



PERMIT REPORT

To: MCWD Board of Managers

From: Grace Barlow, Permitting Technician

Date: October 7th, 2021

Re: Permit 19-553; MCES L24 St. Bonifacius Lift Station Reconstruction

Recommendation:

Approval of the requested buffer rule variance

Approval of the permit application with the following conditions;

1. Execution of a Minnehaha Creek Watershed District stormwater facility maintenance agreement
2. Submission of a wetland buffer planting plan
3. Submission of a wetland buffer maintenance and monitoring plan

Introduction:

The Metropolitan Council (Applicant) has applied for a Minnehaha Creek Watershed District (MCWD) permit for upgrades to the existing L24 lift station in Minnetrista. The project triggers the Wetland Conservation Act (WCA) and MCWD's Erosion Control, Stormwater Management, and Wetland Protection rules. The City of Minnetrista is the Local Governance Unit (LGU) for WCA. The project meets the District's Erosion Control and Stormwater Management rules. The project does not meet the District's Wetland Protection rule as the proposed buffers do not meet the required average buffer width, minimum applied buffer widths, or the total required buffer area. These shortfalls are the subject of a variance request. In accordance with established policy, the Board of Managers is asked to consider the application and variance request.

Background:

The Applicant is proposing to reconstruct the existing L24 lift station at the intersection of 4340 Highland Road and State Highway 7 in Minnetrista. The reconstruction will include relocating the existing generator and lift station to the south of the site and the construction of a larger lift station building and associated drive lanes. These upgrades will allow for increased service

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capacity in conjunction with the St. Bonifacius Interceptor project and will also bring the facility into OSHA compliance.

The 0.51 acre parcel contains portions of a Type 3 Shallow Marsh wetland that is continuous around the north, east, and west edges of the property. The portions of wetland that extend onto the boundaries of the parcel are Type 2 Fringe. The City of Minnetrista is the LGU for WCA within its jurisdiction. The wetland was delineated and approved under a Notice of Decision issued by the City of Minnetrista on November 4th, 2015. Additional information pertaining to the distinction between the Type 3 and Type 2 boundaries was reviewed by the City of Minnetrista and approved under a second Notice of Decision issued on November 24th, 2016.

The District implements the Erosion Control, Stormwater Management, and Wetland Protection Rules within the City of Minnetrista. The Erosion Control and Stormwater Management rules are applicable as the project will result in land disturbance in an amount greater than the Erosion Control thresholds and an increase in impervious surface. The District's Wetland Protection rule is applicable because the work triggers the Stormwater Management rule. The Wetland Protection rule requires that a vegetated buffer be established on the edge of any property wetland downgradient from the proposed disturbance. The following rule analysis summarizes the application of the Erosion Control, Stormwater Management, and Wetland Protection rule and the variance request from the applicant.

The initial application and variance request was received by the District on October 9th, 2019. An initial incomplete letter was sent on October 22nd, 2019. The Applicant provided updated submittals on August 19th, 2021 and was deemed complete on September 16th of 2021. The project's public notice period and Board Meeting notice was issued on September 22nd, 2021 and ended on October 6th, 2021.

This permit is before the Board of Managers in accordance with established policy requiring Board consideration of variance requests.

District Rule Analysis

Erosion Control Rule

The District's Erosion Control Rule is applicable to projects proposing at least 5,000 square feet of land disturbance or 50 cubic yards of fill, grading, excavation, or stockpiling. The Applicant is proposing 15,400 sf of disturbance and 2,000 cy of excavation. As a result, this project is subject to review under the District's Erosion Control Rule.

The applicants have provided a Stormwater Pollution Prevention Plan and Erosion Control plan to meet District requirements. Silt fences will be established around all disturbed areas to provide perimeter control, including double layered silt fence along wetland edges. Hydroseed and long-term sod to stabilize areas of disturbance. Inlet protection will also be provided.

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As a result, the proposed project meets the criteria of this rule.

Wetland Protection

The District’s Wetland Protection rule is applicable to projects that propose draining or filling, or excavation in the permanently or semi-permanently flooded basins of type 3, 4, and 5 wetlands or for projects under review for the District’s Stormwater Management or Waterbody Crossings and Structure rules.

The proposed project triggers the District’s Stormwater Management rule and as a result requires review under the District’s Wetland Protection rule. No wetland disturbance is proposed for the project.

According to the District’s Functional Assessment of Wetlands and the delineated boundary, the surrounding wetland is a preserve wetland. As mentioned in the introduction, the parcel is surrounded on three sides by the same continuous, downgradient wetland, resulting in the requirement of one continuous wetland buffer. The existing site layout can be seen in Attachment 3 and the proposed site layout can be seen in Attachment 4

In full, the buffer has been established to the greatest extent possible on site, with buffer perimeter totaling 366 lf, an average buffer width of 34’, and a total buffer area of 12,552 sf.

Because the proposed buffer widths fluctuate in multiple areas across the 366 lf of buffer, analysis of the buffer under this rule is best done by breaking it into three sections to the north, west, and east sides of the parcel. The breakdown of average buffer width, buffer minimum and maximum widths, and average buffer area for each section can be seen in Table 1 below.

			West	North	East	
Required Linear Feet	327	Provided Linear Feet	158	70	113	Total = 366
Required Base Width (ft)	75	Provided Average Base Width (ft)	31	20	51	Average = 34
Required Buffer Area (sf)	24,525	Provided Buffer Area (sf)	4,949	1,862	5,471	Total = 12,552
Allowable Minimum Width (ft)	37.5	Provided Minimum (ft)	19	14	7	

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Allowable Maximum Width (ft)	150	Provided Maximum (ft)	57	70	130	
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Table 1: Required and Provided Buffer Widths and Averages

Per section 6 (b), preserve wetlands require a 75’ average buffer width, with a minimum applied buffer width of 67’. As seen in Table 1, the average buffer width for each section includes 31’ to the west, 21’ to the north, and 51’ to the east. The shortfalls in average buffer width equate to a total buffer area of 12,552 sf which is less than the required 25, 200 sf that would be achieved with a 75’ average. As a result, the application does not meet the minimum buffer width requirements as proposed and has therefore requested a variance from the rule requirement.

Per section 6 (c), buffer widths may vary based on site constraints, provided that a width of at least 50% of the applied buffer width is maintained at all points. For a preserve wetland, the minimum allowable width is 37.5’. As seen in Table 1, all three sections of buffer have points that drop to widths less than the required 37.5’. The application does not meet this section as proposed. The inability to meet the minimum applied buffer width is part of the requested variance from the rule requirement.

Per section 7(b), establishment, maintenance, and monumentation of buffers are to be satisfied through maintenance documents. Submission of a maintenance agreement between the Applicant and MCWD is listed as a condition of approval.

Stormwater Management

The District’s Stormwater Management rule is applicable for any project that creates new or replaces existing impervious surface in a way that affects the direction, peak rate, volume, or water quality of runoff. The construction of a larger lift station building and the associated drive lanes will result in an increase in impervious surface, triggering the District’s rule.

Table 2 below summarizes the size of the project area, area to be disturbed, and existing and proposed impervious amounts.

Size of Site (ac)	Site Drains To	Existing Impervious in Disturbed Area (ac)	Proposed Impervious in Disturbed Area (ac)
0.51 acres (0.354 ac disturbed)	Six Mile Creek	0.073	0.163

Table 2: Project Disturbance and Impervious Amounts

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Per section 5(a) of the rule, redevelopment requirements for sites that are one acre or less in size require the establishment of best Management Practices (BMPs) without a specific rate, volume, or phosphorous treatment scope.

The Applicant has proposed to meet the BMP requirement through the creation of both a sand filtration system and a bioswale. The BMPs are sized to provide rate and phosphorous control at a level that meets District standards for a site one acre or greater in size. This increase in BMP capacity exceeds the baseline stormwater management criteria for this project.

Rate Control

As outlined in section 3 (b), redevelopment projects that are subject to this rule shall result in no net increase in the peak runoff rate for the 1-, 10-, and 100-year rain events. Table 3 below demonstrates the overall reductions achieved on site from the two BMPs.

Storm Event	Existing Rate (cfs)	Proposed Rate (cfs)
-1	0.97	0.97
-10	2.22	1.93
-100	4.5	3.68

Table 3: Existing and Proposed Rates

The addition of the sand filter and bioswale to the site will result in decreases in discharge rate for the 1-, 10-, and 100-year storm events. These reductions meet District rate control requirements for sites that are one acre or greater in size. As a result, the provided rate control exceeds District requirements for a site less than one acre in size.

Phosphorous Reduction

As outlined in subsection 3(c), redevelopment projects that are subject to the volume control requirement of the rule shall provide phosphorous control in an amount equivalent to that which would be achieved through abstraction of one inch of rainfall from the site's impervious. The proposed project is not subject to the volume control requirement, but it is reviewed here as a point of comparison.

The addition of the two BMPs will provide for the filtration of 1.1 inches across the site. Pretreatment for sand filtration system is provided with a proposed grass filter strip while pretreatment to the proposed swale is met with a rip-rap strip.

Overall, the stormwater management requirements for a site under an acre are met through the establishment of the two stormwater BMPs. The applicant is proposing to provide stormwater treatment that exceeds the baseline requirements for the site by providing rate and phosphorus

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reduction in an amount that would be required for a site greater than an acre. These reductions were confirmed by the District engineer.

In summary, the proposed project meets the criteria of the rule.

Variance

The Applicant is requesting a variance to the Wetland Protection rule, specifically for the required average buffer width, minimum applied buffer widths, and the total required buffer area.

The existing lift station was constructed in the early 1970's prior to any wetland buffer requirements. Its sizing and location were both determined based on population needs at that time. The applicant represents that as the lift station nears the end of its service life, improvements are required to allow for an increase in capacity to surrounding neighborhoods as the applicant completes the St. Bonifacius Interceptor project. The applicant represents that these improvements will also bring the facility into OSHA compliance.

