300-2000
ITEM 2

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
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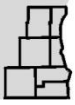


December 1, 2015

Mr. Robert Vanden Noven, P.E.
City Engineer/Director of Public Works
City of Port Washington Dept. of Public Works
P.O. Box 307
Port Washington, WI 53074

Re: SEWRPC No. CA-210-38

Dear Mr. Vanden Noven:

This will respond to your email message of March 2, 2015, requesting that the Commission staff conduct a field inspection of the proposed sanitary sewer and water main extension project areas along the east side of CTH C. The project areas are located in parts of U.S. Public Land Survey Section 33, Township 11 North, Range 22 East; and Sections 3 and 4, Township 10 North, Range 22 East, City of Port Washington, Ozaukee County, Wisconsin. The purpose of the field inspection was to identify and stake the boundaries of any wetlands contained within the project areas.

Pursuant to your request, Commission staff identified and staked the wetland boundaries within the project areas on July 21 and 22, 2015. 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, Senior Specialist-Biologist (*cjors@sewrpc.org* or 262-953-3246).

Sincerely,

Kenneth R. Yunker, P.E.
Executive Director

KRY/TMS/CJJ/kmd
#229058 – CA210-38 CTH C Utilities

Enclosure (#229197)

cc: Mr. Joseph Eberle, P.E., Ruekert & Mielke, Inc. (w/enclosure)
Ms. Kathleen Kramasz, Wisconsin Department of Natural Resources (w/enclosure)
Mr. Anthony Jernigan, U.S. Army Corps of Engineers (w/enclosure)

WETLAND DELINEATION REPORT

CTH C (Centerline to 75' East of Centerline)
FOR PROPOSED SEWER AND WATERLINES TO SERVE PROPOSED CEDAR VINEYARDS
Section 33, T11N, R22E
Sections 3 and 4, T10N, R22E
CITY OF PORT WASHINGTON
OZAUKEE COUNTY
WISCONSIN

Prepared by:

Jennifer Dietl
Christopher Jors
Daniel Carter

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

WETLAND DELINEATION REPORT OVERVIEW

(Based upon WDNR WETLAND Delineation Confirmation Request Check List)

INTRODUCTION

- Who requested the delineation – **Robert J. Vanden Noven, P.E., City Engineer/Director of Public Works, City of Port Washington**
- Why the delineation was undertaken – **Sewer and water lines to serve proposed Cedar Vineyards**
- Date the field work was completed – **July 21 and 22, 2015**
- Who conducted field work – **Jennifer Dietl, Christopher Jors, Daniel Carter**
- Statement of Qualifications

METHODS

- Description of Methods
- Sources Reviewed
    - Topographic Map – **Exhibit 1 (Maps 1 to 3)**
    - Wisconsin Wetland Inventory (WWI) Map – **Exhibit 2 (Maps 1 to 3)**
    - Soil Survey and Floodplain Map – **Exhibit 3 (Maps 1 to 3)**
    - Historical Aerial Photos – **Exhibits 4A to 4J (Maps 1 to 3)**
    - Sanitary Sewer Service Map – **Exhibits 5A and 5B**
    - Advanced Delineation and Identification (ADID) Wetland Map – **Exhibit 6 (Maps 1 to 3)**
- 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 water resources located in the project area

LITERATURE CITED

Wetland Delineation Map – **Exhibit 7 (Maps 1 to 3)**

Vegetation Survey and Wetland Delineation Data Forms

- Preliminary Vegetation Survey – **Exhibit 8**
- Wetland Determination Data Forms – Northcentral and Northeast Region – **Exhibit 9**

Site Photos – **Exhibit 10**

Farm Service Agency Slide Review

- Completed wetland documentation form (NRCS form NRCS-CPA-32A) – **Exhibit 11**
- FSA Slide Review Map – **Exhibit 12**
- Copies or photos of slides if available – **Exhibit 13**
- Copy of the draft NRCS Wetland Inventory map if available – **Exhibit 14**

INTRODUCTION

This wetland delineation report responds to the City of Port Washington's letter of request to identify the boundaries of any wetland along County Highway C (Centerline to 75' East of Centerline) between North of Sunset Road and South of Stonecroft Drive for proposed sewer and water lines to serve proposed Cedar Vineyards. This area is located in U.S. Public Land Survey Sections 33, Township 11 North, Range 22 East, and Sections 3 and 4, Township 10 North, Range 22 East, City of Port Washington, Ozaukee County, Wisconsin.

Statement of Qualifications

Jennifer Dietl, Specialist-Biologist, earned a Bachelor's degree in Biology and Environmental Science from Carroll University in 1992. She has worked at the Commission from 1992 to 1997 and from 2006 to the present conducting wetland delineations, primary environmental corridor delineations, and vegetation surveys. In between years of service at the Commission she worked for the Wisconsin Department of Transportation – Green Bay as an LTE Environmental Analysis and Review Specialist – and the Wisconsin Department of Natural Resources – Green Bay as an LTE Hydrologist. Jennifer attended the UW-La Crosse Basic and Advanced Wetland Delineation Workshops on August 10-15, 2015 and a Wisconsin Dept. of Natural Resources Wetland Delineation & Wetland Rapid Assessment Methodology Workshop on April 23, 2014.

Christopher Jors, Senior Specialist-Biologist, has worked at SEWRPC since 1993, and has been part of the wetland delineation team since 1994. He received a Bachelor's degree in Conservation Aspects of Biology from the University of Wisconsin – Milwaukee in 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 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.

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

METHODS

Description of Methods

The wetland boundary determinations were based upon the criteria and methodologies set forth in the 1987 *Corps of Engineers Wetlands Delineation Manual*; the January 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast* (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 2014 Wetland Plant List.

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

Sources Reviewed

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

RESULTS AND DISCUSSION

Jennifer Dietl, lead investigator, and Christopher Jors and Dr. Daniel Carter, identified and staked the boundaries of the wetlands contained within the project area on July 21 and 22, 2015.

The results of the wetland delineation field inspection for this project area are shown on Exhibit 7, which includes sample site numbers and locations, staked and surveyed wetland boundaries, plant community area numbers and locations, photograph locations and directions, as well as GPS-located wet ditches.

Antecedent Hydrologic Conditions

WETS Station: PORT WASHINGTON (WI6467) GHCN-D Station: SAUKVILLE (WI 7581)

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

	Month	3 yrs. In 10 less than	Normal	3 yrs. In 10 more than	Observed precip.	Condition dry, wet, normal	Condition value	Month weight value	Product of previous two columns
1st prior month	July	2.59	3.81	4.55	3.05	Normal	2	3	6
2nd prior month	June	2.15	3.58	4.35	3.12	Normal	2	2	4
3rd prior month	May	1.8	2.93	3.54	3.62	Wet	3	1	3
								sum	13

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

Conclusion Normal

Previous wetland delineation mapping – None

Existing Environmental Mapping

The Ozaukee County topographic map (Exhibit 1) shows that the project area has slight rolling topography ranging from highs of just above 700 feet to lows around 690 feet above sea level at several points along the project area. Surface water flows west to east towards Lake Michigan in several small drainage ways.

The Wisconsin Wetland Inventory map (WWI) (Exhibit 2) indicates four small farmed wetlands (F0Kf), one shrub/wet meadow (S3/E2K), two wet shrub-carrs (S3K), and one emergent wet meadow (E2K) in the project area.

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

Soil Name	Slope %	Drainage Class	Comments
Kewaunee silt loam (KnA)	0-2%	Well drained	Sample sites: 12, 13, 14, 15, 16, 17, 18, 20, 22, 23,
Kewaunee silt loam (KnB)	2-6%	Well drained	Sample site: 3, 4, 5, 10,
Kewaunee silty clay loam (KoB2)	2-6%, eroded	Well drained	
Kewaunee silty clay loam (KoC2)	6-12%, eroded	Well drained	Sample sites: 1, 2, 7
Kewaunee silty clay (KrC3)	6-12%, severely eroded	Well drained	Sample site: 25
Manawa silt loam (MaA)	0-3%	Somewhat poorly drained	Sample sites: 6, 8, 11, 19, 24
Poygan silty clay loam (Py)	0-2%	Very poorly drained	Sample sites: 21

Historical aerial photos of the project area were reviewed back to 1963. Aerial photos for years 2015, 2010, 2007, 2005, 2000, 1995, 1990, 1980, 1970, and 1963 are attached (Exhibits 4A to 4J, maps 1 to 3). This review is summarized in the table below.

CHANGES IN LAND USE OBSERVED ON AERIAL PHOTOGRAPHY FROM 1963 TO 2015

Year	Northern Project Area (Map 1)	Southern Project Area (Maps 2 & 3)
1963	Agricultural land use - cropland	Agricultural land use – Mostly cropland except for approx. 600 feet of road frontage in pasture
1970	No change	No change except for a new driveway just north of the pasture
1980	No change	Driveway just north of pasture removed & returned to cropland. Driveway across from Stonecroft Drive also removed and returned to cropland
1990	No change	Pasture apparently abandoned – woody vegetation encroaching
1995	No change	No change
2000	No change	No change
2005	Significant land disturbance related to conversion of coal-fired power plant to natural gas. New road built to serve power plant and extensive staging areas for construction equipment and soil material. Stormwater detention pond built just east of CTH C.	No change
2007	No change	No change
2010	Construction equipment & soil material removed, site regraded	No change
2015	Site revegetated – hayfield?	No change

SEWRPC's sanitary sewer map (Exhibit 5) shows that the entire project area is located in the City of Port Washington and Environs planned sanitary sewer service area.

The ADID wetland map (Exhibit 6) indicates that wetland Plant Community Area Nos. 5 and 6 are located within a designated Primary Environmental Corridor (PEC) and have been designated as ADID wetlands under the Section 404(b)(1) Guidelines of the Clean Water Act.

Amount and Types of Wetlands in the Project Area

A total of eight plant community areas were identified within the project area. A list of vascular plant species observed during the field inspection was prepared for each 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 each plant community area (PCA).

PCA Number	Acreage(s)	PCA Type(s)	Dominant Species	Critical Species
1	0.10	Fresh (wet) meadow and constructed roadside ditch with fresh (wet) meadow	*Agrostis gigantea*-Redtop grass *Phalaris arundinacea*-Reed canary grass *Toxicodendron rydbergii*-Poison ivy	None
2	--	Constructed roadside ditch with fresh (wet) meadow	*Agrostis gigantea*-Redtop grass *Juncus bufonius*-Toad rush *Phalaris arundinacea*-Reed canary grass *Poa pratensis*-Kentucky bluegrass	None
3	0.14 0.04	Atypical (farmed) wetland Fresh (wet) meadow	*Agrostis stolonifera*-Creeping bent-grass *Phalaris arundinacea*-Reed canary grass *Schedonorus pratensis*-Tall fescue *Typha angustifolia*-Narrow-leaved cat-tail	None
4	0.14 0.03 0.08 0.03	Atypical (farmed) wetland Fresh (wet) meadow Southern wet to wet-mesic lowland hardwoods Constructed roadside ditch with fresh (wet) meadow	*Fraxinus pennsylvanica*-Green ash *Juncus bufonius*-Toad rush *Phalaris arundinacea*-Reed canary grass *Poa pratensis*-Kentucky bluegrass *Puccinellia distans*-Alkali grass *Toxicodendron rydbergii*-Poison ivy *Triticum aestivum*-Wheat (planted)	None
5	0.03	Fresh (wet) meadow and constructed roadside ditch with fresh (wet) meadow	*Phalaris arundinacea*-Reed canary grass *Solidago gigantea*-Giant goldenrod	None
6	0.14	Southern wet to wet-mesic lowland hardwoods Constructed roadside ditch with fresh (wet) meadow	*Carex vulpinodea*-Fox sedge *Fraxinus pennsylvanica*-Green ash *Geum canadense*-White avens *Impatiens capensis*-Jewelweed *Juncus dudleyi*-Dudley's rush	None
7	0.03 0.14	Atypical (farmed) wetland Fresh (wet) meadow Constructed roadside ditch with fresh (wet) meadow	*Phalaris arundinacea*-Reed canary grass	None
8	0.03 0.03	Atypical (farmed) wetland Fresh (wet) meadow	*Equisetum arvense*-Common horsetail *Phalaris arundinacea*-Reed canary grass	None

Wetland/Upland Boundary Explanation

Twenty five representative sample sites were identified within the project area. The Wetland Determination Data Forms describing the findings at each sample site are attached as Exhibit 9. The locations of the sample sites are shown in Exhibit 7. The wetland boundary was determined using breaks in topography, changes in vegetation composition, visual identification of wetland hydrology, and presence of hydric soils.

Disturbed and Problematic Areas Encountered

Wetland sample site 6 has naturally problematic soils (A16. Coast Prairie Redox). Wetland sample sites 16 and 22 had "significantly" disturbed vegetation due to agricultural land management activities (managed plant community) which obscured hydrophytic vegetation.

Other Water Resources Located in the Project Area

No other water resources are located in the project area. However, an unnamed tributary is identified to the west of CTH C (crosses West Sunset Road) and Lake Michigan is located about 900 feet to the east, both at the north

end of the project area. Another unnamed tributary is identified to the east of CTH C (near Stonecroft Drive) at the south end of the project area.

Other Considerations

Please be advised that no Federal or State regulatory jurisdiction determinations relative to any wetland permits or certifications are made under this report.

LITERATURE CITED

U.S. Army Corps of Engineers, 2015, Special Public Notice: *Guidance for Submittal of Delineation Reports to the St. Paul District Corps of Engineers and the Wisconsin Department of Natural Resources*, U.S. Army Corps of Engineers, March 2015.

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

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

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

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

CA210-38 CTH C Sewer and Waterlines for Cedar Vineyards (00226457).DOC
300-2000
JLD/CJJ/DC/kmd
12/1/15


Exhibit 1. Topographic Map
Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
West Sunset Road
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
Date of Photography: 2015
CA#210-38


Exhibit 1. Topographic Map
Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Lake Michigan
LAKE MICHIGAN
W.S. 580.1
W.S. 706.8
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
Date of Photography: 2015
CA#210-38


Exhibit 1. Topographic Map
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Stonecroft Drive
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
Date of Photography: 2015
CA#210-38

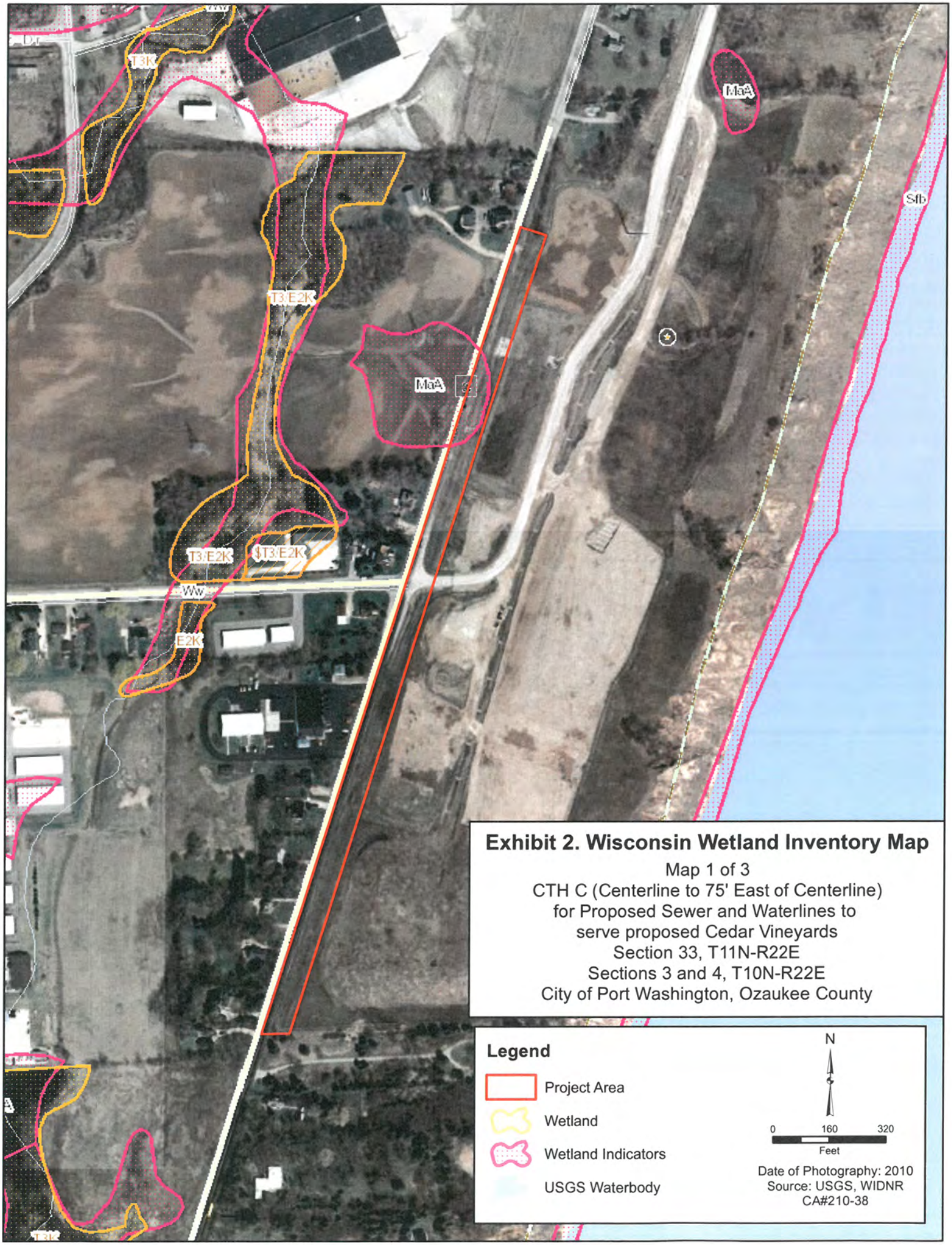


Exhibit 2. Wisconsin Wetland Inventory Map

Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County

Legend

- Project Area
- Wetland
- Wetland Indicators
- USGS Waterbody

N

0 160 320
Feet

Date of Photography: 2010
Source: USGS, WIDNR
CA#210-38

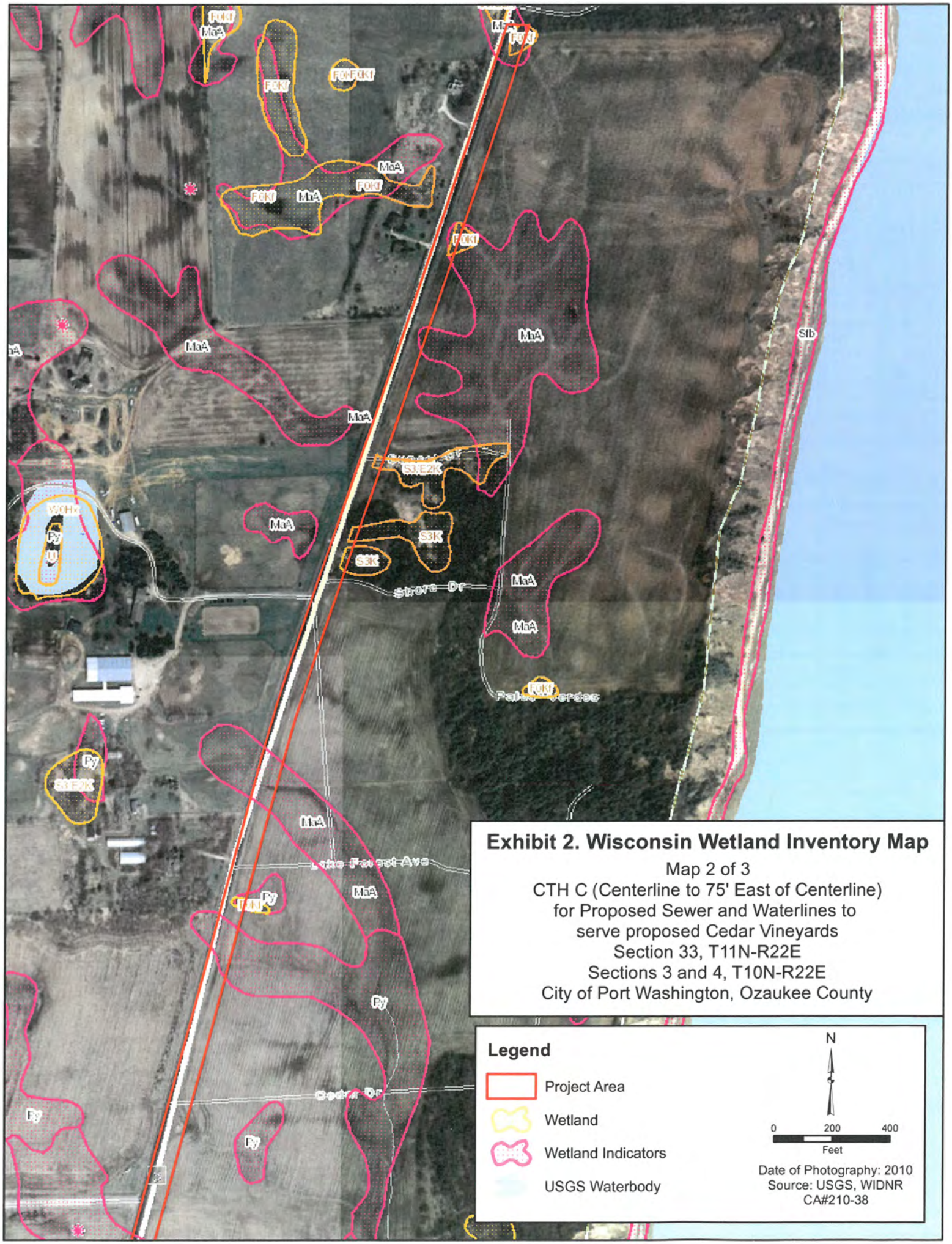


Exhibit 2. Wisconsin Wetland Inventory Map

Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County

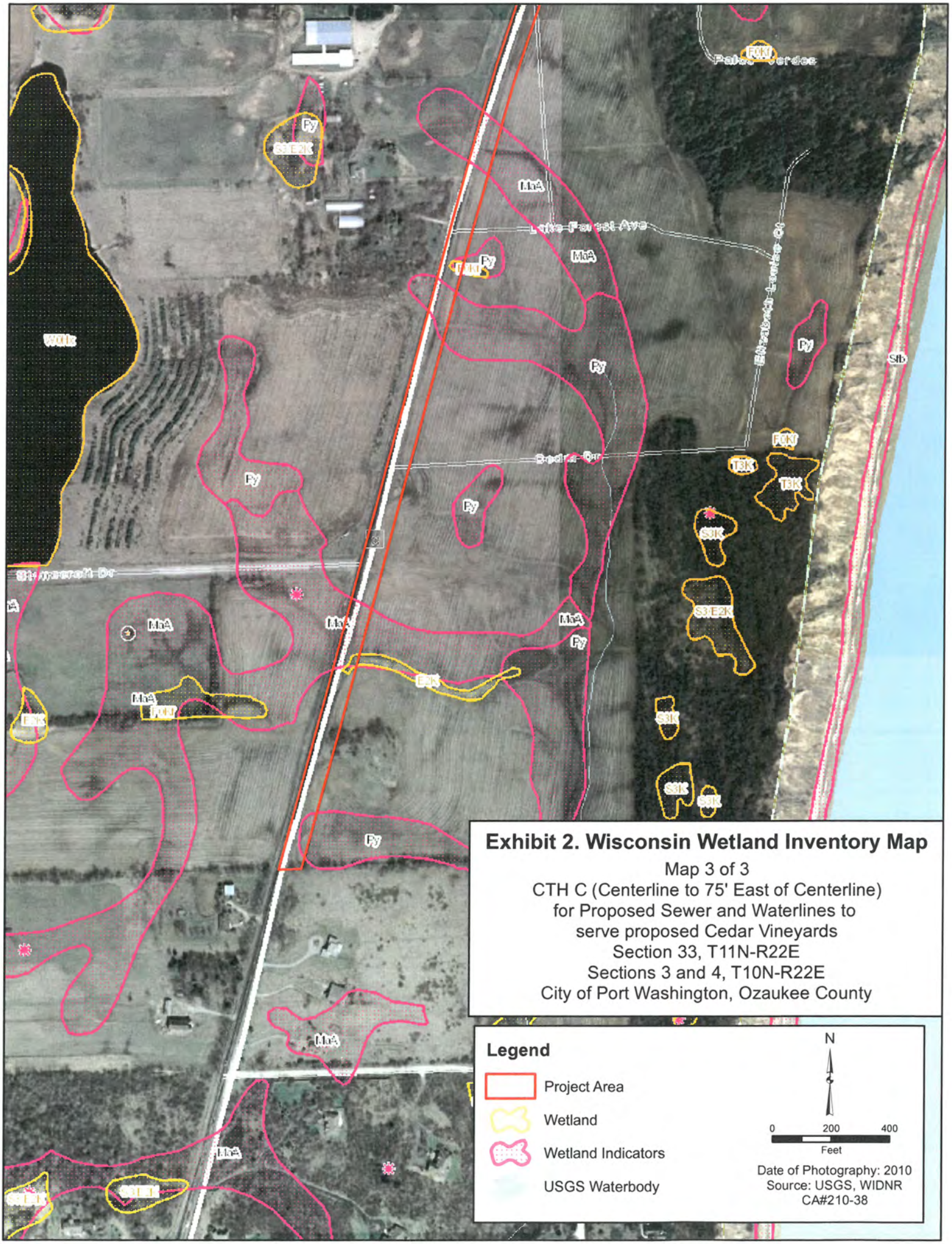
Legend

- Project Area
- Wetland
- Wetland Indicators
- USGS Waterbody

N

0 200 400
Feet

Date of Photography: 2010
Source: USGS, WIDNR
CA#210-38


Py
MnA
Lake Forest Ave
Elizabeth Lueder Dr
Cedar Dr
Stb
T8K
S3E2K
S3K
E2K
Exhibit 2. Wisconsin Wetland Inventory Map
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
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Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
Legend
Project Area
Wetland
Wetland Indicators
USGS Waterbody
N
0
200
400
Feet
Date of Photography: 2010
Source: USGS, WIDNR
CA#210-38


Exhibit 3. Soils and Floodplain Map
Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
FaA
Mzk
Wv
GP
CcB2
CeB2
KoC2
FaA
Ry
HeB
MaA
CTH C
KoB2
KnB
West Sunset Road
KoB2
MaA
Lu
KoB2
KoC2
RaA
MaA
KnB
MaA
Lu
MaA
Ry
Lake Michigan
Legend
Project Area
Floodway
100 Year Floodplain
Other Soils
Poorly drained or Very poorly drained
Somewhat poorly drained
N
0
200
400
Feet
Source: SEWRPC
Date of Photography: 2015
CA#210-38

