

Tyco Fire Products L.P.

WETLAND AND WATERBODY DELINEATION REPORT

Water Distribution System Extension to the Town of Peshtigo

Marinette County, Wisconsin

October 2019

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Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin

DELINEATION REPORT

WETLAND AND

WATERBODY

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1 INTRODUCTION

This Wetland and Waterbody Delineation Report summarizes the results of a wetland and waterbody delineation survey conducted on September 9 through September 11, 2019 by Arcadis U.S., Inc. (Arcadis) on behalf of Tyco Fire Products L.P. (Tyco) for the proposed Water Distribution System Extension to the Town of Peshtigo Project (Project). The proposed project will provide municipal water to select residences in the town of Peshtigo. The Project is located at approximately 45.070705° Latitude and -87.630635° Longitude in Sections 18 and 19 of Township 30 North and Range 24 East and Section 24 of Township 30 North and Range 23 East. The purpose of the wetland and waterbody delineation survey is to assess the presence or absence of wetlands and other waters that may be affected by the proposed project, and to assess general ecological conditions within the environmental survey area (ESA). Seven wetlands and four streams were identified within the ESA.

2 STATEMENT OF QUALIFICATION

The wetland and waterbody delineation and report were performed and authored by Ryan Bombeck, Professional Wetland Scientist (PWS), Certified Wildlife Biologist (CWB), and Project Ecologist at Arcadis. Mr. Bombeck was the Lead Wetland Delineator for this project with assistance from Michael Meisenger, Ecologist 1 at Arcadis.

Ryan Bombeck holds a Bachelor of Science degree in Zoology - Fisheries and Wildlife Management (2007) from North Dakota State University in Fargo, North Dakota. Mr. Bombeck has over 11 years of experience as an environmental consultant. He is currently a Project Ecologist and Associate Project Manager with Arcadis based in Milwaukee, Wisconsin. Mr. Bombeck has extensive experience with field work and permitting throughout the Midwest.

Michael Meisenger holds a Bachelor of Arts degree in Environmental Science with a focus in Conservation and Ecology from Carthage College. He is currently an Ecologist with Arcadis based in Milwaukee, Wisconsin. Mr. Meisenger has 1 year of experience as an environmental consultant and has successfully completed the advanced wetland delineation training through the University of Wisconsin Lacrosse. Mr. Meisenger has experience with field work throughout the Midwest.

3 BACKGROUND INFORMATION

Prior to conducting the wetland and waterbody delineation survey, Arcadis reviewed the following resources to identify the potential location and extent of wetlands and waterbodies within the ESA:

- U.S. Geological Survey (USGS) topographic maps (Marinette West and Marinette East Quadrangles) (USGS, 2018).
- Marinette County contour data (Marinette County Land Records, 2018).
- Current aerial imagery (Environmental Systems Research Institute [ESRI], 2017) and historic aerial imagery (Google Earth, 2019).
- Wisconsin Department of Natural Resources (WDNR) Hydrography mapped rivers and streams and mapped lakes and open water (WDNR, 2019a).
- WDNR Wisconsin Wetlands Inventory (WWI) dataset (WDNR, 2019b).
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panels 5502590885B (FEMA, 1991a), 5502590895B (FEMA, 1991b), and 5502610001B (FEMA, 1978).
- U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey (WSS) of Marinette County, Wisconsin (NRCS, 2018) and WDNR Wetland Indicators (WDNR, 2018).

3.1 USGS Topographic Maps

According to topographic mapping (**Figure 1**), there is a total of four blueline streams mapped in various locations within the ESA.

3.2 Contour Maps

Two-foot contour data was acquired from the Marinette County Land Records department to evaluate drainage patterns within the ESA.

The maximum and minimum recorded elevations within the ESA (**Figure 2**) are approximately 620 and 594 feet above mean sea level, respectively. In general, the ESA drains from north to south along unnamed tributaries to the Little River.

3.3 Aerial Imagery

The ESA consists of portions of the existing road right-of-way along University Drive, County Road B, Rader Road, and Stanley Lane. A review of current aerial imagery for the ESA shows that the ESA is generally surrounded by private land parcels in a low-density populated area. Aerial photography for the ESA and its vicinity is depicted in **Figure 2**.

A review of historic aerial imagery demonstrates that the ESA has been largely unchanged during the time periods available (1999 to 2013). Between 2010 and 2013, there were improvements made to a

private residence north of Rader Road, east of County Road B. Historic aerial imagery was reviewed for the years of 1999, 2005, 2006, 2008, 2010, and 2013 (**Figure 3**).

3.4 WDNR Hydrography

The WDNR hydrography data represent the WDNR's register of waterbodies, including linear features such as streams and rivers and polygons such as lakes and other open water features. According to WDNR hydrography data, there are four surface water features within the ESA (**Figure 4**). Three unnamed intermittent streams (WBIC 5008898, 583300, and 5009250) intersect the ESA on County Road B and one unnamed perennial stream (WBIC 583300) intersects the ESA on Rader Road.

The ESA lies within the Little River-Frontal Lake Michigan (USGS Hydrologic Unit Code [HUC] 040301050605) subwatershed of the Peshtigo River subbasin (HUC 04030105). The closest designated traditionally navigable waterway (TNW) to the ESA is Lake Michigan, approximately 3,500 feet to the east of the eastern extent of the ESA.

3.5 WDNR WWI

WWI maps are used as a guide, along with other data, to indicate the potential presence of wetlands. The information is not necessarily field-verified. The presence of a WWI feature is not a definitive indicator that a wetland is present. Conversely, the absence of a WWI feature is not a definitive indicator that a wetland is not present.

The WWI data indicate that there are multiple wetlands adjacent to the ESA and forested, broad-leaved deciduous, wet soil, palustrine (T3K) and forested, broad-leaved deciduous, standing water, palustrine (T3H) wetlands within the ESA along County Road B and T3H wetlands within the ESA along Rader Road (**Figure 4**).

3.6 FEMA Floodplain Maps

The identification and location of mapped FEMA flood zones within the ESA were determined by reviewing FEMA FIRM Panels 5502590885B and 5502590895B. No digital floodplain data is available for Marinette County. Therefore, FIRM panel data were digitized in the vicinity of the ESA. The extent of digitized floodplain data is depicted in **Figures 4.**

The ESA is located predominantly within the area of minimal flood hazard (Zone X) and partially within the 100-year flood zone (Zone A) along the perennial stream that intersects Rader Road.

3.7 USDA NRCS WSS of Marinette County, Wisconsin and WDNR Wetland Indicators

According to the USDA NRCS WSS for Marinette County, the five soil map units listed in **Table 1** are mapped within the ESA. The WDNR Wetland Indicators data show the intersect of hydric soils mapped by the USDA NRCS and topography indicative of a wetland landscape position based on 10 meter USGS topographic data. Hydric soils are typically found within areas designated as wetlands.

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Generally, soil units identified as hydric contain soils that indicate through their color and structure that they have experienced dominantly reducing (i.e.; oxygen poor) conditions, which are a result of inundation and/or saturation by water. The location and extent of the soil units and wetland indicators identified within the ESA are depicted in **Figure 5**.

Table 1. Soil Map Units within the Environmental Survey Area

Soil Unit Symbol	Soil Unit Name	WDNR Wetland Indicator?
DeCo	Deford and Cormant Soils, 0 to 2 percent slopes	Yes
RsB	Rousseau loamy fine sand, 1 to 6 percent slopes	No
SfB	Shawano loamy fine sand, 2 to 6 percent slopes	No
SfC	Shawano loamy fine sand, 6 to 12 percent slopes	No
WaA	Wainola loamy fine sand, 0 to 3 percent slopes	Yes

4 METHODOLOGY

A pedestrian survey was conducted within the ESA to identify wetlands and waterbodies on September 9 through September 11, 2019. Wetland boundaries were field-delineated according to Section 404 of the Clean Water Act routine onsite methodology described in the Technical Report Y-87-1 *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) and subsequent guidance documents and the U.S. Army Corps of Engineers (USACE) 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Version 2.0). The ESA is within the Northcentral Forests Land Resource Region (USACE, 2012). National wetland indicator status and taxonomic nomenclature is referenced from The National Wetland Plant List (Lichvar, 2016). Indicators of hydric soil are based on the Field Indicators of Hydric Soils in the United States guide Version 8.2 (Vasilas et al., 2018).

Wetland delineation data were recorded on the USACE Northcentral and Northeast Regional Supplement wetland determination data forms. In general, representative data points were recorded for each wetland. Corresponding representative upland data points were recorded to document upland boundaries and conditions surrounding the wetlands within the ESA. Additional data points were recorded within different vegetation types, WWI features, and WDNR Wetland Indicators, as necessary.

Streams were identified as those waters that possessed a defined "bed and bank" or ordinary high water mark (OHWM) indicators and lacked a dominance of upland vegetation in the channel. Channels that parallel roadways were identified as upland drainage features and were not considered to be jurisdictional unless they had an identifiable OHWM, were identified on the USGS topographic map, or represented a presumed relocation of a natural channel.

The outer boundaries of each wetland and waterbody (determined by the OHWM) were delineated and recorded using a handheld Trimble R1 global positioning system receiver paired with ESRI software on a hand-held tablet. As features were collected, they were given a unique feature identification (ID).

Precipitation data from approximately 90 days prior to the wetland and waterbody delineation surveys were obtained from a weather station near the ESA and compared with 30-year average precipitation data obtained from a NRCS WETS Table for Marinette County to determine if antecedent hydrologic conditions at the time of the survey were normal, wetter, or drier than the normal range (Midwestern Regional Climate Center, 2019).

5 SURVEY RESULTS

5.1 Antecedent Precipitation

Prior to conducting the field visit, antecedent precipitation data were analyzed. Data were obtained from a nearby weather station (Marinette: USC00475091) and compared to data from a nearby WETS station (Marinette: USC00475091).

The most recent rainfall event prior to the site visit was 0.02 inches, which occurred on September 7, 2019. Precipitation for the 14 days prior to the site visit was 2.23 inches. There was 0.52 inches of precipitation during the overnight hours of September 10, 2019. The precipitation data for the 90-day period prior to the field visit (**Appendix A, Table 4**) was entered into a WETS analysis worksheet (**Appendix A, Table 5**) to weight the information from each preceding month to analyze hydrologic conditions. Based on this analysis, the antecedent hydrologic conditions were within the normal range, suggesting that climatic/hydrologic conditions were normal for this time of year.

Using this same methodology, antecedent hydrologic conditions were analyzed for the historic aerial imagery depicted in **Figure 3**. Based on the analyses, climatic/hydrologic conditions were determined to be drier than normal for the years of 1999, 2005, and 2008; within the normal range for the years of 2010 and 2013; and wetter than normal for the year of 2006. Antecedent precipitation data and WETS analysis worksheets for the historic aerial imagery are provided in **Appendix A, Table 6 – Table 17**.

5.2 Vegetative Communities

Vegetative communities observed within the ESA consisted of emergent upland, emergent wetland (PEM), scrub/shrub upland, scrub/shrub wetland (PSS), and forested upland habitat types typical of roadside ditches of northern Wisconsin. Photographs of the ESA are provided in **Appendix B** and photograph locations are depicted in **Figure 7.**

Dominant plant species in upland areas included annual ragweed (*Ambrosia artemisiifolia*), ash-leaf maple (*Acer negundo*), black locust (*Robinia pseudoacacia*), black oak (*Quercus velutina*), eastern white pine (*Pinus strobus*), European buckthorn (*Rhamnus cathartica*), glossy false buckthorn (*Frangula alnus*), interrupted fern (*Osmunda claytoniana*), Kentucky blue grass (*Poa pratensis*), paper birch (*Betula papyrifera*), quaking aspen (*Populus tremuloides*), red pine (*Pinus resinosa*), reed canary grass (*Phalaris arundinacea*), Scotch pine (*Pinus sylvestris*), sensitive fern (*Onoclea sensibilis*), smooth brome (*Bromus inermis*), sugar maple (*Acer saccharum*), and Virginia-creeper (*Parthenocissus quinquefolia*).

Dominant plant species in wetland areas included American elm (*Ulmus americana*), ash-leaf maple, balsam fir (*Abies balsamea*), common duckweed (*Lemna minor*), cottongrass bulrush (*Scirpus cyperinus*), European buckthorn, glossy false buckthorn, green ash (*Fraxinus pennsylvanica*), Kentucky blue grass, narrow-leaf cat-tail (*Typha angustifolia*), needle spike-rush (*Eleocharis acicularis*), reed canary grass, sensitive fern, speckled alder (*Alnus incana*), spotted touch-me-not (*Impatiens capensis*), stalk-grain sedge (*Carex stipata*), sugar maple, and uptight sedge (*Carex stricta*).

5.3 Wetlands

As shown in **Figure 6**, a total of 7 wetlands (W01 through W07) were identified as part of the delineation for a total of 2.22 acres. All wetlands appear to be hydrologically connected to surface water systems in the vicinity of the ESA and may be considered jurisdictional by the USACE and WDNR. It should be noted that the USACE and WDNR make the final determination of wetland hydrologic connectivity and jurisdiction. USACE Wetland Determination Data Forms are provided in **Appendix C** and wetland characteristics are summarized in **Table 2**.

Table 2. Wetlands within the Environmental Survey Area

Feature ID	Cowardin Classification	Total Approximate Area Delineated within ESA (acres) ¹	Acres PEM	Acres PSS	Hydrologic Connection ²
W01	PEM/PSS	0.02	0.01	0.01	Connected
W02	PSS	0.05	0.00	0.05	Connected
W03	PEM/PSS	0.91	0.42	0.49	Connected
W04	PEM	0.09	0.09	0.00	Connected
W05	PEM	0.68	0.68	0.00	Connected
W06	PEM	0.40	0.40	0.00	Connected
W07	PEM	0.07	0.07	0.00	Connected
	Total	2.22	1.67	0.55	

Notes:

W01 is a PEM/PSS wetland that measures approximately 0.02 acres within the ESA and is located within the roadside ditch of County Road B. Two wetland data points (DP03 and DP05) were recorded within W01 and one upland data point (DP04) was recorded in an adjacent upland area to aid in the wetland boundary determination. W01 is comprised of emergent and scrub/shrub plant communities. Dominant plant species observed at the wetland data points included European buckthorn, glossy false buckthorn, reed canary grass, cottongrass bulrush, and sensitive fern. This wetland was located at the toe slope of the road ditch. Wetland hydrology indicators observed at the wetland data points included high water table (A2), saturation (A3), geomorphic position (D2), and FAC-neutral test (D5). Soil textures were generally silt loam over loamy sand. Hydric soil indicators observed at the wetland data points included sandy redox (S5). The wetland boundary was determined by subtle to moderate topographical changes in elevation, in addition to the boundary between the presence or absence of hydrophytic vegetation, wetland hydrology, and hydric soils.

¹The wetland may extend outside of the ESA; this acreage corresponds to the size of the feature located within the ESA.

²The determinations of hydrologic connection is based on the boundary delineations and have not been formally approved by the USACE and/or WDNR.

W02 is a PSS wetland that measures approximately 0.05 acres within the ESA and is located within the roadside ditch of County Road B. Two wetland data points (DP06 and DP07) were recorded within W02 and one upland data point (DP08) was recorded in an adjacent upland area to aid in the wetland boundary determination. W02 is comprised of a scrub/shrub plant community. Dominant plant species observed at the wetland data points included balsam fir, European buckthorn, American elm, glossy false buckthorn, reed canary grass, and sensitive fern. This wetland was located at the toe slope of the road ditch. Wetland hydrology indicators observed at the wetland data points included geomorphic position (D2) and FAC-neutral test (D5). Soil textures were generally silt loam over loamy sand and sandy loam. Hydric soil indicators observed at the wetland data points included depleted below dark surface (A11) and sandy redox (S5). The wetland boundary was determined by subtle to moderate topographical changes in elevation, in addition to the boundary between the presence or absence of hydrophytic vegetation, wetland hydrology, and hydric soils.

W03 is a PEM/PSS wetland that measures approximately 0.91 acres within the ESA and is located within the roadside ditch of County Road B. This wetland is hydrologically connected by culverts under private driveways and streams that flow through culverts under County Road B. Nine wetland data points (DP09, DP11, DP13, DP14, DP15, DP16, DP19, DP20, and DP22) were recorded within W03 and five upland data points (DP10, DP12, DP17, DP18, and DP21) were recorded in adjacent upland areas to aid in the wetland boundary determination. W03 is comprised of emergent and scrub/shrub plant communities. Dominant plant species observed at the wetland data points included glossy false buckthorn, ash-leaf maple, speckled alder, sensitive fern, reed canary grass, needle spike-rush, spotted touch-me-not, and stalk-grain sedge. This wetland was located at the toe slope of the road ditch. Wetland hydrology indicators observed at the wetland data points included high water table (A2), saturation (A3), water stained leaves (B9), drainage patterns (B10), geomorphic position (D2), and FAC-neutral test (D5). Soil textures were generally silt loam over loamy sand. Hydric soil indicators observed at the wetland data points included thick dark surface (A12), sandy redox (S5), and redox dark surface (F6). The wetland boundary was determined by subtle to moderate topographical changes in elevation, in addition to the boundary between the presence or absence of hydrophytic vegetation, wetland hydrology, and hydric soils.

W04 is a PEM wetland that measures approximately 0.09 acres within the ESA and is located within the roadside ditch of Rader Road. One wetland data point (DP23) was recorded within W04 and one upland data point (DP24) was recorded in an adjacent upland area to aid in the wetland boundary determination. W04 is comprised of an emergent plant community. Dominant plant species observed at the wetland data point included glossy false buckthorn and sensitive fern. This wetland was located at the toe slope of the road ditch. Wetland hydrology indicators observed at the wetland data point included saturation (A3), geomorphic position (D2), and FAC-neutral test (D5). Soil textures were generally loamy sand. Hydric soil indicators observed at the wetland data point included sandy redox (S5). The wetland boundary was determined by subtle to moderate topographical changes in elevation, in addition to the boundary between the presence or absence of hydrophytic vegetation, wetland hydrology, and hydric soils.

W05 is a PEM wetland that measures approximately 0.68 acres within the ESA and is located within the roadside ditch of Rader Road. This wetland is hydrologically connected by culverts under private driveways and a stream that flows through a culvert under Rader Road. Three wetland data points (DP26, DP27, and DP29) were recorded within W05 and two upland data point (DP25 and DP28) were recorded in adjacent upland areas to aid in the wetland boundary determination. W05 is comprised of an emergent

plant community that partially occurred at the fringe of PSS and forested wetlands (PFO). PSS and PFO plant communities occurred outside of the ESA. Dominant plant species observed at the wetland data point included Kentucky blue grass, sensitive fern, glossy false buckthorn, speckled alder, stalk-grain sedge, uptight sedge, green ash, and European buckthorn. This wetland was located at the toe slope of the road ditch. Wetland hydrology indicators observed at the wetland data point included high water table (A2), saturation (A3), water marks (B1), drainage patterns (B10), geomorphic position (D2), and FAC-neutral test (D5). Soil textures were generally silt loam over loamy sand. Hydric soil indicators observed at the wetland data points included depleted below dark surface (A11) and thick dark surface (A12). The wetland boundary was determined by subtle to moderate topographical changes in elevation, in addition to the boundary between the presence or absence of hydrophytic vegetation, wetland hydrology, and hydric soils.

W06 is a PEM wetland that measures approximately 0.40 acres within the ESA and is located within the roadside ditch of Rader Road and Stanley Lane. One wetland data point (DP31) was recorded within W06 and one upland data point (DP30) was recorded in an adjacent upland area to aid in the wetland boundary determination. W06 is comprised of an emergent plant community that occurred at the fringe of a PSS wetland. PSS plant communities occurred outside of the ESA. Dominant plant species observed at the wetland data point included sugar maple, European buckthorn, and common duckweed. This wetland was located at the toe slope of the road ditch. Wetland hydrology indicators observed at the wetland data point included surface water (A1), high water table (A2), saturation (A3), water marks (B1), water stained leaves (B9), and geomorphic position (D2). Soil textures were generally mucky silt loam over loamy sand. Hydric soil indicators observed at the wetland data point included depleted below dark surface (A11) and sandy redox (S5). The wetland boundary was determined by subtle to moderate topographical changes in elevation, in addition to the boundary between the presence or absence of hydrophytic vegetation, wetland hydrology, and hydric soils.

W07 is a PEM wetland that measures approximately 0.07 acres within the ESA and is located within the roadside ditch of University Drive. One wetland data point (DP32) was recorded within W07 and one upland data point (DP33) was recorded in an adjacent upland area to aid in the wetland boundary determination. Dominant plant species observed at the wetland data point included narrow-leaf cat-tail. This wetland was located at the toe slope of the road ditch. Wetland hydrology indicators observed at the wetland data point included surface water (A1), high water table (A2), saturation (A3), geomorphic position (D2), and FAC-neutral test (D5). Soil textures were generally mucky silt loam over loamy sand. Hydric soil indicators observed at the wetland data point included redox dark surface (F6). The wetland boundary was determined by subtle to moderate topographical changes in elevation, in addition to the boundary between the presence or absence of hydrophytic vegetation, wetland hydrology, and hydric soils.

5.4 Waterbodies

As shown in **Figure 6**, three intermittent unnamed tributaries and one perennial unnamed tributary to the Little River were identified within the ESA for a total of approximately 115 linear feet. Stream 1 (S01) intersects County Road B and measures approximately 45 linear feet within the ESA. Stream 2 (S02) intersects County Road B and measures approximately 22 linear feet within the ESA. Stream 3 (S03) intersects County Road B and measures approximately 24 linear feet within the ESA. Stream 4 (S04)

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intersects Rader Road and measures approximately 24 linear feet within the ESA. S01, S02, and S03 drain to S04, which appears to be an unnamed tributary to the Little River. Due to the hydrologic connection between these streams and Lake Michigan, a TNW, they may be considered jurisdictional by the USACE and WDNR. It should be noted that the USACE and WDNR make the final determination of significant nexus with a TNW. Stream characteristics are summarized in **Table 3**.

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Table 3. Waterbodies within the Environmental Survey Area

Feature ID	Waterbody Name	WDNR WBIC	Flow Regime ¹	Depth (inches)	Substrate	Approximate Length (linear feet)	Approximate OHWM Width (feet)	Approximate Bank Width (feet)	TNW Connection
S01	Unnamed Tributary to Little River	5008898	Intermittent	4	Sandy	45	5	10	Connected
S02	Unnamed Tributary to Little River	583300	Intermittent	4	Sandy	22	7	7	Connected
\$03	Unnamed Tributary to Little River	5009250	Intermittent	4	Sandy	24	2	3	Connected
S04	Unnamed Tributary to Little River	583300	Perennial	6	Sandy	24	5	8	Connected
					Total	115			

Notes:

¹Flow regime is defined as perennial, intermittent, or ephemeral. This determination was interpreted using field observations, WDNR hydrography, and USGS topographic maps, as appropriate.

6 CONCLUSIONS

A wetland and waterbody delineation survey was conducted by Arcadis for the proposed project on September 9 through September 11, 2019. Arcadis identified 7 wetlands (totaling 2.22 acres) and 4 streams (totaling 115 linear feet) within the ESA.

All wetland and waterbody features appeared to be hydrologically connected to surface water systems within the vicinity of the ESA and may be considered jurisdictional by the USACE and WDNR. However, the USACE and WDNR make the final determinations regarding jurisdiction of the delineated features.

7 REFERENCES

- Environmental Laboratory, 1987. 1987 USACE Wetlands Delineation Manual.
- ESRI, 2017. World Imagery. Available online at: ESRI online streaming services. Accessed: August 2019.
- FEMA, 1978. National Flood Hazard Layer Flood Insurance Rate Map Panel 5502610001B. Available online at: https://msc.fema.gov/portal/home. Accessed: August 2019.
- FEMA, 1991a. National Flood Hazard Layer Flood Insurance Rate Map Panel 5502590885B. Available online at: https://msc.fema.gov/portal/home. Accessed: August 2019.
- FEMA, 1991b. National Flood Hazard Layer Flood Insurance Rate Map Panel 5502590895B. Available online at: https://msc.fema.gov/portal/home. Accessed: August 2019.
- Google Earth, 2019. Historic aerial imagery tool. Images from 1999, 2005, 2006, 2008, 2010, and 2013. Available online at: Google Earth streaming services. Accessed: August 2019.
- Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner, 2016. The National Wetland Plant List: 2016 Update of Wetland Ratings. Phytoneuron 2014-41: 1-42.
- Marinette County Land Records, 2018. Two-foot digital contour data. Purchased: July 30, 2018.
- Midwestern Regional Climate Center, 2019. cli-MATE Database. Available online at: https://mrcc.illinois.edu/CLIMATE/. Accessed: September 2019.
- NRCS, 2018. WSS of Marinette County, Wisconsin. Available online at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed: August 2019.
- USACE, 2012. 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0).
- USGS, 2018. Marinette West and Marinette East Quadrangle Maps. Available online at: https://viewer.nationalmap.gov/advanced-viewer/. Accessed: August 2019.
- Vasilas, L.M., G.W. Hurt, and C.V. Noble, 2018. Field Indicators of Hydric Soils in the United States. USDA NRCS in cooperation with the National Technical Committee for Hydric Soils. Version 8.2.
- WDNR, 2018. Wetland Indicators. Available online at: https://dnrmaps.wi.gov/H5/?Viewer=SWDV. Accessed: August 2019.
- WDNR, 2019a. Hydrography. Available online at: https://dnrmaps.wi.gov/H5/?Viewer=SWDV. Accessed: August 2019.
- WDNR, 2019b. WWI. Available online at: https://dnr.wi.gov/topic/wetlands/inventory.html. Accessed: August 2019.

FIGURES

Document Path: Z:\GlSProjeds_ENV\TYCO_Marinette_WI\MXD\WDR\Figure_1.my



Legend

ESA

2 ft Contour

10 ft Reference Contour

1,000

Note: Aerial Imagery from ESRI Streaming Imagery Server

Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin

FIGURE 2 CONTOURS

PN:30015299

Date: 10/4/2019





0 250 500 1,000 Feet

> Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin

FIGURE 3 HISTOICAL AERIAL IMAGERY (1999, 2005, 2006, 2008, 2010, 2013)

30015299 ARCADIS



Legend

- WDNR Hydrography Perennial Streams
- WDNR Hydrography Intermittent Streams
- ESA
- FEMA Flood Zone A
- FEMA Flood Zone X
- WDNR Hydrography Open Water
 - WWI Wetland

1,000

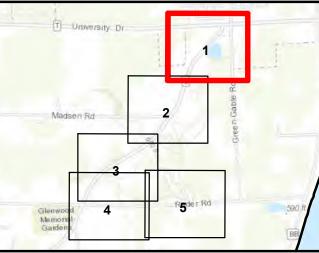
- 1. Wetland and Stream data sourced from WI DNR https://dnr.wi.gov/topic/wetlands/inventory.html
 Accessed 9/23/2019
 2. FEMA NFHL data digitized from
 FRIM panel 5502590895B
 3. Aerial Imagery provided by ESRI Streaming
 Imagery Server

Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin

FIGURE 4 WDNR HYDROGRAPHY, WWI, AND FEMA FLOODPLAIN

PN:30015299 Date: 10/7/2019

ARCADIS



Legend

- Upland Data Point
- Wetland Data Point
- Existing Culverts
- Delineated Streams
- Delineated PEM Wetland
- Delineated PSS Wetland
- ESA

0 125 250 500 Fee

Note:

 Aerial Imagery provided by ESRI Streaming Imagery Server

> Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin

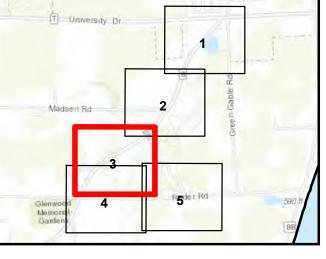
FIGURE 6-1 DELINEATED WETLANDS AND WATERBODIES

PN:30015299

Date: 10/7/2019



500



- Upland Data Point
- Wetland Data Point
- **Existing Culverts**
- **Delineated Streams**
- Delineated PEM Wetland
- Delineated PSS Wetland
- ESA

500

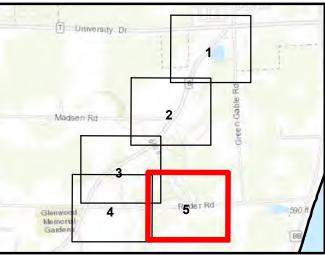
Aerial Imagery provided by ESRI Streaming Imagery Server

Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin

FIGURE 6-3
DELINEATED WETLANDS AND WATERBODIES

ARCADIS

500



Legend

- Upland Data Point
- Wetland Data Point
- **Existing Culverts**
- **Delineated Streams**
- Delineated PEM Wetland
- Delineated PSS Wetland
- ESA

500

Aerial Imagery provided by ESRI Streaming Imagery Server

Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin

FIGURE 6-5 DELINEATED WETLANDS AND WATERBODIES

PN:30015299

Date: 10/7/2019





Legend

Photograph Locations

Delineated PEM Wetland

Delineated PSS Wetland ESA

500

Aerial Imagery provided by ESRI Streaming Imagery Server

Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin

FIGURE 7-1 PHOTO LOCATIONS

PN:30015299

ARCADIS Date: 10/7/2019

Date: 1077,2019 OSET Marrie: trianin Document Path: Z:\GISProjects\ ENV\TYCO Marinette WIMXD\WDR\Figure 7.m

Date: 10/7/2019 User Name: thahn Document Path: Z:\GISProiects\ ENV\TYCO Marinette W\\MXD\WDR\Figure 7.m

APPENDIX A

Antecedent Precipitation



Table 4 Antecedent Precinitation Data

	cedent Precipitat onth Prior		onth Prior	1st M	1st Month Prior		
Date	Precipitation (in.)	Date	Precipitation (in.)	Date	Precipitation (in.)		
6/1/2019	0.00	7/1/2019	0.00	8/1/2019	0.00		
6/2/2019	0.04	7/2/2019	0.38	8/2/2019	0.07		
6/3/2019	0.00	7/3/2019	0.18	8/3/2019	Т		
6/4/2019	0.00	7/4/2019	0.00	8/4/2019	0.00		
6/5/2019	0.01	7/5/2019	0.02	8/5/2019	0.02		
6/6/2019	0.00	7/6/2019	0.03	8/6/2019	0.01		
6/7/2019	0.00	7/7/2019	0.03	8/7/2019	0.02		
6/8/2019	0.00	7/8/2019	0.00	8/8/2019	0.22		
6/9/2019	0.00	7/9/2019	0.00	8/9/2019	0.15		
6/10/2019	0.05	7/10/2019	0.05	8/10/2019	0.00		
6/11/2019	0.00	7/11/2019	0.00	8/11/2019	0.48		
6/12/2019	6/12/2019 0.27 7/1		0.00	8/12/2019	0.42		
6/13/2019	0.82	7/13/2019	0.20	8/13/2019	Т		
6/14/2019	0.00	7/14/2019	0.00	8/14/2019	0.00		
6/15/2019	0.95	7/15/2019	1.96	8/15/2019	0.00		
6/16/2019	0.00	7/16/2019	0.46	8/16/2019	0.11		
6/17/2019	0.00	7/17/2019	0.00	8/17/2019	Т		
6/18/2019	0.09	7/18/2019	0.04	8/18/2019	0.62		
6/19/2019	0.00	7/19/2019	0.07	8/19/2019	0.03		
6/20/2019	0.00	7/20/2019	1.67	8/20/2019	0.00		
6/21/2019	0.00	7/21/2019	0.17	8/21/2019	0.00		
6/22/2019	0.00	7/22/2019	0.00	8/22/2019	0.00		
6/23/2019	0.00	7/23/2019	0.00	8/23/2019	0.00		
6/24/2019	0.03	7/24/2019	0.00	8/24/2019	0.00		
6/25/2019	0.00	7/25/2019	0.56	8/25/2019	0.00		
6/26/2019	0.00	7/26/2019	0.00	8/26/2019	0.00		
6/27/2019	0.00	7/27/2019	0.06	8/27/2019	1.00		
6/28/2019	0.39	7/28/2019	0.00	8/28/2019	0.10		
6/29/2019	Т	7/29/2019	0.41	8/29/2019	0.00		
6/30/2019	0.00	7/30/2019	0.00	8/30/2019	0.00		
		7/31/2019	0.00	8/31/2019	0.00		
Total =	2.65	Total =	6.29	Total =	3.25		

Notes:

Station Name: Marinette, Wisconsin (USC00475091) Date Range = June 1, 2019 - August 31, 2019 M = Missing

T = Trace

Table 5. WETS Analysis

	Lo	ng-Term Rainfall R	ecords (from WETS	Site Determination				
Month	Normal	3 Years in 10 Less Than	3 Years in 10 Greater Than	Site Rainfall (in.)	Condition (Dry, Normal*, or Wet)	Condition Value**	Month Weight	Product
June	3.65	2.28	4.41	2.65	Normal	2	1	2
July	3.39	2.37	4.03	6.29	Wet	3	2	6
August	3.41	2.57	3.98	3.25	Normal	2	3	6
Sum =	10.45		Sum =	12.19			Sum*** =	14

Determination:	Dry	
	Normal	X
	Wet	

Notes:

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

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

^{**}Condition value: Dry = 1, Normal = 2, Wet = 3.

