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November 27, 2006

Mr. Dick Klaas
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, WI 53713-3398

Subject: **Wetland Delineation**
**West Interceptor Extension Replacement**
**Town of Middleton**
**Dane County, Wisconsin**

Dear Mr. Klaas:

This correspondence summarizes the results of the wetland delineation completed by Earth Tech on October 26 and 30, 2006, for the Madison Metropolitan Sewerage District (MMSD) West Interceptor Extension Replacement project. The study area for this project is approximately 15 acres in size and is located in the NE ¼ of Section 12, Township 7 North, Range 8 East, in the Town of Middleton, Dane County, Wisconsin. The corridor is approximately 2,900 feet long, which includes 1,700 lineal feet within Lakeview Community Park and 1,200 lineal feet through apartment complexes and parking lots. The project area is located west of Allen Boulevard and extends from Mendota Avenue northward to approximately 200' south of CTH M (Figure 1, Attachment A).

## PROJECT OBJECTIVES

The objective of this wetland delineation is to delineate the wetlands located within the project study area that are subject to State and Federal jurisdiction under Section 404 and Section 401 of the Clean Water Act, as determined by the regulations and procedures of the U.S. Army Corps of Engineers (USACE) and the Wisconsin Department of Natural Resources (WDNR).

The procedures outlined in the USACE Wetland Delineation Manual (Environmental Laboratory, 1987) (herein referred to as "the 1987 Manual") were used to complete this assessment. Under the Federal USACE regulation, for a site to be considered jurisdictional wetland, it must first be a "water of the United States" and be a physical wetland. To be considered a physical wetland, the site must meet the following criteria as established in the 1987 Manual:

- More than 50 percent of the dominant vegetation species in a suspect area must have a wetland indicator status of facultative, facultative wet, or obligate according to the National List of Plant Species That Occur in Wetlands: Region 3 (U.S. Fish and Wildlife Service, 1988).
- The soils at a suspect wetland must be hydric, as determined by the National Technical Committee on Hydric Soils.

- The suspect area must be saturated or inundated within 12 inches of the surface for at least 1 week during the growing season.

Under normal conditions, a site must meet all three criteria to be considered a physical wetland. An area may be a physical wetland, but not be a jurisdictional wetland (i.e., subject to jurisdiction of the USACE under Section 404 of the Clean Water Act) if the situation is exempted under law, regulation, or policy. If a wetland does not fall under the jurisdiction of the USACE, it may still fall under the jurisdiction of WDNR.

## FIELD RECONNAISSANCE METHODOLOGY

On October 26 and 30, 2006, an Earth Tech wetland scientist conducted a wetland delineation within the project area. The purpose of the delineation was to identify potential wetland areas and evaluate whether the three mandatory criteria of hydrophytic vegetation, hydric soils, and wetland hydrology were present. These three criteria were used to delineate the upland/wetland boundaries of wetlands located within the project area.

The vegetation was assessed to determine the dominant species in the tree, shrub, and herbaceous vegetation strata. The percentage of areal cover was visually estimated for each species at the suspect location. Hydrophytic vegetation boundaries were identified to aid in locating the approximate upland/wetland boundary based on the percentage of hydrophytic plant species versus upland species. Vegetation information was recorded on USACE Data Forms, presented in Attachment B.

The presence or absence of hydric soils was assessed through use of a soil probe to collect soil cores. Soil descriptions were completed at each soil core location using Munsell soil color charts, U.S. Department of Agriculture (USDA) soil texture, moisture content, special features, and horizon designation. Soil core locations were selected to represent wetland and non-wetland areas. The wetland boundary was determined by first completing a wetland core then completing additional upgradient soil cores as needed to determine the boundary. Soil core locations were selected by examining local topographical characteristics, as well as the extent of dominant hydrophytic vegetation. Soil conditions were recorded on USACE Data Forms.

Wetland hydrology was determined through observation of saturated soil conditions and evaluation of surficial hydrologic indicators. Typical surface hydrologic indicators may include standing water, water-stained leaves, drift lines, and high-water marks. Hydrology information was recorded on USACE Data Forms.

Wetland functional value was assessed for each wetland identified by completing the WDNR form entitled "Rapid Assessment Methodologies for Determining Wetland Functional Values". The summary page of each evaluation is included in Attachment C. Photographs of the wetland areas were taken at various locations and are included in Attachment D.

The wetland/upland boundary was surveyed using a Trimble GeoXT® Global Positioning System (GPS) which is listed as having sub-meter accuracy.

## BACKGROUND INFORMATION

Available background information from government agency documents and private sources, where available, were collected and reviewed. This material provided a first screening as to the known or possible existence of wetlands on the property. The documents reviewed were:

- Soil Survey of Dane County, Wisconsin (USDA, 1978)
- Hydric Soils List for Dane County, Wisconsin (Natural Resource Conservation Service, 1996)
- USGS 7.5-Minute Topographic Quadrangle Map, Madison West, Wisconsin (USGS, 1983)
- Digital Wisconsin Wetland Inventory (WWI), T7N, R8E, Dane County, Wisconsin (WDNR 1997)

The USGS topographic map indicates nearly level topography along the project corridor, with surface water drainage to the east toward Lake Mendota. A copy of the USGS topographic map (Figure 1) is included in Attachment A.

The digital WWI data does not show any wetlands located within or adjacent to the project area. The excavated pond in Lakeview Community Park is identified as W0Hx. A copy of the digital WWI Map (Figure 2) is included in Attachment A.

The Soil Survey of Dane County indicates that there are four soil units mapped within the project area. The four soil units include Adrian muck (Ad), Granby loamy sand (Gn), Grays silt loam, 6 to 12 percent slopes (GsB), and Houghton muck (Ho). According to the Hydric Soils List for Dane County, Ad, Gn, and Ho are listed as hydric soils. The soils map for the project area (Figure 3) and the Hydric Soils List for Dane County are included in Attachment A.

## WETLAND DELINEATION RESULTS

Three wetland areas (Area A, Area B, and Area C) were delineated within the project area during the site reconnaissance (Figure 4A, Attachment E).

Wetland Area A (see Figure 4B) is a small depressional wetland located near the northeast corner of the tennis courts in Lakeview Community Park. This wetland was dominated by soft-stem bulrush (*Schoenoplectus tabernaemontani*), spikerush (*Eleocharis* sp.), and sphagnum moss (*Sphagnum* sp.). Wetland criteria we met in this area due to the dominance of hydrophytic vegetation, positive hydrology indicators, and presence of hydric soils. Wetland Area A is approximately 260 square feet in size (0.006 acres) and was evaluated to have low wetland functional values.

Wetland Area B (see Figure 4C) is a predominately forested wetland that is located in the northern portion of Lakeview Community Park. This wetland contains an intermittent drainageway that receives stormwater discharge from a large concrete culvert and eventually flows out of the park toward Lake Mendota. This wetland area is divided by a paved walking

path, so there is an east and west component of Wetland Area B that are separated by the paved walkway.

North of the intermittent drainageway, the east and west components of Area B are dominated by cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), box elder (*Acer negundo*), glossy buckthorn (*Rhamnus frangula*), red elderberry (*Sambucus racemosa*), American elderberry (*Sambucus canadensis*), white avens (*Geum canadense*), large-leaf avens (*Geum macrophyllum*), dames rocket (*Hesperis matronalis*), wild black currant (*Ribes americanum*), and garlic mustard (*Alliaria petiolata*). South of the drainageway, Area B is a mix of forested and wet meadow communities. Forested areas are dominated by most of the same species as the forested areas north of the drainageway. The wet meadow communities are dominated by reed canary grass (*Phalaris arundinacea*), late goldenrod (*Solidago gigantea*), white avens, large-leaf avens, blue-joint grass (*Calamagrostis canadensis*), American elderberry, field thistle (*Cirsium arvense*), tall goldenrod (*Solidago canadensis*), devil's beggar-ticks (*Bidens frondosa*), common burdock (*Arctium minus*), enchanter's nightshade (*Solanum dulcamara*), stinging nettle (*Urtica dioica*), and an aster (*Aster* sp.). The east and west components of Area B were both dominated by hydrophytic vegetation and were found to have hydric soils. Though no wetland hydrology indicators we observed at the time of the field investigation, it was assumed that wetland hydrology must be present at some time during the growing season in order for wetland vegetation to grow and for hydric soils to be present. Wetland Area B is greater than 4 acres in size and was evaluated to have medium wetland functional values.

Wetland Area C (see Figure 4B) consists of a wetland restoration area in Lakeview Community Park that was created by the local Kiwanis Club. This area is no longer mowed and wet meadow wetland species have re-established. Dominant vegetation within this wetland area include late goldenrod (*Solidago gigantea*), giant sunflower (*Helianthus giganteus*), cup plant (*Silphium perfoliatum*), great St. Johnswort (*Hypericum ascyron*), blue vervain (*Verbena hastata*), and asters. This area was dominated by hydrophytic vegetation and hydric soils were found to be present. Though no wetland hydrology indicators we observed at the time of the field investigation, it was assumed that wetland hydrology must be present at some time during the growing season in order for wetland vegetation to grow and for hydric soils to be present. Wetland Area C is approximately 0.28 acres in size and was evaluated to have low to medium wetland functional values.

## STREAM CHARACTERIZATION

One unnamed intermittent stream (see Figure 4C) was identified within the project area (Figure 4, Attachment E). This stream receives stormwater discharge from a large concrete culvert located on the west side of Lakeview Community Park and flows east out of the park toward Lake Mendota. It appears that the stream banks have been cut down and the channel scoured out periodically by large volumes of stormwater discharged by the culvert. The average stream bank height is approximately 3 feet and the average channel width is approximately 5 feet. Much of the channel had approximately 6 inches of standing water at the time of the field investigation.

## ISOLATED/NON-ISOLATED JURISDICTIONAL DETERMINATION

Earth Tech has reviewed the hydrologic characteristics for each of the delineated wetland areas pursuant to the Supreme Court's January 9, 2001, decision in Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (herein referred to as the "SWANCC decision"). The SWANCC decision states that Section 404 of the Clean Water Act does not apply to isolated, non-navigable, wholly intrastate waters, where the only connection between the water body (or wetland) and interstate commerce is the use of the water as habitat for migratory birds.

"Waters of the United States" are defined as meeting one of the following criteria: 1) a "navigable water" as defined by Federal law; 2) an interstate water; 3) part of a tributary system to 1) or 2); 4) a wetland adjacent to a navigable water; or 5) an impoundment to any of the above.

The evaluations showed that wetland Areas A and C were isolated, non-jurisdictional wetlands. Wetland B, however is likely to be considered a "Waters of the United States" because it is adjacent to a tributary of Lake Mendota, which has a hydrological connection to the Yahara River. This conclusion is the opinion of Earth Tech. The final authority over wetland jurisdiction is the responsibility of the project applicant and the appropriate State and Federal agencies.

## SUMMARY

Earth Tech completed a field reconnaissance of the West Interceptor Extension Reconstruction project area in October 2006, and delineated three wetland areas (Area A, Area B, and Area C) within the project area. Area A is a small wet meadow wetland with low wetland functional values. Area B is a moderate sized forested wetland and wet meadow complex with medium wetland functional values. Area C is a small restored wet meadow wetland with low to medium wetland functional values. All three areas meet the wetland criteria as outlined by the USACE. Wetland Area B is likely to be deemed a jurisdictional wetland by USACE, while Areas A and C are likely isolated, non-jurisdictional wetlands.

A Section 404 Department of Army Permit is required to discharge dredged and/or fill material into non-isolated wetlands, and water quality certification under Section 401 of the Clean Water Act is also required for impacts to all wetlands in accordance with USACE and WDNR regulations. A Chapter 30 Permit will be required if more than 10,000 $ft^2$ of surface area will be impacted within 75 feet of the unnamed intermittent stream that flows through wetland Area B.

If you have any questions regarding the wetland delineation, please give me a call at (920) 451-2424.