The Applicant proposes to provide an average buffer width of 34' across the site, which does not meet the 75' width required for preserve wetlands. The buffer also drops below the allowable minimum width of 37.5' at various locations across its entirety. As a result, the total buffer area on site does not meet the required amount, providing 12,552 sf of the required 24,525 sf.

The District's Variance and Exception Rule states that the Managers may grant a variance from a provision of the rules if the applicant demonstrates the following:

- Because of special conditions inherent to the property that do not apply generally to other land or structures in the District, strict compliance with a provision of the a District rule will cause undue hardship to the applicant;
- The hardship was not created by the applicant, its owner or representative, or a contractor. Economic hardship is not grounds for issuing a variance;
- Granting the variance will not serve merely as a convenience to the applicant;
- There is no feasible and prudent alternative to the proposed activity requiring the variance; and
- Granting the variance will not impair or be contrary to the intent of the rules.

The Applicant cites limited site size of only half an acre, existing right of way, and setbacks from existing roads and utilities, as special conditions inherent to the property. With these existing conditions, establishing the full 75' buffer would make any sort of upgrades or expansion to the lift station infeasible. The Applicant states that strict compliance with the 75' buffer requirement would result in either a no-build scenario or requiring work to occur entirely within the existing footprint of the lift station. Both situations are not feasible as neither would allow for the

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necessary capacity increase of OSHA compliance upgrades. Further, working within the existing footprint of the lift station would still result in buffer shortfalls. Additional alternatives beyond the two required for a variance request were also provided by the Applicant, The full explanations for why these alternatives can be found in Attachment 2.

To further support the request for a variance, the applicant has also submitted materials indicating the project is providing stormwater treatment beyond baseline requirements in order to enhance the natural resource benefit beyond what would be provided under strict adherence to the rule. Currently, no permanent stormwater BMPs or wetland buffers exist on site. Under these conditions, any overland flow from the site's impervious surface enters the wetland untreated. The addition of the sand filtration system and the bioswale, in conjunction with the establishment of wetland buffers, will provide stormwater treatment on a site that does not currently have any, . Under strict compliance with the rule, establishing a 75' buffer and a BMP with no treatment scope would result in a 32% removal of both total suspended solids and total phosphorous. Under the variance proposal, the establishment of the two BMPs will instead provide a 60% removal of total suspended solids and a 36% removal in total phosphorous from the site's runoff. As a result, the variance as proposed captures a greater pollutant load than would be achieved with the compliant buffer.

Staff concurs in the factual statements and technical justifications state above and in the variance application. According, staff finds there is an adequate technical basis and justification to grant the requested variance.

Summary:

The Metropolitan Council has applied for a District permit for Erosion Control, Wetland Protection, and Stormwater Management permit in order to provide capacity upgrades for the L24 lift station in Minnetrista. The applicant has also applied for a variance from the buffer width requirement of the Wetland Protection rule due to site constraints causing shortfalls in buffer width averages, minimum applied buffer widths, and total buffer area provided.

The proposed project does not meet minimum width requirements due to the size of the site and existing characteristics including easements and gas lines. Establishing a 75' buffer on the site would make it so that the proposed upgrades could not occur.

The applicant has provided materials showing that the site is providing stormwater treatment in an amount that is beyond what would be a required for the parcel size of 0.51 acres and is providing water quality benefits that exceed what would be achieved by the wetland buffer alone.

The permit application is currently complete. Staff recommends approval of the variance and approval of the permit with the condition that maintenance and monitoring documents are provided.

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Attachments:

- 1. Signed Application Form**
- 2. Variance Request Form**
- 3. Existing Site Conditions**
- 4. Proposed Site Conditions and Wetland Buffer Figure**
- 5. Stormwater Management Narrative**
- 6. WCA Notice of Decision 2015**
- 7. Updated Notice of Decision 2016**

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WATER RESOURCE PERMIT APPLICATION FORM

Use this form to notify/apply to the Minnehaha Creek Watershed District (MCWD) of a proposed project or work which may fall within their jurisdiction. Fill out this form completely and submit with your site plan, maps, etc. to the MCWD at:
15320 Minnetonka Blvd. Minnetonka, MN 55345.

Keep a copy for your records.

YOU MUST OBTAIN ALL REQUIRED AUTHORIZATIONS BEFORE BEGINNING WORK.

1. Name of each property owner: Jeannine Clancy - Metropolitan Council
Mailing Address: 390 Robert St N City: St. Paul State: MN Zip: 55101
Email Address: jeannine.clancy@metc.state.mn.us Phone: 651-602-1210 Fax: _____

2. Property Owner Representative Information (not required) (licensed contractor, architect, engineer, etc...)
Business Name: Foth Representative Name: Bill Johnson
Business Address: 8550 Hudson Blvd N Suite 105 City: St. Paul State: MN Zip: 55042
Email Address: Bill.Johnson@foth.com Phone: 651-288-8604 Fax: 651-288-8551

3. Project Address: 4340 Highland Road & 4275 Creek View Circle City: Minnetrista
State: MN Zip: 55375 Qtr Section(s): NE 1/4 Section(s): 32 Township(s): 117 Range(s): 24
Lot: 001 Block: 001 Subdivision: Unplatted 32 117 24 PID: 3211724130005

4. Size of project parcel (square feet or acres): 0.51 acre
Area of disturbance (square feet): 15,400 SF Volume of excavation/fill (cubic yards): 2,000 CY
Area of existing impervious surface: 0.073 acre Area of proposed impervious surface: 0.163
Length of shoreline affected (feet): N/A Waterbody (& bay if applicable): N/A

5. Type of permit being applied for (Check all that apply):
 EROSION CONTROL WATERBODY CROSSINGS/STRUCTURES
 FLOODPLAIN ALTERATION STORMWATER MANAGEMENT
 WETLAND PROTECTION APPROPRIATIONS
 DREDGING ILLICIT DISCHARGE
 SHORELINE/STREAMBANK STABILIZATION

6. Project purpose (Check all that apply):
 SINGLE FAMILY HOME MULTI FAMILY RESIDENTIAL (apartments)
 ROAD CONSTRUCTION COMMERCIAL or INSTITUTIONAL
 UTILITIES SUBDIVISIONS (include number of lots)
 DREDGING LANDSCAPING (pools, berms, etc.)
 SHORELINE/STREAMBANK STABILIZATION OTHER (DESCRIBE): _____

7. NPDES/SDS General Stormwater Permit Number (if applicable): _____

8. Waterbody receiving runoff from site: Six Mile Creek

9. Project Timeline: Start Date: 1/1/2021 Completion Date: 6/30/2022

Permits have been applied for: City County MN Pollution Control Agency DNR COE
Permits have been received: City County MN Pollution Control Agency DNR COE

By signing below, I hereby request a permit to authorize the activities described herein. I certify that I am familiar with MCWD Rules and that the proposed activity will be conducted in compliance with these Rules. I am familiar with the information contained in this application and, to the best of my knowledge and belief, all information is true, complete and accurate. I understand that proceeding with work before all required authorizations are obtained may be subject to federal, state and/or local administrative, civil and/or criminal penalties.

Jeannine Clancy
Signature of Each Property Owner

9/24/19
Date
Received
OCT 04 2019
By: _____

REQUEST FOR VARIANCE AND STATEMENT OF HARDSHIP

MINNEHAHA CREEK WATERSHED DISTRICT (MCWD)
15320 MINNETONKA BLVD.
MINNETONKA, MN 55345

Phone: 952-471-0590
Fax: 952-471-0682

A request for a Variance must be accompanied by a MCWD Water Resources Application

Project Details:

Project address: _____ City: _____ State: _____ Zip: _____
County: _____ Property ID number (PID): _____

The Board of Managers may hear requests for variances from strict compliance with provisions of the District Rules in instances where strict enforcement of the rules would cause an undue hardship because of circumstances unique to the property under consideration. The Board of Managers may grant variances where it is demonstrated that such action will remain in spirit and with the intent of these rules. An applicant granted a variance from full compliance with a requirement of the rules would be required to meet the requirement to the greatest degree feasible short of full compliance. A variance must be approved by a two-thirds majority of managers voting.

To grant a variance, the Board of Managers must determine, based on a showing by the applicant:

- That because of special conditions inherent to the property, which do not apply generally to other land or structures in the District, strict compliance with a provision of a District rule will cause undue hardship to the applicant or property owner;
- That the hardship was not created by the landowner, the landowner's agent or representative, or a contractor. Economic hardship is not grounds for issuing a variance.
- That granting such variance will not merely serve as a convenience to the applicant.
- That there is no feasible and prudent alternative to the proposed activity requiring the variance.
- That granting the variance will not impair or be contrary to the intent of these rules.

A variance will remain valid only as long as the underlying permit remains valid.

A violation of any condition of approval of a permit subject to a variance shall constitute grounds for termination of the variance.

Variance Requested From MCWD Rule(s):

- Erosion Control
- Floodplain Alteration
- Wetland Protection
- Shoreline & Streambank Stabilization

- Waterbody Crossings & Structures
- Stormwater Management
- Appropriations
- Illicit Discharge

Provision(s) and Requirement(s) of the Rule(s):

Requested Variance:

Please complete the below narrative to be used as the variance justification that will be considered by the Board of Managers. Please note that economic hardship is not grounds for issuing a variance.

Describe the special conditions inherent to the property and how strict compliance with the rule will cause an undue hardship.

Describe how the special condition was not created by the applicant, the representative, or a contractor.

Provide a minimum of two alternatives that were considered and why they were rejected to demonstrate that there is no feasible and prudent alternative to the proposed activity requiring the variance.

Referring to the Policy of the Rule(s), describe how the intent of the rule(s) will be met.



