Chicago-Milwaukee
Amtrak Hiawatha Service
Draft Environmental Assessment

Appendix F

Wisconsin Natural Resources Review

Amtrak Hiawatha Natural Resource Review Milwaukee County

DOT Project I.D. 0385-57-02

November 2015

Prepared for

Wisconsin Department of Transportation
Southeast Region
141 Northwest Barstow St.
Waukesha, WI 53187

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Project No.: 2014-0041.39

CONTENTS

APPENDICES

1.0 INTRODUCTION

Per the request of the Wisconsin Department of Transportation, GRAEF conducted a Natural Resource Review (NRR) to support environmental analyses for the Chicago-Milwaukee Intercity Passenger Rail project which studies the impact of increasing service on Amtrak's *Hiawatha Service* from 7 to 10 round trips per day in the Chicago to Milwaukee corridor. GRAEF is responsible for producing the NRR for infrastructure improvement projects within the Wisconsin portion of the corridor. The project locations are as follows:

1. Milwaukee Airport Rail Station Second Platform Project, milepost 78.54 to milepost 78.69.
2. Muskego Yard Signalization Project, milepost 83.4 to milepost 87.3.
3. MKE to Cut-Off CTC Installation Project, milepost 84.34 to milepost 87.3.

All projects are located in the city of Milwaukee, County of Milwaukee, State of Wisconsin and are generally located within the railroad right of way along the Canadian Pacific Railroad from Amtrak's Milwaukee Airport Rail Station to Canal Street in Milwaukee, WI (Figure 1, Appendix A).

The purpose of this NRR is to determine the current location and extent of protected natural resources located within the identified project areas which included wetlands, remnant uplands and threatened and endangered Species. The first section of the NRR discusses the wetland and upland analysis in terms of methodology, results, and conclusions. The second portion of the report discusses the Threatened and Endangered Species review.

The NRR field investigation was conducted by GRAEF scientists Mike Al-wathiqui and Geoffrey B. Parish on August 13th and 24th, 2015. A Statement of Qualifications on the field investigators is provided in Appendix B.

2.0 WETLAND AND UPLAND ANALYSIS

2.1 METHODS

The wetland delineation portion of the NRR was conducted in accordance with the guidelines of the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0, 2010) and in general accordance with Wisconsin Department of Natural Resources guidelines (WI Department of Administration, WI Coastal Management Program, 1995) and Wisconsin Department of Transportation Wetland Mitigation Banking Technical Guidelines (1993). National Wetland Indicator status and taxonomic nomenclature is referenced from The National Wetland Plant List (Lichvar 2013). National Wetland Indicator status is based on the Midwest Region.

Prior to conducting fieldwork, GRAEF scientists reviewed several maps including the United States Geological Survey (USGS) 7.5' Quadrangle maps, Wisconsin Wetland Inventory Map, Natural Resource Conservation Service (NRCS) Soil Survey Map, and aerial photographs. *Note: NRCS no longer releases their NRCS Wetland Inventory Maps to other than the landowner or operator without documented permission from the landowner or operator; therefore they were not reviewed nor are they included with this report.*

Precipitation data from approximately 90 days prior to the field investigation was obtained from a weather station near the project areas and compared with 30-year average precipitation data obtained from a NRCS WETS Table for the County where the project areas was located to determine if antecedent hydrologic conditions at the time of the site visit were normal for the time of the year.

Sampling points were located in areas exhibiting wetland and upland characteristics to document the presence and/or absence of wetlands and to provide support for the delineated wetland boundaries. At each sampling point, data were collected to document the vegetation, soils, and indicators of wetland hydrology. The wetland boundaries were staked using wire pin flags and flagging tape when needed. Wetland boundaries were generally determined by distinct to subtle differences in the abundance of hydrophytic vegetation and upland vegetation, apparent topographic breaks, and regular probing of soils.

In addition to delineating wetlands, scientists investigated for the presence of any remnant upland plant communities of ecological significance with in the project areas. A Floristic Quality Assessment (FQA) for each wetland and upland was conducted using the guidelines described in Development of a Floristic Quality Assessment for Wisconsin (Bernthal, 2003) as adopted and amended from the Plants of the Chicago Region (Swink and Wilhelm, 1994). A meander survey was performed for each wetland and upland area to identify and document all vascular plant species present and identifiable at the time of the site visit. Based on the data collected, mean C and Floristic Quality Index (FQI) values were calculated using coefficients of conservatism values made available by the University of Wisconsin-Madison Herbarium's "Checklist of the Vascular Plants of Wisconsin".

2.2 BACKGROUND REVIEW

2.2.1 Topography

Topography of the site generally consisted of elevated areas associated with the embankment of the railroad and depressional or flat, low areas at the base of the railroad embankment.

2.2.2 Wisconsin Wetland Inventory

The Wisconsin Wetland Inventory (WWI) map (Figure 2, Appendix A) depicted four wetlands within the project areas. The types of wetland shown on the WWI map are listed in Table 1 below.

Table 1. Mapped WWI Wetland Types

Map Unit Symbol	Description
E1K	Wet Meadow, Persistent, Wet Soil
E2K / $E2K	Wet Meadow, Narrow Leaved Persistent, Wet Soil

2.2.3 Soils

According to the NRCS Soil Survey map (Figure 3, Appendix A) four mapped soil units are located within the project areas. The types of mapped soils are listed on Table 2 below.

Table 2. Mapped Soils

Map Unit Symbol	Soil Name	Hydric Classification
BlA	Blount silt loam, 1 to 3 percent slopes	Hydric
LDF	Land Fill	Not Hydric
MzdB	Morley silt loam, 2 to 6 percent slopes	Not Hydric
MzdC2	Morley silt loam, 6 to 12 percent slopes	Not Hydric

2.2.4 Precipitation Data

The WETS analysis worksheet is provided in Appendix C. According to the NRCS EFOTG database, the total precipitation from a nearby weather station MILWAUKEE MITCHELL AP (14839) for the 14 days prior to the site visit was 1.48 inches for August 13th and 2.04 inches for August 24th. The most recent rainfall event prior to the site visits were 0.96 inches and 0.02 inches, which occurred on August 10th and 23rd, respectively. The total precipitation for the 90 days prior to the month of August was approximately 6.52 inches, which was 3.68 inches below a 30-year average. The precipitation data for the 90 day period preceding the month of August were entered into a WETS analysis worksheet to determine antecedent hydrologic conditions at the time of the site visit for field investigation purposes. Based on this analysis, the precipitation total for the 90 days prior to the site visits was considered below average, suggesting that the surface or near-surface hydrology at the time of the site visit was not normal and that hydrologic conditions during the site visit were not typical.

2.3 FIELD STUDY

2.3.1 Site Description

The project areas are located within the Canadian Pacific railroad right-of-way from the Milwaukee Airport Rail Station to Canal Street in Milwaukee, WI. Most of the project areas are located in developed urban areas with little natural landscape. All wetlands within the corridor were located within the Milwaukee Airport Rail Station (MARS) project limits. Topography of the MARS project area typically consists of elevated railroad embankment and low areas at the base of the embankments. Delineated wetlands tended to occur in the low areas at the base of the railroad embankments, likely receiving water in the form of runoff down the slopes of the railroad embankment after rain events.

2.3.2 Wetlands

Six wetlands (W-1 through W-6) were delineated within the MARS project area. The delineated wetland boundaries and data points are shown on maps (Exhibit A) in Appendix D. Data was collected and

recorded on Wetland Determination Data Forms at 12 data points to document wetland and upland locations (Appendix E). Photographs were taken at each data point and other notable locations (Appendix F). A wetland summary table is located in Appendix G.

Wetland W-1 was 0.32 acres and was contained entirely within the MARS project area. The wetland was comprised of a fresh (wet) meadow plant community in a depressional area at the base of the railroad embankment. Hydrology was likely received in the form of runoff down the slope of the embankment after rain events. The wetland sample point was dominated by Prairie Cord Grass, Spikerush and Torrey's Rush. Soils in the wetland were dark with a presence of redoximorphic features meeting hydric soil indicator F6 (Redox Dark Surface). Hydrology indicators in the wetland included a water table, saturation, geomorphic position and a passed FAC neutral test. The adjacent upland was dominated by Crown Vetch. Soils in the upland were dark, but without redox. The soils were primarily comprised of what appeared to be ash fill material possibly used in the construction of the railroad. Compact gravel prevented observation of the soil profile past 15 inches. A water table was present at 13 inches at the upland sample point with saturation at 12 inches, but this is likely an artifact of recent heavy rains three days prior to the site visit. The plant community, geomorphic position and proximity to the railroad indicate that this area is upland.

Wetland W-2 was 0.54 acres and extended outside of the MARS project area. The wetland was comprised of a fresh (wet) meadow in a ditch at the base of the railroad embankment that eventually broadened out and continued off site at the south end of the delineated area. Wetland W-2 was subdivided into three sections: W-2A, W-2B and W-2C. Wetland W-2A was connected to W-2B via a culvert through a small section of upland. W-2B was hydrologically connected to W-2C via a cement lined ditch running under the freeway bridge. Hydrology in W-2 was likely received in the form of runoff down the slope of the embankment of the railroad after rain events. The wetland sample points in W-2 were dominated by Narrow Leaf Cattail and Reed Canary Grass. Soils in the wetland at sample point SP-4 were depleted with redox meeting hydric soil indicator F3 (Depleted Matrix). Soils at sample point SP-10 were dark with a presence of redoximorphic features meeting hydric soil indicator F6 (Redox Dark Surface). Hydrology indicators in the wetland included a dry season water table, saturation, geomorphic position and a passed FAC neutral test. The adjacent uplands were dominated by Canada Goldenrod, Grey Dogwood and Bird's Foot Trefoil. Soils in the upland were lighter in value and higher in chroma than in the wetland and lacked any hydric soil indicators. Hydrology indicators were absent in the upland.

Wetland W-3 was 0.17 acres and was contained entirely within the MARS project area. The wetland was comprised of a fresh (wet) meadow and shrub-carr in a depressional area at the base of the railroad embankment. Hydrology was likely received in the form of runoff down the slope of the railroad embankment and the slope of the adjacent land to the west, after rain events. The wetland sample point was dominated by Dark Green Bulrush, Jewel Weed, Crack Willow and Bebb's Willow. Soils in the wetland were dark with a presence of redoximorphic features meeting hydric soil indicator F6 (Redox Dark Surface). Hydrology indicators in the wetland included geomorphic position and a passed FAC neutral test. The adjacent upland was dominated by Canada Thistle and Black Raspberry. Soils in the upland were dark at the surface, absent of redox, with a higher chroma and lighter value layer beneath. No hydric soil indicators were met. There were no indicators of hydrology present in the upland as well. The upland sample point was in a slope that likely conveyed runoff down towards the wetland after rain events.

Wetland W-4 was 0.06 acres and continued outside of the MARS project area. The wetland was comprised of a fresh (wet) meadow and shrub-carr in a depressional area at the base of the railroad embankment. Hydrology was likely received in the form of runoff down the slope of the railroad embankment and the slope of the adjacent land to the west, after rain events. The wetland sample point was dominated by Elderberry and Willowherb. Soils in the wetland were dark with a presence of redoximorphic features meeting hydric soil indicator F6 (Redox Dark Surface) with a depleted layer below the surface meeting indicator A11 (Depleted Below Dark Surface). Hydrology indicators in the wetland included a high water table, saturation, geomorphic position and a passed FAC neutral test. The adjacent upland was dominated by Canada Thistle and Grey Dogwood. Soils in the upland were dark at the surface, absent of redox, with a high chroma and light value layer beneath. No hydric soil indicators were met. There were no indicators of hydrology present in the upland as well. The upland sample point was in a slope that likely conveyed runoff down towards the wetland after rain events.

Wetland W-5 was 0.17 acres and was contained within the MARS project area. This wetland is likely a constructed stormwater feature that may be exempt. The wetland was comprised of a fresh (wet) meadow in what appeared to be a man made depressional area in the side lawn of the Amtrak Station. Hydrology was likely received in the form of runoff from the surrounding lawn and parking lot after rain events. The wetland sample point was dominated by Pathrush. Soils in the wetland were depleted below a dark surface meeting indicator A11 (Depleted Below Dark Surface). Hydrology indicators in the wetland included saturation visible on aerial imagery and geomorphic position. The adjacent upland was dominated by planted Kentucky Blue Grass. Soils in the upland were dark at the surface, absent of redox, with a high chroma and light value layer beneath. No hydric soil indicators were met. There were no indicators of hydrology present in the upland as well. The upland sample point was in a slope that likely conveyed runoff down towards the wetland after rain events.

Wetland W-6 was 0.07 acres and extended outside of the MARS project area. This wetland is possibly a constructed stormwater feature that may be exempt. The wetland was comprised of a fresh (wet) meadow in a depressional area in the side lawn of the Amtrak Station. Hydrology was likely received in the form of runoff from the surrounding lawn and parking lot after rain events. The wetland sample point was dominated by Pathrush and Torrey's Rush. Soils in the wetland were dark with redoximorphic features present meeting hydric soil indicator F6 (Dark Surface Redox). Hydrology indicators in the wetland included a high water table, saturation, saturation visible on aerial imagery, geomorphic position and a passed FAC neutral test. The adjacent upland was dominated by planted Kentucky Blue Grass and Red Fescue. Soils in the upland were dark at the surface, absent of redox, with a high chroma and light value layer beneath. No hydric soil indicators were met. There were no indicators of hydrology present in the upland as well.

2.3.3 Uplands

Upland plant communities in all project areas were investigated in order to document the possible presence of any remnant communities. Upland areas were designated as U-1 through U-10 and are labeled on maps A-1 through A-14 in Appendix D. Uplands were generally dominated by weedy species

commonly found along roadsides and in disturbed areas. Representative plant lists for each upland area are shown in Appendix H. An upland summary table is located in Appendix G.

2.4 CONCLUSION

Based on the natural resource review completed by GRAEF six wetlands (W-1 through W-6) were delineated with a total of 1.33 acres. There were no ADID wetlands present in the Study Areas. Two waterways, the Kinnickinnic River and the Menomonee River were identified in the Study Areas. Remnant upland plant communities were not found in the Study Areas.

Activity in delineated wetlands or waterways may require permits from the U.S. Army Corps of Engineers, Wisconsin Department of Natural Resources, and local governments prior to beginning any work. Impacts to wetlands is currently unknown, but will be addressed during permitting when construction of the MARS project has been funded.

2.5 LIMITATIONS

The results of this field study are based on site conditions at the time of the field study, which was conducted in accordance with current regulatory policy and methods. Unknown and future conditions that affect observations of field indicators, and change in interpretation of regulatory policy, may modify future findings.

Statements within this report about the connectivity of the delineated wetlands to surface waters are the professional opinions of GRAEF's scientists and are not significant nexus determinations or jurisdictional determinations. Opinions on connectivity are based on general field observations and a cursory review available map resources. The ultimate authority to determine jurisdiction resides with the U.S. Army Corps of Engineers and the Wisconsin Department of Natural Resources.

The U.S. Army Corps of Engineers and the Wisconsin Department of Natural Resources have the ultimate authority to determine wetland boundaries, and adjustments to wetland boundaries may occur based on decisions made by these regulatory agencies.

3.0 THREATENED AND ENDANGERED SPECIES

A Threatened and Endangered Species review was conducted by the Wisconsin Department of Natural Resources (WDNR) in December 2014 to determine the presence of threatened or endangered species listed by the State of Wisconsin in the project areas. After reviewing the scope of the project, the WDNR determined that there were no known threatened or endangered species or associated habitat likely to be impacted by the proposed project within the project areas. The letter from the WDNR regarding the results of the review are included in Appendix I. WDNR identified several project-specific resource concerns including wetlands, fisheries/stream work, migratory birds, invasive species, floodplains, Emerald Ash Borer, and construction site considerations. These resources are discussed in Sections 3.1-3.7 below.

The U.S Fish & Wildlife Service's IPaC project planning tool was used to investigate for the presence of federally listed threatened or endangered species and resources located within all three project areas. The results included one threatened and endangered species for which no critical habitat has yet been defined by the planning tool, the Northern Long-eared Bat (*Myotis septentrionalis*) (Appendix I). This species is discussed in Section 3.8.

3.1 Wetlands

Six wetlands (W-1 through W-6) were delineated with a total of 1.33 acres. There were no ADID wetlands present in the Study Areas.

3.2 Fisheries/Stream Work

Construction activities include replacing railroad ties on the bridge crossing the Menomonee River, a navigable waterway. No known activities are to occur in the waterway as part of the project. No known threatened and endangered aquatic species are known to be present either. If activities were to occur that would temporarily impair the water quality, they should be performed between June 15th and February 28th of the calendar year to minimize impacts to developing fish eggs and substrate for aquatic organisms.

3.3 Migratory Birds

There is evidence of past migratory bird nesting on the bridge over the Menomonee River. To avoid potential impacts to nesting migratory birds, construction activities on the bridge should be conducted during the non-nesting season between August 30th and May 1st, according to the WDNR.

3.4 Invasive Species

During construction, adequate precautions will be taken to prevent transporting or introducing invasive species via construction equipment. WDNR will be consulted during the permitting phase when projects have been funded for construction.

3.5 Floodplains

FEMA flood hazard maps were reviewed for the project areas. In the Menomonee River bridge area, it was found that the 1 percent flood event was mainly confined to the river channel, which is likely due to the extensive areas of sheet pile banks. Work in the immediate area of the river is confined to railway tie replacement, which is not anticipated to significantly affect the hydrologic storage of the lands adjacent to the river. In the Muskego Yard area west of the 27th Street bridge the 1 percent flood event inundates the railway. Evaluation of the impact of the proposed changes in the floodplain resulting from addition of new signaling and track on floodplain storage or water elevation is beyond the scope of this NRR evaluation. It is not anticipated that the proposed changes in the railway will have impacts on the utilization of the floodplain natural resources.

3.6 Emerald Ash Borer

During construction, all regulations pertaining to the transport of ash material, the emerald ash borer, and hardwood debris from EAB quarantined areas, and within these areas, will be followed.

3.7 Construction Site Considerations

During construction, the engineer and contractor will coordinate with WDNR on erosion control and asbestos issues. The bridge over the Menomonee River will not be removed as part of any project.

3.8 Northern Long-Eared Bat

All three project areas are located in an urban setting in the railroad right of way. According to the Federal Highway Administration (FHWA) and Federal Railroad Administration (FRA) (2015), Northern Long-eared Bats spend summers roosting in wooded areas and winters hibernating in underground caves and cave-like structures, with very high humidity. Potential roosting areas within the Project area are limited. Wooded areas in and surrounding the Project area are heavily fragmented with extremely poor connectivity. Stands of trees in the Project area are very small and typically surrounded by urban development. Additionally, Indiana bats, thought to have similar roosting tendencies as NLEB, typically roost over 100 feet from roads and railroads. The Project area does not expand beyond 100 feet in either direction from the railroad making it more unlikely for NLEB's to roost in the Project area. Given the geological characteristics of the region it is highly unlikely that there are any caves or cave-like features suitable for winter habitat. There are what appear to be a few abandoned buildings adjacent to the Project area, near Greenfield Avenue. This was identified as the most likely winter habitat near the Project area, potentially serving as hibernacula. However, due to the apparent condition of the buildings it is highly unlikely they can sustain a suitable temperature and humidity to serve as winter habitat for the Northern Long-eared Bat.

If bats were to be found in the Project area, it is unlikely that they would affected by the proposed activities.

