WETLAND DELINEATION REPORT

STH 50 RECONSTRUCTION
(1300 FEET WEST OF 256th AVENUE TO 2000 FEET EAST OF 236th AVENUE)

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11, and 12, T1N, R20E
VILLAGES OF PADDOCK LAKE AND
SALEM LAKES, KENOSHA COUNTY,
WISCONSIN

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Report Completion: August 11, 2020

WETLAND DELINEATION REPORT OVERVIEW

(Based upon WDNR WETLAND Delineation Confirmation Request Check List)

INTRODUCTION

- Who requested the delineation – **Brenda H. Ruenger, P.G., Environmental Coordinator, Wisconsin Department of Transportation-Southeast Region**
- Why the delineation was undertaken – **Planned road reconstruction/improvements**
- Date the field work was completed – **June 17, 2020**
- Who conducted field work – **Christopher Jors, Jennifer Dietl, and Shane Heyel**
- Statement of Qualifications
- GIS Support – **Bradley Subotnik**

METHODS

- Description of Methods
- Sources Reviewed
  - Kenosha County Topographic Mapping – **Exhibit 1 (Maps 1 – 3)**
  - Wisconsin Department of Natural Resources (WDNR) Surface Water Data Viewer – Wisconsin Wetland Inventory (WWI) Mapping – **Exhibit 2 (Maps 1 – 3)**
  - Natural Resources Conservation Service (NRCS) Soil Survey and Federal Emergency Management Agency (FEMA) Floodplain Mapping – **Exhibit 3 (Maps 1 – 3)**
  - SEWRPC Historical Aerial Photographs – **Exhibits 4A to 4H (Maps 1 – 3)** (2016, 2010, 2005, 2000, 1990, 1980, 1970, and 1963)
  - SEWRPC Sanitary Sewer Service Area Mapping – **Exhibit 5 (Maps 1 & 2)**
  - Advance Identification (ADID) Wetland Mapping – **Exhibit 6 (Maps 1 – 3)**
  - NRCS Draft Wetland Inventory Mapping – **Exhibit 7 (Maps 1 – 3)**
  - National Agriculture Imagery Program (NAIP) & Farm Service Agency (FSA) Images – **Not Applicable (N/A)**
- Description of any site specific agency guidance (site meetings, etc.) – **None**

RESULTS AND DISCUSSION

- Antecedent hydrologic condition analysis – **Wetter than normal**
- Previous wetland delineation mapping – **SEWRPC - October 19, 2011**
- Existing environmental mapping (WWI mapping, Soil survey, etc.)
- Amount and types of wetland in the project area
- Wetland/upland boundary explanation
- Disturbed and problematic areas encountered
- Other Considerations

LITERATURE CITED

Wetland Delineation Map – **Exhibit 8 (Maps 1 – 3)**

Vegetation Survey, Wetland Delineation Data Forms, and Site Photos

- Preliminary Vegetation Survey – **Exhibit 9**
- Wetland Determination Data Forms – Midwest Region – **Exhibit 10**
- Site Photos – **Exhibit 11**

INTRODUCTION

This wetland delineation report responds to a September 24, 2019, email request from Brenda H. Ruenger, P.G., Environmental Coordinator, Wisconsin Department of Transportation-Southeast Region, to verify/update the boundaries of any wetlands within a specified highway corridor project area along STH 50 (WisDOT Project ID: 1310-04-00). The project area includes land in portions of U.S. Public Land Survey Sections 1, 2, 3, 10, 11, and 12, Township 1 North, Range 20 East, in the Villages of Paddock Lake and Salem Lakes, Kenosha County, Wisconsin.

SEWRPC delineated wetlands along most of this segment of the STH 50 right-of-way on October 19, 2011. WisDOT surveyors subsequently surveyed the wetland boundary markers placed by SEWRPC at that time. The current project area is somewhat different than the 2011 project area with additions in linear footage at both the eastern and western ends and around the STH 50/STH 75 intersection, and reductions along other portions of the corridor as most of the planned work is to occur "between the existing sidewalks" on either side of STH 50.

Further, by an email dated September 26, 2019, Ms. Ruenger specifically requested a field survey for Eastern Prairie White Fringed Orchid (*Platanthera leucophaea*), a State-endangered/Federal-threatened species, with historical records in the general vicinity of the project area.

Statement of Qualifications

Lead Investigator: Christopher Jors, Principal 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 Biological Aspects of Conservation from the University of Wisconsin – Milwaukee in 1992. 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 the UW-La Crosse Critical Methods Workshop on March 4, 2020; the UW-La Crosse Basic and Advanced Wetland Delineation Workshops on August 10-15, 2015; a Wisconsin Dept. of Natural Resources Wetland Delineation & Wetland Rapid Assessment Methodology Workshop on April 23, 2014; and a U.S. Army Corps of Engineers Workshop on the Midwest Supplement to the 1987 Wetland Delineation Manual on February 3, 2009.

Jennifer Dietl, Senior Specialist-Biologist, earned Bachelor's degrees in Biology and Environmental Science from Carroll University in 1992. Jennifer has worked at SEWRPC 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 SEWRPC, she worked for the Wisconsin Department of Transportation – Green Bay as an LTE Environmental Analysis and Review Specialist – and the WDNR – Green Bay as an LTE Hydrologist. Jennifer attended the UW-La Crosse Critical Methods Workshop on March 4, 2020; the UW-La Crosse Hydric Soils Workshop on July 19-21, 2017; the UW-La Crosse Basic and Advanced Wetland Delineation Workshops on August 10-15, 2015; and a WDNR Wetland Delineation & Wetland Rapid Assessment Methodology Workshop on April 23, 2014.

Shane Heyel, Specialist-Biologist, joined the wetland delineation team at SEWRPC in June 2016. He holds a Bachelor's degree in Land Use Planning from the University of Wisconsin-Stevens Point and a Master's degree in Hydrology & Water Quality from Lancaster University (United Kingdom). Shane worked for the Wisconsin Department of Natural Resources for seven years, including four years regulating waterways and wetlands. With Atkins Limited, U.K. from 2005-2009, he delivered pollution and flood risk assessments to the English Highways Agency and modeled sewer networks to report flood alleviation options for major British water companies. As an independent consultant in Wisconsin, Shane helped develop a site restoration plan for a proposed wetland mitigation bank. His recent wetland training includes UW-La Crosse

Workshops in Basic Wetland Delineation (August 2015), Advanced Wetland Delineation (August (2016), Basic Plant ID (July 2017), Hydric Soils (July 2018), and Critical Methods (March 2020).

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 Midwest Region* (Version 2.0); the March 4, 2015, *Guidance for Submittal of Delineation Reports to the St. Paul District Army Corps of Engineers and the Wisconsin Department of Natural Resources*; and the State of Wisconsin 2016 Wetland Plant List.

Sources Reviewed

Prior to conducting the field inspection, Commission staff reviewed the following data sources that were available and applicable to the subject project area:

- Kenosha County's topographic mapping (Exhibit 1, Maps 1 through 3)
- WDNR Surface Water Data Viewer - WWI mapping (Exhibit 2, Maps 1 through 3)
- NRCS soil survey and FEMA floodplain mapping (Exhibit 3, Maps 1 through 3)
- SEWRPC Historical Aerial Photography (Exhibit 4A-4H, Maps 1 through 3)
- SEWRPC Sanitary Sewer Service Area mapping (Exhibit 5, Maps 1 and 2)
- ADID wetland mapping (Exhibit 6, Maps 1 - 3)
- NRCS Draft wetland inventory mapping (Exhibit 7, Maps 1 -3)
- Precipitation data from the NRCS "WETS" tables
- SEWRPC Wetland Delineation report dated November 14, 2011

RESULTS AND DISCUSSION

Christopher Jors, as lead field investigator and report author, supervised and approved all aspects of the wetland delineation in the field, data compilation and analysis, and preparation of this report. A field inspection of the current project area was conducted on June 17, 2020. Wetland boundaries delineated by SEWRPC in 2011 that fall within the current project area were reviewed for any changes. Wetland boundaries that have not changed since 2011 were not re-staked. The WisDOT survey from 2011 can be utilized for unchanged wetlands. Wetland boundaries where changes have occurred were re-staked with orange wire flags and ribbon. In addition, wetland boundaries that were located outside the 2011 project area, but fall within the current project area, were identified and staked in the field. Commission staff utilized 21 representative sample sites and one hydrologic probe site within the project area to determine the current wetland boundaries. Commission staff utilized a sub-meter-accuracy Global Positioning System (GPS) device to record the updated and new wetland boundary markers placed on June 17, 2020, as well as the locations of the sample sites and probe site.

The results of the field inspection for the project area are shown on Exhibit 8 (Maps 1 through 3). These maps include the updated and new wetland boundaries (blue-shaded and hatched), the 2011 wetland boundary that remains valid (red-shaded), the sample and hydrologic probe sites, and the numbered wetland plant community areas.

Further, Eastern Prairie White Fringed Orchid (*Platanthera leucophaea*), was not observed within the project area during the field inspection.

Antecedent Hydrologic Conditions

Climatological data presented below are taken from the nearest WETS station(s) with relevant data for the 1981-2010 climate period and the monthly precipitation summaries for the antecedent 90-day period. In

this case, historical data was taken from the Burlington Station while the 90-day observed data was available from the closer Twin Lakes 1.5 NE Station.

June 17, 2019	Month	3 years in 10 Less Than	Normal	3 years in 10 More Than	Observed Precip.	Condition (dry, wet, normal)	Condition Value	Month Weight Value	Product of Previous Two Columns
1st prior month	June	2.29	3.80	4.70	5.89	Wet	3	3	9
2nd prior month	May	2.24	3.67	4.30	5.20	Wet	3	2	6
3rd prior month	April	2.48	3.43	4.06	5.54	Wet	3	1	3
									Sum = 18

If Sum is	
6 - 9	drier than normal
10 - 14	normal
15 - 18	wetter than normal

Conclusion: Wetter than normal

Existing Environmental Mapping

The Kenosha County topographic mapping (Exhibit 1, Maps 1 through 3) depicts a linear road corridor project area crossing a landscape with naturally rolling topography. The image, however, also illustrates a largely built environment that includes steep slopes, constructed roadside ditches, and modified drainageways and depressions within and abutting the project area.

Map 1, which depicts the western portion of the project area, shows several roadside ditch segments on either side of STH 50, west of STH 75/83. Larger wetlands appear partially within or abutting the project area on each side of STH 50, west of 256th Avenue. Map 1 also shows modified drainageways in both the northeastern and southeastern quadrants of the STH 75/83-STH 50 intersection. The former drains to a depression containing a small surface water body that lies just outside the project area. The latter is identified as an unnamed tributary to Hooker Lake. A second branch of this tributary is shown just outside the southern end of the project on the east side of STH 75/83.

Map 2 illustrates a largely paved, urban central portion of the project area. The imagery suggests that even unpaved depressions that extend into the project area, e.g. adjacent to a school entrance opposite 248th Avenue and along the west side of 246th Avenue, are well-drained by storm sewers.

Map 3 shows the outlet from Paddock, identified as an unnamed tributary to Salem Branch, flowing southward as it crosses STH 50, approximately 200 feet west of 236th Avenue. There is a depression associated with this waterway on the north side of STH 50. South of STH 50, the tributary meanders such that it comes close to the project area again, approximately 175 feet east of 236th Avenue. A constructed pond abuts the south side of the project area approximately 400 feet west of the tributary crossing.

Elevations in the project area range from a high of approximately 833.3 feet above the National Geodetic Vertical Datum of 1929 (NGVD 29), which is a "spot elevation" shown on the north side of STH 50 in between 256th Avenue and STH 75/83 to a low of 784 feet, in the STH 50 median at the east end of the project area. The WDNR Surface Water Data Viewer (WWI) Mapping (Exhibit 2, Maps 1 through 3) indicates small portions of several wetlands in the project area. Map 1 depicts an emergent-wet meadow (E2K) and two scrub-shrub/emergent-wet meadow (S3/E2K) wetlands west of 256th Avenue. An E1K wetland associated with the unnamed tributary to Hooker Lake extends into the project area in two locations southeast of the STH 50 and STH 75/83 intersection. No wetlands are shown on Map 2, indicative of the more urban central portion

of the project area. Map 3 indicates the northern edges of an excavated pond (W0Hx) and two areas of S3/E2K wetland in the eastern part of the project area. The latter are associated with the unnamed tributary to the Salem Branch waterway.