^{***} If sum is: 6 to 9 = Dry, 10 to 14 = Normal, 15 to 18 = Wet.



Table 6. Antecedent Precipitation Data

	cedent Precipitat				
3rd M	onth Prior	2nd M	onth Prior	1st M	onth Prior
Date	Precipitation (in.)	Date	Precipitation (in.)	Date	Precipitation (in.)
2/1/1999	Т	3/1/1999	0.00	4/1/1999	0.00
2/2/1999	0.13	3/2/1999	0.00	4/2/1999	0.07
2/3/1999	0.00	3/3/1999	0.00	4/3/1999	Т
2/4/1999	0.22	3/4/1999	0.00	4/4/1999	0.69
2/5/1999	0.00	3/5/1999	0.03	4/5/1999	T
2/6/1999	0.02	3/6/1999	0.00	4/6/1999	0.35
2/7/1999	0.00	3/7/1999	0.00	4/7/1999	0.30
2/8/1999	0.00	3/8/1999	0.00	4/8/1999	0.00
2/9/1999	0.00	3/9/1999	1.60	4/9/1999	0.20
2/10/1999	0.00	3/10/1999	0.04	4/10/1999	0.00
2/11/1999	Т	3/11/1999	0.00	4/11/1999	0.12
2/12/1999	0.57	3/12/1999	0.00	4/12/1999	Т
2/13/1999	0.00	3/13/1999	0.00	4/13/1999	0.00
2/14/1999	0.00	3/14/1999	0.00	4/14/1999	0.00
2/15/1999	0.00	3/15/1999	0.00	4/15/1999	0.00
2/16/1999	0.00	3/16/1999	0.00	4/16/1999	0.00
2/17/1999	0.17	3/17/1999	0.00	4/17/1999	0.00
2/18/1999	0.00	3/18/1999	0.00	4/18/1999	0.00
2/19/1999	0.00	3/19/1999	0.00	4/19/1999	0.00
2/20/1999	0.00	3/20/1999	0.00	4/20/1999	0.00
2/21/1999	0.00	3/21/1999	0.00	4/21/1999	0.00
2/22/1999	0.00	3/22/1999	0.00	4/22/1999	0.10
2/23/1999	0.00	3/23/1999	0.00	4/23/1999	T
2/24/1999	M	3/24/1999	0.00	4/24/1999	0.00
2/25/1999	0.13	3/25/1999	0.00	4/25/1999	0.00
2/26/1999	0.00	3/26/1999	0.00	4/26/1999	0.00
2/27/1999	Т	3/27/1999	0.00	4/27/1999	0.00
2/28/1999	0.26	3/28/1999	0.00	4/28/1999	0.00
		3/29/1999	Т	4/29/1999	0.00
		3/30/1999	0.00	4/30/1999	0.00
		3/31/1999	0.00		
Total =	1.50	Total =	1.67	Total =	1.83

Notes:

Station Name: Marinette, Wisconsin (USC00475091) Date Range = February 1, 1999 - April 30, 1999

M = Missing

T = Trace

Table 7. WETS Analysis

Table 7. WL	Long-Term Rainfall Records (from WETS Table)					Site Deter	mination	
Month	Normal	3 Years in 10 Less Than	3 Years in 10 Greater Than	Site Rainfall (in.)	Condition (Dry, Normal*, or Wet)	Condition Value**	Month Weight	Product
February	1.30	0.73	1.58	1.50	Normal	2	1	2
March	2.22	1.37	2.68	1.67	Normal	2	2	4
April	2.83	2.04	3.35	1.83	Dry	1	3	3
Sum =	6.35		Sum =	5.00			Sum*** =	9

Determination:	Dry	X
	Normal	
	Wet	

Notes:

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

^{**}Condition value: Dry = 1, Normal = 2, Wet = 3.

^{***}If sum is: 6 to 9 = Dry, 10 to 14 = Normal, 15 to 18 = Wet.



Table 8 Antecedent Precipitation Data

Table 8. Antecedent Precipitation Data						
3rd M	onth Prior	2nd M	onth Prior	1st M	onth Prior	
Date	Precipitation (in.)	Date	Precipitation (in.)	Date	Precipitation (in.)	
6/1/2005	М	7/1/2005	Т	8/1/2005	0.00	
6/2/2005	М	7/2/2005	0.00	8/2/2005	0.00	
6/3/2005	M	7/3/2005	0.00	8/3/2005	Т	
6/4/2005	M	7/4/2005	0.03	8/4/2005	Т	
6/5/2005	M	7/5/2005	0.30	8/5/2005	0.00	
6/6/2005	0.38	7/6/2005	0.00	8/6/2005	0.00	
6/7/2005	0.00	7/7/2005	0.00	8/7/2005	0.00	
6/8/2005	0.43	7/8/2005	0.00	8/8/2005	0.00	
6/9/2005	0.00	7/9/2005	0.00	8/9/2005	0.00	
6/10/2005	0.00	7/10/2005	0.00	8/10/2005	0.56	
6/11/2005	0.39	7/11/2005	0.00	8/11/2005	0.00	
6/12/2005	T	7/12/2005	0.00	8/12/2005	0.37	
6/13/2005	0.00	7/13/2005	0.00	8/13/2005	0.00	
6/14/2005	0.51	7/14/2005	0.00	8/14/2005	0.00	
6/15/2005	0.11	7/15/2005	0.00	8/15/2005	0.00	
6/16/2005	0.00	7/16/2005	0.00	8/16/2005	0.00	
6/17/2005	0.00	7/17/2005	0.00	8/17/2005	0.00	
6/18/2005	0.00	7/18/2005	0.00	8/18/2005	0.00	
6/19/2005	0.00	7/19/2005	0.00	8/19/2005	0.87	
6/20/2005	0.00	7/20/2005	0.00	8/20/2005	0.60	
6/21/2005	T	7/21/2005	0.22	8/21/2005	0.00	
6/22/2005	0.00	7/22/2005	0.00	8/22/2005	0.00	
6/23/2005	0.00	7/23/2005	0.00	8/23/2005	0.00	
6/24/2005	0.00	7/24/2005	0.60	8/24/2005	0.00	
6/25/2005	0.00	7/25/2005	0.00	8/25/2005	0.00	
6/26/2005	0.00	7/26/2005	0.58	8/26/2005	0.01	
6/27/2005	T	7/27/2005	0.00	8/27/2005	0.48	
6/28/2005	0.00	7/28/2005	0.00	8/28/2005	0.00	
6/29/2005	0.08	7/29/2005	0.40	8/29/2005	0.12	
6/30/2005	0.06	7/30/2005	0.00	8/30/2005	0.00	
		7/31/2005	0.00	8/31/2005	0.00	
Total =	1.96	Total =	2.13	Total =	3.01	

Notes:

Station Name: Marinette, Wisconsin (USC00475091) Date Range = June 1, 2005 - August 31, 2005 M = Missing

T = Trace

Table 9. WETS Analysis

	Long-Term Rainfall Records (from WETS Table)			Site Determination				
Month	Normal	3 Years in 10 Less Than	3 Years in 10 Greater Than	Site Rainfall (in.)	Condition (Dry, Normal*, or Wet)	Condition Value**	Month Weight	Product
June	3.65	2.28	4.41	1.96	Dry	1	1	1
July	3.39	2.37	4.03	2.13	Dry	1	2	2
August	3.41	2.57	3.98	3.01	Normal	2	3	6
Sum =	10.45		Sum =	7.10			Sum*** =	9

Determination:	Dry	X
	Normal	
	Wet	

Notes:

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

^{**}Condition value: Dry = 1, Normal = 2, Wet = 3.

^{***}If sum is: 6 to 9 = Dry, 10 to 14 = Normal, 15 to 18 = Wet.



Table 10 Antecedent Precinitation Data

	tecedent Precipita Ionth Prior		onth Prior	1st M	onth Prior
Date	Precipitation (in.)	Date	Precipitation (in.)	Date	Precipitation (in.)
6/1/2006	0.00	7/1/2006	0.00	8/1/2006	0.00
6/2/2006	0.11	7/2/2006	0.01	8/2/2006	2.22
6/3/2006	Т	7/3/2006	0.00	8/3/2006	0.27
6/4/2006	0.00	7/4/2006	0.33	8/4/2006	0.00
6/5/2006	0.00	7/5/2006	M	8/5/2006	0.00
6/6/2006	0.00	7/6/2006	М	8/6/2006	0.00
6/7/2006	0.17	7/7/2006	M	8/7/2006	0.00
6/8/2006	0.00	7/8/2006	M	8/8/2006	0.00
6/9/2006	0.00	7/9/2006	M	8/9/2006	0.00
6/10/2006	0.00	7/10/2006	Т	8/10/2006	0.02
6/11/2006	0.00	7/11/2006	0.00	8/11/2006	0.00
6/12/2006	0.00	7/12/2006	0.00	8/12/2006	0.00
6/13/2006	0.00	7/13/2006	0.00	8/13/2006	0.00
6/14/2006	0.18	7/14/2006	0.00	8/14/2006	0.54
6/15/2006	0.00	7/15/2006	0.16	8/15/2006	0.00
6/16/2006	Т	7/16/2006	0.00	8/16/2006	0.00
6/17/2006	0.00	7/17/2006	0.04	8/17/2006	0.00
6/18/2006	0.05	7/18/2006	Т	8/18/2006	0.00
6/19/2006	Т	7/19/2006	0.00	8/19/2006	0.00
6/20/2006	0.00	7/20/2006	0.00	8/20/2006	0.01
6/21/2006	0.05	7/21/2006	0.00	8/21/2006	0.00
6/22/2006	0.00	7/22/2006	0.00	8/22/2006	Т
6/23/2006	0.00	7/23/2006	0.41	8/23/2006	Т
6/24/2006	0.00	7/24/2006	0.31	8/24/2006	0.27
6/25/2006	0.20	7/25/2006	1.20	8/25/2006	0.90
6/26/2006	0.15	7/26/2006	1.92	8/26/2006	Т
6/27/2006	T	7/27/2006	Т	8/27/2006	Т
6/28/2006	0.40	7/28/2006	0.00	8/28/2006	0.00
6/29/2006	0.28	7/29/2006	0.02	8/29/2006	Т
6/30/2006	0.00	7/30/2006	0.05	8/30/2006	0.00
		7/31/2006	Т	8/31/2006	0.00
Total =	1.59	Total =	4.45	Total =	4.23

Notes:

Station Name: Marinette, Wisconsin (USC00475091) Date Range = June 1, 2005 - August 31, 2005

M = Missing

T = Trace

Table 11. WETS Analysis

	Lo	Long-Term Rainfall Records (from WETS Table)			Site Determination			
Month	Normal	3 Years in 10 Less Than	3 Years in 10 Greater Than	Site Rainfall (in.)	Condition (Dry, Normal*, or Wet)	Condition Value**	Month Weight	Product
June	3.65	2.28	4.41	1.59	Dry	1	1	1
July	3.39	2.37	4.03	4.45	Wet	3	2	6
August	3.41	2.57	3.98	4.23	Wet	3	3	9
Sum =	10.45		Sum =	10.27			Sum*** =	16

Determination:	Dry	
	Normal	
	Wet	X

Notes:

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

^{**}Condition value: Dry = 1, Normal = 2, Wet = 3.

^{***} If sum is: 6 to 9 = Dry, 10 to 14 = Normal, 15 to 18 = Wet.



Table 12. Antecedent Precipitation Data

	tecedent Precipita onth Prior		onth Prior	1st M	onth Prior
Date	Precipitation (in.)	Date	Precipitation (in.)	Date	Precipitation (in.)
7/1/2008	0.00	8/1/2008	0.00	9/1/2008	0.00
7/2/2008	0.45	8/2/2008	0.00	9/2/2008	0.00
7/3/2008	0.27	8/3/2008	0.00	9/3/2008	0.03
7/4/2008	0.00	8/4/2008	0.02	9/4/2008	0.00
7/5/2008	0.00	8/5/2008	Т	9/5/2008	0.34
7/6/2008	0.00	8/6/2008	0.00	9/6/2008	0.03
7/7/2008	0.00	8/7/2008	0.00	9/7/2008	0.00
7/8/2008	0.54	8/8/2008	0.12	9/8/2008	0.03
7/9/2008	0.00	8/9/2008	Т	9/9/2008	Т
7/10/2008	0.00	8/10/2008	0.02	9/10/2008	0.00
7/11/2008	0.00	8/11/2008	0.00	9/11/2008	0.00
7/12/2008	0.38	8/12/2008	0.00	9/12/2008	0.36
7/13/2008	0.00	8/13/2008	0.00	9/13/2008	Т
7/14/2008	0.00	8/14/2008	0.00	9/14/2008	0.18
7/15/2008	0.13	8/15/2008	0.00	9/15/2008	Т
7/16/2008	0.05	8/16/2008	0.00	9/16/2008	0.00
7/17/2008	0.12	8/17/2008	0.07	9/17/2008	0.00
7/18/2008	2.95	8/18/2008	0.00	9/18/2008	0.00
7/19/2008	0.01	8/19/2008	0.18	9/19/2008	0.00
7/20/2008	Т	8/20/2008	Т	9/20/2008	0.00
7/21/2008	0.26	8/21/2008	0.00	9/21/2008	0.00
7/22/2008	Т	8/22/2008	0.05	9/22/2008	0.00
7/23/2008	0.00	8/23/2008	0.02	9/23/2008	0.00
7/24/2008	0.00	8/24/2008	0.00	9/24/2008	0.00
7/25/2008	0.00	8/25/2008	0.00	9/25/2008	0.00
7/26/2008	0.01	8/26/2008	0.00	9/26/2008	Т
7/27/2008	0.00	8/27/2008	0.00	9/27/2008	0.00
7/28/2008	0.00	8/28/2008	0.00	9/28/2008	0.00
7/29/2008	0.00	8/29/2008	0.01	9/29/2008	Т
7/30/2008	1.18	8/30/2008	0.00	9/30/2008	0.31
7/31/2008	0.00	8/31/2008	0.00		
Total =	6.35	Total =	0.49	Total =	1.28

Notes:

Station Name: Marinette, Wisconsin (USC00475091) Date Range = July 1, 2008 - September 30, 2008

M = Missing

T = Trace

Table 13, WETS Analysis

	Lo	Long-Term Rainfall Records (from WETS Table)				Site Determination			
Month	Normal	3 Years in 10 Less Than	3 Years in 10 Greater Than	Site Rainfall (in.)	Condition (Dry, Normal*, or Wet)	Condition Value**	Month Weight	Product	
July	3.39	2.37	4.03	6.35	Wet	3	1	3	
August	3.41	2.57	3.98	0.49	Dry	1	2	2	
September	3.28	2.37	3.87	1.28	Dry	1	3	3	
Sum =	10.08		Sum =	8.12			Sum*** =	8	

Determination:	Dry	X
	Normal	
	Wet	

Notes:

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

^{**}Condition value: Dry = 1, Normal = 2, Wet = 3.

^{***}If sum is: 6 to 9 = Dry, 10 to 14 = Normal, 15 to 18 = Wet.



Table 14. Antecedent Precipitation Data

	tecedent Precipita onth Prior		onth Prior	1st Mo	1st Month Prior		
Date	Precipitation (in.)	Date	Precipitation (in.)	Date	Precipitation (in.)		
8/1/2010	0.08	9/1/2010	0.38	10/1/2010	0.00		
8/2/2010	0.44	9/2/2010	0.00	10/2/2010	0.33		
8/3/2010	0.06	9/3/2010	0.61	10/3/2010	0.01		
8/4/2010	0.00	9/4/2010	0.03	10/4/2010	0.00		
8/5/2010	0.00	9/5/2010	0.00	10/5/2010	0.00		
8/6/2010	0.00	9/6/2010	0.00	10/6/2010	0.00		
8/7/2010	0.00	9/7/2010	0.18	10/7/2010	0.00		
8/8/2010	1.43	9/8/2010	0.01	10/8/2010	0.00		
8/9/2010	0.00	9/9/2010	0.00	10/9/2010	0.00		
8/10/2010	0.02	9/10/2010	0.00	10/10/2010	0.00		
8/11/2010	0.00	9/11/2010	0.04	10/11/2010	0.00		
8/12/2010	0.08	9/12/2010	0.40	10/12/2010	0.00		
8/13/2010	0.00	9/13/2010	Т	10/13/2010	0.00		
8/14/2010	0.00	9/14/2010	0.00	10/14/2010	0.00		
8/15/2010	0.01	9/15/2010	T	10/15/2010	0.04		
8/16/2010	0.00	9/16/2010	0.81	10/16/2010	0.00		
8/17/2010	0.00	9/17/2010	0.07	10/17/2010	0.00		
8/18/2010	0.00	9/18/2010	0.00	10/18/2010	Т		
8/19/2010	0.02	9/19/2010	0.00	10/19/2010	0.00		
8/20/2010	0.04	9/20/2010	0.00	10/20/2010	0.00		
8/21/2010	0.08	9/21/2010	Т	10/21/2010	0.00		
8/22/2010	0.00	9/22/2010	0.02	10/22/2010	0.00		
8/23/2010	0.00	9/23/2010	1.57	10/23/2010	0.00		
8/24/2010	0.00	9/24/2010	1.15	10/24/2010	0.48		
8/25/2010	0.05	9/25/2010	0.01	10/25/2010	0.65		
8/26/2010	0.00	9/26/2010	0.00	10/26/2010	0.23		
8/27/2010	0.00	9/27/2010	0.00	10/27/2010	0.15		
8/28/2010	0.00	9/28/2010	0.00	10/28/2010	T		
8/29/2010	0.00	9/29/2010	0.00	10/29/2010	0.00		
8/30/2010	0.00	9/30/2010	0.00	10/30/2010	0.00		
8/31/2010	0.00		0.00	10/31/2010	0.00		
Total =	2.31	Total =	5.28	Total =	1.89		

Notes:

Station Name: Marinette, Wisconsin (USC00475091)
Date Range = August 1, 2010 - October 31, 2010
M = Missing

T = Trace

Table 15. WETS Analysis

	Lor	ng-Term Rainfall Re	ecords (from WETS	Site Determination				
Month	Normal	3 Years in 10 Less Than	3 Years in 10 Greater Than Site Rainfall (in.)		Condition (Dry, Normal*, or Wet)	Condition Value**	Month Weight	Product
August	3.41	2.57	3.98	2.31	Dry	1	1	1
September	3.28	2.37	3.87	5.28	Wet	3	2	6
October	2.81	1.83	3.38	1.89	Normal	2	3	6
Sum =	9.50		Sum =			Sum*** =	13	

Determination:	Dry	
	Normal	X
	Wet	

Notes:

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

^{**}Condition value: Dry = 1, Normal = 2, Wet = 3.

^{***} If sum is: 6 to 9 = Dry, 10 to 14 = Normal, 15 to 18 = Wet.



Table 16. Antecedent Precipitation Data

	ecedent Precipita		onth Prior	1st Mo	onth Prior
Date	Precipitation (in.)	Date	Precipitation (in.)	Date	Precipitation (in.)
3/1/2013	0.00	4/1/2013	T	5/1/2013	T
3/2/2013	0.00	4/2/2013	0.00	5/2/2013	0.00
3/3/2013	0.00	4/3/2013	0.00	5/3/2013	0.18
3/4/2013	0.00	4/4/2013	0.00	5/4/2013	0.06
3/5/2013	0.00	4/5/2013	0.01	5/5/2013	0.00
3/6/2013	0.00	4/6/2013	0.04	5/6/2013	0.00
3/7/2013	Т	4/7/2013	0.30	5/7/2013	0.00
3/8/2013	0.00	4/8/2013	0.00	5/8/2013	0.00
3/9/2013	0.00	4/9/2013	0.07	5/9/2013	0.00
3/10/2013	0.52	4/10/2013	0.71	5/10/2013	0.33
3/11/2013	0.71	4/11/2013	0.00	5/11/2013	T
3/12/2013	0.00	4/12/2013	0.36	5/12/2013	0.20
3/13/2013	T	4/13/2013	0.05	5/13/2013	0.00
3/14/2013	0.00	4/14/2013	0.02	5/14/2013	0.02
3/15/2013	0.00	4/15/2013	0.37	5/15/2013	T
3/16/2013	0.08	4/16/2013	0.00	5/16/2013	0.00
3/17/2013	0.00	4/17/2013	0.00	5/17/2013	0.00
3/18/2013	0.00	4/18/2013	0.11	5/18/2013	T
3/19/2013	0.30	4/19/2013	0.20	5/19/2013	0.00
3/20/2013	0.00	4/20/2013	0.00	5/20/2013	0.05
3/21/2013	0.00	4/21/2013	0.00	5/21/2013	0.46
3/22/2013	0.00	4/22/2013	T	5/22/2013	0.33
3/23/2013	0.00	4/23/2013	0.17	5/23/2013	0.26
3/24/2013	0.00	4/24/2013	T	5/24/2013	0.00
3/25/2013	0.00	4/25/2013	0.00	5/25/2013	0.00
3/26/2013	0.00	4/26/2013	T	5/26/2013	0.00
3/27/2013	Т	4/27/2013	0.07	5/27/2013	0.00
3/28/2013	0.00	4/28/2013	0.00	5/28/2013	0.03
3/29/2013	0.00	4/29/2013	0.07	5/29/2013	0.05
3/30/2013	0.00	4/30/2013	0.44	5/30/2013	T
3/31/2013	0.22			5/31/2013	0.60
Total =	1.83	Total =	2.99	Total =	2.57

Station Name: Marinette, Wisconsin (USC00475091) Date Range = March 1, 2013 - May 31, 2013

M = Missing

T = Trace

Table 17. WETS Analysis

	Loi	ng-Term Rainfall R	ecords (from WETS	Site Determination				
Month	Normal	3 Years in 10 Less Than	3 Years in 10 Greater Than	Site Rainfall (in.)	5 15 15 15 15 15 15 15 15 15 15 15 15 15		Month Weight	Product
March	2.22	1.37	2.68	1.83	Normal	2	1	2
April	2.83	2.04	3.35	2.99	Normal	2	2	4
May	3.20	2.31	3.78	2.57	Normal	2	3	6
Sum =	8.25		Sum =	7.39			Sum*** =	12

Determination:	Dry	
	Normal	Х
	Wet	

Notes:

^{*}Normal precipitation with 30% to 70% probability of occurrence.

**Condition value: Dry = 1, Normal = 2, Wet = 3.

^{***}If sum is: 6 to 9 = Dry, 10 to 14 = Normal, 15 to 18 = Wet.

APPENDIX B

Photographic Log



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 01

Date: 9/9/2019

Description:

Upland data point DP01 in WDNR wetland indicators layer.

Direction:South



Photo: 02

Date: 9/9/2019

Description:

Upland data point DP02 in road ditch depression.

Direction: Southwest



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 03

Date: 9/9/2019

Description:PEM wetland data point DP03 in W01.

Direction:Southwest



Photo: 04

Date: 9/9/2019

Description:

Upland data point DP04 at the boundary of W01.

Direction:Southwest



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 05

Date: 9/9/2019

Description:

PSS wetland data point DP05 in W01.

Direction:Northeast



Photo: 06

Date: 9/9/2019

Description:

PSS wetland data point DP06 in W02.

Direction:Southwest



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 07

Date: 9/9/2019

Description:PSS wetland data point DP07 in W02.

Direction:Northeast



Photo: 08

Date: 9/9/2019

Description:

Upland data point DP08 at the boundary of W02.

Direction: Southwest



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 09

Date: 9/9/2019

Description:PEM wetland data n

PEM wetland data point DP09 in W03.

Direction:Southwest



Photo: 10

Date: 9/9/2019

Description:

Upland data point DP10 at the boundary of W03.

Direction: Northeast



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 11

Date: 9/9/2019

Description:PEM wetland data point DP11 in W03.

Direction:Southwest



Photo: 12

Date: 9/9/2019

Description:

Upland data point DP12 at the boundary of W03.

Direction: Northeast



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 13

Date:

9/10/2019

Description:

PSS wetland data point DP13 in W03.

Direction:Northeast



Photo: 14

Date:

9/10/2019

Description:

PEM wetland data point DP14 in W03.

Direction:

Southwest



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 15

Date:

9/10/2019

Description:

PEM wetland data point DP15 in W03.

Direction:Southwest



Photo: 16

Date:

9/10/2019

Description:

PSS wetland data point DP16 in W03.

Direction:

Northeast



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 17

Date:

9/10/2019

Description:

Upland data point DP17 at the boundary of W03.

Direction:Southwest



Photo: 18

Date:

9/10/2019

Description:

Upland data point DP18 at the boundary of W03.

Direction:

Northeast



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 19

Date: 9/10/2019

Description:PEM wetland data point DP19 in W03.

Direction:Southwest



Photo: 20

Date: 9/10/2019

Description:

PSS wetland data point DP20 in W03.

Direction: Southwest



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 21

Date: 9/10/2019

Description:Upland data point DP21 at the boundary of W03.

Direction:Southwest



Photo: 22

Date: 9/10/2019

Description:PSS wetland data point DP22 in W03.

Direction: Northeast



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 23

Date:

9/10/2019

Description:

PEM wetland data point DP23 in W04.

Direction:

East



Photo: 24

Date:

9/10/2019

Description:

Upland data point DP24 at the boundary of W04.

Direction:

West



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 25

Date:

9/10/2019

Description:

Upland data point DP25 at the boundary of W05.

Direction:

West



Photo: 26

Date:

9/10/2019

Description:

PEM wetland data point DP26 in W05.

Direction:

East



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 27

Date: 9/10/2019

Description:

PEM wetland data point DP27 in W05. W05 is a PEM fringe of a PSS wetland.

Direction:West



Photo: 28

Date:

9/10/2019

Description:

Upland data point DP28 at the boundary of W05.

Direction:

Northwest



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 29

Date:

9/10/2019

Description:

PEM wetland data point DP29 in W05. W05 is a PEM fringe of a PFO wetland.

Direction:

East



Photo: 30

Date:

9/10/2019

Description:

Upland data point DP30 at the boundary of W06.

Direction:

North



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 31

Date: 9/10/2019

Description:

PSS wetland data point DP31 in W06. W06 is a PEM fringe of a PSS wetland.

Direction:South



Photo: 32

Date:

9/11/2019

Description:

PEM wetland data point DP32 in W07 and upland data point DP33 at the boundary of DP07.

Direction:

West



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 33

Date:

9/10/2019

Description:

View upstream at S01.

Direction:Northeast



Photo: 34

Date:

9/10/2019

Description:

View downstream at S02.

Direction:

South



Water Distribution System Extension to the Town of Peshtigo Marinette County, Wisconsin



Photo: 35

Date:

9/10/2019

Description:

View upstream at S03.

Direction:

Northwest



Photo: 36

Date:

9/10/2019

Description:

View upstream at S04.

Direction:

Northwest

APPENDIX C Wetland Determination Data Forms

Site: Water Distribution System Extension to the Town of	Peshtigo City/County: Marinette Co	unty Sampling Date: 9/9/2019			
Applicant/Owner: Tyco Fire Products L.P	•	State: WI Sampling Point: DP01			
Investigator(s): Ryan Bombeck, Micha	el Meisenger Section, Towns	hip, Range: Section 18, Township 30N, Range 24E			
Landform (hillslope,terrace,etc.): Plain	Local relief (concave	e, convex, none): Flat Slope (%): 0%			
Subregion(LRR or MLRA): LRR K - Northce	ntral Forests Lat. 45.070586° N	Long. 87.630442° W Datum: WGS 84			
Soil Map Unit Name: Wainola loamy fine sar	nd, 0 to 3 percent slopes	WWI Classification: None			
Are climatic/hydrologic conditions on the site	typical for time of year? Yes X	No (If no, explain in the Remarks)			
Are Vegetation X Soil _	or Hydrologysigni	ficantly disturbed?			
Are Vegetation Soil	or Hydrologynatu	rally problematic?			
Are Normal Circumstances Present?	Yes X No (If needed, ex	xplain any answers in Remarks)			
SUMMARY OF FINDINGS					
Hydrophytic Vegetation Present?	/es NoX Is th	e Sampled Area within a Wetland?			
Hydric Soil Present?	/es NoXY	es NoX			
Wetland Hydrology Present?	Yes NoX If yes	s, optional Wetland Site ID:			
Remarks:					
Photo 01 in Appendix B. Data point recorded three parameters, this area is an upland. All		dside. Vegetation is recently mowed. Based on the absence of all			
tinee parameters, the area is an apiana. 7th	data points were recorded along existing	Toddsides.			
HYDROLOGY					
Wetland Hydrology Indicators:					
Primary Indicators (minimum of on	e is required; check all that apply)	Secondary Indicators (minimum of two required)			
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 Tim Lines (B6)			
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)			
Sediment Deposits (B2)	Oxidized Rhizospheres on Living	Crayfish Burrows (C8)			
Drift Deposits (B3)	Roots (C3)	Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)			
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soil	Geomorphic Position (D2)			
Inundation Visible on Aerial	(C6)	Shallow Aquitard (D3)			
Imagery (B7)	Thin Muck Surface (C7)	Microtopographic Relief (D4)			
Sparsely Vegetated Concave	Other (Explain in Remarks)	FAC-Neutral Test (D5)			
Surface (B8)					
Field Observations:					
· · · · · · · · · · · · · · · · · · ·	No X Depth (inches)				
	No X Depth (inches)	Yes NoX			
Saturation Present? Yes	No X Depth (inches)				
Describe Recorded Data (stream guage, mo	nitoring well, aerial photos, previous insp	pections), if available:			
Topographic maps, aerial imagery, WWI dat	a, WDNR Wetland Indicators data.				
Remarks: The criterion for wetland bydrology is not me	t Based on WETS analysis antocodent	hydrologic conditions are within a normal range.			
The offenor for wetland hydrology is not me	a. Dased on we is analysis, antecedent	nyarologic containons are within a normal rafige.			

VLGL	TATION	Absolute %	Dominant		Sampling Point: DP01
Tree St	ratum Plot size: 30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1. 2.					Number of dominant species that are OBL, FACW, or FAC: 0 (A)
3. 4.					Total number of dominant species across all strata: 2(B)
5. 6.					Percent of dominant species that are OBL, FACW, or FAC: 0% (A/B)
7.					Prevalence Index Worksheet:
50%=	0.0% 20%= 0.0%	0	Total Cover		Total % cover of:
Shrub S	Stratum Plot size: 15'				OBL species0 x10
1.					FACW species <u>0</u> x 2 <u>0</u>
2.					FAC species0 x30
3.					FACU species <u>78</u> x 4 <u>312</u>
4.					UPL species <u>25</u> x 5 <u>125</u>
5.					Column Totals:103(A)437_(B)
6.					Prevalence Index: 4.2 (B/A)
7.					Hydrophytic Vegetation Indicators:
50%=	0.0% 20%= 0.0%	0	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb St	ratum Plot size: 5'				Dominance Test is >50%
1.	Poa pratensis	60	Y	FACU	Prevalence Index is <3.0*
2.	Bromus inermis	25	Y	UPL	Morphological Adaptations*
3.	Digitaria sanguinalis	5	N	FACU	Problematic Hydrophytic Vegetation*
4.	Trifolium pratense	5	N	FACU	* Indicators of hydric soil and wetland hydrology must be present
5.	Ambrosia artemisiifolia	5	N	FACU	unless disturbed or problematic
6.	Achillea millefolium	2	N	FACU	Definitions of Vegetation Strata:
7. 8.	Taraxacum officinale	1	N	FACU	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height
9. 10.					Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1M) tall.
11. 12.					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50%=	51.5% 20%= 20.6%	103	Total Cover		Was I Was a All and a second of a good side of the
	Vine Stratum Plot size: 30'	•			Woody Vines - All woody vines greater than 3.28 ft in height.
1.					
2.					
3.		-			Hydrophytic Vegetaion Present?
4.		-		-	.,,,
50%=	0.0% 20%= 0.0%	0	Total Cover		YesNoX
Remark	ss: (Include photo numbers here or erion for hydrophytic vegetation is	on a separat	e sheet.)	antly disturbed as a	

SOIL	SOIL										
									Sampling Point:	DP01	
Profile	Description:	(Describe to	depth	needed to d	locume	ent the ir	ndicator	or confirm abse	ence of indicators.)		
	Depth	Matrix	X	Redox Fea	atures						
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks		
	0-7	10YR 3/4	100					Loamy Sand			
	7-20	10YR 4/4	98	10YR 4/6	2	С	М	Loamy Sand	Distinct redox concentrations.		
* Type	: C=Concentra	ation. D=Depl	etion. RN	/l=Reduced	Matrix.	CS=Coa	ted Sand	grains **Locati	on: PL=Pore Lining. M=Matrix		
* Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: Indicators for Problematic Soils											
•	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L,	MLRA 149B)	
	Histic Epiped	on (A2)			Dark S	Surface (S	S7)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)	·	
	Black Histic (A3)			Polyva	lve Belov	w Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)	
	Hydrogen Sul	lfide (A4)			MLRA	149B)				Dark Surface (S7) (LRR K, L, M)	
	Stratified Laye	ers (A5)			Thin D	ark Surfa	ace (S9)		Polyvalve Below Surface (St	8) (LRR K, L)	
	Depleted Below Dark Surface (A11) Loamy Mucky							- 1)	Thin Dark Surface (S9) (LRF	R K, L)	
	Thick Dark St	urface (A12)			Loamy	Gleyed	Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)	
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)	
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	rface (F6	6)	Red Parent Material (F21)		
	Sandy Redox	(S5)			Deplet	ed Dark	Surface ((F7)	Very Shallow Dark Surface ((TF12)	
					Redox	Depress	ions (F8)	Other (Explain in Remarks)		
Restric	ctive Layer (if	observed)									
	Type:		J	Vone							
Dep	th (inches):						Hydri	c Soil Present?	YesNoX		
Remar											
The criterion for hydric soil is not met.											