Review of Programmatic Consultation's Active Season Habitat Stressors:

- Noise/Vibration – no effect, areas within 100 feet of railroad already receives noise from fairly heavy rail travel
- Tree Removal – no effect, no tree removal
- Lighting – Apply Avoidance and Mitigation Measure (AMM), no effect (FHWA & FDA, 2015)
- Water/Foraging Habitat Alteration – wetland fill, 1.33 Acres of wetland are to be filled, will apply AMM, insignificant impacts anticipated
- Burning – no effect, no burning
- Collision – constructing pedestrian bridge near Mitchell Airport Amtrak Station, however significant impacts unlikely, because the bridge will cross the railroad where heavy locomotion traffic already occurs, posing existing collision risks

Review of Programmatic Consultation's Structures (Artificial Roost) Stressors:

- Structure Maintenance/Removal-Active Season – no effect, replacing railroad ties above existing railroad bridge above the Menomonee River
- Structure Maintenance/Alteration/Demolition-Inactive/Winter Season – no effect, replacing railroad ties above existing railroad bridge above the Menomonee River

Review of Programmatic Consultation's Active Season Habitat Stressors: No effects, no suitable winter habitat in Project area.

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APPENDICES

APPENDIX A

Figures

SITE MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

WETLAND DELINEATION REPORT

MILWAUKEE COUNTY, WISCONSIN

FIGURE # 1

GRAEF

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FIGURE #3-1

GRAEF

1995 AERIAL MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

N

0 150 300

Feet

1 in = 500 ft

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FIGURE #3-2

GRAEF

1995 AERIAL MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

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Feet

1 in = 500 ft

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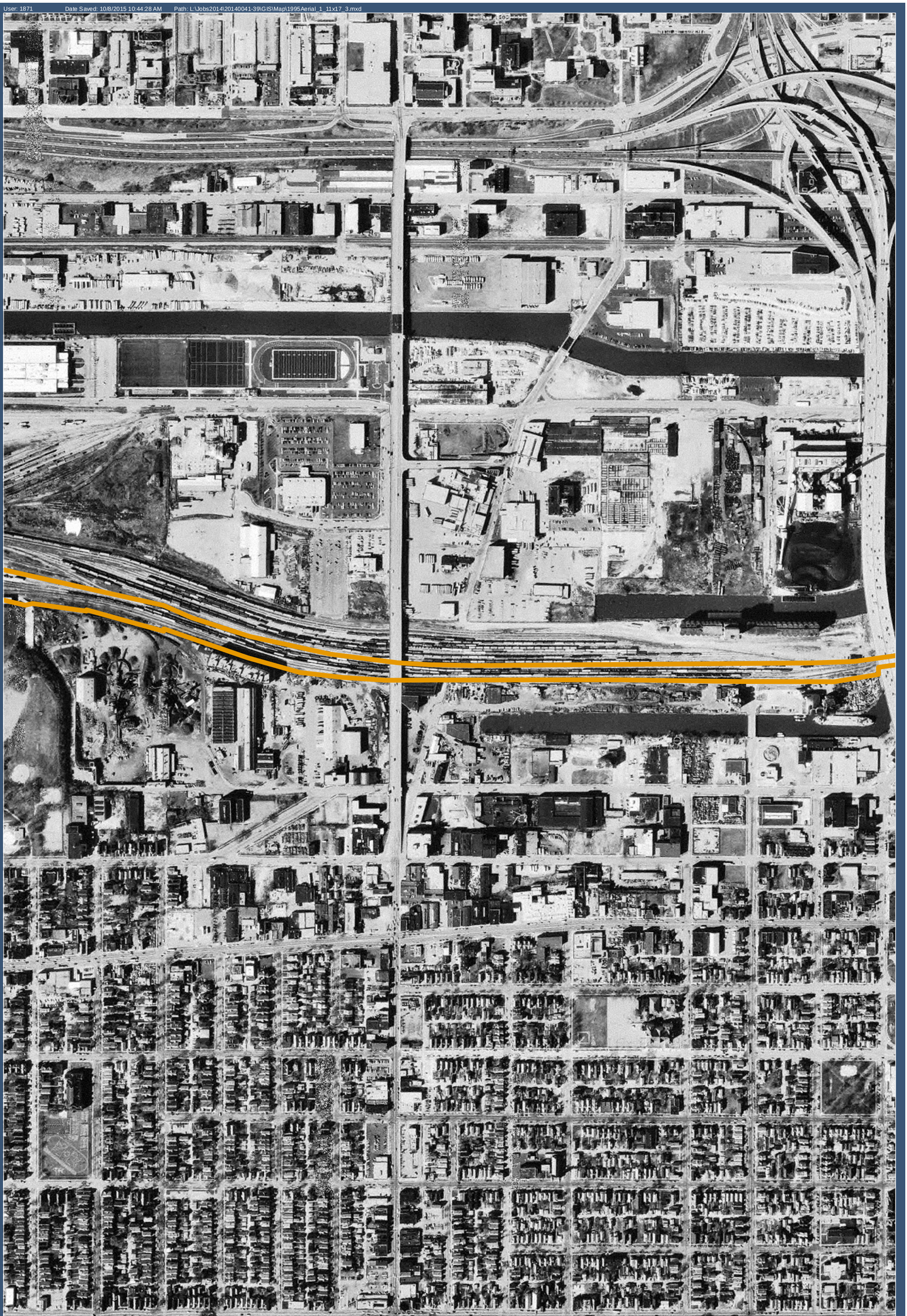
Source: SEWRPC 2010 Digital Orthophotography; USDA-NRCS SSURGO Database



1995 AERIAL MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

1 in = 500 ft

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GRAEF

FIGURE #3-3

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Proj. Number: 2014 0041.32

Source: SEWRPC 2010 Digital Orthophotography; USDA-NRCS SSURGO Database

1995 AERIAL MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

1 in = 500 ft

0 150 300
Feet

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GRAEF

FIGURE #3-4

FIGURE #3-1

GRAEF

2000 AERIAL MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

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1 in = 500 ft

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Proj. Number: 2014 0041.32 Source: SEWRPC 2010 Digital Orthophotography; USDA-NRCS SSURGO Database

FIGURE #3-2

GRAEF

2000 AERIAL MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

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Feet

1 in = 500 ft

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Proj. Number: 2014 0041.32

Source: SEWRPC 2010 Digital Orthophotography; USDA-NRCS SSURGO Database

2000 AERIAL MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

1 in = 500 ft

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FIGURE #3-3

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Proj. Number: 2014 0041.32

Source: SEWRPC 2010 Digital Orthophotography; USDA-NRCS SSURGO Database

1 in = 500 ft

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2000 AERIAL MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

GRAEF

FIGURE #3-4

FIGURE #3-1

GRAEF

2005 AERIAL MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

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1 in = 500 ft

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Proj. Number: 2014 0041.32 Source: SEWRPC 2010 Digital Orthophotography; USDA-NRCS SSURGO Database

FIGURE #3-2

GRAEF

2005 AERIAL MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

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Feet

1 in = 500 ft

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Proj. Number: 2014 0041.32

Source: SEWRPC 2010 Digital Orthophotography; USDA-NRCS SSURGO Database

2005 AERIAL MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

1 in = 500 ft

0 150 300

Feet

N

GRAEF

FIGURE #3-3

FIGURE #3-4

GRAEF

2005 AERIAL MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

N

0 150 300

Feet

1 in = 500 ft

User: 1871 Date Saved: 10/6/2015 10:49:01 AM Path: L:\Jobs\2014\2014041-39\GIS\Map\2005Aerial 1 11x17 4.mxd

Proj. Number: 2014 0041.32 Source: SEWRPC 2010 Digital Orthophotography; USDA-NRCS SSURGO Database

FIGURE #3-1

GRAEF

2010 AERIAL MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

N

0 150 300

Feet

1 in = 500 ft

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User: 1871

Proj. Number: 2014 0041.32

Source: SEWRPC 2010 Digital Orthophotography; USDA-NRCS SSURGO Database

FIGURE #3-2

GRAEF

2010 AERIAL MAP

IH 94
NATURAL RESOURCE REVIEW
RACINE COUNTY, WISCONSIN

N

0 150 300
Feet

1 in = 500 ft

User: 1871
Date Saved: 10/8/2015 10:41:19 AM
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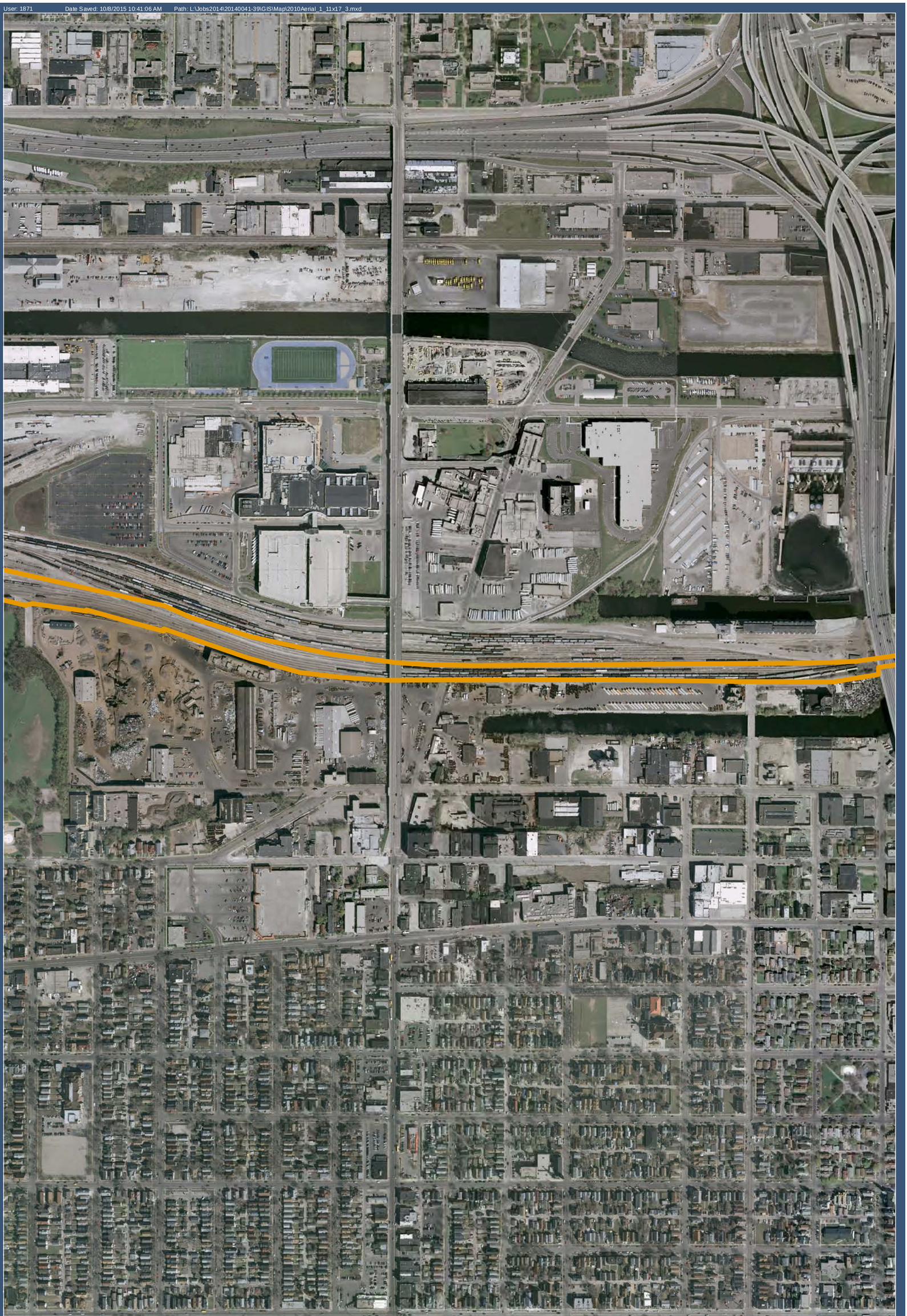

2010 AERIAL MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

N

0 150 300

Feet

1 in = 500 ft

GRAEF

FIGURE #3-3

FIGURE #3-4

GRAEF

2010 AERIAL MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

N

0 150 300

Feet

1 in = 500 ft

User: 1871

Date Saved: 10/8/2015 10:41:44 AM

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Proj. Number: 2014 0041.32

Source: SEWRPC 2010 Digital Orthophotography; USDA-NRCS SSURGO Database

FIGURE #2-1

GRAEF

WWI MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOT PROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

Date Saved: 10/8/2015 10:33:19 AM Path: L:\Jobs\2014\20140041-39\GIS\Map\WWI 1 11x17 1.mxd

User: 1871

Proj. Number: 2014 0041.39 Source: SEWRPC 2010 Digital Orthophotography; Wisconsin Digital Wetland Inventory (DWI) Database, 2010

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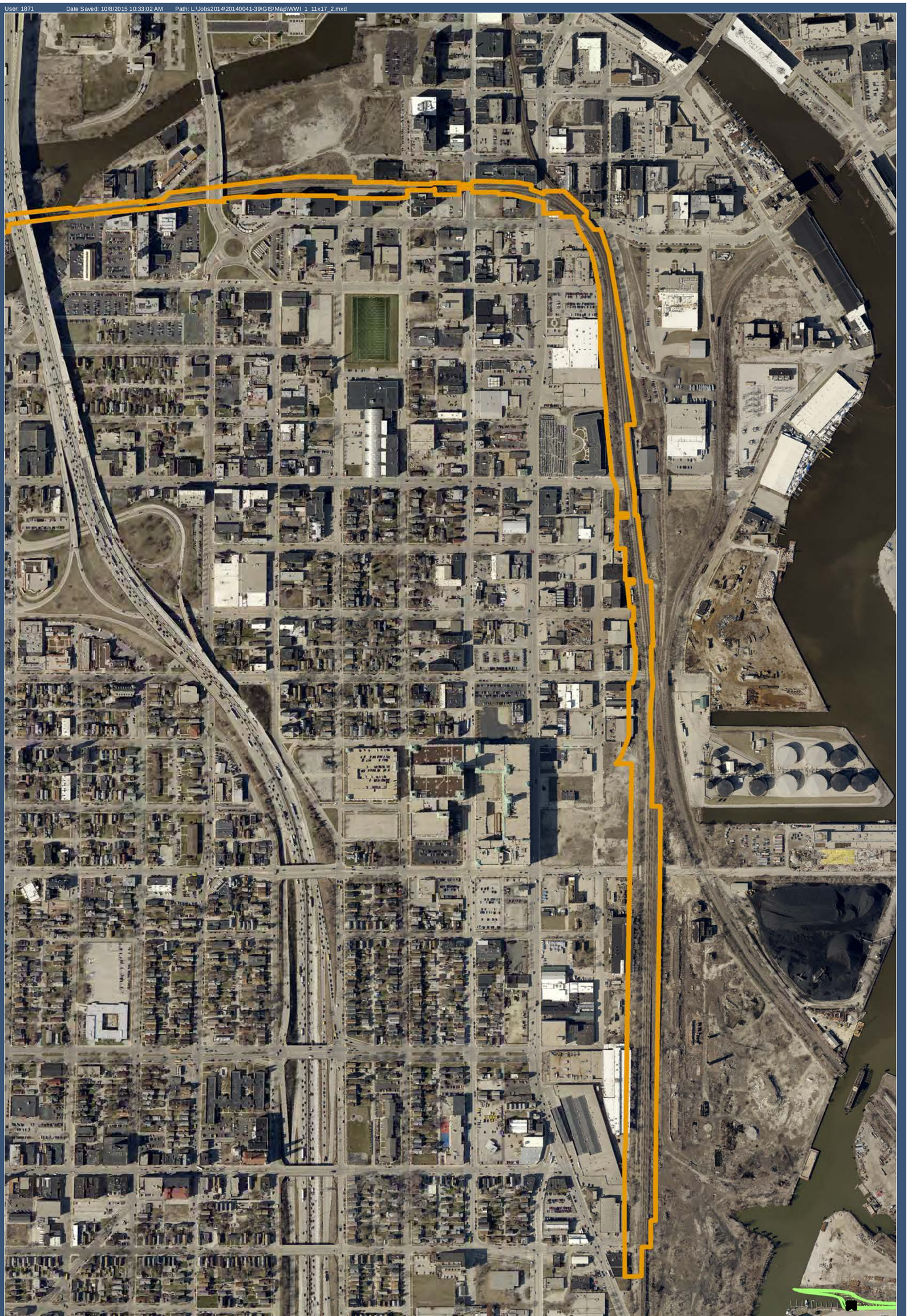
Proj. Number: 2014 0041.39

Source: SEWRPC 2010 Digital Orthophotography; Wisconsin Digital Wetland Inventory (DWI) Database, 2010



WWI MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

N

0 150 300

Feet

1 in = 500 ft

GRAEF

FIGURE #2-2

User: 1871 Date Saved: 10/8/2015 10:33:33 AM Path: L:\Jobs2014\20140041-39\GIS\Map\WWI 1 11x17 3.mxd

Proj. Number: 2014 0041.39

Source: SEWRPC 2010 Digital Orthophotography; Wisconsin Digital Wetland Inventory (DWI) Database, 2010

WWI MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

N

0 150 300

Feet

1 in = 500 ft

GRAEF

FIGURE #2-3

E1Kf

W0Hx

T3K W0Hx

W0Hx

E1K

T3K

T3K

F2R

E1K

E1K

WWI MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

FIGURE #2-4

GRAEF

N

0 150 300

Feet

1 in = 500 ft

Path: L:\Jobs\2014\2014041.39\GIS\Map\WWI 1 11x17 4.mxd

Date Saved: 10/8/2015 10:32:47 AM

User: 1871

Proj. Number: 2014 0041.39

Source: SEWRPC 2010 Digital Orthophotography; Wisconsin Digital Wetland Inventory (DWI) Database, 2010

