300-3000 ITEM 3

COPY

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

W239 N1812 ROCKWOOD DRIVE • PO BOX 1607 • WAUKESHA, WI 53187-1607 •

TELEPHONE (262) 547-6721 FAX (262) 547-1103

Serving the Counties of:

KENOSHA
MILWAUKEE
OZAUKEE
RACINE
WALWORTH
WASHINGTON
MANKECHA

	٦
11	ſ
	ł

May 22, 2015

Mr. David S. Gulgowski, P.E. Facilities Management Division Milwaukee County City Campus 2711 W. Wells Street, 2nd Floor Milwaukee, WI 53208

Re: SEWRPC No. CA-406-39

Dear Mr. Gulgowski:

This will respond to your electronic mail message of September 4, 2014, requesting that the Commission staff conduct a field inspection of the Milwaukee River Parkway between W. Bender Road and W. Good Hope Road. The project area is located in parts of northeast and southeast one-quarters of U.S. Public Land Survey Section 19, and in parts of the northeast one-quarter of Section 30, Township 8 North, Range 22 East, City of Glendale, Milwaukee County, Wisconsin. The purpose of the field inspection was to identify and stake the boundaries of any wetlands within the project area.

Pursuant to your request, Commission staff identified and staked the wetland boundaries within the project area on October 27 and 28, 2014. A copy of the wetland delineation report is attached for your reference. It is the Commission staff's expectation that the wetland boundaries will be surveyed and identified on forthcoming design plans attendant to the proposed parkway improvements.

Should you have any questions regarding this information, please do not hesitate to contact Mr. Christopher J. Jors, Specialist-Biologist (*cjors@sewrpc.org* or 262-953-3246).

Sincerely,

Kenneth R. Yunker, P.E. Executive Director

KRY/TMS/CJJ/pk CA406-39 MILWAUKEE RIVER PARKWAY IMPROVMENTS LETTER (00225936).DOCX

Enclosure (#226047)

cc: Mr. Richard E. Maslowski, City of Glendale Mr. Kevin Haley, Milwaukee County Department of Parks Ms. April Marcangeli, Wisconsin Department of Natural Resources Mr. Anthony Jernigan, U.S. Army Corps of Engineers

WETLAND DELINEATION REPORT

MILWAUKEE RIVER PARKWAY AND OAK LEAF TRAIL RECONSTRUCTION From W. Bender Road to W. Good Hope Road

NE and SE Quarter, Section 19 and NE Quarter, Section 30, T8N, R22E CITY OF GLENDALE MILWUAKEE COUNTY WISCONSIN

> Prepared by: Christopher Jors

Jennifer Dietl Daniel Carter Zofia Noe

Southeastern Wisconsin Regional Planning Commission W239 N1812 Rockwood Drive P.O. Box 1607 Waukesha, WI 53187-1607

WETLAND DELINEATION REPORT OVERVIEW

(Based upon WDNR WETLAND Delineation Confirmation Request Check List)

INTRODUCTION

- Who requested the delineation David Gulgowski, Facilities Mgmt Division, Milwaukee County
- · Why the delineation was undertaken Milwaukee River Pkwy & Oak Leaf Trail reconstruction
- Date the field work was completed October 27 and 28, 2014
- · Who conducted field work Christopher Jors, Jennifer Dietl, Daniel Carter, Zofia Noe
- Statement of Qualifications

METHODS

- Description of Methods
- Sources Reviewed
 - o Topographic Map Exhibit 1
 - Wisconsin Wetland Inventory (WWI) Map Exhibit 2
 - Soil Survey and Floodplain Map Exhibit 3
 - Historical Aerial Photos Exhibits 4A to 4G
 - Sanitary Sewer Service Map Not Applicable
 - ADID Wetland Map Exhibit 5
- Description of any site specific agency guidance (site meetings, etc.) None

RESULTS AND DISCUSSION

- Antecedent hydrologic condition analysis Normal conditions
- Previous wetland delineation mapping None
- Existing environmental mapping (WWI mapping, Soil survey, etc.)
- Amount and types of wetland located within the project area
- Wetland/upland boundary explanation
- Disturbed and problematic areas encountered
- Other water resources located in the project area
- Other considerations

LITERATURE CITED

Wetland Delineation Map - Exhibit 6

Vegetation Survey and Wetland Delineation Data Forms

- Preliminary Vegetation Survey Exhibit 7
- Wetland Determination Data Forms Midwest Region Exhibit 8

Site Photos - Exhibit 9

Farm Service Agency Slide Review - Not Applicable

INTRODUCTION

This wetland delineation report responds to Milwaukee County's electronic mail request to identify the boundaries of any wetland along the Milwaukee River Parkway and Oak Leaf Trail between West Bender Road and West Good Hope Road. The project area is located in the Northeast and Southeast quarters of U.S. Public Land Survey Section 19 and the Northeast quarter of Section 30, Township 8 North, Range 22 East, City of Glendale, Milwaukee County, Wisconsin.

Statement of Qualifications

Christopher Jors, Specialist-Biologist, has worked at SEWRPC since 1993, and has been part of the wetland delineation team since 1994. He received a Bachelor's degree in Conservation Aspects of Biology from the University of Wisconsin – Milwaukee in 1993. Prior to working at SEWRPC, Chris worked at the UWM Field Station at the Cedarburg Bog in Saukville, WI, where he learned methods of sampling wetland plant communities within the Bog. Chris has attended various wetland training workshops including a U.S. Army Corps of Engineers Workshop on the Midwest Supplement to the 1987 Wetland Delineation Manual (2009) and a Wisconsin Department of Natural Resources Workshop on Techniques for Identifying Wetland Features on Farm Service Agency Aerial Slides (2009).

Daniel Carter, PhD, Senior Biologist, has worked at SEWRPC since 2013. He graduated with honors from Grinnell College with a Bachelor's degree in Biology. He later received a PhD in Biology from Kansas State University. Daniel has published several plant ecology articles in peer-reviewed journals, serves on the botany team for the Wisconsin Wildlife Action Plan, and co-teaches the UW-La Crosse Basic Wetland Plant Identification course. He has completed both basic and advanced wetland delineation training as well as Wisconsin Natural Heritage Inventory training. Prior to working for the Commission, Daniel served as project coordinator for a grassland restoration project overseen jointly by the United States Department of Agriculture and The Nature Conservancy and taught high school Biology.

Jennifer Dietl, Specialist-Biologist, earned a Bachelor's degree in Biology and Environmental Science from Carroll University in 1992. Jennifer has worked at the Commission from 1992 to 1997 and from 2006 to the present conducting wetland delineations, primary environmental corridor delineations, and vegetation surveys. In between years of service at the Commission she worked for the Wisconsin Department of Transportation – Green Bay as an LTE Environmental Analysis and Review Specialist –and the Wisconsin Department of Natural Resources – Green Bay as an LTE Hydrologist.

Zofia Noe, Specialist-Biologist, earned a Bachelor's degree in Biology and Chemistry from St. Mary's College of Maryland in 2003. She earned a Masters Degree in Coastal Marine and Wetland Studies from Coastal Carolina University in 2009. Zofia has experience in a variety of environmental assessments including water quality, aquatic plant, and upland vegetation surveys. Zofia began assisting with wetland delineations in the summer of 2013.

METHODS

Description of Methods

The wetland boundary determinations were based upon the criteria and methodologies set forth in the 1987 Corps of Engineers Wetlands Delineation Manual; the August 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest (Version 2.0); the Wisconsin Department of Administration Coastal Management Program's 1995 Basic Guide to Wisconsin's Wetlands and their Boundaries; and the State of Wisconsin 2014 Wetland Plant List.

Specific methods used to field identify wetland boundaries included the U.S. Department of the Army Corps of Engineers Routine Onsite Determination Method – Plant Community Assessment Procedure. This procedure requires an initial identification of representative plant community types in the project area followed by a characterization of vegetation, soils, and hydrology for each type.

Sources Reviewed

Prior to conducting field work, Commission staff reviewed the following data sources: Milwaukee County's topographic mapping (Exhibit 1); Wisconsin Wetland Inventory mapping (Exhibit 2); Natural Resource Conservation Service's (NRCS) soil survey and FEMA Floodplain mapping (Exhibit 3); Commission aerial photography (Exhibits 4A – 4D); ADID Wetland Map (Exhibit 5), and United States Department of Agriculture (USDA) and National Climatic Data Center (NCDC) data for antecedent and observed precipitation.

RESULTS AND DISCUSSION

Christopher Jors, lead investigator, and Jennifer Dietl, Dr. Daniel Carter, and Zofia Noe, identified and staked the boundaries of the wetlands contained within the project area on October 27 and 28, 2014.

The results of the wetland delineation field inspection for this project area are shown on Exhibit 6, which includes staked and surveyed wetland boundaries, sample site numbers and locations, primary environmental corridor, and Natural Areas.

Antecedent Hydrologic Conditions

WETS Station: MILWAUKEE MT MARY CLG, WI 5474 GHCND Station: same as WETS station

Climatological data were taken from the nearest WETS station with relevant data. Observed precipitation amounts were taken from the nearest GHCND weather station with monthly precipitation summaries.

	Month	3 yrs. In 10 less than	Norma 1	3 yrs. In 10 more than	Observe d precip.	Conditio n dry, wet, normal	Conditio n value	Mont h weight value	Product of previous two columns
1st prior	A 1								
month	October	1.29	2.28	2.78	3.2	wet	3	3	9
2nd prior month	Septembe r	1.57	3.38	4.13	1.39	dry	1	2	2
3rd prior									
month	August	2.81	3.98	4.72	4.45	normal	2	1	2
								sum	13
		If sum is							
		6-9	drier than	normal					
		10 - 14	normal						
		15 - 18	wetter the	an normal					
		Conclusi	on						
		Antecede	ent precipita	ntion was n	ormal.				

Previous wetland delineation mapping - None

Existing Environmental Mapping

The Milwaukee County topographic map (Exhibit 1) indicates that the project area is located within the western portion of the Milwaukee River Valley. The western portion of the project area encompasses a fairly level terrace occupied by the Milwaukee River Parkway and Oak Leaf Trail, dropping in elevation to the Milwaukee River channel and associated floodplain lands on the eastern portion of the project area. Surface water flows from north to south within the parkway. On the northern portion of the project area elevations range from 644 feet above sea level at the parkway road to 629 feet at the river channel. At the south end elevations range from 640 feet at the road suface to 617 feet at the river channel. Two ravines are evident on the topographic maps carrying flows from the west and discharging into the Milwaukee River just south of Good Hope Road and just north of some park buildings in Kletzsch Park.

The Wisconsin Wetland Inventory map (WWI) (Exhibit 2) indicates several forested wetlands (T3K) adjacent to the river within the project area. Also, an emergent/wet meadow wetland (E1K) and a scrub/shrub wetland (S3K) are mapped along the west side of the parkway.

The NRCS Soil Survey map (Exhibit 3) shows that the project area contains somewhat poorly drained Mundelein silt loam (MzfA) with 1-3% slopes, Matherton silt loam (MmA) with 1-3% slopes, and Alluvial land (Am) with 0-2% slopes. Other mapped soils in the project area include: Loamy land (Lu) or fill, Casco loam (CeB and CeC2) with 2-6% and 6-12% slopes, Fox silt loam (FoB) with 2-6% slopes, and Grays silt loam (GrA) with 0-2% slopes.

Historical aerial photos of the project area were reviewed going back to 1956 (Exhibits 4A-4G). This review indicated that the landscape has changed significantly on the northern portion of the project area between W. Good Hope Road and W. Green Tree Road. The W. Good Hope Road bridge over the Milwaukee River had not been constructed at the time the 1963 photo was taken. Also, the Milwaukee River Parkway road had not been constructed at that time connecting W. Good Hope Road and W. Green Tree Road. Additional residential development occurred after the 1963 photo just west of the northern portion of the project area.

Park improvements are already evident on the 1956 photo south of W. Green Tree Road, including a parkway road connecting W. Green Tree Road and W. Bender Road. Also, the W. Bender Road bridge over the Milwaukee River had already been constructed over the Milwaukee River by 1956. The most significant change to lands south of W. Green Tree Road occurs on the west side of the parkway where a large pond shown on 1956 aerial photo is subsequently drained. Water levels are significantly lower when the 1963 photo was taken when compared to 1956 photo. Sometime after the 1963 photo was taken, a ditch was constructed through the wetland, directing flows into a culvert under the parkway road. This culvert discharges into a ravine which drains to the Milwaukee River. Aerial photos for years 1956, 1963, 1995, 2000, 2005, 2007, and 2010 are attached (see Exhibits 4A to 4G).

The ADID wetland map (Exhibit 5) indicates that the wetlands within the project area east of the parkway road are all located within a designated Primary Environmental Corridor (PEC) and have been designated as ADID wetlands under the Section 404(b)(1) Guidelines of the Clean Water Act.

Amount and Types of Wetlands in the Project Area

Three wetlands were identified on the eastern portion of the project area between the parkway road and the river channel. These three wetlands, Plant Community Area (PCA) Numbers 1, 4, and 5, are contained within the one-percent annual probability (100-year) floodplain for the river. PCA Nos. 1 and 5 are forested wetlands measuring 2.6- and 0.8-acres, respectively. PCA No. 4, measuring 0.1-acre, consists of fresh (wet) meadow at the bottom of a ravine draining to the Milwaukee River. A portion of PCA No. 4 is contained within a natural area of local significance (NA-3) known as Kletzsch Park Woods, identified in SEWRPC's 2010 Amendment to the *Natural*

Areas and Critical Species Habitat Protection and Management Plan for the Southeastern Wisconsin Region. The other two wetlands (PCA Nos. 3 and 6), located west of the parkway road, are outside of the floodplain. PCA No. 3 consists of shallow marsh and fresh (wet) meadow with scattered lowland hardwoods and measures 0.5acre. PCA No. 6, measuring 0.04-acre, consists of lowland hardwoods on both sides of the Union Pacific Railroad right-of-way.

In addition, the western upland portion of Kletzsch Park Woods was inventoried for this project. PCA No. 2, measuring 1.4-acre, consists of second-growth, Southern dry-mesic hardwoods. Forked aster (*Aster furcatus*), a State-designated Threatened species, was observed during the field inspection within PCA No. 2.

A list of the observed vascular plant species, plant community types, and disturbances for each plant community area are listed in Exhibit 7. The lists of vascular plant species were prepared using a meander method on the days of the field inspections.

Wetland/Upland Boundary Explanation

Fifteen representative sample sites were identified within the project area. The Wetland Determination Data Forms describing the findings at each sample site are attached as Exhibit 8. The locations of the sample sites are shown on Exhibit 6. The wetland boundary was determined using breaks in topography, changes in vegetation composition, visual identification of wetland hydrology, and presence of hydric soils.

Disturbed and Problematic Areas Encountered

While disturbances have occurred along the parkway, it was determined that none of the disturbances led to a misleading or "Significantly Disturbed" finding for vegetation, soils, or hydrology. Wetland sample sites 3, 9, and 10 were determined to have "Naturally Problematic" vegetation based upon a lack of vegetative cover due to flowing water. Wetland sample sites 4 and 5 were found to have "Naturally Problematic" soils due to the fluvial nature of the soils at those sites. Also, while sample site 8 had both hydrophytic vegetation and hydric soils, it was determined these indicators were misleading. Sample site 8 did not have wetland hydrology. Further, it was determined that the hydric soils indicators were relict. Historical aerial photography revealed that a large water body had once occupied this site (see attached 1956 aerial photo) which would explain the formation of hydric soils. Over time this water body was drained via a culvert under the parkway road leading to a ravine which discharges into the Milwaukee River. A ditch is also evident on aerial photos since 1995. With these circumstances, sample site 8 was determined to be upland. All sample sites were found to meet "Normal Circumstances" based upon long-term, well-established conditions.

Other Water Resources Located in the Project Area

Two ravines discharge into the Milwaukee River within the project area. A ravine just south of W. Good Hope Road likely carries stormwater flows from the residential lands west of the parkway in that area. A ravine on the southern edge of Kletzsch Park Woods receives flows from a culvert draining the wetland on the west side of the parkway road.

Other Considerations

The wetlands located within the recorded Primary Environmental Corridor (PEC) east of the parkway road, as shown on the Exhibit 6 maps, have been designated as Advanced Delineation and Identification (ADID) wetlands under the Section 404(b)(1) Guidelines of the Clean Water Act and are deemed generally unsuitable for the discharge of dredge and fill material. In addition, recent revisions of the nonagricultural performance standards set forth in Section NR 151.125 of the *Wisconsin Statutes*, requires establishment of a 75-foot impervious surface protective area to protect these higher quality wetlands. PCA nos. 3 and 6, located west of the parkway road, requires establishment of a 50-foot protective area due to the presence of "moderately susceptible" wetlands including shallow marsh and fresh (wet) meadow in PCA 3 and early successional forested wetland in PCA 6.

This designated protective area boundary is measured horizontally from the delineated wetland boundary to the closest impervious surface. The protective area requirements should be taken into consideration for any planned improvements on the subject property and it is suggested that you contact WDNR regarding approaches to meet the requirements. Finally, please be advised that no Federal or State regulatory jurisdiction determinations relative to any wetland permits or certifications are made under this report.

LITERATURE CITED

Southeastern Wisconsin Regional Planning Commission, 2010, The Natural Areas and Critical Species Habitat Protection and Management Plan for the Southeastern Wisconsin Region.

U.S. Army Corps of Engineers, 2014, State of Wisconsin Wetland Plant List

U.S. Army Corps of Engineers, 2012, Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest (Version 2.0). U.S. Army Engineer Research and Development Center.

U.S. Army Corps of Engineers, 1987, U.S. Army Corps of Engineers wetlands delineation manual. Wetlands Research Program Technical Report Y-87-1.

Wisconsin Coastal Management Program, 1995, Basic Guide to Wisconsin's Wetland and their Boundaries.

CA406-39 MILWAUKEE RIVER PARKWAY AND OAK LEAF TRAIL RECONSTRUCTION (00224705).DOC

Exhibit 1. Topographic Map Map 1 of 2 Milwaukee River Parkway and Oak Leaf Trail Reconstruction from West Bender Road to West Good Hope Road

NE and SE Quarter, Section 19, NE Quarter, Section 30,T8N-R22E City of Glendale, Milwaukee County

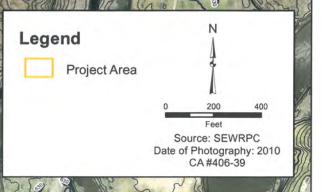


Exhibit 1. Topographic Map Map 2 of 2 Milwaukee River Parkway and Oak Leaf Trail Reconstruction from West Bender Road to West Good Hope Road NE and SE Quarter, Section 19, NE Quarter, Section 30, T8N-R22E City of Glendale, Milwaukee County

0

650

"000 - -----

650

Legend

Project Area

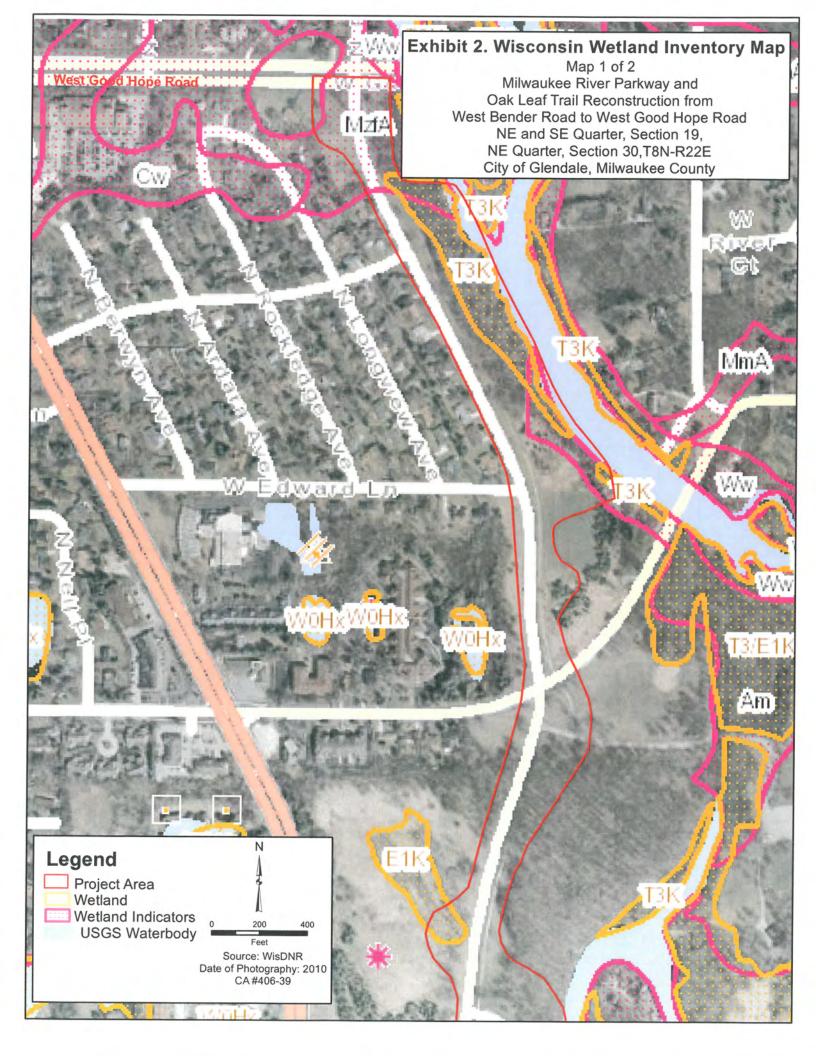
650

670

Ν

200 Feet Source: SEWRPC Date of Photography: 2010 CA #406-39

400



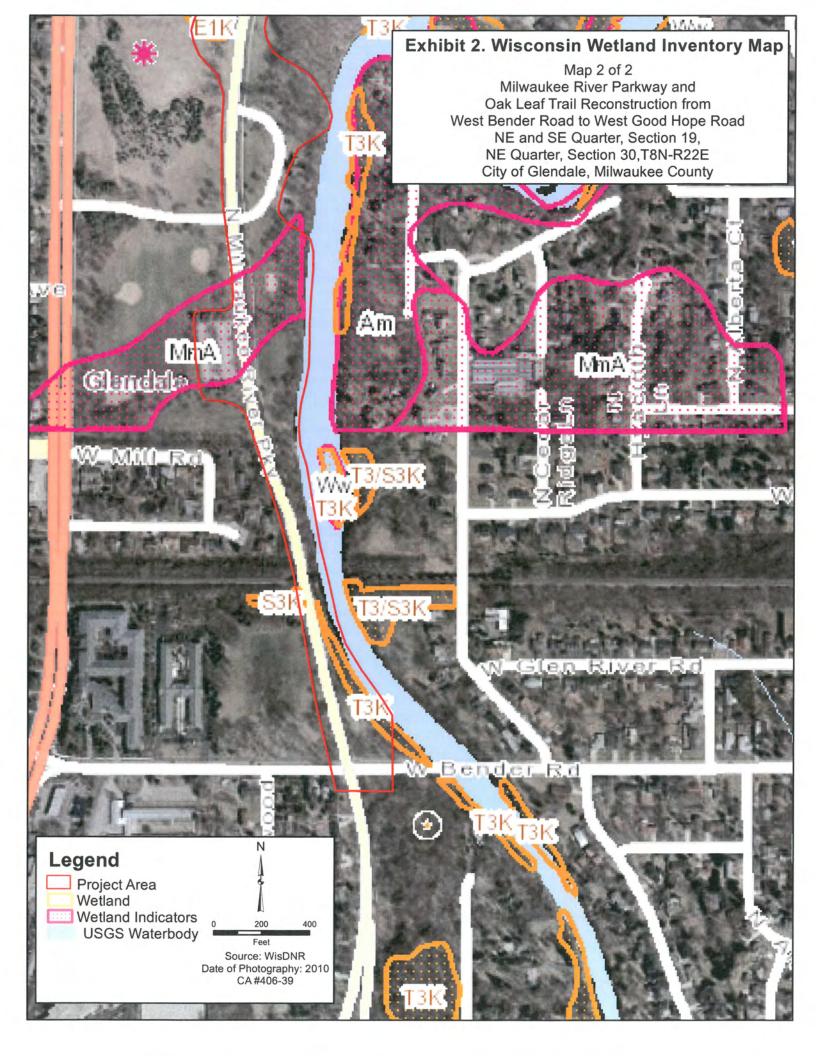
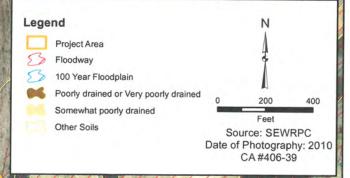


Exhibit 3. Soils and Floodplain Map Map 1 of 2 Milwaukee River Parkway and Oak Leaf Trail Reconstruction from West Bender Road to West Good Hope Road NE and SE Quarter, Section 19, NE Quarter, Section 30,T8N-R22E City of Glendale, Milwaukee County

West Good H



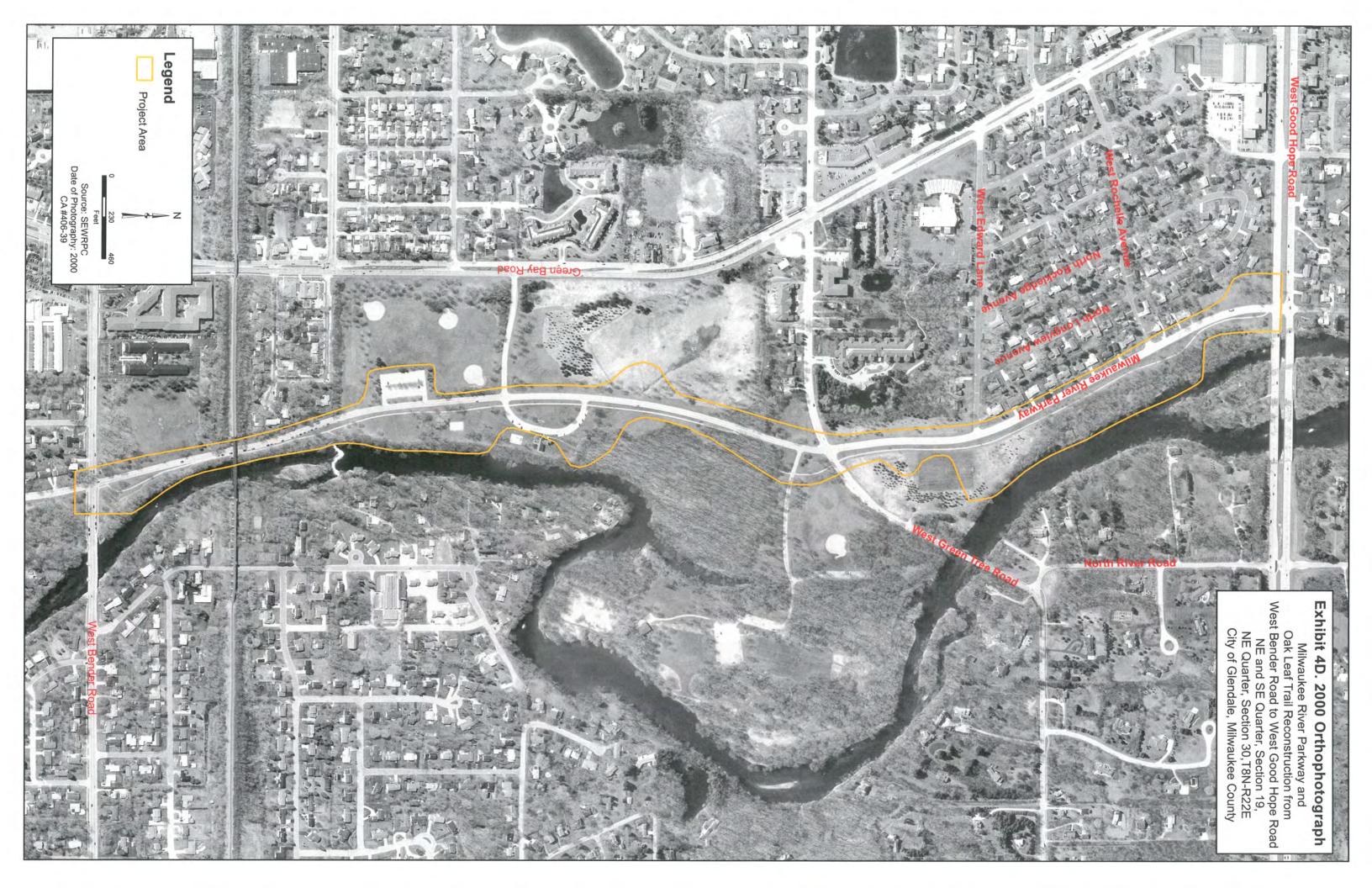


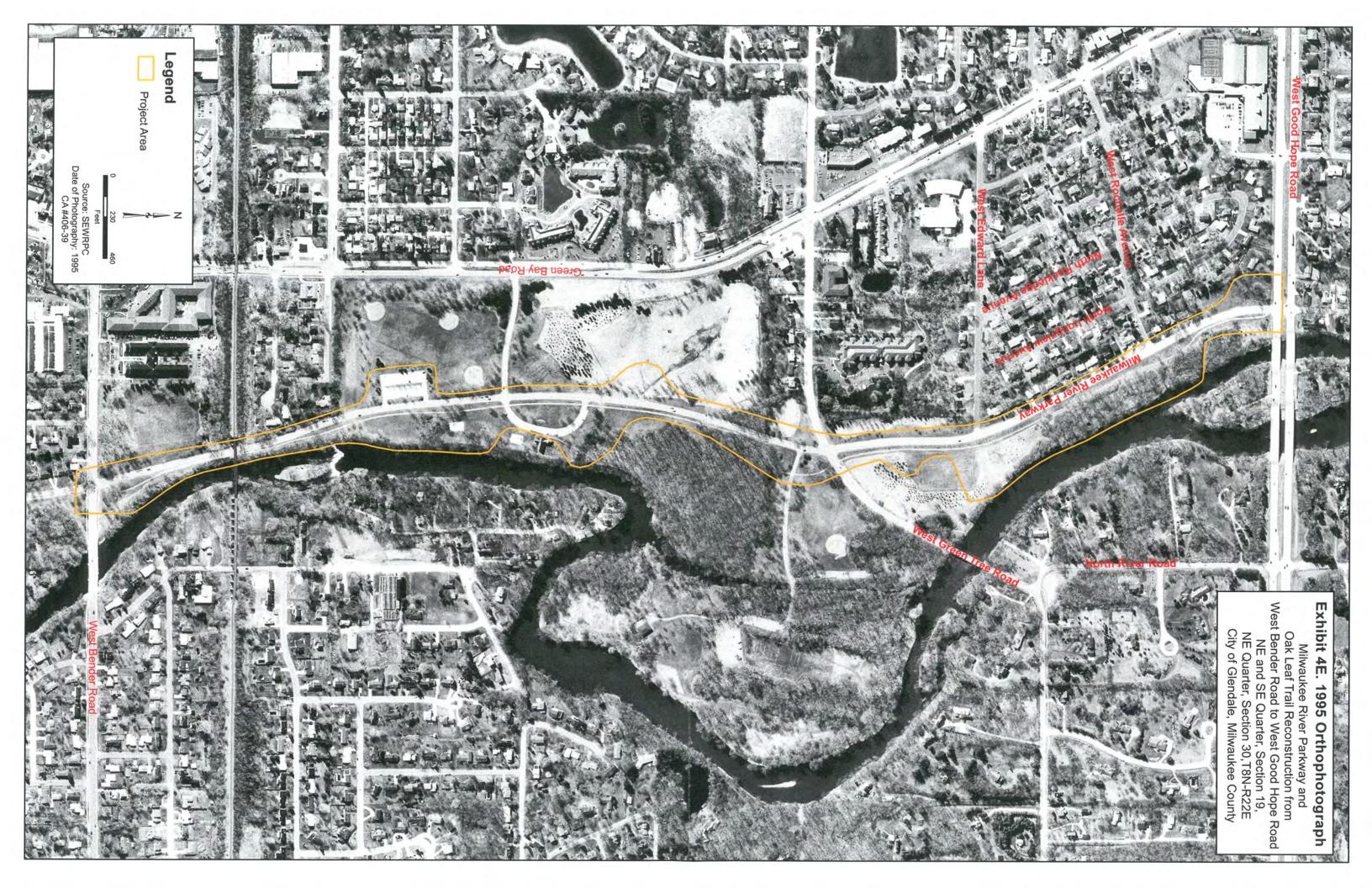


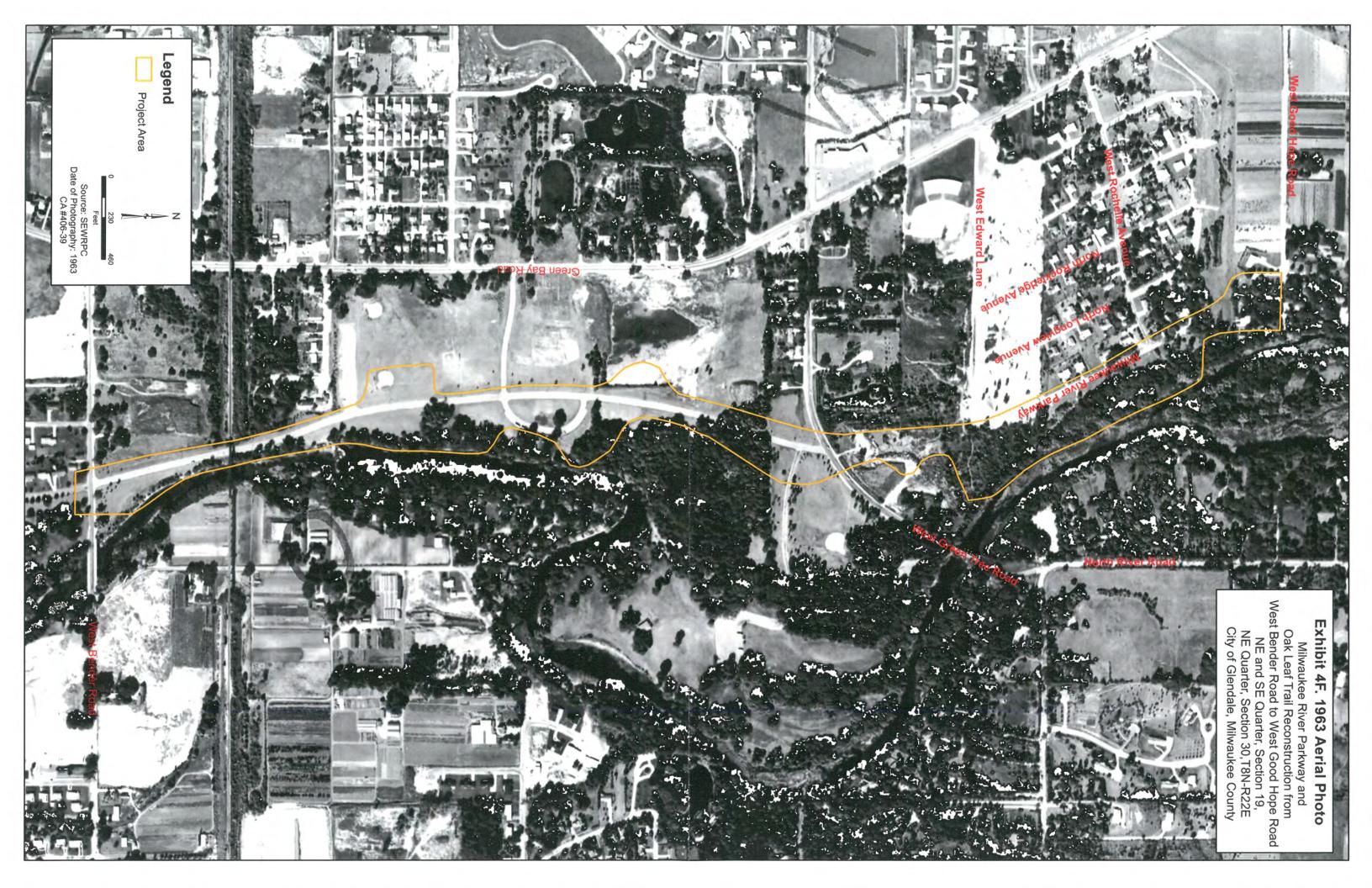












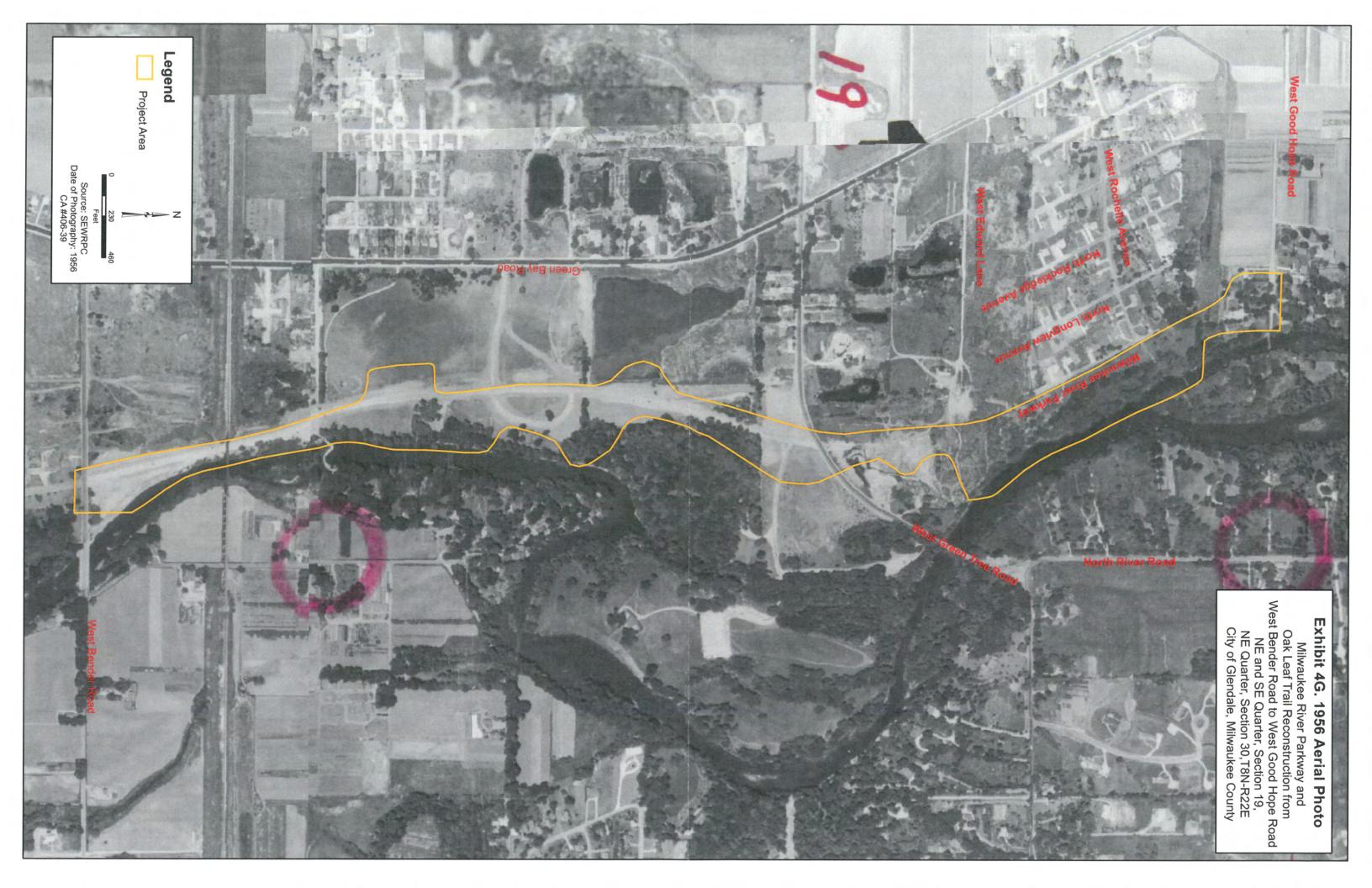
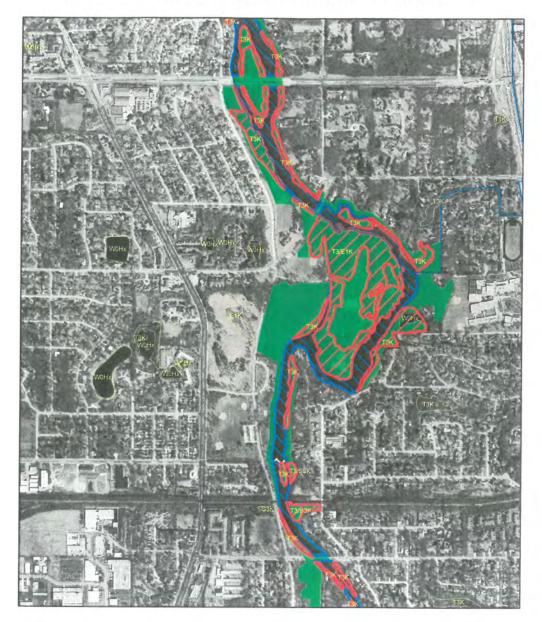


