes □ No					
Are Vegetation □, Soil □, or Hydrology □ naturally	•		xplain any answers in						
The vegetation [1, 50h [1, of Hydrology [1 hattaran]	•	MARY OF FINDING		i Keliaiks.)					
Hydrophytic Vegetation Present? ☐ Yes ☐ No	Beivin	TAKI OF FINDING	J B						
Hydric Soil Present? Yes No		Is the Samp	led Area within	☐ Yes ☒ No					
		a wetland?		ies 🖾 No					
Wetland Hydrology Present? ☐ Yes ☒ No									
Remarks:									
		V – Use scientific nam							
Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:					
1		☐ Yes ☐ No		Number of dominant species that are OBL,					
2		☐ Yes ☐ No		FACW, or FAC: 1 (A)					
3		☐ Yes ☐ No		Total number of					
4		☐ Yes ☐ No		dominant species across all strata: 1 (B)					
5.		☐ Yes ☐ No		Percent of dominant					
<u> </u>				species that are OBL,					
		= Total Cover		FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:					
1		☐ Yes ☐ No		Total % Cover of: Multiply By:					
2		☐ Yes ☐ No		OBL species: x 1					
3		☐ Yes ☐ No		FACW species: 100 x 2 200					
4		☐ Yes ☐ No		FAC species: x 3					
5		☐ Yes ☐ No		FACU species: x 4					
		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)				Column Totals: 100 (A) 200 (B)					
Phalaris arundinacea	100	Yes □ No	FACW	Prevalence Index $(B/A) = 2.0$					
2		☐ Yes ☐ No		Hydrophytic Vegetation Indicators:					
3		☐ Yes ☐ No		☐ Rapid Test for Hydrophytic Vegetation					
4		☐ Yes ☐ No		☐ Dominance Test is >50%					
5		Yes No		☐ Prevalence Index is < 3.0¹					
6				_					
7		Yes No		☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on separate sheet)					
		☐ Yes ☐ No							
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation (Explain in Remarks)					
9		Yes No							
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
	100	= Total Cover		and a distance of protection.					
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No		Hydrophytic No. 7 No.					
2		☐ Yes ☐ No		Vegetation Present?					
		= Total Cover							
Remarks (Include photo numbers here or on a separate sh	eet):			1					
•									



Profile Description: (Descr	ribo to the dent	th needed to	dooumont the indi	cotor or co		beares of i	indicators)					
Trome Description. (Descr	Matrix	in needed to		edox Featur		osence of 1	muicators	•)					
Depth (in) Cole	or (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	Remarks					
0-36 10	YR 2/1	100	<u></u>				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:								Indicators for Problematic Hydric Soils ³	3:				
Histosol (A1)			Sandy Gley		S4)			Coast Prairie Redox (A16) (LRR K, L					
Histic Epipedon (A2)			☐ Sandy Redo					☐ Iron-Manganese Masses (F12) (LRR I	K, L, R)				
Black Histic (A3)			Stripped M		(E1)			Dark Surface (S7) (LRR K, L)	K I B)				
☐ Hydrogen Sulfide (A4) ☐ Stratified Layers (A5)			☐ Loamy Mu ☐ Loamy Gle					☐ 5 cm Mucky Peat or Peat (S3) (LRR, I☐ Very Shallow Dark Surface (TF12)	N , L, K)				
☐ 2 cm Muck (A10)			☐ Depleted M	-	(1.77)								
Depleted Below Dark Su	ırface (A11)		Redox Dark		6)			_ Sucr (Explain in remarks)					
☐ Thick Dark Surface (A12			☐ Depleted D					Indicators of hydrophytic vegetation and v	wetland				
☐ Sandy Mucky Mineral (S	51)		☐ Redox Dep	ressions (F8)			hydrology must be present, unless dist	curbed				
			or problematic.										
Restrictive layer (if observe	ed):												
Type:								Hydric Soil Present? ☐ Yes ☒	No				
Depth (in):													
Remarks:							<u> </u>						
				HYDR	OLOGY								
Wetland Hydrology Indicat	tors.												
		(minimum of	one is required; che	vals all that s	analer)			Secondary Indicators (minimum of two	o magnimad)				
Surface Water (A1)	iary muicators	(IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	☐ Water Stain						o requireu)				
☐ High Water Table (A2)			Aquatic Fai		D9)			☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10)					
Saturation (A3)			☐ True Aquat		14)			Dry-Season Water Table (C2)					
☐ Water Marks (B1)			☐ Hydrogen S					☐ Crayfish Burrows (C8)					
Sediment Deposits (B2)			☐ Oxidized R			Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)				
☐ Drift Deposits (B3)			☐ Presence of	Reduced Ir	on (C4)			☐ Stunted or Stressed Plants (D1)					
Algal Mat or Crust (B4)			Recent Iron			ils (C6)		Geomorphic Position (D2)					
☐ Iron Deposits (B5)			☐ Thin Muck	,	*			FAC-Neutral Test (D5)					
Inundation Visible on Ae			Gauge or W										
Sparsely Vegetated Conc	cave Surrace (B	(8)	Other (Expl	iain in Kem	arks)								
Field Observations:													
Surface Water Present?	☐ Yes		Depth (in):										
Water Table Present?	☐ Yes	⊠ No	Depth (in):	_				Wetland Hydrology Present?	s 🛛 No				
Saturation Present?	Yes	☐ No	Depth (in): 23										
(includes capillary fringe)													
			Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:										
	eam gage, moni	toring well, a	erial photos, previo	ous inspection	ons), if avail	able:							
	eam gage, moni	toring well, a	erial photos, previo	us inspection	ns), if avail	able:							
	eam gage, moni	toring well, a	erial photos, previo	ous inspection	ons), if avail	able:							
Describe Recorded Data (stre	eam gage, moni	toring well, a	erial photos, previo	ous inspection	ns), if avail	able:							



See W. Sur.									
Project/Site: Minnesota River Greenway - Eagan Alignme	ent	City/County: I	Eagan/Dako	ota	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,2	3W					
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	Classificati	on: PEMCd					
Are climatic/hydrologic conditions on the site typical for the	his time of year?	⊠ Yes □	□ No (if i	no explain in remarl	ks)				
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significan	•			•	ent? ⊠ Yes □ No				
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	problematic?	(If needed, explain any answers in Remarks.)							
	SUMN	MARY OF F	INDING	\mathbf{S}					
Hydrophytic Vegetation Present? ☐ Yes ☐ No									
Hydric Soil Present? ⊠ Yes □ No				ed Area within	⊠ Yes □ No				
Wetland Hydrology Present? ☐ Yes ☐ No		a w	etland?						
Remarks:									
	VEGETATION	V – Use scient	ific name	es of plants					
Tree Stratum (Plot Size: 30)	Absolute % Cover			Indicator Status	Dominance Test Worksheet:				
1		☐ Yes ☐	□ No		Number of dominant				
2.		☐ Yes ☐			species that are OBL,				
					FACW, or FAC: 1 (A) Total number of				
3		☐ Yes ☐			dominant species				
4		☐ Yes ☐	_		across all strata: 1 (B)				
5		☐ Yes ☐	No		Percent of dominant species that are OBL,				
		= Total Cov	er		FACW or FAC: 100% (A/B)				
Saplings/Shrub Stratum (Plot Size: 15)					Prevalence Index Worksheet:				
1		☐ Yes ☐	No		Total % Cover of: Multiply By:				
2		☐ Yes ☐	No		OBL species: x 1				
3		☐ Yes ☐	No		FACW species: 100 x 2 200				
4		☐ Yes ☐	No		FAC species: x 3				
5		☐ Yes ☐	No		FACU species: x 4				
		= Total Cov	er		UPL species: x 5				
Herb Stratum (Plot size: 5)					Column Totals: 100 (A) 200 (B)				
Phalaris arundinacea	100	⊠ Yes □	7 No	FACW	Prevalence Index $(B/A) = 2.0$				
2	100		 '	TACW	Hydrophytic Vegetation Indicators:				
3		☐ Yes ☐	_		Rapid Test for Hydrophytic Vegetation				
4		☐ Yes ☐			☐ Dominance Test is >50%				
		☐ Yes ☐							
5		Yes [Prevalence Index is < 3.01				
6		☐ Yes ☐	No		☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on separate sheet)				
7		Yes [No		supporting data in Remarks of on separate sheet)				
8		☐ Yes ☐	No		☐ Problematic Hydrophytic Vegetation				
9		Yes [No		(Explain in Remarks)				
10		☐ Yes ☐	No		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
	100	= Total C	lover		must be present, unless disturbed of problematic.				
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No ——			Hydrophytic N van D Na				
2		☐ Yes ☐			Vegetation Present?				
-		= Total C							
Remarks (Include photo numbers here or on a separate she	eet):								
	•								



(Midwest Region)

Profile Description:	(Describe to the de	oth needed to d	locument the indi	cator or co	nfirm the a	bsence of	indicators	.)						
5 4 4 5	Matrix		<u>R</u>	ledox Featur	res									
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>						
0-24	10 YR 2/1	100					Muck							
24+		100	· 				Peat							
211		100					1 Cut							
														
 -														
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix														
Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :														
Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)						
☐ Histic Epipedon	(A2)		☐ Sandy Redo		,			☐ Iron-Manganese Masses (F12) (LRR K, L, R)						
☐ Black Histic (A3			☐ Stripped M					☐ Dark Surface (S7) (LRR K, L)						
☐ Hydrogen Sulfide	e (A4)		☐ Loamy Mu	cky Mineral	(F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)						
☐ Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)						
2 cm Muck (A10			Depleted M					Other (Explain in Remarks)						
Depleted Below			Redox Darl											
☐ Thick Dark Surfa	, ,		☐ Depleted D ☐ Redox Dep					³ Indicators of hydrophytic vegetation and wetland						
Sandy Mucky Mi	merai (S1)		hydrology must be present, unless disturbed or problematic.											
Restrictive layer (if	observed):							of problemane.						
-	observed).							Hardwin Soil Broson49 No. 7 No.						
Type:								Hydric Soil Present?						
Depth (in):														
Remarks:														
				HYDR	OLOGY									
Wetland Hydrology	Indicators:													
	Primary Indicators	(minimum of o	one is required; che	eck all that a	apply)			Secondary Indicators (minimum of two required)						
☐ Surface Water (A		(☐ Water Stair					Surface Soil Cracks (B6)						
☐ High Water Table			☐ Aquatic Far		()			Drainage Patterns (B10)						
Saturation (A3)	` '		☐ True Aquat	, ,	14)			Dry-Season Water Table (C2)						
☐ Water Marks (B1	.)		☐ Hydrogen S	Sulfide Odo	r (C1)			Crayfish Burrows (C8)						
☐ Sediment Deposi			☐ Oxidized R	-	-	Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)						
Drift Deposits (B			Presence of					Stunted or Stressed Plants (D1)						
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)						
☐ Iron Deposits (B:		(D.7)	☐ Thin Muck					☐ FAC-Neutral Test (D5)						
☐ Inundation Visib	le on Aerial Imagery (ed Concave Surface (☐ Gauge or W☐ Other (Exp											
Field Observations:	ed Concave Surface (D0)	☐ Other (Exp.	iam m Kem	ai K5)									
	.0 🗆 🗸	. M . M.	Denth Cale											
Surface Water Presen		s 🛛 No	Depth (in): Depth (in): 20											
Water Table Present?		s 🗌 No	Depth (in): 20 Depth (in): 10					Wetland Hydrology Present? ⊠ Yes □ No						
Saturation Present?	⊠ Ye													
(includes capillary fr	•				\ .a ::	1.1								
Describe Recorded D	ata (stream gage, moi	nitoring well, ac	erial photos, previo	ous inspection	ons), if avail	able:								
Remarks:														



69.2 % 200										
Project/Site: Minnesota River Greenway - Eagan Alignm	nent	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: 18,2	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 Classi	fication: PEMCd							
•										
Are climatic/hydrologic conditions on the site typical for	•		o (if no explain in rema							
Are Vegetation ☐, Soil ☐, or Hydrology ☐ signification	-		mal circumstances" pres							
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	•	(If needed, explain any answers in Remarks.)								
SUMMARY OF FINDINGS										
Hydrophytic Vegetation Present? ☐ Yes ☐ No		T 41 G	1.14							
Hydric Soil Present? ☐ Yes ☐ No		a wetlan	ampled Area within	☐ Yes ⊠ No						
Wetland Hydrology Present?										
Remarks:		l.								
	VEGETATION	V – Use scientific	names of plants							
Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Specie	s? Indicator Status	Dominance Test Worksheet:						
1		☐ Yes ☐ No)	Number of dominant						
2.		☐ Yes ☐ No		species that are OBL,						
				FACW, or FAC: 1 (A)						
3		☐ Yes ☐ No		Total number of dominant species						
4		☐ Yes ☐ No		across all strata: 1 (B)						
5		☐ Yes ☐ No		Percent of dominant						
		= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)						
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:						
1		☐ Yes ☐ No)	Total % Cover of: Multiply By:						
2		☐ Yes ☐ No		OBL species: x 1						
3		☐ Yes ☐ No		FACW species: 100 x 2 200						
4		☐ Yes ☐ No		FAC species: x 3						
										
5		☐ Yes ☐ No		•						
		= Total Cover		UPL species: x 5						
<u>Herb Stratum</u> (Plot size: 5)				Column Totals: 100 (A) 220 (B)						
Phalaris arundinacea	100	Yes No	FACW FACW	Prevalence Index $(B/A) = 2.2$						
2. Cannabis sativa	5	☐ Yes ⊠ No	FACU	Hydrophytic Vegetation Indicators:						
3		☐ Yes ☐ No		Rapid Test for Hydrophytic Vegetation						
4		☐ Yes ☐ No		☑ Dominance Test is >50%						
5		☐ Yes ☐ No)	\square Prevalence Index is $\leq 3.0^{1}$						
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide						
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)						
8			,							
9		☐ Yes ☐ No	· · · · · · · · · · · · · · · · · · ·	Problematic Hydrophytic Vegetation (Explain in Remarks)						
		Yes No		¹ Indicators of hydric soil and wetland hydrology						
10		☐ Yes ☐ No		must be present, unless disturbed or problematic.						
	105	= Total Cover		·						
Woody Vine Stratum (Plot size: 30)										
1		☐ Yes ☐ No	· —	Hydrophytic ⊠ Yes □ No						
2		☐ Yes ☐ No) —	Vegetation Present?						
		= Total Cover								
Remarks (Include photo numbers here or on a separate sh	neet):			L						



(Midwest Region)

Profile Description:	(Describe to the de	pth needed to o	locument the indi	icator or co	nfirm the a	bsence of	indicators	.)					
_	Matrix												
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type1	Loc2	Texture	<u>Remarks</u>					
0-18	7.5 YR 4/6	100					SiCL						
18-36	10 YR 2/1	100	<u></u>				Muck						
	10 YR 5/2	100											
36+	10 1 K 3/2	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: Indicators for Problematic Hydric Soils ³ :													
Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			☐ Coast Prairie Redox (A16) (LRR K, L, R)					
☐ Histic Epipedon	(A2)		☐ Sandy Red	ox (S5)				☐ Iron-Manganese Masses (F12) (LRR K, L, R)					
☐ Black Histic (A3			☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)					
Hydrogen Sulfide			Loamy Mu	•				5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)					
Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)					
2 cm Muck (A10			☐ Depleted M		16)			Other (Explain in Remarks)					
☐ Depleted Below ☐ ☐ Thick Dark Surfa			☐ Redox Darl ☐ Depleted D					37. diseases of hardwarks in sectorious and section a					
Sandy Mucky M	, ,		Redox Dep					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed					
Sandy Mucky M	merar (51)		or problematic.										
Restrictive layer (if	observed):							. 1					
Type:	,							Hydric Soil Present? ⊠ Yes □ No					
								Tryunc Son Frescht.					
Depth (in):													
Remarks:													
				HYDR	OLOGY								
Wetland Hydrology	Indicators:												
	Primary Indicators	s (minimum of o	one is required; ch	eck all that	apply)			Secondary Indicators (minimum of two required)					
☐ Surface Water (A	1)		☐ Water Stair	ned Leaves	(B9)			Surface Soil Cracks (B6)					
High Water Tabl			☐ Aquatic Fa		` /			Drainage Patterns (B10)					
☐ Saturation (A3)			☐ True Aquat	tic Plants (B	14)			☐ Dry-Season Water Table (C2)					
☐ Water Marks (B1)		☐ Hydrogen S	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)					
Sediment Deposi			Oxidized R	-	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)					
Drift Deposits (B			Presence of					Stunted or Stressed Plants (D1)					
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)					
☐ Iron Deposits (B:		(D7)	☐ Thin Muck					☐ FAC-Neutral Test (D5)					
	le on Aerial Imagery (ed Concave Surface (☐ Gauge or W☐ Other (Exp										
Field Observations:		B 0)	outer (Exp	iam in Rem	ur Ko)								
		es 🛛 No	Donth (in)										
Surface Water Preser			Depth (in): Depth (in): 32										
Water Table Present?		s 🗌 No	* ' '					Wetland Hydrology Present? ☐ Yes ☒ No					
Saturation Present?		es 🗌 No	Depth (in): 26										
(includes capillary fi	• .		mial mhatre our '			-h1							
Describe Recorded D	vata (stream gage, moi	mioring well, a	eriai pnotos, previo	ous inspection	ons), if avail	anie:							
Remarks:													



107 (530)											
Project/Site: Minnesota River Greenway - Eagan Alignme	nt	City/Count	ty: Eagan/Dak	ota	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,2	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:									
•	.::		_		La)						
Are climatic/hydrologic conditions on the site typical for the Are Vegetation ☐, Soil ☐, or Hydrology ☐ significant	·	⊠ Yes		no explain in remarl	ent? ⊠ Yes □ No						
	•			•							
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally		# A D \$7 (O)		plain any answers in	n Remarks.)						
	SUMMARY OF FINDINGS										
Hydrophytic Vegetation Present?			Is the Sample	ed Area within							
Hydric Soil Present?			a wetland?	cu zirca witiiii	⊠ Yes □ No						
Wetland Hydrology Present?											
Remarks:											
	VEGETATION	I – Use sc	ientific nam	es of plants							
<u>Tree Stratum</u> (Plot Size: 30)	Absolute % Cover	Domina	ant Species?	Indicator Status	Dominance Test Worksheet:						
1. Acer negundo	5	⊠ Ye	es 🗌 No	FAC	Number of dominant						
2		☐ Ye	es 🗌 No		species that are OBL, FACW, or FAC: 2 (A)						
3	<u></u>	— □ v	es 🗌 No		Total number of						
			_		dominant species						
4		☐ Yes ☐ No			across all strata: 2 (B)						
5		∐ Ye	es 🗌 No		Percent of dominant species that are OBL,						
	5	= Total	Cover		FACW or FAC: 100% (A/B)						
Saplings/Shrub Stratum (Plot Size: 15)					Prevalence Index Worksheet:						
1		☐ Yee	es 🗌 No		Total % Cover of: Multiply By:						
2		□ Ye	es 🗌 No		OBL species: x 1						
3		☐ Ye	es 🗌 No		FACW species: 105 x 2 210						
4		☐ Yee	es 🗌 No		FAC species: 5 x 3 15						
5		□ Ye	es 🗌 No		FACU species: x 4						
		= Total	Cover		UPL species: x 5						
Herb Stratum (Plot size: 5)	<u></u>				Column Totals: 110 (A) 235 (B)						
Phalaris arundinacea	100	⊠ v.	es 🗌 No	FACW	Prevalence Index (B/A) = 2.1						
		_			, ,						
2. Persicaria spp.	5		es 🛛 No	FACW	Hydrophytic Vegetation Indicators:						
3		_	es 🗌 No		Rapid Test for Hydrophytic Vegetation						
4		☐ Ye	es 🗌 No		Dominance Test is >50%						
5		☐ Ye	es 🗌 No		\square Prevalence Index is $\leq 3.0^{1}$						
6		☐ Ye	es 🗌 No		☐ Morphological Adaptations¹ (Provide						
7		☐ Yee	es 🗌 No		supporting data in Remarks or on separate sheet)						
8		☐ Ye	es 🗌 No		☐ Problematic Hydrophytic Vegetation						
9		□ Ye	es 🗌 No		(Explain in Remarks)						
10		□ Ye	es 🗌 No		¹ Indicators of hydric soil and wetland hydrology						
	105	= To	tal Cover		must be present, unless disturbed or problematic.						
Woody Vine Stratum (Plot size: 30)											
1		□ 1 7	ac □ M≃		T. 1. 1. 1.						
			es 🗌 No		Hydrophytic						
2			es No		- egention - resource						
Damada (Induda abata augula da la caracteria da la caract		= To	tal Cover								
Remarks (Include photo numbers here or on a separate she	er):										



(Midwest Region)

Profile Description	: (Describe to the de	pth needed to	document the indi	cator or co	nfirm the al	bsence of i	indicators.						
D4h (**)	Matrix		<u>R</u>	edox Featur	<u>es</u>		Т	D					
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>					
0-4	10 YR 2/1	100					SL						
4-30	10 YR 2/1	100					Muck						
30+		100					Peat						
301		100					1 cat						
													
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix													
Hydric Soil Indicat	ors:						1	Indicators for Problematic Hydric Soils ³ :					
Histosol (A1)			☐ Sandy Gley	ed Matrix (S	S4)		[Coast Prairie Redox (A16) (LRR K, L, R)					
☐ Histic Epipedon			☐ Sandy Redo					Iron-Manganese Masses (F12) (LRR K, L, R)					
Black Histic (A3			Stripped M					Dark Surface (S7) (LRR K, L)					
Hydrogen Sulfid			Loamy Mu				[5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)					
Stratified Layers			Loamy Gle	•	(F2)		L	Very Shallow Dark Surface (TF12)					
☐ 2 cm Muck (A10☐ Depleted Below			☐ Depleted M ☐ Redox Dark		6)		L	Other (Explain in Remarks)					
☐ Thick Dark Surf			☐ Depleted D	,	*		3	Indicators of hydrophytic vegetation and wetland					
☐ Sandy Mucky M			Redox Dep					hydrology must be present, unless disturbed					
	, ,		or problematic.										
Restrictive layer (if	observed):												
Type:								Hydric Soil Present? ⊠ Yes □ No					
Depth (in):													
Remarks:													
Kemarks.													
				HYDR	OLOGY								
Wetland Hydrology	y Indicators:												
	Primary Indicator	s (minimum of	one is required; che	eck all that a	ipply)			Secondary Indicators (minimum of two required)					
☐ Surface Water (A	A1)		☐ Water Stain	ed Leaves (B9)		[Surface Soil Cracks (B6)					
☐ High Water Tab			☐ Aquatic Fat	ına (B13)			[☐ Drainage Patterns (B10)					
Saturation (A3)			☐ True Aquat	ic Plants (B	14)		[☐ Dry-Season Water Table (C2)					
☐ Water Marks (B			☐ Hydrogen S	Sulfide Odor	(C1)		[Crayfish Burrows (C8)					
Sediment Depos			Oxidized R	-	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)					
Drift Deposits (I			☐ Presence of					Stunted or Stressed Plants (D1)					
☐ Algal Mat or Cr			Recent Iron			ils (C6)		Geomorphic Position (D2)					
☐ Iron Deposits (B	ole on Aerial Imagery	(P7)	☐ Thin Muck ☐ Gauge or W				L						
	ted Concave Surface (Other (Expl										
Field Observations		/	<u> </u>										
Surface Water Prese		es 🛛 No	Donth (in):										
			Depth (in): Depth (in): 24										
Water Table Present		es 🗌 No	•	face			1	Wetland Hydrology Present? ⊠ Yes □ No					
Saturation Present?		es 🗌 No	Depth (in): Sur	iace									
(includes capillary f	• .	nitorina11	orial photos '	ino	.no) if'1	hlar							
Describe Recorded I	Oata (stream gage, mo	mtoring well, a	citai piiotos, previo	us mspeciio	nis), 11 avalla	aute.							
Remarks:													



Project/Site: Minnesota River Greenway - Eagan Alignme	nt	City/Coun	ty: Eagan/Dak	ota	Sampling Date: 9/17/13				
Applicant/Owner: Dakota County		State: MN	1		Sampling Point: W2 SB-P				
Investigator(s): Dan Donayre		Sec, Twp,	Ran: 17,27N,2	23W					
Landform (hillside, terrace, etc.): Terrace		Local Reli	ief (concave, co	onvex, none): Flat					
Slope (%): 0-1% Lat:		Long:			Datum:				
Soil Map Unit Name: Seelyville muck		NWI or W	WI Classificati	ion:					
•	is time of year?	⊠ Yes		no explain in remar	(ra)				
Are climatic/hydrologic conditions on the site typical for the Are Vegetation , Soil , or Hydrology isignificant	•	△ 1es		•					
Are Vegetation , Soil , or Hydrology a significant	•	Are "normal circumstances" present? Yes □ No							
Are vegetation, soil, of Hydrology flaturally p		(If needed, explain any answers in Remarks.) MARY OF FINDINGS							
	SUMIN	IAKY O	r rinding	<u> </u>					
Hydrophytic Vegetation Present? ☐ Yes ☒ No			Is the Sample	ed Area within					
Hydric Soil Present? ⊠ Yes □ No			a wetland?	cu zirca witiiiii	☐ Yes ☒ No				
Wetland Hydrology Present? ☐ Yes ☒ No									
Remarks:									
	VEGETATION	– Use so	cientific nam	es of plants					
<u>Tree Stratum</u> (Plot Size: 30)	Absolute % Cover	Domin	ant Species?	Indicator Status	Dominance Test Worksheet:	_			
1		□ Y	es 🗌 No		Number of dominant				
2		ПΥ	es 🗌 No		species that are OBL, FACW, or FAC: 1 (A)				
			es 🗌 No		FACW, or FAC: 1 (A) Total number of				
3		_	<u> </u>		dominant species				
4		∐ Y	es 🗌 No		across all strata: 2 (B)				
5		□ Y	es 🗌 No		Percent of dominant species that are OBL,				
		= Total	Cover		FACW or FAC: 50% (A/B)				
Saplings/Shrub Stratum (Plot Size: 15)					Prevalence Index Worksheet:				
1		☐ Yes ☐ No			Total % Cover of: Multiply By:				
2		□ Y	es 🗌 No		OBL species: x 1				
3		□ Y	es 🗌 No		FACW species: 30 x 2 60				
4		ПΥ	es No		FAC species: x 3				
5			es 🗌 No		FACU species: 50 x 4 200				
<u> </u>		= Total	_		UPL species: x 5				
Herb Stratum (Plot size: 5)		- Total	COVE						
									
1. Phalaris arundinacea	30		es 🗌 No	FACW	Prevalence Index (B/A) = 3.3				
2. Ageratina altissima	20	⊠ Y	es 🗌 No	FACU	Hydrophytic Vegetation Indicators:				
3. Arctium minus	10	□ Y	es 🛛 No	FACU	Rapid Test for Hydrophytic Vegetation				
4. Cannabis sativa	10	□ Y	es 🛛 No	FACU	☐ Dominance Test is >50%				
5. Geranium maculatum	10	□ Y	es 🛛 No	FACU	\square Prevalence Index is $\leq 3.0^{1}$				
6		□ Y	es 🗌 No		☐ Morphological Adaptations¹ (Provide				
7		□ Y	es 🗌 No		supporting data in Remarks or on separate sheet	.)			
8		□ Y	es 🗌 No		☐ Problematic Hydrophytic Vegetation				
9		_ П Y	es No		(Explain in Remarks)				
10			es No		¹ Indicators of hydric soil and wetland hydrology	,			
_	80		otal Cover	·	must be present, unless disturbed or problematic				
Woody Vine Stratum (Plot size: 30)	80	- 10	00.01						
		_	_						
1			es 🗌 No		Hydrophytic ☐ Yes ☒ No Vegetation Present?				
2			es 🗌 No		vegetation i resent;				
	<u></u>	= To	otal Cover						
Remarks (Include photo numbers here or on a separate sheet	et):								



(Midwest Region)

Profile Description:	: (Describe to the dep	oth needed t	o document the ind	icator or co	onfirm the a	bsence of	indicators	s.)					
Don't (in)	Matrix		<u> </u>	Redox Featu	res		T	D1					
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>					
0-17	10 YR 2/2	100					SL						
17-30	10 YR 2/1	80	5 YR 4/6	20		PL	SL						
			0 110 1/0	20	C		Mucky	,,					
30+	10 YR 2/1	100					peat						
Type: C=Concentrat	¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix												
Hydric Soil Indicate	•	1-reduced r	viatrix, ivib = iviasko	a band Gran	ns. Loca	ttion. TL=	T OF LIMIT	Indicators for Problematic Hydric Soils ³ :					
☐ Histosol (A1)	013.		☐ Sandy Gley	ved Matrix ((\$4)			Coast Prairie Redox (A16) (LRR K, L, R)					
Histic Epipedon	(A2)		☐ Sandy Gle		(54)			☐ Iron-Manganese Masses (F12) (LRR K, L, R)					
☐ Black Histic (A3			☐ Stripped M					Dark Surface (S7) (LRR K, L)					
☐ Hydrogen Sulfid	,		☐ Loamy Mu		1 (F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)					
☐ Stratified Layers			☐ Loamy Gle					☐ Very Shallow Dark Surface (TF12)					
☐ 2 cm Muck (A10))		☐ Depleted M	Aatrix (F3)				☐ Other (Explain in Remarks)					
☐ Depleted Below Dark Surface (A11) ☐ Redox Dark Surface (F6)													
☐ Thick Dark Surfa	, ,	³ Indicators of hydrophytic vegetation and wetland											
☐ Sandy Mucky M	ineral (S1)		hydrology must be present, unless disturbed										
							1	or problematic.					
Restrictive layer (if	observed):												
Type:								Hydric Soil Present? ⊠ Yes □ No					
Depth (in):													
Remarks:													
				HYDE	ROLOGY								
Wetland Hydrology	· Indicators				TOLOGI								
welland Hydrology													
		(minimum c	of one is required; ch					Secondary Indicators (minimum of two required)					
Surface Water (A	*		☐ Water Stair		(B9)			☐ Surface Soil Cracks (B6)					
☐ High Water Tabl ☐ Saturation (A3)	le (A2)		☐ Aquatic Fa ☐ True Aqua		014)			☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2)					
☐ Water Marks (B:	1)		☐ Hydrogen					Crayfish Burrows (C8)					
Sediment Deposit			Oxidized F			Roots (C3)		Saturation Visible on Aerial Imagery (C9)					
☐ Drift Deposits (E			☐ Presence o		-			Stunted or Stressed Plants (D1)					
☐ Algal Mat or Cru			Recent Iron	n Reduction	in Tilled So	ils (C6)		Geomorphic Position (D2)					
☐ Iron Deposits (B	5)		☐ Thin Muck	Surface (C	7)			FAC-Neutral Test (D5)					
☐ Inundation Visib	ole on Aerial Imagery	(B7)	☐ Gauge or V	Vell Data (I	09)								
☐ Sparsely Vegetat	ted Concave Surface (B8)	Other (Exp	lain in Rem	arks)								
Field Observations:	:												
Surface Water Preser	nt?	s 🛛 No	Depth (in):										
Water Table Present	?	s 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No					
Saturation Present?	⊠ Ye	s 🔲 No	Depth (in): 15					Wetland Hydrology Present? ☐ Yes ☒ No					
(includes capillary f	ringe)												
	Data (stream gage, mor	nitoring well,	, aerial photos, previo	ous inspecti	ons), if avail	able:	1						
Remarks:													
1													



C475 16 5101									
Project/Site: Minnesota River Greenway - Eagan Alignm	nent	City/County: Eagan/Dak	tota	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 Classificat	ion: PEM/SS1Cd						
Are climatic/hydrologic conditions on the site typical for	this time of year?	⊠ Yes ☐ No (if	no explain in remark	cs)					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ signification	ntly disturbed?	Are "normal	circumstances" prese	ent? 🛛 Yes 🗌 No					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	problematic?	(If needed, ex	xplain any answers ir	n Remarks.)					
	SUMM	MARY OF FINDING	S						
Hydrophytic Vegetation Present? ☐ Yes ☐ No									
Hydric Soil Present? ☐ Yes ☐ No		-	ed Area within	⊠ Yes □ No					
Wetland Hydrology Present? ☐ Yes ☐ No		a wetland?							
Remarks:									
	VEGETATION	I – Use scientific nam	es of plants						
Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:					
Acer negundo	10	∑ Yes	FAC	Number of dominant					
•	10		TAC	species that are OBL,					
2		Yes No		FACW, or FAC: 2 (A)					
3		☐ Yes ☐ No		Total number of dominant species					
4		☐ Yes ☐ No		across all strata: 2 (B)					
5		☐ Yes ☐ No		Percent of dominant					
	10	= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:					
1		☐ Yes ☐ No		Total % Cover of: Multiply By:					
2		☐ Yes ☐ No		OBL species: x 1					
3		☐ Yes ☐ No		FACW species: 100 x 2 200					
4		☐ Yes ☐ No		FAC species: 10 x 3 30					
5		☐ Yes ☐ No		FACU species: x 4					
<u> </u>		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)		= Total Cover		Column Totals: 110 (A) 230 (B)					
	100		E 1 GW	()					
Phalaris arundinacea	100	⊠ Yes □ No	FACW	Prevalence Index (B/A) = 2.1					
2		Yes No		Hydrophytic Vegetation Indicators:					
3		☐ Yes ☐ No		Rapid Test for Hydrophytic Vegetation					
4		☐ Yes ☐ No		Dominance Test is >50%					
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$					
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)					
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation					
9		☐ Yes ☐ No		(Explain in Remarks)					
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology					
	100	= Total Cover		must be present, unless disturbed or problematic.					
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No		Hydrophytic					
2		Yes No		Hydrophytic					
		= Total Cover							
Remarks (Include photo numbers here or on a separate sh	eet):	- 10141 60761							
(e.ace photo numbers here of on a separate si	/•								



(Midwest Region)

Profile Description:	(Describe to the de	oth needed to	document the indi	cator or co	nfirm the a	bsence of i	indicators	.)						
_	Matrix			edox Featu										
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>						
0-20	10 YR 2/1	100					SiL							
20+	10 YR 2/1	100					Muck							
20+	10 1 K 2/1	100					WILLER							
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix														
Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :														
Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)						
☐ Histic Epipedon	(A2)		☐ Sandy Redo		,			☐ Iron-Manganese Masses (F12) (LRR K, L, R)						
☐ Black Histic (A3)		☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)						
☐ Hydrogen Sulfide			☐ Loamy Mu	cky Minera	l (F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)						
Stratified Layers			Loamy Gle		(F2)			☐ Very Shallow Dark Surface (TF12)						
2 cm Muck (A10			☐ Depleted M					Other (Explain in Remarks)						
Depleted Below			Redox Darl					27 12						
☐ Thick Dark Surfa☐ Sandy Mucky M	, ,		☐ Depleted D ☐ Redox Dep					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed						
Salidy Mucky M.	merar (31)		or problematic.											
Restrictive layer (if	observed):							or processing.						
	obser (eu).							Hydric Soil Present? ⊠ Yes □ No						
Type:								Hydric Son Fresent:						
Depth (in):														
Remarks:														
				HYDR	OLOGY									
Wetland Hydrology	Indicators:													
	Primary Indicators	(minimum of	one is required; che	eck all that	apply)			Secondary Indicators (minimum of two required)						
☐ Surface Water (A	1)		☐ Water Stair	ed Leaves	(B9)			Surface Soil Cracks (B6)						
☐ High Water Tabl			Aquatic Far					☐ Drainage Patterns (B10)						
Saturation (A3)			☐ True Aquat	ic Plants (B	14)			☐ Dry-Season Water Table (C2)						
☐ Water Marks (B1)		☐ Hydrogen S	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)						
Sediment Deposi			Oxidized R	-	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)						
Drift Deposits (B			Presence of					Stunted or Stressed Plants (D1)						
☐ Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)						
☐ Iron Deposits (B:	5) le on Aerial Imagery ((D7)	☐ Thin Muck ☐ Gauge or W					☐ FAC-Neutral Test (D5)						
	ed Concave Surface (Other (Exp		· ·									
Field Observations:														
		s 🛛 No	Donth (in):											
Surface Water Preser			Depth (in): Depth (in):											
Water Table Present?		s 🛛 No	_					Wetland Hydrology Present? ⊠ Yes □ No						
Saturation Present?		s 🗌 No	Depth (in): 10											
(includes capillary fi	• .	nitoring wall -	arial photos pro	ue increati	ne) if ave!	oblo:								
Describe Recorded D	ata (stream gage, moi	mornig wen, a	zmai photos, previo	us mspectio	ms), 11 avall	aute.								
Remarks:														



16.50 W 2011									
Project/Site: Minnesota River Greenway - Eagan Alignme	nt	City/Coun	ty: Eagan/Dak	ota	Sampling Date: 9/17/13				
Applicant/Owner: Dakota County		State: MN	1		Sampling Point: W2-Sl	B-R			
Investigator(s): Dan Donayre		Sec, Twp,	Ran: 8,27N,23	BW					
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 the		⊠ Yes	_	no explain in remarl	lze)				
Are Vegetation , Soil , or Hydrology significan	*	⊠ 1es		•	ent? X Yes I No				
Are Vegetation , Soil , or Hydrology asignment	-			plain any answers in					
Ale vegetation, son, or fryurology naturally p		IARY O	F FINDING		ii Kemarks.)				
Hydrophytic Vegetation Present? ✓ Yes No	BCWIN.		TINDING						
Hydric Soil Present?			Is the Sample	ed Area within	☐ Yes ⊠ No				
			a wetland?						
Wetland Hydrology Present? ☐ Yes ☒ No Remarks:									
Remarks.									
	VECETATION	. Has as	iontifio nom	as of mlants					
The Green (DL e Green)	VEGETATION			•					
<u>Tree Stratum</u> (Plot Size: 30)	Absolute % Cover		ant Species?	Indicator Status	Dominance Test We				
1. Acer negundo	65	⊠ Y	es 🗌 No	FAC	Number of dominant species that are OBL				
2		□ Y	es 🗌 No		FACW, or FAC:	2 (A)			
3		□ Y	es 🗌 No		Total number of				
4		□ Y	es 🗌 No		dominant species across all strata:	2 (B)			
5		□ Y	es 🗌 No		Percent of dominant				
	65	= Total	Cover		species that are OBL FACW or FAC:	., 100% (A/B)			
Saplings/Shrub Stratum (Plot Size: 15)					Prevalence Index W				
1		Пν	es 🗌 No		Total % Cover of				
			es 🗌 No			<u>миниргу Бу.</u> х 1			
2					OBL species:				
3			es No		FACW species:	110 x 2 220			
4			es No		FAC species:	75 x 3 225			
5			es No		FACU species:	x 4			
		= Total	Cover		UPL species:	x 5			
<u>Herb Stratum</u> (Plot size: 5)					Column Totals:	185 (A) 445 (B)			
Phalaris arundinacea	90	X Y	es 🗌 No	FACW	Prevalence	e Index (B/A) = 2.4			
2. Ageratina altissima	10	□ Y	es 🛛 No	FAC	Hydrophytic Vegeta	ation Indicators:			
3. Urtica dioica	10	□ Y	es 🛛 No	FACW	Rapid Test for H	lydrophytic Vegetation			
4. Rudbeckia laciniata	10	□ Y	es 🛛 No	FACW	□ Dominance Test	is >50%			
5		□ Y	es 🗌 No		□ Prevalence Index	$cis \le 3.0^{1}$			
6		□ Y	es 🗌 No		☐ Morphological A	Adaptations ¹ (Provide			
7		□ Y	es 🗌 No			emarks or on separate sheet)			
8			es 🗌 No		☐ Problematic Hyd	Ironhytic Vegetation			
9			es 🗌 No		(Explain in Remarks				
10			es No		¹ Indicators of hydric	soil and wetland hydrology			
	120		otal Cover	 -		ess disturbed or problematic.			
Woody Vine Stratum (Plot size: 20)	120	- 10	an Cover						
Woody Vine Stratum (Plot size: 30)		_	. 🗖						
1			es No		Hydrophytic Vegetation Present	Yes 🗌 No			
2			es 🗌 No		v egetation i reselli	·•			
		= To	otal Cover						
Remarks (Include photo numbers here or on a separate sheet	et):								



Profile Description:	(Describe to the der	oth needed to	document the indi		nfirm the a	beance of i	indicators				
Trome Description.	Matrix	om needed to		edox Featur		osence of 1	muicators	5.)			
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>			
0-26	10 YR 2/1	100					SiL				
26+	10 YR 5/1	100					SiL				
<u></u>											
								<u></u>			
								<u></u>			
								<u></u>			
<u></u> ,											
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix											
Hydric Soil Indicato	ors:							Indicators for Problematic Hydric Soils3:			
☐ Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)			
☐ Histic Epipedon ((A2)		☐ Sandy Redo	ox (S5)				☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
☐ Black Histic (A3)			☐ Stripped M					☐ Dark Surface (S7) (LRR K, L)			
Hydrogen Sulfide			Loamy Mu					5 cm Mucky Peat or Peat (S3) (LRR , K , L , R)			
Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)			
2 cm Muck (A10)			☐ Depleted M		I = \			Other (Explain in Remarks)			
Depleted Below I			Redox Dark								
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7)								³ Indicators of hydrophytic vegetation and wetland			
Sandy Mucky Mineral (S1) Redox Depressions (F8)								hydrology must be present, unless disturbed or problematic.			
Restrictive layer (if	observed):							. 1			
Type:								Hydric Soil Present? ⊠ Yes □ No			
Depth (in):								. – –			
Remarks:											
remarks.											
				HVDD	OLOGY						
Wetland Hydrology	Indicators			IIIDK	OLOGI						
wettand frydrology		(:-:		1 11 41 4	1)			Consider Indicator (minimum of two monimum)			
		(IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	one is required; che					Secondary Indicators (minimum of two required)			
Surface Water (A			☐ Water Stain		(B9)			☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10)			
☐ High Water Table ☐ Saturation (A3)	e (A2)		☐ Aquatic Fat ☐ True Aquat		14)			☐ Dry-Season Water Table (C2)			
☐ Water Marks (B1	,		☐ Hydrogen S					Crayfish Burrows (C8)			
Sediment Deposit			Oxidized R			Poots (C3)		Saturation Visible on Aerial Imagery (C9)			
☐ Drift Deposits (B			☐ Presence of		_	10015 (05)		Stunted or Stressed Plants (D1)			
☐ Algal Mat or Cru			☐ Recent Iron		` ′	ils (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B5			☐ Thin Muck					▼ FAC-Neutral Test (D5)			
☐ Inundation Visibl		(B7)	☐ Gauge or W	ell Data (D	9)						
☐ Sparsely Vegetate	ed Concave Surface (B8)	Other (Expl	lain in Rema	arks)						
Field Observations:											
Surface Water Presen	t?	s 🛛 No	Depth (in):								
Water Table Present?	☐ Ye	s 🛛 No	Depth (in):					Wotland Hydrology Procent?			
Saturation Present?	⊠ Ye	s 🗌 No	Depth (in): 23					Wetland Hydrology Present? ☐ Yes ☒ No			
(includes capillary fr		_									
Describe Recorded D	-	nitoring well,	nerial photos, previo	us inspection	ons), if avail	able:	<u> </u>				
Remarks:											



1975 K 2011									
Project/Site: Minnesota River Greenway - Eagan Al	ignment	City/County: Eagan/Dak	tota	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,2	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 typica	l for this time of year?	☐ Yes ☐ No (if	no explain in remar	ks)					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ sign	· ·		-	ent? ⊠ Yes □ No					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ natu	urally problematic?	(If needed, ex	xplain any answers in	n Remarks.)					
	SUMN	MARY OF FINDING	S						
Hydrophytic Vegetation Present? ☐ Yes ☐ N	То								
Hydric Soil Present?	No	-	ed Area within	⊠ Yes □ No					
Wetland Hydrology Present? ☐ Yes ☐ N		a wetland?							
Remarks:									
	VEGETATION	V – Use scientific nam	es of plants						
Tree Stratum (Plot Size: 30)	Absolute % Cover		Indicator Status	Dominance Test Worksheet:					
1. Acer negundo	10	☐ Yes ☐ No	FAC	Number of dominant					
2.	10	☐ Yes ☐ No	1110	species that are OBL,					
				FACW, or FAC: 2 (A)					
3		☐ Yes ☐ No		Total number of dominant species					
4		Yes No		across all strata: 2 (B)					
5		☐ Yes ☐ No		Percent of dominant species that are OBL,					
	10	= Total Cover		FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:					
1		☐ Yes ☐ No		Total % Cover of: Multiply By:					
2		☐ Yes ☐ No		OBL species: x 1					
3		☐ Yes ☐ No		FACW species: 110 x 2 220					
4		☐ Yes ☐ No		FAC species: 10 x 3 30					
5		☐ Yes ☐ No		FACU species: x 4					
		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)		701111 00101		Column Totals: 120 (A) 250 (B)					
Phalaris arundinacea	100	M. M. D. M.	FACW	Prevalence Index $(B/A) = 2.1$					
	100	⊠ Yes □ No	FACW	` ′					
2		Yes No		Hydrophytic Vegetation Indicators:					
3		☐ Yes ☐ No		Rapid Test for Hydrophytic Vegetation					
4		☐ Yes ☐ No		☑ Dominance Test is >50%					
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$					
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)					
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation					
9		☐ Yes ☐ No		(Explain in Remarks)					
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology					
	100	= Total Cover		must be present, unless disturbed or problematic.					
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No		Hydronhytic					
2			_	Hydrophytic					
<u></u>		☐ Yes ☐ No vegetation Fresent:							
Remarks (Include photo numbers here or on a separa	ite sheet):	= Total Cover							
remarks (merade photo numbers here of on a separa	ac siece.								