FIGURE #3-1

GRAEF

SOIL SURVEY MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

N

0 150 300

Feet

1 in = 500 ft

Path: L:\Jobs\2014\2014 0041-39\GIS\Map\Soil_1_11x17_1.mxd

Date Saved: 10/8/2015 10:37:22 AM

User: 1871

Proj. Number: 2014 0041.32

Source: SEWRPC 2010 Digital Orthophotography; USDA-NRCS SSURGO Database

FIGURE #3-2

GRAEF

SOIL SURVEY MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

UA

W

W

W

UA

W

N

0 150 300

Feet

1 in = 500 ft

Path: L:\Jobs2014\2014041-39\GIS\Map\Soil 1_11x17_2.mxd

Date Saved: 10/8/2015 10:37:38 AM

User: 1871

Proj. Number: 2014 0041.32

Source: SEWRPC 2010 Digital Orthophotography; USDA-NRCS SSURGO Database

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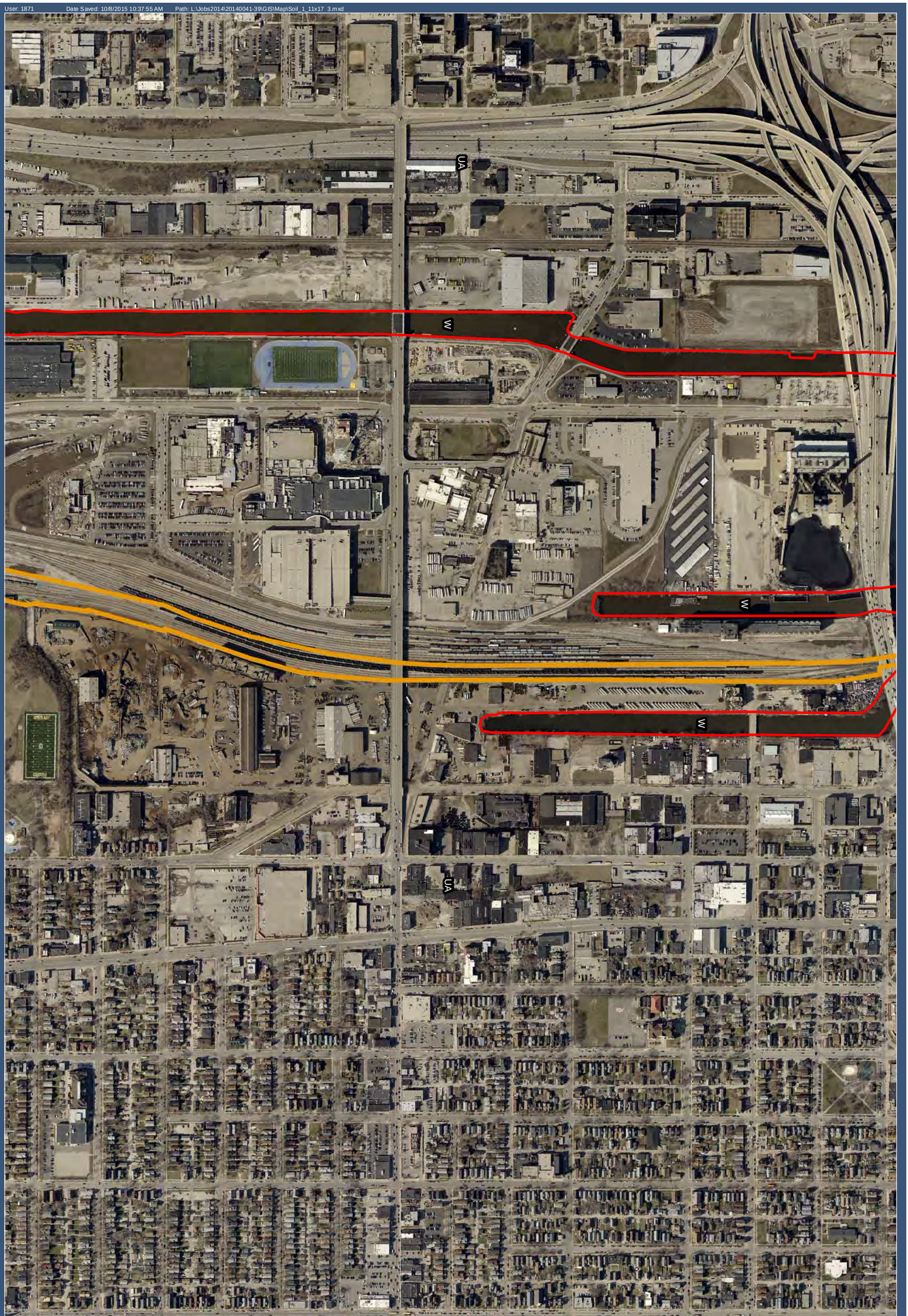
Proj. Number: 2014 0041.32

Source: SEWRPC 2010 Digital Orthophotography; USDA-NRCS SSURGO Database



SOIL SURVEY MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

1 in = 500 ft

0 150 300
Feet

N

GRAEF

FIGURE #3-3

FIGURE #3-4

GRAEF

SOIL SURVEY MAP

IH 94

NATURAL RESOURCE REVIEW

RACINE COUNTY, WISCONSIN

W

W

UA

UA

N

0 150 300

Feet

1 in = 500 ft

Date Saved: 10/8/2015 10:37:00 AM Path: L:\bds2014\2014004139\GIS\Map\Soil_1_11x17_4.mxd

User: 1871

Proj. Number: 2014 0041.32 Source: SEWRPC 2010 Digital Orthophotography; USDA-NRCS SSURGO Database

GRĀEF

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APPENDIX B

Statement of Qualifications

STATEMENT OF QUALIFICATIONS

FIELD INVESTIGATORS:

Geoffrey B. Parish, P.G., P.H.

Mr. Parish is a hydrologist and geologist with M.S. and B.S. degrees in geosciences from the University of Wisconsin-Milwaukee. He has studied wetland hydrology and soils in Wisconsin, and Illinois for almost twenty years. His wetland work has included wetland delineations, wetland mitigation projects, including enhancements, restorations and creations in Wisconsin and Illinois. Geof has worked on over 300 delineations in Wisconsin in the past six years. He was on a team of scientists that provided expert witness services to the US Department of Justice regarding impacts to a state of Wisconsin owned wetland. In 2014 and 2015 Geof co-taught Wetland Hydrology for the UW-Milwaukee School of Continuing Education Water Technology Program. The class focused on hydrology basics, wetland hydrology indicators, determining sources of wetland hydrology, soil indicators of wetland hydrology, hydrology of plant community types, wetland water budgets and restoration of wetlands. The 2014 proposed revisions of the definition of "Waters of the U.S." were presented in 2014 and the finalized definition published in 2015 was presented in 2015 along with connectivity concepts. Geof has worked on habitat mapping, including numerous plant species such as Forked Aster, Prairie Milkweed Small White Lady Slipper Hairy Wild Petunia and Slender Bog Arrow-grass, inarticulate species Karner Blue Butterfly, Gorgone Checker Spot, Phlox Moth and the Persius Dusky Wing, and animals such as Northern Cricket Frog and Red-shouldered Hawk. Geof has worked on the assessment of wetland functions using the WDNR Wetland Rapid Assessment Method Version 2.0 for project corridors. Geof has worked on invasive species mapping projects, such as mapping Phragmites australis along IH 94 in Kenosha and Racine Counties, and mapped the location of invasive species along over thirty miles of the Fox River from the City of Waukesha to Waterford, Wisconsin.

Mike Al-wathiqui

Mr. Al-wathiqui received his M.S. degree in freshwater resources and technology from the University of Wisconsin-Milwaukee's School of Freshwater Science. He received a B.S. degree in biology and natural resource management at the University of Wisconsin-Milwaukee as well. He has completed the WDNR's Basic Wetland Delineators course in 2015. Mike has over five years of diverse ecological experience including performing wetland delineations, riparian landscape management, environmental education and stream studies. Mike has been performing wetland delineations for the past two years and has authored many delineation reports and wetland permit applications. He is familiar with state and federal wetland regulation and water policy and regularly coordinates with the WDNR and Army Corps of Engineers applying for wetland permits. Mike has years of experience in invasive vegetation management and vegetation monitoring. He provided invasive vegetation management and monitoring services for a Pike River management plan in Racine County. He has also worked at the WDNR on a trail management plan controlling invasive vegetation species along the Hank Aaron State Trail and with non-profits managing invasive vegetation species along the Milwaukee River greenway. Mike has also worked for the City of Milwaukee Forestry Department treating thousands of Ash trees to protect against infestation by the Emerald Ash Borer. He currently holds a valid Wisconsin Pesticide Applicators License. Mike has additional experience in developing metrics for assessing biological integrity of stream ecosystems. He recently worked on a project with the US Forest Service on assessing stream health and invertebrate community structure of various freshwater Hawaiian streams.

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APPENDIX C

WETS Analysis

WETS Analysis

Project Site: Amtrak Hiawatha
Project Number: 2014-0041.39
Period of interest: May-July, 2015
County: Milwaukee

Long-term rainfall records (from WETS table)

	Month	3 years in 10 less than	Normal	3 years in 10 greater than
1st month prior:	July	2.40	3.58	4.28
2nd month prior:	June	2.34	3.56	4.28
3rd month prior:	May	1.8	3.06	3.71
		Sum =	**10.20**	

Site determination

Site Rainfall (in)	Condition Dry/Normal*/Wet	Condition** Value	Month Weight	Product
1.60	Dry	1	3	3
2.49	Normal	2	2	4
2.43	Normal	2	1	2
Sum = **6.52**			Sum*** =	**9**

*Normal precipitation with 30% to 70% probability of occurrence

Determination: Wet / **Dry** / Normal

**Condition value:

Dry = 1
Normal = 2
Wet = 3

***If sum is:

6 to 9	then period has been drier than normal
10 to 14	then period has been normal
15 to 18	then period has been wetter than normal

Precipitation data source: NRCS EFOTG

WETS Station: MILWAUKEE MITCHELL AP (14839)

Reference: Donald E.Woodward, ed. 1997. *Hydrology Tools for Wetland Determination* , Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.

APPENDIX D

Wetland Delineation Map

EXHIBIT A-1

GRAEF

WETLAND MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

W-5
0.1661 Ac.

W-2C
0.3168 Ac.

W-3
0.1742 Ac.

W-4
0.0602 Ac.

U-1

U-1

SP 11
SP 12
SP 4
SP 3
SP 8
SP 7
SP 6
SP 5

N

0 75 150
Feet

1 in = 150 ft

Path: L:\Jobs\2014\2014041.39\GIS\Map\Wetland 11x17_1.mxd
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User: 1871

Proj. Number: 2014 0041.39 Source: SEWRPC 2010 Digital Orthophotography

EXHIBIT A-2

GRAEF

WETLAND MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

SP-11
SP-12
W-6
0.0703 Ac.
SP-14
SP-13
W-5
0.1661 Ac.
W-2C
0.3168 Ac.
SP-2
SP-1
U-3
W-1
0.3222 Ac.
SP-10
SP-9
W-2A
0.0006 Ac.
U-2
W-2B
0.2238 Ac.

N

0 75 150

Feet

1 in = 150 ft

User: 1871 Date Saved: 10/8/2015 9:03:58 AM Path: L:\bts\2014\2014041-39\GIS\Map\Wetland_11x17_2.mxd

Proj. Number: 2014 0041.39 Source: SEWRPC 2010 Digital Orthophotography

EXHIBIT A-3

GRAEF

WETLAND MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

U-4

U-4

N

0 75 150

Feet

1 in = 150 ft

User: 1871 Date Saved: 10/8/2015 10:11:55 AM Path: L:\Jobs\2014\2014041-39\GIS\Map\Wetland 11x17 3.mxd

Proj. Number: 2014 0041.39 Source: SEWRPC 2010 Digital Orthophotography

EXHIBIT A-4

GRAEF

WETLAND MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

U-4

U-4

U-4

N

0 75 150

Feet

1 in = 150 ft

Proj. Number: 2014 0041.39 Source: SEWRPC 2010 Digital Orthophotography

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EXHIBIT A-5

GRAEF

WETLAND MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

U-5

U-5

N

0 75 150

Feet

1 in = 150 ft

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Proj. Number: 2014 0041.39

Source: SEWRPC 2010 Digital Orthophotography

WETLAND MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

N

0 75 150 Feet

1 in = 150 ft

GRAEF

EXHIBIT A-6

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Proj. Number: 2014 0041.39

Source: SEWRPC 2010 Digital Orthophotography

WETLAND MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

0 75 150 Feet

1 in = 150 ft

N

GRAEF

EXHIBIT A-7

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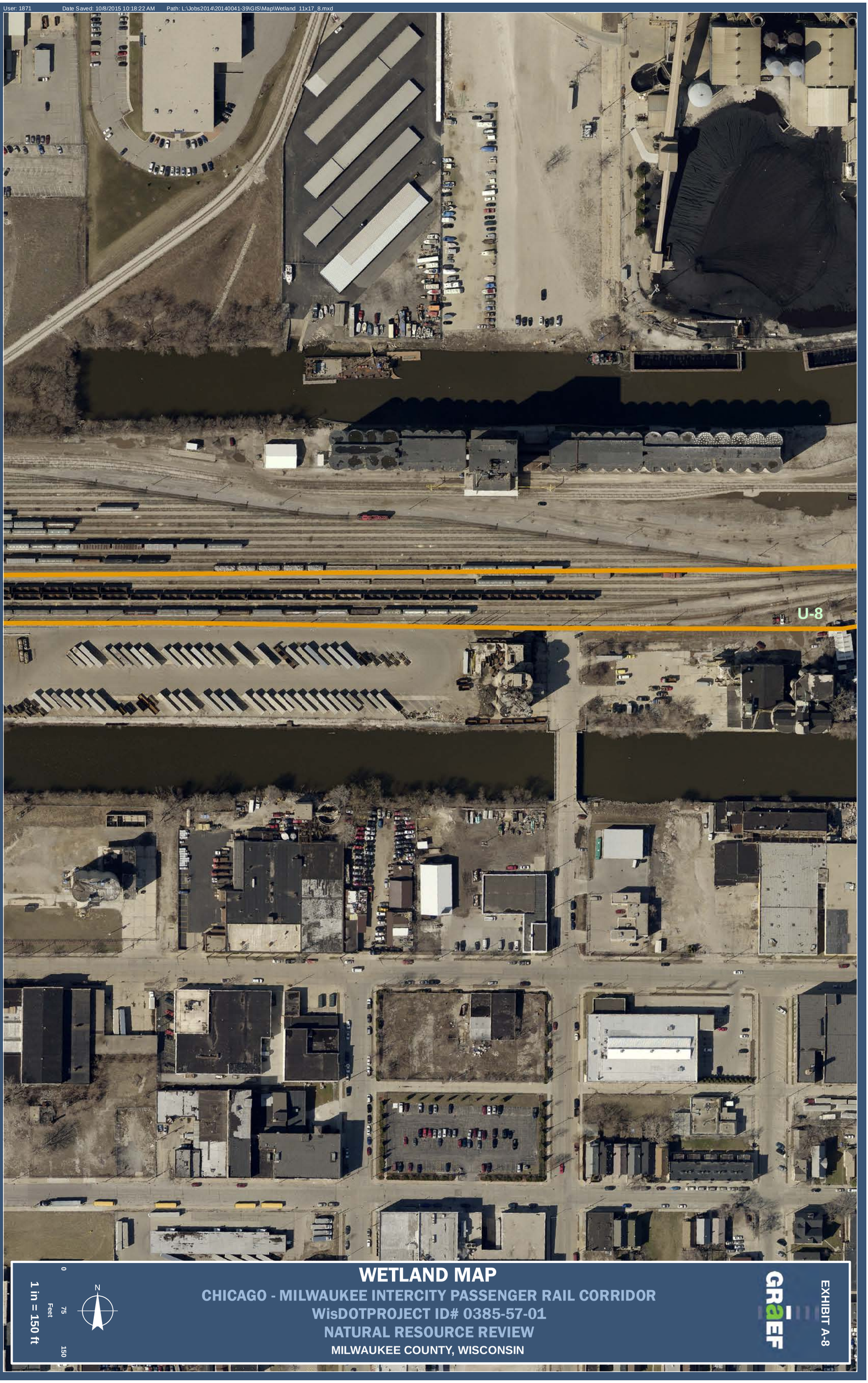

WETLAND MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

N

0 75 150 Feet

1 in = 150 ft

GRAEF

EXHIBIT A-8

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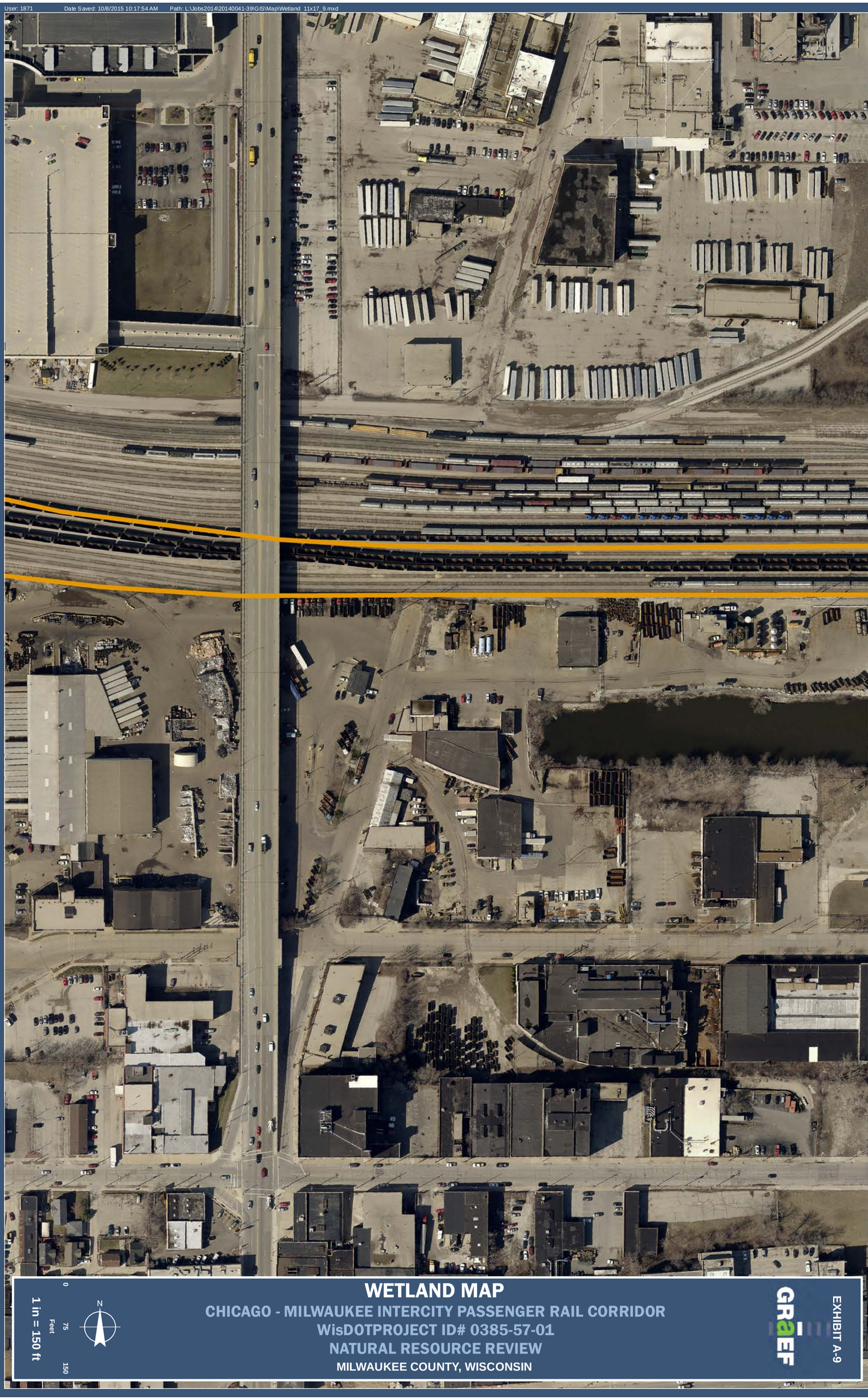