This map was created using Sambatek's Geographic Information Systems (GIS), it is a compilation of information and data from various sources. This map is not a surveyed or legally recorded map and is intended to be used as a reference. Sambatek is not responsible for any inaccuracies contained herein.



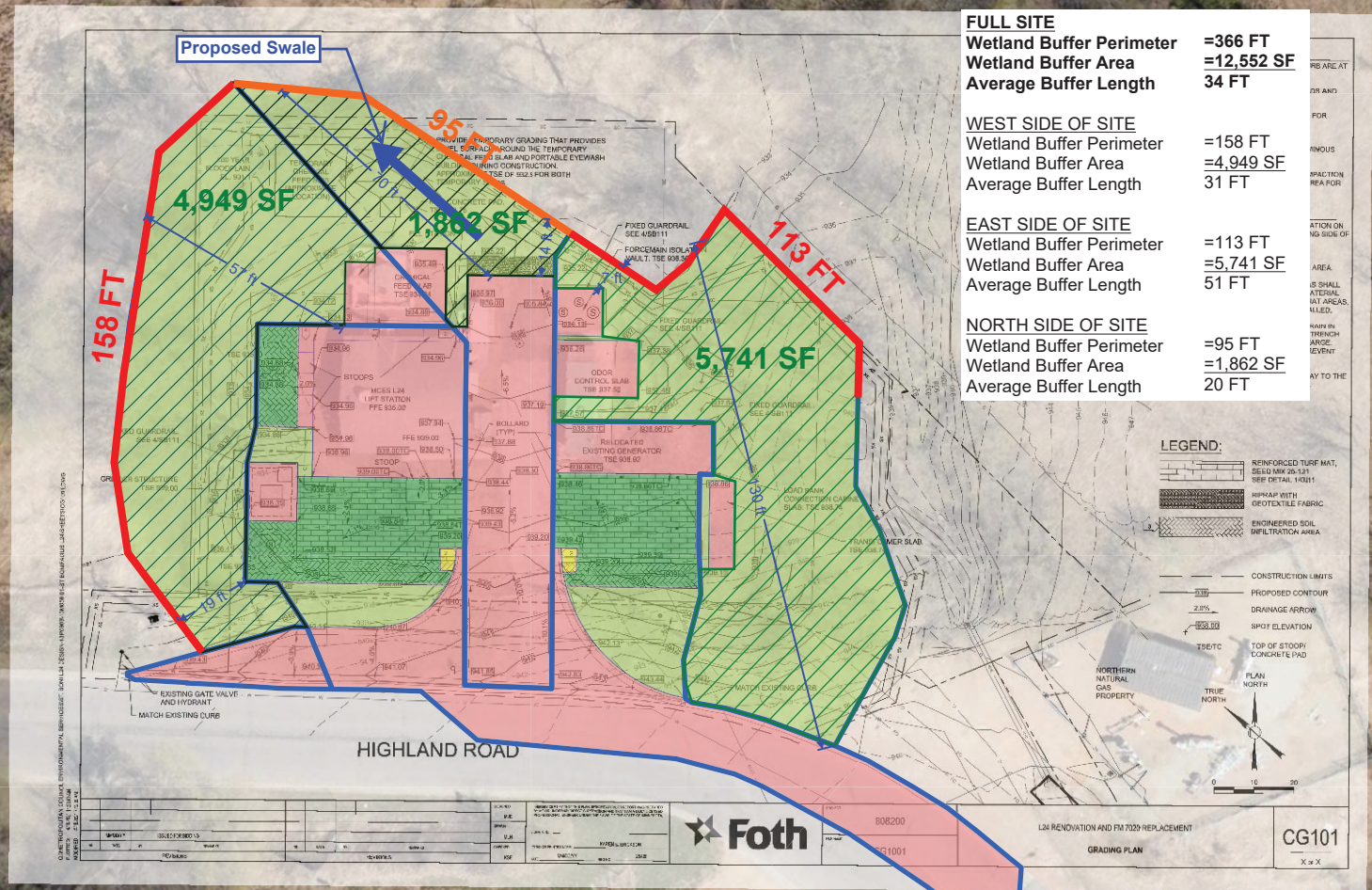
Existing Drainage Map

MCES L-24 Reconstruction

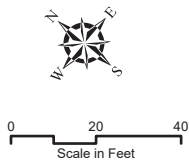
St. Bonifacius, Minnesota

Legend

- Existing Drainage Areas
- Pervious Area
- Impervious Area



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Proposed Wetland Buffer Configuration

MCES L-24 Reconstruction

St. Bonifacius, Minnesota

Legend

- Proposed Drainage Areas
- Impervious Area
- Pervious Area
- Armored Turf Sand Filtration
- Proposed Grass Filter Strip

MINNEHAHA CREEK WATERSHED DISTRICT PERMIT APPLICATION
AND
STORMWATER MANAGEMENT PLAN
FOR
L-24 LIFT STATION
ST. BONIFACIUS, MN

PREPARED BY:
EMILY CASTANIAS

APRIL 26, 2021

PROJECT SCOPE AND LOCATION

The proposed redevelopment project is located off Highland Road in St. Bonifacius within the Minnehaha Creek Watershed District (MCWD). The 0.51-acre site contains a 710 SF lift station building, a generator, an isolation valve vault, and access lane. The project proposes upgrading an existing lift station to meet the anticipated increased service capacity for future growth in conjunction with the St. Bonifacius Interceptor project as well as bring the facility into OSHA-compliance. The proposed upgrades include relocating the existing generator and lift station to the south, addition of an isolation valve vault and a larger lift station building with increased capacity and associated drive lanes for operations and maintenance access. The lift station is owned and operated by the Metropolitan Council Environmental Services (MCES). FOTH is responsible for preparation of construction documents.

WETLAND RULE REQUIREMENTS

A wetland delineation for the site was approved by the City of Minnetrista on November 4, 2015. No wetland impacts or mitigation are proposed at this time. From the approved wetland boundary, the wetland buffer width base requirement for Preserve Management Class is 75 feet. Due to the limited site size, existing right-of-way, setbacks from existing gas lines and associated easements, and proximity of wetland surrounding the site, the average wetland buffer provided is 34 feet. The average buffer for each side of runoff is 21 feet, 31 feet, and 51 feet for the north, west, and east side of the project site respectively. These buffer lengths fall short of the 75-foot requirement. Since the wetland buffer requirement is not satisfied, MCES proposes applying for a variance to this rule with the intent to exceed the stormwater rule requirements and meet the overall spirit and intent of the wetland buffer requirement.

Buffer Averages			North	West	East
Required Base Width	75 ft	Provided Average Width	20 ft	31 ft	51 ft
Linear feet of Buffer Required	327 ft	Linear Feet of Buffer Provided	70 ft	158 ft	113 ft
Required Area based on 75'	24,525 sf	Provided Area (West)	1,862	4,949 ft	5,741 ft
Minimum Width	37.5 ft	Provided Minimum	14 ft	19 ft	7 ft
Maximum Width	150 ft	Provided Maximum	70 ft	57 ft	130 ft

STORMWATER RULE REQUIREMENTS

The proposed facility upgrades will result in an increase in impervious surface of 0.080 acres, and since the site is less than one acre in size, incorporation of BMPs is required per the MCWD stormwater management rule, but there is not a specific treatment requirement. To exceed the required stormwater management standards, runoff from the proposed impervious surfaces will be routed to two different BMPs: a sand filtration system beneath the armored turf, and a swale along the north side of the site which discharges to the wetland. The proposed BMP will be sized in accordance with the MCWD stormwater management rules for a redevelopment site increasing impervious surface greater than one acre in size, providing filtration of the 1.1-inch rainfall event and rate control for the 1-, 10-, and 100-year 24 hour rainfall events.

EXISTING SITE CONDITIONS

Existing impervious surfaces on the site and adjacent roadway run-on measure approximately 0.124 acres. The site slopes from southeast to northwest toward the existing wetland known as Six Mile Marsh riparian to Six Mile Creek. Six Mile Creek flows northeast and intersects Minnehaha Creek two miles downstream at Halsted's Bay. Runoff from higher elevations to the southeast follows a roadside ditch along Highway 7, flows through a driveway culvert along Highland Road, then discharges via an existing swale along the eastern border of the site to Six Mile Marsh. No stormwater treatment is provided for existing onsite impervious surfaces prior to discharge to the wetland.

The NRCS Soil Survey describes onsite soils as Hamel, overwash-Hamel complex, 0-10 percent slopes, which are classified as loam and clay loam, hydrologic soil group (HSG) C/D, poorly drained. Soil borings taken as part of the St. Bonifacius Interceptor project indicate soils comprise clayey sands and sandy lean clay, which are classified as HSG D soils. Additionally, the soil borings indicate the presence of artesian groundwater conditions. Logs indicate the groundwater was observed rising 15-16.6-ft after drilling in two borings drilled near the proposed BMP location. Based on this information, infiltration on this site has been deemed infeasible.

RATE CONTROL REQUIREMENT

Per MCWD Rules, no net increase over the existing conditions peak discharge rates from the site is allowed for the 1-, 10-, and 100-year Atlas 14 rainfall events. Calculations were performed in HydroCAD using the MSE 3 rainfall events. The results of the rate control calculations are summarized in the table below and further details may be found in the appendices.