	Matrix			Redox Feature	es				
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>	
0-26	10 YR 2/1	100					SiL		
26+	10 YR 4/1	100				· <u></u> -	SiL		
201	10 110 1/1	100					SIL		
									
									
¹Type: C=Concentrati	on, D=Depletion, RM	1=Reduced M	Iatrix, MS = Mask	ed Sand Grain	s. ² Loca	tion: PL=	Pore Lining	, M=Matrix	
Hydric Soil Indicator	rs:						1	indicators for Problematic Hydric Soils3:	
Histosol (A1)			☐ Sandy Gl	eyed Matrix (S	4)		[Coast Prairie Redox (A16) (LRR K, L, R)	
☐ Histic Epipedon (.			☐ Sandy Re					Iron-Manganese Masses (F12) (LRR K, L, R)	
Black Histic (A3)			Stripped 1					Dark Surface (S7) (LRR K, L)	
Hydrogen Sulfide			•	lucky Mineral			[5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)	
Stratified Layers (•	leyed Matrix (F2)		l	Very Shallow Dark Surface (TF12)	
☐ 2 cm Muck (A10) ☐ Depleted Below I			☐ Depleted	Matrix (F3) ark Surface (F6	5)		L	Other (Explain in Remarks)	
☐ Depleted Below I				Dark Surface (Fo	*		3	Indicators of hydrophytic vegetation and wetland	
☐ Sandy Mucky Min			•	epressions (F8)				hydrology must be present, unless disturbed	
			_ nous.	pressions (10,				or problematic.	
Restrictive layer (if o	observed):							•	
Type: Rock/Gravel							1	Hydric Soil Present? ⊠ Yes □ No	
Depth (in): 30"									
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.									
this determination.						many, the	presence of	nyaroarophyare regenation and nyaronogy neep verny	
this determination.				•	OLOGY	mary, the	presence of	nyaroarophyare regenation and nyaronogy neep verny	
this determination. Wetland Hydrology	Indicators:			•		mary, the	presence or	nyaroarophyare regenation and nyaronogy neep verny	
	Indicators: Primary Indicators			HYDR	OLOGY	many, the	presence or	Secondary Indicators (minimum of two required)	
Wetland Hydrology Surface Water (A	Primary Indicators 1)		f one is required; c	HYDRe theck all that a nined Leaves (OLOGY	many, the		Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)	
Wetland Hydrology Surface Water (A High Water Table	Primary Indicators 1)		f one is required; c Water Sta	HYDR Theck all that a nined Leaves (Fauna (B13)	DLOGY pply) 39)	, many, the		Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10)	
Wetland Hydrology Surface Water (A High Water Table Saturation (A3)	Primary Indicators 1) (A2)		f one is required; c Water Sta Aquatic F	HYDR Theck all that a timed Leaves (Fauna (B13) atic Plants (B1)	DLOGY pply) 39) 4)	, the		Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)	
Wetland Hydrology ☐ Surface Water (A ☐ High Water Table ☑ Saturation (A3) ☐ Water Marks (B1)	Primary Indicators 1) (A2)		f one is required; c Water Sta Aquatic F True Aqu Hydroger	HYDR theck all that a nined Leaves (1 Fauna (B13) atic Plants (B1 n Sulfide Odor	DLOGY pply) 399 4) (C1)			Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)	
Wetland Hydrology ☐ Surface Water (A ☐ High Water Table ☑ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposit	Primary Indicators 1) 2 (A2) 3 (B2)		f one is required; c Water Sta Aquatic F True Aqu Hydroger Oxidized	HYDR theck all that a nined Leaves (1) Fauna (B13) atic Plants (B13) a Sulfide Odor Rhizospheres	DLOGY pply) 399 4) (C1) on Living F			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)	
Wetland Hydrology ☐ Surface Water (A ☐ High Water Table ☑ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposit ☐ Drift Deposits (B3)	Primary Indicators 1) (A2) (ss (B2) 3)		f one is required; c Water Sta Aquatic F True Aqu Hydroger Oxidized Presence	HYDRO check all that a nined Leaves (1) Fauna (B13) atic Plants (B13) a Sulfide Odor Rhizospheres of Reduced Iro	oply) 39) 4) (C1) on Living For (C4)	doots (C3)		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)	
Wetland Hydrology □ Surface Water (A □ High Water Table □ Saturation (A3) □ Water Marks (B1) □ Sediment Deposit □ Drift Deposits (B3) □ Algal Mat or Crus	Primary Indicators 1) (A2) (ss (B2) 3) st (B4)		f one is required; c Water Sta Aquatic F True Aqu Hydroger Oxidized Presence	HYDRo check all that a nined Leaves (1 Fauna (B13) atic Plants (B1 a Sulfide Odor Rhizospheres of Reduced Iro on Reduction i	oply) 39) 4) (C1) on Living Form (C4) n Tilled So	doots (C3)		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)	
Wetland Hydrology □ Surface Water (A □ High Water Table □ Saturation (A3) □ Water Marks (B1) □ Sediment Deposits □ Drift Deposits (B3) □ Algal Mat or Crus □ Iron Deposits (B5)	Primary Indicators 1) (A2) (SE) (SE) (SE) (SE) (SE) (SE) (SE) (SE	(minimum o	f one is required; c Water Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir	HYDRO check all that a nined Leaves (1) Fauna (B13) atic Plants (B13) a Sulfide Odor Rhizospheres of Reduced Iro on Reduction in the Surface (C7	oply) 39) 4) (C1) on Living Fon (C4) n Tilled So.	doots (C3)		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)	
Wetland Hydrology □ Surface Water (A □ High Water Table □ Saturation (A3) □ Water Marks (B1) □ Sediment Deposit □ Drift Deposits (B5) □ Algal Mat or Crus □ Iron Deposits (B5) □ Inundation Visible	Primary Indicators 1) (A2) (SE) (SE) (SE) (SE) (SE) (SE) (SE) (SE	(minimum o	f one is required; of Water State Aquatic For True Aquadic For Hydroger Oxidized Presence Recent Ir	HYDRo check all that a nined Leaves (1 Fauna (B13) atic Plants (B1 a Sulfide Odor Rhizospheres of Reduced Iro on Reduction i	OLOGY Oply) 39) 4) (C1) on Living Fon (C4) n Tilled So)	doots (C3)		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)	
Wetland Hydrology □ Surface Water (A □ High Water Table □ Saturation (A3) □ Water Marks (B1) □ Sediment Deposit □ Drift Deposits (B5) □ Algal Mat or Crus □ Iron Deposits (B5) □ Inundation Visible	Primary Indicators 1) 2 (A2) 3 (SE) 3 (SE) 3 (SE) 5 (B4) 6) 6 on Aerial Imagery ((minimum o	f one is required; of Water State Aquatic For True Aquadic For Hydroger Oxidized Presence Recent Ir	HYDRo check all that a nined Leaves (1) Fauna (B13) atic Plants (B13) a Sulfide Odor Rhizospheres of Reduced Iro on Reduction in the Surface (C7) Well Data (D9)	OLOGY Oply) 39) 4) (C1) on Living Fon (C4) n Tilled So)	doots (C3)		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)	
Wetland Hydrology □ Surface Water (A □ High Water Table □ Saturation (A3) □ Water Marks (B1) □ Sediment Deposit □ Drift Deposits (B5) □ Iron Deposits (B5) □ Inundation Visible □ Sparsely Vegetate	Primary Indicators 1) 2 (A2) 3 (SE (B2) 3) St (B4) 4) 4) 6) 6 on Aerial Imagery (6 dd Concave Surface ((minimum o	f one is required; of Water State Aquatic For True Aquadic For Hydroger Oxidized Presence Recent Ir	HYDR theck all that a anined Leaves (1) Fauna (B13) atic Plants (B13) a Sulfide Odor Rhizospheres of Reduced Ire on Reduction in the Surface (C7 Well Data (D9 splain in Rema	OLOGY Oply) 39) 4) (C1) on Living Fon (C4) n Tilled So)	doots (C3)		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)	
Wetland Hydrology Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3) Algal Mat or Crus Iron Deposits (B5) Inundation Visible Sparsely Vegetate Field Observations:	Primary Indicators 1) 2 (A2) 3) st (B4) 6) e on Aerial Imagery (2d Concave Surface (1) t?	(minimum o	f one is required; of Water State Aquatic Factor True Aquadic Presence Recent Ir	HYDRO Theck all that a anined Leaves (1) Fauna (B13) atic Plants (B1) a Sulfide Odor Rhizospheres of Reduced Iro on Reduction in ck Surface (C7 Well Data (D9 splain in Rema	OLOGY Oply) 39) 4) (C1) on Living Fon (C4) n Tilled So)	doots (C3)		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)	
Wetland Hydrology □ Surface Water (A □ High Water Table □ Saturation (A3) □ Water Marks (B1) □ Sediment Deposits □ Drift Deposits (B5) □ Iron Deposits (B5) □ Inundation Visible □ Sparsely Vegetate Field Observations: Surface Water Present	Primary Indicators 1) 2 (A2) 3 (S2) 3 (S2) 5 (B2) 6 (B4) 6) 6 on Aerial Imagery (6 d Concave Surface (1) 4 (Part of the primary of	(minimum o (B7) (B8) s ⊠ No s ⊠ No	f one is required; of Water State Aquatic Factor True Aquadic Presence Recent Ir Gauge or Other (Extended to the Company of th	HYDRO check all that a nined Leaves (1) Fauna (B13) atic Plants (B13) a Sulfide Odor Rhizospheres of Reduced Irr on Reduction in the Surface (C7 Well Data (D9) splain in Rema	OLOGY Oply) 39) 4) (C1) on Living Fon (C4) n Tilled So)	doots (C3)		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)	
Wetland Hydrology Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B5) Inon Deposits (B5) Inundation Visible Sparsely Vegetate Field Observations: Surface Water Present Water Table Present?	Primary Indicators 1) 2 (A2) 3) 3t (B4) 4) 4 Concave Surface (1) 17 18 19 19 19 10 10 11 11 12 12 13 14 15 15 16 17 17 18 18 19 19 19 19 19 19 19 19	(minimum of (B7) B8)	f one is required; of Water State Aquatic Factor True Aquatic Factor True Aquatic Presence Recent Ir Gauge or Other (Extended Control of the	HYDRO check all that a nined Leaves (1) Fauna (B13) atic Plants (B13) a Sulfide Odor Rhizospheres of Reduced Irr on Reduction in the Surface (C7 Well Data (D9) splain in Rema	OLOGY Oply) 39) 4) (C1) on Living Fon (C4) n Tilled So)	doots (C3)		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)	
Wetland Hydrology □ Surface Water (A □ High Water Table □ Saturation (A3) □ Water Marks (B1) □ Sediment Deposit □ Drift Deposits (B5) □ Inon Deposits (B5) □ Inundation Visible □ Sparsely Vegetate Field Observations: Surface Water Present?	Primary Indicators 1) 2 (A2) 3 (SE) 3 (SE) 3 (SE) 4 (A2) 5 (B2) 6 (B4) 6 (Concave Surface (Concave	(Minimum of (Minimum of (B87) (B88) (S \rightarrow No (S \rightarrow No	f one is required; c Water Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Mu Gauge or Other (Ex	HYDRo check all that a nined Leaves (1) Fauna (B13) atic Plants (B13) a Sulfide Odor Rhizospheres of Reduced Iro on Reduction in the Surface (C7 Well Data (D9 splain in Rema	OLOGY oply) 39) 4) (C1) on Living Fon (C4) n Tilled So)) rks)	doots (C3)		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)	
Wetland Hydrology □ Surface Water (A □ High Water Table □ Saturation (A3) □ Water Marks (B1) □ Sediment Deposits □ Drift Deposits (B5) □ Inundation Visible □ Sparsely Vegetate Field Observations: Surface Water Present Water Table Present? (includes capillary fri	Primary Indicators 1) 2 (A2) 3 (SE) 3 (SE) 3 (SE) 4 (A2) 5 (B2) 6 (B4) 6 (Concave Surface (Concave	(Minimum of (Minimum of (B87) (B88) (S \rightarrow No (S \rightarrow No	f one is required; c Water Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Mu Gauge or Other (Ex	HYDRo check all that a nined Leaves (1) Fauna (B13) atic Plants (B13) a Sulfide Odor Rhizospheres of Reduced Iro on Reduction in the Surface (C7 Well Data (D9 splain in Rema	OLOGY oply) 39) 4) (C1) on Living Fon (C4) n Tilled So)) rks)	doots (C3)		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)	
Wetland Hydrology □ Surface Water (A □ High Water Table □ Saturation (A3) □ Water Marks (B1) □ Drift Deposits (B3) □ Iron Deposits (B5) □ Inundation Visible □ Sparsely Vegetate Field Observations: Surface Water Present Water Table Present? (includes capillary fridescribe Recorded Dates	Primary Indicators 1) 2 (A2) 3 (SE) 3 (SE) 3 (SE) 4 (A2) 5 (B2) 6 (B4) 6 (Concave Surface (Concave	(Minimum of (Minimum of (B87) (B88) (S \rightarrow No (S \rightarrow No	f one is required; c Water Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Mu Gauge or Other (Ex	HYDRo check all that a nined Leaves (1) Fauna (B13) atic Plants (B13) a Sulfide Odor Rhizospheres of Reduced Iro on Reduction in the Surface (C7 Well Data (D9 splain in Rema	OLOGY oply) 39) 4) (C1) on Living F on (C4) n Tilled So)) rks)	doots (C3)		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)	
Wetland Hydrology □ Surface Water (A □ High Water Table □ Saturation (A3) □ Water Marks (B1) □ Sediment Deposits □ Drift Deposits (B5) □ Inundation Visible □ Sparsely Vegetate Field Observations: Surface Water Present Water Table Present? (includes capillary fri	Primary Indicators 1) 2 (A2) 3 (SE) 3 (SE) 3 (SE) 4 (A2) 5 (B2) 6 (B4) 6 (Concave Surface (Concave	(Minimum of (Minimum of (B87) (B88) (S \rightarrow No (S \rightarrow No	f one is required; c Water Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Mu Gauge or Other (Ex	HYDRo check all that a nined Leaves (1) Fauna (B13) atic Plants (B13) a Sulfide Odor Rhizospheres of Reduced Iro on Reduction in the Surface (C7 Well Data (D9 splain in Rema	OLOGY oply) 39) 4) (C1) on Living F on (C4) n Tilled So)) rks)	doots (C3)		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)	
Wetland Hydrology □ Surface Water (A □ High Water Table □ Saturation (A3) □ Water Marks (B1) □ Drift Deposits (B3) □ Iron Deposits (B5) □ Inundation Visible □ Sparsely Vegetate Field Observations: Surface Water Present Water Table Present? (includes capillary fridescribe Recorded Dates	Primary Indicators 1) 2 (A2) 3 (SE) 3 (SE) 3 (SE) 4 (A2) 5 (B2) 6 (B4) 6 (Concave Surface (Concave	(Minimum of (Minimum of (B87) (B88) (S \rightarrow No (S \rightarrow No	f one is required; c Water Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Mu Gauge or Other (Ex	HYDRo check all that a nined Leaves (1) Fauna (B13) atic Plants (B13) a Sulfide Odor Rhizospheres of Reduced Iro on Reduction in the Surface (C7 Well Data (D9 splain in Rema	OLOGY oply) 39) 4) (C1) on Living F on (C4) n Tilled So)) rks)	doots (C3)		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)	



1975 (6.5)									
Project/Site: Minnesota River Greenway - Eagan Alignm	nent	City/County: Eagan/Da	akota	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?		if no explain in remar	ks)					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significa	ntly disturbed?	Are "norma	l circumstances" pres	ent? 🛛 Yes 🗌 No					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	problematic?	(If needed,	explain any answers i	n Remarks.)					
	SUMM	IARY OF FINDIN	GS						
Hydrophytic Vegetation Present? ☐ Yes ☐ No									
Hydric Soil Present? ☐ Yes ☒ No		Is the Samp a wetland?	oled Area within	☐ Yes ⊠ No					
Wetland Hydrology Present? ☐ Yes ☒ No		a wettand:							
Remarks:									
	VEGETATION	I – Use scientific na	nes of plants						
Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:					
Acer negundo	5	☐ Yes ☐ No	FAC	Number of dominant					
2		☐ Yes ☐ No		species that are OBL,					
				FACW, or FAC: 2 (A) Total number of					
3		☐ Yes ☐ No		dominant species					
4		☐ Yes ☐ No		across all strata: 2 (B)					
5		☐ Yes ☐ No		Percent of dominant species that are OBL,					
	5	= Total Cover		FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:					
1		☐ Yes ☐ No		Total % Cover of: Multiply By:					
2		☐ Yes ☐ No		OBL species: x 1					
3		☐ Yes ☐ No		FACW species: 100 x 2 200					
4		☐ Yes ☐ No		FAC species: 5 x 3 15					
5		☐ Yes ☐ No		FACU species: 10 x 4 40					
		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)				Column Totals: 115 (A) 255 (B)					
Phalaris arundinacea	100	⊠ Yes □ No	FACW	Prevalence Index $(B/A) = 2.2$					
Cirsium vulgare				Hydrophytic Vegetation Indicators:					
	10	☐ Yes ☒ No	FACU	Rapid Test for Hydrophytic Vegetation					
3		☐ Yes ☐ No		✓ Rapid Test for Hydrophytic Vegetation ✓ Dominance Test is >50%					
4		☐ Yes ☐ No							
5		Yes No		\square Prevalence Index is $\leq 3.0^{1}$					
6		Yes No		☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on separate sheet)					
7		☐ Yes ☐ No		supporting data in Remarks of on separate sneet)					
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation					
9		☐ Yes ☐ No		(Explain in Remarks)					
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
	110	= Total Cover		must be present, unless disturbed of problematic.					
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No		Hydrophytic No. 17 No.					
2		☐ Yes ☐ No		Vegetation Present? ✓ Yes ☐ No					
		= Total Cover							
Remarks (Include photo numbers here or on a separate sh	eet):								
, , , , , , , , , , , , , , , , , , ,	•								



Profile Description:	(Describe to the de	nth needed to	document the indi		nfirm the a	heanca of	indicators	s)			
Trome Description.	Matrix	_		ledox Featu		bsence of	marcutor	54)			
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>e</u> <u>Remarks</u>			
0-6	10 YR 2/1	100					SiL				
6-15	10 YR 2/1	80	7.5 YR 4/3	20	С	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: Indicators for Problematic Hydric Soils ³ :											
☐ Histosol (A1)			☐ Sandy Gley	ed Matrix	(S4)			Coast Prairie Redox (A16) (LRR K, L, R)			
☐ Histic Epipedon	(A2)		☐ Sandy Redo		` ′			☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
☐ Black Histic (A3			☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)			
☐ Hydrogen Sulfid	e (A4)		☐ Loamy Mu		1 (F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)			
☐ Stratified Layers			Loamy Gle					☐ Very Shallow Dark Surface (TF12)			
2 cm Muck (A10			☐ Depleted M	latrix (F3)				Other (Explain in Remarks)			
☐ Depleted Below	Dark Surface (A11)		☐ Redox Darl	k Surface (I	F6)			-			
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7)								³ Indicators of hydrophytic vegetation and wetland			
Sandy Mucky Mineral (S1) Redox Depressions (F8)								hydrology must be present, unless disturbed			
								or problematic.			
Restrictive layer (if	observed):										
Type:								Hydric Soil Present? ☐ Yes ☐ No			
Depth (in):											
Remarks:											
				HYDE	ROLOGY						
Wetland Hydrology	/ Indicators:				102001						
wetianu frydrology		(minimum of	f one is required; abo	ook all that	opply)			Secondary Indicators (minimum of two required)			
	-	s (IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	f one is required; che					Secondary Indicators (minimum of two required)			
Surface Water (A			☐ Water Stair		(B9)			☐ Surface Soil Cracks (B6)			
High Water Tabl	le (A2)		Aquatic Fa	, ,	M 40			Drainage Patterns (B10)			
Saturation (A3)	15		☐ True Aquat ☐ Hydrogen S					Dry-Season Water Table (C2)			
☐ Water Marks (B)☐ Sediment Deposit			☐ Oxidized R			2 t - (C2)		☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9)			
☐ Drift Deposits (E			☐ Presence of	-	-	Xoois (C3)		☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1)			
☐ Algal Mat or Cru			Recent Iron			:1c (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B.			☐ Thin Muck			iis (Co)		FAC-Neutral Test (D5)			
	ole on Aerial Imagery	(P7)	☐ Gauge or W	,	·			FAC-Neutral Test (D3)			
	ted Concave Surface (Other (Expl								
Field Observations:		100)	_ outer (Exp.	idii ili itoli	au Ko)						
Surface Water Preser		es 🛛 No	Depth (in):								
Water Table Present		es 🛛 No	Depth (in):								
Saturation Present?		es 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No			
(includes capillary fi		23 110									
	Oata (stream gage, mo	nitoring well	aerial photos, previo	ous inspecti	ons), if avail	able:					
- I Too or and I	, Suge, 1110		p	реси	,, u.u.ı						
Damarka											
Remarks:											



693 8 200									
Project/Site: Minnesota River Greenway - Eagan Alignme	ent	City/County: Eag	gan/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 (con-	cave, convex, none): Con	nvex					
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 t	his time of year?	⊠ Yes □	No (if no explain in rem	arks)					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significan	ntly disturbed?	Are "i	normal circumstances" pr	esent? 🛛 Yes 🗌 No					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	problematic?	(If needed, explain any answers in Remarks.)							
	SUMM	ARY OF FIN	DINGS						
Hydrophytic Vegetation Present? ☐ Yes ☐ No									
Hydric Soil Present? ⊠ Yes □ No			Sampled Area within	⊠ Yes □ No					
Wetland Hydrology Present? ☐ Yes ☐ No		a wet	iana:						
Remarks:									
	VEGETATION	V – Use scientifi	ic names of plants						
Tree Stratum (Plot Size: 30)	Absolute % Cover		•	S Dominance Test Worksheet:					
Acer negundo	40	⊠ Yes □	No FAC	Number of dominant					
2		☐ Yes ☐		species that are OBL,					
				FACW, or FAC: 2 (A) Total number of					
3		☐ Yes ☐		dominant species					
4		☐ Yes ☐	No	across all strata: 2 (B)					
5		☐ Yes ☐	No	Percent of dominant species that are OBL,					
	40	= Total Cover		FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:					
1		☐ Yes ☐	No	Total % Cover of: Multiply By:					
2		☐ Yes ☐	No	OBL species: 10 x 1 10					
3		☐ Yes ☐	No	FACW species: 115 x 2 230					
4		☐ Yes ☐	No	FAC species: 40 x 3 120					
5		☐ Yes ☐	No	FACU species: x 4					
		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)				Column Totals: 165 (A) 360 (B)					
Phalaris arundinacea	100	⊠ Yes □	No FACW	Prevalence Index $(B/A) = 2.2$					
2. Bidens spp.				Hydrophytic Vegetation Indicators:					
3. Typha spp.	15	☐ Yes ☒		Rapid Test for Hydrophytic Vegetation					
**	10	☐ Yes ⊠		✓ Dominance Test is >50%					
4		☐ Yes ☐							
5		☐ Yes ☐	· 	Prevalence Index is < 3.01					
6		☐ Yes ☐	No	☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐	No	supporting data in Remarks or on separate sheet)					
8		☐ Yes ☐	No	Problematic Hydrophytic Vegetation					
9		☐ Yes ☐	No	(Explain in Remarks)					
10		☐ Yes ☐	No	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
	125	= Total Cov	rer	must be present, unless disturbed of problematic.					
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐	No	Hydrophytic No. 1 No.					
2		☐ Yes ☐	No	Vegetation Present?					
		= Total Cov							
Remarks (Include photo numbers here or on a separate she	eet):			I					
,									



Profile Description:	: (Describe to the dep	oth peeded to	document the indi	cetor or co		heanca of	indicators	1			
Trome Description.	Matrix	Jili liceaca to		ledox Featu		osence of	muicators	·· <i>)</i>			
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>			
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 Indicate	ors:		_					Indicators for Problematic Hydric Soils ³ :			
Histosol (A1)			☐ Sandy Gley		(S4)			Coast Prairie Redox (A16) (LRR K, L, R)			
Histic Epipedon			☐ Sandy Redo					☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
Black Histic (A3			☐ Stripped M		1.074			Dark Surface (S7) (LRR K, L)			
Hydrogen Sulfid			Loamy Mu					5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)			
Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)			
☐ 2 cm Muck (A10☐ Depleted Below			☐ Depleted M☐ Redox Dark		76)			Other (Explain in Remarks)			
								³ Indicators of hydrophytic vegetation and wetland			
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)								hydrology must be present, unless disturbed			
Sandy Mucky Whitelat (S1)								or problematic.			
Restrictive layer (if	observed):										
Туре:								Hydric Soil Present? ⊠ Yes □ No			
Depth (in):											
Remarks:											
				HYDE	ROLOGY						
Wetland Hydrology	y Indicators:										
ı sı		(minimum of	one is required; che	eck all that	apply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A		(IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	☐ Water Stain					Surface Soil Cracks (B6)			
☐ High Water Tabl			Aquatic Fat		(D9)			Drainage Patterns (B10)			
Saturation (A3)	ic (112)		☐ True Aquat		R14)			☐ Dry-Season Water Table (C2)			
☐ Water Marks (B)	1)		☐ Hydrogen S					Crayfish Burrows (C8)			
☐ Sediment Deposi			☐ Oxidized R			Roots (C3)		Saturation Visible on Aerial Imagery (C9)			
☐ Drift Deposits (E			☐ Presence of		-	(,		☐ Stunted or Stressed Plants (D1)			
☐ Algal Mat or Cru			Recent Iron	Reduction	in Tilled So	ils (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B			☐ Thin Muck			, ,		☐ FAC-Neutral Test (D5)			
	ole on Aerial Imagery ((B7)	☐ Gauge or W	Vell Data (E	09)						
☐ Sparsely Vegetat	ted Concave Surface (B8)	Other (Expl	lain in Rem	arks)						
Field Observations:	:										
Surface Water Preser	nt?	s 🛛 No	Depth (in):								
Water Table Present	?	s 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☐ No			
Saturation Present?	⊠ Ye	s 🗌 No	Depth (in): 10								
(includes capillary f	•										
Describe Recorded D	Data (stream gage, mor	nitoring well,	aerial photos, previo	ous inspecti	ons), if avail	able:					
Remarks:											



443. K 200									
Project/Site: Minnesota River Greenway - Eagan Alignme	ent	City/County: Eagan/Da	kota	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 t	his time of year?	⊠ Yes □ No (i	f no explain in remark	(2)					
Are Vegetation □, Soil □, or Hydrology □ significan	•	—	•						
Are Vegetation □, Soil □, or Hydrology □ naturally	•	Are "normal circumstances" present? Yes □ No (If needed, explain any answers in Remarks.)							
2 _ , _ , , , , , , , , , , , , , , , ,	,								
Hydrophytic Vegetation Present? ☐ Yes ☐ No		IARY OF FINDIN							
Hydric Soil Present? ☐ Yes ☒ No		-	oled Area within	☐ Yes ⊠ No					
Wetland Hydrology Present? ☐ Yes ☒ No		a wetland?							
Remarks:									
Kemarks.									
	VECETATION	I II:4:6:							
T		– Use scientific nar	•						
Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:					
Acer negundo	90	Yes No	FAC	Number of dominant species that are OBL,					
2		☐ Yes ☐ No		FACW, or FAC: 2 (A)					
3		☐ Yes ☐ No		Total number of					
4		☐ Yes ☐ No		dominant species across all strata: 2 (B)					
5		☐ Yes ☐ No		Percent of dominant					
	90	= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:					
1		☐ Yes ☐ No		Total % Cover of: Multiply By:					
2		☐ Yes ☐ No		OBL species: x 1					
3		Yes No		_					
4		Yes No		•					
5		☐ Yes ☐ No		FACU species: x 4					
		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)				Column Totals: 175 (A) 440 (B)					
Lapotea canadensis	80	Yes No	FACW	Prevalence Index (B/A) = 2.5					
2. Bidens spp.	5	☐ Yes ⊠ No	FACW	Hydrophytic Vegetation Indicators:					
3		☐ Yes ☐ No		Rapid Test for Hydrophytic Vegetation					
4		☐ Yes ☐ No		☑ Dominance Test is >50%					
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$					
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)					
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation					
9		☐ Yes ☐ No		(Explain in Remarks)					
10	_	☐ Yes ☐ No	_	¹ Indicators of hydric soil and wetland hydrology					
	85	= Total Cover		must be present, unless disturbed or problematic.					
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No		Walandard					
2				Hydrophytic					
		☐ Yes ☐ No = Total Cover							
Remarks (Include photo numbers here or on a separate she		– 10tai Cover							
remarks (menude photo numbers here of on a separate site).								



Profile Description:	(Describe to the der	th peeded to	dooumont the indi		nfirm the e	bearag of	indicator	g)			
Trome Description.	Matrix	in necueu to		edox Featur		osence of 1	muicators	5.)			
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>e</u> <u>Remarks</u>			
0-24	10 YR 2/1	100			-7,5-		L				
24+	10 YR 3/2	100					L				
241	10 TR 3/2	100					L				
								· ——			
								· ——			
								<u> </u>			
								· —			
											
								· —			
¹Type: C=Concentrati		1=Reduced M	atrix, $MS = Masked$	Sand Grain	is. ² Loca	tion: PL=I	Pore Linin	ng, M=Matrix			
Hydric Soil Indicato	rs:		_					Indicators for Problematic Hydric Soils ³ :			
Histosol (A1)			☐ Sandy Gley		S4)			Coast Prairie Redox (A16) (LRR K, L, R)			
Histic Epipedon (☐ Sandy Redo					☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
Black Histic (A3)			☐ Stripped Ma		T1)			Dark Surface (S7) (LRR K, L)			
Hydrogen Sulfide			Loamy Muc					5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)			
Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)			
☐ 2 cm Muck (A10) ☐ Depleted Below I			☐ Depleted M ☐ Redox Dark		6)			Other (Explain in Remarks)			
			³ Indicators of hydrophytic vegetation and wetland								
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)								hydrology must be present, unless disturbed			
Sailuy Mucky Milierai (S1)								or problematic.			
Restrictive layer (if o	observed):							•			
Туре:								Hydric Soil Present? ☐ Yes ☒ No			
Depth (in):								. – –			
Remarks:							L				
Ttomation.											
				HYDR	OLOGY						
Wetland Hydrology	Indicators:										
	Primary Indicators	(minimum of	one is required; che	eck all that a	pply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A			□ Water Stain	ed Leaves (B9)			Surface Soil Cracks (B6)			
☐ High Water Table	e (A2)		☐ Aquatic Fau	ına (B13)				☐ Drainage Patterns (B10)			
☐ Saturation (A3)			☐ True Aquat					☐ Dry-Season Water Table (C2)			
☐ Water Marks (B1			☐ Hydrogen S					☐ Crayfish Burrows (C8)			
Sediment Deposit			Oxidized R	-	_	Roots (C3)		Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B)			☐ Presence of		. ,			Stunted or Stressed Plants (D1)			
Algal Mat or Crus			Recent Iron			ils (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B5			☐ Thin Muck	,	*			FAC-Neutral Test (D5)			
☐ Inundation Visibl			Gauge or W								
	ed Concave Surface (B8)	Other (Expl	lain in Rema	arks)						
Field Observations:		N N	Dog (C)								
Surface Water Presen		s 🛛 No	Depth (in): Depth (in):								
Water Table Present?		s 🛛 No	_					Wetland Hydrology Present? ☐ Yes ☒ No			
Saturation Present?		s 🛛 No	Depth (in):								
(includes capillary fr	•	. 14 1				1.1.					
Describe Recorded Da	ata (stream gage, moi	ntoring well, a	ieriai photos, previo	ous inspectio	ns), 11 avail	able:					
Remarks:											



193.620									
Project/Site: Minnesota River Greenway - Eagan Alignme	nt	City/Count	ty: Eagan/Dak	ota	Sampling Date: 9/17/13				
Applicant/Owner: Dakota County		State: MN	I		Sampling Point: W2-SB-W				
Investigator(s): Dan Donayre		Sec, Twp, Ran: 8,27N,23W							
Landform (hillside, terrace, etc.): Basin		Local Relie	ef (concave, co	onvex, none): Conve	x				
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 the Are Vegetation , Soil , or Hydrology significan		Yes No (if no explain in remarks)							
	-	Are "normal circumstances" present? Yes □ No							
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally I		(If needed, explain any answers in Remarks.)							
	SUMIN	IAKY O	F FINDING						
Hydrophytic Vegetation Present? ✓ Yes No			Is the Sample	ed Area within					
Hydric Soil Present?			a wetland?	ed III ed William	⊠ Yes □ No				
Wetland Hydrology Present?									
Remarks:									
	VEGETATION	l – Use sc	ientific nam	es of plants					
Tree Stratum (Plot Size: 30)	Absolute % Cover	Domina	ant Species?	Indicator Status	Dominance Test Worksheet:				
1		□ Ye	es 🗌 No		Number of dominant				
2		□ Ye	es 🗌 No		species that are OBL, FACW, or FAC: 1 (A)				
3		Пу	es 🗌 No		Total number of				
4		_	es 🗌 No		dominant species				
					across all strata: 1 (B) Percent of dominant				
5			es 🗌 No		species that are OBL,				
		= Total	Cover		FACW or FAC: 100% (A/B)				
Saplings/Shrub Stratum (Plot Size: 15)					Prevalence Index Worksheet:				
1		☐ Yeel	es 🗌 No		Total % Cover of: Multiply By:				
2		□ Ye	es 🗌 No		OBL species: 10 x 1 10				
3		□ Yee	es 🗌 No		FACW species: 120 x 2 240				
4		□ Ye	es 🗌 No		FAC species: x 3				
5		□ Ye	es 🗌 No		FACU species: x 4				
		= Total	Cover		UPL species: x 5				
Herb Stratum (Plot size: 5)					Column Totals: 130 (A) 250 (B)				
Lapotea canadensis	100	⊠ v	es 🗌 No	FACW	Prevalence Index $(B/A) = 1.9$				
2. Bidens spp.					Hydrophytic Vegetation Indicators:				
••	10		es 🛛 No	FACW					
3. Typha spp.	10		es 🛛 No	OBL	☐ Rapid Test for Hydrophytic Vegetation				
4. Echinocystis lobata	10		es 🛛 No	FACW	☑ Dominance Test is >50%				
5			es 🗌 No		☑ Prevalence Index is ≤ 3.0¹				
6		☐ Y	es 🗌 No		☐ Morphological Adaptations¹ (Provide				
7		☐ Yell	es 🗌 No		supporting data in Remarks or on separate sheet)				
8		☐ Yell	es 🗌 No		☐ Problematic Hydrophytic Vegetation				
9		□ Yee	es 🗌 No		(Explain in Remarks)				
10		□ Ye	es 🗌 No		¹ Indicators of hydric soil and wetland hydrology				
	130	= To	tal Cover		must be present, unless disturbed or problematic.				
Woody Vine Stratum (Plot size: 30)									
1		□ v.	es 🗌 No		Hadaankati -				
2					Hydrophytic				
			es No		_				
Pomorks (Include photo numbers have as a second of		= 10	tal Cover						
Remarks (Include photo numbers here or on a separate shee	ει <i>)</i> .								



(Midwest Region)

Profile Description:	(Describe to the dep	pth needed to	document the indi	icator or cor	nfirm the a	bsence of	indicators	.)		
D 4 ()	Matrix		<u>R</u>	Redox Featur	<u>es</u>		m .	D 1		
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>		
0-10	10 YR 2/1	100					Muck			
10.							Mucky			
10+	10 YR 2/1	100					peat			
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix **Matrix** **Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. **PL=Pore Lining, M=Matrix** **Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. **PL=Pore Lining, M=Matrix** **Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. **PL=Pore Lining, M=Matrix** **Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. **PL=Pore Lining, M=Matrix** **Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. **PL=Pore Lining, M=Matrix** **Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. **Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. **Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS = Masked Sand Grains. **Type: C=Concentration										
Hydric Soil Indicator	rs:							Indicators for Problematic Hydric Soils ³ :		
Histosol (A1)			Sandy Gley		54)			Coast Prairie Redox (A16) (LRR K, L, R)		
Histic Epipedon (A	A2)		☐ Sandy Red					☐ Iron-Manganese Masses (F12) (LRR K, L, R)		
Black Histic (A3)			☐ Stripped M		(79.1)			Dark Surface (S7) (LRR K, L)		
Hydrogen Sulfide			Loamy Mu					5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)		
☐ Stratified Layers (☐ 2 cm Muck (A10)			☐ Loamy Gle ☐ Depleted M		F2)			☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Depleted Below D			Redox Dari		5)			U Other (Explain in Remarks)		
☐ Thick Dark Surface				,	*			³ Indicators of hydrophytic vegetation and wetland		
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)								hydrology must be present, unless disturbed		
								or problematic.		
Restrictive layer (if o	bserved):							-		
Type:	,							Hydric Soil Present? ⊠ Yes □ No		
								nyuric son Fresent:		
Depth (in):										
Remarks:										
				HYDR	OLOGY					
Wetland Hydrology	Indicators:									
Wetland Hydrology				1 11 1	1 \					
		s (minimum of	one is required; ch					Secondary Indicators (minimum of two required)		
Surface Water (Al			☐ Water Stain		B9)			Surface Soil Cracks (B6)		
☐ High Water Table ☐ Saturation (A3)	(A2)		☐ Aquatic Fa		1.4)			☐ Drainage Patterns (B10)		
☐ Water Marks (B1)			☐ True Aquat					☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8)		
Sediment Deposits			Oxidized R			Poots (C3)		Saturation Visible on Aerial Imagery (C9)		
☐ Drift Deposits (B3			☐ Presence of		U	(0013 (03)		Stunted or Stressed Plants (D1)		
☐ Algal Mat or Crus			☐ Recent Iron		. ,	ils (C6)		Geomorphic Position (D2)		
☐ Iron Deposits (B5)				Surface (C7				▼ FAC-Neutral Test (D5)		
☐ Inundation Visible		(B7)	☐ Gauge or V	Vell Data (D	9)					
☐ Sparsely Vegetate	d Concave Surface (B8)	☐ Other (Exp	lain in Rema	ırks)					
Field Observations:										
Surface Water Present	?	s 🛛 No	Depth (in):							
Water Table Present?		s 🛛 No	Depth (in):							
	_		Depth (in): 15					Wetland Hydrology Present? ⊠ Yes □ No		
Saturation Present?		s 🗌 No	(<i>)</i> . 10							
(includes capillary fri Describe Recorded Da		nitoring well a	erial photos, previo	nus inspectio	ns) if avail	ahle:				
2 cocinc Recorded Da	(Stream gage, mo		eriai piiotos, pievit	as inspectio	,, 11 avail					
Remarks:										



1602 16 2011									
Project/Site: Minnesota River Greenway - Eagan Alig	gnment	City/County: Eagan/Dak	ota	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,22	3W						
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 □ signi	•	`	-						
Are Vegetation □, Soil □, or Hydrology □ natur	•	Are "normal circumstances" present? Yes □ No (If needed, explain any answers in Remarks.)							
	• •	ARY OF FINDING	-	,					
Hydrophytic Vegetation Present? ☐ Yes ☒ No			-~						
Hydric Soil Present? ☐ Yes ☒ No		-	ed Area within	☐ Yes ⊠ No					
Wetland Hydrology Present? ☐ Yes ☒ No		a wetland?							
Remarks:	,								
Kellarks.									
	VECETATION	I II:4:£:	£1						
T		V – Use scientific nam	•						
Tree Stratum (Plot Size: 30)	Absolute % Cover		Indicator Status	Dominance Test Worksheet:					
Acer negundo	85	Yes □ No	FAC	Number of dominant species that are OBL,					
2		☐ Yes ☐ No		FACW, or FAC: 2 (A)					
3		☐ Yes ☐ No		Total number of					
4		☐ Yes ☐ No		dominant species across all strata: 4 (B)					
5		☐ Yes ☐ No		Percent of dominant					
	85	= Total Cover		species that are OBL, FACW or FAC: 50% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)		101111 00101		Prevalence Index Worksheet:					
		☐ Yes ☐ No							
1									
2		☐ Yes ☐ No		OBL species: x 1					
3		☐ Yes ☐ No		FACW species: 20 x 2 40					
4		☐ Yes ☐ No		FAC species: 85 x 3 255					
5		☐ Yes ☐ No		FACU species: 80 x 4 320					
		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)				Column Totals: 185 (A) 615 (B)					
1. Arctium minus	60	Yes □ No	FACU	Prevalence Index $(B/A) = 3.3$					
2. Ageratina altissima	20	🛛 Yes 🗌 No	FACU	Hydrophytic Vegetation Indicators:					
3. Rudbeckia laciniata	20	∑ Yes □ No	FACW	☐ Rapid Test for Hydrophytic Vegetation					
4		☐ Yes ☐ No		☐ Dominance Test is >50%					
5		☐ Yes ☐ No		☐ Prevalence Index is < 3.01					
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)					
8		☐ Yes ☐ No		Droblemetic Hydrophytic Vegetetien					
9		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation (Explain in Remarks)					
10				¹ Indicators of hydric soil and wetland hydrology					
		Yes No		must be present, unless disturbed or problematic.					
West Was Green as (DL c. 1 CO)	100	= Total Cover							
Woody Vine Stratum (Plot size: 30)		_							
1		☐ Yes ☐ No		Hydrophytic ☐ Yes ☒ No					
2		☐ Yes ☐ No		Vegetation Present?					
		= Total Cover							
Remarks (Include photo numbers here or on a separate	e sheet):								
•									





693 8 200									
Project/Site: Minnesota River Greenway - Eagan Alignme	ent	City/County: Eagan/Dak	tota	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, co	(concave, convex, none): Concave						
Slope (%): 0-1% Lat:		Long:		Datum:					
Soil Map Unit Name: Udorthents		NWI or WWI Classificat	ion:						
Are climatic/hydrologic conditions on the site typical for t	his time of year?		no explain in remark	as)					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significan	ntly disturbed?	Are "normal	circumstances" prese	ent? 🛛 Yes 🗌 No					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	problematic?	(If needed, ex	xplain any answers in	Remarks.)					
	SUMN	ARY OF FINDING	SS						
Hydrophytic Vegetation Present? ☐ Yes ☐ No									
Hydric Soil Present? ⊠ Yes ☐ No		-	ed Area within	⊠ Yes □ No					
Wetland Hydrology Present? ☐ Yes ☐ No		a wetland?							
Remarks:									
	VECETATION	I – Use scientific nam	og of plants						
T (1 (Di. (C' 20)			•	T					
Tree Stratum (Plot Size: 30)	Absolute % Cover		Indicator Status	Dominance Test Worksheet:					
Acer negundo	10	⊠ Yes □ No	FAC	Number of dominant species that are OBL,					
2		☐ Yes ☐ No		FACW, or FAC: 2 (A)					
3		☐ Yes ☐ No		Total number of					
4		☐ Yes ☐ No		dominant species across all strata: 2 (B)					
5		☐ Yes ☐ No		Percent of dominant					
	10	= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)		Prevalence Index Worksheet:							
1		☐ Yes ☐ No		Total % Cover of: Multiply By:					
		Yes No							
2									
3		☐ Yes ☐ No		FACW species: 100 x 2 200					
4		Yes No		FAC species: 10 x 3 30					
5		☐ Yes ☐ No		FACU species: x 4					
		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)				Column Totals: 115 (A) 235 (B)					
Phalaris arundinacea	100	🛛 Yes 🗌 No	FACW	Prevalence Index (B/A) = 2.0					
2. Urtica dioica	10	☐ Yes ☒ No	FACW	Hydrophytic Vegetation Indicators:					
3. Typha spp.	5	☐ Yes ⊠ No	OBL	Rapid Test for Hydrophytic Vegetation					
4		☐ Yes ☐ No		☑ Dominance Test is >50%					
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$					
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)					
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation					
9		☐ Yes ☐ No		(Explain in Remarks)					
10				¹ Indicators of hydric soil and wetland hydrology					
	115	☐ Yes ☐ No = Total Cover		must be present, unless disturbed or problematic.					
Woody Vine Stratum (Diet siese 20)	115	- 10tal COVE							
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No		Hydrophytic Verytetion Present? Yes □ No					
2		☐ Yes ☐ No		Vegetation Present?					
		= Total Cover							
Remarks (Include photo numbers here or on a separate she	eet):								
·									



(Midwest Region)

Profile Description:	(Describe to the den	oth needed to d	ocument the indi	cator or co	nfirm the a	bsence of i	indicators	.)			
-	Matrix			edox Featur				,			
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>			
0-15	10 YR 2/1	100					L				
15+	10 YR 2/1	100					Muck				
13+	10 1 K 2/1	100					Muck				
											
¹Type: C=Concentration	on D=Depletion RM	======================================	rix MS = Masked	Sand Grain	ns ² Loca	tion: PL=F	Pore Lining	g, M=Matrix			
Hydric Soil Indicator		1 11000000 11100	in, wis master	Sund Oran	2000			Indicators for Problematic Hydric Soils ³ :			
Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)			
☐ Histic Epipedon (A	A2)		☐ Sandy Redo		3.,			☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
☐ Black Histic (A3)			☐ Stripped M					☐ Dark Surface (S7) (LRR K, L)			
☐ Hydrogen Sulfide	(A4)		☐ Loamy Mu	cky Mineral	(F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)			
☐ Stratified Layers ((A5)		☐ Loamy Gle	yed Matrix ((F2)			☐ Very Shallow Dark Surface (TF12)			
☐ 2 cm Muck (A10)			☐ Depleted M					Other (Explain in Remarks)			
☐ Depleted Below □			Redox Darl								
☐ Thick Dark Surface	, ,		☐ Depleted D					³ Indicators of hydrophytic vegetation and wetland			
☐ Sandy Mucky Min	nerai (S1)		☐ Redox Dep	ressions (F8)			hydrology must be present, unless disturbed or problematic.			
Restrictive layer (if o	hearvad).							or problematic.			
	ibscrvcu).							will gub to May Day			
Type:								Hydric Soil Present? ⊠ Yes □ No			
Depth (in):											
Remarks:											
				HYDR	OLOGY						
Wetland Hydrology	Indicators:										
	Primary Indicators	(minimum of o	one is required: che	eck all that a	ipply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A	-	\	☐ Water Stain					Surface Soil Cracks (B6)			
☐ High Water Table			☐ Aquatic Fat		/			☐ Drainage Patterns (B10)			
Saturation (A3)	` /		☐ True Aquat		14)			Dry-Season Water Table (C2)			
☐ Water Marks (B1))		☐ Hydrogen S	Sulfide Odor	(C1)			☐ Crayfish Burrows (C8)			
☐ Sediment Deposit	s (B2)		☐ Oxidized R	hizospheres	on Living F	Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3			Presence of					Stunted or Stressed Plants (D1)			
Algal Mat or Crus			Recent Iron			ils (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B5		D7)	☐ Thin Muck					☐ FAC-Neutral Test (D5)			
☐ Inundation Visible ☐ Sparsely Vegetate	0.		☐ Gauge or W☐ Other (Expl								
Field Observations:	d Concave Surface (1	30)	Other (Expi	iam in Kema	arks)						
Surface Water Present	D v	. M. N.	Danish (in)								
		s 🛛 No	Depth (in): Depth (in):								
Water Table Present?		s 🛛 No	•					Wetland Hydrology Present? ⊠ Yes □ No			
Saturation Present?		s 🗌 No	Depth (in):								
(includes capillary fri	•	dennin : 11	alatakara t			-l-1					
Describe Recorded Da	ua (stream gage, mor	moring well, ae	riai pnotos, previo	ous inspectio	ons), 11 availa	adie:					
Remarks:											



160 % 2011									
Project/Site: Minnesota River Greenway - Eagan Alignme	nt	City/County: Eagan/Dak	tota	Sampling Date: 9/17/13					
Applicant/Owner: Dakota County		State: MN Sampling Point: W2-SB-Z							
Investigator(s): Dan Donayre	3W								
Landform (hillside, terrace, etc.): Backslope		Local Relief (concave, co	onvex, none): Concar	ve					
Slope (%): 2-6% Lat:		Long:		Datum:					
Soil Map Unit Name: Udorthents		NWI or WWI Classificat	ion:						
Are climatic/hydrologic conditions on the site typical for the	nis time of year?	Xes □ No (if	no explain in remark	s)					
Are Vegetation □, Soil □, or Hydrology □ significan	tly disturbed?	Are "normal	circumstances" prese	nt? ⊠ Yes □ No					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	problematic?	(If needed, ex	xplain any answers in	Remarks.)					
	SUMN	ARY OF FINDING	SS						
Hydrophytic Vegetation Present? ☐ Yes ☐ No									
Hydric Soil Present? ☐ Yes ☒ No		-	ed Area within	☐ Yes ⊠ No					
Wetland Hydrology Present? ☐ Yes ☐ No		a wetland?							
Remarks:									
	VECETATION	V – Use scientific nam	ag of plants						
Tree Streeture (Diet Sine, 20)			•	Designation of Total Weeksheet					
Tree Stratum (Plot Size: 30)	Absolute % Cover		Indicator Status	Dominance Test Worksheet:					
1. Acer negundo	20	⊠ Yes □ No	FAC	Number of dominant species that are OBL,					
2		☐ Yes ☐ No		FACW, or FAC: 2 (A)					
3		☐ Yes ☐ No		Total number of dominant species					
4		☐ Yes ☐ No		across all strata: 2 (B)					
5		☐ Yes ☐ No		Percent of dominant					
	20	= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)			Prevalence Index Worksheet:						
1		☐ Yes ☐ No		Total % Cover of: Multiply By:					
2		Yes No		OBL species: x 1					
3		Yes No		•					
4		Yes No		*					
				•					
5		☐ Yes ☐ No		FACU species: 10 x 4 40					
		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)				Column Totals: 145 (A) 330 (B)					
Phalaris arundinacea	100	Yes 🗌 No	FACW	Prevalence Index $(B/A) = 2.3$					
2. Arctium minus	10	☐ Yes ⊠ No	FACU	Hydrophytic Vegetation Indicators:					
3. Echinocystis lobata	10	☐ Yes ☒ No	FACW	Rapid Test for Hydrophytic Vegetation					
4. Urtica dioica	5	☐ Yes 🏻 No	FACW	☑ Dominance Test is >50%					
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$					
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)					
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation					
9		☐ Yes ☐ No		(Explain in Remarks)					
10		Yes No		¹ Indicators of hydric soil and wetland hydrology					
_	125	= Total Cover		must be present, unless disturbed or problematic.					
Woody Vine Stratum (Plot size: 30)	123	23 00.01							
1		☐ Yes ☐ No		Hydrophytic					
2		Yes No		gomeon - 1 - south					
		= Total Cover							
Remarks (Include photo numbers here or on a separate she	et):								



(Midwest Region)

Profile Description:	(Describe to the de	oth needed to	locument the indi	cator or co	nfirm the a	bsence of	indicators	s.)	
_	Matrix	•		ledox Featur					
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>e</u> <u>Remarks</u>	
0-13	10 YR 2/1	100					L		
13-38	10 YR 4/6	100					L		
38+	10 YR 2/1	100							
38+	10 1 K 2/1	100					L		
								- 	
								<u> </u>	
¹Type: C=Concentrat	ion, D=Depletion, RN	∕I=Reduced Ma	trix, MS = Masked	l Sand Grain	ns. ² Loca	ation: PL=1	Pore Linin	ng, M=Matrix	
Hydric Soil Indicato	ors:							Indicators for Problematic Hydric Soils ³ :	
☐ Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)	
☐ Histic Epipedon ((A2)		☐ Sandy Red	ox (S5)				☐ Iron-Manganese Masses (F12) (LRR K, L, R)	
☐ Black Histic (A3))		☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)	
☐ Hydrogen Sulfide			☐ Loamy Mu	-				5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)	
☐ Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)	
2 cm Muck (A10			☐ Depleted M					Other (Explain in Remarks)	
☐ Depleted Below I☐ Thick Dark Surfa			☐ Redox Darl ☐ Depleted D					Tradicators of hadronhotic records and mothers	
=	, ,		•					Indicators of hydrophytic vegetation and wetland	
Sandy Mucky Mineral (S1) Redox Depressions (F8) hydrology must be present, unless disturbed or problematic.									
Restrictive layer (if	observed):							F	
Туре:								Hydric Soil Present? ☐ Yes ☒ No	
								Tryunc Son Trescut.	
Depth (in): Remarks:									
Remarks.									
				HYDR	OLOGY				
Wetland Hydrology	Indicators:								
	Primary Indicators	(minimum of	one is required; ch	eck all that a	apply)			Secondary Indicators (minimum of two required)	
☐ Surface Water (A	.1)		☐ Water Stair	ned Leaves	(B9)			☐ Surface Soil Cracks (B6)	
☐ High Water Table	e (A2)		☐ Aquatic Fa	una (B13)				☐ Drainage Patterns (B10)	
☐ Saturation (A3)			☐ True Aquat	ic Plants (B	14)			☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1			☐ Hydrogen S					☐ Crayfish Burrows (C8)	
Sediment Deposi			Oxidized R			Roots (C3)		Saturation Visible on Aerial Imagery (C9)	
Drift Deposits (B			☐ Presence of			1 (00)		Stunted or Stressed Plants (D1)	
☐ Algal Mat or Cru☐ Iron Deposits (B5			☐ Recent Iron ☐ Thin Muck			11S (C6)		☐ Geomorphic Position (D2) ☐ FAC-Neutral Test (D5)	
☐ Inundation Visible		(R7)	☐ Gauge or V	,	*			FAC-Neutral Test (D3)	
	ed Concave Surface (Other (Exp	,					
Field Observations:	`								
Surface Water Presen	ıt? □ Ve	s 🛛 No	Depth (in):						
Water Table Present?		s 🛛 No	Depth (in):						
			Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No	
Saturation Present?	-	s 🛛 No	Dopui (iii).						
(includes capillary fr Describe Recorded D	•	nitoring well a	erial photos previo	ous inspection	ons) if avail	able:			
Describe Recorded D	am (Stream gage, mo		pilotos, pievie	as mspection	,, 11 uvull				
Remarks:									



107 (530)									
Project/Site: Minnesota River Greenway - Eagan Alignme	ent	City/County: Eagan/Dal	cota	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 Classificat							
•									
Are climatic/hydrologic conditions on the site typical for the	•		no explain in remark						
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significan	-		circumstances" prese						
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	•		xplain any answers in	Remarks.)					
	SUMN	MARY OF FINDING	GS						
Hydrophytic Vegetation Present? ☐ Yes ☐ No		T 41 G							
Hydric Soil Present? ☐ Yes ☐ No		a wetland?	led Area within	⊠ Yes □ No					
Wetland Hydrology Present?									
Remarks:		<u> </u>							
	VEGETATION	V – Use scientific nam	nes of plants						
Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:					
1		☐ Yes ☐ No		Number of dominant					
2.		☐ Yes ☐ No		species that are OBL,					
				FACW, or FAC: 2 (A)					
3		☐ Yes ☐ No		Total number of dominant species					
4		☐ Yes ☐ No		across all strata: 2 (B)					
5		☐ Yes ☐ No		Percent of dominant species that are OBL,					
	= Total Cover								
Saplings/Shrub Stratum (Plot Size: 15)									
1		☐ Yes ☐ No		Total % Cover of: Multiply By:					
2		☐ Yes ☐ No		OBL species: 20 x 1 20					
3		☐ Yes ☐ No		FACW species: 110 x 2 220					
4		☐ Yes ☐ No		FAC species: x 3					
		☐ Yes ☐ No							
5				FACU species: x 4					
		= Total Cover		UPL species: x 5					
<u>Herb Stratum</u> (Plot size: 5)				Column Totals: 130 (A) 240 (B)					
Phalaris arundinacea	100	🛛 Yes 🗌 No	FACW	Prevalence Index $(B/A) = 1.8$					
2. Typha spp.	20	🛛 Yes 🗌 No	OBL	Hydrophytic Vegetation Indicators:					
3. Urtica dioica	10	☐ Yes ⊠ No	FACW	☑ Rapid Test for Hydrophytic Vegetation					
4		☐ Yes ☐ No		☑ Dominance Test is >50%					
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{\circ}$					
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
7				supporting data in Remarks or on separate sheet)					
8		☐ Yes ☐ No							
		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation (Explain in Remarks)					
9		☐ Yes ☐ No		· •					
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
	130	= Total Cover		and the present, among distartors of problematic.					
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No		Hydrophytic Vac II No.					
2		☐ Yes ☐ No		Vegetation Present?					
		= Total Cover							
Remarks (Include photo numbers here or on a separate she	et):								
, , , , , , , , , , , , , , , , , , ,									