WETLAND MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

0 75 150 Feet

1 in = 150 ft

N

GRAEF

EXHIBIT A-9

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Proj. Number: 2014 0041.39

Source: SEWRPC 2010 Digital Orthophotography

WETLAND MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

N

0 75 150 Feet

1 in = 150 ft

GRAEF

EXHIBIT A-10

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Proj. Number: 2014 0041.39

Source: SEWRPC 2010 Digital Orthophotography

WETLAND MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

0 75 150 Feet

1 in = 150 ft

N

GRAEF

EXHIBIT A-11

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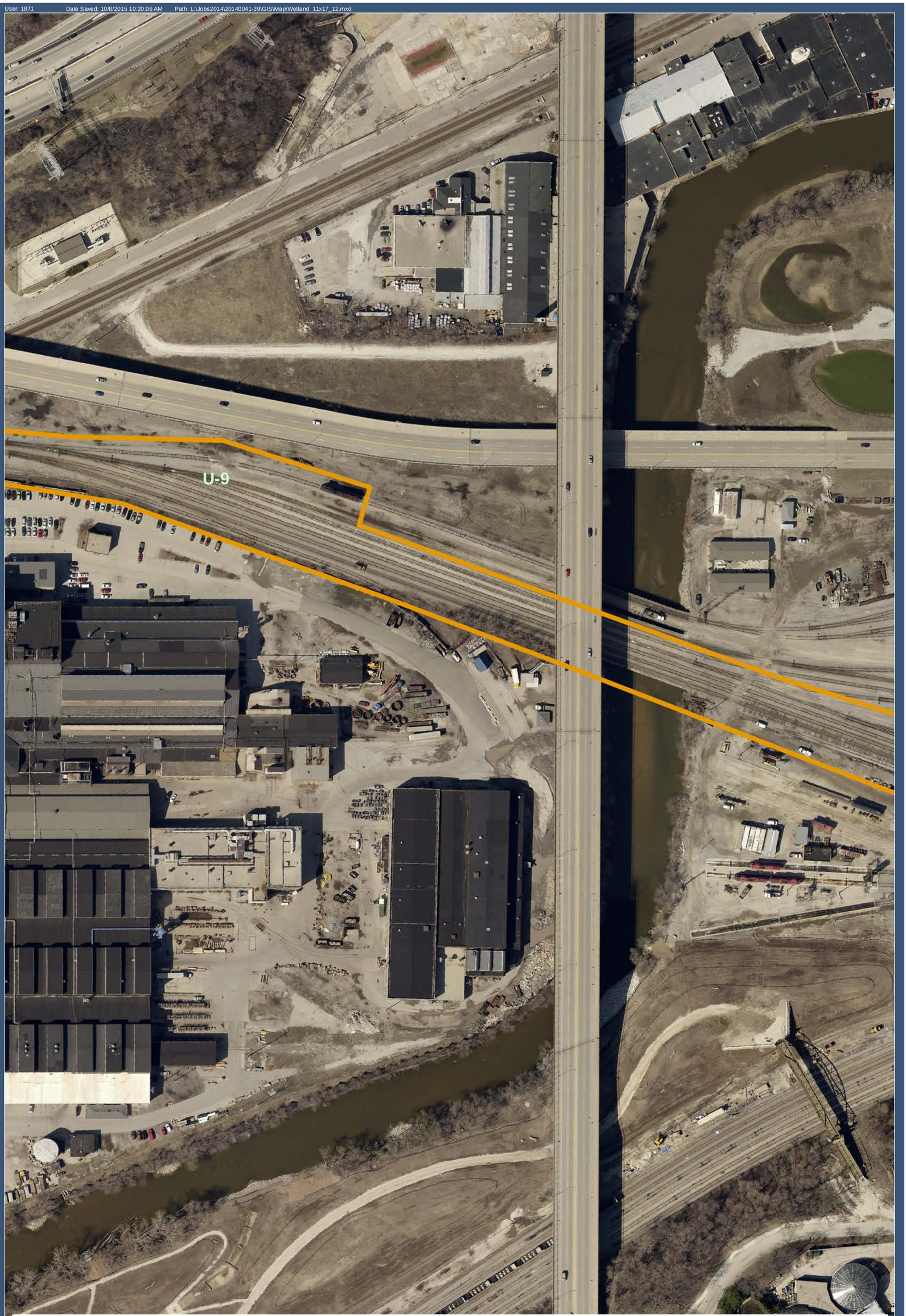

WETLAND MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

0 75 150 Feet

1 in = 150 ft

N

GRAEF

EXHIBIT A-12

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Proj. Number: 2014 0041.39

Source: SEWRPC 2010 Digital Orthophotography

WETLAND MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

N

0 75 150 Feet

1 in = 150 ft

GRAEF

EXHIBIT A-13

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Proj. Number: 2014 0041.39

Source: SEWRPC 2010 Digital Orthophotography

WETLAND MAP

CHICAGO - MILWAUKEE INTERCITY PASSENGER RAIL CORRIDOR

WisDOTPROJECT ID# 0385-57-01

NATURAL RESOURCE REVIEW

MILWAUKEE COUNTY, WISCONSIN

0 75 150 Feet

1 in = 150 ft

N

GRAEF

EXHIBIT A-14

GRĀEF

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APPENDIX E

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Amtrak Hiawatha City/County: Milwaukee/Milwaukee Sampling Date: 13-Aug-15

Applicant/Owner: WisDOT State: WI Sampling Point: **SP-1 upl**

Investigator(s): Mike Al-wathiqui, Geof Parish Section, Township, Range: S 32 T 6N R 22E

Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): convex

Slope: 5.0% / 2.9 ° Lat.: Long.: Datum:

Soil Map Unit Name: Morley silt loam, 2 to 6 percent slopes (MzdB), not hydric WWI classification: None

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

Are Vegetation ☐ , Soil ☑ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

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

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

Hydrophytic Vegetation Present?	Yes ○	No ◉	**Is the Sampled Area within a Wetland?** **Yes** ○ **No** ◉
Hydric Soil Present?	Yes ○	No ◉	
Wetland Hydrology Present?	Yes ◉	No ○	

Remarks:
WETS analysis found conditions to be slightly dryer than normal, but 1" of precipitation which occurred three days prior to the site visit may account for abnormally wet hydrological conditions. This area is on the edge of the embankment of the railroad.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' r)			
1. Elaeagnus angustifolia	5	☑ 100.0%	FACU
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	5	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' r)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Herb Stratum (Plot size: 5' r)			
1. Coronilla varia	60	☑ 56.6%	UPL
2. Panicum virgatum	15	☐ 14.2%	FAC
3. Solidago canadensis	10	☐ 9.4%	FACU
4. Symphyotrichum lateriflorum	5	☐ 4.7%	FACW
5. Solidago canadensis	5	☐ 4.7%	FACU
6. Spartina pectinata	5	☐ 4.7%	FACW
7. Sonchus arvensis	3	☐ 2.8%	FACU
8. Acer negundo	3	☐ 2.8%	FAC
9.	0	☐ 0.0%	
10.	0	☐ 0.0%	
	106	= Total Cover	
Woody Vine Stratum (Plot size: 30' r)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	18	x 3 =	54
FACU species	23	x 4 =	92
UPL species	60	x 5 =	300
Column Totals:	111 (A)		466 (B)

Prevalence Index = B/A = 4.198

Hydrophytic Vegetation Indicators:

- ☐ **1 - Rapid Test for Hydrophytic Vegetation**
- ☐ **2 - Dominance Test is > 50%**
- ☐ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Hydrophytic Vegetation Present? **Yes** ○ **No** ◉

Remarks: (Include photo numbers here or on a separate sheet.)
This area is dominated by upland weeds. The vegetation criterion is not met.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-1 upl**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-15	10YR	2/1	100						Sandy Loam	Fill material

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils [3]:

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

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

Restrictive Layer (if observed):

Type: Gravel Fill

Depth (inches): 15

Hydric Soil Present? Yes ○ No ◉

Remarks:

The soil is mostly comprised of gravel and fill material likely used in the construction of the railroad. The hydric soil criterion is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches): 13

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 12

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

A water table is present at 13" which may be accounted for by heavy rains three days prior to the site visit. Despite this vegetation, soils and best professional judgement indicate that this area is upland.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Amtrak Hiawatha City/County: Milwaukee/Milwaukee Sampling Date: 13-Aug-15

Applicant/Owner: WisDOT State: WI Sampling Point: **SP-2 wtd**

Investigator(s): Mike Al-wathiqui, Geof Parish Section, Township, Range: S 32 T 6N R 22E

Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): convex

Slope: 0.0% / 0.0 ° Lat.: Long.: Datum:

Soil Map Unit Name: Morley silt loam, 2 to 6 percent slopes (MzdB), not hydric WWI classification: None

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

Are Vegetation ☐ , Soil ☑ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

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

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

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?** **Yes ◉ No ○**
Hydric Soil Present?	Yes ◉ No ○	
Wetland Hydrology Present?	Yes ◉ No ○	

Remarks:
WETS analysis found conditions to be slightly dryer than normal, but 1" of precipitation which occurred three days prior to the site visit may account for abnormally wet hydrological conditions. All three criteria are met in this area indicating that it is wetland. Wetland ID: W-1.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Herb Stratum (Plot size: 5' r)				
1. Spartina pectinata	40	☑	29.6%	FACW
2. Eleocharis obtusa	40	☑	29.6%	OBL
3. Juncus torreyi	30	☑	22.2%	FACW
4. Scirpus atrovirens	10	☐	7.4%	OBL
5. Juncus tenuis	5	☐	3.7%	FAC
6. Juncus canadensis	5	☐	3.7%	OBL
7. Euthamia graminifolia	5	☐	3.7%	FACW
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	135	= Total Cover		
Woody Vine Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	55	x 1 =	55
FACW species	75	x 2 =	150
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	135 (A)		220 (B)

Prevalence Index = B/A = 1.630

Hydrophytic Vegetation Indicators:

- ☑ **1 - Rapid Test for Hydrophytic Vegetation**
- ☑ **2 - Dominance Test is > 50%**
- ☑ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Hydrophytic Vegetation Present? **Yes ◉ No ○**

Remarks: (Include photo numbers here or on a separate sheet.)
This is a fresh (wet) meadow. The hydrophytic vegetation criterion is met.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-2 wtd**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-15	10YR	2/1	90	7.5YR	4/6	10	C	M	Sandy Clay	gravel/fill

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils [3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

The soil is mostly comprised of gravel and fill material used in the construction of the railroad. However, the hydric soil criterion is met by indicator F6 (Redox Dark Surface).

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ○	No ◉	Depth (inches):	
Water Table Present?	Yes ◉	No ○	Depth (inches):	2
Saturation Present? (includes capillary fringe)	Yes ◉	No ○	Depth (inches):	0

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

This is a ditch at the bottom of the railroad embankment. A water table is present at 2" with saturation at the surface. Multiple secondary hydrology indciators are present as well. The criterion is met.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Amtrak Hiawatha City/County: Milwaukee/Milwaukee Sampling Date: 24-Sep-15

Applicant/Owner: WisDOT State: WI Sampling Point: **SP-3 upl**

Investigator(s): Mike Al-wathiqui, Geof Parish Section, Township, Range: S 32 T 6N R 22E

Landform (hillslope, terrace, etc.): Shoulder slope Local relief (concave, convex, none): convex

Slope: 5.0% / 2.9 ° Lat.: Long.: Datum:

Soil Map Unit Name: Morley silt loam, 2 to 6 percent slopes (MzdB), not hydric WWI classification:

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

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

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

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

Hydrophytic Vegetation Present?	Yes ○	No ◉	**Is the Sampled Area within a Wetland?** **Yes** ○ **No** ◉
Hydric Soil Present?	Yes ○	No ◉	
Wetland Hydrology Present?	Yes ○	No ◉	

Remarks:
WETS analysis found conditions to be slightly dryer than normal. None of the three criteria are met indicating that this area is upland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Herb Stratum (Plot size: 5' r)				
1. Solidago canadensis	10	☑	34.5%	FACU
2. Cornus racemosa	10	☑	34.5%	FAC
3. Rosa acicularis	5	☐	17.2%	FACU
4. Cirsium arvense	2	☐	6.9%	FACU
5. Rubus occidentalis	2	☐	6.9%	UPL
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	29	= Total Cover		
Woody Vine Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	17	x 4 =	68
UPL species	2	x 5 =	10
Column Totals:	29 (A)		108 (B)

Prevalence Index = B/A = 3.724

Hydrophytic Vegetation Indicators:

- ☐ **1 - Rapid Test for Hydrophytic Vegetation**
- ☐ **2 - Dominance Test is > 50%**
- ☐ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Hydrophytic Vegetation Present? **Yes** ○ **No** ◉

Remarks: (Include photo numbers here or on a separate sheet.)
This area is dominated by upland weeds. The vegetation criterion is not met.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-3 upl**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)	%	Type [1]	Loc²	Texture	Remarks
0-7	10YR	4/3	50					Silty Clay Loam	
	10YR	3/2	40						
	10YR	4/2	100						
7-17	10YR	4/3	50					Silty Clay Loam	
	10YR	4/6	30						
	10YR	4/2	10						
	10YR	3/2	10						

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils [3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

The hydric soil criterion is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches): _____

Water Table Present? Yes ○ No ◉ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches): _____

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

There are no indicators of hydrology in this area. The criterion is not met.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Amtrak Hiawatha | City/County: Milwaukee/Milwaukee | Sampling Date: 24-Sep-15

Applicant/Owner: WisDOT | State: WI | Sampling Point: **SP-4 wtd**

Investigator(s): Mike Al-wathiqui, Geof Parish | Section, Township, Range: S 32 T 6N R 22E

Landform (hillslope, terrace, etc.): Flat | Local relief (concave, convex, none): flat

Slope: 0.0% / 0.0 ° | Lat.: | Long.: | Datum:

Soil Map Unit Name: Morley silt loam, 2 to 6 percent slopes (MzdB), not hydric | WWI classification: None

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

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

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

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

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?** **Yes ◉ No ○**
Hydric Soil Present?	Yes ◉ No ○	
Wetland Hydrology Present?	Yes ◉ No ○	

Remarks:
WETS analysis found conditions to be slightly dryer than normal. All three of the criteria are met indicating that this area is a wetland. Wetland ID: W-2. W-2 extends south of the boundary of the WWI mapped wetland that is located to the north of this sample point location.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Herb Stratum (Plot size: 5' r)				
1. Typha angustifolia	100	☑	91.7%	OBL
2. Parthenocissus quinquefolia	5	☐	4.6%	FACU
3. Rubus occidentalis	2	☐	1.8%	UPL
4. Cirsium arvense	2	☐	1.8%	FACU
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	109	= Total Cover		
Woody Vine Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	100	x 1 =	100
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	7	x 4 =	28
UPL species	2	x 5 =	10
Column Totals:	109 (A)		138 (B)

Prevalence Index = B/A = 1.266

Hydrophytic Vegetation Indicators:

- ☑ **1 - Rapid Test for Hydrophytic Vegetation**
- ☑ **2 - Dominance Test is > 50%**
- ☑ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Hydrophytic Vegetation Present? **Yes ◉ No ○**

Remarks: (Include photo numbers here or on a separate sheet.)
This is a shallow marsh dominated by Narrow Leaf Cattail. The vegetation criterion is met.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-4 wtd**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-16	10YR	5/1	90	10YR	6/8	10	C	M	Silty Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils [3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes ◉ No ○

Remarks:

The hydric soil criterion is met by indicator F3 (Depleted Matrix).

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches): 15

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 2

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

A water table is present at 15" with saturation at 2". Multiple secondary hydrology indicators are present as well. The criterion is met.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Amtrak Hiawatha City/County: Milwaukee/Milwaukee Sampling Date: 24-Sep-15

Applicant/Owner: WisDOT State: WI Sampling Point: **SP-5 upl**

Investigator(s): Mike Al-wathiqui, Geof Parish Section, Township, Range: S 32 T 6N R 22E

Landform (hillslope, terrace, etc.): Shoulder slope Local relief (concave, convex, none): convex

Slope: 20.0% / 11.3 ° Lat.: Long.: Datum:

Soil Map Unit Name: Morley silt loam, 2 to 6 percent slopes (MzdB), not hydric WWI classification: E1K

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

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

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

Hydrophytic Vegetation Present?	Yes ○	No ◉	**Is the Sampled Area within a Wetland?** **Yes** ○ **No** ◉
Hydric Soil Present?	Yes ○	No ◉	
Wetland Hydrology Present?	Yes ○	No ◉	

Remarks:
WETS analysis found conditions to be slightly dryer than normal. None of the three criteria are met indicating that this area is upland. This area is on the border of the mapped WWI which may be an artifact of map scale and the line thickness of the border.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Herb Stratum (Plot size: 5' r)				
1. Cirsium arvense	10	☑	55.6%	FACU
2. Cornus racemosa	5	☑	27.8%	FAC
3. Rubus occidentalis	3	☐	16.7%	UPL
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	18	= Total Cover		
Woody Vine Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	10	x 4 =	40
UPL species	3	x 5 =	15
Column Totals:	18 (A)		70 (B)

Prevalence Index = B/A = 3.889

Hydrophytic Vegetation Indicators:

- ☐ **1 - Rapid Test for Hydrophytic Vegetation**
- ☐ **2 - Dominance Test is > 50%**
- ☐ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Hydrophytic Vegetation Present? **Yes** ○ **No** ◉

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

Vegetation is sparse do to construction activities related to a new fence, but the present plant community is dominated by upland weeds. The vegetation criterion is not met.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-5 upl**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-6	10YR	3/2	100						Silty Clay Loam	
6-10	10YR	4/3	70							
	10YR	3/2	20	10YR	6/8	10	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils [3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

The hydric soil criterion is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches): _____

Water Table Present? Yes ○ No ◉ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches): _____

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

There are no indicators of hydrology in this area. The criterion is not met.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Amtrak Hiawatha City/County: Milwaukee/Milwaukee Sampling Date: 24-Sep-15

Applicant/Owner: WisDOT State: WI Sampling Point: **SP-6 wtd**

Investigator(s): Mike Al-wathiqui, Geof Parish Section, Township, Range: S 32 T 6N R 22E

Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): concave

Slope: 2.0% / 1.1 ° Lat.: Long.: Datum:

Soil Map Unit Name: Morley silt loam, 2 to 6 percent slopes (MzdB), not hydric WWI classification: E1K

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

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

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

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

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?** **Yes ◉ No ○**
Hydric Soil Present?	Yes ◉ No ○	
Wetland Hydrology Present?	Yes ◉ No ○	

Remarks:
WETS analysis found conditions to be slightly dryer than normal. This is a ditch at the base of the railroad embankment. All three of the criteria are met indicating that this area is a wetland. Wetland ID: W-4.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' r)				
1. Sambucus nigra	5	☑	100.0%	FACW
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	5	= Total Cover		
Herb Stratum (Plot size: 5' r)				
1. Epilobium ciliatum	70	☑	74.5%	FACW
2. Rumex crispus	10	☐	10.6%	FAC
3. Asclepias incarnata	5	☐	5.3%	OBL
4. Impatiens capensis	5	☐	5.3%	FACW
5. Euthamia graminifolia	3	☐	3.2%	FACW
6. Bidens frondosa	1	☐	1.1%	FACW
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	94	= Total Cover		
Woody Vine Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	84	x 2 =	168
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	99 (A)		203 (B)

Prevalence Index = B/A = 2.051

Hydrophytic Vegetation Indicators:

- ☑ **1 - Rapid Test for Hydrophytic Vegetation**
- ☑ **2 - Dominance Test is > 50%**
- ☑ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Hydrophytic Vegetation Present? **Yes ◉ No ○**

Remarks: (Include photo numbers here or on a separate sheet.)
This is a fresh (wet) meadow in a ditch along the base of the railroad embankment. The hydrophytic vegetation criterion is met.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-6 wtd**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-3	10YR	3/2	100						Silt Loam	
3-8	10YR	5/1	80	10YR	6/8	20	C	M	Silty Clay	
8-18	10YR	2/1	90	10YR	6/6	10	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils [3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes ◉ No ○

Remarks:

The hydric soil criterion is met by indicators A11 (Depleted Below Dark Surface) and F6 (Redox Dark Surface).