Maximum Rate of Runoff (cfs)		
Storm Event	Total Existing	Total Proposed
<i>1-year</i>	0.97	0.97
<i>10-year</i>	2.22	1.93
<i>100-year</i>	4.50	3.68

WATER QUALITY REQUIREMENT

MCWD requires a 75-ft wetland buffer. However, due to the sites existing proximity to the wetland and the necessary lift-station expansion, it is not possible to provide the 75-ft buffer or the alternative 37.5-ft average buffer. These scenarios would result in an infeasible site layout that would decrease accessibility. The intent of the proposed plan is to provide sand filtration such that the treatment is in excess of what would have been provided by the 75-ft wetland buffer alone. Water quality calculations were performed in the MPCA Minimal Impact Design Standards (MIDS) calculator to determine total suspended solids and total phosphorus removal onsite. Two MIDS models were created. The first shows the treatment which would be provided for the proposed site by a 75-ft buffer. The second shows the proposed site, which directions a portion of the runoff to a filtration system, a portion to a swale, and the remainder to side swales of the east and west side of the site. Based off this analysis, the sand filter provides higher quality treatment than would be provided by the wetland buffer alone.

BMP	Nutrient Analysis	
	TSS Removal (%)	TP Removal (%)
<i>Sand Filter with Swale</i>	60	36
<i>Wetland Buffer</i>	32	32

Pretreatment for the sand filtration system is provided with a proposed grass filter strip. Pretreatment to the proposed swale is met with a rip-rap strip. To determine whether the proposed filter strips are properly sized, the following equation from the MPCA was utilized:

$$LW = - ((c * I * A) / (v_s) * \ln(1 - FR)) \text{ where } c = 0.7 \text{ for small storms}$$

Where:

- v_s , the settling velocity for the particle size targeted = 0.017 ft/s
- FR, the target fraction removal = 0.8
- A, the area of directly connected impervious draining to the pretreatment practice = 6,286 ft²
- I, the peak rain intensity (0.505 in/hr for a 1.1-inch event, Type 2 distribution) = 0.505 in/hr = 1.169E-5 ft/s

Plugging these values into the equation:

$$LW = - ((0.7 * 6,286 \text{ ft}^2) * 0.00001169 \text{ in/hr}) / 0.017 \text{ ft/s} * \ln(1-0.8) = 4.87 \text{ ft}^2$$

Therefore, the pretreatment filter strip requires approximately 5 sf of area. The proposed filter strips are 2-ft deep, 40.5 ft long, and have a surface area of 81 sf.

EMERGENCY OVERFLOW

The sand filter will overflow to the southwest during large rainfall events.

STORMWATER SYSTEM OPERATIONS & MAINTENANCE

A maintenance agreement in compliance with MCWD will be completed for the proposed sand filter.

FLOODPLAIN ALTERATION RULE REQUIREMENTS

FEMA floodplain (Zone A) is mapped on the site. See Appendix D for a FIRMette. Per MCWD, the 100-year flood elevation established for this site is 931.1 (Six Mile Creek at Highland Road, XPSWMM model, Atlas 14, 24-hour 100-year storm event.) There is no floodplain onsite.

SUMMARY

The proposed lift station project will meet the requirements of the MCWD through construction of a bioretention basin. This BMP will provide the required rate control, water quality, and volume reduction improvements prior to discharging stormwater runoff from the site to downstream receiving waters.

Minnesota Wetland Conservation Act

Notice of Decision

Local Government Unit (LGU) City of Minnetrista	Address 7701 County Road 110 W Minnetrista, MN 55364
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1. PROJECT INFORMATION

Applicant Name Metropolitan Council Environmental Services	Project Name Lift Station 24 (LS 24) & St. Bonifacious Forcemain	Date of Application 9/3/2015	Application Number 2121-520 ML-15025
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Attach site locator map.

Type of Decision:

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

Technical Evaluation Panel Findings and Recommendation (if any):

<input type="checkbox"/> Approve	<input type="checkbox"/> Approve with conditions	<input type="checkbox"/> Deny
Summary (or attach): No written comments were received from the TEP.		

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: November 4, 2015		
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Approved with conditions (include below)	<input type="checkbox"/> Denied

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

The Metropolitan Council Environmental Services (MCES) St. Bonifacious (MCES Project #808200) Project involves an approximate 4-mile section bordering Minnesota Highway 7 and approximately a 0.5-mile section bordering Lotus Drive. The project begins east of the City of St. Bonifacious near the intersection of Minnesota Highway 7 and Highland Road and extends to the southeast, ending near the Minnesota Highway 7 and Baycliffe Drive intersection. The purpose of the project is to remove the existing force main and install a new force main to meet the project capacity needs of the communities served by the force main interceptor.

A new LS-24 liftstation facility is being proposed, near the existing facility, located near the intersection of Highland Road and State Highway 7.

Wetland boundaries were reviewed in the field on October 9, 2015. During the site review the City of Minnetrista requested changes to the delineated wetland boundaries at several locations. In addition, the City requested further field review of suspect areas that had not been investigated. Sambatek submitted an addendum report which documented the City comments, changes in wetland boundary locations, as well as provided supplemental information regarding the additional areas investigated.

The addendum, dated October 20, 2015 is attached.

All wetland boundaries/types delineated and designated for this project are approved, as identified in the October 20, 2015 Wetland Delineation Report addendum, or if no changes were necessary, as indicated in the Wetland Delineation Report dated August 4, 2015.

Because of the file size, the August 4 Delineation Report is not attached with this Notice. TEP members have received copies of it.

For Replacement Plans using credits from the State Wetland Bank:

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


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

- Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).
- Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR “Declaration of Restrictions and Covenants” and “Consent to Replacement Wetland” forms have been filed with the county recorder’s office in which the replacement wetland is located.
- Credit Withdrawal:** For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

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

LGU Authorized Signature:

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

Name Shawn Williams	Title Senior Environmental Scientist, WSB	
Signature 	Date 11/4/2015	Phone Number and E-mail 763-287-8531 swilliams@wsbeng.com

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

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

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

3. APPEAL OF THIS DECISION

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

Check one:

<input checked="" type="checkbox"/> Appeal of an LGU staff decision. Send petition and \$TBD fee (if applicable) to: City of Minnetrista 7701 County Road 110 West Minnetrista, MN 55364	<input type="checkbox"/> Appeal of LGU governing body decision. Send petition and \$500 filing fee to: Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155
---	---

4. LIST OF ADDRESSEES

<input checked="" type="checkbox"/> SWCD TEP member: Stacey Lijewski stacey.lijewski@hennepin.us <input checked="" type="checkbox"/> BWSR TEP member: Ben Meyer ben.meyer@state.mn.us <input checked="" type="checkbox"/> LGU TEP member (if different than LGU Contact): David Abel dabel@ci.minnetrista.mn.us <input checked="" type="checkbox"/> DNR TEP member: Leslie Parris, Kate Drewry <input type="checkbox"/> DNR Regional Office (if different than DNR TEP member) <input checked="" type="checkbox"/> WD or WMO (if applicable): Elizabeth Brown, MCWD ebrown@minnehahacreek.org <input type="checkbox"/> Applicant and Landowner (if different) <input checked="" type="checkbox"/> Members of the public who requested notice: Todd Ullom, Sambatek Tim Stockman, Foth <input checked="" type="checkbox"/> Corps of Engineers Project Manager <input type="checkbox"/> BWSR Wetland Bank Coordinator (wetland bank plan decisions only)

5. MAILING INFORMATION

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

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

➤ Department of Natural Resources Regional Offices:

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

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf

➤ For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687 or send to:

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

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

6. ATTACHMENTS

In addition to the site locator map, list any other attachments:

- Wetland Delineation Report Addendum dated October 20, 2015 (Sambatek)**
- Site Map**
- Joint Application Form**
-
-



Sambatek

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Sources: NRCS,LMIC, ESRI, MetorGIS, MnDNR

Scale In Feet

Location Map

St. Bonifacius Interceptor - MCES Project #808200
St. Bonifacius and Minnetrista, Minnesota

Map Legend

Project Limits

MFRA #19666

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name: Bryce Pickart, Assistant General Manager

Mailing Address: 390 North Robert Street, St. Paul, MN 55101

Phone: 651-602-1176

E-mail Address: bryce.pickart@metc.state.mn.us

Authorized Contact (do not complete if same as above): Tim Stockman – Foth Infrastructure & Environment, LLC

Mailing Address: Eagle Point II, 8550 Hudson Blvd N, Suite 105, Lake Elmo, MN 55042

Phone: 651-288-8550

E-mail Address: Tim.stockman@foth.com

Agent Name: Todd Ullom - Sambatek

Mailing Address: 12800 Whitewater Dr, Suite 300, Minnetonka, MN 55343

Phone: 763-476-6010

E-mail Address: tullom@sambatek.com

PART TWO: Site Location Information

County: Hennepin and Carver

City/Township: Minnetrista and Victoria

Parcel ID and/or Address: multiple

Legal Description (Section, Township, Range): Sections 32, 33, 34, & 35, T117N, R24W and Section 1, T116N, R24W

Lat/Long (decimal degrees): 44.890948, -93.701764

Attach a map showing the location of the site in relation to local streets, roads, highways.

Approximate size of site (acres) or if a linear project, length (feet): 21,120 feet

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted *prior to* this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

The proposed project involves Lift Station L-24 (located near the intersection of Highland Road and Minnesota State Highway 7) and the St. Bonifacius forcemain (located in the City of Minnetrista, along Minnesota State Highway 7 between St. Bonifacius and the intersection of Baycliffe Drive and Minnesota State Highway 7 in Victoria). The purpose of the project

is to remove the existing infrastructure and construct a new lift station and install a new forcemain in order to meet the capacity needs of the communities served by the utilities.

PART FOUR: Aquatic Resource Impact¹ Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	Aquatic Resource Type (wetland, lake, tributary etc.)	Type of Impact (fill, excavate, drain, or remove vegetation)	Duration of Impact Permanent (P) or Temporary (T) ¹	Size of Impact ²	Overall Size of Aquatic Resource ³	Existing Plant Community Type(s) in Impact Area ⁴	County, Major Watershed #, and Bank Service Area # of Impact Area ⁵

¹If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".

²Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).

³This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".