(Midwest Region)

Profile Description:	(Describe to the dep	oth needed to	locument the indi	cator or co	nfirm the a	bsence of	indicators	.)
_	Matrix	•		edox Featu				
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
0-14	10 YR 2/1	100					L	
14+	10 YR 2/1	100					Muck	
147	10 11 2/1	100					WILLER	
								
¹ Type: C=Concentrat	ion, D=Depletion, RM	∕I=Reduced Ma	trix, MS = Masked	l Sand Grai	ns. ² Loca	tion: PL=l	Pore Lining	g, M=Matrix
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils3:
Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)
☐ Histic Epipedon	(A2)		☐ Sandy Redo	ox (S5)				☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Black Histic (A3)		☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)
☐ Hydrogen Sulfide			☐ Loamy Mu					5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
☐ Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)
2 cm Muck (A10			☐ Depleted M		16)			Other (Explain in Remarks)
☐ Depleted Below: ☐ Thick Dark Surfa			☐ Redox Darl ☐ Depleted D					3Tr. di cotore of hadronhatio acceptation and acceptant
Sandy Mucky M	, ,		Redox Dep		, ,			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed
Sandy Mucky M	merar (51)		Redox Dep	103310113 (1	"			or problematic.
Restrictive layer (if	observed):							A
Туре:	,							Hydric Soil Present? ⊠ Yes □ No
								nyunc son Tresent.
Depth (in):								
Remarks.								
				HYDR	OLOGY			
Wetland Hydrology	Indicators:							
	Primary Indicators	(minimum of	one is required; che	eck all that	apply)			Secondary Indicators (minimum of two required)
☐ Surface Water (A	A1)		■ Water Stair	ned Leaves	(B9)			☐ Surface Soil Cracks (B6)
☐ High Water Tabl	e (A2)		☐ Aquatic Fa	una (B13)				☐ Drainage Patterns (B10)
☐ Saturation (A3)			☐ True Aquat	ic Plants (B	14)			☐ Dry-Season Water Table (C2)
☐ Water Marks (B1			☐ Hydrogen S					☐ Crayfish Burrows (C8)
Sediment Deposi			Oxidized R	-	_	Roots (C3)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B			☐ Presence of			1 (00)		Stunted or Stressed Plants (D1)
☐ Algal Mat or Cru ☐ Iron Deposits (B:			☐ Recent Iron ☐ Thin Muck			11S (C6)		☐ Geomorphic Position (D2) ☐ FAC-Neutral Test (D5)
	on Aerial Imagery	(R7)	Gauge or W					AC-Neutral Test (D3)
	ed Concave Surface (Other (Exp	•				
Field Observations:								
Surface Water Preser		s 🛛 No	Depth (in):					
Water Table Present?		s 🛛 No	Depth (in):					
			Depth (in): 20					Wetland Hydrology Present? ⊠ Yes □ No
Saturation Present?		s 🗌 No	Depui (iii). 20					
(includes capillary fr Describe Recorded D	ringe) Oata (stream gage, moi	nitoring well a	erial photos previo	ous inspecti	ons) if avail	able:		
2 control Recorded D	am (sucum guge, moi	oi iii g woii, a	criai pilotos, previe	as mspeem	,, 11 avall			
_								
Remarks:								



18.00 W 2011.									
Project/Site: Minnesota River Greenway - Eagan Alignme	nt	City/County: Eaga	ın/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 Clas	sification: L2UBGx						
Are climatic/hydrologic conditions on the site typical for the	nis time of year?	⊠ Yes □ 1	No (if no explain in rema	urks)					
Are Vegetation □, Soil □, or Hydrology □ significan	•		ormal circumstances" pre						
Are Vegetation □, Soil □, or Hydrology □ naturally	problematic?	(If need	led, explain any answers	in Remarks.)					
	SUMN	ARY OF FINI	DINGS						
Hydrophytic Vegetation Present? ☐ Yes ☐ No									
Hydric Soil Present? ☐ Yes ☒ No			Sampled Area within	☐ Yes ⊠ No					
Wetland Hydrology Present? ☐ Yes ☐ No		a wetla	ind?						
Remarks:									
	VECETATION	I Use scientific	names of plants						
Tree Stratum (Plot Size: 30)	Absolute % Cover		•	Dominance Test Worksheet:					
				Number of dominant					
1. Acer negundo	5	⊠ Yes □ N		species that are OBL,					
2		☐ Yes ☐ N		FACW, or FAC: 2 (A)					
3		☐ Yes ☐ 1		Total number of dominant species					
4		☐ Yes ☐ N	lo	across all strata: 2 (B)					
5		☐ Yes ☐ N	No	Percent of dominant					
	5	= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)									
1		☐ Yes ☐ N	1o	Total % Cover of: Multiply By:					
2		☐ Yes ☐ N		OBL species: 5 x 1 5					
3		☐ Yes ☐ N		FACW species: 100 x 2 200					
4		☐ Yes ☐ N		FAC species: x 3					
		Yes \(\)		FACU species: x 4					
5		= Total Cover		î de la companya de					
W 1.0 ((D) () 5)		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)				Column Totals: 105 (A) 205 (B)					
Phalaris arundinacea	100	⊠ Yes □ N		Prevalence Index (B/A) = 2.0					
2		☐ Yes ☐ N		Hydrophytic Vegetation Indicators:					
3		☐ Yes ☐ N		Rapid Test for Hydrophytic Vegetation					
4		☐ Yes ☐ N		☑ Dominance Test is >50%					
5		☐ Yes ☐ 1	lo	\square Prevalence Index is $\leq 3.0^{1}$					
6		☐ Yes ☐ N	No	☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐ N		supporting data in Remarks or on separate sheet)					
8		☐ Yes ☐ 1		☐ Problematic Hydrophytic Vegetation					
9		☐ Yes ☐ N	lo	(Explain in Remarks)					
10		☐ Yes ☐ N		¹ Indicators of hydric soil and wetland hydrology					
	100	= Total Cove		must be present, unless disturbed or problematic.					
Woody Vine Stratum (Plot size: 30)	100								
1		□ v □ x	To.						
2		☐ Yes ☐ N		Hydrophytic					
<u></u>		Yes N							
Damada (Induda abata augilia 1		= Total Cove	Г						
Remarks (Include photo numbers here or on a separate she	et):								



(Midwest Region)

Profile Description:	(Describe to the dep	oth needed to	document the indi	icator or co	nfirm the a	bsence of	indicators	.)
5 4 6 5	Matrix							
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type1	Loc2	Texture	<u>Remarks</u>
0-15	10 YR 2/1	100					L	
15+	10 YR 3/2	100					L	
131	10 11 3/2	100					L	
								
¹Type: C=Concentrati	ion, D=Depletion, RM	∕I=Reduced Ma	trix, MS = Masked	1 Sand Grai	ns. ² Loca	ation: PL=1	Pore Lining	g, M=Matrix
Hydric Soil Indicato	rs:							Indicators for Problematic Hydric Soils3:
☐ Histosol (A1)			☐ Sandy Gley	ed Matrix ((S4)			Coast Prairie Redox (A16) (LRR K, L, R)
☐ Histic Epipedon (A2)		☐ Sandy Redo	ox (S5)				☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Black Histic (A3))		☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)
☐ Hydrogen Sulfide			☐ Loamy Mu	cky Minera	l (F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)
2 cm Muck (A10)			☐ Depleted M					Other (Explain in Remarks)
☐ Depleted Below I☐ Thick Dark Surfa			Redox Darl					31. di catano of hardroub di caracteti ca and acatan d
Sandy Mucky Mi	, ,		☐ Depleted D ☐ Redox Dep					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed
Salidy Mucky Mil	nerai (31)		☐ Redox Dep	ressions (17	3)			or problematic.
Restrictive layer (if	observed):							
	<i>5.5.5.</i> 2 (<i>5.6.</i>) (Hydric Soil Present? ☐ Yes ☒ No
Type:								Hydric Son Fresent:
Depth (in):								
Remarks:								
				HYDR	OLOGY			
Wetland Hydrology	Indicators:							
	Primary Indicators	(minimum of	one is required; che	eck all that	apply)			Secondary Indicators (minimum of two required)
☐ Surface Water (A	1)		☐ Water Stair	ned Leaves	(B9)			Surface Soil Cracks (B6)
☐ High Water Table			Aquatic Far					☐ Drainage Patterns (B10)
☐ Saturation (A3)			☐ True Aquat	tic Plants (B	314)			☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)		☐ Hydrogen S	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)
Sediment Deposi			Oxidized R	-	_	Roots (C3)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B			Presence of					Stunted or Stressed Plants (D1)
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B5		(D7)	☐ Thin Muck	,	*			☐ FAC-Neutral Test (D5)
☐ Inundation Visibl☐ Sparsely Vegetate	ed Concave Surface (☐ Gauge or W☐ Other (Exp					
Field Observations:	ou concuve purince (B0)	Other (Exp.	iam in item	urks)			
Surface Water Presen	t2 □ V-	s 🛛 No	Donth (in)					
			Depth (in): Depth (in):					
Water Table Present?		s 🛛 No	_					Wetland Hydrology Present? ☐ Yes ☒ No
Saturation Present?	☐ Ye	s 🛛 No	Depth (in):					
(includes capillary fr	•	.141				.1.1.		
Describe Recorded D	ata (stream gage, moi	moring well, a	eriai pnotos, previo	ous inspection	ons), it avail	aoie:		
Remarks:								



The Market Market									
Project/Site: Minnesota River Greenway - Eagan Alignm	ent	City/County: Ea	gan/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			assification:						
•									
Are climatic/hydrologic conditions on the site typical for	•		No (if no explain in re						
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significa	•			present? X Yes No					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	•		eeded, explain any answe	ers in Remarks.)					
	SUMN	MARY OF FI	NDINGS						
Hydrophytic Vegetation Present? ☐ Yes ☐ No		T 41	G 1.14 - 141						
Hydric Soil Present?			e Sampled Area within tland?	⊠ Yes □ No					
Wetland Hydrology Present?									
Remarks:		'							
	VEGETATION	V – Use scienti	fic names of plants						
Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Sp	ecies? Indicator Stat	tus Dominance Test Worksheet:					
1		☐ Yes ☐	No	Number of dominant					
2.		☐ Yes ☐		species that are OBL,					
				FACW, or FAC:(A)					
3		☐ Yes ☐	No	Total number of dominant species					
4		☐ Yes ☐	No	across all strata:(B)					
5		☐ Yes ☐	No	Percent of dominant species that are OBL,					
	= Total Cover								
Saplings/Shrub Stratum (Plot Size: 15)									
1		☐ Yes ☐	No	Prevalence Index Worksheet: Total % Cover of: Multiply By:					
2		☐ Yes ☐	· 	OBL species: x 1					
3		☐ Yes ☐		•					
			·	1					
4		☐ Yes ☐	·	FAC species: x 3					
5		☐ Yes ☐	· 	FACU species: x 4					
		= Total Cover		UPL species: x 5					
<u>Herb Stratum</u> (Plot size: 5)				Column Totals: 105 (A) 210 (B)					
Phalaris arundinacea	100	⊠ Yes □	No FACW	Prevalence Index $(B/A) = 2.0$					
2. Spartina pectinata	5	☐ Yes ⊠	No FACW	Hydrophytic Vegetation Indicators:					
3		☐ Yes ☐	No	☑ Rapid Test for Hydrophytic Vegetation					
4		☐ Yes ☐	No	☑ Dominance Test is >50%					
5		☐ Yes ☐		\boxtimes Prevalence Index is $\leq 3.0^{1}$					
6		☐ Yes ☐		☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐		supporting data in Remarks or on separate sheet)					
8	 -		NO						
		☐ Yes ☐	· · · · · · · · · · · · · · · · · · ·	Problematic Hydrophytic Vegetation (Explain in Remarks)					
9		☐ Yes ☐	No						
10		☐ Yes ☐	No	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
	105	= Total Co	ver	, , , , , , , , , , , , , , , , , , ,					
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐	No	Hydrophytic ⊠ Yes □ No					
2		☐ Yes ☐	No	Vegetation Present?					
		= Total Co	ver						
Remarks (Include photo numbers here or on a separate sh	eet):			I					



(Midwest Region)

Profile Description:	(Describe to the dep	oth needed to	document the indi	cator or con	firm the al	bsence of	indicators	.)
5 4 (1)	Matrix	5						
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
0-15	10 YR 2/1	100		_		· 	L	
0-13	10 1 K 2/1	100						
15+	10 YR 2/1	100					Sandy muck	
	<u> </u>							
								
IType: C-Concentrat	tion, D=Depletion, RM	M-Reduced Me	atriv MS – Mackac	I Sand Grain	s 2I oca	tion: PI -l	Pore Linine	z, M=Matrix
Hydric Soil Indicate	•	1-Reduced IVI	urix, ivis = iviaskee	i Sand Grain	s. Loca	tion. TL=		Indicators for Problematic Hydric Soils ³ :
-	015.		Cond. Clas	d Matrice (C	14)			
☐ Histosol (A1)☐ Histic Epipedon	(42)		☐ Sandy Gley ☐ Sandy Red		94)			☐ Coast Prairie Redox (A16) (LRR K, L, R) ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Black Histic (A3			☐ Stripped M					Dark Surface (S7) (LRR K, L)
☐ Hydrogen Sulfid			Loamy Mu		(F1)			5 cm Mucky Peat or Peat (S3) (LRR , K , L , R)
☐ Stratified Layers			Loamy Gle					☐ Very Shallow Dark Surface (TF12)
2 cm Muck (A10			☐ Depleted M		12)			Other (Explain in Remarks)
☐ Depleted Below			Redox Darl		5)			Other (Explain in Remarks)
☐ Thick Dark Surfa	, ,			ark Surface	*			³ Indicators of hydrophytic vegetation and wetland
☐ Sandy Mucky M			_ ^	ressions (F8)				hydrology must be present, unless disturbed
,	,							or problematic.
Restrictive layer (if	observed):							
_	,							Hydric Soil Present? ⊠ Yes □ No
Type:								nyunc son rresent:
Depth (in):								
Remarks:								
				HVDD	OLOGY			
***	* * .			HIDK	OLOGI			1
Wetland Hydrology								
	Primary Indicators	(minimum of	one is required; che	eck all that ap	pply)			Secondary Indicators (minimum of two required)
☐ Surface Water (A	,		☐ Water Stair	,	B9)			☐ Surface Soil Cracks (B6)
☐ High Water Tabl	le (A2)		☐ Aquatic Fa	una (B13)				☐ Drainage Patterns (B10)
Saturation (A3)			☐ True Aquat	•	*			☐ Dry-Season Water Table (C2)
Water Marks (B)			Hydrogen S					Crayfish Burrows (C8)
Sediment Deposi			Oxidized R	•	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (E	*		Presence of		. ,			Stunted or Stressed Plants (D1)
Algal Mat or Cru				Reduction i		ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B.				Surface (C7				FAC-Neutral Test (D5)
_	le on Aerial Imagery (_	Vell Data (D9				
	ted Concave Surface (B8)	Uther (Exp.	lain in Rema	rks)			
Field Observations:		_						
Surface Water Preser	nt? Yes	s 🛛 No	Depth (in):					
Water Table Present	? Xe:	s 🗌 No	Depth (in): 40					Wetland Hydrology Present? ☐ Yes ☐ No
Saturation Present?	⊠ Ye	s 🗌 No	Depth (in): 10					Tremand Hydrology Hesene: ZV 168 [] 140
(includes capillary fi								
	Data (stream gage, mor	nitoring well, a	erial photos, previo	ous inspection	ns), if availa	able:	1	
Remarks:								
Kemarks.								



Project/Site: Minnesota River Greenway - Eagan Alignme	nt	City/Coun	ity: Eagan/Dak	ota	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 W	WI Classificati	ion:					
•	is time of year?	⊠ Yes	_		lro)				
Are climatic/hydrologic conditions on the site typical for the Are Vegetation ☐, Soil ☐, or Hydrology ☐ significan		∐ 1 es		no explain in remarl	ent? ⊠ Yes □ No				
Are Vegetation , Soil , or Hydrology naturally p	•			plain any answers in					
Are vegetation [], Soil [], of Hydrology [] naturally [,		ii Keinarks.)				
	SUMIN	IAKY O	F FINDING	iS .					
Hydrophytic Vegetation Present?			Ic the Sample	ed Area within					
Hydric Soil Present? ☐ Yes ☒ No			a wetland?	cu Arca within	☐ Yes ☒ No				
Wetland Hydrology Present? ☐ Yes ☒ No									
Remarks:									
	VEGETATION	I – Use so	cientific nam	es of plants					
<u>Tree Stratum</u> (Plot Size: 30)	Absolute % Cover	Domin	ant Species?	Indicator Status	Dominance Test Worksheet:				
1		□ Y	es 🗌 No		Number of dominant				
2			es □ No		species that are OBL,				
			_		FACW, or FAC: 1 (A)				
3		ЦΥ	es No		Total number of dominant species				
4		□ Y	'es 🗌 No		across all strata: 1 (B)				
5		□ Y	'es 🗌 No		Percent of dominant				
		species that are OBL, FACW or FAC: 100% (A/B)							
Saplings/Shrub Stratum (Plot Size: 15)	igs/Shrub Stratum (Plot Size: 15)								
1		ΠΥ	'es □ No		Total % Cover of: Multiply By:				
2			es □ No		OBL species: x 1				
3			es □ No		FACW species: 110 x 2 220				
4			'es □ No		FAC species: x 3				
					· ·				
5		_	es □ No		FACU species: 5 x 4 20				
		= Total	l Cover		UPL species: x 5				
Herb Stratum (Plot size: 5)					Column Totals: 115 (A) 240 (B)				
Phalaris arundinacea	100	⊠ Y	'es 🗌 No	FACW	Prevalence Index $(B/A) = 2.1$				
2. Echinocystis lobata	10	□ Y	'es 🛛 No	FACW	Hydrophytic Vegetation Indicators:				
3. Cirsium vulgare	5	□ Y	es 🛛 No	FACU	☑ Rapid Test for Hydrophytic Vegetation				
4		□ Y	'es 🗌 No		☑ Dominance Test is >50%				
5		Пγ	es 🗌 No		\boxtimes Prevalence Index is $\leq 3.0^{1}$				
6			'es □ No		Manushala siaal Adamatatianal (Prassida				
7			'es □ No		☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on separate sheet)				
8									
			es 🗌 No		Problematic Hydrophytic Vegetation (Explain in Remarks)				
9			es 🗌 No		,				
10		□ Y	'es 🗌 No		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
	115	= To	otal Cover						
Woody Vine Stratum (Plot size: 30)									
1		□ Y	es 🗌 No		Hydrophytic N. N.				
2		ПΥ	es No		Vegetation Present? ✓ Yes ☐ No				
			otal Cover						
Remarks (Include photo numbers here or on a separate shee									
race of on a separate short									



(Midwest Region)

Profile Description:	(Describe to the dep	oth needed to d	locument the indi	cator or cor	nfirm the al	osence of	indicators	.)
	Matrix		<u>R</u>	edox Feature	<u>es</u>		_	
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
0-38	10 YR 2/1	100					L	
							Sandy	
38+	10 YR 2/1	100					muck	
								
								
								
¹ Type: C=Concentrat	ion, D=Depletion, RM	/I=Reduced Ma	trix, $MS = Masked$	Sand Grain	s. ² Loca	tion: PL=	Pore Lining	g, M=Matrix
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			Sandy Gley		54)			Coast Prairie Redox (A16) (LRR K, L, R)
Histic Epipedon (☐ Sandy Redo					☐ Iron-Manganese Masses (F12) (LRR K, L, R)
Black Histic (A3)			☐ Stripped M		(E1)			Dark Surface (S7) (LRR K, L)
☐ Hydrogen Sulfide ☐ Stratified Layers	, ,		Loamy Muc					☐ 5 cm Mucky Peat or Peat (S3) (LRR , K , L , R) ☐ Very Shallow Dark Surface (TF12)
2 cm Muck (A10			☐ Loamy Gle ☐ Depleted M		F2)			Other (Explain in Remarks)
Depleted Below l			Redox Dark		5)			Guier (Explain in Remarks)
☐ Thick Dark Surfa				ark Surface	*			³ Indicators of hydrophytic vegetation and wetland
☐ Sandy Mucky Mi			Redox Dep					hydrology must be present, unless disturbed
								or problematic.
Restrictive layer (if	observed):							
Туре:								Hydric Soil Present? ☐ Yes ⊠ No
Depth (in):								
Kemarks.								
				HYDR	OLOGY			
Wetland Hydrology	Indicators:							
, 3,	Primary Indicators	(minimum of a	one is required: che	eck all that a	nnly)			Secondary Indicators (minimum of two required)
☐ Surface Water (A	•	(IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	☐ Water Stain					Surface Soil Cracks (B6)
☐ High Water Table	,		Aquatic Fai	`	D))			☐ Drainage Patterns (B10)
☐ Saturation (A3)	(112)		☐ True Aquat		14)			Dry-Season Water Table (C2)
☐ Water Marks (B1)		☐ Hydrogen S					☐ Crayfish Burrows (C8)
☐ Sediment Deposi			☐ Oxidized R			Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B	3)		☐ Presence of	Reduced Iro	on (C4)			☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Cru			☐ Recent Iron			ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B5				Surface (C7	*			FAC-Neutral Test (D5)
☐ Inundation Visib			_	/ell Data (D9				
☐ Sparsely Vegetate	ed Concave Surface (B8)	Other (Expl	lain in Rema	rks)			
Field Observations:								
Surface Water Presen	t?	s 🛛 No	Depth (in):					
Water Table Present?	☐ Ye	s 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No
Saturation Present?	☐ Ye	s 🛛 No	Depth (in):					Treatment injurious grant in the interest in t
(includes capillary fr	ringe)							
Describe Recorded D		nitoring well, ac	erial photos, previo	us inspection	ns), if availa	ıble:		
Remarks:								
- 10111111101								



18.00 W 2011.								
Project/Site: Minnesota River Greenway - Eagan Alignme	nt	City/County: Eagan/Da	kota	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,2	23W					
Landform (hillside, terrace, etc.): Basin		Local Relief (concave, c	convex, none): Conca	ve				
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 the	nis time of year?	✓ Yes ☐ No (if no explain in remarks)						
Are Vegetation □, Soil □, or Hydrology □ significan	•	Are "normal circumstances" present? Yes \(\square\) No						
Are Vegetation , Soil , or Hydrology naturally	•	(If needed, explain any answers in Remarks.)						
	•	MARY OF FINDING	•	,				
Hydrophytic Vegetation Present? ☐ Yes ☐ No								
Hydric Soil Present?		-	led Area within	⊠ Yes □ No				
Wetland Hydrology Present? ✓ Yes No		a wetland?		2 10 110				
Remarks:								
	VEGETATION	N – Use scientific nan	nes of plants					
Tree Stratum (Plot Size: 30)	Absolute % Cover		Indicator Status	Dominance Test Worksheet:				
			·	Number of dominant				
1. Salix nigra	50	☐ Yes ☐ No	OBL	species that are OBL,				
2. Acer negundo	10	☐ Yes ⊠ No	FAC	FACW, or FAC: 2 (A)				
3		☐ Yes ☐ No		Total number of dominant species				
4		☐ Yes ☐ No		across all strata: 2 (B)				
5		☐ Yes ☐ No		Percent of dominant				
	60	= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)				
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:				
1		☐ Yes ☐ No		Total % Cover of: Multiply By:				
2		☐ Yes ☐ No		OBL species: 60 x 1 60				
3		☐ Yes ☐ No		FACW species: 105 x 2 210				
4		☐ Yes ☐ No		FAC species: 10 x 3 30				
		☐ Yes ☐ No		FACU species: x 4				
5		= Total Cover		· ·				
W 1 (0) ((D) () (5)		= Total Cover		UPL species: x 5				
Herb Stratum (Plot size: 5)				Column Totals: 175 (A) 300 (B)				
Phalaris arundinacea	100	⊠ Yes □ No	FACW	Prevalence Index (B/A) = 1.7				
2. Typha spp.	10	☐ Yes ⊠ No	OBL	Hydrophytic Vegetation Indicators:				
3. Pilea pumila	5	☐ Yes ☒ No	FACW	Rapid Test for Hydrophytic Vegetation				
4		☐ Yes ☐ No		☑ Dominance Test is >50%				
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$				
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide				
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)				
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation				
9		☐ Yes ☐ No		(Explain in Remarks)				
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology				
	115	= Total Cover		must be present, unless disturbed or problematic.				
Woody Vine Stratum (Plot size: 30)	110							
1		□ Vac □ Na						
2		Yes No		Hydrophytic				
		Yes No						
Pamarka (Include phate awark as he		= Total Cover						
Remarks (Include photo numbers here or on a separate she	et):							



(Midwest Region)

Profile Description:	(Describe to the de	oth needed to	document the indi	cator or co	nfirm the a	bsence of	indicators	.)			
_	Matrix	•		edox Featu							
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>			
0-15	10 YR 3/2	100					SL				
15+	10 YR 2/1	100					Muck				
151	10 11 2/1	100					Widek				
¹ Type: C=Concentrat	tion, D=Depletion, RN	∕I=Reduced Ma	trix, MS = Masked	l Sand Grain	ns. ² Loca	tion: PL=l	Pore Lining	g, M=Matrix			
Hydric Soil Indicate								Indicators for Problematic Hydric Soils3:			
Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)			
☐ Histic Epipedon	(A2)		☐ Sandy Red		,			☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
☐ Black Histic (A3)		☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)			
☐ Hydrogen Sulfid			Loamy Mu	cky Minera	l (F1)			5 cm Mucky Peat or Peat (S3) (LRR , K , L , R)			
☐ Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)			
2 cm Muck (A10			☐ Depleted M					Other (Explain in Remarks)			
Depleted Below			Redox Darl					27 . 1'			
☐ Thick Dark Surfa			☐ Depleted D					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed			
Sandy Mucky Mineral (S1) Redox Depressions (F8) hydrology must be present, unless disturble or problematic.											
Restrictive layer (if	observed):										
	0.002 (0.0)							Hydric Soil Present? ⊠ Yes □ No			
Type:								Hydric Son Fresent:			
Depth (in):											
Remarks:											
				HYDR	OLOGY						
Wetland Hydrology	Indicators:										
	Primary Indicators	(minimum of	one is required; ch	eck all that	apply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A	A1)		☐ Water Stair	ned Leaves	(B9)			Surface Soil Cracks (B6)			
High Water Tabl			Aquatic Fa					☐ Drainage Patterns (B10)			
Saturation (A3)			☐ True Aquat	ic Plants (B	14)			☐ Dry-Season Water Table (C2)			
☐ Water Marks (B)	1)		☐ Hydrogen S	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)			
Sediment Deposi			Oxidized R	-	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (E			Presence of					Stunted or Stressed Plants (D1)			
Algal Mat or Cru			Recent Iron			ils (C6)		☐ Geomorphic Position (D2) ☐ FAC-Neutral Test (D5)			
☐ Iron Deposits (B.	3) le on Aerial Imagery ((R7)	☐ Thin Muck ☐ Gauge or V					AC-Neutral Test (D3)			
	ed Concave Surface (Other (Exp	•	· ·						
Field Observations:											
Surface Water Preser		s 🛛 No	Depth (in):								
Water Table Present		s 🔲 No	Depth (in): 10	<u></u> -							
		s 🔲 No	Depth (in): sut	face				Wetland Hydrology Present? ⊠ Yes □ No			
Saturation Present?		s 🔲 No	Depui (iii). suc								
(includes capillary fr Describe Recorded D	ringe) Data (stream gage, moi	nitoring well a	erial photos, previo	ous inspection	ons), if avail	able:					
- Interest Accorded B	Sage, 11101			peoti	,,						
Remarks:											



1642 N. 201										
Project/Site: Minnesota River Greenw	vay - Eagan Alignme	nt	City/Coun	nty: Eagan/Dak	ota	Sampling Date: 9/23/1	.3			
Applicant/Owner: Dakota County			State: MN	N		Sampling Point: W2-S	B-FF			
Investigator(s): Dan Donayre			Sec, Twp,	Ran: 4,27N,23	3W					
Landform (hillside, terrace, etc.): Terr	race		Local Reli	ief (concave, co	onvex, none): Flat					
Slope (%): 0-1%	Lat:		Long: Datum:							
Soil Map Unit Name: Urban land			NWI or W	/WI Classificati	ion: PEMCd					
Are climatic/hydrologic conditions on	the site typical for th	is time of year?	☐ Yes ☐ No (if no explain in remarks)							
Are Vegetation , Soil , or Hydr	tly disturbed?	Are "normal circumstances" present? Yes □ No								
Are Vegetation ☐, Soil ☐, or Hydr	problematic?	(If needed, explain any answers in Remarks.)								
		SUMM	IARY O	F FINDING	S					
Hydrophytic Vegetation Present?	⊠ Yes □ No									
Hydric Soil Present?	☐ Yes ⊠ No			-	ed Area within	☐ Yes ⊠ No				
	☐ Yes ⊠ No			a wetland?						
Remarks:										
		VEGETATION	– Use so	cientific nam	es of plants					
Tree Stratum (Plot Size: 30)		Absolute % Cover		ant Species?	Indicator Status	Dominance Test W	/orksheet:			
Acer negundo		70		es □ No	FAC	Number of dominan				
•		10		es ⊠ No	OBL	species that are OBI	L,			
2. Salix nigra		10			OBL	FACW, or FAC:	3 (A)			
3				'es □ No		Total number of dominant species				
4			□ Y	es No		across all strata:	3 (B)			
5			□ Y	es 🗌 No		Percent of dominant species that are OBI				
		80	= Total	l Cover		FACW or FAC:	100% (A/B)			
Saplings/Shrub Stratum (Plot Size: 15	olings/Shrub Stratum (Plot Size: 15)						Worksheet:			
1. Rhamnus cathartica		10	⊠ Y	es 🗌 No	FAC	Total % Cover	of: Multiply By:			
2			□ Y	es 🗌 No		OBL species:	10 x 1 10			
3			□ Y	es No		FACW species:	90 x 2 180			
4			Y	es □ No		FAC species:	80 x 3 240			
5			— П у	es □ No		FACU species:	25 x 4 100			
		10	_	l Cover		UPL species:	x 5			
Herb Stratum (Plot size: 5)						Column Totals:	205 (A) 530 (B)			
Phalaris arundinacea		80	⊠ v	es □ No	FACW		e Index (B/A) = 2.6			
Arctium minus						Hydrophytic Veget	1 7			
		15		es ⊠ No	FACU					
3. Cirsium vulgare		10		'es ⊠ No	FACU	-	Hydrophytic Vegetation			
4. Pilea pumila		10		es ⊠ No	FACW	☑ Dominance Tes				
5				es □ No		☐ Prevalence Inde	$\times 18 \le 3.0^{1}$			
6			□ Y	es No			Adaptations¹ (Provide			
7			□ Y	es No		supporting data in R	Remarks or on separate sheet)			
8			□ Y	es 🗌 No			drophytic Vegetation			
9			□ Y	es 🗌 No		(Explain in Remarks				
10			□ Y	es 🗌 No			c soil and wetland hydrology			
		115	= To	otal Cover		musi be present, uni	less disturbed or problematic.			
Woody Vine Stratum (Plot size: 30)							-			
1			□ Y	es □ No		Hydrophytic	.			
2				es □ No		Vegetation Presen	t?			
				otal Cover						
Remarks (Include photo numbers here	e or on a separate shee	et):								
, r	r	•								



(Midwest Region)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
_	Matrix			Redox Featur							
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>			
0-15	10 YR 4/4	100					S				
15-23	10 YR 3/2	100					SL				
23+	10 YR 2/1	100									
23+	10 1 K 2/1	100					Muck				
											
¹Type: C=Concentrat	ion, D=Depletion, RN	√I=Reduced Ma	trix, MS = Masked	d Sand Grain	ns. ² Loca	ntion: PL=I	Pore Lining	g, M=Matrix			
Hydric Soil Indicate	•		,					Indicators for Problematic Hydric Soils ³ :			
Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)			
☐ Histic Epipedon	(A2)		☐ Sandy Red		,			☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
☐ Black Histic (A3)		☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)			
☐ Hydrogen Sulfide			☐ Loamy Mu	cky Mineral	l (F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)			
Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)			
2 cm Muck (A10			☐ Depleted M					Other (Explain in Remarks)			
Depleted Below Dark Surface (A11) Redox Dark Surface (F6)											
☐ Thick Dark Surfa	, ,		☐ Depleted D					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed			
Sandy Mucky Mineral (S1) Redox Depressions (F8) hydrology must be present, unless distribution or problematic.											
Restrictive layer (if	observed):										
-	obser (eu).							Hydric Soil Present? ☐ Yes ☒ No			
Type:								Hydric Son Fresent:			
Depth (in):											
Remarks:											
				HYDR	OLOGY						
Wetland Hydrology	Indicators:										
	Primary Indicators	(minimum of o	one is required; ch	eck all that a	apply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A	1)		☐ Water Stair	ned Leaves	(B9)			Surface Soil Cracks (B6)			
High Water Table			Aquatic Fa					Drainage Patterns (B10)			
☐ Saturation (A3)			☐ True Aquat	tic Plants (B	14)			☐ Dry-Season Water Table (C2)			
☐ Water Marks (B1)		☐ Hydrogen S	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)			
Sediment Deposi			Oxidized R	-	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B			Presence of					Stunted or Stressed Plants (D1)			
☐ Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B:☐ Inundation Visib		(D7)	☐ Thin Muck ☐ Gauge or V	,	*			☐ FAC-Neutral Test (D5)			
l	ed Concave Surface (Other (Exp								
Field Observations:											
		s 🛛 No	Donth (in):								
Surface Water Present			Depth (in): Depth (in):								
Water Table Present?		s 🛛 No	_	_				Wetland Hydrology Present? ☐ Yes ☒ No			
Saturation Present?		s 🗌 No	Depth (in): 34								
(includes capillary fr	• .	nitoring wall a	rial photos pro-	us increati	ne) if ave!	abla					
Describe Recorded D	ata (stream gage, moi	mornig well, as	ziiai piiotos, previo	ous mispection	ms), 11 avall	avie.					
Remarks:											



1602 V 2711									
Project/Site: Minnesota River Greenway - Eagan Alignn	nent	City/County: Eagan/Dal	kota	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,2	23W						
Landform (hillside, terrace, etc.): Basin		Local Relief (concave, c	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?	_		ka)					
Are Vegetation , Soil , or Hydrology significant	•	 Yes ☐ No (if no explain in remarks) Are "normal circumstances" present? ☐ Yes ☐ No 							
Are Vegetation □, Soil □, or Hydrology □ naturally	-	(If needed, explain any answers in Remarks.)							
Are vegetation [1], 50n [1], or Hydrology [1] naturally	•	MARY OF FINDING		ii Keliaiks.)					
Hydrophytic Vegetation Present? ☐ Yes ☐ No	501111								
Hydric Soil Present?		Is the Samp	led Area within	⊠ Yes □ No					
		a wetland?							
Wetland Hydrology Present? ☐ Yes ☐ No Remarks:									
Remarks.									
	VECETATION	I II.a saiantifia nan	nos of mlants						
T. G. (DI (G) 20)		N – Use scientific nan	•						
<u>Tree Stratum</u> (Plot Size: 30)	Absolute % Cover		Indicator Status	Dominance Test Worksheet:					
1. Salix nigra	20	⊠ Yes □ No	OBL	Number of dominant species that are OBL,					
2		Yes No		FACW, or FAC: 2 (A)					
3		☐ Yes ☐ No		Total number of					
4		☐ Yes ☐ No		dominant species across all strata: 2 (B)					
5		☐ Yes ☐ No		Percent of dominant					
	20	= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)	20	7000 00.01		Prevalence Index Worksheet:					
		☐ Yes ☐ No							
1				Total % Cover of: Multiply By:					
2		Yes No		OBL species: 20 x 1 20					
3		☐ Yes ☐ No		FACW species: 110 x 2 220					
4		Yes No		FAC species: x 3					
5		☐ Yes ☐ No		FACU species: x 4					
		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)				Column Totals: 130 (A) 240 (B)					
Phalaris arundinacea	100	Yes □ No	FACW	Prevalence Index $(B/A) = 1.8$					
2. Phragmites australis	10	☐ Yes ⊠ No	FACW	Hydrophytic Vegetation Indicators:					
3		☐ Yes ☐ No		□ Rapid Test for Hydrophytic Vegetation					
4		☐ Yes ☐ No		☑ Dominance Test is >50%					
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$					
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)					
8		Yes No		D Politicasi II doct de Verendo					
9				Problematic Hydrophytic Vegetation (Explain in Remarks)					
10.		Yes No		¹ Indicators of hydric soil and wetland hydrology					
10		Yes No		must be present, unless disturbed or problematic.					
w	110	= Total Cover							
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No		Hydrophytic ⊠ Yes □ No					
2		☐ Yes ☐ No		Vegetation Present?					
		= Total Cover							
Remarks (Include photo numbers here or on a separate shape of the separate shape shape shape of the separate s	neet):								



(Midwest Region)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
5 4 6 5	Matrix		<u>R</u>	Redox Featu	ires							
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type1	Loc2	Texture	<u>e</u> <u>Remarks</u>				
0-6	10 YR 2/1	100					SL					
6+	10 YR 4/1	98	7.5 YR 4/6	2	С	M	SL					
01	10 110 1/1	70	7.5 110 1/0	2	C	111	SE					
							-					
							-	· —				
												
¹ Type: C=Concentrat	ion, D=Depletion, RM	I=Reduced M	atrix, MS = Masked	1 Sand Grai	ns. ² Loca	ation: PL=	Pore Linin	g, M=Matrix				
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils ³ :				
☐ Histosol (A1)			☐ Sandy Gley	ed Matrix	(S4)			Coast Prairie Redox (A16) (LRR K, L, R)				
☐ Histic Epipedon	(A2)		☐ Sandy Redo	ox (S5)				☐ Iron-Manganese Masses (F12) (LRR K, L, R)				
☐ Black Histic (A3)		☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)				
☐ Hydrogen Sulfide			☐ Loamy Mu	cky Minera	d (F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)				
Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)				
2 cm Muck (A10			☐ Depleted M		7.0			Other (Explain in Remarks)				
□ Depleted Below Dark Surface (A11) □ Redox Dark Surface (F6) □ Thick Dark Surface (A12) □ Depleted Dark Surface (F7) ³Indicators of hydrophytic vegetation and wetland												
Sandy Mucky M	, ,		Redox Dep					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed				
or problematic.												
Restrictive layer (if	observed):							or keeping.				
	obser (eu).							Hydric Soil Present? ⊠ Yes □ No				
Type:								Hydric Son Fresent:				
Depth (in):												
Remarks:												
				HYDI	ROLOGY							
Wetland Hydrology	Indicators:											
	Primary Indicators	(minimum of	one is required; che	eck all that	apply)			Secondary Indicators (minimum of two required)				
☐ Surface Water (A	1)		☐ Water Stair	ned Leaves	(B9)			Surface Soil Cracks (B6)				
High Water Tabl			Aquatic Fa					Drainage Patterns (B10)				
Saturation (A3)			☐ True Aquat	tic Plants (I	314)			☐ Dry-Season Water Table (C2)				
☐ Water Marks (B1)		☐ Hydrogen S	Sulfide Odo	or (C1)			☐ Crayfish Burrows (C8)				
Sediment Deposi			Oxidized R	_	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)				
☐ Drift Deposits (B			Presence of					Stunted or Stressed Plants (D1)				
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)				
☐ Iron Deposits (B:	o) le on Aerial Imagery ((D7)	☐ Thin Muck ☐ Gauge or W					FAC-Neutral Test (D5)				
	ed Concave Surface (. ,	Other (Exp		*							
Field Observations:		20))							
Surface Water Preser		s 🛛 No	Depth (in):									
			Depth (in): 10									
Water Table Present?		s 🗌 No	•	face				Wetland Hydrology Present? ⊠ Yes □ No				
Saturation Present?		s 🗌 No	Depth (in): sur	iace								
(includes capillary fi	• .	itoring11	orial photos '	in	one) if a '1	ablar						
Describe Recorded L	ata (stream gage, mor	moring well, a	ierrai piiotos, previo	ous mspecti	ons), it avail	aoie:						
Remarks:												



15-63.5 % 2011									
Project/Site: Minnesota River Green	nway - Eagan Alignment	City/County: Eagan/Dal	cota	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,2	3W						
Landform (hillside, terrace, etc.): Te	errace	Local Relief (concave, c	onvex, none): Flat						
Slope (%): 0-1%	Lat:	Long:	Long: Datum:						
Soil Map Unit Name: Seelyeville m		NWI or WWI Classification:							
Are climatic/hydrologic conditions of	on the site typical for this time of year?	☐ Yes ☐ No (if	no explain in remarl	ks)					
Are Vegetation ⊠, Soil ⊠, or Hy	**	–	•	ent? ☐ Yes ⊠ No					
Are Vegetation □, Soil □, or Hy	• •	(If needed, explain any answers in Remarks.)							
	,								
Hydrophytic Vegetation Present?	☐ Yes ⊠ No	MMARY OF FINDING							
Hydric Soil Present?	☐ Yes ⊠ No		led Area within	☐ Yes ⊠ No					
Wetland Hydrology Present?	☐ Yes ☒ No	a wetland?							
Remarks: This boring is located ove									
Tremand, Time coming to receive over	an dodinonou ortanimous train								
	VEGETATION	ON – Use scientific nan	nes of plants						
Tree Stratum (Plot Size: 30)	Absolute % Co		Indicator Status	Dominance Test Worksheet:					
1	110001110 70 00	Yes No	marcar Starta	Number of dominant					
	 -			species that are OBL,					
2		☐ Yes ☐ No		FACW, or FAC: 1 (A)					
3		☐ Yes ☐ No		Total number of dominant species					
4		☐ Yes ☐ No		across all strata: 3 (B)					
5		☐ Yes ☐ No		Percent of dominant					
		= Total Cover		species that are OBL, FACW or FAC: 33% (A/B)					
Saplings/Shrub Stratum (Plot Size:	15)		Prevalence Index Worksheet:						
Rhamnus cathartica	50	∑ Yes □ No	FAC	Total % Cover of: Multiply By:					
2		☐ Yes ☐ No		OBL species: x 1					
3		☐ Yes ☐ No		FACW species: 10 x 2 20					
4		☐ Yes ☐ No		FAC species: 50 x 3 150					
5		☐ Yes ☐ No		FACU species: 40 x 4 160					
	50	= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)	50	- Total Cover		Column Totals: 100 (A) 330 (B)					
1. Arctium minus	20		FACIL	Prevalence Index (B/A) = 3.3					
	20	⊠ Yes □ No	FACU	, ,					
2. Solidigo canadensis	20	⊠ Yes □ No	FACU	Hydrophytic Vegetation Indicators:					
3. Phalaris arundinacea	10	☐ Yes ⊠ No	FACW	Rapid Test for Hydrophytic Vegetation					
4		☐ Yes ☐ No		Dominance Test is >50%					
5		☐ Yes ☐ No		Prevalence Index is $\leq 3.0^{1}$					
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)					
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation					
9		☐ Yes ☐ No		(Explain in Remarks)					
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology					
	50	= Total Cover		must be present, unless disturbed or problematic.					
Woody Vine Stratum (Plot size: 30	0)								
1		☐ Yes ☐ No		Hydrophytic Van M Na					
2		☐ Yes ☐ No	_	Vegetation Present? ☐ Yes ☒ No					
		= Total Cover							
Remarks (Include photo numbers he	re or on a separate sheet).	- 10tti Covoi							
(metade photo numbers ne	a separate shoot/.								



(Midwest Region)

Profile Description:	(Describe to the dep	oth needed to	locument the indi	cator or co	nfirm the a	bsence of i	indicators.	.)			
•	Matrix			edox Featu				•			
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>			
0-5	10 YR 4/3	100					SL				
											
											
											
¹Type: C=Concentrati	on, D=Depletion, RM	1=Reduced Ma	trix, MS = Masked	Sand Grain	ns. ² Loca	tion: PL=I	Pore Lining	g, M=Matrix			
Hydric Soil Indicato	•							Indicators for Problematic Hydric Soils ³ :			
Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)			
Histic Epipedon (A2)		☐ Sandy Redo		,			☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
☐ Black Histic (A3)	ı		☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)			
☐ Hydrogen Sulfide	(A4)		☐ Loamy Mu					5 cm Mucky Peat or Peat (S3) (LRR , K , L , R)			
Stratified Layers			Loamy Gle		(F2)			Very Shallow Dark Surface (TF12)			
2 cm Muck (A10)			☐ Depleted M		16			Other (Explain in Remarks)			
☐ Depleted Below I☐ Thick Dark Surfa			Redox Dark				,	37			
=	, ,		☐ Depleted D				•	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed			
Sandy Mucky Mineral (S1) Redox Depressions (F8) hydrology must be present, unless disturbed or problematic.											
Restrictive layer (if	observed):							The process of the pr			
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							Hydric Soil Present? ☐ Yes ☐ No			
Type: Bituminous							-	Hydric Son Fresent:			
Depth (in): 5 Percentage Area is registed above westland begin it consists of an old hituminous trail. Lock of hydrollabilities agreed a bove end in the decision of hydric											
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.											
,											
				HYDR	OLOGY						
Wetland Hydrology	Indicators:										
	Primary Indicators	(minimum of	one is required; che	eck all that	apply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A	1)		☐ Water Stain	ed Leaves	(B9)			Surface Soil Cracks (B6)			
☐ High Water Table	e (A2)		☐ Aquatic Fat	ına (B13)				☐ Drainage Patterns (B10)			
☐ Saturation (A3)			☐ True Aquat	ic Plants (B	14)			☐ Dry-Season Water Table (C2)			
☐ Water Marks (B1			☐ Hydrogen S					☐ Crayfish Burrows (C8)			
Sediment Deposit	· /		Oxidized R	-	_	Roots (C3)		Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B			☐ Presence of			1 (00)		Stunted or Stressed Plants (D1)			
☐ Algal Mat or Cru ☐ Iron Deposits (B5			☐ Recent Iron ☐ Thin Muck			ils (C6)		☐ Geomorphic Position (D2) ☐ FAC-Neutral Test (D5)			
☐ Inundation Visibl		R7)	Gauge or W	,	*			FAC-Neutral Test (D3)			
	ed Concave Surface (I		Other (Expl								
Field Observations:	`	,									
Surface Water Presen	t?	s 🛛 No	Depth (in):								
			Depth (in):								
Water Table Present?		s 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No			
Saturation Present?	_	s 🛛 No	Depui (iii).								
(includes capillary fr Describe Recorded D	•	nitoring well a	erial photos previo	us inenactio	ng) if avail	able.					
Describe Recolued D	aaa (sacam gage, mor	mornig well, di	orai photos, previo	чо тореси	,,, 11 avall	u010.					
Remarks: See soils re	emarks.										