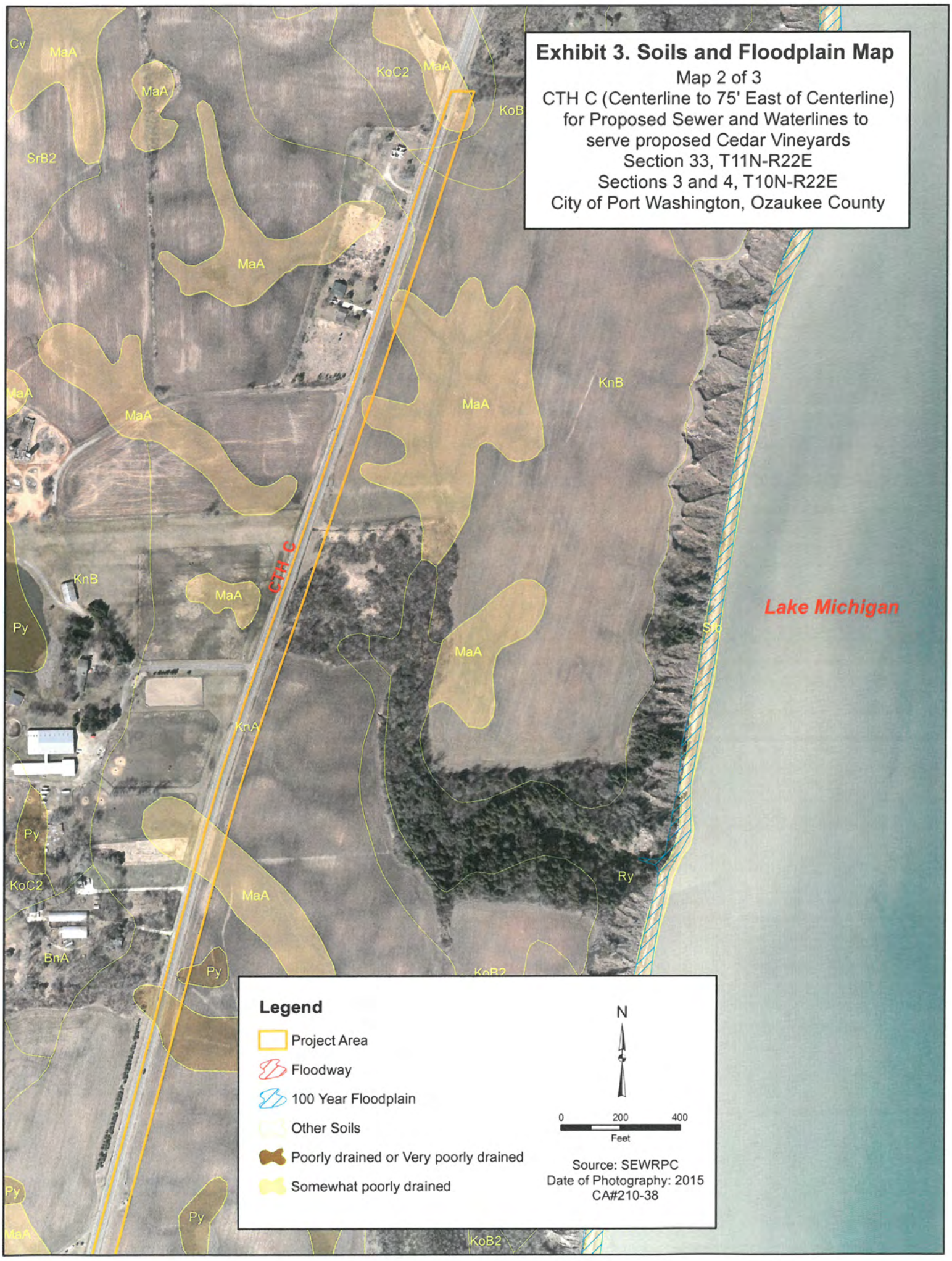
Exhibit 3. Soils and Floodplain Map
Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
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MaA
SrB2
KoC2
KoB
KnB
KnA
Py
BnA
Ry
Sp
KoB2
CTH C
Lake Michigan
Legend
Project Area
Floodway
100 Year Floodplain
Other Soils
Poorly drained or Very poorly drained
Somewhat poorly drained
N
0
200
400
Feet
Source: SEWRPC
Date of Photography: 2015
CA#210-38


Exhibit 3. Soils and Floodplain Map
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
KnB
KoC2
Py
MaA
BnA
W
KrD3
KnA
CTH C
Stonecroft Drive
KrC3
KoB2
Cv
BmB2
BmD2
Lake Michigan
Legend
Project Area
Floodway
100 Year Floodplain
Other Soils
Poorly drained or Very poorly drained
Somewhat poorly drained
N
0
200
400
Feet
Source: SEWRPC
Date of Photography: 2015
CA#210-38


Exhibit 4A. 2015 Orthophotograph
Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
West Sunset Road
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38


Exhibit 4A. 2015 Orthophotograph
Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Lake Michigan
Legend
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Feet
Source: SEWRPC
CA#210-38

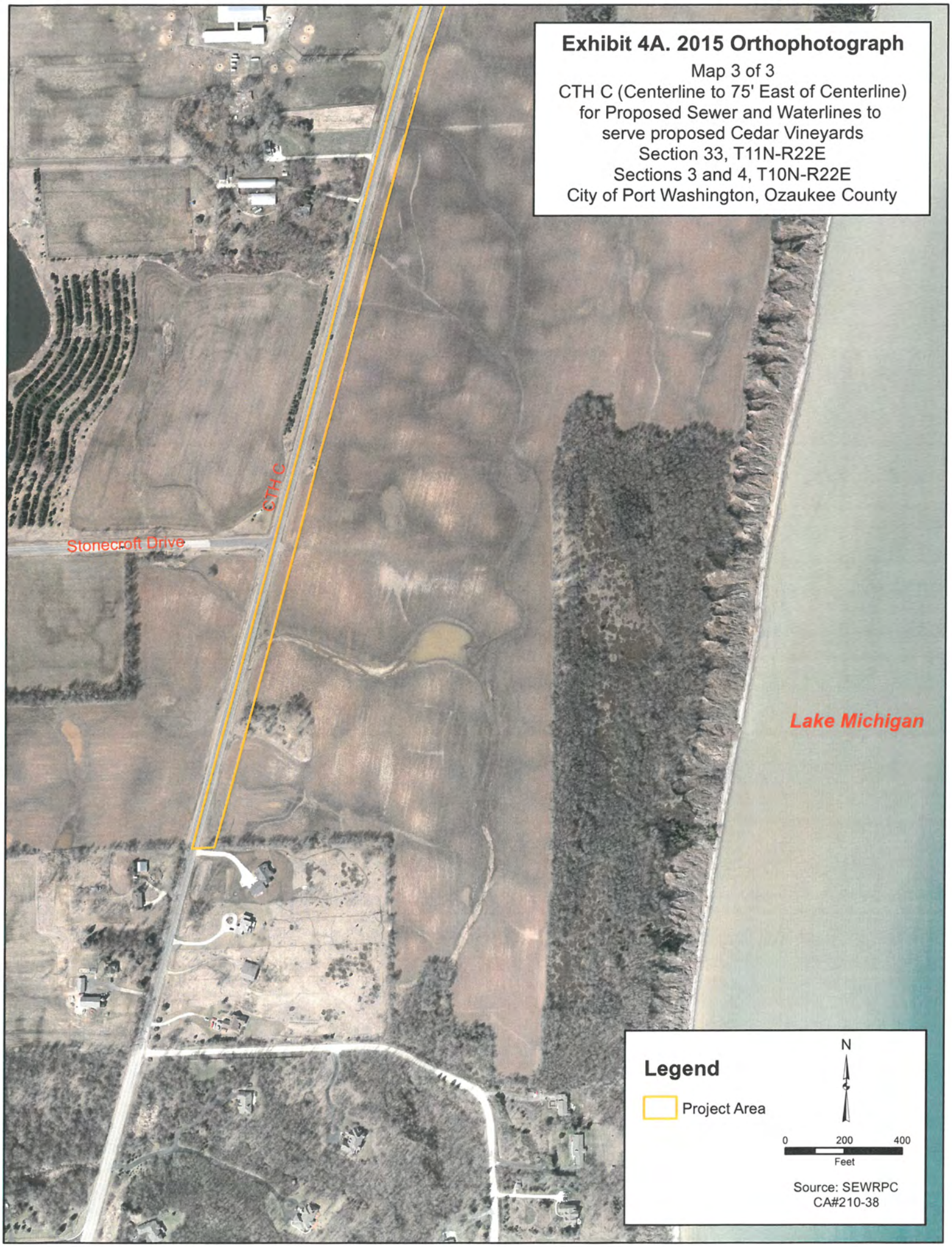
Exhibit 4A. 2015 Orthophotograph
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
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serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Stonecroft Drive
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38


Exhibit 4B. 2010 Orthophotograph
Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
West Sunset Road
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38


Exhibit 4B. 2010 Orthophotograph
Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Lake Michigan
Legend
Project Area
N
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400
Feet
Source: SEWRPC
CA#210-38

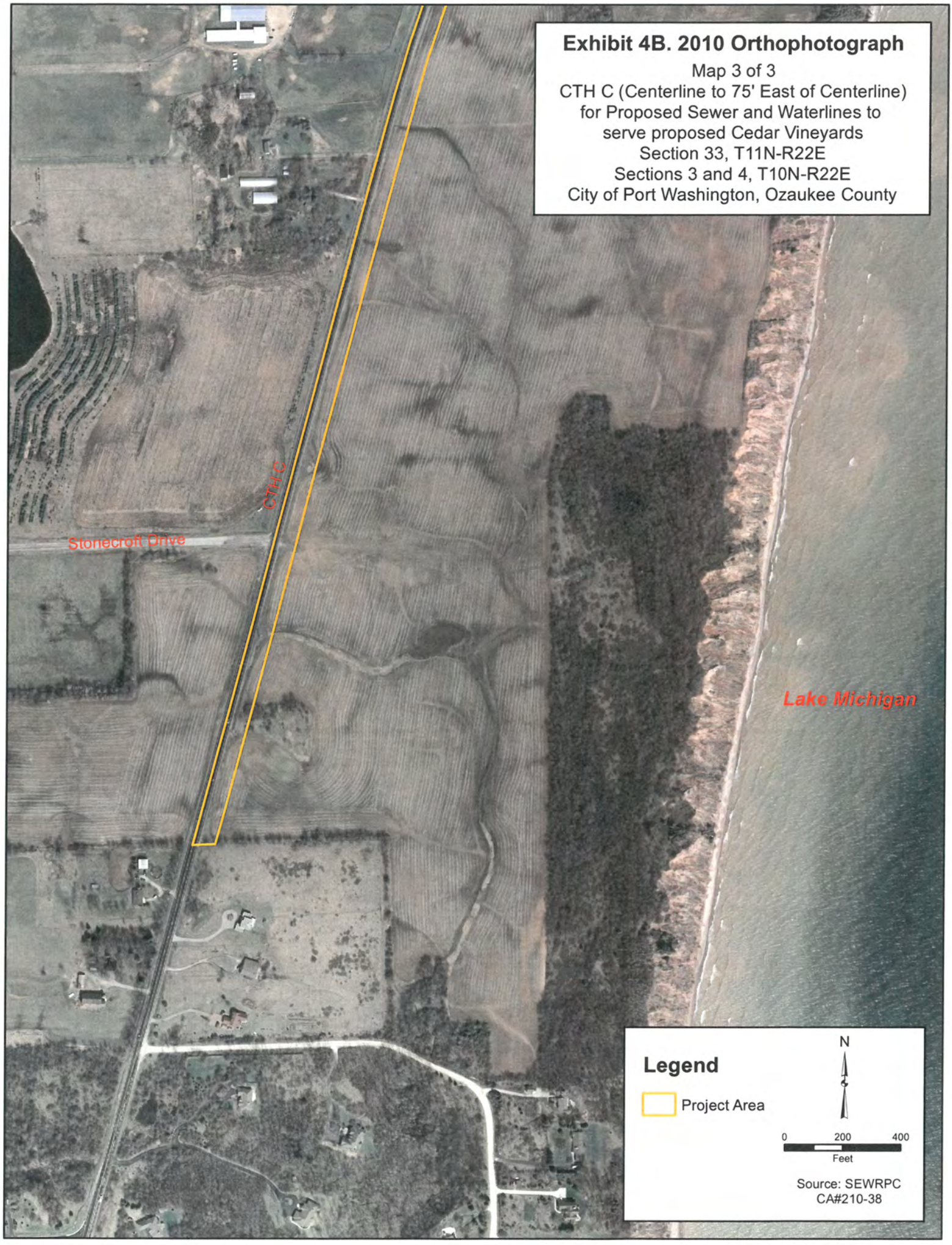
Exhibit 4B. 2010 Orthophotograph
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Stonecroft Drive
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38


Exhibit 4C. 2007 Orthophotograph
Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
West Sunset Road
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38


Exhibit 4C. 2007 Orthophotograph
Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

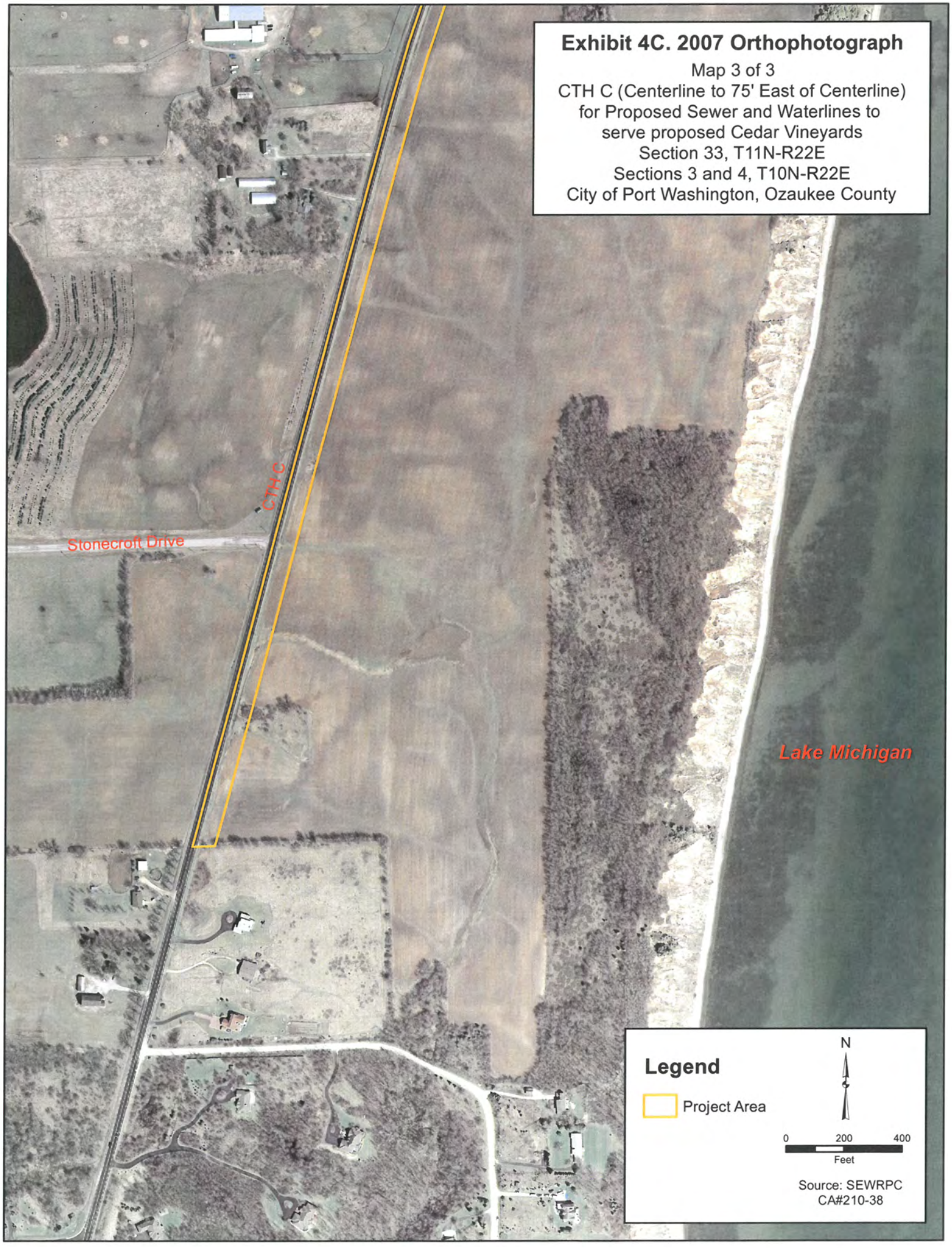
Exhibit 4C. 2007 Orthophotograph
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Stonecroft Drive
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38


Exhibit 4D. 2005 Orthophotograph
Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
West Sunset Road
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38


Exhibit 4D. 2005 Orthophotograph
Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

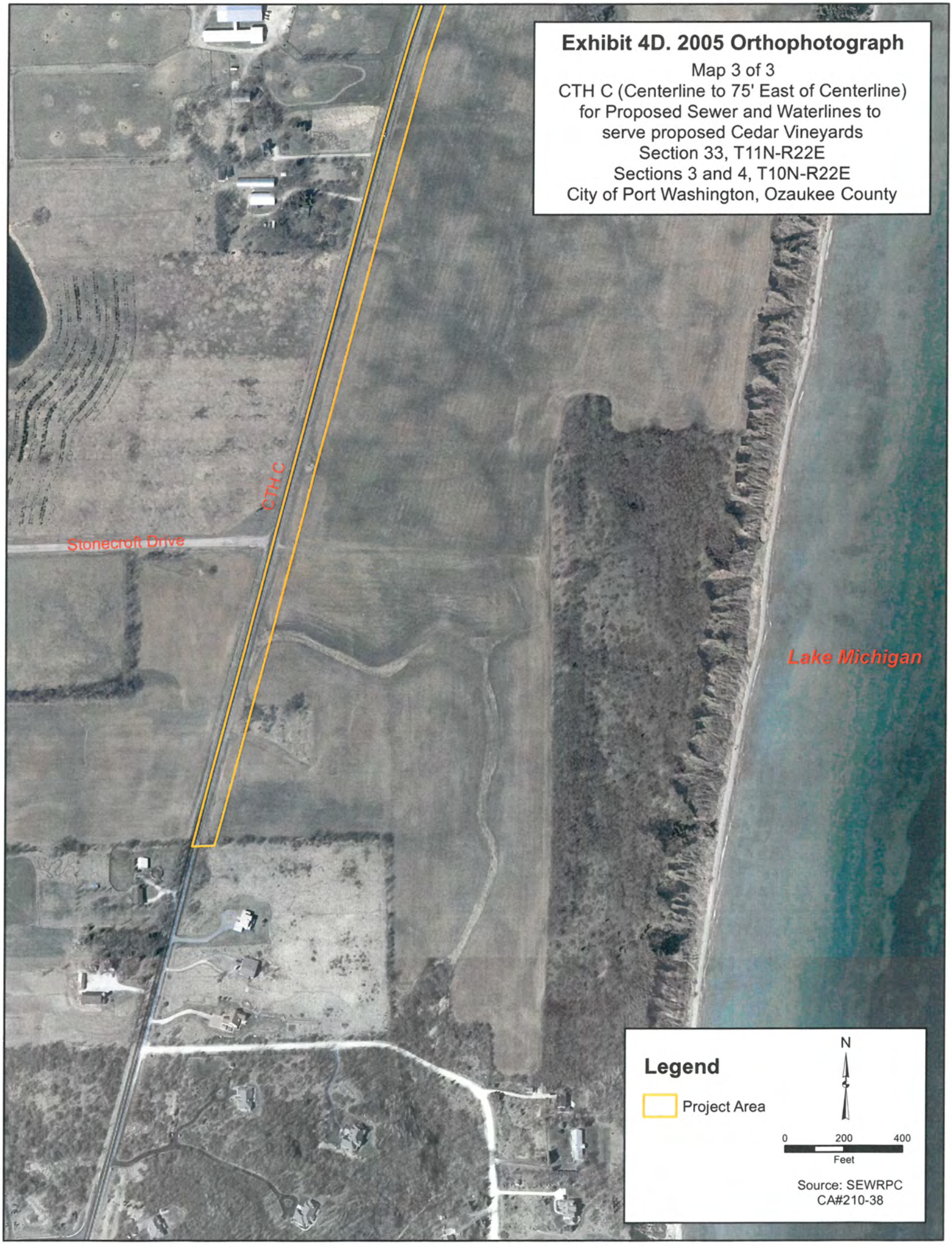
Exhibit 4D. 2005 Orthophotograph
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Stonecroft Drive
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

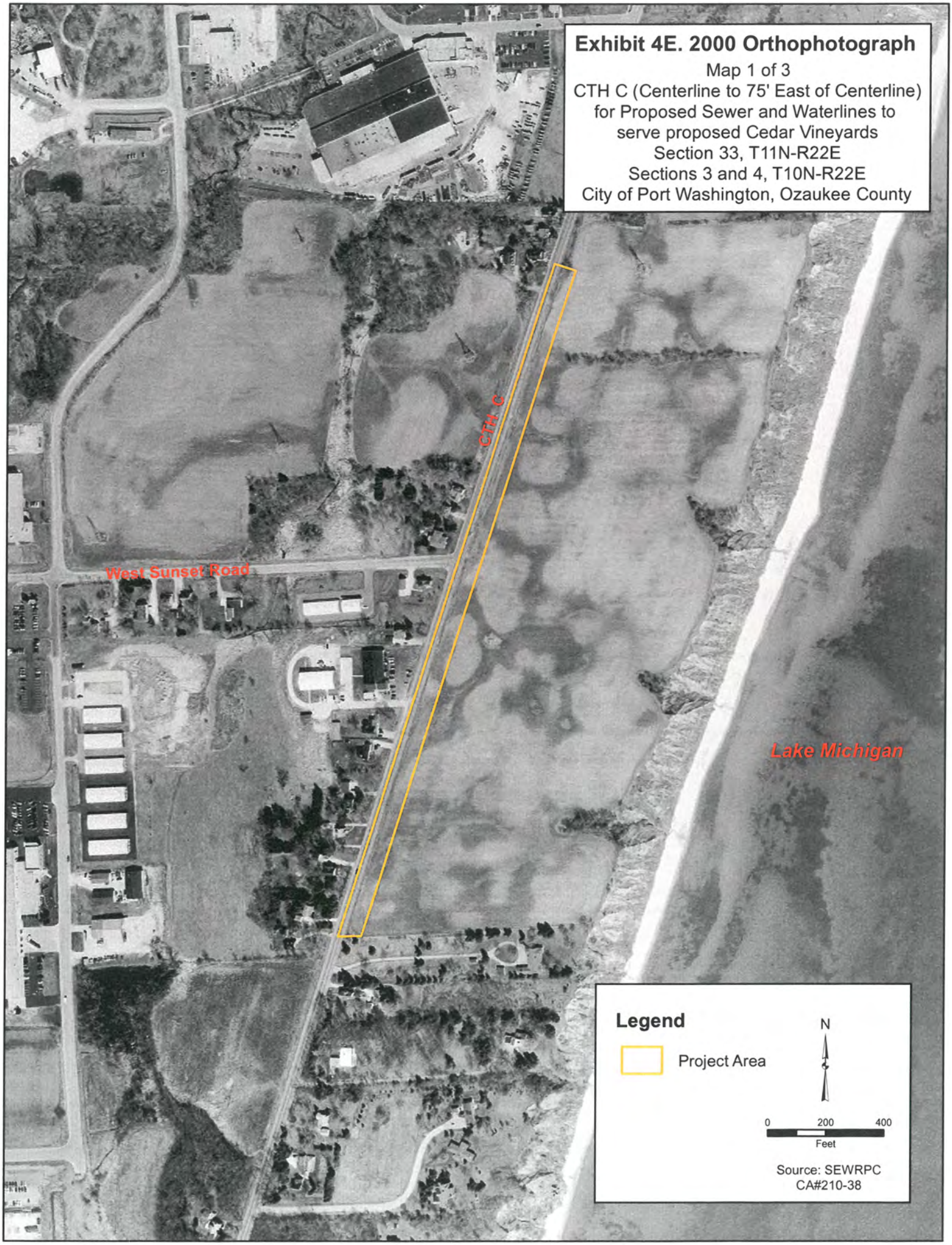
Exhibit 4E. 2000 Orthophotograph
Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
West Sunset Road
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

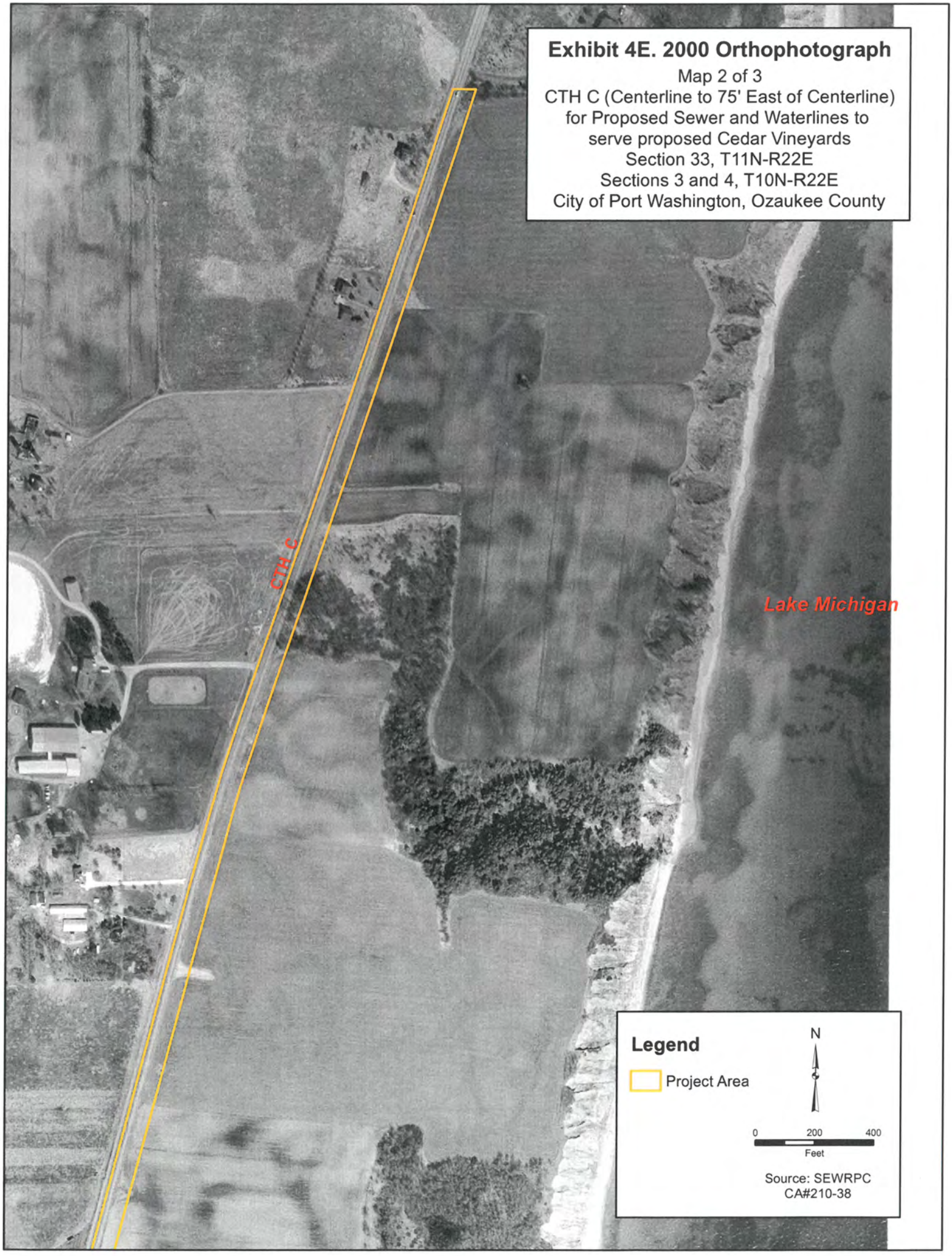
Exhibit 4E. 2000 Orthophotograph
Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