Wetland indicators, shown as NRCS-mapped Ashkum silty clay loam (AtA), Beecher silt loam (BcA), Blount silt loam (BlA), Ozaukee silt loam (OzaB), Radford silt loam (RaA), Sebewa silt loam (So), and Walkill silt loam (Wa) are identified in the project area.

WDNR identifies the unnamed tributary to Hooker Lake as a 1st order stream with a macroinvertebrate community in unknown condition. While data is limited for the segment of waterway within the project area, it ultimately drains into a large wetland adjacent to Hooker Lake which WDNR has designated as a Sensitive Area with Critical Species Habitat. The unnamed tributary to the Salem Branch waterway, which is an outflow from Paddock Lake, has not been monitored since 2007. WDNR classifies the waterway as a 1st order stream with a warm headwater community in unknown condition. Neither of these small streams is considered "impaired" relative to the State's Section 303(d) list.

The NRCS Soil Survey map (Exhibit 3, Maps 1-3) shows the following soils in the project area:

Map Unit Name and Symbol	Slope (%)	Hydric Category	Hydric Percent of Map Unit	Hydric Minor Component, Percent, and Landform	Project Area (%)
Ashkum silty clay loam (AtA)	0-2	Predominantly Hydric	97	Not Applicable (N/A)	11.3
Beecher silt loam (BcA)	1-3	Predominantly Non-hydric	5	Ashkum, 5%, depressions	1.0
Blount silt loam (BlA)	1-3	Predominantly Non-hydric	5	Ashkum, 5%, depressions	0.3
Hebron loam (HeB2)	2-6 eroded	Non-hydric	0	N/A	2.0
Loamy land (Lu)	0-6	Non-hydric	0	N/A	1.2
Markham silt loam (MeB)	2-6	Predominantly Non-hydric	10	Ashkum-drained, 0-9% and Pewamo-drained, 0-6%, both on end moraines or ground moraines	7.4
Ozaukee silt loam (OzaB)	2-6	Predominantly Non-hydric	6	Ashkum-drained, 0-7%, ground or end moraines; Pewamo-drained, 0-7%, depressions or drainageways on ground moraines	45.2
Ozaukee silt loam (OzaB2)	2-6 eroded	Predominantly Non-hydric	6	Ashkum-drained, 0-7%, ground or end moraines; Pewamo-drained, 0-7%, depressions or drainageways on ground moraines	2.6
Ozaukee silt loam (OzaC)	6-12	Non-hydric	0	N/A	1.8
Ozaukee silt loam (OzaC2)	6-12 eroded	Non-hydric	0	N/A	20.8
Ozaukee silt loam (OzaD)	12-20	Non-hydric	0	N/A	2.4
Radford silt loam (RaA)	0-3	Predominantly Non-hydric	10	Drummer, 0-3%, Sable, 2-5%, and Sebewa, 1-4%, all on depressions, and Otter, 2-8%, floodplains/drainageways	1.4
Sebewa silt loam, clayey substratum (So)	0-2	Hydric	100	N/A	2.2
Wallkill silt loam (Wa)	0-2	Predominantly Hydric	98	N/A	0.4

Exhibit 3 (Map 3 of 3) also indicates a small area of FEMA-mapped one-percent-annual-probability floodplain associated with the unnamed tributary to Salem Branch waterway in the eastern portion of the project area.

Historical aerial photos were reviewed going back to 1963. Images for years 1995, 1985, 1975, and 1967 were omitted as no significant changes to land use were observed on these images. Hence, orthophotographs (2016, 2010, 2005, and 2000) and aerial photographs (1990, 1980, 1970, and 1963) comprise the review as detailed in the table below, and are attached (Exhibits 4A to 4H, Maps 1-3).

Year	Changes in Land Use Observed on Aerial Photography from 1963 to 2016
1963	The imagery depicts a project area with a mixture of land uses including cropped fields, pastures, farmsteads, idle land, and residential/commercial/institutional land uses (Exhibit H, Maps 1-3). STH 50 and STH 75 are comprised of simple two-lane roadways at this time. Wetness signatures are most prominent in the fields west of STH 75 (Map 1), with at least one area being farmed around due to wetness. An unnamed tributary to Hooker Lake, located east of the STH 50-STH 75 intersection, is barely visible. A large wet signature indicative of a depression is also present adjacent to the project area just west of the school (Map 2). An unnamed tributary to Salem Branch is apparent (Map 3) crossing the project area just west of 236th Avenue.
1970	Significant land disturbance is evident northeast of the STH 50-STH 75 intersection (Exhibit G, Map 1). The school has expanded, accompanied by several drainage features that lies partially in the project area opposite 248th Avenue (Map 2). Park development is underway southeast of Paddock Lake, with a large parking lot appearing partially in the project area and dredge spoils spread along the west side of the unnamed tributary to Salem Branch (Map 3). A small farm structure in the southeast end of the project area has been razed and previously idle fields on either side of it are now cropped.
1980	Commercial development is underway on the north side of STH 50, west of 250th Avenue (Exhibit F, Map 1). A smaller disturbance, possibly a construction staging area, is present nearer the STH 75 intersection, partially within the project area. The area near the school, opposite 248th Avenue, now shows wetness signatures in the mowed area nearer the building and the depression just to the west is idle (Map 2). A dredge spoil berm now appears along the east side of the unnamed tributary to Salem Branch (Map 3), extending northward from the project area. Additional areas in the southeast part of the project area are farmed again.
1990	STH 50, and STH 75 at its intersection with STH 50, have been widened to 4-lane divided highways with grass medians (Exhibit E, Maps 1-3). Virtually the entire project area is idle, with new ditches at either end of the project area. In the western end (Map 1), the ditches are wet with wetland extending beyond the project area boundaries at several points. Buildings at the northeast corner of STH 50-STH 75 have been razed. Present-day drainage infrastructure, including a small drainageway leading to a pond near the northeast corner of this intersection, and the steep rip-rapped channel at the southeast corner, have been installed. Similarly, curb and gutter storm sewer is also present on the north side of STH 50 from the nearby shopping center east to at least 74th Place, as well as much of the same stretch on the south side of STH 50 (Maps 1 & 2). The constructed pond on the south side of STH 50, west of the Salem Branch tributary, appears larger and now abuts the project area (Map 3).
2000	New development has occurred on both sides of STH 50 from 256th Avenue to and including all but the southeast quadrant of the STH 50-STH 75/83 intersection (Exhibit D, Map 1). Sidewalks accompany this development, indicating the likelihood storm sewers were extended in kind. Paved access and parking were again expanded at the school, including within the project area (Map 2).
2005	A second access to the large shopping center between 250th Avenue and STH 75 (Exhibit C, Map 1) has been added from STH 75 at the north end of the project area, crossing the unnamed tributary to Hooker Lake. The access off STH 50 is re-configured to limit ingress/egress to west-bound traffic only. The entrance to the school opposite 248th Avenue (Map 2) is re-configured to the present-day alignment with accompanying sidewalk and storm sewer improvements resulting in the loss of wet signatures in that area that were noted on previous images. New buildings have been constructed at the northwest corner of STH 50 and 236th Avenue (Map 3) immediately east of the unnamed tributary to Salem Branch.
2010	Sidewalks have been added along 236th Avenue (Exhibit B, Map 3).
2016	A structure at the southeast corner of the STH 50-STH 75 intersection has been razed and a new walkway has been constructed in that area (Exhibit A, Map 1). The school parking lot has been expanded again (Map 2).

SEWRPC's sanitary sewer service area mapping (Exhibit 5, Maps 1 and 2) indicates the project area is in the planned sewer service areas for the Salem/Paddock Lake/Bristol area (Map 1) and the Village of Paddock Lake (Map 2). The maps indicate primary environmental corridor (PEC) extending to the edge of the southwest corner of the project area (Map 1) and crossing the project area on the east end (Map 3), just south of Paddock Lake. Finally, a secondary environmental corridor (SEC), which crosses the project area, is depicted along the tributary to the Salem Branch waterway.

The ADID wetland mapping (Exhibit 6, Maps 1 through 3) also indicates the two areas of PEC described above. Accordingly, the WWI-mapped S3/E2K wetland shown abutting the southwest end of the project area (Map 1) and the W0Hx wetland that abuts the southeastern portion (Map 3) are classified as ADID

wetlands. During the site investigation, both wetlands were delineated as extending slightly into the project area. The U.S. Environmental Protection Agency considers ADID wetlands unsuitable for the discharge of fill materials in accordance with Section 404 of the Clean Water Act. If the ADID wetland mapping is updated in the future, the wetlands shown on Exhibit 8 will be reflected.

The NRCS draft wetland inventory mapping was only available for the portions of the project area falling in Sections 3, 10, and 1 (Exhibit 7, Maps 1 through 3, respectively). Maps 1 and 2, covering most of the western half of the project area, identify small wetland areas on both sides of STH 50 near the western end, along the unnamed tributary to Hooker Lake, and in the depression just west of the school. These maps further indicate the remainder this part of the project area is comprised of roughly equal portions of upland, areas that were not inventoried (NI), and prior converted (PC) cropland. PC land is defined as wetland converted to cropland prior to December 1985, could produce a crop and did not meet farmed wetland hydrology. Map 3 illustrates only the far northeastern end of the project area, which is shown as upland.

Amount and Types of Wetlands in the Project Area

Eight wetland plant community areas (PCAs) were identified and inventoried within the project area (Exhibit 8, Maps 1 through 3). A list of vascular plant species observed during the field inspection was prepared for each PCA as well as plant community type(s), dominant plant species, disturbances, and any critical plant and animal species (Exhibit 9). The following table summarizes characteristics of each PCA:

PCA Number	Acreage	PCA Type(s)	Dominant Species	Critical Species
1	0.38	Constructed roadside ditches with shallow marsh and degraded fresh (wet) meadow	*Phalaris arundinacea*--Reed canary grass *Phragmites australis* subsp. *australis*--Giant reed grass *Typha angustifolia*--Narrow-leaved cat-tail	None
2	0.28	Constructed roadside ditches with shallow marsh and degraded fresh (wet) meadow	*Phalaris arundinacea*--Reed canary grass *Phragmites australis* subsp. *australis*--Giant reed grass *Typha angustifolia*--Narrow-leaved cat-tail	None
3	0.02	Constructed roadside ditches with atypical (mowed) wetland	*Agrostis gigantea*--Redtop grass	None
4	0.02	Degraded fresh (wet) meadow and shallow marsh associated with an unnamed tributary to Hooker Lake	*Impatiens capensis*--Jewelweed *Phragmites australis* subsp. *australis*--Giant reed grass	None
5	0.02	Degraded fresh (wet) meadow	*Phalaris arundinacea*--Reed canary grass	None
6	0.01	Degraded fresh (wet) meadow associated with an unnamed tributary to Salem Branch	*Agrostis gigantea*--Redtop grass *Phalaris arundinacea*--Reed canary grass	None
7	0.01	Degraded fresh (wet) meadow and shallow marsh	*Phalaris arundinacea*--Reed canary grass *Typha angustifolia*--Narrow-leaved cat-tail	None
8	0.04	Constructed roadside ditch with degraded fresh (wet) meadow	*Phalaris arundinacea*--Reed canary grass	None

Wetland/Upland Boundary Explanation

Twenty-one representative sample sites were identified in the project area. One hydrologic probe was taken to confirm the presence of hydric soils and wetland hydrology in an area with dominant hydrophytic vegetation. The Wetland Determination Data Forms, describing the findings at each sample site and probe site, are attached as Exhibit 10. The locations of the sample sites and probe site are shown on Exhibit 8 (Maps 1 and 3). The wetland boundaries were determined using breaks in topography, changes in vegetation composition, visual identification of wetland hydrology, and presence of hydric soils.

Disturbed and Problematic Areas Encountered

No "significantly disturbed" or "naturally problematic" areas, relative to wetland delineation parameters, were encountered during the field inspection.

