

**Exhibit 4G. 1990 Aerial Photograph**

Little Menomonee River Corridor  
Ecosystem/Habitat Restoration Project  
on MMSD Greenseam Parcel  
SE Quarter, Section 20, T9N-R21E  
City of Mequon, Ozaukee County



**Legend**

- Project Area
- Property Boundary

0 100 200  
Feet

Source: SEWRPC  
CA#209-150

**Exhibit 4H. 1980 Aerial Photograph**

Little Menomonee River Corridor  
Ecosystem/Habitat Restoration Project  
on MMSD Greenseam Parcel  
SE Quarter, Section 20, T9N-R21E  
City of Mequon, Ozaukee County



Unamed Tributary to

Little Menomonee River

Little Menomonee River

Unamed Tributary to Little Menomonee River

STH 167 West Mequon Road

West Poplar Drive

North Swan Road

North Swan Road

**Legend**

- Project Area
- Property Boundary

0 100 200  
Feet



Source: SEWRPC  
CA#209-150

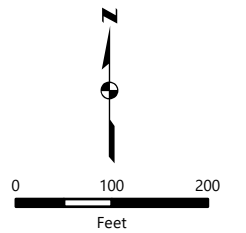
**Exhibit 4I. 1970 Aerial Photograph**

Little Menomonee River Corridor  
Ecosystem/Habitat Restoration Project  
on MMSD Greenseam Parcel  
SE Quarter, Section 20, T9N-R21E  
City of Mequon, Ozaukee County



**Legend**

-  Project Area
-  Property Boundary



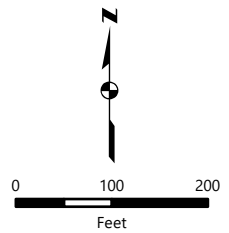
Source: SEWRPC  
CA#209-150

**Exhibit 4J. 1963 Aerial Photograph**

Little Menomonee River Corridor  
Ecosystem/Habitat Restoration Project  
on MMSD Greenseam Parcel  
SE Quarter, Section 20, T9N-R21E  
City of Mequon, Ozaukee County



- Legend**
- Project Area
  - Property Boundary



Source: SEWRPC  
CA#209-150

**Exhibit 4K. 1937 Aerial Photograph**  
Little Menomonee River Corridor Ecosystem/Habitat  
Restoration Project on MMSD Greenseam Parcel  
SE Quarter, Section 20, T9N-R21E  
City of Mequon, Ozaukee County



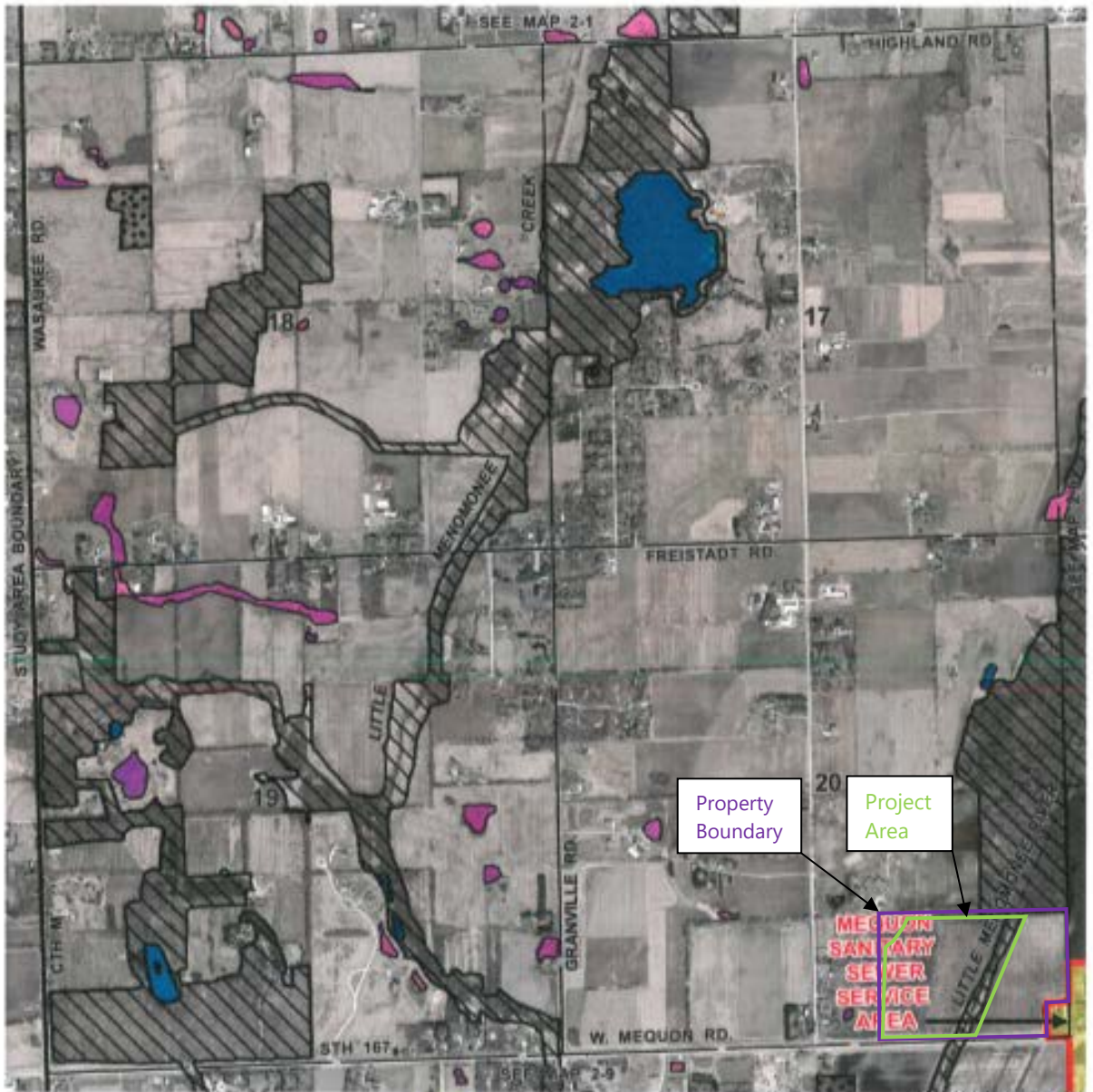
# Exhibit 5. Sanitary Sewer Service Map

Little Menomonee River Corridor Ecosystem/Habitat  
 Restoration Project on MMSD Greenseam Parcel  
 SE Quarter, Section 20, T9N-R21E  
 City of Mequon, Ozaukee County

Map 2-5

## ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE CITY OF MEQUON

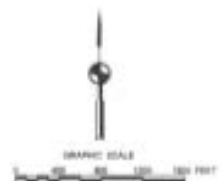
U.S. Public Land Survey Sections 17, 18, 19, and 20  
 Township 9 North, Range 21 East



- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREA
- WETLANDS AND SURFACE WATER AREAS LESS THAN FIVE ACRES IN SIZE LOCATED OUTSIDE ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS
- SURFACE WATER WITHIN ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS
- GROSS SANITARY SEWER SERVICE AREA BOUNDARY

- PLANNED SANITARY SEWER SERVICE AREA
- RESTRICTIONS ON SEWERED DEVELOPMENT**
- PRIMARY ENVIRONMENTAL CORRIDORS WITHIN THE PLANNED SANITARY SEWER SERVICE AREA. THE EXTENSION OF SEWERS TO SERVE NEW DEVELOPMENT IS CONFINED TO LIMITED RECREATIONAL AND INSTITUTIONAL USES AND RURAL-DENSITY RESIDENTIAL DEVELOPMENT IN AREAS OTHER THAN WETLANDS, FLOODLANDS, SHORELANDS, AND STEEP SLOPES.
  - PORTIONS OF SECONDARY ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS WITHIN THE PLANNED SANITARY SEWER SERVICE AREA WHICH ARE COMPOSED OF WETLANDS, FLOODLANDS, SHORELANDS, AND STEEP SLOPES. THE EXTENSION OF SEWERS TO SERVE NEW DEVELOPMENT IN THESE AREAS IS NOT PERMITTED.

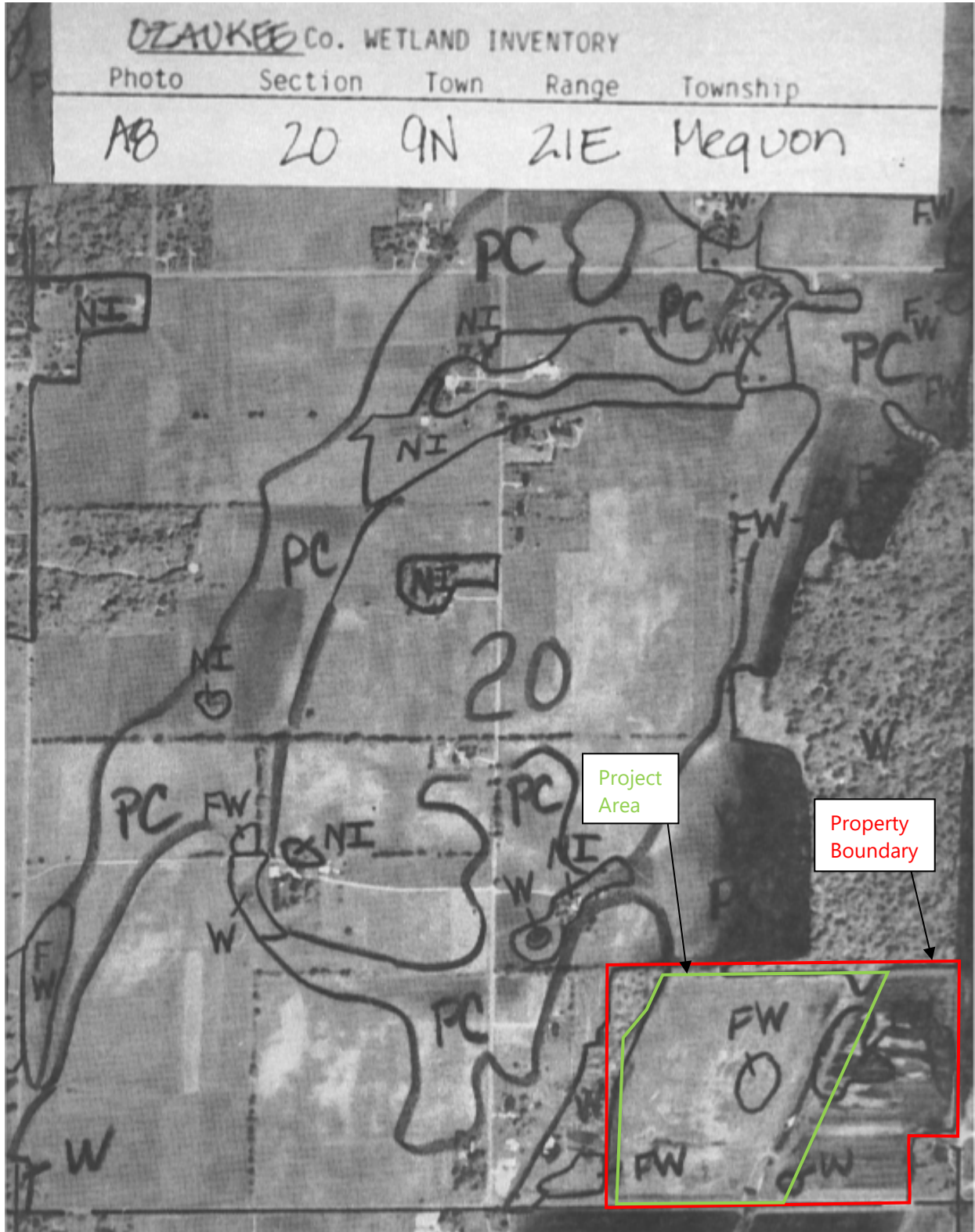
Photography Date: April 2015



Source: SEWRPC

# Exhibit 6. NRCS Draft Wetland Inventory Map

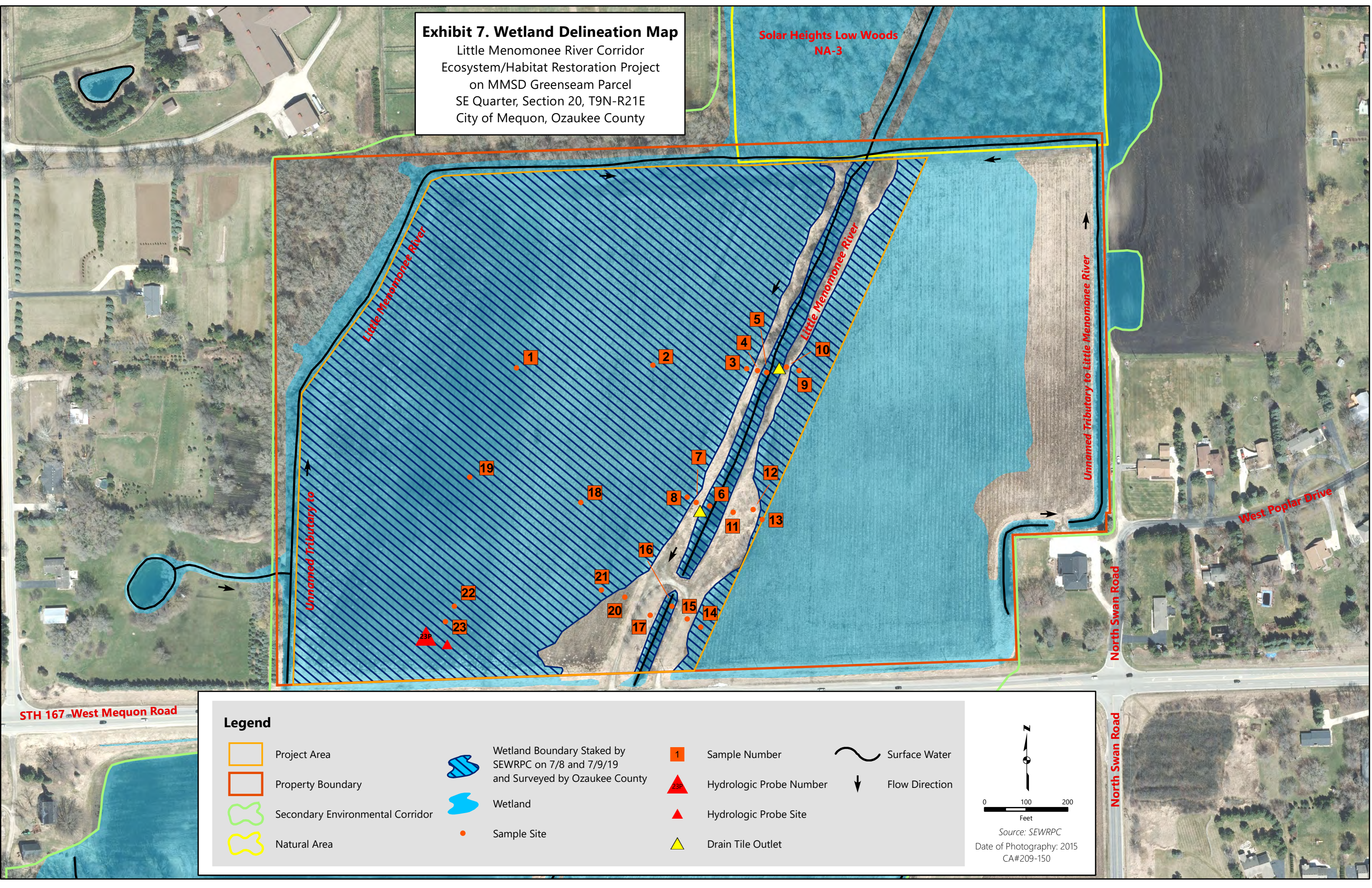
Little Menomonee River Corridor Ecosystem/Habitat  
Restoration Project on MMSD Greenseam Parcel  
SE Section 20, T9N-R21E  
City of Mequon, Ozaukee County



### Exhibit 7. Wetland Delineation Map

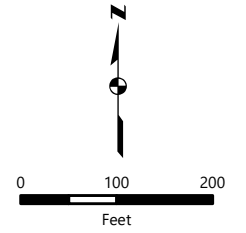
Little Menomonee River Corridor  
Ecosystem/Habitat Restoration Project  
on MMSD Greenseam Parcel  
SE Quarter, Section 20, T9N-R21E  
City of Mequon, Ozaukee County

Solar Heights Low Woods  
NA-3



#### Legend

- Project Area
- Property Boundary
- Secondary Environmental Corridor
- Natural Area
- Wetland Boundary Staked by SEWRPC on 7/8 and 7/9/19 and Surveyed by Ozaukee County
- Wetland
- Sample Site
- 1 Sample Number
- ▲ Hydrologic Probe Number
- ▲ Hydrologic Probe Site
- ▲ Drain Tile Outlet
- Surface Water
- Flow Direction



Source: SEWRPC  
Date of Photography: 2015  
CA#209-150





## Exhibit 8. Preliminary Vegetation Survey

Little Menomonee River Corridor Ecosystem/Habitat Restoration Project  
on MMSD Greenseam Parcel

Dates: July 8 and 9, 2019

Observers: Christopher J. Jors, Principal Biologist  
Jennifer L. Dietl, Senior Biologist  
Shane T. Heyel, Biologist  
Southeastern Wisconsin Regional Planning Commission

Location: City of Mequon in parts of the Southeast one-quarter of U.S. Public Land Survey  
Section 20, Township 9 North, Range 21 East, Ozaukee County, Wisconsin.