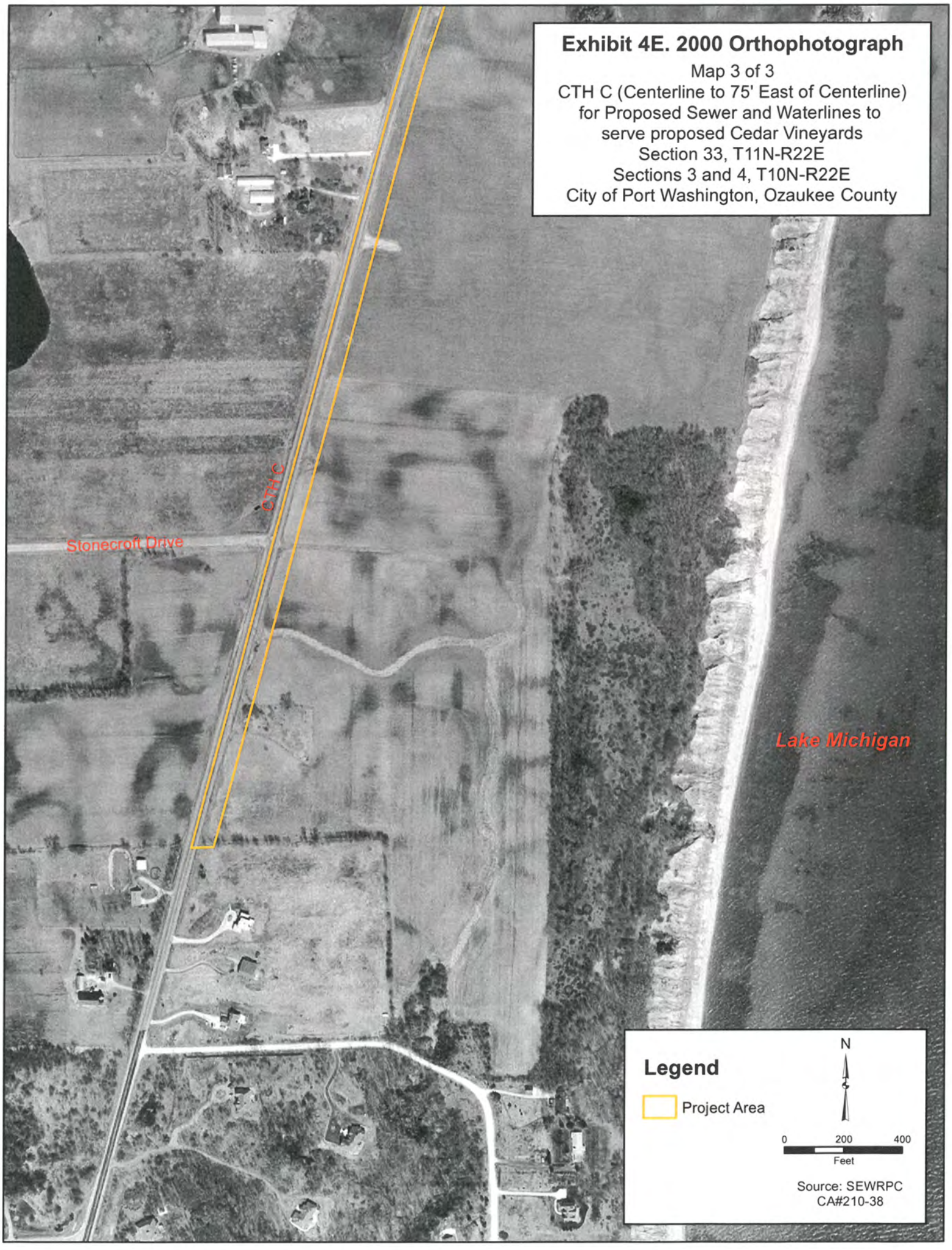
Exhibit 4E. 2000 Orthophotograph
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Stonecroft Drive
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

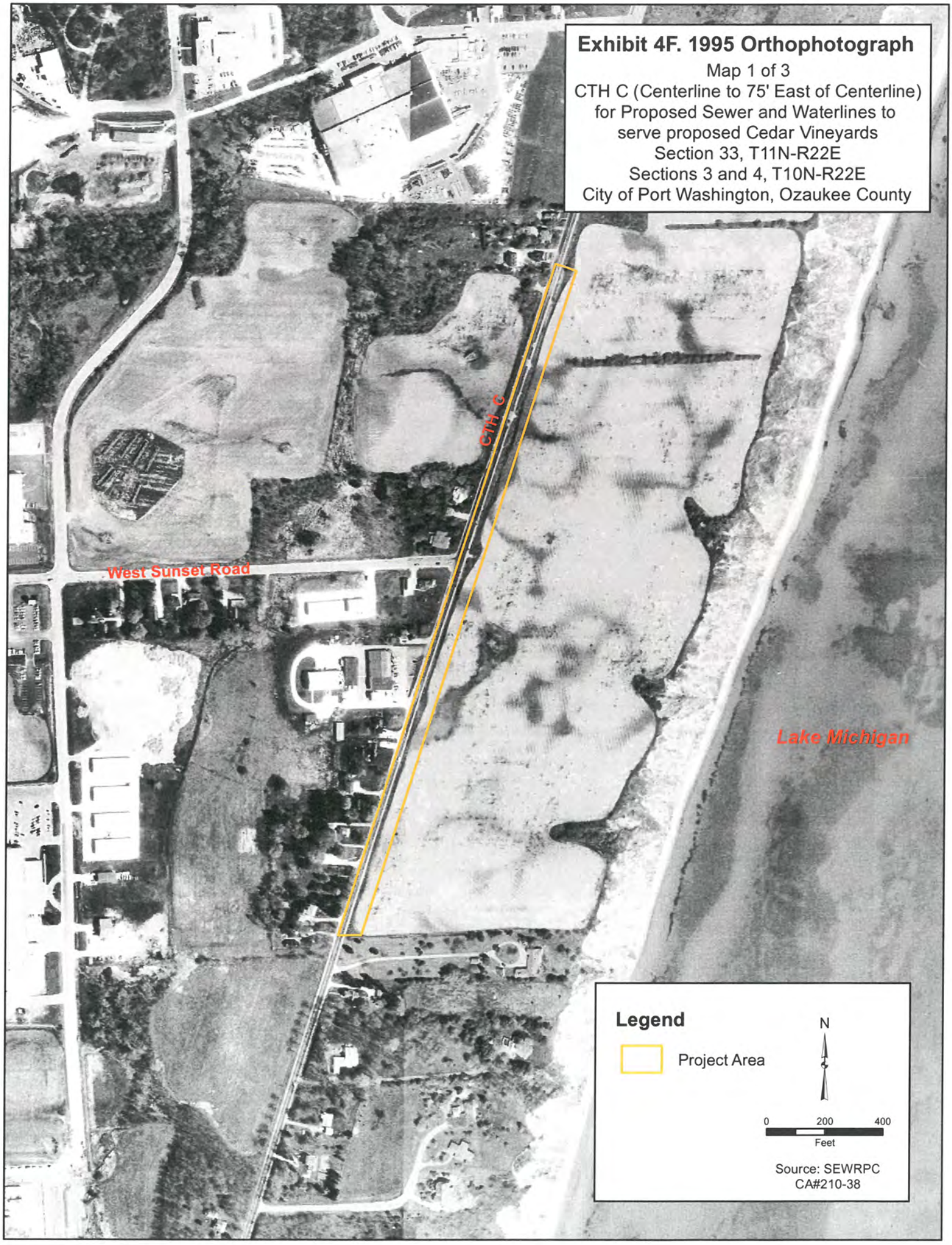
Exhibit 4F. 1995 Orthophotograph
Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
West Sunset Road
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

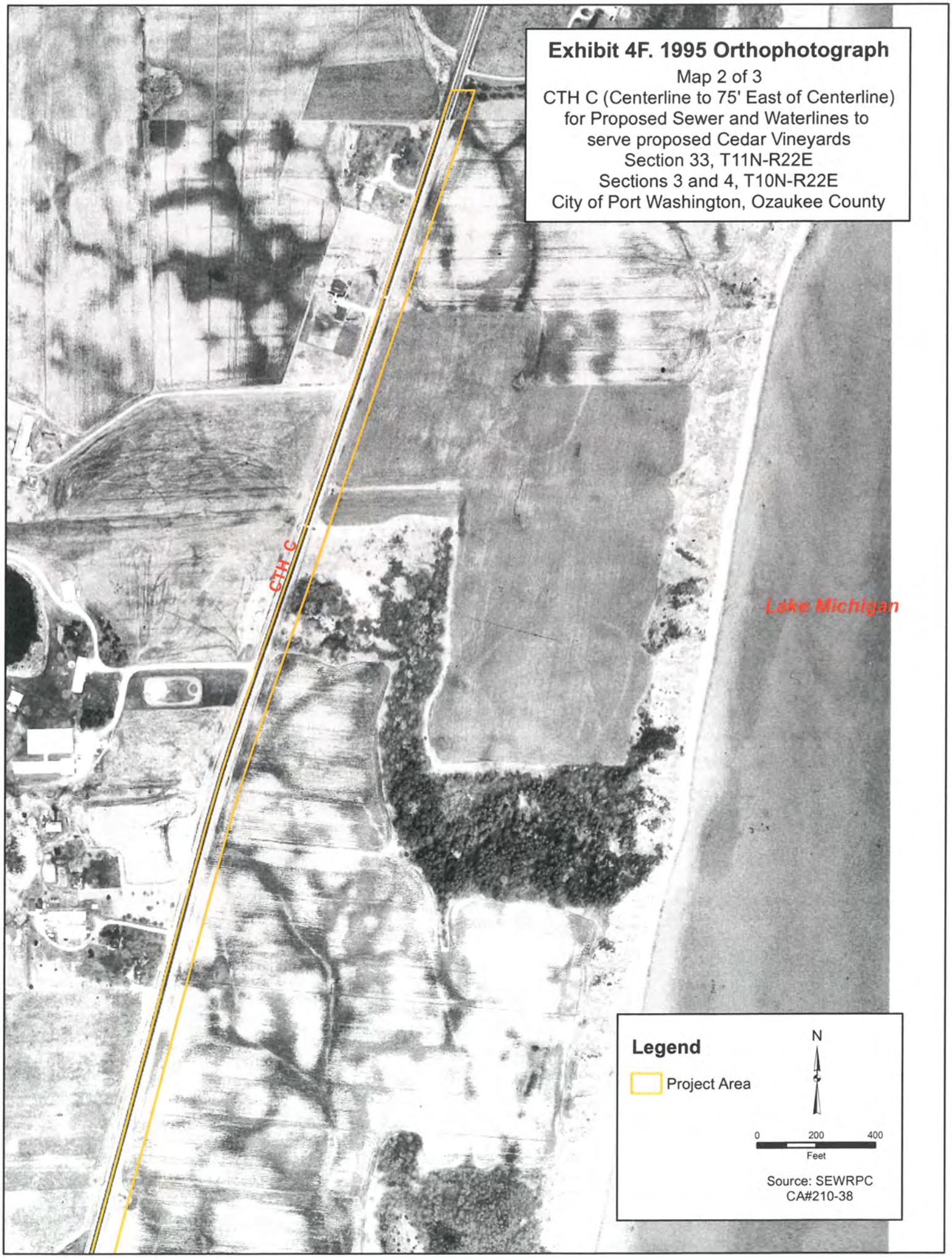
Exhibit 4F. 1995 Orthophotograph
Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38


Exhibit 4F. 1995 Orthophotograph
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Stonecroft Drive
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

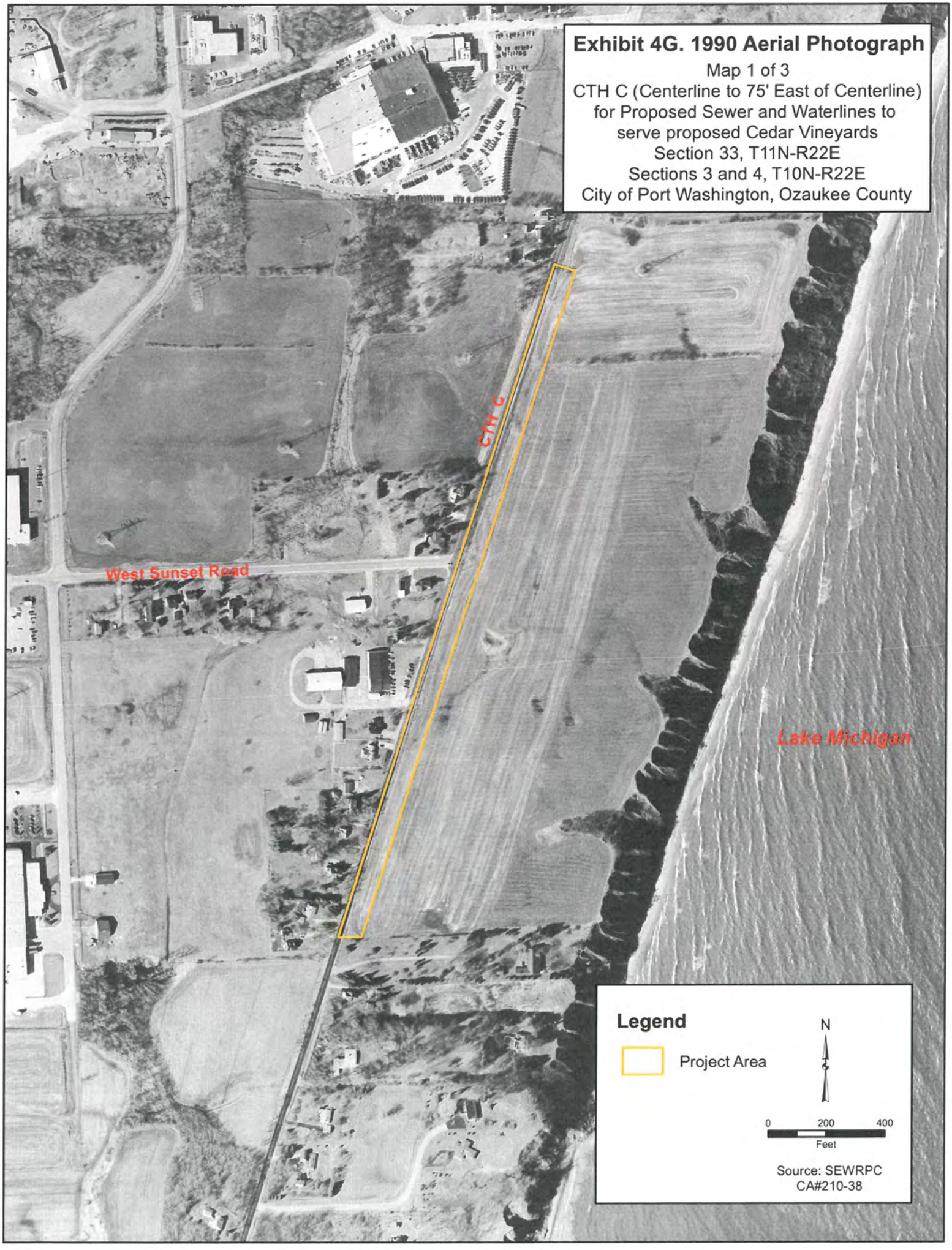
Exhibit 4G. 1990 Aerial Photograph
Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
West Sunset Road
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

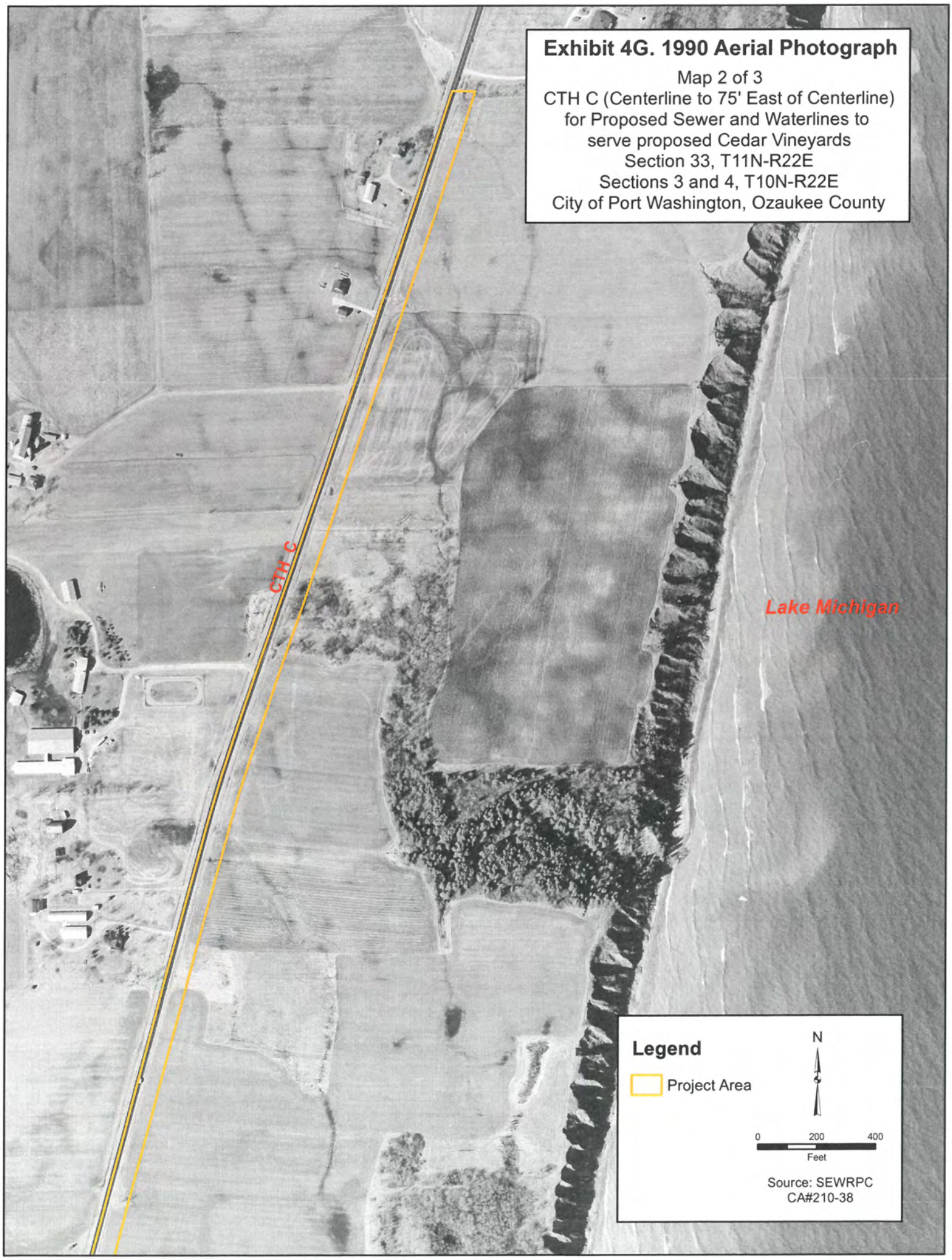
Exhibit 4G. 1990 Aerial Photograph
Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

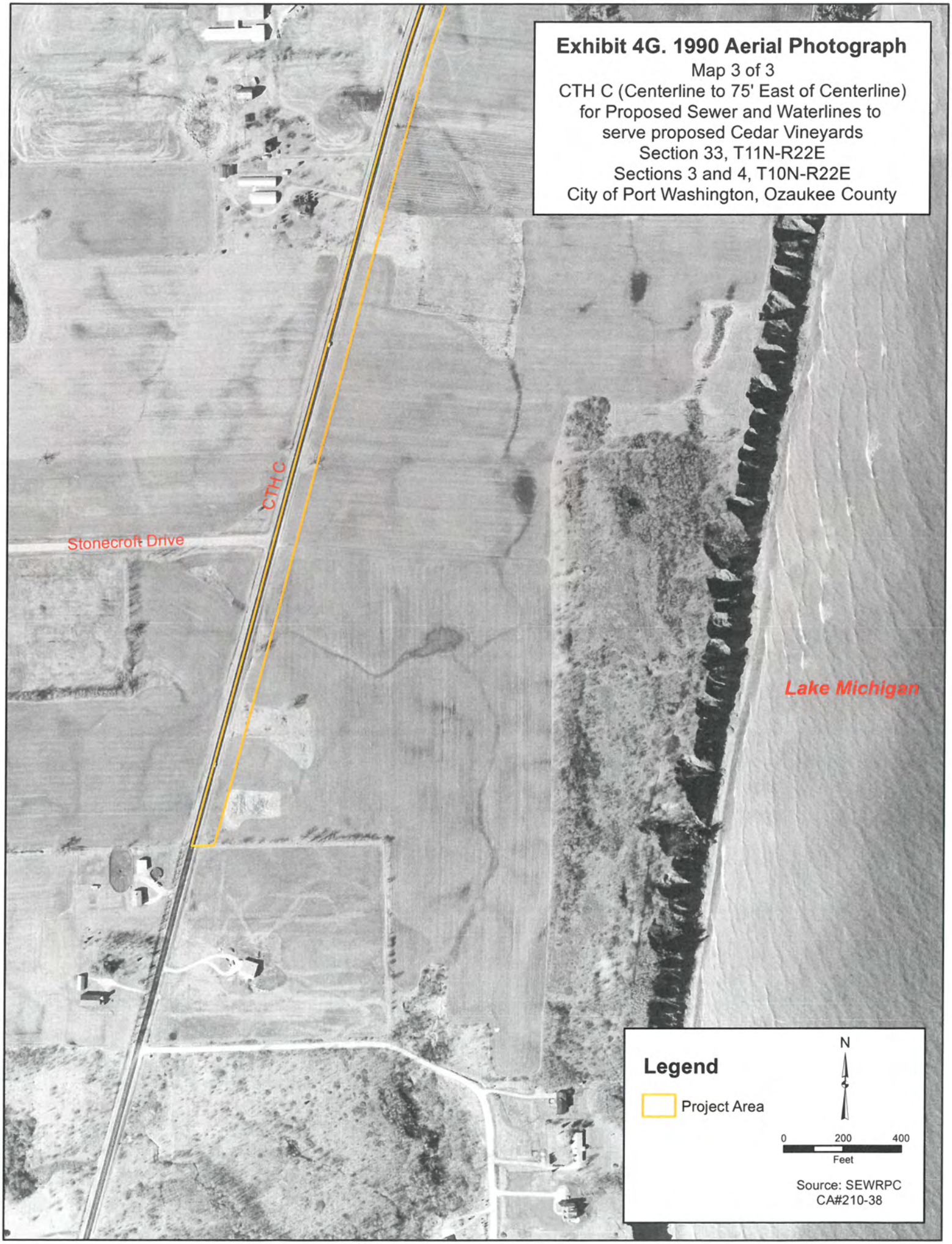
Exhibit 4G. 1990 Aerial Photograph
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Stonecroft Drive
Lake Michigan
Legend
Project Area
N
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200
400
Feet
Source: SEWRPC
CA#210-38

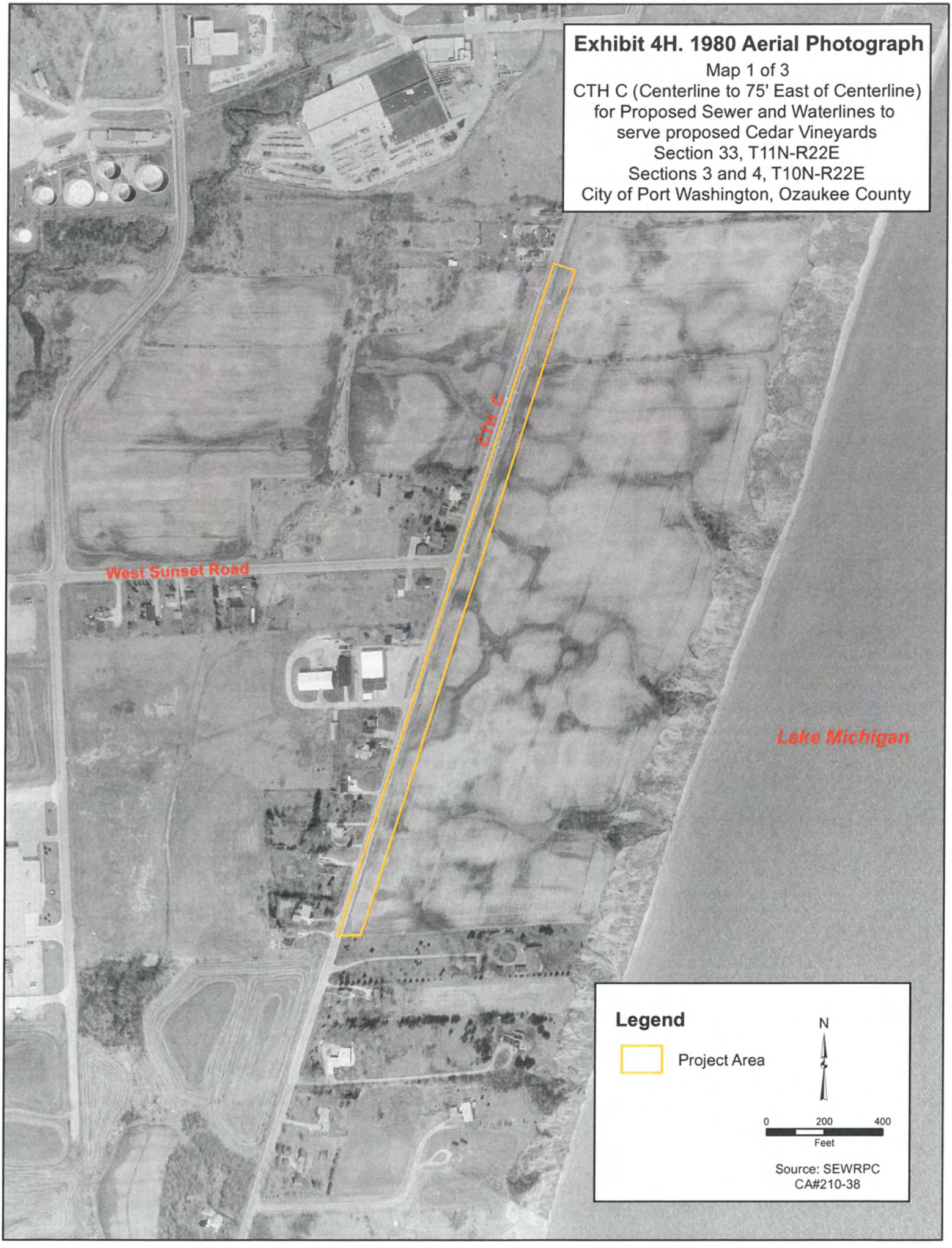
Exhibit 4H. 1980 Aerial Photograph
Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
West Sunset Road
Lake Michigan
Legend
Project Area
N
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Feet
Source: SEWRPC
CA#210-38