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ○	No ◉	Depth (inches):	
Water Table Present?	Yes ◉	No ○	Depth (inches):	8
Saturation Present? (includes capillary fringe)	Yes ◉	No ○	Depth (inches):	6

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

A water table is present at 8" with saturation at 6". Multiple secondary hydrology indicators are present as well. The criterion is met.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Amtrak Hiawatha City/County: Milwaukee/Milwaukee Sampling Date: 24-Sep-15

Applicant/Owner: WisDOT State: WI Sampling Point: **SP-7 upl**

Investigator(s): Mike Al-wathiqui, Geof Parish Section, Township, Range: S 32 T 6N R 22E

Landform (hillslope, terrace, etc.): Shoulder slope Local relief (concave, convex, none): convex

Slope: 24.0% / 13.5 ° Lat.: Long.: Datum:

Soil Map Unit Name: Morley silt loam, 2 to 6 percent slopes (MzdB), not hydric WWI classification: None

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

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

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

Hydrophytic Vegetation Present?	Yes ○	No ◉	**Is the Sampled Area within a Wetland?** **Yes** ○ **No** ◉
Hydric Soil Present?	Yes ○	No ◉	
Wetland Hydrology Present?	Yes ○	No ◉	

Remarks:
WETS analysis found conditions to be slightly dryer than normal. None of the three criteria are met indicating that this area is upland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Herb Stratum (Plot size: 5' r)				
1. Rubus occidentalis	20	☑	46.5%	UPL
2. Cirsium arvense	10	☑	23.3%	FACU
3. Sonchus arvensis	5	☐	11.6%	FACU
4. Rhamnus cathartica	5	☐	11.6%	FAC
5. Phalaris arundinacea	3	☐	7.0%	FACW
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	43	= Total Cover		
Woody Vine Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	3	x 2 =	6
FAC species	5	x 3 =	15
FACU species	15	x 4 =	60
UPL species	20	x 5 =	100
Column Totals:	43 (A)		181 (B)

Prevalence Index = B/A = 4.209

Hydrophytic Vegetation Indicators:

- ☐ **1 - Rapid Test for Hydrophytic Vegetation**
- ☐ **2 - Dominance Test is > 50%**
- ☐ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Hydrophytic Vegetation Present? **Yes** ○ **No** ◉

Remarks: (Include photo numbers here or on a separate sheet.)
This area is dominated by upland weeds. The vegetation criterion is not met.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-7 upl**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-9	10YR	3/2	100						Silt Loam	
9-17	10YR	4/3	80	10YR	4/6	10	C	M	Silty Clay Loam	
	10YR	3/2	10							

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils [3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

The hydric soil criterion is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches): _____

Water Table Present? Yes ○ No ◉ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches): _____

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

There are no indicators of hydrology in this area. The criterion is not met.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Amtrak Hiawatha City/County: Milwaukee/Milwaukee Sampling Date: 24-Sep-15

Applicant/Owner: WisDOT State: WI Sampling Point: **SP-8 wtd**

Investigator(s): Mike Al-wathiqui, Geof Parish Section, Township, Range: S 32 T 6N R 22E

Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): concave

Slope: 0.0% / 0.0 ° Lat.: Long.: Datum:

Soil Map Unit Name: Morley silt loam, 2 to 6 percent slopes (MzdB), not hydric WWI classification: None

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

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

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

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?** **Yes ◉ No ○**
Hydric Soil Present?	Yes ◉ No ○	
Wetland Hydrology Present?	Yes ◉ No ○	

Remarks:
WETS analysis found conditions to be slightly dryer than normal. All three of the criteria are met indicating that this area is a wetland. Wetland ID: W-3.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' r)				
1. Salix fragilis	10	☑	55.6%	FAC
2. Salix bebbiana	5	☑	27.8%	FACW
3. Salix interior	3	☐	16.7%	FACW
4. Cornus racemosa	0	☐	0.0%	FAC
5.	0	☐	0.0%	
	18	= Total Cover		
Herb Stratum (Plot size: 5' r)				
1. Scirpus cyperinus	20	☑	37.7%	OBL
2. Impatiens capensis	10	☑	18.9%	FACW
3. Typha angustifolia	5	☐	9.4%	OBL
4. Solidago canadensis	5	☐	9.4%	FACU
5. Euthamia graminifolia	5	☐	9.4%	FACW
6. Salix discolor	5	☐	9.4%	FACW
7. Ribes americanum	2	☐	3.8%	FACW
8. Bidens frondosa	1	☐	1.9%	FACW
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	53	= Total Cover		
Woody Vine Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	31	x 2 =	62
FAC species	10	x 3 =	30
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	71 (A)		137 (B)

Prevalence Index = B/A = 1.930

Hydrophytic Vegetation Indicators:

- ☐ **1 - Rapid Test for Hydrophytic Vegetation**
- ☑ **2 - Dominance Test is > 50%**
- ☑ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Hydrophytic Vegetation Present? **Yes ◉ No ○**

Remarks: (Include photo numbers here or on a separate sheet.)
This is a fresh (wet) meadowand shrub carr. The hydrophytic vegetation criterion is met.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-8 wtd**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-4	10YR	3/2	100						Sandy Loam	
4-16	10YR	3/2	90	7.5YR	4/6	10	C	M	Sandy Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils [3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

The hydric soil criterion is met by indicator F6 (Redox Dark Surface).

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches): _____

Water Table Present? Yes ○ No ◉ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches): _____

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

Multiple secondary hydrology indicators are present. The criterion is met.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Amtrak Hiawatha City/County: Milwaukee/Milwaukee Sampling Date: 24-Sep-15

Applicant/Owner: WisDOT State: WI Sampling Point: **SP-9 upl**

Investigator(s): Mike Al-wathiqui, Geof Parish Section, Township, Range: S 32 T 6N R 22E

Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): convex

Slope: 5.0% / 2.9 ° Lat.: Long.: Datum:

Soil Map Unit Name: Morley silt loam, 2 to 6 percent slopes (MzdB), not hydric WWI classification: None

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

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

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

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

Hydrophytic Vegetation Present?	Yes ○	No ◉	**Is the Sampled Area within a Wetland?** **Yes** ○ **No** ◉
Hydric Soil Present?	Yes ○	No ◉	
Wetland Hydrology Present?	Yes ○	No ◉	

Remarks:
WETS analysis found conditions to be slightly dryer than normal. None of the three criteria are met indicating that this area is upland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Herb Stratum (Plot size: 5' r)				
1. Lotus corniculatus	100	☑	86.2%	FACU
2. Daucus carota	5	☐	4.3%	UPL
3. Elymus repens	5	☐	4.3%	FACU
4. Lactuca serriola	3	☐	2.6%	FACU
5. Sonchus arvensis	3	☐	2.6%	FACU
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	116	= Total Cover		
Woody Vine Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	111	x 4 =	444
UPL species	5	x 5 =	25
Column Totals:	116 (A)		469 (B)

Prevalence Index = B/A = 4.043

Hydrophytic Vegetation Indicators:

- ☐ **1 - Rapid Test for Hydrophytic Vegetation**
- ☐ **2 - Dominance Test is > 50%**
- ☐ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Hydrophytic Vegetation Present? **Yes** ○ **No** ◉

Remarks: (Include photo numbers here or on a separate sheet.)
This area is dominated by upland weeds. The vegetation criterion is not met.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-9 upl**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-10	10YR	3/2	70						Silt Loam	
	10YR	5/3	30							
10-18	10YR	4/3	60	10YR	5/1	10	D	M	Silty Clay	
	10YR	3/2	20	10YR	6/8	10	C	M		

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils [3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

Redoximorphic features and depletions are present at depth, but not enough to meet an indicator. The hydric soil criterion is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches): _____

Water Table Present? Yes ○ No ◉ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches): _____

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

There are no indicators of hydrology in this area. The criterion is not met.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Amtrak Hiawatha | City/County: Milwaukee/Milwaukee | Sampling Date: 24-Sep-15

Applicant/Owner: WisDOT | State: WI | Sampling Point: **SP-10 wtd**

Investigator(s): Mike Al-wathiqui, Geof Parish | Section, Township, Range: S 32 T 6N R 22E

Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): concave

Slope: 0.0% / 0.0 ° | Lat.: | Long.: | Datum:

Soil Map Unit Name: Morley silt loam, 2 to 6 percent slopes (MzdB), not hydric | WWI classification: None

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

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

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

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

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?** **Yes ◉ No ○**
Hydric Soil Present?	Yes ◉ No ○	
Wetland Hydrology Present?	Yes ◉ No ○	

Remarks:
WETS analysis found conditions to be slightly dryer than normal. This section of W-2 (W-2B) is a ditch at the base of the roalroad embankment that extends east of the study area. All three of the criteria are met indicating that this area is a wetland. Wetland ID: W-2.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Herb Stratum (Plot size: 5' r)				
1. Phalaris arundinacea	100	☑	80.0%	FACW
2. Juncus torreyi	20	☐	16.0%	FACW
3. Solidago sempervirens	5	☐	4.0%	FACW
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	125	= Total Cover		
Woody Vine Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	125	x 2 =	250
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	125 (A)		250 (B)

Prevalence Index = B/A = 2.000

Hydrophytic Vegetation Indicators:

- ☑ **1 - Rapid Test for Hydrophytic Vegetation**
- ☑ **2 - Dominance Test is > 50%**
- ☑ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Hydrophytic Vegetation Present? **Yes ◉ No ○**

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

This is a fresh (wet) meadow dominated by a monotypic stand of reed Canary Grass. The vegetation criterion is met.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-10 wtd**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc[2]	Texture	Remarks
0-6	10YR	3/2	80	10YR	6/8	10	C	M	Silty Clay	
				10YR	4/1	10	D	M		
6-14	10YR	4/3	60	10YR	4/1	20	D	M	Silty Clay	
				10YR	5/6	20	C	M		

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils [3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes ◉ No ○

Remarks:

The hydric soil criterion is met by indicator F6 (Redox Dark Surface).

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ○	No ◉	Depth (inches):	
Water Table Present?	Yes ◉	No ○	Depth (inches):	11
Saturation Present? (includes capillary fringe)	Yes ◉	No ○	Depth (inches):	10

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

A water table is present at 11" with saturation at 10". Multiple secondary hydrology indicators are present as well. The criterion is met.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Amtrak Hiawatha City/County: Milwaukee/Milwaukee Sampling Date: 24-Sep-15

Applicant/Owner: WisDOT State: WI Sampling Point: **SP-11 upl**

Investigator(s): Mike Al-wathiqui, Geof Parish Section, Township, Range: S 32 T 6N R 22E

Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): convex

Slope: 20.0% / 11.3 ° Lat.: Long.: Datum:

Soil Map Unit Name: Morley silt loam, 2 to 6 percent slopes (MzdB), not hydric WWI classification: None

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

Are Vegetation ☑ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

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

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

Hydrophytic Vegetation Present?	Yes ◉	No ○	**Is the Sampled Area within a Wetland?** **Yes** ○ **No** ◉
Hydric Soil Present?	Yes ○	No ◉	
Wetland Hydrology Present?	Yes ○	No ◉	

Remarks:
WETS analysis found conditions to be slightly dryer than normal. This is part of the manicured lawn of the Amtrak station. The vegetation criterion is met due to planted Kentucky Blue Grass, but the soils and lack of hydrology indicate that this area is upland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Herb Stratum (Plot size: 5' r)				
1. Poa pratensis	100	☑	98.0%	FAC
2. Cirsium arvense	2	☐	2.0%	FACU
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	102	= Total Cover		
Woody Vine Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	100	x 3 =	300
FACU species	2	x 4 =	8
UPL species	0	x 5 =	0
Column Totals:	102 (A)		308 (B)

Prevalence Index = B/A = 3.020

Hydrophytic Vegetation Indicators:

- ☐ **1 - Rapid Test for Hydrophytic Vegetation**
- ☑ **2 - Dominance Test is > 50%**
- ☐ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Hydrophytic Vegetation Present? **Yes** ◉ **No** ○

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

This area is part of the manicured lawn of the Amtrak station and is dominated by planted Kentucky Blue Grass. The vegetation criterion is met, but the soils and lack of hydrology indicate that this area is upland.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-11 upl**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)	%	Type [1]	Loc²	Texture	Remarks
0-12	10YR	5/3	100					Silt Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils [3]:

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

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

Restrictive Layer (if observed):

Type: compact gravel

Depth (inches): 12

Hydric Soil Present? Yes ○ No ◉

Remarks:

There is a restrictive layer preventing observation of the soil profile deeper than 12". However, the profile is deep enough to discount any hydric soil indicators. The criterion is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches): _____

Water Table Present? Yes ○ No ◉ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches): _____

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

There are no indicators of hydrology in this area. Water gets conveyed towards what appears to be a constructed stormwater feature to the east. The criterion is not met.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Amtrak Hiawatha City/County: Milwaukee/Milwaukee Sampling Date: 24-Sep-15

Applicant/Owner: WisDOT State: WI Sampling Point: **SP-12 wtd**

Investigator(s): Mike Al-wathiqui, Geof Parish Section, Township, Range: S 32 T 6N R 22E

Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): concave

Slope: 20.0% / 11.3 ° Lat.: Long.: Datum:

Soil Map Unit Name: Morley silt loam, 2 to 6 percent slopes (MzdB), not hydric WWI classification: None

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☑ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

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

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

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?** **Yes ◉ No ○**
Hydric Soil Present?	Yes ◉ No ○	
Wetland Hydrology Present?	Yes ◉ No ○	

Remarks:
This appears to to be a constructed stormwater feature. However, all three criteria are met indicating that this area is wetland. Wetland ID: W-5.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' r)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' r)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Herb Stratum (Plot size: 5' r)			
1. Juncus tenuis	50	☑ 57.5%	FAC
2. Erigeron annuus	10	☐ 11.5%	FACU
3. Euthamia graminifolia	10	☐ 11.5%	FACW
4. Carex vulpinoidea	5	☐ 5.7%	FACW
5. Plantago major	5	☐ 5.7%	FAC
6. Scirpus atrovirens	5	☐ 5.7%	OBL
7. Verbena hastata	2	☐ 2.3%	FACW
8.	0	☐ 0.0%	
9.	0	☐ 0.0%	
10.	0	☐ 0.0%	
	87	= Total Cover	
Woody Vine Stratum (Plot size: 30' r)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	17	x 2 =	34
FAC species	55	x 3 =	165
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	87 (A)		244 (B)

Prevalence Index = B/A = 2.805

Hydrophytic Vegetation Indicators:

- ☐ **1 - Rapid Test for Hydrophytic Vegetation**
- ☑ **2 - Dominance Test is > 50%**
- ☑ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Hydrophytic Vegetation Present? **Yes ◉ No ○**

Remarks: (Include photo numbers here or on a separate sheet.)
This is a fresh (wet) meadow. The vegetation criterion is met.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-12 wtd**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-3	10YR	3/2	100						Silt Loam	
3-5	10YR	4/2	60	10YR	6/8	10	C	M	Silty Clay Loam	
	10YR	4/3	30							
5-12	10YR	4/3	60	10YR	6/8	10	C	M	Silty Clay	
	10YR	4/2	30							

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils [3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

The hydric soil criterion is met by indicator A11 (Depleted Below Dark Surface).

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches): _____

Water Table Present? Yes ○ No ◉ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches): _____

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

Multiple secondary hydrology indicators are present. The criterion is met.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Amtrak Hiawatha City/County: Milwaukee/Milwaukee Sampling Date: 24-Sep-15

Applicant/Owner: WisDOT State: WI Sampling Point: **SP-13 upl**

Investigator(s): Mike Al-wathiqui, Geof Parish Section, Township, Range: S 32 T 6N R 22E

Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): convex

Slope: 10.0% / 5.7 ° Lat.: Long.: Datum:

Soil Map Unit Name: Morley silt loam, 2 to 6 percent slopes (MzdB), not hydric WWI classification: None

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

Are Vegetation ☑ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

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

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

Hydrophytic Vegetation Present?	Yes ○	No ◉	**Is the Sampled Area within a Wetland?** **Yes** ○ **No** ◉
Hydric Soil Present?	Yes ○	No ◉	
Wetland Hydrology Present?	Yes ○	No ◉	

Remarks:
WETS analysis found conditions to be slightly dryer than normal. This is part of a manicured lawn. None of the three criteria are met indicating that this area is upland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Herb Stratum (Plot size: 5' r)				
1. Poa pratensis	100	☑	74.1%	FAC
2. Festuca rubra	30	☑	22.2%	FACU
3. Plantago major	2	☐	1.5%	FAC
4. Sonchus arvensis	2	☐	1.5%	FACU
5. Daucus carota	1	☐	0.7%	UPL
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	135	= Total Cover		
Woody Vine Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	102	x 3 =	306
FACU species	32	x 4 =	128
UPL species	1	x 5 =	5
Column Totals:	135 (A)		439 (B)

Prevalence Index = B/A = 3.252

Hydrophytic Vegetation Indicators:

- ☐ **1 - Rapid Test for Hydrophytic Vegetation**
- ☐ **2 - Dominance Test is > 50%**
- ☐ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Hydrophytic Vegetation Present? **Yes** ○ **No** ◉

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

This area is part of a manicured lawn. Despite a dominance of planted Kentucky Blue Grass, the vegetation criterion is not met.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-13 upl**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)	%	Type [1]	Loc²	Texture	Remarks
0-5	10YR	3/2	100					Silty Clay Loam	
5-8	10YR	2/1	100					Sand	fill material
8-14	10YR	5/6	100					Sand	gravel present

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils [3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

The soil profile is dominated by sand, gravel and fill material. The hydric soil criterion is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches): _____

Water Table Present? Yes ○ No ◉ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches): _____

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

There are no indicators of hydrology in this area. The criterion is not met.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Amtrak Hiawatha City/County: Milwaukee/Milwaukee Sampling Date: 24-Sep-15

Applicant/Owner: WisDOT State: WI Sampling Point: **SP-14 wtd**

Investigator(s): Mike Al-wathiqui, Geof Parish Section, Township, Range: S 32 T 6N R 22E

Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): concave

Slope: 0.0% / 0.0 ° Lat.: Long.: Datum:

Soil Map Unit Name: Morley silt loam, 2 to 6 percent slopes (MzdB), not hydric WWI classification: None

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☑ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

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

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

Hydrophytic Vegetation Present?	Yes ◉ No ○	**Is the Sampled Area within a Wetland?** **Yes ◉ No ○**
Hydric Soil Present?	Yes ◉ No ○	
Wetland Hydrology Present?	Yes ◉ No ○	

Remarks:
WETS analysis found conditions to be slightly dryer than normal. Aerials and topography suggest that this may be a constructed stormwater feature. However, all three criteria are met indicating that this area is wetland. Wetland ID: W-6.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Herb Stratum (Plot size: 5' r)				
1. Juncus tenuis	50	☑	59.5%	FAC
2. Juncus torreyi	30	☑	35.7%	FACW
3. Phragmites australis	2	☐	2.4%	FACW
4. Euthamia graminifolia	2	☐	2.4%	FACW
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	84	= Total Cover		
Woody Vine Stratum (Plot size: 30' r)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	0	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	34	x 2 =	68
FAC species	50	x 3 =	150
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	84 (A)		218 (B)

Prevalence Index = B/A = 2.595

Hydrophytic Vegetation Indicators:

- ☑ **1 - Rapid Test for Hydrophytic Vegetation**
- ☑ **2 - Dominance Test is > 50%**
- ☑ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Hydrophytic Vegetation Present? **Yes ◉ No ○**

Remarks: (Include photo numbers here or on a separate sheet.)
This is a fresh (wet) meadow. The vegetation criterion is met.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **SP-14 wtd**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc²	Texture	Remarks
0-6	10YR	2/1	95	7.5YR	5/6	5	C	M	Sandy Clay Loam	
6-14	10YR	5/6	100						Sand	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils [3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

The hydric soil criterion is met by indicator F6 (Redox Dark Surface).

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches): _____

Water Table Present? Yes ◉ No ○ Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 4

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

A water table is present at 6" with saturation at 4". Multiple secondary hydrology indicators are present as well. The criterion is met.

APPENDIX F

Site Photographs

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 1

Direction of View:

-

Comment:

Upland sample point SP-1 in upland U -3.

Photo #: 2

Direction of View:

-

Comment:

Wetland sample point SP-2 in wetland W-1.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 3

Direction of View:

North

Comment:

Wetland W-1, a fresh (wet) meadow at the base of the railroad embankment.

Photo #: 4

Direction of View:

-

Comment:

Upland sample point SP-3 in upland U -1.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 5

Direction of View:

-

Comment:

Wetland sample point SP-4 in wetland W-2C.

Photo #: 6

Direction of View:

north

Comment:

Wetland W-2C Cattail marsh.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 8/24/2015

Photo #: 7

Direction of View:

-

Comment:

Upland sample point SP-5 in upland U -1.

Photo #: 8

Direction of View:

-

Comment:

Wetland sample point SP-6 in wetland W-4.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 9

Direction of View:

North

Comment:

Wetland W-4.

Photo #: 10

Direction of View:

-

Comment:

Upland sample point SP-7 in upland U -1.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 11

Direction of View:

-

Comment:

Wetland sample point SP-8 in wetland W-3.