Site:	Water Distribution System Extension to the T	Town of Peshtigo	City/County: 1	Marinette County	у	Sampling Date:	9/9/2019	
	ant/Owner: Tyco Fire Product				State: WI			
Invest	igator(s): Ryan Bombeck, M	Vichael Meiseng	er Se	ction, Township,	, Range: Section 18, Towns	ship 30N, Range 24E		
Landfo	orm (hillslope,terrace,etc.): Depr	ression	Local re	elief (concave, c	convex, none): Concave	Slc	ope (%):0%	
Subre	gion(LRR or MLRA): LRR K - No	orthcentral Fores	ts Lat. 4	5.067848° N	Long. 87.633796° W	Datum: W0	3S 84	
Soil M	lap Unit Name: Shawano loamy f	ine sand, 6 to 12						
	imatic/hydrologic conditions on th						<u> </u>	
Are	Vegetation	Soil	or Hydrology	significa	intly disturbed?			
Are	Vegetation	Soil	or Hydrology _	naturally	y problematic?		ļ	
Are No	ormal Circumstances Present?	Yes X	No((If needed, expla	ain any answers in Remarks	s)		
SUMN	MARY OF FINDINGS							
	Hydrophytic Vegetation Prese		· · · · · · · · · · · · · · · · · · ·		Sampled Area within a Wet	:land?		
	Hydric Soil Prese				No X		ļ	
	Wetland Hydrology Prese	nt? Yes	No X	If yes, o	ptional Wetland Site ID:			
<u> </u>								
Rema Photo	rks: 02 in Appendix B. Data point rec	orded in depress	sion in roadside d	litch. Based on t	he absence of all three para	ameters, this area is	an upland. All	
	points were recorded along existing	•	ion in roddoide a	Itori. Duood o	no abounce of all alloo paid	initions, time area is	an apiana. 7 iii	
HAD	ROLOGY							
Wella	nd Hydrology Indicators:	of one is requir	ad chack all the	ot annly)	Secondary Indicate	are (minimum of tw		
	Primary Indicators (minimum of Surface Water (A1)		Stained Leaves (Secondary Indicate Surface Soil Crack	•	o requireu)	
	High Water Table (A2)		c Fauna (B13)	,D9 <i>)</i>	Drainage Patterns	,		
	Saturation (A3)		eposits (B15)		Moss Tim Lines (B	•		
	Water Marks (B1)		gen Sulfide Odor	(C1)	Dry-Season Water	,		
	Sediment Deposits (B2)		ed Rhizospheres		Crayfish Burrows (C8)			
	Drift Deposits (B3)	Roots		OII LIVING	Saturation Visible on Aerial Imagery (C9)			
	Algal Mat or Crust (B4)	Preser	nce of Reduced Ir	ron (C.4)	Stunted or Stressed Plants (D1)			
	Iron Deposits (B5)		t Iron Reduction i		Geomorphic Position (D2)			
	Inundation Visible on Aerial	(C6)	Hon Reduction.	II Tillea oon	Shallow Aquitard (,		
	Imagery (B7)	Thin M	luck Surface (C7)	\	<u> </u>	,		
	Sparsely Vegetated Concave		(Explain in Rema	,	Microtopographic Relief (D4) FAC-Neutral Test (D5)			
	Surface (B8)	Other \	Explain in Noma	iks)	I AO Nouliai 1000	(D3)		
Field	Observations:							
		es No	X Depth (i	inches)	Wetland Hydrology Prese	ent?		
			Depth (i		1	No	X	
			Depth (i		-			
		·	· ·	, <u> </u>				
Descr	ibe Recorded Data (stream guage	e, monitoring we	II, aerial photos,	previous inspect	tions), if available:			
	graphic maps, aerial imagery, WW	•						
Rema		•						
The cr	riterion for wetland hydrology is no		•		•	-	ased on generally	
wet su	ummer and water balance tables t	for the region, the	is survey was not	t considered to r	be conducted during the ary	season.		

VLOL	TATION	Absolute %	Dominant		Sampling Point: DP02		
Tree St	ratum Plot size: 30'	Cover	Species	Indicator Status	Dominance Test Worksheet		
1.	Pinus resinosa	25	Y	FACU	Number of dominant species that are OBL,		
2.	Pinus sylvestris	25	Y	UPL	FACW, or FAC:1(A)		
3. 4.					Total number of dominant species across all strata: 6 (B)		
5.				-			
6.					Percent of dominant species that are OBL, FACW, or FAC: 17% (A/B)		
7.					Prevalence Index Worksheet:		
50%=	25.0% 20%= 10.0%	50	Total Cover		Total % cover of:		
Shrub S	Stratum Plot size: 15'				OBL species0 x10		
1.	Rhamnus cathartica	5	Y	FAC	FACW species <u>10</u> x 2 <u>20</u>		
2.	Pinus sylvestris	2	Y	UPL	FAC species <u>5</u> x 3 <u>15</u>		
3.			-		FACU species <u>55</u> x 4 <u>220</u>		
4.				·	UPL species <u>87</u> x 5 <u>435</u>		
5.				·	Column Totals: <u>157</u> (A) <u>690</u> (B)		
6.					Prevalence Index: 4.4 (B/A)		
7.					Hydrophytic Vegetation Indicators:		
50%=	3.5% 20%= 1.4%	7	Total Cover		Rapid Test for Hydrophytic Vegetation		
Herb S	ratum Plot size: 5'				Dominance Test is >50%		
1.	Bromus inermis	60	Y	UPL	Prevalence Index is ≤3.0*		
2.	Parthenocissus quinquefolia	30	Υ	FACU	Morphological Adaptations*		
3.	Onoclea sensibilis	5	N	FACW	Problematic Hydrophytic Vegetation*		
4. 5.	Solidago gigantea	5	N	FACW	* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
6.		-			Definitions of Vegetation Strata:		
7.					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast		
8.					height (DBH), regardless of height		
9.					Sapling/shrub - Woody plants less than 3 in. DBH and greater		
10.					than or equal to 3.28 ft (1M) tall.		
11.							
12.					and woody plants less than 3.28 ft tall.		
50%=	50.0% 20%= 20.0%	100	Total Cover		West Misses All and bissesses to the control of the		
Woody	Vine Stratum Plot size: 30'				Woody Vines - All woody vines greater than 3.28 ft in height.		
1.							
2.							
3.		•			Hydrophytic Vegetaion Present?		
4.		•			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
50%=	0.0% 20%= 0.0%	0	Total Cover		YesNoX		
	ks: (Include photo numbers here or erion for hydrophytic vegetation is		e sheet.)				

SOIL											
									Sampling Point:	DP02	
Profile	Description:	(Describe to	o depth	needed to d	locume	ent the in	ndicator	or confirm abse	ence of indicators.)		
	Depth	Matri	Х	Redox Fea	atures		1				
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks		
	0-3	10YR 3/3	100					Sandy Loam			
	3-10	3-10 10YR 4/6 100						Loamy Sand			
	10-21	10YR 4/6	85	2.5YR 4/8	15	С	М	Loamy Sand	Prominent redox concentrations.		
* Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix											
Hydric Soil Indicators: Indicators for Problematic Soils											
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L	, MLRA 149B)	
	Histic Epiped	on (A2)			Dark S	Surface (S	S7)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)		
	Black Histic (A	A3)			,		ow Surface (S8) (LRR R,		5 cm Mucky Peat (S3) (LRR	K, L, R)	
	Hydrogen Sulfide (A4) MLRA 149B)								Dark Surface (S7) (LRR K, L, M)		
	Stratified Laye	ers (A5)			Thin D	ark Surfa	ace (S9)		Polyvalve Below Surface (S	8) (LRR K, L)	
	Depleted Belo	ow Dark Surfa	ace (A11)	Loamy	Mucky N	Mineral (F	- 1)	Thin Dark Surface (S9) (LRI	R K, L)	
	Thick Dark Su	urface (A12)			Loamy	Gleyed I	Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)	
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix	d Matrix (F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)	
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	Dark Surface (F6)		Red Parent Material (F21)		
	Sandy Redox	(S5)			Deplet	ed Dark	rk Surface (F7)		Very Shallow Dark Surface (TF12)		
					Redox	Depress	ssions (F8)		Other (Explain in Remarks)		
Restric	tive Layer (if	observed)									
	Type:			None		_					
Dept	th (inches):						Hydri	ic Soil Present?	YesNoX		
Remarl											
The crit	terion for hydri	c soil is not n	net.								

Site:	Water Distribution System Extension to the Town	of Peshtigo City/Cou	nty: Marinette County	/			Sampling Date:	9/9/201	19	
	ant/Owner: Tyco Fire Products L				State:	WI	Sampling Point:	DP03	,	
Investi	igator(s): Ryan Bombeck, Mich	nael Meisenger	Section, Township,	Range:	Section	18, Towns	hip 30N, Range 24E			
Landfo	orm (hillslope,terrace,etc.): Toe Slop		cal relief (concave, c	onvex, n	none):	Concave	Slo	pe (%):	0%	
	gion(LRR or MLRA): LRR K - Northo		Long.	87.6341	12° W					
	ap Unit Name: Shawano loamy fine									
	matic/hydrologic conditions on the si									
Are		or Hydrolo								
Are	Vegetation Soil	or Hydrolo	gynaturally	probler/	matic?					
Are No	ormal Circumstances Present?	Yes X No	(If needed, expla	ain any answers in Remarks)						
SUMN	ARY OF EINDINGS									
SUIVIIVI	MARY OF FINDINGS Hydrophytic Vegetation Present?	Voc V No	ls the S	amnlad	Araa wi	thin a Wet	lando			
		Yes X No Yes X No		the Sampled Area within a Wetland?						
	Wetland Hydrology Present?			es X No No Optional Wetland Site ID: W01						
	Wellahu Hyurulogy Fresent:	Yes X No	ii yes, o	puona v	Velianu	Site iD. <u>1</u>	/// 1			
	rks: 03 in Appendix B. PEM wetland data a points were recorded along existing	•	undary of W01. Base	ed on the	e presen	ce of all thr	ee parameters, this a	area is a w	etland.	
HYDF	ROLOGY									
Wetlar	nd Hydrology Indicators:									
	Primary Indicators (minimum of o	ne is required; check a	ll that apply)	Secondary Indicators (minimum of two required)						
	Surface Water (A1)	Water Stained Lea	ves (B9)	Surface Soil Cracks (B6)						
Х	High Water Table (A2)	Aquatic Fauna (B1	,		Drainag	ge Patterns	(B10)			
Х	Saturation (A3)	Marl Deposits (B15	Marl Deposits (B15)			im Lines (B	36)			
<u> </u>	Water Marks (B1)	Hydrogen Sulfide (Hydrogen Sulfide Odor (C1)			ason Water	Table (C2)			
<u> </u>	Sediment Deposits (B2)	Oxidized Rhizosph	eres on Living	Crayfish Burrows (C8)						
<u> </u>	Drift Deposits (B3)	Roots (C3)		Saturation Visible on Aerial Imagery (C9)						
<u> </u>	Algal Mat or Crust (B4)	Presence of Reduc	Presence of Reduced Iron (C4)				Stunted or Stressed Plants (D1)			
<u> </u>	Iron Deposits (B5)	Recent Iron Reduc	tion in Tilled Soil	Х	Geomo	rphic Positi	on (D2)			
	Inundation Visible on Aerial	(C6)			Shallow Aquitard (D3)					
<u> </u>	Imagery (B7)	Thin Muck Surface	(C7)				Relief (D4)			
	Sparsely Vegetated Concave Surface (B8)	Other (Explain in R	temarks)	Х	FAC-Ne	eutral Test	(D5)			
Field (Observations:									
		No X De	oth (inches)	Wetland	d Hvdro	logy Prese	ent?			
	_		No Depth (inches)12			Yes X No				
			No Depth (inches) 8			_				
Descri	ibe Recorded Data (stream guage, m	nonitoring well, aerial pho	tos, previous inspect	ions), if	available	:				
Topog	raphic maps, aerial imagery, WWI d	ata, WDNR Wetland Indi	cators data.							
Remar The cri	rks: riterion for wetland hydrology is met.	Based on WETS analysis	s, antecedent hydrolo	ogic cond	ditions ar	re within a r	normal range.			

VLGL	TATION			Absolute %	Daminant		Sampling Point: DP03		
<u>Tree Stratum</u> Plot size: <u>30'</u>		Cover	Dominant Species	Indicator Status	Dominance Test Worksheet				
1.						. <u></u>	Number of dominant species that are OBL,		
2.							FACW, or FAC:4(A)		
3.							Total number of dominant species across		
4.							all strata:4(B)		
5.							Percent of dominant species that are OBL,		
6. 7							FACW, or FAC:(A/B) Prevalence Index Worksheet:		
7. 50%=	0.0%	20%_	: 0.0%	0	Total Cover	-	Total % cover of:		
Shrub S		size:	15'		Total Cover		OBL species 25 x 1 25		
	Rhamnus cathart			25	Υ	FAC	FACW species 60 x 2 120		
-	Frangula alnus				 N	FAC	FAC species 30 x 3 90		
3.					-	17.0	FACU species 0 x 4 0		
4.							UPL species 0 x 5 0		
5.							Column Totals: 115 (A) 235 (B)		
6.					-	-	Prevalence Index: 2.0 (B/A)		
7.							Hydrophytic Vegetation Indicators:		
50%=	15.0%	20%=	6.0%	30	Total Cover		Rapid Test for Hydrophytic Vegetation		
Herb St	ratum Plot	size:	5'				x Dominance Test is >50%		
1.	Phalaris arundina	cea		40	Υ	FACW	x Prevalence Index is ≤3.0*		
2.	Scirpus cyperinus	S		20	Υ	OBL	Morphological Adaptations*		
3.	Onoclea sensibili	S		20	Y	FACW	Problematic Hydrophytic Vegetation*		
4. Eleocharis acicularis5.			5	N	OBL	* Indicators of hydric soil and wetland hydrology must be prese unless disturbed or problematic			
6.							Definitions of Vegetation Strata:		
7.							Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast		
8.							height (DBH), regardless of height		
9.							Sapling/shrub - Woody plants less than 3 in. DBH and greater		
10.							than or equal to 3.28 ft (1M) tall.		
11.					· -		Herb - All herbaceous (non-woody) plants, regardless of size,		
12.						· -	and woody plants less than 3.28 ft tall.		
50%=	42.5%	20%=	: 17.0%	85	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.		
Woody	Vine Stratum Plo	size:	30'						
1									
2.									
3.							Hydrophytic Vegetaion Present?		
4.									
50%=	0.0%	20%=	0.0%	0	Total Cover		Yes <u>X</u> No		
Remark	s: (Include photo	numbers	s here or	r on a separat	e sheet.)		1		
	erion for hydrophy				,				

SOIL											
									Sampling Point:	DP03	
Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)											
	Depth Matrix Redox Fe			Redox Fea	atures						
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks		
	0-4.5	10YR 2/1	100					Silt Loam			
	4.5-9	10YR 4/1	98	2.5YR 4/8	2	С	М	Loamy Sand	Prominent redox concentrations.		
	9-18	10YR 4/4	98	10YR 4/6	2	С	М	Loamy Sand	Distinct redox concentrations.		
* Type	: C=Concentra	ation, D=Depl	etion, RI	∕/I=Reduced I	Matrix,	CS=Coat	ed Sand	grains **Locati	on: PL=Pore Lining, M=Matrix		
Hydric	Soil Indicato	rs:							Indicators for Problem	atic Soils	
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L,	MLRA 149B)	
	Histic Epiped	on (A2)			Dark S	Surface (S	37)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)	16)	
	Black Histic (A	A3)			-	Polyvalve Below Surface (S8) (LRR R,			5 cm Mucky Peat (S3) (LRR K, L, R)		
	Hydrogen Sulfide (A4)					MLRA 149B)			Dark Surface (S7) (LRR K, L, M)		
	Stratified Laye	ers (A5)			Thin Dark Surface (S9)				Polyvalve Below Surface (S8) (LRR K, L)		
	Depleted Belo	ow Dark Surfa	ace (A11)	Loamy	Mucky Mineral (F1)			Thin Dark Surface (S9) (LRR K, L)		
	Thick Dark Su			Loamy Gleyed Matrix (F2)				Iron-Manganese Masses (F12) (LRR K, L, R)			
	Sandy Mucky Mineral (S1) Depleted Mat						(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)	
	Sandy Gleyed Matrix (S4) Redox Dark Su						urface (F6)		Red Parent Material (F21)		
X Sandy Redox (S5) Depleted					Deplet	ed Dark S	Surface (F7)	Very Shallow Dark Surface (TF12)	
					Redox	Depress	ions (F8)	Other (Explain in Remarks)	Other (Explain in Remarks)	
Restric	tive Layer (if	observed)									
Type: None											
Dept	th (inches):						Hydri	c Soil Present?	Yes X No		
Remarl											
The criterion for hydric soil is met.											

Site:	Water Distribution System Extension to the	Town of Peshtigo	City/County: N	Marinette County	/	Sampling Date:	9/9/2019		
	ant/Owner: Tyco Fire Produc				State: WI				
Invest	igator(s): Ryan Bombeck,	Michael Meisenge	erSec	tion, Township,	Range: Section 18, Towns	ship 30N, Range 24E			
Landfo	orm (hillslope,terrace,etc.): Sho	oulder Slope	Local re	lief (concave, c	onvex, none): Convex	Slc	ope (%):1%		
Subre	gion(LRR or MLRA): LRR K - N	Northcentral Fores	ts Lat. 45	5.067534° N	Long. 87.634079° W	Datum: W0	GS 84		
Soil M	lap Unit Name: Shawano loamy	fine sand, 6 to 12							
	imatic/hydrologic conditions on the						_		
Are	Vegetation	Soil	or Hydrology _	significa	ntly disturbed?				
Are	Vegetation	Soil	or Hydrology _	naturally	problematic?				
Are No	ormal Circumstances Present?	Yes X	No(I	f needed, expla	in any answers in Remarks	s)			
SUMN	MARY OF FINDINGS								
	Hydrophytic Vegetation Pres				ampled Area within a Wet	land?			
		sent? Yes			s NoX				
	Wetland Hydrology Pres	sent? Yes	No X	If yes, o	ptional Wetland Site ID:				
<u> </u>									
Rema	rks: 04 in Appendix B. Upland data p	point recorded at t	the houndary of W	/01 Rased on t	he absence of two out of th	ree parameters, this	area is an unland		
	ta points were recorded along ex		.ne boundary or vi	/U1. Dascu on i	He absence of two out of the	ree parameters, tins	alta is all uplatiu.		
	·	-							
HAD									
	ROLOGY								
Wetia	nd Hydrology Indicators:				O Lamada Parte				
	Primary Indicators (minimum		•		Secondary Indicate		o required)		
	Surface Water (A1)		Stained Leaves (E	39)	Surface Soil Crack	,			
	High Water Table (A2)		c Fauna (B13)		Drainage Patterns	,			
	Saturation (A3)		eposits (B15)	204)	Moss Tim Lines (B	,			
	Water Marks (B1)		gen Sulfide Odor (Dry-Season Water	` ,			
	Sediment Deposits (B2)	Roots	ed Rhizospheres ((C3)	on Living	Crayfish Burrows (C8)				
	Drift Deposits (B3)			(0.1)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)				
<u> </u>	Algal Mat or Crust (B4)		nce of Reduced Iro						
<u> </u>	Iron Deposits (B5)	Recent	t Iron Reduction ir	1 Tilled Soil	Geomorphic Position (D2)				
	Inundation Visible on Aerial Imagery (B7)	<u> </u>			Shallow Aquitard (I	,	_		
<u> </u>			uck Surface (C7)		Microtopographic F	, ,			
	Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remar	ks)	FAC-Neutral Test	(D5)			
Field	Observations:								
		Yos No	V Denth (ir	achae)	Wetland Hydrology Prese	n49			
		Yes Y No			, ,,		v		
		Yes X No Yes X No			163_	No			
Sature	MOH Frescht!	162 V 140	pehii (ii	ICHES) ZI					
Descr	ibe Recorded Data (stream qua-	ae. monitorina we	II. aerial photos, p	revious inspect	ions), if available:				
	Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data.								
Remarks:									
The cr	riterion for wetland hydrology is r		•	•	•		ased on generally		
wet su	ummer and water balance tables	s for the region, thi	s survey was not	considered to b	e conducted during the dry	season.			

VEGE	TATION		Absolute %	Dominant		Sampling Point: DP04
Tree St	ratum Plot size:	30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1.	Pinus sylvestris		20	Υ	UPL	Number of dominant species that are OBL,
2.	Populus tremuloides		15	Υ	FACU	FACW, or FAC:4 (A)
3.					· -	Total number of dominant species across
4.						all strata:6(B)
5.						Percent of dominant species that are OBL,
6.						FACW, or FAC: <u>67%</u> (A/B)
7.						Prevalence Index Worksheet:
50%=		%= 7.0%	35	Total Cover		Total % cover of:
Shrub S	Stratum Plot size:	15'				OBL species <u>2</u> x 1 <u>2</u>
1.	Rhamnus cathartica		80	Y	FAC	FACW species <u>60</u> x 2 <u>120</u>
2.					· 	FAC species <u>110</u> x 3 <u>330</u>
3.						FACU species <u>15</u> x 4 <u>60</u>
4.						UPL species <u>20</u> x 5 <u>100</u>
5.						Column Totals: <u>207</u> (A) <u>612</u> (B)
6.					· 	Prevalence Index: 3.0 (B/A)
7.						Hydrophytic Vegetation Indicators:
50%=			80	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb Stratum Plot size: 5'						x Dominance Test is >50%
	Phalaris arundinacea		30	Y	FACW	x Prevalence Index is <3.0*
2.	Rhamnus cathartica		30	Y	FAC	Morphological Adaptations*
3.	Onoclea sensibilis		30	Y	FACW	Problematic Hydrophytic Vegetation*
4. 5.	Scirpus cyperinus		2	N	OBL	* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6.			-	-	. <u></u>	Definitions of Vegetation Strata:
7.					· -	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.						height (DBH), regardless of height
9.					· -	Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.						than or equal to 3.28 ft (1M) tall.
11.						Herb - All herbaceous (non-woody) plants, regardless of size,
12.				-		and woody plants less than 3.28 ft tall.
50%=	46.0% 20	%= 18.4%	92	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
Woody	Vine Stratum Plot size:	30'				, , ,
1.					·	
2.					· -	
3.				·		Hydrophytic Vegetaion Present?
4.					· -	
50%=	0.0% 20	%= 0.0%	0	Total Cover		Yes <u>X</u> No
	ks: (Include photo numb erion for hydrophytic ve			e sheet.)		

								Sampling Point:	DP04	
Description:	(Describe to	o depth	needed to d	locume	ent the in	ndicator	or confirm abse	ence of indicators.)		
Depth	Matri	Х	Redox Fea	atures						
(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks		
0-5	10YR 2/1	100					Silt Loam			
5-9	10YR 4/4	100					Loamy Sand			
9-18	10YR 4/4	85	2.5YR 4/8	5	С	М	Loamy Sand	Prominent redox concentrations.		
	10YR 2/2	10					Loamy Sand			
e: C=Concentra	ation, D=Depl	etion, RI	M=Reduced I	Matrix,	CS=Coat	ted Sand	grains **Locati	on: PL=Pore Lining, M=Matrix		
Soil Indicato	rs:			•				Indicators for Problem	atic Soils	
Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L,	MLRA 149B)	
Histic Epipedon (A2) Dark Surface						87)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)		
Black Histic (-		w Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR K, L, R)				
Hydrogen Su			MLRA	149B)			Dark Surface (S7) (LRR K, I	_, M)		
Stratified Lay			Thin D	ark Surfa	ace (S9)		Polyvalve Below Surface (Sa	8) (LRR K, L)		
Depleted Bel	ow Dark Surfa	ace (A11)	Loamy	Mucky N	Mineral (F	- 1)	Thin Dark Surface (S9) (LRF	R K, L)	
Thick Dark S	urface (A12)			Loamy	Gleyed I	Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)	
Sandy Mucky	/ Mineral (S1)			Depleted Matrix (F3)				Mesic Spodic (TA6) (MLRA	144A, 145, 149B)	
Sandy Gleye	d Matrix (S4)			Redox	Dark Su	rface (F6	6)	Red Parent Material (F21)		
Sandy Redox	(S5)			Deplet	ed Dark	Surface ((F7)	Very Shallow Dark Surface (TF12)		
				Redox	Depress	sions (F8) Other (Explain in Remark				
ctive Layer (if	observed)									
Type:			None							
oth (inches):						Hydri	ic Soil Present?	YesNoX		
ks:										
iterion for hydr	ic soil is not n	net.								
	Depth (inches) 0-5 5-9 9-18 E: C=Concentra Soil Indicato Histosol (A1) Histic Epiped Black Histic (Hydrogen Su Stratified Lay Depleted Bel Thick Dark S Sandy Mucky Sandy Gleye Sandy Redox Ctive Layer (if Type: th (inches):	Depth Matri (inches) Color 0-5 10YR 2/1 5-9 10YR 4/4 9-18 10YR 4/4 10YR 2/2 CEConcentration, D=Depth Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surfactory Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Ctive Layer (if observed) Type: th (inches):	Depth Matrix (inches) Color % 0-5 10YR 2/1 100 5-9 10YR 4/4 100 9-18 10YR 4/4 85 10YR 2/2 10 E: C=Concentration, D=Depletion, RI 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) Ctive Layer (if observed) Type: th (inches):	Depth	Depth	Depth	Depth	Depth	Description: (Describe to depth needed to document the indicator or confirm absence of indicators.) Depth Matrix Redox Features (inches) Color % Color % Type* Loc** Texture Remarks 0-5 107R 2/1 100 Loamy Sand 5-9 107R 4/4 100 Loamy Sand Prominent redox concentrations. 107R 2/2 10 Loamy Sand Prominent redox concentrations. 107R 2/2 10 Loamy Sand Prominent redox concentrations. C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix Soil Indicators: Indicators: Indicators for Problem Histosol (A1) Stripped Matrix (S6) 2 cm Muck (A10) (LRR K, L, Histic Epipedon (A2) Dark Surface (S7)(LRR R,MLRA 149B) Coast Prairie Redox (A16) Black Histic (A3) Polyvalve Below Surface (S8) (LRR R, MLRA 149B) Dark Surface (S7) (LRR K, L, MLRA 149B) Dark Su	

Site:	Water Distribution System Extension to the Tow	n of Peshtigo City/0	County: Marinette Count	ty		Sampling Date:	9/9/2019
	ant/Owner: Tyco Fire Products		·	,	State: WI	Sampling Point:	
		chael Meisenger	Section, Township	, Range		ship 30N, Range 24E	
Landfo	orm (hillslope,terrace,etc.): ToeSlo						
	gion(LRR or MLRA): LRR K - Nort						
	lap Unit Name: Shawano loamy fine						
	imatic/hydrologic conditions on the						
Are			rologysignifica		· ·	,	
Are	Vegetation So						
Are No	ormal Circumstances Present?					3)	
						,	
SUMN	MARY OF FINDINGS						
	Hydrophytic Vegetation Present	? Yes X No	Is the S	Sample	d Area within a Wet	land?	
		? Yes X No		X	No		
	Wetland Hydrology Present				Wetland Site ID:	W01	
					_		
Rema	rks:						
	05 in Appendix B. This data point w					W01. Based on the	presence of all
three p	parameters, this area is a wetland.	All data points were re	corded along existing ro	adsides	i.		
HYDI	ROLOGY						
Wetla	nd Hydrology Indicators:						
	Primary Indicators (minimum of	one is required; che	ck all that apply)		Secondary Indicate	ors (minimum of tw	o required)
	Surface Water (A1)	Water Stained			Surface Soil Crack		. ,
Х	High Water Table (A2)	Aquatic Fauna			Drainage Patterns	(B10)	
Х	Saturation (A3)	Marl Deposits (,		Moss Tim Lines (E	,	
	Water Marks (B1)	Hydrogen Sulfi	,		Dry-Season Water	,	
	Sediment Deposits (B2)		spheres on Living		Crayfish Burrows (` '	
	Drift Deposits (B3)	Roots (C3)		Saturation Visible on Aerial Imagery (C9)			
	Algal Mat or Crust (B4)	Presence of Re	educed Iron (C4)	Stunted or Stressed Plants (D1)			
	Iron Deposits (B5)		duction in Tilled Soil	Х	Geomorphic Positi	()	
	Inundation Visible on Aerial	(C6)			Shallow Aquitard (
	Imagery (B7)	Thin Muck Surf	ace (C7)		Microtopographic		
	Sparsely Vegetated Concave	Other (Explain	` '	Х	FAC-Neutral Test	, ,	
	Surface (B8)	Totrici (Expidiri	in remarks)		THE Neutral Test	(50)	
Field (Observations:						
		No X	Denth (inches)	Wetlau	nd Hydrology Prese	ant?	
				VVCtiai	, ,,		
		XNo			163_	X	
Satura	MON Present? Tes	X No	Depth (inches) 8				
Docori	ibe Recorded Data (stream guage,	monitoring well parial	photos provious inspec	tions) i	f available:		
	graphic maps, aerial imagery, WWI	-		,110115), 1	i avaliable.		
Rema		data, WDNK Wettand	mulcators data.				
	rks: riterion for wetland hydrology is met	. Based on WETS ana	lvsis, antecedent hydrol	oaic cor	nditions are within a i	normal range.	
	, , , , , , , , , , , , , , , , , , ,		,,	3		3.	