Project/Site: Minnesota River Greenway - Eagan Alignmer	nt	City/Cour	nty: Eagan/Dak	ota	Sampling Date: 9/19/13				
Applicant/Owner: Dakota County		State: MN	N		Sampling Point: W2-SB-II				
Investigator(s): Dan Donayre		Sec, Twp,	Ran: 4,27N,23	3W					
Landform (hillside, terrace, etc.): Basin		Local Rel	ief (concave, co	onvex, none): Conca	ve				
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 the	is time of year?	Yes No (if no explain in remarks)							
Are Vegetation □, Soil □, or Hydrology □ significant	· ·	Are "normal circumstances" present? Yes \(\square\) No							
Are Vegetation , Soil , or Hydrology a naturally p	•	(If needed, explain any answers in Remarks.)							
The regention [1], both [1], of Hydrology [1] mittaining p		MARY OF FINDINGS							
Hydrophytic Vegetation Present? ☐ Yes ☐ No	SCIVIIV	IAKI O	T FINDING	13					
			Is the Sample	ed Area within					
Hydric Soil Present? ✓ Yes No			a wetland?		☑ Yes □ No				
Wetland Hydrology Present? Yes No									
Remarks:									
	VEGETATION	– Use so	cientific nam	es of plants					
Tree Stratum (Plot Size: 30)	Absolute % Cover	Domin	ant Species?	Indicator Status	Dominance Test Worksheet:				
1		□ Y	es 🗌 No		Number of dominant				
2		□ Y	es □ No		species that are OBL, FACW, or FAC: 2 (A)				
3			es □ No		Total number of				
					dominant species				
4			Yes □ No		across all strata: 2 (B)				
5		∐ Y	es 🗌 No		Percent of dominant species that are OBL,				
	= To				FACW or FAC: 100% (A/B)				
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:					
1		□ Y	es 🗌 No		Total % Cover of: Multiply By:				
2		□ Y	es 🗌 No		OBL species: 100 x 1 100				
3		□ Y	es 🗌 No		FACW species: 70 x 2 140				
4		□ Y	es 🗌 No		FAC species: x 3				
5		ПΥ	es □ No		FACU species: x 4				
		= Total	l Cover		UPL species: x 5				
Herb Stratum (Plot size: 5)					Column Totals: 170 (A) 240 (B)				
1. Lemna minor	90	M v	7 - N .	ODI	Prevalence Index $(B/A) = 1.4$				
	80		Yes □ No	OBL					
2. Bidens spp.	50		es □ No	FACW	Hydrophytic Vegetation Indicators:				
3. Typha spp.	20	☐ Y	es 🗌 No	OBL	Rapid Test for Hydrophytic Vegetation				
Equisetum pratense	20	□ Y	es 🗌 No	FACW	Dominance Test is >50%				
5		□ Y	es 🗌 No		Prevalence Index is < 3.01				
6		□ Y	es 🗌 No		☐ Morphological Adaptations¹ (Provide				
7		□ Y	es 🗌 No		supporting data in Remarks or on separate sheet)				
8		□ Y	es 🗌 No		☐ Problematic Hydrophytic Vegetation				
9		□ Y	es 🗌 No		(Explain in Remarks)				
10			es □ No		¹ Indicators of hydric soil and wetland hydrology				
	170		otal Cover		must be present, unless disturbed or problematic.				
Woody Vine Stratum (Plot size: 30)	1/0	•	· · 						
		_	. 🗖						
1			es □ No		Hydrophytic				
2			es No		, egention i resent.				
		= To	otal Cover						
Remarks (Include photo numbers here or on a separate shee	t):								



(Midwest Region)

Profile Description:	(Describe to the dep	oth needed to	locument the indi	cator or co	nfirm the a	bsence of	indicators	.)			
_	Matrix			edox Featu							
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>			
0-8	10 YR 2/1	100					SiCL				
8+	Gley 5/10BG	100					SiCL				
OT.	Gicy 3/10BG	100					SICL				
											
¹Type: C=Concentrat	ion, D=Depletion, RM	√=Reduced Ma	trix, MS = Masked	l Sand Grai	ns. ² Loca	tion: PL=	Pore Lining	g, M=Matrix			
Hydric Soil Indicato	ors:							Indicators for Problematic Hydric Soils3:			
☐ Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)			
☐ Histic Epipedon ((A2)		☐ Sandy Redo	ox (S5)				☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
☐ Black Histic (A3))		☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)			
☐ Hydrogen Sulfide	e (A4)		☐ Loamy Mu	cky Minera	l (F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)			
Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)			
2 cm Muck (A10			☐ Depleted M		10)			Other (Explain in Remarks)			
☐ Depleted Below I☐ Thick Dark Surfa			Redox Darl					31. dicatana of hardwarehatis are satution and another d			
Sandy Mucky Mi	, ,		☐ Depleted D ☐ Redox Dep					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed			
or problematic.											
Restrictive layer (if	observed):							The second secon			
	obser (eu).							Hydric Soil Present? ⊠ Yes □ No			
Type:								nyuric son Fresent:			
Depth (in):											
Remarks:											
				HYDR	OLOGY						
Wetland Hydrology	Indicators:										
	Primary Indicators	(minimum of	one is required; che	eck all that	apply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A	1)		☐ Water Stair	ned Leaves	(B9)			Surface Soil Cracks (B6)			
High Water Table			Aquatic Far					☐ Drainage Patterns (B10)			
Saturation (A3)			☐ True Aquat	ic Plants (B	14)			☐ Dry-Season Water Table (C2)			
☐ Water Marks (B1)		☐ Hydrogen S	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)			
Sediment Deposi			Oxidized R	-	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B			Presence of					Stunted or Stressed Plants (D1)			
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B:		(D7)	☐ Thin Muck ☐ Gauge or W					☐ FAC-Neutral Test (D5)			
	ed Concave Surface (Other (Exp	•							
Field Observations:	(/	<u> </u>								
Surface Water Presen	nt? □ V△	s 🛛 No	Depth (in):								
			Depth (in): 10	_							
Water Table Present?		s 🗌 No	Depth (in): sur	face				Wetland Hydrology Present? ⊠ Yes □ No			
Saturation Present?	· 	s 🗌 No	Dopai (iii). sui								
(includes capillary fr Describe Recorded D	•	nitoring well a	erial photos previo	nus inspecti	ons) if avail	able:					
Describe Recoluct D	am (sucam gage, moi	mornig well, d	oriai pilotos, pievie	лаз шърсен	,110), 11 avall	aoic.					
Remarks:											



1642 16 2011									
Project/Site: Minnesota River Greenway - Eagar	n Alignment	City/County: Eagan/Dak	tota	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,23	3W						
Landform (hillside, terrace, etc.): Terrace		Local Relief (concave, co	onvex, 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 ty	oical for this time of year?	✓ Yes ☐ No (if no explain in remarks)							
Are Vegetation , Soil , or Hydrology	•	`	•						
Are Vegetation , Soil , or Hydrology		Are "normal circumstances" present? ☐ Yes ☒ No (If needed, explain any answers in Remarks.)							
The vegetation [1, 50h [1, 6h Hydrology [1	-	i Konarks.)							
Hydrophytic Vegetation Present?		MARY OF FINDING							
		Is the Sampl	ed Area within	☐ Yes ⊠ No					
		a wetland?		l ies 🖾 No					
Wetland Hydrology Present? Yes									
Remarks: This boring is located over an abandon	ned bituminous trail								
		V – Use scientific nam	•						
Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:					
1		☐ Yes ☐ No		Number of dominant species that are OBL,					
2		☐ Yes ☐ No		FACW, or FAC: 1 (A)					
3		☐ Yes ☐ No		Total number of					
4		☐ Yes ☐ No		dominant species across all strata: 1 (B)					
5.		☐ Yes ☐ No		Percent of dominant					
5. <u></u>		= Total Cover		species that are OBL,					
		= Total Cover		FACW or FAC: 50% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:					
1		☐ Yes ☐ No		Total % Cover of: Multiply By:					
2		☐ Yes ☐ No		OBL species: x 1					
3		☐ Yes ☐ No		FACW species: 10 x 2 20					
4		☐ Yes ☐ No		FAC species: 20 x 3 60					
5		☐ Yes ☐ No		FACU species: 60 x 4 240					
		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)				Column Totals: 90 (A) 320 (B)					
Lotus corniculatus	40	Yes □ No	FACU	Prevalence Index $(B/A) = 3.6$					
Equisetum arvense	20	⊠ Yes □ No	FAC	Hydrophytic Vegetation Indicators:					
Phalaris arundinacea	10	☐ Yes ⊠ No	FACW	Rapid Test for Hydrophytic Vegetation					
4. Arctium minus	10	☐ Yes ⊠ No	FACU	☐ Dominance Test is >50%					
5. Bromus inermus	10	☐ Yes ⊠ No	FACU	☐ Prevalence Index is ≤3.0¹					
6	10	Yes No	TACO						
7				☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on separate sheet)					
		Yes No							
8		☐ Yes ☐ No		Problematic Hydrophytic Vegetation (Explain in Remarks)					
9		☐ Yes ☐ No							
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
	90	= Total Cover		, , , , , , , , , , , , , , , , , , , ,					
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No		Hydrophytic					
2		☐ Yes ☐ No		Vegetation Present? ☐ Yes ☐ No					
		= Total Cover							
Remarks (Include photo numbers here or on a se	parate sheet):								



(Midwest Region)

Profile Description:	Describe to the dep	oth needed to	locument the ind	icator or con	firm the a	bsence of	indicators.	.)
5 4 (1)	Matrix		<u>F</u>	Redox Feature	es_			n
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
0-6	10 YR 4/3	100		· 			CI	
0-0	10 1 K 4/3	100					SL	
		-						
				10 10 :	27	.: Dr 1	T	
¹Type: C=Concentratio		1=Reduced Ma	trix, MS = Masked	1 Sand Grain	s. ² Loca	ition: PL=I	`	g, M=Matrix
Hydric Soil Indicator	s:		_					Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			☐ Sandy Gley		54)			Coast Prairie Redox (A16) (LRR K, L, R)
☐ Histic Epipedon (A	A2)		☐ Sandy Red					☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Black Histic (A3)			☐ Stripped M					☐ Dark Surface (S7) (LRR K, L)
☐ Hydrogen Sulfide			Loamy Mu	cky Mineral	(F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
☐ Stratified Layers (A5)		☐ Loamy Gle	•	F2)			☐ Very Shallow Dark Surface (TF12)
☐ 2 cm Muck (A10)			☐ Depleted M					Other (Explain in Remarks)
☐ Depleted Below D			☐ Redox Dar	k Surface (Fe	5)			
☐ Thick Dark Surfac	e (A12)		☐ Depleted D	ark Surface	(F7)		:	Indicators of hydrophytic vegetation and wetland
☐ Sandy Mucky Min	eral (S1)		☐ Redox Dep	ressions (F8))			hydrology must be present, unless disturbed
								or problematic.
Restrictive layer (if o	bserved):							
Type: Bituminous								Hydric Soil Present? ☐ Yes ⊠ No
								I Tes Z 110
Depth (in): 6	1.1 .1.11		C 1111	. 11 7 1	C1 1 1	1	1	
soils and hydrology no		sin, it consists	of an old bitumino	us trail. Laci	of hydroli	onytic vege	tation and i	raised nature of the area aid in the decision of hydric
sons and nydrology no	t being present.							
				HYDR	OLOGY			
Wetland Hydrology I	ndicators:							
,	Primary Indicators	(minimum of	no is roquired; ch	ook all that a	anly)			Secondary Indicators (minimum of two required)
		(IIIIIIIIIIIIIIIII OI						
Surface Water (A1			☐ Water Stair	•	39)			Surface Soil Cracks (B6)
High Water Table	(A2)		☐ Aquatic Fa					Drainage Patterns (B10)
Saturation (A3)			☐ True Aqua					Dry-Season Water Table (C2)
Water Marks (B1)	(72)		Hydrogen :			(60)		Crayfish Burrows (C8)
Sediment Deposits			Oxidized R	-	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3			Presence of			1 (0.0		Stunted or Stressed Plants (D1)
Algal Mat or Crus			Recent Iron			11s (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B5)			☐ Thin Muck					FAC-Neutral Test (D5)
☐ Inundation Visible			-	Vell Data (D9				
	d Concave Surface (B8)	☐ Other (Exp	lain in Rema	rks)			
Field Observations:								
Surface Water Present	?	s 🛛 No	Depth (in):					
Water Table Present?	☐ Ye	s 🛛 No	Depth (in):					
Saturation Present?		s 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No
		- LJ 110						
(includes capillary fring Describe Recorded Date Date	•	nitoring well a	erial photos previo	ous inspection	ns) if avail	able:		
2 5501150 Recorded Da	(Stream gage, moi		pilotos, pievie	as mspecifor	,, 11 avaii			
Remarks: See soils rea	narks.							



100 W 200										
Project/Site: Minnesota River Greenway - Eagan Alignme	ent	City/County: Ea	gan/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	1,27N,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 t	his time of year?	⊠ Yes □	No (if no explain in rem	arks)						
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significan	ntly disturbed?	Are "	normal circumstances" pr	resent? 🛛 Yes 🗌 No						
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	problematic?	(If ne	eded, explain any answer	s in Remarks.)						
	SUMM	IARY OF FIN	DINGS							
Hydrophytic Vegetation Present? ☐ Yes ☐ No										
Hydric Soil Present? ☐ Yes ☐ No			Sampled Area within	⊠ Yes □ No						
Wetland Hydrology Present? ☐ Yes ☐ No		a wei	land?							
Remarks:		I								
	VEGETATION	– Use scientif	ic names of plants							
Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Spe	cies? Indicator Statu	S Dominance Test Worksheet:						
1. Salix nigra	70	⊠ Yes □	No OBL	Number of dominant						
2.		☐ Yes ☐		species that are OBL, FACW, or FAC: 5 (A)						
		☐ Yes ☐	· 	FACW, or FAC: 5 (A) Total number of						
3			· 	dominant species						
4		☐ Yes ☐		across all strata: 5 (B)						
5		☐ Yes ☐	No	Percent of dominant species that are OBL,						
	70	= Total Cover		FACW or FAC: 100% (A/B)						
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:						
1. Cornus alba	50	⊠ Yes □	No FACW	Total % Cover of: Multiply By:	<u>:</u>					
2. Salix amygdaloides	30	⊠ Yes □	No FACW	OBL species: 140 x 1 140						
3. Rhamnus cathartica	30	⊠ Yes □	No FAC	FACW species: 100 x 2 200						
4. Cornus racemosa	10	☐ Yes ⊠	No FAC	FAC species: 40 x 3 120						
5		☐ Yes ☐	No	FACU species: x 4						
	120	= Total Cover		UPL species: x 5						
Herb Stratum (Plot size: 5)				Column Totals: 280 (A) 460 (B)						
1. Typha spp.	70	⊠ Yes □	No OBL	Prevalence Index $(B/A) = 1.6$						
Equisetum palustre	20	☐ Yes ☐		Hydrophytic Vegetation Indicators:						
3	20	☐ Yes ☐		Rapid Test for Hydrophytic Vegetation						
4				Dominance Test is >50%						
		☐ Yes ☐		Prevalence Index is < 3.01						
5 6		☐ Yes ☐								
		☐ Yes ☐		☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on separate sheet	et)					
7		☐ Yes ☐		supporting data in Remarks of on separate sites	Ct)					
8		☐ Yes ☐	· · · · · · · · · · · · · · · · · · ·	Problematic Hydrophytic Vegetation						
9		☐ Yes ☐	No	(Explain in Remarks)						
10		☐ Yes ☐	No	¹ Indicators of hydric soil and wetland hydrolog must be present, unless disturbed or problemat						
	90	= Total Co	/er	must be present, unless distanced of problemat	.10.					
Woody Vine Stratum (Plot size: 30)										
1		☐ Yes ☐	No	Hydrophytic No. 7 No. 7 No.						
2	_	☐ Yes ☐	No	Vegetation Present?	J					
		= Total Co								
Remarks (Include photo numbers here or on a separate she	eet):									
-										



(Midwest Region)

Profile Description:	(Describe to the dep	th needed to	document the ind	icator or co	nfirm the a	bsence of	indicators	s.)
	Matrix			Redox Featur				
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
				_		· · · · · · · · · · · · · · · · · · ·	Mucky	,
0+	10 YR 2/1	100					peat	
		-						
	· 	· <u></u>	· 	<u> </u>		<u> </u>	·	·
	· -	· 	 -				-	
								· · · · · · · · · · · · · · · · · · ·
								
¹ Type: C=Concentrat	ion, D=Depletion, RM	=Reduced M	Matrix, MS = Masked	d Sand Grain	is. ² Loca	tion: PL=	Pore Linin	g, M=Matrix
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			☐ Sandy Gley	yed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)
☐ Histic Epipedon (☐ Sandy Red					☐ Iron-Manganese Masses (F12) (LRR K, L, R)
Black Histic (A3)			☐ Stripped M					Dark Surface (S7) (LRR K, L)
Hydrogen Sulfide			Loamy Mu					5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
Stratified Layers			☐ Loamy Gle		(F2)			☐ Very Shallow Dark Surface (TF12)
☐ 2 cm Muck (A10☐ Depleted Below l			☐ Depleted M☐ Redox Dar		()			Other (Explain in Remarks)
☐ Thick Dark Surfa			☐ Depleted D	`	,			³ Indicators of hydrophytic vegetation and wetland
Sandy Mucky Mi	` /		☐ Redox Dep					hydrology must be present, unless disturbed
Buildy Mucky ivi	merar (51)		Redox Dep	ressions (1 c	')			or problematic.
Restrictive layer (if	observed):							r
-	00001 (00)							Hadada Cadi Danamada M. Wasa D. Na
Type:								Hydric Soil Present? ⊠ Yes □ No
Depth (in):								
Remarks:								
				HYDR	OLOGY			
Wetland Hydrology	Indicators				OLOGI			
wetiand flydrology								
_	•	(minimum o	f one is required; ch					Secondary Indicators (minimum of two required)
Surface Water (A	*		☐ Water Stair	,	B9)			☐ Surface Soil Cracks (B6)
☐ High Water Table ☐ Saturation (A3)	e (A2)		☐ Aquatic Fa☐ True Aqua		1.4)			☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2)
☐ Water Marks (B1	`		☐ Hydrogen		*			Crayfish Burrows (C8)
Sediment Deposi			Oxidized R			Roots (C3)		Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B			☐ Presence of		U	10013 (03)		Stunted or Stressed Plants (D1)
☐ Algal Mat or Cru			☐ Recent Iron		. ,	ils (C6)		☐ Geomorphic Position (D2)
☐ Iron Deposits (B5	5)		☐ Thin Muck					☐ FAC-Neutral Test (D5)
☐ Inundation Visib	le on Aerial Imagery (B7)	☐ Gauge or V	Vell Data (D	9)			
☐ Sparsely Vegetate	ed Concave Surface (I	38)	Other (Exp	lain in Rema	arks)			
Field Observations:								
Surface Water Presen	it?	No No	Depth (in):					
Water Table Present?		— □ No	Depth (in): 10					
Saturation Present?	_	No No	Depth (in): sur	face				Wetland Hydrology Present? ☐ Yes ☐ No
		I INO	F ()					
(includes capillary fr	ata (stream gage, mon	itoring well	aerial photos, previo	nus inspectic	ns) if avail	able:		
_ ssiles Recorded B	(outum gage, mon		photos, previo	speetic	,, u · u i			
Remarks:								



Con A Sur									
Project/Site: Minnesota River Greenway - Eagar	Alignment	City/County: Eagan/Dak	ota	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,23	3W						
Landform (hillside, terrace, etc.): Terrace		Local Relief (concave, co	onvex, 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 type	pical for this time of year?	☐ Yes ☐ No (if	no explain in remarl	ks)					
Are Vegetation ⊠, Soil ⊠, or Hydrology ⊠	significantly disturbed?	Are "normal	circumstances" pres	ent? 🗌 Yes 🖾 No					
Are Vegetation 🔲, Soil 🔲, or Hydrology 🔲	naturally problematic?	(If needed, ex	xplain any answers in	n Remarks.)					
	SUMN	MARY OF FINDING	S						
Hydrophytic Vegetation Present? X Yes	No								
Hydric Soil Present?	No No	Is the Sampl a wetland?	ed Area within	☐ Yes ⊠ No					
Wetland Hydrology Present? ☐ Yes ☑	No	a wettanu:							
Remarks: This boring is located over an abandon	ned bituminous trail								
	VEGETATION	V – Use scientific nam	es of plants						
Tree Stratum (Plot Size: 30)	Absolute % Cover		Indicator Status	Dominance Test Worksheet:					
1. Salix nigra	40	⊠ Yes □ No	OBL	Number of dominant					
Salix amygdaloides	20	☐ Yes ☐ No	FACW	species that are OBL,					
• •	20	⊠ Yes □ No		FACW, or FAC: 5 (A) Total number of					
3. Populus tremuloides	20		FAC	dominant species					
4		Yes No		across all strata: 6 (B)					
5		☐ Yes ☐ No		Percent of dominant species that are OBL,					
	80	= Total Cover		FACW or FAC: 83% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:					
1. Salix amygdaloides	30	🛛 Yes 🗌 No	FACW	Total % Cover of: Multiply By:					
2		☐ Yes ☐ No	·	OBL species: 40 x 1 40					
3		☐ Yes ☐ No		FACW species: 70 x 2 140					
4		☐ Yes ☐ No		FAC species: 100 x 3 300					
5		☐ Yes ☐ No		FACU species: 50 x 4 200					
	30	= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)				Column Totals: 260 (A) 480 (B)					
1. Poa pratensis	80	⊠ Yes □ No	FAC	Prevalence Index $(B/A) = 1.8$					
Solidago canadensis	40	Yes □ No	FACU	Hydrophytic Vegetation Indicators:					
Phalaris arundinacea		☐ Yes ☐ No	FACW	Rapid Test for Hydrophytic Vegetation					
Ambrosia artemisiifolia	20			Dominance Test is >50%					
	10	☐ Yes ⊠ No	FACU	 ☑ Prevalence Index is ≤ 3.0¹ 					
5		☐ Yes ☐ No		Frevalence fildex is < 5.0°					
6		Yes No		☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on separate sheet)					
7		☐ Yes ☐ No		supporting data in Remarks of on separate sheet)					
8		☐ Yes ☐ No		Problematic Hydrophytic Vegetation					
9		☐ Yes ☐ No		(Explain in Remarks)					
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
	150	= Total Cover		must be present, unless disturbed of problematic.					
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No		Hydrophytic No.					
2	_	☐ Yes ☐ No		Vegetation Present? ✓ Yes ☐ No					
		= Total Cover							
Remarks (Include photo numbers here or on a sep	parate sheet):								



(Midwest Region)

Profile Description:	Describe to the dep	oth needed to	locument the ind	icator or con	firm the a	bsence of	indicators.	.)
5 4 (1)	Matrix		<u>F</u>	Redox Feature	es_			n
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
0-6	10 YR 4/3	100		· 			CI	
0-0	10 1 K 4/3	100					SL	
		-						
				10 10 :	27	.: Dr 1	T	
¹Type: C=Concentratio		1=Reduced Ma	trix, MS = Masked	1 Sand Grain	s. ² Loca	ition: PL=I	`	g, M=Matrix
Hydric Soil Indicator	s:		_					Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			☐ Sandy Gley		54)			Coast Prairie Redox (A16) (LRR K, L, R)
☐ Histic Epipedon (A	A2)		☐ Sandy Red					☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Black Histic (A3)			☐ Stripped M					☐ Dark Surface (S7) (LRR K, L)
☐ Hydrogen Sulfide			Loamy Mu	cky Mineral	(F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
☐ Stratified Layers (A5)		☐ Loamy Gle	•	F2)			☐ Very Shallow Dark Surface (TF12)
☐ 2 cm Muck (A10)			☐ Depleted M					Other (Explain in Remarks)
☐ Depleted Below D			☐ Redox Dar	k Surface (Fe	5)			
☐ Thick Dark Surfac	e (A12)		☐ Depleted D	ark Surface	(F7)		:	Indicators of hydrophytic vegetation and wetland
☐ Sandy Mucky Min	eral (S1)		☐ Redox Dep	ressions (F8))			hydrology must be present, unless disturbed
								or problematic.
Restrictive layer (if o	bserved):							
Type: Bituminous								Hydric Soil Present? ☐ Yes ⊠ No
								I Tes Z 110
Depth (in): 6	1.1 .1.11		C 1111	. 11 7 1	C1 1 1	1	1	
soils and hydrology no		sin, it consists	of an old bitumino	us trail. Laci	of hydroli	onytic vege	tation and i	raised nature of the area aid in the decision of hydric
sons and nydrology no	t being present.							
				HYDR	OLOGY			
Wetland Hydrology I	ndicators:							
,	Primary Indicators	(minimum of	no is roquired; ch	ook all that a	anly)			Secondary Indicators (minimum of two required)
		(IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII						
Surface Water (A1			☐ Water Stair	•	39)			Surface Soil Cracks (B6)
High Water Table	(A2)		☐ Aquatic Fa					Drainage Patterns (B10)
Saturation (A3)			☐ True Aqua					Dry-Season Water Table (C2)
Water Marks (B1)	(72)		Hydrogen :			(60)		Crayfish Burrows (C8)
Sediment Deposits			Oxidized R	-	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3			Presence of			1 (0.0		Stunted or Stressed Plants (D1)
Algal Mat or Crus			Recent Iron			11s (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B5)			☐ Thin Muck					FAC-Neutral Test (D5)
☐ Inundation Visible			-	Vell Data (D9				
	d Concave Surface (B8)	☐ Other (Exp	lain in Rema	rks)			
Field Observations:								
Surface Water Present	?	s 🛛 No	Depth (in):					
Water Table Present?	☐ Ye	s 🛛 No	Depth (in):					
Saturation Present?		s 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No
		- LJ 110						
(includes capillary fring Describe Recorded Date Date	•	nitoring well a	erial photos previo	ous inspection	ns) if avail	able:		
2 5501150 Recorded Da	(Sucum guge, moi		pilotos, pievie	as mspecifor	,, 11 avaii			
Remarks: See soils rea	narks.							



Miles & Survey										
Project/Site: Minnesota River Green	nway - Eagan Alignment		City/Coun	ty: Eagan/Dak	tota	Sampling Date: 9/4/13				
Applicant/Owner: Dakota County			State: MN	1		Sampling Point: W3-S	SB-A			
Investigator(s): Dan Donayre			Sec, Twp,	Ran: 18,27N,2	23W					
Landform (hillside, terrace, etc.): To	errace		Local Reli							
Slope (%): 0-1	Lat:		Long:			Datum:				
Soil Map Unit Name: Minneiska lo			NWI or WWI Classification:							
Are climatic/hydrologic conditions of Are Vegetation , Soil , or Hy	**		 ✓ Yes ☐ No (if no explain in remarks) Are "normal circumstances" present? ☑ Yes ☐ No 							
Are Vegetation , Soil , or Hy	• •				_					
Are vegetation, Soil, or Hy	drology inaturally problem		(If needed, explain any answers in Remarks.) MARY OF FINDINGS							
Hydrophytic Vegetation Present?	⊠ Yes □ No	BUNI	JAKI O	THIDHIO						
Hydric Soil Present?	⊠ Yes □ No			Is the Sampl	ed Area within	⊠ Yes □ No				
•				a wetland?		⊠ les 🗆 No				
Wetland Hydrology Present?	⊠ Yes □ No									
Remarks:										
	VEG	ETATIO	V – Use so	cientific nam	es of plants					
Tree Stratum (Plot Size: 30 ft)		% Cover		ant Species?	Indicator Status	Dominance Test W	/orksheet·			
	-	70 COVCI		es No	indicator Status	Number of dominar				
1						species that are OB				
2				es No		FACW, or FAC:	2 (A)	1		
3			□ Y	es 🗌 No		Total number of dominant species				
4			□ Y	es 🗌 No		across all strata:	2 (B)			
5			□ Y	es 🗌 No		Percent of dominan				
			= Total	Cover		species that are OB: FACW or FAC:		(A/B)		
Saplings/Shrub Stratum (Plot Size:	15 ft)					Prevalence Index V	Worksheet:			
Salix interior		10	⊠ Y	es 🗌 No	FACW	Total % Cover	of:	Multipl	ly By:	
2				es No		OBL species:		1 75		
3			_	es 🗌 No		FACW species:		2 70	i	
4				es 🗌 No		FAC species:		3 6		
5				es 🗌 No		FACU species:		4		
J		10	= Total			UPL species:	· <u></u> -	 . 5	_	
Herb Stratum (Plot size: 5 ft)		10	= 10tai	Cover		Column Total:	<u> </u>	·	1 (D)	
· -			-				`		1 (B)	
Phalaris arundinacea		75	⊠ Y	es 🗌 No	FACW		e Index (B/A			
2. Phleum prantense		25	⊠ Y	es 🗌 No	FACU	Hydrophytic Vege ☐ Rapid Test for I			ion	
3				D No		Dominance Tes		v egetati	OII	
4				es No		☐ Prevalence Inde				
5				es No						
				es No		☐ Morphological supporting data in F				
6				es No		supporting data in I	temarks or o	п зериги	e sheet)	
7			☐ Y	es 🗌 No		Problematic Hy (Explain in Remark		egetation	1	
8			□ Y	es 🗌 No		` '	<i></i>			
9			□ Y	es 🗌 No		¹ Indicators of hydric must be present, un				
10			□ Y	es 🗌 No		or present, un				
		100	= To	otal Cover						
Woody Vine Stratum (Plot size: 1:	5 ft <u>)</u>									
1			ПΥ	es 🗌 No		Hydrophytic Vegetation Present	,, 🛚 🗆 Y	es □ N	No	
2				es 🗌 No		v egetation r resem	•			
				tal Cover						
Remarks:										



(Midwest Region)

Profile Description:	: (Describe to the de	oth needed to	document the indi	cator or co	onfirm the a	bsence of	indicators	s.)		
Danth (in)	Matrix		<u>R</u>	edox Featu	res		Т	Damanka		
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>		
0-20	10 YR 2/1	100					SiCL			
20+	10 YR 4/1	95	10 YR 4/6	5	С	M	SiCL			
						-	-			
							-			
							-			
¹Type: C=Concentra	tion, D=Depletion, RM	∕I=Reduced M	Matrix, CS=Covered	or Coated S	and Grains.	² Locati	ion: PL=P	ore Lining, M=Matrix		
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils ³ :		
☐ Histosol (A1)			☐ Sandy Gley	ed Matrix	(S4)			☐ Coast Prairie Redox (A16)		
☐ Histic Epipedon	(A2)		☐ Sandy Red	ox (S5)				☐ Iron-Manganese Masses (F12)		
☐ Black Histic (A3			☐ Stripped M					Other (Explain in Remarks)		
Hydrogen Sulfid			Loamy Mu	•	. ,					
☐ Stratified Layers	* /		Loamy Gle		(F2)					
2 cm Muck (A10			☐ Depleted M	, ,	7.6)					
Depleted Below			Redox Darl					27 - 1' - 1 C1 - 1 1 - 1' 1 1 1 1		
☐ Thick Dark Surf			☐ Depleted D☐ Redox Dep					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed		
5 cm Mucky Pea			☐ Redox Dep	icssions (i	5)			or problematic.		
Restrictive layer (if										
Type:	•							Hydric Soil Present? ⊠ Yes □ No		
Depth (in):										
Remarks:										
Remarks.										
				HYDI	ROLOGY					
Wetland Hydrology	Indicators:									
	Primary Indicators	(minimum o	f one is required; che	eck all that	apply)			Secondary Indicators (minimum of two required)		
☐ Surface Water (A	A 1)		■ Water Stair	ned Leaves	(B9)			☐ Surface Soil Cracks (B6)		
☐ High Water Tabl	le (A2)		☐ Aquatic Fa	una (B13)				☐ Drainage Patterns (B10)		
☐ Saturation (A3)			☐ True Aquat					☐ Dry-Season Water Table (C2)		
Water Marks (B			Hydrogen S					Crayfish Burrows (C8)		
Sediment Depos			Oxidized R	-	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (F			☐ Presence of			1 (00)		Stunted or Stressed Plants (D1)		
☐ Algal Mat or Cru ☐ Iron Deposits (B			☐ Recent Iron ☐ Thin Muck			ils (C6)		 ⊠ Geomorphic Position (D2) ⊠ FAC-Neutral Test (D5) 		
	ole on Aerial Imagery	(R7)	Gauge or V					A FAC-Neutral Test (D5)		
	ted Concave Surface (Other (Exp							
Field Observations:		20)								
Surface Water Preser		s 🛛 No	Depth (in):							
Water Table Present		s 🛛 No	Depth (in):							
			Depth (in): 29	 -				Wetland Hydrology Present?		
Saturation Present?		s 🗌 No	Depth (iii). 2)							
	(includes capillary fringe) Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:									
2 cscrise Recorded I	Jam (Stream gage, Mo)	oing well,	acrui priotos, previe	as mspeen	,, 11 avalle					
Remarks:										
I										



Project/Site: Minnesota River Gree	nway - Eagan Alignment	City/Coun	ty: Eagan/Dak	tota	Sampling Date: 9/4/13					
Applicant/Owner: Dakota County		State: MN	State: MN Sampling Point: W3-SB-B							
Investigator(s): Dan Donayre		Sec, Twp,	Sec, Twp, Ran: 18,27N,23W							
Landform (hillside, terrace, etc.): T	errace	Local Reli	ef (concave, co	onvex, none): Flat						
Slope (%): 0-1	Lat:	Long:	Long: Datum:							
Soil Map Unit Name: Minneiska lo	am	NWI or W	WI Classificat	ion:						
Are climatic/hydrologic conditions	on the site typical for this time of year?		☐ No (if	no explain in remark	as)					
Are Vegetation ☐, Soil ☐, or Hy	vdrology ☐ significantly disturbed?		Are "normal	circumstances" prese	ent? 🛛 Yes 🗌 No					
Are Vegetation ☐, Soil ☐, or Hy	drology naturally problematic?		(If needed, ex	xplain any answers in	Remarks.)					
	SU	MMARY O	F FINDING	S						
Hydrophytic Vegetation Present?	⊠ Yes □ No									
Hydric Soil Present?	☐ Yes ⊠ No			ed Area within	☐ Yes ⊠ No					
Wetland Hydrology Present?	☐ Yes ☒ No		a wetland?							
Remarks:										
	VECETAT	ION – Use so	viantifia nam	os of plants						
Tree Stratum (Plot Size: 30 ft)					Danis Trad Wash					
, , , ,	% Cover	·	ant Species?	Indicator Status	Dominance Test Work	sneet:				
Fraxinus pennsylvanica	5		es 🗌 No	FACW	Number of dominant species that are OBL,					
2. Populus deltoides	5	⊠ Y	es 🗌 No	FAC	FACW, or FAC:	4 (A)				
3		□ Y	es 🗌 No		Total number of dominant species					
4		□ Y	es 🗌 No		across all strata:	4 (B)				
5		□ Y	es 🗌 No		Percent of dominant					
	10	= Total	Cover		species that are OBL, FACW or FAC:	100% (A/B)				
Saplings/Shrub Stratum (Plot Size:	15 ft)				Prevalence Index Wor					
Fraxinus pennsylvanica	2	ΜY	es 🗌 No	FACW	Total % Cover of:	Multiply By:				
	<i>2</i>		es No	THEW	OBL species:	<u>манирту Бу.</u> х 1				
2					_					
3			es 🗌 No		FACW species: 10					
4		_	es 🗌 No		FAC species: 5					
5		_	es 🗌 No		FACU species:	x 4				
	2	= Total	Cover		UPL species:	x 5				
Herb Stratum (Plot size: 5 ft)					Column Total: 11	` , , , , , , , , , , , , , , , , , , ,				
Phalaris arundinacea	100	⊠ Y	es 🗌 No	FACW		dex (B/A) = 2.0				
2		□ Y	es 🗌 No		Hydrophytic Vegetatio					
					Rapid Test for Hydr					
3			es 🗌 No		Dominance Test is					
4			es 🗌 No		Prevalence Index is	<u><</u> 3.0¹				
5		☐ Y	es 🗌 No		☐ Morphological Ada					
6		□ Y	es 🗌 No		supporting data in Kema	arks or on separate sheet)				
7		□ Y	es 🗌 No		☐ Problematic Hydrop	ohytic Vegetation				
8		□ Y	es 🗌 No		(Explain in Remarks)					
9		□ Y	es 🗌 No		¹ Indicators of hydric soi					
10		□ Y	es 🗌 No		must be present, unless	disturbed or problematic.				
	100	= To	tal Cover							
Woody Vine Stratum (Plot size: 1.										
1		Пν	es 🗌 No		Hydrophytic	⊠ Yes □ No				
2.			es 🗌 No		Vegetation Present?					
·			tal Cover							
Remarks:		=10	un COVEI							
remarks.										
İ										



SOILS												
Profile Description:	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth (in)	Matrix			Redox Featu	res		Texture	Remarks				
<u>Deptii (iii)</u>	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	Kemarks				
0-20	10 YR 2/1	100					SiCL					
20-35	10 YR 3/2	100					SiCL					
35+	2.5 Y 4/2	100					SiCL					
35+	2.3 1 4/2	100					SICL					
¹Type: C=Concentra	tion, D=Depletion, RM	=Reduced N	latrix CS=Covered	l or Coated S	and Grains	² Locati	ion: PL=P	ore Lining, M=Matrix				
Hydric Soil Indicat		Troudered I.	initing ob covered	i or coured b	una Gramo.			Indicators for Problematic Hydric Soils ³ :				
☐ Histosol (A1)			☐ Sandy Gle	eved Matrix ((S4)			Coast Prairie Redox (A16)				
Histic Epipedon	(A2)		☐ Sandy Re	-	(51)			☐ Iron-Manganese Masses (F12)				
☐ Black Histic (A3			☐ Stripped N					Other (Explain in Remarks)				
☐ Hydrogen Sulfid			Loamy M		1 (F1)							
☐ Stratified Layers			☐ Loamy Gl	eyed Matrix	(F2)							
☐ 2 cm Muck (A10	*		☐ Depleted l	Matrix (F3)								
☐ Depleted Below			☐ Redox Da	•	*							
Thick Dark Surf			Depleted					³ Indicators of hydrophytic vegetation and wetland				
Sandy Mucky M			☐ Redox De	pressions (F	8)			hydrology must be present, unless disturbed				
5 cm Mucky Pea								or problematic.				
Restrictive layer (if	observed):											
Type:								Hydric Soil Present? ☐ Yes ☒ No				
Depth (in):												
Remarks:							I					
Γ				HYDR	ROLOGY							
Wetland Hydrology	Indicators:											
	Primary Indicators	(minimum o	f one is required; cl	heck all that	apply)			Secondary Indicators (minimum of two required)				
☐ Surface Water (A	A1)		☐ Water Sta	ined Leaves	(B9)			☐ Surface Soil Cracks (B6)				
High Water Tab	le (A2)		Aquatic F	auna (B13)	, ,			☐ Drainage Patterns (B10)				
☐ Saturation (A3)			☐ True Aqua	atic Plants (E	314)			☐ Dry-Season Water Table (C2)				
☐ Water Marks (B	1)		☐ Hydrogen	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)				
☐ Sediment Depos				-	s on Living R	Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (I			Presence of					Stunted or Stressed Plants (D1)				
Algal Mat or Cru			Recent Iro			ils (C6)		Geomorphic Position (D2)				
☐ Iron Deposits (B			☐ Thin Muc	•	·			☐ FAC-Neutral Test (D5)				
l =	ole on Aerial Imagery (Well Data (I								
_ 1 , c	ted Concave Surface (I	38)	U Otner (Ex	plain in Rem	arks)							
Field Observations		_										
Surface Water Prese	nt?	No No	Depth (in):									
Water Table Present	? \(\sum \text{Yes}	No No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No				
Saturation Present?	⊠ Yes	. □ No	Depth (in): 35	5								
(includes capillary f	ringe)											
Describe Recorded I	Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:											
Remarks:												



The Survey of Survey									
Project/Site: Minnesota River Greenway - Eagan A	lignment	City/County: Eagan/Dal	cota	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, co	onvex, none): Conc	ave					
Slope (%): 0-1 Lat:		Long:		Datum:					
Soil Map Unit Name: Minneiska loam		NWI or WWI Classificat	ion:						
Are climatic/hydrologic conditions on the site typic Are Vegetation ☐, Soil ☐, or Hydrology ☐ sig	•	✓ Yes ☐ No (if no explain in remarks)Are "normal circumstances" present? ✓ Yes ☐ No							
Are Vegetation ☐, Soil ☐, or Hydrology ☐ na	turally problematic?	(If needed, ex	xplain any answers i	n Remarks.)					
	SUM	MARY OF FINDING	SS						
Hydrophytic Vegetation Present? X Yes	No								
Hydric Soil Present? ☐ Yes ☐	No		led Area within	⊠ Yes □ No					
Wetland Hydrology Present? ☐ Yes ☐		a wetland?							
Remarks:									
	VEGETATIO	N – Use scientific nam	nes of plants						
Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:					
Fraxinus pennsylvanica	30	⊠ Yes □ No	FACW	Number of dominant					
2. Populus tremuloides	10	— — — No	FAC	species that are OBL,					
3. Acer saccharinum	10	Yes □ No	FACW	FACW, or FAC: 4 (A) Total number of					
	10		FACW	dominant species					
4		Yes No		across all strata: 4 (B)					
5		☐ Yes ☐ No		Percent of dominant species that are OBL,					
	50	= Total Cover		FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15 ft)				Prevalence Index Worksheet:					
1		☐ Yes ☐ No		Total % Cover of: Multiply By:					
2		☐ Yes ☐ No		OBL species: x 1					
3		☐ Yes ☐ No		FACW species: 110 x 2 220					
4		☐ Yes ☐ No		FAC species: 10 x 3 30					
5		☐ Yes ☐ No		FACU species: x 4					
		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5 ft)				Column Total: 120 (A) 250 (B)					
Phalaris arundinacea	60	⊠ Yes □ No	FACW	Prevalence Index $(B/A) = 2.1$					
				Hydrophytic Vegetation Indicators:					
2. Persicaria spp.	10	☐ Yes ⊠ No	FACW	□ Rapid Test for Hydrophytic Vegetation					
3		☐ Yes ☐ No		☑ Dominance Test is >50%					
4		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$					
5		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
6		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)					
7		☐ Yes ☐ No		Droblematic Hydrophytic Vegetation					
8		☐ Yes ☐ No		Problematic Hydrophytic Vegetation (Explain in Remarks)					
9				¹ Indicators of hydric soil and wetland hydrology					
10		Yes No		must be present, unless disturbed or problematic.					
10		Yes No							
	70	= Total Cover							
Woody Vine Stratum (Plot size: 15 ft)				Hydrophytic SZ X SZ					
1		☐ Yes ☐ No		Vegetation Present?					
2		☐ Yes ☐ No							
	<u> </u>	= Total Cover							
Remarks:									
1									



(Midwest Region)

Profile Description:	: (Describe to the de	pth needed to	document the indi	cator or co	nfirm the al	sence of	indicators	.)		
Danish (in)	Matrix		<u>R</u>	dedox Featu	res		Т	Damada		
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>		
0-37	10 YR 2/1	100					SiCL			
37+	Gley 4/5GY	100					SiCL			
27.										
										
										
					-					
										
¹Type: C=Concentrat	tion, D=Depletion, RM	M=Reduced M	atrix, CS=Covered	or Coated S	and Grains.	² Locati	on: PL=P	ore Lining, M=Matrix		
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils3:		
Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			☐ Coast Prairie Redox (A16)		
☐ Histic Epipedon	(A2)		☐ Sandy Redo					☐ Iron-Manganese Masses (F12)		
Black Histic (A3			☐ Stripped M					Other (Explain in Remarks)		
Hydrogen Sulfid			Loamy Mu	•						
Stratified Layers	. ,		Loamy Gle		(F2)					
2 cm Muck (A10			☐ Depleted M☐ Redox Darl		26)					
☐ Depleted Below ☐ Thick Dark Surfa			☐ Redox Dari	•	*			³ Indicators of hydrophytic vegetation and wetland		
Sandy Mucky M			☐ Redox Dep					hydrology must be present, unless disturbed		
5 cm Mucky Pea			Redox Bep	ressions (1	,,			or problematic.		
Restrictive layer (if								•		
Type:								Hydric Soil Present? ⊠ Yes □ No		
Depth (in):										
Remarks:										
Romans.										
Γ				HYDR	OLOGY					
Wetland Hydrology	Indicators:									
	Primary Indicators	s (minimum of	one is required; che	eck all that a	apply)			Secondary Indicators (minimum of two required)		
☐ Surface Water (A			☐ Water Stair		(B9)			☐ Surface Soil Cracks (B6)		
High Water Tabl	le (A2)		Aquatic Fa					Drainage Patterns (B10)		
Saturation (A3)			☐ True Aquat					Dry-Season Water Table (C2)		
Water Marks (B			Hydrogen S			(C2)		Crayfish Burrows (C8)		
☐ Sediment Deposits (E			☐ Oxidized R ☐ Presence of	-	-	.00ts (C3)		☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1)		
Algal Mat or Cru			Recent Iron			ls (C6)		Geomorphic Position (D2)		
☐ Iron Deposits (B			☐ Thin Muck			13 (CO)		☐ FAC-Neutral Test (D5)		
	ole on Aerial Imagery	(B7)	☐ Gauge or W					2 1110 10data 1650 (50)		
	ted Concave Surface (Other (Exp							
Field Observations:	1									
Surface Water Preser	nt?	s 🛛 No	Depth (in):							
Water Table Present		s 🛛 No	Depth (in):							
Saturation Present?	_	s 🗌 No	Depth (in): 35					Wetland Hydrology Present? ⊠ Yes □ No		
(includes capillary f	_	3 🔲 110								
	<u> </u>	nitoring well,	aerial photos, previo	ous inspection	ons), if availa	ble:				
	Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:									
Pomerke:										
Remarks:										



Market & State								
Project/Site: Minnesota River Greenway	- Eagan Alignment	City/County: Eagan/Da	kota	Sampling Date: 9/4/13				
Applicant/Owner: Dakota County		State: MN		Sampling Point: W4 SB-B	1			
Investigator(s): Dan Donayre		Sec, Twp, Ran: 13,27N	,24W					
Landform (hillside, terrace, etc.): Basin		Local Relief (concave, o	convex, none): Conca	ave				
Slope (%): 0-1	Lat:	Long:		Datum:				
Soil Map Unit Name: Minneiska loam		NWI or WWI Classifica	ation:					
Are climatic/hydrologic conditions on the Are Vegetation ☐, Soil ☐, or Hydrologic	• • • • • • • • • • • • • • • • • • • •	✓ Yes ☐ No (if no explain in remarks)Are "normal circumstances" present? ✓ Yes ☐ No						
Are Vegetation , Soil , or Hydrold	ogy naturally problematic?	(If needed, e	explain any answers in	n Remarks.)				
	SUM	MARY OF FINDING	GS					
Hydrophytic Vegetation Present?	Yes No							
Hydric Soil Present?	Yes 🛛 No	Is the Samp a wetland?	oled Area within	☐ Yes ⊠ No				
Wetland Hydrology Present?	Yes 🛛 No	u wetuna.						
Remarks:		l						
	VEGETATIO	N – Use scientific nar	nes of plants					
Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status	Dominance Test Work	sheet:			
Fraxinus pennsylvanica	40	☑ Yes □ No	FACW	Number of dominant				
2. Acer negundo	20	∑ Yes □ No	FAC	species that are OBL, FACW, or FAC:	3 (A)			
3. Acer saccharinum	20	✓ Yes ☐ No	FACW	Total number of	3 (11)			
4		☐ Yes ☐ No		dominant species	2 (P)			
5		☐ Yes ☐ No		across all strata: Percent of dominant	3 (B)			
J				species that are OBL,				
	80	= Total Cover		FACW or FAC:	100% (A/B)			
Saplings/Shrub Stratum (Plot Size: 15 ft)			Prevalence Index Work				
1		☐ Yes ☐ No		Total % Cover of:	Multiply By:			
2		Yes No		OBL species:	x 1			
3		Yes No		FACW species: 60				
4		☐ Yes ☐ No		FAC species: 20	0 x 3 60			
5		☐ Yes ☐ No		FACU species:	x 4			
		= Total Cover		UPL species:	x 5			
Herb Stratum (Plot size: 5 ft)				Column Total: 80	0 (A) 180 (B)			
1		☐ Yes ☐ No			dex (B/A) = 2.3			
2		☐ Yes ☐ No		Hydrophytic Vegetatio				
				Rapid Test for Hydr				
3		Yes No		Dominance Test is				
4		☐ Yes ☐ No		Prevalence Index is	<u><</u> 3.0⁴			
5		Yes No		Morphological Adap	ptations ¹ (Provide arks or on separate sheet)			
6		☐ Yes ☐ No		supporting data in Kema	irks of on separate sheet)			
7		☐ Yes ☐ No		Problematic Hydrop	ohytic Vegetation			
8		☐ Yes ☐ No		(Explain in Remarks)				
9		☐ Yes ☐ No			l and wetland hydrology disturbed or problematic.			
10		☐ Yes ☐ No		F-125mc, amount	F-133001111101			
	70	= Total Cover						
Woody Vine Stratum (Plot size: 15 ft)								
1		☐ Yes ☐ No		Hydrophytic Vegetation Present?	∑ Yes □ No			
2		☐ Yes ☐ No						
		= Total Cover						
Remarks:								



				50	JILS							
Profile Description:	(Describe to the dep	th needed to	document the ind	licator or co	nfirm the al	osence of	indicators	i.)				
Danth (in)	<u>Matrix</u>]	Redox Featu	res		Т	Damada				
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>				
0-12	10 YR 3/3	100					SiCL					
12+	10 YR 4/4	100	-				SiCL					
												
												
¹ Type: C=Concentrat	ion, D=Depletion, RM	I=Reduced M	Iatrix, CS=Covered	or Coated S	and Grains.	² Locati	ion: PL=P	ore Lining, M=Matrix				
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils3:				
☐ Histosol (A1)			☐ Sandy Gle	ved Matrix (S4)			Coast Prairie Redox (A16)				
☐ Histic Epipedon	(A2)		☐ Sandy Rec	•	<i>.</i> ,			☐ Iron-Manganese Masses (F12)				
☐ Black Histic (A3	` '		☐ Stripped M					Other (Explain in Remarks)				
☐ Hydrogen Sulfid			Loamy Mu		l (F1)							
☐ Stratified Layers			Loamy Gl	-								
2 cm Muck (A10			☐ Depleted I	•	` /							
☐ Depleted Below	*		Redox Da		(6)							
☐ Thick Dark Surfa			☐ Depleted I	Dark Surface	(F7)			³ Indicators of hydrophytic vegetation and wetland				
☐ Sandy Mucky M			Redox De	pressions (F8	3)			hydrology must be present, unless disturbed				
☐ 5 cm Mucky Pea								or problematic.				
Restrictive layer (if												
								Hydric Soil Present? ☐ Yes ☒ No				
Type:								Hydric Soil Present? ☐ Yes ☒ No				
Depth (in):												
Remarks:												
				HYDR	OLOGY							
Wetland Hydrology	Indicators:											
	Primary Indicators	(minimum o	f one is required: cl	neck all that a	apply)			Secondary Indicators (minimum of two required)				
Surface Water (A	-	(☐ Water Stai					Surface Soil Cracks (B6)				
☐ High Water Tabl	,		Aquatic Fa		(D))			Drainage Patterns (B10)				
Saturation (A3)	C (A2)		☐ True Aqua		14)			Dry-Season Water Table (C2)				
☐ Water Marks (B)	D		☐ Hydrogen	,	<i>'</i>			Crayfish Burrows (C8)				
Sediment Deposi	*				on Living R	Poots (C3)		Saturation Visible on Aerial Imagery (C9)				
☐ Drift Deposits (E			☐ Presence of			()		Stunted or Stressed Plants (D1)				
☐ Algal Mat or Cru			Recent Iro			ils (C6)		Geomorphic Position (D2)				
☐ Iron Deposits (B.			☐ Thin Mucl			()		∑ FAC-Neutral Test (D5)				
	le on Aerial Imagery (B7)		Well Data (D	*							
	ed Concave Surface (I			olain in Rem								
Field Observations:		,										
		. M. M.	Don't Col									
Surface Water Preser		s 🛛 No	Depth (in):									
Water Table Present	? ☐ Yes	s 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No				
Saturation Present?	☐ Yes	s 🛛 No	Depth (in):					v 3v				
(includes capillary fi	ringe)											
Describe Recorded D	ata (stream gage, mon	nitoring well,	aerial photos, previ	ous inspection	ons), if availa	able:						
Pomorto:												
Remarks:												



1602 N. 2011.									
Project/Site: Minnesota River Greenway - Eagan Alignme	ent	City/County: Eagan/Dal	cota	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 t	his time of year?		no explain in remark	ks)					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significan	ntly disturbed?	Are "normal	circumstances" prese	ent? 🛛 Yes 🗌 No					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	problematic?	(If needed, e.	xplain any answers ir	n Remarks.)					
	SUMM	ARY OF FINDING	GS						
Hydrophytic Vegetation Present? X Yes No									
Hydric Soil Present? ⊠ Yes □ No			led Area within	⊠ Yes □ No					
Wetland Hydrology Present? ☐ Yes ☐ No		a wetland?							
Remarks:									
	VEGETATION	I – Use scientific nam	nes of plants						
Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:					
Fraxinus pennsylvanica	40		FACW	Number of dominant					
2. Acer saccharum	30	Yes □ No	FACW	species that are OBL,					
	30		FACW	FACW, or FAC: 3 (A)					
3		Yes No		Total number of dominant species					
4		☐ Yes ☐ No		across all strata: 3 (B)					
5		☐ Yes ☐ No		Percent of dominant species that are OBL,					
	70	= Total Cover		FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)		Prevalence Index Worksheet:							
Fraxinus pennsylvanica	30	Yes □ No		Total % Cover of: Multiply By:					
2		☐ Yes ☐ No		OBL species: x 1					
3		☐ Yes ☐ No		FACW species: 100 x 2 200					
4		☐ Yes ☐ No		FAC species: x 3					
5		☐ Yes ☐ No		FACU species: x 4					
	30	= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)				Column Totals: 100 (A) 200 (B)					
1		☐ Yes ☐ No		Prevalence Index $(B/A) = 2.0$					
2				Hydrophytic Vegetation Indicators:					
		Yes No		Rapid Test for Hydrophytic Vegetation					
3		☐ Yes ☐ No							
4		Yes No		Dominance Test is >50%					
5		Yes No		☐ Prevalence Index is ≤ 3.0¹					
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)					
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation					
9		☐ Yes ☐ No		(Explain in Remarks)					
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology					
		= Total Cover		must be present, unless disturbed or problematic.					
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No		Hydrophytic No. No.					
2		☐ Yes ☐ No		Vegetation Present? ✓ Yes ☐ No					
		= Total Cover							
Remarks (Include photo numbers here or on a separate she	eet):								
, , , , , , , , , , , , , , , , , , ,	•								