Photo #: 12

Direction of View:

East

Comment:

Wetland W-4, a fresh (wet) meadow and shrub carr at the base of the railroad embankment.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 13

Direction of View:

-

Comment:

Upland sample point SP-9 in upland U -2.

Photo #: 14

Direction of View:

-

Comment:

Wetland sample point SP-10 in wetland W-2B.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 15

Direction of View:

northeast

Comment:

Wetland W-2B, a fresh (wet) meadow dominated by reed Canary Grass and Phragmites.

Photo #: 16

Direction of View:

-

Comment:

Upland sample point SP-11 in upland U-3.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 17

Direction of View:

-

Comment:

Wetland sample point SP-12 in wetland W-5.

Photo #: 18

Direction of View:

northwest

Comment:

Overview of wetland W-5. This is likely an excavated stormwater feature, based on grading and historic aerials.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 19

Direction of View:

-

Comment:

Upland sample point SP-13 in upland U-3.

Photo #: 20

Direction of View:

-

Comment:

Wetland sample point SP-14 in wetland W-6.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 21

Direction of View:

south

Comment:

Overview of wetland W-6. This is possibly a graded stormwater feature.

Photo #: 22

Direction of View:

north

Comment:

Upland U-4 south of Greenfield Avenue.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 23

Direction of View:

south

Comment:

Upland U-4 south fo Greenfield Avenue on the east side of the railroad.

Photo #: 24

Direction of View:

south

Comment:

Upland U-5, north of National Avenue.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 25

Direction of View:

north

Comment:

Upland U-5, north of National Avenue.

Photo #: 26

Direction of View:

west

Comment:

Upland U-6, east of 6th Street.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 27

Direction of View:

east

Comment:

Upland U-6, east of 6th Street.

Photo #: 28

Direction of View:

west

Comment:

Upland U-6.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 29

Direction of View:
west
Comment:
Upland U-7.

Photo #: 30

Direction of View:
east
Comment:
Upland U-7.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 31

Direction of View:
west
Comment:
Upland U-8.

Photo #: 32

Direction of View:
east
Comment:
Upland U-8.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 33

Direction of View:

north

Comment:

Upland U-8 at the railroad river crossing.

Photo #: 34

Direction of View:

west

Comment:

Upland U-8, east of the 16th street bridge.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 35

Direction of View:

east

Comment:

Upland U-8, east of the 16th Street Bridge.

Photo #: 36

Direction of View:

east

Comment:

Upland U-9, south of Canal Street.

SITE PHOTOGRAPHS

Amtrak Hiawatha
Milwaukee County, Wisconsin

Photos Taken by GRAEF on 8/13/2015 and 8/24/2015

Photo #: 37

Direction of View:

west

Comment:

Upland U-10,.

Photo #: 38

Direction of View:

east

Comment:

Upland U-10.

GRĀEF

collaborāte / formulāte / innovāte

APPENDIX G

Upland and Wetland Summary Tables

Table 3. Wetland Summary Table

Wetland ID	Size (Acres)	C-value	FQI vaue	Wetland Sample Point(s)	Adjacent Upland Sample Point(s)	WWI Mapped Wetland(s)	Wetland Plant Community Description(s)	Dominant Wetland Vegetation (Based on FQA or Determination Data Form)	Adjacent Upland Vegetation	Mapped Wetland Soil Type	Mapped Soils Hydric Classification †	Hydric Soil Field Indicator(s)	Hydrology Field Indicators	Comments on Apparent Connectivity to Surface Waters ‡	Comments on Boundary Determination	ADID Status
W-1	0.32	2.8	13.3	SP-2	SP-1	None	Shallow Marsh, Wet Meadow	Typha angustifolia, Typha X glauca	Elaegnus angustifolia, Coronilla varia	Morley silt loam, 2 to 6 percent slopes (MzdB)	Non hydric	F6	A2, A3, D2, D5	None	Differences in vegetation soils and topography	No
W-2A, W-2B	0.22	2.6	11.6	SP-10	SP-9	None	Shallow Marsh, Wet Meadow	Phragmites australis, Typha angustifolia	Lotus corniculatus	Morley silt loam, 2 to 6 percent slopes (MzdB)	Non Hydric	F6	A2, A3, D2, D5	Intermittent stream, ditch, and additional wetlands	Differences in vegetation , soils and hydrology	No
W-2C	0.32	2.6	9.4	SP-4	SP-3	None	Shallow Marsh, Shrub Carr	Sambucus nigra, Typha angustifolia	Solidago canadensis, Cornus racemosa	Morley silt loam, 2 to 6 percent slopes (MzdB)	Non Hydric	F3	A3, C2, D2, D5	Intermittent stream, ditch, and additional wetlands	Differences in vegetation, soils and hydrology	No
W-3	0.17	3	12.7	SP-8	SP-7	None	Wet Meadow, Shrub Carr	Phalaris arundinacea, Typha angustifolia, Cornus racemosa	Rubus occidentalis, Cirsium arvense	Morley silt loam, 2 to 6 percent slopes (MzdB)	Non Hydric	F6	D2, D5	None	Differences in vegetation, soils and hydrology	No
W-4	0.06	2.9	10.5	SP-6	SP-5	E1K	Wet Meadow, Shrub Carr	Sambucus nigra	Cirsium arvense, Cornus racemosa	Morley silt loam, 2 to 6 percent slopes (MzdB)	Non Hydric	A11, F6	A2, A3, D2, D5	None	Differences in vegetation, soils and hydrology	No
W-5	0.17	3	9.9	SP-12	SP-11	None	Atypical (stormwater feature)	Phragmites australis	Poa pratensis	Morley silt loam, 2 to 6 percent slopes (MzdB)	Non Hydric	A11	C9, D2	Likely a constructed stormwater feature	Differences in soils and hydrology	No
W-6	0.07	1.9	6	SP-14	SP-13	None	Atypical (stormwater feature)	Juncus tenuis, Juncus torreyi	Poa pratensis, Festuca rubra	Morley silt loam, 2 to 6 percent slopes (MzdB)	Non Hydric	F6	A2, A3, C9, D2, D5	Likely a constructed stormwater feature	Differences in vegetation, soils and hydrology	No

† "Hydric" means that all components listed for a given map unit are rated as being hydric. "Predominantly hydric" means components that comprise 66 to 99 percent of the map unit are rated as hydric. "Partially hydric" means components that comprise 33 to 66 percent of the map unit are rated as hydric. "Predominantly nonhydric" means components that comprise up to 33 percent of the map unit are rated as hydric. "Nonhydric" means that none of the components are rated as hydric. The assumption here is that all components of the map unit are rated as hydric or nonhydric in the underlying database. A "Not rated or not available" map unit rating is displayed when none of the components within a map unit have been rated.

‡ Comments on connectivity are the professional oppinion of the investigator based on general field observations at the time of the field visit and occasionally map resources. The ability to evaluate connectivity in the field may often be limited by public ROW access and private land access limitations. These oppinions are subject to change based on furhter investigation and data availibility. These oppinoins are not a juriscitional determination nor a significant nexus determination.

Table 4. Upland Summary Table

Upland ID	C-value	FQI vaue	Upland Community Description(s)	Characteristic Vegetation (Based on FQA)	General Comments
U-1	2.4	7.3	upland (weedy)	Cornus racemosa, Rhamnus cathartica	Weedy area, recently disturbed
U-2	2.8	10.3	upland (weedy)	Rhamnus cathartica	Weedy area, historically disturbed
U3	1.9	8	upland (weedy)	Frangula alnus, Solidago canadensis	Weedy area, likely historically disturbed, some areas of managed lawn
U-4	1.7	5.7	upland (weedy)	Daucus carota	Weedy area, historically disturbed
U-5	2.6	5.8	upland (weedy)	Rhamnus cathartica	Weedy area, historically disturbed
U-6	0.3	0.5	upland (weedy)	Centaurea biebersteinii, Daucus carota, Solidago canadensis	Weedy area, historically disturbed
U-7	2.6	7.4	upland (weedy)	Ambrosia artemisiifolia, Daucus carota	Weedy area, mostly concrete
U-8	1.4	4.3	upland (weedy)	Conyza canadensis, Daucus carota, Solidago canadensis	Weedy area, mostly gravel

Table 4. Upland Summary Table

Upland ID	C-value	FQI vaue	Upland Community Description(s)	Characteristic Vegetation (Based on FQA)	General Comments
U-9	2.3	4.5	upland (weedy)	Centaurea biebersteinii, Solidago canadensis	Weedy area, mostly gravel
U-10	1	2.2	upland (weedy)	Daucus carota, Solidago canadensis	Weedy area, mostly gravel

APPENDIX H

Plants Lists

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-13-2015

Plant Community ID: W-1 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT	Shallow Marsh and Wet Meadow
Eggers and Reed	Shallow Marsh and Fresh Meadow

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☐	Ambrosia artemisiifolia	annual bur-sage	FACU	0
☐	Ambrosia trifida	giant ragweed	FAC	0
☐	Cornus racemosa	gray dogwood	FAC	2
☐	Dipsacus laciniatus	cut-leaved teasel		
☐	Eleocharis obtusa	blunt spike-rush	OBL	3
☐	Euthamia graminifolia	grass-leaved goldenrod	FACW	4
☐	Fraxinus pennsylvanica	green ash	FACW	2
☐	Juncus canadensis	Canadian rush	OBL	7
☐	Juncus tenuis	path rush	FAC	1
☐	Juncus torreyi	Torrey's rush	FACW	4
☐	Lycopus americanus	American water-horehound	OBL	4
☐	Lythrum salicaria	purple loosestrife	OBL	
☐	Oenothera biennis	bastard evening-primrose	FACU	1
☐	Parthenocissus quinquefolia	Virginia creeper	FACU	5
☐	Populus deltoides	plains cottonwood	FAC	2
☐	Rhamnus cathartica	common buckthorn	FAC	
☐	Rubus occidentalis	black-cap		2
☐	Sambucus nigra	black elder	FACW	3
☐	Scirpus atrovirens	dark-green bulrush	OBL	3
☐	Solidago canadensis	Canadian goldenrod	FACU	1
☐	Solidago gigantea	giant goldenrod	FACW	3
☐	Solidago sempervirens	seaside goldenrod	FACW	
☐	Spartina pectinata	prairie cord grass	FACW	5
☐	Symphyotrichum lateriflorum	Farewell-Summer	FACW	
☐	Symphyotrichum novae-angliae	New England aster	FACW	3
☐	Toxicodendron radicans	common eastern poison-ivy	FAC	4
☑	Typha angustifolia	narrow-leaved cat-tail	OBL	
☑	Typha X glauca	hybrid cat-tail	OBL	
☐	Verbena hastata	blue vervain	FACW	3

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-13-2015

Plant Community ID: W-1 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT	Shallow Marsh and Wet Meadow
Eggers and Reed	Shallow Marsh and Fresh Meadow

☐	Vitis riparia	river-bank grape	FACW	2

$$FQI = \overline{C}\sqrt{N}$$

Where: FQI = Floristic Quality Index
$\overline{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**64**
N =	**23**
$\overline{C}$ =	**2.8**
FQI =	**13.3**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-13-2015

Plant Community ID: W-2A and W-2B ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT	Shallow Marsh and Wet Meadow
Eggers and Reed	Shallow Marsh and Fresh Meadow

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☐	Acer negundo	box elder	FAC	0
☐	Agrostis gigantea	redtop	FACW	
☐	Ambrosia artemisiifolia	annual bur-sage	FACU	0
☐	Bidens frondosa	Devil's-Pitchfork	FACW	1
☐	Carex vulpinoidea	brown fox sedge	FACW	2
☐	Centaurium pulchellum	branching centaury	FACU	
☐	Conium maculatum	poison-hemlock	FACW	
☐	Daucus carota	Queen Anne's-lace		
☐	Dipsacus laciniatus	cut-leaved teasel		
☐	Eleocharis obtusa	blunt spike-rush	OBL	3
☐	Equisetum arvense	common horsetail	FAC	1
☐	Euthamia graminifolia	grass-leaved goldenrod	FACW	4
☐	Geum aleppicum	yellow avens	FACW	3
☐	Hordeum jubatum	foxtail barley	FAC	
☐	Juncus canadensis	Canadian rush	OBL	7
☐	Juncus tenuis	path rush	FAC	1
☐	Juncus torreyi	Torrey's rush	FACW	4
☐	Lycopus americanus	American water-horehound	OBL	4
☐	Lythrum salicaria	purple loosestrife	OBL	
☐	Panicum virgatum	switch grass	FAC	4
☐	Phalaris arundinacea	reed canary grass	FACW	
☑	Phragmites australis	common reed	FACW	1
☐	Rhamnus cathartica	common buckthorn	FAC	
☐	Sambucus nigra	black elder	FACW	3
☐	Schoenoplectus tabernaemontani	soft-stem bulrush	OBL	4
☐	Scirpus atrovirens	dark-green bulrush	OBL	3
☐	Solidago canadensis	Canadian goldenrod	FACU	1
☐	Solidago gigantea	giant goldenrod	FACW	3
☐	Solidago sempervirens	seaside goldenrod	FACW	

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-13-2015

Plant Community ID: W-2A and W-2B ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT	Shallow Marsh and Wet Meadow
Eggers and Reed	Shallow Marsh and Fresh Meadow

☐	Sonchus arvensis	field sow-thistle	FACU	
☑	Typha angustifolia	narrow-leaved cat-tail	OBL	
☐	Typha X glauca	hybrid cat-tail	OBL	
☐	Verbena hastata	blue vervain	FACW	3

$$FQI = \bar{C}\sqrt{N}$$

Where: **FQI = Floristic Quality Index**
$\bar{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**52**
N =	**20**
$\bar{C}$ =	**2.6**
FQI =	**11.6**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-24-2015

Plant Community ID: W-2C ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT	Shallow Marsh and Shrub Scrub
Eggers and Reed	Shallow Marsh and Shrub Carr

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☐	Agrostis gigantea	redtop	FACW	
☐	Alisma subcordatum	common water-plantain	OBL	3
☐	Ambrosia artemisiifolia	annual bur-sage	FACU	0
☐	Bidens frondosa	Devil's-Pitchfork	FACW	1
☐	Eleocharis obtusa	blunt spike-rush	OBL	3
☐	Equisetum arvense	common horsetail	FAC	1
☐	Impatiens capensis	orange jewelweed	FACW	2
☐	Juncus tenuis	path rush	FAC	1
☐	Juncus torreyi	Torrey's rush	FACW	4
☐	Lycopus americanus	American water-horehound	OBL	4
☐	Parthenocissus quinquefolia	Virginia creeper	FACU	5
☐	Phalaris arundinacea	reed canary grass	FACW	
☐	Rhamnus cathartica	common buckthorn	FAC	
☑	Sambucus nigra	black elder	FACW	3
☐	Schoenoplectus tabernaemontani	soft-stem bulrush	OBL	4
☑	Typha angustifolia	narrow-leaved cat-tail	OBL	
☐	Verbena hastata	blue vervain	FACW	3

$$FQI = \bar{C}\sqrt{N}$$

Where: FQI = Floristic Quality Index
$\bar{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**34**
N =	**13**
$\bar{C}$ =	**2.6**
FQI =	**9.4**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-24-2015

Plant Community ID: W-3 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT Wet Meadow and Shrub Scrob

Eggers and Reed Fresh (Wet) Meadow and Shrub Carr

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☐	Bidens frondosa	Devil's-Pitchfork	FACW	1
☐	Carex stricta	common tussock sedge	OBL	7
☐	Conium maculatum	poison-hemlock	FACW	
☐	Cornus racemosa	gray dogwood	FAC	2
☐	Euthamia graminifolia	grass-leaved goldenrod	FACW	4
☐	Impatiens capensis	orange jewelweed	FACW	2
☐	Juncus effusus	common rush	OBL	4
☐	Juncus tenuis	path rush	FAC	1
☐	Lycopus americanus	American water-horehound	OBL	4
☐	Phalaris arundinacea	reed canary grass	FACW	
☐	Populus deltoides	plains cottonwood	FAC	2
☐	Populus deltoides	plains cottonwood	FAC	2
☐	Rhamnus cathartica	common buckthorn	FAC	
☐	Ribes americanum	American black currant	FACW	4
☐	Rubus occidentalis	black-cap		2
☐	Salix bebbiana	beaked willow	FACW	7
☐	Salix discolor	pussy willow	FACW	2
☐	Salix fragilis	brittle willow	FAC	
☐	Salix interior	Sandbar Willow	FACW	2
☐	Sambucus nigra	black elder	FACW	3
☐	Scirpus cyperinus	wool-grass	OBL	4
☐	Solidago canadensis	Canadian goldenrod	FACU	1
☐	Sonchus arvensis	field sow-thistle	FACU	
☐	Typha angustifolia	narrow-leaved cat-tail	OBL	

$$FQI = \bar{C}\sqrt{N}$$

Where: FQI = Floristic Quality Index
$\bar{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**54**
N =	**18**
$\bar{C}$ =	**3.0**
FQI =	**12.7**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-24-2015

Plant Community ID: W-4 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT	Wet Meadow and Shrub Scrob
Eggers and Reed	Fresh (Wet) Meadow and Shrub Carr

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☐	Asclepias incarnata	swamp milkweed	OBL	5
☐	Bidens frondosa	Devil's-Pitchfork	FACW	1
☐	Carex stricta	common tussock sedge	OBL	7
☐	Cirsium arvense	Canada thistle	FACU	
☐	Cornus racemosa	gray dogwood	FAC	2
☐	Eupatorium maculatum	spotted Joe-Pye-weed		4
☐	Euthamia graminifolia	grass-leaved goldenrod	FACW	4
☐	Impatiens capensis	orange jewelweed	FACW	2
☐	Rhamnus cathartica	common buckthorn	FAC	
☐	Rubus occidentalis	black-cap		2
☐	Rumex crispus	curly dock	FAC	
☐	Salix interior	Sandbar Willow	FACW	2
☑	Sambucus nigra	black elder	FACW	3
☐	Solidago canadensis	Canadian goldenrod	FACU	1
☐	Solidago gigantea	giant goldenrod	FACW	3
☐	Typha angustifolia	narrow-leaved cat-tail	OBL	
☐	Vitis riparia	river-bank grape	FACW	2

$$FQI = \bar{C}\sqrt{N}$$

Where: FQI = Floristic Quality Index
$\bar{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**38**
N =	**13**
$\bar{C}$ =	**2.9**
FQI =	**10.5**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-24-2015

Plant Community ID: W-5 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT Atypical (stormwater feature)

Eggers and Reed

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☐	Carex vulpinoidea	brown fox sedge	FACW	2
☐	Coronilla varia	crown-vetch		
☐	Daucus carota	Queen Anne's-lace		
☐	Erigeron strigosus	daisy fleabane	FACU	2
☐	Euthamia graminifolia	grass-leaved goldenrod	FACW	4
☐	Helenium autumnale	common sneezeweed	FACW	4
☐	Hordeum jubatum	foxtail barley	FAC	
☐	Juncus torreyi	Torrey's rush	FACW	4
☑	Phragmites australis	common reed	FACW	1
☐	Plantago major	broad-leaved plantain	FAC	
☐	Rudbeckia hirta	black-eyed Susan	FACU	4
☐	Rumex crispus	curly dock	FAC	
☐	Scirpus atrovirens	dark-green bulrush	OBL	3
☐	Silphium perfoliatum	cup-plant	FACW	4
☐	Solidago sempervirens	seaside goldenrod	FACW	
☐	Typha X glauca	hybrid cat-tail	OBL	
☐	Verbena hastata	blue vervain	FACW	3
☐	Vitis riparia	river-bank grape	FACW	2

$$FQI = \bar{C}\sqrt{N}$$

Where: FQI = Floristic Quality Index
$\bar{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**33**
N =	**11**
$\bar{C}$ =	**3.0**
FQI =	**9.9**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-24-2015