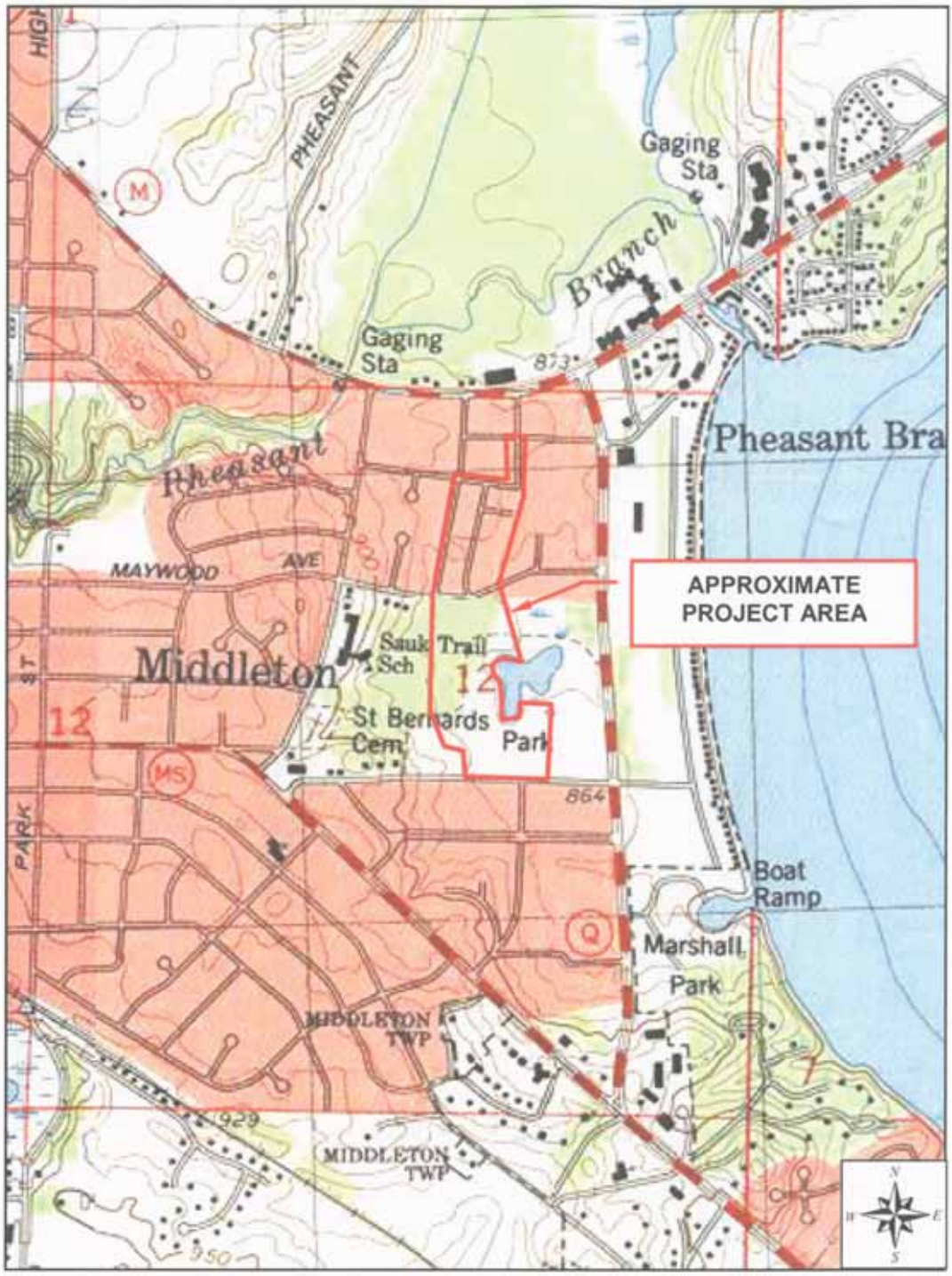
Sincerely,

Ann Amelse
Environmental Scientist

Enclosures: As Noted

## ATTACHMENT A

- FIGURE 1 – SITE LOCATION MAP (USGS TOPOGRAPHIC MAP)
- FIGURE 2 – WISCONSIN WETLAND INVENTORY (WWI) MAP
- WWI MAP LEGEND
- FIGURE 3 – SOIL SURVEY MAP
- DANE COUNTY HYDRIC SOILS LIST




Note: Not to Scale
Source: USGS 7.5-Minute Topographic Quadrangle, Madison West, WI (1983)

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## FIGURE 1
## SITE LOCATION MAP

MADISON METROPOLITAN SEWERAGE DISTRICT
WEST INTERCEPTOR EXTENSION RECONSTRUCTION
TOWN OF MIDDLETON, WISCONSIN

NOVEMBER 2006 96336


**FIGURE 2**
**WISCONSIN WETLAND INVENTORY MAP**

MADISON METROPOLITAN SEWERAGE DISTRICT
WEST INTERCEPTOR EXTENSION RECONSTRUCTION
TOWN OF MIDDLETON, WISCONSIN

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November 2006 96336

Spatial Reference: WTM83/91

Data Source: USDA WI Farm Service Agency 2005, WI DNR 2004, Earth Tech 2006

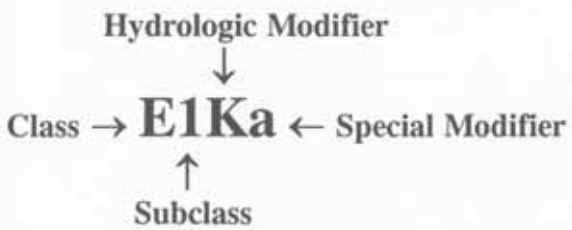
# WISCONSIN WETLAND INVENTORY
# WETLAND TYPES

| CLASS | | SUBCLASS | |
|---|---|---|---|
| Symbol | Definition | Symbol | Definition |
| A | Aquatic Bed | 1 | Submergent |
| | | 2 | Floating |
| | | 3 | Rooted Floating |
| | | 4 | Free Floating |
| M | Moss | | |
| E | Emergent Wet Meadow | 1 | Persistent |
| | | 2 | Narrow-leaved Persistent |
| | | 3 | Broad-leaved Persistent |
| | | 4 | Nonpersistent |
| | | 5 | Narrow-leaved Nonpersistent |
| | | 6 | Broad-leaved Nonpersistent |
| S | Scrub/Shrub | 1 | Deciduous |
| | | 2 | Needle-leaved Deciduous |
| | | 3 | Broad-leaved Deciduous |
| | | 4 | Evergreen |
| | | 5 | Needle-leaved Evergreen |
| | | 6 | Broad-leaved Evergreen |
| | | 7 | Dead |
| | | 8 | Needle-leaved |
| | | 9 | Broad-leaved |
| T | Forested | 1 | Deciduous |
| | | 2 | Needle-leaved Deciduous |
| | | 3 | Broad-leaved Deciduous |
| | | 5 | Needle-leaved Evergreen |
| | | 7 | Dead |
| | | 8 | Needle-leaved |
| F | Flats/Unvegetated Wet Soil | 0 | Subclass Unknown |
| | | 1 | Cobble/Gravel |
| | | 2 | Sand |
| | | 3 | Mud |
| | | 4 | Organic |
| | | 5 | Vegetated Pioneer |
| W | Open Water | 0 | Subclass Unknown |
| | | 1 | Cobble/Gravel |
| | | 2 | Sand |
| | | 3 | Mud |
| | | 4 | Organic |

| Hydrologic Modifier | |
|---|---|
| L | Standing Water, Lake |
| R | Flowing Water, River |
| H | Standing Water, Palustrine |
| K | Wet Soil, Palustrine |

| Special Modifiers | |
|---|---|
| a | Abandoned Cropland |
| c | Man-made Cranberry Bog |
| e | Exposed Flats Complex |
| f | Farmed in Dry Years |
| g | Grazed |

| Special Modifiers (continued) | |
|---|---|
| j | Central Sands Complex |
| m | Floating Vegetated Mats |
| s | Ridge and Swale Complex |
| v | Vegetation Recently Removed |
| w | Floodplain Complex |
| x | Excavated |
| z | Evidence of Muskrat Activity |



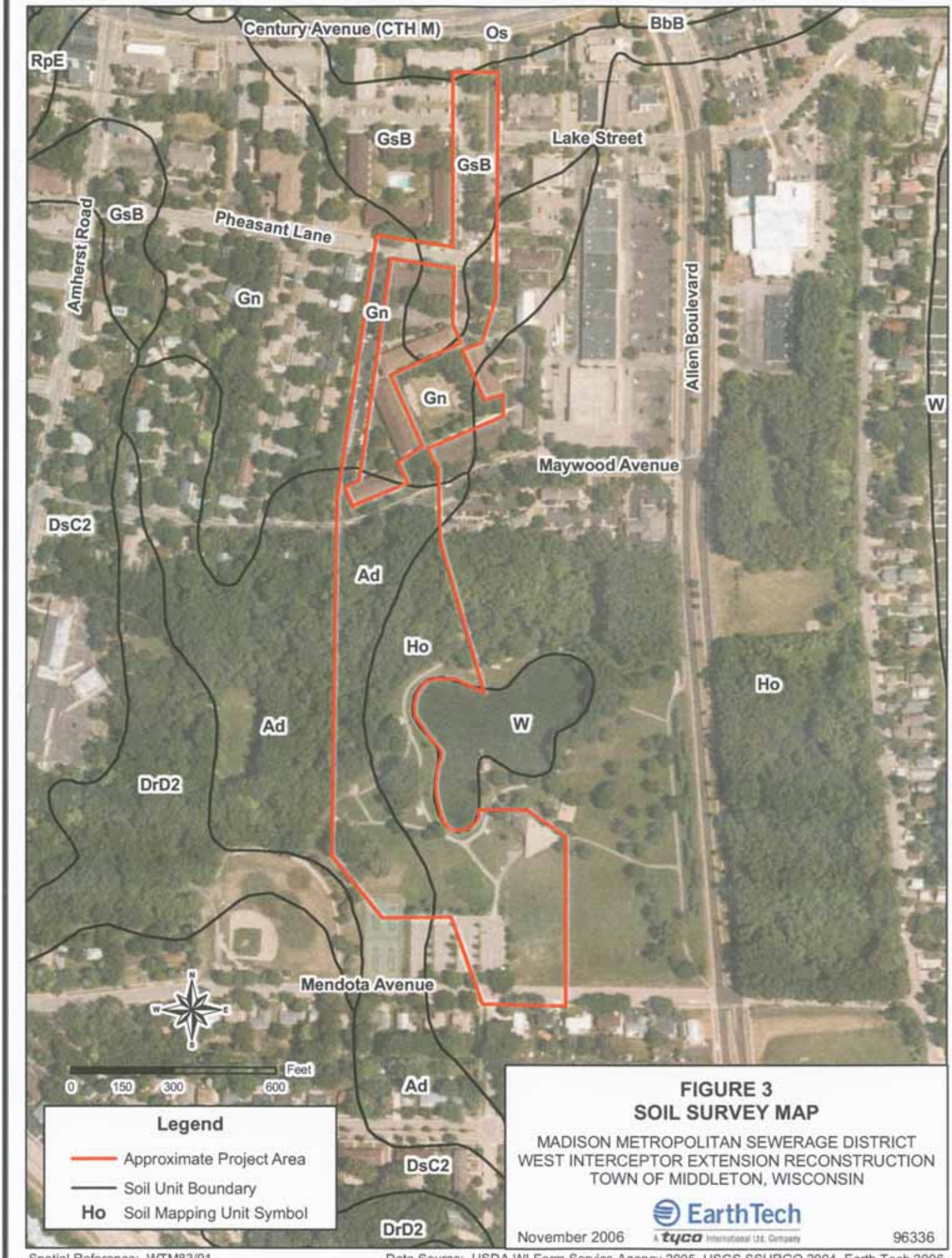




**FIGURE 3**
**SOIL SURVEY MAP**

MADISON METROPOLITAN SEWERAGE DISTRICT
WEST INTERCEPTOR EXTENSION RECONSTRUCTION
TOWN OF MIDDLETON, WISCONSIN

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November 2006 96336

Spatial Reference: WTM83/91

Data Source: USDA WI Farm Service Agency 2005, USGS SSURGO 2004, Earth Tech 2006

HYDRIC SOIL LIST FOR DANE COUNTY, WISCONSIN

United States Department of Agriculture - Natural Resources Conservation Service
Section II Technical Guide - Hydric Soil Interpretations


January 19, 1996

| MAP SYMBOL | MAP UNIT NAME | (C) HYDRIC COMPONENT<br>(I) HYDRIC INCLUSION | HYDRIC CRITERIA | LOCAL LANDFORM | NATURAL CONDITION |
|---|---|---|---|---|---|
| Ad | ADRIAN MUCK | | | | |
| | | (C) ADRIAN | 1,3 | | Farmable |
| Af | ALLUVIAL LAND, WET | | | | |
| | | (C) ALLUVIAL LAND, WET | 2B3,3,4 | | Wooded |
| Co | COLWOOD SILT LOAM | | | | |
| | | (C) COLWOOD | 2B3,3 | | Farmable |
| DeA | DELLS SILT LOAM, 0 TO 3 PERCENT SLOPES | | | | |
| | | (I) Marshan soils | 2B3,3 | Depression | Farmable |
| | | (I) Granby soils | 2B3,3 | Depression | Farmable |
| DfA | DEL REY SILT LOAM, 0 TO 3 PERCENT SLOPES | | | | |
| | | (I) Montgomery soils | 2B3,3 | Depression | Wooded |
| EfB | ELBURN SILT LOAM, 1 TO 4 PERCENT SLOPES | | | | |
| | | (I) Sable soils | 2B3,3 | Depression | Farmable |
| | | (I) Wacousta soils | 2B3,3 | Depression | Farmable |
| EgA | ELBURN SILT LOAM, GRAVELLY SUBSTRATUM, 0 TO 3 PERCENT SLOPES | | | | |
| | | (I) Sable soils | 2B3,3 | Depression | Farmable |
| | | (I) Waucousta soils | 2B3,3 | Depression | Farmable |
| Ev | ELVERS SILT LOAM | | | | |
| | | (C) ELVERS | 2B3,3,4 | | Wooded |
| Gn | GRANBY LOAMY SAND | | | | |
| | | (C) GRANBY | 2B2,3 | | Farmable |
| HaA | HAYFIELD SILT LOAM, 0 TO 3 PERCENT SLOPES | | | | |
| | | (I) Marshan soils | 2B3,3 | Depression | Farmable |