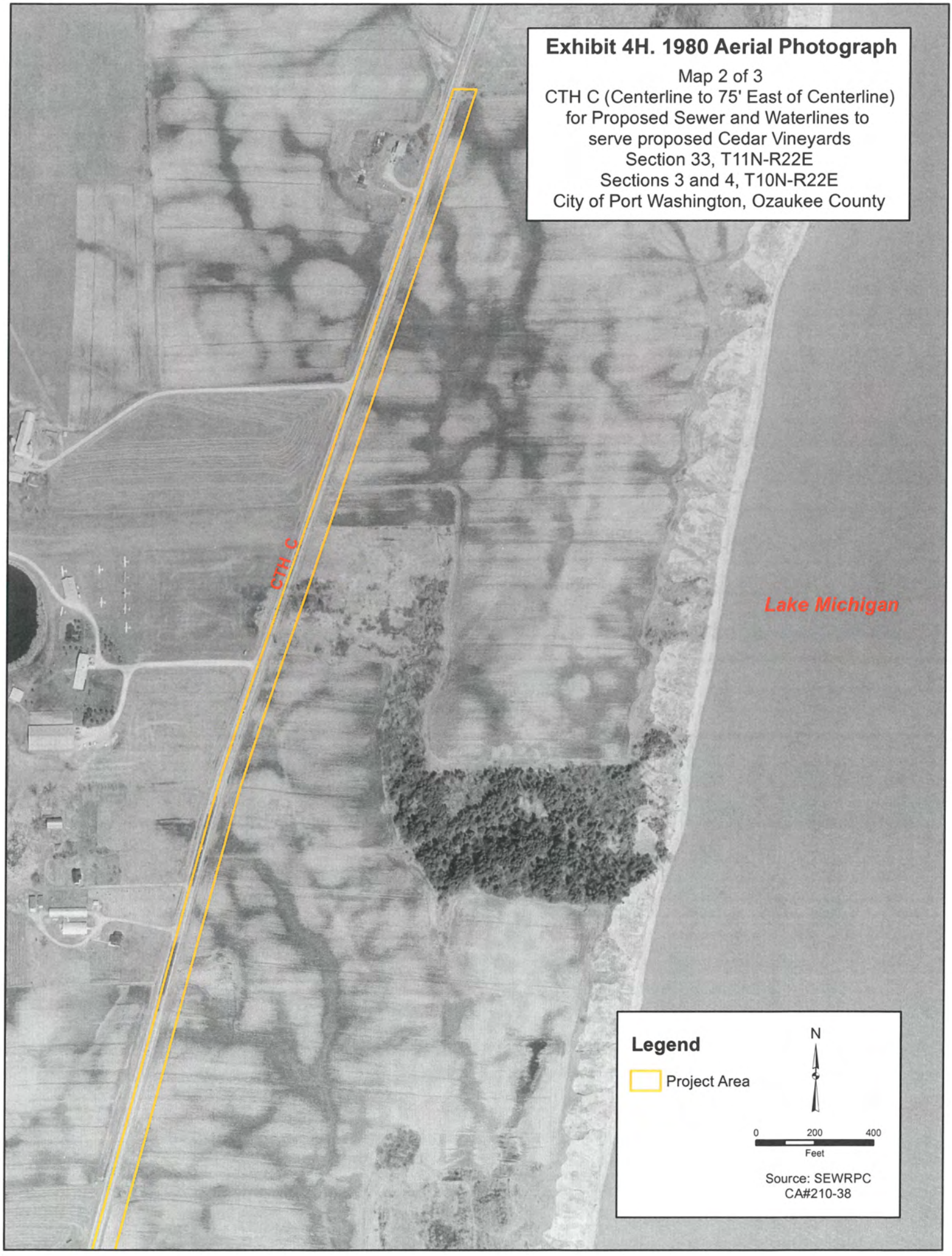
Exhibit 4H. 1980 Aerial Photograph
Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Lake Michigan
Legend
Project Area
N
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200
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Feet
Source: SEWRPC
CA#210-38

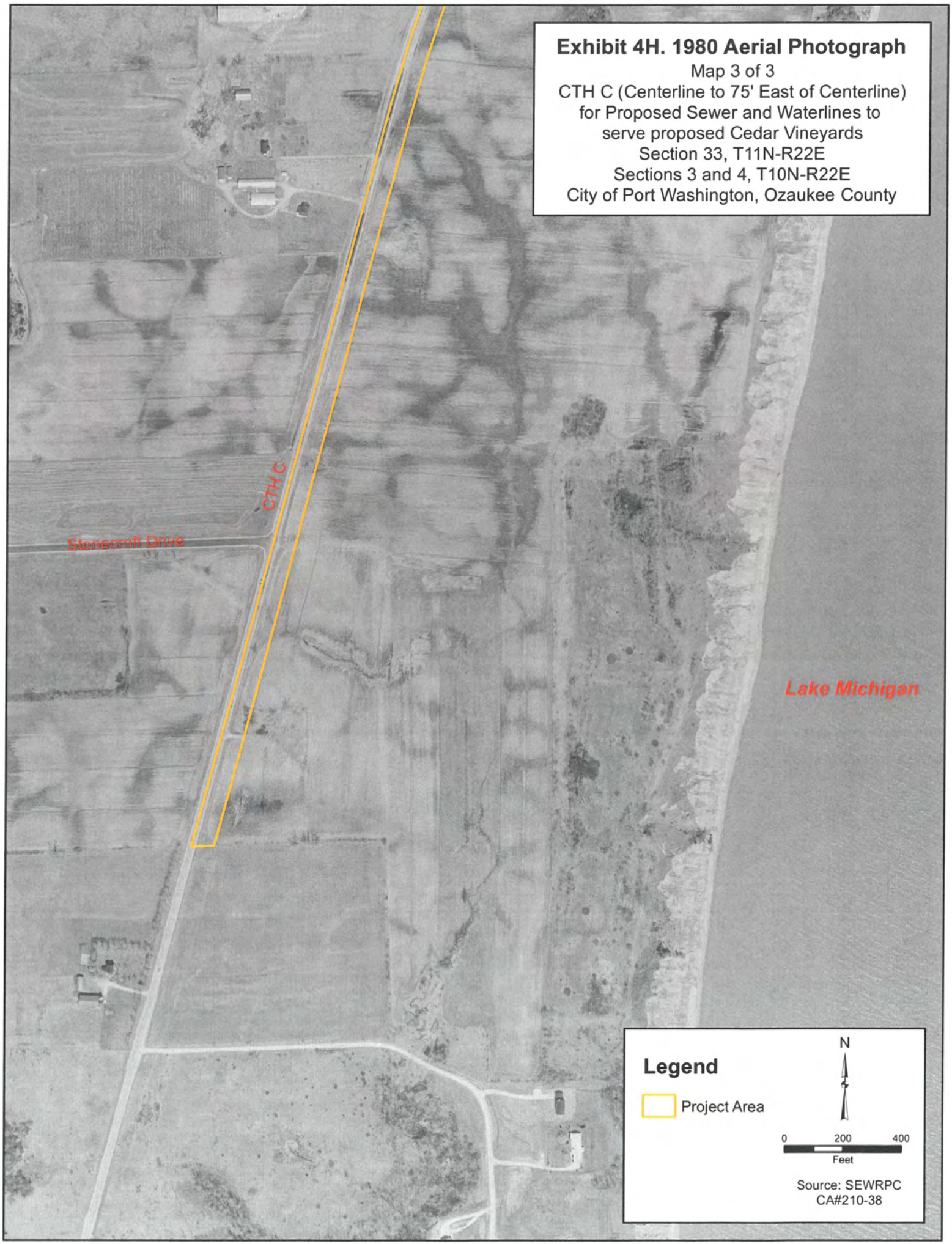
Exhibit 4H. 1980 Aerial Photograph
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Stonecroft Drive
Lake Michigan
Legend
Project Area
N
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200
400
Feet
Source: SEWRPC
CA#210-38

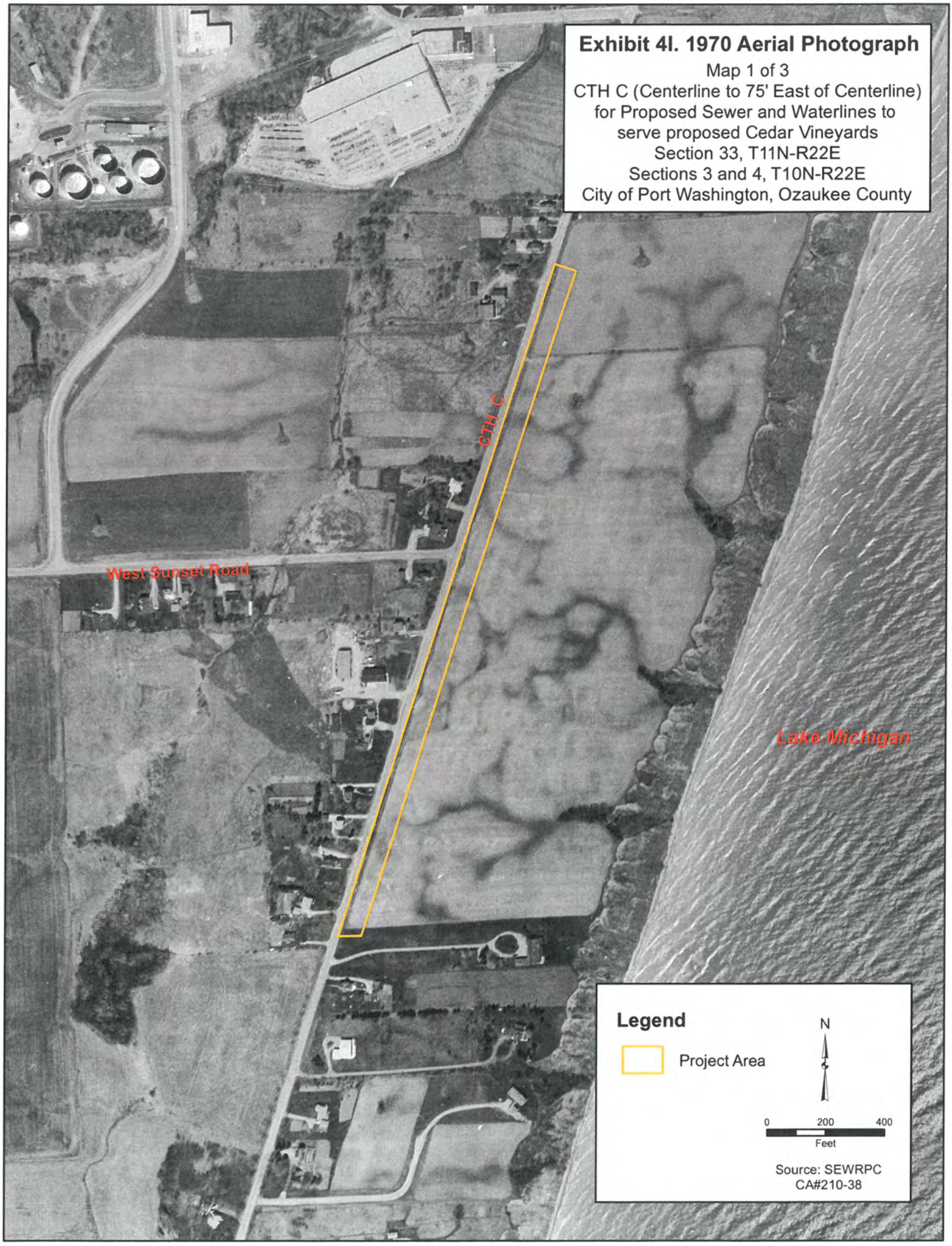


Exhibit 4I. 1970 Aerial Photograph
Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
West Sunset Road
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

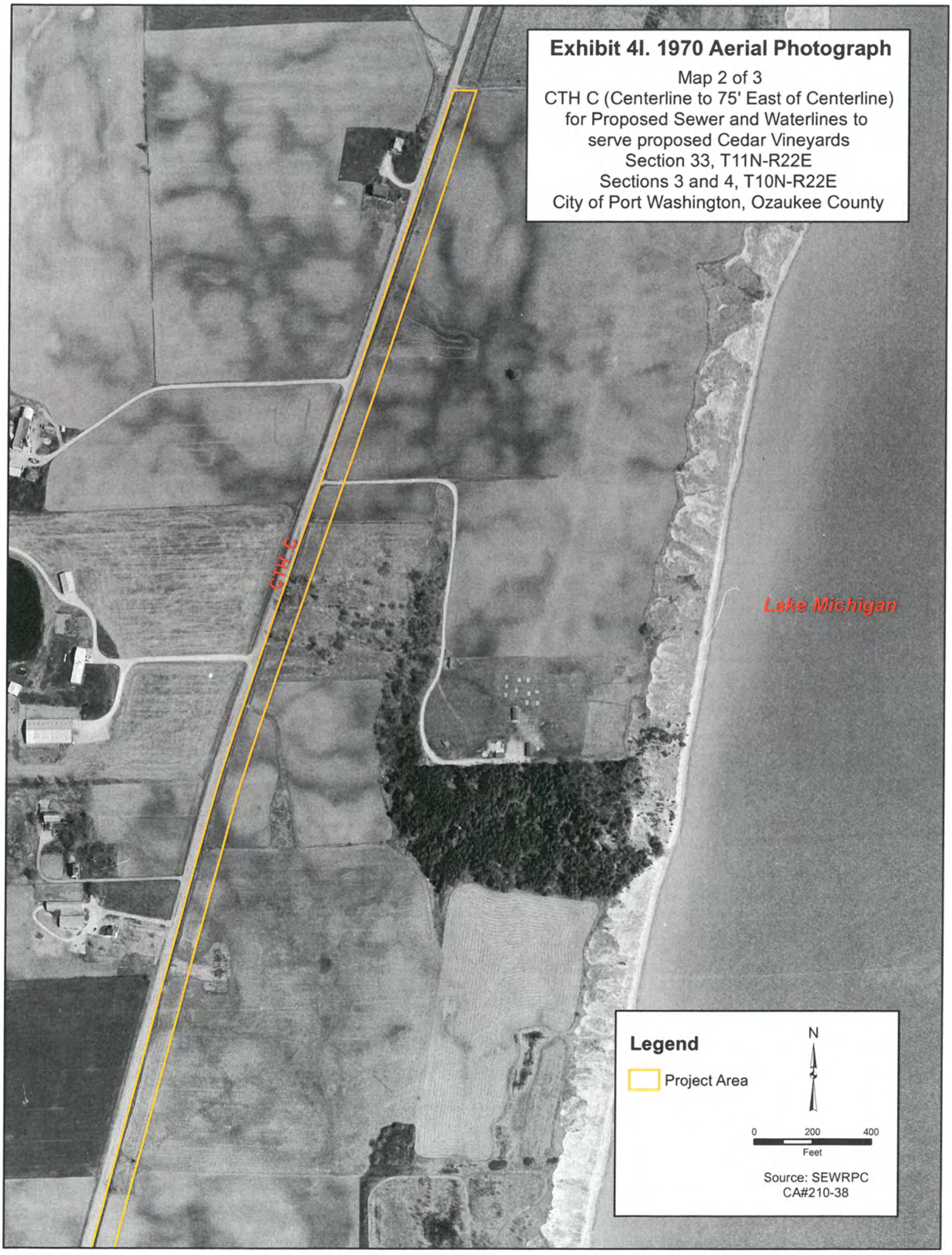


Exhibit 4I. 1970 Aerial Photograph
Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

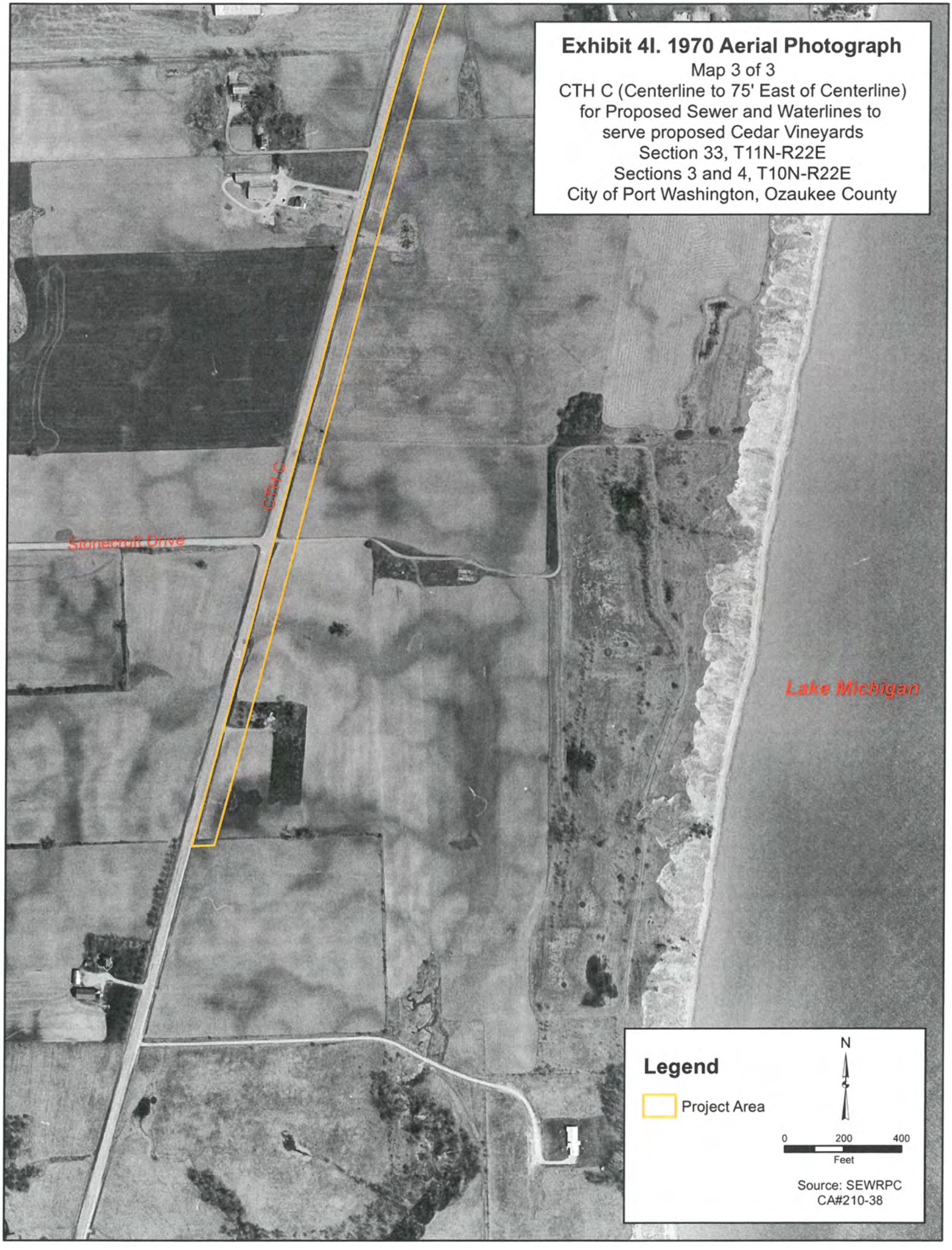


Exhibit 4I. 1970 Aerial Photograph
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Stonecroft Drive
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

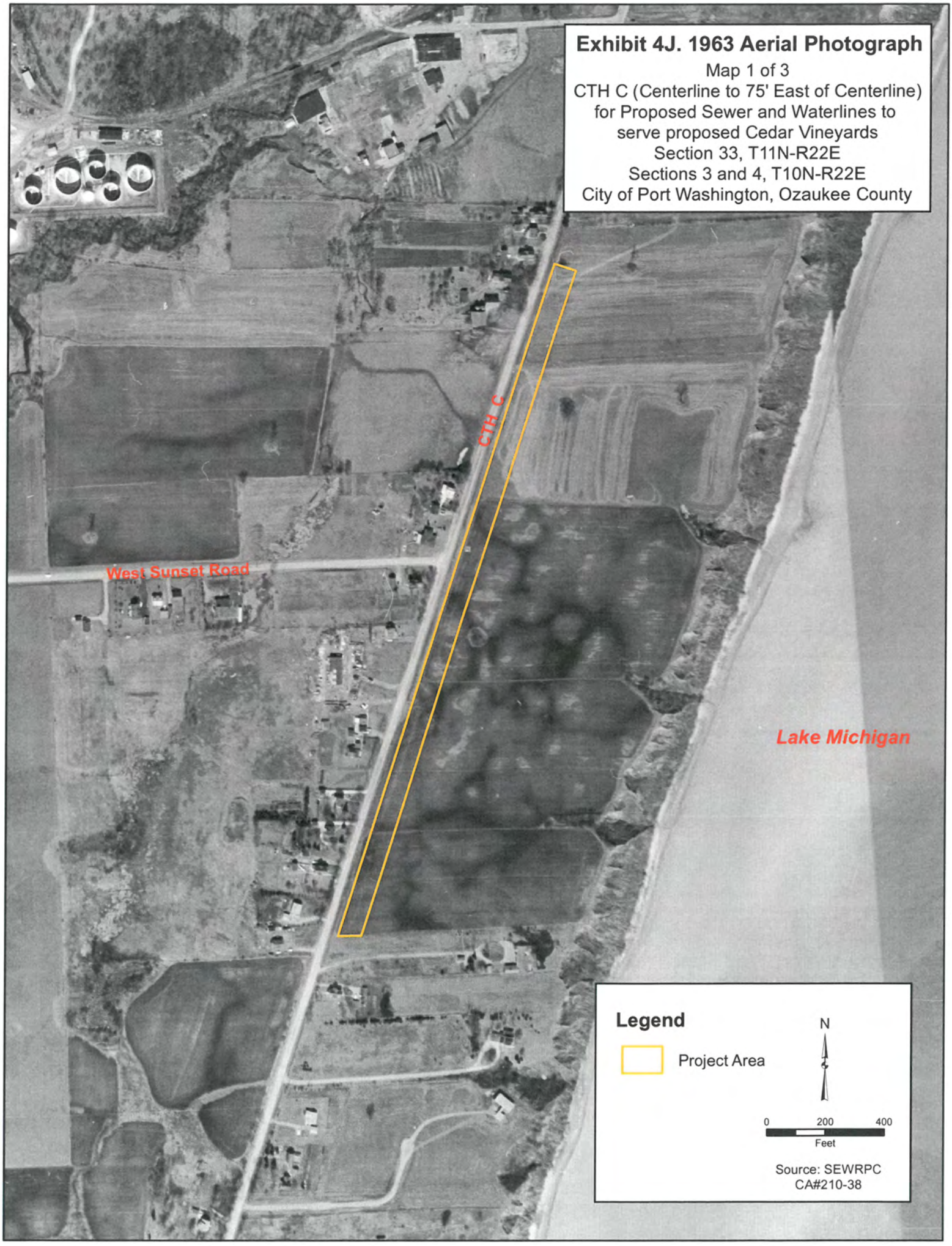


Exhibit 4J. 1963 Aerial Photograph
Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
West Sunset Road
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

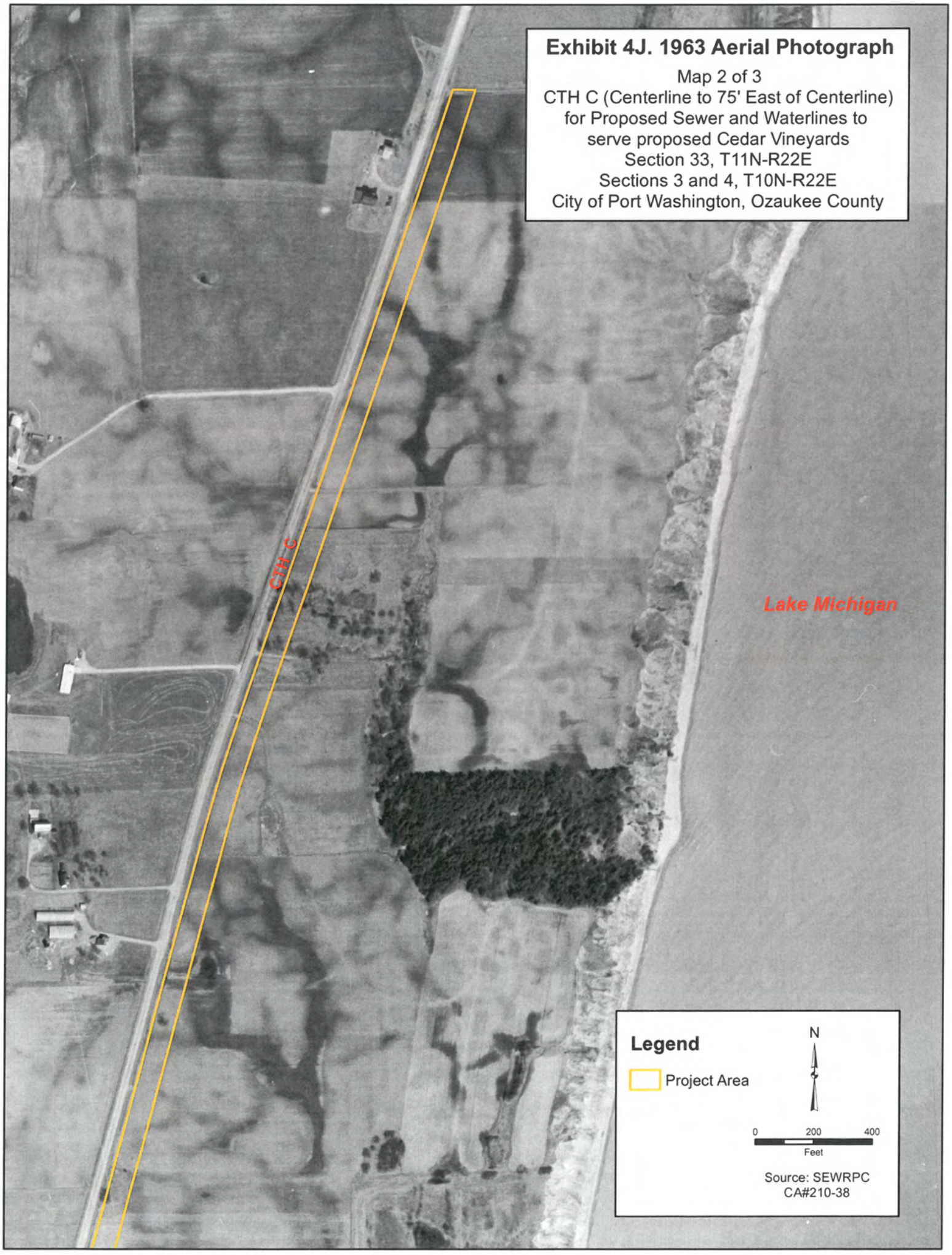


Exhibit 4J. 1963 Aerial Photograph
Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