EXHIBIT 5. ADID Wetland Map Milwaukee River Parkway and Oak Leaf Trail Reconstruction from West Bender Road to West Good Hope Road NE and SE Quarter, Section 19 NE Quarter, Section 30, T8N-R22E City of Glendale, Milwaukee County

ADID Wetlands In Southeast Wisconsin

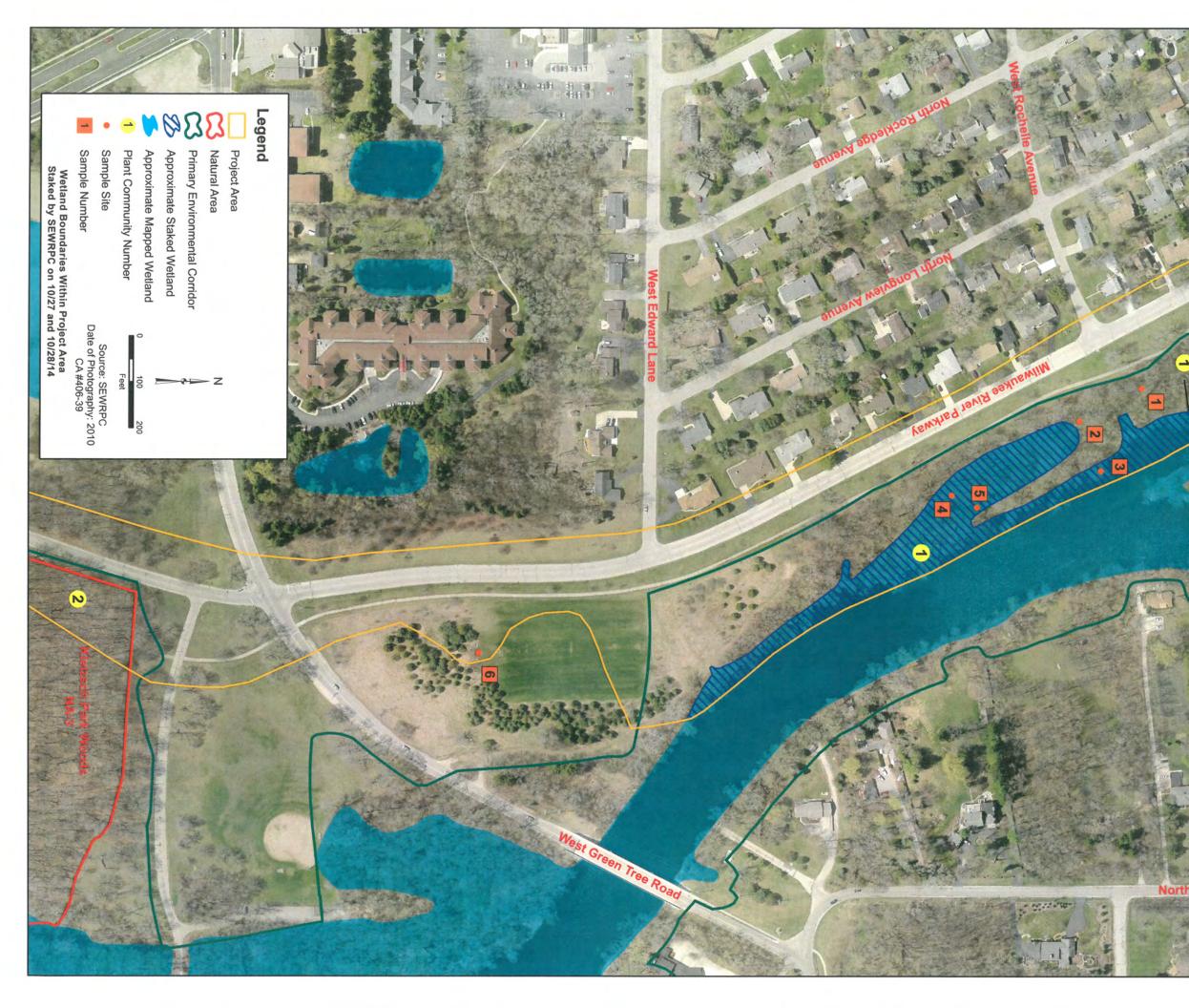


Legend

2010 Wetlands ADID Wetlands ADID Lakes and 2010 Primary Fr

ADID Lakes and Ponds 2010 Primary Environmental Corridors 1 inch = 978 feet

W E S





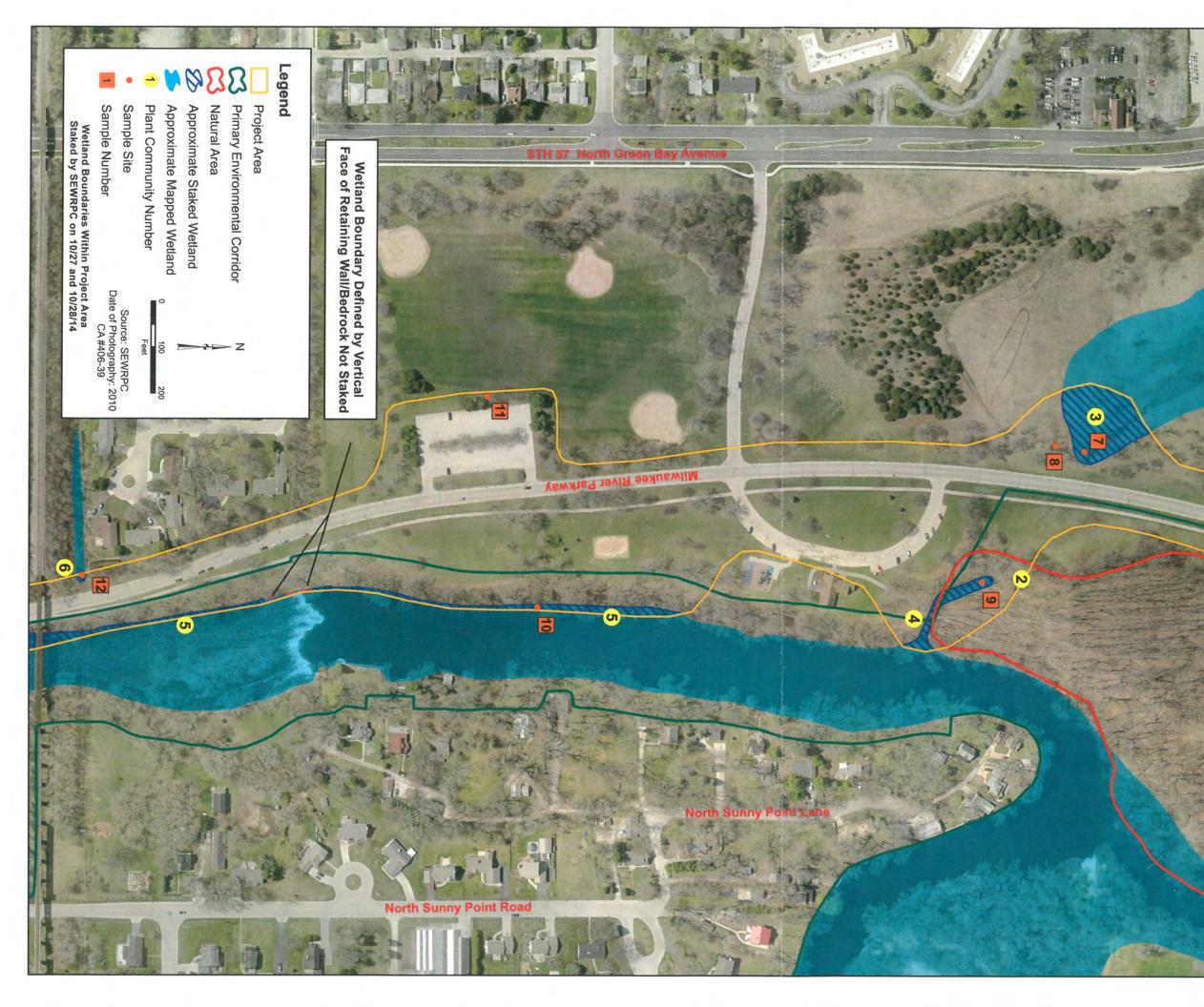


Exhibit 6. Wetland Delineation Map Map 2 of 3 Milwaukee River Parkway and Oak Leaf Trail Reconstruction from West Bender Road to West Good Hope Road NE and SE Quarter, Section 19, NE Quarter, Section 30,T8N-R22E City of Glendale, Milwaukee County

N

Exhibit 6. Wetland Delineation Map Map 3 of 3 Milwaukee River Parkway and Oak Leaf Trail Reconstruction from West Bender Road to West Good Hope Road NE and SE Quarter, Section 19, NE Quarter, Section 30,T8N-R22E City of Glendale, Milwaukee County

Legend

A MARTINET V



0 100 200 Feet Source: SEWRPC Date of Photography: 2010

CA#406-39

6

6

15

Wetland Boundaries Within Project Area Staked by SEWRPC on 10/27 and 10/28/14

Bender Road

SVY4190 CA406-39

EXHIBIT 7

PRELIMINARY VEGETATION SURVEY MILWAUKEE RIVER PARKWAY AND OAK LEAF TRAIL RECONSTRUCTION FROM WEST BENDER ROAD TO WEST GOOD HOPE ROAD

Dates:	October 27 and 28, 2014
Observers:	Daniel L. Carter, PhD., Senior Biologist Christopher J. Jors, Biologist Jennifer L. Dietl, Biologist Zofia Noe, Biologist Southeastern Wisconsin Regional Planning Commission
Location:	City of Glendale in parts of U.S. Public Land Survey Sections 19 and 30, Township 8 North, Range 22 East, Milwaukee County, Wisconsin.
Species List:	PLANT COMMUNITY AREA NO. 1 - NATIVE PLANT SPECIES

Co-dominant plant species

Acer negundo--Boxelder Acer saccharinum--Silver maple Aster ontarionis--Ontario aster Clematis virginiana-Virgin's bower Elymus virginicus--Virginia wild rve Fraxinus pennsylvanica--Green ash Hydrophyllum virginianum--Virginia waterleaf Impatiens capensis--Jewelweed Laportea canadensis--Wood nettle Lysimachia ciliata -- Fringed loosestrife Populus deltoides--Cottonwood Quercus bicolor--Swamp white oak Ribes americanum--Wild black currant Rudbeckia laciniata--Green-headed coneflower Sambucus canadensis--Elderberry Solidago gigantea-Giant goldenrod Thalictrum dasycarpum--Tall meadow rue Ulmus americana--American elm Urtica dioica-Stinging nettle Viburnum lentago--Nannyberry

NON-NATIVE PLANT SPECIES

Acer platanoides--Norway maple <u>Alliaria officinalis</u>--Garlic-mustard <u>Fallopia japonica</u>--Japanese knotweed <u>Glechoma hederacea</u>--Creeping Charlie <u>Hesperis matronalis</u>--Dames rocket <u>Iris pseudacorus</u>--Yellow iris <u>Lonicera X bella</u>--Hybrid honeysuckle <u>Lysimachia nummularia</u>--Moneywort <u>Phalaris arundinacea</u>--Reed canary grass <u>Rhamnus cathartica</u>--Common buckthorn <u>Salix fragilis</u>--Crack willow Total number of plant species: 31 Number of alien, or non-native, plant species: 11 (35 percent)

This approximately 2.6-acre plant community area is part of the Milwaukee River floodplain- wetland complex and consists of open water and second growth, Southern wet to wet-mesic lowland hardwoods. Disturbances to the plant community area include the establishment of footpaths, side casting of dredge spoil material, siltation and sedimentation due to stormwater runoff from adjacent lands, and water level changes due to ditching. While no Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection, this reach of the Milwaukee River has record of Striped shiner (*Luxilus chrysocephalus*), a State-designated Endangered fish species; and Greater redhorse (*Moxostoma valenciennesi*), a State-designated Special Concern fish species.

PLANT COMMUNITY AREA NO. 2 - NATIVE PLANT SPECIES

Acer saccharum--Sugar maple Anemone virginiana--Thimbleweed Aster furcatus--Forked aster (A State-designated Threatened species) Aster lateriflorus--Calico aster Aster sagittifolius-Arrowleaf aster Carex pensylvanica--Pennsylvania sedge Carya cordiformis--Yellowbud hickory Caulophyllum thalictroides--Blue cohosh Cornus alternifolia--Pagoda dogwood Cornus racemosa--Grey dogwood Fagus grandifolia--American beech Fraxinus americana---White ash Fraxinus pennsylvanica--Green ash Geranium maculatum--Wild geranium Geum canadense--White avens Hackelia virginiana--Stickseed Hamamelis virginiana--Witch-hazel Hydrophyllum virginianum--Virginia waterleaf Hystrix patula--Bottlebrush grass Ostrya virginiana--Ironwood Prunus serotina--Black cherry Prunus virginiana---Chokecherry Quercus alba--White oak Quercus rubra--Northern red oak Ribes americanum--Wild black currant Solidago flexicaulis--Zig-zag goldenrod Solidago gigantea--Giant goldenrod Thalictrum dasycarpum--Tall meadow rue Thalictrum dioicum--Woodland meadow rue Tilia americana--Basswood Ulmus americana--American elm Viburnum lentago-Nannyberry Viburnum rafinesquianum--Downy arrowwood Vitis riparia--Riverbank grape

NON-NATIVE PLANT SPECIES

<u>Acer platanoides</u>--Norway maple <u>Alliaria officinalis</u>--Garlic-mustard <u>Leonurus cardiaca</u>--Motherwort <u>Lonicera X bella</u>--Hybrid honeysuckle PCA No. 2 NON-NATIVE PLANT SPECIES cont'

<u>Rhamnus</u> <u>cathartica</u>--Common buckthorn <u>Viburnum</u> <u>opulus</u>--European highbush-cranberry

Total number of plant species: 40 Number of alien, or non-native, plant species: 6 (15 percent)

This approximately 1.4-acre upland plant community area is part of a larger primary environmental corridor and consists of second growth, Southern dry-mesic hardwoods. Disturbances to the plant community area include the establishment of footpaths. Forked aster (<u>Aster furcatus</u>), a State-designated Threatened species, was observed during the field inspection. In addition, SEWRPC's 2010 Amendment to the Natural Areas and Critical Species Habitat Protection and Management Plan for the Southeastern Wisconsin Region identifies this plant community area as part of the Kletzsch Park Woods, a natural area of local significance (NA-3).

PLANT COMMUNITY AREA NO. 3 - NATIVE PLANT SPECIES

<u>Aster lucidulus</u>--Swamp aster <u>Aster novae-angliae</u>--New England aster <u>Aster simplex</u>--Marsh aster <u>Cornus stolonifera</u>--Red-osier dogwood <u>Fraxinus pennsylvanica</u>--Green ash <u>Geum laciniatum</u>--Rough avens <u>Juncus dudleyi</u>--Dudley's rush <u>Lysimachia ciliata</u>--Fringed loosestrife <u>Salix discolor</u>--Pussy willow <u>Solidago altissima</u>--Tall goldenrod <u>Solidago gigantea</u>--Giant goldenrod

NON-NATIVE PLANT SPECIES

Agrostis stolonifera--Creeping bentgrass Festuca elatior--Tall fescue Lythrum salicaria--Purple loosestrife Phalaris arundinacea--Reed canary grass Poa pratensis--Kentucky bluegrass Rhamnus frangula--Glossy buckthorn Typha angistifolia--Narrow-leaved cattail

Total number of plant species: 18 Number of alien, or non-native, plant species: 7 (39 percent)

This approximately 0.5-acre plant community area is part of a larger wetland complex and consists of shallow marsh and fresh (wet) meadow with scattered lowland hardwoods. Disturbances to the plant community area include past filling, siltation and sedimentation due to stormwater runoff from adjacent lands, and water level changes due to ditching and draining. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

PLANT COMMUNITY AREA NO. 4 - NATIVE PLANT SPECIES

Impatiens capensis--Jewelweed Ribes americanum--Wild black currant Sambucus canadensis--Elderberry

NON-NATIVE PLANT SPECIES

Rhamnus cathartica--Common buckthorn

Total number of plant species: 4 Number of alien, or non-native, plant species: 1 (25 percent)

This approximately 0.1-acre plant community area is part of the Milwaukee River floodplain- wetland complex and consists of a narrow drainage way (gully) with fresh (wet) meadow. Disturbances to the plant community area include the establishment of footpaths, past filling, and siltation and sedimentation due to stormwater runoff from adjacent lands. While no Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection, this reach of the Milwaukee River has record of Striped shiner (*Luxilus chrysocephalus*), a State-designated Endangered fish species; and Greater redhorse (*Moxostoma valenciennesi*), a State-designated Special Concern fish species. In addition, SEWRPC's 2010 Amendment to the *Natural Areas and Critical Species Habitat Protection and Management Plan for the Southeastern Wisconsin Region* identifies this plant community area as part of the Kletzsch Park Woods, a natural area of local significance (NA-3).

PLANT COMMUNITY AREA NO. 5 - NATIVE PLANT SPECIES

Acer negundo--Boxelder Acer saccharinum-Silver maple Aster lateriflorus-Calico aster Aster ontarionis-Ontario aster Elymus virginicus-Virginia wild rye Epilobium coloratum--Willow-herb Equisetum arvense--Common horsetail Fraxinus pennsylvanica--Green ash Hydrophyllum virginianum--Virginia waterleaf Impatiens capensis--Jewelweed Iris sp.--Iris Lemna minor--Lesser duckweed Populus deltoides--Cottonwood Ribes americanum -- Wild black currant Sambucus canadensis--Elderberry Solidago gigantea--Giant goldenrod

<u>Ulmus</u> <u>americana</u>--American elm <u>Viburnum</u> <u>lentago</u>--Nannyberry <u>Vitis</u> <u>riparia</u>--Riverbank grape

NON-NATIVE PLANT SPECIES

<u>Alliaria officinalis</u>--Garlic-mustard <u>Epipactis helleborine</u>--Helleborine <u>Euonymus europaeus</u>--European spindle tree <u>Glechoma hederacea</u>--Creeping Charlie <u>Lonicera X bella</u>--Hybrid honeysuckle <u>Myosotis scorpioides</u>--Forget-me-not <u>Myriophyllum spicatum</u>--European water-milfoll PCA No. 5 - NON-NATIVE PLANT SPECIES cont'

<u>Phalaris</u> arundinacea</u>--Reed canary grass <u>Rhamnus</u> cathartica--Common buckthorn <u>Rhamnus</u> frangula--Glossy buckthorn <u>Robinia</u> pseudoacacia--Black locust <u>Salix</u> fragilis--Crack willow <u>Solanum</u> dulcamara--Deadly nightshade <u>Viburnum</u> opulus--European highbush-cranberry

Total number of plant species: 33

Number of alien, or non-native, plant species: 14 (42 percent)

This approximately 0.8-acre plant community area is part of the Milwaukee River floodplain- wetland complex and consists of second growth, Southern wet to wet-mesic lowland hardwoods. Disturbances to the plant community area include siltation and sedimentation due to stormwater runoff from adjacent lands and placement of rock rip-rap. While no Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection, this reach of the Milwaukee River has record of Striped shiner (*Luxilus chrysocephalus*), a State-designated Endangered fish species; and Greater redhorse (*Moxostoma valenciennesi*), a State-designated Special Concern fish species.

PLANT COMMUNITY AREA NO. 6 - NATIVE PLANT SPECIES

Acer negundo-Boxelder

<u>Aster simplex</u>--Marsh aster <u>Cornus stolonifera</u>--Red-osier dogwood <u>Fraxinus pennsylvanica</u>--Green ash <u>Geum canadense</u>--White avens <u>Hackelia virginiana</u>--Stickseed <u>Ribes americanum</u>--Wild black currant <u>Solidago gigantea</u>--Giant goldenrod <u>Vitis riparia</u>--Riverbank grape

NON-NATIVE PLANT SPECIES

<u>Alliaria officinalis</u>--Garlic-mustard <u>Glechoma hederacea</u>--Creeping Charlie <u>Rhamnus</u> <u>cathartica</u>--Common buckthorn <u>Solanum dulcamara</u>--Deadly nightshade

Total number of plant species: 13 Number of alien, or non-native, plant species: 4 (31 percent)

This approximately 0.04-acre plant community area is part of a larger wetland complex and consists of second growth, Southern wet to wet-mesic lowland hardwoods. Disturbances to the plant community area include ditching, dumping and filling along the wetland edge, and siltation and sedimentation due to stormwater runoff from adjacent lands. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

	EXHIBIT 8		
WETLAND DET	ERMINATION DATA FORM - Mid	west Region	
Project/Site: <u>Milwaukee River Pkwy and Oak Leaf Trail Rec</u> Applicant/Owner: Investigator(s): <u>Jennifer Dietl and Zofia Noe; SEWRPC</u>	onstruction City/County: <u>City of Glendale/Mi</u> S Section, Township, Range: <u>Section</u>	waukee County State: <u>WI</u> on 19, T8N, R22E	Sampling Date: <u>10/27/2014</u> Sampling Point: <u>1</u>
Landform (hillslope, terrace, etc.): terrace	Local relief (concave, convex, non	e): <u>none</u>	
Slope (%): 2-6% Lat:	Long:		Datum:
Soil Map Unit Name: Casco loam (CeB)		NWI cla	assification: T3K
Are climatic/hydrologic conditions on the site typical for this t	me of year? Yes 🛛 No 🗌 (If no,	explain in Remarks)	
Are Vegetation, Soil, or Hydrology signific	cantly disturbed? Are "Normal Circumstance		No 🗆
Are Vegetation, Soil, or Hydrology natura	lly problematic? (If, needed, explain any an		
SUMMARY OF FINDINGS - Attach site map showing sam			
Hydrophytic Vegetation Present? Hydric Soils Present? Yes Note: Soils Present? Hydric S	within a Wetland?	🗌 Yes	⊠No
Wetland Hydrology Present? Yes No			
Remarks: Sample site taken at this location as WWI n	napping indicated wetland (T3K) but field v	isit determined sam	ple area to be upland.

VEGETATION - Use scientific names of plants.				
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Tilia americana	<u>40</u>		FACU	Number of Dominant Species
2. Juglans nigra	30	\boxtimes	FACU	That are OBL, FACW, or FAC: 4 (A)
3. Fraxinus pennsylvanica	15		FACW	Total Number of Dominant
4. Ulmus americana	<u>10</u>		FACW	Species Across All Strata: <u>7</u> (B)
5				Percent of Dominant Species
	<u>95</u>	= Total Cov	ver	That Are OBL, FACW, or FAC: 57% (A/B)
Sapling/Shrub Stratum (Plot size: 30' radius)				Prevalence Index worksheet:
1. Rhamnus cathartica	35	\boxtimes	FAC	Total % Cover of: Multiply by:
2. Lonicera x bella	15	\boxtimes	FACU	OBL species x 1 =
3. Acer negundo	<u>10</u>		FAC	FACW species x 2 =
4. Ribes americanum	10		FACW	FAC species x 3 =
5				FACU species x 4 =
	<u>70</u>	= Total Cov	/er	UPL species x 5 =
Herb Stratum (Plot size: 5' radius)				Column Totals: (A) (B)
1. Solidago gigantea	30		FACW	Prevalence Index = B/A =
2. Rhamnus cathartica	<u>10</u>		FAC	Hydrophytic Vegetation Indicators:
3. Alliaria officinalis	8		FAC	1 - Rapid Test for Hydrophytic Vegetation
4. Hesperis matrionalis	<u>6</u>		FACU	2 - Dominance Test is >50%
5. Hydrophyllum virginianum	5		FAC	 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting)
6			_	data in Remarks or on a separate sheet)
7				5 - Problematic Hydrophytic Vegetation ¹ (Explain)
8				
9			_	¹ Indicators of hydric soil and wetland hydrology must
10,				Be present, unless disturbed or problematic.
	59	= Total Cov	er	
Woody Vine Stratum (Plot size: 30' radius)				Hydrophytic
1. Clematis virginiana	35	\boxtimes	FAC	Vegetation
2. <u>Vitis riparia</u>	10		FAC	Present? Yes No 🗆
	45	= Total Cove	er	