Plant Community ID: W-6 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT Atypical (stormwater feature)

Eggers and Reed

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☐	Ambrosia artemisiifolia	annual bur-sage	FACU	0
☐	Coronilla varia	crown-vetch		
☐	Cyperus strigosus	false nut sedge	FACW	1
☐	Daucus carota	Queen Anne's-lace		
☐	Elaeagnus angustifolia	oleaster	FACU	
☐	Euthamia graminifolia	grass-leaved goldenrod	FACW	4
☑	Juncus tenuis	path rush	FAC	1
☑	Juncus torreyi	Torrey's rush	FACW	4
☐	Phragmites australis	common reed	FACW	1
☐	Prunella vulgaris	heal-all	FAC	1
☐	Rhamnus cathartica	common buckthorn	FAC	
☐	Rhus hirta	staghorn sumac		2
☐	Schoenoplectus tabernaemontani	soft-stem bulrush	OBL	4
☐	Solidago canadensis	Canadian goldenrod	FACU	1
☐	Solidago sempervirens	seaside goldenrod	FACW	
☐	Sonchus arvensis	field sow-thistle	FACU	
☐	Symphyotrichum lateriflorum	Farewell-Summer	FACW	
☐	Typha angustifolia	narrow-leaved cat-tail	OBL	

$$FQI = \bar{C}\sqrt{N}$$

Where: FQI = Floristic Quality Index
$\bar{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**19**
N =	**10**
$\bar{C}$ =	**1.9**
FQI =	**6.0**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-24-15

Plant Community ID: U-1 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT	Upland
Eggers and Reed	Upland

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☑	Cirsium arvense	Canada thistle	FACU	
☑	Cornus racemosa	gray dogwood	FAC	2
☐	Eupatorium rugosum	white snakeroot		1
☐	Euthamia graminifolia	grass-leaved goldenrod	FACW	4
☐	Lonicera X bella	showy bush honeysuckle	FACU	
☐	Monarda fistulosa	bee balm	FACU	3
☑	Rhamnus cathartica	common buckthorn	FAC	
☐	Ribes americanum	American black currant	FACW	4
☐	Rubus occidentalis	black-cap		2
☐	Sambucus nigra	black elder	FACW	3
☐	Solidago canadensis	Canadian goldenrod	FACU	1
☐	Vitis riparia	river-bank grape	FACW	2

$$FQI = \bar{C}\sqrt{N}$$

Where: FQI = Floristic Quality Index
$\bar{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**22**
N =	**9**
$\bar{C}$ =	**2.4**
FQI =	**7.3**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-24-15

Plant Community ID: U-2 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT Upland

Eggers and Reed Upland

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☐	Acer negundo	box elder	FAC	0
☐	Asparagus officinalis	asparagus	FACU	
☐	Cirsium vulgare	bull thistle	FACU	
☐	Coronilla varia	crown-vetch		
☐	Daucus carota	Queen Anne's-lace		
☐	Elymus canadensis	Canada wild-rye	FACU	4
☐	Euthamia graminifolia	grass-leaved goldenrod	FACW	4
☐	Hypericum prolificum	shrubby St. John's-wort	FACU	5
☐	Juniperus virginiana	eastern red-cedar	FACU	3
☑	Lotus corniculatus	bird's-foot deer-vetch	FACU	
☐	Oenothera biennis	bastard evening-primrose	FACU	1
☐	Phalaris arundinacea	reed canary grass	FACW	
☐	Phragmites australis	common reed	FACW	1
☐	Prunella vulgaris	heal-all	FAC	1
☐	Quercus alba	white oak	FACU	7
☑	Rhamnus cathartica	common buckthorn	FAC	
☐	Rhus hirta	staghorn sumac		2
☐	Rudbeckia hirta	black-eyed Susan	FACU	4
☐	Rumex crispus	curly dock	FAC	
☑	Solidago canadensis	Canadian goldenrod	FACU	1
☐	Sonchus arvensis	field sow-thistle	FACU	
☐	Toxicodendron radicans	common eastern poison-ivy	FAC	4

$$FQI = \overline{C}\sqrt{N}$$

Where: FQI = Floristic Quality Index
$\overline{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**37**
N =	**13**
$\overline{C}$ =	**2.8**
FQI =	**10.3**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-24-15

Plant Community ID: U-3 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT	Upland
Eggers and Reed	Upland

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☐	Acer negundo	box elder	FAC	0
☐	Ambrosia artemisiifolia	annual bur-sage	FACU	0
☐	Asclepias syriaca	common milkweed	FACU	1
☐	Conyza canadensis	Canadian horseweed	FACU	0
☐	Coronilla varia	crown-vetch		
☐	Cyperus strigosus	false nut sedge	FACW	1
☐	Daucus carota	Queen Anne's-lace		
☐	Dipsacus laciniatus	cut-leaved teasel		
☐	Elaeagnus angustifolia	oleaster	FACU	
☐	Equisetum arvense	common horsetail	FAC	1
☐	Erigeron strigosus	daisy fleabane	FACU	2
☐	Euthamia graminifolia	grass-leaved goldenrod	FACW	4
☐	Fragaria virginiana	thick-leaved wild strawberry	FACU	1
☐	Geum aleppicum	yellow avens	FACW	3
☐	Hypericum perforatum	common St. John's-wort	FACU	
☐	Juncus tenuis	path rush	FAC	1
☐	Juniperus virginiana	eastern red-cedar	FACU	3
☐	Lotus corniculatus	bird's-foot deer-vetch	FACU	
☐	Melilotus albus	white sweet-clover		
☐	Panicum virgatum	switch grass	FAC	4
☐	Parthenocissus quinquefolia	Virginia creeper	FACU	5
☐	Phleum pratense	common timothy	FACU	
☑	Poa pratensis	Kentucky bluegrass	FAC	
☑	Rhamnus frangula	European alder buckthorn		
☐	Rumex crispus	curly dock	FAC	
☐	Setaria faberi	Chinese foxtail	FACU	
☑	Solidago canadensis	Canadian goldenrod	FACU	1
☐	Solidago sempervirens	seaside goldenrod	FACW	
☐	Sonchus arvensis	field sow-thistle	FACU	

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-24-15

Plant Community ID: U-3 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT	Upland
Eggers and Reed	Upland

☐	Symphyotrichum novae-angliae	New England aster	FACW	3
☐	Verbascum thapsus	common mullein		
☐	Verbena hastata	blue vervain	FACW	3

$$FQI = \bar{C}\sqrt{N}$$

Where: FQI = Floristic Quality Index
$\bar{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**33**
N =	**17**
$\bar{C}$ =	**1.9**
FQI =	**8.0**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-13-2015

Plant Community ID: U-4 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT	Upland
Eggers and Reed	Upland

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☐	Acer negundo	box elder	FAC	0
☐	Acer platanoides	Norway maple		
☐	Acer saccharinum	silver maple	FACW	2
☐	Achillea millefolium	common yarrow	FACU	1
☐	Bromus inermis	smooth brome	FACU	
☐	Centaurea biebersteinii	spotted knapweed		
☐	Cichorium intybus	blue chicory	FACU	
☐	Conyza canadensis	Canadian horseweed	FACU	0
☑	Daucus carota	Queen Anne's-lace		
☐	Eupatorium rugosum	white snakeroot		1
☐	Fraxinus americana	white ash	FACU	5
☐	Fraxinus pennsylvanica	green ash	FACW	2
☐	Hypericum perforatum	common St. John's-wort	FACU	
☐	Lotus corniculatus	bird's-foot deer-vetch	FACU	
☐	Melilotus albus	white sweet-clover		
☐	Mentha arvensis	field mint	FACW	3
☐	Plantago lanceolata	English plantain	FACU	
☐	Poa pratensis	Kentucky bluegrass	FAC	
☐	Populus deltoides	plains cottonwood	FAC	2
☐	Solidago canadensis	Canadian goldenrod	FACU	1
☐	Verbascum thapsus	common mullein		
☐	Vitis riparia	river-bank grape	FACW	2

$$FQI = \overline{C}\sqrt{N}$$

Where: FQI = Floristic Quality Index
$\overline{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**19**
N =	**11**
$\overline{C}$ =	**1.7**
FQI =	**5.7**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-13-2015

Plant Community ID: U-5 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT Upland

Eggers and Reed Upland

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☑	Centaurea biebersteinii	spotted knapweed		
☑	Daucus carota	Queen Anne's-lace		
☐	Fraxinus pennsylvanica	green ash	FACW	2
☐	Hypericum perforatum	common St. John's-wort	FACU	
☐	Juniperus virginiana	eastern red-cedar	FACU	3
☐	Linaria vulgaris	butter-and-eggs		
☐	Parthenocissus quinquefolia	Virginia creeper	FACU	5
☐	Poa pratensis	Kentucky bluegrass	FAC	
☑	Rhamnus cathartica	common buckthorn	FAC	
☑	Solidago canadensis	Canadian goldenrod	FACU	1
☐	Vitis riparia	river-bank grape	FACW	2

$$FQI = \bar{C}\sqrt{N}$$

Where: FQI = Floristic Quality Index
$\bar{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**13**
N =	**5**
$\bar{C}$ =	**2.6**
FQI =	**5.8**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-13-2015

Plant Community ID: U-6 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT	Upland
Eggers and Reed	Upland

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☐	Achillea millefolium	common yarrow	FACU	1
☐	Ambrosia artemisiifolia	annual bur-sage	FACU	0
☐	Arctium minus	common burdock	FACU	
☑	Centaurea biebersteinii	spotted knapweed		
☐	Chenopodium album	common lamb's-quarters	FACU	0
☐	Cichorium intybus	blue chicory	FACU	
☐	Cirsium arvense	Canada thistle	FACU	
☐	Conyza canadensis	Canadian horseweed	FACU	0
☑	Daucus carota	Queen Anne's-lace		
☐	Lotus corniculatus	bird's-foot deer-vetch	FACU	
☐	Medicago lupulina	black medick	FACU	
☐	Melilotus albus	white sweet-clover		
☐	Phleum pratense	common timothy	FACU	
☐	Poa pratensis	Kentucky bluegrass	FAC	
☐	Rumex acetosella	common sheep sorrel	FACU	
☑	Solidago canadensis	Canadian goldenrod	FACU	1
☐	Trifolium arvense	rabbit-foot clover		

$$FQI = \overline{C}\sqrt{N}$$

Where: FQI = Floristic Quality Index
$\overline{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**2**
N =	**5**
$\overline{C}$ =	**0.4**
FQI =	**0.9**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-13-2015

Plant Community ID: U-7 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT Upland

Eggers and Reed Upland

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☐	Acer negundo	box elder	FAC	0
☑	Ambrosia artemisiifolia	annual bur-sage	FACU	0
☐	Bromus inermis	smooth brome	FACU	
☐	Capsella bursa-pastoris	shepherd's-purse	FACU	
☐	Convolvulus arvensis	field bindweed		
☐	Conyza canadensis	Canadian horseweed	FACU	0
☑	Daucus carota	Queen Anne's-lace		
☐	Elymus repens	quackgrass	FACU	
☐	Euthamia graminifolia	grass-leaved goldenrod	FACW	4
☐	Linaria vulgaris	butter-and-eggs		
☐	Melilotus albus	white sweet-clover		
☐	Nepeta cataria	catnip	FACU	
☐	Phleum pratense	common timothy	FACU	
☐	Poa pratensis	Kentucky bluegrass	FAC	
☐	Rhus hirta	staghorn sumac		2
☐	Setaria faberi	Chinese foxtail	FACU	
☐	Solanum dulcamara	bittersweet nightshade	FAC	
☐	Solidago canadensis	Canadian goldenrod	FACU	1
☐	Solidago gigantea	giant goldenrod	FACW	3
☐	Symphyotrichum pilosum	White Oldfield American-Aster	FACU	
☐	Thuja occidentalis	eastern arborvitae	FACW	9
☐	Vitis riparia	river-bank grape	FACW	2

$$FQI = \overline{C}\sqrt{N}$$

Where: FQI = Floristic Quality Index
$\overline{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**21**
N =	**9**
$\overline{C}$ =	**2.3**
FQI =	**7.0**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-0041.39

8-13-2015

Plant Community ID: U-8 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT	Upland
Eggers and Reed	Upland

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☐	Acer negundo	box elder	FAC	0
☐	Ambrosia artemisiifolia	annual bur-sage	FACU	0
☐	Asclepias syriaca	common milkweed	FACU	1
☐	Centaurea biebersteinii	spotted knapweed		
☐	Cirsium arvense	Canada thistle	FACU	
☐	Convolvulus arvensis	field bindweed		
☑	Conyza canadensis	Canadian horseweed	FACU	0
☑	Daucus carota	Queen Anne's-lace		
☐	Melilotus albus	white sweet-clover		
☐	Mentha arvensis	field mint	FACW	3
☐	Oenothera biennis	bastard evening-primrose	FACU	1
☐	Parthenocissus quinquefolia	Virginia creeper	FACU	5
☐	Populus deltoides	plains cottonwood	FAC	2
☐	Setaria faberi	Chinese foxtail	FACU	
☑	Solidago canadensis	Canadian goldenrod	FACU	1

$$FQI = \bar{C}\sqrt{N}$$

Where: FQI = Floristic Quality Index
$\bar{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**13**
N =	**9**
$\bar{C}$ =	**1.4**
FQI =	**4.3**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-00041.39

8-13-2015

Plant Community ID: U-9 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT	Upland
Eggers and Reed	Upland

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☐	Achillea millefolium	common yarrow	FACU	1
☐	Artemisia absinthium	absinth sage-wort		
☑	Centaurea biebersteinii	spotted knapweed		
☐	Cirsium vulgare	bull thistle	FACU	
☐	Euthamia graminifolia	grass-leaved goldenrod	FACW	4
☐	Linaria vulgaris	butter-and-eggs		
☐	Mentha arvensis	field mint	FACW	3
☐	Poa pratensis	Kentucky bluegrass	FAC	
☑	Solidago canadensis	Canadian goldenrod	FACU	1
☐	Symphyotrichum pilosum	White Oldfield American-Aster	FACU	

$$FQI = \bar{C}\sqrt{N}$$

Where: **FQI = Floristic Quality Index**
$\bar{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**9**
N =	**4**
$\bar{C}$ =	**2.3**
FQI =	**4.5**

FLORISTIC QUALITY ASSESSMENT

Natural Resource Review

2014-00041.39

8-13-2015

Plant Community ID: U-10 ***Observer(s):*** Geof Parish and Mike Al-wathiqui

Community Classification:

WisDOT	Upland
Eggers and Reed	Upland

Dominant	Scientific Name	Common Name	Ind. Status	WI C Value
☐	Acer negundo	box elder	FAC	0
☐	Ambrosia artemisiifolia	annual bur-sage	FACU	0
☐	Cichorium intybus	blue chicory	FACU	
☐	Cirsium arvense	Canada thistle	FACU	
☑	Daucus carota	Queen Anne's-lace		
☐	Lolium perenne	English rye grass	FACU	
☐	Lotus corniculatus	bird's-foot deer-vetch	FACU	
☐	Mentha arvensis	field mint	FACW	3
☐	Oenothera biennis	bastard evening-primrose	FACU	1
☑	Solidago canadensis	Canadian goldenrod	FACU	1
☐	Symphyotrichum pilosum	White Oldfield American-Aster	FACU	
☐	Verbascum thapsus	common mullein		

$$FQI = \bar{C}\sqrt{N}$$

Where: FQI = Floristic Quality Index
$\bar{C}$ = Mean C Value
N = Number of native taxa

TOTAL =	**5**
N =	**5**
$\bar{C}$ =	**1.0**
FQI =	**2.2**

GRĀEF

collaborāte / formulāte / innovāte

APPENDIX I

WDNR Threatened and Endangered Species Review and IPaC Results

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Southeast Region Headquarters
2300 N. Dr. Martin Luther King Jr. Dr.
Milwaukee, WI 53212

Scott Walker, Governor
Cathy Stepp, Secretary
Eric Nitschke, Regional Director
Telephone 414-263-8570

December 23, 2014

Melanie K. Johnson, P.E.
Quandel Consultants
2000 Auburn Drive, Suite 291
Beachwood, OH 44122

Subject: **DNR Initial Project Review**:
Hiawatha Passenger Rail
Chicago-Milwaukee Environmental Assessment & Service Development Plan
Kenosha, Racine and Milwaukee Counties

Dear Ms. Johnson:

The Department has received the information you provided for the proposed above-referenced project on November 5th, 2014. According to your proposal, the purpose of this project is to increase passenger rail service from 7 trips per day to 10 trips per day. Proposed improvements include:

1. A new platform, with elevator towers and overhead walkway, across from the existing General Mitchell International Airport Rail Station
2. New signalization equipment at the Muskego Rail Yard (Menomonee Valley, I-43 to 43rd St.). Rehabilitation or replacement of deteriorated Muskego Rail Yard bridges over the Menomonee River may be added to the signalization project
3. Upgraded signals near the Milwaukee Intermodal Station cut-off point

Preliminary information has been reviewed by DNR staff for the project under the DOT/DNR Cooperative Agreement. Initial comments on the project as proposed are included below and assume that additional information will be provided that addresses all resource concerns identified.

A. Project-Specific Resource Concerns

Wetlands & Waterways

There is potential for wetland impacts to occur as a result of this project and therefore wetland impacts must be avoided and/or minimized to the greatest extent possible. Unavoidable wetland impacts must be mitigated for in accordance with the DOT/DNR Cooperative Agreement and the Wisconsin Department of Transportation Wetland Mitigation Banking Technical Guideline. The Department requests information regarding the amount and type of unavoidable wetland impacts.

Endangered Resources (ER)

Based upon a review of the Natural Heritage Inventory (NHI) and other Department records on December 23, 2014 no Endangered Resources or suitable habitat that could be impacted by this project are known or likely to occur in the project area or its vicinity.

Fisheries/Stream work

The Menomonee River is a navigable waterway. In order to protect developing fish eggs and substrate for aquatic organisms, all in-stream work that could adversely impact water quality should be undertaken between June 15th and February 28th of the calendar year.

Migratory birds

Based on the information provided/based on site review, there is evidence of past migratory bird nesting on the existing structure. Under the U.S. Migratory Bird Treaty Act, destruction of swallows and other migratory birds or their nests is unlawful unless a permit has been obtained from the U.S. Fish & Wildlife Service. Therefore, the project should either utilize measures to prevent nesting (e.g., remove unoccupied nests during the non-nesting season and install barrier netting prior to May 1), or should occur only between August 30 and May 1 (non-nesting season). (If netting is used, ensure it is properly maintained, then removed as soon as the nesting period is over.) If neither of these options is practicable then the U.S. Fish & Wildlife Service must be contacted to apply for a depredation permit.

Invasive species & VHS

Adequate precautions should be taken to prevent transporting or introducing invasive species via construction equipment, as provided under NR 40, Wis. Administrative Code. This website provides further information and lists those species classified as Restricted or Prohibited under NR 40:
http://dnr.wi.gov/topic/Invasives/classification.html

The Department will work with project managers to help identify specific locations of problem areas across the project site and to recommend preventive measures. The following Best Management Practices (BMPs) for rights-of-way provide a series of measures that will ensure reasonable precautions are taken throughout the stages of construction: http://council.wisconsinforestry.org/invasives/transportation/pdf/ROW-Manual.pdf

In particular, the following measures will be important for this project:
http://dnr.wi.gov/topic/fishing/documents/vhs/disinfection_protocols.pdf

For work involving waterbodies:

All equipment must be properly cleaned and disinfected to address the spread of invasive species and viruses. Special provisions should require contractors to implement the following measures before and after mobilizing in-water equipment to prevent the spread of Viral Hemorrhagic Septicemia (VHS), Zebra Mussel, and other invasive species. Follow **STSP 107-055** Environmental Protection – Aquatic Exotic Species Control, which includes the protocol found here:

For up to date information on invasive species and infested waters go to
http://dnr.wi.gov/lakes/invasives/AISByWaterbody.aspx

Floodplains

A determination must be made as to whether the project lies within a mapped/zoned floodplain. In order to meet the standards of NR 116, Floodplain Management, a hydraulic and hydrologic analysis must be conducted for the 100-year flood event for any new structures. Plans for the structure must comply with the provisions of the local community's floodplain zoning ordinance. DNR requires submittal of the results of a 100-year flood analysis for the structure(s).