Other Considerations

The nonagricultural performance standards set forth in Section NR 151.125 of the *Wisconsin Administrative Code* require establishment of a 75-foot impervious surface protective area to protect "highly susceptible" wetlands (fens, sedge meadows, ephemeral ponds, etc.). "Moderately susceptible" wetland types (USGS-mapped waterways and waterbodies, shrub-carr, floodplain forests, forested wetlands with early successional species, shallow marsh, and fresh (wet) meadow) should have a 50-foot impervious surface protective area. Degraded portions of wetlands with 90 percent or greater cover by non-native species (Reed canary grass, Narrow-leaved cattail, etc.) and farmed wetlands are considered "less susceptible," requiring establishment of a 10- to 30-foot setback depending on average width of the wetland. Stormwater management facilities which are designed, constructed, and maintained for conveyance or treatment purposes are not subject to protective area performance standards as indicated in the WDNR *Guidance for the Establishment of Protective Areas for Wetlands in Runoff Management Rules, Wisconsin Administrative Code NR 151*.

PCA numbers 1, 2, 3, and 8 consist of wetlands within constructed roadside ditches designed and maintained for stormwater management purpose, and are, therefore, exempt from these standards. PCA numbers 4 and 6 consist of wetlands that are associated with USGS-mapped waterways, which are considered moderately susceptible types that typically receive a 50-foot protective area setback. PCAs 5 and 7 are comprised of fresh (wet) meadow degraded by dominance of nuisance invasive species such as reed canary grass (*Phalaris arundinacea*). These less susceptible wetlands typically receive the 10- to 30-foot protective area depending upon their width.

The 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. It is suggested that WisDOT or their representative contact WDNR regarding approaches to meet the requirements. Finally, it is noted that no Federal or State regulatory jurisdiction determinations relative to any wetland permits or certifications are made under this report.

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CJJ/JLD/STH/mid
CA104-50 STH 50 Reconstruction WD Report (00254474).DOCX
490-1118

Exhibit 1. Topographic Map

Map 1 of 3
STH 50 Reconstruction
1300 feet West of 256th Avenue to
2000 feet East of 236th Avenue
WisDOT ID: 1310-04-00
Sections 1, 2, 3, 10, 11 and 12, T1N-R20E
Villages of Salem Lakes and Paddock Lake, Kenosha County

STH 50/83
256th Avenue
STH 75/83 Antioch Road
250th Avenue
Unnamed Tributary to Hooker Lake

Legend

- Project Area
- Surface Water
- Flow Direction

N

0 100 200
Feet

Contour Interval: 1 foot
Date of Contour Lines: 2010
NGVD 29

Source: SEWRPC
Date of Photography: 2015
CA#104-50

Exhibit 1. Topographic Map

Map 2 of 3
STH 50 Reconstruction
1300 feet West of 256th Avenue to
2000 feet East of 236th Avenue
WisDOT ID: 1310-04-00
Sections 1, 2, 3, 10, 11 and 12, T1N-R20E
Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

248th Avenue
246th Ave.
243rd Ave.
74th Pl.
STH 50/83
244th Avenue
242nd Avenue

Legend

- Project Area
- Surface Water
- Flow Direction

0 100 200
Feet

Contour Interval: 1 foot
Date of Contour Lines: 2010
NGVD 29

Source: SEWRPC
Date of Photography: 2015
CA#104-50

Exhibit 1. Topographic Map

Map 3 of 3
STH 50 Reconstruction
1300 feet West of 256th Avenue to
2000 feet East of 236th Avenue
WisDOT ID: 1310-04-00
Sections 1, 2, 3, 10, 11 and 12, T1N-R20E
Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

236th Avenue

STH 50/83

Unnamed Tributary to Salem Branch

W.S. 804.7

W.S. 786.3

W.S. 787.5

Legend

- Project Area
- Surface Water
- Flow Direction

N

0 100 200
Feet

Contour Interval: 1 foot
Date of Contour Lines: 2010
NGVD 29

Source: SEWRPC
Date of Photography: 2015
CA#104-50

Exhibit 2. WDNR Surface Water Data Viewer
Wisconsin Wetland Inventory Map

Map 1 of 3
STH 50 Reconstruction
1300 feet West of 256th Avenue to
2000 feet East of 236th Avenue
WisDOT ID: 1310-04-00
Sections 1, 2, 3, 10, 11 and 12, T1N-R20E
Villages of Salem Lakes and Paddock Lake, Kenosha County

BcA
E1Hf
OzaB
E2Hf
BcA
OzaB
OzaB
BcA
BcA
E2K
BcA
BcA
BcA
BcA
AtA
BcA
AtA
E2K
BcA
AtA
AtA
AtA
STH 50/83
AtA
T3K
AtA
E1K
BcA
E1K
AtA
$E2K
BcA
E1Hx
250th Avenue
RaA
BcA
S3/E2K
OzaB
S3/E2K
AtA
BlA
BlA
AtA
OzaB
AtA
T3K
AtA
OzaB2
AtA
T3K
BlA
BlA
AtA
256th Avenue
OzaB2
E2Kv
AtA
BlA
AtA
AtA
E2H
OzaB
OzaB
AtA
STH 75/83 Antioch Road
RaA
E1K
Unnamed Tributary to Hooker Lake
E1K
AtA
RaA

Legend
- Project Area
- Wetland
- Filled Areas ($E2K)
- Wetland Indicators
- NRCS Wetspots
- USGS Waterway

0 100 200
Feet
Source: USGS, WDNR
Date of Photography: 2015
CA#104-50

Exhibit 2. WDNR Surface Water Data Viewer
Wisconsin Wetland Inventory Map

Map 2 of 3
STH 50 Reconstruction
1300 feet West of 256th Avenue to
2000 feet East of 236th Avenue
WisDOT ID: 1310-04-00
Sections 1, 2, 3, 10, 11 and 12, T1N-R20E
Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

A3L
A1L
S3/E2K
AtA
OzaB
BcA
Wa

248th Avenue
246th Ave.
243rd Ave.
74th Pl.
STH 50/83
244th Avenue
242nd Avenue

Legend
- Project Area
- Wetland
- Wetland Indicators
- USGS Waterbody

N

0 100 200
Feet

Source: USGS, WDNR
Date of Photography: 2015
CA#104-50

Exhibit 2. WDNR Surface Water Data Viewer
Wisconsin Wetland Inventory Map

Map 3 of 3
STH 50 Reconstruction
1300 feet West of 256th Avenue to
2000 feet East of 236th Avenue
WisDOT ID: 1310-04-00
Sections 1, 2, 3, 10, 11 and 12, T1N-R20E
Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake
A1L
T3K
So
Unnamed Tributary to Salem Branch
236th Avenue
STH 50/83
S3/E2K
W0Hx
BIA
T3H
BcA
EtB
AzB

Project Area
Wetland
NRCS
USGS
USGS

N
0 100 200
Feet
Source: USGS, WDNR
Date of Photography: 2015
CA#104-50

Exhibit 3. Soils Map

Map 1 of 3
STH 50 Reconstruction
1300 feet West of 256th Avenue to
2000 feet East of 236th Avenue
WisDOT ID: 1310-04-00
Sections 1, 2, 3, 10, 11 and 12, T1N-R20E
Villages of Salem Lakes and Paddock Lake, Kenosha County

OzaB2
OzaB
BcA
AtA
MeB
BlA
RaA
OzaC2
MzeD3
OzaC
OzaD

STH 50/83
256th Avenue
STH 75/83 Antioch Road
250th Avenue
Unnamed Tributary to Hooker Lake

Legend

- Project Area
- Non Hydric
- Predominantly Hydric
- Predominantly Non Hydric

N

0 100 200
Feet

Source: SEWRPC
Date of Photography: 2015
CA#104-50

Exhibit 3. Soils and Floodplain Map

Map 2 of 3
STH 50 Reconstruction
1300 feet West of 256th Avenue to
2000 feet East of 236th Avenue
WisDOT ID: 1310-04-00
Sections 1, 2, 3, 10, 11 and 12, T1N-R20E
Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

OzaB
OzaC
AtA
BcA
OzaD
OzaB
OzaC2
OzaE
Wa
AtA
OzaB
OzaC2
OzaC
OzaB
OzaE
OzaD
OzaD

248th Avenue
246th Ave.
243rd Ave.
74th Pl.
STH 50/83
244th Avenue
242nd Avenue

Legend

- Project Area
- 100 Year Floodplain
- Hydric
- Non Hydric
- Predominantly Hydric
- Predominantly Non Hydric

N

0 100 200
Feet

Source: SEWRPC
Date of Photography: 2015
CA#104-50

Exhibit 3. Soils and Floodplain Map

Map 3 of 3
STH 50 Reconstruction
1300 feet West of 256th Avenue to
2000 feet East of 236th Avenue
WisDOT ID: 1310-04-00
Sections 1, 2, 3, 10, 11 and 12, T1N-R20E
Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake
W
OzaD
Lu
Unnamed Tributary to Storm Ditch
236th Avenue
OzaB2
HeB2
STH 50/83
BcA
AtA
OzaB2
BcA
EtB
OzaB2
OzaB
W
OzaB
OzaC
HeB2
So
Unnamed Tributary to Salem Branch
HeB2
OzaC2
AzB
AzB
FoB
BlA
W
BlA
OzaD
OzaC
OzaB

Legend

- Project Area
- 100 Year Floodplain
- Hydric
- Non Hydric
- Predominantly Hydric
- Predominantly Non Hydric

N

0 100 200
Feet

Source: SEWRPC
Date of Photography: 2015
CA#104-50

Exhibit 4A. 2016 Orthophotography

Map 1 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

STH 50/83

256th Avenue

STH 75/83 Antioch Road

Unnamed Tributary to Hooker Lake

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4A. 2016 Orthophotography

Map 2 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

248th Avenue

246th Ave.

243rd Ave.

74th Pl.

STH 50/83

244th Avenue

242nd Avenue

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4A. 2016 Orthophotography

Map 3 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

Unnamed Tributary to Salem Branch

236th Avenue

STH 50/83

Unnamed Tributary to Salem Branch

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4B. 2010 Orthophotography

Map 1 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

STH 50/83

256th Avenue

255th Avenue

STH 75/83 Antioch Road

Unnamed Tributary to Hooker Lake

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4B. 2010 Orthophotography

Map 2 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

248th Avenue

246th Ave.

243rd Ave.

74th Pl.

STH 50/83

244th Avenue

242nd Avenue

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4B. 2010 Orthophotography

Map 3 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

Unnamed Tributary to Salem Branch

236th Avenue

STH 50/83

Unnamed Tributary to Salem Branch

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4C. 2005 Orthophotography

Map 1 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

STH 50/83

256th Avenue

STH 75/83, Antioch Road

250th Avenue

Unnamed Tributary to Hooker Lake

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4C. 2005 Orthophotography

Map 2 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

248th Avenue

246th Ave.

243rd Ave.

74th Pl.

STH 50/83

244th Avenue

242nd Avenue

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4C. 2005 Orthophotography

Map 3 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

Unnamed Tributary to Salem Branch

236th Avenue

STH 50/83

Unnamed Tributary to Salem Branch

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4D. 2000 Orthophotography

Map 1 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

STH 50/83

256th Avenue

STH 75/83 Antioch Road

250th Avenue

Unnamed Tributary to Hooker Lake

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4D. 2000 Orthophotography

Map 2 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

248th Avenue

246th Ave.

243rd Ave.

74th Pl.