SOIL

Sampling Point: 1

b.7 10/R 2/2 100 Clay Ioan 7.19 10/R 4/4 100 Sand and gravel 121 10/R 4/4 100 Sand and gravel 21-24 10/R 2/2 95 7.5VR 5/8 5 C PL M Sill loam 21-24 10/R 2/2 95 7.5VR 5/8 5 C PL M Sill loam 7/pp: C-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains *Location: PL=Pore Lining, M=Matrix Indicators for Problematic Hydris Solit*, Cocat Praine Reduced (Afd) Histic Epipedon (A/2) Sandy Bratox, Matrix (S1) Dark Surface (A71) Dark Surface (A71) Dark Surface (A71) Depleted Dark Surface (A11) Dapleted Matrix (S2) Dother dischars (Hydroigy must be present, Uning, M=Matrix) Pdetected Matrix (S1) *Indicators of Hydrophytic vegetation and Welland Hydroigy must be present, Uning, M=Matrix Theic Dark Surface (A12) Dapleted Matrix (S1) Patrix (Fridorigy must be present, Unicators of Hydrophytic vegetation and Welland Hydroigy must be present, Unicators (Hydrophytic vegetation and Welland Hydroigy must be present, Unicators (Hydrophytic vegetation and Welland Hydroigy must be present, Unicators (Hydrophytic vegetation and Welland Hydroigy must be present, Unicators (Hydrophyt	and the second se	Matrix				Redox Fea					
7.19 10YR 4/4 100 Sand and gravel 192.1 10YR 4/4 100 Sand 192.2 10YR 4/4 100 Sand 192.2 10YR 4/4 100 Sand 192.1 10YR 4/4 100 Sand 192.2 95 7.5YR 5/8 5 C 192.1 10YR 4/4 100 Sandy Glaved Matrix (S4) Site Indicators 192.1 10YR 4/4 100 Sandy Glaved Matrix (S4) Dark Surface (S7) 193.1 11/11/11 Sandy Glaved Matrix (S6) Dark Surface (T7) Dark Surface (T7) 11/11 11/11 Dary Glaved Matrix (F2) Doter (Explain in Remarks) Doter (Explain in Remarks) 12 2 cm Muck (A10) Depieted Dark Surface (F7) Indicators of Hydrophydic vegetation and Mydrokgy must be present, Unless disturbed or problematic. 13 Conterview Layer (To bearved): Type: Depieted Dark Surface (F7) Indicators (F8) 15 Sandy Mucky Mineral (S1) Redox Depresations (F8) Unless disturbed or problematic. 14 Ydrice Soil Present? Yes in No Si Depieted Dark Surface (T7) Indicators (F8) <th>(inches)</th> <th></th> <th>%</th> <th>Color (</th> <th>moist)</th> <th>%</th> <th>Type¹</th> <th>Loc²</th> <th></th> <th>Fexture</th> <th>Remarks</th>	(inches)		%	Color (moist)	%	Type ¹	Loc ²		Fexture	Remarks
921 10YR 4/4 100 Sand 1124 10YR 2/2 95 7.5YR 6/6 \$ C PL M Sitt loam Type: Coconsentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains *Location: PL=Pore Lining, M=Matrix Mistic Sitt Indicators: Indicators (CA) Indicators (CA) Indicators (CA) Indicators (CA) Mistic Epipedon (A1) Sandy Glayed Matrix (S4) Cocation: PL=Pore Lining, M=Matrix Indicators (CA) Mistic Epipedon (A1) Sandy Glayed Matrix (S4) Does (Cast Praine Redox (A16) Does (Cast Praine Redox (A16) Strated Balow Dark Surface (A11) Depleted Matrix (CB) Dim: Nmaganese Masses (F12) Other (Explain in Remarks) Depleted Balow Dark Surface (A11) Depleted Matrix (CB) Indicators of Hydrophydic vegalation and Watard hydrology must be present; Veric: Unless disturbed or problematic. Estificitive Layer (If Observed); True Aquatic Plants (B13) Brain Andre Andre Andre (B1) Barch Matrix Misse (B1) Watard Angrafic Set Matrix (B14) Doralinge Patterns (B10) Surface Water (A11) Water Standed Layers (B9) Surface Soi Cracks (B8) Hight Water Table (A2) Aquatic Funatis (B13) Doralinge Patte			100				_		Clay loam		
11-24 10YR 2/2 95 7.5YR 6/8 5 C PL_M Sitt barn Type: C-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains ?Location: PL=Pore Lining, M=Matrix Type: C-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains ?Location: PL=Pore Lining, M=Matrix Type: C-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains ?Location: PL=Pore Lining, M=Matrix Type: Depleted Patrix Sandy Redox (S5) Dark Matrix (S6) Black Halls (A3) Distripted Matrix (S6) Doals Surface (F12) Stratified Layers (A5) Doals Cardee Matrix (S1) Periode Matrix (S2) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Indicators of Hydrophytic vegetation and Welson hydrology must be present, Unless disturbed or problematic. S om Mucky Peat or Parti (S3) Redox Depressions (F8) Metrix Matrixee S(B1) Surface Water (A1) Weter Stained Leavers (B9) Statusted or problematic. Surface Water (A1) Weter Stained Leavers (B9) Duringe Patiens (B10) Surface Water (A1) Weter Stained Leavers (B9) Duringe Patiens (B10) Surface Water (A1) Weter Anal (B13) Drainage Patiens (B10) Surface (B2)			100		_		_	-	Sand and	gravel	
Type: C=Concentration. D=Depletion. RM=Reduced Matrix. MS=Masked Sand Grains *Location: PL=Pore Lining. M=Mastrix Type: C=Concentration. D=Depletion. RM=Reduced Matrix. (S4) Indicators for Problematic Hydric Solis*: Histosol (A1) Sandy Gleyed Matrix (S4) Coast Praine Redox (A16) Dask Surface (S7) Black Histic (A3) Stripped Matrix (S3) Dank Surface (T12) Coast Praine Redox (A16) Depleted Dark Surface (A11) Depleted Dark Surface (F7) Cast Surface (A11) Perfect Dark Surface (F12) Thick Dark Surface (A12) Depleted Dark Surface (F7) *Indicators of Hydrophytic vegetation and Wetten dydrology must be present, Urrises disturbed or problematic starts (F3) Sandy Mucky Maeral (S1) Redox Depressions (F8) *Indicators of Hydrophytic vegetation and Wetten dydrology must be present, Urrises disturbed or problematic starts (F3) Bepleted Dark Surface (A12) Depleted Dark Surface (F7) *Indicators of Hydrophytic vegetation and Wetten dydrology must be present, Urrises disturbed or problematic starts (F3) Bepleted Dark Surface (A11) Weter-Stained Leaves (B9) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Drainage Patterns (B10) Surface Soil Cracks (B6) Oxidace Arial Imagery (C1) Crayfab Burrows (C2) Surface Soil Cr	19-21	10YR 4/4	100		_	_			Sand		
typeric Soil Indicators: Indicators for Problematic Hydric Soils*: Histo Epipedion (A2) Sandy Gleyed Matrix (S4) Histo Epipedion (A2) Sandy Redox (S5) Black Histic (A3) Stripped Matrix (S6) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (S6) 2 com Muck (A10) Deark Surface (S7) Brack Histic (A3) Deark Surface (S7) Depieted Below Dark Surface (A11) Redox Dark Surface (F12) Sandy Macky Mineral (S1) Redox Depressions (F8) Wetland Hydrology must be present, Unless disturbed or problematic. Vers Shallow Dark Surface (F12) Sandy Macky Mineral (S1) Redox Depressions (F8) Wetland Hydrology must be present, Unless disturbed or problematic. Type: Depti (inches): Hydric Soil Present? Yes No [2] Bernarks: Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Dry-Season Water Table (C2) Surface Soil Cracks (B1) Hydrice Soil Present? Yes No [2] Surface (C1) Surface Soil Cracks (B1) Hydrice Soil Present? Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) D	21-24	10YR 2/2	95	7.5YR 5/8	(=	5	С	PL M	Silt loam		
tydric Soil Indicators: Indicators for Problematic Hydric Soils*: Histo Epipedon (A2) Sandy Gleyed Matrix (S4) Black Histic (A3) Stripped Matrix (S6) Histo Epipedon (A2) Sandy Redox (S5) Black Histic (A3) Stripped Matrix (S6) Hydrogen Sulfide Layers (A5) Loamy Gleyed Matrix (F2) Depited Delow Dark Surface (A11) Depited Matrix (F2) Sandy Mucky (A10) Depited Matrix (F2) Sandy Mucky (A10) Redox Dark Surface (F12) Sandy Mucky (A10) Redox Dark Surface (F12) Sandy Mucky (Minerel (S1) Redox Depressions (F8) Wetland Hydrology must be present. Unless disturbed or problematic. Type: Deptit (nches): emarks: Hydric Soil Present? Yes No (S2) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil (Cacks (B6) Hydrogen Suifide Cor (1) Sadimatic Plants (B1) Hydrogen Suifide Cor (1) Statient Opposits (B3) Presence of Reduced Iron (C4) Water Table (A2) Aquatic Fauna (B13) Surface Water (A1) Hydrogen Suifide Cor (1) Statientic N(A3) Presence of Reduced Iron (C4) </td <td></td>											
typeric Soil Indicators: Indicators for Problematic Hydric Soils*: Histo Epipedion (A2) Sandy Gleyed Matrix (S4) Histo Epipedion (A2) Sandy Redox (S5) Black Histic (A3) Stripped Matrix (S6) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (S6) 2 com Muck (A10) Deark Surface (S7) Brack Histic (A3) Deark Surface (S7) Depieted Below Dark Surface (A11) Redox Dark Surface (F12) Sandy Macky Mineral (S1) Redox Depressions (F8) Wetland Hydrology must be present, Unless disturbed or problematic. Vers Shallow Dark Surface (F12) Sandy Macky Mineral (S1) Redox Depressions (F8) Wetland Hydrology must be present, Unless disturbed or problematic. Type: Depti (inches): Hydric Soil Present? Yes No [2] Bernarks: Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Dry-Season Water Table (C2) Surface Soil Cracks (B1) Hydrice Soil Present? Yes No [2] Surface (C1) Surface Soil Cracks (B1) Hydrice Soil Present? Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) D	Turini Ca	Constanting R. D.									
			letion, Rivi	Reduced N	hatrix, MS	=Masked S	Sand Grains				
Image: Secondary Indicators Image: Secondary Indicators (F12) Image: Secondary Indicators Image: Secondary Indicators Image: Secondary Indicators Image: Secondary Indicators (F12) Image: Secondary Indicators Image: Secondary Indicators						Sandy Gle	eyed Matrix (S	54)			
Importagen Suffate (A) □ Leamy Mucky Mineral (F1) □ Wery Shallow Dark Surface (F12) □ Stratified Layers (A5) □ Leamy Gleyed Matrix (F2) □ Other (Explain in Remarks) □ Depleted Below Dark Surface (F1) □ Redox Dark Surface (F6) □ Trick Dark Surface (F7) □ Trick Dark Surface (F12) □ Other (Explain in Remarks) □ Other (Explain in Remarks) □ Sandy Mucky Mineral (S1) □ Redox Dark Surface (F7) Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic. Type:						Sandy Re	dox (S5)			Dark Surface (S	S7)
Strattied Layers (A5)			0.11							Iron-Manganes	e Masses (F12)
² 2 m Muck (10) ² best (2,2) ² 2 m Muck (10) ² best (2,2) ¹ Depleted Below Dark Surface (A12) ¹ bepleted Dark Surface (A12) ¹ Sandy Mucky Mineral (S1) ¹ bepleted Dark Surface (F2) ¹ Sandy Mucky Mineral (S1) ¹ bepleted Dark Surface (F7) ¹ best Surface (If observed): ¹ reserved): ¹ Type: ¹ bepleted Dark Surface (F7) ¹ bept (inches): ¹ bept (inches): ¹ bept (inches): ¹ bept (inches): ¹ best (2,2) ¹ best (2,2) ¹ best (2,2) ¹ best (2,2) ¹ best (1,2) ¹ best (2,2) ¹ best (1,2) ¹ best (2,2) ¹ best (2,2) ¹ best (2,2) ¹ big Water Table (A2) ¹ Aquitc Faura (813) ¹ big Water Table (A2) ¹ Aquitc Faura (813) ¹ brif Deposits (83) <td>-</td> <td></td>	-										
□ Depleted Below Dark Surface (A11) □ Redox Dark Surface (F6) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F7) □ Sandy Mucky Mineral (S1) □ Redox Depressions (F8) *Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic. trype: □ Berly Mucky Mineral (S1) □ Berly Mucky Mineral (S1) □ Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic. trype: □ Depth (inches): □ Berly Mineral (S1) □ Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic. #indicators (minimum of one is required: check all that apply) Secondary Indicators (minimum of two required: check all that apply) Surface Water (A1) □ Water-Stained Leaves (B9) □ Surface Soil Cracks (B6) □ High Water Table (A2) □ Aquatic Piants (B14) □ Dry-Season Water Table (C2) □ Sufface Water (A1) □ Hydrogen Sufface Otor (C1) □ Crayfish Burrows (C8) □ Seturation (A3) □ True Aquatic Piants (B14) □ Dry-Season Water Table (C2) □ Drift Deposits (B3) □ Presence of Reduced fron (C4) □ Sturated or Stressed Plants (D1) □ Algal Mat or Crust (B4) □ Recent Iron Reduction in Tilled Solis (C6) □ Geomorphic Position (D2) □ I								-2)		Other (Explain i	in Remarks)
Thick Dark Surface (A12) Depleted Dark Surface (F7) ³ Indicators of Hydrophytic vegetation and Wetland hydrology must be present. Unless disturbed or problematic. S ondy Mucky Mineral (S1) Bed Redox Depressions (F8) Wetland hydrology must be present. Unless disturbed or problematic. Type:			Surface (A	(11)			and the second se	6)			
		Thick Dark Surface (A	12)						31	lipptom of Live	
	-								-100		
Type:											
Depth (inches):											
emarks: //DROLOGY /fetland Hydrology Indicators: Primary Indicators (minimum of one is required: check all that apply) Secondary Indicators (minimum of two req									Hydri	ic Soil Present?	Yes 🗌 No 🛛
PDROLOGY detland Hydrology Indicators: Primary Indicators (minimum of one is required: check all that apply) Secondary Indicators (minimum of two reg Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (Diff Deposits (B3) Orift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Agal Mat or Crust (B4) Recent Iron Reducition in Tilled Solis (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) eld Observations: Mater Present? Yes No Ø Depth (inches):		in (inches):									
Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Drift Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (D1) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Iron Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Setter Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Intraction Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No No Intraction Present? Yes No Depth (inches): Yes No No No <td< th=""><th>DROL</th><th>OGY</th><th></th><th></th><th></th><th>_</th><th></th><th></th><th></th><th></th><th></th></td<>	DROL	OGY				_					
High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Drift Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (Divide Odor (C1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Seemorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) ald Observations: Yes No Depth (inches): Intration Present? Yes No Depth (inches): Cuddes capillary fringe) Sective Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soil rivey Map (Exhibit 3), marks: While the sample site is located in the Milwaukee River floodway, it is not on a concave surface. Also the site is 4 to 5 feet higher	etland H	ydrology Indicators:	0.00								
Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Drift Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Invertice (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Invertice (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Invertice (B8) Other (Explain in Remarks) eld Observations: Yes No Index capillary fringe) No Depth (inches): Saturation Present? Yes No Inversent? Yes No Depth (inches): Inversent? Yes No Depth (inches): No Inversent? Yes No Depth (inches): No <t< td=""><td>etland H</td><td>ydrology Indicators: ry Indicators (minimum</td><td>of one is</td><td>required; ch</td><td>eck all that</td><td>t apply)</td><td></td><td></td><td>Ş</td><td>Secondary Indicat</td><td>tors (minimum of two require</td></t<>	etland H	ydrology Indicators: ry Indicators (minimum	of one is	required; ch	eck all that	t apply)			Ş	Secondary Indicat	tors (minimum of two require
Water marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (B) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Image: Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Image: Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Image: Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Image: Iron Deposits (B5) Other (Explain in Remarks) FAC-Neutral Test (D5) Image: Iron Deposits (B7) Gauge or Well Data (D9) FAC-Neutral Test (D5) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Wetland Hydrology Present? Ind Observations: Image: Iron Deposition (D2) No Image: Iron Depth (inches): Image: Iron Depth (Inches): Image: Iron Deposite Present? Yes Image: Iron Depth (Inches): Image: Iron Depth (Inches): Image: Iron Depth (Inches): Image: Iron Deposite Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soil Irovey Map (Exhibit 3), Image: Iron Deposite River floodway, it is not on a concave surface. Also the site is 4 to 5 feet higher	Vetland H Prima	ydrology Indicators: ry Indicators (minimum Surface Water (A1)	of one is	required; ch		(A.	Leaves (B9)		5	1	
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (Drift Deposits (B3) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) eld Observations: Other (Explain in Remarks) urface Water Present? Yes No No Depth (inches): Wetland Hydrology Present? Yes No aturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No acturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Saturation Present?	Vetland H Primal	ydrology Indicators: ry Indicators (minimum Surface Water (A1)	of one is	required; ch	U Wat	er-Stained	the second second		I	Surface Soil	Cracks (B6)
□ Drift Deposits (B3) □ Presence of Reduced Iron (C4) □ Stanted or Stressed Plants (D1) □ Algal Mat or Crust (B4) □ Recent Iron Reduction in Tilled Soils (C6) □ Geomorphic Position (D2) □ Iron Deposits (B5) □ Thin Muck Surface (C7) □ FAC-Neutral Test (D5) □ Inundation Visible on Aerial Imagery (B7) □ Gauge or Well Data (D9) □ FAC-Neutral Test (D5) □ Sparsely Vegetated Concave Surface (B8) □ Other (Explain in Remarks) ■ eld Observations: □	Primar Primar D f	ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)	of one is i	required; ch	U Wat	er-Stained atic Fauna	i (B13)			Surface Soil	Cracks (B6) tterns (B10)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) FAC-Neutral Test (D5) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) FAC-Neutral Test (D5) eld Observations: Other (Explain in Remarks) Wetland Hydrology Present? Yes intraction Present? Yes No Depth (inches): No intraction Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soil invey Map (Exhibit 3), Marks: While the sample site is located in the Milwaukee River floodway, it is not on a concave surface. Also the site is 4 to 5 feet higher	Primar	ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1)		required; ch	Vat	ter-Stained atic Fauna e Aquatic F	i (B13) Plants (B14)			Surface Soil Drainage Pat Dry-Season V	Cracks (B6) tterns (B10) Water Table (C2)
□ Iron Deposits (B5) □ Thin Muck Surface (C7) □ FAC-Neutral Test (D5) □ Inundation Visible on Aerial Imagery (B7) □ Gauge or Well Data (D9) □ FAC-Neutral Test (D5) □ Sparsely Vegetated Concave Surface (B8) □ Other (Explain in Remarks) eld Observations: □ rface Water Present? Yes □ No ⊠ Depth (inches): □ ater Table Present? Yes □ No ⊠ Depth (inches): □ Wetland Hydrology Present? Yes □ No ⊠ cludes capillary fringe) wetland Hydrology Present? Yes □ No ⊠ Depth (inches): □ escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soil envey Map (Exhibit 3), Barral photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soil emarks: While the sample site is located in the Milwaukee River floodway, it is not on a concave surface. Also the site is 4 to 5 feet higher	Primar	ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1)		required; ch	Wat Aqu True Hyd	ter-Stained atic Fauna Aquatic F rogen Sulf	i (B13) Plants (B14) ide Odor (C1)		Surface Soil Drainage Pat Dry-Season Crayfish Burr	Cracks (B6) tterns (B10) Water Table (C2) rows (C8)
□ Inundation Visible on Aerial Imagery (B7) □ Gauge or Well Data (D9) □ Sparsely Vegetated Concave Surface (B8) □ Other (Explain in Remarks) eld Observations: □ ater Table Present? Yes □ No ☑ Depth (inches): □ ater Table Present? Yes □ No ☑ Depth (inches): □ □ Wetland Hydrology Present? Yes □ No ☑ ater Table Present? Yes □ No ☑ Depth (inches): □ □ Wetland Hydrology Present? Yes □ No ☑ cludes capillary fringe) □ wetland Lydrology Present? Yes □ No ☑ escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soil invey Map (Exhibit 3), □ marks: While the sample site is located in the Milwaukee River floodway, it is not on a concave surface. Also the site is 4 to 5 feet higher	Primar	ydrology Indicators: ry Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2		required; ch	Wat Aqu True Hyd Oxid	ter-Stained atic Fauna Aquatic F rogen Sulf dized Rhize	i (B13) Plants (B14) ide Odor (C1 ospheres on) Living Root	 s (C3)	Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Via	Cracks (B6) tterns (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9)
□ Inundation Visible on Aerial Imagery (B7) □ Gauge or Well Data (D9) □ Sparsely Vegetated Concave Surface (B8) □ Other (Explain in Remarks) eld Observations: □ Other (Explain in Remarks) urface Water Present? Yes No Depth (inches):	Primal Primal Image: State Image: State <td>ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3)</td> <td>)</td> <td>required; ch</td> <td>Wat Aqu True Hyd Oxid Pres</td> <td>ter-Stained atic Fauna Aquatic F rogen Sulf dized Rhize sence of R</td> <td>i (B13) Plants (B14) ide Odor (C1 ospheres on educed Iron (</td> <td>) Living Root (C4)</td> <td> s (C3)</td> <td>Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Stunted or St</td> <td>Cracks (B6) tterns (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1)</td>	ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3))	required; ch	Wat Aqu True Hyd Oxid Pres	ter-Stained atic Fauna Aquatic F rogen Sulf dized Rhize sence of R	i (B13) Plants (B14) ide Odor (C1 ospheres on educed Iron () Living Root (C4)	 s (C3)	Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Stunted or St	Cracks (B6) tterns (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1)
eld Observations: urface Water Present? Yes No Depth (inches):	Vetland Hy Prima Prima F F F F F F F F F F F F F	ydrology Indicators: ry Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4))	required; ch	U Wat Aqu True Hyd Oxid Pres Rec	er-Stained atic Fauna Aquatic F rogen Sulf dized Rhize sence of R ent Iron Re	i (B13) Plants (B14) ide Odor (C1 ospheres on educed Iron (eduction in Ti) Living Root (C4)	s (C3)	Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Via Stunted or St Geomorphic I	Cracks (B6) ttems (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
rface Water Present? Yes No Depth (inches):	etland H Prima	ydrology Indicators: ry Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5))		U Wat Aqu True Hyd Oxid Pres Rec Thin	er-Stained atic Fauna Aquatic F rogen Sulf dized Rhize sence of R ent Iron Re Muck Sur	a (B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in Ti face (C7)) Living Root (C4)	s (C3)	Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Via Stunted or St Geomorphic I	Cracks (B6) ttems (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
ater Table Present? Yes No Depth (inches):		ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A Sparsely Vegetated Co) erial Image	ery (B7)	U Wat Aqu True Hyd Oxid Pres Rec Thin Gau	ter-Stained atic Fauna Aquatic F rogen Sulf dized Rhize sence of R ent Iron Re Muck Sur ge or Well	a (B13) Plants (B14) ide Odor (C1 ospheres on educed Iron (eduction in Ti face (C7) Data (D9)) Living Root (C4) illed Soils (C	s (C3)	Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Via Stunted or St Geomorphic I	Cracks (B6) ttems (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
Auturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No No cludes capillary fringe) wetland Hydrology Present? Yes No No escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soil urvey Map (Exhibit 3), wmarks: While the sample site is located in the Milwaukee River floodway, it is not on a concave surface. Also the site is 4 to 5 feet higher	Vetland H Prima Prim Prim Prima Prima Prima Prima	ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A Sparsely Vegetated Co rvations:) erial Image ncave Sur	ery (B7) face (B8)	Wat Aqu True Hyd Oxic Pres Recc Thin Gau Othe	ter-Stained atic Fauna Aquatic F rogen Sulf dized Rhize sence of R ent Iron Re Muck Sur ge or Well er (Explain	a (B13) Plants (B14) ide Odor (C1 ospheres on educed Iron (eduction in Ti face (C7) Data (D9)) Living Root (C4) illed Soils (C	s (C3)	Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Via Stunted or St Geomorphic I	Cracks (B6) ttems (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
cludes capillary fringe) Wetland Hydrology Present? Yes No X escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soil rvey Map (Exhibit 3), emarks: While the sample site is located in the Milwaukee River floodway, it is not on a concave surface. Also the site is 4 to 5 feet higher	Vetland H Prima	ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A Sparsely Vegetated Co rvations: tter Present? Yes) erial Image ncave Sur	ery (B7) face (B8)	Wat Aqu True Hyd Oxid Press Recc Thin Gau Other th (inches)	er-Stained atic Fauna e Aquatic F rogen Sulf dized Rhize sence of R ent Iron Re Muck Sur ge or Well er (Explain	a (B13) Plants (B14) ide Odor (C1 ospheres on educed Iron (eduction in Ti face (C7) Data (D9)) Living Root (C4) illed Soils (C	s (C3)	Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Via Stunted or St Geomorphic I	Cracks (B6) ttems (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
rvey Map (Exhibit 3). marks: While the sample site is located in the Milwaukee River floodway, it is not on a concave surface. Also the site is 4 to 5 feet highe	Primar Pr	ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A Sparsely Vegetated Co rvations: ter Present? Yes	erial Image ncave Sur C No	ery (B7) face (B8)	Wat Aqu Aqu True Hyd Oxic Pres Recc Thin Gau Othe th (inches)	ter-Stained atic Fauna e Aquatic F rogen Sulf dized Rhize sence of R ent Iron Re Muck Sur ge or Well er (Explain	a (B13) Plants (B14) ide Odor (C1 ospheres on educed Iron (eduction in Ti face (C7) Data (D9)) Living Root (C4) illed Soils (C	s (C3)	Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Via Stunted or St Geomorphic I	Cracks (B6) ttems (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
emarks: While the sample site is located in the Milwaukee River floodway, it is not on a concave surface. Also the site is 4 to 5 feet higher	Vetland H Prima Pr	ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A Sparsely Vegetated Co rvations: ter Present? Yes Present? Yes	erial Image ncave Sur C No	ery (B7) face (B8)	Wat Aqu Aqu True Hyd Oxic Pres Recc Thin Gau Othe th (inches)	ter-Stained atic Fauna e Aquatic F rogen Sulf dized Rhize sence of R ent Iron Re Muck Sur ge or Well er (Explain	a (B13) Plants (B14) ide Odor (C1 ospheres on educed Iron (eduction in Ti face (C7) Data (D9)) Living Root (C4) illed Soils (C	s (C3)	Surface Soil	Cracks (B6) tterns (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5)
evation that the surrounding wet swale and river channel. Finally, soils are permeable.	Vetland H Prima Pr	ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A Sparsely Vegetated Co rvations: tter Present? Yes Present? Yes Present? Yes pillary fringe) ecorded Data (stream g o (Exhibit 3),) ncave Sur Concave Sur No Conception Survey No Survey No	ery (B7) face (B8) Dep D D D D D D D D D D D D D D D D D D	Wat Aqu Aqu True Hyd Oxid Pres Recc Thin Gau Othe th (inches) th (inches) aerial pho	er-Stained atic Fauna e Aquatic F rogen Sulf dized Rhize sence of R ent Iron Re Muck Sur ge or Well er (Explain	a (B13) Plants (B14) ide Odor (C1 ospheres on educed Iron (eduction in Ti face (C7) Data (D9) in Remarks)) Living Root (C4) illed Soils (C	etland Hydr	Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Via Stunted or St Geomorphic I FAC-Neutral rology Present? Map (Exhibit 1), W	Cracks (B6) tterns (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5) Yes No X WVI Map (Exhibit 2), Soil

	ATION DATA FORM - Midwest Regio	
Project/Site: Milwaukee River Pkwy and Oak Leaf Trail Reconstruction	City/County: City of Glendale/Milwaukee County	Sampling Date: 10/27/2014
Applicant/Owner:	State: WI	Sampling Point: 2
Investigator(s): Jennifer Dietl and Zofia Noe; SEWRPC	Section, Township, Range: Section 19, T8N, R22E	
Landform (hillslope, terrace, etc.): terrace	Local relief (concave, convex, none): none	
Slope (%): 2-6% Lat: Long:		Datum:
Soil Map Unit Name: Casco loam (CeB)	NV	VI classification: T3K
Are climatic/hydrologic conditions on the site typical for this time of ye	r? Yes 🛛 No 🗌 (If no, explain in Remar	
Are Vegetation, Soil, or Hydrology significantly dis		
Are Vegetation, Soil, or Hydrology naturally proble		
SUMMARY OF FINDINGS - Attach site map showing sampling po		-1

Hydrophytic Vegetation Present? Hydric Soils Present? Wetland Hydrology Present?	⊠Yes □Yes □Yes	⊡No ⊠No ⊠No	Is the Sampled Area within a Wetland?	🗋 Yes	No
Remarks: Sample site was select wetland boundary.	ted as eleva	tion is lower than	sample 1 and wetland vegetation	is present. Sample le	ocated just outside the

VEGETATION - Use scientific names of plants.

1. Acer resurdo 49 X FAC Number of Dominant Species 2. Rhamus cathartica 25 X FAC That are OBL, FACW, or FAC: \$(A) 3	Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
2. Rhamnus cathartica 25 ☑ FAC That are OBL, FACW, or FAC: 5 (A) 3	1. Acer negundo		the second se		Number of Dominant Species	
4	2. Rhamnus cathartica	25	\boxtimes	FAC		
5.	3	-			Total Number of Dominant	
gs = Total Cover That Are OBL, FACW, or FAC: 100% (AVB) Saoling/Shub Stratum (Plot size: 30' radius) Prevalence Index worksheet: 1. Rhamnus cathartica 80 FAC Total % Cover of: Multiply by: 2.	4					
65 = Total Cover That Are OBL, FACW, or FAC: 100% (AVB) Sabiling/Shrub Stratum (Plot size: 30' radius) Prevalence Index worksheet: 1. <u>Rhamnus cathartica</u> 89 FAC Total % Cover of: Multiply by; 2.	5			_	Percent of Dominant Species	
1. <u>Rhamnus cathartica</u> 80 A FAC Total % Cover of: Multiply by: 2.		65	= Total Cov	/er)
2	Sapling/Shrub Stratum (Plot size: 30' radius)				Prevalence Index worksheet:	
2.	1. Rhamnus cathartica	80	\boxtimes	FAC	Total % Cover of: Multiply b	v:
3.	2					-
4	3			1		-
5.	4					_
B0 = Total Cover UPL species x 5 = Herb Stratum (Plot size: 5' radius) 40 FAC Prevalence Index = B/A =	5.					-
Herb Stratum (Plot size: 5' radius) Column Totals: (A) (E 1. Alliaria officinalis 40 EAC Prevalence Index = B/A =		80		er		-
1. Alliaria officinalis 40 ⊠ FAC Prevalence Index = B/A =	Herb Stratum (Plot size: 5' radius)					(B)
2. Hydrophyllum virginianum 25 K FAC Hydrophytic Vegetation Indicators: 3. Ribes americanum 15 FACW 1 - Rapid Test for Hydrophytic Vegetation 4. Hesperis matrionalis 2 FACU 2 - Dominance Test is >50% 5	1. Alliaria officinalis	40		FAC		_ (u)
3. Ribes americanum 15 FACW 1 - Rapid Test for Hydrophytic Vegetation 4. Hesperis matrionalis 2 FACU 2 - Dominance Test is >50% 5	2. Hydrophyllum virginianum					
4. Hesperis matrionalis 2 FACU I = Rapid Test for Hydrophytic Vegetation 5	3. Ribes americanum	15		0.7572		
5	4. Hesperis matrionalis	2				
6.						
7 5 - Problematic Hydrophytic Vegetation' (Explain) 8 ' Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. 10 Hydrophytic Vegetation' (Explain) 10 Present, unless disturbed or problematic. Woody Vine Stratum (Plot size: 30' radius)						
8						
9						
10. □ Be present, unless disturbed or problematic. 82 = Total Cover Woody Vine Stratum (Plot size: 30' radius) Image: Stratum (Plot size: 30' radius) 1. □ 2. □					¹ Indicators of hydric soil and wetland hydrology	must
82 = Total Cover Woody Vine Stratum (Plot size: 30' radius) Hydrophytic 1 2				_		
Woody Vine Stratum (Plot size: 30' radius) Hydrophytic 1		82		er		-
1 □ □ Hydrophytic 2 □ □ Vegetation Present? Yes ⊠ No	Woody Vine Stratum (Plot size: 30' radius)				1. J	
2 Present? Yes 🛛 No 🗌				1.1111		
					the second	
		0	10 T 1 1 1	er		

Sampling Point: 2

Depth	Matrix			Redox Fea	tures			
(inches)	Color (moist)	%	Color (moist		Type ¹	Loc ²	Texture	Remarks
0-11	10YR 2/2	100	- Andrew (monor)	· · · · ·			Clay loam	
11-13	10YR 3/2	50					Loam	
	10YR 5/4	50					Loam	
13-18	10YR 3/2	90	7.5YR 5/8	10	С	PL M	Loam	
18-27	10YR 2/2	100			(<u></u>	- CE. III	Loam	
							Louin	
Type: C=	Concentration, D=Dep	letion, RM	I=Reduced Matrix	MS=Masked S	and Grains	-	² Location: PL=Pore	Lining M=Matrix
	I Indicators:	<u></u>		7.00 110 0128 3	and around			ematic Hydric Soils ³ :
Restrictive Type:	Histosol (A1) Histic Epipedon (A2) Black Hístic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark 3 Thick Dark Surface (A Sandy Mucky Mineral 5 cm Mucky Peat or Pa Layer (if observed)	Surface (A 12) (S1) eat (S3)	N11)	Sandy Rei Stripped M Loamy Mu Loamy Gle Depleted M Redox Dai Depleted I	latrix (S6) cky Mineral (eyed Matrix (I	(F1) F2) 6) (F7)	Very Shallow I Other (Explain alndicators of Hydro Wetland hydrol	S7) se Masses (F12) Dark Surface (TF12) in Remarks) phytic vegetation and ogy must be present, ed or problematic.
YDROLO)GY ydrology Indicators:							
YDROLC		of one is	required; check a	ll that apply)			Secondary Indica	tors (minimum of two required)
YDROLO Wetland Hy Primar	drology Indicators:	of one is	required; check a	<u>II that apply)</u> Water-Stained	Leaves (B9))		tors (minimum of two required)
YDROLC Wetland Hy Primar	vdrology Indicators: y Indicators (minimum			Water-Stained)	Surface Soi	Cracks (B6)
YDROLC Wetland Hy Primar	ydrology Indicators: y Indicators (minimum Surface Water (A1)			Water-Stained Aquatic Fauna	(B13))	Surface Soi	Cracks (B6) atterns (B10)
YDROLO Wetland Hy Primar	ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)			Water-Stained Aquatic Fauna True Aquatic F	(B13) Plants (B14)		Surface Soi Drainage Pa Dry-Season	Cracks (B6) atterns (B10) Water Table (C2)
YDROLC Wetland Hy Primar D S D H S D V	vdrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1)			Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf	(B13) Plants (B14) ide Odor (C1)	Surface Soi Drainage Pa Dry-Season Crayfish Built	Cracks (B6) atterns (B10) Water Table (C2) rrows (C8)
YDROLC Vetland Hy Primar C S C S C S C S S S S S S S S S S S S S	ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2)			Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize	(B13) Plants (B14) ide Odor (C1 ospheres on) Living Root	Surface Soi	Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) fisible on Aerial Imagery (C9)
YDROLO Vetland Hy Primar C S C H C S C S C S C S C S C S C S C S C S C S	ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2))		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron) Living Root (C4)	Surface Soi	Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) atressed Plants (D1)
YDROLO	ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Hgal Mat or Crust (B4))		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in Ti) Living Root (C4)	Surface Soi	Cracks (B6) atterns (B10) Water Table (C2) mows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
YDROLC Wetland Hy Primar C S C S C S C S C S C S C S C S C S C S	ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Hgal Mat or Crust (B4) Fon Deposits (B5)	0	0 0 0 0 0 0 0	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in Ti face (C7)) Living Root (C4)	Surface Soi	Cracks (B6) atterns (B10) Water Table (C2) mows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
YDROLO Wetland Hy Primar Image:	ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) orift Deposits (B3) Higal Mat or Crust (B4) ron Deposits (B5) hundation Visible on A	erial Imag	ery (B7)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in Ti face (C7) Data (D9)) Living Root (C4) illed Soils ((Surface Soi	Cracks (B6) atterns (B10) Water Table (C2) mows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
YDROLC Wetland Hy Primar Image:	ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) orift Deposits (B3) Higal Mat or Crust (B4) ron Deposits (B5) hundation Visible on A sparsely Vegetated Co	erial Imag	ery (B7)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in Ti face (C7) Data (D9)) Living Root (C4) illed Soils ((Surface Soi	Cracks (B6) atterns (B10) Water Table (C2) mows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
YDROLO Wetland Hy Primar C S C S C S C C C S C C C S C C C S C C C S C S	ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Algal Mat or Crust (B4) Fron Deposits (B5) hundation Visible on A sparsely Vegetated Co rvations:	erial Imag ncave Su	ery (B7)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in Ti face (C7) Data (D9)) Living Root (C4) illed Soils ((Surface Soi	Cracks (B6) atterns (B10) Water Table (C2) mows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
YDROLO Wetland Hy Primar C S C S C S C S C S C S C S C S C S C S	ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) Ngal Mat or Crust (B4) ron Deposits (B5) hundation Visible on A sparsely Vegetated Co rvations: ter Present? Yes	erial Imag ncave Su		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in Ti face (C7) Data (D9)) Living Root (C4) illed Soils ((Surface Soi	Cracks (B6) atterns (B10) Water Table (C2) mows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
YDROLO Vetland Hy Primar C S C S C S C S C S C S C S C S C S C S	ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) orift Deposits (B3) Higal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A sparsely Vegetated Co rvations: ter Present? Yes	erial Imag Incave Su		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain ches):	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in Ti face (C7) Data (D9)) Living Root (C4) illed Soils ((Surface Soi	Cracks (B6) atterns (B10) Water Table (C2) mows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
YDROLO Wetland Hy Primar C S C S C S C S C S C S C S C S C S C S	ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) orift Deposits (B3) Higal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A sparsely Vegetated Co rvations: ter Present? Yes	erial Imag Incave Su		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in Ti face (C7) Data (D9)) Living Root (C4) illed Soils (C	Surface Soi	Cracks (B6) atterns (B10) Water Table (C2) mows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) I Test (D5)
YDROLO Wetland Hy Primar Primar S S S S S S S S S S S S S S S S S S S	ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) orift Deposits (B3) Algal Mat or Crust (B4) fron Deposits (B5) hundation Visible on A sparsely Vegetated Co rvations: ter Present? Yes Present? Yes pillary fringe)	erial Imag Incave Su Incave Su Incave Su		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain ches): ches):	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in Ti face (C7) Data (D9) in Remarks)) Living Root (C4) illed Soils (C	Image Parameter Image Parameter	Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) I Test (D5) Yes □ No ⊠
YDROLO Wetland Hy Primar Primar S Primar S S S S S S S S S S S S S S S S	ydrology Indicators: y Indicators (minimum Surface Water (A1) digh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) orift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) hundation Visible on A sparsely Vegetated Co rvations: ter Present? Yes Present? Yes pillary fringe) acorded Data (stream g	erial Imag incave Su S No S No S No gauge, mo	ervy (B7)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain ches): ches): ches):	e (B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in Ti face (C7) Data (D9) in Remarks)) Living Root (C4) illed Soils (C	Image Parameter Image Parameter	Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) I Test (D5) Yes □ No ⊠
YDROLO Wetland Hy Primar Primar S Primar S S S S S S S S S S S S S S S S	ydrology Indicators: y Indicators (minimum Surface Water (A1) tigh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) orift Deposits (B3) tigal Mat or Crust (B4) ron Deposits (B5) hundation Visible on A sparsely Vegetated Co rvations: ter Present? Yes Present? Yes pillary fringe) coorded Data (stream g (Exhibit 3).	erial Imag incave Su S No S No S No gauge, mo	ervy (B7)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain ches): ches): ches):	e (B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in Ti face (C7) Data (D9) in Remarks)) Living Root (C4) illed Soils (C	Image Parameter Image Parameter	Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) I Test (D5) Yes □ No ⊠

WETLAND DETERMINA	TION DATA FORM - Midwest Region	
Project/Site: Milwaukee River Pkwy and Oak Leaf Trail Reconstruction	City/County: City of Glendale/Milwaukee County	Sampling Date: 10/27/2014
Applicant/Owner:	State: WI	Sampling Point: 3
Investigator(s): Jennifer Dietl and Zofia Noe; SEWRPC	Section, Township, Range: Section 19, T8N, R22E	
Landform (hillslope, terrace, etc.): Milwaukee River	Local relief (concave, convex, none): none	
Slope (%): - Lat: Long:		Datum:
Soil Map Unit Name: Water (W)	NWI	classification: T3K
Are climatic/hydrologic conditions on the site typical for this time of year?	Yes 🛛 No 🗌 (If no, explain in Remarks	
Are Vegetation, Soil, or Hydrology significantly disturb	bed? Are "Normal Circumstances" present? Yes	No 🗆
Are Vegetation X, Soil, or Hydrology naturally problematic?	? (If, needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map showing sampling point		
senting senting senting senting senting senting	totations, transects, important leatures, etc.	
Hydrophytic Vegetation Present? XYes INo	Is the Sampled Area	

Hydrophytic Vegetation Present? Hydric Soils Present? Wetland Hydrology Present?	⊠Yes ⊠Yes ⊠Yes	□No □No □No	Is the Sampled Area within a Wetland?	🛛 Yes	ШNо	
Remarks: No vegetation present	in flowing w	ater of the Milwau	ukee River.			

VEGETATION – Use scientific names of plants.						
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1	1			Number of Dominant Species		
2			_	That are OBL, FACW, or FAC: 0 (A)		
3	_			Total Number of Dominant		
4			_	Species Across All Strata: 0 (B)		
5				Percent of Dominant Species		
	0 = Total Cover		ver	That Are OBL, FACW, or FAC: 0% (A/B)		
Sapling/Shrub Stratum (Plot size: 30' radius)				Prevalence Index worksheet:		
1			_	Total % Cover of: Multiply by:		
2			_	OBL species x 1 =		
3			-	FACW species x 2 =		
4				FAC species x 3 =		
5			-	FACU species x 4 =		
	0 = Total Cover		ver	UPL species x 5 =		
Herb Stratum (Plot size: 5' radius)			-	Column Totals: (A) (B)		
1			_	Prevalence Index = B/A =		
2				Hydrophytic Vegetation Indicators:		
3	· · · · · · · · · · · · · · · · · · ·					
4				2 - Dominance Test is >50%		
5	_			 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Problematic Hydrophytic Vegetation' (Explain) 		
6						
7			_			
8			a.			
9			- Carlos 1	¹ Indicators of hydric soil and wetland hydrology must		
10				Be present, unless disturbed or problematic.		
	<u>0</u>	= Total Cov	er			
Voody Vine Stratum (Plot size: 30' radius)			Hydrophytic			
1				Vegetation		
2				Present? Yes 🛛 No 🗌		
	0	= Total Cov	er			

Remarks: (Include photo numbers here or on a separate sheet.) No vegetation present in flowing water of the Milwaukee River. Meets description of problematic hydrophytic vegetation in riparian areas.

-	-		
~	$^{\circ}$	1	
5	~		÷.,

Depth	Matrix			Redox Fea	tures			
(inches)	s) Color (moist) % C		Color (moist) % Type ¹ Loc ²			Loc ²	Texture	Remarks
		_			=	=		
Type: C=C	oncentration, D=Dep	letion, RM:	=Reduced Matrix, MS=	Masked S	and Grains		² Location: PL=Pore Lit	
	istosol (A1) istic Epipedon (A2) lack Histic (A3) ydrogen Sulfide (A4) tratified Layers (A5) cm Muck (A10) epleted Below Dark S hick Dark Surface (A andy Mucky Mineral (cm Mucky Peat or Pe Layer (if observed):	Surface (A [.] 12) (S1) eat (S3)		Sandy Red Stripped M Loamy Mu Loamy Gle Depleted M Redox Dar Depleted D	latrix (S6) cky Mineral (eyed Matrix (F	F1) (2) (F7)	Indicators for Problem Coast Prairie Rec Dark Surface (S7 Iron-Manganese Very Shallow Dar Other (Explain in ³ Indicators of Hydroph Wetland hydrology Unless disturbed of	dox (A16)) Masses (F12) k Surface (TF12) Remarks) ytic vegetation and y must be present,
Type:	(inches):						Hydric Soil Present?	Yes 🛛 No 🗌

\boxtimes	Surface Water (A1)				Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table	(A2)				Aquatic Fauna (B13)		Drainage Patterns (B10)
	Saturation (A3)					True Aquatic Plants (B14)		Dry-Season Water Table (C2)
	Water marks (B1)				Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
	Sediment Deposi	ts (B2)				Oxidized Rhizospheres on Li		Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3	3)				Presence of Reduced Iron (C		Stunted or Stressed Plants (D1)
	Algal Mat or Crus	t (B4)				Recent Iron Reduction in Till	and the second se	Geomorphic Position (D2)
	Iron Deposits (B5)				Thin Muck Surface (C7)		FAC-Neutral Test (D5)
	Inundation Visible	on Aerial I	mager	y (B	7) 🗌	Gauge or Well Data (D9)		
	Sparsely Vegetat	ed Concave	e Surfa	ce (I	38)	Other (Explain in Remarks)		
eld Obs	ervations:	1. 1. 1	-		1.0			
urface W	ater Present?	Yes 🛛	No		Depth (in	ches): 9		
ater Tab	ole Present?	Yes 🗌	No		Depth (in	ches):		
	Present? capillary fringe)	Yes 🗍	No		Depth (in	ches):	Wetland	Hydrology Present? Yes 🛛 No 🗌
escribe F Irvey Ma	Recorded Data (str ap (Exhibit 3).	ream gauge	e, moni	torin	g well, aeri	al photos, previous inspection	s), if available: To	opo Map (Exhibit 1), WWI Map (Exhibit 2), Soil
marks:	Sample is locat	ed in the M	Ailwau	kee	River floo	odway.		

