300-3000 ITEM 3

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

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

September 8, 2020

Mr. Andrew T. Struck Director Ozaukee County Planning & Parks Department P.O. Box 994 Port Washington, WI 53074

Re: SEWRPC No. CA-209-150

Dear Mr. Struck:

This will respond to your email message of May 17, 2019, requesting that the Commission staff conduct a field inspection of a Milwaukee Metropolitan Sewerage District (MMSD) Greenseams parcel (Tax Key Number 140201500100) where a Little Menomonee River corridor ecosystem restoration project is proposed. The parcel is located northwest of the intersection of West Mequon Road (STH 167) and North Swan Road in parts of the Southeast one-quarter of U.S. Public Land Survey Section 20, Township 9 North, Range 21 East, City of Mequon, Ozaukee County, Wisconsin. The purpose of the field inspection was to identify and stake the boundaries of any wetland contained on the subject property.

Following the receipt of your request, during discussions between you and the Commission staff, it was agreed that an inspection of the entire property was unnecessary. You indicated that restoration activities would be limited to the existing river corridor and lands west of the existing channel where a new river meander is proposed. Accordingly, Commission staff identified and staked the wetland boundaries within the project area on July 8 and 9, 2019. A copy of the wetland delineation report is attached for your reference. Should you have any questions regarding this information, please do not hesitate to contact Mr. Christopher J. Jors, Principal Specialist-Biologist (cjors@sewrpc.org or 262-953-3246).

Sincerely,

Kevin J. Muhs, PE, AICP **Executive Director**

KJM/TMS/CJJ/md #254575 - CA209-150 Little Menomonee River Corridor Ecosystem/Habitat Restoration Project Letter

Enclosure (#254930)

cc: Mr. Kevin Shafer, P.E., Milwaukee Metropolitan Sewerage District (w/enclosure) Mr. Ryan Pappas, Wisconsin Department of Natural Resources (w/enclosure by email) Ms. Kara Brooks, Wisconsin Department of Natural Resources (w/enclosure by email) Ms. April Marcangeli, U.S. Army Corps of Engineers (w/enclosure)





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> KENOSHA MILWAUKEE OZAUKEE RACINE WALWORTH WASHINGTON

WAUKESHA

Serving the Counties of:

Mr. Kevin Shafer, P.E. Executive Director Milwaukee Metropolitan Sewerage District 260 W. Seeboth Street Milwaukee, WI 53204-1446

Mr. Ryan Pappas Water Regulation & Zoning Specialist Wisconsin Department of Natural Resources <u>Ryan.Pappas@wisconsin.gov</u>

Ms. Kara Brooks Wetland Identification Specialist Wisconsin Department of Natural Resources <u>Kara.Brooks@wisconsin.gov</u>

Ms. April Marcangeli Environmental Protection Specialist U.S. Army Corps of Engineers 250 N. Sunnyslope Road, Suite 296 Brookfield, Wisconsin 53005

WETLAND DELINEATION REPORT

LITTLE MENOMONEE RIVER CORRIDOR ECOSYSTEM/HABITAT RESTORATION PROJECT

Milwaukee Metropolitan Sewerage District (MMSD) Greenseam Parcel

SE Quarter, Section 20, T9N, R21E CITY OF MEQUON, OZAUKEE COUNTY, WISCONSIN

Lead Investigator: Christopher J. Jors Principal Specialist-Biologist Southeastern Wisconsin Regional Planning Commission W239 N1812 Rockwood Drive P.O. Box 1607 Waukesha, WI 53187-1607 (262)547-6721 cjors@sewrpc.org

Report completed: July 27, 2020

WETLAND AND PRIMARY ENVIRONMENTAL CORRIDOR (PEC) DELINEATION REPORT OVERVIEW

(Based upon WDNR WETLAND Delineation Confirmation Request Check List)

INTRODUCTION

- Who requested the delineation Mr. Andrew T. Struck, Director, Ozaukee County Planning and Parks Department
- Why the delineation was undertaken Grant-funded river/ecosystem restoration on MMSD site
- Date the field work was completed July 8 & 9, 2019
- Who conducted field work Christopher Jors, Jennifer Dietl, and Shane Heyel
- Statement of Qualifications
- GIS Support Bradley Subotnik