	Absolute %	Dominant		Sampling Point: DP05
Tree Stratum Plot size: 30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1. 2.		· 		Number of dominant species that are OBL, FACW, or FAC: 4 (A)
3. 4.	·			Total number of dominant species across all strata: 4 (B)
5. 6.	·			Percent of dominant species that are OBL, FACW, or FAC: 100% (A/B)
7.				Prevalence Index Worksheet:
50%= 0.0% 20%= 0.0%	0	Total Cover		Total % cover of:
Shrub Stratum Plot size: 15'				OBL species 0 x 1 0
1. Rhamnus cathartica	100	ΥΥ	FAC	FACW species <u>80</u> x 2 <u>160</u>
2.			. <u></u>	FAC species <u>120</u> x 3 <u>360</u>
3.			. <u></u>	FACU species <u>0</u> x 4 <u>0</u>
4				UPL species0 x 50
5.				Column Totals:(A)(B)
6.				Prevalence Index: 2.6 (B/A)
7.				Hydrophytic Vegetation Indicators:
50%= 50.0% 20%= 20.0%	100	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb Stratum Plot size: 5'		•		x Dominance Test is >50%
1. Onoclea sensibilis	60	Υ	FACW	x Prevalence Index is ≤3.0*
2. Rhamnus cathartica	20	Y	FAC	Morphological Adaptations*
3. Phalaris arundinacea	20	Υ	FACW	Problematic Hydrophytic Vegetation*
4				* Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic
6			·	Definitions of Vegetation Strata:
7				Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
			· -	height (DBH), regardless of height
9				 Sapling/shrub - Woody plants less than 3 in. DBH and greater
10			· -	than or equal to 3.28 ft (1M) tall.
11				
12.				and woody plants less than 3.28 ft tall.
50%= 50.0% 20%= 20.0%	100	Total Cover		
Woody Vine Stratum Plot size: 30'	100	. Total Gover		Woody Vines - All woody vines greater than 3.28 ft in height.
			· -	
2. 3.				Hydrophytic Vegetaion Present?
4.				Trydrophytic Vegetaion Fresent:
50%= 0.0% 20%= 0.0%	0	Total Cover	-	Yes X No
50%= 0.0% 20%= 0.0%		Total Cover		Tes NO
				<u>l</u>

SOIL	SOIL												
									Sampling Point:	DP05			
Profile	Description:	(Describe to	o depth	needed to d	locume	ent the ir	ndicator	or confirm abse	ence of indicators.)				
	Depth	Matri	х	Redox Fea	atures								
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks				
	0-4.5	10YR 2/1	100					Silt Loam					
	4.5-9	10YR 4/1	98	2.5YR 4/8	2	С	М	Loamy Sand	Prominent redox concentrations.				
	9-18	10YR 4/4	98	10YR 4/6	2	С	М	Loamy Sand	Distinct redox concentrations.				
* Type	* Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix												
Hydric	Soil Indicator	rs:		1					Indicators for Problem	atic Soils			
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L,	MLRA 149B)			
	Histic Epipedo	on (A2)			Dark S	Surface (S	S7)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)				
	Black Histic (A3) Polyvalve Belo						v Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)			
	Hydrogen Sulfide (A4) MLRA 149B)								Dark Surface (S7) (LRR K, L	Dark Surface (S7) (LRR K, L, M)			
	Stratified Layers (A5) Thin Dark Sui								Polyvalve Below Surface (St	8) (LRR K, L)			
	Depleted Below Dark Surface (A11) Loamy Mucky							-1)	Thin Dark Surface (S9) (LRF	R K, L)			
	Thick Dark Surface (A12) Loamy Gley							2)	Iron-Manganese Masses (F	12) (LRR K, L, R)			
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)			
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	urface (F6) Red Parent Material (F21)		Red Parent Material (F21)				
Χ	Sandy Redox	(S5)			Deplet	ed Dark	Surface (F7) Very Shallow Dark Surface (TI		(TF12)				
					Redox	Depress	ssions (F8) Other (Explain in F		Other (Explain in Remarks)				
Restric	tive Layer (if	observed)											
	Type:			None		_							
Dept	th (inches):					_	Hydri	ic Soil Present?	Yes X No				
Remarl	ks:												
The crit	terion for hydri	c soil is met.											

Site:	Water Distribution System Extension to the Town of	f Peshtigo City/County: Marinette Cour	nty Sampling Date: 9/9/2019
	ant/Owner: Tyco Fire Products L.F		State: WI Sampling Point: DP06
Investi	igator(s): Ryan Bombeck, Micha	ael Meisenger Section, Townshi	p, Range: Section 19, Township 30N, Range 24E
Landfo			convex, none): Concave Slope (%): 0%
	gion(LRR or MLRA): LRR K - Northco		Long. 87.634201° W Datum: WGS 84
	·		WWI Classification: None
			No(If no, explain in the Remarks)
Are		or Hydrologysignific	
Are		or Hydrologynatura	
	<u></u>	Yes X No (If needed, exp	
			,
SUMM	IARY OF FINDINGS		
	Hydrophytic Vegetation Present?	Yes X No Is the	Sampled Area within a Wetland?
			s_X_ No
	Wetland Hydrology Present?		optional Wetland Site ID: W02
		<u>——</u>	·
Remar	rks:		
	• • •		/DNR wetland indicators layer near WWI feature. Based on the
presen	ice of all three parameters, this area i	is a wetland. All data points were recorded	along existing roadsides.
HYDF	ROLOGY		
Wetlar	nd Hydrology Indicators:		
		ne is required; check all that apply)	Secondary Indicators (minimum of two required)
	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 Tim Lines (B6)
	Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
	Sediment Deposits (B2)	Oxidized Rhizospheres on Living	Crayfish Burrows (C8)
	Drift Deposits (B3)	Roots (C3)	Saturation Visible on Aerial Imagery (C9)
	Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
	Iron Deposits (B5)	Recent Iron Reduction in Tilled Soil	X Geomorphic Position (D2)
	Inundation Visible on Aerial	(C6)	Shallow Aquitard (D3)
	Imagery (B7)	Thin Muck Surface (C7)	Microtopographic Relief (D4)
	Sparsely Vegetated Concave	Other (Explain in Remarks)	X FAC-Neutral Test (D5)
	Surface (B8)	Other (Explain in Remarks)	TAO Neutral Test (DO)
Field (Observations:		
		No X Depth (inches)	Wetland Hydrology Present?
		No X Depth (inches)	Yes X No
Salura	tion Present? Yes	No X Depth (inches)	_
Dagari	ika Dagardad Data (atraam ayana m	onitoring well posici photos provious inco	ctions) if available.
		onitoring well, aerial photos, previous inspe	clions), ii avallable.
	raphic maps, aerial imagery, WWI da	ta, WDNK Wettand indicators data.	
Remar		Based on WETS analysis, antecedent hydro	ologic conditions are within a normal range.

VEGE	TATION			Absolute %	Dominant		Sampling Point: DP06
Tree St	<u>ratum</u> Plot	size:	30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1. 2.							Number of dominant species that are OBL, FACW, or FAC:(A)
3. 4.							Total number of dominant species across all strata:2(B)
5. 6.							Percent of dominant species that are OBL, FACW, or FAC: 100% (A/B)
7.					. <u></u>		Prevalence Index Worksheet:
50%=	0.0%	20%=	= 0.0%	0	Total Cover		Total % cover of:
Shrub S	Stratum Plot	size:	15'				OBL species 0 x 10
	Rhamnus cathartic			10	Y	FAC	FACW species 70 x 2 140
2.							FAC species 20 x 3 60
3.							FACU species 10 x 4 40
4.							UPL species 10 x 5 50
5.							Column Totals: 110 (A) 290 (B)
6.	-					-	Prevalence Index: 2.6 (B/A)
7.	-					-	Hydrophytic Vegetation Indicators:
50%=	50%= 5.0% 20%= 2.0%		= 2.0%	10	Total Cover		Rapid Test for Hydrophytic Vegetation
			5'				x Dominance Test is >50%
			50	Υ	FACW	x Prevalence Index is ≤3.0*	
	Onoclea sensibilis			10	N	FACW	Morphological Adaptations*
•	Rhamnus cathartic			10	N	FAC	Problematic Hydrophytic Vegetation*
•	Solidago canaden			10	N	FACU	* Indicators of hydric soil and wetland hydrology must be present,
	Solidago gigantea			10	N	FACW	unless disturbed or problematic
	Bromus inermis			10	N	UPL	Definitions of Vegetation Strata:
7.							Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.							height (DBH), regardless of height
9.							Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.							than or equal to 3.28 ft (1M) tall.
11.							Herb - All herbaceous (non-woody) plants, regardless of size,
12.							and woody plants less than 3.28 ft tall.
50%=	50.0%	20%=	= 20.0%	100	Total Cover		NAME OF A STATE OF A S
Wo <u>ody</u>	Vine Stratum Plot		30'				Woody Vines - All woody vines greater than 3.28 ft in height.
1.							
2.							1
3.							Hydrophytic Vegetaion Present?
4.	-					-	,
50%=	0.0%	20%=	= 0.0%	0	Total Cover	_	Yes <u>X</u> No
	ks: (Include photo r erion for hydrophyt				e sheet.)		

SOIL										
									Sampling Point:	DP06
Profile	Description:	(Describe to	depth	needed to d	locume	ent the in	dicator	or confirm abse	ence of indicators.)	
	Depth	Matri	X	Redox Fea	atures					
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks	
	0-4	10YR 2/1	100				Silt Loam			
	4-12	10YR 5/2	98	10YR 3/6	2 C		М	Loamy Sand	Prominent redox concentrations.	
	12-24	10YR 3/3	80	10YR 3/6	20	С	М	Sandy Loam	Distinct redox concentrations.	
		•	etion, RN	<i>I</i> I=Reduced	Matrix,	CS=Coat	ed Sand	grains **Locati	on: PL=Pore Lining, M=Matrix	
Hydric	Soil Indicato	rs:							Indicators for Problem	
	Histosol (A1) Stripped Matri						` '		2 cm Muck (A10) (LRR K, L,	MLRA 149B)
	Histic Epipedon (A2) Dark Surface							R,MLRA 149B)	Coast Prairie Redox (A16)	
	MI DA 140D)						v Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	,
	Hydrogen Suilide (A4)								Dark Surface (S7) (LRR K, L	
	Stratified Layers (A5) Thin Dark Sur								Polyvalve Below Surface (Sa	
Х	Depleted Below Dark Surface (A11) Loamy Mucky							,	Thin Dark Surface (S9) (LRF	
	Thick Dark Surface (A12) Loamy Gleyer							2)	Iron-Manganese Masses (F	, , , , , ,
	Sandy Mucky					ed Matrix			Mesic Spodic (TA6) (MLRA	144A, 145, 149B)
	Sandy Gleyed	d Matrix (S4)					urface (F6) Red Parent Material (F21)			
X	Sandy Redox	(S5)					Surface (F7) Very Shallow Dark Surfa			(TF12)
					Redox	Depress	Ssions (F8) Other (Explain in Remark			
Restric	tive Layer (if	observed)	_							
_	Type:			None						
Dept	th (inches):						Hydri	c Soil Present?	Yes X No	
Remarl	ks:									
The crit	terion for hydri	c soil is met.								

Site: Water Distribution System Extension to the Town of F	Peshtigo City/County: Marinette Coun	nty Sampling Date: 9/9/2019			
Applicant/Owner: Tyco Fire Products L.P.		State: WI Sampling Point: DP07			
Investigator(s): Ryan Bombeck, Michael	Meisenger Section, Township	p, Range: Section 19, Township 30N, Range 24E			
		convex, none): Concave Slope (%): 0%			
Subregion(LRR or MLRA): LRR K - Northce		Long. 87.637983° W Datum: WGS 84			
		WWI Classification: None			
		No(If no, explain in the Remarks)			
	or Hydrologysignific				
	or Hydrologynatural				
Are Normal Circumstances Present?					
		,			
SUMMARY OF FINDINGS					
Hydrophytic Vegetation Present? Y	es X No Is the	Sampled Area within a Wetland?			
Hydric Soil Present? Y		s X No			
Wetland Hydrology Present? Y		optional Wetland Site ID: W02			
		·			
Remarks:					
		sed on the presence of all three parameters, this area is a wetland.			
All data points were recorded along existing r	oadsides.				
HYDROLOGY					
Wetland Hydrology Indicators:					
Primary Indicators (minimum of one	is required; check all that apply)	Secondary Indicators (minimum of two required)			
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 Tim Lines (B6)			
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)			
Sediment Deposits (B2)	Oxidized Rhizospheres on Living	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3)	Roots (C3)				
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)			
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soil	X Geomorphic Position (D2)			
Inundation Visible on Aerial	(C6)	Shallow Aquitard (D3)			
Imagery (B7)	Thin Muck Surface (C7)	Microtopographic Relief (D4)			
Sparsely Vegetated Concave	Other (Explain in Remarks)	X FAC-Neutral Test (D5)			
Surface (B8)	other (Explain in Remarke)	The House (50)			
Field Observations:					
	No X Depth (inches)	Wetland Hydrology Present?			
	No X Depth (inches)	Yes X No			
	No X Depth (inches)				
Jaculation resent:	No X Deptil (inches)	-			
Describe Recorded Data (stream guage, mor	nitoring well gerial photos previous inspe	ctions) if available:			
Topographic maps, aerial imagery, WWI data		ctions), ii available.			
Remarks:	, WDINI Welland maleators data.				
The criterion for wetland hydrology is met. Ba	sed on WETS analysis, antecedent hydro	logic conditions are within a normal range.			
, 0,	, ,	· ·			

VEGE	TATION	Absolute %	Dominant		Sampling Point: DP07
Tree St	tratum Plot size: 30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1.	Abies balsamea	20	Υ	FAC	Number of dominant species that are OBL,
2.	Rhamnus cathartica	20	Υ	FAC	FACW, or FAC: 8 (A)
3.	Ulmus americana	10	Υ	FACW	Total number of dominant species across
4. 5					all strata:8 (B)
5. 6.					Percent of dominant species that are OBL, FACW, or FAC: 100% (A/B)
7.					Prevalence Index Worksheet:
50%=	25.0% 20%= 10.0%	50	Total Cover		Total % cover of:
Shrub S	Stratum Plot size: 15'				OBL species0 x10
1.	Frangula alnus	50	Y	FAC	FACW species <u>50</u> x 2 <u>100</u>
2.	Rhamnus cathartica	30	Y	FAC	FAC species <u>150</u> x 3 <u>450</u>
3.				· - <u></u> -	FACU species <u>10</u> x 4 <u>40</u>
4.					UPL species0 x50
5.			<u> </u>		Column Totals: 210 (A) 590 (B)
6.					Prevalence Index: 2.8 (B/A)
7.					Hydrophytic Vegetation Indicators:
50%=	40.0% 20%= 16.0%	80	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb St	tratum Plot size: 5'				x Dominance Test is >50%
1.	Phalaris arundinacea	20	ΥΥ	FACW	x Prevalence Index is ≤3.0*
2.	Onoclea sensibilis	20	Υ	FACW	Morphological Adaptations*
3.	Rhamnus cathartica	20	Υ	FAC	Problematic Hydrophytic Vegetation*
4.	Solidago canadensis	10	N	FACU	* Indicators of hydric soil and wetland hydrology must be present,
5.	Equisetum arvense	10	N	FAC	unless disturbed or problematic
6.					Definitions of Vegetation Strata:
7. °					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height
8.				· · · · · · · · · · · · · · · · · · · 	
9.					Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1M) tall.
10.				-	· · · ·
11.					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
12.			Tital Cover		
50%=	40.0% 20%= 16.0%	80	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
	Vine Stratum Plot size: 30'				
1.					
2.					- I also various Barrando
3.					Hydrophytic Vegetaion Present?
4.	200/ 000/ 000/		Tital Cover		V V N-
50%=	0.0% 20%= 0.0%	0	Total Cover		Yes <u>X</u> No
	ks: (Include photo numbers here or terion for hydrophytic vegetation is		sheet.)		

SOIL	OIL												
									Sampling Point:	DP07			
Profile	Description:	(Describe to	o depth	needed to d	locume	ent the ir	ndicator	or confirm abse	ence of indicators.)				
	Depth	Matri	Х	Redox Fea	atures								
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks				
	0-9	10YR 2/1	100					Silt Loam					
	9-24	10YR 6/2	95	10YR 5/8	5	С	М	Loamy Sand	Prominent redox concentrations.				
* Tumo	. C. Consontro	stion D. Donl	lation DA	1 Dadwaad	Matrix	CC	tod Cond		ioni Di Doro Lining M Motris				
	Soil Indicato		ellon, Ri	/i=Reduced	iviatrix,	CS=C0a	ied Sand	grains Locali	on: PL=Pore Lining, M=Matrix Indicators for Problem	natic Soils			
Tiyano	Histosol (A1)	13.			Stringe	ed Matrix	(86)		2 cm Muck (A10) (LRR K, L				
	Histic Epiped	on (A2)						R,MLRA 149B)	Coast Prairie Redox (A16)	, WERA 1430)			
								e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	KIR)			
,						149B)	. • • • • • • • • • • • • • • • • • • •	(20) (2	Dark Surface (S7) (LRR K, L, M)				
	Stratified Layers (A5) Thin Dar								Polyvalve Below Surface (S	,			
Х	Depleted Belo	` '	ace (A11)		Mucky N	` '	- 1)	Thin Dark Surface (S9) (LRI				
	` '						Matrix (F	2)	Iron-Manganese Masses (F	· <i>'</i>			
	· ·						(F3)	,	Mesic Spodic (TA6) (MLRA	, ,			
	Sandy Gleyed	d Matrix (S4)			Redox Dark Surface (F6)				Red Parent Material (F21)				
	Sandy Redox	(S5)			Deplet	ed Dark	Surface (F7)	Very Shallow Dark Surface	(TF12)			
					Redox	Depress	ssions (F8) Other (Explain in Rema						
Restric	tive Layer (if	observed)											
	Type:		l	None									
Dept	th (inches):						Hydri	c Soil Present?	Yes X No				
Remark	KS:												
The crit	terion for hydri	c soil is met.											

Site:	Water Distribution System Extension to the Town of	of Peshtigo City/County:	Marinette Count	у	Sampling Date:	9/9/2019	
	ant/Owner: Tyco Fire Products L.			State: WI			
	igator(s): Ryan Bombeck, Mich		ection, Township	, Range: Section 19, Towns			
Landfo	orm (hillslope,terrace,etc.): Back Slo			convex, none): Convex		pe (%): 2%	
Subre	gion(LRR or MLRA): LRR K - Northo			Long. 87.637979° W			
Soil Ma	ap Unit Name: Wainola loamy fine sa						
	matic/hydrologic conditions on the sit						
Are	Vegetation Soil	or Hydrology	significa	antly disturbed?			
Are	Vegetation Soil	or Hydrology	naturall	y problematic?			
Are No	ormal Circumstances Present?	Yes X No	(If needed, expla	ain any answers in Remarks	s)		
SUMN	MARY OF FINDINGS						
	Hydrophytic Vegetation Present?	Yes NoX	Is the S	Sampled Area within a Wet	tland?		
	Hydric Soil Present?	Yes NoX	Yes	NoX			
	Wetland Hydrology Present?	Yes NoX_	_ If yes, c	ptional Wetland Site ID:			
Remai							
	08 in Appendix B. Upland data point oints were recorded along existing ro		W02. Based on	the absence of all three par	ameters, this area is a	an upland. All	
uaia p	UIIIIS WEIG IECOIDED along Chicking IC	dusiues.					
HYD	ROLOGY						
Wetla	nd Hydrology Indicators:			1			
	Primary Indicators (minimum of o			Secondary Indicate	ors (minimum of two	required)	
	Surface Water (A1)	Water Stained Leaves	(B9)	Surface Soil Crack	ks (B6)		
	High Water Table (A2)	Aquatic Fauna (B13)		Drainage Patterns	(B10)		
	Saturation (A3)	Marl Deposits (B15)		Moss Tim Lines (E	36)		
	Water Marks (B1)	Hydrogen Sulfide Odo	r (C1)	Dry-Season Wate	r Table (C2)		
	Sediment Deposits (B2)	Oxidized Rhizospheres	s on Living	Crayfish Burrows	(C8)		
	Drift Deposits (B3)	Roots (C3)		Saturation Visible on Aerial Imagery (C9)			
	Algal Mat or Crust (B4)	Presence of Reduced	Iron (C4)	Stunted or Stressed Plants (D1)			
	Iron Deposits (B5)	Recent Iron Reduction	n in Tilled Soil	Geomorphic Posit	ion (D2)		
	Inundation Visible on Aerial	(C6)		Shallow Aquitard (D3)			
	Imagery (B7)	Thin Muck Surface (C	7)	Microtopographic	Relief (D4)		
	Sparsely Vegetated Concave	Other (Explain in Rem	arks)	FAC-Neutral Test	(D5)		
	Surface (B8)						
Field (Observations:						
		No X Depth	· · ·	Wetland Hydrology Prese			
Water		No X Depth		Yes_	No	X	
Satura	ation Present? Yes_	No X Depth	(inches)				
Descri	ibe Recorded Data (stream guage, m	onitoring well, aerial photos,	, previous inspec	tions), if available:			
Topog	raphic maps, aerial imagery, WWI da	ata, WDNR Wetland Indicato	ors data.				
Remai		at Danadan METO analysi		daalaada aan distana aan wishi			
The cr	iterion for wetland hydrology is not m	et. based on WETS analysis	s, antecedent nyo	arologic conditions are with	n a normai range.		

VEGE	TATION			A 0/	Deminant		Sampling Point: DP08
Tree Str	ratum_	Plot size:	30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet
1							Number of dominant species that are OBL,
2					. .		FACW, or FAC:1(A)
3. 4.							Total number of dominant species across all strata: 2(B)
5. 6.					·		Percent of dominant species that are OBL, FACW, or FAC:50%(A/B)
7.							Prevalence Index Worksheet:
50%=	0.0%	20%=	= 0.0%	0	Total Cover	· -	Total % cover of:
Shrub S	Stratum_	Plot size:	15'	. ————————————————————————————————————			OBL species 0 x 1 0
1							FACW species 40 x 2 80
2.							FAC species 0 x 3 0
3.							FACU species <u>21</u> x 4 <u>84</u>
4.							UPL species 40 x 5 200
5.							Column Totals: 101 (A) 364 (B)
6.							Prevalence Index: 3.6 (B/A)
7.							Hydrophytic Vegetation Indicators:
50%=	0.0%	20%=	= 0.0%	0	Total Cover	· <u></u>	Rapid Test for Hydrophytic Vegetation
Herb St	<u>ratum</u>	Plot size:	5'				Dominance Test is >50%
1.	Phalaris aru	ındinacea		40	Y	FACW	Prevalence Index is ≤3.0*
2.	Bromus iner	rmis		40	Y	UPL	Morphological Adaptations*
3.	Solidago ca	nadensis		20	N	FACU	Problematic Hydrophytic Vegetation*
4. <u> </u>	Melilotus off	icinalis		1	N	FACU	* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6.							Definitions of Vegetation Strata:
7.					-		Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.						-	height (DBH), regardless of height
9.							Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.							than or equal to 3.28 ft (1M) tall.
11.							Herb - All herbaceous (non-woody) plants, regardless of size,
12.							and woody plants less than 3.28 ft tall.
50%=	50.5%	20%=	= 20.2%	101	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
Woody '	Vine Stratun	n Plot size:	30'				woody vines - All woody vines greater than 3.20 it in neight.
1.							
2.							
3.							Hydrophytic Vegetaion Present?
4.					<u> </u>		
50%=	0.0%	20%=	= 0.0%	0	Total Cover	· _	YesNoX
Remark	s: (Include p	hoto number	s here o	r on a separat	te sheet.)		

SOIL											
									Sampling Point:	DP08	
Profile	Description:	(Describe to	depth	needed to d	locume	ent the ir	ndicator	or confirm abse	ence of indicators.)		
	Depth	Matri	X	Redox Fea	Redox Features						
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks		
	0-4	10YR 2/2	100					Silt Loam			
	4-20	10YR 4/6	98	10YR 5/8	2	С	М	Loamy Sand	Distinct redox concentrations.		
* Type	· C=Concentra	ation D=Dept	etion RN	∕I=Reduced	Matrix	CS=Coa	ted Sand	grains **Location	on: PL=Pore Lining, M=Matrix		
	Soil Indicato		otion, ren	n=reduced	watrix,	00-00 a	tou ourio	grains Locali	Indicators for Problem	natic Soils	
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L	, MLRA 149B)	
	Histic Epipedon (A2)				Dark S	surface (S	S7)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)	,	
	Black Histic (A3)				Polyva	lve Belov	w Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)	
	Hydrogen Sulfide (A4)				MLRA	149B)			Dark Surface (S7) (LRR K, I	_, M)	
	Stratified Layers (A5)				Thin D	ark Surfa	ace (S9)		Polyvalve Below Surface (S8) (LRR K, L)		
	Depleted Below Dark Surface (A11)				Loamy	Mucky N	/lineral (F	⁻ 1)	Thin Dark Surface (S9) (LRI	R K, L)	
	Thick Dark Su	urface (A12)			Loamy Gleyed Matrix (F2)				Iron-Manganese Masses (F	12) (LRR K, L, R)	
	Sandy Mucky	Mineral (S1)			Depleted Matrix (F3)				Mesic Spodic (TA6) (MLRA	144A, 145, 149B)	
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	rface (F6	5)	Red Parent Material (F21)		
	Sandy Redox	(S5)			Deplet	ed Dark	Surface (F7)	Very Shallow Dark Surface	(TF12)	
					Redox	Depress	ions (F8)	Other (Explain in Remarks)		
Restric	tive Layer (if	observed)									
	Type:		l	None							
Dept	Depth (inches):						Hydri	c Soil Present?	YesNoX		
Remark The crit	ks: terion for hydri	c soil is not n	net.			l					

Applicant/Owner: Tyco Fire Products L.P. State: WI Sampling Point: DP09 Investigator(s): Ryan Bombeck, Michael Meisenger Section, Township, Range: Section 19, Township 30N, Range 24E Landform (hillslope,terrace,etc.): Toe Slope Local relief (concave, convex, none): Concave Slope (%): 1% Subregion(LRR or MLRA): LRR K - Northcentral Forests Lat. 45.061829° N Long. 87.638841° W Datum: WGS 84 Soil Map Unit Name: Rousseau loamy fine sand, 1 to 6 percent slopes WWI Classification: None Are climatic/hydrologic conditions on the site typical for time of year? Yes X No (If no, explain in the Remarks) Are Vegetation Soil or Hydrology significantly disturbed? Are Normal Circumstances Present? Yes X No (If needed, explain any answers in Remarks) SUMMARY OF FINDINGS Hydrophytic Vegetation Present? Yes X No Yes X No (If needed, explain any answers in Remarks) Wetland Hydrology Present? Yes X No If yes, optional Wetland Site ID: W03 Remarks: Photo 09 in Appendix B. PEM wetland data point recorded on a floodplain terrace of S01 at the boundary of W03. Based on the presence of all three parameters, this area is a wetland. All data points were recorded along existing roadsides.	Site: Water Distribution System Extension to the Town	of Peshtigo City/County: Marinette Cou	inty Sampling Date: 9/9/2019
Investigator(s): Nan Bombeck, Michael Meisenger Section, Township, Range: Section 19, Township 30N, Range 24E Landform (hillslope terrace set 2): Toe Slope Slope (%): 1%		<u> </u>	· · · · · · · · · · · · · · · · · · ·
Load Contained Load Reference Local relief (concave, corvex, nore); Concave Slope (%); 1%	Investigator(s): Ryan Bombeck, Mich	aael Meisenger Section, Townsh	ip, Range: Section 19, Township 30N, Range 24E
Subregion (LRR or MLRA): LRR K - Northcentral Forests			
Solt Map Unit Name: Rousseau loamy fine sand, 1 to 6 percent slopes Are climatic hydrologic conditions on the site typical for time of year? Are Vegetation Soll Orthydrology Are Vegetation Soll Orthydrology Are Nogalan in the Remarks) Are Vegetation Soll Orthydrology Are Nogalan in the Remarks Are Vegetation Soll Orthydrology Are Nogalan in the Remarks) Are Nogalan in the Remarks Are Vegetation Soll Orthydrology Are Nogalan in the Remarks Are Vegetation Soll Orthydrology Are Nogalan in the Remarks Are Vegetation Soll Orthydrology Are Nogalan in the Remarks Are Vegetation Soll Orthydrology Are Nogalan in the Remarks Are Vegetation Soll Orthydrology Are Vegetation Soll Orthydrology Are Vegetation Soll Orthydrology Are Vegetation Are Vegetation Orthydrology Are Vegetation Are Vegetation Orthydrology Are Vegetation Are Vegetation Orthydrology Or	· · · · · · · · · · · · · · · · · · ·		
Are Cegetation Soil of the Soi			
Are Vegetation Soil or Hydrology atturbuted? Are Vegetation Soil or Hydrology anturally problematic? Are Normal Circumstances Present? Yes X No (If needed, explain any answers in Remarks) SUMMARY OF FINDINGS Hydrophytic Vegetation Present? Yes X No (If needed, explain any answers in Remarks) Hydrophytic Vegetation Present? Yes X No (If needed, explain any answers in Remarks) Hydrophytic Vegetation Present? Yes X No (If yes, optional Wetland Site ID: W03 Remarks: Photo 08 in Appendix B. PEM wetland data point recorded on a floodplain terrace of S01 at the boundary of W03. Based on the presence of all three parameters, this area is a wetland. All data points were recorded along existing roadsides. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) X Water Stained Leaves (B9) Surface Soil Cracks (B6) Hythydrophytic Vegetation Present? Yes A No (If yes, optional Wetland Site ID: W03 By Surface Water (A1) X Water Stained Leaves (B9) Surface Soil Cracks (B6) Hythydrophytic Vegetation Present? (B1) Augustic Fauna (B13) X Drainage Patterns (B10) Surface Water Aprix (B1) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Sediment Deposits (B3) Oriticed Rhizospheres on Living Crayfish Burrows (C8) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Statuted or Stressed Plants (D1) Into Deposits (B3) Recont Iron Reduction in Tilled Soil (C6) Sharled Observations: Surface Water Present? Yes No X Depth (inches) Sharled Hydrology Present? Yes No X Depth (inches) Yes X No Sharled Hydrology Present? Yes No X Depth (inches) Yes X No Sharled Hydrology Present? Yes No X Depth (inches) Yes X No Sharled Hydrology Present? Yes No X Depth (inches) Yes X No Sharled Hydrology Present? Yes No X Depth (inches) Yes X No Sharled Hydrology Present? Yes X			
Are Vegetation Soil or Hydrology anaturally problematic? Are Normal Circumstances Present? Yes X No (If needed, explain any answers in Remarks) SUMMARY OF FINDINGS Hydrophytic Vegetation Present? Yes X No YES X YES X NO YES X NO YES X YES		· · · · · · · · · · · · · · · · · · ·	
Are Normal Circumstances Present? Yes X No (If needed, explain any answers in Remarks) SUMMARY OF FINDINGS Hydrophytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland? Hydrology Present? Yes X No If yes, optional Wetland Site ID: W03 Remarks: Photo 09 in Appendix B. PEM wetland data point recorded on a floodplain terrace of S01 at the boundary of W03. Based on the presence of all three parameters, this area is a wetland. All data points were recorded along existing roadsides. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) X Water Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) X Drainage Patterns (B10) Saturation (A3) Mart Deposits (B15) Moss Tim Lines (B6) Water Marks (B1) Hydrogen Sulfide Odor (C1) Dpy-Season Water Table (C2) Sediment Deposits (B2) Oxidized Rhizospheres on Living Crayfish Burrows (C8) Drift Deposits (B3) Roots (C3) Saturation Visible on Aerial Imagery (C9) Incordiation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (C7) Microtopographic Relief (D4) Surface (B8) Field Observations: Surface Water Present? Yes No X Depth (inches) Water Table Present? Yes No X Depth (inches) Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data.			
SUMMARY OF FINDINGS Hydrophylic Vegetation Present? Yes X No If yes, optional Wetland? Hydric Soil Present? Yes X No If yes, optional Wetland Site ID: W03 Remarks: Photo 09 in Appendix B. PEM wetland data point recorded on a floodplain terrace of S01 at the boundary of W03. Based on the presence of all three parameters, this area is a wetland. All data points were recorded along existing roadsides. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) X Water Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) X Drainage Patterns (B10) Saturation (A3) Marl Deposits (B15) Moss Tim Lines (B6) Water Marks (B1) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Sediment Deposits (B2) Oxidized Rhizospheres on Living Carylish Burrows (C8) Roots (C3) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Sturded or Stressed Plants (D1) Iron Deposits (B5) Recent Iron Reduction in Tilled Soil (C6) Sparsely Vegetated Concave Other (Explain in Remarks) X FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No X Depth (inches) Pescribe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data.	· · · · · · · · · · · · · · · · · · ·		
Hydrophytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland? Hydric Soil Present? Yes X No If yes, optional Wetland Site ID: W03 Remarks: Photo 09 in Appendix B. PEM wetland data point recorded on a floodplain terrace of S01 at the boundary of W03. Based on the presence of all three parameters, this area is a wetland. All data points were recorded along existing roadsides. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) X Water Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) X Drainage Patterns (B10) Saturation (A3) Marl Deposits (B15) Moss Tim Lines (B6) Water Marks (B1) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Sediment Deposits (B2) Oxidized Rhizospheres on Living Drift Deposits (B3) Roots (C3) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Iron Deposits (B5) Recent Iron Reduction in Tilled Soil (C6) Shallow Aquitard (D3) Imagery (B7) Imagery (B7) In Muck Surface (C7) Microtopographic Relief (D4) Sparsely Vegetated Concave Other (Explain in Remarks) X FAC-Neutral Test (D5) Suturation Present? Yes No X Depth (inches) Saturation Present? Yes No X Depth (inches) Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data.			
Hydric Soil Present? Yes X No If yes, optional Wetland Site ID: W03 Remarks: Photo 99 in Appendix B. PEM wetland data point recorded on a floodplain terrace of S01 at the boundary of W03. Based on the presence of all three parameters, this area is a wetland. All data points were recorded along existing roadsides. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) X Water Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) X Drainage Parims (B10) Saturation (A3) Marl Deposits (B15) Moss Tim Lines (B6) Water Marks (B1) Prisence of Reduced Iron (C4) Iton Deposits (B3) Recent Iron Reduction in Tilled Soil Iron Deposits (B5) Iron D	SUMMARY OF FINDINGS		
Hydric Soil Present? Yes X No If yes, optional Wetland Site ID: W03 Remarks: Photo 90 in Appendix B. PEM wetland data point recorded on a floodplain terrace of S01 at the boundary of W03. Based on the presence of all three parameters, this area is a wetland. All data points were recorded along existing roadsides. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) X Water Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) X Drainage Parisms (B10) Saturation (A3) Marl Deposits (B15) Moss Tim Lines (B6) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Orift Deposits (B3) Aligal Mat or Crust (B4) Presence of Reduced Iron (C4) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water (Present? Yes No X Depth (inches) Water Table Present? Yes No X Depth (inches) Wetland Hydrology Indicators (minimum of two required) Wetland Hydrology Indicators (minimum of two required) Secondary Indicators (minimum of two required) Secondary Indicators (minimum of two required) Secondary Indicators (minimum of two required) Surface Water Table (A2) Aquatic Fauna (B13) X Drainage Parisms (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) In Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No X Depth (inches) Wetland Hydrology Present? Yes No X Depth (inches) Wetland Hydrology Present? Yes No X Depth (inches) Wetland Hydrology Present? Yes X No Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data.	Hydrophytic Vegetation Present?	Yes X No Is the	Sampled Area within a Wetland?
Remarks: Photo 09 in Appendix B. PEM wetland data point recorded on a floodplain terrace of S01 at the boundary of W03. Based on the presence of all three parameters, this area is a wetland. All data points were recorded along existing roadsides. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Surface Water (A1) Surface Water (A2) Aquatic Fauna (B13) Saturation (A3) Mart Deposits (B15) Water Marks (B1) Drift Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Inundation Visible on Aerial Imagery (B7) Field Observations: Surface Water Present? Yes No X Depth (inches) Wetland Hydrology Present? Yes No X Depth (inches) Wetland Hydrology Indicators (minimum of two required) Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Surface Soil Cracks (B6)			es X No
Remarks: Photo 09 in Appendix B. PEM wetland data point recorded on a floodplain terrace of S01 at the boundary of W03. Based on the presence of all three parameters, this area is a wetland. All data points were recorded along existing roadsides. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) X Water Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) X Drainage Patterns (B10) Saturation (A3) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No X Depth (inches) Wetland Hydrology Present? Yes No X Depth (inches) Wetland Hydrology Present? Yes No X Depth (inches) Wetland Hydrology Present? Yes No X Depth (inches) Saturation Visible on Aerial Imagery, WWI data, WDNR Wetland Indicators data. Remarks: Photo Opinity Deposits (B1) Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data.			
Photo 09 in Appendix B. PEM wetland data point recorded on a floodplain terrace of S01 at the boundary of W03. Based on the presence of all three parameters, this area is a wetland. All data points were recorded along existing roadsides. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1)			·
### Parameters, this area is a wetland. All data points were recorded along existing roadsides. ###################################	Remarks:		
### Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required)	parameters, this area is a wetland. All data	points were recorded along existing roadsi	des.
Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required)	HYDROLOGY		
Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required)	Wetland Hydrology Indicators:		
Surface Water (A1)		one is required; check all that apply)	Secondary Indicators (minimum of two required)
High Water Table (A2) Saturation (A3) Marl Deposits (B15) Moss Tim Lines (B6) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Presence of Reduced Iron (C4) Inundation Visible on Aerial Imagery (B5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No X Depth (inches) Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data. Remarks: X Drainage Patterns (B10) Moss Tim Lines (B6) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) X Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Position (D2) X FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No X Depth (inches) Yes X No Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data. Remarks:		1	
Saturation (A3)	High Water Table (A2)		X Drainage Patterns (B10)
Water Marks (B1)		· ·	
Sediment Deposits (B2)		` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `	` '
Drift Deposits (B3) Roots (C3) Roots (C3) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) X Geomorphic Position (D2) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No X Depth (inches) Saturation Present? Yes No X Depth (inches) Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data. Remarks:	` ′		` '
Algal Mat or Crust (B4) Iron Deposits (B5) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No X Depth (inches) Saturation Present? Yes No X Depth (inches) Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic not Stressed Plants (D1) X Geomorphic Position (D2) X Geomorphic Position (D2) X Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) X FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No X Depth (inches) Yes X No Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data. Remarks:		·	`
Iron Deposits (B5)	· · · · ·	Presence of Reduced Iron (C4)	
Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No X Depth (inches) Saturation Present? Yes No X Depth (inches) Saturation Present? Yes No X Depth (inches) Secribe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data. Remarks:		` '	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Imagery (B7)		ł I	, , ,
Sparsely Vegetated Concave Surface (B8) Cher (Explain in Remarks) Cher (Explain in Remarks) X FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes X No Satu		Thin Muck Surface (C7)	
Surface (B8) Field Observations: Surface Water Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present? Yes No X Depth (inches) Yes X No Saturation Present?	Sparsely Vegetated Concave	` '	
Surface Water Present? Yes No _X _ Depth (inches) Wetland Hydrology Present? Water Table Present? Yes No _X _ Depth (inches) Yes X _ No Saturation Present? Yes No _X _ Depth (inches) Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data. Remarks:		Other (Explain in Nemarks)	1 AC-Neutral Test (D3)
Surface Water Present? Yes No _X _ Depth (inches) Wetland Hydrology Present? Water Table Present? Yes No _X _ Depth (inches) Yes X _ No Saturation Present? Yes No _X _ Depth (inches) Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data. Remarks:	Field Observations:	Į.	
Water Table Present? Yes No X Depth (inches) Saturation Present? Yes No X Depth (inches)		No. Y. Donth (inches)	Westland Hydrology Procent?
Saturation Present? Yes No _X _ Depth (inches) Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data. Remarks:			
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data. Remarks:			
Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data. Remarks:	Saturation Fresent:	No_X Deptil (inches)	7
Topographic maps, aerial imagery, WWI data, WDNR Wetland Indicators data. Remarks:	Describe Recorded Data (streem guage in	enitoring well periol photos provious insp	potions) if available:
Remarks:			ections), ii avaliable.
	ropographic maps, aenai imagery, wwi u		
	Damanda.	ata, WDINK Wettarid Indicators data.	
			ologic conditions are within a normal range.
			ologic conditions are within a normal range.