STH 50/83

244th Avenue

242nd Avenue

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

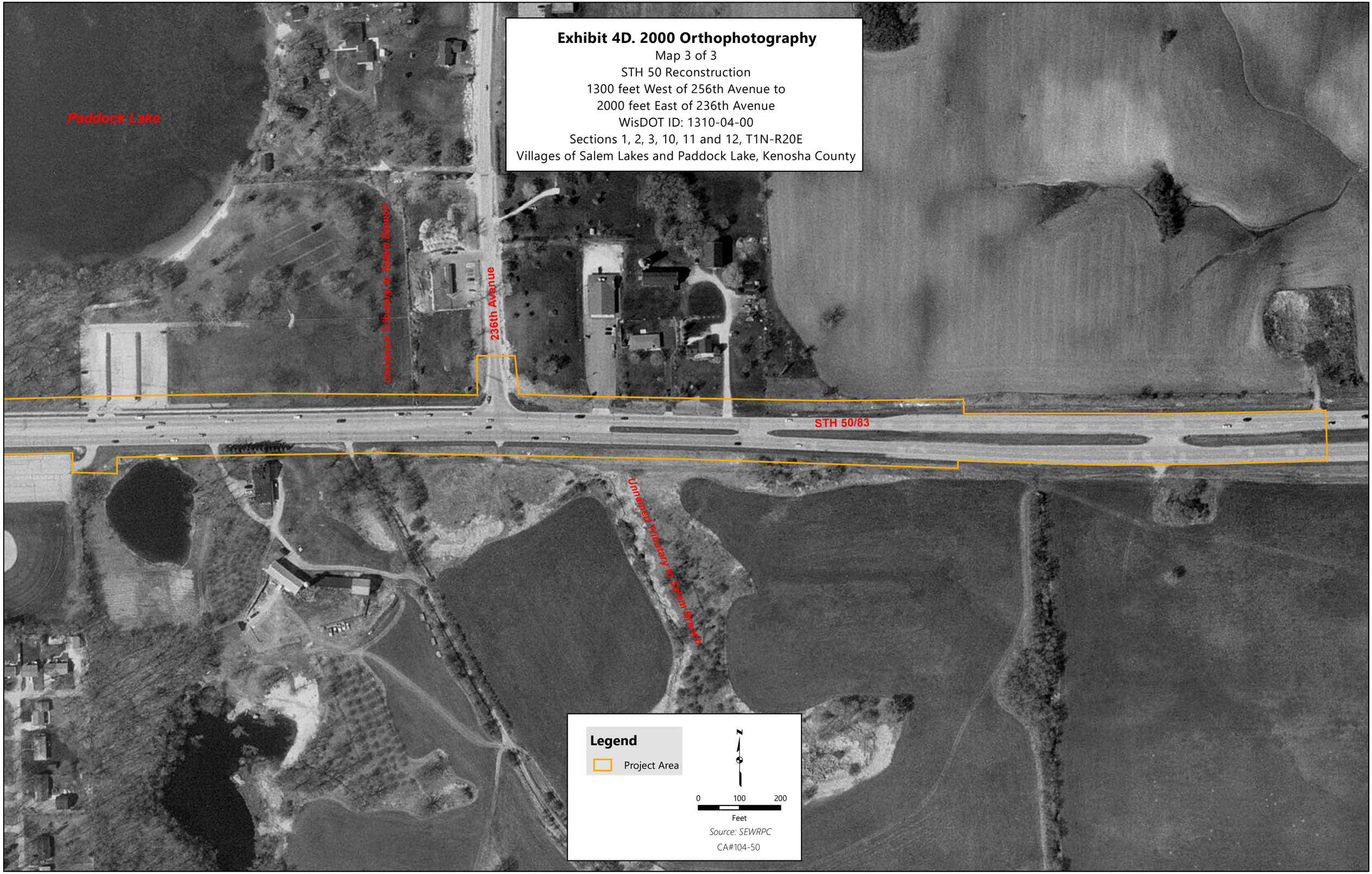


Exhibit 4D. 2000 Orthophotography

Map 3 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Exhibit 4E. 1990 Aerial Photograph

Map 1 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

STH 50/83

256th Avenue

STH 75/83 Antioch Road

250th Avenue

Unnamed Tributary to Hooker Lake

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4E. 1990 Aerial Photograph

Map 2 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

248th Avenue

246th Ave.

243rd Ave.

74th Pl.

STH 50/83

244th Avenue

242nd Avenue

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4E. 1990 Aerial Photograph

Map 3 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

Unnamed Tributary to Salem Branch

236th Avenue

STH 50/83

Unnamed Tributary to Salem Branch

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4F. 1980 Aerial Photograph

Map 1 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

STH 50/83

256th Avenue

STH 75/83 Antioch Road

250th Avenue

Unnamed Tributary to Hooker Lake

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4F. 1980 Aerial Photograph

Map 2 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

248th Avenue

246th Ave.

243rd Ave.

74th Pl.

STH 50/83

242nd Avenue

244th Avenue

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4F. 1980 Aerial Photograph

Map 3 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

Unnamed Tributary to Salem Branch

236th Avenue

STH 50/83

Unnamed Tributary to Salem Branch

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4G. 1970 Aerial Photograph

Map 1 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

STH 50/83

250th Avenue

256th Avenue

STH 7/83 Antioch Road

Unnamed Tributary to Hooker Lake

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4G. 1970 Aerial Photograph

Map 2 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

248th Avenue

246th Ave.

243rd Ave.

74th Pl.

STH 50/83

242nd Avenue

244th Avenue

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4G. 1970 Aerial Photograph

Map 3 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

Unnamed Tributary to Salem Branch

236th Avenue

STH 50/83

Unnamed Tributary to Salem Branch

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4H. 1963 Aerial Photograph

Map 1 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

STH 50/83

256th Avenue

STH 75/83 Antioch Road

250th Avenue

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4H. 1963 Aerial Photograph

Map 2 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

248th Avenue

246th Ave.

243rd Ave.

74th Pl.

STH 50/83

244th Avenue

242nd Avenue

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 4H. 1963 Aerial Photograph

Map 3 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

Unnamed Tributary to Salem Branch

236th Avenue

STH 50/83

Unnamed Tributary to Salem Branch

Legend

Project Area

N

0 100 200

Feet

Source: SEWRPC

CA#104-50

Exhibit 5. Sanitary Sewer Service Map

Map 1 of 2

STH 50 Reconstruction – WisDOT ID: 1310-04-00

1300 feet West of 256th Avenue to 2000 feet East of 236th Avenue

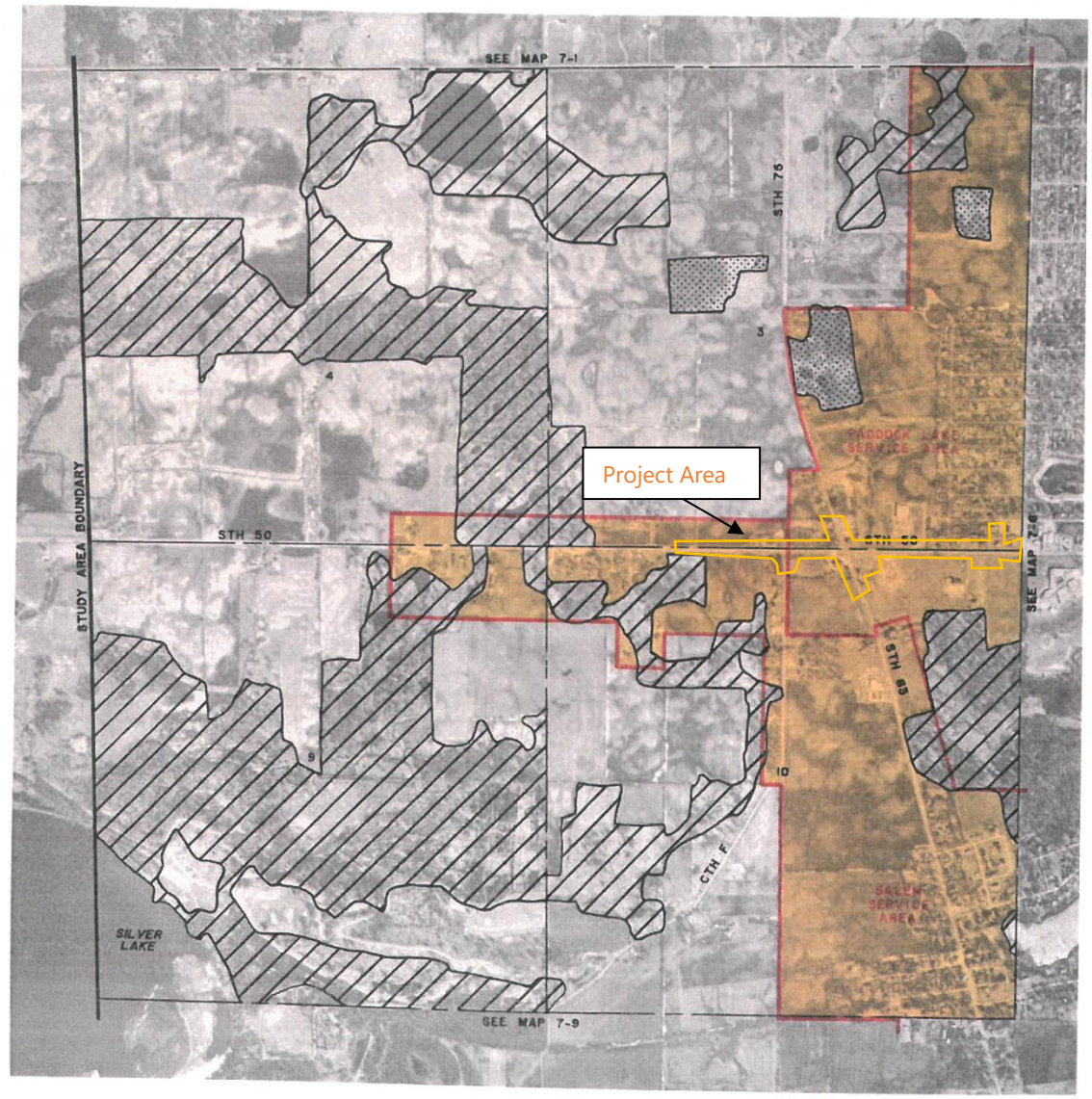
Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Map 7-5

ENVIRONMENTALLY SIGNIFICANT LANDS AND
PLANNED SANITARY SEWER SERVICE AREA FOR
THE SALEM/PADDOCK LAKE/BRISTOL AREA

U. S. Public Land Survey Sections 3, 4, 9, and 10
Township 1 North, Range 20 East



LEGEND

PRIMARY ENVIRONMENTAL CORRIDOR

ISOLATED NATURAL AREA

PLANNED SANITARY SEWER SERVICE AREA

GROSS SANITARY SEWER SERVICE AREA BOUNDARY

Source: SEWRPC.