WETLAND DETERMINA	TION DATA FORM - Midwest Region	
Project/Site: Milwaukee River Pkwy and Oak Leaf Trail Reconstruction	City/County: City of Glendale/Milwaukee County	Sampling Date: 10/27/2014
Applicant/Owner:	State: WI	Sampling Point: 4
Investigator(s): Jennifer Dietl and Zofia Noe; SEWRPC	Section, Township, Range: Section 19, T8N, R22E	
Landform (hillslope, terrace, etc.): low terrace	Local relief (concave, convex, none): concave	
Slope (%): 2-6% Lat: Long:		Datum:
Soil Map Unit Name: Casco loam (CeB)	NWI d	assification: T3K
Are climatic/hydrologic conditions on the site typical for this time of year?		
Are Vegetation, Soil, or Hydrology significantly disturb		No 🗖
Are Vegetation, Soil X, 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? Hydric Soils Present? Wetland Hydrology Present?	⊠Yes ⊠Yes ⊠Yes	□No □No □No	Is the Sampled Area within a Wetland?	🛛 Yes	□No
Remarks: Problematic Fluvial so fluvial soils were not expected.	ils. Sample s	site located in a l	ow basin and was chosen as a clea	r wetland sample po	oint, although, problematic

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wor	ksheet:		
1. Acer negundo	30		FAC	Number of Dominant Spo	ecies		
2. Acer saccharinum	30	\boxtimes	FACW	That are OBL, FACW, or		4 (A)	
3			- <u></u>	Total Number of Domina	nt		
4				Species Across All Strata	a:	<u>4</u> (B)	
5				Percent of Dominant Spe	cies		
	60	= Total Cov	/er	That Are OBL, FACW, or		100% (A/B)	
Sapling/Shrub Stratum (Plot size: 30' radius)				Prevalence Index works	sheet:		
1. Ribes americanum	4		FACW	Total % Cover of:		Multiply by:	
2			-	OBL species	x1=		
3				FACW species	x 2 =	-	
4				FAC species	x 3 =		-
5	_			FACU species	x 4 =		
	4	= Total Cov	/er	UPL species	x 5 =		1
Herb Stratum (Plot size: 5' radius)	10			Column Totals:	(A)		(B
1. Lysimachia nummularia	5		FACW	Prevalence In	dex = B/A =	-	1
2. Rhamnus cathartica	2		FAC	Hydrophytic Vegetation	Indicators		
3. Aster ontarionis	1		FAC	1 - Rapid Test for Hyd	trophytic Ve	egetation	
4				2 - Dominance Test	is >50%	ogotation	
5				3 - Prevalence Index		Tura late avance	
6				4 - Morphological Ada data in Remarks o	· · · · · · · · · · · · · · · · · · ·		ning
7			_	5 - Problematic Hydro		The second s	ain)
8							
9				+ Indicators of hydric soil a			ust
10				Be present, unless disturt	ped or probl	lematic.	
	8	= Total Cov	er				_
Woody Vine Stratum (Plot size: 30' radius)				Hydrophytic			
1				Vegetation			
2				Present? Yes	No I		
	0	= Total Cov	er				

00

rofile Description: (D		anth mandad	وتستحد لما عدام ا	and the stand	P	P 0		24		
		leptn needeo				onfirm the a	bsence of i	ndicators.)		
Depth	Matrix	-		Redox Feat			-1	1.1		
(inches) Color (n	and the second second		(moist)	%	Type ¹	Loc ²	Carlos II.	exture	Rema	arks
8 10YR 2/1	100						Loam			
11 10YR 3/1	100						Loam			
1-17 10YR 3/2	100		_	_			Clay			
7-24 10YR 3/1	95	10YR 4/6	5	5	C	PL M	Clay loam			_
		-								
		-								_
ype: C=Concentration ydric Soil Indicators:		RM=Reduced	Matrix, MS	=Masked S	and Grains				re Lining, M=Matrix	
Histosol (A1)				Sandy Gla	yed Matrix (SAL			e Redox (A16)	s²:
Histic Epiped			<u> </u>	Sandy Gle		54)		Dark Surface		
Black Histic (Stripped M					ese Masses (F12)	
Hydrogen Su					cky Mineral	(F1)			v Dark Surface (TF12	Y
Stratified Lay	ers (A5)				yed Matrix (ain in Remarks)	
2 cm Muck (A	A10)			Depleted N	Aatrix (F3)					
Depleted Bel		(A11)			k Surface (F					
Thick Dark Si					ork Surface		³ Inc	licators of Hvd	rophytic vegetation a	nd
Sandy Mucky				Redox Dep	pressions (FI	B)			ology must be preser	
5 cm Mucky F									bed or problematic.	
estrictive Layer (if ob	oserved):									
Type:							Hydri	c Soil Presen	t? Yes 🛛 N	0 🗆
Depth (inches): emarks: Problematic	-									
	icators:									
etland Hydrology Ind		is required: c	beck all that	at apply)				Secondary India	cators (minimum of h	
/DROLOGY /etland Hydrology Ind Primary Indicators (minimum of one	is required; c			t anvas (P		S		cators (minimum of ty	vo required
Vetland Hydrology Ind Primary Indicators (Surface Wate	<u>minimum of one</u> r (A1)	is required; c	🛛 Wa	ter-Stained	d Leaves (B	9)	<u> </u>	Surface S	oil Cracks (B6)	vo required
Vetland Hydrology Ind Primary Indicators (Surface Water High Water Ta	minimum of one r (A1) able (A2)	is required; c	Wa	ater-Stainec uatic Fauna	(B13)	9)	<u> </u>	Surface S	oil Cracks (B6) Patterns (B10)	vo required
Vetland Hydrology Ind Primary Indicators (minimum of one r (A1) able (A2) 3)	is required; c	Wa	nter-Stained uatic Fauna ue Aquatic P	(B13) Plants (B14)			Surface S Drainage Dry-Sease	oil Cracks (B6) Patterns (B10) on Water Table (C2)	vo required
Vetland Hydrology Ind Primary Indicators (U U Surface Wate U High Water Ta Saturation (A Water marks	minimum of one r (A1) able (A2) (3) (B1)	is required; c	Wa	ater-Stained uatic Fauna le Aquatic P drogen Sulfi	(B13) Plants (B14) ide Odor (C1)		Surface S Drainage Dry-Sease	oil Cracks (B6) Patterns (B10)	vo required
Vetland Hydrology Ind Primary Indicators (minimum of one r (A1) able (A2) (3) (B1)	is required; c	Wa	ater-Stained uatic Fauna le Aquatic P drogen Sulfi	(B13) Plants (B14))		Surface S Drainage Dry-Sease Crayfish B	oil Cracks (B6) Patterns (B10) on Water Table (C2)	
Primary Indicators (Primary Indicators (Surface Wate High Water Ta Saturation (A Water marks	minimum of one r (A1) able (A2) (A3) (B1) posits (B2)	is required; c	Va Aqu Tru Hyo Oxi	ater-Stained uatic Fauna le Aquatic P drogen Sulfi idized Rhizo	(B13) Plants (B14) ide Odor (C1	I) Living Root	s (C3)	Surface S Drainage Dry-Seas Crayfish B Saturation	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)	gery (C9)
Primary Indicators (Primary Indicators (Surface Water High Water Ta Saturation (A Water marks Sediment Dep	minimum of one r (A1) able (A2) (3) (B1) posits (B2) (B3)	is required; c	Ø Wa □ Aqu □ Tru □ Hyo □ Oxi □ Pre	ater-Stained uatic Fauna ue Aquatic P drogen Sulfi idized Rhizo esence of Re	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron	I) Living Root (C4)	s (C3)	Surface S Drainage Dry-Sease Crayfish B Saturation Stunted or	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) Visible on Aerial Ima Stressed Plants (D1	gery (C9)
Vetland Hydrology Ind Primary Indicators (Surface Wate High Water Ta Saturation (A Water marks Sediment Dep Drift Deposits	minimum of one r (A1) able (A2) (3) (B1) oosits (B2) (B3) Crust (B4)	is required; c	Wa Aquina True Hyo Oxi Pree Record	ater-Stained uatic Fauna le Aquatic P drogen Sulfi Idized Rhizo esence of Re cent Iron Re	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in T	I) Living Root (C4)	s (C3)	Surface S Drainage Dry-Sease Crayfish B Saturation Stunted or Geomorp	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) Visible on Aerial Ima Stressed Plants (D1 hic Position (D2)	gery (C9)
Vetland Hydrology Ind Primary Indicators (Surface Wate High Water Ta Saturation (A Water marks Sediment Dep Drift Deposits Iron Deposits	minimum of one r (A1) able (A2) (3) (B1) posits (B2) (B3) Crust (B4) (B5)		Wa Aquina True Hyce Oxi Pree Reco Third	ater-Stained uatic Fauna le Aquatic P drogen Sulfi idized Rhizo esence of Re cent Iron Re n Muck Surf	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in T face (C7)	I) Living Root (C4)	s (C3)	Surface S Drainage Dry-Sease Crayfish B Saturation Stunted or Geomorp	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) Visible on Aerial Ima Stressed Plants (D1	gery (C9)
etland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A Water marks Drift Deposits Algal Mat or C Iron Deposits Inundation Vis	minimum of one r (A1) able (A2) (3) (B1) posits (B2) (B3) Crust (B4) (B5) sible on Aerial Image	agery (B7)	Wa Aqui Hyo Oxi Oxi Rec Thin Gau	ater-Stained uatic Fauna le Aquatic P drogen Sulfi idized Rhizo esence of Re cent Iron Re n Muck Surf uge or Well	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in T face (C7) Data (D9)	I) Living Root (C4) illed Solls (C	s (C3)	Surface S Drainage Dry-Sease Crayfish B Saturation Stunted or Geomorp	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) Visible on Aerial Ima Stressed Plants (D1 hic Position (D2)	gery (C9)
/etland Hydrology Ind Primary Indicators (□ Surface Water □ High Water Ta □ Saturation (A ○ Saturation (A ○ Vater marks □ Sediment Dep □ Drift Deposits □ Iron Deposits □ Inundation Vis □ Sparsely Vege	minimum of one r (A1) able (A2) (3) (B1) posits (B2) (B3) Crust (B4) (B5)	agery (B7)	Wa Aqui Hyo Oxi Oxi Pre Reco Thin Gal	ater-Stained uatic Fauna le Aquatic P drogen Sulfi idized Rhizo esence of Re cent Iron Re n Muck Surf uge or Well	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in T face (C7)	I) Living Root (C4) illed Solls (C	s (C3)	Surface S Drainage Dry-Sease Crayfish B Saturation Stunted or Geomorp	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) Visible on Aerial Ima Stressed Plants (D1 hic Position (D2)	gery (C9)
etland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A Vater marks Drift Deposits Algal Mat or C Iron Deposits Inundation Vis Sparsely Vege	minimum of one r (A1) able (A2) (3) (B1) posits (B2) (B3) Crust (B4) (B5) sible on Aerial Ima atated Concave S	agery (B7) Surface (B8)	Wa Aqu Tru Oxi Oxi Oxi Pre Rec Gau Oth	ater-Stained uatic Fauna le Aquatic P drogen Sulfi idized Rhizo esence of Re cent Iron Re n Muck Surfi uge or Well uge or Well her (Explain	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in T face (C7) Data (D9)	I) Living Root (C4) illed Solls (C	s (C3)	Surface S Drainage Dry-Sease Crayfish B Saturation Stunted or Geomorp	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) Visible on Aerial Ima Stressed Plants (D1 hic Position (D2)	gery (C9)
/etland Hydrology Ind Primary Indicators (minimum of one r (A1) able (A2) (3) (B1) posits (B2) (B3) Crust (B4) (B5) sible on Aerial Im- atated Concave S Yes []	agery (B7) Surface (B8) No 🖾 De	Wa Aqu Aqu Tru Oxi Oxi Oxi Pre Rec Gau Gau Oth epth (inches	ater-Stained uatic Fauna the Aquatic P drogen Sulfi idized Rhizo esence of Re cent Iron Re in Muck Surfi uge or Well uge or Well her (Explain	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in T face (C7) Data (D9)	I) Living Root (C4) illed Solls (C	s (C3)	Surface S Drainage Dry-Sease Crayfish B Saturation Stunted or Geomorp	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) Visible on Aerial Ima Stressed Plants (D1 hic Position (D2)	gery (C9)
Vetland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Inundation Vis Sparsely Vege eld Observations: urface Water Present? ater Table Present?	minimum of one r (A1) able (A2) (3) (B1) boosits (B2) (B3) brust (B4) (B5) sible on Aerial Im- atated Concave S Yes ☐ 4 Yes ⊠	agery (B7) Surface (B8) No ⊠ De No ⊡ De	Wa Aqu Hyd Oxi Pre Red Thin Gau Oth	ater-Stained uatic Fauna le Aquatic P drogen Sulfi idized Rhizo esence of Re cent Iron Re n Muck Surf uge or Well her (Explain s):	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in T face (C7) Data (D9)	I) Living Root (C4) illed Solls (C	s (C3)	Surface S Drainage Dry-Sease Crayfish B Saturation Stunted or Geomorp	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) Visible on Aerial Ima Stressed Plants (D1 hic Position (D2)	gery (C9)
Vetland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A Saturation (A Drift Deposits Drift Deposits Iron Deposits Inundation Vis Sparsely Vege eld Observations:	minimum of one r (A1) able (A2) (3) (B1) posits (B2) (B3) Crust (B4) (B5) sible on Aerial Im- atated Concave S Yes ☐ Yes ⊠ Yes ⊠	agery (B7) Surface (B8) No ⊠ De No ⊡ De	Wa Aqu Aqu Tru Oxi Oxi Oxi Pre Rec Gau Gau Oth epth (inches	ater-Stained uatic Fauna le Aquatic P drogen Sulfi idized Rhizo esence of Re cent Iron Re n Muck Surf uge or Well her (Explain s):	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in T face (C7) Data (D9)	I) Living Roots (C4) illed Soils (C	s (C3)	Surface S Drainage Dry-Sease Crayfish B Saturation Stunted or Geomorp	oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) Visible on Aerial Ima Stressed Plants (D1 hic Position (D2) tral Test (D5)	gery (C9)
Vetland Hydrology Ind Primary Indicators (□ Surface Water □ High Water Ta □ High Water Ta □ Saturation (A ○ Saturation (A ○ Drift Deposits □ Drift Deposits □ Iron Deposits □ Iron Deposits □ Isparsely Vege eld Observations: urface Water Present? urface Water Present? Saturation Present?	minimum of one r (A1) able (A2) (B1) posits (B2) (B3) Crust (B4) (B5) sible on Aerial Ima atated Concave S Yes □ Yes □ Yes ⊠ Yes ⊠	agery (B7) Surface (B8) No ⊠ De No □ De No □ De	Wa Aqu Tru Hyc Oxi Pre Rec Thin Gau Oth epth (inchess epth (inchess	ater-Stained uatic Fauna le Aquatic P drogen Sulfi idized Rhizo esence of Re cent Iron Re n Muck Surfi uge or Well uge or Well her (Explain (5): <u>17</u> (5): <u>11</u>	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in T face (C7) Data (D9) in Remarks)	I) Living Roots (C4) illed Soils (C	s (C3)	Surface S Drainage Dry-Sease Crayfish E Saturation Stunted or Geomorp FAC-Neut	oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) Visible on Aerial Ima Stressed Plants (D1 hic Position (D2) tral Test (D5)	gery (C9))

WETLAND DETERMINA	TION DATA FORM - Midwest Region	
Project/Site: Milwaukee River Pkwy and Oak Leaf Trail Reconstruction	City/County: City of Glendale/Milwaukee County	Sampling Date: 10/27/2014
Applicant/Owner:	State: WI	Sampling Point: 5
Investigator(s): Jennifer Dietl and Zofia Noe; SEWRPC	Section, Township, Range: Section 19, T8N, R22E	
Landform (hillslope, terrace, etc.): footslope	Local relief (concave, convex, none): linear	
Slope (%): 2-6% Lat: Long:		Datum:
Soil Map Unit Name: Casco loam (CeB)	NWI di	assification: T3K
Are climatic/hydrologic conditions on the site typical for this time of year?	Yes No [] (If no, explain in Remarks)	a church ann a thairte
Are Vegetation, Soil, or Hydrology significantly disturb	bed? Are "Normal Circumstances" present? Yes	No 🗆
Are Vegetation, Soil X, or Hydrology naturally problematic	? (If, needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map showing sampling point		

Hydrophytic Vegetation Present? Hydric Soils Present? Wetland Hydrology Present?	⊠Yes ⊠Yes ⊠Yes	□No □No □No	Is the Sampled Area within a Wetland?	🛛 Yes	□No
Remarks: Problematic Fluvial so change in vegetation occurred a				e sample was taken	at this location as a

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test w	orksheet:		
1. Fraxinus pennsylvanica	25		FACW	Number of Dominant S	pecies		
2				That are OBL, FACW,		<u>5</u> (A)	
3				Total Number of Domin	nant		
4				Species Across All Stra	ata:	<u>6</u> (B)	
5				Percent of Dominant S	pecies		
	25	= Total Cov	ver	That Are OBL, FACW,	or FAC:	83% (A/B)	
Sapling/Shrub Stratum (Plot size: 30' radius)				Prevalence Index wor	ksheet:		
1. Ribes americanum	25	\boxtimes	FACW	Total % Cover of:		Multiply by:	
2. Rhamnus cathartica	15		FAC	OBL species	x 1 =		
3				FACW species	x 2 =		-
4				FAC species	x 3 =		-
5				FACU species	x 4 =	-	- C
	40	= Total Cov	ver	UPL species	x 5 =		-
Herb Stratum (Plot size: 5' radius)				Column Totals:	(A)		(B
1. Alliaria officinalis	30	\boxtimes	FAC		Index = B/A		
2. Hesperis matrionalis	20		FACU	Hydrophytic Vegetatio	on Indicator	s:	
3. Rudbeckia laciniata	20	\boxtimes	FACW	1 - Rapid Test for H	vdroobytic V	eretation	
4. Thalictrum dasycarpum	15		FACW	2 - Dominance Tes		egeration	
5			1.00	3 - Prevalence Inde			
6			_	4 - Morphological A data in Remarks			orung
7				5 - Problematic Hyd			lain)
8							
9				1 Indicators of hydric so	and wetlan	d hydrology m	nust
10.				Be present, unless distu	irbed or prob	plematic.	
	85	= Total Cov	er				
Woody Vine Stratum (Plot size: 30' radius)			-	Hudesheeds			
1				Hydrophytic Vegetation			
2		Ē		Present? Yes	No No		
the second secon	0	= Total Cove	er				

-		~	
25	C	3	L
~		~	-

1

Denti	Matrix			Redox Fea	tures				
Depth (inches)	Color (moist)	%	Color (moist)	Kedox Fea	Type'	Loc ²	-	and the second se	6
0-11	10YR 2/1		Color (moist)	70		Loc-		xture	Remarks
11-18	10YR 3/1	100					Clay loam		
the second day and the		100		÷			Loam		
18-24	10YR 3/2	100		-			Clay loam		
						_			
_				_					
	Concentration, D=Dep	letion, RM=Re	duced Matrix, N	MS=Masked S	Sand Grains		² Loca	tion: PL=Pore L	ining, M=Matrix
-	I Indicators:			Con ch	0.000	C			natic Hydric Soils ³ :
	Histosol (A1)		_		eyed Matrix (S	4)		Coast Prairie Re	
	Histic Epipedon (A2)			Sandy Red				Dark Surface (S	
	Black Histic (A3) Hydrogen Sulfide (A4)		-	Stripped N		- 4 5		Iron-Manganese	
	Stratified Layers (A5)				icky Mineral (i				irk Surface (TF12)
	2 cm Muck (A10)		- E		eyed Matrix (F	2)	X	Other (Explain	in Kemarks)
	Depleted Below Dark	Surface (A11)			rk Surface (F6	5)			
	Thick Dark Surface (A				Dark Surface (AL		and the second
	Sandy Mucky Mineral		Ē		pressions (F8				nytic vegetation and any must be present,
	5 cm Mucky Peat or Pe							Jnless disturbed	
	Layer (if observed):					_			er providinado.
Type:							Hydric	Soil Present?	Yes 🛛 No 🗆
Depth	(inches):							Don's these	
	Problematic Fluvial s	oils.							
YDROLC Wetland Hy)GY /drology Indicators:		ired: check all i	ibat applu)					
YDROLC Wetland Hy Primar	OGY /drology Indicators: y Indicators (minimum			1			Se	1.1.1.1.1.1.	ors (minimum of two required
YDROLC Vetland Hy Primar	DGY /drology Indicators: y Indicators (minimum Surface Water (A1)		<u> </u>	Vater-Stained	2		Se	Surface Soil C	Cracks (B6)
YDROLC Vetland Hy Primar	OGY /drology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2)			Water-Stained Aquatic Fauna	a (B13)		_	Surface Soil C Drainage Patt	Cracks (B6) erns (B10)
YDROLC Vetland Hy Primar	DGY /drology Indicators: y Indicators (minimum Surface Water (A1)			Vater-Stained	a (B13)			Surface Soil C Drainage Patt	Cracks (B6)
YDROLC Vetland Hy Primar	OGY /drology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2)			Water-Stained Aquatic Fauna True Aquatic F	a (B13)			Surface Soil C Drainage Patt	Cracks (B6) erns (B10) /ater Table (C2)
YDROLC Vetland Hy Primar S B B S S S V	OGY vdrology Indicators: v Indicators (minimum surface Water (A1) ligh Water Table (A2) saturation (A3)	of one is requ		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf	a (B13) Plants (B14)			Surface Soil C Drainage Patt Dry-Season V Crayfish Burro	Cracks (B6) erns (B10) /ater Table (C2)
YDROLC Vetland Hy Primar C S C H S S S S S S S S S S S S S S S S S S S	OGY /drology Indicators: γ Indicators (minimum Surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1)	of one is requ		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Dxidized Rhizo	a (B13) Plants (B14) iide Odor (C1)	iving Roo		Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis	Cracks (B6) erns (B10) /ater Table (C2) ows (C8)
YDROLO Vetland Hy Primar	OGY vdrology Indicators: v Indicators (minimum surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1) sediment Deposits (B2)	of one is requ		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Dxidized Rhizo Presence of R	a (B13) Plants (B14) ide Odor (C1) ospheres on L educed Iron (i	iving Roo C4)		Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis Stunted or Str	Cracks (B6) erns (B10) /ater Table (C2) ows (C8) ible on Aerial Imagery (C9) essed Plants (D1)
YDROLC Vetland Hy Primar	OGY vdrology Indicators: y Indicators (minimum surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1) sediment Deposits (B2) orift Deposits (B3) ligal Mat or Crust (B4)	of one is requ		Water-Stained Aquatic Fauna Frue Aquatic F Hydrogen Sulf Dxidized Rhizo Presence of R Recent Iron Re	a (B13) Plants (B14) ide Odor (C1) ospheres on L educed Iron (eduction in Til	iving Roo C4)	IS (C3)	Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P	Cracks (B6) erns (B10) Vater Table (C2) ows (C8) ible on Aerial Imagery (C9) essed Plants (D1) Position (D2)
YDROLC Vetland Hy Primar C S C S C S C S C S C S C S C S C S C S	OGY vdrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1) sediment Deposits (B2) orift Deposits (B3) ugal Mat or Crust (B4) on Deposits (B5)	of one is requ		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Dxidized Rhize Presence of R Recent Iron Re Thin Muck Sur	a (B13) Plants (B14) ide Odor (C1) ospheres on L educed Iron (eduction in Til face (C7)	iving Roo C4)		Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis Stunted or Str	Cracks (B6) erns (B10) Vater Table (C2) ows (C8) ible on Aerial Imagery (C9) essed Plants (D1) Position (D2)
YDROLO Vetland Hy Primar	OGY vdrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1) Sediment Deposits (B2) orift Deposits (B3) ligal Mat or Crust (B4) on Deposits (B5) nundation Visible on A	of one is requ)		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Dxidized Rhizo Presence of R Recent Iron Ro Thin Muck Sur Gauge or Well	a (B13) Plants (B14) iide Odor (C1) ospheres on L educed Iron (eduction in Til face (C7) Data (D9)	iving Roo C4)	IS (C3)	Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P	Cracks (B6) erns (B10) Vater Table (C2) ows (C8) ible on Aerial Imagery (C9) essed Plants (D1) Position (D2)
YDROLO Wetland Hy Primar D S D S V S V S V S V S V S V S V S V S V S V	OGY vdrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1) sediment Deposits (B2) orift Deposits (B3) ligal Mat or Crust (B4) on Deposits (B5) nundation Visible on A parsely Vegetated Co	of one is requ)		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Dxidized Rhize Presence of R Recent Iron Re Thin Muck Sur	a (B13) Plants (B14) iide Odor (C1) ospheres on L educed Iron (eduction in Til face (C7) Data (D9)	iving Roo C4)	IS (C3)	Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P	Cracks (B6) erns (B10) Vater Table (C2) ows (C8) ible on Aerial Imagery (C9) essed Plants (D1) Position (D2)
YDROLC Vetland Hy Primar Primar S Primar S Primar S Primar S Primar S Primar S Primar S S S S S S S S S S S S S	OGY vdrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1) sediment Deposits (B2) orift Deposits (B3) ligal Mat or Crust (B4) on Deposits (B5) nundation Visible on A parsely Vegetated Co	of one is requ) erial Imagery (ncave Surface	B7)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Dxidized Rhizo Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Dther (Explain	a (B13) Plants (B14) iide Odor (C1) ospheres on L educed Iron (eduction in Til face (C7) Data (D9)	iving Roo C4)	IS (C3)	Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P	Cracks (B6) erns (B10) Vater Table (C2) ows (C8) ible on Aerial Imagery (C9) essed Plants (D1) Position (D2)
YDROLC Wetland Hy Primar C S C S C S C S C S C S C S C S C S C S	OGY vdrology Indicators: v Indicators (minimum surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1) sediment Deposits (B2) vater marks (B1) sediment Deposits (B3) ligal Mat or Crust (B4) on Deposits (B5) nundation Visible on A parsely Vegetated Co vations: ter Present? Yes	of one is requ) erial Imagery (ncave Surface	Image: Constraint of the second se	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Dxidized Rhize Presence of R Recent Iron Re Chin Muck Sur Gauge or Well Other (Explain	a (B13) Plants (B14) iide Odor (C1) ospheres on L educed Iron (eduction in Til face (C7) Data (D9)	iving Roo C4)	IS (C3)	Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P	Cracks (B6) erns (B10) Vater Table (C2) ows (C8) ible on Aerial Imagery (C9) essed Plants (D1) Position (D2)
YDROLO Vetland Hy Primar C S C V C S C V C S C V C S C V C S C V C S C S C V C S C S C S C S C S C S C S C S C S C S	OGY vdrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) iaturation (A3) Vater marks (B1) iediment Deposits (B2) on Deposits (B3) ligal Mat or Crust (B4) ion Deposits (B5) nundation Visible on A parsely Vegetated Co vations: ter Present? Yes	of one is requ) erial Imagery (ncave Surface : No 🖾	Image: Constraint of the second se	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Dxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Bauge or Well Other (Explain mes):	a (B13) Plants (B14) iide Odor (C1) ospheres on L educed Iron (eduction in Til face (C7) Data (D9)	iving Roo C4)	IS (C3)	Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P	Cracks (B6) erns (B10) Vater Table (C2) ows (C8) ible on Aerial Imagery (C9) essed Plants (D1) Position (D2)
YDROLO Wetland Hy Primar B B B B B B B B B B B B B B B B B B B	OGY vdrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1) sediment Deposits (B2) on Deposits (B3) ligal Mat or Crust (B4) on Deposits (B5) nundation Visible on A parsely Vegetated Co vations: ter Present? Yes	of one is requ) erial Imagery (ncave Surface : No 🖾	Image: Constraint of the second se	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Dxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Bauge or Well Other (Explain mes):	a (B13) Plants (B14) iide Odor (C1) ospheres on L educed Iron (eduction in Til face (C7) Data (D9)	iving Roo C4) led Soils (Ls (C3)	Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P	Cracks (B6) erns (B10) Vater Table (C2) ows (C8) ible on Aerial Imagery (C9) essed Plants (D1) Position (D2)
YDROLC Wetland Hy Primar Primar S Primar S Primar S S Primar S S S S S S S S S S S S S	OGY vdrology Indicators: v Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) on Deposits (B3) ligal Mat or Crust (B4) on Deposits (B5) nundation Visible on A parsely Vegetated Co vations: ter Present? Yes Present? Yes present? Yes pillary fringe)	of one is required of one is required of one is required of the second o	Image: Constraint of the second sec	Water-Stained Aquatic Fauna Frue Aquatic F Hydrogen Sulf Dxidized Rhize Presence of R Recent Iron Re Chin Muck Sur Gauge or Well Dther (Explain mes): mes):	a (B13) Plants (B14) ide Odor (C1) ospheres on L educed Iron (eduction in Til face (C7) Data (D9) in Remarks)	Living Roo C4) led Soils (Is (C3)	Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P FAC-Neutral T	Cracks (B6) erns (B10) Vater Table (C2) ows (C8) ible on Aerial Imagery (C9) essed Plants (D1) Position (D2) Test (D5)
YDROLC Wetland Hy Primar Primar S Primar S Primar S Primar S Primar S S S S S S S S S S S S S	OGY vdrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) on Deposits (B3) ligal Mat or Crust (B4) on Deposits (B5) hundation Visible on A parsely Vegetated Co vations: ter Present? Yes Present? Yes present? Yes pillary fringe)	of one is required of one is required in the second	Image: Constraint of the second se	Vater-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Dxidized Rhize Presence of R Recent Iron Re Chin Muck Sur Gauge or Well Other (Explain Mes): Mes): mes): photos, previo	a (B13) Plants (B14) ide Odor (C1) ospheres on L educed Iron (eduction in Til face (C7) Data (D9) in Remarks)	Living Roo C4) led Soils (Is (C3)	Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P FAC-Neutral T	Cracks (B6) erns (B10) √ater Table (C2) ows (C8) ible on Aerial Imagery (C9) essed Plants (D1) Position (D2) Test (D5) Yes ⊠ No □
YDROLC Wetland Hy Primar Primar S Primar S Primar S Primar S Primar S S S S S S S S S S S S S	OGY vdrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) vift Deposits (B3) ligal Mat or Crust (B4) on Deposits (B5) nundation Visible on A parsely Vegetated Co vations: ter Present? Yes Present? Yes present? Yes pillary fringe) corded Data (stream g (Exhibit 3).	of one is required of one is required in the second	Image: Constraint of the second se	Vater-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Dxidized Rhize Presence of R Recent Iron Re Chin Muck Sur Gauge or Well Other (Explain Mes): Mes): mes): photos, previo	a (B13) Plants (B14) ide Odor (C1) ospheres on L educed Iron (eduction in Til face (C7) Data (D9) in Remarks)	Living Roo C4) led Soils (Is (C3)	Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P FAC-Neutral T	Cracks (B6) erns (B10) √ater Table (C2) ows (C8) ible on Aerial Imagery (C9) essed Plants (D1) Position (D2) Test (D5) Yes ⊠ No □

WETLAND DETERMINA	TION DATA FORM – Midwest Region	
Project/Site: Milwaukee River Pkwy and Oak Leaf Trail Reconstruction	이 같은 것 같은 것 같은 이 것 것 같아요. 김 씨는 것 같아? 것 같아요. 김 씨가는 것요? 특별 가지 않는 것 같아요. 이 나는 것 같아요. 나는 것 않아요. 나는 것 같아요. 나는 것 않아요. 나는 않아요. 나는 것 않아요. 나는 않아요. 나는 않아요. 나는 않아요. 나는 않아요. 나는 것 않아요. 나는 것 않아요. 나는 것 않아요. 나는 않	g Date: 10/27/2014
Applicant/Owner:	State: WI Sampling	g Point: 6
Investigator(s): Jennifer Dietl and Zofia Noe; SEWRPC	Section, Township, Range: Section 19, T8N, R22E	-
Landform (hillslope, terrace, etc.): terrace	Local relief (concave, convex, none): slightly concave	
Slope (%): 2-6% Lat: Long:	Datum:	
Soil Map Unit Name: Casco loam (CeB)	NWI classification:	the second se
Are climatic/hydrologic conditions on the site typical for this time of year?		
Are Vegetation, Soil, or Hydrology significantly disturb		No 🗆
Are Vegetation, Soil ?, or Hydrology naturally problematic?		
SUMMARY OF FINDINGS - Attach site map showing sampling point		
Financial of Thirdshoo Adabit site map showing sampling point	tiocations, transects, important leatures, etc.	
Hydrophytic Vegetation Present?	Is the Sampled Area	

Hydrophytic Vegetation Present?	⊠Yes	⊡No.	Is the Sampled Area	
Hydric Soils Present?	☐ Yes	No	within a Wetland?	□ Yes
Wetland Hydrology Present?	□Yes	No	4 / / · · · · · · · · · · · · · · · · ·	

Remarks: Sample site chosen in slight depression indicated on topographic map.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo	rksheet:
1. Fraxinus pennsylvanica	<u>10</u>		FACW	Number of Dominant Sp	ecies
2			_	That are OBL, FACW, or	
3				Total Number of Domina	int
4			_	Species Across All Strat	a: <u>3</u> (B)
.5			_	Percent of Dominant Spe	ecies
	<u>10</u>	= Total Cov	/er	That Are OBL, FACW, o	
Sapling/Shrub Stratum (Plot size: 30' radius)				Prevalence Index work	sheet:
1. Fraxinus pennsylvanica	<u>18</u>	\boxtimes	FACW	Total % Cover of:	Multiply by:
2. Rhamnus cathartica	4		FAC	OBL species	x 1 =
3. Acer negundo	2		FAC	FACW species	x 2 =
4				FAC species	x 3 =
5			1	FACU species	x 4 =
	24	= Total Cov	ver	UPL species	x 5 =
Herb Stratum (Plot size: 5' radius)			1.1	Column Totals:	(A) (B)
1. Poa pratensis	<u>70</u>		FAC	Prevalence Ir	
2. Phalaris arundinacea	15		FACW	Hydrophytic Vegetation	Indicators:
3. Cirsium arvense	5		FACU	1 - Rapid Test for Hy	drophytic Vegetation
4				🛛 2 - Dominance Test	is >50%
5				3 - Prevalence Index	is ≤3.0 ¹ aptations ¹ (Provide supporting
6					or on a separate sheet)
7					ophytic Vegetation ¹ (Explain)
8					
9				¹ Indicators of hydric soil	and wetland hydrology must
10				Be present, unless distur	bed or problematic.
	90	= Total Cov	er		
Woody Vine Stratum (Plot size: 30' radius)			-	Hydrophytic	
1			1	Vegetation	
2				Present? Yes	No 🗆
	0	= Total Cov	er		

No

SOIL

Profile De:	Matrix			Redox Fea	tures					
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	-	at inc		in the second
-3	10YR 2/2	100		70		LOC*	-	kture	R	emarks
-8	10YR 3/1	100					Loam	a		
+	TOTK S/T	100					Gravelly san	idy loam		
				_	_		Gravel		Refusal	
		_		-	()	_				
					(
Type: C=0	Concentration, D=Dep	letion, RM=F	Reduced Matrix, M	IS=Masked S	Sand Grains			tion: PL=Pore		
	I Indicators: Histosol (A1)		-					ors for Proble		ioils3:
	Histic Epipedon (A2)			Sandy Gle	eyed Matrix (S4	+)		Coast Prairie R Dark Surface (S		
	Black Histic (A3)		Ē	Stripped N				ron-Manganes		1
	Hydrogen Sulfide (A4)		Ē		cky Mineral (F	1)		Very Shallow D		
	Stratified Layers (A5)				eyed Matrix (F:			Other (Explain i		
	2 cm Muck (A10)		E	Depleted I	Matrix (F3)	<i>x</i>		A		
	Depleted Below Dark	Surface (A11			rk Surface (F6					
	Thick Dark Surface (A		5		Dark Surface (F7)	^a Indic	ators of Hydrop	hytic vegetatio	n and
	Sandy Mucky Mineral			Redox De	pressions (F8)			Vetland hydrolo		
	5 cm Mucky Peat or Pea						U	Inless disturbed	f or problemation	0.
	Gravel						i di sadata di		No. D	1 57
	(inches): 8						Hydric	Soil Present?	Yes 🗌	No 🛛
	and the first of the second									
emarks:										
DROLO									-	
DROLC	drology Indicators:	of one is rec	uired: check all t	hat apply)	_		Se	Condary Indicat	ore (minimum	
DROLO /etland Hy Primar	vdrology Indicators: y Indicators (minimum	of one is rec					-	condary Indical		of two require
DROLC Ietland Hy Primar □ S	ydrology Indicators: y Indicators (minimum Surface Water (A1)	of one is rec		Vater-Stained	Leaves (B9)	2		Surface Soil	Cracks (B6)	of two require
DROLC /etland Hy Primar S H	ydrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2)	of one is rec		Vater-Stained quatic Fauna	a (B13)			Surface Soil Drainage Pat	Cracks (B6) terns (B10)	
DROLO etland Hy Primar S H	ydrology Indicators: y Indicators (minimum Surface Water (A1) figh Water Table (A2) Saturation (A3)	of one is rec		Vater-Stained quatic Fauna rue Aquatic F	a (B13) Plants (B14)			Surface Soil Drainage Pat	Cracks (B6)	
/DROLO /etland Hy Primar 	ydrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1)			Vater-Stained quatic Fauna rue Aquatic F lydrogen Sulf	a (B13) Plants (B14) fide Odor (C1)			Surface Soil Drainage Pal Dry-Season Crayfish Burr	Cracks (B6) terns (B10) Nater Table (C ows (C8)	2)
DROLO /etland Hy Primar S S S S	ydrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2)			Vater-Stained quatic Fauna rue Aquatic F lydrogen Sulf Dxidized Rhizo	a (B13) Plants (B14) fide Odor (C1) ospheres on Li			Surface Soil Drainage Pal Dry-Season Crayfish Burr	Cracks (B6) tterns (B10) Water Table (C	2)
DROLO Vetland Hy Primar S Primar S Primar S S S S S S S S	ydrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1)			Vater-Stained quatic Fauna rue Aquatic F lydrogen Sulf Dxidized Rhizo	a (B13) Plants (B14) fide Odor (C1)			Surface Soil Drainage Pat Dry-Season Crayfish Burr Saturation Vi	Cracks (B6) terns (B10) Nater Table (C ows (C8)	2) Imagery (C9)
DROLO etland Hy Primar C S C H S C S C S C S C S C S C S C S C S C S C	ydrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2)			Vater-Stained quatic Fauna rue Aquatic F lydrogen Sulf Dxidized Rhiz resence of R	a (B13) Plants (B14) fide Odor (C1) ospheres on Li	(4)	ts (C3)	Surface Soil Drainage Pat Dry-Season Crayfish Burr Saturation Vi	Cracks (B6) tterns (B10) Nater Table (C ows (C8) sible on Aerial ressed Plants	2) Imagery (C9)
DROLO etland Hy Primar S C C C C C C C C C C C C C C C C C C	ydrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1) Sediment Deposits (B2)			Vater-Stained quatic Fauna rue Aquatic F lydrogen Sulf Dxidized Rhiz resence of R	a (B13) Plants (B14) fide Odor (C1) ospheres on Li educed Iron (C eduction in Till	(4)	ts (C3)	Surface Soil Drainage Pal Dry-Season Crayfish Burr Saturation Vi Stunted or St	Cracks (B6) tterns (B10) Water Table (C ows (C8) sible on Aerial ressed Plants Position (D2)	2) Imagery (C9)
DROLC /etland Hy Primar	ydrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) Drift Deposits (B3) ligal Mat or Crust (B4))		Vater-Stained quatic Fauna rue Aquatic F lydrogen Sulf Dxidized Rhize resence of R lecent Iron Re	a (B13) Plants (B14) fide Odor (C1) ospheres on Li educed Iron (C eduction in Till fface (C7)	(4)	ts (C3)	Surface Soil Drainage Pal Dry-Season Crayfish Burr Saturation Vi Stunted or St Geomorphic	Cracks (B6) tterns (B10) Water Table (C ows (C8) sible on Aerial ressed Plants Position (D2)	2) Imagery (C9)
DROLC etland Hy Primar Image:	ydrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) orift Deposits (B3) ulgal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A sparsely Vegetated Co) erial Imagery		Vater-Stained quatic Fauna rue Aquatic F lydrogen Sulf oxidized Rhiz resence of R recent Iron Ro hin Muck Sur Gauge or Well	a (B13) Plants (B14) fide Odor (C1) ospheres on Li educed Iron (C eduction in Till fface (C7)	(4)	ts (C3)	Surface Soil Drainage Pal Dry-Season Crayfish Burr Saturation Vi Stunted or St Geomorphic	Cracks (B6) tterns (B10) Water Table (C ows (C8) sible on Aerial ressed Plants Position (D2)	2) Imagery (C9)
Primar Primar Primar S Primar S C S C S C C S C C S C C S C S S C S S S S S S S S S S S S S	ydrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Jgal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A sparsely Vegetated Co rvations:) erial Imagery ncave Surfac		Vater-Stained quatic Fauna rue Aquatic F lydrogen Sulf Dxidized Rhize resence of R decent Iron Re hin Muck Sur Gauge or Well other (Explain	a (B13) Plants (B14) fide Odor (C1) ospheres on Li reduced Iron (C eduction in Till face (C7) Data (D9)	(4)	ts (C3)	Surface Soil Drainage Pal Dry-Season Crayfish Burr Saturation Vi Stunted or St Geomorphic	Cracks (B6) tterns (B10) Water Table (C ows (C8) sible on Aerial ressed Plants Position (D2)	2) Imagery (C9)
VDROLC Vetland Hy Primar C S C S C S C S C S C S C S C S C S C S	ydrology Indicators: y Indicators (minimum Surface Water (A1) digh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) orift Deposits (B3) dgal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A sparsely Vegetated Co rvations: ter Present? Yes) erial Imagery ncave Surfac :□ No	(B7) Ce (B8) Ce (B7) Ce (Charles Content of	Vater-Stained quatic Fauna rue Aquatic F lydrogen Sulf oxidized Rhize resence of R lecent Iron Re hin Muck Sur Bauge or Well other (Explain es):	a (B13) Plants (B14) fide Odor (C1) ospheres on Li reduced Iron (C eduction in Till face (C7) Data (D9)	(4)	ts (C3)	Surface Soil Drainage Pal Dry-Season Crayfish Burr Saturation Vi Stunted or St Geomorphic	Cracks (B6) tterns (B10) Water Table (C ows (C8) sible on Aerial ressed Plants Position (D2)	2) Imagery (C9)
DROLC etland Hy Primar C S C S C V C S C V C S C V C S C V C S C C C S C C C S C S C C C S C S C S	ydrology Indicators: y Indicators (minimum Surface Water (A1) figh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) orift Deposits (B3) sigal Mat or Crust (B4) on Deposits (B5) nundation Visible on A parsely Vegetated Co rvations: ter Present? Yes) ncave Surfac	(B7) (B7) Depth (inch)	Vater-Stained quatic Fauna rue Aquatic F lydrogen Sulf oxidized Rhize resence of R lecent Iron Re hin Muck Sur Bauge or Well other (Explain es):	a (B13) Plants (B14) fide Odor (C1) ospheres on Li reduced Iron (C eduction in Till face (C7) Data (D9)	(4)	ts (C3)	Surface Soil Drainage Pal Dry-Season Crayfish Burr Saturation Vi Stunted or St Geomorphic	Cracks (B6) tterns (B10) Water Table (C ows (C8) sible on Aerial ressed Plants Position (D2)	2) Imagery (C9)
Primar Primar Primar S C S C S C S C S C C S C C S C C S C C S C C S C C S C C S S C C S S C S S C S S C S S S S S S S S S S S S S	y Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) orift Deposits (B3) ligal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A sparsely Vegetated Co rvations: ter Present? Yes Present? Yes) ncave Surfac	(B7) (B7) Depth (inch-	Vater-Stained quatic Fauna rue Aquatic F lydrogen Sulf Dxidized Rhize resence of R decent Iron Ro hin Muck Sur Bauge or Well Other (Explain es):	a (B13) Plants (B14) fide Odor (C1) ospheres on Li reduced Iron (C eduction in Till face (C7) Data (D9)	34) ed Soils (ts (C3)	Surface Soil Drainage Pal Dry-Season V Crayfish Burr Saturation Vi Stunted or St Geomorphic FAC-Neutral	Cracks (B6) tterns (B10) Water Table (C rows (C8) sible on Aerial ressed Plants Position (D2) Test (D5)	2) Imagery (C9
Primar Primar S P S P S P S P S P P S S P P P S S P P P S S P P P S S P P P P P P P P P P P P P	ydrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) orift Deposits (B3) ligal Mat or Crust (B4) ron Deposits (B5) hundation Visible on A sparsely Vegetated Co rvations: ter Present? Yes Present? Yes pillary fringe)) ncave Surfact I No I I No I	(B7) □ G 2e (B8) □ O Depth (inch Depth (inch Depth (inch	Vater-Stained quatic Fauna irue Aquatic F lydrogen Sulf Didized Rhize resence of R lecent Iron Re hin Muck Sur Gauge or Well other (Explain es): es):	a (B13) Plants (B14) fide Odor (C1) ospheres on Li educed Iron (C eduction in Till face (C7) Data (D9) in Remarks)	24) ed Soils (ts (C3)	Surface Soil Drainage Pal Dry-Season V Crayfish Burr Saturation Vi Stunted or St Geomorphic FAC-Neutral	Cracks (B6) tterns (B10) Water Table (C ows (C8) sible on Aerial ressed Plants Position (D2) Test (D5)	2) Imagery (C9 D1) No 🖾
VDROLC Vetland Hy Primar S Primar S Primar S Primar S S C S C S C S S C S S C S S C S S S S S S S S S S S S S	y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Agal Mat or Crust (B4) Son Deposits (B5) Sundation Visible on A Sparsely Vegetated Co rvations: ter Present? Yes Present? Yes Present? Yes pillary fringe) scorded Data (stream g (Exhibit 3).) ncave Surfac D No D No No No D No		Vater-Stained quatic Fauna rue Aquatic F lydrogen Sulf oxidized Rhize resence of R decent Iron Re hin Muck Sur eauge or Well other (Explain es): es): es): photos, previo	a (B13) Plants (B14) fide Odor (C1) ospheres on Li educed Iron (C eduction in Till face (C7) Data (D9) in Remarks)	24) ed Soils (v s), if avail	ts (C3)	Surface Soil Drainage Pal Dry-Season V Crayfish Burr Saturation Vi Stunted or St Geomorphic FAC-Neutral	Cracks (B6) tterns (B10) Water Table (C ows (C8) sible on Aerial ressed Plants Position (D2) Test (D5) Yes Yes	2) Imagery (C9 D1) No Ø Dit 2), Soil
Primar Primar Primar S S Primar S Primar S Primar S Primar S Primar S Primar S Primar S Primar S Primar S S Primar S Primar S S Primar S S Primar S S Primar S Primar S S Primar S S Primar S S Primar S S Primar S S Primar S S S S S S S S S S S S S	ydrology Indicators: y Indicators (minimum Surface Water (A1) figh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) orift Deposits (B3) sigal Mat or Crust (B4) on Deposits (B5) hundation Visible on A parsely Vegetated Co rvations: ter Present? Yes Present? Yes present? Yes present? Yes pillary fringe) corded Data (stream g (Exhibit 3). Vhile the sample site) erial Imagery ncave Surfact D No 1 D No 1 gauge, monit	Image: Constraint of the second se	Vater-Stained quatic Fauna rue Aquatic F lydrogen Sulf oxidized Rhize resence of R resence of R	a (B13) Plants (B14) fide Odor (C1) ospheres on Li reduced Iron (C eduction in Till face (C7) Data (D9) in Remarks) ous inspection rapid permea	24) ed Soils (v s), if avail	ts (C3)	Surface Soil Drainage Pal Dry-Season V Crayfish Burr Saturation Vi Stunted or St Geomorphic FAC-Neutral	Cracks (B6) tterns (B10) Water Table (C ows (C8) sible on Aerial ressed Plants Position (D2) Test (D5) Yes Yes	2) Imagery (C9) D1) No 🖾 Dit 2), Soil
Primar Primar Primar S S Primar S Primar S Primar S Primar S Primar S Primar S Primar S Primar S Primar S S Primar S Primar S S Primar S S Primar S S Primar S Primar S S Primar S S Primar S S Primar S S Primar S S Primar S S S S S S S S S S S S S	ydrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) orift Deposits (B3) ligal Mat or Crust (B4) ron Deposits (B5) hundation Visible on A sparsely Vegetated Co rvations: ter Present? Yes Present? Yes pillary fringe) scorded Data (stream g) erial Imagery ncave Surfact D No 1 D No 1 gauge, monit	Image: Constraint of the second se	Vater-Stained quatic Fauna rue Aquatic F lydrogen Sulf oxidized Rhize resence of R resence of R	a (B13) Plants (B14) fide Odor (C1) ospheres on Li reduced Iron (C eduction in Till face (C7) Data (D9) in Remarks) ous inspection rapid permea	24) ed Soils (v s), if avail	ts (C3)	Surface Soil Drainage Pal Dry-Season V Crayfish Burr Saturation Vi Stunted or St Geomorphic FAC-Neutral	Cracks (B6) tterns (B10) Water Table (C ows (C8) sible on Aerial ressed Plants Position (D2) Test (D5) Yes Yes	2) Imagery (C9) D1) No 🖾 Dit 2), Soil