VEGE1	AHON			Absolute %	Dominant		Sampling Point: DP09
Tree Stra	atum_	Plot size:	30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1 2							Number of dominant species that are OBL, FACW, or FAC: 1 (A)
3. <u> </u>							Total number of dominant species across all strata:1(B)
5. <u> </u>							Percent of dominant species that are OBL, FACW, or FAC: 100% (A/B)
7.							Prevalence Index Worksheet:
50%=	0.0%	20%=	= 0.0%	0	Total Cover	ı	Total % cover of:
Shrub St	tratum_	Plot size:	15'			!	OBL species0 x10
1							FACW species <u>100</u> x 2 <u>200</u>
2.							FAC species5x315
3.							FACU species 0 x 4 0
4.							UPL species 0 x 5 0
5.						·	Column Totals: 105 (A) 215 (B)
6.						· -	Prevalence Index: 2.0 (B/A)
7.					_	, · · · · · · · · · · · · · · · · · · ·	Hydrophytic Vegetation Indicators:
50%=	0.0%	20%=	= 0.0%	0	Total Cover	, <u> </u>	Rapid Test for Hydrophytic Vegetation
Herb Str	at <u>um</u>	Plot size:	5'			ı	x Dominance Test is >50%
	Impatiens ca			80	Υ	FACW	x Prevalence Index is <3.0*
_	Phalaris arui	•		20	N	FACW	Morphological Adaptations*
_	Urtica dioica			5	N	FAC	Problematic Hydrophytic Vegetation*
4 5.							* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6.						,	Definitions of Vegetation Strata:
7.							Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.							height (DBH), regardless of height
9.					. .		Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.							than or equal to 3.28 ft (1M) tall.
11.							Herb - All herbaceous (non-woody) plants, regardless of size,
12.				-	·		and woody plants less than 3.28 ft tall.
50%=	52.5%	20%-	= 21.0%	105	Total Cover		
	52.5% √ine Stratum		30'	100	Total Cover	ı	Woody Vines - All woody vines greater than 3.28 ft in height.
-						ı	
1					-		1
2							Hudranbutia Vagataian Bracant?
3							Hydrophytic Vegetaion Present?
4	2.20/	000/	2.00/		T-+-! Cover		- V N-
50%=	0.0%	20%=	= 0.0%	0	Total Cover		Yes X No
Pomark	e: (Include n	hoto number	e here o	r on a separat	to sheet)		
		rophytic vege			e Sileet.		

SOIL										
									Sampling Point:	DP09
Profile	Description:	(Describe to	depth	needed to d	locume	ent the ir	ndicator	or confirm abse	ence of indicators.)	
	Depth	Matri	X	Redox Fea	edox Features					
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks	
	0-3	10YR 2/2	100					Silt Loam		
	3-18	10YR 3/2	80	10YR 5/8	20	С	М	Loamy Sand	Prominent redox concentrations.	
* Type	: C=Concentra	ition. D=Depl	etion. RN	/l=Reduced	Matrix.	CS=Coa	ted Sand	grains **Locati	on: PL=Pore Lining, M=Matrix	
- / -	Soil Indicator		,		,			J	Indicators for Problem	natic Soils
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L	, MLRA 149B)
	Histic Epipedon (A2)				Dark S	surface (S	67)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)	
	Black Histic (A3)				Polyva	lve Belov	v Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)
	Hydrogen Sulfide (A4)				MLRA	149B)			Dark Surface (S7) (LRR K, I	_, M)
	Stratified Layers (A5)				Thin D	ark Surfa	ce (S9)		Polyvalve Below Surface (S8) (LRR K, L)	
	Depleted Below Dark Surface (A11)				Loamy	Mucky N	/lineral (F	⁻ 1)	Thin Dark Surface (S9) (LRI	R K, L)
	Thick Dark Su	urface (A12)			Loamy	Gleyed	Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)
	Sandy Gleyed	Matrix (S4)			Redox	Dark Su	rface (F6	5)	Red Parent Material (F21)	
Χ	Sandy Redox	(S5)			Deplet	ed Dark	Surface (F7)	Very Shallow Dark Surface	(TF12)
					Redox	Depress	ions (F8)	Other (Explain in Remarks)	
Restric	tive Layer (if	observed)								
	Type:		1	None						
Dep	Depth (inches):						Hydri	c Soil Present?	Yes X No	
Remarks: The criterion for hydric soil is met.										

Site:	Water Distribution System Extension to the Town of	of Peshtigo City/Cou	nty: Marinette Coun	ty	Sampling Date: 9/	/9/2019	
	ant/Owner: Tyco Fire Products L.			State: WI	. •	DP10	
		ael Meisenger	Section, Township	, Range: Section 19, Towns			
Landfo	orm (hillslope,terrace,etc.): Shoulde					%): 2%	
	gion(LRR or MLRA): LRR K - Northo			Long. 87.638825° W			
Soil M	ap Unit Name: Rousseau loamy fine						
	matic/hydrologic conditions on the sit						
Are	Vegetation Soil	or Hydrolo	gysignific	antly disturbed?			
Are	Vegetation Soil	or Hydrolc	gynatural	y problematic?			
Are No	ormal Circumstances Present?	Yes X No	(If needed, expl	ain any answers in Remarks	s)		
SUMN	MARY OF FINDINGS						
	Hydrophytic Vegetation Present?	Yes NoX	s the	Sampled Area within a We	lland?		
	Hydric Soil Present?	Yes NoX	Yes Yes	No X			
	Wetland Hydrology Present?	Yes NoX	If yes, o	optional Wetland Site ID:			
Remai							
	10 in Appendix B. Upland data point oints were recorded along existing ro		y of W03. Based on	the absence of all three par	ameters, this area is an up	oland. All	
uaia p	OIIIIS WEIG IECOIDED along Chicking 10	dusiues.					
HYDI	ROLOGY						
Wetla	nd Hydrology Indicators:						
	Primary Indicators (minimum of o			Secondary Indicat	ors (minimum of two req	Įuired)	
	Surface Water (A1)	Water Stained Lea	ives (B9)	Surface Soil Cracl	ks (B6)		
	High Water Table (A2)	Aquatic Fauna (B1	3)	Drainage Patterns	(B10)		
	Saturation (A3)	Marl Deposits (B15	•	Moss Tim Lines (E	36)		
	Water Marks (B1)	Hydrogen Sulfide (Odor (C1)	Dry-Season Wate	r Table (C2)		
	Sediment Deposits (B2)	Oxidized Rhizosph	eres on Living	Crayfish Burrows	(C8)		
	Drift Deposits (B3)	Roots (C3)		Saturation Visible on Aerial Imagery (C9)			
	Algal Mat or Crust (B4)	Presence of Reduc	ced Iron (C4)	Stunted or Stresse	tressed Plants (D1)		
	Iron Deposits (B5)	Recent Iron Reduc	ction in Tilled Soil	Geomorphic Posit	ion (D2)		
	Inundation Visible on Aerial	(C6)		Shallow Aquitard ((D3)		
	Imagery (B7)	Thin Muck Surface	e (C7)	Microtopographic	Relief (D4)		
	Sparsely Vegetated Concave	Other (Explain in R	Remarks)	FAC-Neutral Test	(D5)		
	Surface (B8)						
Field (Observations:						
Surfac		No X De		Wetland Hydrology Prese	ent?		
Water		No X De		Yes_	NoX		
Satura	ation Present? Yes_	No X De	pth (inches)	 -			
Descri	ibe Recorded Data (stream guage, m	onitoring well, aerial pho	otos, previous inspec	tions), if available:			
Topog	raphic maps, aerial imagery, WWI da	ata, WDNR Wetland Indi	cators data.				
Rema		Daniel WETO	1 -2 1 1	T. J			
The cr	iterion for wetland hydrology is not m	et. Based on WE15 ana	alysis, antecedent ny	arologic conditions are withi	n a normai range.		

VEGE	TATION	Absolute %	Dominant		Sampling Point: DP10
Tree St	ratum Plot size: 30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1. 2.	Robinia pseudoacacia	50	Y	FACU	Number of dominant species that are OBL, FACW, or FAC: 0 (A)
3. 4.					Total number of dominant species across all strata: 2(B)
5. 6.					Percent of dominant species that are OBL, FACW, or FAC: 0% (A/B)
7.					Prevalence Index Worksheet:
50%=	25.0% 20%= 10.0%	50	Total Cover		Total % cover of:
Shrub S	Stratum Plot size: 15'				OBL species0 x10
1.				· ·	FACW species <u>0</u> x 2 <u>0</u>
2.					FAC species0x30
3.					FACU species <u>72</u> x 4 <u>288</u>
4.					UPL species <u>80</u> x 5 <u>400</u>
5.					Column Totals: 152 (A) 688 (B)
6.					Prevalence Index: 4.5 (B/A)
7.					Hydrophytic Vegetation Indicators:
50%=	0.0% 20%= 0.0%	0	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb St	ratum Plot size: 5'				Dominance Test is >50%
1.	Bromus inermis	80	Υ	UPL	Prevalence Index is <3.0*
2.	Solidago canadensis	20	N	FACU	Morphological Adaptations*
3.	Ambrosia artemisiifolia	2	N	FACU	Problematic Hydrophytic Vegetation*
4. 5.					* Indicators of hydric soil and wetland hydrology must be presen unless disturbed or problematic
6.			-	-	Definitions of Vegetation Strata:
7.					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.				-	height (DBH), regardless of height
9.					
10.					than or equal to 3.28 ft (1M) tall.
11.					 Herb - All herbaceous (non-woody) plants, regardless of size,
12.			-		and woody plants less than 3.28 ft tall.
50%=	51.0% 20%= 20.4%	102	Total Cover		
	Vine Stratum Plot size: 30'	102	rotal covol		Woody Vines - All woody vines greater than 3.28 ft in height.
1.					
2.			-		
3.					Hydrophytic Vegetaion Present?
4.					Try and Programmer Todaliti
50%=	0.0% 20%= 0.0%	0	Total Cover		Yes No X
JU /0=	20/0= 0.076		. olai Oovei		100NO
	ss: (Include photo numbers here or erion for hydrophytic vegetation is		e sheet.)		•

SOIL											
									Sampling Point:	DP10	
Profile	Description:	(Describe to	depth	needed to d	locume	ent the in	ndicator	or confirm abse	ence of indicators.)		
	Depth	Matri	х	Redox Fea	atures						
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks		
	0-5	10YR 2/2	100					Silt Loam			
	5-10	10YR 3/3	98	10YR 4/6	2	С	М	Loamy Sand	Distinct redox concentrations.		
	10-18	10YR 3/3	90	10YR 4/6	8	С	М	Loamy Sand	Distinct redox concentrations.		
				10YR 4/2	2	D	М				
* Туре	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix										
Hydric	Soil Indicato	rs:							Indicators for Problem	natic Soils	
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L	, MLRA 149B)	
	Histic Epiped	on (A2)			Dark S	Surface (S	S7)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)		
	Black Histic (A3)			-		w Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)	
	Hydrogen Su	Ifide (A4)			MLRA	149B)			Dark Surface (S7) (LRR K, L, M)		
	Stratified Lay	ers (A5)			Thin D	ark Surfa	ace (S9)		Polyvalve Below Surface (S	8) (LRR K, L)	
	Depleted Bel	ow Dark Surfa	ace (A11)	Loamy	Mucky N	Mineral (F	=1)	Thin Dark Surface (S9) (LRI	R K, L)	
	Thick Dark S	urface (A12)			Loamy	Gleyed I	Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)	
	Sandy Mucky	/ Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)	
	Sandy Gleye	d Matrix (S4)			Redox	Dark Su	rface (F6	6)	Red Parent Material (F21)		
	Sandy Redox	(S5)			Deplet	ed Dark	Surface ((F7)	Very Shallow Dark Surface (TF12)		
					Redox	Depress	ions (F8)	Other (Explain in Remarks)		
Restric	tive Layer (if	observed)									
	Type:			None							
Dept	th (inches):						Hydri	ic Soil Present?	YesNoX		
Remarks: The criterion for hydric soil is not met.											
THE CH	teriori ioi riyar	IC 3011 13 110t 11	ict.								
ì											
Ī											

Site:	Water Distribution System Extension to the Town	of Peshtigo City/Co	ounty: Marinette Coun	ty		Sampling Date:	9/9/2019
	ant/Owner: Tyco Fire Products L		·		State: WI		
Investi	igator(s): Ryan Bombeck, Mich	ael Meisenger	Section, Township	o, Range		ship 30N, Range 24E	
Landfo	orm (hillslope,terrace,etc.): Toe Slop						
	gion(LRR or MLRA): LRR K - Northo		Lat. 45.061456° N				
	ap Unit Name: Rousseau loamy fine						
	matic/hydrologic conditions on the si						
Are		or Hydro	·		· · · · · · · · · · · · · · · · · · ·	ŕ	
Are	Vegetation Soil						
Are No	ormal Circumstances Present?					s)	
						•	
SUMN	MARY OF FINDINGS						
	Hydrophytic Vegetation Present?	Yes X No	Is the	Sample	d Area within a Wet	tland?	
	Hydric Soil Present?			x	No		
	Wetland Hydrology Present?				Wetland Site ID:	W03	
					_		
Rema	rks:						
	11 in Appendix B. PEM wetland data			1 in W0	3. Based on the pres	sence of all three par	ameters, this area
is a we	etland. All data points were recorded	along existing roadside	es.				
HYDI	ROLOGY						
	nd Hydrology Indicators:						
· · · · · ·	Primary Indicators (minimum of o	ne is required: check	(all that apply)		Secondary Indicate	ors (minimum of tw	o required)
	Surface Water (A1)	Water Stained L			Surface Soil Crack	•	- · · · · · · · · · · · · · · · · · · ·
	High Water Table (A2)	Aquatic Fauna (I			Drainage Patterns	,	
	Saturation (A3)	Marl Deposits (B	•		Moss Tim Lines (E	•	
	Water Marks (B1)	Hydrogen Sulfide	,		Dry-Season Water	,	
	Sediment Deposits (B2)	Oxidized Rhizos			Crayfish Burrows	` ,	
	Drift Deposits (B3)	Roots (C3)	one. 33 3 g			on Aerial Imagery (C	:9)
	Algal Mat or Crust (B4)	Presence of Rec	luced Iron (C4)		Stunted or Stresse	<u> </u>	
	Iron Deposits (B5)		uction in Tilled Soil	Х	Geomorphic Posit	` ′	
	Inundation Visible on Aerial	(C6)	dollori iii Tillica Coll		Shallow Aquitard (, ,	
	Imagery (B7)	Thin Muck Surfa	oo (C7)				
	Sparsoly Vagatated Concava	Thin Muck Surfa		Х	Microtopographic		
	Sparsely Vegetated Concave Surface (B8)	Other (Explain in	Remarks)		FAC-Neutral Test	(D9)	
Field (Observations						
	Observations:	No V	Santh (inches)	Madle	nd Hudrolowy Drood	-m42	
		No X [wetia	nd Hydrology Prese		
		No X [res_	XNo	
Satura	ation Present? Yes_	No <u>X</u> [Depth (inches)				
				<u> </u>			
	ibe Recorded Data (stream guage, m	-		ctions), i	f available:		
	raphic maps, aerial imagery, WWI da	ata, WDNR Wetland In	dicators data.				
Remai	rks: iterion for wetland hydrology is met. I	Based on WETS analy	sis antecedent hydrol	logic co	nditions are within a	normal range	
THE CI	iteriori for wettaria riyarology is met.	based on WETO analy	sis, antecedent riyaroi	logic coi	nditions are within a	nonnarrange.	

VEGE	TATION			Absolute %	Dominant		Sampling Point: DP11
Tree Str	ratum_	Plot size:	30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1. 2.							Number of dominant species that are OBL, FACW, or FAC:(A)
3. 4.							Total number of dominant species across all strata:2(B)
5. 6.							Percent of dominant species that are OBL, FACW, or FAC:
7.							Prevalence Index Worksheet:
50%=	0.0%	20%=	= 0.0%	0	Total Cover		Total % cover of:
Shrub S	Stratum_	Plot size:	15'				OBL species <u>2</u> x 1 <u>2</u>
1						· -	FACW species <u>100</u> x 2 <u>200</u>
2.							FAC species <u>0</u> x 3 <u>0</u>
3.							FACU species <u>0</u> x 4 <u>0</u>
4.							UPL species0 x50
5.							Column Totals: 102 (A) 202 (B)
6.							Prevalence Index: 2.0 (B/A)
7.							Hydrophytic Vegetation Indicators:
50%=	0.0%	20%=	= 0.0%	0	Total Cover		x Rapid Test for Hydrophytic Vegetation
Herb St	<u>ratum</u>	Plot size:	5'				x Dominance Test is >50%
1.	Impatiens ca	apensis		70	Y	FACW	x Prevalence Index is <3.0*
2.	Phalaris aru	ndinacea		30	Υ	FACW	Morphological Adaptations*
3.	Carex stipat	а		2	N	OBL	Problematic Hydrophytic Vegetation*
4. 5.							* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6.							Definitions of Vegetation Strata:
7. <u> </u>							Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height
9. 10.							Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1M) tall.
11.							Herb - All herbaceous (non-woody) plants, regardless of size,
12.							and woody plants less than 3.28 ft tall.
50%=	51.0%	20%=	= 20.4%	102	Total Cover		March March All and State and Confidence of the
Woody '	Vine Stratun	n Plot size:	30'				Woody Vines - All woody vines greater than 3.28 ft in height.
1.		_					
2.			<u>.</u>				
3.							Hydrophytic Vegetaion Present?
4.							,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
50%=	0.0%	20%=	= 0.0%	0	Total Cover		Yes <u>X</u> No
		hoto number rophytic vege		r on a separat met.	e sheet.)		1

SOIL											
									Sampling Point:	DP11	
Profile	Description:	(Describe to	o depth	needed to d	locume	ent the ir	ndicator	or confirm abse	ence of indicators.)	•	
	Depth	Matri	х	Redox Fea	atures		ı				
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks		
	0-6	10YR 2/2	100					Silt Loam			
	6-18	10YR 3/2	75	10YR 4/6	10	С	М	Loamy Sand	Prominent redox concentrations.		
				10YR 5/2	10	D	М			I	
* Туре	e: C=Concentra	ation, D=Depl	etion, RI	M=Reduced	Matrix,	CS=Coat	ted Sand	d grains **Locati	ion: PL=Pore Lining, M=Matrix		
Hydric	Soil Indicato	rs:		<u> </u>	ı				Indicators for Problem	atic Soils	
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L,	, MLRA 149B)	
	Histic Epiped	on (A2)			Dark S	Surface (S	87)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)		
							v Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)	
	Hydrogen Sulfide (A4)					149B)			Dark Surface (S7) (LRR K, L, M)		
	Stratified Layers (A5)				Thin D	ark Surfa	ce (S9)		Polyvalve Below Surface (S8) (LRR K, L)		
	Depleted Belo	ow Dark Surfa	ace (A11)	Loamy	Mucky N	/lineral (F	F1)	Thin Dark Surface (S9) (LRF	₹ K, L)	
	Thick Dark S	urface (A12)			Loamy	Gleyed I	Matrix (F	(2)	Iron-Manganese Masses (F	12) (LRR K, L, R)	
	Sandy Mucky	Mineral (S1)			Depleted Matrix (F3)				Mesic Spodic (TA6) (MLRA	144A, 145, 149B)	
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	rface (F6	6)	Red Parent Material (F21)		
Χ	Sandy Redox	(S5)			Deplet	ed Dark	Surface	(F7)	Very Shallow Dark Surface ((TF12)	
					Redox	Depress	ions (F8)	Other (Explain in Remarks)		
Restri	ctive Layer (if	observed)									
	Type:			None							
Dep	oth (inches):					-	Hydri	ic Soil Present?	YesXNo		
Remar		11									
ine cr	iterion for hydri	ic soil is met.									

Site: Water Distribution System Extension to the Town of F	Peshtigo City/County: Marinette Co	unty Sampling Date: 9/9/2019				
Applicant/Owner: Tyco Fire Products L.P.		State: WI Sampling Point: DP12				
Investigator(s): Ryan Bombeck, Michael	el Meisenger Section, Towns	nip, Range: Section 19, Township 30N, Range 24E				
Landform (hillslope,terrace,etc.): Shoulder S		e, convex, none): Convex Slope (%): 15%				
Subregion(LRR or MLRA): LRR K - Northce	ntral Forests Lat. 45.061472° N	Long. 87.639105° W Datum: WGS 84				
		WWI Classification: None				
Are climatic/hydrologic conditions on the site	typical for time of year? Yes X	No(If no, explain in the Remarks)				
	or Hydrologysigni					
	or Hydrologynatu	ally problematic?				
Are Normal Circumstances Present?	/es X No (If needed, ex	plain any answers in Remarks)				
SUMMARY OF FINDINGS						
Hydrophytic Vegetation Present? Y		e Sampled Area within a Wetland?				
Hydric Soil Present? Y	/es NoX Y	es No <u>X</u>				
Wetland Hydrology Present? Y	'es NoX If yes	, optional Wetland Site ID:				
Remarks: Photo 12 in Appendix B. Upland data point re data points were recorded along existing road	•	on the absence of all three parameters, this area is an upland. All				
HYDROLOGY						
Wetland Hydrology Indicators:						
Primary Indicators (minimum of one	e is required; check all that apply)	Secondary Indicators (minimum of two required)				
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 Tim Lines (B6)				
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)				
Sediment Deposits (B2)	Oxidized Rhizospheres on Living	Crayfish Burrows (C8)				
Drift Deposits (B3)	Roots (C3)	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soil	Geomorphic Position (D2)				
Inundation Visible on Aerial	(C6)	Shallow Aquitard (D3)				
Imagery (B7)	Thin Muck Surface (C7)	Microtopographic Relief (D4)				
Sparsely Vegetated Concave	Other (Explain in Remarks)	FAC-Neutral Test (D5)				
Surface (B8)						
Field Observations:						
Surface Water Present? Yes	No X Depth (inches)	Wetland Hydrology Present?				
	No X Depth (inches)					
	No X Depth (inches)					
Describe Recorded Data (stream guage, mo	nitoring well, aerial photos, previous insp	l ections) if available:				
Topographic maps, aerial imagery, WWI data		solidio), il availabio.				
Remarks:	a, WDITT Fromana manager across					
	t. Based on WETS analysis, antecedent	nydrologic conditions are within a normal range.				

	TATION			Absolute %	Dominant		Sampling Point: DP12 Dominance Test Worksheet
Tree Str	atum Plo	ot size:	30'	Cover	Species	Indicator Status	DOMINANCE LEST WOLKSHEEL
1. ₋ 2. ₋							Number of dominant species that are OBL, FACW, or FAC: 0 (A)
3. 4.					- <u></u>	·	Total number of dominant species across all strata: 2(B)
5. 6.					·		Percent of dominant species that are OBL, FACW, or FAC: 0% (A/B)
7.							Prevalence Index Worksheet:
50%=	0.0%	20%=	= 0.0%	0	Total Cover		Total % cover of:
Shrub S	tratum Plo	ot size:	15'				OBL species0 x10
1.					<u> </u>		FACW species <u>0</u> x 2 <u>0</u>
2.							FAC species1 x 3 3
3.							FACU species 42 x 4 168
4.							UPL species 60 x 5 300
5.							Column Totals: 103 (A) 471 (B)
6.							Prevalence Index: 4.6 (B/A)
7.							Hydrophytic Vegetation Indicators:
50%=	0.0%	20%=	= 0.0%	0	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb St	ratum Plo	ot size:	5'				Dominance Test is >50%
1.	 Bromus inermis			60	Υ	UPL	Prevalence Index is ≤3.0*
2.	Ambrosia artem	isiifolia		40	Υ	FACU	Morphological Adaptations*
3.	Cirsium vulgare			2	N	FACU	Problematic Hydrophytic Vegetation*
4. <u> </u>	Urtica dioica			1	N	FAC	* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6.						-	Definitions of Vegetation Strata:
7.							Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.							height (DBH), regardless of height
9.							Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.							than or equal to 3.28 ft (1M) tall.
11.						·	Herb - All herbaceous (non-woody) plants, regardless of size,
12.							and woody plants less than 3.28 ft tall.
50%=	51.5%	20%=	= 20.6%	103	Total Cover		1
	Vine Stratum Plo		30'		10101 00.2.		Woody Vines - All woody vines greater than 3.28 ft in height.
1.							
2.							
3.							Hydrophytic Vegetaion Present?
4.							Tryurophytic vegetalon i resent.
50%=	0.0%	20%-	= 0.0%	0	Total Cover	-	Yes No X
3070-	0.070	20 /0-	0.070		Total Gover		itesito
Remark	s: (Include photo	number	s here o	r on a senarat	te sheet)		
	erion for hydroph				o onoon,		

SOIL												
									Sampling Point:	DP12		
Profile	Description:	(Describe to	depth	needed to d	ocume	ent the in	dicator	or confirm abse	ence of indicators.)			
	Depth	Matri	X	Redox Fea	atures							
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks			
	0-6	10YR 2/2	100					Sandy Loam				
	6-18	10YR 3/3	80	10YR 4/6	10	С	М	Loamy Sand	Distinct redox concentrations.			
				10YR 5/2	10	D	М					
* Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix												
Hydric	Soil Indicato	rs:							Indicators for Problem	natic Soils		
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L	, MLRA 149B)		
	Histic Epiped	on (A2)			Dark S	surface (S	87)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)			
	Black Histic (A3)			-		v Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)		
	Hydrogen Sulfide (A4) MLRA 149B)								Dark Surface (S7) (LRR K, L, M)			
	Stratified Layers (A5) Thin Dark Su								Polyvalve Below Surface (S8) (LRR K, L)			
	Depleted Belo	ow Dark Surfa	ace (A11)	Loamy	Mucky N	/lineral (F	- 1)	Thin Dark Surface (S9) (LRI	R K, L)		
	Thick Dark Su	urface (A12)			Loamy	Gleyed I	Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)		
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)		
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	rface (F6	5)	Red Parent Material (F21)			
	Sandy Redox	(S5)			Deplet	ed Dark S	Surface ((F7)	Very Shallow Dark Surface (TF12)			
					Redox	Depress	ions (F8)	Other (Explain in Remarks)			
Restric	tive Layer (if	observed)										
	Type:		l	None								
Dep	th (inches):						Hydri	ic Soil Present?	YesNoX			
Remarl												
The cri	terion for hydri	c soil is not m	net. No s	tripping obse	erved.							