HYDRIC SOIL LIST FOR DANE COUNTY, WISCONSIN



| MAP SYMBOL | MAP UNIT NAME | (C) HYDRIC COMPONENT<br>(I) HYDRIC INCLUSION | HYDRIC CRITERIA | LOCAL LANDFORM | NATURAL CONDITION |
|---|---|---|---|---|---|
| Ho | HOUGHTON MUCK | | | | |
| | | (C) HOUGHTON | 1,3 | | Farmable |
| HuA | HUNTSVILLE SILT LOAM, 0 TO 2 PERCENT SLOPES | | | | |
| | | (I) Wetter soils | 2B3,3 | Depression | Wooded |
| HuB | HUNTSVILLE SILT LOAM, 2 TO 6 PERCENT SLOPES | | | | |
| | | (I) Wetter soils | 2B3,3 | Depression | Wooded |
| KcB | KICKAPOO FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES | | | | |
| | | (I) Wetter soils | 2B3,3 | Depression | Wooded |
| Mb | MARSH | | | | |
| | | (C) MARSH | 1,3 | | Farmable |
| Mc | MARSHAN SILT LOAM | | | | |
| | | (C) MARSHAN | 2B3,3 | | Farmable |
| MoA | MONTGOMERY SILTY CLAY LOAM, 0 TO 3 PERCENT SLOPES | | | | |
| | | (C) MONTGOMERY | 2B3,3 | | Wooded |
| Or | ORION SILT LOAM | | | | |
| | | (I) Orion, wet soils | 2B3,3 | Depression | Wooded |
| Os | ORION SILT LOAM, WET | | | | |
| | | (C) ORION, WET | 2B3,3 | | Wooded |
| | | (I) Otter soils | 2B3,3 | Floodplain | Wooded |
| | | (I) Wacousta soils | 2B3,3 | Drainageway | Farmable |
| | | (I) Sable soils | 2B3,3 | Drainageway | Farmable |
| Ot | OTTER SILT LOAM | | | | |
| | | (C) OTTER | 2B3,3 | | Wooded |

HYDRIC SOIL LIST FOR DANE COUNTY, WISCONSIN



| MAP SYMBOL | MAP UNIT NAME | (C) HYDRIC COMPONENT<br>(I) HYDRIC INCLUSION | HYDRIC CRITERIA | LOCAL LANDFORM | NATURAL CONDITION |
|---|---|---|---|---|---|
| Pa | PALMS MUCK | | | | |
| | | (C) PALMS | 1,3 | | Farmable |
| RaA | RADFORD SILT LOAM, 0 TO 3 PERCENT SLOPES | | | | |
| | | (I) Sable soils | 2B3,3 | Depression | Farmable |
| | | (I) Otter soils | 2B3,3 | Depression | Wooded |
| SaA | SABLE SILTY CLAY LOAM, 0 TO 3 PERCENT SLOPES | | | | |
| | | (C) SABLE | 2B3,3 | | Farmable |
| ShA | SALTER SANDY LOAM, WET VARIANT, 0 TO 3 PERCENT SLOPES | | | | |
| | | (I) Wacousta soils | 2B3,3 | Depression | Farmable |
| | | (I) Colwood soils | 2B3,3 | Depression | Farmable |
| TrB | TROXEL SILT LOAM, 1 TO 3 PERCENT SLOPES | | | | |
| | | (I) Wetter soils | 2B3,3 | Depression | Farmable |
| VwA | VIRGIL SILT LOAM, GRAVELLY SUBSTRATUM, 0 TO 3 PERCENT SLOPES | | | | |
| | | (I) Wetter soils | 2B3,3 | Depression | Farmable |
| Wa | WACOUSTA SILTY CLAY LOAM | | | | |
| | | (C) WACOUSTA | 2B3,3 | | Farmable |
| Wt | WATSEKA LOAMY SAND | | | | |
| | | (I) Granby soils | 2B3,3 | Depression | Farmable |
| | | (I) Marshan soils | 2B3,3 | Depression | Farmable |

# ATTACHMENT B

# USACE ROUTINE WETLAND DETERMINATION DATA FORMS

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

| | | | |
|---|---|---|---|
| Project/Site: | **West Interceptor Extension Replacement, Town of Middleton** | Date: | **10/26/06** |
| Applicant/Owner: | **Madison Metropolitan Sewerage District** | County: | **Dane** |
| Investigator #1: | **Ann Amelse** #2: | State: | **Wisconsin** |
| Do Normal Circumstances Exist On The Site? | X Yes ___ No | Community ID: | **Wetland A** |
| Is The Site Significantly Disturbed (Atypical Situation)? | ___ Yes X No | Station ID: | -- |
| Is The Area A Potential Problem Area? (If yes, define below.) | ___ Yes X No | Plot ID: | **S1** |

Remarks: --

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind. Status | Stratum | % Cover | | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|---|---|---|---|---|
| 1. | *Schoenoplectus tabernaemontani* | OBL | HERB | 40 | 7. | | | | |
| 2. | *Eleocharis sp.* | UNK | HERB | 40 | 8. | | | | |
| 3. | *Sphagnum sp.* | OBL | HERB | 20 | 9. | | | | |
| 4. | | | | | 10. | | | | |
| 5. | | | | | 11. | | | | |
| 6. | | | | | 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **100%**

Remarks: **Hydrophytic vegetation is dominant**

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, Or Tide Gauge
- ___ Aerial Photos
- ___ Other

X No Recorded Data Available

Field Observations:
- Depth of Surface Water: **1** (in.)
- Depth to Free Water: **0** (in.)
- Depth to Saturated Soil: **0** (in.)

Wetland Hydrology Indicators:
- ___ None

Primary Indicators:
- X Inundated
- X Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or More Required):
- ___ Oxidized Root Channels In Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is present**

## SOILS

Map Unit Name: **Adrian muck** Series Drainage Class: **very poorly drained**

Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? ___ Yes X No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | Oe | N | 2.5 | | | | | mucky peat, wet, friable, 60% roots |
| 1 | 4 | Oi | 10YR | 3/2 | | | | | peat, wet, friable, 60% roots |
| 4 | 10 | A | 10YR | 3/1 | 10YR | 3/4 | common | distinct | silty clay loam, wet, friable, |
| 10 | 14 | B | 2.5Y | 3/1 | 10YR | 4/6 | common | distinct | silty clay loam, moist, friable, oxidixed rhozospheres |
| 14 | 21 | 2Oa | N | 2.5 | | | | | muck, moist friable, sulfidic odor |

Hydric Soil Indicators:
- ___ Histosol
- ___ Histic Epipedon
- X Sulfidic Odor
- ___ Aquic Moisture Regime
- X Reducing Conditions
- X Gleyed Or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content In Surface Layer In Sandy Soils
- ___ Organic Streaking In Sandy Soils
- X Listed On Local Hydric Soils List
- ___ Listed On National Hydric Soils List
- ___ Other (Explain In Remarks)

Remarks: **Hydric soils are present**

## WETLAND DETERMINATION

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | X Yes | ___ No | Hydric Soils Present? | X Yes | ___ No |
| Wetland Hydrology Present? | X Yes | ___ No | Is This Sampling Point Within A Wetland? | X Yes | ___ No |

Remarks: **This plot is located in wetland**

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

Project/Site: **West Interceptor Extension Replacement, Town of Middleton**
Applicant/Owner: **Madison Metropolitan Sewerage District**
Investigator #1: **Ann Amelse** #2:

Do Normal Circumstances Exist On The Site? X Yes ___ No
Is The Site Significantly Disturbed (Atypical Situation)? ___ Yes X No
Is The Area A Potential Problem Area? ___ Yes X No
(If yes, define below.)

Date: **10/26/06**
County: **Dane**
State: **Wisconsin**
Community ID: **Wetland A**
Station ID: **--**
Plot ID: **S2**

Remarks: --

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind. Status | Stratum | % Cover | | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|---|---|---|---|---|
| 1. | *Poa pratensis* | FAC- | HERB | 80 | 7. | | | | |
| 2. | *Trifolium pratense* | FACU+ | HERB | 20 | 8. | | | | |
| 3. | | | | | 9. | | | | |
| 4. | | | | | 10. | | | | |
| 5. | | | | | 11. | | | | |
| 6. | | | | | 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **0%**

Remarks: **Hydrophytic vegetation is not dominant**
mowed area in park

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, Or Tide Gauge
___ Aerial Photos
___ Other

X No Recorded Data Available

Field Observations:
Depth of Surface Water: **NA** (in.)
Depth to Free Water: **NA** (in.)
Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
X None
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or More Required):
___ Oxidized Root Channels In Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present**

## SOILS

Map Unit Name: **Adrian muck** Series Drainage Class: **very poorly drained**
Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? ___ Yes X No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 4 | Oi | 10YR | 3/2.5 | | | | | peat, moist, friable |
| 4 | 10 | A | 10YR | 2/1 | | | | | mucky loam, moist, friable, 30% roots |
| 10 | 18 | 2Oa | N | 2/1 | | | | | muck, moist, friable, sulfidic odor |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:
___ Histosol
___ Histic Epipedon
X Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
X Gleyed Or Low-Chroma Colors
___ Concretions
___ High Organic Content In Surface Layer In Sandy Soils
___ Organic Streaking In Sandy Soils
___ Listed On Local Hydric Soils List
___ Listed On National Hydric Soils List
___ Other (Explain In Remarks)

Remarks: **Hydric soils are present**

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? ___ Yes X No
Wetland Hydrology Present? ___ Yes X No
Hydric Soils Present? X Yes ___ No
Is This Sampling Point Within A Wetland? ___ Yes X No

Remarks: **This plot is not located in wetland**

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

Project/Site: **West Interceptor Extension Replacement, Town of Middleton** | Date: **10/26/06**
Applicant/Owner: **Madison Metropolitan Sewerage District** | County: **Dane**
Investigator #1: **Ann Amelse** #2: | State: **Wisconsin**
Do Normal Circumstances Exist On The Site? **X** Yes ____ No | Community ID: **Wetland B**
Is The Site Significantly Disturbed (Atypical Situation)? ____ Yes **X** No | Station ID: **--**
Is The Area A Potential Problem Area? ____ Yes **X** No | Plot ID: **S3**
(If yes, define below.)

Remarks: --

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind. Status | Stratum | % Cover | | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|---|---|---|---|---|
| 1. | *Acer saccharinum* | FACW | TREE | 30 | 7. | | | | |
| 2. | *Rhamnus frangula* | FAC+ | SHRUB | 40 | 8. | | | | |
| 3. | *Sphagnum sp.* | OBL | HERB | 20 | 9. | | | | |
| 4. | *Alliaria petiolata* | FAC | HERB | 20 | 10. | | | | |
| 5. | | | | | 11. | | | | |
| 6. | | | | | 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **100%**

Remarks: **Hydrophytic vegetation is dominant**

## HYDROLOGY

____ Recorded Data (Describe in Remarks):
____ Stream, Lake, Or Tide Gauge
____ Aerial Photos
____ Other
**X** No Recorded Data Available

Field Observations:
Depth of Surface Water: **NA** (in.)
Depth to Free Water: **NA** (in.)
Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
____ None
Primary Indicators:
____ Inundated
____ Saturated in Upper 12 Inches
____ Water Marks
____ Drift Lines
____ Sediment Deposits
____ Drainage Patterns in Wetlands
Secondary Indicators (2 or More Required):
____ Oxidized Root Channels In Upper 12 Inches
____ Water-Stained Leaves
**X** Local Soil Survey Data
____ FAC-Neutral Test
____ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present** Wetland hydrology indicators not present, but because of the season, wetland hydrology may not be evident. Wetland hydrology is assumed to exist at some point during the growing season based on dominance of hydrophytic vegetation and existence of hydric soils

## SOILS

Map Unit Name: **Adrian muck** Series Drainage Class: **very poorly drained**
Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? **X** Yes ____ No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 25 | Oe | N | 2.5 | | | | | mucky peat, moist, friable |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:
**X** Histosol
**X** Histic Epipedon
____ Sulfidic Odor
____ Aquic Moisture Regime
____ Reducing Conditions
____ Gleyed Or Low-Chroma Colors
____ Concretions
____ High Organic Content In Surface Layer In Sandy Soils
____ Organic Streaking In Sandy Soils
**X** Listed On Local Hydric Soils List
____ Listed On National Hydric Soils List
____ Other (Explain In Remarks)

Remarks: **Hydric soils are present**

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? **X** Yes ____ No
Wetland Hydrology Present? ____ Yes **X** No
Hydric Soils Present? **X** Yes ____ No
Is This Sampling Point Within A Wetland? **X** Yes ____ No

Remarks: **This plot is located in wetland**
This plot meets the vegetation and soil criteria, but no wetland hydrology indicators were evident at the time of the field investigation. Wetland hydrology is assumed to exist at some point during the growing season based in the dominance of hydrophytic vegetation and the existence of hydric soils.