Species List: Native Species  
**Co-dominant species**

*Acer negundo*--Boxelder  
*Ambrosia trifida*--Giant ragweed  
*Asclepias syriaca*--Common milkweed  
*Euthamia graminifolia*--Grass-leaved goldenrod  
*Fraxinus pennsylvanica*--Green ash  
*Geum canadense*--White avens  
*Impatiens capensis*--Jewelweed  
*Larix laricina*--Tamarack (planted)  
*Lemna minor*--Lesser duckweed  
*Panicum virgatum*--Switch grass  
*Poa palustris*--Marsh bluegrass  
*Populus deltoides*--Cottonwood  
*Quercus alba*--White oak (planted)  
*Quercus bicolor*--Swamp white oak (planted)  
*Ribes americanum*--Wild black currant  
*Sambucus nigra*--Elderberry  
*Scirpus atrovirens*--Green bulrush  
*Solidago altissima*--Tall goldenrod  
***Solidago gigantea*--Giant goldenrod**  
*Sphenopholis intermedia*--Slender wedge grass  
***Symphotrichum lanceolatum*--Marsh aster**  
*Symphotrichum lateriflorum*--Calico aster  
*Symphotrichum novae-angliae*--New England aster  
***Symphotrichum puniceum*--Red-stemmed aster**  
*Ulmus americana*--American elm  
*Urtica dioica*--Stinging nettle  
*Vitis riparia*--Riverbank grape

NON-Native Species

*Cirsium arvense*--Canada thistle  
*Daucus carota*--Queen Anne's lace

NON-Native Species cont.

Elymus repens--Quack grass

**Phalaris arundinacea**--Reed canary grass

Poa pratensis--Kentucky bluegrass

Rhamnus cathartica--Common buckthorn

Taraxacum officinale--Common dandelion

Total number of plant species: 34

Number of alien, or non-native, plant species: 7 (21 percent)

This approximately 28.86-acre plant community area is part of the Little Menomonee River floodplain-wetland complex and consists of open water and fresh (wet) meadow (partly degraded). Disturbances to the plant community area include past sod farming, side casting of dredge spoil material, and water level changes due to ditching, draining, and stream channel realignment. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

SVY4583  
CA209-150

**Exhibit 9.**

**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 1  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): terrace/floodway Local relief (concave, convex, none): none  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None

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

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

|  |  |
|--|--|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b><br>Hydric Soils Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b><br>Wetland Hydrology Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> | <b>Is the Sampled Area within a Wetland?</b> <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> |
| Remarks: 90-day antecedent precipitation is normal.  |  |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)          | Absolute % Cover | Dominant Species?                   | Indicator Status   | Dominance Test worksheet:   |
|---|------------------|-------------------------------------|--------------------|---|
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____              | Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>5</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)   |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____              |   |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____              |   |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____              |   |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |   |
| 0 = Total Cover                               |                  |                                     |                    |   |
| Sapling/Shrub Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species?                   | Indicator Status   | Prevalence Index worksheet:   |
| 1. <b><u>Rhamnus cathartica</u></b>           | <b><u>7</u></b>  | <input checked="" type="checkbox"/> | <b><u>FAC</u></b>  | <b>Total % Cover of:</b> <u>          </u> <b>Multiply by:</b> <u>          </u><br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br><br>Prevalence Index = B/A = _____   |
| 2. <b><u>Larix laricina (planted)</u></b>     | <b><u>3</u></b>  | <input checked="" type="checkbox"/> | <b><u>FACW</u></b> |   |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____              |   |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____              |   |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |   |
| 10 = Total Cover                              |                  |                                     |                    |   |
| Herb Stratum (Plot size: 5' radius)           | Absolute % Cover | Dominant Species?                   | Indicator Status   | Hydrophytic Vegetation Indicators:  |
| 1. <b><u>Solidago gigantea</u></b>            | <b><u>30</u></b> | <input checked="" type="checkbox"/> | <b><u>FACW</u></b> | <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> <b>2 - Dominance Test is &gt;50%</b><br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 2. <b><u>Symphotrichum lanceolatum</u></b>    | <b><u>25</u></b> | <input checked="" type="checkbox"/> | <b><u>FACW</u></b> |   |
| 3. <b><u>Solidago altissima</u></b>           | <b><u>20</u></b> | <input checked="" type="checkbox"/> | <b><u>FACU</u></b> |   |
| 4. <u>Symphotrichum novae-angliae</u>         | <u>18</u>        | <input type="checkbox"/>            | <u>FACW</u>        |   |
| 5. <u>Euthamia graminifolia</u>               | <u>12</u>        | <input type="checkbox"/>            | <u>FACW</u>        |   |
| 6. <u>Rhamnus cathartica</u>                  | <u>5</u>         | <input type="checkbox"/>            | <u>FAC</u>         |   |
| 7. <u>Asclepias syriaca</u>                   | <u>3</u>         | <input type="checkbox"/>            | <u>UPL</u>         |   |
| 8. _____                                      | _____            | <input type="checkbox"/>            | _____              |   |
| 9. _____                                      | _____            | <input type="checkbox"/>            | _____              |   |
| 10. _____                                     | _____            | <input type="checkbox"/>            | _____              |   |
| 113 = Total Cover                             |                  |                                     |                    |   |
| Woody Vine Stratum (Plot size: 30' radius)    | Absolute % Cover | Dominant Species?                   | Indicator Status   | Hydrophytic Vegetation Present?   |
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____              | <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> <input type="checkbox"/>   |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____              |   |
| 0 = Total Cover                               |                  |                                     |                    |   |

Remarks: (Include photo numbers here or on a separate sheet.) Fresh (wet) meadow.

**SOIL**

Sampling Point: 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 <sup>1</sup> | Loc <sup>2</sup> |           |         |
| 0-16           | N 2.5/        | 95 | 2.5Y 5/2       | 5  | D                 | PL M             | Muck      |         |
| 16-30          | 10Y 5/1       | 80 | 10YR 5/6       | 20 | C                 | PL M             | Clay loam |         |
|                |               |    |                |    |                   |                  |           |         |
|                |               |    |                |    |                   |                  |           |         |
|                |               |    |                |    |                   |                  |           |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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): 27  
 Saturation Present? **Yes**  No  Depth (inches): 5  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is located on a low, level landscape in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply due to the presence of a drain tile system.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 2  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): terrace/floodway Local relief (concave, convex, none): none  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None

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

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

|  |   |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Remarks: <u>90-day antecedent precipitation is normal.</u>   |   |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)          | Absolute % Cover | Dominant Species?                   | Indicator Status | Dominance Test worksheet:   |
|---|------------------|-------------------------------------|------------------|---|
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____            | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>1</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____            |   |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____            |   |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____            |   |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____            |   |
| <u>0</u> = Total Cover                        |                  |                                     |                  |   |
| Sapling/Shrub Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species?                   | Indicator Status | Prevalence Index worksheet:   |
| 1. <u>Quercus bicolor</u> (planted)           | <u>2</u>         | <input type="checkbox"/>            | <u>FACW</u>      | Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____   |
| 2. <u>Ulmus americana</u>                     | <u>1</u>         | <input type="checkbox"/>            | <u>FACW</u>      |   |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____            |   |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____            |   |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____            |   |
| <u>3</u> = Total Cover                        |                  |                                     |                  |   |
| Herb Stratum (Plot size: 5' radius)           | Absolute % Cover | Dominant Species?                   | Indicator Status | Hydrophytic Vegetation Indicators:  |
| 1. <u>Symphytotrichum puniceum</u>            | <u>60</u>        | <input checked="" type="checkbox"/> | <u>OBL</u>       | <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> <b>2 - Dominance Test is &gt;50%</b><br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 2. <u>Euthamia graminifolia</u>               | <u>10</u>        | <input type="checkbox"/>            | <u>FACW</u>      |   |
| 3. <u>Panicum virgatum</u>                    | <u>8</u>         | <input type="checkbox"/>            | <u>FAC</u>       |   |
| 4. <u>Solidago gigantea</u>                   | <u>5</u>         | <input type="checkbox"/>            | <u>FACW</u>      |   |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____            |   |
| 6. _____                                      | _____            | <input type="checkbox"/>            | _____            |   |
| 7. _____                                      | _____            | <input type="checkbox"/>            | _____            |   |
| 8. _____                                      | _____            | <input type="checkbox"/>            | _____            |   |
| 9. _____                                      | _____            | <input type="checkbox"/>            | _____            |   |
| 10. _____                                     | _____            | <input type="checkbox"/>            | _____            |   |
| <u>83</u> = Total Cover                       |                  |                                     |                  |   |
| Woody Vine Stratum (Plot size: 30' radius)    | Absolute % Cover | Dominant Species?                   | Indicator Status | Hydrophytic Vegetation Present?   |
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____            | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>   |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____            |   |
| <u>0</u> = Total Cover                        |                  |                                     |                  |   |

Remarks: (Include photo numbers here or on a separate sheet.) Fresh (wet) meadow.

**SOIL**

Sampling Point: 2

**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 <sup>1</sup> | Loc <sup>2</sup> |           |         |
| 0-16           | N 1/          | 100 |                |    |                   |                  | Muck      |         |
| 16-24          | 10Y 4/1       | 75  | 10YR 4/6       | 15 | C                 | PL M             | Clay loam |         |
|                |               |     | 5YR 3/4        | 10 | C                 | PL M             |           |         |
|                |               |     |                |    |                   |                  |           |         |
|                |               |     |                |    |                   |                  |           |         |
|                |               |     |                |    |                   |                  |           |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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): 5  
 Saturation Present? Yes  No  Depth (inches): 0 (at surface)  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is located on a low, level landscape in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply due to the presence of a drain tile system.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 3  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): toeslope/floodway Local relief (concave, convex, none): concave  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? **Yes**  No  (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? **Yes**  No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If, needed, explain any answers in Remarks.)

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

|  |   |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Remarks: <u>90-day antecedent precipitation is normal.</u>   |   |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)   | Absolute % Cover | Dominant Species?                   | Indicator Status | Dominance Test worksheet:   |
|--|------------------|-------------------------------------|------------------|---|
| 1. _____   | _____            | <input type="checkbox"/>            | _____            | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>1</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  |
| 2. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| 3. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| 4. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| 5. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| <u>0</u> = Total Cover   |                  |                                     |                  |   |
| Sapling/Shrub Stratum (Plot size: 30' radius)  | Absolute % Cover | Dominant Species?                   | Indicator Status | Prevalence Index worksheet:   |
| 1. _____   | _____            | <input type="checkbox"/>            | _____            | Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____   |
| 2. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| 3. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| 4. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| 5. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| <u>0</u> = Total Cover   |                  |                                     |                  |   |
| Herb Stratum (Plot size: 5' radius)  | Absolute % Cover | Dominant Species?                   | Indicator Status | Hydrophytic Vegetation Indicators:  |
| 1. <u>Phalaris arundinacea</u>   | <u>75</u>        | <input checked="" type="checkbox"/> | <u>FACW</u>      | <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> <b>2 - Dominance Test is &gt;50%</b><br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 2. <u>Solidago gigantea</u>  | <u>25</u>        | <input type="checkbox"/>            | <u>FACW</u>      |   |
| 3. <u>Symphotrichum puniceum</u>   | <u>15</u>        | <input type="checkbox"/>            | <u>OBL</u>       |   |
| 4. <u>Taraxacum officinale</u>   | <u>12</u>        | <input type="checkbox"/>            | <u>FACU</u>      |   |
| 5. <u>Solidago altissima</u>   | <u>10</u>        | <input type="checkbox"/>            | <u>FACU</u>      |   |
| 6. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| 7. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| 8. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| 9. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| 10. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| <u>137</u> = Total Cover   |                  |                                     |                  |   |
| Woody Vine Stratum (Plot size: 30' radius)   | Absolute % Cover | Dominant Species?                   | Indicator Status | Hydrophytic Vegetation Present?   |
| 1. _____   | _____            | <input type="checkbox"/>            | _____            | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>   |
| 2. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| <u>0</u> = Total Cover   |                  |                                     |                  |   |
| Remarks: (Include photo numbers here or on a separate sheet.) <u>Fresh (wet) meadow.</u> |                  |                                     |                  |   |



**SOIL**

Sampling Point: 3

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

| Depth<br>(inches) | Matrix        |     | Redox Features |    |                   |                  | Texture   | Remarks |
|-------------------|---------------|-----|----------------|----|-------------------|------------------|-----------|---------|
|                   | Color (moist) | %   | Color (moist)  | %  | Type <sup>1</sup> | Loc <sup>2</sup> |           |         |
| 0-21              | N 2.5/        | 100 |                |    |                   |                  | Muck      |         |
| 21-31             | 10Y 5/1       | 80  | 10YR 4/6       | 20 | C                 | PL M             | Clay loam |         |
|                   |               |     |                |    |                   |                  |           |         |
|                   |               |     |                |    |                   |                  |           |         |
|                   |               |     |                |    |                   |                  |           |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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): 26  
 Saturation Present? Yes  No  Depth (inches): 0 (at surface)  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is located on a concave toeslope in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply due to the presence of a drain tile system.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 4  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): berm (with dredge spoils)/floodway Local relief (concave, convex, none): linear, convex  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None