METHODS

- Description of Methods
- Sources Reviewed
 - Ozaukee County Topographic Mapping Exhibit 1
 - Wisconsin Department of Natural Resources (WDNR) Surface Water Data Viewer Wisconsin Wetland Inventory (WWI) Mapping – Exhibit 2
 - Natural Resources Conservation Service (NRCS) Soil Survey and SEWRPC Floodplain Mapping Exhibit 3
 - SEWRPC Historical Aerial Photos Exhibits 4A to 4K (2015, 2010, 2007, 2005, 2000, 1995, 1990, 1980, 1970, 1963, and 1937)
 - SEWRPC Sanitary Sewer Service Area Mapping Exhibit 5
 - Advance Identification (ADID) Wetland Mapping **Not Applicable (N/A)**
 - NRCS Draft Wetland Inventory Map **Exhibit 6**
- National Agriculture Imagery Program (NAIP) & Farm Service Agency (FSA) Images N/A
- Description of any site specific agency guidance (site meetings, etc.) None

RESULTS AND DISCUSSION

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

LITERATURE CITED

Wetland Delineation Map – Exhibit 7

Vegetation Survey, Wetland Delineation Data Forms, and Site Photos

- Preliminary Vegetation Survey Exhibit 8
- Wetland Determination Data Forms Midwest Region Exhibit 9
- Site Photos Exhibit 10

INTRODUCTION

This wetland delineation report responds to May 17, 2019, email from Mr. Andrew T. Struck, Director, Ozaukee County Planning and Parks Department, requesting SEWRPC staff to identify the boundaries of any wetlands on a MMSD Greenseam Parcel where a Little Menomonee River corridor ecosystem restoration project is proposed. The parcel is located northwest of the intersection of West Mequon Road (STH 167) and North Swan Road in the Southeast one-quarter of U.S. Public Land Survey Section 20, Township 9 North, Range 21 East, City of Mequon, Ozaukee County, Wisconsin.

Following discussions between SEWRPC staff and Mr. Struck, it was agreed that the wetland delineation could be limited to only a portion of the property where restoration activities are proposed. This project area includes the river channel itself, dredge spoil berms on both sides of the channel, and lands west of the river corridor where a new meandering channel is proposed.

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 February 19, 2019; the UW-La Crosse Basic and Advanced Wetland Delineation Workshops on August 10-15, 2015; a Wisconsin Department 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 the Commission from 1992 to 1997 and from 2006 to the present conducting wetland delineations, primary environmental corridor delineations, and vegetation surveys. In between years of service at the Commission, she worked for the Wisconsin Department of Transportation – Green Bay as an LTE Environmental Analysis and Review Specialist – and the WDNR – Green Bay as an LTE Hydrologist. Jennifer attended the UW-La Crosse Critical Methods Workshop on February 19, 2019; 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 (February 2019).

METHODS

Description of Methods

The wetland boundary determinations were based upon the criteria and methodologies set forth in the 1987 *Corps of Engineers Wetlands Delineation Manual*; the August, 2010, *Regional Supplement to the Corps*

of Engineers Wetland Delineation Manual: Midwest 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 property:

- Ozaukee County's topographic mapping (Exhibit 1)
- WDNR Surface Water Data Viewer WWI mapping (Exhibit 2)
- NRCS soil survey and SEWRPC floodplain mapping (Exhibit 3)
- SEWRPC historical aerial photography (Exhibits 4A 4K)
- SEWRPC Sanitary Sewer Service Area mapping (Exhibit 5)
- NRCS Draft Wetland Inventory mapping (Exhibit 6)
- Precipitation data from the NRCS "WETS" tables

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. Wetland boundaries in the project area were marked in the field with orange wire flags and ribbon on July 8 and 9, 2019. Ozaukee County staff surveyed the wetland boundary markers and provided a corresponding electronic data file. Commission staff used a sub-meter-accuracy Global Positioning System (GPS) device to record the sample site locations where hydrology, vegetation, and soils data were recorded. The GPS was also used to record the location of drain tile outlets along the river channel and a probe site that was used to verify wetland hydrology and hydric soils on the south end of the project area.

The results of the field inspection for this project area are illustrated on Exhibit 7, which includes the fieldstaked and surveyed wetland boundaries and the GPS-located sample/probe sites and drain tile outlets.