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

Project/Site: **West Interceptor Extension Replacement, Town of Middleton**
Applicant/Owner: **Madison Metropolitan Sewerage District**
Investigator #1: **Ann Amelse** #2:

Date: **10/26/06**
County: **Dane**
State: **Wisconsin**
Community ID: **Wetland B**
Station ID: **--**
Plot ID: **S4**

| | | |
|---|---|---|
| Do Normal Circumstances Exist On The Site? | X Yes | ___ No |
| Is The Site Significantly Disturbed (Atypical Situation)? | ___ Yes | X No |
| Is The Area A Potential Problem Area? (If yes, define below.) | ___ Yes | X No |

Remarks: --

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|
| 1. | *Poa pratensis* | FAC- | HERB | 100 |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **0%**

Remarks: **Hydrophytic vegetation is not dominant**
mowed area in park

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, Or Tide Gauge
___ Aerial Photos
___ Other
X No Recorded Data Available

Field Observations:
Depth of Surface Water: **NA** (in.)
Depth to Free Water: **NA** (in.)
Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
X None
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or More Required):
___ Oxidized Root Channels In Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present**

## SOILS

Map Unit Name: **Adrian muck** Series Drainage Class: **very poorly drained**
Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? ___ Yes X No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 15 | A | 10YR | 2/1 | | | | | loamy sand, moist, very friable, 30% roots |
| 15 | 18 | Bt | 10YR | 4/1 | 5YR | 3/4 | common | prominent | silt loam, moist, friable |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:

| | |
|---|---|
| ___ Histosol | ___ Concretions |
| ___ Histic Epipedon | ___ High Organic Content In Surface Layer In Sandy Soils |
| ___ Sulfidic Odor | ___ Organic Streaking In Sandy Soils |
| ___ Aquic Moisture Regime | ___ Listed On Local Hydric Soils List |
| ___ Reducing Conditions | ___ Listed On National Hydric Soils List |
| ___ Gleyed Or Low-Chroma Colors | ___ Other (Explain In Remarks) |

Remarks: **Hydric soils are not present**

## WETLAND DETERMINATION

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | ___ Yes | X No | Hydric Soils Present? | ___ Yes | X No |
| Wetland Hydrology Present? | ___ Yes | X No | Is This Sampling Point Within A Wetland? | ___ Yes | X No |

Remarks: **This plot is not located in wetland**

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

| | | | |
|---|---|---|---|
| Project/Site: | **West Interceptor Extension Replacement, Town of Middleton** | Date: | **10/26/06** |
| Applicant/Owner: | **Madison Metropolitan Sewerage District** | County: | **Dane** |
| Investigator #1: | **Ann Amelse** #2: | State: | **Wisconsin** |
| Do Normal Circumstances Exist On The Site? | X Yes ___ No | Community ID: | **Wetland B** |
| Is The Site Significantly Disturbed (Atypical Situation)? | ___ Yes X No | Station ID: | **--** |
| Is The Area A Potential Problem Area? (If yes, define below.) | ___ Yes X No | Plot ID: | **S5** |

Remarks: --

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind. Status | Stratum | % Cover | | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|---|---|---|---|---|
| 1. | *Acer saccharinum* | FACW | TREE | 20 | 7. | | | | |
| 2. | *Rhamnus frangula* | FAC+ | SHRUB | 40 | 8. | | | | |
| 3. | *Populus deltoides* | FAC+ | TREE | 40 | 9. | | | | |
| 4. | *Viola sp.* | UNK | HERB | 15 | 10. | | | | |
| 5. | | | | | 11. | | | | |
| 6. | | | | | 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **75%**

Remarks: **Hydrophytic vegetation is dominant**

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, Or Tide Gauge
- ___ Aerial Photos
- ___ Other

X No Recorded Data Available

Field Observations:
- Depth of Surface Water: **NA** (in.)
- Depth to Free Water: **NA** (in.)
- Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
- X None

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or More Required):
- ___ Oxidized Root Channels In Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present** Wetland hydrology indicators not present, but because of the season, wetland hydrology may not be evident. Wetland hydrology is assumed to exist at some point during the growing season based on dominance of hydrophytic vegetation and existence of hydric soils

## SOILS

Map Unit Name: **Adrian muck** Series Drainage Class: **very poorly drained**
Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? X Yes ___ No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 18 | Oa | N | 2.5 | | | | | muck, moist, friable |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:
- X Histosol
- X Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed Or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content In Surface Layer In Sandy Soils
- ___ Organic Streaking In Sandy Soils
- X Listed On Local Hydric Soils List
- ___ Listed On National Hydric Soils List
- ___ Other (Explain In Remarks)

Remarks: **Hydric soils are present**

## WETLAND DETERMINATION

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | X Yes ___ No | Hydric Soils Present? | X Yes ___ No |
| Wetland Hydrology Present? | ___ Yes X No | Is This Sampling Point Within A Wetland? | X Yes ___ No |

Remarks: **This plot is located in wetland**
This plot meets the vegetation and soil criteria, but no wetland hydrology indicators were evident at the time of the field investigation. Wetland hydrology is assumed to exist at some point during the growing season based in the dominance of hydrophytic vegetation and the existence of hydric soils.

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

Project/Site: **West Interceptor Extension Replacement, Town of Middleton**
Applicant/Owner: **Madison Metropolitan Sewerage District**
Investigator #1: **Ann Amelse** #2:

Date: **10/26/06**
County: **Dane**
State: **Wisconsin**
Community ID: **Wetland B**
Station ID: **--**
Plot ID: **S6**

| | | |
|---|---|---|
| Do Normal Circumstances Exist On The Site? | X Yes | ___ No |
| Is The Site Significantly Disturbed (Atypical Situation)? | ___ Yes | X No |
| Is The Area A Potential Problem Area? (If yes, define below.) | ___ Yes | X No |

Remarks: --

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|
| 1. | *Acer saccharinum* | FACW | TREE | 20 |
| 2. | *Sambucus canadensis* | FACW- | SHRUB | 10 |
| 3. | *Populus deltoides* | FAC+ | TREE | 20 |
| 4. | *Phalaris arundinacea* | FACW+ | HERB | 80 |
| 5. | *Solidago gigantea* | FACW | HERB | 10 |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **100%**

Remarks: **Hydrophytic vegetation is dominant**

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, Or Tide Gauge
___ Aerial Photos
___ Other
X No Recorded Data Available

Field Observations:
Depth of Surface Water: **NA** (in.)
Depth to Free Water: **NA** (in.)
Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
X None
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or More Required):
___ Oxidized Root Channels In Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present** Wetland hydrology indicators not present, but because of the season, wetland hydrology may not be evident. Wetland hydrology is assumed to exist at some point during the growing season based on dominance of hydrophytic vegetation and existence of hydric soils

## SOILS

Map Unit Name: **Adrian muck** Series Drainage Class: **very poorly drained**
Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? ___ Yes X No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14 | C | 10YR | 3/2 | 7.5YR | 4/4 | common | distinct | silt fill material, moist, very friable |
| 14 | 18 | 2O | 10YR | 3/2 | | | | | mucky peat, moist, friable |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:
___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
X Reducing Conditions
___ Gleyed Or Low-Chroma Colors
___ Concretions
___ High Organic Content In Surface Layer In Sandy Soils
___ Organic Streaking In Sandy Soils
___ Listed On Local Hydric Soils List
___ Listed On National Hydric Soils List
___ Other (Explain In Remarks)

Remarks: **Hydric soils are present**

## WETLAND DETERMINATION

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | X Yes | ___ No | Hydric Soils Present? | X Yes | ___ No |
| Wetland Hydrology Present? | ___ Yes | X No | Is This Sampling Point Within A Wetland? | X Yes | ___ No |

Remarks: **This plot is located in wetland**
This plot meets the vegetation and soil criteria, but no wetland hydrology indicators were evident at the time of the field investigation.
Wetland hydrology is assumed to exist at some point during the growing season based in the dominance of hydrophytic vegetation and the existence of hydric soils.

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

| | | | |
|---|---|---|---|
| Project/Site: | **West Interceptor Extension Replacement, Town of Middleton** | Date: | **10/26/06** |
| Applicant/Owner: | **Madison Metropolitan Sewerage District** | County: | **Dane** |
| Investigator #1: | **Ann Amelse** #2: | State: | **Wisconsin** |
| Do Normal Circumstances Exist On The Site? | X Yes ___ No | Community ID: | **Wetland B** |
| Is The Site Significantly Disturbed (Atypical Situation)? | ___ Yes X No | Station ID: | -- |
| Is The Area A Potential Problem Area? (If yes, define below.) | ___ Yes X No | Plot ID: | **S7** |

Remarks: --

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind.Status | Stratum | % Cover | | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|---|---|---|---|---|
| 1. | *Solanum dulcamara* | FAC | HERB | 20 | 7. | | | | |
| 2. | *Cirsium arvense* | FACU | HERB | 20 | 8. | | | | |
| 3. | *Arctium minus* | UPL | HERB | 10 | 9. | | | | |
| 4. | *Phalaris arundinacea* | FACW+ | HERB | 40 | 10. | | | | |
| 5. | *Geum macrophyllum* | FACW+ | HERB | 10 | 11. | | | | |
| 6. | | | | | 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **67%**

Remarks: **Hydrophytic vegetation is dominant**

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, Or Tide Gauge
- ___ Aerial Photos
- ___ Other

X No Recorded Data Available

Field Observations:
- Depth of Surface Water: **NA** (in.)
- Depth to Free Water: **NA** (in.)
- Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
- X None

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or More Required):
- ___ Oxidized Root Channels In Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present** Wetland hydrology indicators not present, but because of the season, wetland hydrology may not be evident. Wetland hydrology is assumed to exist at some point during the growing season based on dominance of hydrophytic vegetation and existence of hydric soils

## SOILS

Map Unit Name: **Houghton muck** Series Drainage Class: **very poorly drained**

Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? ___ Yes X No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 17 | C | 10YR | 2/1 | | | | | mucky loam sand fill, moist, very friable |
| 17 | 18 | 2O | 10YR | 3/2.5 | | | | | peat, moist, friable |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:
- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed Or Low-Chroma Colors
- ___ Concretions
- X High Organic Content In Surface Layer In Sandy Soils
- ___ Organic Streaking In Sandy Soils
- ___ Listed On Local Hydric Soils List
- ___ Listed On National Hydric Soils List
- ___ Other (Explain In Remarks)

Remarks: **Hydric soils are present**

## WETLAND DETERMINATION

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | X Yes | ___ No | Hydric Soils Present? | X Yes | ___ No |
| Wetland Hydrology Present? | ___ Yes | X No | Is This Sampling Point Within A Wetland? | X Yes | ___ No |

Remarks: **This plot is located in wetland**

This plot meets the vegetation and soil criteria, but no wetland hydrology indicators were evident at the time of the field investigation. Wetland hydrology is assumed to exist at some point during the growing season based in the dominance of hydrophytic vegetation and the existence of hydric soils.