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

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

|  |   |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b><br>Hydric Soils Present? <input type="checkbox"/> <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b><br>Wetland Hydrology Present? <input type="checkbox"/> <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> | Is the Sampled Area within a Wetland? <input type="checkbox"/> <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> |
| Remarks: 90-day antecedent precipitation is normal. The sample site is located immediately outside the WWI-mapped wetland boundary shown on Exhibit 2.   |   |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)          | Absolute % Cover | Dominant Species?                   | Indicator Status   |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|---|------------------|-------------------------------------|--------------------|--|-------------------|--------------|-------------------------------|--|--------------------------------|--|-------------------------------|--|--------------------------------|--|-------------------------------|--|--------------------------|-----------|--------------------------------|--|
| 1. <u><b>Acer negundo</b></u>                 | <u>15</u>        | <input checked="" type="checkbox"/> | <u><b>FAC</b></u>  | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>5</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. <u><b>Rhamnus cathartica</b></u>           | <u>10</u>        | <input checked="" type="checkbox"/> | <u><b>FAC</b></u>  |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|   | <u>25</u>        | = Total Cover                       |                    |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| Sapling/Shrub Stratum (Plot size: 30' radius) |                  |                                     |                    | <b>Prevalence Index worksheet:</b><br><br><table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: right;">Multiply by:</td> </tr> <tr> <td>OBL species _____ x 1 = _____</td> <td></td> </tr> <tr> <td>FACW species _____ x 2 = _____</td> <td></td> </tr> <tr> <td>FAC species _____ x 3 = _____</td> <td></td> </tr> <tr> <td>FACU species _____ x 4 = _____</td> <td></td> </tr> <tr> <td>UPL species _____ x 5 = _____</td> <td></td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table> | 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 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. <u><b>Rhamnus cathartica</b></u>           | <u>20</u>        | <input checked="" type="checkbox"/> | <u><b>FAC</b></u>  |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. <u><b>Lonicera x bella</b></u>             | <u>10</u>        | <input checked="" type="checkbox"/> | <u><b>FACU</b></u> |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|   | <u>30</u>        | = Total Cover                       |                    |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| Herb Stratum (Plot size: 5' radius)           |                  |                                     |                    | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> <b>2 - Dominance Test is &gt;50%</b><br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.   |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 1. <u><b>Bromus inermis</b></u>               | <u>75</u>        | <input checked="" type="checkbox"/> | <u><b>UPL</b></u>  |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. <u>Phalaris arundinacea</u>                | <u>20</u>        | <input type="checkbox"/>            | <u><b>FACW</b></u> |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 3. <u>Rhamnus cathartica</u>                  | <u>10</u>        | <input type="checkbox"/>            | <u><b>FAC</b></u>  |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 4. <u>Solidago altissima</u>                  | <u>5</u>         | <input type="checkbox"/>            | <u><b>FACU</b></u> |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 5. <u>Solidago gigantea</u>                   | <u>3</u>         | <input type="checkbox"/>            | <u><b>FACW</b></u> |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 6. <u>Symphotrichum lateriflorum</u>          | <u>3</u>         | <input type="checkbox"/>            | <u><b>FAC</b></u>  |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 7. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 8. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 9. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 10. _____                                     | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|   | <u>116</u>       | = Total Cover                       |                    |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| Woody Vine Stratum (Plot size: 30' radius)    |                  |                                     |                    | <b>Hydrophytic Vegetation Present?</b> <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> <input type="checkbox"/>   |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|   | <u>0</u>         | = Total Cover                       |                    |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |

Remarks: (Include photo numbers here or on a separate sheet.) Old field with scattered shrubs and trees.

**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 <sup>1</sup> | Loc <sup>2</sup> |           |                           |
| 0-3            | 10YR 3/1      | 100 |                |    |                   |                  | Silt loam |                           |
| 3-12           | 10YR 5/3      | 60  | 10YR 5/6       | 10 | C                 | PL M             | Silt loam | with gravel               |
|                | 10YR 3/1      | 30  |                |    |                   |                  |           |                           |
| 12+            |               |     |                |    |                   |                  |           | Refusal: Gravel/dry soils |
|                |               |     |                |    |                   |                  |           |                           |
|                |               |     |                |    |                   |                  |           |                           |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

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

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: Gravel/dry soil  
Depth (inches): 12

**Hydric Soil Present?** Yes  No

Remarks: The soil profile includes old dredge spoils. No hydric soil indicators observed.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

Secondary Indicators (minimum of two required)

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                  | <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Aquatic Fauna (B13)                        | <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> True Aquatic Plants (B14)                  | <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Water marks (B1)                          | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Presence of Reduced Iron (C4)              | <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Thin Muck Surface (C7)                     | <input type="checkbox"/> FAC-Neutral Test (D5)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Gauge or Well Data (D9)                    |  |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   | <input type="checkbox"/> Other (Explain in Remarks)                 |  |

**Field Observations:**

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: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply as the site is on a convex, dredge spoil berm and a drain tile system is present. No wetland hydrology indicators observed.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 5  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): Little Menomonee River/floodway Local relief (concave, convex, none): linear, concave  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: T3K

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Remarks: 90-day antecedent precipitation is normal. The sample site has naturally problematic vegetation due to an unvegetated section of a river.   |   |

**VEGETATION – Use scientific names of plants.**

| <u>Tree Stratum</u> (Plot size: <u>30'</u> radius)          | Absolute % Cover | Dominant Species?        | Indicator Status | <b>Dominance Test worksheet:</b>  |
|---|------------------|--------------------------|------------------|---|
| 1. _____  | _____            | <input type="checkbox"/> | _____            | Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>0</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)  |
| 2. _____  | _____            | <input type="checkbox"/> | _____            |   |
| 3. _____  | _____            | <input type="checkbox"/> | _____            |   |
| 4. _____  | _____            | <input type="checkbox"/> | _____            |   |
| 5. _____  | _____            | <input type="checkbox"/> | _____            |   |
| <u>0</u> = Total Cover                                      |                  |                          |                  |   |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius) |                  |                          |                  | <b>Prevalence Index worksheet:</b>  |
| 1. _____  | _____            | <input type="checkbox"/> | _____            | Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____   |
| 2. _____  | _____            | <input type="checkbox"/> | _____            |   |
| 3. _____  | _____            | <input type="checkbox"/> | _____            |   |
| 4. _____  | _____            | <input type="checkbox"/> | _____            |   |
| 5. _____  | _____            | <input type="checkbox"/> | _____            |   |
| <u>0</u> = Total Cover                                      |                  |                          |                  |   |
| <u>Herb Stratum</u> (Plot size: <u>5'</u> radius)           |                  |                          |                  | <b>Hydrophytic Vegetation Indicators:</b>   |
| 1. _____  | _____            | <input type="checkbox"/> | _____            | <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input type="checkbox"/> 2 - Dominance Test is >50%<br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input checked="" type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 2. _____  | _____            | <input type="checkbox"/> | _____            |   |
| 3. _____  | _____            | <input type="checkbox"/> | _____            |   |
| 4. _____  | _____            | <input type="checkbox"/> | _____            |   |
| 5. _____  | _____            | <input type="checkbox"/> | _____            |   |
| 6. _____  | _____            | <input type="checkbox"/> | _____            |   |
| 7. _____  | _____            | <input type="checkbox"/> | _____            |   |
| 8. _____  | _____            | <input type="checkbox"/> | _____            |   |
| 9. _____  | _____            | <input type="checkbox"/> | _____            |   |
| 10. _____   | _____            | <input type="checkbox"/> | _____            |   |
| <u>0</u> = Total Cover                                      |                  |                          |                  |   |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)    |                  |                          |                  | <b>Hydrophytic Vegetation Present?</b>  |
| 1. _____  | _____            | <input type="checkbox"/> | _____            | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>   |
| 2. _____  | _____            | <input type="checkbox"/> | _____            |   |
| <u>0</u> = Total Cover                                      |                  |                          |                  |   |

Remarks: (Include photo numbers here or on a separate sheet.) The sample site is in an unvegetated section of the Little Menomonee River. It exhibits wetland hydrology indicators and has (inundated) hydric soil. Vegetation on the banks includes: *Acer negundo* (FAC), *Bromus inermis* (UPL), *Phalaris arundinacea* (FACW), and *Rhamnus cathartica* (FAC). Open water.

**SOIL**

Sampling Point: 5

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)   |               |   |  |   |   |  |         |         |
|---|---------------|---|--|---|---|--|---------|---------|
| Depth<br>(inches)   | Matrix        |   | Redox Features   |   |   |  | Texture | Remarks |
|   | Color (moist) | % | Color (moist)  | % | Type <sup>1</sup>                               | Loc <sup>2</sup>   |         |         |
|   |               |   |  |   |   |  |         |         |
|   |               |   |  |   |   |  |         |         |
|   |               |   |  |   |   |  |         |         |
|   |               |   |  |   |   |  |         |         |
|   |               |   |  |   |   |  |         |         |
|   |               |   |  |   |   |  |         |         |
|   |               |   |  |   |   |  |         |         |
|   |               |   |  |   |   |  |         |         |
| <sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains   |               |   |  |   | <sup>2</sup> Location: PL=Pore Lining, M=Matrix |  |         |         |
| <b>Hydric Soil Indicators:</b>  |               |   | <b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>  |   |   |  |         |         |
| <input type="checkbox"/> Histosol (A1)<br><input type="checkbox"/> Histic Epipedon (A2)<br><input type="checkbox"/> Black Histic (A3)<br><input type="checkbox"/> Hydrogen Sulfide (A4)<br><input type="checkbox"/> Stratified Layers (A5)<br><input type="checkbox"/> 2 cm Muck (A10)<br><input type="checkbox"/> Depleted Below Dark Surface (A11)<br><input type="checkbox"/> Thick Dark Surface (A12)<br><input type="checkbox"/> Sandy Mucky Mineral (S1)<br><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) |               |   | <input type="checkbox"/> Sandy Gleyed Matrix (S4)<br><input type="checkbox"/> Sandy Redox (S5)<br><input type="checkbox"/> Stripped Matrix (S6)<br><input type="checkbox"/> Loamy Mucky Mineral (F1)<br><input type="checkbox"/> Loamy Gleyed Matrix (F2)<br><input type="checkbox"/> Depleted Matrix (F3)<br><input type="checkbox"/> Redox Dark Surface (F6)<br><input type="checkbox"/> Depleted Dark Surface (F7)<br><input type="checkbox"/> Redox Depressions (F8) |   |   | <input type="checkbox"/> Coast Prairie Redox (A16)<br><input type="checkbox"/> Dark Surface (S7)<br><input type="checkbox"/> Iron-Manganese Masses (F12)<br><input type="checkbox"/> Very Shallow Dark Surface (TF12)<br><input checked="" type="checkbox"/> <b>Other (Explain in Remarks)</b> |         |         |
| <b>Restrictive Layer (if observed):</b><br>Type: _____<br>Depth (inches): _____   |               |   |  |   |   | <b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>  |         |         |
| Remarks: Soils inundated with 5 inches of river water, hydric by definition - Criteria 3.   |               |   |  |   |   |  |         |         |

**HYDROLOGY**

|  |   |  |
|--|---|--|
| <b>Wetland Hydrology Indicators:</b>   |   |  |
| <u>Primary Indicators (minimum of one is required; check all that apply)</u>   |   | <u>Secondary Indicators (minimum of two required)</u>  |
| <input checked="" type="checkbox"/> <b>Surface Water (A1)</b><br><input type="checkbox"/> High Water Table (A2)<br><input type="checkbox"/> Saturation (A3)<br><input type="checkbox"/> Water marks (B1)<br><input type="checkbox"/> Sediment Deposits (B2)<br><input type="checkbox"/> Drift Deposits (B3)<br><input type="checkbox"/> Algal Mat or Crust (B4)<br><input type="checkbox"/> Iron Deposits (B5)<br><input checked="" type="checkbox"/> <b>Inundation Visible on Aerial Imagery (B7)</b><br><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Water-Stained Leaves (B9)<br><input type="checkbox"/> Aquatic Fauna (B13)<br><input type="checkbox"/> True Aquatic Plants (B14)<br><input type="checkbox"/> Hydrogen Sulfide Odor (C1)<br><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)<br><input type="checkbox"/> Presence of Reduced Iron (C4)<br><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)<br><input type="checkbox"/> Thin Muck Surface (C7)<br><input type="checkbox"/> Gauge or Well Data (D9)<br><input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Surface Soil Cracks (B6)<br><input type="checkbox"/> Drainage Patterns (B10)<br><input type="checkbox"/> Dry-Season Water Table (C2)<br><input type="checkbox"/> Crayfish Burrows (C8)<br><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)<br><input type="checkbox"/> Stunted or Stressed Plants (D1)<br><input checked="" type="checkbox"/> <b>Geomorphic Position (D2)</b><br><input type="checkbox"/> FAC-Neutral Test (D5) |
| <b>Field Observations:</b><br>Surface Water Present?    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5</u><br>Water Table Present?    Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____<br>Saturation Present?    Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____<br>(includes capillary fringe)   |   | <b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>  |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).   |   |  |
| Remarks: The sample site lies in the channel and SEWRPC-mapped floodway of a straightened, dredged portion of the Little Menomonee River. The banks of the river are steep and undercut at this location.  |   |  |

# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 6  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): Little Menomonee River/floodway Local relief (concave, convex, none): linear, concave  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: T3K

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Remarks: 90-day antecedent precipitation is normal. The sample site has naturally problematic vegetation due to an unvegetated section of a river.   |   |

**VEGETATION – Use scientific names of plants.**

| Stratum   | Absolute % Cover | Dominant Species?        | Indicator Status | Notes  |
|---|------------------|--------------------------|------------------|--|
| <u>Tree Stratum</u> (Plot size: <u>30'</u> radius)          |                  |                          |                  | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>0</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)   |
| 1. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 2. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 3. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 4. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 5. _____  | _____            | <input type="checkbox"/> | _____            |  |
| <u>0</u> = Total Cover                                      |                  |                          |                  |  |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius) |                  |                          |                  | <b>Prevalence Index worksheet:</b><br><br>Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____  |
| 1. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 2. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 3. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 4. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 5. _____  | _____            | <input type="checkbox"/> | _____            |  |
| <u>0</u> = Total Cover                                      |                  |                          |                  |  |
| <u>Herb Stratum</u> (Plot size: <u>5'</u> radius)           |                  |                          |                  | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input type="checkbox"/> 2 - Dominance Test is >50%<br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input checked="" type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 1. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 2. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 3. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 4. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 5. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 6. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 7. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 8. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 9. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 10. _____   | _____            | <input type="checkbox"/> | _____            |  |
| <u>0</u> = Total Cover                                      |                  |                          |                  |  |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)    |                  |                          |                  | <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>   |
| 1. _____  | _____            | <input type="checkbox"/> | _____            |  |
| 2. _____  | _____            | <input type="checkbox"/> | _____            |  |
| <u>0</u> = Total Cover                                      |                  |                          |                  |  |

Remarks: (Include photo numbers here or on a separate sheet.) The sample site is in an unvegetated section of the Little Menomonee River. It exhibits wetland hydrology indicators and has (inundated) hydric soil. Vegetation on the banks includes: Bromus inermis (UPL), Phalaris arundinacea (FACW), Rhamnus cathartica (FAC), Sambucus nigra (FAC), Solidago gigantea (FACW), and Vitis riparia (FACW). Open water.