Site:	Water Distribution System Extension to the Town of	of Peshtigo City/C	County: Marinette Coun	ity		Sampling Date:	9/9/2019
	ant/Owner: Tyco Fire Products L.		• -	•	State: WI	Sampling Point:	
Investi	igator(s): Ryan Bombeck, Micha	ael Meisenger	Section, Township	o, Range	e: Section 19, Towns		
Landfo	orm (hillslope,terrace,etc.): Toe Slop						
	gion(LRR or MLRA): LRR K - Northc						
	ap Unit Name: Deford and Cormant s						
	matic/hydrologic conditions on the sit						
Are			rology signific			,	
Are	Vegetation Soil						
	ormal Circumstances Present?					s)	
				Í		•	
SUMM	IARY OF FINDINGS						
	Hydrophytic Vegetation Present?	Yes X No	Is the	Sample	d Area within a Wet	tland?	
	Hydric Soil Present?			-	No		
	Wetland Hydrology Present?				Wetland Site ID:	W03	
	, 0,			•	_		
Remar	rks:						
	13 in Appendix B. This data point was	s recorded to docum	ent representative PSS	vegeta	tive conditions within	W03. Based on the	presence of all
three p	parameters, this area is a wetland. All	data points were red	corded along existing ro	adsides	S.		
HYDF	ROLOGY						
	nd Hydrology Indicators:						
	Primary Indicators (minimum of o	ne is required: chec	ck all that apply)		Secondary Indicate	ors (minimum of tw	o required)
	Surface Water (A1)	Water Stained			Surface Soil Crack		<u> </u>
	High Water Table (A2)	Aquatic Fauna			Drainage Patterns	,	
	Saturation (A3)	Marl Deposits (•		Moss Tim Lines (E	,	
	Water Marks (B1)	Hydrogen Sulfic	•		Dry-Season Water	,	
	Sediment Deposits (B2)		spheres on Living		Crayfish Burrows	` ,	
	Drift Deposits (B3)	Roots (C3)	opnicios sii <u></u>			on Aerial Imagery (C	:0)
	Algal Mat or Crust (B4)	Presence of Re	educed Iron (C4)	1	Stunted or Stresse		
	Iron Deposits (B5)		duction in Tilled Soil	Х	Geomorphic Posit	()	
	Inundation Visible on Aerial	(C6)	duction in Tilled 5011	<u> </u>	'		
	Imagery (B7)	,	- (07)		Shallow Aquitard (•	
		Thin Muck Surf		Х	Microtopographic	, ,	
	Sparsely Vegetated Concave Surface (B8)	Other (Explain	in Remarks)	^	FAC-Neutral Test	(D5)	
	, ,						
	Observations:	,		ļ,		-	
			Depth (inches)	Wetia	nd Hydrology Prese		
			Depth (inches)		Yes_	X No	
Satura	tion Present? Yes	No X	Depth (inches)	-			
	be Recorded Data (stream guage, m	=		ctions), i	if available:		
	raphic maps, aerial imagery, WWI da	ta, WDNR Wetland	Indicators data.				
Remar		Doord on WETC one	lucia, anta ao dont hudro	امعام مما	nditiona are within a		
The cr	iterion for wetland hydrology is met. E	sased on WE15 and	iysis, antecedent nydrol	logic coi	nations are within a	normai range.	

VEGE	TATION		Absolute %	Dominant		Sampling Point: DP13
Tree St	ratum Plot si	ize: <u>30'</u>	Absolute % Cover	Species	Indicator Status	Dominance Test Worksheet
1. 2.						Number of dominant species that are OBL, FACW, or FAC:(A)
3. 4.						Total number of dominant species across all strata: 2 (B)
5. 6.					-	Percent of dominant species that are OBL, FACW, or FAC: 100% (A/B)
7.						Prevalence Index Worksheet:
50%=	0.0%	20%= 0.0%	<u> </u>	Total Cover		Total % cover of:
Shrub S						OBL species 0 x 1 0
	Frangula alnus		 90	Y	FAC	FACW species 85 x 2 170
2.						FAC species 105 x 3 315
3.					· ·	FACU species 0 x 4 0
4.						UPL species 0 x 5 0
5.						Column Totals: 190 (A) 485 (B)
6.						Prevalence Index: 2.6 (B/A)
7.			_			Hydrophytic Vegetation Indicators:
50%=	45.0%	20%= 18.09		Total Cover	-	Rapid Test for Hydrophytic Vegetation
Herb St			,,,			x Dominance Test is >50%
	Onoclea sensibilis		 80	Υ	FACW	x Prevalence Index is ≤3.0*
-	Frangula alnus		10	N	FAC	Morphological Adaptations*
-	Phalaris arundinace	 a		N	FACW	Problematic Hydrophytic Vegetation*
-	Equisetum arvense		5	N	FAC	* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6.					·	Definitions of Vegetation Strata:
7.					-	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.						height (DBH), regardless of height
9.						Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.			<u></u>			than or equal to 3.28 ft (1M) tall.
11.						Herb - All herbaceous (non-woody) plants, regardless of size,
12.						and woody plants less than 3.28 ft tall.
50%=	50.0%	20%= 20.09	 % 100	Total Cover		
	Vine Stratum Plot si		//	Total Covol		Woody Vines - All woody vines greater than 3.28 ft in height.
1.						
2.			_			
3.			_			Hydrophytic Vegetaion Present?
4.			_			nyurophytic vegetatori r resent:
50%=	0.0%	20%= 0.0%	% <u>0</u>	Total Cover		Yes <u>X</u> No
	ss: (Include photo nu erion for hydrophytic			e sheet.)		

SOIL												
									Sampling Point:	DP13		
Profile	Description:	(Describe to	depth	needed to d	locume	ent the in	dicator	or confirm abse	ence of indicators.)			
	Depth	Matri	X	Redox Fea	atures							
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks			
	0-6	10YR 2/2	100					Silt Loam				
	6-18	10YR 3/2	75	10YR 4/6	10	С	М	Loamy Sand	Prominent redox concentrations.			
				10YR 5/2	10	D	М					
* Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix												
Hydric Soil Indicators: Indicators for Problematic Soils												
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L,	MLRA 149B)		
	Histic Epipedon (A2) Dark Surface							R,MLRA 149B)	Coast Prairie Redox (A16)			
								e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)		
	Hydrogen Sulfide (A4) MLRA 149B)								Dark Surface (S7) (LRR K, L, M)			
	Stratified Layers (A5) Thin Dark						ce (S9)		Polyvalve Below Surface (S8) (LRR K, L)			
	Depleted Belo	ow Dark Surfa	ace (A11)	Loamy	Mucky N	/lineral (F	⁻ 1)	Thin Dark Surface (S9) (LRR K, L)			
	Thick Dark St	urface (A12)			Loamy	Gleyed I	Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)		
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix				144A, 145, 149B)		
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	Surface (F6) Red Parent Material (
Χ	Sandy Redox	(S5)			Deplet	ed Dark S	k Surface (F7) Very Shallow Dar			(TF12)		
					Redox	Depress	ions (F8)	Other (Explain in Remarks)			
Restric	ctive Layer (if	observed)										
	Type:		l	None								
Dep	th (inches):						Hydri	c Soil Present?	Yes X No			
Remar												
The ch	terion for hydri	c son is met.										

Site:	Water Distribution System Extension to the To	own of Peshtigo C	ity/County: Marinette Count	ty	Sampling Date:	9/9/2019
	ant/Owner: Tyco Fire Product		, .	•	/I Sampling Point:	
	igator(s): Ryan Bombeck, M		Section, Township		 24, Township 30N, Range 23	
	orm (hillslope,terrace,etc.): Toe S					
	gion(LRR or MLRA): LRR K - No				53° W Datum: W	
	lap Unit Name: Rousseau loamy f					
	imatic/hydrologic conditions on the)
Are			Hydrology signification	<u> </u>	,	
Are	Vegetation S					
Are No	ormal Circumstances Present?				Remarks)	
				·	,	
SUMN	MARY OF FINDINGS					
	Hydrophytic Vegetation Preser	nt? Yes X N	lo Is the S	Sampled Area with	nin a Wetland?	
		nt? Yes X N		X No		
	Wetland Hydrology Presei			ptional Wetland Si		
Rema	rks:					
	14 in Appendix B. This data point					
	cation for classifying the mowed la neters, this area is a wetland. All d				wn. Based on the presence of	of all three
param	cters, tills area is a wettaria. All a	ata points were reco	raca along existing roadside			
HYD	ROLOGY					
Wetla	nd Hydrology Indicators:					
	Primary Indicators (minimum o	of one is required; of	heck all that apply)	Secondary	/ Indicators (minimum of to	wo required)
	Surface Water (A1)	Water Stair	ned Leaves (B9)	Surface S	Soil Cracks (B6)	
	High Water Table (A2)	Aquatic Fau		Drainage	Patterns (B10)	
Х	Saturation (A3)	Marl Depos	its (B15)	Moss Tim	n Lines (B6)	
	Water Marks (B1)	Hydrogen S	Sulfide Odor (C1)	Dry-Seas	son Water Table (C2)	
	Sediment Deposits (B2)	Oxidized RI	nizospheres on Living	Crayfish I	Burrows (C8)	
	Drift Deposits (B3)	Roots (C3)		Saturation	n Visible on Aerial Imagery (C9)
	Algal Mat or Crust (B4)	Presence o	f Reduced Iron (C4)	Stunted of	or Stressed Plants (D1)	,
	Iron Deposits (B5)	Recent Iron	Reduction in Tilled Soil	X Geomorp	ohic Position (D2)	
	Inundation Visible on Aerial	(C6)			Aquitard (D3)	
	Imagery (B7)	Thin Muck	Surface (C7)		ographic Relief (D4)	
	Sparsely Vegetated Concave	i i	ain in Remarks)		utral Test (D5)	
	Surface (B8)	10.11.01 (-1.17.1				
Field	Observations:					
		s No X	Depth (inches)	Wetland Hydrolo	ogy Present?	
			Depth (inches) 14		Yes X No_	
			Depth (inches) 10			
Catare	mon room.	3 <u></u>		1		
Descr	ibe Recorded Data (stream guage	monitoring well ae	rial nhotos, previous inspec	tions) if available:		
	graphic maps, aerial imagery, WW	_		aono), ii availabio.		
Rema		Tata, WDIVIC Wolle	ina maioatoro data.			
	riterion for wetland hydrology is m	et. Based on WETS	analysis, antecedent hydrol	ogic conditions are	within a normal range.	
				-	•	

VLGL	TATION			Absolute %	Dominant		Sampling Point: DP14
Tree Str	ratum_	Plot size:	30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1. 2.							Number of dominant species that are OBL, FACW, or FAC: 1(A)
3. 4.							Total number of dominant species across all strata:1(B)
5. 6.							Percent of dominant species that are OBL, FACW, or FAC:100%(A/B)
7.							Prevalence Index Worksheet:
50%=	0.0%	20%=	= 0.0%	0	Total Cover		Total % cover of:
Shrub S	Stratum_	Plot size:	15'				OBL species <u>85</u> x 1 <u>85</u>
1.							FACW species 15 x 2 30
2.							FAC species 0 x 3 0
3.							FACU species 0 x 4 0
4.							UPL species 0 x 5 0
5.							Column Totals: 100 (A) 115 (B)
6.							Prevalence Index: 1.2 (B/A)
7.							Hydrophytic Vegetation Indicators:
50%=	0.0%	20%=	= 0.0%	0	Total Cover		x Rapid Test for Hydrophytic Vegetation
Herb St	ratum	Plot size:	5'				x Dominance Test is >50%
	Eleocharis a			70	Υ	OBL	x Prevalence Index is ≤3.0*
-		ctus pungens		15	N	OBL	Morphological Adaptations*
_	Phalaris aru			15	N	FACW	Problematic Hydrophytic Vegetation*
4. <u> </u>							* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6.							Definitions of Vegetation Strata:
7.							Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.							height (DBH), regardless of height
9.							Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.							than or equal to 3.28 ft (1M) tall.
11.							 Herb - All herbaceous (non-woody) plants, regardless of size,
12.					-		and woody plants less than 3.28 ft tall.
50%=	50.0%	20%=	= 20.0%	100	Total Cover		
	Vine Stratun		30'	100	10101 00.0.		Woody Vines - All woody vines greater than 3.28 ft in height.
1.		1 100 3120.					
2.							
3.							Hydrophytic Vegetaion Present?
4.							Trydrophytic vegetalon i resent.
50%=	0.0%	20%=	= 0.0%	0	Total Cover		Yes <u>X</u> No
		hoto number		r on a separat met.	e sheet.)		

SOIL												
									Sampling Point:	DP14		
Profile	Description:	(Describe to	depth	needed to d	locume	ent the ir	ndicator	or confirm abse	ence of indicators.)	-		
	Depth	Matri	X	Redox Fea	atures							
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks			
	0-5	10YR 2/2	90	10YR 4/6	10	С	М	Silt Loam	Prominent redox concentrations.			
	5-18	10YR 4/6	90	2.5YR 5/8	10	С	М	Loamy Sand	Prominent redox concentrations.			
* -	0.00	e Boul		4.5.11		00.0			D. D. Davidsky M. Mart			
* Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: Indicators for Problematic Soils												
Hyaric		rs:			C4=:=====	al Madaire	(00)					
	Histosol (A1)	(40)				ed Matrix	` ′	D.M. D.A. 4.40D)	2 cm Muck (A10) (LRR K, L	., MLRA 149B)		
	Histic Epiped	,				,		R,MLRA 149B)	Coast Prairie Redox (A16)) K D)		
	Black Histic (/				MLRA		w Surrace	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRF	,		
	Hydrogen Sul	` '					(CO)		Dark Surface (S7) (LRR K,	· ,		
	Stratified Layers (A5) Depleted Below Dark Surface (A11) Loamy Muck							=1)	Polyvalve Below Surface (S Thin Dark Surface (S9) (LR			
	Thick Dark Su		ace (ATT	,	,	Gleyed	,		Iron-Manganese Masses (F	. ,		
	Sandy Mucky				·	ed Matrix	,	2)	Mesic Spodic (TA6) (MLRA	, ,		
	Sandy Gleyed			X		Dark Su		3)	Red Parent Material (F21)	1447, 143, 1490)		
	Sandy Redox			^			k Surface (F7) Very Shallow Dark Surf			/TF12)		
	Sandy Nedox	(55)				Depress		,	Other (Explain in Remarks)	(11 12)		
				I	rtodox	Воргооз	0 1) 611016)	Other (Explain in Nemarko)			
Restric	tive Layer (if	observed)										
	Type:		ı	None								
Dept	th (inches):						Hydri	c Soil Present?	Yes X No	_		
Remarl												
The crit	terion for hydri	c soil is met.										

Site: Water Distribution System Extension to the Town of F	Peshtigo City/County: Marinette Coun	ty Sampling Date: 9/10/2019			
Applicant/Owner: Tyco Fire Products L.P.		State: WI Sampling Point: DP15			
Investigator(s): Ryan Bombeck, Michael	el Meisenger Section, Township	p, Range: Section 24, Township 30N, Range 23E			
Landform (hillslope,terrace,etc.): Toe Slope	Local relief (concave,	convex, none): Concave Slope (%): 0%			
Subregion(LRR or MLRA): LRR K - Northce	ntral Forests Lat. 45.060257° N	Long. 87.641786° W Datum: WGS 84			
Soil Map Unit Name: Wainola loamy fine san	nd, 0 to 3 percent slopes	WWI Classification: None			
Are climatic/hydrologic conditions on the site	typical for time of year? Yes X	No (If no, explain in the Remarks)			
	or Hydrologysignific				
Are Vegetation Soil _	or Hydrologynatural	ly problematic?			
Are Normal Circumstances Present?	'es X No (If needed, exp	lain any answers in Remarks)			
SUMMARY OF FINDINGS					
Hydrophytic Vegetation Present? Y		Sampled Area within a Wetland?			
	· · · · · · · · · · · · · · · · · · ·	s X No			
Wetland Hydrology Present? Y	/es X No If yes,	optional Wetland Site ID: W03			
Remarks: Photo 15 in Appendix B. This data point was	recorded in a mowed section of road ditch	to document wetland conditions in disturbed vegetation.			
		presence of all three parameters, this area is a wetland. All data			
points were recorded along existing roadside	S.				
HYDROLOGY					
Wetland Hydrology Indicators:	= in required, abook all that apply)	Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one Surface Water (A1)	Water Stained Leaves (B9)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)			
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)			
Saturation (A3)	Marl Deposits (B15)	Moss Tim Lines (B6)			
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)			
Sediment Deposits (B2)	Oxidized Rhizospheres on Living	Crayfish Burrows (C8)			
Drift Deposits (B3)	Roots (C3)	Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)			
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soil	X Geomorphic Position (D2)			
Inundation Visible on Aerial	(C6)	Shallow Aquitard (D3)			
Imagery (B7)	Thin Muck Surface (C7)	Microtopographic Relief (D4)			
Sparsely Vegetated Concave	Other (Explain in Remarks)	X FAC-Neutral Test (D5)			
Surface (B8)	Other (Explain in Remarks)	PAO-Neutral Test (DO)			
Field Observations:					
	No X Depth (inches)	Wetland Hydrology Present?			
	No X Depth (inches)	Yes X No			
	No X Depth (inches)	1			
		1			
Describe Recorded Data (stream guage, mor	nitoring well, aerial photos, previous insper	ctions), if available:			
Topographic maps, aerial imagery, WWI data					
Remarks:					
The criterion for wetland hydrology is met. Ba	ased on WETS analysis, antecedent hydro	logic conditions are within a normal range.			

VEGET	ATION				Sampling Point: DP15
Tree Stra	atum Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet
1. <u> </u>					Number of dominant species that are OBL, FACW, or FAC: 1 (A)
3.				• •	Total number of dominant species across
4.					all strata:1(B)
5.			<u>-</u>		Percent of dominant species that are OBL.
6.			<u>-</u>		FACW, or FAC: 100% (A/B)
7.		_	<u>-</u>		Prevalence Index Worksheet:
50%=	0.0% 20%= 0.0%	0	Total Cover	· _	Total % cover of:
Shrub Str	ratum Plot size: 15'				OBL species101 x1101
1.					FACW species 0 x 2 0
2.					FAC species 0 x 3 0
3.					FACU species 0 x 4 0
4.					UPL species
5.					Column Totals: 101 (A) 101 (B)
6.					Prevalence Index: 1.0 (B/A)
7.					Hydrophytic Vegetation Indicators:
50%=	0.0% 20%= 0.0%	0	Total Cover		x Rapid Test for Hydrophytic Vegetation
Herb Stra	atum Plot size: 5'				x Dominance Test is >50%
	Eleocharis acicularis	80	Υ	OBL	x Prevalence Index is ≤3.0*
	Carex stipata	20	N	OBL	Morphological Adaptations*
	Schoenoplectus pungens	1	N	OBL	Problematic Hydrophytic Vegetation*
4. <u> </u>					* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6. <u> </u>					Definitions of Vegetation Strata:
7. <u> </u>					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height
9.				· -	Sapling/shrub - Woody plants less than 3 in. DBH and greater
9 10					than or equal to 3.28 ft (1M) tall.
11. <u> </u>					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50%=	50.5% 20%= 20.2%	101	Total Cover	· -	
	ine Stratum Plot size: 30'		Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
1					
2					
3					Hydrophytic Vegetaion Present?
4					
50%=	0.0% 20%= 0.0%	0	Total Cover		YesXNo

Remarks: (Include photo numbers here or on a separate sheet.)
The criterion for hydrophytic vegetation is met. Vegetation was considered significantly disturbed due to routine mowing. Remaining vegetation and volunteer species were hydrophytic.

SOIL											
									Sampling Point:	DP15	
Profile	Description:	(Describe to	o depth	needed to d	locume	ent the in	ndicator	or confirm abse	ence of indicators.)		
	Depth	Matri	х	Redox Fea	atures						
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks		
	0-6	10YR 2/2	100					Silt Loam			
	6-18	10YR 3/2	95	2.5YR 4/8	5	С	М	Loamy Sand	Prominent redox concentrations.		
* Type	: C=Concentra	ation, D=Depl	etion, RI	∕/⊫Reduced	Matrix,	CS=Coat	ted Sand	l grains **Locati	on: PL=Pore Lining, M=Matrix		
Hydric	Soil Indicator	rs:							Indicators for Problem	natic Soils	
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L	, MLRA 149B)	
	Histic Epipede	on (A2)			Dark S	Surface (S	S7)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)		
	Black Histic (A	A3)			, ,		v Surfac	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)	
	Hydrogen Sulfide (A4) MLRA 149B								Dark Surface (S7) (LRR K, I	_, M)	
	Stratified Laye	ers (A5)			Thin D	ark Surfa	ce (S9)		Polyvalve Below Surface (S8) (LRR K, L)		
	Depleted Belo	ace (A11)	Loamy	Mucky N	/lineral (f	- 1)	Thin Dark Surface (S9) (LRI	R K, L)		
	Thick Dark Surface (A12)					Gleyed I	Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)	
	Sandy Mucky	Mineral (S1)			Depleted Matrix (F3)				Mesic Spodic (TA6) (MLRA	144A, 145, 149B)	
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	rface (F6	6)	Red Parent Material (F21)		
Χ	Sandy Redox	(S5)			Deplet	ed Dark	Surface	(F7)	Very Shallow Dark Surface (TF12)		
					Redox	lox Depressions (F8)			Other (Explain in Remarks)		
Restri	ctive Layer (if	observed)									
	Type:			None							
Dep	th (inches):						Hydr	ic Soil Present?	Yes X No		
Remar		::::									
The ch	terion for hydri	c son is met.									

Site: v	Nater Distribution System Extension to the Town	n of Peshtigo City/County: N	Marinette County		Sampling Date:	9/10/2019	
_	nt/Owner: Tyco Fire Products		•	State: WI			
Investiga	ator(s): Ryan Bombeck, Mic	chael Meisenger Sec	ction, Township, Rang				
Landforr	m (hillslope,terrace,etc.): Toe Sk						
	on(LRR or MLRA): LRR K - North	-	5.057531° N Lon				
	Unit Name: Wainola loamy fine						
	atic/hydrologic conditions on the s						
Are		il or Hydrology _	·	· ·	ŕ		
Are	Vegetation So						
Are Norr	mal Circumstances Present?				s)		
		<u> </u>			•		
SUMMA	RY OF FINDINGS						
	Hydrophytic Vegetation Present	? Yes X No	Is the Sample	d Area within a Wet	tland?		
	Hydric Soil Present		Yes X	No			
	Wetland Hydrology Present		·	Wetland Site ID:	W03		
				-			
Remarks	 S:						
	6 in Appendix B. PSS data point re		3. Based on the prese	nce of all three parar	meters, this area is a	wetland. All data	
points w	ere recorded along existing roads	sides.					
HYDR	OLOGY						
	d Hydrology Indicators:						
	rimary Indicators (minimum of	one is required: check all tha	nt apply)	Secondary Indicate	ors (minimum of two	o required)	
	Surface Water (A1)	Water Stained Leaves (Surface Soil Crack	•		
	High Water Table (A2)	Aquatic Fauna (B13)	X	Drainage Patterns	,		
	Saturation (A3)	Marl Deposits (B15)		Moss Tim Lines (E	•		
	Water Marks (B1)	Hydrogen Sulfide Odor	(C1)	Dry-Season Wate	,		
	Sediment Deposits (B2)	Oxidized Rhizospheres		Crayfish Burrows	` '		
	Drift Deposits (B3)	Roots (C3)	511 <u>2</u> 11g	Saturation Visible on Aerial Imagery (C9)			
	Algal Mat or Crust (B4)	Presence of Reduced Ir	on (C4)	Stunted or Stresse		5)	
	Iron Deposits (B5)	Recent Iron Reduction i	` ′	Geomorphic Posit	,		
	Inundation Visible on Aerial	(C6)	II Tilled Goll	Shallow Aquitard (
	Imagery (B7)	Thin Muck Surface (C7)					
		Thin Muck Surface (C7)	.,	Microtopographic			
	Sparsely Vegetated Concave Surface (B8)	Other (Explain in Rema	iks) A	FAC-Neutral Test	(D5)		
Field O							
	bservations:	No. V. Donth /	nahaa) Matla	nd Hudralam, Drae	40		
		No X Depth (i		nd Hydrology Prese			
		No X Depth (i		res_	X No		
Saturation	on Present? Yes	No X Depth (i	nches)				
	e Recorded Data (stream guage,			if available:			
	phic maps, aerial imagery, WWI	data, WDNR Wetland Indicator	s data.				
Remarks	s: erion for wetland hydrology is met.	Based on WETS analysis ant	ecedent hydrologic co	nditions are within a	normal range		
THE CITE	mon for wettand flydrology is met	. Dasca on WETO analysis, and	eccuciii iiyarologic co	nations are within a	normai range.		

VEGET	ATION			^ handuta 0/	Deminant		Sampling Point: DP16
Tree Stra	a <u>tum</u> Plo	t size:	30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet
1					<u> </u>		Number of dominant species that are OBL,
2							FACW, or FAC: (A)
3					.		Total number of dominant species across
4							all strata:(B)
5							Percent of dominant species that are OBL,
6						-	FACW, or FAC:
7	0.00/	200/-	0.00/		Total Cover		Prevalence Index Worksheet:
50%= Shrub Sti	0.0%		0.0% 15'	0	Total Cover		Total % cover of: OBL species 90 x 1 90
Shrub St				15	V	FAC	<u> </u>
1. <u>A</u> 2.	Acer negundo				Y		1, '. ———
3.							FACU species
3. <u> </u>							UPL species 0 x 5 0
5.							Column Totals: 117 (A) 169 (B)
6.							Prevalence Index: 1.4 (B/A)
7.							Hydrophytic Vegetation Indicators:
50%=	7.5%	20%=	3.0%	15	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb Stra			5'				x Dominance Test is >50%
	Carex stipata			90	Υ	OBL	x Prevalence Index is ≤3.0*
2.	Dnoclea sensibili	s		5	N	FACW	Morphological Adaptations*
3. <u>F</u>	Parthenocissus o	uinquefc	olia	5	N	FACU	Problematic Hydrophytic Vegetation*
4. <u>V</u> 5.	/erbena hastata			2	N	FACW	* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6.							Definitions of Vegetation Strata:
7.					·		Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.							height (DBH), regardless of height
9.							Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.							than or equal to 3.28 ft (1M) tall.
11.							Herb - All herbaceous (non-woody) plants, regardless of size,
12.					<u> </u>		and woody plants less than 3.28 ft tall.
50%=	51.0%	20%=	20.4%	102	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
Woody V	ine Stratum Plo	t size:	30'				Thought The Transcription of t
1						<u> </u>	
2							-
3							Hydrophytic Vegetaion Present?
4							-
50%=	0.0%	20%=	0.0%	0	Total Cover		Yes <u>X</u> No
Remarks	: (Include photo	numbers	s here or	r on a separat	e sheet.)		
	rion for hydrophy						

SOIL	SOIL												
									Sampling Pol	nt: DP16			
Profile	Description:	(Describe to	depth	needed to d	ocume	ent the in	dicator	or confirm abse	ence of indicators.)				
	Depth	Matri	X	Redox Fea	atures								
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks				
	0-4	10YR 2/2	100					Silt Loam					
	4-8	10YR 4/6	98	2.5YR 5/8	3 2 C		М	Loamy Sand	Prominent redox concentratio	ns.			
	8-14	10YR 2/1	96	10YR 4/6	3 2 C		М	Sandy Loam	Prominent redox concentratio	ns.			
				10YR 4/2	2	D	М						
	14-20	10YR 5/2	90	10YR 4/6	10	С	М	Loamy Sand	Prominent redox concentratio	ns.			
* Type	: C=Concentra	ation, D=Depl	etion, RI	M=Reduced	Matrix,	CS=Coat	ted Sand	grains **Locati	on: PL=Pore Lining, M=Matrix				
Hydric	Soil Indicato	rs:							Indicators for Prol	olematic Soils			
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR	K, L, MLRA 149B)			
	Histic Epiped	lon (A2)			Dark S	Surface (S	87)(LRR	R,MLRA 149B)	Coast Prairie Redox (A	16)			
	,							e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR K, L, R)				
	Hydrogen Sulfide (A4) MLRA 149B)								Dark Surface (S7) (LRR	K, L, M)			
	Stratified Lay	rers (A5)			Thin D	ark Surfa	ice (S9)		Polyvalve Below Surfac	e (S8) (LRR K, L)			
	Depleted Bel	ow Dark Surfa	ace (A11)	Loamy	Mucky N	/lineral (F	- 1)	Thin Dark Surface (S9)	(LRR K, L)			
	Thick Dark S	urface (A12)			Loamy	Gleyed I	Matrix (F	2)	Iron-Manganese Masse	s (F12) (LRR K, L, R)			
	Sandy Mucky	/ Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
	Sandy Gleye	d Matrix (S4)		Х	Redox	Dark Su	rface (F6	6)	Red Parent Material (F21)				
	Sandy Redox	(S5)			Deplet	ed Dark S	Surface ((F7)	Very Shallow Dark Surface (TF12)				
					Redox	Depress	ions (F8)	Other (Explain in Rema	rks)			
Restric	ctive Layer (if	observed)											
	Type:			None		,							
Dep	th (inches):					,	Hydri	ic Soil Present?	Yes X No				
Remar	ks: terion for hydr	io osilio most											
THE CH	teriori ioi riyar	ic soil is friet.											

Site:	Water Distribution System Extension to the Town of	of Peshtigo City/County:	Marinette Count	у	Sampling Date: 9/10/20)19
	ant/Owner: Tyco Fire Products L.			State: WI		
	igator(s): Ryan Bombeck, Mich		ection, Township	, Range: Section 24, Towns		
Landfo	orm (hillslope,terrace,etc.): Back Slo			·	Slope (%):	2%
Subre	gion(LRR or MLRA): LRR K - Northo			Long. 87.646502° W		
	ap Unit Name: Wainola loamy fine sa					
	matic/hydrologic conditions on the sit					
Are		or Hydrology	· · · · · · · · · · · · · · · · · · ·	<u> </u>	,	
Are	Vegetation Soil		·			
	ormal Circumstances Present?				3)	
				•	,	
SUMN	MARY OF FINDINGS					
	Hydrophytic Vegetation Present?	Yes No X	Is the S	Sampled Area within a Wet	land?	
	Hydric Soil Present?			No X		
	Wetland Hydrology Present?			ptional Wetland Site ID:		
	, 0,		-	· -		
Rema	rks:					
	17 in Appendix B. Upland data point	recorded at the boundary of	W03. Based on	the absence of all three par	ameters, this area is an upland	i. All
data p	oints were recorded along existing ro	adsides.				
HYD	ROLOGY					
	nd Hydrology Indicators:					
Wetia	Primary Indicators (minimum of o	ne is required: check all th	nat anniv)	Secondary Indicate	ors (minimum of two required	d)
	Surface Water (A1)	Water Stained Leaves		Surface Soil Crack		<u>~,</u>
	High Water Table (A2)	Aquatic Fauna (B13)	(20)	Drainage Patterns	\	
	Saturation (A3)	Marl Deposits (B15)		Moss Tim Lines (E	,	
	Water Marks (B1)	Hydrogen Sulfide Odo	r (C.1)	Dry-Season Wate	,	
	Sediment Deposits (B2)	Oxidized Rhizospheres		Crayfish Burrows	,	
	Drift Deposits (B3)	Roots (C3)	S OII LIVING	İ	on Aerial Imagery (C9)	
	Algal Mat or Crust (B4)	Presence of Reduced	Iron (C4)	Stunted or Stresse	<u> </u>	
	Iron Deposits (B5)	Recent Iron Reduction		Geomorphic Posit	,	
	Inundation Visible on Aerial	(C6)	I III Tilleu Soli	i '	,	
	Imagery (B7)	. ,		Shallow Aquitard (•	
		Thin Muck Surface (C)	,	Microtopographic	,	
	Sparsely Vegetated Concave Surface (B8)	Other (Explain in Rem	arks)	FAC-Neutral Test	(D5)	
	,					
	Observations:					
		No X Depth	· · ·	Wetland Hydrology Prese		
		No X Depth		Yes	NoX	
Satura	ation Present? Yes_	No X Depth	(inches)			
Descr	ibe Recorded Data (stream guage, m	onitoring well, aerial photos,	, previous inspect	tions), if available:		
Topog	graphic maps, aerial imagery, WWI da	ata, WDNR Wetland Indicato	ors data.			
Rema						
The cr	riterion for wetland hydrology is not m	et. Based on WETS analysis	s, antecedent hyd	drologic conditions are withi	n a normal range.	