Exhibit 5. Sanitary Sewer Service Map

Map 2 of 2

STH 50 Reconstruction – WisDOT ID: 1310-04-00

1300 feet West of 256th Avenue to 2000 feet East of 236th Avenue

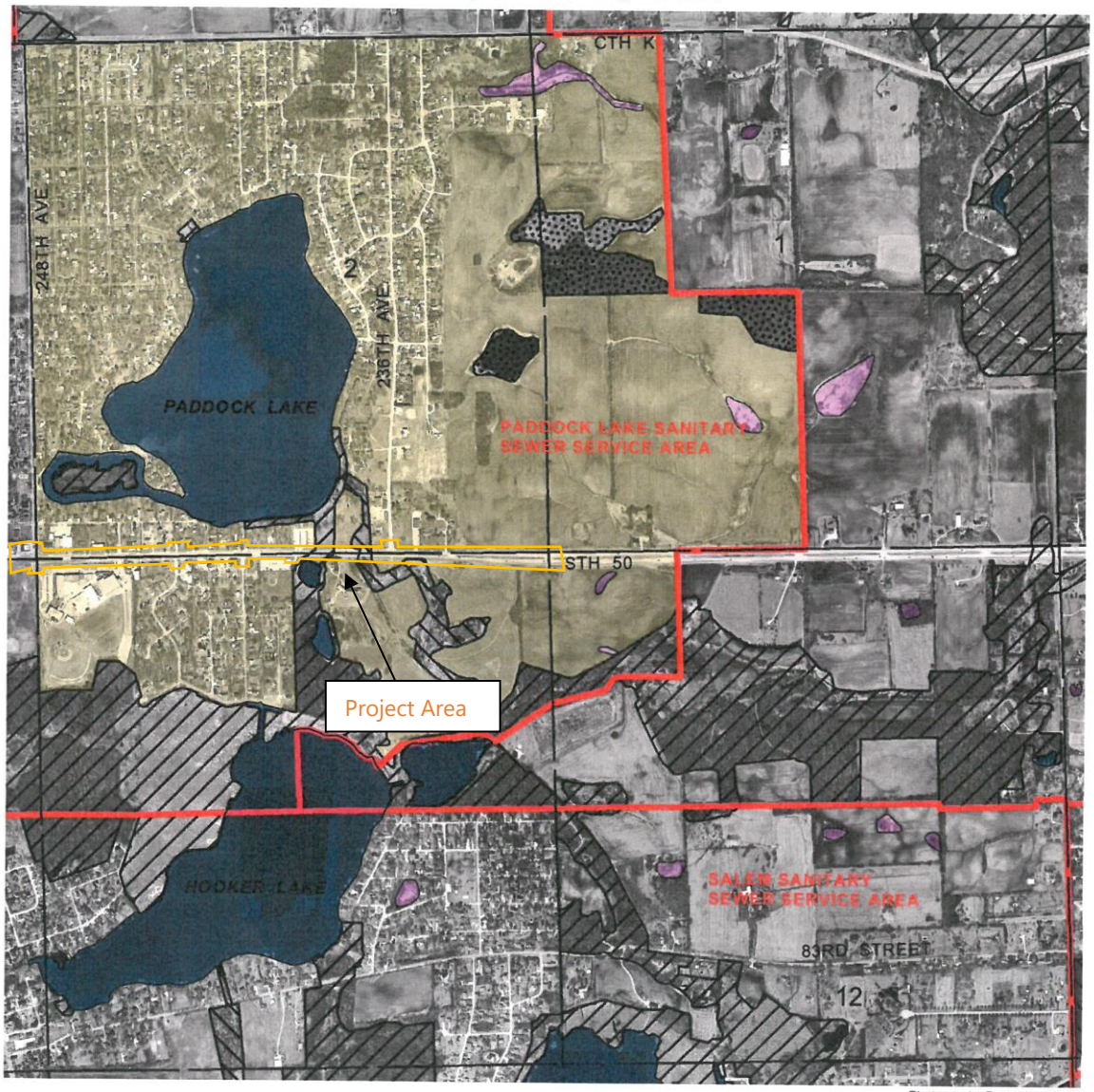
Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Map 2

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR VILLAGE OF PADDOCK LAKE

U.S. Public Land Survey Sections 1, 2, 11, and 12
Township 1 North, Range 20 East



Photography Date: April 2005

PRIMARY ENVIRONMENTAL CORRIDOR

SECONDARY ENVIRONMENTAL CORRIDOR

ISOLATED NATURAL RESOURCE AREA

WETLANDS AND SURFACE WATER AREAS LESS THAN FIVE ACRES IN SIZE

SURFACE WATER WITHIN ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS

GROSS SANITARY SEWER SERVICE AREA BOUNDARY

PLANNED SANITARY SEWER SERVICE AREA

GRAPHIC SCALE
0 400 800 1200 1600 FEET

Source: SEWRPC.

Exhibit 6. ADID Wetland Map

Map 1 of 3
STH 50 Reconstruction
1300 feet West of 256th Avenue to
2000 feet East of 236th Avenue
WisDOT ID: 1310-04-00
Sections 1, 2, 3, 10, 11 and 12, T1N-R20E
Villages of Salem Lakes and Paddock Lake, Kenosha County

E1Ha
E2K
T3K
E1K
E1K
$E2K
E1Hx
E2K
S3/E2K
S3/E2K
T3K
S3/E1H
S3/E1H
E2H
E1K
E2H
STH 50/83
STH 75/83 Antioch Road
256th Avenue
250th Avenue
Unnamed Tributary to Nookie Lake

Legend

- Project Area
- 2005 Wetlands
- ADID Wetlands
- ADID Lakes and Ponds
- ADID Natural Area Wetlands
- 2005 Primary Environmental Corridors

N

0 100 200
Feet

Source: SEWRPC
Date of Photography: 2015
CA#104-50

Exhibit 6. ADID Wetland Map

Map 2 of 3
STH 50 Reconstruction
1300 feet West of 256th Avenue to
2000 feet East of 236th Avenue
WisDOT ID: 1310-04-00
Sections 1, 2, 3, 10, 11 and 12, T1N-R20E
Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

A1L

A1L

248th Avenue

246th Ave.

243rd Ave.

74th Pl.

STH 50/83

244th Avenue

242nd Avenue

Legend

- Project Area
- 2005 Wetlands
- ADID Wetlands
- ADID Lakes and Ponds
- ADID Natural Area Wetlands
- 2005 Primary Environmental Corridors

N

0 100 200

Feet

Source: SEWRPC
Date of Photography: 2015
CA#104-50

Exhibit 6. ADID Wetland Map

Map 3 of 3
STH 50 Reconstruction
1300 feet West of 256th Avenue to
2000 feet East of 236th Avenue
WisDOT ID: 1310-04-00
Sections 1, 2, 3, 10, 11 and 12, T1N-R20E
Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake
T3K
A1L
Unnamed Tributary to Salem Branch
236th Avenue
STH 50/83
W0Hx
S3/E2K
S3/E3K
Unnamed Tributary to Salem Branch
W0Hx
W0Hx
W0Hx
T3H
W0Hx

Legend

- Project Area
- 2005 Wetlands
- ADID Wetlands
- ADID Lakes and Ponds
- ADID Natural Area Wetlands
- 2005 Primary Environmental Corridors

N

0 100 200
Feet

Source: SEWRPC
Date of Photography: 2015
CA#104-50

Exhibit 7. NRCS Draft Wetland Inventory Map

Map 1 of 3

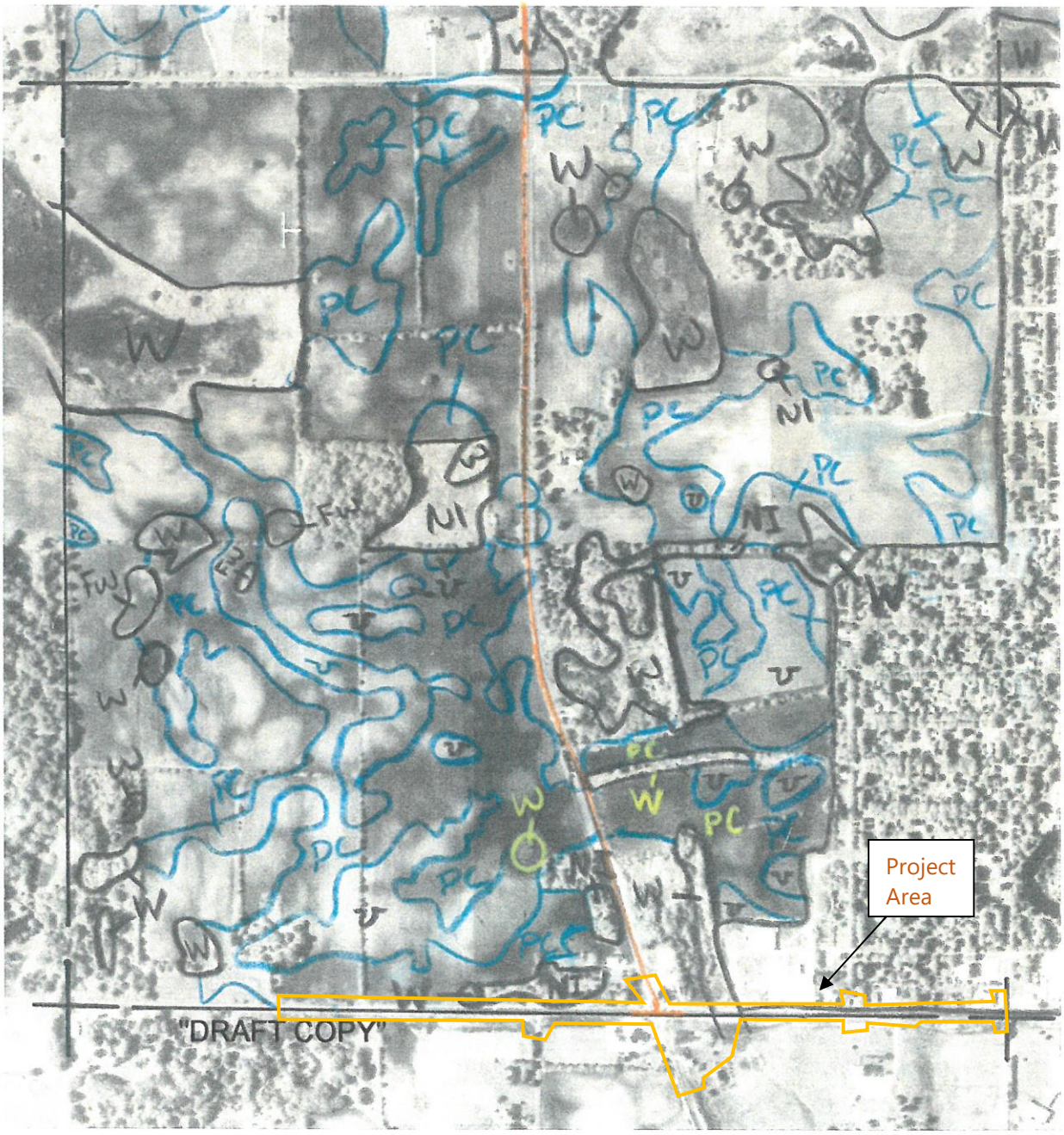
STH 50 Reconstruction

1300 feet West of 256th Avenue to 2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Section 3, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County



0120-3

Exhibit 7. NRCS Draft Wetland Inventory Map

Map 2 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to 2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Section 10, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Exhibit 7. NRCS Draft Wetland Inventory Map

Map 3 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to 2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Section 1, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

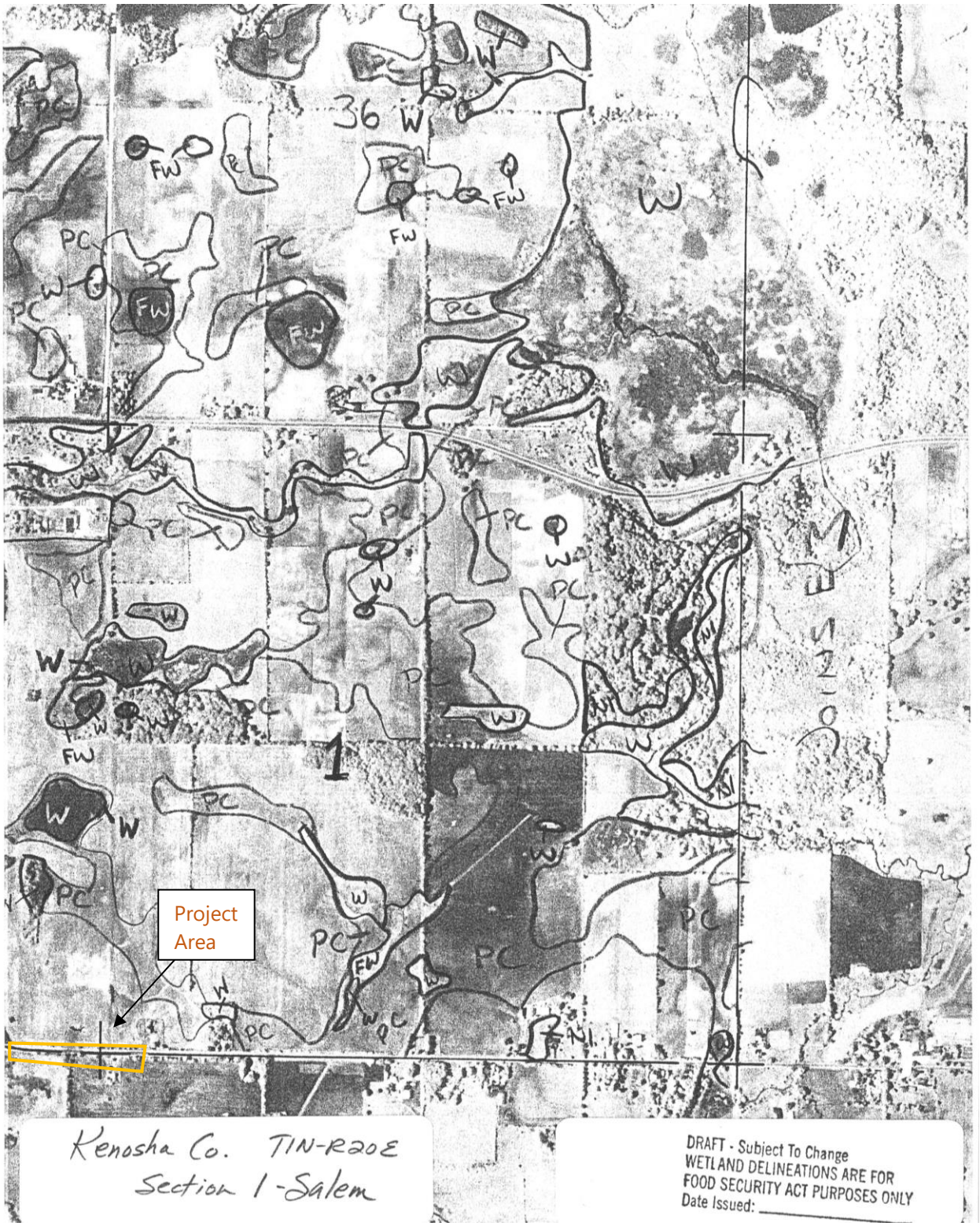


Exhibit 8. Wetland Delineation Map

Map 1 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Legend

- Project Area
- Primary Environmental Corridor
- Secondary Environmental Corridor
- Wetland Boundary Staked and GPS-located by SEWRPC on 6/17/20
- 2011 Wetland Boundary Delineation by SEWRPC still Valid as of 6/17/20
- Wetland
- 1 — Plant Community Number
- Sample Site Location
- 1 — Sample Site Number
- 1P — Hydrologic Probe Number
- Hydrologic Probe Site
- Surface Water
- Flow Direction