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

| Depth<br>(inches) | Matrix        |   | Redox Features |   |                   |                  | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
|                   | Color (moist) | % | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |         |         |
|                   |               |   |                |   |                   |                  |         |         |
|                   |               |   |                |   |                   |                  |         |         |
|                   |               |   |                |   |                   |                  |         |         |
|                   |               |   |                |   |                   |                  |         |         |
|                   |               |   |                |   |                   |                  |         |         |
|                   |               |   |                |   |                   |                  |         |         |
|                   |               |   |                |   |                   |                  |         |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: 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 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 Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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: Soils inundated with 12 inches of river water, hydric by definition - Criteria 3.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

Secondary Indicators (minimum of two required)

- |  |   |   |
|--|---|---|
| <input checked="" type="checkbox"/> <b>Surface Water (A1)</b>                        | <input type="checkbox"/> Water-Stained Leaves (B9)                  | <input type="checkbox"/> Surface Soil Cracks (B6)                   |
| <input type="checkbox"/> High Water Table (A2)                                       | <input type="checkbox"/> Aquatic Fauna (B13)                        | <input type="checkbox"/> Drainage Patterns (B10)                    |
| <input type="checkbox"/> Saturation (A3)   | <input type="checkbox"/> True Aquatic Plants (B14)                  | <input type="checkbox"/> Dry-Season Water Table (C2)                |
| <input type="checkbox"/> Water marks (B1)  | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 | <input type="checkbox"/> Crayfish Burrows (C8)                      |
| <input type="checkbox"/> Sediment Deposits (B2)                                      | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)  |
| <input type="checkbox"/> Drift Deposits (B3)   | <input type="checkbox"/> Presence of Reduced Iron (C4)              | <input type="checkbox"/> Stunted or Stressed Plants (D1)            |
| <input type="checkbox"/> Algal Mat or Crust (B4)                                     | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input checked="" type="checkbox"/> <b>Geomorphic Position (D2)</b> |
| <input type="checkbox"/> Iron Deposits (B5)  | <input type="checkbox"/> Thin Muck Surface (C7)                     | <input type="checkbox"/> FAC-Neutral Test (D5)                      |
| <input checked="" type="checkbox"/> <b>Inundation Visible on Aerial Imagery (B7)</b> | <input type="checkbox"/> Gauge or Well Data (D9)                    |   |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)                     | <input type="checkbox"/> Other (Explain in Remarks)                 |   |

**Field Observations:**

Surface Water Present?    Yes     No     Depth (inches): 12  
 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: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site lies in the channel and SEWRPC-mapped floodway of a straightened, dredged portion of the Little Menomonee River. The banks of the river are steep and undercut at this location. A large, corrugated plastic drain tile outlet was observed near the sample site, approximately eight inches above river water level.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 7  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): berm (old dredge spoils)/floodway Local relief (concave, convex, none): linear, convex  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? **Yes**  No  (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? **Yes**  No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If, needed, explain any answers in Remarks.)

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

|   |  |
|---|--|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> No<br>Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b> | Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b> |
| Remarks: <u>90-day antecedent precipitation is normal.</u>  |  |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)          | Absolute % Cover | Dominant Species?                   | Indicator Status   |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|---|------------------|-------------------------------------|--------------------|--|-------------------|--------------|-------------------------------|--|--------------------------------|--|-------------------------------|--|--------------------------------|--|-------------------------------|--|--------------------------|-----------|--------------------------------|--|
| 1. <u><b>Acer negundo</b></u>                 | <u>20</u>        | <input checked="" type="checkbox"/> | <u><b>FAC</b></u>  | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>3</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)   |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|   | <u>20</u>        | = Total Cover                       |                    |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| Sapling/Shrub Stratum (Plot size: 30' radius) |                  |                                     |                    | <b>Prevalence Index worksheet:</b><br><table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: right;">Multiply by:</td> </tr> <tr> <td>OBL species _____ x 1 = _____</td> <td></td> </tr> <tr> <td>FACW species _____ x 2 = _____</td> <td></td> </tr> <tr> <td>FAC species _____ x 3 = _____</td> <td></td> </tr> <tr> <td>FACU species _____ x 4 = _____</td> <td></td> </tr> <tr> <td>UPL species _____ x 5 = _____</td> <td></td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table> | 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 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. <u><b>Acer negundo</b></u>                 | <u>10</u>        | <input checked="" type="checkbox"/> | <u><b>FAC</b></u>  |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|   | <u>10</u>        | = Total Cover                       |                    |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| Herb Stratum (Plot size: 5' radius)           |                  |                                     |                    | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> <b>2 - Dominance Test is &gt;50%</b><br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.   |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 1. <u><b>Phalaris arundinacea</b></u>         | <u>65</u>        | <input checked="" type="checkbox"/> | <u><b>FACW</b></u> |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. <u>Solidago altissima</u>                  | <u>20</u>        | <input type="checkbox"/>            | <u>FACU</u>        |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 3. <u>Arctium minus</u>                       | <u>15</u>        | <input type="checkbox"/>            | <u>FACU</u>        |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 4. <u>Rhamnus cathartica</u>                  | <u>8</u>         | <input type="checkbox"/>            | <u>FAC</u>         |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 5. <u>Cirsium arvense</u>                     | <u>3</u>         | <input type="checkbox"/>            | <u>FACU</u>        |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 6. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 7. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 8. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 9. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 10. _____                                     | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|   | <u>111</u>       | = Total Cover                       |                    |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| Woody Vine Stratum (Plot size: 30' radius)    |                  |                                     |                    | <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>   |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|   | <u>0</u>         | = Total Cover                       |                    |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |

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



**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 <sup>1</sup> | Loc <sup>2</sup> |           |                         |
| 0-5            | 10YR 3/2      | 100 |                |    |                   |                  | Silt loam |                         |
| 5-15           | 2.5Y 4/1      | 90  | 7.5YR 4/6      | 10 |                   |                  | Clay loam |                         |
| 15-19          | 2.5Y 4/1      | 55  | 10YR 4/6       | 5  |                   |                  | Silt loam |                         |
|                | 10YR 2/1      | 40  |                |    |                   |                  |           |                         |
| 19+            |               |     |                |    |                   |                  |           | Refusal: Hard, dry soil |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: 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 checked="" type="checkbox"/> <b>Depleted Matrix (F3)</b> |
| <input checked="" type="checkbox"/> <b>Depleted Below Dark Surface (A11)</b> | <input 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 Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: 19  
Depth (inches): Hard, dry soil

**Hydric Soil Present?** Yes  No

Remarks: While the above soil profile meets the A11 and F3 indicators, it includes mixed dredge spoils that did not originate in this elevated/convex location.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

Secondary Indicators (minimum of two required)

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                  | <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Aquatic Fauna (B13)                        | <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> True Aquatic Plants (B14)                  | <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Water marks (B1)                          | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Presence of Reduced Iron (C4)              | <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Thin Muck Surface (C7)                     | <input checked="" type="checkbox"/> <b>FAC-Neutral Test (D5)</b>   |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Gauge or Well Data (D9)                    |  |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   | <input type="checkbox"/> Other (Explain in Remarks)                 |  |

**Field Observations:**

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: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply as the site is on a convex, dredge spoil berm and a drain tile system is present. Therefore, only one secondary wetland hydrology indicator (D5) is observed.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 8  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): toeslope/floodway Local relief (concave, convex, none): concave  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None

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

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

|   |  |
|---|--|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> No<br>Wetland Hydrology Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> No | Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> No |
| Remarks: <u>90-day antecedent precipitation is normal.</u>  |  |

**VEGETATION – Use scientific names of plants.**

| <u>Tree Stratum</u> (Plot size: <u>30'</u> radius)                                       | Absolute % Cover  | Dominant Species?                   | Indicator Status   | <b>Dominance Test worksheet:</b>  |
|--|-------------------|-------------------------------------|--------------------|---|
| 1. _____   | _____             | <input type="checkbox"/>            | _____              | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>1</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  |
| 2. _____   | _____             | <input type="checkbox"/>            | _____              |   |
| 3. _____   | _____             | <input type="checkbox"/>            | _____              |   |
| 4. _____   | _____             | <input type="checkbox"/>            | _____              |   |
| 5. _____   | _____             | <input type="checkbox"/>            | _____              |   |
| <u>0</u> = Total Cover   |                   |                                     |                    |   |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)                              |                   |                                     |                    | <b>Prevalence Index worksheet:</b>  |
| 1. _____   | _____             | <input type="checkbox"/>            | _____              | Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____   |
| 2. _____   | _____             | <input type="checkbox"/>            | _____              |   |
| 3. _____   | _____             | <input type="checkbox"/>            | _____              |   |
| 4. _____   | _____             | <input type="checkbox"/>            | _____              |   |
| 5. _____   | _____             | <input type="checkbox"/>            | _____              |   |
| <u>0</u> = Total Cover   |                   |                                     |                    |   |
| <u>Herb Stratum</u> (Plot size: <u>5'</u> radius)  |                   |                                     |                    | <b>Hydrophytic Vegetation Indicators:</b>   |
| 1. <b><u>Phalaris arundinacea</u></b>  | <b><u>100</u></b> | <input checked="" type="checkbox"/> | <b><u>FACW</u></b> | <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> <b>2 - Dominance Test is &gt;50%</b><br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 2. <u>Solidago altissima</u>   | <u>10</u>         | <input type="checkbox"/>            | <u>FACU</u>        |   |
| 3. <u>Solidago gigantea</u>  | <u>10</u>         | <input type="checkbox"/>            | <u>FACW</u>        |   |
| 4. <u>Asclepias syriaca</u>  | <u>6</u>          | <input type="checkbox"/>            | <u>FACU</u>        |   |
| 5. _____   | _____             | <input type="checkbox"/>            | _____              |   |
| 6. _____   | _____             | <input type="checkbox"/>            | _____              |   |
| 7. _____   | _____             | <input type="checkbox"/>            | _____              |   |
| 8. _____   | _____             | <input type="checkbox"/>            | _____              |   |
| 9. _____   | _____             | <input type="checkbox"/>            | _____              |   |
| 10. _____  | _____             | <input type="checkbox"/>            | _____              |   |
| <u>126</u> = Total Cover   |                   |                                     |                    |   |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)                                 |                   |                                     |                    | <b>Hydrophytic Vegetation Present?</b>  |
| 1. _____   | _____             | <input type="checkbox"/>            | _____              | <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> <input type="checkbox"/>   |
| 2. _____   | _____             | <input type="checkbox"/>            | _____              |   |
| <u>0</u> = Total Cover   |                   |                                     |                    |   |
| Remarks: (Include photo numbers here or on a separate sheet.) <u>Fresh (wet) meadow.</u> |                   |                                     |                    |   |

**SOIL**

Sampling Point: 8

| 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 <sup>1</sup>                               | Loc <sup>2</sup>   |           |         |
| 0-15  | N 2.5/        | 100 |  |    |   |  | Muck      |         |
| 15-26   | 10Y 5/1       | 60  | 7.5YR 4/4  | 40 | C   | PL M   | Clay loam |         |
|   |               |     |  |    |   |  |           |         |
|   |               |     |  |    |   |  |           |         |
|   |               |     |  |    |   |  |           |         |
|   |               |     |  |    |   |  |           |         |
|   |               |     |  |    |   |  |           |         |
| <sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains   |               |     |  |    | <sup>2</sup> Location: PL=Pore Lining, M=Matrix |  |           |         |
| <b>Hydric Soil Indicators:</b>  |               |     | <b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>  |    |   |  |           |         |
| <input type="checkbox"/> Histosol (A1)<br><input checked="" type="checkbox"/> <b>Histic Epipedon (A2)</b><br><input type="checkbox"/> Black Histic (A3)<br><input type="checkbox"/> Hydrogen Sulfide (A4)<br><input type="checkbox"/> Stratified Layers (A5)<br><input checked="" type="checkbox"/> <b>2 cm Muck (A10)</b><br><input type="checkbox"/> Depleted Below Dark Surface (A11)<br><input checked="" type="checkbox"/> <b>Thick Dark Surface (A12)</b><br><input type="checkbox"/> Sandy Mucky Mineral (S1)<br><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) |               |     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)<br><input type="checkbox"/> Sandy Redox (S5)<br><input type="checkbox"/> Stripped Matrix (S6)<br><input type="checkbox"/> Loamy Mucky Mineral (F1)<br><input type="checkbox"/> Loamy Gleyed Matrix (F2)<br><input type="checkbox"/> Depleted Matrix (F3)<br><input type="checkbox"/> Redox Dark Surface (F6)<br><input type="checkbox"/> Depleted Dark Surface (F7)<br><input type="checkbox"/> Redox Depressions (F8) |    |   | <input type="checkbox"/> Coast Prairie Redox (A16)<br><input type="checkbox"/> Dark Surface (S7)<br><input type="checkbox"/> Iron-Manganese Masses (F12)<br><input type="checkbox"/> Very Shallow Dark Surface (TF12)<br><input type="checkbox"/> Other (Explain in Remarks) |           |         |
| <b>Restrictive Layer (if observed):</b><br>Type: _____<br>Depth (inches): _____   |               |     |  |    |   | <b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>  |           |         |
| Remarks:  |               |     |  |    |   |  |           |         |

<sup>3</sup>Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

**HYDROLOGY**

| Wetland Hydrology Indicators:  |   |  |
|--|---|--|
| <u>Primary Indicators (minimum of one is required; check all that apply)</u>   |   | <u>Secondary Indicators (minimum of two required)</u>  |
| <input type="checkbox"/> Surface Water (A1)<br><input type="checkbox"/> High Water Table (A2)<br><input checked="" type="checkbox"/> <b>Saturation (A3)</b><br><input type="checkbox"/> Water marks (B1)<br><input type="checkbox"/> Sediment Deposits (B2)<br><input type="checkbox"/> Drift Deposits (B3)<br><input type="checkbox"/> Algal Mat or Crust (B4)<br><input type="checkbox"/> Iron Deposits (B5)<br><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)<br><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Water-Stained Leaves (B9)<br><input type="checkbox"/> Aquatic Fauna (B13)<br><input type="checkbox"/> True Aquatic Plants (B14)<br><input type="checkbox"/> Hydrogen Sulfide Odor (C1)<br><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)<br><input type="checkbox"/> Presence of Reduced Iron (C4)<br><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)<br><input type="checkbox"/> Thin Muck Surface (C7)<br><input type="checkbox"/> Gauge or Well Data (D9)<br><input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Surface Soil Cracks (B6)<br><input type="checkbox"/> Drainage Patterns (B10)<br><input type="checkbox"/> Dry-Season Water Table (C2)<br><input type="checkbox"/> Crayfish Burrows (C8)<br><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)<br><input type="checkbox"/> Stunted or Stressed Plants (D1)<br><input type="checkbox"/> Geomorphic Position (D2)<br><input checked="" type="checkbox"/> <b>FAC-Neutral Test (D5)</b> |
| <b>Field Observations:</b><br>Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____<br>Water Table Present?    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>21</u><br>Saturation Present?    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5</u><br>(includes capillary fringe)   |   | <b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>  |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).   |   |  |
| Remarks: The sample site lies on a concave toeslope in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply due to the presence of a drain tile system.  |   |  |

# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 9  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): toeslope/floodway Local relief (concave, convex, none): concave  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None

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

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

|  |   |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <b>Is the Sampled Area within a Wetland?</b><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Remarks: <u>90-day antecedent precipitation is normal.</u>   |   |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)          | Absolute % Cover | Dominant Species?                   | Indicator Status   |  |
|---|------------------|-------------------------------------|--------------------|--|
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____              | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>3</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)   |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| <u>0</u> = Total Cover                        |                  |                                     |                    |  |
| Sapling/Shrub Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species?                   | Indicator Status   |  |
| 1. <b><u>Acer negundo</u></b>                 | <b><u>15</u></b> | <input checked="" type="checkbox"/> | <b><u>FAC</u></b>  | <b>Prevalence Index worksheet:</b><br><br>Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____  |
| 2. <u>Fraxinus pennsylvanica</u>              | <u>3</u>         | <input type="checkbox"/>            | <u>FACW</u>        |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| <u>18</u> = Total Cover                       |                  |                                     |                    |  |
| Herb Stratum (Plot size: 5' radius)           | Absolute % Cover | Dominant Species?                   | Indicator Status   |  |
| 1. <b><u>Phalaris arundinacea</u></b>         | <b><u>60</u></b> | <input checked="" type="checkbox"/> | <b><u>FACW</u></b> | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> <b>2 - Dominance Test is &gt;50%</b><br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 2. <b><u>Ambrosia trifida</u></b>             | <b><u>25</u></b> | <input checked="" type="checkbox"/> | <b><u>FAC</u></b>  |  |
| 3. <u>Elymus repens</u>                       | <u>15</u>        | <input type="checkbox"/>            | <u>FACU</u>        |  |
| 4. <u>Cirsium arvense</u>                     | <u>10</u>        | <input type="checkbox"/>            | <u>FACU</u>        |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 6. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 7. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 8. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 9. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 10. _____                                     | _____            | <input type="checkbox"/>            | _____              |  |
| <u>110</u> = Total Cover                      |                  |                                     |                    |  |
| Woody Vine Stratum (Plot size: 30' radius)    | Absolute % Cover | Dominant Species?                   | Indicator Status   |  |
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____              | <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>   |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| <u>0</u> = Total Cover                        |                  |                                     |                    |  |

Remarks: (Include photo numbers here or on a separate sheet.) Fresh (wet) meadow.