(Midwest Region)

Profile Description:	(Describe to the dep	th needed to d	locument the indi	cator or co	nfirm the a	bsence of i	indicators	.)
_	Matrix			ledox Featur				
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
0-30	10 YR 3/1						SiCL	
30+	Gley 2 4/5B						SiCL	
30+	Gicy 2 4/3B						SICL	
¹Type: C=Concentrati	on, D=Depletion, RM	=Reduced Ma	trix. MS = Masked	l Sand Grain	ıs. ² Loca	tion: PL=I	Pore Lining	g, M=Matrix
Hydric Soil Indicato			,					Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)
☐ Histic Epipedon (A2)		☐ Sandy Redo		,			☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Black Histic (A3)			☐ Stripped M					☐ Dark Surface (S7) (LRR K, L)
☐ Hydrogen Sulfide	(A4)		☐ Loamy Mu	cky Mineral	(F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)
2 cm Muck (A10)			Depleted M					Other (Explain in Remarks)
Depleted Below I			Redox Darl					
☐ Thick Dark Surfa			☐ Depleted D ☐ Redox Dep					³ Indicators of hydrophytic vegetation and wetland
Sandy Mucky Mi	nerai (S1)		☐ Redox Dep	ressions (Fo	5)			hydrology must be present, unless disturbed or problematic.
Restrictive layer (if o	hserved).							or protestatio.
	beer vea).							Hudwig Cail Dussan49 No. 7 No.
Type:								Hydric Soil Present? ⊠ Yes □ No
Depth (in):								
Remarks:								
				HYDR	OLOGY			
Wetland Hydrology	Indicators:							
	Primary Indicators	(minimum of o	one is required; che	eck all that a	apply)			Secondary Indicators (minimum of two required)
☐ Surface Water (A	•							Surface Soil Cracks (B6)
☐ High Water Table			☐ Aquatic Far					☐ Drainage Patterns (B10)
Saturation (A3)			☐ True Aquat	ic Plants (B	14)			☐ Dry-Season Water Table (C2)
☐ Water Marks (B1))		☐ Hydrogen S	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)
Sediment Deposit			Oxidized R	-	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B.			Presence of					Stunted or Stressed Plants (D1)
Algal Mat or Crus			Recent Iron			ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B5		D7)	☐ Thin Muck ☐ Gauge or W					☐ FAC-Neutral Test (D5)
☐ Inundation Visible ☐ Sparsely Vegetate			☐ Other (Exp.	,				
Field Observations:	da Concave Barrace (1	50)	Other (Exp.	idin in Rein	ur Ko)			
	+? □ Vos	No	Donth (in):					
Surface Water Present			Depth (in): Depth (in): 35					
Water Table Present?		No No	•	face				Wetland Hydrology Present? ⊠ Yes □ No
Saturation Present?	-	No No	Depth (in): sur	ide				
(includes capillary fri Describe Recorded Da	* ·	itoring wall as	orial photos previo	ue inepactio	ne) if oveil	able:		
Describe Recorded Da	aia (sucam gage, mon	noring well, ac	arai photos, previo	us mspectio	ms), 11 avall	aoic.		
Remarks:								



1642 K 201										
Project/Site: Minnesota River Greenv	way - Eagan Alignme	nt	City/Cour	nty: Eagan/Dak	ota	Sampling Date: 9/6/13				
Applicant/Owner: Dakota County			State: MN	N		Sampling Point: W5 SB-B				
Investigator(s): Dan Donayre			Sec, Twp,	Ran: 13,27N,2	24W					
Landform (hillside, terrace, etc.): Bac	ckslope		Local Relief (concave, convex, none): slope							
Slope (%): 0-1%	Lat:		Long: Datum:							
Soil Map Unit Name: Minneiska loar	n		NWI or WWI Classification:							
Are climatic/hydrologic conditions on	the site typical for th	is time of year?	⊠ Yes	☐ No (if	no explain in remark	cs)				
Are Vegetation ☐, Soil ☐, or Hyd	rology significan	tly disturbed?		Are "normal o	circumstances" prese	ent? 🛛 Yes 🗌 No				
Are Vegetation ☐, Soil ☐, or Hyd	rology 🔲 naturally p	problematic?		(If needed, ex	plain any answers in	Remarks.)				
		SUMM	IARY O	F FINDING	S					
Hydrophytic Vegetation Present?	⊠ Yes □ No									
Hydric Soil Present?	☐ Yes ⊠ No				ed Area within	☐ Yes ⊠ No				
	☐ Yes ⊠ No			a wetland?						
Remarks:										
		VEGETATION	– Use so	cientific nam	es of plants					
Tree Stratum (Plot Size: 30)		Absolute % Cover		ant Species?	Indicator Status	Dominance Test Works	heet:			
Acer saccharum		80		es □ No	FACW	Number of dominant				
Acer negundo		10		es ⊠ No	FAC	species that are OBL,	- /			
<u> </u>		10	_		FAC	FACW, or FAC:	2 (A)			
3				es □ No		Total number of dominant species				
4			□ Y	es No		across all strata:	2 (B)			
5				Percent of dominant species that are OBL,						
		90	= Total	l Cover		FACW or FAC:	100% (A/B)			
Saplings/Shrub Stratum (Plot Size: 1:	5)		Prevalence Index Work	sheet:						
1. Fraxinus pennsylvanica		50	⊠ Y	es 🗌 No	FACW	Total % Cover of:	Multiply By:			
2. Salix interior		10	□ Y	es 🛛 No	FACW	OBL species:	_ x 1			
3			□ Y	es No		FACW species: 140	x 2 280			
4			□ Y	es No		FAC species:	x 3			
5				es □ No	·	FACU species:	x 4			
		60		l Cover		UPL species:	x 5			
Herb Stratum (Plot size: 5)						Column Totals: 100				
1				es □ No		Prevalence Ind	` , ` , ` ,			
				<u> </u>		Hydrophytic Vegetation				
2				es □ No						
3				'es □ No		Rapid Test for Hydro				
4				es □ No		Dominance Test is >5				
5				es □ No		☐ Prevalence Index is ≤	<u>(3.01</u>			
6			☐ Y	es 🗌 No		☐ Morphological Adapt				
7			□ Y	es No		supporting data in Remar	ks of oil separate sheet)			
8			□ Y	es 🗌 No		☐ Problematic Hydroph	ytic Vegetation			
9			□ Y	es 🗌 No		(Explain in Remarks)				
10		<u> </u>	□ Y	es 🗌 No	· -	¹ Indicators of hydric soil must be present, unless d				
			= To	otal Cover		must be present, unless di	isturbed or problematic.			
Woody Vine Stratum (Plot size: 30)	<u>.</u>									
1			□ Y	es □ No		Hydrophytic				
2						Vegetation Present?	∑ Yes □ No			
				es No otal Cover						
Remarks (Include photo numbers here	e or on a separate shee	 et):								
, r	£	•								



(Midwest Region)

Profile Description:	(Describe to the de	oth needed to	document the indi	cator or co	nfirm the a	bsence of	indicator	s.)
_	Matrix			edox Featu				
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Textur	<u>e</u> <u>Remarks</u>
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		M	SiCL	
321	10 11 3/2)3	10 11 3/0	3	C	141	SICL	
							-	
							-	·
¹Type: C=Concentrat	ion, D=Depletion, RN	√l=Reduced Ma	atrix, MS = Masked	l Sand Grai	ns. ² Loca	ation: PL=	Pore Linir	ng, M=Matrix
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			☐ Sandy Gley	ed Matrix ((S4)			☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Histic Epipedon			☐ Sandy Redo					☐ Iron-Manganese Masses (F12) (LRR K, L, R)
Black Histic (A3			☐ Stripped M					Dark Surface (S7) (LRR K, L)
Hydrogen Sulfide			Loamy Mu	•				5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)
☐ 2 cm Muck (A10☐ Depleted Below)			☐ Depleted M☐ Redox Darl		36)			Other (Explain in Remarks)
☐ Thick Dark Surfa			☐ Depleted D					³ Indicators of hydrophytic vegetation and wetland
☐ Sandy Mucky Mi	, ,		☐ Redox Dep					hydrology must be present, unless disturbed
	, ,			`				or problematic.
Restrictive layer (if	observed):							
Туре:								Hydric Soil Present? ☐ Yes ☒ No
Depth (in):								
Remarks:								
Ttomarius.								
-				HYDE	ROLOGY			
Wetland Hydrology	Indicators:							
	Primary Indicators	(minimum of	one is required; che	eck all that	apply)			Secondary Indicators (minimum of two required)
☐ Surface Water (A	(1)		□ Water Stair	ned Leaves	(B9)			☐ Surface Soil Cracks (B6)
☐ High Water Table	e (A2)		☐ Aquatic Fa	una (B13)				☐ Drainage Patterns (B10)
☐ Saturation (A3)			☐ True Aquat					☐ Dry-Season Water Table (C2)
Water Marks (B1			Hydrogen S					Crayfish Burrows (C8)
Sediment Deposi			Oxidized R			Roots (C3)		Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B☐ Algal Mat or Cru			☐ Presence of			ila (C6)		Stunted or Stressed Plants (D1)
☐ Iron Deposits (B:			☐ Recent Iron ☐ Thin Muck			11S (CO)		☐ Geomorphic Position (D2) ☐ FAC-Neutral Test (D5)
☐ Inundation Visib		B7)	Gauge or W	,	·			Z The reduction less (53)
	ed Concave Surface (Other (Exp	,	,			
Field Observations:								
Surface Water Presen	ıt? □ Ye	s 🛛 No	Depth (in):					
Water Table Present?		s 🛛 No	Depth (in):					
Saturation Present?		s 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No
	_	9 🕅 140	1					
(includes capillary fr Describe Recorded D	•	nitoring well. a	erial photos, previo	ous inspection	ons), if avail	able:		
	- (Buge, 11101	-5, 0	_F , provide	Peeti	.,, a.an	-		
P 1								
Remarks:								



Project/Site: Minnesota River Greenway - Eagan Alignme	nt	City/Cour	nty: Eagan/Dak	tota	Sampling Date: 9/6/13				
Applicant/Owner: Dakota County		State: MN	N		Sampling Point: W6 SB	-A			
Investigator(s): Dan Donayre		Sec, Twp,	Ran: 13,27N,2	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 W							
Are climatic/hydrologic conditions on the site typical for the	is time of year?	NWI or WWI Classification: PFO1Ch ☐ Yes ☐ No (if no explain in remarks)							
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significan	•	Z 1 C3		•	ent? X Yes No				
Are Vegetation , Soil , or Hydrology naturally	•			plain any answers in					
The vegetation [1, 50h [1, 0t Hydrology [1] maturally]		AADV O	F FINDING		ii Remarks.)				
Hydrophytic Vegetation Present? ☐ Yes ☐ No	SUMIN	IAKI O	T FINDING	15					
			Is the Sample	ed Area within					
Hydric Soil Present? ☐ Yes ☐ No			a wetland?		⊠ Yes □ No				
Wetland Hydrology Present?									
Remarks:									
	VEGETATION	√ – Use so	cientific nam	es of plants					
Tree Stratum (Plot Size: 30)	Absolute % Cover	Domin	ant Species?	Indicator Status	Dominance Test Wo	rksheet:			
1. Acer saccharum	40	⊠ Y	es 🗌 No	FACW	Number of dominant				
2. Populus deltoides	40	⊠ Y	es 🗌 No	FAC	species that are OBL, FACW, or FAC:	2 (A)			
3			es □ No		Total number of	2 (11)			
					dominant species				
4			Yes □ No		across all strata: 2 (B)				
5		ЦΥ	es 🗌 No		Percent of dominant species that are OBL,				
	= Total Cover			FACW or FAC:	100% (A/B)				
Saplings/Shrub Stratum (Plot Size: 15)					Prevalence Index Wo	orksheet:			
1		□ Y	es 🗌 No		Total % Cover of	Multiply By:			
2		□ Y	es 🗌 No		OBL species:	x 1			
3		□ Y	es 🗌 No		FACW species:	40 x 2 80			
4	<u></u>	□ Y	es 🗌 No		FAC species:	40 x 3 120			
5		Пу	es □ No		FACU species:	x 4			
		_	l Cover		UPL species:	x 5			
Herb Stratum (Plot size: 5)		1044			Column Totals:	80 (A) 200 (B)			
1			7 - N .			Index (B/A) = 2.5			
			Yes □ No						
2			es □ No		Hydrophytic Vegetat				
3			es 🗌 No		Rapid Test for Hy				
4		□ Y	es 🗌 No		Dominance Test i				
5		□ Y	es 🗌 No		Prevalence Index	is $\leq 3.0^{1}$			
6		□ Y	es 🗌 No		☐ Morphological Ac				
7		□ Y	es 🗌 No		supporting data in Rei	marks or on separate sheet)			
8		□ Y	es 🗌 No		☐ Problematic Hydr	ophytic Vegetation			
9		□ Y	es □ No		(Explain in Remarks)				
10			es □ No		¹ Indicators of hydric s	oil and wetland hydrology			
			otal Cover		must be present, unles	ss disturbed or problematic.			
Woody Vine Stratum (Plot size: 30)			· 						
		_	. 🗖						
1		☐ Yes ☐ No			Hydrophytic Vegetation Present?	⊠ Yes □ No			
2			es No		regenation i resent:				
		= To	otal Cover						
Remarks (Include photo numbers here or on a separate she	et):								



(Midwest Region)

Profile Description:	(Describe to the der	oth needed to d	ocument the indi	cator or co	nfirm the al	bsence of i	indicators	
Trome Bescription.	Matrix	om necucu to u		edox Featur				,
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
0-10			Coror (moist)	<u>70</u>	1700	200	C:CI	
	10 YR 4/6	100					SiCL	
10-34	10 YR 3/1	100					SiCL	
34+	Gley 4/5B	100					SiCL	
				-				
								
¹Type: C=Concentrati		1=Reduced Mat	rix, MS = Masked	Sand Grain	s. ² Loca	tion: PL=F		g, M=Matrix
Hydric Soil Indicato	rs:		_					Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			☐ Sandy Gley		S4)			Coast Prairie Redox (A16) (LRR K, L, R)
Histic Epipedon (☐ Sandy Redo					☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Black Histic (A3) ☐ Hydrogen Sulfide			☐ Stripped Ma		(E1)			Dark Surface (S7) (LRR K, L)
Stratified Layers	, ,		Loamy Muc	•				☐ 5 cm Mucky Peat or Peat (S3) (LRR , K , L , R) ☐ Very Shallow Dark Surface (TF12)
2 cm Muck (A10)			☐ Depleted M		(1.77)			Other (Explain in Remarks)
☐ Depleted Below I			☐ Redox Dark		6)			Other (Explain in Remarks)
☐ Thick Dark Surfa			☐ Depleted D					Indicators of hydrophytic vegetation and wetland
☐ Sandy Mucky Mi	, ,		Redox Depi					hydrology must be present, unless disturbed
			•					or problematic.
Restrictive layer (if	observed):							
Туре:								Hydric Soil Present? ⊠ Yes □ No
Depth (in): Remarks: Top 10" of	5 10 VD 4/6	4 1:11 4 4						
Kemarks. Top 10 of	10 1 K 4/0 material i	nost likely due t	o erosion or adjac	ent stope.				
				HYDR	OLOGY			
Wetland Hydrology	Indicators:							
, si	Primary Indicators	(minimum of o	ne is required: che	ock all that s	nnly)			Secondary Indicators (minimum of two required)
Curfosa Water (A		(IIIIIIIIIIIIIIII OI O	☐ Water Stain					Surface Soil Cracks (B6)
☐ Surface Water (A☐ High Water Table			Aquatic Fat		D9)			Drainage Patterns (B10)
☐ Saturation (A3)	(A2)		☐ True Aquat		14)			Dry-Season Water Table (C2)
☐ Water Marks (B1)		☐ Hydrogen S					Crayfish Burrows (C8)
☐ Sediment Deposit			☐ Oxidized R			Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B			☐ Presence of	-	_			☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Cru	st (B4)		☐ Recent Iron	Reduction	in Tilled Soi	ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B5	5)		☐ Thin Muck	Surface (C7	')			FAC-Neutral Test (D5)
☐ Inundation Visible	e on Aerial Imagery ((B7)	☐ Gauge or W	ell Data (D	9)			
☐ Sparsely Vegetate	ed Concave Surface (B8)	Other (Expl	ain in Rema	ırks)			
Field Observations:								
Surface Water Presen	t?	s 🛛 No	Depth (in):	_				
Water Table Present?	☐ Ye	s 🛛 No	Depth (in):					
Saturation Present?	_	s 🗌 No	Depth (in): 19					Wetland Hydrology Present? ☐ Yes ☐ No
(includes capillary fr								
Describe Recorded D	•	nitoring well, ae	rial photos, previo	us inspectio	ns), if availa	able:		
		-	- *	•				
n 1								
Remarks:								



693 6 200									
Project/Site: Minnesota River Greenway - Eagan Alignme	ent	City/Count	ty: Eagan/Dak	ota	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,2	24W					
Landform (hillside, terrace, etc.): Backslope		Local Relie	ef (concave, co						
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 the	his time of year?	⊠ Yes	□ No (if	no explain in remark	as)				
Are Vegetation □, Soil □, or Hydrology □ significar	•	_		-	ent? X Yes No				
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	problematic?		(If needed, ex	plain any answers in	Remarks.)				
	S								
Hydrophytic Vegetation Present? ☐ Yes ☐ No									
Hydric Soil Present? ☐ Yes ☒ No				ed Area within	☐ Yes ⊠ No				
Wetland Hydrology Present? ☐ Yes ☒ No			a wetland?						
Remarks:									
	VEGETATION	I II.a.sa	iantifia nam	as of plants					
T (1 (Di. (C' 20)				•	D				
Tree Stratum (Plot Size: 30)	Absolute % Cover		int Species?	Indicator Status	Dominance Test Wor	ksheet:			
Populus deltoides	70	_	es 🗌 No	FAC	Number of dominant species that are OBL,				
2. Acer saccharum	10	⊠ Ye	es 🗌 No	FACW	FACW, or FAC:	3 (A)			
3		☐ Yee	es 🗌 No		Total number of				
4		☐ Yee	es 🗌 No		dominant species across all strata:	3 (B)			
5		es 🗌 No		Percent of dominant					
	80	= Total	Cover	species that are OBL, FACW or FAC:	100% (A/B)				
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Wo					
1. Acer negundo	5	⊠ V	es 🗌 No	FAC	Total % Cover of:				
	3			TAC					
2		_	es 🗌 No		OBL species:	x1			
3			es 🗌 No		•	10 x 2 20			
4			es 🗌 No		•	75 x 3 150			
5			es 🗌 No		FACU species:	x 4			
	5	= Total	Cover		UPL species:	x 5			
Herb Stratum (Plot size: 5)						85 (A) 170 (B)			
1		□ Ye	es 🗌 No		Prevalence I	$\mathbf{ndex} \ (\mathbf{B/A}) = 2.0$			
2		☐ Yee	es 🗌 No		Hydrophytic Vegetat	ion Indicators:			
3		☐ Yee	es 🗌 No		Rapid Test for Hy	drophytic Vegetation			
4		□ Ye	es 🗌 No		□ Dominance Test is	s>50%			
5		□ Yee	es 🗌 No		Prevalence Index i	s <u>< 3.0</u> ¹			
6		□ Yee	es 🗌 No		☐ Morphological Ad	aptations1 (Provide			
7		□ Ye	es 🗌 No			narks or on separate sheet)			
8		□ Ye	es 🗌 No		☐ Problematic Hydro	onhytic Vegetation			
9		П Ү	es 🗌 No		(Explain in Remarks)	.F)			
10			es 🗌 No			oil and wetland hydrology			
_					must be present, unless	s disturbed or problematic.			
Woody Vine Stratum (Plot size: 30)		= Total Cover							
1		Yes No —			Hydrophytic Vegetation Present?	Yes □ No			
2									
		= Tot	tal Cover						
Remarks (Include photo numbers here or on a separate she	eet):								



(Midwest Region)

Profile Description:	(Describe to the dep	oth needed to	document the indi	cator or co	nfirm the a	bsence of i	indicators.)
5 4 4 5	Matrix		<u>R</u>	edox Featu	res			
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type1	Loc2	Texture	<u>Remarks</u>
0+	10 YR 4/6	100		SiCL				
			· 	·	· <u></u>			
			· 		-			
								
								
¹Type: C=Concentrat	ion, D=Depletion, RM	1=Reduced Ma	trix, MS = Masked	Sand Grain	ns. ² Loca	tion: PL=I	Pore Lining	g, M=Matrix
Hydric Soil Indicate								Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)
☐ Histic Epipedon ((A2)		☐ Sandy Redo		,			☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Black Histic (A3))		☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)
☐ Hydrogen Sulfide	e (A4)		☐ Loamy Mu	cky Mineral	(F1)			5 cm Mucky Peat or Peat (S3) (LRR , K , L , R)
Stratified Layers			Loamy Gle		(F2)			Very Shallow Dark Surface (TF12)
2 cm Muck (A10			☐ Depleted M					Other (Explain in Remarks)
Depleted Below l			Redox Darl					
☐ Thick Dark Surfa☐ Sandy Mucky Mi			☐ Depleted D ☐ Redox Dep				•	Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed
Salidy Mucky Mi	merar (31)		☐ Redox Dep.	ressions (1.6	·)			or problematic.
Restrictive layer (if	observed):							or proordinate.
-	observed).							Wester Carl December 1
Type:								Hydric Soil Present? ☐ Yes ☐ No
Depth (in):								
Remarks: Pit dug to	30". Lack of hydrolog	gy at this depth	and geomorphic p	osition lead	to assumpti	on that no l	hydric soils	s are present.
				HYDR	OLOGY			
Wetland Hydrology	Indicators:							
	Primary Indicators	(minimum of	one is required: che	eck all that a	apply)			Secondary Indicators (minimum of two required)
☐ Surface Water (A	·		☐ Water Stain					Surface Soil Cracks (B6)
☐ High Water Table			Aquatic Fat		/			☐ Drainage Patterns (B10)
Saturation (A3)	` '		☐ True Aquat		14)			☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)		☐ Hydrogen S	Sulfide Odo	r (C1)			Crayfish Burrows (C8)
☐ Sediment Deposi			☐ Oxidized R			Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B			Presence of					Stunted or Stressed Plants (D1)
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B:		70.7%	☐ Thin Muck					FAC-Neutral Test (D5)
☐ Inundation Visib	le on Aerial Imagery (ed Concave Surface (l		☐ Gauge or W☐ Other (Expl	,				
Sparsely Vegetate Field Observations:	ed Colicave Surface (1	D0)	☐ Other (Exp.	iaiii iii Keiii	ai KS)			
	.0 🗆 🗆	N	D 4 ()					
Surface Water Presen		s 🛛 No	Depth (in):					
Water Table Present?		s 🛛 No	Depth (in):				,	Wetland Hydrology Present? ☐ Yes ☒ No
Saturation Present?	☐ Yes	s 🛛 No	Depth (in):					
(includes capillary fr	<u> </u>				\ .e ::	1.1		
Describe Recorded D	ata (stream gage, mor	nitoring well, a	erial photos, previo	ous inspection	ons), 1f avail	able:		
Remarks:								



3.4.3									
Project/Site: Minnesota River Green	nway - Eagan Alignme	nt	City/Cour	nty: Eagan/Dak	tota	Sampling Date: 9/7/13			
Applicant/Owner: Dakota County			State: MN	N		Sampling Point: W7 SB-A			
Investigator(s): Dan Donayre			Sec, Twp,	Ran: 18,27N,2	23W				
Landform (hillside, terrace, etc.): Ba	asin - riverine		Local Rel						
Slope (%): 0-2%	Lat:		Long:			Datum:			
Soil Map Unit Name: Seelyeville m	uck		NWI or W	/WI Classificati	ion: PEMCd				
		is time of year?	⊠ Yes	□ No (if	no avalain in ramar	lea)			
Are climatic/hydrologic conditions of Are Vegetation ☐, Soil ☐, or Hy	* *	•	△ 1es		no explain in remar	ent? X Yes No			
Are Vegetation , Soil , or Hy	· - ·	•			plain any answers i				
Are vegetation, son, or ny	diology 🔲 naturany p		TADEZ O			ii Kemarks.)			
		SUMIN	IARY O	F FINDING	iS .				
Hydrophytic Vegetation Present?	Yes No			Is the Sample	ed Area within				
Hydric Soil Present?	Yes □ No			a wetland?	cu zirca widilii	⊠ Yes □ No			
Wetland Hydrology Present?	Yes □ No								
Remarks:									
		VEGETATION	– Use so	cientific nam	es of plants				
Tree Stratum (Plot Size: 30)		Absolute % Cover	Domin	ant Species?	Indicator Status	Dominance Test W	orksheet:		
1			□ Y	es No		Number of dominan	ıt		
2			Пу	es □ No		species that are OBI			
						FACW, or FAC: Total number of	2 (A)		
3				es □ No		dominant species			
4			∐ Y	es No		across all strata:	2 (B)		
5			□ Y	es No		Percent of dominant species that are OBI			
			= Total	l Cover		FACW or FAC:	100% (A/B)		
Saplings/Shrub Stratum (Plot Size:	15)					Prevalence Index V	Worksheet:		
1. Rhamnus cathartica		10	⊠ Y	es 🗌 No	FAC	Total % Cover	of: Multiply By:	<u>.</u>	
2			□ Y	es No		OBL species:	x 1		
3			□ Y	es 🗌 No		FACW species:	100 x 2 200		
4			— П Y	es □ No		FAC species:	10 x 3 30		
5				es □ No		FACU species:	x 4		
<u></u>		10	_	l Cover		UPL species:	x 5		
Harb Stratum (Dlat airca 5)		10	- 1000	Cover		Column Totals:			
Herb Stratum (Plot size: 5)							, , , , ,		
Phalaris arundinacea		100		es 🗌 No	FACW		e Index (B/A) = 2.1		
2			□ Y	es No		Hydrophytic Veget			
3			□ Y	es 🗌 No		☐ Rapid Test for I	Hydrophytic Vegetation		
4			□ Y	'es 🗌 No		□ Dominance Tes	t is >50%		
5			□ Y	es 🗌 No		□ Prevalence Inde □	x is $\leq 3.0^{1}$		
6			□ Y	es No		☐ Morphological .	Adaptations1 (Provide		
7			□ Y	es No		supporting data in R	demarks or on separate shee	et)	
8			ПΥ	es 🗌 No		☐ Problematic Hy	drophytic Vegetation		
9				es □ No		(Explain in Remarks			
10						¹ Indicators of hydric	soil and wetland hydrolog	зy	
	100	☐ Yes ☐ No = Total Cover				less disturbed or problemati			
Woods Vine Stratum (Diet al. 20))	100	- 10	Jul COVO					
Woody Vine Stratum (Plot size: 30	<u>))</u>			_					
1			Yes No			Hydrophytic	Yes □ No		
2			□ Y	es 🗌 No		Vegetation Presen			
		= To	otal Cover						
Remarks (Include photo numbers he	re or on a separate shee	et):				•			



(Midwest Region)

Profile Description	: (Describe to the de	pth needed to	document the indi	cator or co	nfirm the al	osence of i	indicators.)
Danish Cal	Matrix	D and						
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
0-6	10 YR 2/1	100					SiCL	
6-12	10 YR 4/4	100					SL	
12+	10 YR 2/1	100					Muck	
12+	10 1 K 2/1	100					WIUCK	
¹Type: C=Concentra	ation, D=Depletion, RI	M=Reduced Ma	atrix, MS = Masked	Sand Grain	ıs. ² Loca	tion: PL=P	Pore Lining	, M=Matrix
Hydric Soil Indicat	ors:						1	Indicators for Problematic Hydric Soils3:
Histosol (A1)			☐ Sandy Gley	ed Matrix (S	S4)		[Coast Prairie Redox (A16) (LRR K, L, R)
☐ Histic Epipedon			☐ Sandy Redo					Iron-Manganese Masses (F12) (LRR K, L, R)
Black Histic (A			Stripped Ma				_	Dark Surface (S7) (LRR K, L)
Hydrogen Sulfic			Loamy Muc				[5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
Stratified Layers			Loamy Gle	-	(F2)		L	Very Shallow Dark Surface (TF12)
2 cm Muck (A1	Dark Surface (A11)		☐ Depleted M ☐ Redox Dark		6)		L	Other (Explain in Remarks)
☐ Thick Dark Surf			☐ Depleted D	,	*		3	Indicators of hydrophytic vegetation and wetland
Sandy Mucky M			Redox Depi					hydrology must be present, unless disturbed
	, ,				,			or problematic.
Restrictive layer (if	f observed):							
Type:								Hydric Soil Present? ⊠ Yes □ No
							-	2 165 E 110
Depth (in): Remarks: Pit dug to	×40"							
Kemarks. Tit dug te	740 .							
				HYDR	OLOGY			
Wetland Hydrolog	y Indicators:							
	Primary Indicator	s (minimum of	one is required; che	eck all that a	pply)			Secondary Indicators (minimum of two required)
☐ Surface Water (A1)		☐ Water Stain	ed Leaves (B9)		[Surface Soil Cracks (B6)
			☐ Aquatic Fau	ına (B13)			[☐ Drainage Patterns (B10)
☐ Saturation (A3)			☐ True Aquat	ic Plants (B	14)		[☐ Dry-Season Water Table (C2)
☐ Water Marks (B			☐ Hydrogen S	Sulfide Odor	(C1)		[☐ Crayfish Burrows (C8)
Sediment Depos			Oxidized R	-	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (Presence of					Stunted or Stressed Plants (D1)
Algal Mat or Cr			Recent Iron			ls (C6)	_	Geomorphic Position (D2)
☐ Iron Deposits (F	ble on Aerial Imagery	(P7)	☐ Thin Muck ☐ Gauge or W				L	▼ FAC-Neutral Test (D5)
	ited Concave Surface (Other (Expl					
Field Observations		/	<u> </u>					
Surface Water Prese		es 🛛 No	Donth (in):					
			Depth (in): Depth (in): 32					
Water Table Present		es 🗌 No	•				1	Wetland Hydrology Present?
Saturation Present?		es 🗌 No	Depth (in): 10					
(includes capillary	fringe) Data (stream gage, mo	nitoring well a	arial photos provio	ue increatio	ne) if avail	hle:		
Describe Recorded	Data (Sucaili gage, IIIO	moing well, a	citai photos, pievio	us mspecilo	nis), 11 avalla	wie.		
Remarks:								



10 K 3										
Project/Site: Minnesota River Green	way - Eagan Alignmen	nt	City/Cour	nty: Eagan/Dak	tota	Sampling Date: 9/7/13				
Applicant/Owner: Dakota County			State: MI	N		Sampling Point: W7 S	SB-B			
Investigator(s): Dan Donayre			Sec, Twp,	Ran: 18,27N,2	23W					
Landform (hillside, terrace, etc.): Ba	ackslope		Local Relief (concave, convex, none): Slope							
Slope (%): 2-6%	Lat:		Long:							
Soil Map Unit Name: Seelyeville m	uck		NWI or W							
Are climatic/hydrologic conditions o	on the site typical for thi	is time of year?	⊠ Yes	□ No (if	no explain in remarl	ke)				
Are Vegetation □, Soil □, or Hyd	* *	· ·			-	ent? X Yes No				
Are Vegetation □, Soil □, or Hyd	<i>c.</i> – <i>c</i>	-			plain any answers in					
	g, <u> </u> , _F		IARY O	F FINDING	-	,				
Hydrophytic Vegetation Present?	⊠ Yes □ No									
Hydric Soil Present?	☐ Yes ⊠ No			Is the Sample	ed Area within	☐ Yes ⊠ No				
•	☐ Yes ☐ No			a wetland?						
Wetland Hydrology Present? Remarks:	☐ 1es ☐ No									
Kemarks.										
		VECETATION			6.1.					
		VEGETATION			•	T				
<u>Tree Stratum</u> (Plot Size: 30)		Absolute % Cover		ant Species?	Indicator Status	Dominance Test W				
1			☐ Y	es No		Number of dominar species that are OB				
2			☐ Y	es No		FACW, or FAC:	2 (A)			
3			□ Y	es 🗌 No		Total number of				
4			□ Y	es 🗌 No		dominant species across all strata: 2 (B)				
5.			□ Y	es 🗌 No		Percent of dominan				
··· <u></u>				l Cover		species that are OB		(A/D)		
Carlings/Charl Ctarture (Diet Cine)	15)		FACW or FAC:		(A/B)					
Saplings/Shrub Stratum (Plot Size: 1	13)	20	⊠ 3	7 - N .	EAG	Prevalence Index		M 1d-1 D		
Rhamnus cathartica		30	_	es ☐ No	FAC	Total % Cover		Multiply By:		
2				'es ☐ No		OBL species:	X			
3				es ☐ No		FACW species:	100 x			
4			☐ Y	es No		FAC species:	30 x	3 90		
5			□ Y	es 🗌 No		FACU species:	X	4		
		30	= Tota	l Cover		UPL species:	X	5		
Herb Stratum (Plot size: 5)						Column Totals:	130 (A	A) 290 (B)		
1. Phalaris arundinacea		100	⊠ Y	es 🗌 No	FACW	Prevalenc	e Index (B/A	(1) = 2.2		
2			□ Y	es No		Hydrophytic Vege	tation Indica	itors:		
3			Пх	es □ No		☐ Rapid Test for I	Hydrophytic '	Vegetation		
4			_ _ \	es □ No		□ Dominance Test □ Dominance Test	st is >50%			
5				es □ No		☐ Prevalence Inde	ex is < 3.01			
6				es ☐ No				(D., 11.		
7						☐ Morphological supporting data in F				
8				es □ No				_		
				es No		Problematic Hy (Explain in Remark		getation		
9			es ☐ No		` 1	<i></i>	41111			
10		☐ Yes ☐ No			Indicators of hydric must be present, un					
		100	= To	otal Cover		*				
Woody Vine Stratum (Plot size: 30))									
1			☐ Yes ☐ No		Hydrophytic		M	Yes 🗌 No		
2			□ Y	es 🗌 No		Vegetation Preser	ıt?	103 🖂 110		
	<u></u>									
Remarks (Include photo numbers her	re or on a separate shee	t):				1				



(Midwest Region)

Profile Description:	(Describe to the de	pth needed to o	locument the indi	icator or co	nfirm the a	bsence of	indicators	.)			
_	Matrix	_		Redox Featu							
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>			
0-6	10 YR 2/1	100					SiCL				
6+	10 YR 4/4	100	<u> </u>				SL				
0+	10 11 4/4	100					SL				
											
											
¹ Type: C=Concentrat	ion, D=Depletion, RN	M=Reduced Ma	trix, MS = Masked	1 Sand Grain	ns. ² Loca	tion: PL=l	Pore Lining	g, M=Matrix			
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils3:			
☐ Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)			
☐ Histic Epipedon	(A2)		☐ Sandy Redo	ox (S5)				☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
☐ Black Histic (A3			☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)			
☐ Hydrogen Sulfide			☐ Loamy Mu					5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)			
☐ Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)			
2 cm Muck (A10			☐ Depleted M☐ Redox Darl		16)			Other (Explain in Remarks)			
Depleted Below			31. di catano of ha dacabatic acceptation and acceptant								
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)								³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed			
Leady Marky Minoral (52)								or problematic.			
Restrictive layer (if	observed):							· · ·			
Туре:	,							Hydric Soil Present? ☐ Yes ☒ No			
								Tryunc Son Frescht.			
Depth (in): Remarks: Pit dug to	40"										
Remarks: Pit dug to	40 .										
				HYDR	OLOGY						
Wetland Hydrology	Indicators:										
	Primary Indicators	s (minimum of o	one is required; che	eck all that	apply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A		`	☐ Water Stair					Surface Soil Cracks (B6)			
☐ High Water Table			☐ Aquatic Far					Drainage Patterns (B10)			
☐ Saturation (A3)			☐ True Aquat	tic Plants (B	14)			☐ Dry-Season Water Table (C2)			
☐ Water Marks (B1)		☐ Hydrogen S	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)			
☐ Sediment Deposi			☐ Oxidized R			Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)			
☐ Drift Deposits (B			Presence of					Stunted or Stressed Plants (D1)			
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B:		(D7)	☐ Thin Muck ☐ Gauge or W	•	•			☐ FAC-Neutral Test (D5)			
☐ Inundation Visib	ed Concave Surface (☐ Other (Exp		· ·						
Field Observations:		B 0)	Other (Exp.	iam in Rem	ur Ko)						
		a M No	Donth (in)								
Surface Water Presen		s 🛛 No	Depth (in): Depth (in):								
Water Table Present?		s 🛛 No	_					Wetland Hydrology Present? ☐ Yes ☒ No			
Saturation Present?	_	s 🛛 No	Depth (in):								
(includes capillary fr	• .					.1.1.					
Describe Recorded D	rata (stream gage, moi	mtoring well, a	eriai pnotos, previo	ous inspection	ons), 11 avail	aoie:					
Remarks:											



1997 (6.2)								
Project/Site: Minnesota River Greenway - Eagan Alignme	nt	City/Coun	ty: Eagan/Dak	ota	Sampling Date: 9/18/13			
Applicant/Owner: Dakota County		State: MN	1		Sampling Point: W8-SB-A			
Investigator(s): Dan Donayre		Sec, Twp,	Ran: 8,27N,23	3W				
Landform (hillside, terrace, etc.): Basin		Local Reli	ef (concave, co	onvex, none): Conca	ve			
Slope (%): 0-1% Lat:		Long:			Datum:			
Soil Map Unit Name: Udorthents		NWI or WWI Classification:						
•	:							
Are climatic/hydrologic conditions on the site typical for the Are Vegetation , Soil , or Hydrology isignificant	· ·	⊠ Yes		no explain in remark	ent? 🛛 Yes 🗌 No			
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally p		# A D \$7 (0)		xplain any answers in	Remarks.)			
	SUMIN	IAKY O	F FINDING	rS				
Hydrophytic Vegetation Present? ✓ Yes No			Is the Sample	ed Area within				
Hydric Soil Present? ☐ Yes ☐ No			a wetland?	cu mi cu wilim	⊠ Yes □ No			
Wetland Hydrology Present?								
Remarks:								
	VEGETATION	l – Use so	cientific nam	es of plants				
Tree Stratum (Plot Size: 30)	Absolute % Cover	Domina	ant Species?	Indicator Status	Dominance Test Worksheet:			
1		□ Y	es 🗌 No		Number of dominant			
2		□ Y	es 🗌 No		species that are OBL, FACW, or FAC: 1 (A)			
3		ПΥ	es 🗌 No		Total number of			
4		_	es 🗌 No		dominant species			
		_	_		across all strata: 1 (B) Percent of dominant			
5			es 🗌 No		species that are OBL,			
		= Total	Cover		FACW or FAC: 100% (A/B)			
Saplings/Shrub Stratum (Plot Size: 15)					Prevalence Index Worksheet:			
1		□ Y	es 🗌 No		Total % Cover of: Multiply By:			
2		□ Y	es 🗌 No		OBL species: x 1			
3		□ Y	es 🗌 No		FACW species: 125 x 2 250			
4		□ Y	es 🗌 No		FAC species: x 3			
5		□ Y	es 🗌 No		FACU species: 15 x 4 60			
		= Total	Cover		UPL species: x 5			
Herb Stratum (Plot size: 5)					Column Totals: 140 (A) 310 (B)			
Phalaris arundinacea	100	Øν	es 🗌 No	FACW	Prevalence Index $(B/A) = 2.2$			
2. Persicaria spp.					Hydrophytic Vegetation Indicators:			
3. Urtica dioica	25		es 🛛 No	FACW				
	15	_	es 🛛 No	FACU	☐ Rapid Test for Hydrophytic Vegetation			
4			es No		☑ Dominance Test is >50%			
5			es 🗌 No		\square Prevalence Index is $\leq 3.0^{1}$			
6		□ Y	es 🗌 No		☐ Morphological Adaptations¹ (Provide			
7		□ Y	es 🗌 No		supporting data in Remarks or on separate sheet)			
8		□ Y	es 🗌 No		☐ Problematic Hydrophytic Vegetation			
9		□ Y	es 🗌 No		(Explain in Remarks)			
10		□ Y	es 🗌 No		¹ Indicators of hydric soil and wetland hydrology			
	140	= To	otal Cover		must be present, unless disturbed or problematic.			
Woody Vine Stratum (Plot size: 30)								
1		Пν	es 🗌 No		Hydnophytia			
2			es 🗌 No	_	Hydrophytic Vegetation Present?			
			es 🔲 No otal Cover					
Remarks (Include photo numbers here or on a separate shee		= 10	nai COVEI					
remarks (menuce photo numbers here of on a separate snee	λ).							



(Midwest Region)

Profile Description:	(Describe to the dep	pth needed to	document the indi	icator or cor	nfirm the a	sence of	indicators	5.)				
Danit (in)	Matrix		E	Redox Featur	es		To 1	Daniel I				
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>				
0-15	10 YR 2/1	100					SiL					
15.							Mucky	,				
15+	10 YR 2/1	100			-	-	peat					
												
¹Type: C=Concentrati	on, D=Depletion, RN	M=Reduced Ma	atrix, MS = Masked	d Sand Grain	s. ² Loca	tion: PL=	Pore Linin	g, M=Matrix				
Hydric Soil Indicator	rs:							Indicators for Problematic Hydric Soils ³ :				
Histosol (A1)			Sandy Gley		54)			Coast Prairie Redox (A16) (LRR K, L, R)				
Histic Epipedon (☐ Sandy Red					☐ Iron-Manganese Masses (F12) (LRR K, L, R)				
Black Histic (A3)			☐ Stripped M		(F1)			Dark Surface (S7) (LRR K, L)				
Hydrogen Sulfide			Loamy Mu					☐ 5 cm Mucky Peat or Peat (S3) (LRR, K, L, R) ☐ Very Shallow Dark Surface (TF12)				
☐ Stratified Layers (☐ 2 cm Muck (A10)			☐ Loamy Gle ☐ Depleted M		F2)			☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)				
Depleted Below I			☐ Redox Dari		5)			Other (Explain in Remarks)				
☐ Thick Dark Surface			☐ Depleted D	,	*			³ Indicators of hydrophytic vegetation and wetland				
☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)								hydrology must be present, unless disturbed				
or problematic.												
Restrictive layer (if o	observed):							-				
Type:	,							Hydric Soil Present? ⊠ Yes □ No				
								Hydric Son Fresent:				
Depth (in):												
Remarks: Pit dug to 4	10".											
				HYDR	OLOGY							
Wetland Hydrology	Indicators:											
wettand Hydrology		. (1 .11 .1	1 \			Consider To Protect (with a second of the second of the				
	•	s (minimum of	one is required; ch					Secondary Indicators (minimum of two required)				
Surface Water (A			☐ Water Stain ☐ Aquatic Fa		B9)			Surface Soil Cracks (B6)				
☐ High Water Table ☐ Saturation (A3)	(A2)		☐ Aquatic Fa		14)			☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2)				
☐ Water Marks (B1))		Hydrogen S					Crayfish Burrows (C8)				
Sediment Deposit			Oxidized R			Roots (C3)		Saturation Visible on Aerial Imagery (C9)				
☐ Drift Deposits (B3			☐ Presence of		_			Stunted or Stressed Plants (D1)				
☐ Algal Mat or Crus			Recent Iron	Reduction i	n Tilled So	ils (C6)		Geomorphic Position (D2)				
☐ Iron Deposits (B5			☐ Thin Muck	Surface (C7)			☐ FAC-Neutral Test (D5)				
☐ Inundation Visible	e on Aerial Imagery	(B7)	☐ Gauge or V	Vell Data (D	9)							
☐ Sparsely Vegetate	ed Concave Surface (B8)	☐ Other (Exp	lain in Rema	rks)							
Field Observations:												
Surface Water Present	t? 🔲 Ye	s 🛛 No	Depth (in):									
Water Table Present?		es 🛛 No	Depth (in):									
Saturation Present?	_	es 🛛 No	Depth (in):					Wetland Hydrology Present? ⊠ Yes □ No				
		9 M 140	¥ · (/-									
(includes capillary fri Describe Recorded Da		nitoring well a	erial photos previo	ous inspectio	ns), if avail:	able:						
	Gage, mor		Filotos, provid	peetio	-,,							
Remarks:												



107 (250)								
Project/Site: Minnesota River Greenway - Eagan Alignme	ent	City/County: Eagan/Dak	ota	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,23	3W					
Landform (hillside, terrace, etc.): Backslope		Local Relief (concave, co	onvex, none): Slope					
Slope (%): 6-12% Lat:		Long:		Datum:				
Soil Map Unit Name: Udorthents		NWI or WWI Classification:						
•	-i- tif9			->				
Are climatic/hydrologic conditions on the site typical for the Are Vegetation ☐, Soil ☐, or Hydrology ☐ significan	•		no explain in remarks circumstances" preses					
	-		•					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	•		xplain any answers in	Remarks.)				
	SUMN	MARY OF FINDING	iS					
Hydrophytic Vegetation Present?		Is the Samul	ed Area within	_				
Hydric Soil Present? ☐ Yes ☒ No		a wetland?	cu zirca widilii	☐ Yes ⊠ No				
Wetland Hydrology Present? ☐ Yes ☒ No								
Remarks:								
	VEGETATION	V – Use scientific nam	es of plants					
<u>Tree Stratum</u> (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:				
1		☐ Yes ☐ No		Number of dominant				
2.		☐ Yes ☐ No		species that are OBL, FACW, or FAC: 1 (A)				
3		☐ Yes ☐ No		Total number of				
				dominant species				
4		☐ Yes ☐ No		across all strata: 1 (B)				
5		☐ Yes ☐ No		Percent of dominant species that are OBL,				
		= Total Cover		FACW or FAC: 100% (A/B)				
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:				
1		☐ Yes ☐ No		Total % Cover of: Multiply By:				
2		☐ Yes ☐ No		OBL species: x 1				
3		☐ Yes ☐ No		FACW species: 100 x 2 200				
4		☐ Yes ☐ No		FAC species: x 3				
5		☐ Yes ☐ No		FACU species: 10 x 4 40				
<u> </u>		= Total Cover		UPL species: 10 x 5 50				
Harb Stratum (Plot giras 5)		= Total Cover		Column Totals: 120 (A) 290 (B)				
Herb Stratum (Plot size: 5)				, , , , , ,				
1. Phalaris arundinacea	100	Yes No	FACW	Prevalence Index (B/A) = 2.4				
2. Setaria viridis	10	☐ Yes ⊠ No	UPL	Hydrophytic Vegetation Indicators:				
3. Cannabis sativa	10	☐ Yes ⊠ No	FACU	Rapid Test for Hydrophytic Vegetation				
4		☐ Yes ☐ No		☑ Dominance Test is >50%				
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$				
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide				
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)				
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation				
9		☐ Yes ☐ No		(Explain in Remarks)				
10		Yes No		¹ Indicators of hydric soil and wetland hydrology				
	120	= Total Cover		must be present, unless disturbed or problematic.				
Woody Vino Stratum (Plot size: 20)	120	- 10tm Cover						
Woody Vine Stratum (Plot size: 30)								
1		☐ Yes ☐ No		Hydrophytic Vogetetion Present? Yes No				
2		☐ Yes ☐ No		Vegetation Present?				
		= Total Cover						
Remarks (Include photo numbers here or on a separate she	et):							



(Midwest Region)

Profile Description: (Describe to the de	pth needed to	document the indi	icator or cor	nfirm the a	bsence of	indicators	5.)
Daniel (Ca)	Matrix		<u>R</u>	Redox Featur	es		T: 4	Parent :
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
0-40	10 YR 3/2	100					SiL	
40.							Mucky	,
40+	10 YR 2/1	100			-		peat	
								
¹Type: C=Concentratio	n, D=Depletion, RN	M=Reduced Ma	trix, MS = Masked	d Sand Grain	s. ² Loca	tion: PL=	Pore Linin	g, M=Matrix
Hydric Soil Indicators	s:							Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			Sandy Gley		54)			Coast Prairie Redox (A16) (LRR K, L, R)
Histic Epipedon (A	(2)		Sandy Red					☐ Iron-Manganese Masses (F12) (LRR K, L, R)
Black Histic (A3)			Stripped M		(T1)			Dark Surface (S7) (LRR K, L)
Hydrogen Sulfide (Loamy Mu					5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
☐ Stratified Layers (A☐ 2 cm Muck (A10)	45)		☐ Loamy Gle ☐ Depleted M		F2)			☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
Depleted Below Da	ark Surface (A11)		☐ Redox Darl		5)			Other (Explain in Remarks)
☐ Thick Dark Surface			☐ Depleted D	`	*			³ Indicators of hydrophytic vegetation and wetland
Sandy Mucky Mineral (S1) Redox Depressions (F8)								hydrology must be present, unless disturbed
or problematic.								
Restrictive layer (if ol	oserved):							-
	,.							Hydric Soil Present? ☐ Yes ☒ No
Type:								nyuric son Fresent:
Depth (in):								
Remarks:								
				HYDR	OLOGY			
Wetland Hydrology I	ndicators:							
Wettand Hydrology I		(1 .11 .1	1 \			Secondary Indicators (minimum of two required)
	Primary Indicators	s (minimum or	•					
Surface Water (A1			☐ Water Stair	,	B9)			Surface Soil Cracks (B6)
☐ High Water Table ☐ Saturation (A3)	(A2)		☐ Aquatic Fa		14)			☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)			☐ Hydrogen S					Crayfish Burrows (C8)
Sediment Deposits	(B2)		Oxidized R			Roots (C3)		Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)			☐ Presence of	-	-			Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust			Recent Iron			ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B5)			☐ Thin Muck	Surface (C7)			☐ FAC-Neutral Test (D5)
☐ Inundation Visible	on Aerial Imagery	(B7)	☐ Gauge or W	Vell Data (D	9)			
☐ Sparsely Vegetated	l Concave Surface (B8)	☐ Other (Exp	lain in Rema	rks)			
Field Observations:								
Surface Water Present?	?	s 🛛 No	Depth (in):					
Water Table Present?		s 🛛 No	Depth (in):					
Saturation Present?	_	s 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No
		2 KA 140	1					
(includes capillary frin Describe Recorded Dat	-	nitoring well a	erial photos previo	ous inspectio	ns), if avail	able:		
The state of the date of the state of the st	(a Sage, mor	,, u		peetio	-,,			
Remarks:								



See W. Sur.									
Project/Site: Minnesota River Greenway - Eagan Alignme	ent	City/County: Eagan/Da	kota	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,2	23W						
Landform (hillside, terrace, etc.): Ravine		Local Relief (concave, o	convex, none): Slope						
Slope (%): 2-6% Lat:		Long:		Datum:					
Soil Map Unit Name: Udorthents		NWI or WWI Classification: PUBGx							
•	his times of)					
Are climatic/hydrologic conditions on the site typical for the Are Vegetation ☐, Soil ☐, or Hydrology ☐ significant	*	`	f no explain in remark						
Are Vegetation , Soil , or Hydrology naturally	•	Are "normal circumstances" present? Yes □ No (If needed, explain any answers in Remarks.)							
Ale vegetation, son, or rivurology naturally	_	IARY OF FINDING	•	i Kemarks.)					
Hydrophytic Vegetation Present? ☐ Yes ☐ No	Belviiv		35						
Hydric Soil Present?		Is the Samp	oled Area within	⊠ Yes □ No					
		a wetland?		Z ies Z iii					
Wetland Hydrology Present?									
Remarks.									
	VECETATION	I – Use scientific nar	nes of plants						
Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:					
· · · · · · · · · · · · · · · · · · ·	Absolute // Cover		mulcator Status	Number of dominant					
1		☐ Yes ☐ No		species that are OBL,					
2		Yes No		FACW, or FAC: 1 (A)					
3		☐ Yes ☐ No		Total number of dominant species					
4		☐ Yes ☐ No		across all strata: 1 (B)					
5		☐ Yes ☐ No		Percent of dominant					
		= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:					
Rhamnus cathartica	10	∑ Yes □ No	FAC	Total % Cover of: Multiply By:					
2		☐ Yes ☐ No		OBL species: x 1					
3		☐ Yes ☐ No		FACW species: 120 x 2 240					
4		☐ Yes ☐ No		FAC species: 10 x 3 30					
5		☐ Yes ☐ No		FACU species: x 4					
J	10	= Total Cover		UPL species: x 5					
Harb Stratum (Plat circu 5)	10	= Total Cover							
Herb Stratum (Plot size: 5)	400			()					
1. Phalaris arundinacea	100	⊠ Yes □ No	FACW	Prevalence Index $(B/A) = 2.1$					
2. Solidago gigantea	10	☐ Yes ⊠ No	FACW	Hydrophytic Vegetation Indicators:					
3. Persicaria spp.	10	☐ Yes ☒ No	FACW	Rapid Test for Hydrophytic Vegetation					
4		☐ Yes ☐ No		Dominance Test is >50%					
5		☐ Yes ☐ No		Prevalence Index is < 3.01					
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)					
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation					
9		☐ Yes ☐ No		(Explain in Remarks)					
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology					
	120	= Total Cover		must be present, unless disturbed or problematic.					
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No	_	Hudronhutio					
2				Hydrophytic					
<u></u> -		☐ Yes ☐ No = Total Cover							
Remarks (Include photo numbers here or on a separate she		– 10tai Cover							
remarks (menuce photo numbers here of on a separate sne	cij.								