a status in the local of the	WETLAND DETER	MINATION DATA F	ORM - Midwest Re	egion	
Project/Site: Milwaukee River Pkwy a	nd Oak Leaf Trail Reconstr	ruction City/County: City	of Glendale/Milwaukee Cor	unty	Sampling Date: 10/27/2014
Applicant/Owner:			State: WI	3	Sampling Point: 7
Investigator(s): Jennifer Dietl and Zofi	a Noe; SEWRPC	Section, Township,	Range: Section 19, T8N,	R22E	
Landform (hillslope, terrace, etc.): low	terrace	Local relief (concav	e, convex, none): none		
Slope (%): 2-6% Lat:	Lon	g:			Datum:
Soil Map Unit Name: Casco loam (Ce				NWI classi	fication: E1K
Are climatic/hydrologic conditions on th	ne site typical for this time of	of year? Yes 🛛 N	o 🔲 (If no, explain in R	(emarks)	
Are Vegetation, Soil, or Hy	drology significantly	y disturbed? Are "Norma	Circumstances" present?	Yes 🛛	No 🗔
Are Vegetation, Soil, or Hy	drology naturally pr	oblematic? (If, needed,	explain any answers in Re	marks.)	
SUMMARY OF FINDINGS - Attach s	ite map showing samplin	g point locations, transect	s, important features, etc	x .	
Hydrophytic Vegetation Present? Hydric Soils Present? Wetland Hydrology Present?	 ⊠Yes ⊠Yes □No ⊠Yes □No 	is the Sample within a Wetl		Yes	No

Remarks:

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2				That are OBL, FACW, or FAC: <u>3</u> (A)
3	_		_	Total Number of Dominant
4				Species Across All Strata: <u>3</u> (B)
5	_			Percent of Dominant Species
	Q	= Total Cov	ver	That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size: 30' radius)				Prevalence Index worksheet:
1. Fraxinus pennsylvanica	50	\boxtimes	FACW	Total % Cover of: Multiply by:
2. Cornus stolonifera	10		FACW	OBL species x 1 =
3	_			FACW species x 2 =
4				FAC species x 3 =
5			_	FACU species x 4 =
	<u>60</u>	= Total Cov	/er	UPL species x 5 =
Herb Stratum (Plot size: 5' radius)				Column Totals: (A) (B)
1. Agrostis stolonifera	60	\boxtimes	FACW	Prevalence Index = B/A =
2. Poa pratensis	40		FAC	Hydrophytic Vegetation Indicators:
3. Typha angustifolia	15		OBL	1 - Rapid Test for Hydrophytic Vegetation
4. Juncus dudleyi	10		FACW	2 - Dominance Test is >50%
5. Aster lucidulus	3		OBL	 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting)
6	-			data in Remarks or on a separate sheet)
7			_	5 - Problematic Hydrophytic Vegetation ¹ (Explain)
8			1.1	
9				¹ Indicators of hydric soil and wetland hydrology must
10.				Be present, unless disturbed or problematic.
	128	= Total Cov	er	
Woody Vine Stratum (Plot size: 30' radius)			-	Hydrophytic
1				Vegetation
2				Present? Yes No
	Q	= Total Cov	er	
Remarks: (Include photo numbers here or on a separate she	eet.) Fresh (wet) meadow an	id shrub-ca	π.

~	-	۰.
5	n	Ľ
~	v	-

DIL										
rofile Des	scription: (Describe	to the dep	pth neede	d to docur	nent the ind	icator or co	onfirm the a	absence of inc	dicators.)	
Depth	Matrix	_	_		Redox Feat			_		
inches)	Color (moist)	%	Colo	r (moist)	%	Type ¹	Loc ²	Te	xture	Remarks
11	10YR 3/2	100						Mucky loam		
1-14	10YR 5/2	59	10YR 5	/8	2	С	PL M	Clay		
	10YR 4/3	39								
4-18	10YR 5/2	67	10YR 5/	/8	5	С	PL M	Silt		
	10YR 4/3	38								the second s
8+								-		Refusal: Too wet to pull up
_										
	Concentration, D=Dep I Indicators:	letion, RN	1=Reduced	d Matrix, M	S=Masked S	and Grains				re Lining, M=Matrix Ilematic Hydric Soils ³ :
	Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral 5 cm Mucky Peat or Per Layer (if observed): Tight silt soils too wel	(Surface 12) (S1) eat (S3)			Sandy Red Stripped M Loamy Mu Loamy Gle Depleted M Redox Dar	lox (S5) atrix (S6) acky Minera yed Matrix (Matrix (F3) k Surface (F ark Surface	F2) 6) (F7)	³ Indic V	Dark Surface Iron-Mangan Very Shallow Other (Expla cators of Hyd Vetland hydr Jnless disturf	ese Masses (F12) v Dark Surface (TF12) in in Remarks) rophytic vegetation and ology must be present, bed or problematic.
	n (inches): <u>18</u>		o with prob	<u>e</u>				nyaric	Soil Presen	t? Yes⊠ No 🗆
emarks: DROLC etland Hy	n (inches): <u>18</u>				at apply)					t? Yes ⊠ No □ cators (minimum of two required
DROLC etland Hy Primar	n (inches): <u>18</u> DGY ydrology Indicators:			check all th	10 m 2 m 2 m	Leaves (B9))		condary Indi	cators (minimum of two required
DROLO DROLO Stland Hy Primar	n (inches): <u>18</u> DGY ydrology Indicators: y Indicators (minimum	n of one is		<u>check all th</u> □ W	at apply) ater-Stained quatic Fauna))		condary Indi	cators (minimum of two required
DROLC atland Hy Primar S N H	o (inches): <u>18</u> DGY ydrology Indicators: y Indicators (minimum Surface Water (A1)	n of one is		check all th	ater-Stained quatic Fauna	(B13)))		condary Indi Surface S	cators (minimum of two required oil Cracks (B6) Patterns (B10)
DROLC DROLC DIIIand Hy Primar S S S S S S	n (inches): <u>18</u> DGY ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2)	n of one is		check all th	ater-Stained quatic Fauna ue Aquatic P	(B13) lants (B14)			condary Indi Surface So Drainage I Dry-Seasc	cators (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2)
DROLC etland Hy Primar S S S S S S S S S S S S S S S S S S S	n (inches): <u>18</u> DGY ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2 Saturation (A3)	n of one is		check all th W Ac Tr Hy	ater-Stained quatic Fauna ue Aquatic P /drogen Sulfi	(B13) lants (B14) de Odor (C	1)		condary Indi Surface S Drainage I Dry-Seasc Crayfish B	cators (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) ourrows (C8)
DROLC etland Hy Primar B B B B B C S C S S C S S C S S S S S S	or (inches): <u>18</u> DGY ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2)	n of one is		<u>check all th</u> W Ac Tr Hy Oy	ater-Stained quatic Fauna ue Aquatic P ydrogen Sulfi xidized Rhizo	(B13) lants (B14) de Odor (C spheres on	1) Living Root	Sec (C3)	condary Indi Surface S Drainage I Dry-Seasc Crayfish B Saturation	cators (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) surrows (C8) Visible on Aerial Imagery (C9)
DROLC atland Hy Primar B B B B C S C S C S C C S C D D C S S C D D C S S C D C S S S C D C S S S S	o (inches): <u>18</u> OGY ydrology Indicators: y Indicators (minimum) Surface Water (A1) figh Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	n of one is) ?)		<u>check all th</u> W Ac Tr Hy Os Pr	ater-Stained quatic Fauna ue Aquatic P vdrogen Sulfi xidized Rhizo resence of Re	(B13) lants (B14) de Odor (C ² spheres on educed Iron	1) Living Root (C4)	Sec	condary Indi Surface S Drainage I Dry-Seasc Crayfish B Saturation Stunted or	cators (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) ourrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
DROLO etland Hy Primar S S S S S S S S S S S S S S S S S S S	o (inches): <u>18</u> DGY ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2)	n of one is) ?)		<u>check all th</u> W Ac Tr Hy O Pr Re	ater-Stained quatic Fauna ue Aquatic P vdrogen Sulfi kidized Rhizo resence of Re ecent Iron Re	(B13) lants (B14) de Odor (C spheres on educed Iron eduction in T	1) Living Root (C4)	s (C3)	condary Indi Surface S Drainage I Dry-Seasc Crayfish B Saturation Stunted or Geomorp	cators (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) ourrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) hic Position (D2)
DROLC etland Hy Primar S S S S S S S S S S S S S S S S S S S	or (inches): <u>18</u> DGY ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5)	<u>1 of one is</u>) 2)	required;	check all th W Ac Tr O Pr Re Th	ater-Stained quatic Fauna ue Aquatic P ydrogen Sulfi xidized Rhizo resence of Re ecent Iron Re nin Muck Surf	(B13) lants (B14) de Odor (C ⁻ spheres on educed Iron eduction in T face (C7)	1) Living Root (C4)	Sec	condary Indi Surface S Drainage I Dry-Seasc Crayfish B Saturation Stunted or Geomorp	cators (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) ourrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
DROLC atland Hy Primar S S S C C C C C C C C C C C C C	A (inches): <u>18</u> DGY ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Ngal Mat or Crust (B4) ron Deposits (B5) hundation Visible on A	1 of one is) 2) verial Imag	required;	check all th	ater-Stained quatic Fauna ue Aquatic P ydrogen Sulfi xidized Rhizo resence of Re ecent Iron Re nin Muck Surf auge or Well	(B13) lants (B14) de Odor (C ⁻ espheres on educed Iron educetion in T face (C7) Data (D9)	1) Living Root (C4) ïlled Soils ((s (C3)	condary Indi Surface S Drainage I Dry-Seasc Crayfish B Saturation Stunted or Geomorp	cators (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) ourrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) hic Position (D2)
DROLC atland Hy Primar B S C C C C C C C C C C C C C	A (inches): <u>18</u> DGY ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) Ngal Mat or Crust (B4) ron Deposits (B5) hundation Visible on A Sparsely Vegetated Co	1 of one is) 2) verial Imag	required;	check all th	ater-Stained quatic Fauna ue Aquatic P ydrogen Sulfi xidized Rhizo resence of Re ecent Iron Re nin Muck Surf	(B13) lants (B14) de Odor (C ⁻ espheres on educed Iron educetion in T face (C7) Data (D9)	1) Living Root (C4) ïlled Soils ((s (C3)	condary Indi Surface S Drainage I Dry-Seasc Crayfish B Saturation Stunted or Geomorp	cators (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) ourrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) hic Position (D2)
DROLO etland Hy Primar S S S S S S S S S S S S S S S S S S S	DGY ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Ngal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A sparsely Vegetated Co rvations:	1 of one is) 2) verial Imag	required; pery (B7) nface (B8)	check all th W Ac Tr Hy O Pr Re Th Ga Ot	ater-Stained quatic Fauna ue Aquatic P ydrogen Sulfi kidized Rhizo resence of Re ecent Iron Re hin Muck Surf auge or Well ther (Explain	(B13) lants (B14) de Odor (C ⁻ espheres on educed Iron educetion in T face (C7) Data (D9)	1) Living Root (C4) ïlled Soils ((s (C3)	condary Indi Surface S Drainage I Dry-Seasc Crayfish B Saturation Stunted or Geomorp	cators (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) ourrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) hic Position (D2)
DROLC etland Hy Primar B S B H S C V C S C V C S C V C S C C C S C S	A (inches): <u>18</u> DGY ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Ngal Mat or Crust (B4) ron Deposits (B5) hundation Visible on A Sparsely Vegetated Co rvations: ter Present? Yes	n of one is) 2) werial Imag	required; pery (B7) rface (B8)	check all th W Ac Tr Hy O Pr Re Th Gat O	ater-Stained quatic Fauna ue Aquatic P ydrogen Sulfi xidized Rhizo resence of Re ecent Iron Re nin Muck Surf auge or Well ther (Explain	(B13) lants (B14) de Odor (C ⁻ espheres on educed Iron educetion in T face (C7) Data (D9)	1) Living Root (C4) ïlled Soils ((s (C3)	condary Indi Surface S Drainage I Dry-Seasc Crayfish B Saturation Stunted or Geomorp	cators (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) ourrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) hic Position (D2)
Primar Primar Primar S A C C C C C C C C C C C C C	DGY vdrology Indicators: v Indicators (minimum Surface Water (A1) fligh Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) vdter marks (B1) Sediment Deposits (B3) vdter marks (B4) vdter marks (B4	n of one is)) werial Imag oncave Su	required; pery (B7) rface (B8) p D p D	check all th Check all th Ac Tr Ac Tr Ac Tr Ac Tr Ac Tr Co Co Co Co Co Co Co Co Co Co	ater-Stained quatic Fauna ue Aquatic P ydrogen Sulfi xidized Rhizo resence of Re ecent Iron Re nin Muck Surf auge or Well ther (Explain	(B13) lants (B14) de Odor (C ⁻ espheres on educed Iron educetion in T face (C7) Data (D9) in Remarks	1) Living Root (C4) Tilled Soils (C	s (C3)	condary Indi Surface Si Drainage I Dry-Seasc Crayfish B Saturation Stunted or Geomorpi FAC-Neut	cators (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) wurrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) hic Position (D2) ral Test (D5)
emarks: /DROLC /etland Hy Primar S S Primar S Primar S A C C S C C C S C C C S C C C S C C C S C C C S C C C S C C S C C S C C S C C S C C S C C S C C S C C S S C C S S C C S S C C S S C C S S C S S C S S C C S S S S S S S S S S S S S	DGY ydrology Indicators: y Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Vater marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) fron Deposits (B5) hundation Visible on A Sparsely Vegetated Co rvations: ter Present? Yes Present? Yes pillary fringe)	n of one is)) werial Imagoncave Su s No s No s No s No s No	pery (B7) nface (B8) p □ □ p p □ □ p	check all th	ater-Stained quatic Fauna ue Aquatic P ydrogen Sulfi kidized Rhizo resence of Re ecent Iron Re nin Muck Surf auge or Well ther (Explain es): es): _6 es): _0 (at surf	(B13) lants (B14) de Odor (C spheres on educed Iron educed Iron eduction in T face (C7) Data (D9) in Remarks	1) Living Root (C4) Tilled Soils (C	s (C3)	condary Indi Surface Si Drainage I Dry-Seasc Crayfish B Saturation Stunted or Geomorpi FAC-Neut	cators (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) wurrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) hic Position (D2) ral Test (D5)

	WETLA	ND DETERMINATIO	N DATA FORM - Midwest Regi	ion
Project/Site: Milwauk	ee River Pkwy and Oak Lea	Trail Reconstruction City	County: City of Glendale/Milwaukee County	Sampling Date: 10/27/2014
Applicant/Owner:			State: WI	Sampling Point: 8
Investigator(s): Jenni	fer Dietl and Zofia Noe; SEW	/RPC Secti	on, Township, Range: Section 19, T8N, R22	2E
Landform (hillslope, te	errace, etc.): hillslope		I relief (concave, convex, none): linear	.
Slope (%): 2-6%	Lat:	Long:		Datum:
Soil Map Unit Name:	Casco loam (CeB)		N	WI classification: none
Are climatic/hydrologi	c conditions on the site typic	al for this time of year?	Yes X No C (If no, explain in Rema	
Are Vegetation,	Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" present? Y	Yes 🛛 No 🗌
Are Vegetation,	Soil, or Hydrology	naturally problematic?	(If, needed, explain any answers in Remar	rks.)
SUMMARY OF FINDI	NGS - Attach site map sho	wing sampling point locat	ions, transects, important features, etc.	

Hydrophytic Vegetation Present? Hydric Soils Present? Wetland Hydrology Present?	⊠Yes ⊠Yes □Yes		Is the Sampled Area within a Wetland?	☐ Yes	⊠No	
frederik rijkreiegj i recontri		2110				

Remarks: Determined that soils have relict hydric soil indicators at this site based upon a review of historical aerial photography. The 1956 photo shows a large waterbody covering the site. Since then the site has been drained and ditched via a culvert carrying flows under the parkway road to a ravine leading to the Milwaukee River.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Fraxinus pennsylvanica	25	\boxtimes	FACW	Number of Dominant Species
2				That are OBL, FACW, or FAC: 3 (A)
3				Total Number of Dominant
4				Species Across All Strata: 4 (B)
5				Percent of Dominant Species
	25	= Total Con	ver	That Are OBL, FACW, or FAC: 75% (A/B)
Sapling/Shrub Stratum (Plot size: 30' radius)				Prevalence Index worksheet:
1. Fraxinus pennsylvanica	5	\boxtimes	FACW	Total % Cover of: Multiply by:
2. Rhamnus frangula (mostly cut)	1		FACW	OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5.				FACU species x 4 =
	6	= Total Cov	/er	UPL species x 5 =
Herb Stratum (Plot size: 5' radius)				Column Totals: (A) (B)
1. Poa pratensis	60		FAC	Prevalence Index = B/A =
2. Solidago altissima	35		FACU	Hydrophytic Vegetation Indicators:
3. Aster pilosus	15		FACU	1 - Rapid Test for Hydrophytic Vegetation
4. Geum canadense	15		FAC	☑ 2 - Dominance Test is >50%
5. Plantago major	10		FACU	3 - Prevalence Index is ≤3.0 ¹
6. Rhamnus frangula	10		FACW	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
7				5 - Problematic Hydrophytic Vegetation ¹ (Explain)
8				
9,			_	¹ Indicators of hydric soil and wetland hydrology must
10.				Be present, unless disturbed or problematic.
	145	= Total Cov	er	
Woody Vine Stratum (Plot size: 30' radius)		- Officer and		(hadrock) de
1	100			Hydrophytic Vegetation
2.				Present? Yes No
	0	= Total Cov	er	
Remarks: (Include photo numbers here or on a separat	-		2	rdwoods

							DSENCE OF INDICATORS 1	
Depth	Matrix			Redox Feat			bsence of indicators.)	
	or (moist)	% C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
-6 10YR 3	/2 10	00		-			Clay loam	
-8 10YR 3	/2 9	9 10Y	R 4/6	1	С	PL M	Clay loam	
-14 10YR 3	/2 9	5 10Y	R 5/8	5	C	PL M	Gravelly sandy loam	
4-15 10YR 6						1 - 11	Silty clay	
5YR 5/4	· · · · · · · · · · · · · · · · · · ·					_	Only Clay	
5+				_				Potucal: Day ailt calls
								Refusal: Dry silt soils
Type: C=Concentra		, RM=Redu	uced Matrix, M	IS=Masked S	and Grains			Pore Lining, M=Matrix
lydric Soil Indicato					10.00	Sector	Indicators for Pr	oblematic Hydric Soils3:
Histosol (/				Sandy Gley Sandy Red	yed Matrix (S4)		irie Redox (A16)
Black Hist	tic (A3)						Dark Surfa	
Hydrogen						(F1)		anese Masses (F12) ow Dark Surface (TF12)
Stratified I	Layers (A5)			the second se				plain in Remarks)
2 cm Muc								selly in recinance/
Depleted I	Below Dark Surfac	ce (A11)	\boxtimes					
	k Surface (A12)				ark Surface		³ Indicators of H	ydrophytic vegetation and
	cky Mineral (S1)			Redox Dep	ressions (Fi	B)		drology must be present,
estrictive Layer (if	ky Peat or Peat (S	(3)		_			Unless dist	urbed or problematic.
estrictive Layer (n							Huidela Catt Dava	
Type: Dry silt se	oils							
Type: <u>Dry silt sr</u> Depth (inches): emarks: Relict hyd	15	from a tir	ne when wat	er levels we	ere high.		Hydric Soil Pres	ent? Yes⊠ No 🗆
Depth (inches):	15	from a tir	ne when wat	er levels we	ere high.		Hydric Soll Pres	
Depth (inches): emarks: Relict hyd	15 Iric soil indicator	from a tir	ne when wat	er levels we	ere high.		Hydric Soll Pres	
Depth (inches): emarks: Relict hyd /DROLOGY /etland Hydrology	15 Iric soil indicator				ere high.			ndicators (minimum of two require
Depth (inches): emarks: Relict hyd /DROLOGY /etland Hydrology	15 fric soil indicator Indicators: ors (minimum of on		ed; check all th)	Secondary Ir	idicators (minimum of two require
Depth (inches): emarks: Relict hyd /DROLOGY /etland Hydrology Primary Indicato	15 fric soil indicator Indicators: ors (minimum of on		ed; check all th	nat apply)	Leaves (B9)	Secondary Ir	ndicators (minimum of two require Soil Cracks (B6)
Depth (inches): emarks: Relict hyd /DROLOGY /etland Hydrology Primary Indicato	Indicators: Indic		ed; check all th W Ar	nat apply) /ater-Stained quatic Fauna	Leaves (B9 (B13))	Secondary Ir Surface Drainag	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10)
Depth (inches): emarks: Relict hyd /DROLOGY /etland Hydrology Primary Indicato Surface W. High Wate Saturation	Indicators: Indic		ed; check all th W Ar Tr	<u>hat apply)</u> /ater-Stained quatic Fauna rue Aquatic P	Leaves (B9 (B13) lants (B14)		Secondary Ir Surface Drainag Dry-Sea	idicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2)
Depth (inches): emarks: Relict hyd DROLOGY retland Hydrology <u>Primary Indicato</u> <u>C</u> Surface W. <u>C</u> High Water <u>C</u> Saturation <u>C</u> Water mark	Indicators: Indic		ed; check all th W Ar Tr H	<u>nat apply)</u> /ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi	Leaves (B9 (B13) lants (B14) de Odor (C1	1)	Secondary Ir Surface Drainag Dry-Sea Crayfish	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) eson Water Table (C2) e Burrows (C8)
Depth (inches): emarks: Relict hyd DROLOGY Vetland Hydrology Primary Indicato Surface W. Surface W. High Water Saturation Water mark	Indicators: Indic		ed; check all th W Ar Tr H; O	<u>hat apply)</u> /ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo	Leaves (B9 (B13) lants (B14) de Odor (C1 spheres on	l) Living Roots	Secondary Ir Surface Drainag Dry-Sea Crayfish s (C3)	Idicators (minimum of two require Soil Cracks (B6) e Patterns (B10) Ison Water Table (C2) I Burrows (C8) on Visible on Aerial Imagery (C9)
Depth (inches): emarks: Relict hyd /DROLOGY /etland Hydrology Primary Indicato 	Indicators: Indic		ed; check all th	hat apply) /ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Re	Leaves (B9 (B13) lants (B14) de Odor (C1 spheres on educed Iron) Living Roots (C4)	Secondary Ir Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted	Idicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Depth (inches): emarks: Relict hyd DROLOGY Tetland Hydrology Primary Indicato Surface Wa High Water Saturation Water mark Sediment D Drift Depose Algal Mat o	Indicators: Indic		ed; check all th	nat apply) /ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Re ecent Iron Re	Leaves (B9 (B13) lants (B14) de Odor (C1 spheres on educed Iron duction in T) Living Roots (C4)	Secondary Ir Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) Geomor	Idicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) iphic Position (D2)
Depth (inches): emarks: Relict hyd DROLOGY Vetland Hydrology Primary Indicato Surface W. High Water Saturation Saturation Sediment [Drift Depos Algal Mat co Iron Depos	Indicators: Indic	ne is require	ed; check all th	hat apply) /ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfin xidized Rhizo resence of Re ecent Iron Re ecent Iron Re	Leaves (B9 (B13) lants (B14) de Odor (C1 spheres on educed Iron eduction in T face (C7)) Living Roots (C4)	Secondary Ir Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) Geomor	Idicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Depth (inches): emarks: Relict hyd DROLOGY Vetland Hydrology Primary Indicato Surface Wa Surface Wa Sturation Saturation Sediment D Drift Depos Algal Mat c Iron Depos Inundation	Indicators: Indic	ne is require magery (B)	ed; check all th	hat apply) /ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfir xidized Rhizo resence of Re ecent Iron Re nin Muck Surf auge or Well	Leaves (B9 (B13) lants (B14) de Odor (C1 spheres on educed Iron duction in T face (C7) Data (D9)) Living Roots (C4) illed Soils (C	Secondary Ir Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) Geomor	Idicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) iphic Position (D2)
Depth (inches): emarks: Relict hyd DROLOGY Vetland Hydrology Primary Indicato Surface Wa Surface Wa Sturation Saturation Sediment D Drift Depos Algal Mat c Iron Depos Inundation	Indicators: Indic	ne is require magery (B)	ed; check all th	hat apply) /ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfin xidized Rhizo resence of Re ecent Iron Re ecent Iron Re	Leaves (B9 (B13) lants (B14) de Odor (C1 spheres on educed Iron duction in T face (C7) Data (D9)) Living Roots (C4) illed Soils (C	Secondary Ir Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) Geomor	Idicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) iphic Position (D2)
Depth (inches): emarks: Relict hyd DROLOGY Vetland Hydrology Primary Indicato Primary Indicato Surface Wa High Water Saturation Vater mari Sediment D Drift Depos Algal Mat c Iron Depos Inundation Sparsely V	Indicators: Indic	ne is require magery (B' e Surface (I	ed; check all th	hat apply) /ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfin xidized Rhizo resence of Re ecent Iron Re hin Muck Suff auge or Well ther (Explain	Leaves (B9 (B13) lants (B14) de Odor (C1 spheres on educed Iron duction in T face (C7) Data (D9)) Living Roots (C4) illed Soils (C	Secondary Ir Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) Geomor	Idicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) iphic Position (D2)
Depth (inches): emarks: Relict hyd TOROLOGY Tetland Hydrology Primary Indicato Surface W Saturation Saturation Sediment D Sediment D	Indicators: Indi	magery (B Surface (I No 🖾	ed; check all th W A Tr H; O R; Tr R; Tr R; Tr G; 38) O	hat apply) /ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfin xidized Rhizo resence of Re ecent Iron Re hin Muck Surf auge or Well ther (Explain ther (Explain	Leaves (B9 (B13) lants (B14) de Odor (C1 spheres on educed Iron duction in T face (C7) Data (D9)) Living Roots (C4) illed Soils (C	Secondary Ir Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) Geomor	Idicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) iphic Position (D2)
Depth (inches): emarks: Relict hyd Primary Indicato Primary Indicato Surface WA High Water Saturation Vater mark Sediment D Drift Depos Algal Mat o Iron Depos Inundation Sparsely V eld Observations: Irface Water Present	Indicators: Indic	magery (Bi Surface (B No X No X	ed; check all th W Au Tr Hy O Ru Tr Ru Tr Ru Tr Ru Tr Ru Tr Ru Tr Ru Tr O Ru Tr O Ru Tr O Ru Tr O Ru Tr O Ru Tr Ru Tr Ru Tr Ru	hat apply) /ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfir xidized Rhizo resence of Re ecent Iron Re nin Muck Surf auge or Well ther (Explain ther (Explain es):	Leaves (B9 (B13) lants (B14) de Odor (C1 spheres on educed Iron duction in T face (C7) Data (D9)) Living Roots (C4) illed Soils (C	Secondary Ir Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) Geomor	Idicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) iphic Position (D2)
Depth (inches): emarks: Relict hyd Primary Indicato Primary Indicato Surface Wa High Water Saturation Sediment D Algal Mat of Iron Depos Inundation Sparsely V eld Observations: Inface Water Present? atter Table Present? Ituration Present? Ituration Present?	Indicators: Indic	magery (B sourface (B No No No No No No No No No No	ed; check all th W Ar Tr Hr Pr Rr Tr Rr Tr Rr Tr Rr Tr Rr Tr O Tr O Tr O Tr O Tr O Tr O Tr O Tr O Tr O Tr O Tr O Tr O Tr O Tr O Tr O Tr O Tr O Tr O Tr O Tr Ga Tr Ga D 	hat apply) /ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfie xidized Rhizo resence of Re ecent Iron Re hin Muck Suff auge or Well ther (Explain es): es):	Leaves (B9 (B13) lants (B14) de Odor (C1 spheres on educed Iron educed Iron in CC7) Data (D9) in Remarks)	I) Living Roots (C4) illed Soils (C	Secondary Ir Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) Geomor X FAC-Ne	Idicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)

WETLAND DETER	RMINATION DATA FORM – Midw	vest Region
Project/Site: Milwaukee River Pkwy and Oak Leaf Trail Reconst	truction City/County: City of Glendale/Milwa	aukee County Sampling Date: 10/27/2014
Applicant/Owner:	Stat	te: WI Sampling Point: 9
Investigator(s): Jennifer Dietl and Zofia Noe; SEWRPC	Section, Township, Range: Section 1	19, T8N, R22E
Landform (hillslope, terrace, etc.): drainage way	Local relief (concave, convex, none):	concave
Slope (%): 2-6% Lat: Lot	ng:	Datum:
Soil Map Unit Name: Fox Ioam (FoB)		NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time	of year? Yes 🛛 No 🗋 (If no, exp	oplain in Remarks)
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Normal Circumstances" ;	present? Yes 🛛 No 🗌
Are Vegetation X, Soil, or Hydrology naturally prof	blematic? (If, needed, explain any answ	vers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampli	ng point locations, transects, important feat	tures, etc.
Hydrophytic Vegetation Present? XYes No	Is the Sampled Area	Takes and the
Hydric Soils Present? Xes No	within a Wetland?	Yes No
Wetland Hydrology Present? Yes No		

Remarks: No vegetation present in narrow we	et drainage way.				
EGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1			_	Number of Dominant Species	

··			_	Number of Dominant Spe	
2			_	That are OBL, FACW, or	FAC: <u>0</u> (A)
3				Total Number of Domina	
4				Species Across All Strata	£ <u>0</u> (B)
51			_	Percent of Dominant Spe	cies
	Q	= Total Cove	r	That Are OBL, FACW, or	FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size: 30' radius)				Prevalence Index works	sheet:
· (_	Total % Cover of:	Multiply by:
	_		_	OBL species	x 1 =
			_	FACW species	x 2 =
I			_	FAC species	x 3 =
	_			FACU species	x 4 =
	<u>0</u>	= Total Cove	r	UPL species	x 5 =
lerb Stratum (Plot size: 5' radius)				Column Totals:	(A) (
			-	Prevalence In	
				Hydrophytic Vegetation	Indicators:
،				1 - Rapid Test for Hy	trophytic Vegetation
•			_	2 - Dominance Test is	s >50%
				3 - Prevalence Index	
					ptations ¹ (Provide supportir r on a separate sheet)
				5 - Problematic Hydrop	hytic Vegetation ¹ (Explain)
			_	1.000	
			1.1		and wetland hydrology mus
0.				Be present, unless distur	bed or problematic.
	0	= Total Cove			
Voody Vine Stratum (Plot size: 30' radius)	2	a stand and a start of	_	1. S. 1. Sec	
·				Hydrophytic Vegetation	
			_	Present? Yes	No 🗆
*	0	= Total Cove			
Remarks: (Include photo numbers here or on a separate	-		Y		

c	\mathbf{n}	
-		
~	~	-

Remarks
ning, M=Matrix
atic Hydric Solls ³ : dox (A16)) Masses (F12) k Surface (TF12) Remarks) ytic vegetation and y must be present, or problematic.
Yes 🛛 No 🗌
must or probl

Surface Water	(A1)		Water-Stained Leaves (B9)		Secondary Indicators (minimum of two require
High Water Tab	1.		Aquatic Fauna (B13)		Surface Soil Cracks (B6)
Saturation (A3)	a (ric)		True Aquatic Plants (B14)		Drainage Patterns (B10)
Water marks (B	1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2) Cravfish Burrows (C8)
Sediment Depos	·		Oxidized Rhizospheres on Livin	Poots (C2)	
Drift Deposits (B			Presence of Reduced Iron (C4)		Saturation Visible on Aerial Imagery (C9)
Algal Mat or Cru			Sector States and S		Stunted or Stressed Plants (D1)
Iron Deposits (B			Recent Iron Reduction in Tilled This Muck Surface (C7)	Solis (CB)	Geomorphic Position (D2)
	100 C C C C C		Thin Muck Surface (C7)		FAC-Neutral Test (D5)
Sparsely Vegeta Sparsely Vegeta Sparsely Vegeta	ted Concave	a Sunace (B8) Other (Explain in Remarks)		
urface Water Present?	Yes 🛛	No 🗆	Depth (inches): 3		
/ater Table Present?	Yes 🗌	No 🗆	Depth (inches):		
aturation Present?	Yes 🗌	No 🗆	Depth (inches):		
ncludes capillary fringe)			Deput (mones).	Wetland H	Hydrology Present? Yes 🛛 No 🗌
escribe Recorded Data (s	tream nauna	e monitorii	well serial photos previous inspections)	if quailable: To	po Map (Exhibit 1), WWI Map (Exhibit 2), Soil
urvey Map (Exhibit 3).	a com gauge	2 11011000	a wen, aenai photos, previous inspections),	ii avaliable. 10	po map (Exhibit 1), wwwi map (Exhibit 2), Soll
emarks: A majority of th	e drainage	way con	tains standing water. The bottom half o	of the waterwa	y is located in the Milwaukee River 100 year
oodplain.		1004030			,

	WETLAN	ID DETERMINATIO	ON DATA FORM -	Midwest Reg	gion	
Project/Site: Milwaukee River Pkwy	and Oak Leaf	Trail Reconstruction C	ty/County: City of Glendal	e/Milwaukee Cour	ity	Sampling Date: 10/27/2014
Applicant/Owner:				State: WI		Sampling Point: 10
Investigator(s): Jennifer Dietl and Zo	fia Noe: SEW	RPC Se	ction, Township, Range: S	ection 19, T8N, R	22E	
Landform (hillslope, terrace, etc.): M	Iwaukee Rive	Lo Lo	cal relief (concave, convex,	none): none		
Slope (%): _ Lat:		Long:				Datum:
Soil Map Unit Name: Water (W)					NWI class	sification: none
Are climatic/hydrologic conditions on	the site typical	I for this time of year?	Yes 🛛 No 🗌 (II	f no, explain in Re	marks)	
Are Vegetation, Soil, or	Hydrology	significantly disturbed	? Are "Normal Circumsta	ances" present?	Yes 🛛	No 🗔
Are Vegetation X, Soil, or Hyd	Irology	naturally problematic?	(If, needed, explain an	y answers in Rem	arks.)	
SUMMARY OF FINDINGS - Attach	site map sho	wing sampling point loc	ations, transects, importa	ant features, etc.		
Hydrophytic Vegetation Present? Hydric Soils Present? Wetland Hydrology Present?	⊠Yes ⊠Yes ⊠Yes	□No □No □No	Is the Sampled Area within a Wetland?	ØY	es	□No