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

| | | | |
|---|---|---|---|
| Project/Site: | **West Interceptor Extension Replacement, Town of Middleton** | Date: | **10/30/06** |
| Applicant/Owner: | **Madison Metropolitan Sewerage District** | County: | **Dane** |
| Investigator #1: | **Ann Amelse** #2: | State: | **Wisconsin** |
| Do Normal Circumstances Exist On The Site? | X Yes ___ No | Community ID: | **Wetland B** |
| Is The Site Significantly Disturbed (Atypical Situation)? | ___ Yes X No | Station ID: | **--** |
| Is The Area A Potential Problem Area? (If yes, define below.) | ___ Yes X No | Plot ID: | **S8** |

Remarks: --

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind.Status | Stratum | % Cover | | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|---|---|---|---|---|
| 1. | *Acer saccharinum* | FACW | TREE | 40 | 7. | *Alliaria petiolata* | FAC | HERB | 10 |
| 2. | *Sambucus racemosa* | FACU+ | SHRUB | 20 | 8. | *Morus alba* | FAC | SHRUB | 20 |
| 3. | *Rhamnus frangula* | FAC+ | SHRUB | 40 | 9. | | | | |
| 4. | *Pyrola sp.* | UNK | HERB | 20 | 10. | | | | |
| 5. | *Geum macrophyllum* | FACW+ | HERB | 10 | 11. | | | | |
| 6. | *Populus deltoides* | FAC+ | TREE | 30 | 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **75%**

Remarks: **Hydrophytic vegetation is dominant**

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, Or Tide Gauge
- ___ Aerial Photos
- ___ Other

X No Recorded Data Available

Field Observations:
- Depth of Surface Water: **NA** (in.)
- Depth to Free Water: **NA** (in.)
- Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
- X None

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or More Required):
- ___ Oxidized Root Channels In Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present** Wetland hydrology indicators not present, but because of the season, wetland hydrology may not be evident. Wetland hydrology is assumed to exist at some point during the growing season based on dominance of hydrophytic vegetation and existence of hydric soils

## SOILS

Map Unit Name: **Adrian muck** Series Drainage Class: **very poorly drained**
Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? X Yes ___ No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 19 | Oa | N | 2.5 | | | | | muck, moist, friable |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:
- X Histosol
- X Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed Or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content In Surface Layer In Sandy Soils
- ___ Organic Streaking In Sandy Soils
- X Listed On Local Hydric Soils List
- ___ Listed On National Hydric Soils List
- ___ Other (Explain In Remarks)

Remarks: **Hydric soils are present**

## WETLAND DETERMINATION

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | X Yes ___ No | Hydric Soils Present? | X Yes ___ No |
| Wetland Hydrology Present? | ___ Yes X No | Is This Sampling Point Within A Wetland? | X Yes ___ No |

Remarks: **This plot is located in wetland**
This plot meets the vegetation and soil criteria, but no wetland hydrology indicators were evident at the time of the field investigation. Wetland hydrology is assumed to exist at some point during the growing season based in the dominance of hydrophytic vegetation and the existence of hydric soils.

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

| | | | |
|---|---|---|---|
| Project/Site: | **West Interceptor Extension Replacement, Town of Middleton** | Date: | **10/30/06** |
| Applicant/Owner: | **Madison Metropolitan Sewerage District** | County: | **Dane** |
| Investigator #1: | **Ann Amelse** #2: | State: | **Wisconsin** |
| Do Normal Circumstances Exist On The Site? | X Yes ___ No | Community ID: | **Wetland B** |
| Is The Site Significantly Disturbed (Atypical Situation)? | ___ Yes X No | Station ID: | -- |
| Is The Area A Potential Problem Area? (If yes, define below.) | ___ Yes X No | Plot ID: | **S9** |

Remarks: 2' rise in elevation from sample point 8 due to placement of fill material

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind.Status | Stratum | % Cover | | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|---|---|---|---|---|
| 1. | *Sambucus racemosa* | FACU+ | SHRUB | 80 | 7. | | | | |
| 2. | *Acer saccharinum* | FACW | HERB | 30 | 8. | | | | |
| 3. | *Populus deltoides* | FAC+ | HERB | 30 | 9. | | | | |
| 4. | | | | | 10. | | | | |
| 5. | | | | | 11. | | | | |
| 6. | | | | | 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **67%**

Remarks: **Hydrophytic vegetation is dominant**

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, Or Tide Gauge
___ Aerial Photos
___ Other

X No Recorded Data Available

Field Observations:
Depth of Surface Water: **NA** (in.)
Depth to Free Water: **NA** (in.)
Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
X None
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or More Required):
___ Oxidized Root Channels In Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present**

## SOILS

Map Unit Name: **Adrian muck** Series Drainage Class: **very poorly drained**
Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? ___ Yes X No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 8 | A | 10YR | 2/1 | | | | | silt loam, moist, friable |
| 8 | 18 | B | 10YR | 3/2 | | | | | mixed sand and clay fill, moist, friable |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:
___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed Or Low-Chroma Colors
___ Concretions
___ High Organic Content In Surface Layer In Sandy Soils
___ Organic Streaking In Sandy Soils
___ Listed On Local Hydric Soils List
___ Listed On National Hydric Soils List
___ Other (Explain In Remarks)

Remarks: **Hydric soils are not present**

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? X Yes ___ No
Wetland Hydrology Present? ___ Yes X No
Hydric Soils Present? ___ Yes X No
Is This Sampling Point Within A Wetland? ___ Yes X No

Remarks: **This plot is not located in wetland**

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

| | | | |
|---|---|---|---|
| Project/Site: | **West Interceptor Extension Replacement, Town of Middleton** | Date: | **10/30/06** |
| Applicant/Owner: | **Madison Metropolitan Sewerage District** | County: | **Dane** |
| Investigator #1: | **Ann Amelse** #2: | State: | **Wisconsin** |
| Do Normal Circumstances Exist On The Site? | X Yes ___ No | Community ID: | **Wetland B** |
| Is The Site Significantly Disturbed (Atypical Situation)? | ___ Yes X No | Station ID: | **--** |
| Is The Area A Potential Problem Area? (If yes, define below.) | ___ Yes X No | Plot ID: | **S10** |

Remarks: --

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind. Status | Stratum | % Cover | | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|---|---|---|---|---|
| 1. | *Acer saccharinum* | FACW | TREE | 20 | 7. | *Alliaria petiolata* | FAC | HERB | 30 |
| 2. | *Sambucus racemosa* | FACU+ | SHRUB | 20 | 8. | | | | |
| 3. | *Rhamnus frangula* | FAC+ | SHRUB | 40 | 9. | | | | |
| 4. | *Ribes lacustre* | FACW | SHRUB | 20 | 10. | | | | |
| 5. | *Acer negundo* | FACW- | TREE | 20 | 11. | | | | |
| 6. | *Populus deltoides* | FAC+ | TREE | 40 | 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **86%**

Remarks: **Hydrophytic vegetation is dominant**

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, Or Tide Gauge
- ___ Aerial Photos
- ___ Other

X No Recorded Data Available

Field Observations:
- Depth of Surface Water: **NA** (in.)
- Depth to Free Water: **NA** (in.)
- Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
- X None

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or More Required):
- ___ Oxidized Root Channels In Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present** Wetland hydrology indicators not present, but because of the season, wetland hydrology may not be evident. Wetland hydrology is assumed to exist at some point during the growing season based on dominance of hydrophytic vegetation and existence of hydric soils

## SOILS

Map Unit Name: **Adrian muck** Series Drainage Class: **very poorly drained**

Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? X Yes ___ No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 15 | Oa | N | 2.5 | | | | | muck, moist, friable |
| 15 | 20 | Oe | N | 2.5 | | | | | mucky peat, moist, friable |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:
- X Histosol
- X Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed Or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content In Surface Layer In Sandy Soils
- ___ Organic Streaking In Sandy Soils
- X Listed On Local Hydric Soils List
- ___ Listed On National Hydric Soils List
- ___ Other (Explain In Remarks)

Remarks: **Hydric soils are present**

## WETLAND DETERMINATION

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | X Yes | ___ No | Hydric Soils Present? | X Yes | ___ No |
| Wetland Hydrology Present? | ___ Yes | X No | Is This Sampling Point Within A Wetland? | X Yes | ___ No |

Remarks: **This plot is located in wetland**

This plot meets the vegetation and soil criteria, but no wetland hydrology indicators were evident at the time of the field investigation. Wetland hydrology is assumed to exist at some point during the growing season based in the dominance of hydrophytic vegetation and the existence of hydric soils.

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

Project/Site: **West Interceptor Extension Replacement, Town of Middleton**
Applicant/Owner: **Madison Metropolitan Sewerage District**
Investigator #1: **Ann Amelse** #2:

Date: **10/30/06**
County: **Dane**
State: **Wisconsin**
Community ID: **Wetland B**
Station ID: **--**
Plot ID: **S11**

Do Normal Circumstances Exist On The Site? **X** Yes ____ No
Is The Site Significantly Disturbed (Atypical Situation)? ____ Yes **X** No
Is The Area A Potential Problem Area? ____ Yes **X** No
(If yes, define below.)

Remarks: 3' rise in elevation from sample point 12 due to placement of fill material for construction of apartment building

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind.Status | Stratum | % Cover |
|---|---|---|---|---|
| 1. | *Alliaria petiolata* | FAC | HERB | 40 |
| 2. | *Populus deltoides* | FAC+ | TREE | 20 |
| 3. | *Rhamnus frangula* | FAC+ | SHRUB | 30 |
| 4. | *Geum canadense* | FAC | HERB | 10 |
| 5. | | | | |
| 6. | | | | |

| | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **100%**

Remarks: **Hydrophytic vegetation is dominant**

## HYDROLOGY

____ Recorded Data (Describe in Remarks):
____ Stream, Lake, Or Tide Gauge
____ Aerial Photos
____ Other

**X** No Recorded Data Available

Field Observations:
Depth of Surface Water: **NA** (in.)
Depth to Free Water: **NA** (in.)
Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
**X** None
Primary Indicators:
____ Inundated
____ Saturated in Upper 12 Inches
____ Water Marks
____ Drift Lines
____ Sediment Deposits
____ Drainage Patterns in Wetlands
Secondary Indicators (2 or More Required):
____ Oxidized Root Channels In Upper 12 Inches
____ Water-Stained Leaves
____ Local Soil Survey Data
____ FAC-Neutral Test
____ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present**

## SOILS

Map Unit Name: **Houghton muck** Series Drainage Class: **very poorly drained**
Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? ____ Yes **X** No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14 | A | 10YR | 2/1 | | | | | sandy loam, moist, friable |
| 14 | 18 | C | 10YR | 2/2 | | | | | mixed sandy loam and clay fill, moist, friable |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:
____ Histosol
____ Histic Epipedon
____ Sulfidic Odor
____ Aquic Moisture Regime
____ Reducing Conditions
____ Gleyed Or Low-Chroma Colors
____ Concretions
____ High Organic Content In Surface Layer In Sandy Soils
____ Organic Streaking In Sandy Soils
____ Listed On Local Hydric Soils List
____ Listed On National Hydric Soils List
____ Other (Explain In Remarks)

Remarks: **Hydric soils are not present**

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? **X** Yes ____ No
Wetland Hydrology Present? ____ Yes **X** No
Hydric Soils Present? ____ Yes **X** No
Is This Sampling Point Within A Wetland? ____ Yes **X** No

Remarks: **This plot is not located in wetland**

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

Project/Site: **West Interceptor Extension Replacement, Town of Middleton**
Applicant/Owner: **Madison Metropolitan Sewerage District**
Investigator #1: **Ann Amelse** #2:

Date: **10/30/06**
County: **Dane**
State: **Wisconsin**
Community ID: **Wetland B**
Station ID: **--**
Plot ID: **S12**

| | | |
|---|---|---|
| Do Normal Circumstances Exist On The Site? | X Yes | ___ No |
| Is The Site Significantly Disturbed (Atypical Situation)? | ___ Yes | X No |
| Is The Area A Potential Problem Area? (If yes, define below.) | ___ Yes | X No |

Remarks:

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind. Status | Stratum | % Cover | | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|---|---|---|---|---|
| 1. | *Ribes americanum* | FACW | SHRUB | 30 | 7. | | | | |
| 2. | *Fraxinus pennsylvanica* | FACW | TREE | 20 | 8. | | | | |
| 3. | *Geum canadense* | FAC | HERB | 20 | 9. | | | | |
| 4. | *Rhamnus frangula* | FAC+ | SHRUB | 40 | 10. | | | | |
| 5. | *Populus deltoides* | FAC+ | TREE | 30 | 11. | | | | |
| 6. | Acer negundo | FACW+ | TREE | 20 | 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **100%**

Remarks: **Hydrophytic vegetation is dominant**

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, Or Tide Gauge
___ Aerial Photos
___ Other

X No Recorded Data Available

Field Observations:
Depth of Surface Water: **NA** (in.)
Depth to Free Water: **NA** (in.)
Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
X None
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or More Required):
___ Oxidized Root Channels In Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present** Wetland hydrology indicators not present, but because of the season, wetland hydrology may not be evident. Wetland hydrology is assumed to exist at some point during the growing season based on dominance of hydrophytic vegetation and existence of hydric soils

## SOILS

Map Unit Name: **Houghton muck** Series Drainage Class: **very poorly drained**
Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? X Yes ___ No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 19 | Oa | N | 2.5 | | | | | muck, moist, friable |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:

| | |
|---|---|
| X Histosol | ___ Concretions |
| X Histic Epipedon | ___ High Organic Content In Surface Layer In Sandy Soils |
| ___ Sulfidic Odor | ___ Organic Streaking In Sandy Soils |
| ___ Aquic Moisture Regime | X Listed On Local Hydric Soils List |
| ___ Reducing Conditions | ___ Listed On National Hydric Soils List |
| ___ Gleyed Or Low-Chroma Colors | ___ Other (Explain In Remarks) |

Remarks: **Hydric soils are present**

## WETLAND DETERMINATION

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | X Yes | ___ No | Hydric Soils Present? | X Yes | ___ No |
| Wetland Hydrology Present? | ___ Yes | X No | Is This Sampling Point Within A Wetland? | X Yes | ___ No |

Remarks: **This plot is located in wetland**
This plot meets the vegetation and soil criteria, but no wetland hydrology indicators were evident at the time of the field investigation.
Wetland hydrology is assumed to exist at some point during the growing season based in the dominance of hydrophytic vegetation and the existence of hydric soils.