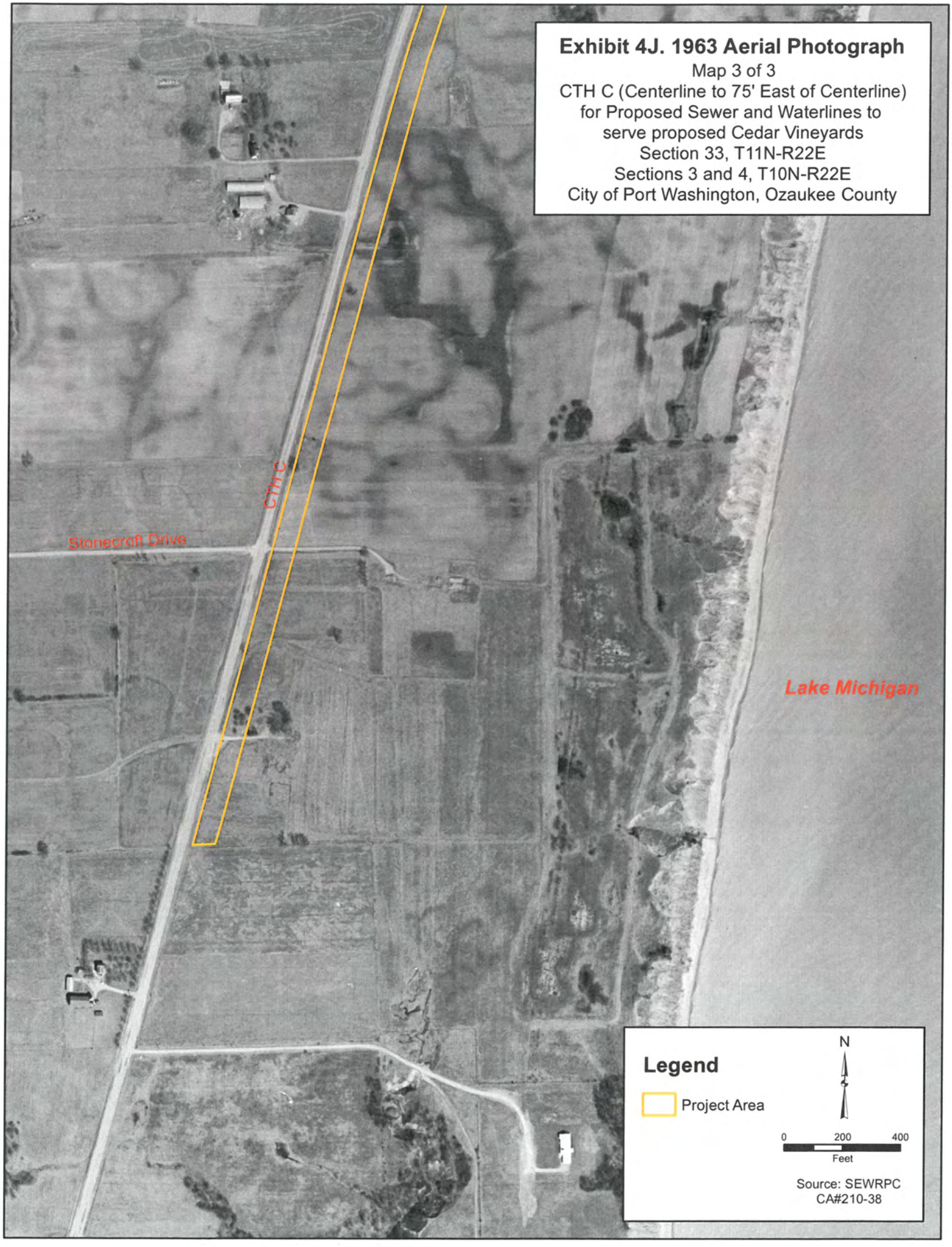


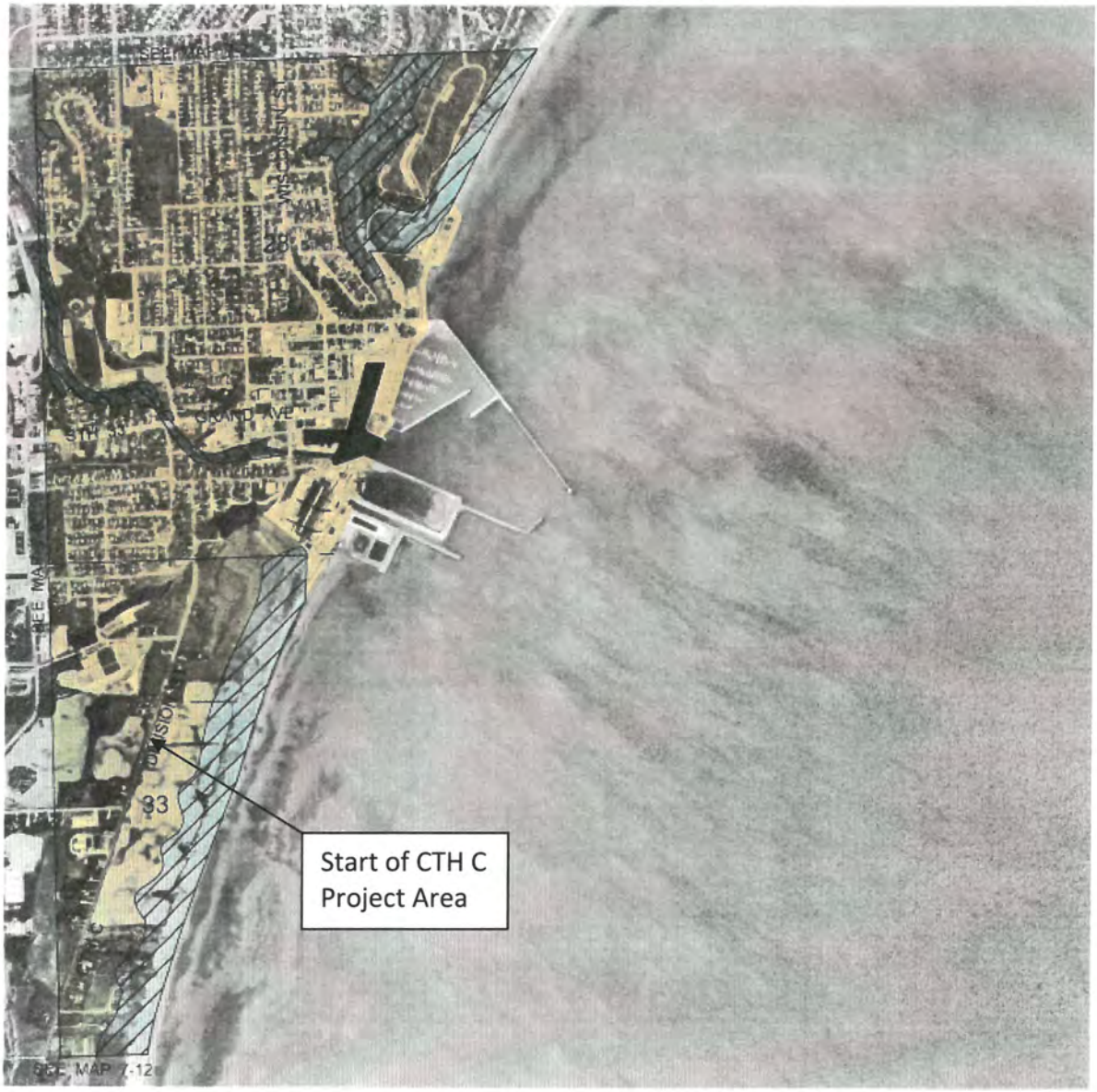
Exhibit 4J. 1963 Aerial Photograph
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
Stonecroft Drive
Lake Michigan
Legend
Project Area
N
0
200
400
Feet
Source: SEWRPC
CA#210-38

EXHIBIT 5A. Sanitary Sewer Service Map

CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE CITY OF PORT WASHINGTON AND ENVIRONS

U. S. Public Land Survey Sections 28 and 33
Township 11 North, Range 22 East



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
PLANNED SANITARY SEWER SERVICE AREA
LANDS WITHIN THE PLANNED SANITARY SEWER SERVICE AREA INELIGIBLE FOR SEWER SERVICE. ENVIRONMENTALLY SIGNIFICANT LANDS WHERE THE EXTENSION OF SEWERS TO SERVE NEW INTENSIVE URBAN DEVELOPMENT IS NOT PERMITTED. NEW SEWERED DEVELOPMENT IS CONFINED TO LIMITED RECREATIONAL AND INSTITUTIONAL USES AND RURAL-DENSITY RESIDENTIAL DEVELOPMENT IN UPLAND AREAS

GRAPHIC SCALE

Source: SEWRPC

EXHIBIT 5B. Sanitary Sewer Service Map

CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE CITY OF PORT WASHINGTON AND ENVIRONS

U. S. Public Land Survey Sections 3, 4, 9 and 10
Township 10 North, Range 22 East

PRIMARY ENVIRONMENTAL CORRIDOR

ISOLATED NATURAL RESOURCE AREA

WETLANDS AND SURFACE WATER AREAS LESS THAN FIVE ACRES IN SIZE

PLANNED SANITARY SEWER SERVICE AREA

GROSS SANITARY SEWER SERVICE AREA BOUNDARY

LANDS WITHIN THE PLANNED SANITARY SEWER SERVICE AREA INELIGIBLE FOR SEWER SERVICE: ENVIRONMENTALLY SIGNIFICANT LANDS WHERE THE EXTENSION OF SEWERS TO SERVE NEW INTENSIVE URBAN DEVELOPMENT IS NOT PERMITTED. NEW SEWERED DEVELOPMENT IS CONFINED TO LIMITED RECREATIONAL AND INSTITUTIONAL USES AND RURAL DENSITY RESIDENTIAL DEVELOPMENT IN UPLAND AREAS

GRAPHIC SCALE

Source: SEWRPC

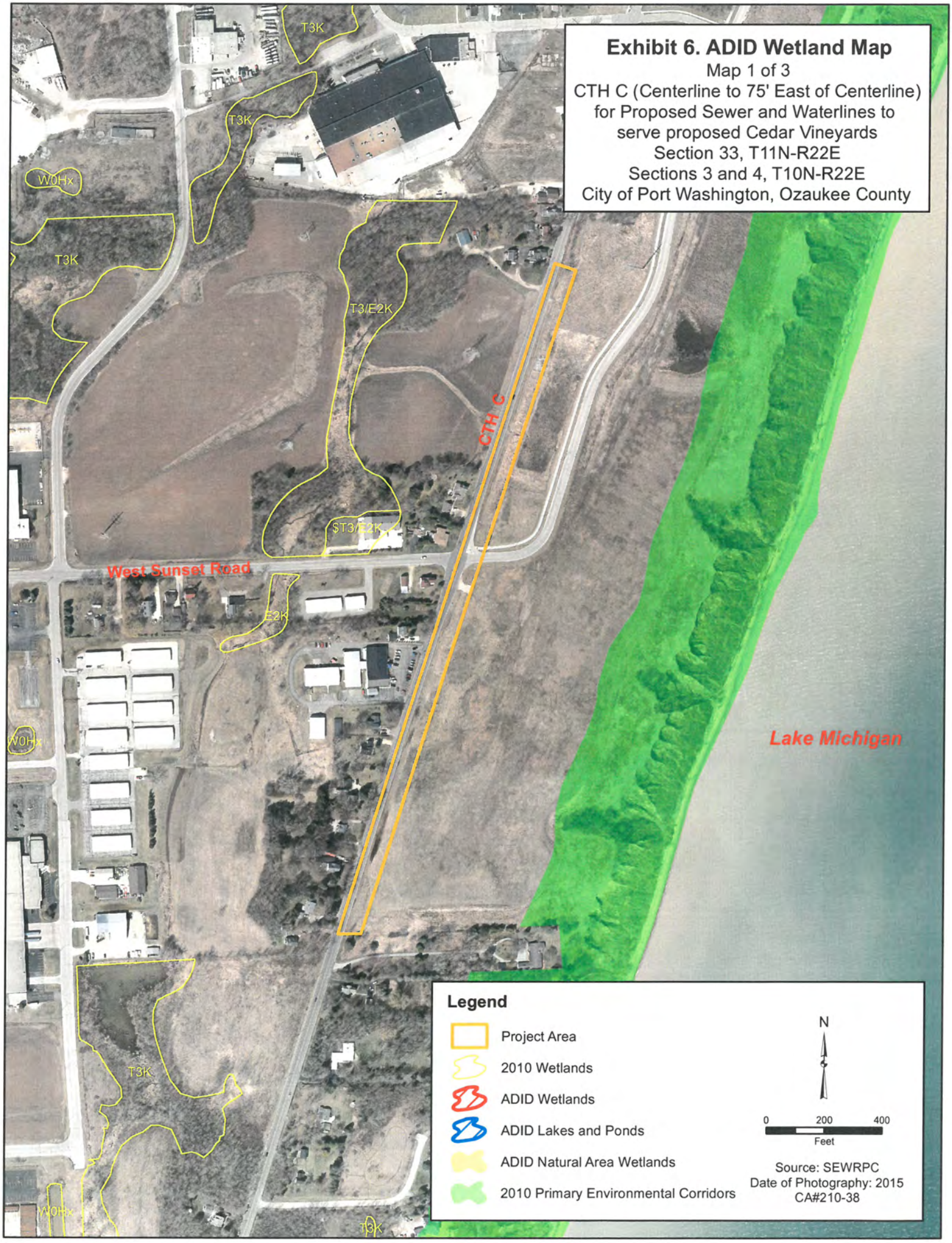


Exhibit 6. ADID Wetland Map
Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
T3K
T3K
W0Hx
T3K
T3/E2K
CTH C
$T3/E2K
West Sunset Road
E2K
W0Hx
Lake Michigan
T3K
W0Hx
T3K
Legend
Project Area
2010 Wetlands
ADID Wetlands
ADID Lakes and Ponds
ADID Natural Area Wetlands
2010 Primary Environmental Corridors
N
0
200
400
Feet
Source: SEWRPC
Date of Photography: 2015
CA#210-38


Exhibit 6. ADID Wetland Map
Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
E2K
S3/E2K
F0Kf
F0Kf
F0Kf
F0Kf
F0Kf
F0Kf
S3/E2K
S3K
S3K
W0Hx
CTH C
Lake Michigan
F0Kf
S3/E2K
E0Kf
S3K
Legend
Project Area
2010 Wetlands
ADID Wetlands
ADID Lakes and Ponds
ADID Natural Area Wetlands
2010 Primary Environmental Corridors
N
0
200
400
Feet
Source: SEWRPC
Date of Photography: 2015
CA#210-38

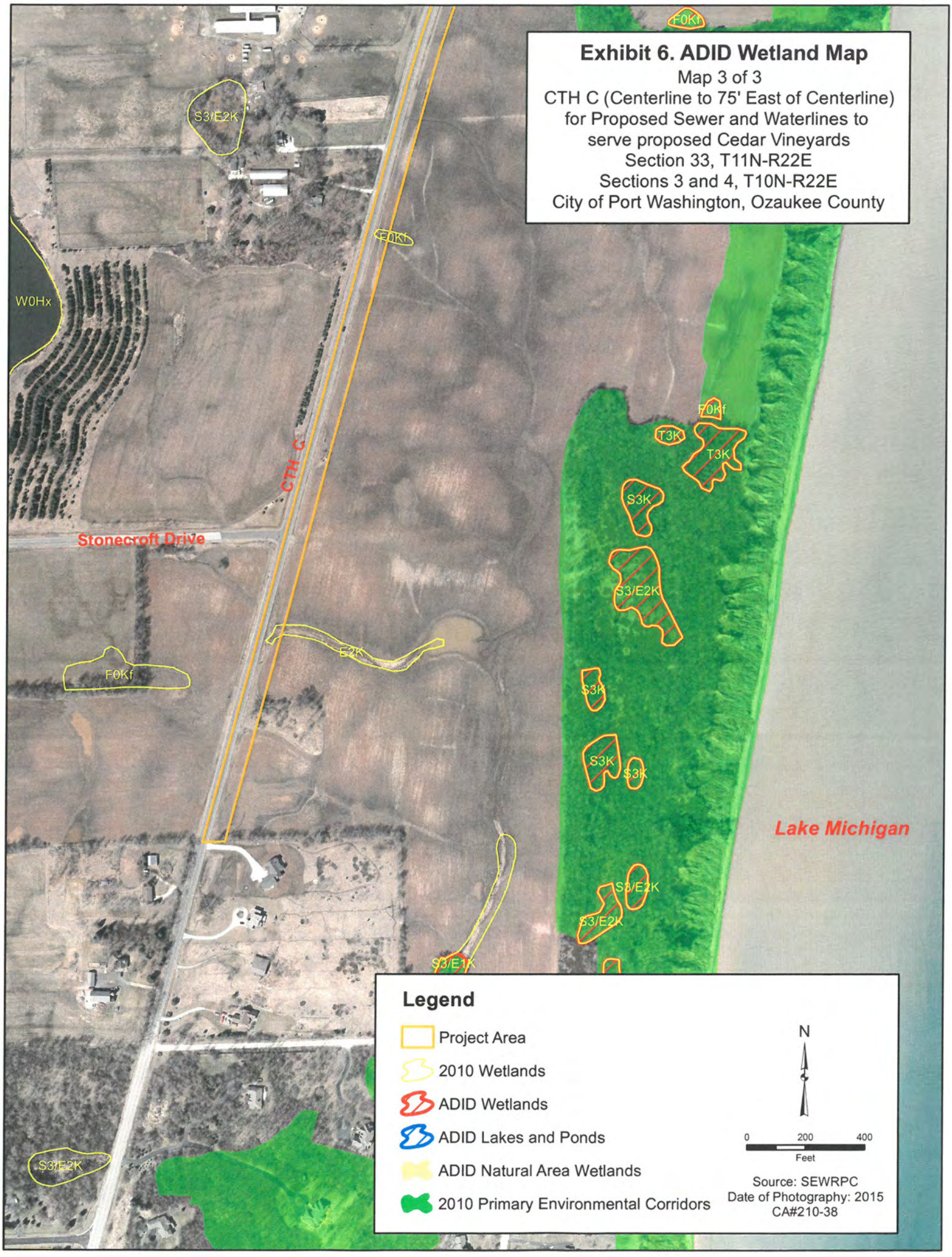


Exhibit 6. ADID Wetland Map
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
F0Kf
S3/E2K
E0Kf
W0Hx
CTH C
Stonecroft Drive
F0Kf
T3K
T3K
S3K
S3/E2K
E2K
F0Kf
S3K
S3K
S3k
Lake Michigan
S3/E2K
S3/E2K
S3/E1K
S3/E2K
Legend
Project Area
2010 Wetlands
ADID Wetlands
ADID Lakes and Ponds
ADID Natural Area Wetlands
2010 Primary Environmental Corridors
N
0
200
400
Feet
Source: SEWRPC
Date of Photography: 2015
CA#210-38

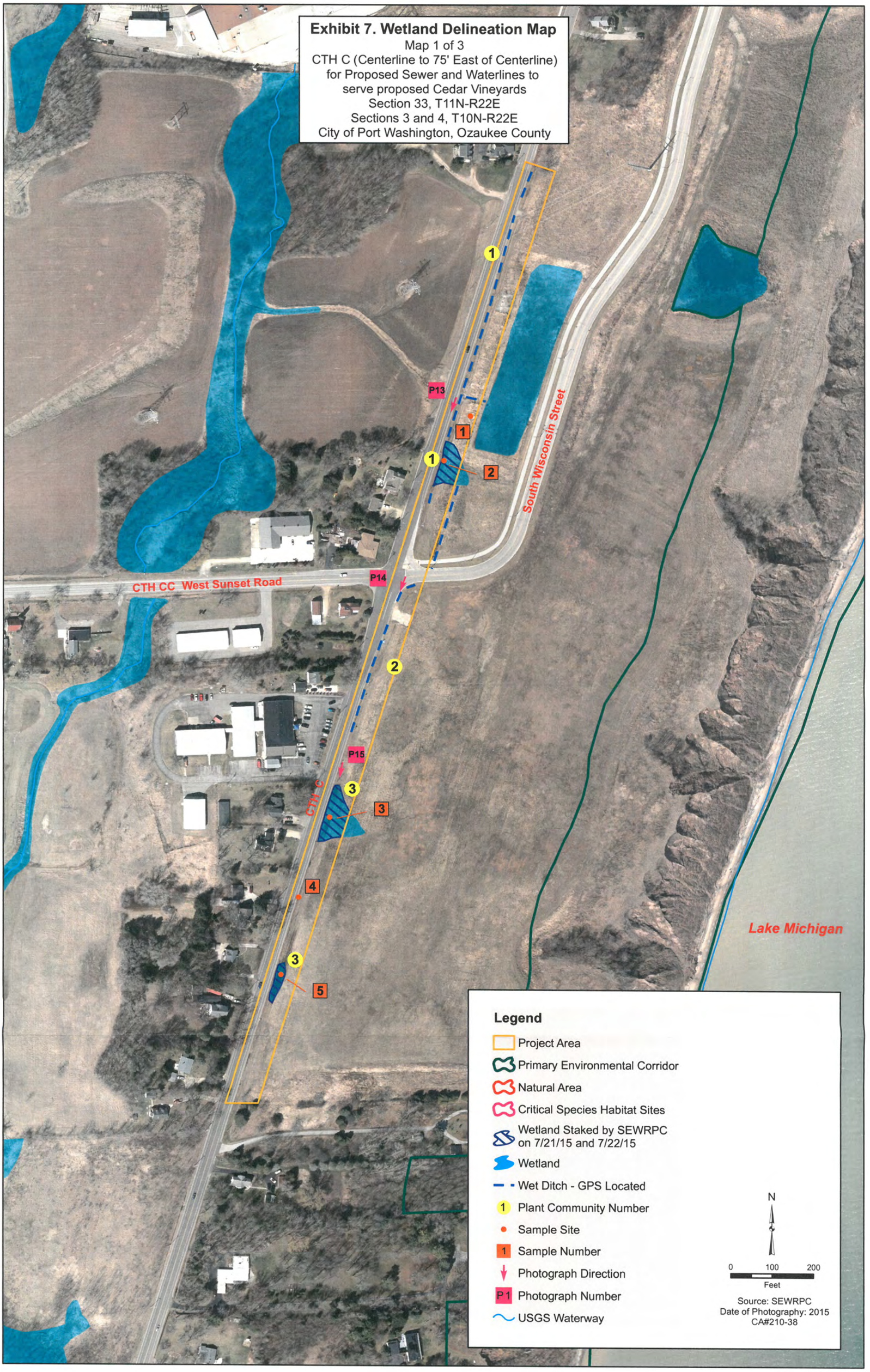


Exhibit 7. Wetland Delineation Map
Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
South Wisconsin Street
CTH CC West Sunset Road
CTH C
Lake Michigan
P13
P14
P15
1
2
3
4
5
Legend
Project Area
Primary Environmental Corridor
Natural Area
Critical Species Habitat Sites
Wetland Staked by SEWRPC on 7/21/15 and 7/22/15
Wetland
Wet Ditch - GPS Located
Plant Community Number
Sample Site
Sample Number
Photograph Direction
Photograph Number
USGS Waterway
N
0
100
200
Feet
Source: SEWRPC
Date of Photography: 2015
CA#210-38

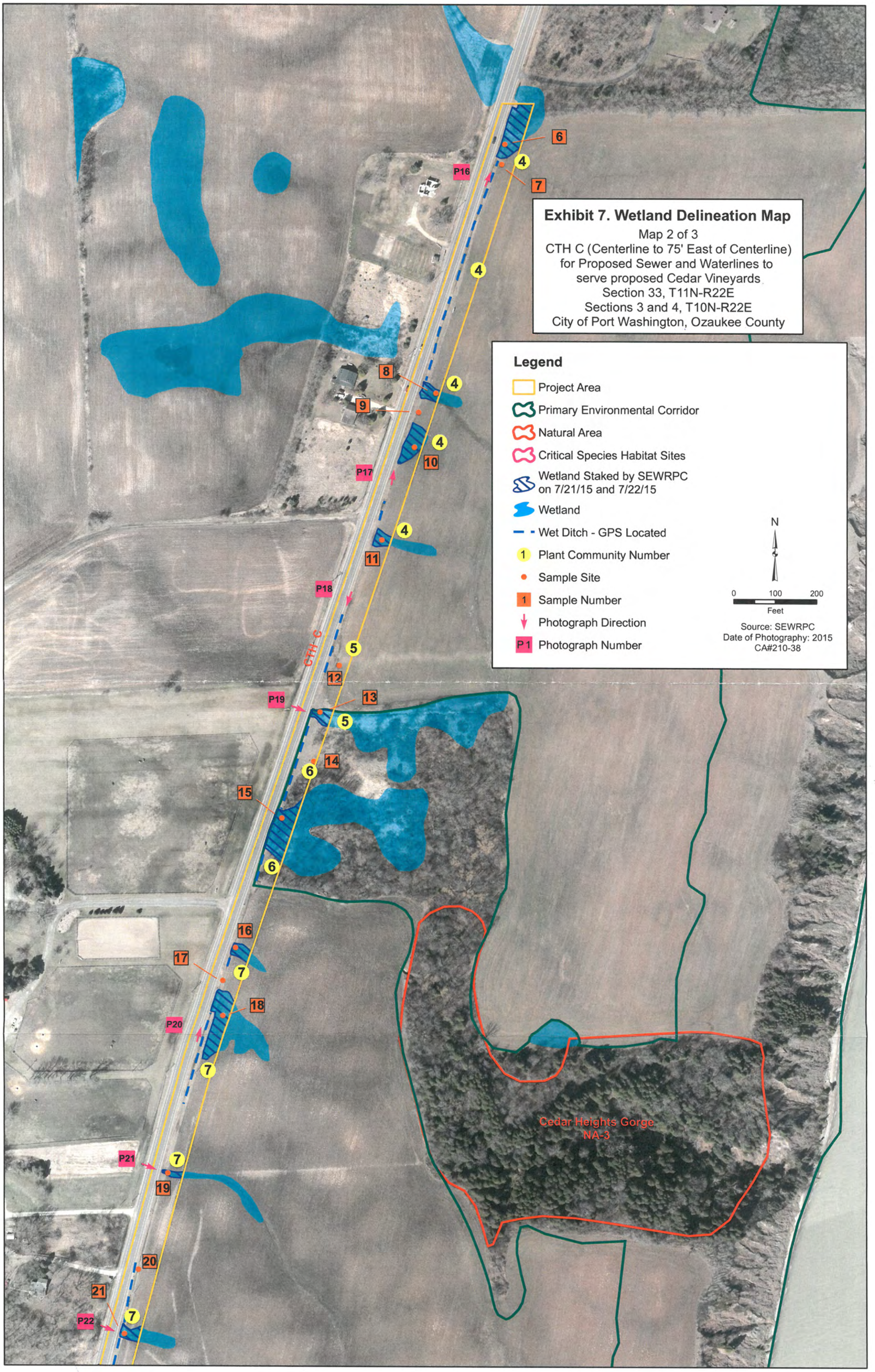


Exhibit 7. Wetland Delineation Map
Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
Legend
Project Area
Primary Environmental Corridor
Natural Area
Critical Species Habitat Sites
Wetland Staked by SEWRPC on 7/21/15 and 7/22/15
Wetland
Wet Ditch - GPS Located
Plant Community Number
Sample Site
Sample Number
Photograph Direction
Photograph Number
N
0
100
200
Feet
Source: SEWRPC
Date of Photography: 2015
CA#210-38
CTH C
Cedar Heights Gorge
NA-3
P16
P17
P18
P19
P20
P21
P22

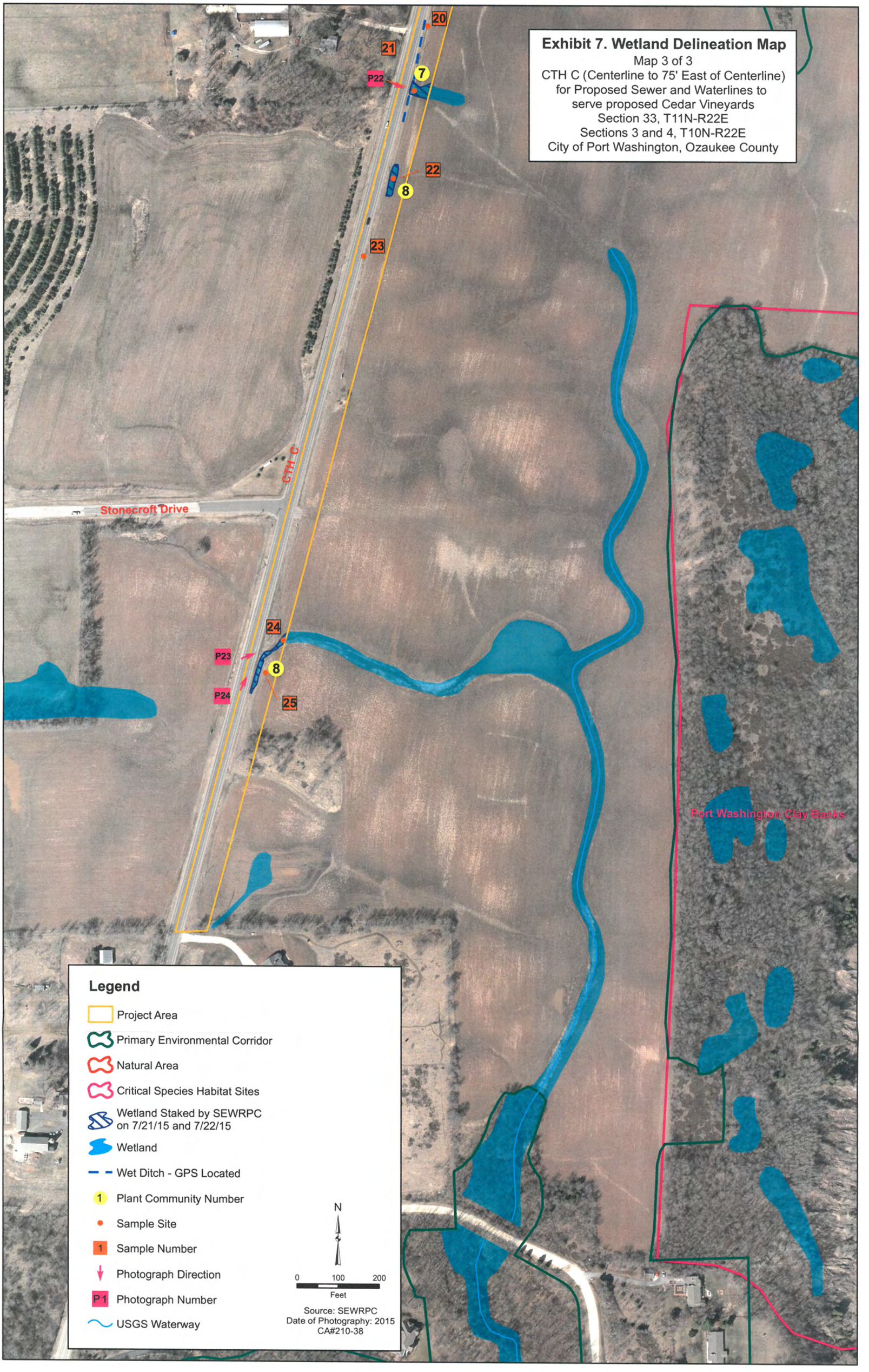


Exhibit 7. Wetland Delineation Map
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
20
21
P22
7
22
8
23
CTH C
Stonecroft Drive
24
P23
8
P24
25
Port Washington Clay Banks
Legend
Project Area
Primary Environmental Corridor
Natural Area
Critical Species Habitat Sites
Wetland Staked by SEWRPC on 7/21/15 and 7/22/15
Wetland
Wet Ditch - GPS Located
1 Plant Community Number
Sample Site
1 Sample Number
Photograph Direction
P1 Photograph Number
USGS Waterway
N
0 100 200
Feet
Source: SEWRPC
Date of Photography: 2015
CA#210-38

SVY4202
CA210-38

EXHIBIT 8

PRELIMINARY VEGETATION SURVEY
CTH C (CENTERLINE TO 75' EAST OF CENTERLINE)
FOR PROPOSED SEWER AND WATERLINES TO SERVE PROPOSED CEDAR VINEYARDS

Dates: July 21 and 22, 2015

Observers: Daniel L. Carter, Ph.D., Principle Biologist
Christopher J. Jors, Senior Biologist
Jennifer Dietl, Biologist
Southeastern Wisconsin Regional Planning Commission

Location: City of Port Washington in parts of U.S. Public Land Survey Section 33, Township 11 North, Range 22 East; and in parts of U.S. Public Land Survey Sections 3 and 4, Township 10 North, Range 22 East, Ozaukee County, Wisconsin.