**SOIL**

Sampling Point: 9

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

| Depth<br>(inches) | Matrix        |     | Redox Features |    |                   |                  | Texture   | Remarks |
|-------------------|---------------|-----|----------------|----|-------------------|------------------|-----------|---------|
|                   | Color (moist) | %   | Color (moist)  | %  | Type <sup>1</sup> | Loc <sup>2</sup> |           |         |
| 0-19              | N 2.5/        | 100 |                |    |                   |                  | Muck      |         |
| 19-26             | 2.5Y 4/1      | 88  | 7.5YR 4/6      | 12 | C                 | PL M             | Clay loam |         |
|                   |               |     |                |    |                   |                  |           |         |
|                   |               |     |                |    |                   |                  |           |         |
|                   |               |     |                |    |                   |                  |           |         |
|                   |               |     |                |    |                   |                  |           |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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): 25.5  
 Saturation Present? **Yes**  No  Depth (inches): 9  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is on a concave toeslope in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply due to the presence of a drain tile system.

# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 10  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): berm (with dredge spoils)/floodway Local relief (concave, convex, none): linear convex  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: T3K

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

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

|  |   |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Remarks: 90-day antecedent precipitation is normal.  |   |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)          | Absolute % Cover | Dominant Species?                   | Indicator Status |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|---|------------------|-------------------------------------|------------------|--|-------------------|--------------|-------------------------------|--|--------------------------------|--|-------------------------------|--|--------------------------------|--|-------------------------------|--|--------------------------|-----------|--------------------------------|--|
| 1. <u>Rhamnus cathartica</u>                  | <u>30</u>        | <input checked="" type="checkbox"/> | <u>FAC</u>       | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>5</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. <u>Acer negundo</u>                        | <u>25</u>        | <input checked="" type="checkbox"/> | <u>FAC</u>       |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|   | <u>55</u>        | = Total Cover                       |                  |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| Sapling/Shrub Stratum (Plot size: 30' radius) |                  |                                     |                  | <b>Prevalence Index worksheet:</b><br><br><table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: right;">Multiply by:</td> </tr> <tr> <td>OBL species _____ x 1 = _____</td> <td></td> </tr> <tr> <td>FACW species _____ x 2 = _____</td> <td></td> </tr> <tr> <td>FAC species _____ x 3 = _____</td> <td></td> </tr> <tr> <td>FACU species _____ x 4 = _____</td> <td></td> </tr> <tr> <td>UPL species _____ x 5 = _____</td> <td></td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table> | 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 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. <u>Rhamnus cathartica</u>                  | <u>60</u>        | <input checked="" type="checkbox"/> | <u>FAC</u>       |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|   | <u>60</u>        | = Total Cover                       |                  |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| Herb Stratum (Plot size: 5' radius)           |                  |                                     |                  | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> 2 - Dominance Test is >50%<br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.   |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 1. <u>Rhamnus cathartica</u>                  | <u>20</u>        | <input checked="" type="checkbox"/> | <u>FAC</u>       |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. <u>Taraxacum officinale</u>                | <u>8</u>         | <input checked="" type="checkbox"/> | <u>FACU</u>      |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 3. <u>Ribes americanum</u>                    | <u>2</u>         | <input type="checkbox"/>            | <u>FACW</u>      |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 6. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 7. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 8. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 9. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 10. _____                                     | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|   | <u>30</u>        | = Total Cover                       |                  |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| Woody Vine Stratum (Plot size: 30' radius)    |                  |                                     |                  | <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>   |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|   | <u>0</u>         | = Total Cover                       |                  |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |

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

**SOIL**

Sampling Point: 10

**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 <sup>1</sup> | Loc <sup>2</sup> |           |                                    |
| 0-6            | 10YR 3/1      | 100 |                |    |                   |                  | Silt loam |                                    |
| 6-19           | 10YR 5/2      | 70  | 7.5YR 4/6      | 10 | C                 | PL M             | Silt loam | with gravel                        |
|                | 10YR 3/1      | 20  |                |    |                   |                  |           |                                    |
| 19+            |               |     |                |    |                   |                  |           | Refusal: Hard, dry soil and gravel |
|                |               |     |                |    |                   |                  |           |                                    |
|                |               |     |                |    |                   |                  |           |                                    |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: 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 checked="" type="checkbox"/> <b>Depleted Matrix (F3)</b> |
| <input checked="" type="checkbox"/> <b>Depleted Below Dark Surface (A11)</b> | <input 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 Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: Hard, dry soil and gravel  
Depth (inches): 19

**Hydric Soil Present?** Yes  No

Remarks: While the above soil profile meets the A11 and F3 indicators, it includes mixed dredge spoils that did not originate in this elevated/convex location.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

Secondary Indicators (minimum of two required)

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                  | <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Aquatic Fauna (B13)                        | <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> True Aquatic Plants (B14)                  | <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Water marks (B1)                          | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Presence of Reduced Iron (C4)              | <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Thin Muck Surface (C7)                     | <input type="checkbox"/> FAC-Neutral Test (D5)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Gauge or Well Data (D9)                    |  |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   | <input type="checkbox"/> Other (Explain in Remarks)                 |  |

**Field Observations:**

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: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply as the site is on a convex, dredge spoil berm and a drain tile system is present. No wetland hydrology indicators observed.

# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 11  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): berm (with dredge spoils) Local relief (concave, convex, none): linear convex  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? **Yes**  No  (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? **Yes**  No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If, needed, explain any answers in Remarks.)

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

|  |   |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b><br>Hydric Soils Present? <input type="checkbox"/> <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b><br>Wetland Hydrology Present? <input type="checkbox"/> <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> | Is the Sampled Area within a Wetland? <input type="checkbox"/> <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> |
| Remarks: <u>90-day antecedent precipitation is normal.</u>   |   |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)          | Absolute % Cover | Dominant Species?                   | Indicator Status   |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
|---|------------------|-------------------------------------|--------------------|--|-------------------|--------------|-------------------------------|--|--------------------------------|--|-------------------------------|--|--------------------------------|--|-------------------------------|--|--------------------------|-----------|--------------------------------|--|
| 1. <u><b>Acer negundo</b></u>                 | <u>25</u>        | <input checked="" type="checkbox"/> | <u><b>FAC</b></u>  | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>5</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| <u>25</u>                                     | = Total Cover    |                                     |                    |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| Sapling/Shrub Stratum (Plot size: 30' radius) |                  |                                     |                    | <b>Prevalence Index worksheet:</b><br><table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: right;">Multiply by:</td> </tr> <tr> <td>OBL species _____ x 1 = _____</td> <td></td> </tr> <tr> <td>FACW species _____ x 2 = _____</td> <td></td> </tr> <tr> <td>FAC species _____ x 3 = _____</td> <td></td> </tr> <tr> <td>FACU species _____ x 4 = _____</td> <td></td> </tr> <tr> <td>UPL species _____ x 5 = _____</td> <td></td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table> | 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 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. <u><b>Rhamnus cathartica</b></u>           | <u>10</u>        | <input checked="" type="checkbox"/> | <u><b>FAC</b></u>  |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. <u><b>Acer negundo</b></u>                 | <u>8</u>         | <input checked="" type="checkbox"/> | <u><b>FAC</b></u>  |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 3. <u><b>Lonicera x bella</b></u>             | <u>6</u>         | <input checked="" type="checkbox"/> | <u><b>FACU</b></u> |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| <u>24</u>                                     | = Total Cover    |                                     |                    |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| Herb Stratum (Plot size: 5' radius)           |                  |                                     |                    | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> <b>2 - Dominance Test is &gt;50%</b><br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.   |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 1. <u><b>Bromus inermis</b></u>               | <u>60</u>        | <input checked="" type="checkbox"/> | <u><b>UPL</b></u>  |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. <u><b>Elymus repens</b></u>                | <u>20</u>        | <input type="checkbox"/>            | <u><b>FACU</b></u> |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 3. <u><b>Phalaris arundinacea</b></u>         | <u>20</u>        | <input type="checkbox"/>            | <u><b>FACW</b></u> |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 4. <u><b>Asclepias syriaca</b></u>            | <u>8</u>         | <input type="checkbox"/>            | <u><b>FACU</b></u> |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 6. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 7. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 8. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 9. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 10. _____                                     | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| <u>108</u>                                    | = Total Cover    |                                     |                    |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| Woody Vine Stratum (Plot size: 30' radius)    |                  |                                     |                    | <b>Hydrophytic Vegetation Present?</b> <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> <input type="checkbox"/>   |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |
| <u>0</u>                                      | = Total Cover    |                                     |                    |  |                   |              |                               |  |                                |  |                               |  |                                |  |                               |  |                          |           |                                |  |

Remarks: (Include photo numbers here or on a separate sheet.) Old field with scattered shrubs and trees.



**SOIL**

Sampling Point: 11

**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 <sup>1</sup> | Loc <sup>2</sup> |                |         |
| 0-4            | 10YR 3/2      | 100 |                |   |                   |                  | Silt loam      |         |
| 4-20           | 10YR 3/2      | 50  | 7.5YR 4/6      | 2 | C                 | PL M             | Loam           |         |
|                | 10YR 6/2      | 18  |                |   |                   |                  |                |         |
|                | 10YR 6/4      | 30  |                |   |                   |                  | Very fine sand |         |
|                |               |     |                |   |                   |                  |                |         |
|                |               |     |                |   |                   |                  |                |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: 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 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 Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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: The mixed soil profile is comprised of old dredge spoils. No hydric soil indicators observed.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

- |  |   |
|--|---|
| <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)                 |

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: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply as the site is on a convex, dredge spoil berm and a drain tile system is present. No wetland hydrology indicators observed.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 12  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): hillslope/floodway Local relief (concave, convex, none): linear  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? **Yes**  No  (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? **Yes**  No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If, needed, explain any answers in Remarks.)

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

|  |   |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b><br>Hydric Soils Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b><br>Wetland Hydrology Present? <input type="checkbox"/> <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> | <b>Is the Sampled Area within a Wetland?</b><br><input type="checkbox"/> <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> |
| Remarks: <u>90-day antecedent precipitation is normal.</u>   |   |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)  | Absolute % Cover | Dominant Species?                   | Indicator Status | Dominance Test worksheet:   |
|---|------------------|-------------------------------------|------------------|---|
| 1. _____  | _____            | <input type="checkbox"/>            | _____            | Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>3</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  |
| 2. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 3. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 4. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 5. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 0 = Total Cover   |                  |                                     |                  |   |
| Sapling/Shrub Stratum (Plot size: 30' radius)                                       |                  |                                     |                  | Prevalence Index worksheet:   |
| 1. <b><u>Acer negundo</u></b>   | <b>80</b>        | <input checked="" type="checkbox"/> | <b>FAC</b>       | Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____   |
| 2. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 3. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 4. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 5. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 80 = Total Cover  |                  |                                     |                  |   |
| Herb Stratum (Plot size: 5' radius)   |                  |                                     |                  | Hydrophytic Vegetation Indicators:  |
| 1. <b><u>Alliaria petiolata</u></b>   | <b>35</b>        | <input checked="" type="checkbox"/> | <b>FAC</b>       | <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> <b>2 - Dominance Test is &gt;50%</b><br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 2. <b><u>Rhamnus cathartica</u></b>   | <b>15</b>        | <input checked="" type="checkbox"/> | <b>FAC</b>       |   |
| 3. <b><u>Phalaris arundinacea</u></b>   | <b>10</b>        | <input type="checkbox"/>            | <b>FACW</b>      |   |
| 4. <b><u>Hesperis matronalis</u></b>  | <b>8</b>         | <input type="checkbox"/>            | <b>FACU</b>      |   |
| 5. <b><u>Ambrosia trifida</u></b>   | <b>5</b>         | <input type="checkbox"/>            | <b>FAC</b>       |   |
| 6. <b><u>Galium aparine</u></b>   | <b>5</b>         | <input type="checkbox"/>            | <b>FACU</b>      |   |
| 7. <b><u>Ambrosia artemisiifolia</u></b>  | <b>3</b>         | <input type="checkbox"/>            | <b>FACU</b>      |   |
| 8. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 9. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 10. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| 81 = Total Cover  |                  |                                     |                  |   |
| Woody Vine Stratum (Plot size: 30' radius)  |                  |                                     |                  | Hydrophytic Vegetation Present?   |
| 1. _____  | _____            | <input type="checkbox"/>            | _____            | <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> <input type="checkbox"/>   |
| 2. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 0 = Total Cover   |                  |                                     |                  |   |
| Remarks: (Include photo numbers here or on a separate sheet.) <u>Shrub thicket.</u> |                  |                                     |                  |   |

**SOIL**

Sampling Point: 12

**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 <sup>1</sup> | Loc <sup>2</sup> |                 |               |
| 0-10           | 10YR 3/2      | 60  | 10YR 5/6       | 25 | C                 | PL M             | Silty clay loam | dredge spoils |
|                | 10YR 5/2      | 10  | 10YR 4/4       | 5  | C                 | PL M             |                 |               |
| 10-18          | N 2.5/        | 100 |                |    |                   |                  | Muck            |               |
| 18-25          | 10YR 5/2      | 90  | 7.5YR 4/6      | 10 | C                 | PL M             | Clay loam       |               |
|                |               |     |                |    |                   |                  |                 |               |
|                |               |     |                |    |                   |                  |                 |               |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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: While the above soil profile meets the F6 indicator, the top layer is dredge spoil material that did not originate in this elevated location.

**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): 23  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply as the site is on an elevated dredge spoil berm and a drain tile system is present. No wetland hydrology indicators observed.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 13  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): toeslope/floodway Local relief (concave, convex, none): concave  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? **Yes**  No  (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? **Yes**  No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If, needed, explain any answers in Remarks.)