N

0 100 200

Feet

Source: SEWRPC

Date of Photography: 2015

CA#104-50

STH 50/83

256th Avenue

STH 75/83 Antioch Road

250th Avenue

Unnamed Tributary to Hooker Lake

Exhibit 8. Wetland Delineation Map

Map 2 of 3

STH 50 Reconstruction

1300 feet West of 256th Avenue to

2000 feet East of 236th Avenue

WisDOT ID: 1310-04-00

Sections 1, 2, 3, 10, 11 and 12, T1N-R20E

Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

248th Avenue

246th Ave.

243rd Ave.

74th Pl.

STH 50/83

244th Avenue

242nd Avenue

Legend

- Project Area
- Primary Environmental Corridor
- Secondary Environmental Corridor
- Wetland Boundary Staked and GPS-located by SEWRPC on 6/17/20
- 2011 Wetland Boundary Delineation by SEWRPC still Valid as of 6/17/20
- Wetland
- 1 — Plant Community Number
- Sample Site Location
- 1 — Sample Site Number
- 3P — Hydrologic Probe Number
- Hydrologic Probe Site
- Surface Water
- Flow Direction

N

0 100 200

Feet

Source: SEWRPC

Date of Photography: 2015

CA#104-50

Exhibit 8. Wetland Delineation Map

Map 3 of 3
STH 50 Reconstruction
1300 feet West of 256th Avenue to
2000 feet East of 236th Avenue
WisDOT ID: 1310-04-00
Sections 1, 2, 3, 10, 11 and 12, T1N-R20E
Villages of Salem Lakes and Paddock Lake, Kenosha County

Paddock Lake

Unnamed Tributary to Salem Branch

236th Avenue

STH 50/83

Unnamed Tributary to Salem Branch

Legend

- Project Area
- Primary Environmental Corridor
- Secondary Environmental Corridor
- Wetland Boundary Staked and GPS-located by SEWRPC on 6/17/20
- 2011 Wetland Boundary Delineation by SEWRPC still Valid as of 6/17/20
- Wetland
- 1 Plant Community Number
- Sample Site Location
- 1 Sample Site Number
- 3P Hydrologic Probe Number
- Hydrologic Probe Site
- Surface Water
- Flow Direction

N

0 100 200
Feet

Source: SEWRPC
Date of Photography: 2015
CA#104-50

Exhibit 9. Preliminary Vegetation Survey

STH 50 Reconstruction
1300 Feet West of 256th Avenue to 2000 Feet East of 236th Avenue
WisDOT ID: 1310-04-00

Date: June 17, 2020

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

Location: Villages of Salem Lakes and Paddock Lake in parts of U.S. Public Land Survey Sections 1, 2, 3, 10, 11, and 12, Township 1 North, Range 20 East, Kenosha County, Wisconsin.

Species List: Plant Community Area No. 1 – Native Species

Co-dominant species

Acer negundo--Boxelder
Alisma triviale--Large-flowered water plantain
Bidens sp.--Beggars-ticks
Calystegia sepium--Hedge bindweed
Cornus racemose--Gray dogwood
Eleocharis palustris--Red-root spike-rush
Equisetum arvense--Common horsetail
Erigeron annuus--Annual fleabane
Helianthus grosseserratus--Sawtooth sunflower
Juncus dudleyi--Dudley's rush
Monarda fistulosa--Wild bergamot
Parthenocissus quinquefolia--Virginia creeper
Salix interior--Sandbar willow
Scirpus atrovirens--Green bulrush
Solidago altissima--Tall goldenrod
Solidago gigantea--Giant goldenrod
Symphyotrichum lateriflorum--Calico aster
Symphyotrichum puniceum--Red-stemmed aster
Vitis riparia--Riverbank grape

NON-Native Species

Barbarea vulgaris--Yellow rocket
Cirsium arvense--Canada thistle
Lythrum salicaria--Purple loosestrife
***Phalaris arundinacea*--Reed canary grass**
***Phragmites australis* subsp. *australis*--Tall reed grass**
Poa pratensis--Kentucky bluegrass
Rumex crispus--Curly dock

PCA 1 cont. NON-Native Species

Trifolium hybridum--Alsike clover
***Typha angustifolia*--Narrow-leaved cat-tail**

Total number of plant species: 28
Number of alien, or non-native, plant species: 9 (32 percent)

This approximately 0.38-acre plant community area is part of a larger wetland complex and consists of constructed roadside ditches with shallow marsh and degraded fresh (wet) meadow. Disturbances to the plant community area include filling, mowing, 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. 2 – Native Species

Asclepias syriaca--Common milkweed
Calystegia sepium--Hedge bindweed
Mentha arvensis--Wild mint
Solidago altissima--Tall goldenrod
Symphyotrichum puniceum--Red-stemmed aster
Urtica dioica--Stinging nettle
Vitis riparia--Riverbank grape

NON-Native Species

Barbarea vulgaris--Yellow rocket
Cirsium arvense--Canada thistle
***Phalaris arundinacea*--Reed canary grass**
***Phragmites australis* subsp. *australis*--Tall reed grass**
Poa pratensis--Kentucky bluegrass
Rumex crispus--Curly dock
Solanum dulcamara--Bittersweet nightshade
***Typha angustifolia*--Narrow-leaved cat-tail**

Total number of plant species: 15
Number of alien, or non-native, plant species: 8 (53 percent)

This approximately 0.28-acre plant community area is part of a larger wetland complex and consists of constructed roadside ditches with shallow marsh and degraded fresh (wet) meadow. Disturbances to the plant community area include filling, mowing, 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. 3 – NON-Native Species

***Agrostis gigantea*--Redtop grass**
Phalaris arundinacea--Reed canary grass
Poa pratensis--Kentucky bluegrass
Schedonorus arundinaceus--Tall fescue
Typha angustifolia--Narrow-leaved cat-tail

PCA 3 cont.

Total number of plant species: 5
Number of alien, or non-native, plant species: 5 (100 percent)

This approximately 0.02-acre plant community area consists of a constructed roadside ditch with atypical (mowed) wetland. Disturbances to the plant community area include mowing 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 Species

Acer negundo--Boxelder
Galium aparine--Annual bedstraw
***Impatiens capensis*--Jewelweed**
Parthenocissus quinquefolia--Virginia creeper
Rhus typhina--Staghorn sumac

NON-Native Species

Arctium minus--Common burdock
Phalaris arundinacea--Reed canary grass
***Phragmites australis* subsp. *australis*--Tall reed grass**
Torilis japonica--Japanese hedge parsley

Total number of plant species: 9
Number of alien, or non-native, plant species: 4 (44 percent)

This approximately 0.02-acre plant community area is part of a larger wetland complex associated with an unnamed tributary to Hooker Lake and consists of degraded fresh (wet) meadow and shallow marsh. Disturbances to the plant community area include 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. 5 – Native Species

Asclepias syriaca--Common milkweed
Solidago gigantea--Giant goldenrod

NON-Native Species

Cirsium arvense--Canada thistle
***Phalaris arundinacea*--Reed canary grass**
Typha angustifolia--Narrow-leaved cat-tail

Total number of plant species: 5
Number of alien, or non-native, plant species: 3 (60 percent)

PCA 5 cont.

This approximately 0.02-acre plant community area is part of a larger wetland complex and consists of degraded fresh (wet) meadow. Disturbances to the plant community area include filling, pond construction, 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.

Plant Community Area No. 6 – NON-Native Species

***Agrostis gigantea*--Redtop grass**
***Phalaris arundinacea*--Reed canary grass**
Poa pratensis--Kentucky bluegrass
Rumex crispus--Curly dock
Schedonorus arundinaceus--Tall fescue

Total number of plant species: 5
Number of alien, or non-native, plant species: 5 (100 percent)

This approximately 0.01-acre plant community area is part of a larger wetland complex associated with an unnamed tributary to Salem Branch and consists of degraded fresh (wet) meadow. Disturbances to the plant community area include filling; mowing; siltation and sedimentation due to stormwater runoff from adjacent lands; water level changes due to past ditching and draining. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 7 – NON-Native Species

Bromus inermis--Smooth brome grass
Cirsium arvense--Canada thistle
***Phalaris arundinacea*--Reed canary grass**
Rumex crispus--Curly dock
***Typha angustifolia*--Narrow-leaved cat-tail**

Total number of plant species: 5
Number of alien, or non-native, plant species: 5 (100 percent)

This approximately 0.01-acre plant community area is part of a larger wetland complex and consists of degraded fresh (wet) meadow and shallow marsh. Disturbances to the plant community area include erosion due to a storm sewer discharge, 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. 8 – NON-Native Species

***Phalaris arundinacea*--Reed canary grass**
Poa pratensis--Kentucky bluegrass

Total number of plant species: 2
Number of alien, or non-native, plant species: 2 (100 percent)

PCA 8 cont.

This approximately 0.04-acre plant community area is part of a larger wetland complex and consists of degraded fresh (wet) meadow within a constructed roadside ditch. Disturbances to the plant community area include filling, mowing, 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.

SVY4599
CA104-50

Exhibit 10.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Salem Lakes/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 1
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 3, T1N-R20E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AtA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☐Yes	☒**No**		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**40**	☒	**FACW**
2. Schedonorus arundinaceus	**35**	☒	**FACU**
3. Poa pratensis	15	☐	FAC
4. Elymus repens	10	☐	FACU
5. Phragmites australis subsp. australis	10	☐	FACW
6. Monarda fistulosa	5	☐	FACU
7. Plantago rugelii	3	☐	FAC
8. Sonchus arvensis	3	☐	FACU
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	121	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

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

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					Silt loam	
2-12	10YR 3/1	100					Silt loam	with gravel
12+								Refusal: Gravel fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel fill

Depth (inches): 12

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ **No** ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ **No** ☒

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

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Salem Lakes/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 2
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 3, T1N-R20E
Landform (hillslope, terrace, etc.): constructed roadside ditch Local relief (concave, convex, none): linear concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AtA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**60**	☒	**FACW**
2. Phragmites australis subsp. australis	10	☐	FACW
3. Equisetum arvense	5	☐	FAC
4. Typha angustifolia	5	☐	OBL
5. Lythrum salicaria	3	☐	OBL
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	83	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

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

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	70	10YR 4/4	15	C	PL M	Clay loam	
	N 2.5/	5	2.5Y 6/1	10	D	M		
12-18	N 2.5/	90	10YR 4/6	10	C	PL M	Clay loam	
18-26	5GY 5/1	60	2.5Y 5/4	20	C	PL M	Clay loam	
	2.5Y 4/2	20						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): *

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 25.5

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

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

Remarks: The sample was collected from the side slope of the constructed roadside ditch. *The ditch channel contained approximately 4 inches of surface water.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Salem Lakes/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 3
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 3, T1N-R20E
Landform (hillslope, terrace, etc.): constructed roadside ditch Local relief (concave, convex, none): linear, concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AtA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**60**	☒	**FACW**
2. Phragmites australis subsp. australis	**40**	☒	**FACW**
3. Typha angustifolia	10	☐	OBL
4. Symphyotrichum lateriflorum	5	☐	FACW
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	115	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

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

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-13	10YR 4/1	75	10YR 4/4	15	C	PL M	Clay loam	
	2.5Y 2.5/1	10						
13+								Too wet to pull up.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 0.5

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Salem Lakes/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 4
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 3, T1N-R20E
Landform (hillslope, terrace, etc.): hillslope (road shoulder) Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AtA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes	☒**No**
Hydric Soils Present?	☐Yes	☒**No**			
Wetland Hydrology Present?	☐Yes	☒**No**			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Schedonorus arundinaceus	**50**	☒	**FACU**
2. Poa pratensis	**25**	☒	**FAC**
3. Phalaris arundinacea	10	☐	FACW
4. Cirsium arvense	5	☐	FACU
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	90	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

Remarks: (Include photo numbers here or on a separate sheet.) Recently mowed old field.