Antecedent Hydrologic Conditions

Climatological data were taken from the nearest WETS station with complete data for the 1981-2010 climate period and monthly precipitation summaries for the 90-day observed data.

WETS Station:		GERMANTOWN, WI		WETS Station (Observed):			BROWN DEER 0.8 NW, WI		
July 8 & 9, 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	2.63	4.11	4.95	4.67	Normal	2	3	6
2nd prior month	May	2.23	3.66	4.44	5.02	Wet	3	2	6
3rd prior month	April	2.54	3.66	4.30	3.60	Normal	2	1	2
									Sum = 14

If Sum is

6 - 9 drier than normal10 - 14 normal15 - 18 wetter than normal

Conclusion: Normal

Existing Environmental Mapping

The Ozaukee County topographic mapping (Exhibit 1) depicts a project area with level, or nearly level, topography outside the Little Menomonee River corridor. The river corridor is comprised of a deeply cut and straightened channel bordered on both sides by linear dredge-spoil berms. The river flows to the south-southwest as it passes through the eastern portion of the project area. In the southern part of the project area, closer to West Mequon Road (STH 167), the berms are wider to support access driveways and a river crossing. Small ditched tributaries to the Little Menomonee River are present just outside and along the western and northern project area boundaries.

Elevations within the project area range from a high of 732 feet above National Geodetic Vertical Datum, 1929 adjustment (NGVD 29), on a berm along the east side of the river, just northeast of the river crossing, to a low of 725 feet along the river channel.

The WDNR Surface Water Data Viewer – WWI mapping (Exhibit 2) indicates one wetland within the project area, a forested (T3K) wetland along the Little Menomonee River. WDNR classifies the Little Menomonee River as a 1st order waterway with a cool-warm headwater natural community. General condition is good. Wetland indicators cover the entire project area based upon NRCS-mapped Ogden mucky peat (Od) and Pella silt loam (Ph).

The NRCS Soil Survey map (Exhibit 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 (%)
Ogden mucky peat (Od)	0-2	Hydric	100	Not Applicable	100

Exhibit 3 also indicates SEWRPC-mapped one-percent-annual-probability floodplain in the south and west parts of the project area and floodway in the eastern and northern parts of the project area.

Historical aerial photos of the project area were reviewed going back to 1937. Orthophotographs (2015, 2010, 2007, 2005, 2000, and 1995) and aerial photos (1990, 1980, 1970, 1963, and 1937) are attached (see Exhibits 4A-4K). This review is summarized for the project area in the following table:

Year	Changes in Land Use Observed on Aerial Photography from 1937 to 2015
1937	A large northeast-southwest corridor of wooded lowland is apparent on this photo, bisected by a dredged channel (Little
	Menomonee River) designed to drain lands to make way for cropland. While the southern end of the project area has
	been converted to cropland, most of it remains wooded.
1963	The extent of cropland within the project area has increased slightly.
1970	Most of the project area has now been cleared for conversion to cropland. A few trees remain in the north part. A
	tributary ditch has been dredged on the western and northern edges of the project area, draining into the Little
	Menomonee River channel on the northeast edge. Dredge spoil piles from the ditching project are apparent west of the
	new ditch. A driveway has been added in the southeast part of the project area providing access to lands east of the
	river from West Mequon Road. A river crossing has also been constructed providing access to lands west of the river.
	Drain tiles are apparent on the property south of the project area, likely used for drainage on project area lands as well.
1980	Most of the project area appears to used for sod production.
1990	Soil wetness signatures are very apparent within the project area on this image. Faint linear features (likely drain tile
	lines) running parallel to the river are apparent within the project area. A pond and two drainage ditches have been
	excavated immediately west of the project area, draining into the tributary ditch on the west edge of the project area.
1995	No significant changes noted.
2000	No significant changes noted.
2005	Drain tile lines are apparent on this image.
2007	No significant changes noted.
2010	Drain tiles are again apparent in this bare soil image where planting has just occurred, possibly related to restoration
	efforts.
2015	No significant changes noted.

SEWRPC sanitary sewer service area mapping (Exhibit 5) shows the project area is located just outside (west of) the planned sewer service area for the City of Mequon. The map also identifies secondary environmental corridor (SEC) associated with the Little Menomonee River corridor in the eastern end of the project area.