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

Project/Site: **West Interceptor Extension Replacement, Town of Middleton**
Applicant/Owner: **Madison Metropolitan Sewerage District**
Investigator #1: **Ann Amelse** #2:

Date: **10/30/06**
County: **Dane**
State: **Wisconsin**
Community ID: **Wetland B**
Station ID: **--**
Plot ID: **S13**

| | | |
|---|---|---|
| Do Normal Circumstances Exist On The Site? | X Yes | ___ No |
| Is The Site Significantly Disturbed (Atypical Situation)? | ___ Yes | X No |
| Is The Area A Potential Problem Area? (If yes, define below.) | ___ Yes | X No |

Remarks:

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind. Status | Stratum | % Cover | | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|---|---|---|---|---|
| 1. | *Phalaris arundinacea* | FACW+ | HERB | 40 | 7. | | | | |
| 2. | *Solanum dulcamara* | FAC | HERB | 20 | 8. | | | | |
| 3. | *Alliaria petiolata* | FAC | HERB | 20 | 9. | | | | |
| 4. | *Urtica dioica* | FAC+ | HERB | 10 | 10. | | | | |
| 5. | *Cirsium arvense* | FACU | HERB | 10 | 11. | | | | |
| 6. | | | | | 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **100%**

Remarks: **Hydrophytic vegetation is dominant**

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, Or Tide Gauge
___ Aerial Photos
___ Other

X No Recorded Data Available

Field Observations:
Depth of Surface Water: **NA** (in.)
Depth to Free Water: **NA** (in.)
Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
X None
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or More Required):
___ Oxidized Root Channels In Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present** Wetland hydrology indicators not present, but because of the season, wetland hydrology may not be evident. Wetland hydrology is assumed to exist at some point during the growing season based on dominance of hydrophytic vegetation and existence of hydric soils

## SOILS

Map Unit Name: **Houghton muck** Series Drainage Class: **very poorly drained**
Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? X Yes ___ No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 8 | A | 10YR | 2/1 | | | | | loamy sand, moist, very friable, 30% roots, high organic content |
| 8 | 11 | C | 10YR | 2/2 | 7.5YR | 4/4 | common | distinct | loamy sand, moist, very friable |
| 11 | 19 | 2Oi | 10YR | 3/2.5 | | | | | peat, moist, friable |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:

| | |
|---|---|
| ___ Histosol | ___ Concretions |
| ___ Histic Epipedon | X High Organic Content In Surface Layer In Sandy Soils |
| ___ Sulfidic Odor | ___ Organic Streaking In Sandy Soils |
| ___ Aquic Moisture Regime | ___ Listed On Local Hydric Soils List |
| X Reducing Conditions | ___ Listed On National Hydric Soils List |
| ___ Gleyed Or Low-Chroma Colors | ___ Other (Explain In Remarks) |

Remarks: **Hydric soils are present**

## WETLAND DETERMINATION

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | X Yes | ___ No | Hydric Soils Present? | X Yes | ___ No |
| Wetland Hydrology Present? | ___ Yes | X No | Is This Sampling Point Within A Wetland? | X Yes | ___ No |

Remarks: **This plot is located in wetland**
This plot meets the vegetation and soil criteria, but no wetland hydrology indicators were evident at the time of the field investigation.
Wetland hydrology is assumed to exist at some point during the growing season based in the dominance of hydrophytic vegetation and the existence of hydric soils.

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

Project/Site: **West Interceptor Extension Replacement, Town of Middleton**
Applicant/Owner: **Madison Metropolitan Sewerage District**
Investigator #1: **Ann Amelse** #2:

Date: **10/30/06**
County: **Dane**
State: **Wisconsin**
Community ID: **Wetland B**
Station ID: **--**
Plot ID: **S14**

| | | |
|---|---|---|
| Do Normal Circumstances Exist On The Site? | X Yes | ___ No |
| Is The Site Significantly Disturbed (Atypical Situation)? | ___ Yes | X No |
| Is The Area A Potential Problem Area? (If yes, define below.) | ___ Yes | X No |

Remarks: --

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind. Status | Stratum | % Cover | | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|---|---|---|---|---|
| 1. | *Silphium perfoliatum* | FACW- | HERB | 5 | 7. | | | | |
| 2. | *Urtica dioica* | FAC+ | HERB | 20 | 8. | | | | |
| 3. | *Solanum dulcamara* | FAC | HERB | 20 | 9. | | | | |
| 4. | *Phalaris arundinacea* | FACW+ | HERB | 20 | 10. | | | | |
| 5. | *Calamagrostis canadensis* | OBL | HERB | 30 | 11. | | | | |
| 6. | | | | | 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **100%**

Remarks: **Hydrophytic vegetation is dominant**

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, Or Tide Gauge
___ Aerial Photos
___ Other

X No Recorded Data Available

Field Observations:
Depth of Surface Water: **NA** (in.)
Depth to Free Water: **NA** (in.)
Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
X None
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or More Required):
___ Oxidized Root Channels In Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present** Wetland hydrology indicators not present, but because of the season, wetland hydrology may not be evident. Wetland hydrology is assumed to exist at some point during the growing season based on dominance of hydrophytic vegetation and existence of hydric soils

## SOILS

Map Unit Name: **Houghton muck** Series Drainage Class: **very poorly drained**
Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? ___ Yes X No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 8 | A | 10YR | 2/1 | | | | | loamy sand, moist, very friable, high organic content |
| 8 | 10 | B | 10YR | 7/1 | 10YR | 5/6 | common | prominent | sand, moist, very friable |
| 10 | 18 | Bt | 10YR | 2/1 | 2.5YR | 2.5/4 | many | distinct | mucky loam, moist, friable |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:

| | |
|---|---|
| ___ Histosol | ___ Concretions |
| ___ Histic Epipedon | X High Organic Content In Surface Layer In Sandy Soils |
| ___ Sulfidic Odor | ___ Organic Streaking In Sandy Soils |
| ___ Aquic Moisture Regime | ___ Listed On Local Hydric Soils List |
| X Reducing Conditions | ___ Listed On National Hydric Soils List |
| ___ Gleyed Or Low-Chroma Colors | ___ Other (Explain In Remarks) |

Remarks: **Hydric soils are present**

## WETLAND DETERMINATION

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | X Yes | ___ No | Hydric Soils Present? | X Yes | ___ No |
| Wetland Hydrology Present? | ___ Yes | X No | Is This Sampling Point Within A Wetland? | X Yes | ___ No |

Remarks: **This plot is located in wetland**
This plot meets the vegetation and soil criteria, but no wetland hydrology indicators were evident at the time of the field investigation.
Wetland hydrology is assumed to exist at some point during the growing season based in the dominance of hydrophytic vegetation and the existence of hydric soils.

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

| | | | |
|---|---|---|---|
| Project/Site: | **West Interceptor Extension Replacement, Town of Middleton** | Date: | **10/30/06** |
| Applicant/Owner: | **Madison Metropolitan Sewerage District** | County: | **Dane** |
| Investigator #1: | **Ann Amelse** #2: | State: | **Wisconsin** |
| Do Normal Circumstances Exist On The Site? | X Yes ___ No | Community ID: | **Wetland B** |
| Is The Site Significantly Disturbed (Atypical Situation)? | ___ Yes X No | Station ID: | -- |
| Is The Area A Potential Problem Area? (If yes, define below.) | ___ Yes X No | Plot ID: | **S15** |

Remarks: --

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind.Status | Stratum | % Cover | | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|---|---|---|---|---|
| 1. | *Poa pratensis* | FAC- | HERB | 40 | 7. | | | | |
| 2. | *Taraxacum officinale* | FACU | HERB | 20 | 8. | | | | |
| 3. | *Solanum dulcamara* | FAC | HERB | 20 | 9. | | | | |
| 4. | *Phalaris arundinacea* | FACW+ | HERB | 30 | 10. | | | | |
| 5. | | | | | 11. | | | | |
| 6. | | | | | 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **50%**

Remarks: **Hydrophytic vegetation is not dominant**
mowed lawn area in park

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, Or Tide Gauge
___ Aerial Photos
___ Other

X No Recorded Data Available

Field Observations:
Depth of Surface Water: **NA** (in.)
Depth to Free Water: **NA** (in.)
Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
X None
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or More Required):
___ Oxidized Root Channels In Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present**

## SOILS

Map Unit Name: **Houghton muck** Series Drainage Class: **very poorly drained**
Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? X Yes ___ No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 17 | Oa | N | 2.5 | | | | | muck, moist, friable |
| 17 | 18 | B | 10YR | 7/2 | | | | | stratified layers of black organics sand , moist, very friable |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:
X Histosol
X Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed Or Low-Chroma Colors
___ Concretions
___ High Organic Content In Surface Layer In Sandy Soils
___ Organic Streaking In Sandy Soils
X Listed On Local Hydric Soils List
___ Listed On National Hydric Soils List
___ Other (Explain In Remarks)

Remarks: **Hydric soils are present**

## WETLAND DETERMINATION

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | ___ Yes X No | Hydric Soils Present? | X Yes ___ No |
| Wetland Hydrology Present? | ___ Yes X No | Is This Sampling Point Within A Wetland? | ___ Yes X No |

Remarks: **This plot is not located in wetland**

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

Project/Site: **West Interceptor Extension Replacement, Town of Middleton**
Applicant/Owner: **Madison Metropolitan Sewerage District**
Investigator #1: **Ann Amelse** #2:

Date: **10/30/06**
County: **Dane**
State: **Wisconsin**
Community ID: **Wetland C**
Station ID: **--**
Plot ID: **S16**

| | | |
|---|---|---|
| Do Normal Circumstances Exist On The Site? | X Yes | ___ No |
| Is The Site Significantly Disturbed (Atypical Situation)? | ___ Yes | X No |
| Is The Area A Potential Problem Area? (If yes, define below.) | ___ Yes | X No |

Remarks: --

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind Status | Stratum | % Cover |
|---|---|---|---|---|
| 1. | *Solidago gigantea* | FACW | HERB | 70 |
| 2. | *Silphium perfoliatum* | FACW- | HERB | 15 |
| 3. | *Helianthus giganteus* | FACW | HERB | 10 |
| 4. | *Hypericum ascyron* | FAC+ | HERB | 5 |
| 5. | | | | |
| 6. | | | | |

| | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **100%**

Remarks: **Hydrophytic vegetation is dominant**

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, Or Tide Gauge
___ Aerial Photos
___ Other
X No Recorded Data Available

Field Observations:
Depth of Surface Water: **NA** (in.)
Depth to Free Water: **NA** (in.)
Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
X None
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or More Required):
___ Oxidized Root Channels In Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present** Wetland hydrology indicators not present, but because of the season, wetland hydrology may not be evident. Wetland hydrology is assumed to exist at some point during the growing season based on dominance of hydrophytic vegetation and existence of hydric soils

## SOILS

Map Unit Name: **Houghton muck** Series Drainage Class: **very poorly drained**
Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? ___ Yes X No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 8 | A | 10YR | 2/1 | 7.5YR | 4/4 | common | distinct | mucky silt loam, moist, very friable, 40% roots |
| 8 | 16 | C | 10YR | 3/1 | 5YR | 3/4 | many | prominent | mixed fill material silt loam, moist, friable |
| 16 | 19 | 2Oa | N | 2.5 | | | | | muck, moist, friable |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:
___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
X Reducing Conditions
X Gleyed Or Low-Chroma Colors
___ Concretions
___ High Organic Content In Surface Layer In Sandy Soils
___ Organic Streaking In Sandy Soils
___ Listed On Local Hydric Soils List
___ Listed On National Hydric Soils List
___ Other (Explain In Remarks)

Remarks: **Hydric soils are present**

## WETLAND DETERMINATION

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | X Yes | ___ No | Hydric Soils Present? | X Yes | ___ No |
| Wetland Hydrology Present? | ___ Yes | X No | Is This Sampling Point Within A Wetland? | X Yes | ___ No |

Remarks: **This plot is located in wetland**
This plot meets the vegetation and soil criteria, but no wetland hydrology indicators were evident at the time of the field investigation.
Wetland hydrology is assumed to exist at some point during the growing season based in the dominance of hydrophytic vegetation and the existence of hydric soils.