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					Silt loam	with gravel
6+								Refusal: Gravel fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel fill

Depth (inches): 6

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: The sample site is on a constructed roadway embankment with a thin soil layer above compacted gravel fill. No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ **No** ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ **No** ☒

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

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Salem Lakes/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 5
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NW Quarter, Section 10, T1N-R20E
Landform (hillslope, terrace, etc.): hillslope (road shoulder) Local relief (concave, convex, none): convex linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AtA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes	☒**No**
Hydric Soils Present?	☐Yes	☒**No**			
Wetland Hydrology Present?	☐Yes	☒**No**			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Poa pratensis	**40**	☒	**FAC**
2. Schedonorus arundinaceus	**40**	☒	**FACU**
3. Cirsium arvense	**25**	☒	**FACU**
4. Cichorum intybus	5	☐	FACU
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	110	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

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

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	100					Clay loam	with gravel fill
6-12	10YR 4/3	90	10YR 4/4	10	C	PL M	Clay loam	with gravel fill
12+								Refusal: Gravel fill and dry clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel fill and dry clay

Depth (inches): 12

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ **No** ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ **No** ☒

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

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Salem Lakes/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 6
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NW Quarter, Section 10, T1N-R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AtA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Phragmites australis subsp. australis	**100**	☒	**FACW**
2. Cirsium arvense	5	☐	FACU
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	105	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

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

SOIL

Sampling Point: 6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-9	2.5Y 2.5/1	100					Clay loam	
9-18	2.5Y 5/2	75	7.5YR 4/4	15	C	PL M	Clay loam	with gravel fill
			2.5Y 6/8	10	C	PL M		
18+								Refusal: Gravel fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel fill

Depth (inches): 18

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): *18

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

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

Remarks: *Water table appeared to be at or just below 18 inches, but compacted gravel fill at that point limited certainty.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Salem Lakes/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 7
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NW Quarter, Section 10, T1N-R20E
Landform (hillslope, terrace, etc.): hillslope (road shoulder) Local relief (concave, convex, none): linear
Slope (%): 1-3% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Blount silt loam (BlA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes	☒**No**
Hydric Soils Present?	☒**Yes**	☐No			
Wetland Hydrology Present?	☐Yes	☒**No**			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Poa pratensis	**40**	☒	**FAC**
2. Schedonorus arundinaceus	**35**	☒	**FACU**
3. Daucus carota	5	☐	FACW
4. Plantago lanceolata	3	☐	FACU
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	83	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

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

SOIL

Sampling Point: 7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	90	10YR 5/2	7	D	M	Silt loam	with gravel
			10YR 4/4	3	C	PL M		
10-15	10YR 5/2	80	10YR 5/6	20	C	PL M	Clay loam	with gravel
15+								Refusal: Gravel fill and dry soil

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel fill and dry soils

Depth (inches): 15

Hydric Soil Present? **Yes** ☒ No ☐

Remarks: Had the investigation not been limited to a depth of 15 inches, the site would most likely have also met the depleted matrix (F3) and depleted below dark surface (A11) indicators.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ **No** ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ **No** ☒

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

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Salem Lakes/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 8
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NW Quarter, Section 10, T1N-R20E
Landform (hillslope, terrace, etc.): constructed roadside ditch Local relief (concave, convex, none): linear, concave
Slope (%): 1-3% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Blount silt loam (BlA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**60**	☒	**FACW**
2. Poa pratensis	10	☐	FAC
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	70	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

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

SOIL

Sampling Point: 8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5Y 2.5/1	95	10YR 4/4	5	C	PL M	Silt loam	
5-11	10YR 5/2	50	10YR 4/6	15	C	PL M	Clay loam	
	10YR 5/1	35						
11+								Refusal: Gravel fill and hard clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel fill and hard clay

Depth (inches): 11

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ **No** ☒ Depth (inches): _____

Wetland Hydrology Present? **Yes** ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Salem Lakes/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 9
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NW Quarter, Section 10, T1N-R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 1-3% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Blount silt loam (BlA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes	☒**No**
Hydric Soils Present?	☒**Yes**	☐No			
Wetland Hydrology Present?	☐Yes	☒**No**			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**55**	☒	**FACW**
2. Poa pratensis	**25**	☒	**FAC**
3. Asclepias syriaca	10	☐	FACU
4. Cirsium arvense	5	☐	FACU
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

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

SOIL

Sampling Point: 9

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/1	100					Silt loam	
5-12	10YR 2/1	90	10YR 4/4	10	C	PL M	Clay loam	
12-15	2.5Y 5/2	60	10YR 4/6	15	C	PL M	Clay loam	
	7.5YR 5/2	25						
15+								Refusal: Rocky hard clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rocky hard clay

Depth (inches): 15

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ **No** ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ **No** ☒

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

Remarks: Only one secondary wetland hydrology indicator observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Paddock Lake/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 10
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NE Quarter, Section 10, T1N-R20E
Landform (hillslope, terrace, etc.): constructed roadside ditch Local relief (concave, convex, none): linear, concave
Slope (%): 2-6% Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Markham silt loam (MeB) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. ____	____	☐	____
2. ____	____	☐	____
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. ____	____	☐	____
2. ____	____	☐	____
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Agrostis gigantea	**50**	☒	**FACW**
2. Schedonorus arundinaceus	10	☐	FACU
3. Phalaris arundiancea	5	☐	FACW
4. ____	____	☐	____
5. ____	____	☐	____
6. ____	____	☐	____
7. ____	____	☐	____
8. ____	____	☐	____
9. ____	____	☐	____
10. ____	____	☐	____
	65	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. ____	____	☐	____
2. ____	____	☐	____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

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

SOIL

Sampling Point: 10

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100					Silt loam	
2-11	10YR 5/2	80	10YR 4/6	20	C	PL M	Clay loam	
11-15	2.5Y 5/2	70	10GY 6/1	15	D	M	Clay loam	
			2.5Y 5/6	15	C	PL M		
15-28	2.5Y 4/1	60	2.5Y 5/6	10	C	PL M	Clay loam	
	5Y 5/3	15	10GY 6/1	15	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

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

Remarks: The saturation (A3) indicator does not apply since it could not be confirmed with a water table below.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Paddock Lake/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 11
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NE Quarter, Section 10, T1N-R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 2-6% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Markham silt loam (MeB) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes	☒**No**
Hydric Soils Present?	☒**Yes**	☐No			
Wetland Hydrology Present?	☐Yes	☒**No**			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Poa pratensis	**60**	☒	**FAC**
2. Lolium perenne	**30**	☒	**FACU**
3. Schedonorus arundinaceus	10	☐	FACU
4. _____	_____	☐	_____
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

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

SOIL

Sampling Point: 11

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-15	10YR 3/1	85	7.5YR 3/4	10	C	PL M	Silt loam	
			10YR 4/4	5	C	PL M		
15-23	10YR 5/3	70	10YR 5/6	20	C	PL M	Clay loam	
	10YR 3/1	10						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ **No** ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ **No** ☒

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

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Paddock Lake/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 12
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NE Quarter, Section 10, T1N-R20E
Landform (hillslope, terrace, etc.): drainageway Local relief (concave, convex, none): linear, concave
Slope (%): 6-12% Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Ozaukee silt loam (OzaC2) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is wetter than normal. The drainageway "upstream" of the sample site is a steep, rip-rap-lined channel, shown in Exhibit 11, Photos 20 and 21. While this drainage way had hydrophytic vegetation (Phragmites australis subsp. australis was dominant), wetland hydrology and hydric soils were not present at hydrologic probe site 1 (see Exhibit 8, Map 1).

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. ____	____	☐	____
2. ____	____	☐	____
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. ____	____	☐	____
2. ____	____	☐	____
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Phragmites australis subsp. australis	**70**	☒	**FACW**
2. Impatiens capensis	**30**	☒	**FACW**
3. Phalaris arundinacea	20	☐	FACW
4. Parthenocissus quinquefolia	3	☐	FACU
5. ____	____	☐	____
6. ____	____	☐	____
7. ____	____	☐	____
8. ____	____	☐	____
9. ____	____	☐	____
10. ____	____	☐	____
	123	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. ____	____	☐	____
2. ____	____	☐	____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

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

SOIL

Sampling Point: 12

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks: Soils inundated with 8 inches of water, hydric by definition - Criteria 3.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? **Yes** ☒ No ☐ Depth (inches): 8

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

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

Wetland Hydrology Present? **Yes** ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Paddock Lake/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 13
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NE Quarter, Section 10, T1N-R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 6-12% Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Ozaukee silt loam (OzaC2) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes	☒**No**
Hydric Soils Present?	☐Yes	☒**No**			
Wetland Hydrology Present?	☐Yes	☒**No**			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	**30**	☒	**FAC**
2. ____	____	☐	____
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
	30	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Rhus typhina	**25**	☒	**NI (UPL)**
2. ____	____	☐	____
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
	25	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**30**	☒	**FACW**
2. Torilis japonica	**25**	☒	**NI (UPL)**
3. Arctium minus	20	☐	FACU
4. Phragmites australis subsp. australis	15	☐	FACW
5. Impatiens capensis	8	☐	FACW
6. Parthenocissus quinquefolia	5	☐	FACU
7. Galium aparine	2	☐	FACU
8. ____	____	☐	____
9. ____	____	☐	____
10. ____	____	☐	____
	105	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. Parthenocissus quinquefolia	3	☐	FACU
2. ____	____	☐	____
	3	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

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

SOIL

Sampling Point: 13

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/2	40					Loam	with gravel fill
	10YR 5/3	30						
	10YR 4/3	30						
10-15	10YR 6/2	85	7.5YR 4/6	15	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 13

Wetland Hydrology Present? Yes ☐ **No** ☒

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

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Paddock Lake/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 14
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NE Quarter, Section 11, T1N-R20E
Landform (hillslope, terrace, etc.): hillslope (road shoulder) Local relief (concave, convex, none): linear
Slope (%): 12-20% Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Ozaukee silt loam (OzaD) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes	☒**No**
Hydric Soils Present?	☐Yes	☒**No**			
Wetland Hydrology Present?	☐Yes	☒**No**			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. ____	____	☐	____
2. ____	____	☐	____
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. ____	____	☐	____
2. ____	____	☐	____
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**50**	☒	**FACW**
2. Schedonorus arundinaceus	**25**	☒	**FACU**
3. Elymus repens	15	☐	FACU
4. Cirsium arvense	10	☐	FACU
5. Asclepias syriaca	5	☐	FACU
6. Parthenocissus quinquefolia	3	☐	FACU
7. ____	____	☐	____
8. ____	____	☐	____
9. ____	____	☐	____
10. ____	____	☐	____
	108	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. ____	____	☐	____
2. ____	____	☐	____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