VEGETATION – Use scientific names of plants.
--

Remarks: No vegetation observed in the Milwaukee River.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo	orksheet:
1			_	Number of Dominant Sp	pecies
2			-	That are OBL, FACW, o	or FAC: <u>0</u> (A)
3			_	Total Number of Domin	ant
4	-		_	Species Across All Stra	ta: <u>0</u> (B)
5	_		_	Percent of Dominant Sp	
	Q	= Total Cov	/er	That Are OBL, FACW, o	or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size: 30' radius)				Prevalence Index wor	ksheet:
t				Total % Cover of:	Multiply by:
2				OBL species	x 1 =
3			_	FACW species	x 2 =
4			_	FAC species	x 3 =
5.				FACU species	x 4 =
	Q	= Total Cov	er	UPL species	x 5 =
Herb Stratum (Plot size: 5' radius)			1.000	Column Totals:	(A) (B)
1				Prevalence	Index = B/A =
2				Hydrophytic Vegetatio	on Indicators:
3			_	1 - Rapid Test for H	vdrophytic Venetation
4			_	2 - Dominance Test	is >50%
5				3 - Prevalence Inde	x is ≤3.01 daptations1 (Provide supporting
6			_		or on a separate sheet)
7				S - Problematic Hydro	phytic Vegetation ¹ (Explain)
8			_		
9					I and wetland hydrology must
10				Be present, unless distu	irbed or problematic.
	Q	= Total Cov	er		
Woody Vine Stratum (Plot size: 30' radius)				Hudrophulis	
1				Hydrophytic Vegetation	
2			1.1	Present? Yes	No 🗆
	0	= Total Cov	er		

nenge pres			ocument the in			ance of ind		
Donth	Matrix		cument the in Redox Fea		and the abs	ence or mo	icators.	
Depth (inches)	Color (moist) %	Color (mois		Type ¹	Loc ²	Tex	dure	Remarks
								Nelliains
_					_			
Type: C=C	oncentration, D=Depletion,	RM=Reduced Matri	x, MS=Masked :	Sand Grains		² Locat	ion: PL=Pore L	ining, M=Matrix
· · · · · · · · · · · · · · · · · · ·	Indicators:		1.12		-			natic Hydric Soils3:
	listosol (A1) listic Epipedon (A2) lack Histic (A3) lydrogen Sulfide (A4) tratified Layers (A5) cm Muck (A10) epleted Below Dark Surface	e (A11)	Sandy Re Stripped M Loamy Mt Loamy GI Depleted	eyed Matrix (S dox (S5) Matrix (S6) ucky Mineral (I eyed Matrix (F Matrix (F3) rk Surface (F6)	F1) F2)			57) e Masses (F12) ark Surface (TF12)
S	hick Dark Surface (A12) andy Mucky Mineral (S1) cm Mucky Peat or Peat (S3	3)	Depleted	Dark Surface (pressions (F8	(F7)	N	Vetland hydrolog	hytic vegetation and gy must be present, l or problematic.
Type: Depth	Layer (if observed):	nundated with 8 in	ches of water,	hydric by de	efinition - Crit	Hydric :	Soil Present?	Yes 🛛 No 🗖
estrictive Type: Depth emarks: So	Layer (if observed): (inches): Dils of Milwaukee River ir	nundated with 8 in	ches of water,	hydric by de	efinition - Crit	Hydric :	Soil Present?	Yes 🛛 No 🗖
estrictive Type: Depth emarks: So ZDROLO Vetland Hyd	Layer (if observed): (inches): bils of Milwaukee River ir			hydric by de	efinition - Crit	Hydric : teria 3.		Yes No
estrictive Type: Depth emarks: So 'DROLO /etland Hyo Primary	Layer (if observed): (inches): oils of Milwaukee River ir GY drology Indicators:					Hydric : teria 3.	condary Indicate	ors (minimum of two required)
estrictive Type: Depth emarks: So ZOROLO Zetland Hyp Primary ⊠ So	Layer (if observed): (inches): oils of Milwaukee River in GY drology Indicators:		all that apply)	d Leaves (B9)		Hydric : teria 3.		ors (minimum of two required) Cracks (B6)
Depth Depth emarks: So DROLO etland Hyo <u>Primary</u> <u>N</u> Si Hi	Layer (if observed): (inches): bils of Milwaukee River ir GY drology Indicators: Indicators (minimum of one urface Water (A1)	e is required; check :	all that apply) Water-Stained	d Leaves (B9) a (B13)		Hydric : eria 3.	condary Indicate Surface Soil (Drainage Pat	ors (minimum of two required) Cracks (B6) terns (B10)
DEROLO Primary Primary Sa DROLO Sa DROLO Sa DROLO Sa Sa Sa Sa Sa Sa Sa Sa Sa Sa	Layer (if observed): (inches): bils of Milwaukee River in GY drology Indicators: Indicators (minimum of one urface Water (A1) gh Water Table (A2)	e is required; check :	all that apply) Water-Stained Aquatic Faund True Aquatic	d Leaves (B9) a (B13)		Hydric : teria 3.	condary Indicate Surface Soil (Drainage Pat Dry-Season V	ors (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2)
DEROLO DROLO DROLO DROLO DROLO DROLO DROLO DROLO Si DROLO Si DROLO W	Layer (if observed): (inches): bils of Milwaukee River in GY drology Indicators: Indicators (minimum of one urface Water (A1) gh Water Table (A2) aturation (A3)	e is required; check :	all that apply) Water-Stained Aquatic Fauna True Aquatic Hydrogen Sul	d Leaves (B9) a (B13) Plants (B14) fide Odor (C1)		Hydric : teria 3.	condary Indicate Surface Soil (Drainage Pat Dry-Season V Crayfish Burr	ors (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8)
Depth Depth emarks: So DROLO etland Hyu Primary Brimary So U U So W So So	Layer (if observed): (inches): bils of Milwaukee River in GY drology Indicators: Indicators (minimum of one urface Water (A1) gh Water Table (A2) aturation (A3) (ater marks (B1)	e is required; check :	all that apply) Water-Stained Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz	d Leaves (B9) a (B13) Plants (B14) fide Odor (C1)) Living Roots (C	Hydric : ceria 3.	condary Indicate Surface Soil (Drainage Pat Dry-Season V Crayfish Burn Saturation Vis	ors (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9)
Depth Depth marks: So DROLO etland Hyo Primary N	Layer (if observed): (inches): bils of Milwaukee River in GY drology Indicators: Indicators (minimum of one urface Water (A1) gh Water Table (A2) aturation (A3) ater marks (B1) ediment Deposits (B2)	e is required; check i	all that apply) Water-Stainer Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F	d Leaves (B9) a (B13) Plants (B14) fide Odor (C1) ospheres on L Reduced Iron () Living Roots (C	Hydric : teria 3.	Condary Indicate Surface Soil (Drainage Pat Dry-Season V Crayfish Burn Saturation Vis Stunted or St	ors (minimum of two required) Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1)
Depth Type: Depth marks: So DROLO etland Hys Primary So Hi So So So Drimary So <	Layer (if observed): (inches): bils of Milwaukee River in GY drology Indicators: Indicators (minimum of one urface Water (A1) gh Water Table (A2) aturation (A3) ater marks (B1) ediment Deposits (B2) ift Deposits (B3)	e is required; check :	all that apply) Water-Stained Aquatic Faund True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R	d Leaves (B9) a (B13) Plants (B14) fide Odor (C1) ospheres on L Reduced Iron (eduction in Til) Living Roots (C	Hydric : ceria 3.	condary Indicate Surface Soil (Drainage Pat Dry-Season V Crayfish Burn Saturation Vis Stunted or Ste Geomorphic	ors (minimum of two required) Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)
estrictive Type: Depth emarks: Se DROLO VDROLO Vetland Hy Primary Se Hi Se W Se D N Se N	Layer (if observed): (inches): bils of Milwaukee River in GY drology Indicators: Indicators (minimum of one urface Water (A1) gh Water Table (A2) aturation (A3) fater marks (B1) ediment Deposits (B2) ift Deposits (B3) gal Mat or Crust (B4)	e is required; check :	all that apply) Water-Stainer Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F	d Leaves (B9) a (B13) Plants (B14) fide Odor (C1) tospheres on L Reduced Iron (reduction in Til rface (C7)) Living Roots (C	Hydric : teria 3.	Condary Indicate Surface Soil (Drainage Pat Dry-Season V Crayfish Burn Saturation Vis Stunted or St	ors (minimum of two required Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)

Surface Water Present? Yes 🖂 Depth (inches): 8 No L Water Table Present? Yes 🗌 No 🗌 Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soil Survey Map (Exhibit 3). Remarks: Sample located in the Milwaukee River floodway.

Project/Site: Milwaukee River Pkwy and Oak Leaf Trail Reconstruction	on City/County: City of Glendale/Milwaukee County	Sampling Date: 10/27/2014
Applicant/Owner:	State: WI	Sampling Point: 11
Investigator(s): Jennifer Dietl and Zofia Noe; SEWRPC	Section, Township, Range: Section 19, T8N, R22E	
Landform (hillslope, terrace, etc.): terrace	Local relief (concave, convex, none): none	
Slope (%): 2-6% Lat: Long:		Datum:
Soil Map Unit Name: Casco loam (CeB)	NWI cla	assification: none
Are climatic/hydrologic conditions on the site typical for this time of year	ear? Yes ⊠ No □ (If no, explain in Remarks)	
Are Vegetation, Soil, or Hydrology significantly dis	sturbed? Are "Normal Circumstances" present? Yes 🗵	No 🗆
Are Vegetation, Soil, or Hydrology naturally proble	ematic? (If, needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map showing sampling po	pint locations transects important features etc.	
Sommarch of This hour of Pattern site hits showing sampling pe		
Hydrophytic Vegetation Present? Types XNo	Is the Sampled Area	

Hydrology Present? Wetland Hydrology Present?	□Yes □Yes	⊠No ⊠No	within a Wetland?	☐ Yes	⊠No
Remarks: Disturbed vegetation due	e to regular mo	owing and heavy foo	ot traffic.		

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2	_			That are OBL, FACW, or FAC: 1 (A)
3				Total Number of Dominant
4	_			Species Across All Strata: <u>2</u> (B)
5	_	口	_	Percent of Dominant Species
	0	= Total Co	/er	That Are OBL, FACW, or FAC: 50% (A/B)
Sapling/Shrub Stratum (Plot size: 30' radius)				Prevalence Index worksheet:
1			_	Total % Cover of: Multiply by:
2			_	OBL species x 1 =
3				FACW species x 2 =
4.			_	FAC species x 3 =
5				FACU species x 4 =
	<u>0</u>	= Total Co	/er	UPL species x 5 =
Herb Stratum (Plot size: 5' radius)			1 C C 1	Column Totals: (A) (
1, Poa pratensis	40		FAC	Prevalence Index = B/A =
2. Trifolium pratense	40	\boxtimes	FACU	Hydrophytic Vegetation Indicators:
3. Plantago lanceolata	5		FACU	1 - Rapid Test for Hydrophytic Vegetation
4. Plantago major	5		FACU	2 - Dominance Test is >50%
5. Taraxacum officinale	5		FACU	 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting)
6				data in Remarks or on a separate sheet)
7			_	5 - Problematic Hydrophytic Vegetation ¹ (Explain
8			_	
9				' Indicators of hydric soil and wetland hydrology must
10				Be present, unless disturbed or problematic.
10	95	= Total Co	/er	
Woody Vine Stratum (Plot size: 30' radius)				Hydrophytic
1			1	Vegetation
2				Present? Yes No
	0	= Total Co	/er	

SOIL

Depth (inches)				Dedate	A Lorenza		absence of indicators.)	
(inches)	Matrix		0.1.1.1.0	Redox Fea	Type ¹			
44 41	Color (moist)	%	Color (moist)	%	Type	Loc ²	Texture	Remarks
	DYR 2/1	100					Sandy loam	
1+				_	=		Sand and gravel	Refusal: Old fill material?
		=		_	_			
ype: C=Con	centration, D=Depl	etion, RM=F	educed Matrix, M	S=Masked S	and Grains		² Location: PL=	Pore Lining, M=Matrix
ydric Soil Ind						_	the second se	roblematic Hydric Soils ³ :
Hist Blac Hyd Stra 2 cm Dep Thic	osol (A1) ic Epipedon (A2) ck Histic (A3) rogen Sulfide (A4) tified Layers (A5) n Muck (A10) leted Below Dark S ck Dark Surface (A' dy Mucky Mineral (Surface (A11 12)		Sandy Rec Stripped M Loamy Mu Loamy Gle Depleted M Redox Dar Depleted D	latrix (S6) cky Mineral (F yed Matrix (F	F1) 2)) F7)	Dark Surf Iron-Mang Very Shal Other (Ex	airie Redox (A16) ace (S7) ganese Masses (F12) low Dark Surface (TF12) plain in Remarks) hydrophytic vegetation and ydrology must be present,
□ 5 cm	Mucky Peat or Pe	eat (S3)						turbed or problematic.
estrictive La	yer (if observed):							tere en presidenteder
	nd and gravel fill m	aterial?					Hydric Soil Pres	sent? Yes 🗌 No 🛛
Depth (in emarks:	ches): 11						1	
	many mulcators'							
Primary In Surfa High Satu Vate Sedin Drift	dicators (minimum ace Water (A1) Water Table (A2) ration (A3) er marks (B1) ment Deposits (B2) Deposits (B3)			/ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizc resence of Re	Plants (B14) de Odor (C1) pspheres on L educed Iron (6	iving Root C4)	Image: Surface Image: Drainage Image: Dry-See Image:	ndicators (minimum of two required Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) I or Stressed Plants (D1)
Primary In Surfa	dicators (minimum ace Water (A1) Water Table (A2) ration (A3) er marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)			/ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Ro ecent Iron Re	(B13) Plants (B14) de Odor (C1) pspheres on L educed Iron (eduction in Til	iving Root C4)	Image: Surface Image: Drainage Image: Dry-See Image:	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) I or Stressed Plants (D1) rphic Position (D2)
Primary In Surfa High Satu VVate Sedir Drift Algal	dicators (minimum ace Water (A1) Water Table (A2) ration (A3) er marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5))		Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Ro ecent Iron Re nin Muck Sur	(B13) Plants (B14) de Odor (C1) ospheres on L educed Iron (eduction in Til face (C7)	iving Root C4)	Image: Surface Image: Drainage Image: Dry-See Image:	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) I or Stressed Plants (D1)
Primary In Surfa High Satu Sedin Sedin Algal Iron I	dicators (minimum ace Water (A1) Water Table (A2) ration (A3) er marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Ad) erial Imagery		Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizc resence of Re ecent Iron Re nin Muck Sur auge or Well	(B13) Plants (B14) de Odor (C1) ospheres on L educed Iron (eduction in Till face (C7) Data (D9)	iving Root C4)	Image: Surface Image: Drainage Image: Dry-See Image:	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) I or Stressed Plants (D1) rphic Position (D2)
Primary In Surfa Builden Satu Sedin Drift Algal Iron I Spars	dicators (minimum ace Water (A1) Water Table (A2) ration (A3) er marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Ac sely Vegetated Con) erial Imagery		Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Ro ecent Iron Re nin Muck Sur	(B13) Plants (B14) de Odor (C1) ospheres on L educed Iron (eduction in Till face (C7) Data (D9)	iving Root C4)	Image: Surface Image: Drainage Image: Dry-See Image:	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) I or Stressed Plants (D1) rphic Position (D2)
Primary In Surfa	dicators (minimum ace Water (A1) Water Table (A2) ration (A3) er marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Ad sely Vegetated Con ions:) erial Imagery ncave Surfac	(B7) (B8) (B8)	Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizc resence of Re ecent Iron Re nin Muck Sun auge or Well ther (Explain	(B13) Plants (B14) de Odor (C1) ospheres on L educed Iron (eduction in Till face (C7) Data (D9)	iving Root C4)	Image: Surface Image: Drainage Image: Dry-See Image:	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) I or Stressed Plants (D1) rphic Position (D2)
Primary In Surfa High Satu Vate Sedii Drift Algal Iron I Spars eld Observat	dicators (minimum ace Water (A1) Water Table (A2) ration (A3) er marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Ac sely Vegetated Con ions: Present? Yes) erial Imagery ncave Surfac	(B7) (B8) Depth (inchese)	Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Re ecent Iron Re nin Muck Sur auge or Well ther (Explain	(B13) Plants (B14) de Odor (C1) ospheres on L educed Iron (eduction in Till face (C7) Data (D9)	iving Root C4)	Image: Constraint of the second se	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) I or Stressed Plants (D1) rphic Position (D2)
Primary In Surfa	dicators (minimum ace Water (A1) Water Table (A2) ration (A3) er marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Ac sely Vegetated Con ions: Present? Yes) erial Imagery ncave Surfac No 1		Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizc resence of Re ecent Iron Re nin Muck Sur auge or Well ther (Explain es):	(B13) Plants (B14) de Odor (C1) ospheres on L educed Iron (eduction in Till face (C7) Data (D9)	iving Root C4)	Image: Constraint of the second se	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) I or Stressed Plants (D1) rphic Position (D2)
Surfa High Satu Wate Sedin Drift Algal Iron I Inunc	dicators (minimum ace Water (A1) Water Table (A2) ration (A3) er marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Ac sely Vegetated Con ions: Present? Yes ent? Yes) erial Imagery ncave Surfac No 1	□ W □ A(□ Tr □ Hy □ O □ Pr □ R(□ Tr □ R(0) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizc resence of Re ecent Iron Re nin Muck Sur auge or Well ther (Explain es):	(B13) Plants (B14) de Odor (C1) ospheres on L educed Iron (eduction in Till face (C7) Data (D9)	iving Root C4) ed Soils (f	Image: Constraint of the second se	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) I or Stressed Plants (D1) rphic Position (D2) eutral Test (D5)
Primary In Surfa Surfa Sedii S	dicators (minimum ace Water (A1) Water Table (A2) ration (A3) er marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Ac sely Vegetated Con ions: Present? Yes esent? Yes ent? Yes ent? Yes iny fringe)) ncave Surfac No No No No	□ W □ A(□ Tr □ H; □ Pr □ Pr □ Ri □ Tr 0; (B7) □ Gi 2;e (B8) □ Of 2;e (B8) □ Of 3 Depth (inche 3 Depth (inche	Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Ro ecent Iron Re nin Muck Sur auge or Well ther (Explain es): es):	(B13) Plants (B14) de Odor (C1) ospheres on L educed Iron (f eduction in Til face (C7) Data (D9) in Remarks)	iving Root C4) ed Soils (f	Image: Construction of the second	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) I or Stressed Plants (D1) rphic Position (D2) eutral Test (D5)
Primary In Surfa High Satu Satu Satu Sedi Sedi Drift Algal Iron I Inunc Spars eld Observat urface Water F ater Table Pres aturation Presu	dicators (minimum ace Water (A1) Water Table (A2) ration (A3) er marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Ac sely Vegetated Con ions: Present? Yes esent? Yes ent? Yes ent? Yes iny fringe)) ncave Surfac No No No No	□ W □ A(□ Tr □ H; □ Pr □ Pr □ Ri □ Tr 0; (B7) □ Gi 2;e (B8) □ Of 2;e (B8) □ Of 3 Depth (inche 3 Depth (inche	Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Ro ecent Iron Re nin Muck Sur auge or Well ther (Explain es): es):	(B13) Plants (B14) de Odor (C1) ospheres on L educed Iron (f eduction in Til face (C7) Data (D9) in Remarks)	iving Root C4) ed Soils (f	Image: Construction of the second	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) I or Stressed Plants (D1) rphic Position (D2) eutral Test (D5)
Primary In Surfa High Satu Satu Sedin Sedin Sedin Drift Algal Iron I Inunc Spars eld Observat urface Water Pres ater Table Pres aturation Press cludes capilla	dicators (minimum ace Water (A1) Water Table (A2) ration (A3) er marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Ac sely Vegetated Con ions: Present? Yes esent? Yes ent? Yes ent? Yes iny fringe)) ncave Surfac No No No No	□ W □ A(□ Tr □ H; □ Pr □ Pr □ Ri □ Tr 0; (B7) □ Gi 2;e (B8) □ Of 2;e (B8) □ Of 3 Depth (inche 3 Depth (inche	Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Ro ecent Iron Re nin Muck Sur auge or Well ther (Explain es): es):	(B13) Plants (B14) de Odor (C1) ospheres on L educed Iron (f eduction in Til face (C7) Data (D9) in Remarks)	iving Root C4) ed Soils (f	Image: Construction of the second	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) I or Stressed Plants (D1) rphic Position (D2) eutral Test (D5)

WETLAN	D DETERMINATIO	N DATA FORM - Midwest Re	gion	
Project/Site: Milwaukee River Pkwy and Oak Leaf	Trail Reconstruction Cit	y/County: City of Glendale/Milwaukee Cou	inty	Sampling Date: 10/27/2014
Applicant/Owner:		State: WI		Sampling Point: 12
Investigator(s): Jennifer Dietl and Zofia Noe; SEWF	RPC Sec	tion, Township, Range: Section 19, T8N, I	R22E	
Landform (hillslope, terrace, etc.): drainage way	Loca	al relief (concave, convex, none): concave		
Slope (%): Lat:	Long:			Datum:
Soil Map Unit Name: Unmapped area (UA)			NWI class	ification: none
Are climatic/hydrologic conditions on the site typical	for this time of year?	Yes 🛛 No 🗋 (If no, explain in R	emarks)	
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 Ren	marks.)	
SUMMARY OF FINDINGS - Attach site map show	wing sampling point loca	tions, transects, important features, etc		
Hydrophytic Vegetation Present? Xes	□No	Is the Sampled Area		2.0
Hydric Soils Present? Xes	No	within a Wetland?	Yes	□No.
Wetland Hydrology Present? Xes	No			

VEGETATION - Use scientific names of plants.

Remarks:

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test workshe	et:	
1. Fraxinus pennsylvanica	<u>15</u>		FACW	Number of Dominant Species		
2. Acer negundo	10	\boxtimes	FAC	That are OBL, FACW, or FAC:	<u>4</u> (A)	
3				Total Number of Dominant		
4			_	Species Across All Strata:	<u>5</u> (B)	
5				Percent of Dominant Species		
	25	= Total Cov	ver	That Are OBL, FACW, or FAC:	80% (A/B)	
Sapling/Shrub Stratum (Plot size: 30' radius)				Prevalence Index worksheet:		
1				Total % Cover of:	Multiply by:	
2,				OBL species x	1=	
3	_			FACW species x	2 =	
4					3 =	-
5					4 =	-
	<u>0</u>	= Total Cov	/er		5 =	÷.,
Herb Stratum (Plot size: 5' radius)				Column Totals:	(A)	(B
I. <u>Glechomea hederacea</u>	30	\boxtimes	FACU	Prevalence Index =		- 0
2. Geum canadense	15		FAC	Hydrophytic Vegetation Indic	ators:	
3. Hackelia virginiana	5		FACU	1 - Rapid Test for Hydrophy	tic Vegetation	
4				2 - Dominance Test is >50	%	
5				 ☐ 3 - Prevalence Index is ≤3.0 ☐ 4 - Morphological Adaptatio 		within m
3				data in Remarks or on a	Contraction of the second s	rung
t				5 - Problematic Hydrophytic	Vegetation ¹ (Expla	ain)
7						
9				1 Indicators of hydric soil and we		ust
10.				Be present, unless disturbed or	problematic.	
	50	= Total Cov	'er			
Voody Vine Stratum (Plot size: 30' radius)				Hydrophytic		
. Vitis riparia	5		FACW	Vegetation		
			622101	Present? Yes 🛛	No 🔲	
	5	= Total Cov	er			

SOIL

	Matrix				Redox Fea	itures					
Depth inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Texture	Re	emarks
5	10YR 2/1	98	10YR 4/6		2	С	PL M	Silt loa	LICZ.LE		
8	10YR 5/1	80	7.5YR 4/6	1	20	C	PL M	Clay le	100		
14	10YR 3/2	90	5YR 4/6		10	C	PL M	-	loam with gravel		
+		-				_			in an an grandi	Refusal: Grav	el and rocks -
				-						fill materia	
		_	_								
vpe: C=	Concentration, D=Dep	letion, RM	A=Reduced f	Matrix, MS	S=Masked S	Sand Grains			² Location: PL=Por	e Lining M=Matri	v
	il Indicators:								dicators for Prob	and the share and the second state of the seco	
	Histosol (A1)					eyed Matrix (S	54)		Coast Prairie		
	Histic Epipedon (A2)				Sandy Ree				Dark Surface		
	Black Histic (A3) Hydrogen Sulfide (A4)				Stripped N	icky Mineral ((E1)		Iron-Mangane		
	Stratified Layers (A5)			H		eyed Matrix (I			Other (Explai	A REAL PROPERTY AND A REAL	-12)
	2 cm Muck (A10)					Matrix (F3)	-/			nin Kolliaiks)	
	Depleted Below Dark		411)			rk Surface (F6)				
	Thick Dark Surface (A	12)			Depleted I	Dark Surface	(F7)		³ Indicators of Hydr	ophytic vegetatio	n and
the second se	Sandy Mucky Mineral				Redox Dep	pressions (F8	3)			logy must be pre	
	5 cm Mucky Peat or P									ed or problematio	
	Layer (if observed)										107.2
	: <u>Gravel and rock</u> h (inches): <u>14</u>							н	ydric Soil Present	? Yes 🛛	No 🗌
marks:	r (mones), <u>14</u>										
DROL(DGY ydrology Indicators:										
tland H		of one is	required; ch	eck all that	at apply)				Secondary Indic	ators (minimum o	of two require
tland H	ydrology Indicators:	of one is	required; ch	1250.00		Leaves (B9	y		-CO	1	of two require
Primar	ydrology Indicators: ry Indicators (minimum	of one is	required; ch	🗆 Wa	ater-Stained	Leaves (B9))		Surface Sc	il Cracks (B6)	of two require
Primar Primar	ydrology Indicators: ry Indicators (minimum Surface Water (A1)	of one is	required; ch	U Wa	ater-Stained uatic Fauna	a (B13))		□ Surface So □ Drainage P	il Cracks (B6) atterns (B10)	
Primation H	ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)	of one is	required; ch	Wa Wa Aq Tru	ater-Stained uatic Fauna ue Aquatic F	a (B13) Plants (B14)			Surface Sc Drainage F Dry-Season	il Cracks (B6) atterns (B10) n Water Table (C	
Primar Primar D S D H D S N	ydrology Indicators: ry Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1)		required; ch	Wa Aq D Tru Hy	ater-Stained uatic Fauna ue Aquatic F drogen Sulf	a (B13) Plants (B14) fide Odor (C1)	IS (C3)	Surface Sc Drainage P Dry-Season Crayfish Bu	il Cracks (B6) atterns (B10) n Water Table (C urrows (C8)	2)
	ydrology Indicators: ry Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Nater marks (B1) Sediment Deposits (B2		required; ch	Wa Aq Aq Tru D Hy Ox	ater-Stained uatic Fauna ue Aquatic F drogen Sulf idized Rhizo	a (B13) Plants (B14) fide Odor (C1 ospheres on) Living Roo	ts (C3)	Surface So Drainage P Dry-Seaso Crayfish Be Saturation	il Cracks (B6) atterns (B10) n Water Table (C urrows (C8) Visible on Aerial	2) Imagery (C9)
	ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3))	required; ch	Wa Aq Aq Tru Hy Ox Ox Pre	ater-Stained uatic Fauna ue Aquatic F drogen Sulf idized Rhize esence of R	a (B13) Plants (B14) fide Odor (C1 ospheres on educed Iron) Living Roc (C4)		Surface Sc Drainage P Dry-Season Crayfish Bu Saturation Stunted or	il Cracks (B6) latterns (B10) n Water Table (C urrows (C8) Visible on Aerial Stressed Plants (2) Imagery (C9) (D1)
	ydrology Indicators: ry Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4))	required; ch	Wa Aq Aq Tru Hy Ox Pre Re	ater-Stained uatic Fauna ue Aquatic F drogen Sulf idized Rhize esence of R cent Iron Re	a (B13) Plants (B14) ide Odor (C1 ospheres on educed Iron eduction in T) Living Roc (C4)		Surface So Drainage P Dry-Seaso Crayfish Bu Saturation Stunted or Geomorph	il Cracks (B6) latterns (B10) n Water Table (C urrows (C8) Visible on Aerial Stressed Plants (ic Position (D2)	2) Imagery (C9) (D1)
	ydrology Indicators: ry Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5))		Wa Aq Aq Tru Hy Ox Pre Re Thi	ater-Stained uatic Fauna ue Aquatic F drogen Sulf idized Rhize esence of R cent Iron Re in Muck Sur	a (B13) Plants (B14) fide Odor (C1 ospheres on educed Iron eduction in T face (C7)) Living Roc (C4)		Surface So Drainage P Dry-Seaso Crayfish Bu Saturation Stunted or Geomorph	il Cracks (B6) latterns (B10) n Water Table (C urrows (C8) Visible on Aerial Stressed Plants (2) Imagery (C9) D1)
	ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A) erial Imag	gery (B7)	Wa Aq Hy Ox Ox	ater-Stained uatic Fauna ue Aquatic F drogen Sulf idized Rhize esence of R cent Iron Re in Muck Sur uge or Well	a (B13) Plants (B14) fide Odor (C1 ospheres on educed Iron eduction in T face (C7) Data (D9)) Living Roo (C4) illed Soils (Surface So Drainage P Dry-Seaso Crayfish Bu Saturation Stunted or Geomorph	il Cracks (B6) latterns (B10) n Water Table (C urrows (C8) Visible on Aerial Stressed Plants (ic Position (D2)	2) Imagery (C9) D1)
	ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A Sparsely Vegetated Co) erial Imag	gery (B7)	Wa Aq Hy Ox Ox	ater-Stained uatic Fauna ue Aquatic F drogen Sulf idized Rhize esence of R cent Iron Re in Muck Sur uge or Well	a (B13) Plants (B14) fide Odor (C1 ospheres on educed Iron eduction in T face (C7)) Living Roo (C4) illed Soils (Surface So Drainage P Dry-Seaso Crayfish Bu Saturation Stunted or Geomorph	il Cracks (B6) latterns (B10) n Water Table (C urrows (C8) Visible on Aerial Stressed Plants (ic Position (D2)	2) Imagery (C9) D1)
	ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A	erial Imag ncave Su	gery (B7) Inface (B8)	Wa Aq Aq Tri Hy Ox Pre Ca Ga Ott	ater-Stained uatic Fauna ue Aquatic F drogen Sulf idized Rhize esence of R icent Iron Re in Muck Sur uge or Well her (Explain	a (B13) Plants (B14) fide Odor (C1 ospheres on educed Iron eduction in T face (C7) Data (D9)) Living Roo (C4) illed Soils (Surface So Drainage P Dry-Seaso Crayfish Bu Saturation Stunted or Geomorph	il Cracks (B6) latterns (B10) n Water Table (C urrows (C8) Visible on Aerial Stressed Plants (ic Position (D2)	2) Imagery (C9) D1)
Itland H Prima Pri	ydrology Indicators: ry Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A Sparsely Vegetated Co rvations:) erial Imag ncave Su s 🔲 N	gery (B7) Irface (B8) • 🛛 Dep	Wa Aq Aq Tru Hy Ox Pre Re Oth Ga Oth	ater-Stained uatic Fauna ue Aquatic F drogen Sulf idized Rhize esence of R cent Iron Re in Muck Sur uge or Well her (Explain	a (B13) Plants (B14) fide Odor (C1 ospheres on educed Iron eduction in T face (C7) Data (D9)) Living Roo (C4) illed Soils (Surface So Drainage P Dry-Seaso Crayfish Bu Saturation Stunted or Geomorph	il Cracks (B6) latterns (B10) n Water Table (C urrows (C8) Visible on Aerial Stressed Plants (ic Position (D2)	2) Imagery (C9) D1)
Prima Prima	ydrology Indicators: ny Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A Sparsely Vegetated Co rvations: tter Present? Yes	erial Imag ncave Su S N S N	gery (B7) Inface (B8) o 🛛 Dep o 🖾 Dep	Wa Aq Hy Ox Pre Re Thi Ga Oth	ater-Stained uatic Fauna ue Aquatic F drogen Sulf idized Rhiz esence of R cent Iron Ro in Muck Sur uge or Well her (Explain s): s):	a (B13) Plants (B14) fide Odor (C1 ospheres on educed Iron eduction in T face (C7) Data (D9)) Living Roo (C4) illed Soils (C6)	Surface So Drainage P Dry-Seaso Crayfish Bu Saturation Stunted or Geomorph FAC-Neutr	il Cracks (B6) latterns (B10) n Water Table (C urrows (C8) Visible on Aerial Stressed Plants (ic Position (D2) al Test (D5)	2) Imagery (C9) D1)
tiland H Prima Pri	ydrology Indicators: ry Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Nater marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A Sparsely Vegetated Co rvations: ther Present? Yes	erial Imag ncave Su S N S N	gery (B7) Inface (B8) o 🛛 Dep o 🖾 Dep	Wa Aq Aq Tru Hy Ox Pre Re Oth Ga Oth	ater-Stained uatic Fauna ue Aquatic F drogen Sulf idized Rhiz esence of R cent Iron Ro in Muck Sur uge or Well her (Explain s): s):	a (B13) Plants (B14) fide Odor (C1 ospheres on educed Iron eduction in T face (C7) Data (D9)) Living Roo (C4) illed Soils (C6)	Surface So Drainage P Dry-Seaso Crayfish Bu Saturation Stunted or Geomorph	il Cracks (B6) latterns (B10) n Water Table (C urrows (C8) Visible on Aerial Stressed Plants (ic Position (D2) al Test (D5)	2) Imagery (C9) D1)
tiland H Prima Pri	ydrology Indicators: ry Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A Sparsely Vegetated Co rvations: Iter Present? Yes Present? Yes Present? Yes pillary fringe)	erial Imag ncave Su S N S N S N	gery (B7) Inface (B8) o 🛛 Dep o 🖾 Dep o 🖾 Dep	Wa Aq Tru Hy Ox Pre Re Thi Ga Oth Oth Oth	ater-Stained uatic Fauna ue Aquatic F drogen Sulf idized Rhize esence of R cent Iron Re in Muck Sur uge or Well her (Explain s): s):	a (B13) Plants (B14) fide Odor (C1 ospheres on educed Iron eduction in T face (C7) Data (D9) in Remarks)) Living Roo (C4) illed Soils (C6) Vetland I	Surface So Drainage P Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph FAC-Neutr	il Cracks (B6) Patterns (B10) In Water Table (C Inrows (C8) Visible on Aerial Stressed Plants (ic Position (D2) al Test (D5)	2) Imagery (C9) D1) No □
tiland H Prima Pri	ydrology Indicators: ry Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Nater marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A Sparsely Vegetated Co rvations: Iter Present? Yes Present? Yes Present? Yes pillary fringe) ecorded Data (stream for the second of the second	erial Imag ncave Su s I N s I N s I N gauge, m	gery (B7) Inface (B8) o 🛛 Dep o 🖾 Dep o 🖾 Dep onitoring wel	Wa Aq Tru Hy Ox Pre Re Thi Ga Oth Oth Oth	ater-Stained uatic Fauna ue Aquatic F drogen Sulf idized Rhize esence of R cent Iron Re in Muck Sur uge or Well her (Explain s): s):	a (B13) Plants (B14) fide Odor (C1 ospheres on educed Iron eduction in T face (C7) Data (D9) in Remarks)) Living Roo (C4) illed Soils (C6) Vetland I	Surface So Drainage P Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph FAC-Neutr	il Cracks (B6) Patterns (B10) In Water Table (C Inrows (C8) Visible on Aerial Stressed Plants (ic Position (D2) al Test (D5)	2) Imagery (C9) (D1) No 🔲
tiland H Prima Pri	ydrology Indicators: ry Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A Sparsely Vegetated Co rvations: Iter Present? Yes Present? Yes Present? Yes pillary fringe)	erial Imag ncave Su s I N s I N s I N gauge, m	gery (B7) Inface (B8) o 🛛 Dep o 🖾 Dep o 🖾 Dep onitoring wel	Wa Aq Tru Hy Ox Pre Re Thi Ga Oth Oth Oth	ater-Stained uatic Fauna ue Aquatic F drogen Sulf idized Rhize esence of R cent Iron Re in Muck Sur uge or Well her (Explain s): s):	a (B13) Plants (B14) fide Odor (C1 ospheres on educed Iron eduction in T face (C7) Data (D9) in Remarks)) Living Roo (C4) illed Soils (C6) Vetland I	Surface So Drainage P Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph FAC-Neutr	il Cracks (B6) Patterns (B10) In Water Table (C Inrows (C8) Visible on Aerial Stressed Plants (ic Position (D2) al Test (D5)	2) Imagery (C9) (D1) No 🔲
tiland H Prima Pri	ydrology Indicators: ry Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Nater marks (B1) Sediment Deposits (B2) Orift Deposits (B3) Algal Mat or Crust (B4) ron Deposits (B5) nundation Visible on A Sparsely Vegetated Co rvations: Iter Present? Yes Present? Yes Present? Yes pillary fringe) ecorded Data (stream for the second of the second	erial Imag ncave Su s I N s I N s I N gauge, m	gery (B7) Inface (B8) o 🛛 Dep o 🖾 Dep o 🖾 Dep onitoring wel	Wa Aq Tru Hy Ox Pre Re Thi Ga Oth Oth Oth	ater-Stained uatic Fauna ue Aquatic F drogen Sulf idized Rhize esence of R cent Iron Re in Muck Sur uge or Well her (Explain s): s):	a (B13) Plants (B14) fide Odor (C1 ospheres on educed Iron eduction in T face (C7) Data (D9) in Remarks)) Living Roo (C4) illed Soils (C6) Vetland I	Surface So Drainage P Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph FAC-Neutr	il Cracks (B6) Patterns (B10) In Water Table (C Inrows (C8) Visible on Aerial Stressed Plants (ic Position (D2) al Test (D5)	2) Imagery (C9) (D1) No 🔲

	VETLAND DETERMI	NATION DATA FORM - M	idwest Region	
Project/Site: Milwaukee River Pkwy an	d Oak Leaf Trail Reconstruction	on City/County: City of Glendale/M	Milwaukee County	Sampling Date: 10/27/2014
Applicant/Owner:			State: WI	Sampling Point: 13
Investigator(s): Jennifer Dietl and Zofia	Noe: SEWRPC	Section, Township, Range: Sec	tion 30, T8N, R22E	
Landform (hillslope, terrace, etc.): low !	errace	Local relief (concave, convex, no	one): none	
Slope (%): = Lat: _	Long:			Datum:
Soil Map Unit Name: Unmapped Area	(UA)		NWI cla	assification: S3K
Are climatic/hydrologic conditions on th	e site typical for this time of ye	ear? Yes 🛛 No 🗌 (If n	o, explain in Remarks)	
Are Vegetation, Soil, or Hy	drology significantly dis	sturbed? Are "Normal Circumstand	ces" present? Yes 🛛	No 🗆
Are Vegetation, Soil, or Hy	drology naturally proble	ematic? (If, needed, explain any a	answers in Remarks.)	
SUMMARY OF FINDINGS - Attach sit	e map showing sampling p	oint locations, transects, important	features, etc.	
Hydrophytic Vegetation Present?	Yes No	Is the Sampled Area	2.5	14.
Hydric Soils Present?	Yes No	within a Wetland?	X Yes	□No
Wetland Hydrology Present?	Yes No			
Remarks:				

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1			_	Number of Dominant Species
2				That are OBL, FACW, or FAC: <u>3</u> (A)
3				Total Number of Dominant
4			_	Species Across All Strata: <u>3</u> (B)
5				Percent of Dominant Species
	Q	= Total Cov	ver	That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size: 30' radius)				Prevalence Index worksheet:
1. Fraxinus pennsylvanica	5	\boxtimes	FACW	Total % Cover of: Multiply by:
2. Cornus stolonifera	4		FACW	OBL species x 1 =
3			_	FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
	<u>9</u>	= Total Cov	er	UPL species x 5 =
Herb Stratum (Plot size: 5' radius)				Column Totals: (A) (B)
1. Solanum dulcamara	40		FAC	Prevalence Index = B/A =
2	<u> </u>			Hydrophytic Vegetation Indicators:
3	-			1 - Rapid Test for Hydrophytic Vegetation
4	_			2 - Dominance Test is >50%
5	_		_	 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting
6	_			data in Remarks or on a separate sheet)
7				5 - Problematic Hydrophytic Vegetation ¹ (Explain)
8				
9	_			¹ Indicators of hydric soil and wetland hydrology must
10.				Be present, unless disturbed or problematic.
	40	= Total Cov	er	
Woody Vine Stratum (Plot size: 30' radius)			-	Hydrophytic
1			_	Vegetation
2.				Present? Yes No
	Q	= Total Cov	er	
Remarks: (Include photo numbers here or on a separate sheet	.) Fresh (wet) meadow w	ith scattere	d lowland shrubs.