(Midwest Region)

Profile Description:	(Describe to the de	oth needed to	locument the indi	cator or co	nfirm the a	bsence of	indicators	.)			
_	Matrix	•		edox Featu							
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>			
0-15	10 YR 2/1	100					L				
15+	10 YR 2/1	100					Muck				
15+	10 11 2/1	100					WIUCK				
¹ Type: C=Concentrat	tion, D=Depletion, RN	∕I=Reduced Ma	trix, MS = Masked	l Sand Grain	ns. ² Loca	ntion: PL=1	Pore Lining	g, M=Matrix			
Hydric Soil Indicate								Indicators for Problematic Hydric Soils3:			
Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)			
☐ Histic Epipedon	(A2)		☐ Sandy Red		,			☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
☐ Black Histic (A3)		☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)			
☐ Hydrogen Sulfide			☐ Loamy Mu	cky Minera	l (F1)			5 cm Mucky Peat or Peat (S3) (LRR , K , L , R)			
Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)			
2 cm Muck (A10			☐ Depleted M					Other (Explain in Remarks)			
Depleted Below			Redox Darl					2T - 1' - 4 C1 - 1 1 (' 4 1 4 1			
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)								³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed			
Sandy Mucky Mineral (S1) Redox Depressions (F8)								or problematic.			
Restrictive layer (if	observed):							The second secon			
-	0.002 (0.0)							Hydric Soil Present? ⊠ Yes □ No			
Type:								nyuric son Fresent:			
Depth (in):											
Remarks:											
				HYDR	OLOGY						
Wetland Hydrology	Indicators:										
	Primary Indicators	(minimum of	one is required; ch	eck all that	apply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A	A1)		☐ Water Stair	ned Leaves	(B9)			Surface Soil Cracks (B6)			
☐ High Water Tabl			Aquatic Fa					Drainage Patterns (B10)			
☐ Saturation (A3)			☐ True Aquat	ic Plants (B	14)			☐ Dry-Season Water Table (C2)			
☐ Water Marks (B1	1)		☐ Hydrogen S	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)			
Sediment Deposi			Oxidized R	-	_	Roots (C3)		Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B			Presence of					Stunted or Stressed Plants (D1)			
Algal Mat or Cru			Recent Iron			ıls (C6)		☑ Geomorphic Position (D2)☑ FAC-Neutral Test (D5)			
☐ Iron Deposits (B:	on Aerial Imagery	(R7)	☐ Thin Muck ☐ Gauge or V					A FAC-Neutral Test (D3)			
	ed Concave Surface (Other (Exp	•							
Field Observations:					,						
Surface Water Preser		s 🛛 No	Depth (in):								
Water Table Present?		s 🛛 No	Depth (in):								
			Depth (in): 20					Wetland Hydrology Present? ⊠ Yes □ No			
Saturation Present?	_	s 🗌 No	(.ii). 20								
(includes capillary fr Describe Recorded D	ringe) Data (stream gage, moi	nitoring well a	erial photos previo	ous inspection	ons), if avail	able:					
Describe Recorded D	am (stream gage, mor	oi iii 6 woii, a	criai pilotos, pievie	as mspeem	,, 11 avall						
Remarks:											



Too Kollin								
Project/Site: Minnesota River Greenway - Eagan Alignment	t	City/Cour	nty: Eagan/Dak	ota	Sampling Date: 9/18/13			
Applicant/Owner: Dakota County		State: MN	N		Sampling Point: W9-SB-B			
Investigator(s): Dan Donayre		Sec, Twp,	Ran: 8,27N,23	BW				
Landform (hillside, terrace, etc.): Backslope		Local Rel	ief (concave, co	nvex, 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 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantl	-	⊠ Yes		no explain in remark	nt? 🛛 Yes 🗌 No			
Are Vegetation , Soil , or Hydrology anaturally problematic?				plain any answers in				
Are vegetation [1], son [1], or Hydrology [1] naturally pr		TADV O		•	Kemarks.)			
Wilder Co. D. o. My D.	SUMIN	IAKY O	F FINDING	'3				
Hydrophytic Vegetation Present? Yes No			Is the Sample	ed Area within				
Hydric Soil Present? ☐ Yes ☒ No			a wetland?	THE WILLIAM	☐ Yes ⊠ No			
Wetland Hydrology Present? ☐ Yes ☒ No								
Remarks:								
,	VEGETATION	– Use so	cientific nam	es of plants				
<u>Tree Stratum</u> (Plot Size: 30)	Absolute % Cover	Domin	ant Species?	Indicator Status	Dominance Test Worksheet:			
1		□ Y	es 🗌 No		Number of dominant			
2.		□ Y	es 🗌 No		species that are OBL, FACW, or FAC: 1 (A)			
3			es □ No		Total number of			
			_		dominant species			
4	· 		es □ No		across all strata: 1 (B)			
5		⊔ Y	es No		Percent of dominant species that are OBL,			
		= Total	l Cover		FACW or FAC: 100% (A/B)			
Saplings/Shrub Stratum (Plot Size: 15)					Prevalence Index Worksheet:			
1		□ Y	es 🗌 No		Total % Cover of: Multiply By:			
2		□ Y	es 🗌 No		OBL species: x 1			
3		□ Y	es 🗌 No		FACW species: 100 x 2 200			
4		□ Y	es No		FAC species: x 3			
5		□ Y	es □ No		FACU species: 5 x 4 20			
			l Cover		UPL species: 5 x 5 25			
Herb Stratum (Plot size: 5)					Column Totals: 110 (A) 245 (B)			
Phalaris arundinacea	100	M v	7 - N	EACW	Prevalence Index $(B/A) = 2.2$			
	100		'es ☐ No	FACW	. ,			
2. Solidago canadensis	5		es ⊠ No	FACU	Hydrophytic Vegetation Indicators:			
3. Setaria virdis	5	_	es 🛛 No	UPL	Rapid Test for Hydrophytic Vegetation			
4		□ Y	es 🗌 No		☑ Dominance Test is >50%			
5		□ Y	es No		Prevalence Index is $\leq 3.0^{1}$			
6		□ Y	es 🗌 No		☐ Morphological Adaptations¹ (Provide			
7		□ Y	es 🗌 No		supporting data in Remarks or on separate sheet)			
8		□ Y	es 🗌 No		☐ Problematic Hydrophytic Vegetation			
9		□ Y	es 🗌 No		(Explain in Remarks)			
10		□ Y	es No		¹ Indicators of hydric soil and wetland hydrology			
	110		otal Cover		must be present, unless disturbed or problematic.			
Woody Vine Stratum (Plot size: 30)								
1			7					
			'es □ No		Hydrophytic			
2			'es ☐ No					
		= To	otal Cover					
Remarks (Include photo numbers here or on a separate sheet):							



Profile Description:	(Describe to the de	oth needed to	document the indi	cator or co		heanca of i	indicator	s)			
Trome Description.	Matrix	Jili necueu to		edox Featur		osence of 1	mulcators	5.)			
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	e <u>Remarks</u>			
0-36	10 YR 2/1	100		_			L				
36+	10 YR 2/1	100					Muck				
											
											
											
							-				
							-				
ITuna: C-Cancantrat	ion, D=Depletion, RN	I—Daducad M	otriv MS – Moskod	Sand Grain		ution: DI –I	Doro I inin	eg, M=Matrix			
Hydric Soil Indicate		/I=Reduced IVI	atrix, MS – Maskeu	Sand Gran	18LUC	mon. rt-i	ole Lilli	Indicators for Problematic Hydric Soils ³ :			
Histosol (A1)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		☐ Sandy Gley	ed Matrix (S4)			☐ Coast Prairie Redox (A16) (LRR K, L, R)			
☐ Histic Epipedon	(A2)		☐ Sandy Redo		31)			☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
☐ Black Histic (A3			☐ Stripped Ma					☐ Dark Surface (S7) (LRR K, L)			
☐ Hydrogen Sulfid	e (A4)		☐ Loamy Muc		(F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)			
☐ Stratified Layers			☐ Loamy Gle					☐ Very Shallow Dark Surface (TF12)			
2 cm Muck (A10			☐ Depleted M	latrix (F3)				Other (Explain in Remarks)			
☐ Depleted Below	Dark Surface (A11)		☐ Redox Dark	Surface (F	6)						
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7)								³ Indicators of hydrophytic vegetation and wetland			
Sandy Mucky Mineral (S1) Redox Depressions (F8)								hydrology must be present, unless disturbed			
Restrictive layer (if	observed):							or problematic.			
	observeu).							Hydric Soil Present? ☐ Yes ☒ No			
Type:								Hydric Soil Present? ☐ Yes ☒ No			
Depth (in):											
Remarks:											
				HYDR	OLOGY						
Wetland Hydrology	Indicators:										
	Primary Indicators	(minimum of	one is required; che	eck all that a	ipply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A	A1)		☐ Water Stain	ed Leaves (B9)			☐ Surface Soil Cracks (B6)			
☐ High Water Tabl	e (A2)		☐ Aquatic Fau	una (B13)				Drainage Patterns (B10)			
☐ Saturation (A3)			☐ True Aquat					☐ Dry-Season Water Table (C2)			
☐ Water Marks (B1			☐ Hydrogen S					☐ Crayfish Burrows (C8)			
Sediment Deposi			Oxidized R	-	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B			☐ Presence of		, ,	(0.0)		Stunted or Stressed Plants (D1)			
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B:		(D7)	☐ Thin Muck	,	*			FAC-Neutral Test (D5)			
	le on Aerial Imagery (ed Concave Surface (☐ Gauge or W☐ Other (Expl								
Field Observations:	,	B0)	Other (Exp	um m rem	arks)						
Surface Water Preser		s 🛛 No	Depth (in):								
Water Table Present		s 🛛 No	Depth (in):					_			
Saturation Present?		s 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No			
(includes capillary fi	_	~ KJ 140									
	oata (stream gage, moi	nitoring well. a	nerial photos, previo	us inspectio	ns), if avail	able:					
		<i>G</i> , ¢	,,		,,	•					
Pamarke:											
Remarks:											



643.6.20								
Project/Site: Minnesota River Greenway - Eagan Alignme	ent	City/County: Eagan/l	Dakota	Sampling Date: 9/18/13				
Applicant/Owner: Dakota County		State: MN		Sampling Point: W9-SB-C				
Investigator(s): Dan Donayre		Sec, Twp, Ran: 8,271	N,23W					
Landform (hillside, terrace, etc.): Basin		Local Relief (concave	e, convex, none): Conce	ave				
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 t	his time of year?	⊠ Yes □ No	(if no explain in remar	ks)				
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significan	ntly disturbed?	Are "norm	nal circumstances" pres	ent? ⊠ Yes □ No				
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	problematic?	(If needed	l, explain any answers i	n Remarks.)				
	SUMN	ARY OF FINDI	NGS					
Hydrophytic Vegetation Present? X Yes No								
Hydric Soil Present? ⊠ Yes □ No			mpled Area within	⊠ Yes □ No				
Wetland Hydrology Present? ☐ Yes ☐ No		a wetland	1?					
Remarks:								
	VEGETATION	I – Use scientific n	ames of plants					
Tree Stratum (Plot Size: 30)	Absolute % Cover		•	Dominance Test Worksheet:				
1. Ulmus americana	30	☐ Yes ☐ No	FACW	Number of dominant				
				species that are OBL,				
2. Rhamnus cathartica	10	⊠ Yes □ No	FAC	FACW, or FAC: 4 (A)				
3		☐ Yes ☐ No		Total number of dominant species				
4		☐ Yes ☐ No		across all strata: 4 (B)				
5		☐ Yes ☐ No		Percent of dominant				
	40	= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)				
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:				
1	0	☐ Yes ☐ No		Total % Cover of: Multiply By:				
2		☐ Yes ☐ No		OBL species: x 1				
3		☐ Yes ☐ No		FACW species: 70 x 2 140				
4		☐ Yes ☐ No		FAC species: 10 x 3 30				
5		☐ Yes ☐ No		FACU species: x 4				
		= Total Cover		UPL species: x 5				
Herb Stratum (Plot size: 5)		- Total Cover		Column Totals: 80 (A) 170 (B)				
1. Phalaris arundinacea	20		FACW	Prevalence Index (B/A) = 2.1				
	30	⊠ Yes □ No	FACW	` ′				
2. Bidens spp.	10	Yes No	FACW	Hydrophytic Vegetation Indicators:				
3		☐ Yes ☐ No		Rapid Test for Hydrophytic Vegetation				
4		☐ Yes ☐ No		☑ Dominance Test is >50%				
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$				
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide				
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)				
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation				
9		☐ Yes ☐ No		(Explain in Remarks)				
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology				
	40	= Total Cover		must be present, unless disturbed or problematic.				
Woody Vine Stratum (Plot size: 30)								
1		☐ Yes ☐ No		Hydrophytic No. 7 No.				
2		☐ Yes ☐ No	_	Vegetation Present?				
		= Total Cover						
Remarks (Include photo numbers here or on a separate she	eet):	- 10tm Cover						
	/•							



70 et 20 1 11	6 11 1 1				ILO						
Profile Description:	· ·	oth needed to				bsence of	indicators	.)			
Depth (in)	Matrix			edox Featu			Texture	Rema	r <u>ks</u>		
* * * *	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²					
0-2	10 YR 2/1	100					SiL				
2-15	10 YR 3/2	100					S				
15+	10 YR 3/1	100					Muck				
		·									
											
											
											
¹Type: C=Concentrat		1=Reduced M	atrix, $MS = Masked$	l Sand Grai	ns. ² Loca	tion: PL=I		g, M=Matrix			
Hydric Soil Indicato	rs:		_					Indicators for Problematic Hyd			
Histosol (A1)			Sandy Gley		(S4)			Coast Prairie Redox (A16) (I			
Histic Epipedon (☐ Sandy Redo					☐ Iron-Manganese Masses (F12			
☐ Black Histic (A3)			☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K , 1	· ·		
☐ Hydrogen Sulfide	, ,		☐ Loamy Mu	cky Minera	l (F1)			☐ 5 cm Mucky Peat or Peat (S3)	(LRR, K, L, R)		
☐ Stratified Layers	(A5)		☐ Loamy Gle	yed Matrix	(F2)			☐ Very Shallow Dark Surface (TF12)		
☐ 2 cm Muck (A10))		□ Depleted M	Iatrix (F3)				☐ Other (Explain in Remarks)			
☐ Depleted Below I	Dark Surface (A11)		☐ Redox Darl	Surface (F	⁷ 6)						
☐ Thick Dark Surfa	ce (A12)		☐ Depleted D	ark Surface	(F7)			3Indicators of hydrophytic vegeta	tion and wetland		
☐ Sandy Mucky Mi	neral (S1)		☐ Redox Dep	ressions (F	3)			hydrology must be present, u	inless disturbed		
								or problematic.			
Restrictive layer (if	observed):										
Туре:								Hydric Soil Present?	Yes No		
Depth (in):											
Remarks:											
Kemarks.											
				HYDR	OLOGY						
Wetland Hydrology	Indicators:										
	Primary Indicators	(minimum of	one is required; che	eck all that	annly)			Secondary Indicators (minim	um of two required)		
Comfort Water (A		(iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii							ani or two requirea)		
Surface Water (A			☐ Water Stain		(В9)			Surface Soil Cracks (B6)			
High Water Table	e (A2)		Aquatic Fat		1.0			Drainage Patterns (B10)			
Saturation (A3)			☐ True Aquat					Dry-Season Water Table (C2	2)		
Water Marks (B1			Hydrogen S					Crayfish Burrows (C8)			
Sediment Deposi	, ,		Oxidized R	-	_	Roots (C3)		Saturation Visible on Aerial			
Drift Deposits (B			Presence of		, ,			Stunted or Stressed Plants (D	01)		
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B5			Thin Muck					FAC-Neutral Test (D5)			
☐ Inundation Visible	e on Aerial Imagery ((B7)	☐ Gauge or W	Vell Data (E) 9)						
☐ Sparsely Vegetate	ed Concave Surface (B8)	Other (Expl	lain in Rem	arks)						
Field Observations:											
Surface Water Presen	t?	s 🛛 No	Depth (in):								
Water Table Present?	⊠ Yes	s 🗌 No	Depth (in): 20					Watland Hydralagy Duccont	⊠ Yes □ No		
Saturation Present?	⊠ Ye	s 🗌 No	Depth (in): sur	face				Wetland Hydrology Present?	☑ 163 □ 140		
(includes capillary fr	inge)										
Describe Recorded D		nitoring well, a	nerial photos, previo	ous inspection	ons), if avail	able:	1				
Remarks:											



1975 K 200									
Project/Site: Minnesota River Greenway - Eagan Alignm	ent	City/County: Eagan/Dak	tota	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,2	3W						
Landform (hillside, terrace, etc.): Backslope		Local Relief (concave, co	onvex, 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 t	his time of year?		no explain in remark	rs)					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significat	ntly disturbed?	Are "normal	circumstances" prese	ent? ⊠ Yes □ No					
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally	problematic?	(If needed, ex	xplain any answers in	Remarks.)					
	SUMM	ARY OF FINDING	S						
Hydrophytic Vegetation Present? X Yes No									
Hydric Soil Present? ⊠ Yes □ No		-	ed Area within	☐ Yes ⊠ No					
Wetland Hydrology Present? ☐ Yes ☒ No		a wetland?							
Remarks:									
	VEGETATION	I – Use scientific nam	es of plants						
Tree Stratum (Plot Size: 30)	Absolute % Cover		Indicator Status	Dominance Test Worksheet:					
1. Ulmus americana	80	Yes □ No	FACW	Number of dominant					
	00	Yes No	THEW	species that are OBL,					
2		<u> </u>		FACW, or FAC: 3 (A)					
3		Yes No		Total number of dominant species					
4		☐ Yes ☐ No		across all strata: 5 (B)					
5		☐ Yes ☐ No		Percent of dominant species that are OBL,					
	80	= Total Cover		FACW or FAC: 60% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:					
Acer negundo	50	Yes □ No	FAC	Total % Cover of: Multiply By:					
2		☐ Yes ☐ No		OBL species: x 1					
3		☐ Yes ☐ No		FACW species: 95 x 2 190					
4		☐ Yes ☐ No		FAC species: 50 x 3 150					
5		☐ Yes ☐ No		FACU species: 40 x 4 160					
	50	= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)				Column Totals: 185 (A) 500 (B)					
Ageratina altissima	30	⊠ Yes □ No	FACU	Prevalence Index $(B/A) = 2.7$					
2. Arctium minus				Hydrophytic Vegetation Indicators:					
	10	⊠ Yes □ No	FACU						
3. Phalaris arundinacea	10	⊠ Yes □ No	FACW	Rapid Test for Hydrophytic Vegetation					
4. Bidens spp.	5	☐ Yes ⊠ No	FACW	☑ Dominance Test is >50%					
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$					
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)					
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation					
9		☐ Yes ☐ No		(Explain in Remarks)					
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
	55	= Total Cover		must be present, unless disturbed or problematic.					
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No		Hydrophytic No. 10 No.					
2		☐ Yes ☐ No		Vegetation Present?					
		= Total Cover							
Remarks (Include photo numbers here or on a separate she	eet):								
	•								



(Midwest Region)

Profile Description:	(Describe to the dep	pth needed to	document the ind	icator or co	nfirm the a	bsence of	indicators	.)
D 4 ()	Matrix		<u>I</u>	Redox Featu	res		T	D 1
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type1	Loc2	Texture	<u>Remarks</u>
0	10 YR 2/1	100					Mucky	
0+	10 1 K 2/1	100					peat	
								
								
								
¹Type: C=Concentrati	ion, D=Depletion, RN	M=Reduced M	Iatrix, MS = Maske	d Sand Grain	ns. ² Loca	tion: PL=	Pore Lining	g, M=Matrix
Hydric Soil Indicato	ors:							Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			☐ Sandy Gle	yed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)
☐ Histic Epipedon ((A2)		☐ Sandy Red	ox (S5)				☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Black Histic (A3))		☐ Stripped M	latrix (S6)				☐ Dark Surface (S7) (LRR K, L)
☐ Hydrogen Sulfide	e (A4)		☐ Loamy Mu	cky Minera	l (F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
☐ Stratified Layers	(A5)		☐ Loamy Gle	yed Matrix	(F2)			☐ Very Shallow Dark Surface (TF12)
☐ 2 cm Muck (A10))		☐ Depleted N	Iatrix (F3)				Other (Explain in Remarks)
☐ Depleted Below I	Dark Surface (A11)		Redox Dar	k Surface (F	⁷ 6)			
☐ Thick Dark Surfa			☐ Depleted I					Indicators of hydrophytic vegetation and wetland
Sandy Mucky Mi			Redox Dep					hydrology must be present, unless disturbed
								or problematic.
Restrictive layer (if o	observed):							
Type:	,							Hydric Soil Present? ⊠ Yes □ No
								Tryunc Son Tresent:
Depth (in):								
Remarks:								
				HVDR	OLOGY			
W-41 H-41	T. J			11111	OLOGI			
Wetland Hydrology								
	Primary Indicators	s (minimum o	f one is required; ch	eck all that	apply)			Secondary Indicators (minimum of two required)
☐ Surface Water (A	.1)		☐ Water Stai	ned Leaves	(B9)			☐ Surface Soil Cracks (B6)
☐ High Water Table	e (A2)		☐ Aquatic Fa	una (B13)				☐ Drainage Patterns (B10)
☐ Saturation (A3)			☐ True Aqua	tic Plants (B	14)			☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)		☐ Hydrogen	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)
☐ Sediment Deposit	ts (B2)		Oxidized F	Rhizospheres	on Living I	Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B	3)		☐ Presence o	f Reduced I	ron (C4)			☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crus	st (B4)		☐ Recent Iro	n Reduction	in Tilled So	ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B5	5)		☐ Thin Muck	Surface (C'	7)			FAC-Neutral Test (D5)
☐ Inundation Visibl	le on Aerial Imagery	(B7)	☐ Gauge or V	Vell Data (D	99)			
☐ Sparsely Vegetate	ed Concave Surface (B8)	Other (Exp	lain in Rem	arks)			
Field Observations:								
riela Observations:								
	ıt? □ Ye	es 🕅 No	Depth (in):					
Surface Water Presen	_	es 🛛 No	Depth (in):					
Surface Water Presen Water Table Present?	☐ Ye	es 🛛 No	Depth (in):	_				Wetland Hydrology Present? ☐ Yes ☒ No
Surface Water Presen Water Table Present? Saturation Present?	☐ Ye			_				Wetland Hydrology Present? ☐ Yes ⊠ No
Surface Water Present Water Table Present? Saturation Present? (includes capillary fr	Ye Yeinge)	es 🛭 No	Depth (in): Depth (in):			ahla.		Wetland Hydrology Present? ☐ Yes ⊠ No
Surface Water Presen Water Table Present? Saturation Present?	Ye Yeinge)	es 🛭 No	Depth (in): Depth (in):		ons), if avail	able:		Wetland Hydrology Present? ☐ Yes ⊠ No
Surface Water Present Water Table Present? Saturation Present? (includes capillary fr	Ye Yeinge)	es 🛭 No	Depth (in): Depth (in):		ons), if avail	able:		Wetland Hydrology Present? ☐ Yes ☒ No
Surface Water Present Water Table Present? Saturation Present? (includes capillary fr	Ye Yeinge)	es 🛭 No	Depth (in): Depth (in):		ons), if avail	able:		Wetland Hydrology Present? ☐ Yes ⊠ No
Surface Water Present Water Table Present? Saturation Present? (includes capillary fr Describe Recorded Date	Ye Yeinge)	es 🛭 No	Depth (in): Depth (in):		ons), if avail	able:		Wetland Hydrology Present? ☐ Yes ⊠ No



0.00									
Project/Site: Minnesota River Greenwa	y - Eagan Alignment		City/Cour	nty: Eagan/Dak	tota	Sampling Date: 9/23/1	.3		
Applicant/Owner: Dakota County			State: MN	N		Sampling Point: W10-	·SB-A		
Investigator(s): Dan Donayre			Sec, Twp,	Ran: 4,27N,23	3W				
Landform (hillside, terrace, etc.): Basin	1		Local Rel	ief (concave, co	onvex, none): Conca	ive			
Slope (%): 0-1%	Lat:		Long:			Datum:			
Soil Map Unit Name: Hubbard loamy s	·			 /WI Classificati	ion: PEMC				
				_					
Are climatic/hydrologic conditions on the	* *	•	⊠ Yes		no explain in remarl				
Are Vegetation , Soil , or Hydro			Are "normal circumstances" present? ☐ Yes ☐ No (If needed, explain any answers in Remarks.)						
Are Vegetation ☐, Soil ☐, or Hydro				-	n Remarks.)				
		SUMM	IARY O	F FINDING	as				
	Yes No			Ta the Commi	. J. A				
Hydric Soil Present?	Yes 🗌 No			a wetland?	ed Area within	⊠ Yes □ No			
Wetland Hydrology Present?	Yes 🗌 No								
Remarks:									
	V	EGETATION	– Use so	cientific nam	es of plants				
Tree Stratum (Plot Size: 30)		Absolute % Cover	Domin	ant Species?	Indicator Status	Dominance Test W	orksheet:		
1			Пу	es □ No		Number of dominar	ıt		
				es ☐ No		species that are OB	L,		
2			_			FACW, or FAC:	3 (A)		
3			⊔ Y	es No		Total number of dominant species			
4			□ Y	es 🗌 No		across all strata:	3 (B)		
5			□ Y	es 🗌 No		Percent of dominan			
			= Total	l Cover		species that are OBI FACW or FAC:	L, 100% (A/B)		
Saplings/Shrub Stratum (Plot Size: 15)						Prevalence Index V			
1. Rhamnus cathartica		40	☐ Yes ☐ No FAC			Total % Cover	of: Multir	ply By:	
2. Cornus alba		10		es □ No	FACW	OBL species:	x 1		
3				es □ No		FACW species:		40	
4				es ☐ No		FAC species:		20	
						-		20	
5			_	'es ☐ No		FACU species:	x 4		
		50	= Total	l Cover		UPL species:	x 5		
<u>Herb Stratum</u> (Plot size: 5)						Column Totals:	160 (A) 36	60 (B)	
Phalaris arundinacea		100	⊠ Y	es 🗌 No	FACW	Prevalenc	e Index $(B/A) = 2.3$	3	
2. Phragmites australis		10	□ Y	es 🛛 No	FACW	Hydrophytic Vege	ation Indicators:		
3			□ Y	es 🗌 No		□ Rapid Test for I	Hydrophytic Vegetat	tion	
4			□ Y	es No		□ Dominance Tes	t is >50%		
5				es □ No		☐ Prevalence Inde	$ex is < 3.0^{1}$		
6				es □ No		Mambalasiasi	A domesticant (Dansai)	1.	
7							Adaptations ¹ (Providental Adaptations) Remarks or on separations		
				es ☐ No			•		
8				es 🗌 No		Problematic Hy (Explain in Remark	drophytic Vegetation	n	
9			□ Y	'es 🗌 No			,		
10			□ Y	es 🗌 No			c soil and wetland hy less disturbed or prol		
		110	= To	otal Cover		must be present, un	cos distarbed or pro-	c.c.manc.	
Woody Vine Stratum (Plot size: 30)									
1		<u>_</u>	□ Y	es □ No		Hydrophytic	.		
2				es □ No		Vegetation Presen	ıt? ⊠ Yes [_ No	
				otal Cover					
Remarks (Include photo numbers here of	or on a senarate cheet).		- 10	00101		1			
Temans (merade photo numbers here to	on a separate sheet).								



				301							
Profile Description:	(Describe to the dep	th needed to				bsence of i	indicators	.)			
Depth (in)	Matrix		<u>R</u>	ledox Featur	res		Texture	Remarks			
<u>Берш (ш)</u>	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>IXCIIIai KS</u>			
0+	10 YR 2/1	100					Muck				
0.	10 110 2/1	100					Muck				
											
											
											
¹ Type: C=Concentration		I=Reduced Ma	trix, MS = Masked	l Sand Graii	is. ² Loca	tion: PL=I	Pore Lining	g, M=Matrix			
Hydric Soil Indicator	rs:							Indicators for Problematic Hydric Soils ³ :			
Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)			
☐ Histic Epipedon (A	A2)		☐ Sandy Redo	ox (S5)				☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
☐ Black Histic (A3)			☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)			
☐ Hydrogen Sulfide	(A4)		☐ Loamy Mu	cky Mineral	(F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)			
☐ Stratified Layers ((A5)		☐ Loamy Gle	yed Matrix	(F2)			☐ Very Shallow Dark Surface (TF12)			
☐ 2 cm Muck (A10)			☐ Depleted M	Iatrix (F3)				Other (Explain in Remarks)			
☐ Depleted Below D	Oark Surface (A11)		☐ Redox Darl		(6)						
☐ Thick Dark Surfac	ce (A12)		☐ Depleted D	ark Surface	(F7)			³ Indicators of hydrophytic vegetation and wetland			
☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)								hydrology must be present, unless disturbed			
	, ,			,				or problematic.			
Restrictive layer (if o	hserved).										
-	bosci ved).										
Type:								Hydric Soil Present? ⊠ Yes □ No			
Depth (in):											
Remarks:											
				HYDR	OLOGY						
*** 41 1 1 1 1	T 1			11121	OLOGI						
Wetland Hydrology l	Indicators:										
	Primary Indicators	(minimum of	one is required; che	eck all that a	apply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A1	1)		■ Water Stain	ned Leaves	(B9)			☐ Surface Soil Cracks (B6)			
☐ High Water Table	(A2)		☐ Aquatic Fat	una (B13)				☐ Drainage Patterns (B10)			
Saturation (A3)			☐ True Aquat	ic Plants (B	14)			☐ Dry-Season Water Table (C2)			
☐ Water Marks (B1))		☐ Hydrogen S	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)			
☐ Sediment Deposits			Oxidized R			Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)			
☐ Drift Deposits (B3	, ,		☐ Presence of	-	_	` ′		☐ Stunted or Stressed Plants (D1)			
☐ Algal Mat or Crus			☐ Recent Iron			ils (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B5)			☐ Thin Muck			(+ +)		☐ FAC-Neutral Test (D5)			
☐ Inundation Visible		R7)	☐ Gauge or W					ine round rose (50)			
	d Concave Surface (I		Other (Expl								
	Durine (I	/		III IXCIII							
Field Observations:	_	_									
Surface Water Present	t?	s 🛛 No	Depth (in):								
Water Table Present?	☐ Yes	s 🛛 No	Depth (in):					Waland Hadroloop Day Clay			
Saturation Present?		s 🗌 No	Depth (in): sur	face				Wetland Hydrology Present?			
Saturation From:		, <u> </u>									
(includes conillam: ful-						abla:					
(includes capillary frie		itoring wall a	Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:								
		itoring well, a	erial photos, previo	ous inspection	ons), ir avaii	abic.					
		itoring well, a	erial photos, previo	ous inspection	ons), ir avaii	able.					
		itoring well, a	erial photos, previo	ous inspection	ons), ir avail	able.					
Describe Recorded Da		itoring well, a	erial photos, previo	ous inspection	ons), ir avail	abie.					
Describe Recorded Da		itoring well, a	erial photos, previo	ous inspection	ons), it avail	aute.					



69.2 % 200						
Project/Site: Minnesota River Greenway - Eagan Alignn	nent	City/County: Eagan/Da	akota	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 Classifica	ation: PEMC			
Are climatic/hydrologic conditions on the site typical for	this time of year?	⊠ Yes □ No (a	if no explain in remark	cs)		
Are Vegetation Soil or Hydrology signification	antly disturbed?	Are "norma	l circumstances" prese	ent? 🛮 Yes 🗌 No		
Are Vegetation , Soil , or Hydrology naturally	y problematic?	(If needed,	explain any answers in	n Remarks.)		
	SUMM	IARY OF FINDIN	GS			
Hydrophytic Vegetation Present? ☐ Yes ☐ No						
Hydric Soil Present? ☐ Yes ☒ No		Is the Samp a wetland?	oled Area within	☐ Yes ⊠ No		
Wetland Hydrology Present? ☐ Yes ☒ No		a wettand:				
Remarks:						
	VEGETATION	I – Use scientific na	nes of plants			
Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:		
Acer negundo	10	Xes □ No	FAC	Number of dominant		
2.		☐ Yes ☐ No		species that are OBL,		
				FACW, or FAC: 3 (A) Total number of		
3		☐ Yes ☐ No		dominant species		
4		☐ Yes ☐ No		across all strata: 3 (B)		
5		☐ Yes ☐ No		Percent of dominant species that are OBL,		
	10	= Total Cover		FACW or FAC: 100% (A/B)		
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:		
1. Rhamnus cathartica	90	Yes □ No	FAC	Total % Cover of: Multiply By:		
2. Fraxinus pennsylvanica	10	☐ Yes ☒ No	FACW	OBL species: x 1		
3		☐ Yes ☐ No		FACW species: 10 x 2 20		
4		☐ Yes ☐ No		FAC species: 130 x 3 390		
5		☐ Yes ☐ No		FACU species: x 4		
	100	= Total Cover		UPL species: x 5		
Herb Stratum (Plot size: 5)				Column Totals: 140 (A) 410 (B)		
1. Poa pratensis	20	∑ Yes □ No	FAC	Prevalence Index $(B/A) = 2.9$		
2	20	Yes No	1710	Hydrophytic Vegetation Indicators:		
3				Rapid Test for Hydrophytic Vegetation		
4		☐ Yes ☐ No		Dominance Test is >50%		
		☐ Yes ☐ No		Prevalence Index is < 3.01		
5		☐ Yes ☐ No		Prevalence index is < 3.04		
6		Yes No		☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on separate sheet)		
7		☐ Yes ☐ No		supporting data in Remarks of on separate sheet)		
8		☐ Yes ☐ No		Problematic Hydrophytic Vegetation		
9		☐ Yes ☐ No		(Explain in Remarks)		
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
	20	= Total Cover		must be present, unless disturbed of problematic.		
Woody Vine Stratum (Plot size: 30)						
1		☐ Yes ☐ No		Hydrophytic No.		
2	_	☐ Yes ☐ No		Vegetation Present? ✓ Yes ☐ No		
		= Total Cover				
Remarks (Include photo numbers here or on a separate sh	neet):			1		
- -						



Profile Description:	(Describe to the der	ath needed to	document the indi	cator or co		heanca of	indicators	s)
Trome Description.	Matrix	om necueu to		edox Featur		oscilee of	mulcator	34 <i>)</i>
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
0-20	10 YR 3/2	100			-		L	
20-38	10 YR 3/1	100					SiL	
38+	10 YR 3/2	100					SL	
								
¹Type: C=Concentrati		1=Reduced M	atrix, MS = Masked	Sand Grain	is. ² Loca	tion: PL=l	Pore Linin	g, M=Matrix
Hydric Soil Indicato	rs:		_					Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			☐ Sandy Gley		S4)			Coast Prairie Redox (A16) (LRR K, L, R)
Histic Epipedon (☐ Sandy Redo					☐ Iron-Manganese Masses (F12) (LRR K, L, R)
Black Histic (A3)			☐ Stripped Ma		(T1)			Dark Surface (S7) (LRR K, L)
Hydrogen Sulfide			Loamy Muc					5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
Stratified Layers			Loamy Gley		(F2)			☐ Very Shallow Dark Surface (TF12)
☐ 2 cm Muck (A10) ☐ Depleted Below I			☐ Depleted M☐ Redox Dark		()			Other (Explain in Remarks)
								³ Indicators of hydrophytic vegetation and wetland
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)								hydrology must be present, unless disturbed
☐ Sandy Mucky Wi	nerar (51)		☐ Redox Depi	essions (1 c	''			or problematic.
Restrictive layer (if o	observed):							
Туре:								Hydric Soil Present? ☐ Yes ☒ No
Depth (in):								
Remarks:							L	
				HYDR	OLOGY			
Wetland Hydrology	Indicators:							
, 30		(minimum of	one is required; che	ck all that a	ipply)			Secondary Indicators (minimum of two required)
☐ Surface Water (A		(IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	☐ Water Stain					Surface Soil Cracks (B6)
☐ High Water Table			Aquatic Fat		D9)			Drainage Patterns (B10)
☐ Saturation (A3)	(112)		☐ True Aquati		14)			☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)		☐ Hydrogen S					Crayfish Burrows (C8)
☐ Sediment Deposit			Oxidized R			Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B.			☐ Presence of	-	_	(,		☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crus			Recent Iron	Reduction	in Tilled So	ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B5			Thin Muck			, ,		FAC-Neutral Test (D5)
☐ Inundation Visibl		(B7)	☐ Gauge or W	ell Data (D	9)			
☐ Sparsely Vegetate	ed Concave Surface (B8)	Other (Expl	ain in Rema	arks)			
Field Observations:								
Surface Water Presen	t?	s 🛛 No	Depth (in):	_				
Water Table Present?	☐ Ye	s 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No
Saturation Present?	⊠ Ye	s 🗌 No	Depth (in): 35					
(includes capillary fr	•							
Describe Recorded Da	ata (stream gage, mor	nitoring well, a	erial photos, previo	us inspectio	ons), if avail	able:		
Remarks:								



16 St. 16 St.							
Project/Site: Minnesota River Greenway - Eagan Alignmen	nt	City/Count	y: Eagan/Dak	ota	Sampling Date: 9/7/13		
Applicant/Owner: Dakota County		State: MN			Sampling Point: STM1	SB-A	
Investigator(s): Dan Donayre		Sec, Twp, I	Ran: 18,27N,2	23W			
Landform (hillside, terrace, etc.): Basin - Stormwater Pond		Local Relie	ef (concave, co	onvex, none): Conca	ve		
Slope (%): 0-1% Lat:		Long:	,		Datum:		
Soil Map Unit Name: Seelyeville muck			— WI Classificati	ion: PEMCx			
•			_				
Are climatic/hydrologic conditions on the site typical for th	·	⊠ Yes		no explain in remark			
Are Vegetation , Soil , or Hydrology significant	-			•	ent? ⊠ Yes □ No		
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally p				plain any answers in	Remarks.)		
	SUMM	MARY OF	F FINDING	SS			
Hydrophytic Vegetation Present? ☐ Yes ☐ No			T 41 G 1				
Hydric Soil Present? ☐ Yes ☐ No			a wetland?	ed Area within	⊠ Yes □ No		
Wetland Hydrology Present? ☐ Yes ☐ No							
Remarks: Man made detention pond.							
	VEGETATION	l – Use sc	ientific nam	es of plants			
Tree Stratum (Plot Size: 30)	Absolute % Cover		nt Species?	Indicator Status	Dominance Test We	orksheet:	
1			es 🗌 No		Number of dominant		
					species that are OBL	·••	
2			es 🗌 No		FACW, or FAC:	3 (A)	
3		☐ Ye	es 🗌 No		Total number of dominant species		
4		☐ Ye	es 🗌 No		across all strata:	3 (B)	
5		☐ Ye	es 🗌 No		Percent of dominant		
		= Total	Cover		species that are OBL FACW or FAC:	, 100% (A/B)	
Saplings/Shrub Stratum (Plot Size: 15)					Prevalence Index W		
Rhamnus cathartica	30	⊠ Va	es 🗌 No	FAC	Total % Cover of		
	10						
2. Fraxinus penneslyvanica	10		es 🗌 No	FACW	OBL species:	x 1	
3		_	es 🗌 No		FACW species:	105 x 2 210	
4			es 🗌 No		FAC species:	10 x 3 30	
5		☐ Ye	es 🗌 No		FACU species:	x 4	
	40	= Total	Cover		UPL species:	x 5	
Herb Stratum (Plot size: 5)					Column Totals:	115 (A) 240 (B)	
1. Phalaris arundinacea	95	⊠ Ye	es 🗌 No	FACW	Prevalence	$\mathbf{Index} \ (\mathbf{B/A}) = 2.1$	
2		П Үе	es 🗌 No		Hydrophytic Vegeta	ation Indicators:	
3			es 🗆 No		Rapid Test for H	lydrophytic Vegetation	
4			es 🗌 No		☐ Dominance Test		
5					☑ Prevalence Index		
			es 🗌 No		Trevalence index	X 15 <u>< </u> 5.0°	
6			es 🗌 No			Adaptations ¹ (Provide emarks or on separate sheet)	
7		☐ Ye	es 🗌 No		supporting data in Ke	emarks of on separate sheet)	
8		☐ Ye	es 🗌 No		☐ Problematic Hyd		
9		☐ Ye	es 🗌 No		(Explain in Remarks)	
10		☐ Ye	es 🗌 No			soil and wetland hydrology	
	95	= Tot	al Cover		must be present, unle	ess disturbed or problematic.	
Woody Vine Stratum (Plot size: 30)							
1		□ v	ng □ Me				
			es 🗌 No		Hydrophytic Vegetation Present	? ⊠ Yes □ No	
2			es 🗌 No				
		= Tot	al Cover				
Remarks (Include photo numbers here or on a separate shee	t):						



1 I OTHE DESCRIPTION. (DESCRIPE to the depth needs	I to document the indicator or c	anfirm the abo	anca of i	ndicators	1
Matrix	Redox Feati		chec of 1	nuicators	•,
Depth (in) Color (moist) %	Color (moist) %		Loc2	Texture	<u>Remarks</u>
0-36 10 YR 2/1 100				SiCL	
36+ Gley 2 4/5B 100				SiCL	
,					
<u> </u>					
					
				-	
					
¹ Type: C=Concentration, D=Depletion, RM=Reduce	1 Matrix, MS = Masked Sand Gra	ns. ² Locatio	on: PL=P	Pore Linin	g, M=Matrix
Hydric Soil Indicators:	_				Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Gleyed Matrix	(S4)			Coast Prairie Redox (A16) (LRR K, L, R)
☐ Histic Epipedon (A2) ☐ Black Histic (A3)	☐ Sandy Redox (S5) ☐ Stripped Matrix (S6)				☐ Iron-Manganese Masses (F12) (LRR K, L, R) ☐ Dark Surface (S7) (LRR K, L)
Hydrogen Sulfide (A4)	Loamy Mucky Miner	1 (F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
☐ Stratified Layers (A5)	☐ Loamy Gleyed Matrix				☐ Very Shallow Dark Surface (TF12)
☐ 2 cm Muck (A10)	Depleted Matrix (F3)	` /			☐ Other (Explain in Remarks)
☐ Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)			-
☐ Thick Dark Surface (A12)	☐ Depleted Dark Surfac ☐ Redox Depressions (F				³ Indicators of hydrophytic vegetation and wetland
☐ Sandy Mucky Mineral (S1)		hydrology must be present, unless disturbed			
D					or problematic.
Restrictive layer (if observed):					
Type:					Hydric Soil Present? ⊠ Yes □ No
Depth (in):					
Remarks:					
	HYD	ROLOGY			
Wetland Hydrology Indicators:	HYD	ROLOGY			
	HYD!				Secondary Indicators (minimum of two required)
Primary Indicators (minimum Surface Water (A1)	n of one is required; check all that	apply)			Surface Soil Cracks (B6)
Primary Indicators (minimum Surface Water (A1) High Water Table (A2)	n of one is required; check all that Water Stained Leaves Aquatic Fauna (B13)	<u>apply)</u> (B9)			☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10)
Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)	n of one is required; check all that Water Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (I	apply) (B9) 314)			☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2)
Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	n of one is required; check all that Water Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (I	apply) (B9) 314) or (C1)	ots (C3)		☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8)
Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	n of one is required; check all that Water Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (I Hydrogen Sulfide Odd	apply) (B9) 314) or (C1) s on Living Roc	ots (C3)		☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9)
Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	n of one is required; check all that Water Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (I	apply) (B9) B14) or (C1) s on Living Roc ron (C4)			☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8)
Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	n of one is required; check all that Water Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (I) Hydrogen Sulfide Ode Oxidized Rhizosphere	apply) (B9) B14) or (C1) s on Living Roc fron (C4) a in Tilled Soils			□ 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)
Primary Indicators (minimum 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)	water Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (I) Hydrogen Sulfide Ode Oxidized Rhizosphere Presence of Reduced I Recent Iron Reduction	apply) (B9) 314) or (C1) s on Living Roc ron (C4) in Tilled Soils			□ 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)
Primary Indicators (minimum 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)	water Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (I) Hydrogen Sulfide Ode Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction Thin Muck Surface (C	apply) (B9) 314) or (C1) s on Living Roc ron (C4) a in Tilled Soils (7) (7)			□ 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)
Primary Indicators (minimum 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)	water Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (I) Hydrogen Sulfide Ode Oxidized Rhizosphere Presence of Reduced I Recent Iron Reduction Thin Muck Surface (C) Gauge or Well Data (I)	apply) (B9) 314) or (C1) s on Living Roc ron (C4) a in Tilled Soils (7) (7)			□ 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)
Primary Indicators (minimum 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 Aquatic Fauna (B13) True Aquatic Plants (IIII) Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction Thin Muck Surface (CIIIII) Gauge or Well Data (IIIIIII) Other (Explain in Ren	apply) (B9) 314) or (C1) s on Living Roc ron (C4) a in Tilled Soils (7) (7)			□ 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)
Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations:	water Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (IIII) Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction Thin Muck Surface (CIIIII) Gauge or Well Data (IIIIIII) Other (Explain in Ren	apply) (B9) 314) or (C1) s on Living Roc ron (C4) a in Tilled Soils (7) (7)			□ 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)
Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present?	water Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (IIII) Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction Thin Muck Surface (CIIIII) Gauge or Well Data (IIIIIII) Other (Explain in Ren	apply) (B9) 314) or (C1) s on Living Roc ron (C4) a in Tilled Soils (7) (7)			□ 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)
Primary Indicators (minimum Primary Indicators (Masser Indicators (Masser Indicators (Masser Indicators Indicators (Masser Indicators Indicators (Masser Indicators Indicators (Masser Indicators (Masser Indicators (Minimum Indicators (Minimum Indicators (Minimum Indicators (Minimum Indicators (Minimum Indicators (Masser Indicators (Minimum Indicator	water Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (IIII) Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced IIII Recent Iron Reduction Thin Muck Surface (CIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	apply) (B9) 314) or (C1) s on Living Roc ron (C4) a in Tilled Soils (7) (7) (99) (narks)	(C6)		□ 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)
Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present?	water Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (IIII) Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced IIII Recent Iron Reduction Thin Muck Surface (CIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	apply) (B9) 314) or (C1) s on Living Roc ron (C4) a in Tilled Soils (7) (7) (99) (narks)	(C6)		□ 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)
Primary Indicators (minimum Primary Indicators (Masser Indicators (Masser Indicators (Masser Indicators Indicators (Masser Indicators Indicators (Masser Indicators Indicators (Masser Indicators (Masser Indicators (Minimum Indicators (Minimum Indicators (Minimum Indicators (Minimum Indicators (Minimum Indicators (Masser Indicators (Minimum Indicator	water Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (IIII) Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced IIII Recent Iron Reduction Thin Muck Surface (CIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	apply) (B9) 314) or (C1) s on Living Roc ron (C4) a in Tilled Soils (7) (7) (99) (narks)	(C6)		□ 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)
Primary Indicators (minimum Primary Indicators (Masser Indicators (Masser Indicators (Masser Indicators Indicators (Masser Indicators Indicators (Masser Indicators Indicators (Masser Indicators (Masser Indicators (Minimum Indicators (Minimum Indicators (Minimum Indicators (Minimum Indicators (Minimum Indicators (Masser Indicators (Minimum Indicator	water Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (IIII) Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced IIII Recent Iron Reduction Thin Muck Surface (CIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	apply) (B9) 314) or (C1) s on Living Roc ron (C4) a in Tilled Soils (7) (7) (99) (narks)	(C6)		□ 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)
Primary Indicators (minimum Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) Describe Recorded Data (stream gage, monitoring water Present) Describe Recorded Data (stream gage, mo	water Stained Leaves Aquatic Fauna (B13) True Aquatic Plants (IIII) Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced IIII Recent Iron Reduction Thin Muck Surface (CIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	apply) (B9) 314) or (C1) s on Living Roc ron (C4) a in Tilled Soils (7) (7) (99) (narks)	(C6)		□ 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)