⁴Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

⁵Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

PART FIVE: Applicant Signature

Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature: Bryce J. Pickart Date: 9/3/2015

I hereby authorize _____ to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

¹ The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Attachment A

Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

Wetland Type Confirmation

Delineation Concurrence. Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

Preliminary Jurisdictional Determination. A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

Approved Jurisdictional Determination. An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the *Guidelines for Submitting Wetland Delineations in Minnesota* (2013).

<http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx>



12800 Whitewater Drive
Minnetonka, Minnesota 55343

(763) 476. 6010 main

(763) 476. 8532 fax

www.sambatek.com

ADDENDUM

DATE: October 20, 2015
TO: Shawn Williams – City of Minnetrista (WSB)
FROM: Todd Ullom - Sambatek
SUBJECT: Addendum to Wetland Delineation Report
St. Bonifacius Interceptor – MCES #808200
Hennepin County, Minnesota
Sambatek #20093

Sambatek prepared and submitted a Wetland Delineation Report for St. Bonifacius Interceptor in August 2015. The Wetland Delineation Report was provided to the Technical Evaluation Panel (TEP) for review and comment. On October 9, 2015, Sambatek (Todd Ullom and Jessica Abernathy) met with the City of Minnetrista Wetland Consultant, Shawn Williams of WSB, for the purpose of reviewing the delineated wetland boundaries and types in the field. This Addendum is provided as response to comments and boundary revision requests received on October 9, 2015.

COMMENT 1 – Based on the vegetation and hydrology observed in the field, the City of Minnetrista believes that the wetland boundary of Wetland 22 should be moved further northeast than what was delineated in the field. The TEP requests that the wetland boundary be revised based on the vegetative and hydrological change that was observed in the field.

RESPONSE – Sambatek revised the boundary of Wetland 22 based on the vegetative and hydrological change. Sambatek located the revised wetland boundary with a handheld GPS unit on October 9, 2015 and included it on the attached figure labeled Updated Wetland Boundaries – Wetlands 1 and 22. The wetland boundary delineated in July 2015 is depicted by the solid blue line while the dashed orange line represents the revised wetland boundary delineated during the October 9, 2015 site meeting.

COMMENT 2 – Based on the vegetation observed in the field, the City of Minnetrista believes that the wetland boundary of Wetland 1 should be extended further northeast than what was originally delineated. The City of Minnetrista requests that the wetland boundary be revised based on the vegetative change that was observed in the field.

RESPONSE – Sambatek revised the boundary of Wetland 1 based on the vegetative change along the northeast sides of the basin. Sambatek located the revised wetland boundary with a handheld GPS unit on October 9, 2015 and included it on the attached figure labeled Updated

Wetland Boundaries – Wetlands 1 and 22. The wetland boundary delineated in July 2015 is depicted by the solid blue line while the dashed orange line represents the wetland boundary delineated on October 9, 2015.

COMMENT 3 – Based on the vegetation observed in the field, the City of Minnetrista believes that the wetland boundary of Wetland 9 should be extended further east than what was originally delineated. The City of Minnetrista requests that the wetland boundary be revised based on the vegetative change that was observed in the field.

RESPONSE – Sambatek revised the boundary of Wetland 9 based on the vegetative change along the east side of the basin. Sambatek located the revised wetland boundary with a handheld GPS unit on October 9, 2015 and included it on the attached figure labeled Updated Wetland Boundaries – Wetland 9 and OAR 2. The wetland boundary delineated in July 2015 is depicted by the solid blue line while the orange dashed line represents the wetland boundary delineated on October 9, 2015.

COMMENT 4 – Based on the hydrology observed in the field, the City of Minnetrista believes that the wetland boundary of Wetland 17 should be extended slightly further north than what was originally delineated. The City of Minnetrista requests that the wetland boundary be revised based on the hydrological conditions that were observed in the field.

RESPONSE – Sambatek revised the boundary of Wetland 17 based on the hydrological conditions along the north side of the basin. Sambatek located the revised wetland boundary with a handheld GPS unit on October 9, 2015 and included it on the attached figure labeled Updated Wetland Boundaries – Wetlands 17. The wetland boundary delineated in July 2015 is depicted by the solid blue line while the orange dashed line represents the wetland boundary delineated on October 9, 2015.

COMMENT 5 – Based on the vegetation observed in the field, the City of Minnetrista believes that the wetland boundary of Wetland 21 should be extended further southeast than what was originally delineated. The City of Minnetrista requests that the wetland boundary be revised based on the vegetative conditions that were observed in the field.

RESPONSE – Sambatek revised the boundary of Wetland 21 based on the vegetative change along the southeast side of the basin. Sambatek located the revised wetland boundary with a handheld GPS unit on October 9, 2015 and included it on the attached figure labeled Updated Wetland Boundaries – Wetland 21. The wetland boundary delineated in July 2015 is depicted by the solid blue line while the orange dashed line represents the wetland boundary delineated on October 9, 2015.

COMMENT 6 – Wetland hydrology and vegetation was observed in an area approximately 100 feet west of Wetland 4 during the TEP meeting on October 9, 2015. The City of Minnetrista would like the applicant to examine this area further in field to confirm that wetland conditions exist.

RESPONSE – Sambatek examined this area during a field visit on October 14, 2015 and confirmed that hydric soil, wetland hydrology, and wetland vegetation exist within this location. The wetland boundaries were marked with a handheld GPS unit. This wetland is not identified on the NWI map and is mapped as hydric soil. The boundary of this wetland was delineated during the October 14, 2015 field visit and is mapped as Wetland 23 in attached figure labeled Updated Wetland Boundaries – Wetland 23.

COMMENT 7 – Wetland hydrology was observed in an area approximately 600 feet north of Wetland 6 during the October 9, 2015 site meeting. The City of Minnetrista would like the applicant to further examine this area to determine if other wetland characteristics occur within this location.

RESPONSE – Sambatek examined the area during a field visit on October 14, 2015. Although this was a small depressional area the vegetation was predominantly upland vegetation including: Smooth Brome (FACU), Lesser Burdock (FACU), Leafy Spurge (UPL), Dandelion (FACU), and Daisy Fleabane (FACU). Due to the lack of wetland vegetation this area was determined to be non-wetland and is labeled as Area C on attached figure Updated Wetland Boundaries – Area C.

COMMENT 8 – Wetland hydrology and vegetation was observed in an area north of Highway 7 and directly east of the roundabout during the October 9, 2015 site meeting. The City of Minnetrista would like the applicant to examine the area further.

RESPONSE – Sambatek examined this area during a field visit on October 14, 2015. Hydric soil indicators, wetland vegetation, and wetland hydrology were recorded at this area during the October 14, 2015 field visit and the boundary was recorded with a handheld GPS unit. However, after a review of aerial photos this area was determined to be constructed in an upland between 2013 and 2015. Since this area was constructed in an upland it was determined to be an Other Aquatic Resource and is labeled as OAR 2 on attached figure Updated Wetland Boundaries – Wetland 9 and OAR 2.

COMMENT 9 – Wetland vegetation was observed between the roundabout and Wetland 10 during the October 9, 2015 site meeting. The City of Minnetrista would like the applicant to examine this area for additional wetland areas.

RESPONSE – Sambatek examined this area in during the field visit on October 14, 2015. Two additional wetland areas were identified within the road ditch between the roundabout and Wetland 10. These areas are not mapped on the NWI map however; hydric soil indicators, wetland vegetation, and wetland hydrology were observed at these two locations. The boundaries of these areas were delineated, recorded with a handheld GPS unit, and are labeled as Wetland 24 and 25 on the attached figure Updated Wetland Boundaries – Wetland 24 and 25.

COMMENT 10 – Wetland vegetation was observed between Wetland 11 and Wetland 12 during the October 9, 2015 site meeting. The City of Minnetrista would like the applicant to examine this area to determine if additional wetland areas are present in this area.

RESPONSE – This area was examined during a field visit on October 14, 2015. Although Reed Canary Grass was present in this area soil borings revealed a lack of hydric soil indicators. No wetlands are mapped on the NWI map within this area. This area was determined to be non-wetland and is labeled as Area D on attached figure Updated Wetland Boundaries – Wetland 26 and Area D.

COMMENT 11 – Wetland hydrology and vegetation was observed in an area approximately 500 feet southwest of Wetland 14 during the October 9, 2015 site meeting. The City of Minnetrista would like the applicant to examine this area to confirm that wetland characteristics occur within this area.

RESPONSE – Sambatek examined this area during a field visit on October 14, 2015. This area was confirmed as a wetland. This area is mapped as a PFO1A wetland on the NWI map. The Hennepin County Soil Survey also shows hydric soils in this area. The boundary of this wetland delineated during the October 14, 2015 field visit and these boundaries were recorded with a handheld GPS unit, and labeled as Wetland 26 on the attached figure Updated Wetland Boundaries – Wetland 26 and Area D.

COMMENT 12 – Wetland characteristics were not observed at Wetland 5 during the October 9, 2015 site meeting. The City of Minnetrista would like the applicant to reconsider this wetland boundary.


RESPONSE – Sambatek revisited Wetland 5 on October 14, 2015 and determined that it should be classified as a ditch/ravine which does not exhibit wetland characteristics due to the steep sideslopes. This area was relabeled as OAR 1 and the boundary is now represented by a red line in the attached figure Updated Wetland Boundaries – OAR 1.