SOIL

Profile De								
Depth	Matrix			Redox Fea				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
)-10	10YR 2/1	75	5YR 4/6	10	C	PL M	Mucky loam	
	10YR 3/2	15	And the second					
0-20	2.5Y 3/1	98	10YR 4/6	2	C	PL M	Sandy clay loam	
		_		1		_		
	Concentration, D=Dep	letion, RM	M=Reduced Matrix, N	IS=Masked S	and Grains		² Location: PL=Pore	
estrictive Type:	I Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark S Thick Dark Surface (A Sandy Mucky Mineral 5 cm Mucky Peat or Po Layer (if observed):	Surface (/ 12) (S1) eat (S3)		Sandy Red Stripped M Loamy Mu Loamy Gle Depleted M Redox Da Depleted D	latrix (S6) u cky Minera eyed Matrix (I Matrix (F3)	F 6)	Coast Prairie f Dark Surface (Iron-Mangane: Very Shallow f Other (Explain ³ Indicators of Hydro Wetland hydrol	S7) se Masses (F12) Dark Surface (TF12) in Remarks) phytic vegetation and ogy must be present, d or problematic.
emarks: DROLC etland Hy Primar			× N	<u>nat applγ)</u> /ater-Stainec quatic Fauna		9)	Surface Soil	tors (minimum of two required Cracks (B6) itterns (B10)
Primar Primar S S S S S S S S S S S S S S S S S S S	OGY rdrology Indicators: y Indicators (minimum Surface Water (A1)			/ater-Stained quatic Fauna rue Aquatic P	(B13) Plants (B14)		Surface Soil Drainage Pa Dry-Season	Cracks (B6) itterns (B10) Water Table (C2)
Primar Primar S M M M M M M M M M M M M M M M M M M	OGY vdrology Indicators: <u>v Indicators (minimum</u> Surface Water (A1) ligh Water Table (A2) saturation (A3)			/ater-Stained quatic Fauna	(B13) Plants (B14) ide Odor (C1)	Surface Soil Drainage Pa Dry-Season Crayfish Bur	Cracks (B6) ttterns (B10) Water Table (C2) rows (C8)
Primar Primar Primar S M M S S S S S S S S S S S S S S S S	OGY rdrology Indicators: y Indicators (minimum surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1)			/ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi	(B13) Plants (B14) ide Odor (C1 ospheres on 1) Living Roots	Image: Surface Soil Image: Drainage Participation Image: Dry-Season Image: Crayfish Burston V Image: Structure Structus	Cracks (B6) itterns (B10) Water Table (C2)
Primar Primar S S S S S S S S S S S S S S S S S S S	OGY vdrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1) sediment Deposits (B2)			/ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron () Living Roots (C4)	Surface Soil Surface Soil Drainage Pa Dry-Season Crayfish Bur s (C3) Stunted or S	Cracks (B6) atterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9)
Primar Primar S M S C S C S C S C S C C S C S C S C S C S C S C S C S C S C S C S C S C S C S S C S S C S S C S S C S S C S S S C S S S S S S S S S S S S S	OGY vdrology Indicators: v Indicators (minimum surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1) rediment Deposits (B2) with Deposits (B3)			/ater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Re	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron (eduction in Ti) Living Roots (C4)	Surface Soil Surface Soil Drainage Pa Dry-Season Crayfish Bur s (C3) Stunted or S	Cracks (B6) ttterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) c Position (D2)
emarks: DROLC /etland Hy Primar Image: Solution of the	OGY rdrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) rediment Deposits (B2) Inft Deposits (B3) Igal Mat or Crust (B4))		Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Ro ecent Iron Re	(B13) Plants (B14) ide Odor (C1 ospheres on educed Iron (eduction in Ti face (C7)) Living Roots (C4)	Surface Soil Drainage Pa Dry-Season Crayfish Bur s (C3) Saturation V Stunted or S Sc6) Geomorphi	Cracks (B6) ttterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) c Position (D2)
image: marks: DROLC etland Hy Primar Image: markstrain structure	OGY vdrology Indicators: v Indicators (minimum surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1) vdter marks (B1) vdter marks (B1) vdter marks (B1) vdter marks (B1) vdter marks (B2) indication to Crust (B4) on Deposits (B5) nundation Visible on Au parsely Vegetated Com) erial Imag		Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Re ecent Iron Re hin Muck Sur	(B13) Plants (B14) ide Odor (C1 ospheres on l educed Iron (eduction in Ti face (C7) Data (D9)) Living Roots (C4)	Surface Soil Drainage Pa Dry-Season Crayfish Bur s (C3) Saturation V Stunted or S Sc6) Geomorphi	Cracks (B6) ttterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) c Position (D2)
Primar Primar Primar S M S C C C C C C C C C C C C C	OGY drology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) rediment Deposits (B2) rift Deposits (B3) Igal Mat or Crust (B4) on Deposits (B5) mundation Visible on An parsely Vegetated Con vations:) erial Imag		Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Re ecent Iron Re hin Muck Sur auge or Well	(B13) Plants (B14) ide Odor (C1 ospheres on l educed Iron (eduction in Ti face (C7) Data (D9)) Living Roots (C4)	Surface Soil Drainage Pa Dry-Season Crayfish Bur s (C3) Saturation V Stunted or S Sc6) Geomorphi	Cracks (B6) ttterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) c Position (D2)
emarks: Primar Primar S A B C C C C C C C C C C C C C	DGY vdrology Indicators: y Indicators (minimum surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1) sediment Deposits (B2) nift Deposits (B3) ligal Mat or Crust (B4) on Deposits (B5) nundation Visible on Au parsely Vegetated Con vations: ser Present? Yes) erial Imag ncave Su	□ A □ Tr □ Tr □ H □ Pr □ Tr □ T	Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Re ecent Iron Re hin Muck Sur auge or Well ther (Explain es):	(B13) Plants (B14) ide Odor (C1 ospheres on l educed Iron (eduction in Ti face (C7) Data (D9)) Living Roots (C4)	Surface Soil Drainage Pa Dry-Season Crayfish Bur s (C3) Saturation V Stunted or S Sc6) Geomorphi	Cracks (B6) ttterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) c Position (D2)
emarks: Primar Primar S A B C C C C C C C C C C C C C	DGY vdrology Indicators: y Indicators (minimum surface Water (A1) ligh Water Table (A2) saturation (A3) Vater marks (B1) sediment Deposits (B2) inft Deposits (B3) lgal Mat or Crust (B4) on Deposits (B5) nundation Visible on Au parsely Vegetated Con vations: ser Present? Yes) erial Imag ncave Su	Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second condition Image: Second	Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Re ecent Iron Re hin Muck Sur auge or Well ther (Explain es):	(B13) Plants (B14) ide Odor (C1 ospheres on l educed Iron (eduction in Ti face (C7) Data (D9)) Living Roots (C4)	Surface Soil Drainage Pa Dry-Season Crayfish Bur s (C3) Saturation V Stunted or S Sc6) Geomorphi	Cracks (B6) ttterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) c Position (D2)
emarks: (DROLC /etland Hy Primar S M S M S C N S C N S C N S C N S C N S C S C S C S C S S C S S C S S S S S S S S S S S S S	OGY vdrology Indicators: v Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) rediment Deposits (B2) ligal Mat or Crust (B4) on Deposits (B5) nundation Visible on Air parsely Vegetated Con vations: ter Present? Yes Present? Yes) Incave Su	Image: Second state of the second s	Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Re ecent Iron Re hin Muck Sur auge or Well ther (Explain es):	(B13) Plants (B14) ide Odor (C1 ospheres on l educed Iron (eduction in Ti face (C7) Data (D9) in Remarks)) Living Roots (C4) Iled Soils (C	Surface Soil Drainage Pa Dry-Season Crayfish Bur s (C3) Saturation V Stunted or S Sc6) Geomorphi	Cracks (B6) Itterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) c Position (D2) I Test (D5)
emarks: Primar Primar Primar S M S C C C C C C C C C C C C C	DGY vdrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) rediment Deposits (B2) Igal Mat or Crust (B4) on Deposits (B5) nundation Visible on Ai parsely Vegetated Convations: ser Present? Yes Present? Yes pillary fringe)) ncave Su D N N N N	□ A □ Tr □ Tr □ H □ Pr □ Tr □ Depth (inchest □ Depth (inchest <td>Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Ro ecent Iron Re nin Muck Sur auge or Well ther (Explain es): es): 6 es): 0 (at surf</td> <td>(B13) Plants (B14) ide Odor (C1 ospheres on leduced Iron (eduction in Ti face (C7) Data (D9) in Remarks)</td> <td>) Living Roots (C4) Iled Soils (C</td> <td>Image Surface Soil Image Particular Image Dry-Season Image Dry-Season Image Crayfish Bur Image Solution V Image Solution V</td> <td>Cracks (B6) Itterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) c Position (D2) I Test (D5)</td>	Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Ro ecent Iron Re nin Muck Sur auge or Well ther (Explain es): es): 6 es): 0 (at surf	(B13) Plants (B14) ide Odor (C1 ospheres on leduced Iron (eduction in Ti face (C7) Data (D9) in Remarks)) Living Roots (C4) Iled Soils (C	Image Surface Soil Image Particular Image Dry-Season Image Dry-Season Image Crayfish Bur Image Solution V	Cracks (B6) Itterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) c Position (D2) I Test (D5)
emarks: Primar Primar Primar S A B C C C C C C C C C C C C C	DGY vdrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) sediment Deposits (B2) inft Deposits (B3) lgal Mat or Crust (B4) on Deposits (B5) nundation Visible on Au parsely Vegetated Con- vations: ser Present? Yes Present? Yes present? Yes pillary fringe) corded Data (stream g) ncave Su D N N N N	□ A □ Tr □ Tr □ H □ Pr □ Tr □ Depth (inchest □ Depth (inchest <td>Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Ro ecent Iron Re nin Muck Sur auge or Well ther (Explain es): es): 6 es): 0 (at surf</td> <td>(B13) Plants (B14) ide Odor (C1 ospheres on leduced Iron (eduction in Ti face (C7) Data (D9) in Remarks)</td> <td>) Living Roots (C4) Iled Soils (C</td> <td>Image Parameter Image Parameter</td> <td>Cracks (B6) Itterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) c Position (D2) I Test (D5)</td>	Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Ro ecent Iron Re nin Muck Sur auge or Well ther (Explain es): es): 6 es): 0 (at surf	(B13) Plants (B14) ide Odor (C1 ospheres on leduced Iron (eduction in Ti face (C7) Data (D9) in Remarks)) Living Roots (C4) Iled Soils (C	Image Parameter	Cracks (B6) Itterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) c Position (D2) I Test (D5)
emarks: Primar Primar Primar S M S C C C C C C C C C C C C C	DGY vdrology Indicators: y Indicators (minimum Surface Water (A1) ligh Water Table (A2) Saturation (A3) Vater marks (B1) sediment Deposits (B2) inft Deposits (B3) lgal Mat or Crust (B4) on Deposits (B5) nundation Visible on Au parsely Vegetated Con- vations: ser Present? Yes Present? Yes present? Yes pillary fringe) corded Data (stream g) ncave Su D N N N N	□ A □ Tr □ Tr □ H □ Pr □ Tr □ Depth (inchest □ Depth (inchest <td>Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Ro ecent Iron Re nin Muck Sur auge or Well ther (Explain es): es): 6 es): 0 (at surf</td> <td>(B13) Plants (B14) ide Odor (C1 ospheres on leduced Iron (eduction in Ti face (C7) Data (D9) in Remarks)</td> <td>) Living Roots (C4) Iled Soils (C</td> <td>Image Parameter Image Parameter</td> <td>Cracks (B6) Itterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) c Position (D2) I Test (D5)</td>	Vater-Stained quatic Fauna rue Aquatic P ydrogen Sulfi xidized Rhizo resence of Ro ecent Iron Re nin Muck Sur auge or Well ther (Explain es): es): 6 es): 0 (at surf	(B13) Plants (B14) ide Odor (C1 ospheres on leduced Iron (eduction in Ti face (C7) Data (D9) in Remarks)) Living Roots (C4) Iled Soils (C	Image Parameter	Cracks (B6) Itterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) c Position (D2) I Test (D5)

	WETLAND	DETERMINATIO	DN DATA FORM - N	lidwest Region	n	
Project/Site: Milwaukee River Pkwy			ty/County: City of Glendale/		Sampling Date: 10	0/27/2014
Applicant/Owner:				State: WI	Sampling Point: 14	
Investigator(s): Jennifer Dietl and Z		PC Sec	ction, Township, Range: Sec	ction 30, T8N, R22E		
Landform (hillslope, terrace, etc.): t	errace		al relief (concave, convex, n			
		Long:			Datum:	
Soil Map Unit Name: Unmapped Ar				NW	classification: none	
Are climatic/hydrologic conditions or			Yes 🛛 No 🗌 (If n	o, explain in Remarks		
Are Vegetation, Soil, or	Hydrology	significantly disturbed?	Are "Normal Circumstan	ces" present? Yes	No 🗆	
Are Vegetation, Soil, or	Hydrology	naturally problematic?	(If, needed, explain any	answers in Remarks.	.)	
SUMMARY OF FINDINGS - Attach	site map showi	ing sampling point loca	tions, transects, importan	t features, etc.		
Hydrophytic Vegetation Present?	⊠Yes	□No	Is the Sampled Area	1000		
and the second		No	within a Wetland?	☐ Yes	⊠No	
Hydric Soils Present? Wetland Hydrology Present?	□Yes □Yes	⊠No ⊠No	within a Wetland?	☐ Yes	⊠No	

VEGETATION - Use scientific names of plants.

Remarks:

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo	orksheet:		
1. Populus deltoides	45	\boxtimes	FAC	Number of Dominant S	Decies		
2				That are OBL, FACW,		<u>3</u> (A)	
3				Total Number of Domin	ant		
4			_	Species Across All Stra		<u>3</u> (B)	
5				Percent of Dominant Sp	pecies		
	45	= Total Cov	/er	That Are OBL, FACW,		100% (A/B)	
Sapling/Shrub Stratum (Plot size: 30' radius)				Prevalence Index wor	ksheet:	_	
1. Rhamnus cathartica	45		FAC	Total % Cover of:		Multiply by:	
2. Rhamnus frangula	45		FACW	OBL species	x1=		
3. Fraxinus pennsylvanica	5		FACW	FACW species	x 2 =	-	
4				FAC species	x 3 =		-
5				FACU species	x 4 =		-
	95	= Total Cov	/er	UPL species	x 5 =		-
Herb Stratum (Plot size: 5' radius)				Column Totals:	(A)	1000	(B)
1. Rhamnus cathartica	3		FAC	Prevalence			
2	1 L L			Hydrophytic Vegetatio			
3				1 - Rapid Test for H	vdronhytic V	/equitation	
4				2 - Dominance Tes	t is >50%	egetation	
5			_	3 - Prevalence Inde		BURNIN STATE	and a
5				4 - Morphological Ad data in Remarks			orting
7,				5 - Problematic Hyd	and the second se		ain)
8							
9			2.22	⁺ Indicators of hydric soi	and wetlan	d hydrology m	nust
10			_	Be present, unless distu	rbed or prot	ematic.	
	3	= Total Cov	er				
Woody Vine Stratum (Plot size: 30' radius)			- 11	Hydrophytic			
t				Vegetation			
2	_			Present? Yes	No No		
	0	= Total Cove	er				

SOIL

Depth (inches) Color (r						initia che c	bsence of ind	1.2.2.2.1.2.1	
(inches) Color (r	Matrix	-		Redox Fe					
	moist)	%	Color (mois	st) %	Type'	Loc ²	Tex	ture	Remarks
)-9 10YR 3/2	1	100					Loam		
9-17 10YR 3/2	1	100			_	_	Gravelly loar	n	
17+		_					Gravel and g	lass R	Refusal: Old fill material
		=				_			
Type: C=Concentration		n, RM=R	educed Matri	ix, MS=Masked	Sand Grains			ion: PL=Pore Lir	
Histosol (A1) Histic Epiped Black Histic (Hydrogen Su Stratified Lay 2 cm Muck (A Depleted Bele Thick Dark Si Sandy Mucky 5 cm Mucky F) don (A2) (A3) ilfide (A4) vers (A5) A10) low Dark Surfa urface (A12) y Mineral (S1) Peat or Peat (;			Sandy R Stripped Loamy N Loamy G Depleted Redox D Depleted	leyed Matrix (S edox (S5) Matrix (S6) Mucky Mineral (I Bleyed Matrix (F3) ark Surface (F6) Dark Surface (F6) epressions (F8)	F1) 2) 6) (F7)		Coast Prairie Rec Dark Surface (S7 ron-Manganese I /ery Shallow Dar Dther (Explain in ators of Hydrophy	r) Masses (F12) rk Surface (TF12) Remarks) ytic vegetation and y must be present,
Restrictive Layer (if ob Type: Gravel and of Depth (inches): <u>17</u>	glass fill mater	rial						Soil Present?	Yes 🗋 No 🛛
YDROLOGY									
Vetland Hydrology Ind									
Vetland Hydrology Ind Primary Indicators ((minimum of o	ne is req	uired; check	all that apply)			Sec	condary Indicator	rs (minimum of two require
Vetland Hydrology Ind Primary Indicators (Surface Water	(<u>minimum of o</u> r (A1)	ne is req	uired; check		ed Leaves (B9)		Sec	condary Indicator Surface Soil Cr	
Vetland Hydrology Ind Primary Indicators (D Surface Water High Water Ta	(minimum of o r (A1) able (A2)	ne is req		Water-Staine Aquatic Faur	na (B13)		-		racks (B6)
/etland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A3)	(<u>minímum of o</u> er (A1) able (A2) 3)	ne is req		Water-Staine	na (B13)			Surface Soil Cr	racks (B6) erns (B10)
Vetland Hydrology Ind Primary Indicators ((<u>minímum of o</u> er (A1) able (A2) 3)	ne is req		Water-Staine Aquatic Faur True Aquatic	na (B13)			Surface Soil Cr Drainage Patte	racks (B6) erns (B10) ater Table (C2)
Vetland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A3	(<u>minimum of o</u> rr (A1) able (A2) 3) (B1)	ne is req		Water-Staine Aquatic Faur True Aquatic Hydrogen Su	na (B13) Plants (B14)			Surface Soil Cr Drainage Patte Dry-Season Wa Crayfish Burrow	racks (B6) erns (B10) ater Table (C2)
Vetland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A3 Water marks (Sediment Dep Drift Deposits	(<u>minímum of o</u> er (A1) able (A2) 3) (B1) posits (B2) (B3)	ne is req		Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi	na (B13) Plants (B14) ilfide Odor (C1)	iving Root		Surface Soil Cr Drainage Patte Dry-Season Wa Crayfish Burrov Saturation Visit	racks (B6) erns (B10) ater Table (C2) ws (C8)
Vetland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A3 Water marks (Sediment Dep	(<u>minímum of o</u> er (A1) able (A2) 3) (B1) posits (B2) (B3)	ne is req		Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of	na (B13) Plants (B14) ilfide Odor (C1) zospheres on L	iving Root C4)	s (C3)	Surface Soil Cr Drainage Patte Dry-Season Wa Crayfish Burrov Saturation Visit	racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imagery (C9) essed Plants (D1)
Vetland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A3 Water marks (Sediment Dep Drift Deposits	(<u>minimum of o</u> er (A1) able (A2) 3) (B1) bosits (B2) (B3) Crust (B4)	ne is req		Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of	na (B13) Plants (B14) ilfide Odor (C1) zospheres on L Reduced Iron (Reduction in Til	iving Root C4)	s (C3)	Surface Soil Cr Drainage Patte Dry-Season Wa Crayfish Burrow Saturation Visit Stunted or Stre	racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imagery (C9) essed Plants (D1) osition (D2)
Vetland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A3 Water marks (Sediment Dep Algal Mat or C	(minimum of o er (A1) able (A2) 3) (B1) bosits (B2) (B3) Crust (B4) (B5)			Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F	na (B13) Plants (B14) ilfide Odor (C1) zospheres on L Reduced Iron (Reduction in Til urface (C7)	iving Root C4)	s (C3)	Surface Soil Cr Drainage Patte Dry-Season Wa Crayfish Burrow Saturation Visit Stunted or Stre Geomorphic Po	racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imagery (C9) essed Plants (D1) osition (D2)
Vetland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A3) Vater marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits (Inundation Vis Sparsely Vege	(minimum of o or (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) sible on Aerial	Imagery		Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F Thin Muck Su Gauge or We	na (B13) Plants (B14) ilfide Odor (C1) zospheres on L Reduced Iron (Reduction in Til urface (C7)	iving Root C4)	s (C3)	Surface Soil Cr Drainage Patte Dry-Season Wa Crayfish Burrow Saturation Visit Stunted or Stre Geomorphic Po	racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imagery (C9) essed Plants (D1) osition (D2)
Vetland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A3) Water marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Inundation Vis Sparsely Vege ield Observations:	(minimum of o er (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) sible on Aerial etated Concav	Imagery re Surface	(B7) (B7) (B8)	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F Thin Muck Su Gauge or We Other (Explai	na (B13) Plants (B14) Ilfide Odor (C1) zospheres on L Reduced Iron (Reduced Iron (Reduction in Til urface (C7) ell Data (D9)	iving Root C4)	s (C3)	Surface Soil Cr Drainage Patte Dry-Season Wa Crayfish Burrow Saturation Visit Stunted or Stre Geomorphic Po	racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imagery (C9) essed Plants (D1) osition (D2)
Vetland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A3 Water marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Inundation Vis Sparsely Vege ield Observations: Urface Water Present?	(minimum of o er (A1) able (A2) 3) (B1) boosits (B2) (B3) Crust (B4) (B5) sible on Aerial etated Concav Yes □	Imagery ve Surface No [2	(B7) (B8) (Bepth (i	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F Thin Muck Su Gauge or We	na (B13) Plants (B14) Ilfide Odor (C1) zospheres on L Reduced Iron (Reduced Iron (Reduction in Til urface (C7) ell Data (D9)	iving Root C4)	s (C3)	Surface Soil Cr Drainage Patte Dry-Season Wa Crayfish Burrow Saturation Visit Stunted or Stre Geomorphic Po	racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imagery (C9) essed Plants (D1) osition (D2)
Vetland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A3) Vater marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Sparsely Vege ield Observations: urface Water Present?	(minimum of o or (A1) able (A2) 3) (B1) boosits (B2) (B3) Crust (B4) (B5) sible on Aerial etated Concav Yes Yes Yes	Imagery re Surface	(B7) (B8) (B2) (B2) (B2) (B2) (B2) (B2) (B2) (B2	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F Thin Muck Su Gauge or We Other (Explai	na (B13) Plants (B14) Ilfide Odor (C1) zospheres on L Reduced Iron (Reduced Iron (Reduction in Til urface (C7) ell Data (D9)	iving Root C4)	s (C3)	Surface Soil Cr Drainage Patte Dry-Season Wa Crayfish Burrow Saturation Visit Stunted or Stre Geomorphic Po	racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imagery (C9) essed Plants (D1) osition (D2)
Vetland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A3 Vater marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Inundation Vis Sparsely Vege ield Observations: urface Water Present? aturation Present?	(minimum of o or (A1) able (A2) 3) (B1) boosits (B2) (B3) Crust (B4) (B5) sible on Aerial etated Concav Yes Yes Yes Yes Yes	Imagery ve Surface No [2	(B7) (B7) (B8) Depth (i Depth (i	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F Thin Muck Su Gauge or We Other (Explain nches):	na (B13) Plants (B14) Ilfide Odor (C1) zospheres on L Reduced Iron (Reduced Iron (Reduction in Til urface (C7) ell Data (D9)	Living Roots C4) led Soils (C	s (C3)	Surface Soil Cr Drainage Patte Dry-Season Wa Crayfish Burrow Saturation Visit Stunted or Stre Geomorphic Po FAC-Neutral Te	racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imagery (C9) essed Plants (D1) osition (D2)
Wetland Hydrology Ind Primary Indicators (Surface Water High Water Ta Saturation (A3) Water marks (Sediment Dep Drift Deposits Iron Deposits (Inundation Vis	(minimum of o er (A1) able (A2) 3) (B1) boosits (B2) (B3) Crust (B4) (B5) sible on Aerial etated Concav Yes Yes Yes Yes Yes	Imagery re Surface No D No D No D	(B7) (B	Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F Thin Muck Su Gauge or We Other (Explain nches): nches):	na (B13) Plants (B14) ilfide Odor (C1) zospheres on L Reduced Iron (Reduction in Til urface (C7) ell Data (D9) n in Remarks)	Living Roots C4) led Soils (C	s (C3)	Surface Soil Cr Drainage Patte Dry-Season Wa Crayfish Burrow Saturation Visit Stunted or Stre Geomorphic Po FAC-Neutral Te	racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imagery (C9) essed Plants (D1) esst dPlants (D1) osition (D2) est (D5)

	WETLAND DETEI	RMINATION DATA FORM -	Midwest Region	
Project/Site: Milwaukee River Pkwy an	d Oak Leaf Trail Recons	truction City/County: City of Glenda	le/Milwaukee County	Sampling Date: 10/27/2014
Applicant/Owner:			State: WI	Sampling Point: 15
Investigator(s): Jennifer Dietl and Zofia	a Noe; SEWRPC	Section, Township, Range: §	Section 30, T8N, R22E	
Landform (hillslope, terrace, etc.): Milv	vaukee River	Local relief (concave, convex		
Slope (%): - Lat:	Lo	ng:		Datum:
Soil Map Unit Name: Water (W)			NWI cla	assification: -
Are climatic/hydrologic conditions on th	e site typical for this time	of year? Yes 🖾 No 🗔 (I	If no, explain in Remarks)	
Are Vegetation, Soil, or Hy	drology significan	tly disturbed? Are "Normal Circumst	tances" present? Yes 🛛	No 🗆
Are Vegetation, Soil, or Hy	drology naturally	problematic? (If, needed, explain an	ny answers in Remarks.)	
SUMMARY OF FINDINGS - Attach si	te map showing sampli	ing point locations, transects, import	ant features, etc.	
Hydrophytic Vegetation Present? Hydric Soils Present?	⊠Yes □No ⊠Yes □No	Is the Sampled Area within a Wetland?	⊠ Yes	
Wetland Hydrology Present?	⊠Yes □No		-	4.00
Remarks:				

1 2 3 4 5 Sapling/Shrub Stratum (Plot size: 30' radius) 1 2 3 4 5 Herb Stratum (Plot size: 5' radius) 1. Lemna minor 2. Miryophyllum spicatum	<u> </u>	□ □ □ = Total Cove	er	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% (A/B) Prevalence Index worksheet:		
3 4 5 Sapling/Shrub Stratum (Plot size: 30' radius) 1 2 3 4 5 Herb Stratum (Plot size: 5' radius) 1. Lemna minor 2. Miryophyllum spicatum	<u> </u>	□ □ = Total Cove	er	Total Number of Dominant Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)		
4 5 Sapling/Shrub Stratum (Plot size: 30' radius) 1 2 3 4 5 Herb Stratum (Plot size: 5' radius) 1. Lemna minor 2. Miryophyllum spicatum	<u>0</u>	□ □ = Total Cove	 er	Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)		
5	<u>0</u>	= Total Cove	 er	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)		
Sapling/Shrub Stratum (Plot size: 30' radius) 1. 2. 3. 4. 5. Herb Stratum (Plot size: 5' radius) 1. 2. 2.	<u>0</u>	= Total Cove	er	That Are OBL, FACW, or FAC: 100% (A/B)		
1.	<u>0</u>	D	er			
1.				Prevalence Index worksheet:		
2 3 4 5 Herb Stratum (Plot size: <u>5' radius)</u> 1. Lemna minor 2. <u>Miryophyllum spicatum</u>						
3 4 5 Herb Stratum (Plot size: <u>5' radius</u>) 1. Lemna minor 2. <u>Miryophyllum spicatum</u>				Total % Cover of: Multiply by:		
4 5 <u>Herb Stratum</u> (Plot size: <u>5' radius</u>) 1. <u>Lemna minor</u> 2. <u>Miryophyllum spicatum</u>	-		-	OBL species x 1 =		
5 <u>Herb Stratum</u> (Plot size: <u>5' radius</u>) 1. <u>Lemna minor</u> 2. <u>Miryophyllum spicatum</u>			_	FACW species x 2 =		
Herb Stratum (Plot size: 5' radius) 1. Lemna minor 2. Miryophyllum spicatum				FAC species x 3 =		
Herb Stratum (Plot size: <u>5' radius)</u> 1. Lemna minor 2. Miryophyllum spicatum	_			FACU species x 4 =		
1. <u>Lemna minor</u> 2. <u>Miryophyllum spicatum</u>	0	= Total Cove	er	UPL species x 5 =		
2. Miryophyllum spicatum			1.00	Column Totals: (A) (I		
	25		OBL	Prevalence Index = B/A =		
	5		OBL	Hydrophytic Vegetation Indicators:		
3				1 - Rapid Test for Hydrophytic Vegetation		
4				2 - Dominance Test is >50%		
5	_			 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportin data in Remarks or on a separate sheet) 		
6						
7				5 - Problematic Hydrophytic Vegetation ¹ (Explain)		
8			1			
9				¹ Indicators of hydric soil and wetland hydrology must		
10.				Be present, unless disturbed or problematic.		
	30	= Total Cove	er			
Woody Vine Stratum (Plot size: 30' radius)				The design of the second se		
1.			2.1	Hydrophytic Vegetation		
2				Present? Yes No		
	0	= Total Cove				

~	,	•	×.	
25	c	1	r	Ľ
~	-	•		-

Sampling Point: 15

Depth	Matrix			Redox Fea	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Texture	Remarks
ype: C=C	oncentration, D=Depl Indicators:	etion, RM=	Reduced Matrix, MS	S=Masked S	Sand Grains		² Location: PL=Pore Lin Indicators for Problem	ning, M=Matrix
	istosol (A1) istic Epipedon (A2) lack Histic (A3) ydrogen Sulfide (A4) tratified Layers (A5) cm Muck (A10) epleted Below Dark S hick Dark Surface (A1 andy Mucky Mineral (cm Mucky Peat or Pe	2) S1) eat (S3)		Sandy Red Stripped M Loamy Mu Loamy Gle Depleted M Redox Dar Depleted I	Matrix (S6) ucky Mineral (eyed Matrix (F	F1) (2) (F7)	Coast Prairie Red Dark Surface (S7 Iron-Manganese Very Shallow Dar Other (Explain in ³ Indicators of Hydroph Wetland hydrology Unless disturbed of	dox (A16) ') Masses (F12) rk Surface (TF12) n Remarks) ytic vegetation and y must be present,
Type:	Layer (if observed): (inches):						Hydric Soil Present?	Yes 🛛 No 🗌
DROLO	bils inundated with	18 inches	of water, hydric b	y definitior	n - Criteria 3			
	drology Indicators:							
Primary	Indicators (minimum	of one is re	equired; check all the	at apply)			Secondary Indicator	rs (minimum of two required)
S SL	urface Water (A1)		D Wa	ter-Stained	Leaves (B9)		Surface Soil C	racks (B6)
- Hig	gh Water Table (A2)		Aq	uatic Fauna	a (B13)		Drainage Patte	erns (B10)
Sa Sa	ituration (A3)		Tru Tru	e Aquatic	Plants (B14)		Dry-Season W	ater Table (C2)
D W	ater marks (B1)		🔲 Hy	drogen Sulf	ide Odor (C1)		Cravfish Burrow	ws (C8)

	Dry-Season Wate	er Table (C2)
_		

Crayfish	Burrows	(C8

	Saturation	Visible on	Aerial	Imagery	(C9)
--	------------	------------	--------	---------	------

- Stunted or Stressed Plants (D1) \boxtimes Geomorphic Position (D2)
- \boxtimes
- FAC-Neutral Test (D5)

Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Depth (inches): 18 Surface Water Present? Yes 🛛 No 🗆 Water Table Present? Yes 🗍 No 🗆 Depth (inches): Saturation Present? Yes 🗌 No 🔲 Depth (inches): Wetland Hydrology Present? Yes No D (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soil Survey Map (Exhibit 3). Remarks: Sample site is located in the Milwaukee River floodway.

Oxidized Rhizospheres on Living Roots (C3)

Recent Iron Reduction in Tilled Soils (C6)

Presence of Reduced Iron (C4)

Sediment Deposits (B2)

Drift Deposits (B3)

Algal Mat or Crust (B4)

Page 1of 1 Milwaukee River Parkway and Oak Leaf Trail Reconstruction (W Bender Rd to W Good Hope Rd)

NE and SE Quarter, Section 19 NE Quarter, Section 30, T8N-R22E City of Glendale, Milwaukee County



Photo 1. Sample point 1.



Photo 2. Sample point 2.

Milwaukee River Parkway and Oak Leaf Trail Reconstruction (W Bender Rd to W Good Hope Rd) NE and SE Quarter, Section 19 NE Quarter, Section 30, T8N-R22E City of Glendale, Milwaukee County

Photo 3. Sample point 3.



Photo 4. Sample point 4.

Page 3 of 1 Milwaukee River Parkway and Oak Leaf Trail Reconstruction (W Bender Rd to W Good Hope Rd)

NE and SE Quarter, Section 19 NE Quarter, Section 30, T8N-R22E City of Glendale, Milwaukee County



Photo 5. Sample point 5.



Photo 6. Sample point 6.

Page 4 of 1

EXHIBIT 9

Milwaukee River Parkway and Oak Leaf Trail Reconstruction (W Bender Rd to W Good Hope Rd) NE and SE Quarter, Section 19 NE Quarter, Section 30, T8N-R22E

City of Glendale, Milwaukee County



Photo 7. Sample point 7.



Photo 8. Sample point 8.

Page 5 of 1

EXHIBIT 9

Milwaukee River Parkway and Oak Leaf Trail Reconstruction (W Bender Rd to W Good Hope Rd) NE and SE Quarter, Section 19 NE Quarter, Section 30, T8N-R22E

City of Glendale, Milwaukee County



Photo 9. Sample point 9.



Photo 10. Water in creek down stream of sample point 9.

Page 6 of 1

EXHIBIT 9

Milwaukee River Parkway and Oak Leaf Trail Reconstruction (W Bender Rd to W Good Hope Rd) NE and SE Quarter, Section 19 NE Quarter, Section 30, T8N-R22E City of Glendale, Milwaukee County



Photo 11. East view of creek from foot bridge.



Photo 12. Sample point 10.

Page 7 of 1

EXHIBIT 9

Milwaukee River Parkway and Oak Leaf Trail Reconstruction (W Bender Rd to W Good Hope Rd) NE and SE Quarter, Section 19 NE Quarter, Section 30, T8N-R22E

City of Glendale, Milwaukee County



Photo 13. Sample point 12.



Photo 14. Sample point 13.

Page 8 of 1 Milwaukee River Parkway and Oak Leaf Trail Reconstruction (W Bender Rd to W Good Hope Rd)

NE and SE Quarter, Section 19 NE Quarter, Section 30, T8N-R22E City of Glendale, Milwaukee County



Photo 15. Sample point 14.

00225458

COPY

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

W239 N1812 ROCKWOOD DRIVE • PO BOX 1607 • WAUKESHA, WI 53187-1607•

May 5, 2015

Serving the Counties of: KENOSHA MILWAUKEE

, E

(262) 547-1103

TELEPHONE (262) 547-6721

Ms. Melissa Phillips Landscape Architect West Bend Park, Recreation & Forestry Department 1115 S. Main Street West Bend, WI 53095

Re: SEWRPC No. CA-618-129

FAX

OZAUKEE RACINE WALWORTH WASHINGTON

WAUKESHA

Dear Ms. Phillips:

This will respond to your electronic mail message of August 7, 2014, requesting that the Commission staff conduct a field inspection of the Downtown Riverwalk project area along the Milwaukee River between the river impoundment north of STH 33 and a point just south of the Walnut Street bridge. The project area is located in parts of the southeast and northeast one-quarters of U.S. Public Land Survey Sections 11 and 14, respectively, Township 11 North, Range 19 East, City of West Bend, Washington County, Wisconsin. The purpose of the field inspection was to identify and stake the boundaries of any wetlands within the project area.

Pursuant to your request, Commission staff identified and staked the wetland boundaries within the project area on October 9, 2014. It is the Commission staff's expectation that the wetland boundaries will be surveyed and identified on forthcoming design plans attendant to the proposed riverwalk improvements. A copy of the wetland delineation report is attached for your reference.