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

|   |   |
|---|---|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> No<br>Wetland Hydrology Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> No | <b>Is the Sampled Area within a Wetland?</b> <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> No |
| Remarks: <u>90-day antecedent precipitation is normal.</u>  |   |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)  | Absolute % Cover | Dominant Species?                   | Indicator Status | Dominance Test worksheet:   |
|---|------------------|-------------------------------------|------------------|---|
| 1. _____  | _____            | <input type="checkbox"/>            | _____            | Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  |
| 2. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 3. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 4. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 5. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 0 = Total Cover   |                  |                                     |                  |   |
| Sapling/Shrub Stratum (Plot size: 30' radius)   |                  |                                     |                  | Prevalence Index worksheet:   |
| 1. <b><u>Quercus bicolor (planted)</u></b>  | <b>10</b>        | <input checked="" type="checkbox"/> | <b>FACW</b>      | Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____   |
| 2. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 3. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 4. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 5. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 10 = Total Cover  |                  |                                     |                  |   |
| Herb Stratum (Plot size: 5' radius)   |                  |                                     |                  | Hydrophytic Vegetation Indicators:  |
| 1. <b><u>Phalaris arundinacea</u></b>   | <b>100</b>       | <input checked="" type="checkbox"/> | <b>FACW</b>      | <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> <b>2 - Dominance Test is &gt;50%</b><br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 2. <u>Ambrosia trifida</u>  | 10               | <input type="checkbox"/>            | FAC              |   |
| 3. <u>Cirsium arvense</u>   | 5                | <input type="checkbox"/>            | FACU             |   |
| 4. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 5. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 6. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 7. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 8. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 9. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 10. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| 115 = Total Cover   |                  |                                     |                  |   |
| Woody Vine Stratum (Plot size: 30' radius)  |                  |                                     |                  | Hydrophytic Vegetation Present?   |
| 1. _____  | _____            | <input type="checkbox"/>            | _____            | <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> <input type="checkbox"/>   |
| 2. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 0 = Total Cover   |                  |                                     |                  |   |
| Remarks: (Include photo numbers here or on a separate sheet.) <u>Degraded fresh (wet) meadow.</u> |                  |                                     |                  |   |

**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 <sup>1</sup> | Loc <sup>2</sup> |            |         |
| 0-24           | N 2.5/        | 100 |                |   |                   |                  | Muck       |         |
| 24-32          | 10YR 3/2      | 95  | 7.5YR 4/4      | 5 | C                 | PL M             | Mucky loam |         |
|                |               |     |                |   |                   |                  |            |         |
|                |               |     |                |   |                   |                  |            |         |
|                |               |     |                |   |                   |                  |            |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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): 22  
 Saturation Present? Yes  No  Depth (inches): 6  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is on a concave toeslope in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply due to the presence of a drain tile system.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 14  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): toeslope/floodway Local relief (concave, convex, none): concave  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? **Yes**  No  (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? **Yes**  No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If, needed, explain any answers in Remarks.)

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

|  |  |
|--|--|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b><br>Hydric Soils Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b><br>Wetland Hydrology Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> | <b>Is the Sampled Area within a Wetland?</b> <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> |
| Remarks: <u>90-day antecedent precipitation is normal.</u>   |  |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)   | Absolute % Cover | Dominant Species?                   | Indicator Status | Dominance Test worksheet:  |
|--|------------------|-------------------------------------|------------------|--|
| 1. _____   | _____            | <input type="checkbox"/>            | _____            | Number of Dominant Species That are OBL, FACW, or FAC: <u>5</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>5</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)   |
| 2. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 3. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 4. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 5. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 0 = Total Cover  |                  |                                     |                  |  |
| Sapling/Shrub Stratum (Plot size: 30' radius)  |                  |                                     |                  | Prevalence Index worksheet:  |
| 1. <u>Quercus bicolor (planted)</u>  | <u>12</u>        | <input checked="" type="checkbox"/> | <u>FACW</u>      | Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____  |
| 2. <u>Fraxinus pennsylvanica</u>   | <u>8</u>         | <input checked="" type="checkbox"/> | <u>FACW</u>      |  |
| 3. <u>Acer negundo</u>   | <u>5</u>         | <input checked="" type="checkbox"/> | <u>FAC</u>       |  |
| 4. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 5. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| <u>25</u> = Total Cover  |                  |                                     |                  |  |
| Herb Stratum (Plot size: 5' radius)  |                  |                                     |                  | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> <b>2 - Dominance Test is &gt;50%</b><br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 1. <u>Solidago gigantea</u>  | <u>50</u>        | <input checked="" type="checkbox"/> | <u>FACW</u>      |  |
| 2. <u>Poa pratensis</u>  | <u>18</u>        | <input checked="" type="checkbox"/> | <u>FAC</u>       |  |
| 3. <u>Solidago altissima</u>   | <u>15</u>        | <input type="checkbox"/>            | <u>FACU</u>      |  |
| 4. <u>Cirsium arvense</u>  | <u>10</u>        | <input type="checkbox"/>            | <u>FACU</u>      |  |
| 5. <u>Symphotrichum puniceum</u>   | <u>8</u>         | <input type="checkbox"/>            | <u>OBL</u>       |  |
| 6. <u>Fraxinus pennsylvanica</u>   | <u>5</u>         | <input type="checkbox"/>            | <u>FACW</u>      |  |
| 7. <u>Ambrosia trifida</u>   | <u>3</u>         | <input type="checkbox"/>            | <u>FAC</u>       |  |
| 8. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 9. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 10. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| <u>109</u> = Total Cover   |                  |                                     |                  |  |
| Woody Vine Stratum (Plot size: 30' radius)   |                  |                                     |                  | <b>Hydrophytic Vegetation Present?</b> <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> <input type="checkbox"/>   |
| 1. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 2. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 0 = Total Cover  |                  |                                     |                  |  |
| Remarks: (Include photo numbers here or on a separate sheet.) <u>Fresh wet meadow.</u> |                  |                                     |                  |  |

**SOIL**

Sampling Point: 14

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

| Depth<br>(inches) | Matrix        |     | Redox Features |    |                   |                  | Texture   | Remarks |
|-------------------|---------------|-----|----------------|----|-------------------|------------------|-----------|---------|
|                   | Color (moist) | %   | Color (moist)  | %  | Type <sup>1</sup> | Loc <sup>2</sup> |           |         |
| 0-14              | N 2.5/        | 100 |                |    |                   |                  | Muck      |         |
| 14-24             | 10Y 5/1       | 75  | 7.5YR 4/4      | 25 | C                 | PL M             | Clay loam |         |
|                   |               |     |                |    |                   |                  |           |         |
|                   |               |     |                |    |                   |                  |           |         |
|                   |               |     |                |    |                   |                  |           |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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): 27.5  
 Saturation Present? **Yes**  No  Depth (inches): 10  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is on a concave toeslope in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply due to the presence of a drain tile system.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 15  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): dredge spoil berm/floodway Local relief (concave, convex, none): linear convex  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None

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

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

|  |   |
|--|---|
| Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Remarks: <u>90-day antecedent precipitation is normal.</u>   |   |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)  | Absolute % Cover | Dominant Species?                   | Indicator Status | Dominance Test worksheet:  |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____  | _____            | <input type="checkbox"/>            | _____            | Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)   |
| 2. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 3. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 4. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 5. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| <u>0</u> = Total Cover  |                  |                                     |                  |  |
| Sapling/Shrub Stratum (Plot size: 30' radius)                                   | Absolute % Cover | Dominant Species?                   | Indicator Status | Prevalence Index worksheet:  |
| 1. _____  | _____            | <input type="checkbox"/>            | _____            | Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____  |
| 2. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 3. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 4. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 5. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| <u>0</u> = Total Cover  |                  |                                     |                  |  |
| Herb Stratum (Plot size: 5' radius)   | Absolute % Cover | Dominant Species?                   | Indicator Status | Hydrophytic Vegetation Indicators:   |
| 1. <u>Cirsium arvense</u>   | <u>50</u>        | <input checked="" type="checkbox"/> | <u>FACU</u>      | <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input type="checkbox"/> 2 - Dominance Test is >50%<br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 2. <u>Sonchus arvense</u>   | <u>25</u>        | <input checked="" type="checkbox"/> | <u>FACU</u>      |  |
| 3. <u>Elymus repens</u>   | <u>20</u>        | <input type="checkbox"/>            | <u>FACU</u>      |  |
| 4. <u>Ambrosia trifida</u>  | <u>10</u>        | <input type="checkbox"/>            | <u>FAC</u>       |  |
| 5. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 6. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 7. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 8. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 9. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 10. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| <u>105</u> = Total Cover  |                  |                                     |                  |  |
| Woody Vine Stratum (Plot size: 30' radius)                                      | Absolute % Cover | Dominant Species?                   | Indicator Status | Hydrophytic Vegetation Present?  |
| 1. _____  | _____            | <input type="checkbox"/>            | _____            | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>  |
| 2. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| <u>0</u> = Total Cover  |                  |                                     |                  |  |
| Remarks: (Include photo numbers here or on a separate sheet.) <u>Old field.</u> |                  |                                     |                  |  |



| 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 <sup>1</sup>                               | Loc <sup>2</sup>   |         |         |
| 0-25  | N 2.5/        | 100 |  |   |   |  | Muck    |         |
|   |               |     |  |   |   |  |         |         |
|   |               |     |  |   |   |  |         |         |
|   |               |     |  |   |   |  |         |         |
|   |               |     |  |   |   |  |         |         |
|   |               |     |  |   |   |  |         |         |
|   |               |     |  |   |   |  |         |         |
|   |               |     |  |   |   |  |         |         |
| <sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains   |               |     |  |   | <sup>2</sup> Location: PL=Pore Lining, M=Matrix |  |         |         |
| <b>Hydric Soil Indicators:</b>  |               |     |  |   |   | <b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>  |         |         |
| <input checked="" type="checkbox"/> <b>Histosol (A1)</b><br><input type="checkbox"/> Histic Epipedon (A2)<br><input type="checkbox"/> Black Histic (A3)<br><input type="checkbox"/> Hydrogen Sulfide (A4)<br><input type="checkbox"/> Stratified Layers (A5)<br><input type="checkbox"/> 2 cm Muck (A10)<br><input type="checkbox"/> Depleted Below Dark Surface (A11)<br><input type="checkbox"/> Thick Dark Surface (A12)<br><input type="checkbox"/> Sandy Mucky Mineral (S1)<br><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) |               |     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)<br><input type="checkbox"/> Sandy Redox (S5)<br><input type="checkbox"/> Stripped Matrix (S6)<br><input type="checkbox"/> Loamy Mucky Mineral (F1)<br><input type="checkbox"/> Loamy Gleyed Matrix (F2)<br><input type="checkbox"/> Depleted Matrix (F3)<br><input type="checkbox"/> Redox Dark Surface (F6)<br><input type="checkbox"/> Depleted Dark Surface (F7)<br><input type="checkbox"/> Redox Depressions (F8) |   |   | <input type="checkbox"/> Coast Prairie Redox (A16)<br><input type="checkbox"/> Dark Surface (S7)<br><input type="checkbox"/> Iron-Manganese Masses (F12)<br><input type="checkbox"/> Very Shallow Dark Surface (TF12)<br><input type="checkbox"/> Other (Explain in Remarks) |         |         |
| <b>Restrictive Layer (if observed):</b><br>Type: _____<br>Depth (inches): _____   |               |     |  |   |   | <b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>  |         |         |
| Remarks:  |               |     |  |   |   |  |         |         |

<sup>3</sup>Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

**HYDROLOGY**

| Wetland Hydrology Indicators:  |   |  |
|--|---|--|
| <u>Primary Indicators (minimum of one is required; check all that apply)</u>   |   | <u>Secondary Indicators (minimum of two required)</u>  |
| <input type="checkbox"/> Surface Water (A1)<br><input type="checkbox"/> High Water Table (A2)<br><input type="checkbox"/> Saturation (A3)<br><input type="checkbox"/> Water marks (B1)<br><input type="checkbox"/> Sediment Deposits (B2)<br><input type="checkbox"/> Drift Deposits (B3)<br><input type="checkbox"/> Algal Mat or Crust (B4)<br><input type="checkbox"/> Iron Deposits (B5)<br><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)<br><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Water-Stained Leaves (B9)<br><input type="checkbox"/> Aquatic Fauna (B13)<br><input type="checkbox"/> True Aquatic Plants (B14)<br><input type="checkbox"/> Hydrogen Sulfide Odor (C1)<br><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)<br><input type="checkbox"/> Presence of Reduced Iron (C4)<br><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)<br><input type="checkbox"/> Thin Muck Surface (C7)<br><input type="checkbox"/> Gauge or Well Data (D9)<br><input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Surface Soil Cracks (B6)<br><input type="checkbox"/> Drainage Patterns (B10)<br><input type="checkbox"/> Dry-Season Water Table (C2)<br><input type="checkbox"/> Crayfish Burrows (C8)<br><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)<br><input type="checkbox"/> Stunted or Stressed Plants (D1)<br><input type="checkbox"/> Geomorphic Position (D2)<br><input type="checkbox"/> FAC-Neutral Test (D5) |
| <b>Field Observations:</b><br>Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____<br>Water Table Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____<br>Saturation Present?    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16</u><br>(includes capillary fringe)  |   | <b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>  |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).   |   |  |
| Remarks: The sample site is in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply as the site is on an elevated dredge spoil berm and a drain tile system is present. No wetland hydrology indicators observed.  |   |  |

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 16  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): toeslope/floodway Local relief (concave, convex, none): concave  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: T3K  
 Are climatic/hydrologic conditions on the site typical for this time of year? **Yes**  No  (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? **Yes**  No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If, needed, explain any answers in Remarks.)

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

|   |  |
|---|--|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> No<br>Wetland Hydrology Present? <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> No | <b>Is the Sampled Area within a Wetland?</b><br><input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> No |
| Remarks: <u>90-day antecedent precipitation is normal.</u>  |  |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)          | Absolute % Cover | Dominant Species?                   | Indicator Status   |  |
|---|------------------|-------------------------------------|--------------------|--|
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____              | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)   |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| <u>0</u> = Total Cover                        |                  |                                     |                    |  |
| Sapling/Shrub Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species?                   | Indicator Status   |  |
| 1. <b><u>Sambucus nigra</u></b>               | <b><u>15</u></b> | <input checked="" type="checkbox"/> | <b><u>FAC</u></b>  | <b>Prevalence Index worksheet:</b><br><br>Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____  |
| 2. <u>Ribes americanum</u>                    | <u>3</u>         | <input type="checkbox"/>            | <u>FACW</u>        |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| <u>18</u> = Total Cover                       |                  |                                     |                    |  |
| Herb Stratum (Plot size: 5' radius)           | Absolute % Cover | Dominant Species?                   | Indicator Status   |  |
| 1. <b><u>Phalaris arundinacea</u></b>         | <b><u>50</u></b> | <input checked="" type="checkbox"/> | <b><u>FACW</u></b> | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> <b>2 - Dominance Test is &gt;50%</b><br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 2. <u>Impatiens capensis</u>                  | <u>15</u>        | <input type="checkbox"/>            | <u>FACW</u>        |  |
| 3. <u>Lemna minor</u>                         | <u>5</u>         | <input type="checkbox"/>            | <u>OBL</u>         |  |
| 4. <u>Ribes americanum</u>                    | <u>5</u>         | <input type="checkbox"/>            | <u>FACW</u>        |  |
| 5. <u>Urtica dioica</u>                       | <u>5</u>         | <input type="checkbox"/>            | <u>FAC</u>         |  |
| 6. <u>Vitis riparia</u>                       | <u>5</u>         | <input type="checkbox"/>            | <u>FACW</u>        |  |
| 7. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 8. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 9. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 10. _____                                     | _____            | <input type="checkbox"/>            | _____              |  |
| <u>85</u> = Total Cover                       |                  |                                     |                    |  |
| Woody Vine Stratum (Plot size: 30' radius)    | Absolute % Cover | Dominant Species?                   | Indicator Status   |  |
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____              | <b>Hydrophytic Vegetation Present?</b> <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> <input type="checkbox"/>   |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| <u>0</u> = Total Cover                        |                  |                                     |                    |  |

Remarks: (Include photo numbers here or on a separate sheet.) Fresh (wet) meadow.