List of Attachments

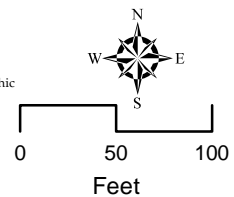
Updated Wetland Boundaries – Wetland 1 and 22
Updated Wetland Boundaries – Wetland 9 and OAR 2
Updated Wetland Boundaries – Wetland 17
Updated Wetland Boundaries – Wetland 21
Updated Wetland Boundaries – Wetland 23
Updated Wetland Boundaries – Area C
Updated Wetland Boundaries – Wetland 24 and 25
Updated Wetland Boundaries – Wetland 26 and Area D
Field Data Sheets



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0 50 100
Feet

Updated Wetland Boundaries (Wetlands 1 and 22)

St. Bonifacius Interceptor - MCES Project #808200
St. Bonifacius and Minnetrista, Minnesota

Legend

- Project Limits
- Wetland Boundary
- Updated Boundaries
- ★ Non Wetland Areas

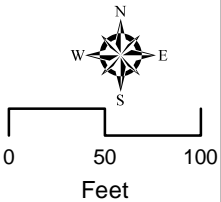
Sources: NRCS, MetroGIS, NRCS, LMIC, ESRI, MnDNR MRFA #19666



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Updated Wetland Boundaries (OAR 1)

St. Bonifacius Interceptor - MCES Project #808200

St. Bonifacius and Minnetrista, Minnesota

- Legend**
- ▭ Project Limits
 - ▭ Wetland Boundary
 - ▭ OAR
 - ▭ Updated_Boundaries
 - ★ Non Wetland Areas



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Updated Wetland Boundaries (Area C)

St. Bonifacius Interceptor - MCES Project #808200
St. Bonifacius and Minnetrista, Minnesota

Legend

- ▬ Project Limits
- ▬ Wetland Boundary
- ▬ Updated_Boundaries
- ★ Non Wetland Areas

Sources: NRCS, MetroGIS, NRCS, LMIC, ESRI, MnDNR MRFA #19666



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Updated Wetland Boundaries (Wetland 9 and OAR 2)

St. Bonifacius Interceptor - MCES Project #808200
 St. Bonifacius and Minnetrista, Minnesota


Legend

- ▬ Project Limits
- ▬ Wetland Boundary
- ▬ OAR
- ▬ Updated_Boundaries
- ★ Non Wetland Areas

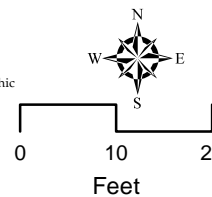
Sources: NRCS, MetroGIS, NRCS, LMIC, ESRI, MnDNR MRFA #19666



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0 10 20
Feet

Updated Wetland Boundaries (Wetland 17)

St. Bonifacius Interceptor - MCES Project #808200
St. Bonifacius and Minnetrista, Minnesota

Legend

-  Project Limits
-  Wetland Boundary
-  Updated_Boundaries
-  Non Wetland Areas

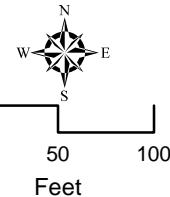
Sources: NRCS, MetroGIS, NRCS, LMIC, ESRI, MnDNR MRFA #19666



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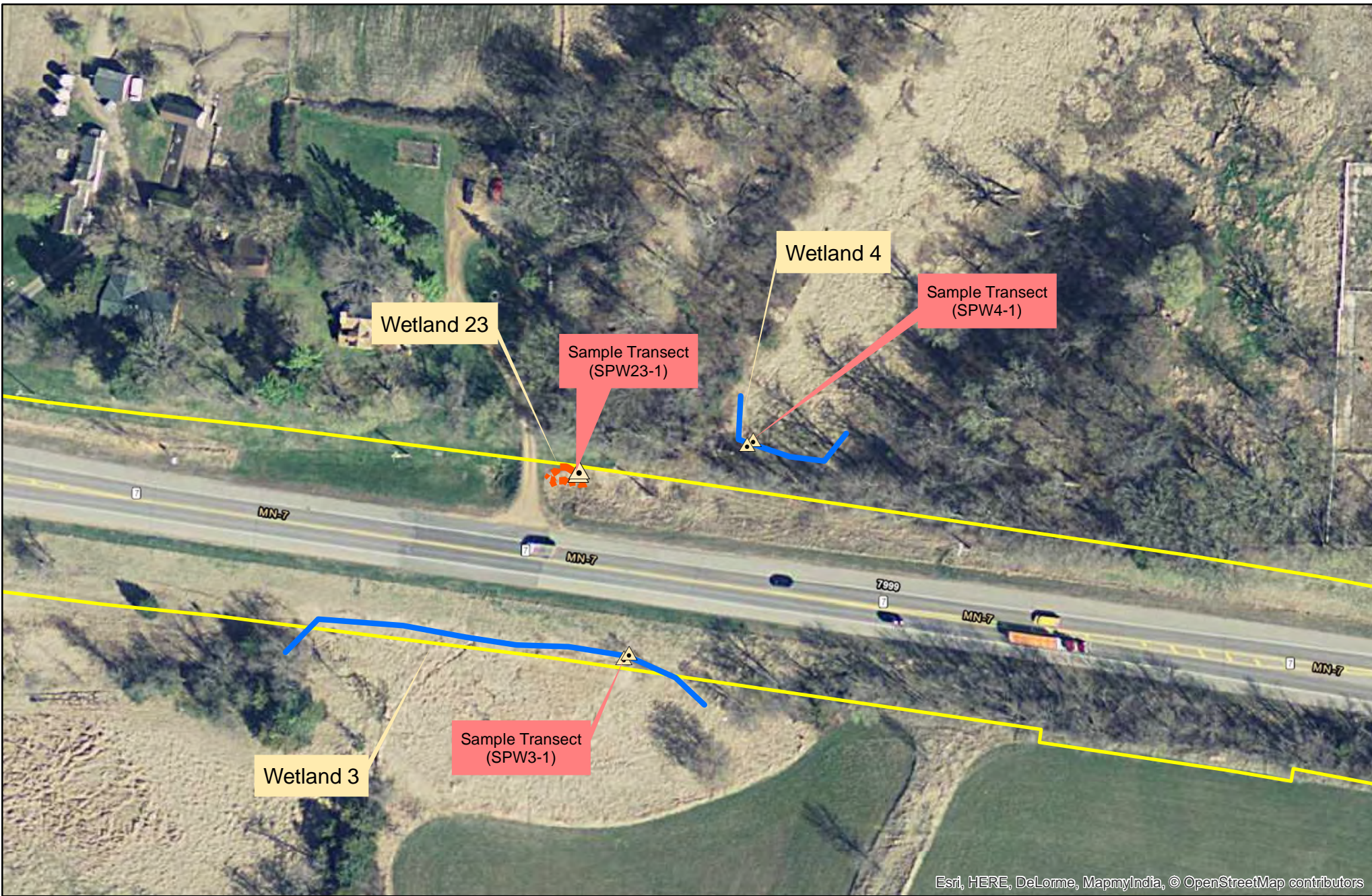
Updated Wetland Boundaries (Wetland 21)

St. Bonifacius Interceptor - MCES Project #808200


St. Bonifacius and Minnetrista, Minnesota

Legend


- ▭ Project Limits
- ▬ Wetland Boundary
- ▬ Updated_Boundaries
- ★ Non Wetland Areas



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01020
Feet

Updated Wetland Boundaries (Wetland 23)

St. Bonifacius Interceptor - MCES Project #808200
St. Bonifacius and Minnetrista, Minnesota

Legend

- Project Limits
- Wetland Boundary
- ▲ Updated_Boundaries
- ★ Non Wetland Areas

Sources: NRCS, MetroGIS, NRCS, LMIC, ESRI, MnDNR MRFA #19666



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Updated Wetland Boundaries (Wetland 24 and 25)

St. Bonifacius Interceptor - MCES Project #808200
 St. Bonifacius and Minnetrista, Minnesota

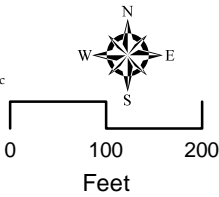
Legend

- Project Limits
- Wetland Boundary
- Updated_Boundaries
- Non Wetland Areas

Sources: NRCS, MetroGIS, NRCS, LMIC, ESRI, MnDNR MRFA #19666



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Updated Wetland Boundaries (Wetland 26 and Area D)

St. Bonifacius Interceptor - MCES Project #808200

St. Bonifacius and Minnetrista, Minnesota

Legend

- Wetland Boundary
- Updated Boundaries
- ★ Non Wetland Areas

Sources: NRCS, MetroGIS, NRCS, LMIC, ESRI, MnDNR

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: St. Bonifacius Interceptor City/County: Minnetrista / Hennepin Sampling Date: October 14, 2015

Applicant/Owner: Metropolitan Council Environmental Services State: Minnesota Sampling Point: SP23-1 UP

Investigator(s): Sambatek – Jessica Abernathy Section, Township, Range: Section 33, T117N, R24W

Landform (hillslope, terrace, etc.) Depressions on moraines Local relief (concave, convex, none): Concave

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

Soil Map Unit Name: L24A – Glencoe loam, depressional NWI Classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

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

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks:	

VEGETATION - Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u>)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ X 2 = _____ FAC species _____ X 3 = _____ FACU species _____ X 4 = _____ UPL species _____ X 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
= Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>)				
_____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
<u>Herb Stratum</u> (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is > 50% ___ 3 - Prevalence Test is ≤ 3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Solidago canadensis</u> (Canada Goldenrod)	70	Y	FACU	
2. <u>Phalaris arundinacea</u> (Reed Canary Grass)	30	Y	FACW	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
100 = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: SP23-1 UP

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/2	100					Clay loam	
10-24	10YR 4/3	100					Clay loam	

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

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Coast Prairie Redox (A16)</p> <p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12)</p> <p><input type="checkbox"/> Very Shallow Dark Surfaces (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No <u>X</u></p>
<p>Remarks:</p>	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p> <p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Stunted or Stressed Plants (D1)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p>
<p>Field Observations:</p> <p>Surface Water Present? Yes ___ No <u>X</u> Depth (inches): _____</p> <p>Water Table Present? Yes ___ No <u>X</u> Depth (inches): _____</p> <p>Saturation Present? Yes ___ No <u>X</u> Depth (inches): _____ (includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes _____ No <u>X</u></p>