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

| | | | |
|---|---|---|---|
| Project/Site: | **West Interceptor Extension Replacement, Town of Middleton** | Date: | **10/30/06** |
| Applicant/Owner: | **Madison Metropolitan Sewerage District** | County: | **Dane** |
| Investigator #1: | **Ann Amelse** #2: | State: | **Wisconsin** |
| Do Normal Circumstances Exist On The Site? | X Yes ___ No | Community ID: | **Wetland C** |
| Is The Site Significantly Disturbed (Atypical Situation)? | ___ Yes X No | Station ID: | **--** |
| Is The Area A Potential Problem Area? (If yes, define below.) | ___ Yes X No | Plot ID: | **S17** |

Remarks: --

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind. Status | Stratum | % Cover | | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|---|---|---|---|---|
| 1. | *Poa pratensis* | FAC- | HERB | 70 | 7. | | | | |
| 2. | *Trifolium pratense* | FACU+ | HERB | 20 | 8. | | | | |
| 3. | *Taraxacum officinale* | FACU | HERB | 10 | 9. | | | | |
| 4. | | | | | 10. | | | | |
| 5. | | | | | 11. | | | | |
| 6. | | | | | 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **0%**

Remarks: **Hydrophytic vegetation is not dominant**
mowed lawn area in park

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, Or Tide Gauge
___ Aerial Photos
___ Other

X No Recorded Data Available

Field Observations:
Depth of Surface Water: **NA** (in.)
Depth to Free Water: **NA** (in.)
Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
X None
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or More Required):
___ Oxidized Root Channels In Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present**

## SOILS

Map Unit Name: **Houghton muck** Series Drainage Class: **very poorly drained**
Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? ___ Yes X No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance/Contrast | | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 6 | A | 10YR | 2/1 | | | | | silt loam, moist, friable, 40% roots |
| 6 | 13 | B | 10YR | 3/1 | 5YR | 3/4 | many | prominent | mixed layer<br>silt loam, moist, friable |
| 13 | 18 | B2 | 10YR | 5/3 | | | | | organic streaking<br>sand, moist, very friable |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:
___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
X Reducing Conditions
___ Gleyed Or Low-Chroma Colors
___ Concretions
___ High Organic Content In Surface Layer In Sandy Soils
___ Organic Streaking In Sandy Soils
___ Listed On Local Hydric Soils List
___ Listed On National Hydric Soils List
___ Other (Explain In Remarks)

Remarks: **Hydric soils are present**

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? ___ Yes X No
Wetland Hydrology Present? ___ Yes X No
Hydric Soils Present? X Yes ___ No
Is This Sampling Point Within A Wetland? ___ Yes X No

Remarks: **This plot is not located in wetland**

**DATA FORM**
**ROUTINE WETLAND DETERMINATION**
**(1987 COE Wetlands Delineation Manual)**

| | | | |
|---|---|---|---|
| Project/Site: | **West Interceptor Extension Replacement, Town of Middleton** | Date: | **10/30/06** |
| Applicant/Owner: | **Madison Metropolitan Sewerage District** | County: | **Dane** |
| Investigator #1: | **Ann Amelse** #2: | State: | **Wisconsin** |
| Do Normal Circumstances Exist On The Site? | X Yes ___ No | Community ID: | **Wetland C** |
| Is The Site Significantly Disturbed (Atypical Situation)? | ___ Yes X No | Station ID: | **--** |
| Is The Area A Potential Problem Area? (If yes, define below.) | ___ Yes X No | Plot ID: | **S18** |

Remarks: --

## VEGETATION

**Dominant Species (50/20 Rule)**

| | Species Name | Ind.Status | Stratum | % Cover | | Species Name | Ind. Status | Stratum | % Cover |
|---|---|---|---|---|---|---|---|---|---|
| 1. | *Solidago gigantea* | FACW | HERB | 85 | 7. | | | | |
| 2. | *Silphium perfoliatum* | FACW- | HERB | 15 | 8. | | | | |
| 3. | | | | | 9. | | | | |
| 4. | | | | | 10. | | | | |
| 5. | | | | | 11. | | | | |
| 6. | | | | | 12. | | | | |

Percent of Dominant Species That Are OBL, FACW, Or FAC (Excluding FAC-): **100%**

Remarks: **Hydrophytic vegetation is dominant**

## HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, Or Tide Gauge
- ___ Aerial Photos
- ___ Other

X No Recorded Data Available

Field Observations:
- Depth of Surface Water: **NA** (in.)
- Depth to Free Water: **NA** (in.)
- Depth to Saturated Soil: **NA** (in.)

Wetland Hydrology Indicators:
- X None

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or More Required):
- ___ Oxidized Root Channels In Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: **Wetland hydrology is not present** Wetland hydrology indicators not present, but because of the season, wetland hydrology may not be evident. Wetland hydrology is assumed to exist at some point during the growing season based on dominance of hydrophytic vegetation and existence of hydric soils

## SOILS

Map Unit Name: **Houghton muck** Series Drainage Class: **very poorly drained**

Taxonomy (Subgroup): **Terric Medisaprists** Field Observations Confirm Mapped Type? ___ Yes X No

Profile Description:

| Top Depth | Bottom Depth | Horizon | Matrix Color (Munsell Moist): | | Mottle Colors (Munsell Moist): | | Mottle Abundance | Mottle Contrast | Texture, moisture, consistency, organic material, and other soil characteristics. |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 6 | A | 10YR | 2/1 | 7.5YR | 4/4 | common | distinct | mucky silt loam, moist, very friable, 40% roots |
| 6 | 15 | C | 10YR | 3/1 | 5YR | 3/4 | many | prominent | mixed fill material silt loam, moist, friable |
| 15 | 19 | 2Oa | N | 2.5 | | | | | muck, moist, friable |
| | | | | | | | | | |
| | | | | | | | | | |

Hydric Soil Indicators:
- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- X Reducing Conditions
- X Gleyed Or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content In Surface Layer In Sandy Soils
- ___ Organic Streaking In Sandy Soils
- ___ Listed On Local Hydric Soils List
- ___ Listed On National Hydric Soils List
- ___ Other (Explain In Remarks)

Remarks: **Hydric soils are present**

## WETLAND DETERMINATION

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | X Yes ___ No | Hydric Soils Present? | X Yes ___ No |
| Wetland Hydrology Present? | ___ Yes X No | Is This Sampling Point Within A Wetland? | X Yes ___ No |

Remarks: **This plot is located in wetland**

This plot meets the vegetation and soil criteria, but no wetland hydrology indicators were evident at the time of the field investigation. Wetland hydrology is assumed to exist at some point during the growing season based in the dominance of hydrophytic vegetation and the existence of hydric soils.

# ATTACHMENT C

# RAPID ASSESSMENT METHODOLOGY FOR DETERMINING WETLAND FUNCTIONAL VALUE (SUMMARY SHEET)

File or Docket Number

Wisconsin Department of Natural Resources

# RAPID ASSESSMENT METHODOLOGY FOR EVALUATING WETLAND FUNCTIONAL VALUES

## GENERAL INFORMATION

| | |
|---|---|
| Name of Wetland/Owner: | Wetland Area A, Lakeview Community Park (City of Middleton) |
| Location: County | Dane ; , NE 1/4, Section 12 , Township 7N , Range 8E |
| Project Name: | West Interceptor Extension Reconstruction |
| Evaluator(s): | Ann Amelse (Earth Tech) |
| Date(s) of Site Visit(s): | October 26 and 30, 2006 |

Description of seasonality limitations of this inspection due to time of year of the evaluation and/or current hydrologic and climatologic conditions (e.g. after heavy rains, now or ice cover, during drought year, during spring flood, during bird migration):

No seasonal limitations present.

## WETLAND DESCRIPTION

| | | | | | |
|---|---|---|---|---|---|
| Wisconsin Wetlands Inventory Classification: | Not identified on WWI map | | | | |
| Wetland Type: | shallow open water | deep marsh | shallow marsh | seasonally flooded basin | bog |
| | Floodplain forest | alder thicket | sedge meadow | coniferous swamp | fen |
| | (Wet meadow) | shrub-carr | low prairie | hardwood swamp | |
| Estimated size of wetland in acres: | < 0.1 acres | | | | |

## SUMMARY OF FUNCTIONAL VALUES

Based on the results of the attached functional assessment, rate the significance of each of the functional values for the subject wetland and check the appropriate box. Complete the table as a summary.

| FUNCTION | SIGNIFICANCE | | | | |
|---|---|---|---|---|---|
| | Low | Medium | High | Exceptional | N/A |
| Floral Diversity | X | | | | |
| Wildlife Habitat | X | | | | |
| Fishery Habitat | | | | | X |
| Flood/Stormwater Attenuation | X | | | | |
| Water Quality Protection | X | | | | |
| Shoreline Protection | | | | | X |
| Groundwater | X | | | | |
| Aesthetics/Recreation/Education | X | | | | |

List any Special Features/"Red Flags":

No special features/Red flags present

File or Docket Number

Wisconsin Department of Natural Resources

# RAPID ASSESSMENT METHODOLOGY FOR EVALUATING WETLAND FUNCTIONAL VALUES

## GENERAL INFORMATION

| |
|---|
| Name of Wetland/Owner: Wetland Area B, Lakeview Community Park (City of Middleton) |
| Location: County Dane ; , NE 1/4, Section 12 , Township 7N , Range 8E |
| Project Name: West Interceptor Extension Reconstruction |
| Evaluator(s): Ann Amelse (Earth Tech) |
| Date(s) of Site Visit(s): October 26 and 30, 2006 |

Description of seasonality limitations of this inspection due to time of year of the evaluation and/or current hydrologic and climatologic conditions (e.g. after heavy rains, now or ice cover, during drought year, during spring flood, during bird migration):

Hydrology indicators were not as evident due to the time of year the delineation was completed.

## WETLAND DESCRIPTION

| | | | | | |
|---|---|---|---|---|---|
| Wisconsin Wetlands Inventory Classification: Not identified on WWI map | | | | | |
| Wetland Type: | shallow open water | deep marsh | shallow marsh | seasonally flooded basin | bog |
| | Floodplain forest | alder thicket | sedge meadow | coniferous swamp | fen |
| | (Wet meadow) | shrub-carr | low prairie | (hardwood swamp) | |
| Estimated size of wetland in acres: 4 to 8 acres | | | | | |

## SUMMARY OF FUNCTIONAL VALUES

Based on the results of the attached functional assessment, rate the significance of each of the functional values for the subject wetland and check the appropriate box. Complete the table as a summary.

| FUNCTION | SIGNIFICANCE | | | | |
|---|---|---|---|---|---|
| | Low | Medium | High | Exceptional | N/A |
| Floral Diversity | | X | | | |
| Wildlife Habitat | | X | | | |
| Fishery Habitat | | | | | X |
| Flood/Stormwater Attenuation | | X | | | |
| Water Quality Protection | | X | | | |
| Shoreline Protection | | | | | X |
| Groundwater | | X | | | |
| Aesthetics/Recreation/Education | | X | | | |

List any Special Features/"Red Flags":

No special features/Red flags present

File or Docket Number

Wisconsin Department of Natural Resources

# RAPID ASSESSMENT METHODOLOGY FOR EVALUATING WETLAND FUNCTIONAL VALUES

## GENERAL INFORMATION

| | |
|---|---|
| Name of Wetland/Owner: | Wetland Area C, Lakeview Community Park (City of Middleton) |
| Location: County | Dane ; , NE 1/4, Section 12 , Township 7N , Range 8E |
| Project Name: | West Interceptor Extension Reconstruction |
| Evaluator(s): | Ann Amelse (Earth Tech) |
| Date(s) of Site Visit(s): | October 26 and 30, 2006 |

Description of seasonality limitations of this inspection due to time of year of the evaluation and/or current hydrologic and climatologic conditions (e.g. after heavy rains, now or ice cover, during drought year, during spring flood, during bird migration):

Hydrology indicators were not as evident due to the time of year the delineation was completed.