1642 16 201									
Project/Site: Minnesota River Gree	nway - Eagan Alignmer	nt	City/Coun	nty: Eagan/Dak	ota	Sampling Date: 9/7/13			
Applicant/Owner: Dakota County			State: MN	N		Sampling Point: STM1 S	SB-B		
Investigator(s): Dan Donayre			Sec, Twp,	Ran: 18,27N,2	23W				
Landform (hillside, terrace, etc.): B	ackslope - Roadway		Local Reli	ief (concave, co	onvex, none): Slope				
Slope (%): 2-6%	Lat:		Long: Datum:						
Soil Map Unit Name: Seelyeville n			 /WI Classificati						
•				_					
Are climatic/hydrologic conditions		•	⊠ Yes		no explain in remark				
Are Vegetation , Soil , or Hydrology significantly disturbed?					•	ent? X Yes No			
Are Vegetation ☐, Soil ☐, or Hy				plain any answers in	Remarks.)				
		SUMM	IARY O	F FINDING	SS				
Hydrophytic Vegetation Present?	☐ Yes ☒ No			* 41 G 1					
Hydric Soil Present?	☐ Yes ⊠ No			a wetland?	ed Area within	☐ Yes ⊠ No			
Wetland Hydrology Present?	☐ Yes ☒ No								
Remarks: Man made detention pon-	d.		Ц						
		VEGETATION	– Use so	cientific nam	es of plants				
Tree Stratum (Plot Size: 30)		Absolute % Cover		ant Species?	Indicator Status	Dominance Test Wor	·ksheet:		
1				es □ No		Number of dominant			
						species that are OBL,			
2			_	'es □ No		FACW, or FAC:	0 (A)		
3			□ Y	es 🗌 No		Total number of dominant species			
4			□ Y	es 🗌 No		across all strata:	0 (B)		
5			□ Y	es 🗌 No		Percent of dominant			
			= Total	l Cover		species that are OBL, FACW or FAC:	0% (A/B)		
Saplings/Shrub Stratum (Plot Size: 15)						Prevalence Index Wo			
1	10)		Пν	es □ No		Total % Cover of:			
				es ☐ No		OBL species:	x 1		
2						Î			
3				'es □ No		FACW species:	x 2		
4				es ☐ No		•	30 x 3 90		
5			⊔ Y	es No		•	50 x 4 200		
			= Total	l Cover		UPL species:	x 5		
Herb Stratum (Plot size: 5)						Column Totals:	80 (A) 290 (B)		
1. Poa pratensis		30	⊠ Y	es 🗌 No	FAC	Prevalence I	$(\mathbf{ndex} \ (\mathbf{B/A}) = 3.6$		
2. Melilotus officinales		20	⊠ Y	es No	FACU	Hydrophytic Vegetat	ion Indicators:		
3. Lotus corniculatus		20	⊠ Y	es 🗌 No	FACU	☐ Rapid Test for Hy	drophytic Vegetation		
4. Trifolium repens		10	П	es 🛛 No	FACU	☐ Dominance Test is	s >50%		
5				es □ No		☐ Prevalence Index	is < 3.01		
6				es ☐ No		1_			
7						☐ Morphological Adsupporting data in Ren	narks or on separate sheet)		
				es □ No			•		
8			_	es 🗌 No		Problematic Hydro (Explain in Remarks)	ophytic Vegetation		
9			□ Y	es No					
10			□ Y	es 🗌 No			oil and wetland hydrology s disturbed or problematic.		
		80	= To	otal Cover		,			
Woody Vine Stratum (Plot size: 3	0)								
1			□ Y	es No		Hydrophytic			
2		_		es □ No		Vegetation Present?	☐ Yes ⊠ No		
				otal Cover					
Remarks (Include photo numbers he	ere or on a separate shee	<u></u>							
, and the proof is not a second in		7							



Profile Description	(Describe to the de	nth peeded to	document the indi	cotor or co	ofirm the e	beares of i	indicators				
Trome Description.	Matrix	_		edox Featur		osence of 1	muicators	·· <i>)</i>			
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>		Loc2	Texture	<u>Remarks</u>			
	<u> </u>		Color (moist)	<u>70</u>	Type ¹	Loc-					
0+	10 YR 4/4	100					SiCL				
											
				·							
											
											
¹ Type: C=Concentrate	tion, D=Depletion, RN	M=Reduced M	atrix, MS = Masked	Sand Grain	s. ² Loca	tion: PL=I	Pore Linin	g, M=Matrix			
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils ³ :			
Histosol (A1)			☐ Sandy Gley	ed Matrix (S	S4)			Coast Prairie Redox (A16) (LRR K, L, R)			
☐ Histic Epipedon	(A2)		☐ Sandy Redo					☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
Black Histic (A3			Stripped Ma					Dark Surface (S7) (LRR K, L)			
Hydrogen Sulfid			Loamy Muc					5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)			
☐ Stratified Layers			Loamy Gley		(F2)			☐ Very Shallow Dark Surface (TF12)			
2 cm Muck (A10			☐ Depleted M					Other (Explain in Remarks)			
☐ Depleted Below ☐ Thick Dark Surfa			☐ Redox Dark ☐ Depleted Dark					Undicators of hydrophytic vegetation and watland			
			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed								
☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)								or problematic.			
Restrictive layer (if	observed):							or proceediment.			
-	observeu).							wilden a Dy My			
Type:								Hydric Soil Present? ☐ Yes ☒ No			
Depth (in):											
Remarks: Lack of hy	ydrology and position	along the road	bank led to assumu	ption that h	ydric soils o	lo not exist.					
				HVDD	OI OCV						
				HYDK	OLOGY						
Wetland Hydrology	Indicators:										
	Primary Indicators	s (minimum of	one is required; che	eck all that a	pply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A	A1)		■ Water Stain	ed Leaves (B9)			☐ Surface Soil Cracks (B6)			
☐ High Water Tabl	le (A2)		☐ Aquatic Fau	ına (B13)				☐ Drainage Patterns (B10)			
☐ Saturation (A3)			☐ True Aquat					☐ Dry-Season Water Table (C2)			
Water Marks (B			☐ Hydrogen S					Crayfish Burrows (C8)			
Sediment Deposit			Oxidized R	-	-	Roots (C3)		Saturation Visible on Aerial Imagery (C9)			
☐ Drift Deposits (E			☐ Presence of			1. (00)		Stunted or Stressed Plants (D1)			
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B	ole on Aerial Imagery	(P7)	☐ Thin Muck☐ Gauge or W					FAC-Neutral Test (D5)			
	ted Concave Surface (Other (Expl	,							
Field Observations:		B 0)	outer (Expi	um m reme	a RS)						
		D N	David C. S								
Surface Water Preser		s 🛭 No	Depth (in):								
Water Table Present	? ☐ Ye	s 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No			
Saturation Present?	☐ Ye	s 🛭 No	Depth (in):	_							
(includes capillary f											
Describe Recorded I	Data (stream gage, mor	nitoring well, a	erial photos, previo	us inspectio	ns), if avail	able:					
Remarks:											



1005 16 500						
Project/Site: Minnesota River Greenway - E	agan Alignment	City/County: Eagan/Dak	ota	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,2	23W			
Landform (hillside, terrace, etc.): Basin		Local Relief (concave, co	onvex, none): Conca	ive		
Slope (%): 0-1%	at:	Long:		Datum:		
Soil Map Unit Name: Udorthents		NWI or WWI Classificat	ion: PUBKx			
Are climatic/hydrologic conditions on the sit	e typical for this time of year?	☐ Yes ☐ No (if	no explain in remark	(2)		
Are Vegetation ⊠, Soil ⊠, or Hydrology	• •	`	•	ent? ☐ Yes ⊠ No		
Are Vegetation □, Soil □, or Hydrology		plain any answers ir				
The regention	• •	MARY OF FINDING	-			
Hydrophytic Vegetation Present?	es 🗌 No					
	es 🗌 No	-	ed Area within	⊠ Yes □ No		
	es 🗌 No	a wetland?				
Remarks: Man made detention pond.	S 🔲 100					
Kemarks. Wan made detention pond.						
	VECETATION	N – Use scientific nam	as of plants			
Tree Stratum (Plot Size: 30)	Absolute % Cover		Indicator Status	Dominous Test Wouldhoot		
	Absolute % Cover		Indicator Status	Dominance Test Worksheet:		
1		☐ Yes ☐ No		Number of dominant species that are OBL,		
2		☐ Yes ☐ No		FACW, or FAC: 1 (A)		
3		☐ Yes ☐ No		Total number of dominant species		
4		☐ Yes ☐ No		across all strata: 1 (B)		
5		☐ Yes ☐ No		Percent of dominant		
		= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)		
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:		
1		☐ Yes ☐ No		Total % Cover of: Multiply By:		
		Yes No	 -	OBL species: x 1		
2				•		
3		☐ Yes ☐ No		FACW species: 100 x 2 200		
4		☐ Yes ☐ No		FAC species: x 3		
5		☐ Yes ☐ No		FACU species: x 4		
		= Total Cover		UPL species: x 5		
Herb Stratum (Plot size: 5)				Column Totals: 100 (A) 200 (B)		
Phalaris arundinacea	100	Yes □ No	FACW	Prevalence Index (B/A) = 2.0		
2		☐ Yes ☐ No		Hydrophytic Vegetation Indicators:		
3		☐ Yes ☐ No		☑ Rapid Test for Hydrophytic Vegetation		
4		☐ Yes ☐ No		☑ Dominance Test is >50%		
5		☐ Yes ☐ No		☑ Prevalence Index is ≤3.01		
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide		
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)		
8						
9		☐ Yes ☐ No		Problematic Hydrophytic Vegetation (Explain in Remarks)		
		Yes No		¹ Indicators of hydric soil and wetland hydrology		
10		Yes No		must be present, unless disturbed or problematic.		
	100	= Total Cover		-		
Woody Vine Stratum (Plot size: 30)						
1		☐ Yes ☐ No		Hydrophytic ⊠ Yes □ No		
2		☐ Yes ☐ No		Vegetation Present?		
		= Total Cover				
Remarks (Include photo numbers here or on	a separate sheet):			-		



(Midwest Region)

Profile Description:	(Describe to the dep	oth needed to	locument the indi	cator or co	nfirm the a	bsence of	indicators	5.)
_	Matrix			edox Featu				
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
0+	10 YR 2/1	80	7.5 YR 5/8	20	С	M	SiL	
¹Type: C=Concentrat	ion. D=Depletion. RM	1=Reduced Ma	trix. MS = Masked	Sand Grain	ns. ² Loca	ation: PL=1	Pore Linin	g, M=Matrix
Hydric Soil Indicate			,					Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)
☐ Histic Epipedon ((A2)				,			☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Black Histic (A3)			☐ Stripped M					☐ Dark Surface (S7) (LRR K, L)
☐ Hydrogen Sulfide	e (A4)		☐ Loamy Mu	cky Minera	l (F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
☐ Stratified Layers			☐ Loamy Gle	yed Matrix	(F2)			☐ Very Shallow Dark Surface (TF12)
2 cm Muck (A10			Depleted M					Other (Explain in Remarks)
Depleted Below l			Redox Darl					
☐ Thick Dark Surfa	, ,		☐ Depleted D ☐ Redox Dep					³ Indicators of hydrophytic vegetation and wetland
Sandy Mucky Mi	neral (S1)		hydrology must be present, unless disturbed or problematic.					
Restrictive layer (if	observed).							or problematic.
-	observed).							which a My Dy
Type:								Hydric Soil Present? ⊠ Yes □ No
Depth (in):								
Remarks: Pit dug to	20 inches							
				HYDR	OLOGY			
Wetland Hydrology	Indicators:							
,	Primary Indicators	(minimum of	one is required: che	eck all that	annly)			Secondary Indicators (minimum of two required)
☐ Surface Water (A		(IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Water Stair					Surface Soil Cracks (B6)
☐ High Water Table			Aquatic Fai		(D))			Drainage Patterns (B10)
Saturation (A3)	(112)		☐ True Aquat		14)			☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)		☐ Hydrogen S					☐ Crayfish Burrows (C8)
☐ Sediment Deposi	ts (B2)		☐ Oxidized R	hizospheres	on Living l	Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B			☐ Presence of	Reduced In	ron (C4)			☐ Stunted or Stressed Plants (D1)
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B5			☐ Thin Muck					☐ FAC-Neutral Test (D5)
☐ Inundation Visib			Gauge or W	,				
	ed Concave Surface (l	B8)	Other (Expl	iain in Kem	arks)			
Field Observations:		5 7						
Surface Water Presen		s 🛛 No	Depth (in):	_				
Water Table Present?	⊠ Yes	s 🗌 No	Depth (in): 15	_				Wetland Hydrology Present? ⊠ Yes □ No
Saturation Present?	⊠ Yes	s 🗌 No	Depth (in): sur	tace				
(includes capillary fr	<u> </u>							
Describe Recorded D	ata (stream gage, mor	nitoring well, a	erial photos, previo	ous inspection	ons), if avail	able:		
Remarks:								



Con A Sur								
Project/Site: Minnesota River Greenway - Eag	an Alignment	City/County: Eagan/Dak	ota	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,2	23W					
Landform (hillside, terrace, etc.): Backslope		Local Relief (concave, co	onvex, none): Slope					
	:	Long: Datum:						
Soil Map Unit Name: Udorthents		NWI or WWI Classificat						
•								
Are climatic/hydrologic conditions on the site t	•		no explain in remark					
Are Vegetation ⊠, Soil ⊠, or Hydrology ∑	•		•	ent? Yes No				
Are Vegetation ☐, Soil ☐, or Hydrology ☐	• •	(If needed, explain any answers in Remarks.)						
		MARY OF FINDING	SS					
Hydrophytic Vegetation Present? Xes	□ No	T 4 6 1						
Hydric Soil Present? Xes	□ No	a wetland?	ed Area within	☐ Yes ☒ No				
Wetland Hydrology Present?	⊠ No							
Remarks: Man made detention pond.		•						
	VEGETATION	N – Use scientific nam	es of plants					
Tree Stratum (Plot Size: 30)	Absolute % Cover		Indicator Status	Dominance Test Worksheet:				
1		☐ Yes ☐ No		Number of dominant				
				species that are OBL,				
2		☐ Yes ☐ No		FACW, or FAC: 1 (A)				
3		☐ Yes ☐ No		Total number of dominant species				
4		☐ Yes ☐ No		across all strata: 1 (B)				
5		☐ Yes ☐ No		Percent of dominant				
		= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)				
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:				
1		☐ Yes ☐ No		Total % Cover of: Multiply By:				
		Yes No		OBL species: x 1				
2								
3		☐ Yes ☐ No		FACW species: 100 x 2 200				
4		Yes No		FAC species: x 3				
5		☐ Yes ☐ No		FACU species: x 4				
		= Total Cover		UPL species: x 5				
Herb Stratum (Plot size: 5)				Column Totals: 100 (A) 200 (B)				
1. Phalaris arundinacea	100	Yes □ No	FACW	Prevalence Index $(B/A) = 2.0$				
2		☐ Yes ☐ No		Hydrophytic Vegetation Indicators:				
3		☐ Yes ☐ No		☐ Rapid Test for Hydrophytic Vegetation				
4		☐ Yes ☐ No		☑ Dominance Test is >50%				
5		☐ Yes ☐ No		 ✓ Prevalence Index is ≤ 3.0¹ 				
6				_				
		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on separate sheet)				
7		☐ Yes ☐ No		supporting data in Ternains of on Separate Silvery				
8		☐ Yes ☐ No		Problematic Hydrophytic Vegetation				
9		☐ Yes ☐ No		(Explain in Remarks)				
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
	100	= Total Cover		must be present, unless disturbed of problematic.				
Woody Vine Stratum (Plot size: 30)								
1		☐ Yes ☐ No		Hydrophytic No. 7 No.				
2		☐ Yes ☐ No		Vegetation Present? ✓ Yes ☐ No				
		= Total Cover						
Remarks (Include photo numbers here or on a s	enarate sheet):	- 10tai COVCI						
remarks (merude photo numbers here of oil a s	separate sneet).							



EXHIBIT H: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Profile Description:	(Describe to the dep	oth needed to	document the indi	icator or co	onfirm the a	bsence of	indicators	s.)			
_	Matrix			Redox Featu							
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>e Remarks</u>			
0-37	10 YR 2/1	100					SiL				
37+	10 YR 4/1	90	7.5 YR 5/8	10	С	M	SiL				
37+	10 11 4/1	70	7.5 TK 5/6	10	C	IVI	SIL				
							-				
											
							-				
							<u></u>				
¹ Type: C=Concentrat	tion, D=Depletion, RM	1=Reduced Ma	atrix, MS = Masked	d Sand Grai	ns. ² Loca	ation: PL=	Pore Linin	g, M=Matrix			
Hydric Soil Indicate								Indicators for Problematic Hydric Soils ³ :			
☐ Histosol (A1) ☐ Sandy Gleyed Matrix (S4)								☐ Coast Prairie Redox (A16) (LRR K, L, R)			
☐ Histic Epipedon (A2) ☐ Sandy Redox (S5)								☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
☐ Black Histic (A3)		☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)			
☐ Hydrogen Sulfid			Loamy Mu	cky Minera	1 (F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)			
☐ Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)			
2 cm Muck (A10			☐ Depleted M					Other (Explain in Remarks)			
Depleted Below			☐ Redox Darl ☐ Depleted D					We direct on a Charles direct of the state of a second section of the state of			
☑ Thick Dark Surfa☑ Sandy Mucky M	, ,		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed								
☐ Salidy Mucky M	or problematic.										
Restrictive layer (if	observed):							or keeping.			
- ·	onser (eu)(Hydric Soil Present? ⊠ Yes □ No			
Type:								Hydric Son Fresent:			
Depth (in):	20 1 1										
Remarks: Pit dug to	20 inches										
				HYDI	ROLOGY						
Wetland Hydrology	Indicators:										
	Primary Indicators	(minimum of	one is required; che	eck all that	apply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A			☐ Water Stair					Surface Soil Cracks (B6)			
☐ High Water Tabl			☐ Aquatic Fa		(')			Drainage Patterns (B10)			
☐ Saturation (A3)			☐ True Aquat	tic Plants (I	314)			☐ Dry-Season Water Table (C2)			
☐ Water Marks (B	1)		☐ Hydrogen S	Sulfide Odo	or (C1)			☐ Crayfish Burrows (C8)			
Sediment Deposit			Oxidized R			Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (E			☐ Presence of					Stunted or Stressed Plants (D1)			
Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B		D7)	☐ Thin Muck ☐ Gauge or V	•	*			FAC-Neutral Test (D5)			
	le on Aerial Imagery (red Concave Surface (☐ Other (Exp								
Field Observations:		B0)	other (Exp	iam in item	ui ks)						
		. M.	Donth (in)								
Surface Water Preser		s 🛛 No	Depth (in): Depth (in):								
Water Table Present		s 🛛 No	_					Wetland Hydrology Present? ☐ Yes ☒ No			
Saturation Present?	⊠ Ye	s 🗌 No	Depth (in): 27								
(includes capillary f	•	.ii				alal a .					
Describe Recorded L	Data (stream gage, mor	moring well, a	eriai pnotos, previo	ous inspecti	ons), if avail	aoie:					
Remarks:											



100 K State								
Project/Site: Minnesota River Greenway - Eagan Alignm	ent	City/County: Eagan/Dal	tota	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, co	onvex, none): Conca	ve				
Slope (%): 0-1% Lat:		Long:		Datum:				
Soil Map Unit Name: Udorthents		NWI or WWI Classificat	ion: PUBKx					
Are climatic/hydrologic conditions on the site typical for t	this time of year?	∑ Yes ☐ No (if no explain in remarks)						
Are Vegetation ⊠, Soil ⊠, or Hydrology ⊠ significat	ntly disturbed?	Are "normal	circumstances" prese	ent? 🗌 Yes 🛛 No				
Are Vegetation , Soil , or Hydrology naturally	problematic?	(If needed, ex	xplain any answers in	Remarks.)				
	SUMM	ARY OF FINDING	SS					
Hydrophytic Vegetation Present? ☐ Yes ☐ No								
Hydric Soil Present? ☐ Yes ☐ No		-	ed Area within	⊠ Yes □ No				
Wetland Hydrology Present? ☐ Yes ☐ No		a wetland?						
Remarks: Man made detention pond.								
•								
	VEGETATION	I – Use scientific nam	nes of plants					
Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:				
1. Acer negundo	70	⊠ Yes □ No	FAC	Number of dominant				
•	70	☐ Yes ☐ No	1710	species that are OBL,				
2				FACW, or FAC: 3 (A)				
3		☐ Yes ☐ No		Total number of dominant species				
4		☐ Yes ☐ No		across all strata: 3 (B)				
5		☐ Yes ☐ No		Percent of dominant species that are OBL,				
	70	= Total Cover		FACW or FAC: 100% (A/B)				
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:				
1		☐ Yes ☐ No		Total % Cover of: Multiply By:				
2		☐ Yes ☐ No		OBL species: 15 x 1 15				
3		☐ Yes ☐ No		FACW species: 50 x 2 100				
4.		☐ Yes ☐ No		FAC species: 70 x 3 210				
5		☐ Yes ☐ No		FACU species: x 4				
		= Total Cover		UPL species: x 5				
Herb Stratum (Plot size: 5)				Column Totals: 135 (A) 325 (B)				
Phalaris arundinacea	50	⊠ Yes □ No	FACW	Prevalence Index $(B/A) = 2.4$				
				, ,				
2. Typha sp.	15	⊠ Yes □ No	OBL	Hydrophytic Vegetation Indicators:				
3		☐ Yes ☐ No		Rapid Test for Hydrophytic Vegetation				
4		☐ Yes ☐ No		Dominance Test is >50%				
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$				
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide				
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)				
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation				
9		☐ Yes ☐ No		(Explain in Remarks)				
10		☐ Yes ☐ No		Indicators of hydric soil and wetland hydrology				
	65	= Total Cover		must be present, unless disturbed or problematic.				
Woody Vine Stratum (Plot size: 30)								
1		☐ Yes ☐ No		Hydrophytic No. 7 No.				
2		☐ Yes ☐ No		Vegetation Present? ✓ Yes ☐ No				
		= Total Cover	_					
Remarks (Include photo numbers here or on a separate she	eet):	2011 20101						
, and a separate sin	<i>*</i>							



EXHIBIT H: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Profile Description:	(Describe to the dep	oth needed to d	locument the indi	cator or co	nfirm the a	osence of i	indicators.	.)			
_	Matrix			edox Featur							
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	Remarks			
0-15	7.5 YR 3/4	100					SiL				
15+	10 YR 2/1	100					Muck				
15+	10 1 K 2/1	100					WIUCK				
¹Type: C=Concentrat	ion, D=Depletion, RM	1=Reduced Ma	trix, MS = Masked	Sand Grain	s. ² Loca	tion: PL=F	Pore Lining	g, M=Matrix			
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils ³ :			
☐ Histosol (A1) ☐ Sandy Gleyed Matrix (S4)								Coast Prairie Redox (A16) (LRR K, L, R)			
☐ Histic Epipedon	(A2)		☐ Sandy Redo	ox (S5)				☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
☐ Black Histic (A3)		☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)			
☐ Hydrogen Sulfid			☐ Loamy Mu	-				5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)			
☐ Stratified Layers			Loamy Gle		(F2)			☐ Very Shallow Dark Surface (TF12)			
2 cm Muck (A10	*		☐ Depleted M		-			Other (Explain in Remarks)			
Depleted Below			Redox Dark					3To disease of hodge bodis as estation and water d			
☐ Thick Dark Surfa			☐ Depleted D					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed			
Sandy Mucky Mineral (S1) Redox Depressions (F8)								or problematic.			
Restrictive layer (if	observed):							***************************************			
Type:	,							Hydric Soil Present? ⊠ Yes □ No			
								Tyure Son Frescht.			
Depth (in):	orizon most likely due	to areaion for	the ediscent unles	nd alona							
Remarks. Top 15 III	orizon most fikely due	to erosion form	tille adjacent upiai	iu siope.							
				HYDR	OLOGY						
Wetland Hydrology	Indicators:										
	Primary Indicators	(minimum of o	one is required; che	eck all that a	pply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A	A1)		☐ Water Stain	ed Leaves (B9)			Surface Soil Cracks (B6)			
High Water Tabl	e (A2)		☐ Aquatic Fat	ına (B13)				☐ Drainage Patterns (B10)			
Saturation (A3)			☐ True Aquat	ic Plants (B	14)			☐ Dry-Season Water Table (C2)			
☐ Water Marks (B1			☐ Hydrogen S					☐ Crayfish Burrows (C8)			
Sediment Deposi			Oxidized R	-	_	Roots (C3)		Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B			☐ Presence of					Stunted or Stressed Plants (D1)			
Algal Mat or Cru			Recent Iron			lls (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B:	o) le on Aerial Imagery ((R7)	☐ Thin Muck ☐ Gauge or W					☐ FAC-Neutral Test (D5)			
	ed Concave Surface (Other (Expl	,	*						
Field Observations:		,									
Surface Water Preser	nt? \(\subseteq \text{Ve}	s 🛛 No	Depth (in):								
Water Table Present?		s 🔲 No	Depth (in): 10								
	_		Depth (in): sur	face.				Wetland Hydrology Present? ☐ Yes ☐ No			
Saturation Present?	· 	s 🗌 No	Depth (m). Sur	iuce							
(includes capillary fringe) Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:											
Describe Recorded Data (stream gage, momentum wen, acrial priotos, provious inspections), it available.											
Remarks:											



COLUMN SIM								
Project/Site: Minnesota River Greenway - Eagan	Alignment	City/County: Eagan/Dak	ota	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,2	23W					
Landform (hillside, terrace, etc.): Backslope		Local Relief (concave, co	onvex, 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 typi	ical for this time of year?		no explain in remark	as)				
Are Vegetation ⊠, Soil ⊠, or Hydrology ⊠ s	*		-	ent? Yes No				
Are Vegetation ☐, Soil ☐, or Hydrology ☐ n	aturally problematic?	(If needed, ex	plain any answers in	Remarks.)				
	SUMN	MARY OF FINDING	S					
Hydrophytic Vegetation Present? ☐ Yes ☐	No							
Hydric Soil Present? ☐ Yes ☐	No	-	ed Area within	☐ Yes ⊠ No				
Wetland Hydrology Present? ☐ Yes ☐		a wetland?						
Remarks: Man made detention pond.								
	VEGETATION	N – Use scientific nam	es of plants					
Tree Stratum (Plot Size: 30)	Absolute % Cover		Indicator Status	Dominance Test Worksheet:				
, ,	40	☐ Yes ☐ No	FAC	Number of dominant				
1. Acer negundo	40		FAC	species that are OBL,				
2		Yes No		FACW, or FAC: 3 (A)				
3		☐ Yes ☐ No		Total number of dominant species				
4		☐ Yes ☐ No		across all strata: 3 (B)				
5		☐ Yes ☐ No		Percent of dominant				
	40	= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)				
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:				
1		☐ Yes ☐ No		Total % Cover of: Multiply By:				
2		☐ Yes ☐ No		OBL species: x 1				
3		☐ Yes ☐ No		FACW species: 105 x 2 210				
4		☐ Yes ☐ No		FAC species: 40 x 3 120				
5		☐ Yes ☐ No		FACU species: x 4				
J		= Total Cover		UPL species: x 5				
Herb Stratum (Plot size: 5)		= Total Cover		Column Totals: 145 (A) 330 (B)				
	100		T. (777)	Prevalence Index (B/A) = 2.3				
Phalaris arundinacea	100	⊠ Yes □ No	FACW	` ′				
2		☐ Yes ☐ No		Hydrophytic Vegetation Indicators:				
3		☐ Yes ☐ No		Rapid Test for Hydrophytic Vegetation				
4		Yes No		Dominance Test is >50%				
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$				
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide				
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)				
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation				
9		☐ Yes ☐ No		(Explain in Remarks)				
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology				
	100	= Total Cover		must be present, unless disturbed or problematic.				
Woody Vine Stratum (Plot size: 30)								
1. Vitis riparia	5	∑ Yes □ No	FACW	Hudronhutic				
2	J	Yes No		Hydrophytic Vegetation Present?				
<u></u>		= Total Cover						
Remarks (Include photo numbers here or on a sep.	arate sheet):	- Total Cover						
remarks (merade photo numbers here of on a sep-	mme sneed.							



Profile Description:	(Describe to the der	th needed to	document the indi	cator or co		heanca of	indicators			
Trome Description.	Matrix	om necucu to		edox Featur		osence of	muicators	·· <i>)</i>		
Depth (in)	Color (moist)	0%	Color (moist)	<u>%</u>		Loc2	Texture	<u>Remarks</u>		
	· · · · · · · · · · · · · · · · · · ·	<u>%</u>	Color (Illoist)	<u>70</u>	Type ¹	Loc ²				
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 Indicato	rs:							Indicators for Problematic Hydric Soils ³ :		
☐ Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16) (LRR K, L, R)		
☐ Histic Epipedon ((A2)		☐ Sandy Redo	ox (S5)				☐ Iron-Manganese Masses (F12) (LRR K, L, R)		
☐ Black Histic (A3))		☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)		
☐ Hydrogen Sulfide			☐ Loamy Mu	cky Mineral	(F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)		
☐ Stratified Layers			Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)		
2 cm Muck (A10)			☐ Depleted M					Other (Explain in Remarks)		
Depleted Below I			Redox Darl							
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7) ☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)								³ Indicators of hydrophytic vegetation and wetland		
☐ Sandy Mucky Mi	neral (S1)		hydrology must be present, unless disturbed							
								or problematic.		
Restrictive layer (if	observed):									
Type:								Hydric Soil Present? ☐ Yes ☒ No		
Depth (in):										
Remarks:							1			
				HYDR	OLOGY					
Wetland Hydrology	Indicators:									
	Primary Indicators	(minimum of	one is required; che	eck all that a	ipply)			Secondary Indicators (minimum of two required)		
☐ Surface Water (A		(☐ Water Stain					Surface Soil Cracks (B6)		
☐ High Water Table			Aquatic Fat		<i>D</i>))			Drainage Patterns (B10)		
☐ Saturation (A3)	- \/		☐ True Aquat		14)			☐ Dry-Season Water Table (C2)		
☐ Water Marks (B1)		☐ Hydrogen S					☐ Crayfish Burrows (C8)		
☐ Sediment Deposit			☐ Oxidized R			Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)		
☐ Drift Deposits (B	3)		☐ Presence of	Reduced Ir	on (C4)			☐ Stunted or Stressed Plants (D1)		
☐ Algal Mat or Cru			☐ Recent Iron	Reduction	in Tilled So	ils (C6)		Geomorphic Position (D2)		
☐ Iron Deposits (B5	5)		☐ Thin Muck	Surface (C7	')			☐ FAC-Neutral Test (D5)		
☐ Inundation Visibl	e on Aerial Imagery (B7)	☐ Gauge or W	ell Data (D	9)					
☐ Sparsely Vegetate	ed Concave Surface (B8)	Other (Expl	lain in Rema	arks)					
Field Observations:										
Surface Water Presen	t?	s 🛛 No	Depth (in):							
Water Table Present?		s 🛛 No	Depth (in):							
			Depth (in): sur					Wetland Hydrology Present? ☐ Yes ☐ No		
Saturation Present?		s 🛛 No	= -p.m (m). but							
(includes capillary fr	•	nitoring wall	parial photos pro	ue inepacti	ne) if ove:1	oblo:				
Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:										
Remarks:										



Meers & Survey										
Project/Site: Minnesota River Gree	enway - Eagan Alignment		City/County: Eagan/l	Dakota	Sampling Date: 9/3/13					
Applicant/Owner: Dakota County			State: MN	tate: MN Sampling Point: Area 1						
Investigator(s): Dan Donayre			Sec, Twp, Ran: 18,27	7N,23W						
Landform (hillside, terrace, etc.): T	errace		Local Relief (concave	Local Relief (concave, convex, none): Flat						
Slope (%): 0-1	Lat:		Long:		Datum:					
Soil Map Unit Name: Minneiska lo	oam		NWI or WWI Classif	ication:						
Are climatic/hydrologic conditions Are Vegetation , Soil , or H	• •	•	_	(if no explain in remar						
Are Vegetation ☐, Soil ☐, or H	ydrology 🔲 naturally prob	elematic?	(If needed	l, explain any answers i	n Remarks.)					
		SUM	MARY OF FINDI	NGS						
Hydrophytic Vegetation Present?	⊠ Yes □ No									
Hydric Soil Present?	☐ Yes ⊠ No		Is the Sar a wetland	npled Area within	☐ Yes ⊠ No					
Wetland Hydrology Present?	☐ Yes ☒ No		a wettand	1.						
Remarks:										
L	VI	EGETATIO	N – Use scientific n	ames of plants						
Tree Stratum (Plot Size: 30 ft)		% Cover	Dominant Species	? Indicator Status	Dominance Test Worksheet:					
Fraxinus pennsyvanica		70	Yes □ No	FACW	Number of dominant					
2. Acer negundo		10	☐ Yes ⊠ No	FAC	species that are OBL, FACW, or FAC: 4 (A)					
3			☐ Yes ☐ No		Total number of					
4			☐ Yes ☐ No		dominant species					
5			☐ Yes ☐ No		across all strata: 4 (B) Percent of dominant					
J		80	= Total Cover		species that are OBL,					
			FACW or FAC: 100% (A/B)							
Saplings/Shrub Stratum (Plot Size:	15 ft)				Prevalence Index Worksheet:					
1			Yes No		Total % Cover of: Multiply By:					
2			☐ Yes ☐ No		OBL species: x 1					
3			☐ Yes ☐ No		FACW species: 90 x 2 180					
4			☐ Yes ☐ No		FAC species: 10 x 3 30					
5			☐ Yes ☐ No		FACU species: x 4					
			= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5 ft)					Column Total: 100 (A) 210 (B)					
Phalaris arundinacea		20	🛛 Yes 🗌 No	FACW	Prevalence Index $(B/A) = 2.1$					
2			☐ Yes ☐ No		Hydrophytic Vegetation Indicators:					
					Rapid Test for Hydrophytic Vegetation					
3			☐ Yes ☐ No		☑ Dominance Test is >50%					
4			☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$					
5			☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
6			☐ Yes ☐ No		supporting data in Remarks or on separate sheet)					
7			☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation					
8			(Explain in Remarks)							
9			☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
10			☐ Yes ☐ No		mast so present, unless disturbed of problematic.					
		20	= Total Cover							
Woody Vine Stratum (Plot size: 1	5 ft <u>)</u>									
1			☐ Yes ☐ No		Hydrophytic Vegetation Present?					
2			☐ Yes ☐ No		· · · · · · · · · · · · · · · · · · ·					
			=Total Cover							
Remarks:					_1					



EXHIBIT H: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Duefile Description	. (Decembe to the dec	.41	. d		JILS	h.a	in diantan	-)		
Profile Description	: (Describe to the dep	pın needed to				osence of	maicator	5.)		
Depth (in)	Matrix Color (moist)	0/	·	Redox Featu		Los?	Textur	<u>Remarks</u>		
		<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²				
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	С	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: Indicators for Problematic Hydric Soils ³ :										
☐ Histosol (A1) ☐ Sandy Gleyed Matrix (S4)								☐ Coast Prairie Redox (A16)		
☐ Histic Epipedon (A2) ☐ Sandy Redox (S5)								☐ Iron-Manganese Masses (F12)		
☐ Black Histic (A3	3)		☐ Stripped M					Other (Explain in Remarks)		
☐ Hydrogen Sulfid	le (A4)		☐ Loamy Mu	cky Minera	l (F1)					
☐ Stratified Layers	` '		☐ Loamy Gle	-	(F2)					
2 cm Muck (A10			Depleted M							
	Dark Surface (A11)		☐ Redox Darl ☐ Depleted D							
☐ Thick Dark Surf			³ Indicators of hydrophytic vegetation and wetland							
Sandy Mucky M			☐ Redox Dep	ressions (F	8)			hydrology must be present, unless disturbed		
5 cm Mucky Pea								or problematic.		
Restrictive layer (if	observed):									
Type:								Hydric Soil Present? ☐ Yes ☒ No		
Depth (in):										
Remarks:										
				HYDR	ROLOGY					
Wetland Hydrology	y Indicators:			11121	CECCI					
wenand Hydrology		,		1 11 .1 .						
	-	s (minimum o	f one is required; che					Secondary Indicators (minimum of two required)		
Surface Water (A	,		☐ Water Stair		(B9)			Surface Soil Cracks (B6)		
High Water Tab	le (A2)		Aquatic Far		114)			☐ Drainage Patterns (B10)		
Saturation (A3) Water Marks (B	1)		☐ True Aquat ☐ Hydrogen S					☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8)		
Sediment Depos			☐ Oxidized R			Roots (C3)		Saturation Visible on Aerial Imagery (C9)		
☐ Drift Deposits (I			☐ Presence of	•	_	10015 (05)		Stunted or Stressed Plants (D1)		
☐ Algal Mat or Cr			☐ Recent Iron			ils (C6)		Geomorphic Position (D2)		
☐ Iron Deposits (B			☐ Thin Muck			, ,		▼ FAC-Neutral Test (D5)		
	ole on Aerial Imagery	(B7)	☐ Gauge or W	Vell Data (E) 9)					
☐ Sparsely Vegeta	ted Concave Surface (B8)	Other (Exp.	lain in Rem	arks)					
Field Observations	:									
Surface Water Prese	nt?	s 🛛 No	Depth (in):							
Water Table Present	? □ Ye	s 🛛 No	Depth (in):	_						
Saturation Present?		s 🗆 No	Depth (in): 38					Wetland Hydrology Present? ☐ Yes ☒ No		
(includes capillary f		1,0								
		nitoring well.	aerial photos, previo	ous inspection	ons), if availa	able:				
Describe Recorded Data (stream gage, monitoring well, aerial photos, previous inspections), if available:										
D										
Remarks:										



The State of the S								
Project/Site: Minnesota River Greenway - Eagan Alignmen	nt	City/County: Eagan/Dal	cota	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 th Are Vegetation ☐, Soil ☐, or Hydrology ☐ significant	•	✓ Yes ☐ No (if no explain in remarks)Are "normal circumstances" present? ✓ Yes ☐ No						
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally p	roblematic?	(If needed, ex	xplain any answers in	n Remarks.)				
	SUM	MARY OF FINDING	GS					
Hydrophytic Vegetation Present?								
Hydric Soil Present? ☐ Yes ☒ No		Is the Sampla wetland?	led Area within	☐ Yes ☒ No				
Wetland Hydrology Present? ☐ Yes ☐ No		a wettand:						
Remarks:								
	VEGETATIO	N – Use scientific nam	nes of plants					
Tree Stratum (Plot Size: 30 ft)	% Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:				
Fraxinus pennsyvanica	50	⊠ Yes □ No	FACW	Number of dominant				
2. Acer negundo	20	— — — No	FAC	species that are OBL, FACW, or FAC: 4 (A)				
3. Acer saccharinum	10	☐ Yes ⊠ No	FACW	Total number of				
	10		TACW	dominant species				
4		☐ Yes ☐ No		across all strata: 4 (B) Percent of dominant				
5		☐ Yes ☐ No		species that are OBL,				
	80	= Total Cover		FACW or FAC: 100% (A/B)				
Saplings/Shrub Stratum (Plot Size: 15 ft)				Prevalence Index Worksheet:				
1		☐ Yes ☐ No		Total % Cover of: Multiply By:				
2		☐ Yes ☐ No		OBL species: x 1				
3		☐ Yes ☐ No		FACW species: 85 x 2 170				
4		☐ Yes ☐ No		FAC species: 20 x 3 60				
5		☐ Yes ☐ No		FACU species: x 4				
		= Total Cover		UPL species: x 5				
Herb Stratum (Plot size: 5 ft)				Column Total: 105 (A) 230 (B)				
Rudbeckia laciniata	15	Yes □ No	FACW	Prevalence Index $(B/A) = 2.2$				
Phalaris arundinacea	10	⊠ Yes □ No	FACW	Hydrophytic Vegetation Indicators:				
	10	☑ Tes ☐ No	FACW	Rapid Test for Hydrophytic Vegetation				
3		☐ Yes ☐ No		☑ Dominance Test is >50%				
4		☐ Yes ☐ No		☑ Prevalence Index is ≤ 3.0¹				
5		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide				
6		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)				
7		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation				
8		☐ Yes ☐ No		(Explain in Remarks)				
9		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology				
10		☐ Yes ☐ No		must be present, unless disturbed or problematic.				
	25	= Total Cover						
Woody Vine Stratum (Plot size: 15 ft)	-							
1		☐ Yes ☐ No		Hydrophytic Vocatotion Present? Yes No				
2		Yes No	_	Vegetation Present?				
		=Total Cover						
Remarks:		-10th C0101						



	SOILS										
Profile Description:	: (Describe to the dep	th needed to	o document the ind	icator or co	nfirm the a	bsence of	indicators	s.)			
Danth (in)	<u>Matrix</u>		<u>F</u>	Redox Featu	res		Т	e Remarks			
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>			
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: Indicators for Problematic Hydric Soils ³ :											
☐ Histosol (A1)			☐ Sandy Gley	od Matrix ((\$4)			Coast Prairie Redox (A16)			
Histic Epipedon	(A2)		☐ Sandy Red		54)			☐ Iron-Manganese Masses (F12)			
☐ Black Histic (A3			☐ Stripped M					Other (Explain in Remarks)			
☐ Hydrogen Sulfid			Loamy Mu		1 (F1)			Other (Explain in Remarks)			
Stratified Layers			Loamy Gle	•							
2 cm Muck (A10			☐ Depleted M	-	(1.2)						
Depleted Below	*		☐ Redox Dar		76)						
☐ Thick Dark Surf			☐ Depleted D	•	*			³ Indicators of hydrophytic vegetation and wetland			
Sandy Mucky M			hydrology must be present, unless disturbed								
			* **								
5 cm Mucky Pea								or problematic.			
Restrictive layer (if	observed):										
Type:								Hydric Soil Present? ☐ Yes ☒ No			
Depth (in):											
Remarks:							l l				
				HYDR	OLOGY						
Watland Hydrolog	Indicators										
Wetland Hydrology											
		(minimum c	of one is required; ch	eck all that	apply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A	A1)		☐ Water Stair	ned Leaves	(B9)			☐ Surface Soil Cracks (B6)			
☐ High Water Tab	le (A2)		☐ Aquatic Fa	una (B13)				☐ Drainage Patterns (B10)			
☐ Saturation (A3)			☐ True Aqua	tic Plants (B	314)			☐ Dry-Season Water Table (C2)			
☐ Water Marks (B	*		☐ Hydrogen	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)			
☐ Sediment Depos	its (B3)		☐ Oxidized R	hizospheres	s on Living F	Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)			
☐ Drift Deposits (I	33)		☐ Presence of	f Reduced In	ron (C4)			☐ Stunted or Stressed Plants (D1)			
☐ Algal Mat or Cru	ust (B4)		☐ Recent Iron	n Reduction	in Tilled So	ils (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B	55)		☐ Thin Muck	Surface (C	7)			☐ FAC-Neutral Test (D5)			
☐ Inundation Visib	ole on Aerial Imagery (B7)	☐ Gauge or V	Vell Data (E	9 9)						
☐ Sparsely Vegeta	ted Concave Surface (I	38)	Other (Exp	lain in Rem	arks)						
Field Observations:	•										
Surface Water Prese	nt? ☐ Yes	s 🛛 No	Depth (in):								
			Depth (in):								
Water Table Present	_	No	• • • •					Wetland Hydrology Present? ☐ Yes ☒ No			
Saturation Present?											
(includes capillary f											
Describe Recorded I	Data (stream gage, mon	itoring well,	aerial photos, previo	ous inspection	ons), if availa	able:					
Remarks:											



Micers & Survey									
Project/Site: Minnesota River Gree	enway - Eagan Alignment		City/County: Eagan/Dal	kota	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.): T	errace		Local Relief (concave, convex, none): Flat						
Slope (%): 0-1	Lat:		Long: Datum:						
Soil Map Unit Name: Minneiska lo	oam		NWI or WWI Classification:						
Are climatic/hydrologic conditions Are Vegetation ☐, Soil ☐, or H	- 1	-	`	☐ Yes ☐ No (if no explain in remarks) Are "normal circumstances" present? ☐ Yes ☐ No					
Are Vegetation ☐, Soil ☐, or H	ydrology 🔲 naturally prol	blematic?	(If needed, ex	xplain any answers i	n Remarks.)				
		SUM	IMARY OF FINDING	GS					
Hydrophytic Vegetation Present?	Yes □ No		* 4 G						
Hydric Soil Present?	☐ Yes ☒ No		a wetland?	led Area within	☐ Yes ⊠ No				
Wetland Hydrology Present?	☐ Yes ☒ No								
Remarks:									
	V	EGETATIO	N – Use scientific nam	nes of plants					
Tree Stratum (Plot Size: 30 ft)		% Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:				
Acer negundo		50	Yes □ No	FAC	Number of dominant				
2			☐ Yes ☐ No		species that are OBL, FACW, or FAC: 5 (A)				
3			☐ Yes ☐ No		Total number of				
4			☐ Yes ☐ No		dominant species across all strata: 5 (B)				
5			☐ Yes ☐ No		Percent of dominant				
		50	= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)				
Saplings/Shrub Stratum (Plot Size:	15 ft)		10111 00101		Prevalence Index Worksheet:				
Salix interior	13 10)	10	⊠ Yes □ No	FACW	Total % Cover of: Multiply By:				
Cornus alba		5	⊠ Yes □ No	FACW	OBL species: 20 x 1 20				
3		3	Yes No	Thew	FACW species: 115 x 2 230				
4		-	☐ Yes ☐ No		FAC species: 50 x 3 50				
5			☐ Yes ☐ No		FACU species: x 4				
J		15	= Total Cover		UPL species: x 5				
Herb Stratum (Plot size: 5 ft)		13	- Total Cover		Column Total: 185 (A) 400 (B)				
Phalaris arundinacea		100	⊠ Vac □ No	FACW	Prevalence Index $(B/A) = 2.2$				
1. I haidis arthumaect		100	⊠ Yes □ No	FACW	Hydrophytic Vegetation Indicators:				
Carex lacustris		20	Yes □ No	OBL	Rapid Test for Hydrophytic Vegetation				
3			☐ Yes ☐ No		☑ Dominance Test is >50%				
4			☐ Yes ☐ No		☑ Prevalence Index is ≤ 3.0¹				
5			☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide				
6			☐ Yes ☐ No		supporting data in Remarks or on separate sheet)				
7			☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation				
8			☐ Yes ☐ No		(Explain in Remarks)				
9									
10			☐ Yes ☐ No		must be present, unless disturbed or problematic.				
		120	= Total Cover						
Woody Vine Stratum (Plot size: 1	5 ft)	120	22 20.01						
1	+ ∠		□ Vac □ Na		Hydrophytic Vesetities Present?				
2			☐ Yes ☐ No		Vegetation Present?				
			☐ Yes ☐ No = Total Cover						
Remarks:			- 10tai C0vei						
Tomata.									