VEGE	TATION			Al colore 0/	D: minant		Sampling Point: DP17
Tree Str	ratum_	Plot size:	30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet
1.			,		·	<u>.</u>	Number of dominant species that are OBL,
2.							FACW, or FAC:1(A)
3.					. <u> </u>	<u> </u>	Total number of dominant species across
4.							all strata: 2(B)
5.						<u>-</u> ———	Percent of dominant species that are OBL,
6.							FACW, or FAC:
7.						<u> </u>	Prevalence Index Worksheet:
50%=	0.0%		= 0.0%	0	Total Cover	ļ	Total % cover of:
Shrub S			15'				OBL species 0 x 1 0
·-	Acer neguno	lo		15	Y		FACW species <u>20</u> x 2 <u>40</u>
2.						-	FAC species <u>15</u> x 3 <u>45</u>
3.				-		-	FACU species <u>27</u> x 4 <u>108</u>
4.						<u> </u>	UPL species <u>55</u> x 5 <u>275</u>
5.							Column Totals: 117 (A) 468 (B)
6.							Prevalence Index: 4.0 (B/A)
7.	7 50/	20%-	2.00/	15	Total Cover		Hydrophytic Vegetation Indicators:
50%= Herb St	7.5%		= 3.0% 5'	15	Total Cover	ļ	Rapid Test for Hydrophytic Vegetation Dominance Test is >50%
	<u>ratum</u> Bromus iner	Plot size:	5'	55	Y	UPL	Prevalence Index is <3.0*
-	Phalaris arui			20	N	FACW	Morphological Adaptations*
-	Solidago car			20	<u>N</u>	FACU	Problematic Hydrophytic Vegetation*
-	Achillea mille			5	N N	FACU	* Indicators of hydric soil and wetland hydrology must be present,
-		sus quinquefo		2		-	unless disturbed or problematic
6.		suo quiriquore					Definitions of Vegetation Strata:
7.					-		Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.							height (DBH), regardless of height
9.							Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.							than or equal to 3.28 ft (1M) tall.
11.							Herb - All herbaceous (non-woody) plants, regardless of size,
12.							and woody plants less than 3.28 ft tall.
50%=	51.0%	20%=	= 20.4%	102	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
Woody	Vine Stratum	Plot size:	30'			ļ	Woody Villes - All woody Villes greater than 3.20 it in hoight.
1.							
2.							
3.							Hydrophytic Vegetaion Present?
4.							
50%=	0.0%	20%=	= 0.0%	0	Total Cover	1	YesNoX
	s: (Include p erion for hyd			r on a separat	e sheet.)		

SOIL											
									Sampling Point:	DP17	
Profile	Description:	(Describe to	o depth	needed to d	locume	ent the in	ndicator	or confirm abse	ence of indicators.)		
	Depth	Matri	Х	Redox Fea	atures						
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks		
	0-6	10YR 2/1	100			Silt Loan		Silt Loam			
	6-12	10YR 2/2	98	10YR 4/6	2	С	C M Loam		Prominent redox concentrations.		
	12-20	10YR 2/2	80	10YR 4/6	10	С	М	Sandy Loam	Prominent redox concentrations.		
				10YR 5/2	10	D	М				
* Type	: C=Concentra	ation, D=Depl	etion, RI	M=Reduced I	Matrix,	CS=Coat	ted Sand	grains **Locati	on: PL=Pore Lining, M=Matrix		
Hydric	Soil Indicato	rs:							Indicators for Problem	natic Soils	
	Histosol (A1) Stripped Mat								2 cm Muck (A10) (LRR K, L,	, MLRA 149B)	
	Histic Epiped	lon (A2)			Dark S	Surface (S	S7)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)		
	Black Histic ((A3)					w Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR K, L, R)		
	Hydrogen Su	Ifide (A4)			MLRA	149B)			Dark Surface (S7) (LRR K, I	_, M)	
	Stratified Lay	ers (A5)			Thin D	ark Surfa	ace (S9)		Polyvalve Below Surface (Sa	8) (LRR K, L)	
	Depleted Bel	ow Dark Surfa	ace (A11)	Loamy	Mucky N	/lineral (F	-1)	Thin Dark Surface (S9) (LRF	R K, L)	
	Thick Dark S	urface (A12)			Loamy	Gleyed I	Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)	
	Sandy Mucky	/ Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)	
	Sandy Gleye	d Matrix (S4)			Redox	Dark Su	rface (F6	5)	Red Parent Material (F21)		
	Sandy Redox	(S5)			•	ed Dark		,	Very Shallow Dark Surface (TF12)		
					Redox	Depress	ions (F8)	Other (Explain in Remarks)		
Doctrie	ctive Layer (if	obcomrod)									
Nesuit	Type:	observeu)		None							
Den	th (inches):			INOTIC			Hvdri	c Soil Present?	Yes No X		
Вор	ur (mones).						. i yui i	o com i resem.	νον		
Remar	ks [.]										
	terion for hydr	ic soil is not n	net.								

Site: Water Distribution System Extension to the Town of	Peshtigo City/County: Marinette Coun	sty Sampling Date: 9/10/2019
Applicant/Owner: Tyco Fire Products L.P	·.	State: WI Sampling Point: DP18
Investigator(s): Ryan Bombeck, Michae	el Meisenger Section, Township	p, Range: Section 19, Township 30N, Range 24E
Landform (hillslope,terrace,etc.): Shoulder	Slope Local relief (concave,	convex, none): Convex Slope (%): 2%
Subregion(LRR or MLRA): LRR K - Northce	entral Forests Lat. 45.061261° N	Long. 87.639725° W Datum: WGS 84
Soil Map Unit Name: Deford and Cormant so	oils, 0 to 2 percent slopes	WWI Classification: None
Are climatic/hydrologic conditions on the site	typical for time of year? Yes X	No (If no, explain in the Remarks)
Are Vegetation Soil_	or Hydrologysignific	antly disturbed?
	or Hydrologynatural	
Are Normal Circumstances Present?	Yes X No (If needed, exp	lain any answers in Remarks)
SUMMARY OF FINDINGS		
Hydrophytic Vegetation Present?		Sampled Area within a Wetland?
		s No <u>X</u>
Wetland Hydrology Present?	Yes NoX If yes,	optional Wetland Site ID:
Remarks:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	The state of the s
Photo 18 in Appendix B. Upland data point re All data points were recorded along existing		the absence of two out of three parameters, this area is an upland.
, dens. p. a.		
HYDROLOGY		
Wetland Hydrology Indicators:		1
Primary Indicators (minimum of on		Secondary Indicators (minimum of two required)
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 Tim Lines (B6)
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)	, ,	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soil	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	(C6)	Shallow Aquitard (D3)
	Thin Muck Surface (C7)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)	FAC-Neutral Test (D5)
` ′		<u> </u>
Field Observations:		
	No X Depth (inches)	Wetland Hydrology Present?
	No X Depth (inches)	Yes NoX
Saturation Present? Yes	No X Depth (inches)	4
Describe Recorded Data (stream guage, mo		ctions), if available:
Topographic maps, aerial imagery, WWI data	a, WDNR Wetland Indicators data.	
Remarks:	+ Based on METS analysis antocodent by	declaric conditions are within a parmal range
The criterion for wettand hydrology is not me	I. Baseu on we is analysis, amededening	drologic conditions are within a normal range.

VEGETATION	Absolute %	Dominant		Sampling Point: DP18
<u>Tree Stratum</u> Plot size: <u>30'</u>	Cover	Species	Indicator Status	Dominance Test Worksheet
1				Number of dominant species that are OBL, FACW, or FAC: 0 (A)
3. 4.		• •		Total number of dominant species across all strata:1(B)
5. 6.				Percent of dominant species that are OBL, FACW, or FAC: (A/B)
7		. <u></u>		Prevalence Index Worksheet:
50%= 0.0% 20%= 0.0%	0	Total Cover		Total % cover of:
Shrub Stratum Plot size: 15'				OBL species0 x10
1			· - <u></u> -	FACW species <u>0</u> x 2 <u>0</u>
2.				FAC species0 x30
3.				FACU species <u>6</u> x 4 <u>24</u>
4.				UPL species 95 x 5 475
5.				Column Totals: 101 (A) 499 (B)
6.				Prevalence Index: 4.9 (B/A)
7.				Hydrophytic Vegetation Indicators:
50%= 0.0% 20%= 0.0%	0	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb Stratum Plot size: 5'				Dominance Test is >50%
1. Bromus inermis	90	Υ	UPL	Prevalence Index is ≤3.0*
2. Daucus carota	5	N	UPL	Morphological Adaptations*
3. Solidago canadensis	5	N	FACU	Problematic Hydrophytic Vegetation*
4. Achillea millefolium 5.	1	N	FACU	* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6			-	Definitions of Vegetation Strata:
7				Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
				height (DBH), regardless of height
0				Sapling/shrub - Woody plants less than 3 in. DBH and greater
10				than or equal to 3.28 ft (1M) tall.
				 Herb - All herbaceous (non-woody) plants, regardless of size,
12.				and woody plants less than 3.28 ft tall.
50%= 50.5% 20%= 20.2%	101	Total Cover		
Woody Vine Stratum Plot size: 30'	101	10141 00101		Woody Vines - All woody vines greater than 3.28 ft in height.
2.				
3.			-	Hydrophytic Vegetaion Present?
4.			-	nyurophytic vegetalon Fresent:
	0	Total Cover	-	. Voc. No. Y
50%= 0.0% 20%= 0.0%		TOtal Cove		YesNoX
		e sheet.)		

SOIL	SOIL												
									Sampling Point:	DP18			
Profile	Description:	(Describe to	depth	needed to d	locume	ent the ir	ndicator	or confirm abse	ence of indicators.)				
	Depth	Matri	X	Redox Fea	atures								
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks				
	0-6	10YR 2/2	98	10YR 4/6	2	С	М	Silt Loam	Prominent redox concentrations.				
	6-18	10YR 5/2	85	10YR 4/6	15	С	М	Loamy Sand	Prominent redox concentrations.				
* Type	· C=Concentra	ation. D=Depl	etion. RN	/l=Reduced	Matrix	CS=Coa	ted Sand	grains **Locati	on: PL=Pore Lining, M=Matrix				
	Soil Indicato		o,			00 000		9.4 2004	Indicators for Problem	atic Soils			
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L,	MLRA 149B)			
								R,MLRA 149B)	Coast Prairie Redox (A16)	·			
	Black Histic (A3) Polyvalve Be							e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)			
	Hydrogen Sulfide (A4) MLRA 149B)								Dark Surface (S7) (LRR K, I	_, M)			
	Stratified Layers (A5) Thin Dark St								Polyvalve Below Surface (S8) (LRR K, L)				
Χ	X Depleted Below Dark Surface (A11) Loamy M						/lineral (F	⁻ 1)	Thin Dark Surface (S9) (LRF	R K, L)			
	Thick Dark Surface (A12) Loamy						Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)			
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)			
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	rface (F6	5)	Red Parent Material (F21)				
Χ	Sandy Redox	(S5)			Deplet	ed Dark	Surface (F7)	Very Shallow Dark Surface ((TF12)			
					Redox	Depress	ions (F8)	Other (Explain in Remarks)				
Restric	tive Layer (if	observed)											
	Type:		1	None									
Dept	th (inches):						Hydri	c Soil Present?	YesXNo				
Remarks: The criterion for hydric soil is met.													

Site:	Water Distribution System Extension to the Town	of Peshtigo City/C	County: Marinette Count	.y		Sampling Date:	9/10/2019
	ant/Owner: Tyco Fire Products I		·	,	State: WI	Sampling Point:	
Invest		hael Meisenger	Section, Township	, Range	e: Section 19, Towns		
Landfo	orm (hillslope,terrace,etc.): Toe Slo				•		
	gion(LRR or MLRA): LRR K - North		Lat. 45.061229° N				
	ap Unit Name: Deford and Corman						
	imatic/hydrologic conditions on the s						
Are			ologysignifica		· ·	,	
Are	Vegetation Soi						
	ormal Circumstances Present?					:)	
						,	
SUMN	MARY OF FINDINGS						
	Hydrophytic Vegetation Present?	Yes X No	Is the S	Sample	d Area within a Wet	land?	
	Hydric Soil Present?			Х	No		
	Wetland Hydrology Present?	<u> </u>			Wetland Site ID:	W03	
					_		
Rema	rks:						
	19 in Appendix B. PEM data point r		ry of W03. Based on the	e presei	nce of all three parar	neters, this area is a	wetland. All data
points	were recorded along existing roads	ides.					
HYD	ROLOGY						
Wetla	nd Hydrology Indicators:						
	Primary Indicators (minimum of	one is required; chec	k all that apply)		Secondary Indicate	ors (minimum of tw	o required)
	Surface Water (A1)	Water Stained	_eaves (B9)		Surface Soil Crack	(s (B6)	
Χ	High Water Table (A2)	Aquatic Fauna	(B13)		Drainage Patterns	(B10)	
Х	Saturation (A3)	Marl Deposits (B15)		Moss Tim Lines (E	36)	
	Water Marks (B1)	Hydrogen Sulfic	le Odor (C1)		Dry-Season Water	Table (C2)	
	Sediment Deposits (B2)	Oxidized Rhizo	spheres on Living		Crayfish Burrows ((C8)	
	Drift Deposits (B3)	Roots (C3)			Saturation Visible	on Aerial Imagery (C	9)
	Algal Mat or Crust (B4)	Presence of Re	duced Iron (C4)		Stunted or Stresse	ed Plants (D1)	
	Iron Deposits (B5)	Recent Iron Re	duction in Tilled Soil	Х	Geomorphic Positi	ion (D2)	
	Inundation Visible on Aerial	(C6)			Shallow Aquitard (D3)	
	Imagery (B7)	Thin Muck Surf	ace (C7)		Microtopographic	Relief (D4)	
	Sparsely Vegetated Concave	Other (Explain	n Remarks)	Х	FAC-Neutral Test	(D5)	
	Surface (B8)	•			•		
Field	Observations:						
Surfac	ce Water Present? Yes	NoX	Depth (inches)	Wetlar	nd Hydrology Prese	ent?	
Water		X No			Yes	X No	
Satura		X No			-		
			. , , ,				
Descr	ibe Recorded Data (stream guage, i	monitoring well, aerial	photos, previous inspec	tions), i	f available:		
Topog	raphic maps, aerial imagery, WWI	data, WDNR Wetland I	ndicators data.	·			
Rema		-					
The cr	riterion for wetland hydrology is met.	Based on WETS anal	ysis, antecedent hydrolo	ogic cor	nditions are within a i	normal range.	

VEGE	TATION	Absolute %	Dominant		Sampling Point: DP19
Tree St	ratum Plot size: 30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1.					Number of dominant species that are OBL,
2.			-		FACW, or FAC:(A)
3. 4.					Total number of dominant species across all strata:(B)
5. 6.					Percent of dominant species that are OBL, FACW, or FAC: 100% (A/B)
7.					Prevalence Index Worksheet:
50%=	0.0% 20%= 0.0%	0	Total Cover		Total % cover of:
Shrub S	Stratum Plot size: 15'				OBL species <u>20</u> x 1 <u>20</u>
1.	Alnus incana	20	Y	FACW	FACW species <u>106</u> x 2 <u>212</u>
2.				· .	FAC species0 x30
3.					FACU species <u>2</u> x 4 <u>8</u>
4.				· .	UPL species0 x50
5.					Column Totals: 128 (A) 240 (B)
6.					Prevalence Index: 1.9 (B/A)
7.					Hydrophytic Vegetation Indicators:
50%=	10.0% 20%= 4.0%	20	Total Cover		x Rapid Test for Hydrophytic Vegetation
Herb St	ratum Plot size: 5'				x Dominance Test is >50%
1.	Phalaris arundinacea	80	Y	FACW	x Prevalence Index is ≤3.0*
2.	Typha latifolia	10	N	OBL	Morphological Adaptations*
3.	Eutrochium maculatum	10	N	OBL	Problematic Hydrophytic Vegetation*
4.	Impatiens capensis	2	N	FACW	* Indicators of hydric soil and wetland hydrology must be present,
5.	Solidago gigantea	2	N	FACW	unless disturbed or problematic
6.	Solidago canadensis	2	N	FACU	Definitions of Vegetation Strata:
7.	Onoclea sensibilis	2	N	FACW	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.				· ·	height (DBH), regardless of height
9.					Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.					than or equal to 3.28 ft (1M) tall.
11.					Herb - All herbaceous (non-woody) plants, regardless of size,
12.					and woody plants less than 3.28 ft tall.
50%=	54.0% 20%= 21.6%	108	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
Woody	Vine Stratum Plot size: 30'				The ay Third This woody Third ground than 6.26 Kill Holgin.
1.				· · ·	
2.				· ·	
3.				· -	Hydrophytic Vegetaion Present?
4.					
50%=	0.0% 20%= 0.0%	0	Total Cover		YesXNo
	ss: (Include photo numbers here or erion for hydrophytic vegetation is		e sheet.)		1

SOIL										ī	
										Sampling Point:	DP19
Profile	Description:	(Describe to	o depth	needed to d	locume	ent the in	ndicator	or confirm abse	ence of	indicators.)	
	Depth	Matri	x	Redox Fea	atures		ı		1		
	(inches)	Color	%	Color	%	Type*	Loc**	Texture		Remarks	
	0-3	10YR 2/1	100					Silt Loam		Mucky.	
	3-6	10YR 2/1	100					Silt Loam			
	6-20	10YR 2/1	90	10YR 4/6	5	С	М	Silt Loam	Prom	inent redox concentrations.	
				10YR 4/2	5	D	М				
	20-26	10YR 4/2	95	10YR 4/6	5	С	М	Loamy Sand	Prom	inent redox concentrations.	
* Tvpo	· C-Concontr	ation D-Donl	otion PM	/_Poducod	Matrix	CS_Coo	tod Sand	Laroine **Locati	on: DI -	Pore Lining, M=Matrix	
	Soil Indicato	•	Guon, ixi	vi=i\euuceu	iviati ix,	CO-COA	ieu Sano	rgrains Locati	011. 1 L-	Indicators for Problem	atic Soils
,	Histosol (A1)				Strippe	ed Matrix	(S6)			2 cm Muck (A10) (LRR K, L,	
	Histic Epiped						` '	R,MLRA 149B)		Coast Prairie Redox (A16)	- /
								e (S8) (LRR R,		5 cm Mucky Peat (S3) (LRR K, L, R)	
	Hydrogen Sulfide (A4) MLRA 149B)									Dark Surface (S7) (LRR K, L	·
	Stratified Lay	rers (A5)			Thin D	ark Surfa	ace (S9)			Polyvalve Below Surface (S8	B) (LRR K, L)
	Depleted Bel	ow Dark Surfa	ace (A11)	Loamy	Mucky N	/lineral (F	-1)		Thin Dark Surface (S9) (LRF	R K, L)
Х	Thick Dark S	urface (A12)			Loamy	Gleyed I	Matrix (F	2)		Iron-Manganese Masses (F	12) (LRR K, L, R)
	Sandy Mucky	/ Mineral (S1)			Deplet	ed Matrix	Matrix (F3)			Mesic Spodic (TA6) (MLRA	144A, 145, 149B)
	Sandy Gleye	d Matrix (S4)		Х	Redox	Dark Su	Surface (F6)			Red Parent Material (F21)	
	Sandy Redox	(S5)			Deplet	ed Dark S	Surface ((F7)	Very Shallow Dark Surface (TF12)		TF12)
					Redox	Depress	ions (F8)	Other (Explain in Remarks)		
Restric	ctive Layer (if	observed)									
	Type:		l	None							
Dep	th (inches):						Hydri	c Soil Present?	Yes	XNo	
Remarl	ko:										
	ks. terion for hydr	ic soil is met.									

Site: Water Distribution System Extension t	o the Town of Peshtigo	City/County: Marinette Cour	ity S	ampling Date: 9/10/2019
Applicant/Owner: Tyco Fire Pro	oducts L.P.		State: WI Sa	ampling Point: DP20
Investigator(s): Ryan Bombe	eck, Michael Meisenger	Section, Townshi	o, Range: Section 19, Township	30N, Range 24E
Landform (hillslope,terrace,etc.):	Toe Slope	Local relief (concave,	convex, none): Concave	Slope (%): 0%
Subregion(LRR or MLRA): LRR k			Long. 87.642521° W	
Soil Map Unit Name: Wainola loan				
Are climatic/hydrologic conditions				
		or Hydrologysignific		
Are Vegetation		or Hydrologynatura		
Are Normal Circumstances Preser				
SUMMARY OF FINDINGS				
Hydrophytic Vegetation F	Present? Yes X	No Is the	Sampled Area within a Wetlar	nd?
	Present? Yes X		sX No	
Wetland Hydrology F	Present? Yes X		optional Wetland Site ID: W0	03
Remarks:				
Photo 20 in Appendix B. This data	point was recorded to	document representative PSS	vegetative conditions within W	03. Based on the presence of all
three parameters, this area is a we	etland. All data points w	ere recorded along existing re	padsides.	
HYDROLOGY				
Wetland Hydrology Indicators:				
	um of one is required	li aback all that apply)	Secondary Indicators	(minimum of two required)
Primary Indicators (minim		ained Leaves (B9)		(minimum of two required)
Surface Water (A1)			Surface Soil Cracks (
High Water Table (A2) Saturation (A3)		-auna (B13) posits (B15)	Drainage Patterns (B Moss Tim Lines (B6)	10)
Water Marks (B1)	<u> </u>	n Sulfide Odor (C1)	Dry-Season Water Ta	able (C2)
Sediment Deposits (B2)		Rhizospheres on Living	Crayfish Burrows (C8	,
Drift Deposits (B3)	Roots (C		Saturation Visible on	,
Algal Mat or Crust (B4)	Presence	e of Reduced Iron (C4)	Stunted or Stressed I	• • • • • • • • • • • • • • • • • • • •
Iron Deposits (B5)		ron Reduction in Tilled Soil	X Geomorphic Position	
Inundation Visible on Aeria	(C6)	TOTT REduction in Tilled 30ii	Shallow Aquitard (D3	,
Imagery (B7)		ck Surface (C7)	Microtopographic Rel	
Sparsely Vegetated Conca		xplain in Remarks)	X FAC-Neutral Test (D	
Surface (B8)	other (E	xpiaiii iii Neiliaiks)	/ PAC-Neutral Test (Di	3)
Field Observations:	L			
Surface Water Present?	Voc. No.	V Donth (inches)	Wetland Hydrology Present	2
		X Depth (inches)	7	
Water Table Present?		X Depth (inches)	res	X No
Saturation Present?	res No	X Depth (inches)	_	
December 19 Decemb				
Describe Recorded Data (stream of			ctions), if available:	
Topographic maps, aerial imagery	, WWW data, WDNR WE	etiand indicators data.		
Remarks: The criterion for wetland hydrology	is met Based on WFT	S analysis, antecedent hydro	logic conditions are within a nor	mal range
The emericine wetter anytheretegy	io mon bacca on WE	o analysis, amossasin nyare	logio conditiono are within a nor	marrange.

VEGET	1			Absolute %	Dominant		Sampling Point: DP20
Tree Stra	<u>itum</u> Plot	size:	30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1 2							Number of dominant species that are OBL, FACW, or FAC:3(A)
3. <u> </u>					-	-	Total number of dominant species across all strata: 3 (B)
5. <u> </u>							Percent of dominant species that are OBL, FACW, or FAC: 100% (A/B)
7.							Prevalence Index Worksheet:
50%=	0.0%	20%=	0.0%	0	Total Cover		Total % cover of:
Shrub Str	ratum Plot	size:	15'				OBL species 0 x 1 0
	rangula alnus			95	Υ	FAC	FACW species 20 x 2 40
2.						•	FAC species 120 x 3 360
3.						-	FACU species 0 x 4 0
4.						-	UPL species 0 x 5 0
5.					-	-	Column Totals: 140 (A) 400 (B)
6.							Prevalence Index: 2.9 (B/A)
7.					-	-	Hydrophytic Vegetation Indicators:
50%=	47.5%	20%=	: 19.0%	95	Total Cover	-	Rapid Test for Hydrophytic Vegetation
Herb Stra		size:	5'				x Dominance Test is >50%
	noclea sensibili		<u> </u>	20	Υ	FACW	x Prevalence Index is ≤3.0*
_	rangula alnus	<u> </u>		20	Y	FAC	Morphological Adaptations*
	quisetum arven	se.		5	N	FAC	Problematic Hydrophytic Vegetation*
4. <u>-</u> 5.							* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6.					-		Definitions of Vegetation Strata:
7.							Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7. <u> </u>					-		height (DBH), regardless of height
o. <u> </u>							Sapling/shrub - Woody plants less than 3 in. DBH and greater
9. <u> </u>							than or equal to 3.28 ft (1M) tall.
11.							Herb - All herbaceous (non-woody) plants, regardless of size,
12.							and woody plants less than 3.28 ft tall.
50%=	22.5%	20%_	9.0%	45	Total Cover		
	ine Stratum Plot		30'		Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
1.							
						-	
2							Hydranhytia Vagataian Brasant?
3						-	Hydrophytic Vegetaion Present?
4	0.00/	200/	0.00/		Total Cayor		. Van V Na
50%=	0.0%	20%=	: 0.0%	0	Total Cover		Yes <u>X</u> No
Remarks	: (Include photo	numbers	s here or	on a separat	e sheet.)		1
	rion for hydrophy				,		

SOIL													
									Sampling Point	DP20			
Profile	Description:	(Describe to	depth	needed to d	locume	ent the ir	ndicator	or confirm abse	ence of indicators.)	_			
	Depth	Matri	X	Redox Fea	atures				.				
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks				
	0-6	10YR 2/1	98	10YR 4/6	2	С	М	Silt Loam	Prominent redox concentrations				
	6-18	10YR 4/6	95	2.5YR 5/8	5	С	М	Loamy Sand	Prominent redox concentrations				
* Type	: C=Concentra	ation, D=Depl	etion, RI	∕/⊫Reduced	Matrix,	CS=Coa	ted Sanc	l grains **Locati	ion: PL=Pore Lining, M=Matrix				
Hydric	Soil Indicato	rs:							Indicators for Proble	matic Soils			
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K,	L, MLRA 149B)			
	Histic Epiped	on (A2)			Dark S	Surface (S	S7)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)	l			
	Black Histic (A3)			_		v Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LF	(R K, L, R)			
	Hydrogen Sul	fide (A4)			MLRA	149B)			Dark Surface (S7) (LRR K	, L, M)			
	Stratified Laye	ers (A5)			Thin D	ark Surfa	ce (S9)		Polyvalve Below Surface (S8) (LRR K, L)				
	Depleted Below Dark Surface (A11) Loamy Muc							- 1)	Thin Dark Surface (S9) (L	RR K, L)			
	Thick Dark St	urface (A12)			Loamy	Gleyed	Matrix (F	2)	Iron-Manganese Masses (F12) (LRR K, L, R)			
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLR	A 144A, 145, 149B)			
	Sandy Gleyed	d Matrix (S4)		X	Redox	Dark Su	rface (F6	6)	Red Parent Material (F21)				
	Sandy Redox	(S5)			Deplet	ed Dark	Surface	(F7)	Very Shallow Dark Surface	e (TF12)			
					Redox	Depress	ions (F8)	Other (Explain in Remarks	;)			
Restric	ctive Layer (if	observed)											
	Type:			None									
Dep	th (inches):						Hydri	ic Soil Present?	Yes X No	<u> </u>			
Remar													
The cri	terion for hydri	c soil is met.											

Site:	Water Distribution System Extension to the Town	of Peshtigo City/County	: Marinette Count	у	Sampling Date:	9/10/2019
	ant/Owner: Tyco Fire Products L	<u></u>		State: WI		
	igator(s): Ryan Bombeck, Mich		Section, Township	, Range: Section 24, Towns		
Landfo	orm (hillslope,terrace,etc.): Back Sk			onvex, none): Concave		e (%): 2%
Subre	gion(LRR or MLRA): LRR K - North			Long. 87.646031° W		
Soil M	ap Unit Name: Wainola loamy fine s					
	matic/hydrologic conditions on the si					
Are	Vegetation Soil	or Hydrology	significa	intly disturbed?		
Are	Vegetation Soil	or Hydrology	naturally	y problematic?		
Are No	ormal Circumstances Present?	Yes X No	_(If needed, expla	ain any answers in Remarks	s)	
SUMM	MARY OF FINDINGS					
	Hydrophytic Vegetation Present?	Yes No X	_ Is the S	ampled Area within a Wet	tland?	
	Hydric Soil Present?	Yes No X	Yes	NoX		
	Wetland Hydrology Present?	Yes NoX_	If yes, o	ptional Wetland Site ID:		
Rema						
	21 in Appendix B. Upland data point a points were recorded along existing		of W03. Based on t	the absence of two out of th	ree parameters, this a	rea is an upland.
All uat	a points were recorded along existing	y roadsides.				
HYDI	ROLOGY					
Wetla	nd Hydrology Indicators:					
	Primary Indicators (minimum of c	ne is required; check all t	that apply)	Secondary Indicate	ors (minimum of two	required)
	Surface Water (A1)	Water Stained Leave	s (B9)	Surface Soil Crack	ks (B6)	
	High Water Table (A2)	Aquatic Fauna (B13)		Drainage Patterns	s (B10)	
	Saturation (A3)	Marl Deposits (B15)		Moss Tim Lines (E	36)	
	Water Marks (B1)	Hydrogen Sulfide Odd	or (C1)	Dry-Season Water	r Table (C2)	
	Sediment Deposits (B2)	Oxidized Rhizosphere	es on Living	Crayfish Burrows	(C8)	
	Drift Deposits (B3)	Roots (C3)		Saturation Visible	on Aerial Imagery (C9)
	Algal Mat or Crust (B4)	Presence of Reduced	d Iron (C4)	Stunted or Stresse	ed Plants (D1)	
	Iron Deposits (B5)	Recent Iron Reductio	n in Tilled Soil	Geomorphic Posit	ion (D2)	
	Inundation Visible on Aerial	(C6)		Shallow Aquitard ((D3)	
	Imagery (B7)	Thin Muck Surface (C	27)	Microtopographic	Relief (D4)	
	Sparsely Vegetated Concave	Other (Explain in Ren	narks)	FAC-Neutral Test	(D5)	
	Surface (B8)					
Field	Observations:					
Surfac	ce Water Present? Yes_	No X Depth	n (inches)	Wetland Hydrology Prese	ent?	
Water	Table Present? Yes_	No X Depth	n (inches)	Yes_	No	X
Satura	ation Present? Yes_	No X Depth	n (inches)			
Descri	ibe Recorded Data (stream guage, m	nonitoring well, aerial photos	s, previous inspect	tions), if available:		
Topog	raphic maps, aerial imagery, WWI d	ata, WDNR Wetland Indicat	tors data.			
Rema					_	
The cr	iterion for wetland hydrology is not m	iet. Based on WETS analys	sis, antecedent hyd	drologic conditions are within	n a normal range.	