## WETLAND DESCRIPTION

| | | | | | |
|---|---|---|---|---|---|
| Wisconsin Wetlands Inventory Classification: | Not identified on WWI map | | | | |
| Wetland Type: | shallow open water | deep marsh | shallow marsh | seasonally flooded basin | bog |
| | Floodplain forest | alder thicket | sedge meadow | coniferous swamp | fen |
| | (Wet meadow) | shrub-carr | low prairie | hardwood swamp | |
| Estimated size of wetland in acres: | < 0.5 acre | | | | |

## SUMMARY OF FUNCTIONAL VALUES

Based on the results of the attached functional assessment, rate the significance of each of the functional values for the subject wetland and check the appropriate box. Complete the table as a summary.

| FUNCTION | SIGNIFICANCE | | | | |
|---|---|---|---|---|---|
| | Low | Medium | High | Exceptional | N/A |
| Floral Diversity | | X | | | |
| Wildlife Habitat | X | | | | |
| Fishery Habitat | | | | | X |
| Flood/Stormwater Attenuation | X | | | | |
| Water Quality Protection | X | | | | |
| Shoreline Protection | | | | | X |
| Groundwater | X | | | | |
| Aesthetics/Recreation/Education | X | | | | |

List any Special Features/"Red Flags":

No special features/Red flags present

# ATTACHMENT D

# PHOTOGRAPHS

Wetland Area A, looking northwest

Wetland Area A, looking southeast

Western component of Wetland Area B, looking northeast (near S3)

Eastern component of Wetland Area B, looking northeast (near S14)

Stormwater culvert near S5, looking southwest

Unnamed intermittent stream in Wetland Area B, looking west from paved walking path

Wetland Area C, looking southwest

Wetland Area C, looking southeast

# ATTACHMENT E

## FIGURE 4 - WETLAND DELINEATION MAP

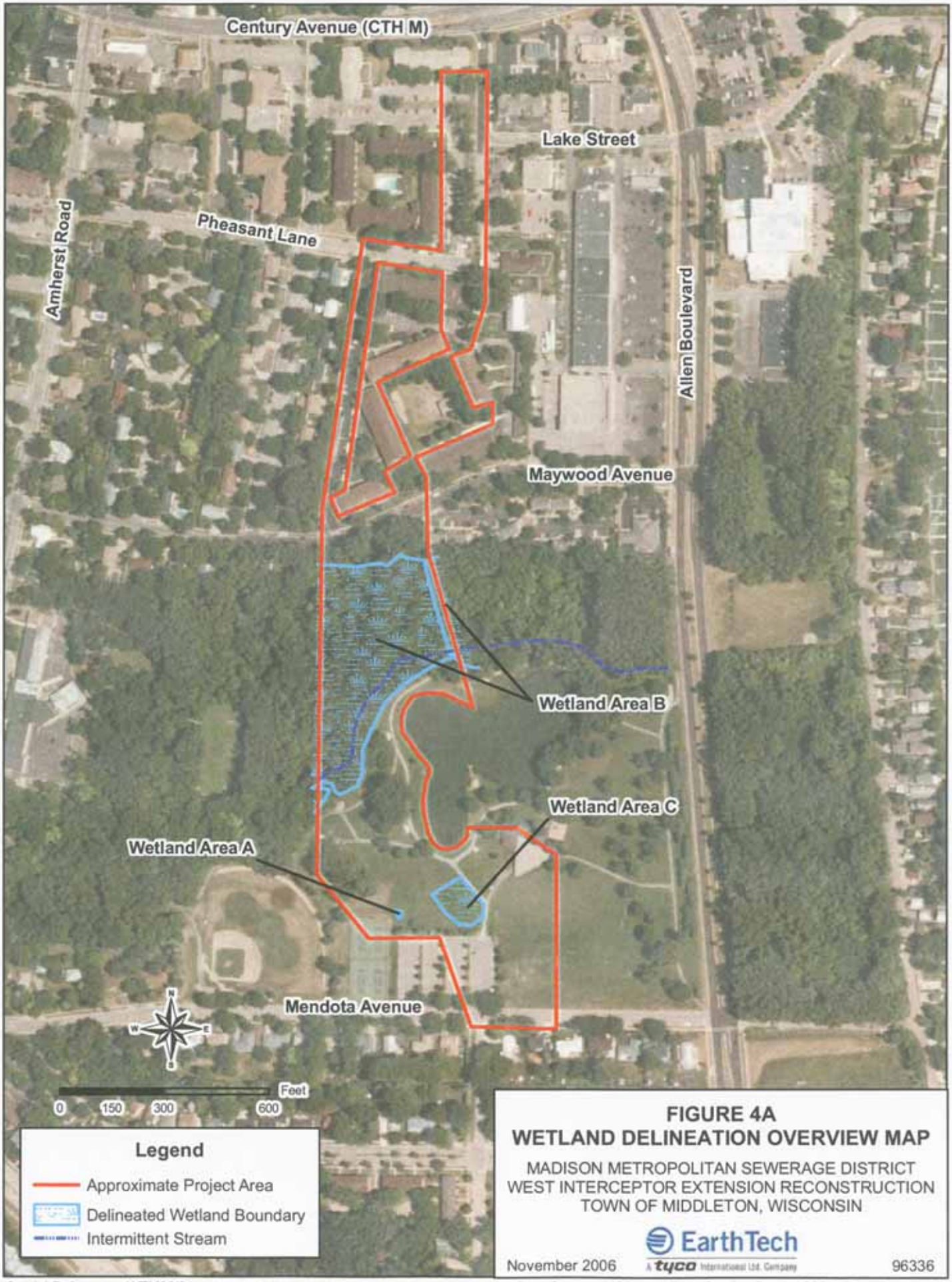


**FIGURE 4A**
**WETLAND DELINEATION OVERVIEW MAP**

MADISON METROPOLITAN SEWERAGE DISTRICT
WEST INTERCEPTOR EXTENSION RECONSTRUCTION
TOWN OF MIDDLETON, WISCONSIN

EarthTech
A tyco International Ltd. Company

November 2006 96336

Spatial Reference: WTM83/91

Data Source: USDA WI Farm Service Agency 2005, Earth Tech 2006

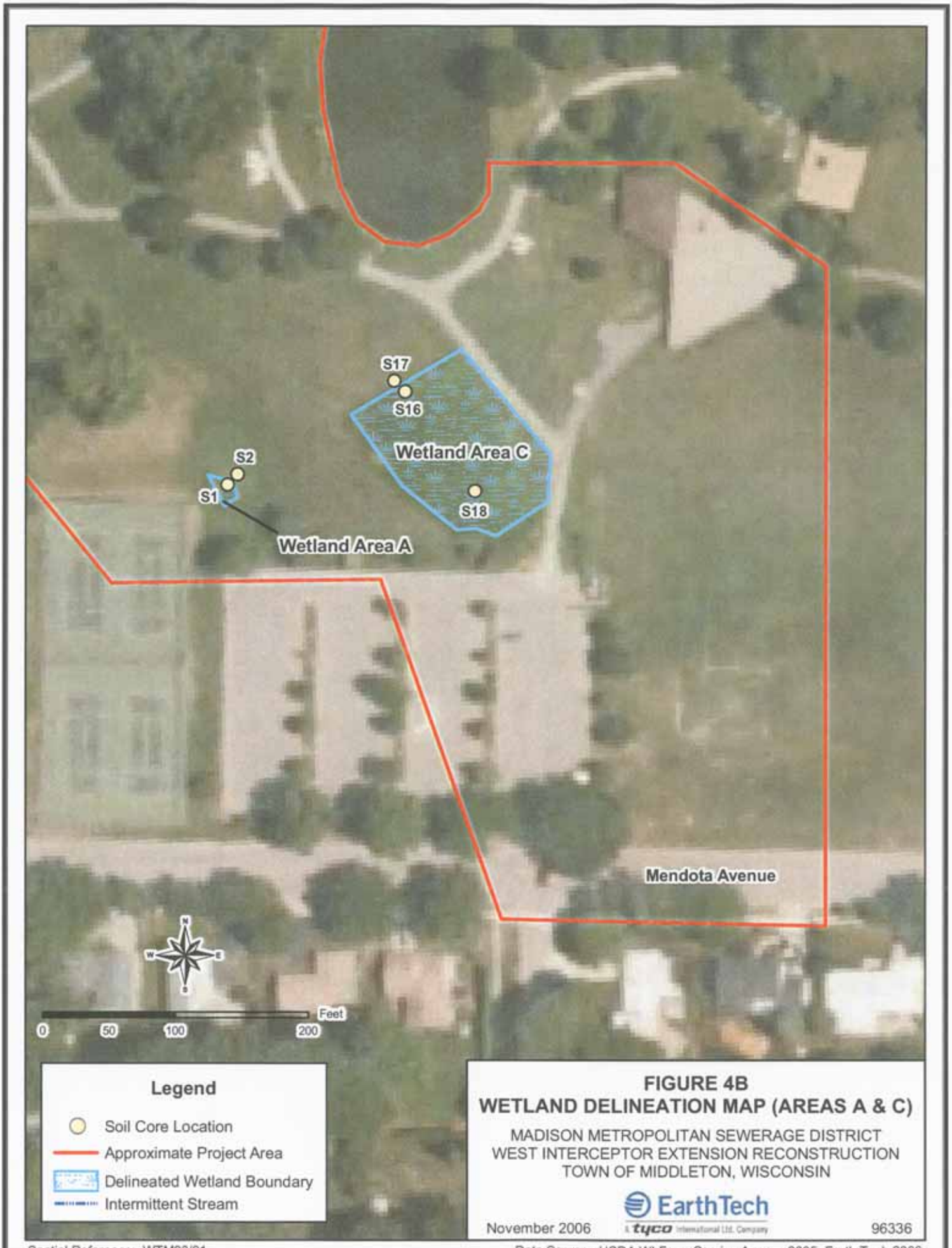


**FIGURE 4B**
**WETLAND DELINEATION MAP (AREAS A & C)**

MADISON METROPOLITAN SEWERAGE DISTRICT
WEST INTERCEPTOR EXTENSION RECONSTRUCTION
TOWN OF MIDDLETON, WISCONSIN

EarthTech
A tyco International Ltd. Company

November 2006 96336

Spatial Reference: WTM83/91

Data Source: USDA WI Farm Service Agency 2005, Earth Tech 2006

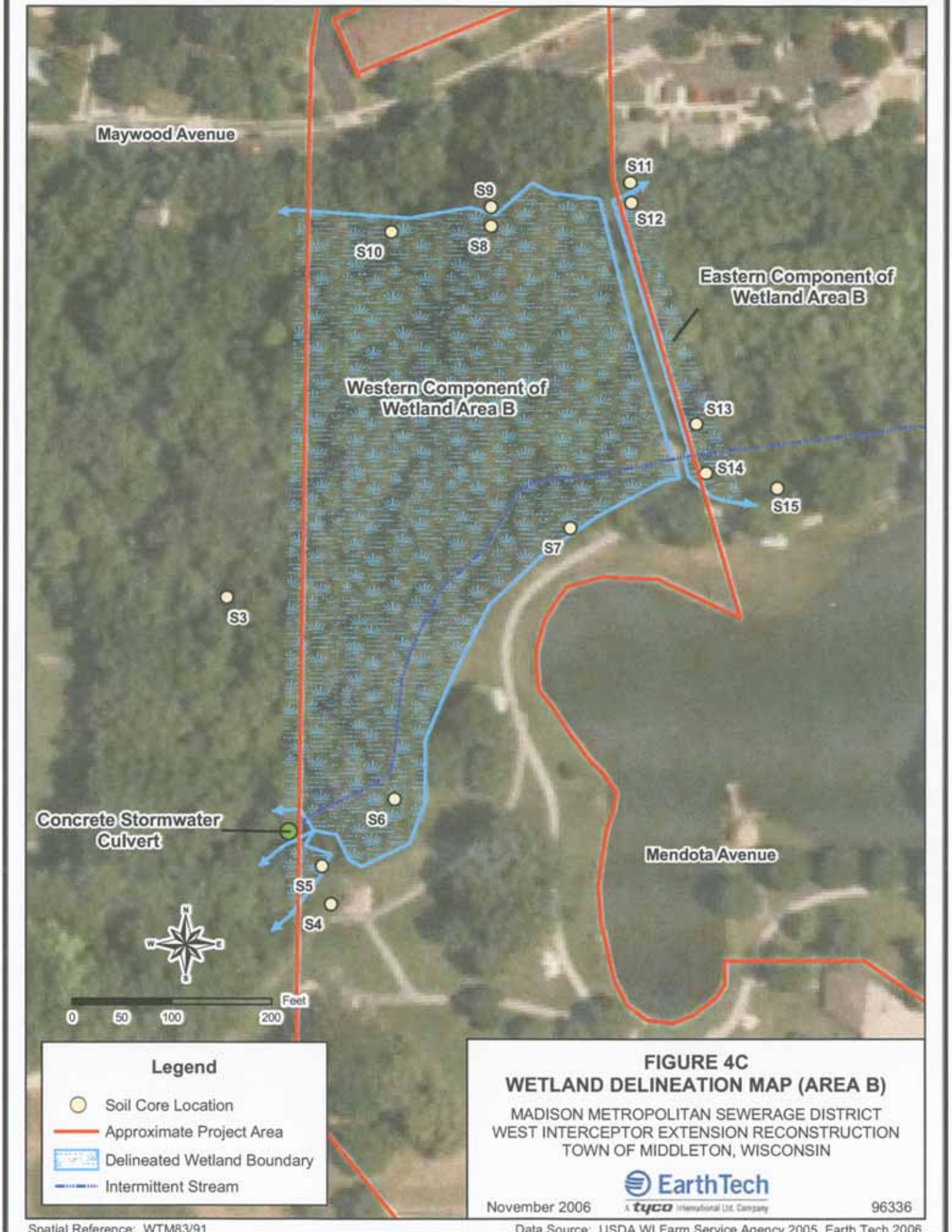


**FIGURE 4C**
**WETLAND DELINEATION MAP (AREA B)**

MADISON METROPOLITAN SEWERAGE DISTRICT
WEST INTERCEPTOR EXTENSION RECONSTRUCTION
TOWN OF MIDDLETON, WISCONSIN

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November 2006 96336

Spatial Reference: WTM83/91

Data Source: USDA WI Farm Service Agency 2005, Earth Tech 2006