Should you have any questions regarding this information, please do not hesitate to contact Mr. Christopher J. Jors, Specialist-Biologist (*cjors@sewrpc.org* or 262-953-3246).

Sincerely,

Kenneth R. Yunker, P.E. Executive Director

KRY/TMS/CJJ/pk ca618-129 downtown riverwalk letter (00225380).docx

Enclosure (#225415)

cc: Ms. Kathleen Kramasz, Wisconsin Department of Natural Resources Mr. Anthony Jernigan, U.S. Army Corps of Engineers

WETLAND DELINEATION REPORT

CITY OF WEST BEND DOWNTOWN RIVERWALK RENOVATION

SE Quarter, Section 11, And NE Quarter, Section 14, T11N, R19E CITY OF WEST BEND WASHINGTON COUNTY WISCONSIN

Prepared by:

Christopher Jors Jennifer Dietl Daniel Carter Zofia Noe

Southeastern Wisconsin Regional Planning Commission W239 N1812 Rockwood Drive P.O. Box 1607 Waukesha, WI 53187-1607

WETLAND DELINEATION REPORT OVERVIEW

(Based upon WDNR WETLAND Delineation Confirmation Request Check List)

INTRODUCTION

- Who requested the delineation Melissa Philipps, Landscape Architect, City of West Bend
- Why the delineation was undertaken Renovation of Downtown Riverwalk
- Date the field work was completed October 9, 2014
- Who conducted field work Christopher Jors, Jennifer Dietl, Zofia Noe
- Statement of Qualifications

METHODS

- Description of Methods
- Sources Reviewed
 - Topographic Map Exhibit 1
 - Wisconsin Wetland Inventory (WWI) Map Exhibit 2
 - Soil Survey and Floodplain Map Exhibit 3
 - Historical Aerial Photos Exhibits 4A to 4D
 - Sanitary Sewer Service Map Exhibits 5
 - o Advanced Delineation and Identification (ADID) Wetland Map Exhibit 6
- Description of any site specific agency guidance (site meetings, etc.) None

RESULTS AND DISCUSSION

- Antecedent hydrologic condition analysis Drier than normal
- Previous wetland delineation mapping Exhibit 7
- Existing environmental mapping (WWI mapping, Soil survey, etc.)
- · Amount and types of wetland located within the project area
- · Wetland/upland boundary explanation
- · Disturbed and problematic areas encountered
- Other water resources located in the project area

LITERATURE CITED

Wetland Delineation Map - Exhibit 8

Vegetation Survey and Wetland Delineation Data Forms

- Preliminary Vegetation Survey Exhibit 9
- Wetland Determination Data Forms NE/NC Region Exhibit 10

Site Photos - Exhibit 11

Farm Service Agency Slide Review - Not Applicable

INTRODUCTION

This wetland delineation report responds to a request from Melissa Philipps, Landscape Architect with the City of West Bend, to identify and stake the boundaries of any wetlands along the Milwaukee River in downtown West Bend. The project area includes the river and adjacent shoreline from the impoundment just north of State Highway 33 to a point just south of the Walnut Street bridge in the Southeast and Northeast one-quarters of U.S. Public Land Survey Sections 11 and 14, respectively, Township 11 North, Range 19 East, City of West Bend, Washington County, Wisconsin.

Statement of Qualifications

Christopher Jors, Specialist-Biologist, has worked at SEWRPC since 1993, and has been part of the wetland delineation team since 1994. He received a Bachelor's degree in Conservation Aspects of Biology from the University of Wisconsin – Milwaukee in 1993. Prior to working at SEWRPC, Chris worked at the UWM Field Station at the Cedarburg Bog in Saukville, WI, where he learned methods of sampling wetland plant communities within the Bog. Chris has attended various wetland training workshops including a U.S. Army Corps of Engineers Workshop on the Midwest Supplement to the 1987 Wetland Delineation Manual (2009) and a Wisconsin Department of Natural Resources Workshop on Techniques for Identifying Wetland Features on Farm Service Agency Aerial Slides (2009).

Daniel Carter, PhD, Senior Biologist, has worked at SEWRPC since 2013. He graduated with honors from Grinnell College with a Bachelor's degree in Biology. He later received a PhD in Biology from Kansas State University. Daniel has published several plant ecology articles in peer-reviewed journals, serves on the botany team for the Wisconsin Wildlife Action Plan, and co-teaches the UW-La Crosse Basic Wetland Plant Identification course, He has completed both basic and advanced wetland delineation training as well as Wisconsin Natural Heritage Inventory training. Prior to working for the Commission, Daniel served as project coordinator for a grassland restoration project overseen jointly by the United States Department of Agriculture and The Nature Conservancy and taught high school Biology.

Jennifer Dietl, Specialist-Biologist, earned a Bachelor's degree in Biology and Environmental Science from Carroll University in 1992. Jennifer has worked at the Commission from 1992 to 1997 and from 2006 to the present conducting wetland delineations, primary environmental corridor delineations, and vegetation surveys. In between years of service at the Commission she worked for the Wisconsin Department of Transportation – Green Bay as an LTE Environmental Analysis and Review Specialist – and the Wisconsin Department of Natural Resources – Green Bay as an LTE Hydrologist.

Zofia Noe, Specialist-Biologist, earned a Bachelor's degree in Biology and Chemistry from St. Mary's College of Maryland in 2003. She earned a Masters Degree in Coastal Marine and Wetland Studies from Coastal Carolina University in 2009. Zofia has experience in a variety of environmental assessments including water quality, aquatic plant, and upland vegetation surveys. Zofia began assisting with wetland delineations in the summer of 2013.

METHODS

Description of Methods

The wetland boundary determinations were based upon the criteria and methodologies set forth in the 1987 Corps of Engineers Wetlands Delineation Manual; the January 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0); the Wisconsin Department of Administration Coastal Management Program's 1995 Basic Guide to Wisconsin's Wetlands and their Boundaries; and the State of Wisconsin 2014 Wetland Plant List.

Specific methods used to field identify wetland boundaries included the U.S. Department of the Army Corps of Engineers Routine Onsite Determination Method – Plant Community Assessment Procedure. This procedure requires an initial identification of representative plant community types in the project area followed by a characterization of vegetation, soils, and hydrology for each type.

Sources Reviewed

Prior to conducting field work, Commission staff reviewed the following data sources: Washington County's topographic mapping (Exhibit 1), Wisconsin Wetland Inventory (Exhibit 2), Natural Resource Conservation Service's (NRCS) soil survey and FEMA Floodplains (Exhibit 3), Commission aerial photography (Exhibits 4A – 4D), Sanitary Sewer Service Area Map (Exhibit 5), ADID Wetland Map (Exhibit 6), and United States Department of Agriculture (USDA) and National Climatic Data Center (NCDC) data for antecedent and observed precipitation.

RESULTS AND DISCUSSION

Christopher Jors, lead investigator, along with Jennifer Dietl and Zofia Noe, identified and staked the boundaries of the wetland contained within the project area on October 9, 2014.

The results of the wetland delineation field inspection for this project area are shown on Exhibit 8, which includes sample site numbers and locations, approximate staked wetland boundaries, approximate wetland boundaries defined by concrete/rock retaining walls, and the primary environmental corridor.

Antecedent Hydrologic Conditions

WETS Station:

HARTFORD 2 W, WI3453

GHCND Station: USC00479053 (West Bend, WI)

Climatological data were taken from the nearest WETS station with relevant data. Observed precipitation amounts were taken from the nearest GHCND weather station with monthly precipitation summaries.

	Month	3 yrs. In 10 less than	Normal	3 yrs. In 10 more than	Observed precip.	Condition dry, wet, normal	Condition value	Month weight value	Product of previous two columns
1st prior	Contombor	1.01	2.61	4.41		dai			
month	September	1.91	3.61	4.41	1.74	dry	1	3	3
2nd prior		6. G. C.							
month	August	3.03	4.15	4.88	3.42	normal	2	2	4
3rd prior									
month	July	2.89	4.13	4.9	3.78	normal	2	1	2
								sum	9
		If sum is							2
		6-9	drier than normal						
		10 - 14	normal						
		15 - 18	wetter th	an normal					

Conclusion

Antecedent precipitation was drier than normal.

Previous Wetland Delineation Mapping

The wetlands on the northern portion of the project area were previously identified and staked in the field by the Commission staff on August 5, 2010, and October 1, 2002. These previous wetland delineations were performed at the request of the Wisconsin Department of Transportation related to the State Highway 33 bridge reconstruction project. The 2010 project area and wetland boundaries staked by the Commission at that time are shown on Exhibit 7.

Existing Environmental Mapping

The Washington County topographic map (Exhibit 1) depicts a project area encompassing the Milwaukee River channel with a vertical or nearly vertical shoreline in much of the project area. The river flows from northwest to southeast within the project area. Developed lands immediately adjacent to the river are fairly level. Lands outside of the project area rise steadily westward while lands east of the project area rise more gently. Elevations on the north side of the project area range from 908 feet above sea level west of the river, dropping to a surface water elevation of 890 feet above the impoundment, and rising to an elevation of 896 feet east of the river. Just below the impoundment the surface water elevation is approximately 884 feet. On the south side of the project area, elevations range from 896 feet west of the river, 880 feet at the water surface, and 892 feet east of the river.

The Wisconsin Wetland Inventory (WWI) map (Exhibit 2) indicates four small wetlands in the northern portion of the project area based upon a previous Commission wetland delineation in 2010 as noted above (Exhibit 7). All four are classified as forested wetlands (T3K) and are part of the Milwaukee River complex.

The NRCS Soil Survey map (Exhibit 3) shows that, outside the river channel itself, soil types within the project area include Grays silt loam (GrB) with 2 to 6% slopes and Theresa silt loam (ThB2) with 2 to 6% slopes, both well-drained soils.

Historical aerial photos of the project area were reviewed back to 1941. This review indicated that lands adjacent to the river were already largely developed by 1941. Lands west of the river were in commercial uses. Lands east of the river appear more industrial, including a major railroad complex. The dam and impoundment are evident on the 1941 photo, including a separate spillway west of the main channel. By 1970 very little had changed in terms of land use within the project area. The only obvious change was removal of the west spillway below the dam. By 1990 the Walnut Street bridge was re-aligned on the south end of the project area. Two Pedestrian bridges were also added by 1990 between STH 33 and Walnut Street. Also, a large industrial site was redeveloped on the east bank of the river. By 2010 lands east of the river underwent a major transformation. The railroad complex was demolished with the railroad itself converted to a recreational trail. Other buildings were removed in preparation for a mixed-use re-development of those lands. Since 2010 some of these vacant lands have been re-developed, including commercial and residential development. Aerial photos for years 2010, 1990, 1970, and 1941 are attached (see Exhibits 4A to 4D).

SEWRPC's sanitary sewer map (Exhibit 5) shows that the project area is located within the City of West Bend and Environs planned sanitary sewer service area.

The ADID wetland map (Exhibit 6) indicates that the wetlands in the project area are located within a designated Primary Environmental Corridor (PEC) and have been designated as ADID wetlands under the Section 404(b)(1) Guidelines of the Clean Water Act.

Amount and Types of Wetlands in the Project Area

A large floodplain-wetland complex along the Milwaukee River was identified and inventoried within the project area. The wetland consists of open water, fresh (wet) meadow and second growth, Southern wet to wet-mesic lowland hardwoods. Disturbances to the wetland include dumping, filling, siltation and sedimentation due to stormwater runoff from adjacent lands, water level changes due to river impoundment, and placement of rock riprap and concrete retaining walls along the shoreline. It is important to note that there was active erosion observed on the stream bank of the Milwaukee River that may need to be addressed to protect existing walkway (See Photo 7 in Exhibit 11). While no Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection, Greater redhorse (*Moxostoma valenciennesi*), a State-designated special concern fish species, has been recorded in this reach of the Milwaukee River.

Exhibit 9 contains a list of the vascular plant species observed within the wetland. A list of vascular plant species observed during the field inspection was prepared for the wetland plant community area using a meander method on the day of the field inspection.

Wetland/Upland Boundary Explanation

Five representative sample sites were identified within the project area. The Wetland Determination Data Forms describing the findings at each sample site are attached as Exhibit 10. The locations of the sample sites are shown on Exhibit 8. The wetland boundary was determined using breaks in topography, changes in vegetation composition, visual identification of wetland hydrology, and presence of hydric soils. In some cases the wetland boundary was determined wall at the river's edge. In those cases it was not possible to physically stake the wetland boundary as shown on Exhibit 8.

Disturbed and Problematic Areas Encountered

None

Other Water Resources Located in the Project Area

None

Other Considerations

All wetlands located within the project area are contained within a recorded Primary Environmental Corridor (PEC). Accordingly, these wetlands have been designated as Advanced Delineation and Identification (ADID) wetlands under the Section 404(b)(1) Guidelines of the Clean Water Act and are deemed generally unsuitable for the discharge of dredge and fill material. The nonagricultural performance standards set forth in Section NR 151.125 of the *Wisconsin Statutes*, requires establishment of a 75-foot impervious surface protective area to protect these higher quality wetlands. This designated protective area boundary is measured horizontally from the delineated wetland boundary to the closest impervious surface. The protective area requirements should be taken into consideration for any planned improvements within the project area and it is suggested that you contact WDNR regarding approaches to meet the requirements. Finally, please be advised that no Federal or State regulatory jurisdiction determinations relative to any wetland permits or certifications are made under this report.

LITERATURE CITED

U.S. Army Corps of Engineers, 2014, State of Wisconsin Wetland Plant List

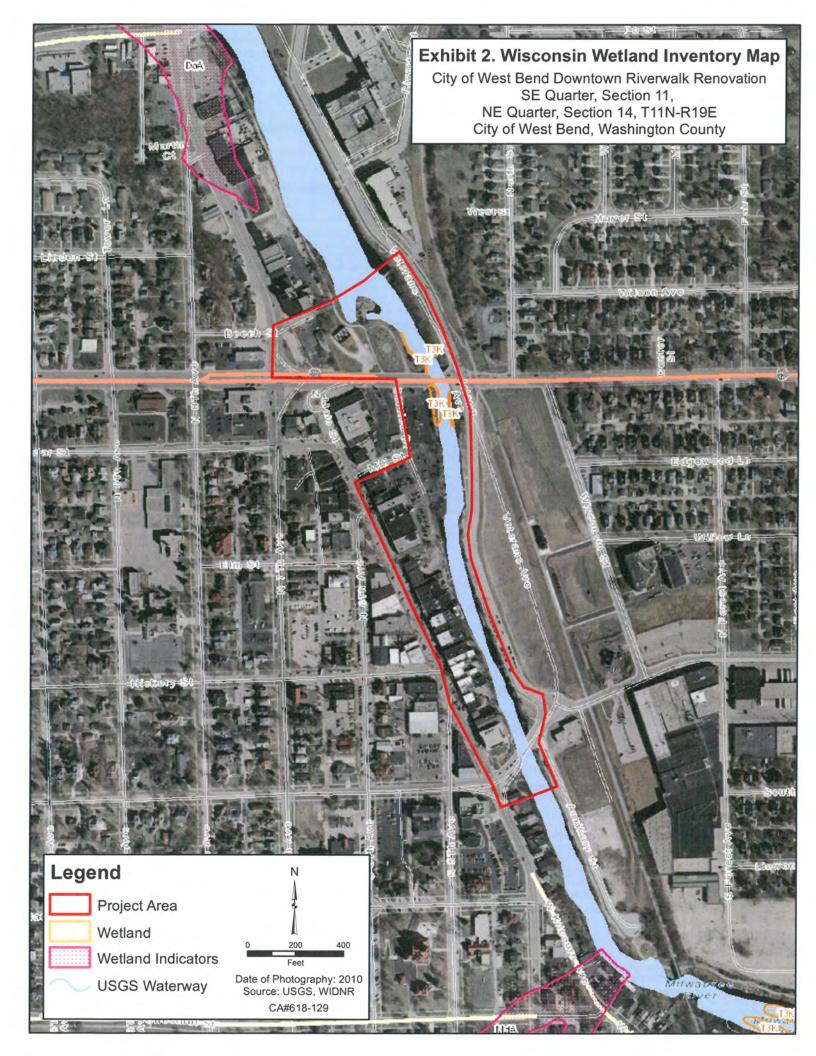
U.S. Army Corps of Engineers, 2012, Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0). U.S. Army Engineer Research and Development Center, January 2012.

U.S. Army Corps of Engineers, 1987, U.S. Army Corps of Engineers wetlands delineation manual. Wetlands Research Program Technical Report Y-87-1.

Wisconsin Coastal Management Program, 1995, Basic Guide to Wisconsin's Wetlands and their Boundaries.

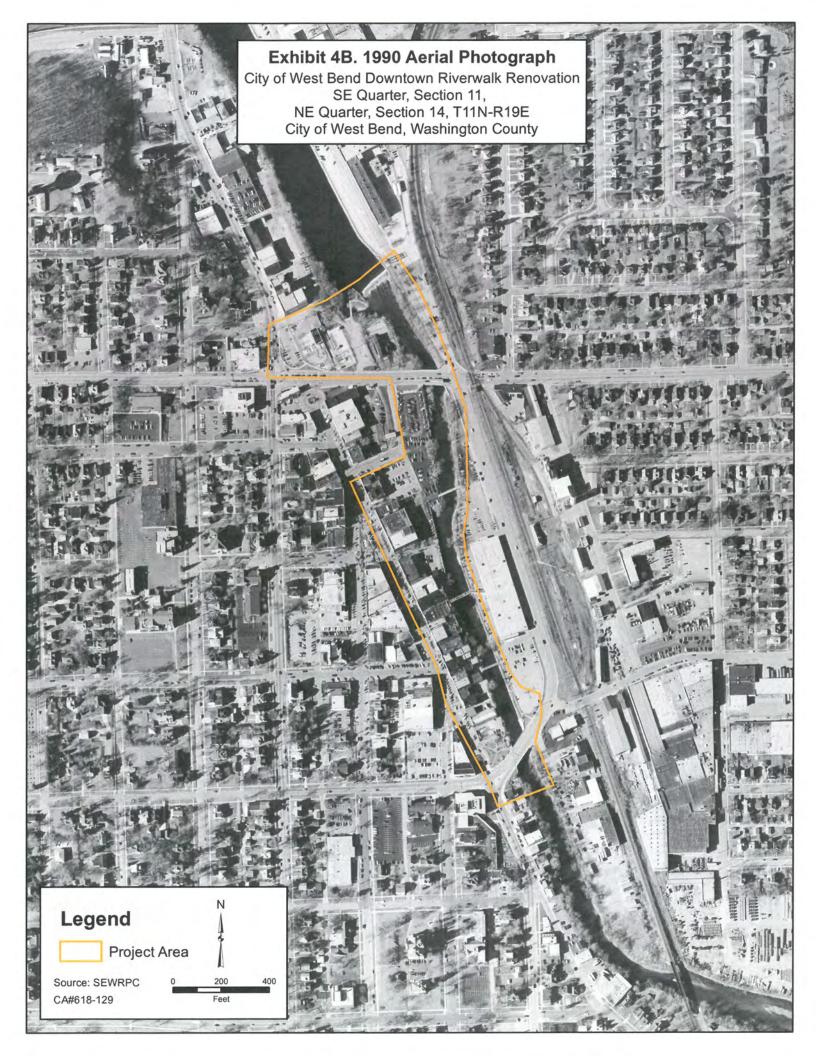
CA618-129 WB DOWNTOWN RIVERWALK RENOVATION SOILS (00224969). DOC

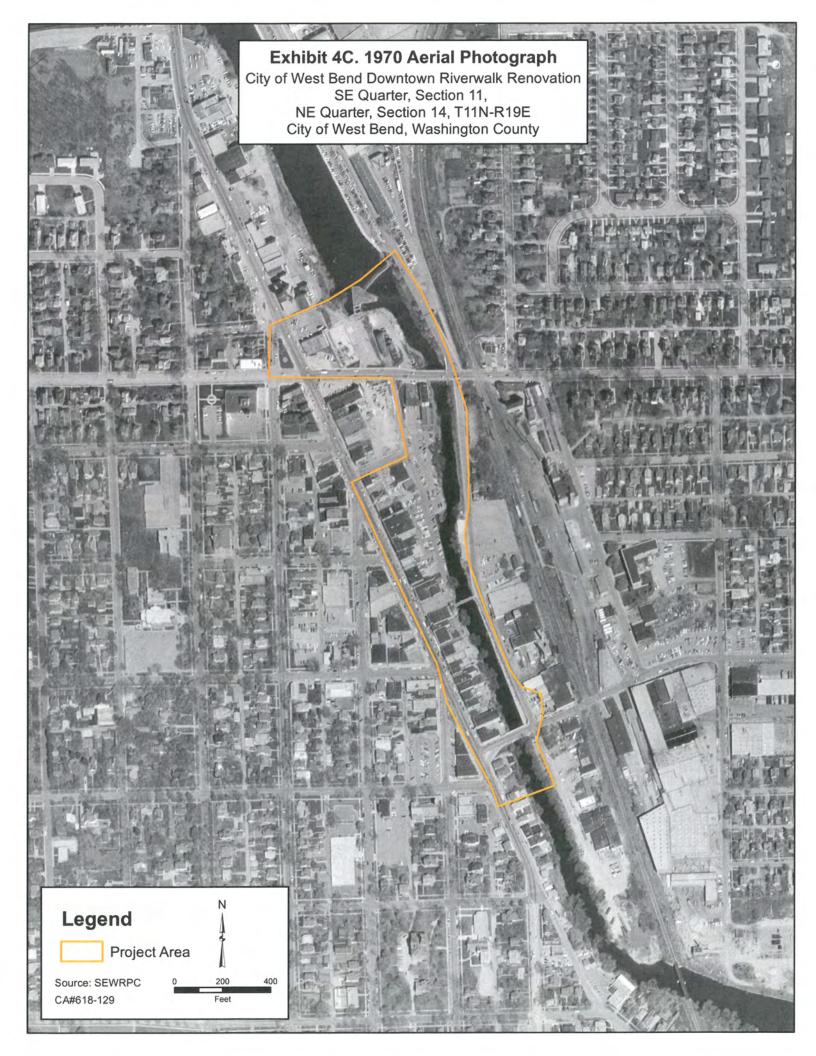












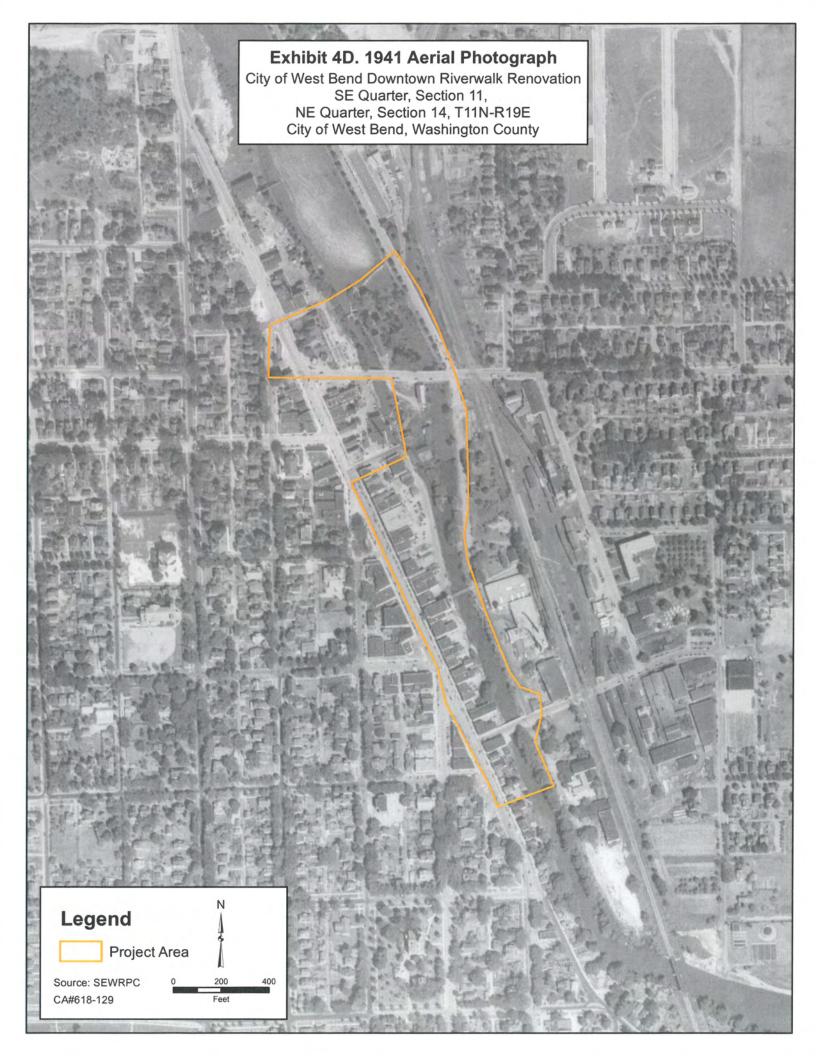


Exhibit 5. Sanitary Sewer Service Map

City of West Bend Downtown Riverwalk Renovation SE Quarter, Section 11, NE Quarter, Section 14, T11N-R19E City of West Bend, Washington County

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE CITY OF WEST BEND AND ENVIRONS

U. S. Public Land Survey Sections 1, 2, 11, and 12 Township 11 North, Range 19 East



Project Area

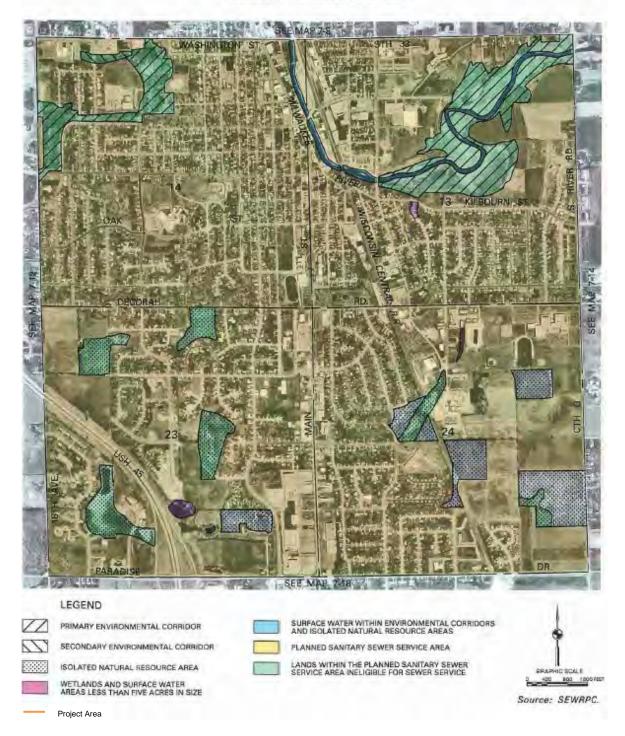
Source: SEWRPC.

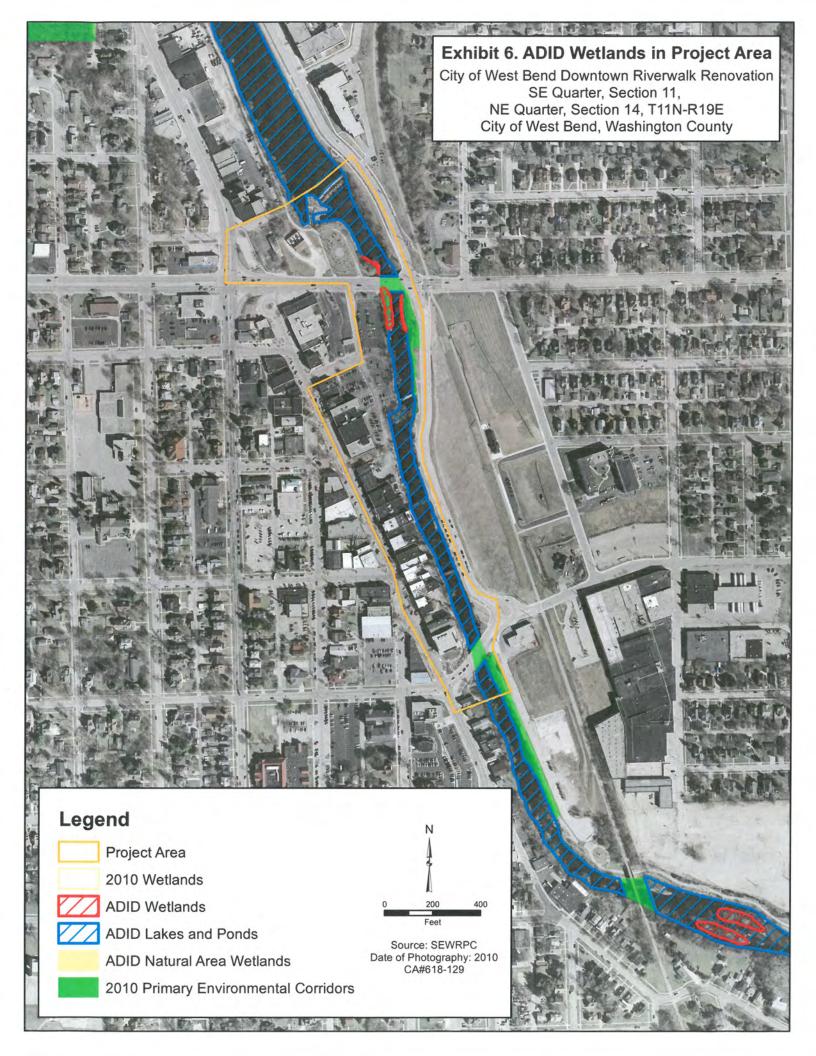
Exhibit 5 cont. Sanitary Sewer Service Map

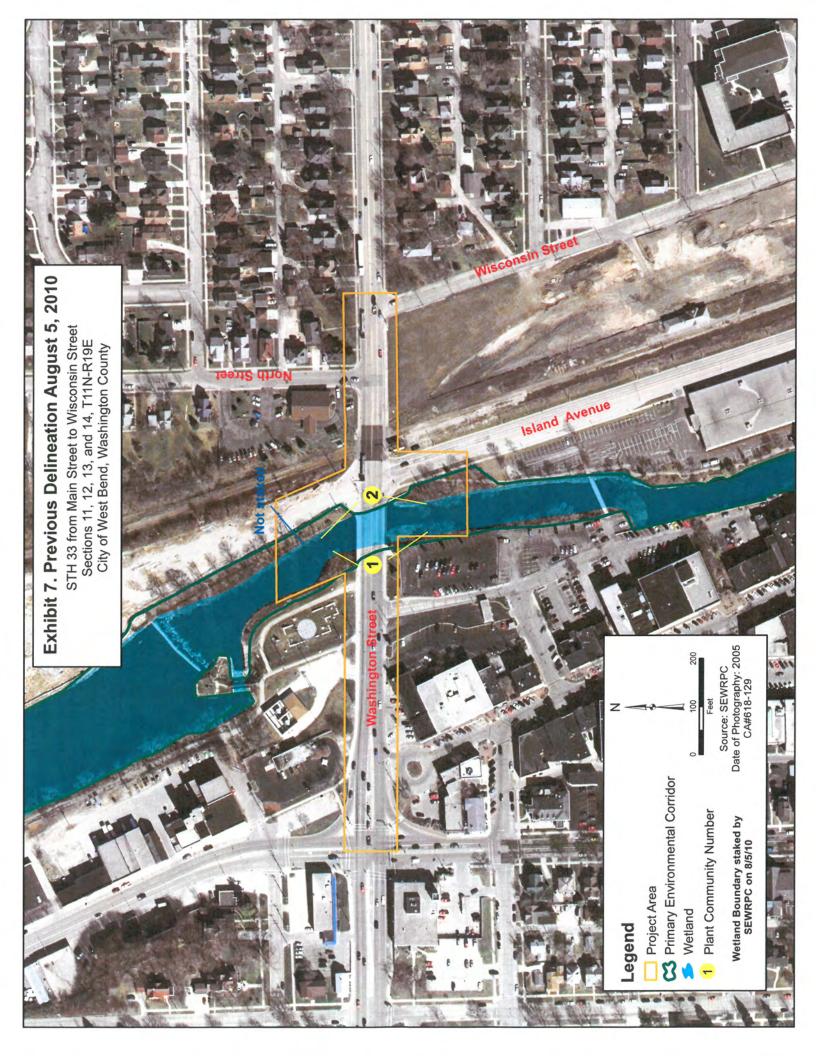
City of West Bend Downtown Riverwalk Renovation SE Quarter, Section 11, NE Quarter, Section 14, T11N-R19E City of West Bend, Washington County

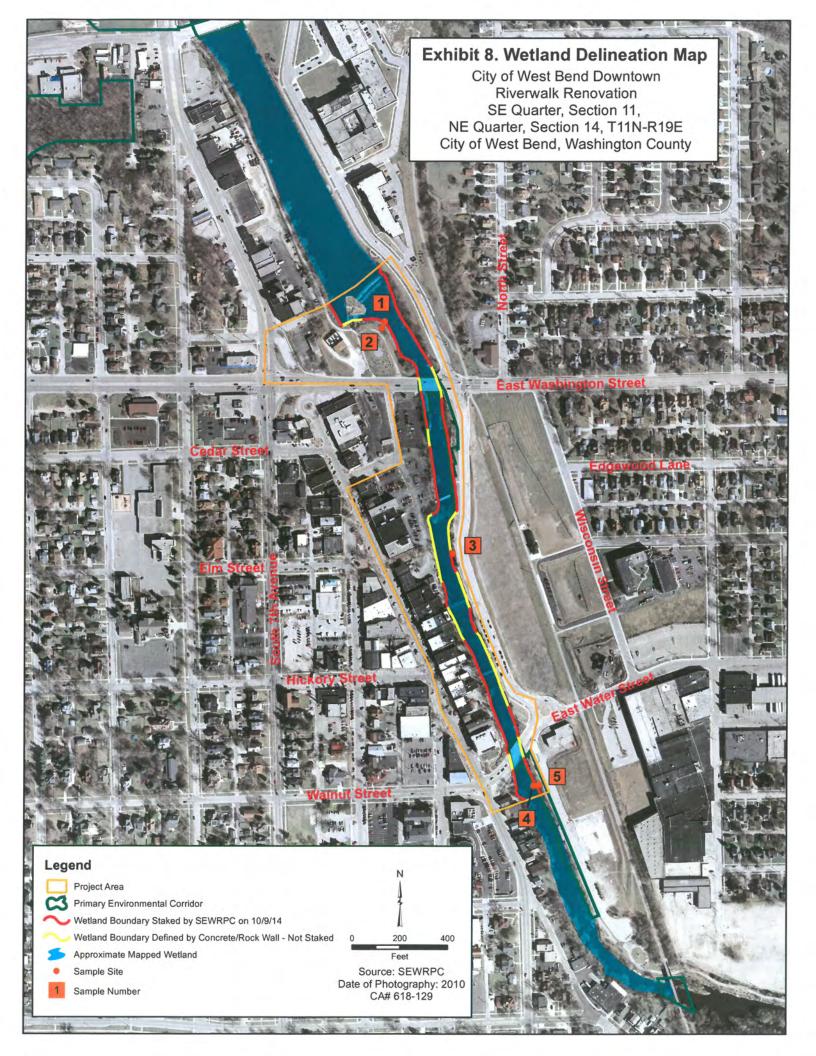
ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE CITY OF WEST BEND AND ENVIRONS

> U. S. Public Land Survey Sections 13, 14, 23, and 24 Township 11 North, Range 19 East









SVY4186 CA618-129

EXHIBIT 9

PRELIMINARY VEGETATION SURVEY CITY OF WEST BEND DOWNTOWN RIVERWALK RENOVATION

Date:

October 9, 2014

Observers:	Christopher J. Jors, Biologist
	Jennifer L. Dietl, Biologist
	Zofia Noe, Biologist
	Southeastern Wisconsin Regional Planning Commission

Location: City of West Bend in parts of the Southeast and Northeast one-quarters of U.S. Public Land Survey Sections 11 and 14, respectively, Township 11 North, Range 19 East, Washington County, Wisconsin.

Species List: Native Plant Species Co-dominant Plant Species

> Acer negundo-Boxelder Aster lateriflorus--Calico aster Bidens vulgata-- Tall beggars-ticks Carex pellita--Woolly sedge Cornus amomum-Silky dogwood Cornus stolonifera-Red-osier dogwood Elymus virginicus--Virginia wild rye Fraxinus pennsylvanica--Green ash Impatiens capensis--Jewelweed Iris virginica--Virginia blueflag Lemna minor-Lesser duckweed Lycopus americanus--Cutleaf bugleweed Oenothera biennis--Evening-primrose Parthenocissus guinguefolia--Virginia creeper Populus deltoides--Cottonwood Populus tremuloides--Quaking aspen Prunus americana-Wild plum Rubus occidentalis--Black raspberry Salix amygdaloides-Peach-leaved willow Salix interior-Sandbar willow Salix nigra-Black willow Scirpus validus--Soft-stemmed bulrush Solidago altissima--Tall goldenrod Solidago gigantea--Giant goldenrod Tilia americana--Basswood Ulmus americana--American elm Verbena hastata--Blue vervain Verbena urticifolia--White vervain Vitis riparia-Riverbank grape

NON-Native Plant Species

<u>Arctium minus</u>--Common burdock <u>Cirsium arvense</u>--Canada thistle <u>Cirsium vulgare</u>--Bull thistle <u>Glechoma hederacea</u>--Creeping Charlie <u>Hemerocallis fulva</u>--Day-lily <u>Hesperis matronalis</u>--Dame's rocket <u>Lactuca serriola</u>--Prickly wild lettuce <u>Lonicera X bella</u>--Hybrid honeysuckle <u>Nepeta cataria</u>--Catnip NON-Native Plant Species cont'

<u>Phalaris arundinacea</u>--Reed canary grass <u>Poa pratensis</u>--Kentucky bluegrass <u>Polygonum persicaria</u>--Lady's thumb <u>Rhamnus cathartica</u>--Common buckthorn <u>Rhamnus frangula</u>--Glossy buckthorn <u>Solanum dulcamara</u>--Deadly nightshade <u>Typha angustifolia</u>--Narrow-leaved cat-tail <u>Viburnum opulus</u>--European highbush-cranberry

Total number of plant species: 46

Number of alien, or non-native, plant species: 17 (37 percent)

This approximately 4.1-acre wetland plant community area is part of the Milwaukee River floodplain-wetland complex and consists of fresh (wet) meadow and second growth, Southern wet to wet-mesic lowland hardwoods. Disturbances to the plant community area include dumping, filling, siltation and sedimentation due to stormwater runoff from adjacent lands, water level changes due to river impoundment, and placement of rock rip-rap and concrete retaining walls along the shoreline. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection. Greater redhorse (*Moxostoma valenciennesi*), a State-designated Special Concern species, has been recorded in this reach of the Milwaukee River.