SOILS											
Profile Description:	: (Describe to the dep	th needed to	document the inc	licator or co	nfirm the al	osence of	indicators	5.)			
Depth (in)	Matrix			Redox Featu	res		Texture	Remarks			
<u>Deptii (iii)</u>	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	Kenarks			
0-20	10 YR 4/2	100					SiCL				
20-35	10 YR 4/3	100					SiCL				
35+	2.5 Y 4/2	100					SiCL				
35+	2.3 1 4/2	100					SICL				
¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix											
Hydric Soil Indicat		Troudered I.	initing ob covered	i or coured b	una Gramo.			Indicators for Problematic Hydric Soils ³ :			
☐ Histosol (A1)			☐ Sandy Gle	eved Matrix ((S4)			Coast Prairie Redox (A16)			
Histic Epipedon	(A2)		☐ Sandy Re	-	(51)			☐ Iron-Manganese Masses (F12)			
☐ Black Histic (A3			☐ Stripped N					Other (Explain in Remarks)			
☐ Hydrogen Sulfid			Loamy M		1 (F1)						
☐ Stratified Layers			☐ Loamy Gl	eyed Matrix	(F2)						
☐ 2 cm Muck (A10	*		☐ Depleted l	Matrix (F3)							
☐ Depleted Below			☐ Redox Da ☐ Depleted I	•	*						
Thick Dark Surf			³ Indicators of hydrophytic vegetation and wetland								
Sandy Mucky M		hydrology must be present, unless disturbed									
5 cm Mucky Pea								or problematic.			
Restrictive layer (if	observed):										
Type:								Hydric Soil Present? ☐ Yes ☒ No			
Depth (in):											
Remarks:							I				
Γ				HYDR	ROLOGY						
Wetland Hydrology	Indicators:										
	Primary Indicators	(minimum o	f one is required; cl	heck all that	apply)			Secondary Indicators (minimum of two required)			
☐ Surface Water (A	A1)		☐ Water Sta	ined Leaves	(B9)			Surface Soil Cracks (B6)			
High Water Tab	le (A2)		Aquatic F	auna (B13)	, ,			Drainage Patterns (B10)			
☐ Saturation (A3)			☐ True Aqua	atic Plants (E	314)			☐ Dry-Season Water Table (C2)			
☐ Water Marks (B	1)		☐ Hydrogen	Sulfide Odo	r (C1)			☐ Crayfish Burrows (C8)			
☐ Sediment Depos					s on Living R	Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (I			Presence					Stunted or Stressed Plants (D1)			
Algal Mat or Cru			Recent Iro			ils (C6)		Geomorphic Position (D2)			
☐ Iron Deposits (B			☐ Thin Muc	,	*			☐ FAC-Neutral Test (D5)			
l =	ole on Aerial Imagery (Well Data (I							
_ 1 , 0	ted Concave Surface (I	38)	U Otner (Ex	plain in Rem	arks)						
Field Observations		_									
Surface Water Prese	nt?	No No	Depth (in):								
Water Table Present	? \(\sum \text{Yes}	No No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No			
Saturation Present?	⊠ Yes	. □ No	Depth (in): 40)							
(includes capillary f	ringe)										
Describe Recorded I	Data (stream gage, mon	itoring well,	aerial photos, prev	ious inspecti	ons), if availa	able:					
Remarks:											



Meers & Survey									
Project/Site: Minnesota River Gree	enway - Eagan Alignment		City/County: Eagan/D	akota	Sampling Date: 9/4/13				
Applicant/Owner: Dakota County			State: MN	N Sampling Point: Area 4					
Investigator(s): Dan Donayre			Sec, Twp, Ran: 18,271	N,23W					
Landform (hillside, terrace, etc.): T	Геггасе		Local Relief (concave,	convex, none): Flat					
Slope (%): 0-1	Lat:		Long:		Datum:				
Soil Map Unit Name: Minneiska lo	oam		NWI or WWI Classific	eation:					
Are climatic/hydrologic conditions Are Vegetation ☐, Soil ☐, or H	• •	-		(if no explain in remar al circumstances" pres	ks) sent? 🛛 Yes 🗌 No				
Are Vegetation ☐, Soil ☐, or H	ydrology 🔲 naturally prob	lematic?	(If needed,	explain any answers i	n Remarks.)				
		SUM	MARY OF FINDIN	IGS					
Hydrophytic Vegetation Present?	⊠ Yes □ No								
Hydric Soil Present?	☐ Yes ☒ No		Is the Sam a wetland?	pled Area within	☐ Yes ⊠ No				
Wetland Hydrology Present?	☐ Yes ☒ No		u weemaa						
Remarks:									
	VI	EGETATIO	N – Use scientific na	mes of plants					
Tree Stratum (Plot Size: 30 ft)		% Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:				
Populus tremuloides		20	🛛 Yes 🗌 No	FAC	Number of dominant				
Fraxinus pennsylvanica		20	🛛 Yes 🗌 No	FACW	species that are OBL, FACW, or FAC: 5 (A)				
3			☐ Yes ☐ No		Total number of				
4			☐ Yes ☐ No		dominant species across all strata: 5 (B)				
5			☐ Yes ☐ No		Percent of dominant				
		40	= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)				
Sanlings/Shruh Stratum (Plot Size:	aplings/Shrub Stratum (Plot Size: 15 ft)								
Populus tremuloides	13 10)	10	⊠ Yes □ No	FAC	Prevalence Index Worksheet: Total % Cover of: Multiply By:				
_		10	☐ Yes ☐ No	FACW					
2. Fraxinus pennsylvanica		10	Yes No	TACW	OBL species: x 1 x 1 FACW species: 50 x 2 100				
3 4			Yes No		FAC species: 30 x 3 90				
5			☐ Yes ☐ No						
J		20	= Total Cover		FACU species: x 4 VPL species: x 5				
Harly Christian (Diet sine, 5 ft)		20	= Total Cover		· —				
Herb Stratum (Plot size: 5 ft)					` , , , , , , , , , , , , , , , , , , ,				
Phalaris arundinacea		20	Yes □ No	FACW	Prevalence Index (B/A) = 2.4				
2			☐ Yes ☒ No		Hydrophytic Vegetation Indicators: ☐ Rapid Test for Hydrophytic Vegetation				
3			☐ Yes ☐ No		☑ Dominance Test is >50%				
4			☐ Yes ☐ No		□ Prevalence Index is ≤ 3.0¹				
5			☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide				
6			☐ Yes ☐ No		supporting data in Remarks or on separate sheet)				
7			☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation				
8			Yes No		(Explain in Remarks)				
9			Yes No		¹ Indicators of hydric soil and wetland hydrology				
10					must be present, unless disturbed or problematic.				
10			Yes No						
Wash Vis Good on O	(F.C.)	20	= Total Cover						
Woody Vine Stratum (Plot size: 1	13 1()				Hydrophytic N. N. D. N.				
1			☐ Yes ☐ No	Yes \square No ———————————————————————————————————					
2			☐ Yes ☐ No						
			= Total Cover						
Remarks:									



EXHIBIT H: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Duefile Description	. (Decembe to the dec				JILS	h.a	in diantan	-)
Profile Description	: (Describe to the dep	pın needed t				osence of	maicator	5.)
Depth (in)	Matrix Color (moist)	0/	_	Redox Featu		Los?	Textur	<u>Remarks</u>
0.24		<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	~.~~	
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	С	M	SiCL	
						-	-	
								
								<u> </u>
¹Type: C=Concentra	ation, D=Depletion, RN	M=Reduced N	Matrix, CS=Covered	or Coated S	and Grains.	² Locati	ion: PL=P	ore Lining, M=Matrix
Hydric Soil Indicat	tors:							Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			☐ Sandy Gley	ed Matrix ((S4)			Coast Prairie Redox (A16)
☐ Histic Epipedon	(A2)		☐ Sandy Red					☐ Iron-Manganese Masses (F12)
Black Histic (A3			☐ Stripped M					Other (Explain in Remarks)
Hydrogen Sulfid			Loamy Mu					
Stratified Layers	* *		☐ Loamy Gle	-	(F2)			
2 cm Muck (A10	0) Dark Surface (A11)		☐ Depleted M		36)			
☐ Thick Dark Surf			☐ Redox Darl ☐ Depleted D					³ Indicators of hydrophytic vegetation and wetland
Sandy Mucky M			Redox Dep					hydrology must be present, unless disturbed
5 cm Mucky Pea			Redox Bep	ressions (1	3)			or problematic.
Restrictive layer (if								1
Type:	,							Hydric Soil Present? ☐ Yes ☒ No
								Trydric bon Tresent.
Depth (in): Remarks:								
Kemarks.								
				HYDE	ROLOGY			
Wetland Hydrology	y Indicators:							
	Primary Indicators	s (minimum o	of one is required; che	eck all that	apply)			Secondary Indicators (minimum of two required)
☐ Surface Water (A	A1)		□ Water Stair	ned Leaves	(B9)			☐ Surface Soil Cracks (B6)
☐ High Water Tab	le (A2)		☐ Aquatic Fa	una (B13)				☐ Drainage Patterns (B10)
☐ Saturation (A3)			☐ True Aquat	tic Plants (E	314)			☐ Dry-Season Water Table (C2)
☐ Water Marks (B			☐ Hydrogen S					☐ Crayfish Burrows (C8)
☐ Sediment Depos			Oxidized R		_	Roots (C3)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (I			Presence of			1 (00)		Stunted or Stressed Plants (D1)
☐ Algal Mat or Cru ☐ Iron Deposits (B			☐ Recent Iron ☐ Thin Muck			ils (C6)		☐ Geomorphic Position (D2) ☐ FAC-Neutral Test (D5)
	ble on Aerial Imagery ((B7)	☐ Gauge or V	,	*			AC-Neutral Test (D3)
	ated Concave Surface (Other (Exp	,				
Field Observations		,						
Surface Water Prese		s 🛛 No	Depth (in):					
			Depth (in):					
Water Table Present	_	s 🛛 No	Depth (in): 38					Wetland Hydrology Present? ☐ Yes ☒ No
Saturation Present?	-	s 🗌 No	Берш (III). 38					
(includes capillary f	fringe) Data (stream gage, moi	nitoring wall	agrial photos pro-	ue inenaati	one) if evel	ahla:		
Describe Recorded I	Data (Sucam gage, moi	moning well,	acitai pilotos, previo	as mspecti	ons), 11 avalla	wic.		
Remarks:								



THEORY & SUITE											
Project/Site: Minnesota River Gree	nway - Eagan Alignment		City/County	: Eagan/Dak	tota	Sampling Date: 9/4/13					
Applicant/Owner: Dakota County			State: MN	State: MN Sampling Point: Area 5							
Investigator(s): Dan Donayre			Sec, Twp, R	an: 13,27N,2	24W						
Landform (hillside, terrace, etc.): T	'errace		Local Relief (concave, convex, none): Flat								
Slope (%): 0-1	Lat:		Long:	_		Datum:					
Soil Map Unit Name: Minneiska lo	oam		NWI or WW	VI Classificat	ion:						
Are climatic/hydrologic conditions Are Vegetation ☐, Soil ☐, or Hy	* *	-	⊠ Yes		no explain in remar circumstances" pres	ks) ent? ⊠ Yes □ No					
Are Vegetation ☐, Soil ☐, or Hy	ydrology 🔲 naturally prob	lematic?		(If needed, ex	xplain any answers i	n Remarks.)					
		SUM	MARY OF	FINDING	S						
Hydrophytic Vegetation Present?	⊠ Yes □ No						-				
Hydric Soil Present?	☐ Yes ⊠ No			Is the Sampla wetland?	ed Area within	☐ Yes ⊠ No					
Wetland Hydrology Present?	☐ Yes ☒ No		'	a wettanu:							
Remarks:											
	VI	EGETATIO	N – Use sci	entific nam	es of plants						
Tree Stratum (Plot Size: 30 ft)		% Cover		nt Species?	Indicator Status	Dominance Test V	Vorkshe	et:			
Populus tremuloides		20	∑ Yes	s 🔲 No	FAC	Number of domina	nt				
Fraxinus pennsylvanica		20	⊠ Yes	s 🗌 No	FACW	species that are OB FACW, or FAC:		6 (A)			
3			_	— s □ No		Total number of		, (11)			
4				s 🔲 No		dominant species		((D)			
5			_	_		across all strata: Percent of dominan		6 (B)			
5				s 🗌 No		species that are OB					
		40	= Total C	Cover		FACW or FAC:		100% (A/	(B)		
Saplings/Shrub Stratum (Plot Size:	15 ft)		_	_		Prevalence Index					
Populus tremuloides		10		S No	FAC	Total % Cover	of:	<u>Mι</u>	ultiply By:		
Fraxinus pennsylvanica		10	⊠ Yes	s 🗌 No	FACW	OBL species:	20	x 1	20		
3				S No		FACW species:	50	x 2	100		
4				s 🗌 No		FAC species:	10	x 3	30		
5			☐ Yes	s 🗌 No		FACU species:		x 4			
		20	= Total C	Cover		UPL species:		x 5			
Herb Stratum (Plot size: 5 ft)						Column Total:	80	(A)	150 (B)		
Phalaris arundinacea		20	Yes	s 🗌 No	FACW	Prevalenc	e Index	(B/A) =	1.9		
Carex lacustris		20	⊠ Yes	s 🗌 No	OBL	Hydrophytic Vege					
		20	_	_	OBL	Rapid Test for			etation		
3			☐ Yes	s 🗌 No		☑ Dominance Tes					
4			☐ Yes	s 🗌 No		☐ Prevalence Inde	ex is <u><</u> 3	.01			
5			☐ Yes	s 🗌 No		☐ Morphological					
6			☐ Yes	s 🗌 No		supporting data in I	Remarks	or on sep	parate sheet)		
7			☐ Yes	s 🗌 No		☐ Problematic Hy		ic Vegeta	ation		
8			☐ Yes	s 🔲 No		(Explain in Remark	is)				
9			☐ Yes	s 🗌 No		¹ Indicators of hydri must be present, un					
10			☐ Yes	s 🗌 No		must be present, un	icss dist	urveu or	problematic.		
		20	= Tota	l Cover							
Woody Vine Stratum (Plot size: 1	5 ft <u>)</u>										
1			☐ Yes	s 🗌 No		Hydrophytic		⊠ Yes [□ No		
2				s 🔲 No		Vegetation Presen					
				l Cover	_						
Remarks:			- 100								



				50	JILS			
Profile Description:	: (Describe to the dep	th needed to	o document the ind	icator or co	nfirm the a	bsence of	indicators	s.)
Danth (in)	<u>Matrix</u>		<u>F</u>	Redox Featu	res		Т	Remarks
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
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	
			· 	<u> </u>				
							-	
¹ Type: C=Concentra	tion, D=Depletion, RM	=Reduced N	Matrix, CS=Covered	or Coated S	and Grains.	² Locati	ion: PL=P	ore Lining, M=Matrix
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils3:
☐ Histosol (A1)			☐ Sandy Gley	ved Matrix (S4)			Coast Prairie Redox (A16)
☐ Histic Epipedon	(A2)		☐ Sandy Red		<i>S</i> .,			☐ Iron-Manganese Masses (F12)
☐ Black Histic (A3			☐ Stripped M					Other (Explain in Remarks)
☐ Hydrogen Sulfid			☐ Loamy Mu		l (F1)			
☐ Stratified Layers			☐ Loamy Gle	-				
2 cm Muck (A10			☐ Depleted M	-	` /			
☐ Depleted Below	*		Redox Dar		76)			
☐ Thick Dark Surf			☐ Depleted D	ark Surface	(F7)			³ Indicators of hydrophytic vegetation and wetland
☐ Sandy Mucky M			☐ Redox Dep	ressions (F	3)			hydrology must be present, unless disturbed
☐ 5 cm Mucky Pea			_					or problematic.
Restrictive layer (if								-
								Hydric Soil Present? ☐ Yes ☒ No
Type:								Hydric Soil Present? ☐ Yes ☒ No
Depth (in):								
Remarks:								
				HYDR	OLOGY			
Wetland Hydrology	Indicators:							
	Primary Indicators	(minimum o	of one is required; ch	eck all that	apply)			Secondary Indicators (minimum of two required)
Surface Water (A		(☐ Water Stair					Surface Soil Cracks (B6)
☐ High Water Tabl	*		Aquatic Fa		(D))			Drainage Patterns (B10)
Saturation (A3)	ic (112)		☐ True Aquat		14)			Dry-Season Water Table (C2)
☐ Water Marks (B	1)		☐ Hydrogen	,	· ·			Crayfish Burrows (C8)
Sediment Depos	*				on Living F	Roots (C3)		Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (H			☐ Presence of	-	_			Stunted or Stressed Plants (D1)
☐ Algal Mat or Cru			Recent Iron			ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B			☐ Thin Muck			()		∑ FAC-Neutral Test (D5)
	ole on Aerial Imagery (B7)	☐ Gauge or V	,	*			
	ted Concave Surface (I			lain in Rem	*			
Field Observations:					,			
		⊠ N.	Dent (a)					
Surface Water Preser	· 	No	Depth (in):					
Water Table Present	?	No No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No
Saturation Present?	Yes	□ No	Depth (in): 36					, a
(includes capillary f	ringe)							
Describe Recorded I	Data (stream gage, mon	itoring well,	aerial photos, previo	ous inspection	ons), if availa	able:		
Domortos								
Remarks:								



Minders & Survey											
Project/Site: Minnesota River Gree	nway - Eagan Alignment	City/Co	City/County: Eagan/Dakota Sampling Date: 9/5/13								
Applicant/Owner: Dakota County		State: 1	State: MN Sampling Point: Area 6								
Investigator(s): Dan Donayre		Sec, Tv	vp, Ran: 18,27N,2	23W							
Landform (hillside, terrace, etc.): B	asin	Local R	delief (concave, co	onvex, none): Slope							
Slope (%): 0-1	Lat:	Long:	Long: Datum:								
Soil Map Unit Name: Palms muck		NWI or	WWI Classificati	ion: PEMCd							
Are climatic/hydrologic conditions Are Vegetation , Soil , or Hy	**	•		no explain in remark circumstances" prese	ent? 🛛 Yes 🗌 No						
Are Vegetation ☐, Soil ☐, or Hy	drology aturally problemat	ic?	(If needed, ex	plain any answers in	Remarks.)						
		SUMMARY	OF FINDING	S							
Hydrophytic Vegetation Present?	⊠ Yes □ No		1								
Hydric Soil Present?	✓ Yes ☐ No			ed Area within	☐ Yes ⊠ No						
Wetland Hydrology Present?	☐ Yes ⊠ No		a wetland?								
Remarks:											
	VEGE	TATION – Use	scientific name	es of plants							
Tree Stratum (Plot Size: 30 ft)	<u>%</u>	Cover Don	ninant Species?	Indicator Status	Dominance Test Worksh	eet:					
Acer negundo		20	Yes 🗌 No	FAC	Number of dominant						
Rhamnus cathartica		10	Yes 🗌 No	FAC	species that are OBL, FACW, or FAC:	3 (A)					
3			Yes No		Total number of	3 (11)					
4	-		Yes No		dominant species	2 (P)					
	_				across all strata: Percent of dominant	3 (B)					
5	_		Yes No		species that are OBL,						
		30 = To	otal Cover		FACW or FAC:	100% (A/B)					
Saplings/Shrub Stratum (Plot Size:	15 ft)				Prevalence Index Works	heet:					
1	_	□	Yes No		Total % Cover of:	Multiply By:					
2	=	□	Yes 🗌 No		OBL species:	x 1					
3	_	🗆	Yes 🗌 No		FACW species: 100	x 2 200					
4	-	🗆	Yes 🗌 No		FAC species: 30	x 3 90					
5	=		Yes 🗌 No		FACU species:	x 4					
	=	= To	otal Cover		UPL species:	x 5					
Herb Stratum (Plot size: 5 ft)					Column Total: 130	(A) 290 (B)					
Phalaris arundinacea		100	Yes 🗌 No	FACW	Prevalence Inde	$\mathbf{x} \left(\mathbf{B}/\mathbf{A} \right) = 2.2$					
2			v. 🗆 v		Hydrophytic Vegetation	Indicators:					
2	_	⊔	Yes No		Rapid Test for Hydrop	hytic Vegetation					
3	-	🗆	Yes 🗌 No		☐ Dominance Test is >50	0%					
4	=	🗆	Yes 🗌 No		Prevalence Index is <	3.01					
5	=	🗆	Yes 🗌 No		☐ Morphological Adapta						
6	_	🗆	Yes 🗌 No		supporting data in Remark	s or on separate sheet)					
7	_	🗆	Yes 🗌 No		☐ Problematic Hydrophy	tic Vegetation					
8		🗆	Yes 🗌 No		(Explain in Remarks)						
9		🗆	Yes No		¹ Indicators of hydric soil a						
10			Yes No		must be present, unless dis	turbed or problematic.					
			Total Cover								
Woody Vine Stratum (Plot size: 1											
1	~		Vac D Ma		Hydrophytic	⊠ Yes □ No					
2	_		Yes ☐ No		Vegetation Present?						
	-		Yes No								
Remarks:	<u> </u>	=	Total Cover								
Rollidias.											



				SC	DILS			
Profile Description:	(Describe to the dep	th needed to	o document the ind	icator or co	nfirm the al	sence of	indicators	s.)
	Matrix]	Redox Featur	res		_	_ ,
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type1	Loc2	Texture	<u>Remarks</u>
0-40	10 YR 2/1	100		_			SiCL	
40+	10 YR 5/1	90	7.5 YR 4/6	C	M		SiCL	
								
								
			·					
IT C. Components	ion D Douletion DN	/ D.dd N	Actorian CC Consumed			21	DI D	and Lining M. Matrin
¹Type: C=Concentrat		i=Reduced N	rairix, CS=Covered	or Coaled S	and Grains.	*Locan	ion: PL=P	ore Lining, M=Matrix
Hydric Soil Indicate	ors:		_					Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			☐ Sandy Gle		S4)			Coast Prairie Redox (A16)
Histic Epipedon (Sandy Red					☐ Iron-Manganese Masses (F12)
Black Histic (A3)			☐ Stripped M					Other (Explain in Remarks)
☐ Hydrogen Sulfide	. ,		Loamy Mu	-				
☐ Stratified Layers			☐ Loamy Gle	-	(F2)			
☐ 2 cm Muck (A10			☐ Depleted N	Matrix (F3)				
☐ Depleted Below l	Dark Surface (A11)		☐ Redox Dar	k Surface (F	76)			
	ice (A12)		☐ Depleted I	Oark Surface	(F7)			³ Indicators of hydrophytic vegetation and wetland
☐ Sandy Mucky Mi	neral (S1)		☐ Redox Dej	pressions (F8	3)			hydrology must be present, unless disturbed
5 cm Mucky Peat	or Peat (S3)							or problematic.
Restrictive layer (if	observed):							
Type:								Hydric Soil Present? ⊠ Yes □ No
								Trydric Bon Treschi.
Depth (in):								
Remarks:								
				HYDR	OLOGY			
Wetland Hydrology	Indicators:							
	Primary Indicators	(minimum o	f one is required; ch	neck all that a	annly)			Secondary Indicators (minimum of two required)
☐ Surface Water (A	·	(11111111111111111111111111111111111111	☐ Water Stai					Surface Soil Cracks (B6)
☐ High Water Table			Aquatic Fa		(D 9)			= \ '
-	e (A2)			, ,	1.4)			
Saturation (A3)			☐ True Aqua					Dry-Season Water Table (C2)
Water Marks (B1	*		☐ Hydrogen			(C2)		Crayfish Burrows (C8)
Sediment Deposi			Oxidized I		- C	toots (C3)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B			Presence o					Stunted or Stressed Plants (D1)
Algal Mat or Cru			Recent Iro			lls (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B5			☐ Thin Mucl					☐ FAC-Neutral Test (D5)
	le on Aerial Imagery (Well Data (D				
☐ Sparsely Vegetate	ed Concave Surface (I	38)	Other (Exp	olain in Rem	arks)		1	
Field Observations:								
Surface Water Presen	t?	s 🛛 No	Depth (in):					
Water Table Present?		s 🛛 No	Depth (in):					
		· <u></u>	Depth (in): 22					Wetland Hydrology Present? ☐ Yes ☒ No
Saturation Present?		s 🗌 No	Dopai (iii). 22	•				
(includes capillary fr		denning 11	and above the) : (.1.1		
Describe Recorded D	ata (stream gage, mor	moring well,	aeriai pnotos, previ	ous inspection	ons), 11 availa	ible:		
Remarks:								



18.00 W 2011										
Project/Site: Minnesota River Greenway - Eagan Alignme	nt	City/County: Eagan/Dak	tota	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 Classificat								
Are climatic/hydrologic conditions on the site typical for the	nis time of year?		no explain in remark	(2)						
Are Vegetation □, Soil □, or Hydrology □ significan	•	<u> </u>	circumstances" prese							
Are Vegetation , Soil , or Hydrology naturally	-		splain any answers in							
		MARY OF FINDING								
Hydrophytic Vegetation Present? ☐ Yes ☐ No										
Hydric Soil Present? ☐ Yes ☒ No		-	ed Area within	☐ Yes ⊠ No						
Wetland Hydrology Present? ☐ Yes ☐ No		a wetland?								
Remarks:										
	VEGETATION	N – Use scientific nam	es of plants							
Tree Stratum (Plot Size: 30)	Absolute % Cover		Indicator Status	Dominance Test Worksheet:						
	110001010 /0 00101	☐ Yes ☐ No	marcaror barras	Number of dominant						
1				species that are OBL,						
2		☐ Yes ☐ No		FACW, or FAC: 2 (A)						
3		☐ Yes ☐ No		Total number of dominant species						
4		☐ Yes ☐ No		across all strata: 2 (B)						
5		☐ Yes ☐ No		Percent of dominant						
		= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)						
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:						
1. Acer negundo	20	Yes □ No	FAC	Total % Cover of: Multiply By:						
2	<u></u>	☐ Yes ☐ No	<u></u>	OBL species: x 1						
3		☐ Yes ☐ No		FACW species: 100 x 2 200						
4		☐ Yes ☐ No	· 	FAC species: 20 x 3 60						
5		☐ Yes ☐ No		FACU species: x 4						
J	20	= Total Cover		UPL species: x 5						
Herb Stratum (Plot size: 5)	20	= Total Cover		Column Totals: 120 (A) 260 (B)						
	100		T C***	Prevalence Index (B/A) = 2.2						
Phalaris arundinacea	100	⊠ Yes □ No	FACW	` ,						
2		☐ Yes ☐ No		Hydrophytic Vegetation Indicators:						
3		☐ Yes ☐ No		Rapid Test for Hydrophytic Vegetation						
4		Yes No		☑ Dominance Test is >50%						
5		☐ Yes ☐ No		Prevalence Index is $\leq 3.0^{1}$						
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide						
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)						
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation						
9		☐ Yes ☐ No		(Explain in Remarks)						
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology						
	105	= Total Cover	· 	must be present, unless disturbed or problematic.						
Woody Vine Stratum (Plot size: 30)										
1		☐ Yes ☐ No		Traduca basis						
2				Hydrophytic						
		☐ Yes ☐ No = Total Cover								
Remarks (Include photo numbers here or on a separate she		– 10tai Cover								
remarks (merude photo numbers here or on a separate sne	Ct).									



EXHIBIT H: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Profile Description: (Des	scribe to the de	pth needed to d	locument the indi	icator or cor	nfirm the al	osence of	indicators)
Donth (in)	<u>Matrix</u>		<u> </u>	Redox Featur	es		Torrtura	Domentes
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type1	Loc2	Texture	<u>Remarks</u>
0-36	10 YR 2/1	100					SiCL	
36+	10 YR 5/2	100					SiCL	
				·	·	· <u> </u>		
								
								
								
¹ Type: C=Concentration, l	D=Depletion, RM	M=Reduced Ma	trix, MS = Masked	d Sand Grain	s. ² Loca	tion: PL=	Pore Lining	g, M=Matrix
Hydric Soil Indicators:								Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)			☐ Sandy Gley		54)			Coast Prairie Redox (A16) (LRR K, L, R)
Histic Epipedon (A2)			Sandy Red					☐ Iron-Manganese Masses (F12) (LRR K, L, R)
Black Histic (A3)			☐ Stripped M					Dark Surface (S7) (LRR K, L)
Hydrogen Sulfide (A4			Loamy Mu					5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
☐ Stratified Layers (A5) ☐ 2 cm Muck (A10)			☐ Loamy Gle☐ Depleted M	•	F2)			☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
Depleted Below Dark	Surface (A11)		☐ Redox Dari		5)			Other (Explain in Remarks)
☐ Thick Dark Surface (A			☐ Depleted D	,	*		:	Indicators of hydrophytic vegetation and wetland
☐ Sandy Mucky Mineral			☐ Redox Dep					hydrology must be present, unless disturbed
								or problematic.
Restrictive layer (if obser	rved):							
Туре:								Hydric Soil Present? ☐ Yes ☒ No
Depth (in):								
Remarks:								
					01.0017			
				HYDK	OLOGY			
Wetland Hydrology Indi								
	rimary Indicators	s (minimum of o	one is required; ch					Secondary Indicators (minimum of two required)
Surface Water (A1)			☐ Water Stain		B9)			Surface Soil Cracks (B6)
High Water Table (A2	2)		☐ Aquatic Fa					Drainage Patterns (B10)
☐ Saturation (A3) ☐ Water Marks (B1)			☐ True Aquat	•				☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8)
Sediment Deposits (B)	2)		☐ Hydrogen S			Poots (C3)		Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	_/		☐ Presence of	-	_	(00)		Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B	4)		Recent Iron		. ,	ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B5)			☐ Thin Muck	Surface (C7)			FAC-Neutral Test (D5)
☐ Inundation Visible on	Aerial Imagery	(B7)	☐ Gauge or V	Vell Data (D	9)			
☐ Sparsely Vegetated Co	oncave Surface (B8)	Other (Exp	lain in Rema	rks)			
Field Observations:								
Surface Water Present?	☐ Ye	es 🛛 No	Depth (in):					
Water Table Present?	☐ Ye	es 🛛 No	Depth (in):					Wetland Hydrology Present? ☐ Yes ☒ No
Saturation Present?	⊠ Ye	s 🗌 No	Depth (in): 27					victiana fryurology fresent:
(includes capillary fringe))							
Describe Recorded Data (s	stream gage, mo	nitoring well, as	erial photos, previo	ous inspectio	ns), if availa	able:	•	
Remarks:								



1997 (6.2)									
Project/Site: Minnesota River Greenway - Eagan Alignmen	nt	City/Count	y: Eagan/Dak	ota	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:		1	Datum:				
Soil Map Unit Name: Udorthents			WI Classificati						
•	:	⊠ Yes	_						
Are climatic/hydrologic conditions on the site typical for the Are Vegetation , Soil , or Hydrology isignificant	•	△ Tes		no explain in remarks circumstances" preser					
Are Vegetation , Soil , or Hydrology asignment	•			plain any answers in					
Ale vegetation [1, 50] [1, 0] Hydrology [1] naturally p		ARY OI	F FINDING	•	Remarks.)				
Hydrophytic Vegetation Present? ☐ Yes ☐ No	501,11,		11.121.10			_			
Hydric Soil Present? ☐ Yes ☐ No			Is the Sample	ed Area within	☐ Yes ⊠ No				
Wetland Hydrology Present? ☐ Yes ☐ No			a wetland?	'					
Remarks:									
Remarks.									
	VEGETATION	I – Use sc	ientific nam	es of plants					
Tree Stratum (Plot Size: 30)	Absolute % Cover		int Species?	Indicator Status	Dominance Test Worksheet:				
· · · · · · · · · · · · · · · · · · ·	Absolute /0 Cover			mulcator Status	Number of dominant				
1			es 🗌 No		species that are OBL,				
2		∐ Y€	es 🗌 No		FACW, or FAC: 2 (A)				
3			es 🗌 No		Total number of dominant species				
4			es 🗌 No		across all strata: 2 (B)				
5		☐ Yee	es 🗌 No		Percent of dominant				
		= Total	Cover		species that are OBL, FACW or FAC: 100% (A/B)				
Saplings/Shrub Stratum (Plot Size: 15)					Prevalence Index Worksheet:	_			
1		ПΥ	es 🗌 No		Total % Cover of: Multiply By:				
2			es 🗌 No		OBL species: 40 x 1 40				
3			es 🗌 No		FACW species: 60 x 2 120				
4			es 🗌 No		FAC species: x 3				
5			es 🗌 No		FACU species: 2 x 4 8				
		= Total	Cover		UPL species: x 5				
Herb Stratum (Plot size: 5)					Column Totals: 102 (A) 168 (B)				
Phalaris arundinacea	50	⊠ Y€	es 🗌 No	FACW	Prevalence Index (B/A) = 1.6				
2. Carex lacustris	40	⊠ Y€	es 🗌 No	OBL	Hydrophytic Vegetation Indicators:				
3. Phragmites australis	10	☐ Yee	es 🛛 No	FACW	□ Rapid Test for Hydrophytic Vegetation				
4. Cirsium vulgare	2		es 🛛 No	FACU	☑ Dominance Test is >50%				
5		□ Ye	es 🗌 No		☑ Prevalence Index is ≤ 3.0¹				
6			es 🗌 No		☐ Morphological Adaptations¹ (Provide				
7		П Ү	es 🗌 No		supporting data in Remarks or on separate sheet	t)			
8		_	es 🗆 No		☐ Problematic Hydrophytic Vegetation				
9			es 🗌 No		(Explain in Remarks)				
10		_	_		¹ Indicators of hydric soil and wetland hydrology	v			
10.			es No		must be present, unless disturbed or problematic				
Woods Vine Stretum (Districe: 20)	102	= 100	tal Cover						
Woody Vine Stratum (Plot size: 30)		_	_						
1		☐ Yee	es 🗌 No		Hydrophytic ⊠ Yes □ No				
2			es 🗌 No		Vegetation Present?				
	<u> </u>	= Tot	tal Cover						
Remarks (Include photo numbers here or on a separate shee	et):								



Profile Description: (Descri	he to the dent	h needed to	locument the indi	estor or cor		beance of i	indicators	1
Trome Description. (Descri	Matrix	n needed to t		edox Featur		osence of 1	muicators	· <i>)</i>
Depth (in)	r (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
	YR 3/1	100	<u>Color (moist)</u>	70	<u> 1340</u>	<u> 1000</u>	SiL	
								
19+ 10	YR 3/2	100					SiL	
								
¹ Type: C=Concentration, D=D	Denletion RM:	=Reduced Ma	trix MS = Masked	Sand Grain	s ² I oca	tion: PI =F	Pore Linin	g, M=Matrix
Hydric Soil Indicators:	repression, rest	-reduced ivid	erra, mis – musico	Build Gruin	is. Loca	ition. TE-I		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)			☐ Sandy Gley	ed Matrix (S	S4)			Coast Prairie Redox (A16) (LRR K, L, R)
☐ Histic Epipedon (A2)			☐ Sandy Redo		.,			☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Black Histic (A3)			☐ Stripped Ma	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)
☐ Hydrogen Sulfide (A4)			☐ Loamy Muc	ky Mineral	(F1)			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
☐ Stratified Layers (A5)			Loamy Gley		(F2)			☐ Very Shallow Dark Surface (TF12)
2 cm Muck (A10)			☐ Depleted M					Other (Explain in Remarks)
Depleted Below Dark Sur			Redox Dark					
☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1			☐ Depleted Da ☐ Redox Depr					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed
☐ Sandy Mucky Milleral (S)	1)		☐ Redox Depi	essions (Fo	,			or problematic.
Restrictive layer (if observed	1):							or proofemate.
	-)•							Hydric Soil Present? ☐ Yes ☒ No
Type:								Hydric Soil Present? ☐ Yes ⊠ No
Depth (in):								
Remarks:								
				HYDR	OLOGY			
Wetland Hydrology Indicate	ors:							
Prima	rv Indicators (minimum of	one is required; che	ck all that a	pply)			Secondary Indicators (minimum of two required)
Surface Water (A1)	.,		☐ Water Stain					Surface Soil Cracks (B6)
☐ High Water Table (A2)			Aquatic Fau	•	2,,			Drainage Patterns (B10)
Saturation (A3)			☐ True Aquati		14)			☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)			☐ Hydrogen S	ulfide Odor	(C1)			Crayfish Burrows (C8)
☐ Sediment Deposits (B2)			☐ Oxidized Rl	-	-	Roots (C3)		☐ Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)			Presence of					Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)			Recent Iron			ils (C6)		Geomorphic Position (D2)
☐ Iron Deposits (B5)	· 1 7 (T	.T.)	☐ Thin Muck	•	*			☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aer☐ Sparsely Vegetated Conca			☐ Gauge or W ☐ Other (Expl					
Field Observations:	ive Surface (B	5)	☐ Other (Expr	am m Rema	шкэ)			
		⊠ N.	Don't Colo					
Surface Water Present?	Yes		Depth (in): Depth (in):					
Water Table Present?	☐ Yes		_					Wetland Hydrology Present? ☐ Yes ☒ No
Saturation Present?	☐ Yes	⊠ No	Depth (in):					
(includes capillary fringe)					\ .c ::	1.1		
Describe Recorded Data (strea	am gage, moni	toring well, a	erial photos, previo	us inspectio	ns), if availa	able:		
Remarks:								



16.50 W 2011									
Project/Site: Minnesota River Greenway - Eagan Alignme	nt	City/County: Eagan/D	D akota	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 Classific							
Are climatic/hydrologic conditions on the site typical for the	is time of year?	⊠ Yes □ No	(if no explain in remark	(2)					
Are Vegetation □, Soil □, or Hydrology □ significan	•		al circumstances" prese						
Are Vegetation □, Soil □, or Hydrology □ naturally	-		explain any answers in						
The regention, son, or 11, allotogy immunity p		IARY OF FINDIN	*						
Hydrophytic Vegetation Present? ✓ Yes No									
Hydric Soil Present? ☐ Yes ☐ No			pled Area within	☐ Yes ⊠ No					
Wetland Hydrology Present? ☐ Yes ☒ No		a wetland	?						
Remarks:									
icinarks.									
	VECETATION	I – Use scientific na	umes of plants						
Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	-	Dominance Test Worksheet:					
	Absolute /o Cover	Yes No	indicator Status	Number of dominant					
1				species that are OBL,					
2		Yes No		FACW, or FAC: 2 (A)					
3		☐ Yes ☐ No		Total number of dominant species					
4		☐ Yes ☐ No		across all strata: 2 (B)					
5		☐ Yes ☐ No		Percent of dominant					
		= Total Cover		species that are OBL, FACW or FAC: 100% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:					
Rhamnus cathartica	5	∑ Yes □ No	FAC	Total % Cover of: Multiply By:					
2		☐ Yes ☐ No		OBL species: x 1					
3		☐ Yes ☐ No		FACW species: 100 x 2 200					
4		☐ Yes ☐ No		FAC species: 5 x 3 15					
5		☐ Yes ☐ No		FACU species: x 4					
J	5	= Total Cover		UPL species: x 5					
Harle Charles (Diet sies, 5)	3	= Total Cover							
Herb Stratum (Plot size: 5)				()					
Phalaris arundinacea	100	⊠ Yes □ No	FACW	Prevalence Index (B/A) = 2.0					
2		☐ Yes ☐ No		Hydrophytic Vegetation Indicators:					
3		☐ Yes ☐ No		Rapid Test for Hydrophytic Vegetation					
4		☐ Yes ☐ No		☑ Dominance Test is >50%					
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$					
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)					
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation					
9		☐ Yes ☐ No		(Explain in Remarks)					
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology					
	110	= Total Cover		must be present, unless disturbed or problematic.					
Woody Vine Stratum (Plot size: 30)									
1		☐ Yes ☐ No	_	Hudnonkutio					
2				Hydrophytic					
		☐ Yes ☐ No = Total Cover		_					
Remarks (Include photo numbers here or on a separate shee		– Total Cover							
remarks (merude photo numbers here or on a separate snee									



EXHIBIT H: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Profile Description:	(Describe to the de	pth needed to	locument the indi	cator or co	nfirm the a	bsence of	indicators	s.)
_	Matrix	_		dedox Featu				
Depth (in)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	<u>Remarks</u>
0-8	10 YR 2/1	100					SiL	
8-20	10 YR 5/4	100					SiL	
20+	10 YR 4/6	100						
20+	10 1 K 4/0	100					SL	
								
¹Type: C=Concentrat	ion, D=Depletion, RN	M=Reduced Ma	trix, MS = Masked	l Sand Grain	ns. ² Loca	tion: PL=I	Pore Linin	g, M=Matrix
Hydric Soil Indicate	ors:							Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)			☐ Sandy Gley	ed Matrix (S4)			☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Histic Epipedon	(A2)		☐ Sandy Red	ox (S5)				☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Black Histic (A3)		☐ Stripped M	atrix (S6)				☐ Dark Surface (S7) (LRR K, L)
☐ Hydrogen Sulfide			☐ Loamy Mu	•	, ,			5 cm Mucky Peat or Peat (S3) (LRR, K, L, R)
Stratified Layers	. ,		Loamy Gle	-	(F2)			☐ Very Shallow Dark Surface (TF12)
2 cm Muck (A10			☐ Depleted M		16)			Other (Explain in Remarks)
☐ Depleted Below: ☐ Thick Dark Surfa			☐ Redox Darl ☐ Depleted D					To discourse of hardworks in secretarion and section d
Sandy Mucky M	, ,		Redox Dep					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed
Sandy Mucky M	merar (51)		□ Redox Dep	103310113 (1 ("			or problematic.
Restrictive layer (if	observed):							1
	,							Hydric Soil Present? ☐ Yes ☒ No
Type:								Tryunc Son Frescht.
Depth (in):								
Remarks.								
				HYDR	OLOGY			
Wetland Hydrology	Indicators:							
	Primary Indicators	s (minimum of	one is required; ch	eck all that	apply)			Secondary Indicators (minimum of two required)
☐ Surface Water (A	1)		☐ Water Stair	ned Leaves	(B9)			☐ Surface Soil Cracks (B6)
☐ High Water Tabl	e (A2)		☐ Aquatic Fa	una (B13)				☐ Drainage Patterns (B10)
Saturation (A3)			☐ True Aquat	ic Plants (B	14)			☐ Dry-Season Water Table (C2)
☐ Water Marks (B1			☐ Hydrogen S					☐ Crayfish Burrows (C8)
Sediment Deposi			Oxidized R			Roots (C3)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B			☐ Presence of			1 (00)		Stunted or Stressed Plants (D1)
☐ Algal Mat or Cru ☐ Iron Deposits (B:			☐ Recent Iron ☐ Thin Muck			11S (C6)		☐ Geomorphic Position (D2) ☐ FAC-Neutral Test (D5)
	le on Aerial Imagery ((B7)	☐ Gauge or V	•	*			AC-Neutral Test (D3)
l	ed Concave Surface (Other (Exp		· ·			
Field Observations:		,						
Surface Water Preser		s 🛛 No	Depth (in):					
Water Table Present?		s 🛛 No	Depth (in):					
			Depth (in): 15					Wetland Hydrology Present? ☐ Yes ☐ No
Saturation Present?		s 🗌 No	Dopui (iii). 13					
(includes capillary fr Describe Recorded D	• .	nitoring well a	erial photos previo	ous inspection	ons) if avail	able:		
Describe Recorded D	am (stream gage, moi		pilotos, pievie	as mspeem	, 11 avall			
-								
Remarks:								



C43 & Sm.									
Project/Site: Minnesota River Greenway - Eagan Alignme	ent	City/County: Eagan/Dak	tota	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 Classificat	ion:						
Are climatic/hydrologic conditions on the site typical for the	nis time of year?	Xes □ No (if	no explain in remark	s)					
Are Vegetation □, Soil □, or Hydrology □ significan	•	`	circumstances" prese						
Are Vegetation □, Soil □, or Hydrology □ naturally	problematic?	(If needed, ex	xplain any answers in	Remarks.)					
	•	ARY OF FINDING	•						
Hydrophytic Vegetation Present? ☐ Yes ☐ No									
Hydric Soil Present? ☐ Yes ☒ No		-	ed Area within	☐ Yes ⊠ No					
Wetland Hydrology Present? ☐ Yes ☒ No		a wetland?							
Remarks:									
Kemara.									
	VECETATION	I II:4:£:	£-1						
The grant of the g		V – Use scientific nam	•						
Tree Stratum (Plot Size: 30)	Absolute % Cover		Indicator Status	Dominance Test Worksheet:					
Acer negundo	90	Yes □ No	FAC	Number of dominant species that are OBL,					
2		☐ Yes ☐ No		FACW, or FAC: 2 (A)					
3		☐ Yes ☐ No		Total number of					
4		☐ Yes ☐ No		dominant species across all strata: 3 (B)					
5		☐ Yes ☐ No		Percent of dominant					
	90	= Total Cover		species that are OBL, FACW or FAC: 67% (A/B)					
Saplings/Shrub Stratum (Plot Size: 15)				Prevalence Index Worksheet:					
1		☐ Yes ☐ No		Total % Cover of: Multiply By:					
		Yes No							
2				OBL species: x 1					
3		☐ Yes ☐ No		FACW species: 40 x 2 80					
4		Yes No		FAC species: 90 x 3 270					
5		☐ Yes ☐ No		FACU species: 30 x 4 120					
		= Total Cover		UPL species: x 5					
Herb Stratum (Plot size: 5)				Column Totals: 160 (A) 470 (B)					
Laportea canadensis	30	Yes □ No	FACW	Prevalence Index (B/A) = 2.9					
Glechoma hederacea	30	Yes 🗌 No	FACU	Hydrophytic Vegetation Indicators:					
3. Phalaris arundinacea	10	☐ Yes ⊠ No	FACW	Rapid Test for Hydrophytic Vegetation					
4		☐ Yes ☐ No		☑ Dominance Test is >50%					
5		☐ Yes ☐ No		\square Prevalence Index is $\leq 3.0^{1}$					
6		☐ Yes ☐ No		☐ Morphological Adaptations¹ (Provide					
7		☐ Yes ☐ No		supporting data in Remarks or on separate sheet)					
8		☐ Yes ☐ No		☐ Problematic Hydrophytic Vegetation					
9		☐ Yes ☐ No		(Explain in Remarks)					
10		☐ Yes ☐ No		¹ Indicators of hydric soil and wetland hydrology					
	70	= Total Cover		must be present, unless disturbed or problematic.					
Woody Vine Stratum (Plot size: 30)	70	20111 20101							
1		☐ Yes ☐ No		Hydrophytic					
2		Yes No		· egemmon I resent.					
		= Total Cover							
Remarks (Include photo numbers here or on a separate she	et):								



Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
olor (moist)			Loc²	Texture	<u>Remarks</u>			
	_			SiL				
								
				SICL				
				-				
			-					
								
								
x, $MS = Masked Sa$	and Grains.	. ² Locat	ion: PL=F	ore Linin				
_					Indicators for Problematic Hydric Soils ³ :			
		1)			Coast Prairie Redox (A16) (LRR K, L, R)			
-					☐ Iron-Manganese Masses (F12) (LRR K, L, R)			
		E1)			Dark Surface (S7) (LRR K, L)			
					☐ 5 cm Mucky Peat or Peat (S3) (LRR, K, L, R) ☐ Very Shallow Dark Surface (TF12)			
		' <i>∠)</i>			☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)			
_		1			Other (Explain in Remarks)			
					³ Indicators of hydrophytic vegetation and wetland			
-		/			hydrology must be present, unless disturbed			
					or problematic.			
					Hydric Soil Present? ☐ Yes ☒ No			
	HYDRO	DLOGY						
	HYDRO	DLOGY						
is required; check					Secondary Indicators (minimum of two required)			
	all that ap	ply)			Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)			
is required; check	all that ap	ply)						
is required; check Water Stained Aquatic Fauna True Aquatic I	Leaves (Bar (B13)	<u>ply)</u> 9) 4)			□ Surface Soil Cracks (B6) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2)			
is required; check Water Stained Aquatic Fauna True Aquatic I Hydrogen Sulf	Leaves (Base) Le	p <u>ly)</u> 9) 4) C1)			□ Surface Soil Cracks (B6) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Crayfish Burrows (C8)			
is required; check Water Stained Aquatic Fauna True Aquatic I Hydrogen Sulf Oxidized Rhiz	Leaves (B 1 (B13) Plants (B14 fide Odor (cospheres o	ply) 9) 4) C1) n Living R	oots (C3)		□ Surface Soil Cracks (B6) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Crayfish Burrows (C8) □ Saturation Visible on Aerial Imagery (C9)			
is required; check Water Stained Aquatic Fauna True Aquatic I Hydrogen Sulf Oxidized Rhiz Presence of Re	Leaves (B 1 (B13) Plants (B14 fide Odor (cospheres ocurrents)	ply) 9) 4) C1) on Living R			□ 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)			
is required; check Water Stained Aquatic Fauna True Aquatic I Hydrogen Sulf Oxidized Rhiz Presence of Re Recent Iron Re	Leaves (B 1 (B13) Plants (B14 fide Odor (cospheres of educed Iron eduction in	ply) 9) 4) C1) In Living R In (C4) Tilled Soi			□ 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)			
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	Sandy Gleyed Sandy Redox Stripped Matr Loamy Mucky Loamy Gleyed Depleted Matr Redox Dark S Depleted Dark	Sandy Gleyed Matrix (S4 Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (Loamy Gleyed Matrix (F3) Redox Dark Surface (F6)	, MS = Masked Sand Grains. ² Locat □ 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)	olor (moist) % Type¹ Loc²	olor (moist) % Type¹ Loc² SiL SiCL SiCL MS = Masked Sand Grains. ²Location: PL=Pore Lining 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)			



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*.

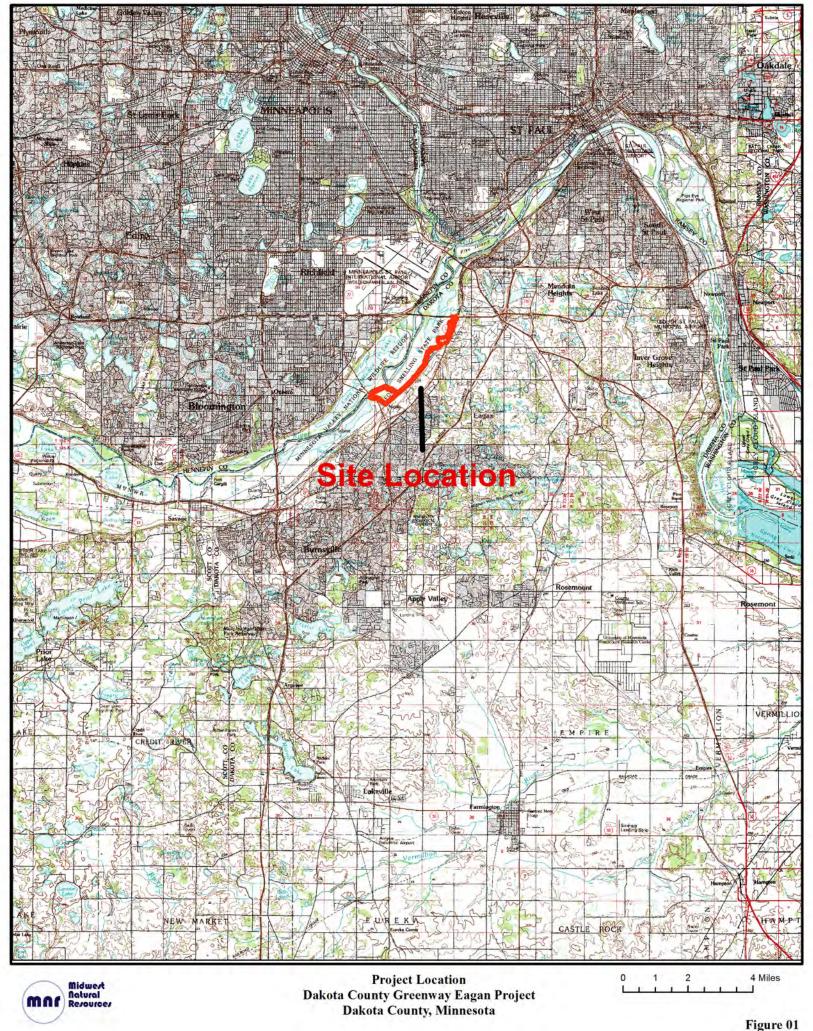
Area 4 appears to be a WMs83 community with dense shrub cover to the south, but fairly open to the north as the shrub cover dissipates. The open component of the complex is dominated by graminoid cover (primarily *Carex lacustris*) with *Bidens trichosperma*, *Equisetum fluviatile*, and *Impatiens capensis*.

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.







MBS Mapped Calcareous Fens Dakota County Greenway Eagan Project Dakota County, Minnesota





Dakota County Greenway Eagan Project Dakota County, Minnesota





August 28, 2013 Field Results Dakota County Greenway Eagan Project Dakota County, Minnesota





August 28, 2013 Field Results Dakota County Greenway Eagan Project Dakota County, Minnesota





August 28, 2013 Field Results Dakota County Greenway Eagan Project Dakota County, Minnesota

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	ļ
Area 1	Fragaria virginiana	ļ
Area 1	Frangula alnus	1
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 Area 1	Rhamnus cathartica	
Area 1	Rorippa sp. 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	1
Area 1	Spartina pectinata	1
Area 1	Taraxacum officinale	1
Area 1	Thalictrum dasycarpum	1
Area 1	Typha sp.	1
Area 1	Viola nephrophylla	
Area 2	Ambrosia artemisiifolia	
Area 2	Amphicarpaea bracteata	1
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
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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 capensis Impatiens pallida	
Area 2	Juncus torrevi	<u> </u>
Area 2 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	J
Area 3	Carex hystericina	5
Area 3		3
AICA J	Carex starilis	25
	Carex sterilis	25
Area 3	Canan atriata	
Area 3 Area 3	Carex stricta	
Area 3 Area 3 Area 3	Cirsium arvense	
Area 3 Area 3		

	To .	T
Area 3	Conyza canadensis	
Area 3	Cornus sericea	
Area 3	Doellingeria umbellata	
Area 3	Equisetum arvense	
Area 3	Erechtites hieraciifolius var. hieraciifolius	1
Area 3	Eriophorum angustifolium subsp. angustifolium	1
Area 3	Eupatorium perfoliatum	
Area 3	Eutrochium maculatum	
Area 3 Area 3	Glyceria striata	
Area 3	Helianthus giganteus	
Area 3	Impatiens capensis Lobelia siphilitica	
Area 3	A	
Area 3	Lycopus americanus	
Area 3	Lycopus uniflorus Lysimachia quadriflora	
Area 3	Maianthemum stellatum	
Area 3	Muhlenbergia richardsonis	
Area 3		
Area 3	Muhlenbergia sp. Oxypolis rigidior	5
Area 3	Pedicularis canadensis	3
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	
	Sparganium eurycarpum	
Area 4	Sparganium eurycarpum	
Area 4 Area 4	Symphyotrichum lanceolatum	
Area 4	Symphyotrichum lanceolatum	

Appendix B

Photos



Photo 01 – Site 1



Photo 02 – Site 2



Photo 03 – Site 3



Photo 04 – Site 4