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: St. Bonifacius Interceptor City/County: Minnetrista / Hennepin Sampling Date: October 14, 2015
 Applicant/Owner: Metropolitan Council Environmental Services State: Minnesota Sampling Point: SP23-1 WET
 Investigator(s): Sambatek – Jessica Abernathy Section, Township, Range: Section 33, T117N, R24W
 Landform (hillslope, terrace, etc.) Depressions on moraines Local relief (concave, convex, none): Concave
 Slope (%): 0-1% Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: L24A – Glencoe loam, depressional NWI Classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ____ Hydric Soil Present? Yes <u>X</u> No ____ Wetland Hydrology Present? Yes <u>X</u> No ____	Is the Sampled Area within a Wetland? Yes <u>X</u> No ____
Remarks: _____ _____ _____	

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ X 2 = _____ FAC species _____ X 3 = _____ FACU species _____ X 4 = _____ UPL species _____ X 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15'</u>) _____ _____ _____ 4. _____ 5. _____ _____ = Total Cover				
Herb Stratum (Plot size: <u>5'</u>) 1. <u><i>Typha sp.</i> (Cattail sp.)</u> 60 Y OBL 2. <u><i>Phalaris arundinacea</i> (Reed Canary Grass)</u> 40 Y FACW 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ _____ = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>) 1. _____ 2. _____ _____ = Total Cover				
100 = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) _____ _____ _____				

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is > 50%
 ___ 3 - Prevalence Test is ≤ 3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 ___ Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

SOIL

Sampling Point: SP23-1 WET

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/2	100					Clay loam	
3-24	10YR 2/1	50	7.5YR 5/6	5	C	M	Clay loam	
			10YR 6/1	45	D	M		

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

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input checked="" type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Coast Prairie Redox (A16)</p> <p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12)</p> <p><input type="checkbox"/> Very Shallow Dark Surfaces (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____</p>
<p>Remarks:</p>	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p> <p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Stunted or Stressed Plants (D1)</p> <p><input checked="" type="checkbox"/> Geomorphic Position (D2)</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</p>
<p>Field Observations:</p> <p>Surface Water Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water Table Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation Present? Yes <input checked="" type="checkbox"/> No ___ Depth (inches): <u>12</u></p> <p>(includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____</p>

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: St. Bonifacius Interceptor City/County: Minnetrista / Hennepin Sampling Date: October 14, 2015
 Applicant/Owner: Metropolitan Council Environmental Services State: Minnesota Sampling Point: SP24-1 UP
 Investigator(s): Sambatek – Jessica Abernathy Section, Township, Range: Section 34, T117N, R24W
 Landform (hillslope, terrace, etc.) Hills on moraines Local relief (concave, convex, none): Linear
 Slope (%): 2-6% Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: L40B – Angus-Kilkenny complex, eroded NWI Classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: _____ _____ _____	

VEGETATION - Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ X 2 = _____ FAC species _____ X 3 = _____ FACU species _____ X 4 = _____ UPL species _____ X 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
_____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is > 50% ___ 3 - Prevalence Test is ≤ 3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <i>Poa pratensis</i> (Kentucky Bluegrass)	30	Y	FAC	
2. <i>Phalaris arundinacea</i> (Reed Canary Grass)	25	Y	FACW	
3. <i>Solidago Canadensis</i> (Canada Goldenrod)	25	Y	FACU	
4. <i>Lotus corniculatus</i> (Bird's-foot Trefoil)	20	Y	FACU	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
100 = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) _____ _____				

SOIL

Sampling Point: SP24-1 UP

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/2	100					loam	
6-24	10YR 3/1	98	7.5YR 4/4	2	C	PL	loam	

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

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input checked="" type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Coast Prairie Redox (A16)</p> <p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12)</p> <p><input type="checkbox"/> Very Shallow Dark Surfaces (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
--	--

Remarks:

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p> <p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Stunted or Stressed Plants (D1)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p>
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<p>Field Observations:</p> <p>Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: St. Bonifacius Interceptor City/County: Minnetrista / Hennepin Sampling Date: October 14, 2015
 Applicant/Owner: Metropolitan Council Environmental Services State: Minnesota Sampling Point: SP24-1 WET
 Investigator(s): Sambatek – Jessica Abernathy Section, Township, Range: Section 34, T117N, R24W
 Landform (hillslope, terrace, etc.) Hills on moraines Local relief (concave, convex, none): Linear
 Slope (%): 2-6% Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: L40B – Angus-Kilkenny complex, eroded NWI Classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks:	

VEGETATION - Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ X 2 = _____ FAC species _____ X 3 = _____ FACU species _____ X 4 = _____ UPL species _____ X 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
_____	_____	_____	_____	
_____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is > 50% _____ 3 - Prevalence Test is ≤ 3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <i>Phalaris arundinacea</i> (Reed Canary Grass)	100	Y	FACW	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
100 = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: SP24-1 WET

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/2	100					loam	
4-20	10YR 4/2	90	5YR 4/4	10	C	M	loam	
20-24	10YR 3/1	98	7.5YR 7/6	2	C	PL		

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

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Coast Prairie Redox (A16)</p> <p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12)</p> <p><input type="checkbox"/> Very Shallow Dark Surfaces (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>Remarks:</p>	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p> <p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Stunted or Stressed Plants (D1)</p> <p><input checked="" type="checkbox"/> Geomorphic Position (D2)</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</p>
<p>Field Observations:</p> <p>Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: St. Bonifacius Interceptor City/County: Minnetrista / Hennepin Sampling Date: October 14, 2015
 Applicant/Owner: Metropolitan Council Environmental Services State: Minnesota Sampling Point: SP25-1 UP
 Investigator(s): Sambatek – Jessica Abernathy Section, Township, Range: Section 34, T117N, R24W
 Landform (hillslope, terrace, etc.) Hills on moraines Local relief (concave, convex, none): Linear
 Slope (%): 18-25% Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: L41E – Lester-Kilkenny complex NWI Classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: _____ _____ _____	

VEGETATION - Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
_____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5'</u>)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ X 2 = _____ FAC species _____ X 3 = _____ FACU species _____ X 4 = _____ UPL species _____ X 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1. <i>Phalaris arundinacea</i> (Reed Canary Grass)	40	Y	FACW	
2. <i>Solidago canadensis</i> (Canada Goldenrod)	30	Y	FACU	
3. <i>Physalis virginiana</i> (Virginia Groundcherry)	20	Y	UPL	
4. <i>Cirsium arvense</i> (Canada Thistle)	10	N	FACU	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is > 50% ___ 3 - Prevalence Test is ≤ 3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) _____ _____				

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

Hydrophytic Vegetation Present? Yes _____ No X

SOIL

Sampling Point: SP25-1 UP

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/2	100					loam	
4-18	10YR 2/1	98	7.5YR 5/8	2	C	PL	loam	
18-24	10YR 4/2	90	7.5YR 5/6	10	C	M	loam	

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Coast Prairie Redox (A16)
- Dark Surface (S7)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surfaces (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

- Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
 - High Water Table (A2)
 - Saturation (A3)
 - Water Marks (B1)
 - Sediment Deposits (B2)
 - Drift Deposits (B3)
 - Algal Mat or Crust (B4)
 - Iron Deposits (B5)
 - Inundation Visible on Aerial Imagery (B7)
 - Sparsely Vegetated Concave Surface (B8)
 - Water-Stained Leaves (B9)
 - Aquatic Fauna (B13)
 - True Aquatic Plants (B14)
 - Hydrogen Sulfide Odor (C1)
 - Oxidized Rhizospheres on Living Roots (C3)
 - Presence of Reduced Iron (C4)
 - Recent Iron Reduction in Tilled Soils (C6)
 - Thin Muck Surface (C7)
 - Gauge or Well Data (D9)
 - Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: St. Bonifacius Interceptor City/County: Minnetrista / Hennepin Sampling Date: October 14, 2015
 Applicant/Owner: Metropolitan Council Environmental Services State: Minnesota Sampling Point: SP25-1 WET
 Investigator(s): Sambatek – Jessica Abernathy Section, Township, Range: Section 34, T117N, R24W
 Landform (hillslope, terrace, etc.) Hills on moraines Local relief (concave, convex, none): Linear
 Slope (%): 18-25% Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: L41E – Lester-Kilkenny complex NWI Classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ____ Hydric Soil Present? Yes <u>X</u> No ____ Wetland Hydrology Present? Yes <u>X</u> No ____	Is the Sampled Area within a Wetland? Yes <u>X</u> No ____
Remarks:	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u>)				
1. <u>Salix interior</u> (Sandbar Willow)	95	Y	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u>Populus deltoides</u> (Eastern Cottonwood)	5	N	FAC	
3. _____				
4. _____				
5. _____				
	100	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				
<u>Cornus sericea</u> (Redosier dogwood)	100	Y	FACW	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ X 2 = _____ FAC species _____ X 3 = _____ FACU species _____ X 4 = _____ UPL species _____ X 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
4. _____				
5. _____				
	100	= Total Cover		
Herb Stratum (Plot size: <u>5'</u>)				
1. <u>Phalaris arundinacea</u> (Reed Canary Grass)	90	Y	FACW	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is > 50% ___ 3 - Prevalence Test is ≤ 3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Urtica dioica</u> (Stinging Nettle)	10	N	FACW	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
	100	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u>)				
1. _____				Hydrophytic Vegetation Present? Yes <u>X</u> No ____
2. _____				
		= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: SP25-1 WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 2/1	98	7.5YR 4/4	2	C	M	Clay loam	
18-24	10YR 5/1	95	7.5YR 4/6	5	C	M	Clay loam	With gravel inclusions