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

Co-Dominant Species

Acer negundo--Boxelder
Carex granularis--Pale sedge
Carex molesta--Sedge
Carex stipata--Common fox sedge
Equisetum arvense--Common horsetail
Fraxinus pennsylvanica--Green ash
Geum aleppicum--Yellow avens
Populus deltoides--Cottonwood
Rosa blanda--Wild rose
Salix amygdaloides--Peach-leaved willow
Salix interior--Sandbar willow
Solidago altissima--Tall goldenrod
Solidago gigantea--Giant goldenrod
Symphyotrichum novae-angliae--New England aster
***Toxicodendron rydbergii*--Poison ivy**
Vitis riparia--Riverbank grape

NON-Native Plants

***Agrostis gigantea*--Redtop grass**
Agrostis stolonifera--Creeping bentgrass
Cirsium arvense--Canada thistle
Daucus carota--Queen Anne's lace
Lonicera X bella--Hybrid honeysuckle
***Phalaris arundinacea*--Reed canary grass**
Poa pratensis--Kentucky bluegrass
Sonchus arvensis--Sow thistle
Typha angustifolia--Narrow-leaved cat-tail

Plant Community Area No. 1 continued

Total number of plant species: 25
Number of alien, or non-native, plant species: 9 (36 percent)

This approximately 0.1-acre wetland plant community area consists of fresh (wet) meadow and a constructed roadside ditch with fresh (wet) meadow. Disturbances to the plant community area include filling, excavation of a stormwater detention pond, side casting of dredge spoil material, 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 Plants

Carex molesta--Sedge
Equisetum arvense--Common horsetail
***Juncus bufonius*--Toad rush**
Juncus dudleyi--Dudley's rush
Potentilla anserina--Silverweed

NON-Native Plants

***Agrostis gigantea*--Redtop grass**
Anagallis arvensis--Scarlet pimpermel
Hordeum jubatum--Squirreltail
***Phalaris arundinacea*--Reed canary grass**
***Poa pratensis*--Kentucky bluegrass**
Puccinellia distans--Alkali grass
Rumex crispus--Curly dock
Salix fragilis--Crack willow
Schedonorus arundinaceous--Tall fescue
Trifolium hybridum--Alsike clover
Trifolium pratense--Red clover
Typha angustifolia--Narrow-leaved cat-tail

Total number of plant species: 17
Number of alien, or non-native, plant species: 12 (71 percent)

This approximately 0.001-acre plant community area is part of a constructed roadside ditch with fresh (wet) meadow. Disturbances to the plant community area include filling, 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. 3 – Native Plants

Fraxinus pennsylvanica--Green ash
Juncus dudleyi--Dudley's rush
Potentilla anserina--Silverweed

NON-Native Plants

Agrostis gigantea--Redtop grass
***Agrostis stolonifera*--Creeping bentgrass**
Bromus inermis--Smooth brome grass
Cirsium arvense--Canada thistle
Elymus repens--Quack grass
***Phalaris arundinacea*--Reed canary grass**
***Poa pratensis*--Kentucky bluegrass**
***Schedonorus pratensis*--Tall fescue**
***Typha angustifolia*--Narrow-leaved cat-tail**

Total number of plant species: 12
Number of alien, or non-native, plant species: 9 (75 percent)

These approximately 0.14 and 0.04-acre wetland plant community areas consists of atypical (farmed) wetland and fresh (wet) meadow. Disturbances to the plant community area include agricultural land management activities, 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 Plants

Ambrosia artemisiifolia--Common ragweed
Carex cristatella--Crested sedge
Carex stipata--Common fox sedge
***Fraxinus pennsylvanica*--Green ash**
***Juncus bufonius*--Toad rush**
Juncus dudleyi--Dudley's rush
Juncus effusus--Common rush
Polygonum erectum--Erect knotweed
Scirpus atrovirens--Green bulrush
Solidago gigantea--Giant goldenrod
***Toxicodendron rydbergii*--Poison ivy**

NON-Native Plants

Agrostis gigantea--Redtop grass
Anagallis arvensis--Scarlet pimpermel
Atriplex patula--Common orach
Barbarea vulgaris--Yellow rocket
Bromus inermis--Smooth brome grass
Centaurium pulchellum--Centaury
Cirsium arvense--Canada thistle

PCA No. 4 NON-Native Plants continued

Daucus carota--Queen Anne's lace
Echinochloa crusgalli--Barnyard grass
Elymus repens--Quack grass
***Phalaris arundinacea*--Reed canary grass**
Poa compressa--Canada bluegrass
***Poa pratensis*--Kentucky bluegrass**
***Puccinellia distans*--Alkali grass**
Ranunculus acris--Tall buttercup
Schedonorus arundinaceous--Tall fescue
Sonchus arvensis--Sow thistle
***Triticum aestivum*—Wheat (planted)**
Typha angustifolia--Narrow-leaved cat-tail

Total number of plant species: 31
Number of alien, or non-native, plant species: 19 (61 percent)

These approximately 0.14, 0.03, 0.08, and 0.03-acre plant community areas consist of atypical (farmed) wetland, fresh (wet) meadow, second growth, Southern wet to wet-mesic lowland hardwoods, and constructed roadside ditches with fresh (wet) meadow. Disturbances to the plant community area include mowing, water level changes due to ditching and draining, and agricultural land management activities such as plowing. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 5 – Native Plants

Cornus alba--Red-osier dogwood
Fraxinus pennsylvanica--Green ash
Solidago altissima--Tall goldenrod
***Solidago gigantea*--Giant goldenrod**

NON-Native Plants

***Phalaris arundinacea*--Reed canary grass**
Poa pratensis--Kentucky bluegrass
Vicia cracca--Vetch

Total number of plant species: 7
Number of alien, or non-native, plant species: 3 (43 percent)

This approximately 0.03-acre plant community area is part of a larger wetland complex and consists of fresh (wet) meadow and a constructed roadside ditch with fresh (wet) meadow. Disturbances to the plant community area include water level changes due to ditching and draining, and agricultural land management activities including plowing along the wetland edge. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 6 – Native Plants

***Carex vulpinoidea*--Fox sedge**
***Fraxinus pennsylvanica*--Green ash**
***Geum canadense*--White avens**
***Impatiens capensis*--Jewelweed**
***Juncus dudleyi*--Dudley's rush**
Prunus virginiana--Chokecherry
Tilia americana--Basswood

NON-Native Plants

Lonicera X bella--Hybrid honeysuckle
Rhamnus cathartica--Common buckthorn
Typha angustifolia--Narrow-leaved cat-tail
Viburnum opulus--European highbush-cranberry

Total number of plant species: 11
Number of alien, or non-native, plant species: 4 (36 percent)

This approximately 0.14-acre plant community area is part of a larger wetland complex and consists of second growth, Southern wet to wet-mesic lowland hardwoods and a constructed roadside ditch with fresh (wet) meadow. Disturbances to the plant community area include 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. 7 – Native Plants

Ambrosia artemisiifolia--Common ragweed
Carex cristatella--Crested sedge
Carex stipata--Common fox sedge
Carex vulpinoidea--Fox sedge
Chenopodium album—Lamb's quarters
Epilobium coloratum--Willow-herb
Equisetum arvense--Common horsetail
Fraxinus pennsylvanica--Green ash
Juncus dudleyi--Dudley's rush
Polygonum erectum--Erect knotweed
Ranunculus sceleratus--Cursed crowfoot
Vitis riparia--Riverbank grape

NON-Native Plants

Agrostis stolonifera--Creeping bentgrass
Ambrosia artemisiifolia--Common ragweed
Atriplex patula--Common orach
Barbarea vulgaris--Yellow rocket
Cirsium arvense--Canada thistle
Daucus carota--Queen Anne's lace
Echinochloa crusgalli--Barnyard grass

PCA 7 – NON-Native Plants continued

Elymus repens--Quack grass
Lolium perenne--English rye grass
Persicaria maculosa--Lady's thumb
***Phalaris arundinacea*--Reed canary grass**
Poa pratensis--Kentucky bluegrass
Puccinellia distans--Alkali grass
Sonchus arvensis--Sow thistle
Tanacetum vulgare--Tansy
Taraxacum officinale--Common dandelion
Trifolium repens--White clover
Zea mays--Domestic corn (planted)

Total number of plant species: 29
Number of alien, or non-native, plant species: 18 (62 percent)

These approximately 0.03, 0.14, 0.01, and 0.03-acre plant community areas are part of larger wetland complexes and consist of atypical (farmed) wetland and fresh (wet) meadow with constructed roadside ditches containing fresh (wet) meadow. Disturbances to the plant community areas include water level changes due to ditching and draining and agricultural land management activities such as plowing. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 8 – Native Plants

Ambrosia artemisiifolia--Common ragweed
Chenopodium album—Lamb's quarters
***Equisetum arvense*--Common horsetail**
Fraxinus pennsylvanica--Green ash
Polygonum erectum--Erect knotweed
Rosa blanda--Wild rose
Rubus idaeus--Red raspberry
Solidago altissima--Tall goldenrod
Symphyotrichum lanceolatum--Marsh aster
Vitis riparia--Riverbank grape

NON-Native Plants

Atriplex patula--Common orach
Bromus inermis--Smooth brome grass
Cirsium arvense--Canada thistle
Echinochloa crusgalli--Barnyard grass
Elymus repens--Quack grass
Persicaria maculosa--Lady's thumb
***Phalaris arundinacea*--Reed canary grass**
Poa pratensis--Kentucky bluegrass
Sonchus arvensis--Sow thistle
Taraxacum officinale--Common dandelion
Zea mays--Domestic corn (planted)

PCA No. 8 continued

Total number of plant species: 21
Number of alien, or non-native, plant species: 11 (52 percent)

These approximately 0.03 and 0.03-acre plant community areas consists of atypical (farmed) wetland and fresh (wet) meadow. Disturbances to the plant community areas include water level changes due to ditching and draining, mowing, and agricultural land management activities such as plowing. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

EXHIBIT 9

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: ____ State: WI Sampling Point: 1
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 33, T11N, R22E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 6-12%
Subregion (LRR or MLRA): LRR K Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Kewaunee silty clay loam (KoC2) 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**	If yes, optional Wetland Site ID: ____		

Remarks: (Explain alternative procedures here or in a separate report.) Upland sample point on dredge spoils from an off-site stormwater detention pond constructed prior to 2005.

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): ____
Water Table Present? Yes ☐ **No** ☒ Depth (inches): ____
Saturation Present? **Yes** ☐ No ☒ Depth (inches): 0-2*
(includes capillary fringe)

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), Site photos (Exhibit 10), and NRCS Wetland Inventory Map (Exhibit 15).

Remarks: *Saturation from 0 to 2 inches is due to recent rainfall.

VEGETATION – Use scientific names of plants. Sampling Point: 1

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Poa pratensis	**60**	☒	**FACU**
2. Cirsium arvense	**30**	☒	**FACU**
3. Elymus repens	20	☐	FACU
4. Phalaris arundinacea	15	☐	FACW
5. Sonchus arvense	10	☐	FACU
6.		☐	
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	135	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Upland meadow/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
0-14	7.5YR 3/1	50					Clay loam	with gravel fill material
	5YR 5/3	50						
14-19	5YR 4/4	100					Clay	with gravel fill material
19-24.5	10YR 3/2	60	5YR 4/6	10	C	PL M	Clay	fill material
	5YR 4/4	30						

[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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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: Fill material and dredge spoils from adjacent stormwater detention pond.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: _____ State: WI Sampling Point: 2
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 33, T11N, R22E
Landform (hillslope, terrace, etc.): low terrace Local relief (concave, convex, none): none Slope (%): 6-12%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Kewaunee silty clay loam (KoC2) 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	If yes, optional Wetland Site ID: Plant Community Area (PCA) No. 1		

Remarks: (Explain alternative procedures here or in a separate report.) Sample site selected as area was unmapped, yet dominated by hydric vegetation.

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☒ **Dry-Season Water Table (C2)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____
Water Table Present? **Yes** ☒ No ☐ Depth (inches): 22
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (surface)*

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), Site photos (Exhibit 10), and NRCS Wetland Inventory Map (Exhibit 15).

Remarks: *Saturation at the surface due to recent rainfall; however, saturation is present down to 22 inches.

VEGETATION – Use scientific names of plants. Sampling Point: 2

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Fraxinus pennsylvanica	4	☐	FACW
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	4	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**90**	☒	**FACW**
2. Solidago gigantea	30	☐	FACW
3. Poa pratensis	20	☐	FACU
4. Agrostis stolonifera	15	☐	FACW
5.		☐	
6.		☐	
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	155	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) 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
0-4	7.5YR 3/2	100					Clay loam	
4-12	7.5YR 3/2	95	5YR 4/6	5	C	PL M	Clay loam	
12-16	10YR 3/1	95	5YR 4/6	5	C	PL M	Clay	
16-23	5YR 4/2	50					Clay	
	5YR 4/4	50						

[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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: _____ State: WI Sampling Point: 3
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 33, T11N, R22E
Landform (hillslope, terrace, etc.): low terrace Local relief (concave, convex, none): slightly concave Slope (%): 2-6%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Kewaunee silt loam (KnB) 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	If yes, optional Wetland Site ID: PCA No. 3		

Remarks: (Explain alternative procedures here or in a separate report.) Sample site selected as area was not mapped as wetland, yet hydric vegetation and standing water were present.

HYDROLOGY

Wetland Hydrology Indicators:

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

☒ **Surface Water (A1)**	☒ **Water-Stained Leaves (B9)**	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)
☐ Saturation (A3)	☐ Marl Deposits (B15)	☐ Moss Trim Lines (B16)
☐ Water marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Dry-Season Water Table (C2)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Crayfish Burrows (C8)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ **Geomorphic Position (D2)**
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Shallow Aquitard (D3)
☐ Sparsely Vegetated Concave Surface (B8)		☐ Microtopographic Relief (D4)
		☒ **FAC-Neutral Test (D5)**

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? **Yes** ☒ No ☐ Depth (inches): 5
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 Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), Site photos (Exhibit 10), and NRCS Wetland Inventory Map (Exhibit 15).

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 3

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**50**	☒	**FACW**
2. Agrostis stolonifera	**40**	☒	**FACW**
3. Poa pratensis	20	☐	FACU
4. Elymus repens	10	☐	FACU
5. Hordeum jubatum	10	☐	FAC
6. Typha angustifolia	10	☐	OBL
7. Juncus dudleyi	5	☐	FACW
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	145	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Mowed fresh (wet) meadow.

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
0-5	5YR 3/2	50					Clay loam	
	5YR 4/4	50						
5-15	7.5YR 4/2	98	5YR 4/6	2	C	PL M	Clay	
15-17	5YR 4/2	50	5YR 4/6	30	C	PL M	Clay	
	5YR 3/1	20						
17-25	10YR 4/2	60	5YR 4/6	35	C	PL M	Clay	
			N 2.5/1	5				Mg nodules

[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)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ **Depleted Matrix (F3)**
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: ____ State: WI Sampling Point: 4
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 33, T11N, R22E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 2-6%
Subregion (LRR or MLRA): LRR K Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Kewaunee silt loam (KnB) 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**	If yes, optional Wetland Site ID: ____		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ 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): 2-4* and 16

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), Site photos (Exhibit 10), and NRCS Wetland Inventory Map (Exhibit 15).

Remarks: *Saturation from 2 to 4 inches is due to recent rainfall. Soils are saturated from 16 inches down to bottome of soil profile.

VEGETATION – Use scientific names of plants. Sampling Point: 4

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Poa pratensis	**60**	☒	**FACU**
2. Scheonorus arundinaceus	**40**	☒	**FACU**
3. Trifolium pratense	15	☐	FACU
4. Sonchus arvensis	5	☐	FACU
5. Taraxacum officinale	3	☐	FACU
6.		☐	
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	123	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Mowed agricultural 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 %	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 4/3	100					Clay loam	
6-17	5YR 4/4	100					Clay	
17-24	5YR 5/4	100					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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: _____ State: WI Sampling Point: 5
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 33, T11N, R22E
Landform (hillslope, terrace, etc.): low terrace Local relief (concave, convex, none): slightly concave Slope (%): 2-6%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Kewaunee silt loam (KnB) 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	If yes, optional Wetland Site ID: PCA No. 3		

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

☒ **Surface Water (A1)**	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)
☐ Saturation (A3)	☐ Marl Deposits (B15)	☐ Moss Trim Lines (B16)
☐ Water marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Dry-Season Water Table (C2)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Crayfish Burrows (C8)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ **Geomorphic Position (D2)**
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Shallow Aquitard (D3)
☐ Sparsely Vegetated Concave Surface (B8)		☐ Microtopographic Relief (D4)
		☒ **FAC-Neutral Test (D5)**

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 3
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 Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), Site photos (Exhibit 10), and NRCS Wetland Inventory Map (Exhibit 15).

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 5

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Schedonorus arundinaceus	**50**	☒	**FACU**
2. Agrostis stolonifera	**40**	☒	**FACW**
3. Phalaris arundinacea	15	☐	FACW
4. Potentilla anserina	5	☐	FACW
5. Typha angustifolia	2	☐	OBL
6.		☐	
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	112	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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	2	x 1 =	2	
FACW species	60	x 2 =	120	
FAC species	0	x 3 =	0	
FACU species	50	x 4 =	200	
UPL species	0	x 5 =	0	
Column Totals:	112	(A)	322	(B)

Prevalence Index = B/A = 2.9

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Atypical (mowed) wetland.

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
0-5	5YR 4/2	95	5YR 4/6	5	C	PL M	Clay	
5-14	7.5YR 3/2	95	5YR 4/6	5	C	PL M	Clay loam	with gravel
14-24.5	7.5YR 4/2	55	5YR 4/6	40	C	PL M	Clay	
			N 2.5/1	5				Mg nodules

[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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ **Depleted Matrix (F3)**
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: ____ State: WI Sampling Point: 6
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 3, T11N, R22E
Landform (hillslope, terrace, etc.): low terrace Local relief (concave, convex, none): none Slope (%): 0-3%
Subregion (LRR or MLRA): LRR K Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Manawa silt loam (MmA) NWI classification: F0Kf
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 **X** , or Hydrology ____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No	If yes, optional Wetland Site ID: PCA No. 4		

Remarks: (Explain alternative procedures here or in a separate report.) Naturally problematic soils (A16. Coast Prairie Redox) present.

HYDROLOGY

Wetland Hydrology Indicators:

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)
☒ **Saturation (A3)**	☐ Marl Deposits (B15)	☐ Moss Trim Lines (B16)
☐ Water marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☒ **Dry-Season Water Table (C2)**
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Crayfish Burrows (C8)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ **Geomorphic Position (D2)**
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Shallow Aquitard (D3)
☐ Sparsely Vegetated Concave Surface (B8)		☐ Microtopographic Relief (D4)
		☒ **FAC-Neutral Test (D5)**

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): ____
Water Table Present? **Yes** ☒ No ☐ Depth (inches): 22
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 2-4* and 10

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), Site photos (Exhibit 10), and NRCS Wetland Inventory Map (Exhibit 15).

Remarks: *Saturation from 2 to 4 inches is due to recent rainfall. Soils are saturated from 10 inches down to water table at 22 inches.

NOTE: FSA slide review for the agricultural land included in this wetland indicates that 5 out of 6 normal years (83%) show signatures of saturation.

VEGETATION – Use scientific names of plants. Sampling Point: 6

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**50**	☒	**FACW**
2. Agrostis gigantea	**30**	☒	**FACW**
3. Poa pratensis	20	☐	FACU
4. Schedonorus arundinaceus	15	☐	FACU
5. Toxicodendron rydbergii	15	☐	FAC
6. Bromus inermis	10	☐	FACU
7. Fraxinus pennsylvanica	3	☐	FACW
8. Solidago gigantea	2	☐	FACW
9. Typha angustifolia	1	☐	OBL
10.		☐	
11.		☐	
12.		☐	
	146	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Fresh (wet) meadow.

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 %	Type[1]	Loc[2]	Texture	Remarks
0-5.5	7.5YR 3/2	100					Silty clay loam	
5.5-16	7.5YR 3/2	98	7.5YR 4/6	2	C	PL M	Clay loam	
16-24	7.5YR 3/1	92	7.5YR 4/6	8	C	PL M	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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☒ **Coast Prairie Redox (A16) (LLR K, L, R)**
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: ____ State: WI Sampling Point: 7
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 3, T10N, R22E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-3%
Subregion (LRR or MLRA): LRR K Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Manawa silt loam (MmA) 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**	If yes, optional Wetland Site ID: ____		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ 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): 15

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Site photos (Exhibit 10).

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 7

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Triticum aestivum (planted)	**70**	☒	**UPL**
2. Bromus inermis	20	☐	UPL
3. Cirsium arvense	20	☐	FACU
4. Ambrosia artemisiifolia	15	☐	FACU
5. Avena sativa (planted)	10	☐	UPL
6.		☐	
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	135	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Old field between CTH C and agricultural 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
0-15	7.5YR 3/2	100					Clay loam	
15-25	5YR 4/3	95	10Y 6/1	5	D	M	Clay	with stones

[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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: _____ State: WI Sampling Point: 8
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 3, T10N, R22E
Landform (hillslope, terrace, etc.): low terrace Local relief (concave, convex, none): slightly concave Slope (%): 0-3%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Manawa silt loam (MaA) NWI classification: F0Kf
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	If yes, optional Wetland Site ID: PCA No. 4		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☒ **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): 11

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Site photos (Exhibit 10).

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 8

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**80**	☒	**FACW**
2. Poa pratensis	20	☐	FACU
3. Bromus inermis	15	☐	UPL
4. Elymus repens	10	☐	FACU
5. Ambrosia artemisiifolia	5	☐	FACU
6. Daucus carota	5	☐	UPL
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	135	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) 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	7.5 YR 3/2	100					Silty clay loam	
5-12	7.5YR 3/1	95	7.5YR 4/6	5	C	PL M	Clay	
12-15	10YR 4/1	70	10YR 3/6 to 4/6	30	C	PL M	Clay	
15-25	5YR 4/4	70					Clay	with small stones
	10Y 4/1	30						

[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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop Sewer and Waterlines to Prop Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: ____ State: WI Sampling Point: 9
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 3, T10N, R22E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Kewaunee silt loam (KnA) 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**	If yes, optional Wetland Site ID: ____		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ 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): 22

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Site photos (Exhibit 10).

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 9

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Bromus inermis	**40**	☒	**UPL**
2. Poa pratensis	**40**	☒	**FACU**
3. Solidago juncea	20	☐	FACU
4. Phleum pratense	10	☐	FACU
5. Daucus carota	5	☐	UPL
6. Erigeron annuus	5	☐	FACU
7. Cirsium arvense	3	☐	FACU
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	123	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Upland old field between CTH C and agricultural 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
0-8.5	7.5YR 3/2	100					Clay loam	
8.5-14	5YR 4/4	80	10Y 5/1	20	D	PL M	Clay	
14-25	5YR 4/3	85	10Y 6/1	15	D	PL M	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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☒ **Red Parent Material (F21)**
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: _____ State: WI Sampling Point: 10
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 3, T10N, R22E
Landform (hillslope, terrace, etc.): low terrace Local relief (concave, convex, none): slightly concave Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Kewaunee silt loam (KnA) 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	If yes, optional Wetland Site ID: PCA No. 4		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☒ **Surface Soil Cracks (B6)**
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☒ **Dry-Season Water Table (C2)**
- ☐ Crayfish Burrows (C8)
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____
Water Table Present? **Yes** ☒ No ☐ Depth (inches): 24
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 Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), Site photos (Exhibit 10), and FSA Slide Review (Exhibits 11 to 15).

Remarks: FSA slide review indicates that 5 out of 6 normal years (83%) show signatures of saturation.

VEGETATION – Use scientific names of plants. Sampling Point: 10

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Juncus bufonius	**30**	☒	**FACW**
2. Puccinellia distans	**20**	☒	**FACW**
3. Agrostis stononifera	3	☐	FACW
4. Echinochloa crus-galli	3	☐	FAC
5. Elymus repens	3	☐	FACU
6. Ambrosia artemisiifolia	2	☐	FACU
7. Atriplex patula	2	☐	FACW
8. Centaurium pulchellum	2	☐	FAC
9. Poa compressa	1	☐	FACU
10. Polygonum erectum	1	☐	FACU
11. Triticum aestivum	1	☐	UPL
12.		☐	
	68	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) 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
0-5.5	7.5YR 3/2	98	5YR 4/6	2	C	PL M	Silty clay loam	
5.5-9	7.5YR 3/1	80	7.5YR 4/6	5	C	PL M	Clay	
	7.5YR 4/1	15						
9-12	7.5YR 3/1	70	7.5YR 4/6	30	C	PL M	Clay	
12-13	7.5YR 4/2	100					Sand	
13-24	5YR 4/4	70	2.5YR 4/8	10	C	PL M	Clay	with stones
	5YR 4/2	20						
24+								Refusal: Stones and 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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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: Stones and gravel

Depth (inches): 24

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: _____ State: WI Sampling Point: 11
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 3, T10N, R22E
Landform (hillslope, terrace, etc.): low terrace Local relief (concave, convex, none): slightly concave Slope (%): 0-3%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Manawa silt loam (MmA) 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	If yes, optional Wetland Site ID: PCA No. 4		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☐ Shallow Aquitard (D3)
- ☒ **Microtopographic Relief (D4)**
- ☐ 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): 10

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), Site photos (Exhibit 10), and FSA Slide Review (Exhibits 11 to 15).

Remarks: FSA slide review indicates that 5 out of 6 normal years (83%) show signatures of saturation.