The NRCS wetland inventory mapping (Exhibit 6) indicates farmed wetland (FW) in the center and eastern edge of the project area and wetland (W) in the southeastern corner, northern edge, and western edge, of the project area. Prior converted (PC) cropland covers the remaining portions of the project area. PC land is defined as wetland that was converted to cropland prior to December 1985, was capable of being cropped and does not meet farmed wetland hydrology.

Amount and Types of Wetland in the Project Area

One wetland plant community area (PCA) was identified and inventoried within the project area (see Exhibit 7). A list of vascular plant species observed during the field inspection was prepared for the plant community area as well as plant community type(s), dominant plant species, disturbances, and any critical plant and animal species (Exhibit 8). The table below summarizes characteristics for the PCA.

PCA				Critical	
Number	Acreage	PCA Type(s)	Dominant Species	Species	
1	28.86	Open water and fresh (wet) meadow	Phalaris arundinacea Reed canary grass		
		(partly degraded) associated with the	<u>Solidago gigantea</u> Giant goldenrod	Nono	
		Little Menomonee River floodplain-	Symphyotrichum lanceolatumMarsh aster	None	
		wetland complex its tributaries	Symphyotrichum puniceum Red-stemmed aster		

Wetland/Upland Boundary Explanation

Twenty-three representative sample sites and one probe site were identified within the project area. The Wetland Determination Data Forms describing the findings at each sample site and the probe site are attached as Exhibit 9. The locations of the sample sites and probe site are shown on Exhibit 7. 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

Sample sites 5 and 6 were in unvegetated open water of the Little Menomonee River. They both exhibited wetland hydrology indicators and had a hydric soil due to inundation. Thus, it was determined to be wetland with "naturally problematic" vegetation.

Sample site 23 did not pass the Dominance Test or the Prevalence Index for hydrophytic vegetation. However, the sample site had indicators of both wetland hydrology and hydric soils. Further, the saturation level measured at sample site 23 was 6 inches deep, the same level measured at nearby wetland sample sites 21 and 22, which both had hydrophytic vegetation. It was therefore determined that sample site 23 was wetland with "naturally problematic" vegetation.

Other Considerations

The nonagricultural performance standards set forth in Section NR 151.125 of the *Wisconsin Statutes*, 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, 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 the 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.*

Most wetlands within the project area are comprised of moderately susceptible wetland types [USGS waterway (open water) and fresh (wet) meadow] that are typically assigned a 50-foot protective area setback. Portions of the wetland that consist of degraded fresh (wet) meadow, such as the wetland at sample site 13, with greater than 90 percent cover by non-native species, are typically assigned a 10-30-foot setback.

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 the property owner 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.

LITERATURE CITED

Ozaukee County Planning and Parks Department-Fish Passage Program, 2019, *Little Menomonee River Corridor Ecosystem Restoration Mequon Road Parcel* design report, June 20, 2019

Southeastern Wisconsin Regional Planning Commission website at maps.sewrpc.org/regionallandinfo/regionalmapping

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USDA, Natural Resources Conservation Service, 2016. *Field Indicators of Hydric Soils in the United States*, Version 8.0. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Committee for Hydric Soils. 2016.

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WDNR, 2015, *Guidance for the Establishment of Protective Areas for Wetlands in Runoff Management Rules, Wisconsin Administrative Code NR 151,* WDNR Bureau of Watershed Management Program Guidance, Storm Water Management Program, April 2015.

CJJ/JLD/STH/mid CA209-150 Little Menomonee River Ecosystem Habitat Restoration WD Report (00253386).DOCX 100-2000





Exhibit 3. Soils and Floodplain Map

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







Bat

Exhibit 4A. 2015 Orthophotography Little Menomonee River Corridor Ecosystem/Habitat Restoration Project on MMSD Greenseam Parcel SE Quarter, Section 20, T9N-R21E City of Mequon, Ozaukee County





STH 167 West Mequon Road





Exhibit 4B. 2010 Orthophotography

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





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on MMSD Greenseam Parcel SE Quarter, Section 20, T9N-R21E







Exhibit 4E. 2000 Orthophotography

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





STH 167 West Mequon Road



on MMSD Greenseam Parcel SE Quarter, Section 20, T9N-R21E City of Mequon, Ozaukee County