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

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surfaces (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Other (Explain in Remarks)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: St. Bonifacius Interceptor City/County: Minnetrista / Hennepin Sampling Date: October 14, 2015
 Applicant/Owner: Metropolitan Council Environmental Services State: Minnesota Sampling Point: SP26-1 UP
 Investigator(s): Sambatek – Jessica Abernathy Section, Township, Range: Section 35, T117N, R24W
 Landform (hillslope, terrace, etc.) Drainageways on moraines Local relief (concave, convex, none): Concave
 Slope (%): 1-4% Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: L36A – Hamel, overwash-Hamel complex NWI Classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No <u>X</u> Hydric Soil Present? Yes ____ No <u>X</u> Wetland Hydrology Present? Yes ____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes ____ No <u>X</u>
Remarks: _____ _____ _____	

VEGETATION - Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u>)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
_____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
		= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ X 2 = _____ FAC species _____ X 3 = _____ FACU species _____ X 4 = _____ UPL species _____ X 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
_____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
		= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is > 50% ___ 3 - Prevalence Test is ≤ 3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <i>Phalaris arundinacea</i> (Reed Canary Grass)	40	Y	FACW	
2. <i>Solidago canadensis</i> (Canada Goldenrod)	40	Y	FACU	
3. <i>Poa pratensis</i> (Kentucky Bluegrass)	15	N	FAC	
4. <i>Cirsium arvense</i> (Canada Thistle)	5	N	FACU	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
	100	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes ____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
		= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.) _____ _____				

SOIL

Sampling Point: SP26-1 UP

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/1	100					Clay loam	
10-24	10YR 4/4	95	7.5YR 5/6	5	C	M	Clay loam	

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

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Coast Prairie Redox (A16)</p> <p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12)</p> <p><input type="checkbox"/> Very Shallow Dark Surfaces (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No <u>X</u></p>
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Remarks:

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p> <p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Stunted or Stressed Plants (D1)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p>
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<p>Field Observations:</p> <p>Surface Water Present? Yes ___ No <u>X</u> Depth (inches): _____</p> <p>Water Table Present? Yes ___ No <u>X</u> Depth (inches): _____</p> <p>Saturation Present? Yes ___ No <u>X</u> Depth (inches): _____ (includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes _____ No <u>X</u></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: St. Bonifacius Interceptor City/County: Minnetrista / Hennepin Sampling Date: October 14, 2015
 Applicant/Owner: Metropolitan Council Environmental Services State: Minnesota Sampling Point: SP26-1 WET
 Investigator(s): Sambatek – Jessica Abernathy Section, Township, Range: Section 35, T117N, R24W
 Landform (hillslope, terrace, etc.) Drainageways on moraines Local relief (concave, convex, none): Concave
 Slope (%): 1-4% Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: L36A – Hamel, overwash-Hamel complex NWI Classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
 Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
 Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No ____ Hydric Soil Present? Yes <u>X</u> No ____ Wetland Hydrology Present? Yes <u>X</u> No ____	Is the Sampled Area within a Wetland? Yes <u>X</u> No ____
Remarks:	

VEGETATION - Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>) _____ _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
Sapling/Shrub Stratum (Plot size: <u>15'</u>) _____ _____ 4. _____ 5. _____ _____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ X 2 = _____ FAC species _____ X 3 = _____ FACU species _____ X 4 = _____ UPL species _____ X 5 = _____ Column Totals: _____ (A) _____ (B)
Herb Stratum (Plot size: <u>5'</u>) 1. <u>Phalaris arundinacea</u> (Reed Canary Grass) <u>90</u> <u>Y</u> <u>FACW</u> 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ _____ <u>100</u> = Total Cover				Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: ____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is > 50% ____ 3 - Prevalence Test is ≤ 3.0 ¹ ____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: <u>30'</u>) 1. _____ 2. _____ _____ = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u>X</u> No ____
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: SP26-1 WET

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/1	98	7.5YR 4/4	2	C	M	Clay loam	
6-24	10YR 4/2	90	5YR 5/6	10	C	M	Clay loam	

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

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Coast Prairie Redox (A16)</p> <p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12)</p> <p><input type="checkbox"/> Very Shallow Dark Surfaces (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>Remarks:</p>	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p> <p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Stunted or Stressed Plants (D1)</p> <p><input checked="" type="checkbox"/> Geomorphic Position (D2)</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</p>
<p>Field Observations:</p> <p>Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: St. Bonifacius Interceptor City/County: Minnetrista / Hennepin Sampling Date: October 14, 2015
 Applicant/Owner: Metropolitan Council Environmental Services State: Minnesota Sampling Point: SPD-1
 Investigator(s): Sambatek – Jessica Abernathy Section, Township, Range: Section 35, T117N, R24W
 Landform (hillslope, terrace, etc.) Drainageways on moraines Local relief (concave, convex, none): Concave
 Slope (%): 12-18% Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: L41D2 – Lester-Kilkenny complex, eroded NWI Classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: _____ _____ _____	

VEGETATION - Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u>)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
_____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
		= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ X 2 = _____ FAC species _____ X 3 = _____ FACU species _____ X 4 = _____ UPL species _____ X 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
_____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____	_____	_____	_____	
		= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is > 50% _____ 3 - Prevalence Test is ≤ 3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Phalaris arundinacea</u> (Reed Canary Grass)	100	Y	FACW	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
	100	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
		= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.) _____ _____				

SOIL

Sampling Point: SPD-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 3/2	100					loam	
7-24	10YR 4/4	98	5YR 5/4	2	C	M	loam	

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

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)</p>	<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Coast Prairie Redox (A16)</p> <p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12)</p> <p><input type="checkbox"/> Very Shallow Dark Surfaces (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No <u>X</u></p>
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Remarks:

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p> <p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Stunted or Stressed Plants (D1)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</p>
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<p>Field Observations:</p> <p>Surface Water Present? Yes ___ No <u>X</u> Depth (inches): _____</p> <p>Water Table Present? Yes ___ No <u>X</u> Depth (inches): _____</p> <p>Saturation Present? Yes ___ No <u>X</u> Depth (inches): _____ (includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes _____ No <u>X</u></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Minnesota Wetland Conservation Act

Notice of Decision

Local Government Unit (LGU) City of Minnetrista	Address 7701 County Road 110 W Minnetrista, MN 55364
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1. PROJECT INFORMATION

Applicant Name Metropolitan Council Environmental Services (MCES)	Project Name St. Boni Interceptor Wetland Delineation Addendum #2 (MCES #808200)	Date of Application 10/3/2016	Application Number 2121-650 ML-15025
<input type="checkbox"/> Attach site locator map.			

Type of Decision:

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

Technical Evaluation Panel Findings and Recommendation (if any):

<input type="checkbox"/> Approve	<input type="checkbox"/> Approve with conditions	<input type="checkbox"/> Deny
Summary (or attach): No written comments were received from the TEP.		

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: November 14, 2016		
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Approved with conditions (include below)	<input type="checkbox"/> Denied

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

The MCES requested a wetland boundary/type review for the Wetland Addendum #2 for wetlands located along a segment of Highway 7 and other areas identified in the report. A wetland investigation was completed for the additional areas for the project by Sambatek on August 1, 2016.

WSB reviewed the project area (Addendum #2) in the field for wetland boundary/type on November 3, 2016.

The City of Minnetrista has determined the Applicant has successfully documented the extent of wetland within the project limits, in accordance with the US Army Corps of Engineers wetland delineation methodology, and approves the wetland boundaries/types as indicated in the wetland delineation addendum report #2, dated October 3, 2016 (attached).

For Replacement Plans using credits from the State Wetland Bank:

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


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

- Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).
- Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR “Declaration of Restrictions and Covenants” and “Consent to Replacement Wetland” forms have been filed with the county recorder’s office in which the replacement wetland is located.
- Credit Withdrawal:** For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

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

LGU Authorized Signature:

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

Name Shawn Williams	Title Senior Environmental Scientist, WSB	
Signature 	Date 11/14/2016	Phone Number and E-mail 763-287-8531 swilliams@wsbeng.com

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all

appropriate authorities before commencing work in or near wetlands.

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

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

3. APPEAL OF THIS DECISION

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

Check one:

<input checked="" type="checkbox"/> Appeal of an LGU staff decision. Send petition and \$TBD fee (if applicable) to: City of Minnetrista 7701 County Road 110 West Minnetrista, MN 55364	<input type="checkbox"/> Appeal of LGU governing body decision. Send petition and \$500 filing fee to: Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155
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4. LIST OF ADDRESSEES

<input checked="" type="checkbox"/> SWCD TEP member: Stacey Lijewski stacey.lijewski@hennepin.us
<input checked="" type="checkbox"/> BWSR TEP member: Ben Meyer ben.meyer@state.mn.us
<input checked="" type="checkbox"/> LGU TEP member (if different than LGU Contact): David Abel dabel@ci.minnetrista.mn.us
<input checked="" type="checkbox"/> DNR TEP member: Becky Horton Becky.Horton@state.mn.us
<input type="checkbox"/> DNR Regional Office (if different than DNR TEP member)
<input checked="" type="checkbox"/> WD or WMO (if applicable): Katherine Sylvia, MCWD ksylvia@minnehahacreek.org
<input type="checkbox"/> Applicant and Landowner (if different)
<input checked="" type="checkbox"/> Members of the public who requested notice: Todd Ullom, Sambatek tullom@sambatek.com
<input checked="" type="checkbox"/> Corps of Engineers Project Manager Melissa Jenny Melissa.M.Jenny@usace.army.mil
<input type="checkbox"/> BWSR Wetland Bank Coordinator (wetland bank plan decisions only)

5. MAILING INFORMATION

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

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

➤ Department of Natural Resources Regional Offices:

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

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf

➤ For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687
or send to:

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

St. Paul, MN 55101-1678

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

6. ATTACHMENTS

In addition to the site locator map, list any other attachments:

- Wetland Delineation Report Addendum #2, dated October 3, 2016 (Sambatek)**
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