VEGETATION – Use scientific names of plants. Sampling Point: 11

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Puccinellia distans	**100**	☒	**FACW**
2. Triticum aestivum (planted)	5	☐	UPL
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	105	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Fresh (wet) meadow/atypical (farmed) wetland.

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
0-4	7.5YR 3/2	100					Silty clay loam	
4-8	5YR 4/1	70	5YR 4/6	30	C	PL M	Clay	with gravel
8-18	7.5YR 5/1	60	5YR 4/6	40	C	PL M	Clay	
18-25	5YR 4/3	50	10Y 5/1	30	D	PL M	Clay	
	5YR 4/4	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)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ **Depleted Matrix (F3)**
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop Sewer and Waterlines to Prop Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: ____ State: WI Sampling Point: 12
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 3, T10N, R22E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Kewaunee silt loam (KnA) 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**	If yes, optional Wetland Site ID: ____		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ 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 Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Site photos (Exhibit 10).

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 12

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Triticum aestivum (planted)	**30**	☒	**UPL**
2. Poa compressa	**20**	☒	**FACU**
3. Elymus repens	**15**	☒	**FACU**
4. Trifolium pratense	5	☐	FACU
5. Ambrosia artemisiifolia	5	☐	FACU
6.		☐	
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	75	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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: 3 (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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Old field between CTH C and agricultural field.

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
0-6	7.5YR 4/3	100					Silty clay loam	
6-14	5YR 4/3	80					Clay	
	7.5YR 3/2	20						
14-24	5YR 4/3	75	10Y 6/1	25	D	M	Clay	with stones

[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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L)**
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: _____ State: WI Sampling Point: 13
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 3, T10N, R22E
Landform (hillslope, terrace, etc.): low terrace/drainage way Local relief (concave, convex, none): concave Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Kewaunee silt loam (KnA) 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	If yes, optional Wetland Site ID: PCA No. 5		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ 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): 8

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Site photos (Exhibit 10).

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 13

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**90**	☒	**FACW**
2. Poa pratensis	**30**	☒	**FACU**
3. Solidago altissima	10	☐	FACU
4. Solidago gigantea	10	☐	FACW
5. Vicia cracca	10	☐	UPL
6.		☐	
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	150	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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	0	x 1 =	0	
FACW species	100	x 2 =	200	
FAC species	0	x 3 =	0	
FACU species	40	x 4 =	160	
UPL species	10	x 5 =	50	
Column Totals:	150	(A)	410	(B)

Prevalence Index = B/A = 2.7

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Fresh (wet) meadow.

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
0-7	7.5YR 2.5/1	100					Silt loam	
7-14	7.5YR 2.5/1	98	7.5YR 3/4	2	C	PL M	Silty clay loam	
14-20	7.5YR 4/2	60	5YR 4/6	40	C	PL M	Clay	with grit
20-24	5YR 4/3	70	5YR 4/6	10	C	PL M	Clay	with grit
	7.5YR 4/3	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)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: _____ State: WI Sampling Point: 14
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 3, T10N, R22E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Kewaunee silt loam (KnA) 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	If yes, optional Wetland Site ID: _____		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ 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): 23

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Site photos (Exhibit 10).

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 14

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Poa pratensis	**50**	☒	**FACU**
2. Bromus inermis	**40**	☒	**UPL**
3. Asclepias syriaca	15	☐	UPL
4. Fragaria virginiana	10	☐	FACU
5. Monarda fistulosa	5	☐	FACU
6. Phleum pratense	5	☐	FACU
7. Solidago juncea	5	☐	FACU
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	130	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Upland 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
0-7	10YR 3/2	100					Clay loam	
7-10	7.5YR 3/2	80					Clay loam	
	5YR 4/3	20						
10-20	5YR 4/4	100					Clay	with gravel
20-25	5YR 4/3	90					Clay	with gravel
	5YR 4/2	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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: _____ State: WI Sampling Point: 15
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 3, T10N, R22E
Landform (hillslope, terrace, etc.): low terrace Local relief (concave, convex, none): none Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Kewaunee silt loam (KnA) NWI classification: S3K
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	If yes, optional Wetland Site ID: PCA No. 6		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☒ **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): 7

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Site photos (Exhibit 10).

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 15

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Tilia americana	**60**	☒	**FACU**
2. Fraxinus pennsylvanica	**30**	☒	**FACW**
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
6. ____	____	☐	____
7. ____	____	☐	____
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Rhamnus cathartica	**15**	☒	**FAC**
2. Viburnum opulus	3	☐	FACW
3. ____	____	☐	____
4. ____	____	☐	____
5. ____	____	☐	____
6. ____	____	☐	____
7. ____	____	☐	____
	18	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Impatiens capensis	**80**	☒	**FACW**
2. Geum canadense	15	☐	FAC
3. Lonicera x bella	5	☐	FACU
4. Rhamnus cathartica	5	☐	FAC
5. Viburnum opulus	3	☐	FACW
6. ____	____	☐	____
7. ____	____	☐	____
8. ____	____	☐	____
9. ____	____	☐	____
10. ____	____	☐	____
11. ____	____	☐	____
12. ____	____	☐	____
	108	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. ____	____	☐	____
2. ____	____	☐	____
3. ____	____	☐	____
4. ____	____	☐	____
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Lowland hardwoods.

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
0-16	7.5YR 2.5/1	100					Silty clay loam	
16-20	7.5YR 4/2	80	7.5YR 4/6	20	C	PL M	Clay	
20-24	7.5YR 4/1	55	7.5YR 5/8	10	C	PL M	Clay	
	7.5YR 5/3	35						

[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)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: _____ State: WI Sampling Point: 16
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 3, T10N, R22E
Landform (hillslope, terrace, etc.): low terrace Local relief (concave, convex, none): slightly concave Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Kewaunee silt loam (KnA) 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 **X**, 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	If yes, optional Wetland Site ID: PCA No. 7		

Remarks: (Explain alternative procedures here or in a separate report.) Disturbed vegetation due to agricultural land management activities (managed plant community). Sample site selected due to evidence of several indicators of hydrology and landscape position.

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ 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 Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), Site photos (Exhibit 10), and FSA Slide Review (Exhibitis 11 to 15).

Remarks: FSA slide review indicates that 3 out of 6 normal years (50%) show signatures of saturation.

VEGETATION – Use scientific names of plants. Sampling Point: 16

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Zea mays (planted)	**50**	☒	**UPL**
2. Tanacetum vulgare	3	☐	FACU
3. Chenopodium album	1	☐	FACU
4. Persicaria maculosa	1	☐	FAC
5.		☐	
6.		☐	
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	55	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Problematic hydrophytic vegetation due to agricultural land management activities (managed plant community). Indicators of hydric soil and wetland hydrology are present. Atypical (farmed) wetland.

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
0-7	10YR 3/2	100					Silty clay loam	
7-12	10YR 3/2	95	7.5YR 4/6	5	C	PL M	Silty clay loam	
12-17	7.5YR 4/2	70	7.5YR 4/6	30	C	PL M	Sandy loam	
17-24	5YR 4/4	55	10Y 5/1	5	D	PL M	Clay	with grit
	7.5YR 5/3	40						

[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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: ____ State: WI Sampling Point: 17
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 3, T10N, R22E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Kewaunee silt loam (KnA) 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**	If yes, optional Wetland Site ID: ____		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ 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 Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Site photos (Exhibit 10).

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 17

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Bromus inermis	**90**	☒	**UPL**
2. Poa pratensis	20	☐	FACU
3. Aspargus officinalis	5	☐	FACU
4. Daucus carota	5	☐	UPL
5. Taraxacum officinale	5	☐	FACU
6.		☐	
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	125	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Old field between CTH C and edge of agricultural field.

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 %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4.5	7.5YR 3/2	100					Clay loam	with gravel
4.5-10	7.5YR 3/2	80					Clay	with gravel
	5YR 4/3	20						
10-19	5YR 4/3	90					Clay	
	5YR 4/2	10						
19-24	5YR 4/3	90	7.5YR 4/6	2	C	PL M	Clay	with gravel
	10YR 5/3	8						

[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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: _____ State: WI Sampling Point: 18
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 3, T10N, R22E
Landform (hillslope, terrace, etc.): low terrace Local relief (concave, convex, none): slightly concave Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Kewaunee silt loam (KnA) 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	If yes, optional Wetland Site ID: PCA No. 7		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☒ **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 Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), Site photos (Exhibit 10), and FSA Slide Review (Exhibits 11 to 15).

Remarks: FSA slide review indicates that 5 out of 6 normal years (83%) show signatures of saturation.

VEGETATION – Use scientific names of plants. Sampling Point: 18

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**50**	☒	**FACW**
2. Poa pratensis	**30**	☒	**FACU**
3. Carex cristatella	20	☐	FACW
4. Agrostis stolonifera	15	☐	FACW
5. Carex vulpinoidea	5	☐	OBL
6. Elymus repens	5	☐	FACU
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	125	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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	5	x 1 =	5	
FACW species	85	x 2 =	170	
FAC species	0	x 3 =	0	
FACU species	35	x 4 =	140	
UPL species	0	x 5 =	0	
Column Totals:	125	(A)	315	(B)

Prevalence Index = B/A = 2.5

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Fresh (wet) meadow.

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
0-7	7.5YR 3/1	98	5YR 4/6	2	C	PL M	Silty clay loam	
7-18	5YR 4/2	65	5YR 4/6	35	C	PL M	Clay	
18-24	5YR 4/3	60	10Y 4/1	20	D	PL M	Clay	with gravel
	5YR 3/1	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)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ **Depleted Matrix (F3)**
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop. Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: _____ State: WI Sampling Point: 19
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 3, T10N, R22E
Landform (hillslope, terrace, etc.): small drainage way Local relief (concave, convex, none): slightly concave Slope (%): 0-3%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Manawa silt loam (MaA) 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	If yes, optional Wetland Site ID: PCA No. 7		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☒ **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): 17

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), Site photos (Exhibit 10), and FSA Slide Review (Exhibits 11 to 15).

Remarks: FSA slide review indicates that 4 out of 6 normal years (67%) show signatures of saturation.

VEGETATION – Use scientific names of plants. Sampling Point: 19

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**50**	☒	**FACW**
2. Cirsium arvense	**20**	☒	**FACU**
3. Carex stipata	15	☐	OBL
4. Carex vupinoidea	15	☐	OBL
5. Barbarea vulgaris	10	☐	FAC
6. Carex cristatella	5	☐	FACW
7. Sonchus arvensis	5	☐	FACU
8. Juncus dudleyi	4	☐	FACW
9. Epilobium coloratum	2	☐	OBL
10.		☐	
11.		☐	
12.		☐	
	126	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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	32	x 1 =	32	
FACW species	59	x 2 =	118	
FAC species	10	x 3 =	30	
FACU species	25	x 4 =	100	
UPL species	0	x 5 =	0	
Column Totals:	126	(A)	280	(B)

Prevalence Index = B/A = 2.2

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) 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
0-5	7.5YR 3/1	100					Clay loam	
5-10	10YR 3/1	98	7.5YR 4/6	2	C	PL M	Clay	
10-19	5YR 4/1	90	5YR 4/6	2	C	PL M	Clay	
	5YR 5/2	8						
19-24	5YR 5/1	40	5YR 4/6	35	C	PL M	Clay	
	5YR 4/2	25						

[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)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop.Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: ____ State: WI Sampling Point: 20
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 3, T10N, R22E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Kewaunee silt loam (KnA) 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**
Hydric Soils Present?	☐Yes	☒**No**
Wetland Hydrology Present?	☐Yes	☒**No**

Is the Sampled Area within a Wetland? ☐ Yes ☒**No**

If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ 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): 15

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Site photos (Exhibit 10).

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 20

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Bromus inermis	**25**	☒	**UPL**
2. Poa pratensis	**20**	☒	**FACU**
3. Cirsium vulgare	**15**	☒	**FACU**
4. Daucus carota	10	☐	UPL
5. Trifolium hybridum	10	☐	FACU
6. Zea mays (planted)	5	☐	UPL
7. Equisetum arvense	4	☐	FAC
8. Medicago sativa	3	☐	FACU
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	92	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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: 3 (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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Old field between CTH C and agricultural field.

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
0-8	7.5YR 4/2	100					Clay loam	
8-19	2.5YR 4/4	100					Clay	
19-24	2.5YR 4/4	90	2.5YR 4/8	10	C	PL M	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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop.Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/21/2015
Applicant/Owner: _____ State: WI Sampling Point: 21
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 4, T10N, R22E
Landform (hillslope, terrace, etc.): low terrace Local relief (concave, convex, none): slightly concave Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Poygan silty clay loam (Py) NWI classification: F0Kf
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	If yes, optional Wetland Site ID: PCA No. 7		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☒ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ 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 Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), Site photos (Exhibit 10), and FSA Slide Review (Exhibits 11 to 15).

Remarks: Standing water observed adjacent to sample area. FSA slide review indicates that 6 out of 6 normal years (100%) show signatures of saturation.

VEGETATION – Use scientific names of plants. Sampling Point: 21

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Persicaria maculosa	**10**	☒	**FAC**
2. Echinochloa crus-galli	3	☐	FAC
3. Polygonum erectum	3	☐	FACU
4. Daucus carota	2	☐	UPL
5. Ranunculus sceleratus	2	☐	OBL
6.		☐	
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	20	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.

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
0-7	10YR 3/2	100					Silty clay loam	
7-12	7.5YR 2.5/1	96	7.5YR 4/6	4	C	PL M	Clay loam	
12-18	7.5YR 4/1	60	7.5YR 4/6	20	C	PL M	Clay	
	10YR 4/2	20						
18-25	7.5YR 5/1	70	7.5YR 4/6	30	C	PL M	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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop Sewer and Waterlines to Prop Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/22/2015
Applicant/Owner: _____ State: WI Sampling Point: 22
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 4, T10N, R22E
Landform (hillslope, terrace, etc.): low terrace Local relief (concave, convex, none): slightly concave Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Poygan silty clay loam (Py) 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 **X**, 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	If yes, optional Wetland Site ID: PCA No. 8		

Remarks: (Explain alternative procedures here or in a separate report.) Disturbed vegetation due to agricultural land management activities (managed plant community). Sample site selected due to evidence of several indicators of hydrology and landscape position.

HYDROLOGY

Wetland Hydrology Indicators:

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

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☒ **Surface Soil Cracks (B6)**	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☒ **Saturation (A3)**	☐ Marl Deposits (B15)	☐ Moss Trim Lines (B16)	
☐ Water marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☒ **Dry-Season Water Table (C2)**	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Crayfish Burrows (C8)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Saturation Visible on Aerial Imagery (C9)	
☒ **Algal Mat or Crust (B4)**	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ **Stunted or Stressed Plants (D1)**	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☒ **Geomorphic Position (D2)**	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Shallow Aquitard (D3)	
☐ Sparsely Vegetated Concave Surface (B8)		☐ Microtopographic Relief (D4)	
		☐ FAC-Neutral Test (D5)	

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____
Water Table Present? **Yes** ☒ No ☐ Depth (inches): 20
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 9

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), Site photos (Exhibit 10), and FSA Slide Review (Exhibits 11 to 15).

Remarks: FSA slide review indicates that only 2 out of 6 normal years (33%) show signatures of saturation.

VEGETATION – Use scientific names of plants. Sampling Point: 22

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Equisetum arvense	**20**	☒	**FAC**
2. Zea mays (planted)	**8**	☒	**UPL**
3. Polygonum erectum	5	☐	FACU
4. Persicaria maculosa	4	☐	FAC
5. Chenopodium album	3	☐	FACU
6. Echinochloa crus-galli	1	☐	FAC
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	41	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	25	x 3 =	75	
FACU species	8	x 4 =	32	
UPL species	8	x 5 =	40	
Column Totals:	41	(A)	147	(B)

Prevalence Index = B/A = 3.6

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Problematic hydrophytic vegetation due to agricultural land management activities (managed plant community). Indicators of hydric soil and wetland hydrology are present. Atypical (farmed) wetland.

SOIL

Sampling Point: 22

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
0-4	5YR 3/2	100					Clay loam	
4-11	5YR 3/2	80	7.5YR 4/6	5	C	PL M	Clay	mixed layer
	5YR 4/4	15						
11-19	5YR 4/4	100					Sandy clay	
19-25	2.5YR 4/6	60	5YR 5/1	20	D	M	Clay	with grit
	5YR 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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop.Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/22/2015
Applicant/Owner: ____ State: WI Sampling Point: 23
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 4, T10N, R22E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Kewaunee silt loam (KnA) 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**
Hydric Soils Present?	☐Yes	☒**No**
Wetland Hydrology Present?	☐Yes	☒**No**

Is the Sampled Area within a Wetland? ☐ Yes ☒**No**

If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ 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): 15

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Site photos (Exhibit 10).

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 23

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Bromus inermis	**60**	☒	**UPL**
2. Schedonorus arundinaceus	**40**	☒	**FACU**
3. Poa pratensis	20	☐	FACU
4. Daucus carota	4	☐	UPL
5.		☐	
6.		☐	
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	124	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Old field between CTH C and agricultural field.

SOIL

Sampling Point: 23

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	7.5YR 3/2	100					Silty clay loam	
10-19	5YR 4/4	100					Clay	
19-24	5YR 5/4	100					Clay	with stones and grit

[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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop.Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/22/2015
Applicant/Owner: _____ State: WI Sampling Point: 24
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 4, T10N, R22E
Landform (hillslope, terrace, etc.): drainage way Local relief (concave, convex, none): concave Slope (%): 0-3%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Manawa silt loam (MaA) NWI classification: 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	If yes, optional Wetland Site ID: PCA No. 8		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☒ **Drainage Patterns (B10)**
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☒ **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): 21

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Site photos (Exhibit 10).

Remarks:

NOTE: An FSA slide review for the agricultural land adjacent to this wetland indicates that 2 out of 5 normal years (40%) show signatures of saturation.

VEGETATION – Use scientific names of plants. Sampling Point: 24

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**100**	☒	**FACW**
2. Elymus repens	20	☐	FACU
3. Poa pratensis	10	☐	FACU
4.		☐	
5.		☐	
6.		☐	
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	130	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Fresh (wet) meadow.

SOIL

Sampling Point: 24

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	7.5YR 3/1+	100					Clay loam	
5-12	7.5YR 3/1	95	5YR 3/4	5	C	PL M	Clay loam	
12-14	7.5YR 4/1	70	5YR 4/6	30	C	PL M	Clay	with grit
14-18	7.5YR 4/2	60	5YR 4/6	20	C	PL M	Clay	with grit
			N2.5/1	20				Mg nodules
18-24	5YR 4/4	60	10Y 6/1	20	D	M	Clay	with small stones
			5YR 4/8	20	C	PL 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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CTH C Prop.Sewer & Waterlines to Prop. Development City/County: City of Port Washington/Ozaukee County Sampling Date: 07/22/2015
Applicant/Owner: ____ State: WI Sampling Point: 25
Investigator(s): Jen Dietl and Dan Carter; SEWRPC Section, Township, Range: Section 4, T10N, R22E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 6-12%
Subregion (LRR or MLRA): LRR K Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Kewaunee silty clay loam (KrC3) 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**	If yes, optional Wetland Site ID: ____		

Remarks: (Explain alternative procedures here or in a separate report.)

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)
- ☐ Marl Deposits (B15)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ 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): 22

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), Wisconsin Wetland Inventory Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Site photos (Exhibit 10).

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 25

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
5.		☐	
6.		☐	
7.		☐	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Bromus inermis	**80**	☒	**UPL**
2. Daucus carota	10	☐	UPL
3. Arctium minus	5	☐	FACU
4. Medicago lupulina	3	☐	FACU
5.		☐	
6.		☐	
7.		☐	
8.		☐	
9.		☐	
10.		☐	
11.		☐	
12.		☐	
	98	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.		☐	
2.		☐	
3.		☐	
4.		☐	
	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:

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

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

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

Remarks: (include photo number here or on a separate sheet.) Upland old field between CTH C and ag field.

SOIL

Sampling Point: 25

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
0-22	5YR 4/3	100					Clay	with gravel
22-24	5YR 4/4	98	5YR 5/8	2	C	PL M	Clay	with 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)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) **(LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ 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:

EXHIBIT 10
CTH C (Centerline to 75' East of Centerline) for Proposed Sewer and Waterlines to serve Proposed Cedar Vineyards
Section 33, T11N, R22E, and Sections 3 and 4, T10N, R22E
City of Port Washington , Ozaukee County

Photo 1. Upland sample site 1.

Photo 2. Wetland sample site 2.

Photo 3. Wetland sample site 3.
Wetland sample site 5 is similar.

Photo 4. Upland sample site 4.

Photo 5. Wetland sample site 6.
Wetland sample sites 8, 13, 18, 19, and 24 are similar.

Photo 6. Upland sample site 7.
Upland sample site 12 is similar.

EXHIBIT 10
CTH C (Centerline to 75' East of Centerline) for Proposed Sewer and Waterlines to serve Proposed Cedar Vineyards
Section 33, T11N, R22E, and Sections 3 and 4, T10N, R22E
City of Port Washington , Ozaukee County

Photo 7. Upland sample site 9.

Photo 8. Wetland sample site 10.
Sample site 11 is similar.

Photo 9. Upland sample site 14.

Photo 10. Wetland sample site 15.

Photo 11. Wetland sample site 16.
Wetland sample sites 21 and 22 are similar.

Photo 12. Upland sample site 17.
Upland sample sites 20, 23, and 25 are similar.

EXHIBIT 10
CTH C (Centerline to 75' East of Centerline) for Proposed Sewer and Waterlines to serve Proposed Cedar Vineyards
Section 33, T11N, R22E, and Sections 3 and 4, T10N, R22E
City of Port Washington , Ozaukee County

Photo 13. South view of ditch. Sample 1 is off photo to left.

Photo 14. South view of ditch from the SE corner of CTH C and W. Sunset Rd.

Photo 15. South view of sample sites 3, 4, and 5.

Photo 16. North view of ditch, wetland sample 6, and Upland sample 7.

Photo 17. North view of sample sites 8, 9, 10 and ditch north of sample 8.

Photo 18. South view of ditch and sample sites 12 and 13.

EXHIBIT 10
CTH C (Centerline to 75' East of Centerline) for Proposed Sewer and Waterlines to serve Proposed Cedar Vineyards
Section 33, T11N, R22E, and Sections 3 and 4, T10N, R22E
City of Port Washington , Ozaukee County

Photo 19. East view and sample site 13 wetland.

Photo 20. North view of ditch and sample sites 17 and 18.

Photo 21. East view of sample 19 wetland.

Photo 22. East view of sample 21 wetland.

Photo 23. East view of sample 24 wetland.

Photo 24. North view of sample 24 wetland.

EXHIBIT 11. FSA Slide Review Data
WETLAND DOCUMENTATION RECORD
Remotely Sensed Data Summary

Owner/Operator: CTH C Prop. Sewer & Waterlines County: Ozaukee State: WI

Slide Reviewer: Daniel Carter; Jennifer Dietl Date: 09/04/15; 11/11/15

Site Identification No. _____ - _____ (Tract No. + Site No.)

Farm Service Agency (or Other) Aerial Slide Data

Date (Mo./Yr)	Rainfall (in) +D/N/W (Apr-June ave. = ____)	Interpretation- (codes listed in box below)	
		FSA Slide Review Area: A	**FSA Slide Review Area: B**
2013	3	Y CR 6d	Y CR 6d
2010	3	Y CR 6d	N CR
2008	**2**	**Y CR 6d**	**N CR**
2006	3	Y CR 6d	N CR
2005	1	Y CR 6a, 6d	N CR
June 2003	**2**	**Y- CR 6d**	**Y- CR 6d**
July 2002	3	N CR 6a	N CR
June 2001	3	Y- CR 6d	N CR
July 2000	**2**	**N CR**	**N CR**
June 1999	3	Y- CR 6d	N CR
June 1998	3	Y- CR 6d	N CR
July 1997	**2**	**Y- CR 6d**	**N CR**
June 1996	**2**	**Y- CR 6d**	**Y- CR 6d**
May 1995	**2**	**Y- CR 6d**	**Y-CR 6d**
June 1994	1	Y CR 6d	Y- CR 6d
1993	3	Y- CR 6d	Y- CR 6d
June 1992	1	Y- CR 6d	Y- CR 6d
June 1991	**2**	**Y CR 6d**	**Y- CR 6d**
July 1990	3	N NC	N CR
Air Photo			
2015	3	Y- CR 6d	Y- CR 6d
2007	**2**	**Y- CR 6d**	**Y- CR 6d**

Y = Yes, signal indicates wetness (+ = strong, - = weak) **N** = No wetness signature
CR = cropped (row crop or tilled) **NC** = not cropped (hay, pasture, idle, etc.)

Feature	Color	Manipulation (year of installation)	Other
1 = water	6a = dark green	7a = ditched	write explanation
2 = mud flat	6b = light green	7b = tiled	
3 = bare spot	6c = yellow	7c = filled	
4 = drowned crop	6d = brown	7d = tree/brush removal	
5 = planted late	6e = black	8 = plowed/tilled	

A. Does slide/air photo data indicate the site is a wetland? ☒ Yes ☐ No
B. Does slide/air photo data indicate the site is a wetland? ☒ Yes ☐ No

A. A total of 7 years out of 8 most normal years (88%) have wet (Y) signatures.
B. A total of 5 years out of 8 most normal years (63%) have wet (Y) signatures.

A. A total of 18 years out of 21 years (86%) observed have wet (Y) signatures.
B. A total of 10 years out of 21 years (48%) observed have wet (Y) signatures.

EXHIBIT 11 continued
WETLAND DOCUMENTATION RECORD
Remotely Sensed Data Summary

Owner/Operator: CTH C Prop. Sewer & Waterlines County: Ozaukee State: WI

Slide Reviewer: Daniel Carter; Jennifer Dietl Date: 09/04/15; 11/11/15

Site Identification No. _____ - _____ (Tract No. + Site No.)

Farm Service Agency (or Other) Aerial Slide Data

Date (Mo./Yr)	Rainfall (in) +D/N/W (Apr-June ave. = ____)	Interpretation- (codes listed in box below)	
		FSA Slide Review Area: C	**FSA Slide Review Area: D**
2013	3	Y CR 6b, 6d	Y CR 6d
2010	3	Y- CR 6d	N CR
2008	**2**	**Y CR 6d**	**Y- CR 6d**
2006	3	Y- CR 6d	N CR
2005	1	Y CR 6d	Y- CR 6d
June 2003	**2**	**Y-CR 6d**	**N CR**
July 2002	3	Y- CR 6d	N CR
June 2001	3	Y-CR 6d	N CR
July 2000	**2**	**Y CR 6d**	**N CR**
June 1999	3	Y CR 6d	Y- CR 6d
June 1998	3	Y CR 6d	Y- CR 6d
July 1997	**2**	**Y- CR 6d**	**Y- CR 6d**
June 1996	**2**	**Y CR 6b, 6d**	**Y CR 6d**
May 1995	**2**	**N CR**	**Y- CR 6d**
June 1994	1	Y CR 6d	Y CR 6d
1993	3	Y CR 6b	Y- CR 6b
June 1992	1	Y CR 6d	Y- CR 6d
June 1991	**2**	**Y CR 6d**	**Y- CR 6d**
July 1990	3	N CR	N CR
Air Photo			
2015	3	Y- CR	N CR
2007	**2**	**Y- CR 6d**	**Y- CR 6d**

Y = Yes, signal indicates wetness (+ = strong, - = weak) **N** = No wetness signature
CR = cropped (row crop or tilled) **NC** = not cropped (hay, pasture, idle, etc.)

Feature	Color	Manipulation (year of installation)	Other
1 = water	6a = dark green	7a = ditched	write explanation
2 = mud flat	6b = light green	7b = tiled	
3 = bare spot	6c = yellow	7c = filled	
4 = drowned crop	6d = brown	7d = tree/brush removal	
5 = planted late	6e = black	8 = plowed/tilled	

C. Does slide/air photo data indicate the site is a wetland? ☒ Yes ☐ No
D. Does slide/air photo data indicate the site is a wetland? ☒ Yes ☐ No

C. A total of 7 years out of 8 most normal years (88%) have wet (Y) signatures.
D. A total of 6 years out of 8 most normal years (75%) have wet (Y) signatures.