**SOIL**

Sampling Point: 16

**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 <sup>1</sup> | Loc <sup>2</sup> |                 |             |
| 0-14           | 10YR 3/2      | 85 | 10YR 4/2       | 10 | D                 | M                | Silty clay loam | with gravel |
|                |               |    | 10YR 4/6       | 5  | C                 | PL M             |                 |             |
| 14-26          | 10Y 5/1       | 80 | 10YR 4/6       | 20 | C                 | PL M             | Clay loam       |             |
|                |               |    |                |    |                   |                  |                 |             |
|                |               |    |                |    |                   |                  |                 |             |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

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

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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): 24  
 Saturation Present? Yes  No  Depth (inches): 0 (at surface)  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is on a concave toeslope in the SEWRPC-mapped floodway at the edge of the Little Menomonee River. However, geomorphic position (D2) does not apply as a drain tile system is present.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 17  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): berm/floodway Local relief (concave, convex, none): convex  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: T3K

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

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

|  |   |
|--|---|
| Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Remarks: <u>90-day antecedent precipitation is normal.</u>   |   |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)          | Absolute % Cover | Dominant Species?                   | Indicator Status  | Dominance Test worksheet:  |
|---|------------------|-------------------------------------|-------------------|--|
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____             | Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>1</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)   |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____             |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____             |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____             |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____             |  |
| <u>0</u> = Total Cover                        |                  |                                     |                   |  |
| Sapling/Shrub Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species?                   | Indicator Status  | Prevalence Index worksheet:  |
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____             | Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____  |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____             |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____             |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____             |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____             |  |
| <u>0</u> = Total Cover                        |                  |                                     |                   |  |
| Herb Stratum (Plot size: 5' radius)           | Absolute % Cover | Dominant Species?                   | Indicator Status  | Hydrophytic Vegetation Indicators:   |
| 1. <b><u>Bromus inermis</u></b>               | <b><u>60</u></b> | <input checked="" type="checkbox"/> | <b><u>UPL</u></b> | <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input type="checkbox"/> 2 - Dominance Test is >50%<br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 2. <u>Elymus repens</u>                       | <u>15</u>        | <input type="checkbox"/>            | <u>FACU</u>       |  |
| 3. <u>Phalaris arundinacea</u>                | <u>15</u>        | <input type="checkbox"/>            | <u>FACW</u>       |  |
| 4. <u>Cirsium arvense</u>                     | <u>10</u>        | <input type="checkbox"/>            | <u>FACU</u>       |  |
| 5. <u>Arctium minus</u>                       | <u>8</u>         | <input type="checkbox"/>            | <u>FACU</u>       |  |
| 6. <u>Symphotrichum lateriflorum</u>          | <u>5</u>         | <input type="checkbox"/>            | <u>FACW</u>       |  |
| 7. _____                                      | _____            | <input type="checkbox"/>            | _____             |  |
| 8. _____                                      | _____            | <input type="checkbox"/>            | _____             |  |
| 9. _____                                      | _____            | <input type="checkbox"/>            | _____             |  |
| 10. _____                                     | _____            | <input type="checkbox"/>            | _____             |  |
| <u>113</u> = Total Cover                      |                  |                                     |                   |  |
| Woody Vine Stratum (Plot size: 30' radius)    | Absolute % Cover | Dominant Species?                   | Indicator Status  | Hydrophytic Vegetation Present?  |
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____             | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>  |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____             |  |
| <u>0</u> = Total Cover                        |                  |                                     |                   |  |

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

**SOIL**

Sampling Point: 17

**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 <sup>1</sup> | Loc <sup>2</sup> |           |         |
| 0-7            | 10YR 3/2      | 100 |                |   |                   |                  | Silt loam |         |
| 7-14           | 10YR 5/2      | 85  | 10YR 4/6       | 8 | C                 | PL M             | Clay loam |         |
|                | 2.5Y 5/1      | 7   |                |   |                   |                  |           |         |
| 14-24          | N 2.5/        | 100 |                |   |                   |                  | Muck      |         |
|                |               |     |                |   |                   |                  |           |         |
|                |               |     |                |   |                   |                  |           |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: 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 checked="" type="checkbox"/> <b>Depleted Matrix (F3)</b> |
| <input checked="" type="checkbox"/> <b>Depleted Below Dark Surface (A11)</b> | <input 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 Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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: While the soil profile meets the F3 and A11 indicators, the top two layers are old dredge spoils that did not originate at this location.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

- |  |   |
|--|---|
| <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)                 |

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: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply as the site is on an elevated dredge spoil berm and a drain tile system is present. No wetland hydrology indicators observed.

# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 18  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): terrace/floodway Local relief (concave, convex, none): none  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? **Yes**  No  (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? **Yes**  No   
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If, needed, explain any answers in Remarks.)

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

|  |   |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Remarks: <u>90-day antecedent precipitation is normal.</u>   |   |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)  | Absolute % Cover | Dominant Species?                   | Indicator Status | Dominance Test worksheet:   |
|---|------------------|-------------------------------------|------------------|---|
| 1. _____  | _____            | <input type="checkbox"/>            | _____            | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)   |
| 2. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 3. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 4. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 5. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 0 = Total Cover   |                  |                                     |                  |   |
| Sapling/Shrub Stratum (Plot size: 30' radius)                                     | Absolute % Cover | Dominant Species?                   | Indicator Status | Prevalence Index worksheet:   |
| 1. <u>Quercus bicolor</u> (planted)   | <u>2</u>         | <input type="checkbox"/>            | <u>FACW</u>      | Total % Cover of: <span style="margin-left: 20px;">Multiply by:</span><br>OBL species <u>35</u> x 1 = <u>35</u><br>FACW species <u>10</u> x 2 = <u>20</u><br>FAC species <u>0</u> x 3 = <u>0</u><br>FACU species <u>35</u> x 4 = <u>140</u><br>UPL species <u>0</u> x 5 = <u>0</u><br>Column Totals: <u>80</u> (A) <u>195</u> (B)<br>Prevalence Index = B/A = <u>2.43</u>   |
| 2. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 3. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 4. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 5. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 2 = Total Cover   |                  |                                     |                  |   |
| Herb Stratum (Plot size: 5' radius)   | Absolute % Cover | Dominant Species?                   | Indicator Status | Hydrophytic Vegetation Indicators:  |
| 1. <u>Solidago altissima</u>  | <u>35</u>        | <input checked="" type="checkbox"/> | <u>FACU</u>      | <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input type="checkbox"/> 2 - Dominance Test is >50%<br><input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 2. <u>Symphytotrichum puniceum</u>  | <u>35</u>        | <input checked="" type="checkbox"/> | <u>OBL</u>       |   |
| 3. <u>Solidago gigantea</u>   | <u>8</u>         | <input type="checkbox"/>            | <u>FACW</u>      |   |
| 4. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 5. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 6. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 7. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 8. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 9. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 10. _____   | _____            | <input type="checkbox"/>            | _____            |   |
| 78 = Total Cover  |                  |                                     |                  |   |
| Woody Vine Stratum (Plot size: 30' radius)  | Absolute % Cover | Dominant Species?                   | Indicator Status | Hydrophytic Vegetation Present?   |
| 1. _____  | _____            | <input type="checkbox"/>            | _____            | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>   |
| 2. _____  | _____            | <input type="checkbox"/>            | _____            |   |
| 0 = Total Cover   |                  |                                     |                  |   |
| Remarks: (Include photo numbers here or on a separate sheet.) Fresh (wet) meadow. |                  |                                     |                  |   |

**SOIL**

Sampling Point: 18

**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 <sup>1</sup> | Loc <sup>2</sup> |           |                      |
| 0-15           | N 2.5/        | 100 |                |    |                   |                  | Muck      | with peat inclusions |
| 15-28          | 10Y 5/1       | 70  | 7.5YR 4/6      | 30 | C                 | PL M             | Clay loam | with dolomite        |
|                |               |     |                |    |                   |                  |           |                      |
|                |               |     |                |    |                   |                  |           |                      |
|                |               |     |                |    |                   |                  |           |                      |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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): 23  
 Saturation Present? Yes  No  Depth (inches): 2  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is on low, level ground in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply as a drain tile system is present.

# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-8-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 19  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None

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

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

|  |  |
|--|--|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <b>Is the Sampled Area within a Wetland?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Remarks: <u>90-day antecedent precipitation is normal.</u>   |  |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)  | Absolute % Cover | Dominant Species?                   | Indicator Status |  |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____  | _____            | <input type="checkbox"/>            | _____            | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>4</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)  |
| 2. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 3. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 4. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 5. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 0 = Total Cover   |                  |                                     |                  |  |
| Sapling/Shrub Stratum (Plot size: 30' radius)                                     |                  |                                     |                  | <b>Prevalence Index worksheet:</b><br><br>Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____  |
| 1. <b><u>Populus deltoides</u></b>  | <b>15</b>        | <input checked="" type="checkbox"/> | <b>FAC</b>       |  |
| 2. <u>Larix laricina</u> (planted)  | <u>3</u>         | <input type="checkbox"/>            | <u>FACW</u>      |  |
| 3. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 4. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 5. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| <u>18</u> = Total Cover   |                  |                                     |                  |  |
| Herb Stratum (Plot size: 5' radius)   |                  |                                     |                  | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> 2 - Dominance Test is >50%<br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 1. <b><u>Symphytotrichum puniceum</u></b>   | <b>35</b>        | <input checked="" type="checkbox"/> | <b>OBL</b>       |  |
| 2. <b><u>Solidago altissima</u></b>   | <b>20</b>        | <input checked="" type="checkbox"/> | <b>FACU</b>      |  |
| 3. <b><u>Symphytotrichum lateriflorum</u></b>                                     | <b>18</b>        | <input checked="" type="checkbox"/> | <b>FACW</b>      |  |
| 4. <u>Euthamia graminifolia</u>   | <u>15</u>        | <input type="checkbox"/>            | <u>FACW</u>      |  |
| 5. <u>Poa pratensis</u>   | <u>12</u>        | <input type="checkbox"/>            | <u>FAC</u>       |  |
| 6. <u>Solidago gigantea</u>   | <u>8</u>         | <input type="checkbox"/>            | <u>FACW</u>      |  |
| 7. <u>Daucus carota</u>   | <u>7</u>         | <input type="checkbox"/>            | <u>UPL</u>       |  |
| 8. <u>Populus deltoides</u>   | <u>5</u>         | <input type="checkbox"/>            | <u>FAC</u>       |  |
| 9. <u>Fraxinus pennsylvanica</u>  | <u>3</u>         | <input type="checkbox"/>            | <u>FACW</u>      |  |
| 10. <u>Taraxacum officinale</u>   | <u>3</u>         | <input type="checkbox"/>            | <u>FACU</u>      |  |
| <u>126</u> = Total Cover  |                  |                                     |                  |  |
| Woody Vine Stratum (Plot size: 30' radius)  |                  |                                     |                  | <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>   |
| 1. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 2. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 0 = Total Cover   |                  |                                     |                  |  |
| Remarks: (Include photo numbers here or on a separate sheet.) Fresh (wet) meadow. |                  |                                     |                  |  |



**SOIL**

Sampling Point: 19

**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 <sup>1</sup> | Loc <sup>2</sup> |           |               |
| 0-18           | N 2.5/        | 100 |                |    |                   |                  | Muck      |               |
| 18-24          | 5GY 4/1       | 85  | 10YR 4/6       | 15 | C                 | PL M             | Clay loam | with dolomite |
|                |               |     |                |    |                   |                  |           |               |
|                |               |     |                |    |                   |                  |           |               |
|                |               |     |                |    |                   |                  |           |               |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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): 23.5  
 Saturation Present? **Yes**  No  Depth (inches): 0 (at surface)  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is on low, nearly level ground. However, geomorphic position (D2) does not apply due to the presence of a drain tile system.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-9-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 20  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): slight hillslope/floodway Local relief (concave, convex, none): linear  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None

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

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

|  |   |
|--|---|
| Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Remarks: <u>90-day antecedent precipitation is normal.</u>   |   |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)          | Absolute % Cover | Dominant Species?                   | Indicator Status   | Dominance Test worksheet:  |
|---|------------------|-------------------------------------|--------------------|--|
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____              | Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)   |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| <u>0</u> = Total Cover                        |                  |                                     |                    |  |
| Sapling/Shrub Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species?                   | Indicator Status   | Prevalence Index worksheet:  |
| 1. <b><u>Prunus americana (planted)</u></b>   | <b>8</b>         | <input checked="" type="checkbox"/> | <b><u>UPL</u></b>  | Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____  |
| 2. <u>Rhamnus cathartica</u>                  | <u>2</u>         | <input type="checkbox"/>            | <u>FAC</u>         |  |
| 3. <u>Ulmus americana</u>                     | <u>1</u>         | <input type="checkbox"/>            | <u>FACW</u>        |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| <u>11</u> = Total Cover                       |                  |                                     |                    |  |
| Herb Stratum (Plot size: 5' radius)           | Absolute % Cover | Dominant Species?                   | Indicator Status   | Hydrophytic Vegetation Indicators:   |
| 1. <b><u>Solidago altissima</u></b>           | <b>60</b>        | <input checked="" type="checkbox"/> | <b><u>FACU</u></b> | <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input type="checkbox"/> 2 - Dominance Test is >50%<br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 2. <u>Poa pratensis</u>                       | <u>12</u>        | <input type="checkbox"/>            | <u>FAC</u>         |  |
| 3. <u>Rhamnus cathartica</u>                  | <u>10</u>        | <input type="checkbox"/>            | <u>FAC</u>         |  |
| 4. <u>Ribes americanum</u>                    | <u>8</u>         | <input type="checkbox"/>            | <u>FACW</u>        |  |
| 5. <u>Taraxacum officinale</u>                | <u>8</u>         | <input type="checkbox"/>            | <u>FACU</u>        |  |
| 6. <u>Cirsium arvense</u>                     | <u>7</u>         | <input type="checkbox"/>            | <u>FACU</u>        |  |
| 7. <u>Symphotrichum puniceum</u>              | <u>5</u>         | <input type="checkbox"/>            | <u>OBL</u>         |  |
| 8. <u>Euthamia graminifolia</u>               | <u>3</u>         | <input type="checkbox"/>            | <u>FACW</u>        |  |
| 9. <u>Ulmus americana</u>                     | <u>2</u>         | <input type="checkbox"/>            | <u>FACW</u>        |  |
| 10. _____                                     | _____            | <input type="checkbox"/>            | _____              |  |
| <u>115</u> = Total Cover                      |                  |                                     |                    |  |
| Woody Vine Stratum (Plot size: 30' radius)    | Absolute % Cover | Dominant Species?                   | Indicator Status   | Hydrophytic Vegetation Present?  |
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____              | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>  |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____              |  |
| <u>0</u> = Total Cover                        |                  |                                     |                    |  |

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

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

| Depth<br>(inches) | Matrix        |     | Redox Features |    |                   |                  | Texture   | Remarks |
|-------------------|---------------|-----|----------------|----|-------------------|------------------|-----------|---------|
|                   | Color (moist) | %   | Color (moist)  | %  | Type <sup>1</sup> | Loc <sup>2</sup> |           |         |
| 0-18              | N 2.5/        | 100 |                |    |                   |                  | Muck      |         |
| 18-28             | 10Y 5/1       | 85  | 10YR 4/6       | 15 | C                 | PL M             | Clay loam |         |
|                   |               |     |                |    |                   |                  |           |         |
|                   |               |     |                |    |                   |                  |           |         |
|                   |               |     |                |    |                   |                  |           |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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): 25  
 Saturation Present? Yes  No  Depth (inches): 16  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply as the site is on a hillslope and a drain tile system is present. No wetland hydrology indicators observed.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-9-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 21  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): terrace/floodway Local relief (concave, convex, none): none  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None

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

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

|  |   |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Remarks: 90-day antecedent precipitation is normal.  |   |

### VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: 30' radius)   | Absolute % Cover | Dominant Species?                   | Indicator Status |  |
|--|------------------|-------------------------------------|------------------|--|
| 1. _____   | _____            | <input type="checkbox"/>            | _____            | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>4</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)  |
| 2. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 3. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 4. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 5. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 0 = Total Cover  |                  |                                     |                  |  |
| Sapling/Shrub Stratum (Plot size: 30' radius)                                    |                  |                                     |                  | <b>Prevalence Index worksheet:</b><br>Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____  |
| 1. <b><u>Rhamnus cathartica</u></b>  | <b>8</b>         | <input checked="" type="checkbox"/> | <b>FAC</b>       |  |
| 2. <b><u>Quercus bicolor (planted)</u></b>                                       | <b>4</b>         | <input checked="" type="checkbox"/> | <b>FACW</b>      |  |
| 3. <b><u>Larix laricina (planted)</u></b>  | <b>3</b>         | <input checked="" type="checkbox"/> | <b>FACW</b>      |  |
| 4. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 5. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 15 = Total Cover   |                  |                                     |                  |  |
| Herb Stratum (Plot size: 5' radius)  |                  |                                     |                  | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> 2 - Dominance Test is >50%<br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 1. <b><u>Solidago altissima</u></b>  | <b>60</b>        | <input checked="" type="checkbox"/> | <b>FACU</b>      |  |
| 2. <u>Symphotrichum puniceum</u>   | 18               | <input type="checkbox"/>            | OBL              |  |
| 3. <u>Poa pratensis</u>  | 15               | <input type="checkbox"/>            | FAC              |  |
| 4. <u>Geum candense</u>  | 8                | <input type="checkbox"/>            | FAC              |  |
| 5. <u>Symphotrichum lanceolatum</u>  | 5                | <input type="checkbox"/>            | FACU             |  |
| 6. <u>Taraxacum officinale</u>   | 5                | <input type="checkbox"/>            | FACU             |  |
| 7. <u>Rhamnus cathartica</u>   | 4                | <input type="checkbox"/>            | FAC              |  |
| 8. <u>Quercus bicolor (planted)</u>  | 3                | <input type="checkbox"/>            | FACW             |  |
| 9. <u>Cirsium arvense</u>  | 2                | <input type="checkbox"/>            | FACU             |  |
| 10. _____  | _____            | <input type="checkbox"/>            | _____            |  |
| 120 = Total Cover  |                  |                                     |                  |  |
| Woody Vine Stratum (Plot size: 30' radius)                                       |                  |                                     |                  | <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>   |
| 1. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 2. _____   | _____            | <input type="checkbox"/>            | _____            |  |
| 0 = Total Cover  |                  |                                     |                  |  |
| Remarks: (Include photo numbers here or on a separate sheet.) Fresh (wet) meadow |                  |                                     |                  |  |

**SOIL**

Sampling Point: 21

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

| Depth<br>(inches) | Matrix        |     | Redox Features |    |                   |                  | Texture   | Remarks |
|-------------------|---------------|-----|----------------|----|-------------------|------------------|-----------|---------|
|                   | Color (moist) | %   | Color (moist)  | %  | Type <sup>1</sup> | Loc <sup>2</sup> |           |         |
| 0-20              | N 2.5/        | 100 |                |    |                   |                  | Muck      |         |
| 20-27             | 10Y 5/1       | 90  | 10YR 4/6       | 10 | C                 | PL M             | Clay loam |         |
|                   |               |     |                |    |                   |                  |           |         |
|                   |               |     |                |    |                   |                  |           |         |
|                   |               |     |                |    |                   |                  |           |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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): 20  
 Saturation Present? **Yes**  No  Depth (inches): 6  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is on low, level ground in the SEWRPC-mapped floodway of the Little Menomonee River. However, geomorphic position (D2) does not apply as a drain tile system is present.

# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-9-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 22  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None

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

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

|  |   |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Remarks: <u>90-day antecedent precipitation is normal.</u>   |   |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)   | Absolute % Cover | Dominant Species?                   | Indicator Status   | Dominance Test worksheet:   |
|--|------------------|-------------------------------------|--------------------|---|
| 1. _____   | _____            | <input type="checkbox"/>            | _____              | Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>3</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)   |
| 2. _____   | _____            | <input type="checkbox"/>            | _____              |   |
| 3. _____   | _____            | <input type="checkbox"/>            | _____              |   |
| 4. _____   | _____            | <input type="checkbox"/>            | _____              |   |
| 5. _____   | _____            | <input type="checkbox"/>            | _____              |   |
| <u>0</u> = Total Cover   |                  |                                     |                    |   |
| Sapling/Shrub Stratum (Plot size: 30' radius)  | Absolute % Cover | Dominant Species?                   | Indicator Status   | Prevalence Index worksheet:   |
| 1. <b><u>Rhamnus cathartica</u></b>  | <b><u>10</u></b> | <input checked="" type="checkbox"/> | <b><u>FAC</u></b>  | Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x 1 = _____<br>FACW species _____ x 2 = _____<br>FAC species _____ x 3 = _____<br>FACU species _____ x 4 = _____<br>UPL species _____ x 5 = _____<br><br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____   |
| 2. <u>Quercus bicolor</u> (planted)  | <u>2</u>         | <input type="checkbox"/>            | <u>FACW</u>        |   |
| 3. _____   | _____            | <input type="checkbox"/>            | _____              |   |
| 4. _____   | _____            | <input type="checkbox"/>            | _____              |   |
| 5. _____   | _____            | <input type="checkbox"/>            | _____              |   |
| <u>12</u> = Total Cover  |                  |                                     |                    |   |
| Herb Stratum (Plot size: 5' radius)  | Absolute % Cover | Dominant Species?                   | Indicator Status   | Hydrophytic Vegetation Indicators:  |
| 1. <b><u>Solidago altissima</u></b>  | <b><u>50</u></b> | <input checked="" type="checkbox"/> | <b><u>FACU</u></b> | <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> <b>2 - Dominance Test is &gt;50%</b><br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 2. <b><u>Symphotrichum lanceolatum</u></b>   | <b><u>50</u></b> | <input checked="" type="checkbox"/> | <b><u>FACW</u></b> |   |
| 3. <u>Rhamnus cathartica</u>   | <u>10</u>        | <input type="checkbox"/>            | <u>FAC</u>         |   |
| 4. <u>Symphotrichum puniceum</u>   | <u>10</u>        | <input type="checkbox"/>            | <u>OBL</u>         |   |
| 5. <u>Cirsium arvense</u>  | <u>5</u>         | <input type="checkbox"/>            | <u>FACU</u>        |   |
| 6. <u>Taraxacum officinale</u>   | <u>3</u>         | <input type="checkbox"/>            | <u>FACU</u>        |   |
| 7. _____   | _____            | <input type="checkbox"/>            | _____              |   |
| 8. _____   | _____            | <input type="checkbox"/>            | _____              |   |
| 9. _____   | _____            | <input type="checkbox"/>            | _____              |   |
| 10. _____  | _____            | <input type="checkbox"/>            | _____              |   |
| <u>128</u> = Total Cover   |                  |                                     |                    |   |
| Woody Vine Stratum (Plot size: 30' radius)   | Absolute % Cover | Dominant Species?                   | Indicator Status   | Hydrophytic Vegetation Present?   |
| 1. _____   | _____            | <input type="checkbox"/>            | _____              | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>   |
| 2. _____   | _____            | <input type="checkbox"/>            | _____              |   |
| <u>0</u> = Total Cover   |                  |                                     |                    |   |
| Remarks: (Include photo numbers here or on a separate sheet.) <u>Fresh (wet) meadow.</u> |                  |                                     |                    |   |

**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 <sup>1</sup> | Loc <sup>2</sup> |           |         |
| 0-10           | N 2.5/        | 100 |                |    |                   |                  | Muck      |         |
| 10-27          | 10Y 5/1       | 90  | 10YR 4/6       | 10 | C                 | PL M             | Clay loam |         |
|                |               |     |                |    |                   |                  |           |         |
|                |               |     |                |    |                   |                  |           |         |
|                |               |     |                |    |                   |                  |           |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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): 26  
 Saturation Present? **Yes**  No  Depth (inches): 6  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is on low, level ground in the SEWRPC-mapped one-percent-annual-probability floodplain of the Little Menomonee River. However, geomorphic position (D2) does not apply as a drain tile system is present.

# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Little Menomonee River Corridor Restoration City/County: City of Mequon/Ozaukee County Sampling Date: 7-9-2019  
 Applicant/Owner: Ozaukee County/MMSD (Greenseam Parcel) State: WI Sampling Point: 23  
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 20, T9N-R21E  
 Landform (hillslope, terrace, etc.): low terrace Local relief (concave, convex, none): none  
 Slope (%): 0-2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Ogden mucky peat (Od) NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes**  No  (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? **Yes**  No   
 Are Vegetation X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Remarks: 90-day antecedent precipitation is normal. Soil was probed about 60 feet south of this sample site with virtually the same soil profile, saturation level, and observed water table. (See Exhibit 7, probe site 23P)  |   |

**VEGETATION – Use scientific names of plants.**

| Tree Stratum (Plot size: 30' radius)          | Absolute % Cover | Dominant Species?                   | Indicator Status | Dominance Test worksheet:  |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____            | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)  |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |
| 0 = Total Cover                               |                  |                                     |                  |  |
| Sapling/Shrub Stratum (Plot size: 30' radius) |                  |                                     |                  | Prevalence Index worksheet:  |
| 1. <b>Rhamnus cathartica</b>                  | <b>12</b>        | <input checked="" type="checkbox"/> | <b>FAC</b>       | Total % Cover of: <span style="float: right;">Multiply by:</span><br>OBL species <u>5</u> x 1 = <u>5</u><br>FACW species <u>5</u> x 2 = <u>10</u><br>FAC species <u>15</u> x 3 = <u>45</u><br>FACU species <u>93</u> x 4 = <u>372</u><br>UPL species <u>0</u> x 5 = <u>0</u><br>Column Totals: <u>118</u> (A) <u>432</u> (B)<br>Prevalence Index = B/A = <u>3.66</u>   |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |
| 3. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |
| 4. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |
| 5. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |
| 12 = Total Cover                              |                  |                                     |                  |  |
| Herb Stratum (Plot size: 5' radius)           |                  |                                     |                  | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation<br><input type="checkbox"/> 2 - Dominance Test is >50%<br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input checked="" type="checkbox"/> 5 - Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. |
| 1. <b>Solidago altissima</b>                  | <b>80</b>        | <input checked="" type="checkbox"/> | <b>FACU</b>      |  |
| 2. <u>Taraxacum officinale</u>                | <u>10</u>        | <input type="checkbox"/>            | <u>FACU</u>      |  |
| 3. <u>Euthamia graminifolia</u>               | <u>5</u>         | <input type="checkbox"/>            | <u>FACW</u>      |  |
| 4. <u>Symphotrichum puniceum</u>              | <u>5</u>         | <input type="checkbox"/>            | <u>OBL</u>       |  |
| 5. <u>Cirsium arvense</u>                     | <u>3</u>         | <input type="checkbox"/>            | <u>FACU</u>      |  |
| 6. <u>Rhamnus cathartica</u>                  | <u>3</u>         | <input type="checkbox"/>            | <u>FAC</u>       |  |
| 7. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |
| 8. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |
| 9. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |
| 10. _____                                     | _____            | <input type="checkbox"/>            | _____            |  |
| 106 = Total Cover                             |                  |                                     |                  |  |
| Woody Vine Stratum (Plot size: 30' radius)    |                  |                                     |                  | Hydrophytic Vegetation Present? <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> <input type="checkbox"/>  |
| 1. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |
| 2. _____                                      | _____            | <input type="checkbox"/>            | _____            |  |
| 0 = Total Cover                               |                  |                                     |                  |  |

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation determined to meet the Problematic Hydrophytic Vegetation indicator due to similar findings of hydric soils (A2-Histic Epipedon and A10-2cm Muck) and wetland hydrology indicators (A3-Saturation at 6 inches with an observed water table below) as wetland sample sites 21 and 22. Professional judgement used to include this sample area as wetland due to vegetation at wetland sample sites 21 and 22 meeting the Dominance Test (75 and 67%, respectively). Fresh (wet) meadow.



**SOIL**

Sampling Point: 23

**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 <sup>1</sup> | Loc <sup>2</sup> |           |         |
| 0-14           | N 2.5/        | 100 |                |    |                   |                  | Muck      |         |
| 14-27          | 10Y 5/1       | 85  | 10YR 5/6       | 15 | C                 | PL M             | Clay loam |         |
|                |               |     |                |    |                   |                  |           |         |
|                |               |     |                |    |                   |                  |           |         |
|                |               |     |                |    |                   |                  |           |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

<sup>2</sup>Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

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

<sup>3</sup>Indicators 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): 24  
 Saturation Present? **Yes**  No  Depth (inches): 6  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is on low, nearly level ground in the SEWRPC-mapped one-percent-annual-probability floodplain of the Little Menomonee River. However, geomorphic position (D2) does not apply as a drain tile system is present.

## Exhibit 10. Site Photos

Little Menomonee River Corridor Ecosystem/Habitat  
Restoration Project on MMSD Greenseam Parcel  
SE Quarter, Section 20, T9N-R21E  
City of Mequon, Ozaukee County

Photo 1. Wetland sample site 1. Fresh (wet) meadow.  
(East view)



Photo 2. Wetland sample site 2. Fresh (wet) meadow.  
(North view)



Photo 3. Wetland sample site 3. Fresh (wet) meadow  
near dredge spoil berm. Sample sites 8 and 9 are similar.



Photo 4. Upland sample site 4. Old field with scattered  
trees and shrubs on a dredge spoil berm. (North view)



Photo 5. Wetland sample site 5. Open water.  
Little Menomonee River.



Photo 6. Wetland sample site 6. Open water.  
Little Menomonee River.



Photo 7. Upland sample site 7. Old field on a dredge spoil berm.



Photo 8. Upland sample site 10. Buckthorn thicket on a dredge spoil berm. River is visible in the background.



Photo 9. Upland sample site 11. Old field (berm) with scattered shrubs and trees alongside the river.



Photo 10. Upland sample site 12. Shrub thicket on dredge spoil material.



Photo 11. Wetland sample site 13. Degraded fresh (wet) meadow.



Photo 12. Wetland sample site 14. Fresh (wet) meadow.



Photo 13. Upland sample site 15. Old field on dredge spoil material. (North view)



Photo 14. Wetland sample site 16. Fresh (wet) meadow at the edge of the Little Menomonee River.



Photo 15. Upland sample site 17. Old field.



Photo 16. Wetland sample site 18. Fresh(wet) meadow. (North view)



Photo 17. Wetland sample site 19. (East view) Fresh (wet) meadow. Sample site 21 is similar.



Photo 18. Upland sample site 20. Old field. Wetland is on lower ground just to the left of the image. (N view)



Photo 19. Wetland sample site 22. Fresh (wet) meadow. (North view)



Photo 20. Wetland sample site 23. Fresh (wet) meadow. (North view)



Photo 21. Steep, undercut bank of the Little Menomonee River at sample site 5.



Photo 22. NE view toward steep bank of the Little Menomonee River across from sample site 5.



Photo 23. Large drain tile outlet pipe, and associated sediment deposit, just south of sample site 6. The outlet is approximately 7 inches above river level.



Photo 24. Submerged drain tile outlet pipe near sample site 10.



Photo 25. North/upstream view of the Little Menomonee River from sample site 10.



Photo 26. South/downstream view of the river with steep, eroding bank opposite sample site 10.



Photo 27. NE/upstream view of river from footbridge crossing near sample site 16.





Photo 28. NE/upstream view, Little Menomonee River from West Mequon Road.



Photo 29. West view, south end of project area along Mequon Road, from driveway just west of the river.



Photo 30. NW view across the project area from a similar vantage point as the previous photo.



Photo 31. North view of old driveway, NW of Little Menomonee River crossing at Mequon Road.



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