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

SOIL

Sampling Point: 14

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100					Silt loam	with gravel
10-12	10YR 3/2	85	10YR 4/6	15	C	PL M	Silty clay loam	
12+								Refusal: Gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 12

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ **No** ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ **No** ☒

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

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Paddock Lake/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 15
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NE Quarter, Section 11, T1N-R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 12-20% Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Ozaukee silt loam (OzaD) NWI classification: W0Hx
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. ____	____	☐	____
2. ____	____	☐	____
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. ____	____	☐	____
2. ____	____	☐	____
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**100**	☒	**FACW**
2. Asclepias syriaca	10	☐	FACU
3. Cirsium arvense	5	☐	FACU
4. Solidago gigantea	3	☐	FACW
5. ____	____	☐	____
6. ____	____	☐	____
7. ____	____	☐	____
8. ____	____	☐	____
9. ____	____	☐	____
10. ____	____	☐	____
	118	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. ____	____	☐	____
2. ____	____	☐	____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

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

SOIL

Sampling Point: 15

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/1	90	10YR 3/6	10	C	PL M	Clay loam	
9-15	10YR 2/1	65	10YR 5/6	5	C	PL M	Clay loam	
	5GY 6/1	20	7.5YR 3/4	10	C	PL M		
15-18	2.5Y 2.5/1	80	10YR 3/6	15	C	PL M	Clay loam	
			5GY 5/1	5	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ **No** ☒ Depth (inches): _____

Wetland Hydrology Present? **Yes** ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Paddock Lake/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 16
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 2, T1N-R20E
Landform (hillslope, terrace, etc.): drainageway Local relief (concave, convex, none): linear, concave
Slope (%): 2-6% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Hebron loam (HeB2) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**50**	☒	**FACW**
2. Agrostis gigantea	**40**	☒	**FACW**
3. Schedonorus arundinaceus	10	☐	FACU
4. Rumex crispus	3	☐	FAC
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	103	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

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

SOIL

Sampling Point: 16

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-13	2.5Y 3/1	80	10YR 3/6	20	C	PL M	Silty clay loam	
13-21	2.5Y 5/2	60	10YR 4/6	25	C	PL M	Clay loam	
	2.5Y 3/1	15						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 16

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Paddock Lake/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 17
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 2, T1N-R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 2-6% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Hebron loam (HeB2) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes	☒**No**
Hydric Soils Present?	☒**Yes**	☐No			
Wetland Hydrology Present?	☐Yes	☒**No**			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Glechoma hederacea	**30**	☒	**FACU**
2. Poa pratensis	**25**	☒	**FAC**
3. Schedonorus arundinaceus	**25**	☒	**FACU**
4. Trifolium pratense	10	☐	FACU
5. Taraxacum officinale	8	☐	FACU
6. Cerastium fontanum	7	☐	FACU
7. Plantago major	3	☐	FAC
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	108	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

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

SOIL

Sampling Point: 17

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	100					Silt loam	
3-18	10YR 2/1	90	10YR 3/6	10	C	PL M	Clay loam	
18-22	10YR 4/2	70	10YR 5/6	10	C	PL M	Clay loam	
	10YR 3/2	20						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 18

Wetland Hydrology Present? Yes ☐ **No** ☒

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

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Paddock Lake/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 18
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NE Quarter, Section 11, T1N-R20E
Landform (hillslope, terrace, etc.): hillslope (road shoulder) Local relief (concave, convex, none): linear
Slope (%): 2-6% Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Ozaukee silt loam (OzaB2) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes	☒**No**
Hydric Soils Present?	☐Yes	☒**No**			
Wetland Hydrology Present?	☐Yes	☒**No**			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. ____	____	☐	____
2. ____	____	☐	____
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. ____	____	☐	____
2. ____	____	☐	____
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Bromus inermis	**90**	☒	**UPL**
2. Cirsium arvense	10	☐	FACU
3. Sonchus arvensis	8	☐	FACU
4. Solidago altissima	5	☐	FACU
5. ____	____	☐	____
6. ____	____	☐	____
7. ____	____	☐	____
8. ____	____	☐	____
9. ____	____	☐	____
10. ____	____	☐	____
	113	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. ____	____	☐	____
2. ____	____	☐	____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

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

SOIL

Sampling Point: 18

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	100					Silt loam	with gravel
12+								Refusal: Gravel fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel fill

Depth (inches): 12

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ **No** ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ **No** ☒

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

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Paddock Lake/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 19
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NE Quarter, Section 11, T1N-R20E
Landform (hillslope, terrace, etc.): drainageway Local relief (concave, convex, none): linear, concave
Slope (%): 2-6% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ozaukee silt loam (OzaB2) NWI classification: S3/E2K
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐No
Hydric Soils Present?	☒**Yes**	☐No			
Wetland Hydrology Present?	☒**Yes**	☐No			

Remarks: 90-day antecedent precipitation is wetter than normal. Storm sewer discharge just above this sample site.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**60**	☒	**FACW**
2. Typha angustifolia	**60**	☒	**OBL**
3. Bromus inermis	10	☐	UPL
4. Cirsium arvense	5	☐	FACU
5. Rumex crispus	5	☐	FAC
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	140	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Shallow marsh and degraded fresh (wet) meadow.

SOIL

Sampling Point: 19

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks: Soils inundated with 7 inches of water, hydric by definition - Criteria 3.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? **Yes** ☒ No ☐ Depth (inches): 7

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

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

Wetland Hydrology Present? **Yes** ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Paddock Lake/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 20
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter Section 2, T1N-R20E
Landform (hillslope, terrace, etc.): constructed roadside ditch Local relief (concave, convex, none): linear, concave
Slope (%): 2-6% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ozaukee silt loam (OzaB) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**100**	☒	**FACW**
2. Poa pratensis	15	☐	FAC
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	115	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

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

SOIL

Sampling Point: 20

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5Y 4/1	85	7.5YR 4/6	15	C	PL M	Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

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

Remarks: Saturation (A3) indicator does not apply since a water table was not observed below.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: STH 50 Reconstruction City/County: Village of Paddock Lake/Kenosha County Sampling Date: 6-17-2020
Applicant/Owner: WisDOT ID: 1310-04-00 State: WI Sampling Point: 21
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 2, T1N-R20E
Landform (hillslope, terrace, etc.): hillslope (road shoulder) Local relief (concave, convex, none): linear
Slope (%): 2-6% Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Ozaukee silt loam (OzaB) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes	☒**No**
Hydric Soils Present?	☒**Yes**	☐No			
Wetland Hydrology Present?	☐Yes	☒**No**			

Remarks: 90-day antecedent precipitation is wetter than normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. ____	____	☐	____
2. ____	____	☐	____
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. ____	____	☐	____
2. ____	____	☐	____
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Poa pratensis	**60**	☒	**FAC**
2. Hemerocallis fulva	**25**	☒	**UPL**
3. Schedonorus arundinaceus	20	☐	FACU
4. Cirsium arvense	5	☐	FACU
5. ____	____	☐	____
6. ____	____	☐	____
7. ____	____	☐	____
8. ____	____	☐	____
9. ____	____	☐	____
10. ____	____	☐	____
	110	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. ____	____	☐	____
2. ____	____	☐	____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

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

SOIL

Sampling Point: 21

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100					Silt loam	
5-10	10YR 3/1	90	10YR 4/6	10	C	PL M	Silty clay loam	
10-14	10YR 4/2	80	10YR 4/6	20	C	PL M	Clay loam	
14+								Refusal: Gravel fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel fill

Depth (inches): 14

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ **No** ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ **No** ☒

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

Remarks: No wetland hydrology indicators observed.

Exhibit 11. Site Photos

STH 50 Reconstruction – WisDOT ID: 1310-04-00
1300 feet West of 256th Avenue to 2000 feet East of 236th Avenue
Sections 1, 2, 3, 10, 11, and 12, T1N-R20E
Villages of Salem Lakes and Paddock Lake, Kenosha County

Photo 1. West view, upland sample site 1, old field (right shovel), and wetland sample site 2, PCA 1, degraded fresh (wet) meadow within a constructed roadside ditch (left shovel).

Photo 2. East view, wetland sample site 3, PCA 1, shallow marsh in a constructed roadside ditch (left shovel, as indicated by red arrow), and upland sample site 4, recently mowed old field (right shovel).

Photo 3. Upland sample site 5, mowed old field (front shovel), and wetland sample site 6, PCA 2, shallow marsh (rear shovel).

Photo 4. South view, upland sample sites 7, mowed old field, and 9, old field (front and rear shovels, respectively). Wetland sample site 8, PCA 2, degraded fresh (wet) meadow within a narrow, constructed ditch is at the soil probe in between, indicated with the red arrow).

Photo 5. NW view, wetland sample site 10, PCA 3, atypical (mowed) wetland in a constructed roadside ditch (rear shovel), and upland sample site 11, mowed lawn (front shovel).

Photo 6. Wetland sample site 12, PCA 4, fresh (wet) meadow along a drainageway channel (front), and upland sample site 13, undifferentiated hardwoods (rear). Sample sites are just "downstream" of the steep rip-rapped drainageway, shown below in Photos 20 and 21.

Photo 7. South view, upland sample site 14, old field (front shovel), and wetland sample site 15, PCA 5, degraded fresh (wet) meadow along the edge of a constructed pond (rear shovel, indicated by red arrow).

Photo 8. North view, wetland sample site 16, PCA 6, degraded fresh (wet) meadow associated with a drainageway connected to Paddock Lake (rear), and upland sample site 17, mowed lawn (front).

Photo 9. South view, upland sample site 18, old field (front), and wetland sample site 19, PCA 7, shallow marsh and degraded fresh (wet) meadow (rear). A storm sewer culvert discharges in between these sample sites.

Photo 10. West view, wetland sample site 20, PCA 8, degraded fresh (wet) meadow in a constructed roadside ditch (right), and upland sample site 21, mowed old field (left).

Photo 11. West view, north side of STH 50 – staked wet ditch, PCA 1, partially mowed.

Photo 12. West view, staked wetland, PCA 2, including sample site 6. Image shows mowed fresh (wet) meadow with shallow marsh starting at the toe of the roadway embankment.

Photo 13. East view, staked narrow wet ditch portion of PCA 2, near sample site 8.

Photo 14. East view, staked portion of wetland PCA 2, at the SW corner of STH 50 and 256th Avenue.

Photo 15. South view of a constructed wet ditch, PCA 3, near the SE corner of STH 50 and 256th Avenue.

Photo 16. West view of a constructed wet ditch, PCA 3, including sample site 10, at the SE corner of STH 50 and 256th Avenue.

Photo 17. East view with storm sewer inlet at the SE corner of STH 50 and 256th Avenue.

Photo 18. South view of upland along the east side of STH 75/83 with the STH 50 intersection in the background.

Photo 19. East view of a dry drainageway that starts near the NE corner of STH 50 and STH 75/83. The "receiving" WWI-mapped E1Hx wetland in the background lies just outside the project area.

Photo 20. East view, top of steep rip-rap-lined channel near the SE corner of STH 50 and STH 75/83.

Photo 21. West/upstream view of steep rip-rap-lined drainageway channel near sample site 12, PCA 4.

Photo 22. NW view of a dry ditch along the west side of STH 75/83 at the south end of the project area.

Photo 23. East view of upland at the NE corner of STH 50 and 250th Avenue.

Photo 24. South view of school entry opposite 248th Avenue. The mapped depression on the right is well-drained via storm sewer.

Photo 25. West view, wetland PCA 5, including sample site 15. Note the substantial rise in elevation. between the pond and STH 50 in the upper right.

Photo 26. NE view of staked wetland, PCA 6, including sample site 16. The drainageway in the background connects to Paddock Lake. The photo was taken near the culvert that flows underneath STH 50

Photo 27. West view, south side of STH 50, with storm sewer inlet near sample sites 18 and 19.

Photo 28. South view toward staked wetland, PCA 7, including sample site 19.

Photo 29. Smaller storm sewer discharge about 525 feet east of sample site 19. The beginning of a small drainageway wetland was staked at this location.

Photo 30. East view of STH 50 median near the east end of the project area. Most of the median is dry, and the wet spot shown in this image is 'too small to delineate'.