C. A total of 19 years out of 21 years (90%) observed have wet (Y) signatures.
D. A total of 13 years out of 21 years (62%) observed have wet (Y) signatures.

EXHIBIT 11 continued
WETLAND DOCUMENTATION RECORD
Remotely Sensed Data Summary

Owner/Operator: CTH C Prop. Sewer & Waterlines County: Ozaukee State: WI

Slide Reviewer: Daniel Carter; Jennifer Dietl Date: 09/04/15; 11/11/15

Site Identification No. _____ - _____ (Tract No. + Site No.)

Farm Service Agency (or Other) Aerial Slide Data

Date (Mo./Yr)	Rainfall (in) +D/N/W (Apr-June ave. = ____)	Interpretation- (codes listed in box below)	
		FSA Slide Review Area: E	**FSA Slide Review Area: F**
2013	3	Y CR 6d	Y- CR 6d
2010	3	Y- CR 6d	Y- CR 6d
2008	**2**	**N CR**	**Y+ CR 6d**
2006	3	Y- CR 6d	N CR
2005	1	N CR	N CR
June 2003	**2**	**Y- CR 6d**	**N CR**
July 2002	3	N CR	Y CR 6d
June 2001	3	Y- CR 6d	N CR
July 2000	**2**	**Y- CR 6d**	**Y- CR 6d**
June 1999	3	N CR	Y- CR 6d
June 1998	3	Y CR 6d	N CR
July 1997	**2**	**N CR**	**N CR**
June 1996	**2**	**Y- CR 6d**	**Y CR 6d**
May 1995	**2**	**Y- CR 6d**	**Y- Cr 6d**
June 1994	1	Y CR 6d	N CR
1993	3	N CR	N CR
June 1992	1	N CR	N CR
June 1991	**2**	**N CR**	**N CR**
July 1990	3	N CR	N CR
Air Photo			
2015	3	N CR	Y CR 6d
2007	**2**	**Y- CR 6d**	**Y- CR 6d**

Y = Yes, signal indicates wetness (+ = strong, - = weak) **N** = No wetness signature
CR = cropped (row crop or tilled) **NC** = not cropped (hay, pasture, idle, etc.)

Feature	Color	Manipulation (year of installation)	Other
1 = water	6a = dark green	7a = ditched	write explanation
2 = mud flat	6b = light green	7b = tiled	
3 = bare spot	6c = yellow	7c = filled	
4 = drowned crop	6d = brown	7d = tree/brush removal	
5 = planted late	6e = black	8 = plowed/tilled	

E. Does slide/air photo data indicate the site is a wetland? ☒ Yes ☐ No
F. Does slide/air photo data indicate the site is a wetland? ☒ Yes ☐ No

E. A total of 5 years out of 8 most normal years (63%) have wet (Y) signatures.
F. A total of 5 years out of 8 most normal years (63%) have wet (Y) signatures.

E. A total of 11 years out of 21 years (52%) observed have wet (Y) signatures.
F. A total of 10 years out of 21 years (48%) observed have wet (Y) signatures.

EXHIBIT 11 continued
WETLAND DOCUMENTATION RECORD
Remotely Sensed Data Summary

Owner/Operator: CTH C Prop. Sewer & Waterlines County: Ozaukee State: WI

Slide Reviewer: Daniel Carter; Jennifer Dietl Date: 09/04/15; 11/11/15

Site Identification No. _____ - _____ (Tract No. + Site No.)

Farm Service Agency (or Other) Aerial Slide Data

Date (Mo./Yr)	Rainfall (in) +D/N/W (Apr-June ave. = ____)	Interpretation- (codes listed in box below)	
		FSA Slide Review Area: G	**FSA Slide Review Area: H**
2013	3	Y- CR 6d	Y+ CR 6d
2010	3	Y- CR 6d	Y+ CR 6d
2008	**2**	**Y- CR 6d**	**Y- CR 6b, 6d**
2006	3	N CR	Y- CR 6d
2005	1	N CR	Y- CR 6d
June 2003	**2**	**N CR**	**Y- CR 6d**
July 2002	3	Y CR 6d	N CR
June 2001	3	N CR	Y+ NC 6d
July 2000	**2**	**Y- CR 6d**	**Y CR 6d**
June 1999	3	Y-CR 6d	Y- CR 6d
June 1998	3	N CR	N CR
July 1997	**2**	**N CR**	**Y- CR 6d**
June 1996	**2**	**Y CR 6d**	**Y CR 6e**
May 1995	**2**	**Y- CR 6d**	**Y CR 6d**
June 1994	1	N CR	N NC
1993	3	N CR	Y CR 6d
June 1992	1	N CR	Y- CR 6d
June 1991	**2**	**N CR**	**Y+ CR 6d**
July 1990	3	N CR	N CR
Air Photo			
2015	3	Y CR 6d	Y- CR 6d
2007	**2**	**Y- CR 6d**	**Y CR 6d**

Y = Yes, signal indicates wetness (+ = strong, - = weak) **N** = No wetness signature
CR = cropped (row crop or tilled) **NC** = not cropped (hay, pasture, idle, etc.)

Feature	Color	Manipulation (year of installation)	Other
1 = water	6a = dark green	7a = ditched	write explanation
2 = mud flat	6b = light green	7b = tiled	
3 = bare spot	6c = yellow	7c = filled	
4 = drowned crop	6d = brown	7d = tree/brush removal	
5 = planted late	6e = black	8 = plowed/tilled	

G. Does slide/air photo data indicate the site is a wetland? ☒ Yes ☐ No
H. Does slide/air photo data indicate the site is a wetland? ☒ Yes ☐ No

G. A total of 5 years out of 8 most normal years (63%) have wet (Y) signatures.
H. A total of 8 years out of 8 most normal years (100%) have wet (Y) signatures.

G. A total of 10 years out of 21 years (48%) observed have wet (Y) signatures.
H. A total of 17 years out of 21 years (81%) observed have wet (Y) signatures.

EXHIBIT 11 continued
WETLAND DOCUMENTATION RECORD
Remotely Sensed Data Summary

Owner/Operator: CTH C Prop. Sewer & Waterlines County: Ozaukee State: WI

Slide Reviewer: Daniel Carter; Jennifer Dietl Date: 09/04/15; 11/11/15

Site Identification No. _____ - _____ (Tract No. + Site No.)

Farm Service Agency (or Other) Aerial Slide Data

Date (Mo./Yr)	Rainfall (in) +D/N/W (Apr-June ave. = ____)	Interpretation- (codes listed in box below)	
		FSA Slide Review Area: I	**FSA Slide Review Area: J**
2013	3	Y- CR 6d	N CR
2010	3	N CR	Y CR 6d
2008	**2**	**Y- CR 6d**	**Y CR 6d**
2006	3	Y- CR 6d	Y+ CR 6d
2005	1	Y- CR 6d	N CR
June 2003	**2**	**N CR**	**N CR**
July 2002	3	N CR	N CR
June 2001	3	N CR	Y- CR 6d
July 2000	**2**	**N CR**	**N CR**
June 1999	3	N CR	N CR
June 1998	3	N CR	Y CR 6d
July 1997	**2**	**N CR**	**N CR**
June 1996	**2**	**Y- CR 6d**	**Y- CR 6d**
May 1995	**2**	**N CR**	**No slide available**
June 1994	1	N CR	N CR
1993	3	N CR	Y- CR 6b
June 1992	1	N CR	N CR
June 1991	**2**	**N CR**	**N CR**
July 1990	3	N CR	N CR
Air Photo			
2015	3	N CR	Y- CR 6d
2007	**2**	**N CR**	**Y- CR 6d**

Y = Yes, signal indicates wetness (+ = strong, - = weak) **N** = No wetness signature
CR = cropped (row crop or tilled) **NC** = not cropped (hay, pasture, idle, etc.)

Feature	Color	Manipulation (year of installation)	Other
1 = water	6a = dark green	7a = ditched	write explanation
2 = mud flat	6b = light green	7b = tiled	
3 = bare spot	6c = yellow	7c = filled	
4 = drowned crop	6d = brown	7d = tree/brush removal	
5 = planted late	6e = black	8 = plowed/tilled	

I. Does slide/air photo data indicate the site is a wetland? ☐ Yes ☒ No
J. Does slide/air photo data indicate the site is a wetland? ☐ Yes ☒ No

I. A total of 2 years out of 8 most normal years (25%) have wet (Y) signatures.
J. A total of 2 years out of 7 most normal years (29%) have wet (Y) signatures.

I. A total of 5 years out of 21 years (24%) observed have wet (Y) signatures.
J. A total of 9 years out of 20 years (45%) observed have wet (Y) signatures.

EXHIBIT 13. FSA Slide Photos
CTH C (Centerline to 75' East of Centerline) for Proposed Sewer and Waterlines to serve Proposed Cedar Vineyards
Section 33, T11N, R22E, and Sections 3 and 4, T10N, R22E
City of Port Washington , Ozaukee County

2008 FSA Photo Areas A, B, C, and D

2008 FSA Photo Areas E, F and G

EXHIBIT 13. FSA Slide Photos
CTH C (Centerline to 75' East of Centerline) for Proposed Sewer and Waterlines to serve Proposed Cedar Vineyards
Section 33, T11N, R22E, and Sections 3 and 4, T10N, R22E
City of Port Washington , Ozaukee County

2008 NAIP Photo Areas H, I, and J

EXHIBIT 13. FSA Slide Photos
CTH C (Centerline to 75' East of Centerline) for Proposed Sewer and Waterlines to serve Proposed Cedar Vineyards
Section 33, T11N, R22E, and Sections 3 and 4, T10N, R22E
City of Port Washington , Ozaukee County

2003 FSA Slide all areas.

EXHIBIT 13. FSA Slide Photos
CTH C (Centerline to 75' East of Centerline) for Proposed Sewer and Waterlines to serve Proposed Cedar Vineyards
Section 33, T11N, R22E, and Sections 3 and 4, T10N, R22E
City of Port Washington , Ozaukee County

2000 FSA Slide All Areas

EXHIBIT 13. FSA Slide Photos
CTH C (Centerline to 75' East of Centerline) for Proposed Sewer and Waterlines to serve Proposed Cedar Vineyards
Section 33, T11N, R22E, and Sections 3 and 4, T10N, R22E
City of Port Washington , Ozaukee County

July 1997 FSA Slide

EXHIBIT 13. FSA Slide Photos
CTH C (Centerline to 75' East of Centerline) for Proposed Sewer and Waterlines to serve Proposed Cedar Vineyards
Section 33, T11N, R22E, and Sections 3 and 4, T10N, R22E
City of Port Washington , Ozaukee County

June 1996 FSA Slide all areas

EXHIBIT 13. FSA Slide Photos
CTH C (Centerline to 75' East of Centerline) for Proposed Sewer and Waterlines to serve Proposed Cedar Vineyards
Section 33, T11N, R22E, and Sections 3 and 4, T10N, R22E
City of Port Washington , Ozaukee County

May 1995 FSA Slide (Area J missing).

EXHIBIT 13. FSA Slide Photos
CTH C (Centerline to 75' East of Centerline) for Proposed Sewer and Waterlines to serve Proposed Cedar Vineyards
Section 33, T11N, R22E, and Sections 3 and 4, T10N, R22E
City of Port Washington , Ozaukee County

June 1991 FSA Slide all areas.

EXHIBIT 14A. Draft NRCS Wetland Inventory Map

CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
City of Port Washington, Ozaukee County

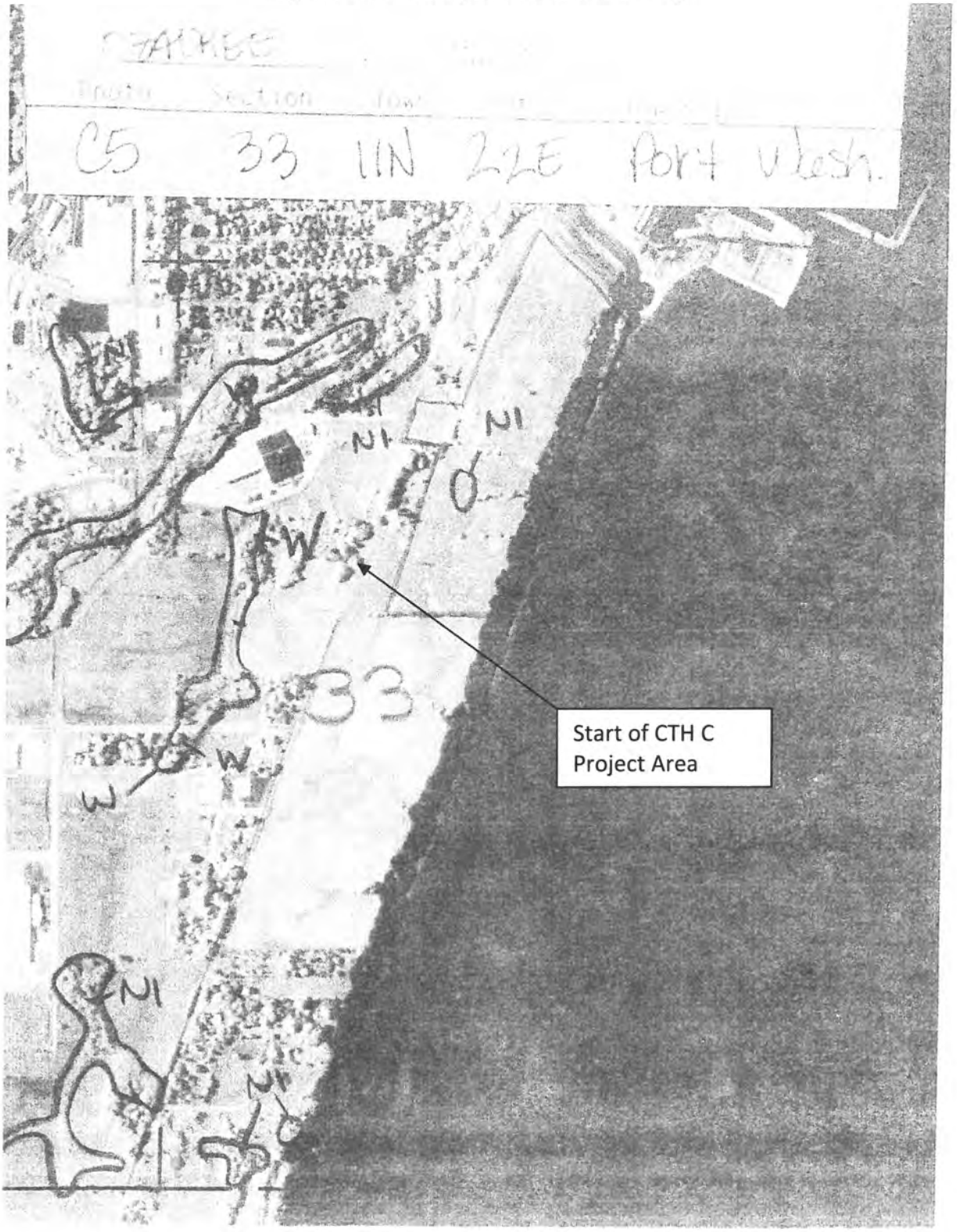


EXHIBIT 14B. Draft NRCS Wetland Inventory Map

CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 3, T10N-R22E
City of Port Washington, Ozaukee County

089 C5 sec3 T10n R22e Grafton Not to Scale

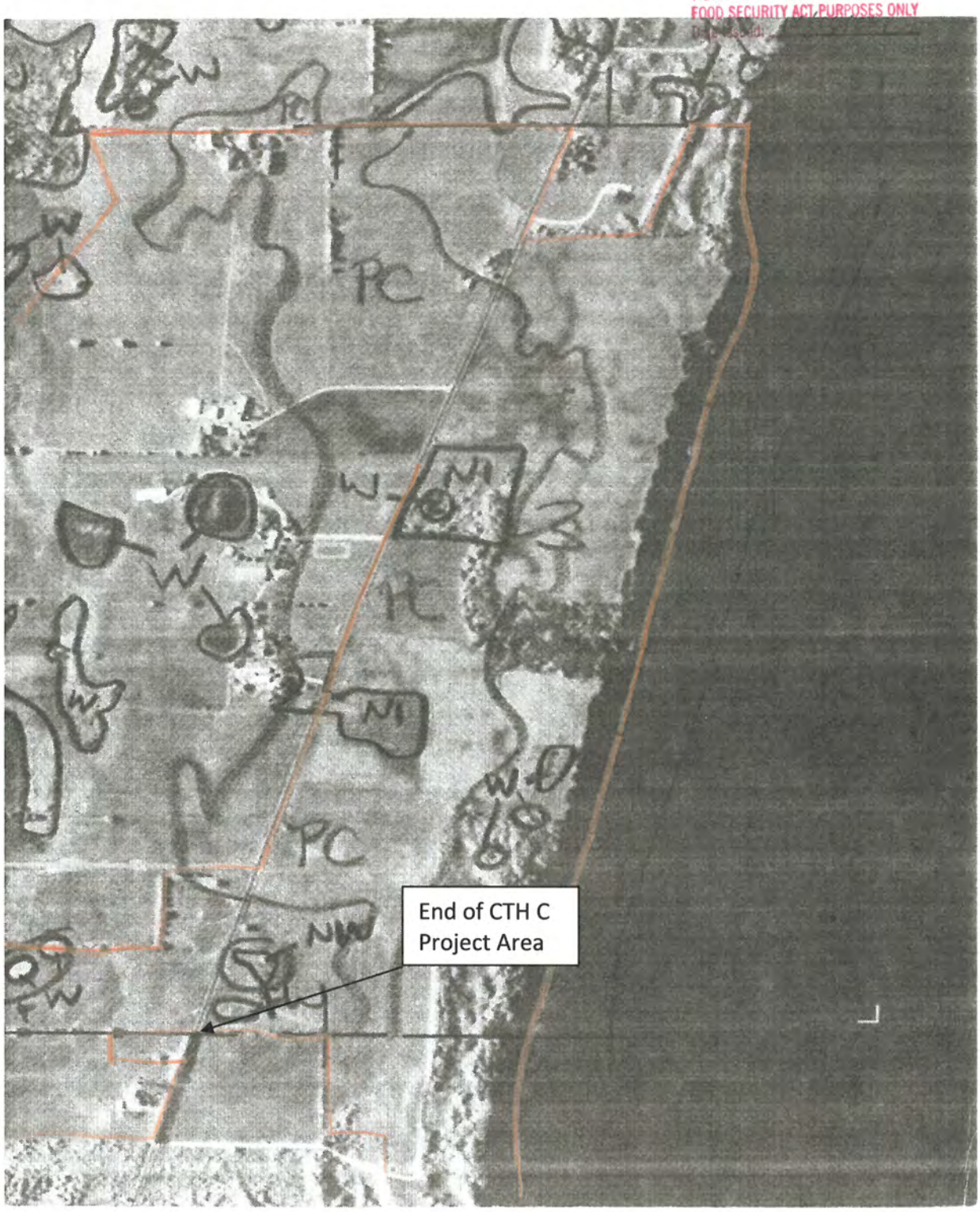



Exhibit 12. FSA Slide Review Map
Map 1 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
CTH C
West Sunset Road
Lake Michigan
Legend
Project Area
FSA Slide Review Area
A
FSA Slide Review Letter
N
0
200
400
Feet
Source: SEWRPC
Date of Photography: 2015
CA#210-38

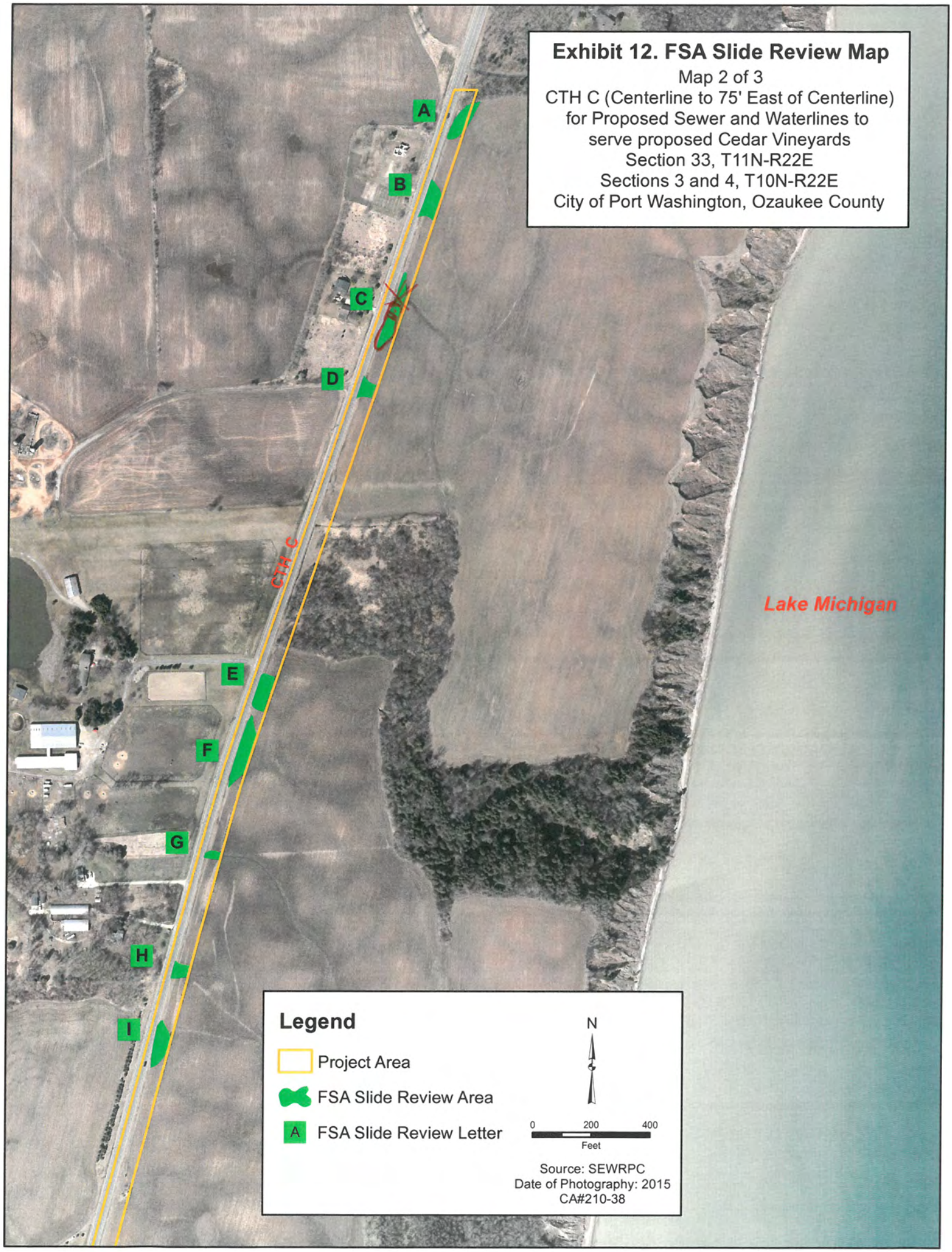


Exhibit 12. FSA Slide Review Map
Map 2 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
A
B
C
D
E
F
G
H
I
CTH C
Lake Michigan
Legend
Project Area
FSA Slide Review Area
A FSA Slide Review Letter
N
0 200 400
Feet
Source: SEWRPC
Date of Photography: 2015
CA#210-38

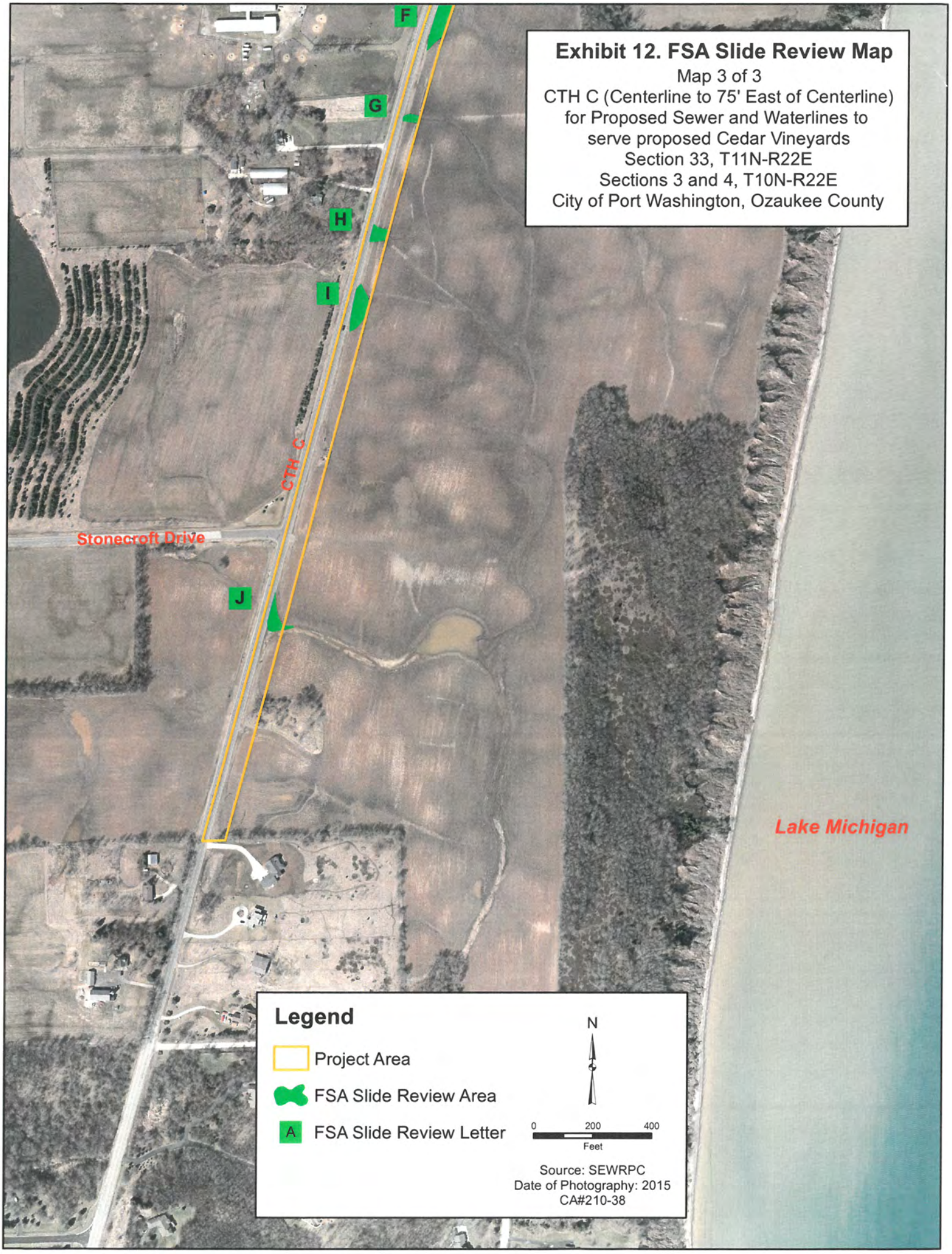


Exhibit 12. FSA Slide Review Map
Map 3 of 3
CTH C (Centerline to 75' East of Centerline)
for Proposed Sewer and Waterlines to
serve proposed Cedar Vineyards
Section 33, T11N-R22E
Sections 3 and 4, T10N-R22E
City of Port Washington, Ozaukee County
F
G
H
I
J
CTH C
Stonecroft Drive
Lake Michigan
Legend
Project Area
FSA Slide Review Area
A
FSA Slide Review Letter
N
0
200
400
Feet
Source: SEWRPC
Date of Photography: 2015
CA#210-38