If the new structure(s) will create an increase of 0.01 feet or more in the 100-year backwater condition, DNR requires that all affected upstream landowners be notified, appropriate legal arrangements made, and the local floodplain ordinance must be amended. For areas lying outside mapped/zoned floodplain, DNR may request the results of DOT flow and backwater calculations.

Other Issues/Unique Features

Emerald Ash Borer

This project has the potential for spreading the Emerald Ask Borer (EAB) beetle. It is illegal to move or transport ash material, the emerald ash borer, and hardwood debris (i.e. firewood) from EAB quarantined areas to a non-quarantined area without a compliance agreement issued by WI Department of Agriculture, Trade and Consumer Protection. Regulated items include cut hardwood (non-coniferous) firewood, ash logs, ash mulch or bark fragments larger than on inch in diameter, or ash nursery stock (DATCP statute 21).

For more information regarding the EAB and quarantine areas please follow the links below.

http://datcpservices.wisconsin.gov/eab/article.jsp?topicid=20

B. Construction Site Considerations

The following issues may be addressed in the Special Provisions and the contractor will be required to outline their construction methods in the Erosion Control Implementation Plan (ECIP).

Erosion control/Stormwater

Erosion control devices should be specified on the construction plans. All disturbed bank areas should be adequately protected and restored as soon as feasible.

An adequate erosion control implementation plan (ECIP) for the project must be developed by the contractor and submitted to this office for review at least 14 days prior to the preconstruction conference.

If erosion mat is used along stream banks, the department recommends that biodegradable and non-netted mat be used (e.g., Class I Type A Urban, Class I Type B Urban, or Class II Type C). Long-term netted mats may cause animals to become entrapped while moving in and out of the stream. Avoid the use of fine mesh matting that is tied or bonded at the mesh intersection such that the openings in the mesh are fixed in size.

Structure removal/Bridge demolition

Due to the characteristics of this section of the Menomonee River, STSP 203-020, *Removing Old Structure Over Waterway With Minimal Debris*, will be adequate for this project. Please coordinate with DNR early in the design phase of the project if the bridge must be dropped into the waterway before removal.

Asbestos

A Notification of Demolition and/or Renovation and Application for Permit Exemption, DNR form 4500-113 (NR 406, 410, and 447 Wis. Adm. Code) may be required. Please refer to DOT FDM 21-35-45 and the DNR's notification requirements web page: http://dnr.wi.gov/topic/Demo/Asbestos.html for further guidance on asbestos inspections and notifications. Contact Mark Davis, Air Management Specialist 608-266-3658, with questions on the form. The DNR's online notification system is available at http://dnr.wi.gov/topic/Demo/Asbestos.html . The notification must be submitted 10 working days in advance of demolition projects.

The above comments represent the Department's initial concerns for the proposed project and do not constitute final concurrence. Final concurrence will be granted after review of plans and further consultation if necessary. If any of the concerns or information provided in this letter requires further clarification, please contact this office 414.881.5633.

Sincerely,

Kristina Betzold

Kristina Betzold
Environmental Analysis & Review Specialist
Southeast Region

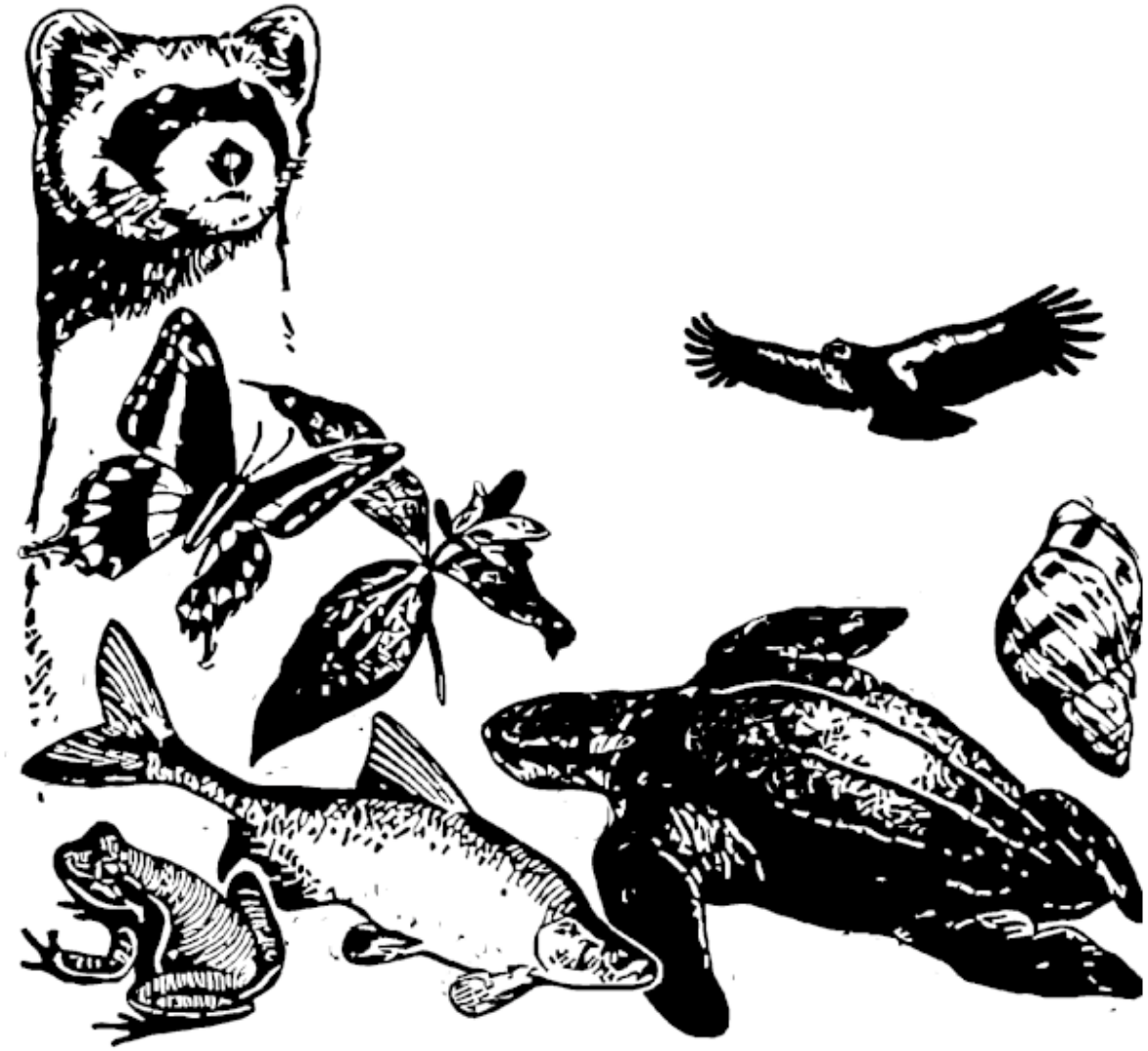
U.S. Fish & Wildlife Service

Amtrak Hiawatha NRPP

IPaC Trust Resource Report

Generated October 26, 2015 09:59 AM MDT

This report is for informational purposes only and should not be used for planning or analyzing project-level impacts. For projects that require FWS review, please return to this project on the IPaC website and request an official species list from the Regulatory Documents page.



US Fish & Wildlife Service

IPaC Trust Resource Report

Project Description

NAME

Amtrak Hiawatha NRPP

PROJECT CODE

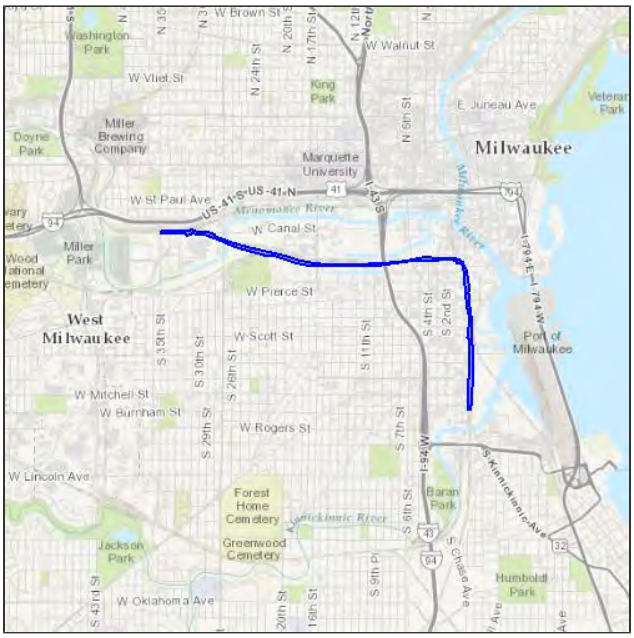
OCUXG-JXI6N-EGNFX-LYOPE-XZHS3U

LOCATION

Milwaukee County, Wisconsin

DESCRIPTION

No description provided



U.S. Fish & Wildlife Contact Information

Species in this report are managed by:

Green Bay Ecological Services Field Office
2661 Scott Tower Drive
New Franken, WI 54229-9565
(920) 866-1717

Endangered Species

Proposed, candidate, threatened, and endangered species that are managed by the Endangered Species Program and should be considered as part of an effect analysis for this project.

This unofficial species list is for informational purposes only and does not fulfill the requirements under Section 7 of the Endangered Species Act, which states that Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action." This requirement applies to projects which are conducted, permitted or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can be obtained by returning to this project on the IPaC website and requesting an official species list on the Regulatory Documents page.

Mammals

Northern Long-eared Bat Myotis septentrionalis **Threatened**

CRITICAL HABITAT

No critical habitat has been designated for this species.

https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A0JE

Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

There is no critical habitat within this project area

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

American Bittern Botaurus lentiginosus — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0F3

Bald Eagle Haliaeetus leucocephalus — **Bird of conservation concern**
Year-round
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008

Black Tern Chlidonias niger — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B09F

Black-billed Cuckoo Coccyzus erythropthalmus — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HI

Blue-winged Warbler Vermivora pinus — **Bird of conservation concern**
Season: Breeding

Bobolink Dolichonyx oryzivorus — **Bird of conservation concern**
Season: Breeding

Brown Thrasher Toxostoma rufum — **Bird of conservation concern**
Season: Breeding

Canada Warbler Wilsonia canadensis — **Bird of conservation concern**
Season: Breeding

Cerulean Warbler Dendroica cerulea — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B09I

Common Tern Sterna hirundo — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B09G

Dickcissel Spiza americana — **Bird of conservation concern**
Season: Breeding

Golden-winged Warbler Vermivora chrysoptera — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0G4

Henslow's Sparrow Ammodramus henslowii **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B09D

Least Bittern Ixobrychus exilis **Bird of conservation concern**
Season: Breeding

Marsh Wren Cistothorus palustris **Bird of conservation concern**
Season: Breeding

Pied-billed Grebe Podilymbus podiceps **Bird of conservation concern**
Season: Breeding

Red-headed Woodpecker Melanerpes erythrocephalus **Bird of conservation concern**
Season: Breeding

Rusty Blackbird Euphagus carolinus **Bird of conservation concern**
Season: Wintering

Short-eared Owl Asio flammeus **Bird of conservation concern**
Season: Wintering
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HD

Upland Sandpiper Bartramia longicauda **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HC

Willow Flycatcher Empidonax traillii **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0F6

Wood Thrush Hylocichla mustelina **Bird of conservation concern**
Season: Breeding

Refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

There are no refuges within this project area

Wetlands

Impacts to NWI wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate U.S. Army Corps of Engineers District.

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Riverine

R2UBH	1490.0 acres
R2UBFd	17.5 acres

U.S. Fish & Wildlife Service

Amtrak Hiawatha (Mitchell) NRPP

IPaC Trust Resource Report

Generated October 26, 2015 10:00 AM MDT

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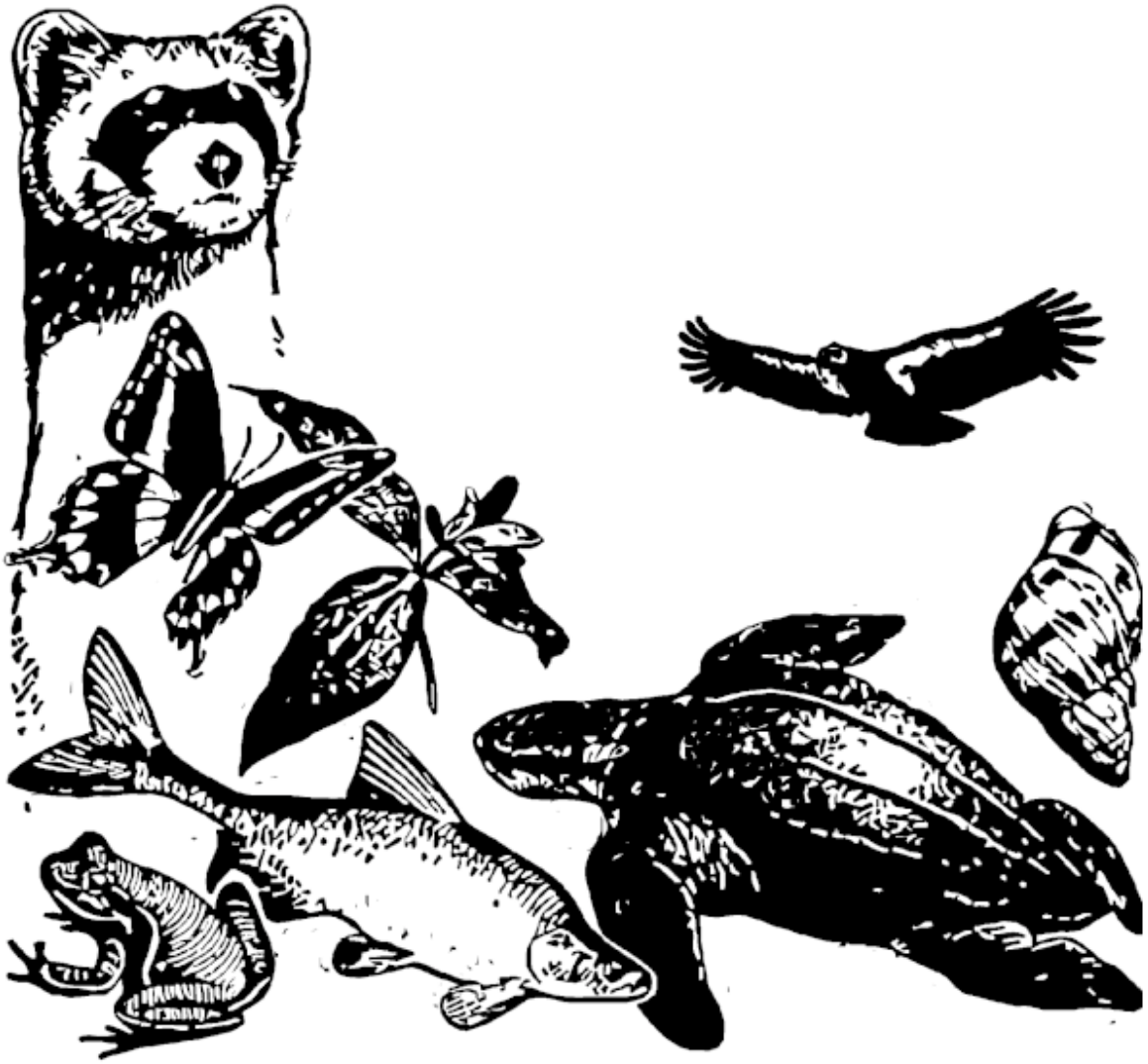


US Fish & Wildlife Service

IPaC Trust Resource Report

Project Description

NAME

Amtrak Hiawatha (Mitchell) NRPP

PROJECT CODE

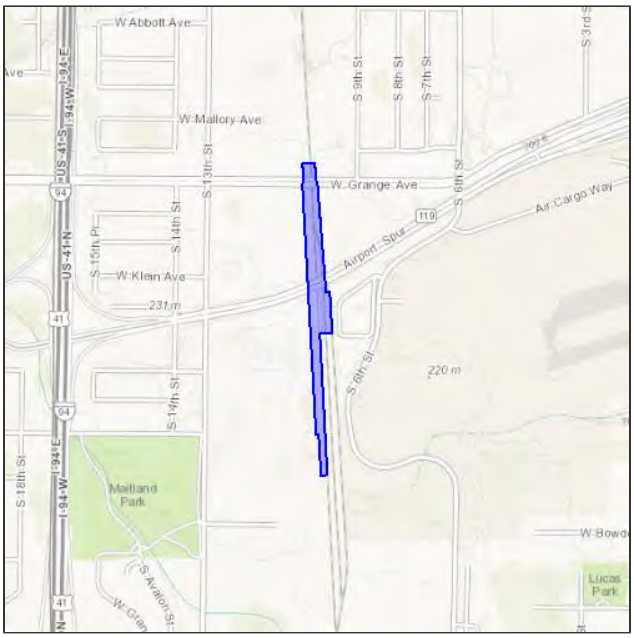
MILQC-6RCFF-F77F6-ZBTTS-BX7AIM

LOCATION

Milwaukee County, Wisconsin

DESCRIPTION

No description provided



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Mammals

Northern Long-eared Bat Myotis septentrionalis **Threatened**

CRITICAL HABITAT

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https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A0JE

Critical Habitats

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Migratory Birds

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Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0F3

Bald Eagle Haliaeetus leucocephalus — **Bird of conservation concern**
Year-round
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008

Black Tern Chlidonias niger — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B09F

Black-billed Cuckoo Coccyzus erythropthalmus — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HI

Blue-winged Warbler Vermivora pinus — **Bird of conservation concern**
Season: Breeding

Bobolink Dolichonyx oryzivorus — **Bird of conservation concern**
Season: Breeding

Brown Thrasher Toxostoma rufum — **Bird of conservation concern**
Season: Breeding

Canada Warbler Wilsonia canadensis — **Bird of conservation concern**
Season: Breeding

Cerulean Warbler Dendroica cerulea — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B09I

Common Tern Sterna hirundo — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B09G

Dickcissel Spiza americana — **Bird of conservation concern**
Season: Breeding

Golden-winged Warbler Vermivora chrysoptera — **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0G4

Henslow's Sparrow Ammodramus henslowii **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B09D

Least Bittern Ixobrychus exilis **Bird of conservation concern**
Season: Breeding

Marsh Wren Cistothorus palustris **Bird of conservation concern**
Season: Breeding

Pied-billed Grebe Podilymbus podiceps **Bird of conservation concern**
Season: Breeding

Red-headed Woodpecker Melanerpes erythrocephalus **Bird of conservation concern**
Season: Breeding

Rusty Blackbird Euphagus carolinus **Bird of conservation concern**
Season: Wintering

Short-eared Owl Asio flammeus **Bird of conservation concern**
Season: Wintering
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HD

Upland Sandpiper Bartramia longicauda **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HC

Willow Flycatcher Empidonax traillii **Bird of conservation concern**
Season: Breeding
https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0F6

Wood Thrush Hylocichla mustelina **Bird of conservation concern**
Season: Breeding

Refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

There are no refuges within this project area

Wetlands

Impacts to NWI wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate U.S. Army Corps of Engineers District.

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Freshwater Emergent Wetland

PEMC 5.49 acres

PEM1C 3.21 acres