VEGE	<u>e Stratum</u> Plot size: <u>30'</u>						Sampling Point: DP21
Tree St	ratum Plo	ot size:	30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet
1.					· 		Number of dominant species that are OBL,
2.							FACW, or FAC:1(A)
3.							Total number of dominant species across
4.						·	all strata:2 (B)
5.						-	Percent of dominant species that are OBL,
6. 7.							FACW, or FAC:
50%=	0.0%	20%-	0.0%	0	Total Cover		Total % cover of:
Shrub S			15'		Total Gover		OBL species 0 x 1 0
	Rhamnus cathar		10	5	Y	FAC	FACW species 2 x 2 4
2.	Midilinao odina.	1104			<u> </u>	17.0	FAC species 9 x 3 27
3.							FACU species 7 x 4 28
4.							UPL species 92 x 5 460
5.							Column Totals: 110 (A) 519 (B)
6.							Prevalence Index: 4.7 (B/A)
7.							Hydrophytic Vegetation Indicators:
50%=	2.5%	20%=	1.0%	5	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb St	ratum Plo	ot size:	5'				Dominance Test is >50%
1.	Bromus inermis			90	Υ	UPL	Prevalence Index is ≤3.0*
2.	Solidago canade	nsis		5	N	FACU	Morphological Adaptations*
3.	Symphyotrichum	ı novae-a	ngliae	2	N	FACW	Problematic Hydrophytic Vegetation*
4.	Parthenocissus (quinquefo	lia	2	N	FACU	* Indicators of hydric soil and wetland hydrology must be present
5.	Daucus carota			2	N	UPL	unless disturbed or problematic
6.	Equisetum arver	ise		2	N	FAC	Definitions of Vegetation Strata:
7.	Equisetum hyem	ale		2	N	FAC	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.						· 	height (DBH), regardless of height
9.							Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1M) tall.
10.						· -	
11.							Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
12.	FO F0/	200/	04.00/	405	Tatal Cover		1
50%=	52.5%		21.0%	105	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
-	Vine Stratum Plo		30'				
1. 2.							
3.							Hydrophytic Vegetaion Present?
4.							Trydrophytic vegetalon i resent.
50%=	0.0%	20%=	0.0%	0	Total Cover		Yes No X
02	0.0		0.2		10.0. 22		
Remark	s: (Include photo	numbers	here or	on a separat	e sheet.)	-	
	erion for hydroph			•	,		

SOIL										
									Sampling Point:	DP21
Profile	Description:	(Describe to	depth	needed to d	locume	nt the ir	dicator	or confirm abse	ence of indicators.)	
	Depth	Matri	X	Redox Fea	atures		•			
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks	
	0-4	10YR 2/2	100					Silt Loam		
	4-18	10YR 4/6	98	2.5YR 5/8	2	С	М	Loamy Sand	Prominent redox concentrations.	
* Type	: C=Concentra	ation, D=Depl	etion, RI	∕/l=Reduced ∣	Matrix,	CS=Coa	ted Sand	grains **Locati	on: PL=Pore Lining, M=Matrix	
Hydric	Soil Indicator	rs:							Indicators for Problem	atic Soils
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L,	MLRA 149B)
	Histic Epipedo	on (A2)			Dark S	urface (S	87)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)	
	Black Histic (A	A3)			-		v Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)
	Hydrogen Sulfide (A4) MLRA 14								Dark Surface (S7) (LRR K, L	_, M)
	Stratified Layers (A5) Thin Dark								Polyvalve Below Surface (S8) (LRR K, L)	
	Depleted Below Dark Surface (A11) Loamy Muc						/lineral (F	⁻ 1)	Thin Dark Surface (S9) (LRF	R K, L)
	Thick Dark Su	urface (A12)			Loamy	Gleyed I	Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	rface (F6	6)	Red Parent Material (F21)	
	Sandy Redox	(S5)			Deplet	ed Dark S	Surface	(F7)	Very Shallow Dark Surface (TF12)	
					Redox	Depress	ions (F8)	Other (Explain in Remarks)	
Restric	tive Layer (if	observed)								
	Type:			None						
Dept	th (inches):						Hydri	c Soil Present?	YesNoX	
Remarl	ks: terion for hydri	c soil is not n	net							
THE CH	ichon for flydir	C 3011 13 110t 11	ict.							

Site:	Water Distribution System Extension to the Town of	of Peshtigo City/County: N	Marinette County		Sampling Date:	9/10/2019
	nt/Owner: Tyco Fire Products L.				Sampling Point:	
			tion, Township, R	ange: Section 24, Towns		
Landfor	rm (hillslope,terrace,etc.): Toe Slop					e (%): 0%
	ion(LRR or MLRA): LRR K - Northo			Long. 87.645943° W		
Soil Ma	p Unit Name: Wainola loamy fine sa					
	natic/hydrologic conditions on the sit					
Are	Vegetation Soil	or Hydrology	significant	ly disturbed?		
Are	Vegetation Soil	or Hydrology	naturally p	roblematic?		
Are No	rmal Circumstances Present?	Yes X No (lf needed, explain	any answers in Remarks)	
SUMM	ARY OF FINDINGS					
	Hydrophytic Vegetation Present?	Yes X No	Is the Sar	npled Area within a Wet	land?	
	Hydric Soil Present?		Yes_	X No		
	Wetland Hydrology Present?	Yes X No	If yes, opti	onal Wetland Site ID: \(\frac{1}{2}\)	N03	
Remark		and the first state of the company	. B I			otland All Late
	22 in Appendix B. PSS data point rec were recorded along existing roadsic		3. Based on the p	resence of all three param	neters, this area is a we	etland. All data
HYDR	ROLOGY					
Wetlan	d Hydrology Indicators:					
- !	Primary Indicators (minimum of o			Secondary Indicato	ors (minimum of two	required)
	Surface Water (A1)	Water Stained Leaves (I	B9)	Surface Soil Crack	ss (B6)	
	High Water Table (A2)	Aquatic Fauna (B13)		Drainage Patterns	(B10)	
	Saturation (A3)	Marl Deposits (B15)		Moss Tim Lines (B	36)	
	Water Marks (B1)	Hydrogen Sulfide Odor (Dry-Season Water	` '	
	Sediment Deposits (B2)	Oxidized Rhizospheres	on Living	Crayfish Burrows ((C8)	
	Drift Deposits (B3)	Roots (C3)		Saturation Visible	on Aerial Imagery (C9)	
	Algal Mat or Crust (B4)	Presence of Reduced In	on (C4)	Stunted or Stresse	ed Plants (D1)	
	Iron Deposits (B5)	Recent Iron Reduction in	n Tilled Soil	X Geomorphic Positi	on (D2)	
	Inundation Visible on Aerial	(C6)		Shallow Aquitard (D3)	
	Imagery (B7)	Thin Muck Surface (C7)		Microtopographic F	Relief (D4)	
	Sparsely Vegetated Concave	Other (Explain in Remar	ks)	X FAC-Neutral Test	(D5)	
	Surface (B8)					
Field O	bservations:					
Surface	e Water Present? Yes_	No X Depth (ii	nches)W	etland Hydrology Prese	ent?	
Water	Table Present? Yes_	No X Depth (ii	nches)	Yes_	X No	
Saturat	ion Present? Yes_	No X Depth (ii	nches)			
Describ	oe Recorded Data (stream guage, m	onitoring well, aerial photos, p	revious inspectio	ns), if available:		
Topogra	aphic maps, aerial imagery, WWI da	ata, WDNR Wetland Indicators	s data.			
Remark						
The crit	terion for wetland hydrology is met. I	Based on WETS analysis, anto	ecedent hydrologi	c conditions are within a r	normal range.	

VEGL	TATION	Absolute %	Dominant		Sampling Point: DP22
Tree St	ratum Plot size: 30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1. 2.					Number of dominant species that are OBL, FACW, or FAC: 3 (A)
3. 4.					Total number of dominant species across all strata:3(B)
5. 6.					Percent of dominant species that are OBL, FACW, or FAC: 100% (A/B)
7.					Prevalence Index Worksheet:
50%=	0.0% 20%= 0.0%	0	Total Cover		Total % cover of:
Shrub S	Stratum Plot size: 15'				OBL species <u>5</u> x 1 <u>5</u>
1.	Frangula alnus	50	Y	FAC	FACW species <u>30</u> x 2 <u>60</u>
2.	Alnus incana	10	N	FACW	FAC species <u>80</u> x 3 <u>240</u>
3.					FACU species0 x40
4.					UPL species0 x50
5.			<u> </u>	<u> </u>	Column Totals: 115 (A) 305 (B)
6.					Prevalence Index: 2.7 (B/A)
7.					Hydrophytic Vegetation Indicators:
50%=	30.0% 20%= 12.0%	60	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb St	tratum Plot size: 5'				x Dominance Test is >50%
1.	Frangula alnus	20	Y	FAC	x Prevalence Index is <3.0*
2.	Alnus incana	20	Y	FACW	Morphological Adaptations*
3.	Equisetum arvense	5	N	FAC	Problematic Hydrophytic Vegetation*
4.	Carex stipata	5	N	OBL	* Indicators of hydric soil and wetland hydrology must be present,
	Equisetum hyemale	5	N	FAC	unless disturbed or problematic
6.					Definitions of Vegetation Strata:
7. 8.					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height
9.					Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1M) tall.
10.					, ,
11.				-	Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
12.				-	and woody planto 1035 than 0.20 it tail.
50%= Woody	27.5% 20%= 11.0% <u>Vine Stratum</u> Plot size: 30'	55	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
1.					
2.					
3.					Hydrophytic Vegetaion Present?
4.					
50%=	0.0% 20%= 0.0%	0	Total Cover		Yes <u>X</u> No
	ks: (Include photo numbers here or erion for hydrophytic vegetation is		sheet.)		

SOIL												
										Sampling Point:	DP22	
Profile	Description:	(Describe to	o depth	needed to d	locume	ent the in	ndicator	or confirm abse	ence of	indicators.)	_	
	Depth	Matri	Х	Redox Fea	atures							
	(inches)	Color	%	Color	%	Type*	Loc**	Texture		Remarks		
	0-4	10YR 2/2	100					Silt Loam				
	4-18	10YR 3/2	98	2.5YR 5/8	2	Prominent redox concentrations.						
* Type	: C=Concentra	ation, D=Depl	etion, RI	M=Reduced	Matrix,	CS=Coa	ted Sand	grains **Locati	ion: PL:	=Pore Lining, M=Matrix		
Hydric	Soil Indicato	rs:								Indicators for Probler	natic Soils	
Histosol (A1) Stripped Matrix (S6) 2 cm Muck (A10) (LRR K, L, MLRA 149B)												
	Histic Epiped	on (A2)			Dark S	R,MLRA 149B)	Coast Prairie Redox (A16)					
	Black Histic (A3)			-	valve Below Surface (S8) (LRR R,				5 cm Mucky Peat (S3) (LRR K, L, R)		
	Hydrogen Su	lfide (A4)			MLRA	149B)				Dark Surface (S7) (LRR K,	L, M)	
	Stratified Lay	ers (A5)			Thin Dark Surface (S9)					Polyvalve Below Surface (S	88) (LRR K, L)	
	Depleted Bel	ow Dark Surfa	ace (A11)	Loamy Mucky Mineral (F1)					Thin Dark Surface (S9) (LR	R K, L)	
	Thick Dark S	urface (A12)			Loamy Gleyed Matrix (F2)					Iron-Manganese Masses (F	-12) (LRR K, L, R)	
	Sandy Mucky	Mineral (S1)			Deplet	pleted Matrix (F3)				Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
	Sandy Gleye	d Matrix (S4)			Redox	Dark Su	rface (F6	6)		Red Parent Material (F21)		
Χ	Sandy Redox	(S5)			Deplet	ed Dark	Surface ((F7)		Very Shallow Dark Surface	(TF12)	
					Redox	Depress	sions (F8)		Other (Explain in Remarks)		
Restric	ctive Layer (if	observed)										
	Type:			None								
Dep	th (inches):						Hydri	ic Soil Present?	Yes	XNo	_	
Remar	ks: terion for hydr	ic soil is mot										
THE CH	teriori ioi riyar	ic 30ii i3 iiici.										

Site:	Water Distribution System Extension to the Town	of Peshtigo City/(County: Marinette Count	ty		Sampling Date:	9/10/2019
	ant/Owner: Tyco Fire Products L		• -	,	State: WI	Sampling Point:	
Invest	igator(s): Ryan Bombeck, Mich	hael Meisenger	Section, Township	, Range	e: Section 24, Towns		
Landfo	orm (hillslope,terrace,etc.): Toe Slo						
	gion(LRR or MLRA): LRR K - North						
	lap Unit Name: Shawano loamy fine						
	imatic/hydrologic conditions on the s						
Are	Vegetation X Soi					,	
Are	Vegetation Soi						
	ormal Circumstances Present?					:)	
				•		,	
SUMN	MARY OF FINDINGS						
	Hydrophytic Vegetation Present?	Yes X No	ls the S	Sample	d Area within a Wet	land?	
		? Yes X No		X	No		
	Wetland Hydrology Present?				Wetland Site ID:	W04	
					_		
Rema	rks:						
	23 in Appendix B. PEM data point re						ent mowing.
Based	d on the presence of all three parame	eters, this area is a we	tland. All data points we	ere reco	rded along existing r	oadsides.	
HYD	ROLOGY						
Wetla	nd Hydrology Indicators:						
	Primary Indicators (minimum of	one is required; che	k all that apply)		Secondary Indicate	ors (minimum of tw	o required)
	Surface Water (A1)	Water Stained	Leaves (B9)		Surface Soil Crack	(s (B6)	
	High Water Table (A2)	Aquatic Fauna			Drainage Patterns	(B10)	
Х	Saturation (A3)	Marl Deposits (•		Moss Tim Lines (B	,	
	Water Marks (B1)	Hydrogen Sulfid	,		Dry-Season Water	r Table (C2)	
	Sediment Deposits (B2)		spheres on Living		Crayfish Burrows ((C8)	
	Drift Deposits (B3)	Roots (C3)				on Aerial Imagery (C	9)
	Algal Mat or Crust (B4)	Presence of Re	educed Iron (C4)		Stunted or Stresse		- /
	Iron Deposits (B5)		duction in Tilled Soil	Х	Geomorphic Positi	ion (D2)	
	Inundation Visible on Aerial	(C6)			Shallow Aquitard (,	
	Imagery (B7)	Thin Muck Surf	ace (C7)		Microtopographic I	•	
	Sparsely Vegetated Concave	Other (Explain	` '	Х	FAC-Neutral Test	` '	
	Surface (B8)	7			1	(50)	
Field	Observations:	<u>, </u>					
		No X	Depth (inches)	Wetla	nd Hydrology Prese	ent?	
		X No				X No	
		X No				<u> </u>	
Janus		<u></u>					
Descr	ibe Recorded Data (stream guage, r	monitoring well, aerial	photos, previous inspec	tions). i	f available:		
	graphic maps, aerial imagery, WWI c	_		,, .	. 41440101		
Rema		iata, 1121111 11011ana	a.catoro aatar				
	riterion for wetland hydrology is met.	Based on WETS ana	lysis, antecedent hydrol	ogic cor	nditions are within a r	normal range.	

VEGETATION		Absolute %	Dominant		Sampling Point: DP23
Tree Stratum	Plot size: 30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1					Number of dominant species that are OBL,
·			-	· -	FACW, or FAC:(A)
				-	Total number of dominant species across
_					all strata:2 (B)
5 6.					Percent of dominant species that are OBL, FACW, or FAC: 100% (A/B)
7.				-	Prevalence Index Worksheet:
50%= 0.0%	20%= 0.0%	0	Total Cover		Total % cover of:
Shrub Stratum	Plot size: 15'		Total Gover		OBL species 0 x 1 0
1. Frangula a	· 	10	Y	FAC	FACW species 20 x 2 40
0				• "	FAC species 10 x 3 30
2					FACU species 0 x 4 0
_					UPL species 0 x 5 0
_					Column Totals: 30 (A) 70 (B)
•					Prevalence Index: 2.3 (B/A)
7.					Hydrophytic Vegetation Indicators:
50%= 5.0%	20%= 2.0%	10	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb Stratum	Plot size: 5'				x Dominance Test is >50%
1. Onoclea se	ensibilis	20	Y	FACW	x Prevalence Index is <3.0*
2				· 	Morphological Adaptations*
3.					Problematic Hydrophytic Vegetation*
4					* Indicators of hydric soil and wetland hydrology must be present,
5					unless disturbed or problematic
6.					Definitions of Vegetation Strata:
					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height
				· 	
					Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1M) tall.
4.4					, ,
·		-	-		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
12 50%= 10.0%	20%= 4.0%	20	Total Cayor		
Woody Vine Stratu			Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
1.	III Piot Size. 30				
2.		-			
3.					Hydrophytic Vegetaion Present?
4.			_		
50%= 0.0%	20%= 0.0%	0	Total Cover		Yes X No
2070 0.070	2370- 0.070		. 3.0. 30101		

Remarks: (Include photo numbers here or on a separate sheet.)
The criterion for hydrophytic vegetation is met. Vegetation was considered significantly disturbed due to recent mowing. There was a lot of woody debris from mowing. Remaining vegetation and volunteer species were hydrophytic.

									_			
								Sampling Point:	DP23			
escription:	(Describe to	depth	needed to d	ocume	ent the in	ndicator	or confirm abse	ence of indicators.)	1			
Depth	Matrix	(Redox Fea	tures		1						
(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks				
0-12	10YR 2/2	80	10YR 4/6	10	С	М	Loamy Sand	Prominent redox concentrations.				
			10YR 4/2	10	D	М						
12-18	10YR 4/2	90	10YR 4/6	10	С	М	Loamy Sand	Prominent redox concentrations.				
18-24	10YR 4/6	90	2.5YR 5/8	10	С	М	Loamy Sand	Prominent redox concentrations.				
Hydric Soil Indicators: Indicators for Problematic Soils Stripped Matrix (S6) 2 cm Muck (A10) (LRP K. L. MLRA 140R)												
Histosol (A1) Stripped Matrix (S6) 2 cm Muck (A10) (LRR K, L, MLRA 149B)												
Black Histic (A3)			-		w Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR K, L, R)				
Hydrogen Sulfide (A4) MLRA 149								Dark Surface (S7) (LRR K, I	L, M)			
Stratified Lay	ers (A5)			Thin D	ark Surfa	ace (S9)		Polyvalve Below Surface (S	8) (LRR K, L)			
epleted Belo	ow Dark Surfa	ce (A11)	Loamy	` '			Thin Dark Surface (S9) (LRI	. ,			
hick Dark S	urface (A12)			Loamy	Gleyed	Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)			
andy Mucky	Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)			
Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	rface (F6	6)	Red Parent Material (F21)				
andy Redox	(S5)						,	Very Shallow Dark Surface	(TF12)			
				Redox	Depress	ions (F8)	Other (Explain in Remarks)				
• `	observed)											
ype:			None		-							
(inches):					-	Hydri	ic Soil Present?	Yes X No				
 :												
	c soil is met.											
	Depth (inches) 0-12 12-18 18-24 S=Concentra Dil Indicato istosol (A1) istic Epiped lack Histic (ydrogen Sultratified Lay- epleted Belchick Dark Si andy Mucky andy Gleyec andy Redox ye Layer (if //pe: (inches):	Depth Matrix (inches) Color 0-12 10YR 2/2 12-18 10YR 4/2 18-24 10YR 4/6 C=Concentration, D=Depleration of the color of	Depth Matrix (inches) Color % 0-12 10YR 2/2 80 12-18 10YR 4/2 90 18-24 10YR 4/6 90 E-Concentration, D=Depletion, RN Dil Indicators: istosol (A1) istic Epipedon (A2) lack Histic (A3) ydrogen Sulfide (A4) tratified Layers (A5) epleted Below Dark Surface (A11) hick Dark Surface (A12) andy Mucky Mineral (S1) andy Gleyed Matrix (S4) andy Redox (S5) Ve Layer (if observed) //pe: (inches):	Depth	Depth	Depth	Depth	Depth	pescription: (Describe to depth needed to document the indicator or confirm absence of indicators.) Depth Matrix Redox Features (inches) Color % Color % Type* Loc** Texture Remarks 0-12 10YR 2/2 80 10YR 4/6 10 C M Loamy Sand Prominent redox concentrations. 12-18 10YR 4/2 90 10YR 4/6 10 C M Loamy Sand Prominent redox concentrations. 18-24 10YR 4/6 90 2.5YR 5/8 10 C M Loamy Sand Prominent redox concentrations. E-Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix Dil Indicators: Indicators Indicators: Indicators Problem istosol (A1) Stripped Matrix (S6) 2 cm Muck (A10) (LRR K, L istic Epipedon (A2) Dark Surface (S7)(LRR R,MLRA 149B) Coast Prairie Redox (A16) lack Histic (A3) Polyvalve Below Surface (S8) (LRR R, S cm Mucky Peat (S3) (LRR k, L tratified Layers (A5) Thin Dark Surface (S9) Polyvalve Below Surface (S7) peleted Below Dark Surface (A11) Loamy Mucky Mineral (F1) Thin Dark Surface (S9) peleted Below Dark Surface (A12) Loamy Gleyed Matrix (F2) Iron-Manganese Masses (Fandy Mucky Mineral (S1) Redox Depleted Matrix (F3) Mesic Spodic (TA6) (MLRA Andy Gleyed Matrix (S4) Redox Dark Surface (F6) Red Parent Material (F21) and y Redox (S5) Depleted Dark Surface (F6) Red Parent Material (F21) Aprice Soil Present? Yes X No Hydric Soil Present? Yes X No			

Site:	Water Distribution System Extension to the Town of	of Peshtigo City/County	: Marinette Count	у	Sampling Date:	9/10/2019
	ant/Owner: Tyco Fire Products L.			State: WI		
			Section, Township	, Range: Section 24, Towns		
Landfo	orm (hillslope,terrace,etc.): Shoulder					e (%):2%
	gion(LRR or MLRA): LRR K - Northc			Long. 87.647009° W		'
Soil M	lap Unit Name: Shawano loamy fine s					
	imatic/hydrologic conditions on the sit					
Are		or Hydrology	· · · · · · · · · · · · · · · · · · ·	<u> </u>		
Are	Vegetation Soil					
Are No	ormal Circumstances Present?				5)	
			_			
SUMN	MARY OF FINDINGS					
	Hydrophytic Vegetation Present?	Yes NoX	_ Is the S	Sampled Area within a Wet	tland?	
	Hydric Soil Present?	Yes NoX	Yes	No X		
	Wetland Hydrology Present?	Yes NoX_	If yes, c	pptional Wetland Site ID:		
Rema						
	24 in Appendix B. Upland data point opints were recorded along existing ro		of W04. Based on	the absence of all three par	ameters, this area is ar	n upland. All
ύαια μ	offits were recorded along existing to	ausiues.				
HYDI	ROLOGY					
Wetla	nd Hydrology Indicators:	_				
	Primary Indicators (minimum of o	ne is required; check all t	hat apply)	Secondary Indicate	ors (minimum of two	required)
	Surface Water (A1)	Water Stained Leave	s (B9)	Surface Soil Crack	ks (B6)	
	High Water Table (A2)	Aquatic Fauna (B13)		Drainage Patterns	s (B10)	
	Saturation (A3)	Marl Deposits (B15)		Moss Tim Lines (E	36)	
	Water Marks (B1)	Hydrogen Sulfide Odd	or (C1)	Dry-Season Wate	r Table (C2)	
	Sediment Deposits (B2)	Oxidized Rhizosphere	es on Living	Crayfish Burrows	(C8)	
	Drift Deposits (B3)	Roots (C3)		Saturation Visible	on Aerial Imagery (C9)	1
	Algal Mat or Crust (B4)	Presence of Reduced	d Iron (C4)	Stunted or Stresse	ed Plants (D1)	
	Iron Deposits (B5)	Recent Iron Reductio	n in Tilled Soil	Geomorphic Posit	ion (D2)	
	Inundation Visible on Aerial	(C6)		Shallow Aquitard ((D3)	
	Imagery (B7)	Thin Muck Surface (C	27)	Microtopographic	Relief (D4)	
	Sparsely Vegetated Concave	Other (Explain in Ren	narks)	FAC-Neutral Test	(D5)	
	Surface (B8)					
Field	Observations:					
Surfac	ce Water Present? Yes	No X Depth	ı (inches)	Wetland Hydrology Prese	ent?	
Water		No X Depth		Yes_	No	X
Satura	ation Present? Yes	No X Depth	ı (inches)			
Descri	ibe Recorded Data (stream guage, m	onitoring well, aerial photos	s, previous inspec	tions), if available:		
Topog	graphic maps, aerial imagery, WWI da	ata, WDNR Wetland Indicat	ors data.			
Rema					_	
The cr	riterion for wetland hydrology is not m	et. Based on WETS analys	is, antecedent hyd	drologic conditions are withi	n a normal range.	

Int species that are OBL, when the companies of the companies with the companies of the com
W, or FAC: Il strata: In species that are OBL,
Il strata:3(B) unt species that are OBL,
•
Worksheet:
ver of:
0 x 10
0 x 20
<u> 5 x 3 </u>
31 x 4 124
92 x 5 460
ls: 128 (A) 599 (B)
Prevalence Index: 4.7 (B/A)
etation Indicators:
st for Hydrophytic Vegetation
te Test is >50%
e Index is ≤3.0*
gical Adaptations*
tic Hydrophytic Vegetation*
ric soil and wetland hydrology must be present,
nless disturbed or problematic
getation Strata:
ats 3 in. (7.6cm) or more in diameter at breast ardless of height
Voody plants less than 3 in. DBH and greater
28 ft (1M) tall.
ous (non-woody) plants, regardless of size,
ess than 3.28 ft tall.
woody vines greater than 3.28 ft in height.
woody vines greater than 5.20 it in height.
etaion Present?
.11

SOIL											
									Sampling Point:	DP24	
Profile	Description:	(Describe to	depth	needed to d	locume	ent the in	ndicator	or confirm abse	ence of indicators.)		
	Depth	Matri	X	Redox Fea	atures		1	T .			
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks		
	0-3	10YR 2/2	100				Silt Loam				
	3-12	10YR 4/6	100					Loamy Sand			
	12-18	10YR 3/3	90	10YR 4/6	10	С	М	Loamy Sand	Distinct redox concentrations.		
* Typo	· C-Concentra	ation D-Donl	otion DN	/_Poducod	Matrix	CS-Coo	tod Sana	laroine **Locati	on: DI _Doro Lining M_Matrix		
* Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: Indicators for Problematic Soils											
Histosol (A1) Stripped Matr						ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L,	MLRA 149B)	
	Histic Epipedon (A2)					Surface (S	57)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)	,	
	Black Histic (A3)					lve Belov	v Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)	
	Hydrogen Sulfide (A4)					149B)			Dark Surface (S7) (LRR K, L, M)		
	Stratified Laye	ers (A5)			Thin Dark Surface (S9)				Polyvalve Below Surface (S8) (LRR K, L)		
	Depleted Belo	ace (A11)	Loamy Mucky Mineral (F1)				Thin Dark Surface (S9) (LRF	R K, L)		
	Thick Dark St	urface (A12)			Loamy Gleyed Matrix (F2)				Iron-Manganese Masses (F	12) (LRR K, L, R)	
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)	
	Sandy Gleyed	d Matrix (S4)			Redox Dark Surface (F6)				Red Parent Material (F21)		
	Sandy Redox	(S5)			Depleted Dark Surface (F7)				Very Shallow Dark Surface (TF12)		
					Redox	Depress	ions (F8)	Other (Explain in Remarks)		
Restric	ctive Layer (if	observed)									
	Type:		I	None							
Dep	th (inches):						Hydri	ic Soil Present?	YesNoX		
Remarl						<u>'</u>					
The cri	terion for hydri	c soil is not m	net.								

Site:	Water Distribution System Extension to the Town	of Peshtigo City	/County: Marinette Cou	nty	Sampling Date:	9/10/2019		
	cant/Owner: Tyco Fire Products L				Sampling Point:			
Invest	tigator(s): Ryan Bombeck, Mich		Section, Townsh	p, Range: Section 24, Town				
Landf	form (hillslope,terrace,etc.): Back Sk							
	egion(LRR or MLRA): LRR K - North			Long. 87.64675° W				
	Map Unit Name: Shawano loamy fine							
	limatic/hydrologic conditions on the si							
Are	Vegetation X Soil		· · · · · · · · · · · · · · · · · · ·		·			
Are	Vegetation Soil							
Are N	lormal Circumstances Present?				s)			
			,	•	,			
SUMI	MARY OF FINDINGS							
	Hydrophytic Vegetation Present?	Yes No	X Is the	Sampled Area within a We	tland?			
	Hydric Soil Present?			s NoX				
	Wetland Hydrology Present?			optional Wetland Site ID:				
				•				
Rema	arks:							
	25 in Appendix B. Upland data point							
	in hydrophytic volunteer species as o	bserved at DP26. Ba	ased on the absence of	two out of three parameters,	this area is an upland	d. All data points		
were	recorded along existing roadsides.							
HYD	ROLOGY							
	and Hydrology Indicators:							
1101.0	Primary Indicators (minimum of c	one is required: che	eck all that anniv)	Secondary Indicat	ors (minimum of two	o required)		
	Surface Water (A1)	Water Stained		Surface Soil Crac				
	High Water Table (A2)	Aquatic Fauna		Drainage Patterns	,			
	Saturation (A3)	Marl Deposits		Moss Tim Lines (I	,			
	Water Marks (B1)		fide Odor (C1)	Dry-Season Wate	,			
	Sediment Deposits (B2)		ospheres on Living	Crayfish Burrows (C8)				
	Drift Deposits (B3)	Roots (C3)	3	Saturation Visible on Aerial Imagery (C9)				
	Algal Mat or Crust (B4)	Presence of R	Reduced Iron (C4)	Stunted or Stress		- /		
	Iron Deposits (B5)		eduction in Tilled Soil	Geomorphic Posi	` ′			
	Inundation Visible on Aerial	(C6)		Shallow Aquitard (D3)				
	Imagery (B7)	Thin Muck Su	rface (C7)	Microtopographic Relief (D4)				
	Sparsely Vegetated Concave	Other (Explain	,	FAC-Neutral Test (D5)				
	Surface (B8)	Other (Explain	riiriteiliaikoj	1710 Noutai Tool	(00)			
Field	Observations:			1				
		No. X	Depth (inches)	Wetland Hydrology Pres	ent?			
			Depth (inches)	7	No	Y		
			Depth (inches)					
Satur	audifriesent! Tes_	NO X	Deptif (inches)					
Docor	ribe Recorded Data (stream guage, m	onitoring well perio	l photos, provious inch	ections) if available:				
	graphic maps, aerial imagery, WWI d	_		ctions), ii avallable.				
Rema		ata, WDINK Wetland	i illulcators data.					
	riterion for wetland hydrology is not m	net. Based on WETS	S analysis, antecedent h	vdrologic conditions are with	in a normal range.			
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			,	3.			

VEGE	TATION	Absolute %	Dominant		Sampling Point: DP25
Tree St	tratum Plot size: 30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1.	Quercus velutina	30	Y	UPL	Number of dominant species that are OBL,
2.	Betula papyrifera	15	Y	FACU	FACW, or FAC:0(A)
3. 4.	Populus tremuloides	10	N	FACU	Total number of dominant species across all strata:3(B)
5. 6.					Percent of dominant species that are OBL, FACW, or FAC: 0% (A/B)
7.		-			Prevalence Index Worksheet:
50%=	27.5% 20%= 11.0%	55	Total Cover		Total % cover of:
Shrub S	Stratum Plot size: 15'				OBL species0 x10
1.					FACW species <u>2</u> x 2 <u>4</u>
2.					FAC species0 x30
3.					FACU species <u>124</u> x 4 <u>496</u>
4.					UPL species <u>32</u> x 5 <u>160</u>
5.				· -	Column Totals:158(A)660_(B)
6.				· .	Prevalence Index: 4.2 (B/A)
7.					Hydrophytic Vegetation Indicators:
50%=	0.0% 20%= 0.0%	0	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb S	tratum Plot size: <u>5'</u>				Dominance Test is >50%
1.	Poa pratensis	95	Y	FACU	Prevalence Index is ≤3.0*
2.	Ambrosia artemisiifolia	2	N	FACU	Morphological Adaptations*
3.	Taraxacum officinale	2	N	FACU	Problematic Hydrophytic Vegetation*
4.	Verbascum thapsus	2	N	UPL	* Indicators of hydric soil and wetland hydrology must be present,
5.	Onoclea sensibilis	2	N	FACW	unless disturbed or problematic
6.		-	-	· .	Definitions of Vegetation Strata:
7. 8.					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height
9.					Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1M) tall.
10.					· · · ·
11.					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
12.					and woody plants less than 5.20 it tall.
50%= <u>Woody</u>	51.5% 20%= 20.6% Vine Stratum Plot size: 30'	103	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
1.					
2.					
3.					Hydrophytic Vegetaion Present?
4.					
50%=	0.0% 20%= 0.0%	0	Total Cover		YesNoX
Remarl	0.0% 20%= 0.0% ks: (Include photo numbers here or terion for hydrophytic vegetation is	on a separat			YesNoX

SOIL											
									Sampling Point:	DP25	
Profile	Description:	(Describe to	depth	needed to d	locume	ent the ir	ndicator	or confirm abse	ence of indicators.)		
	Depth	Matri	X	Redox Fea	atures						
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks		
	0-9	10YR 2/1	100					Silt Loam			
	9-18	10YR 4/2	98	10YR 4/6	2	С	М	Loamy Sand	Prominent redox concentrations.		
_											
			etion, RN	/I=Reduced	Matrix,	CS=Coa	ted Sand	grains **Locati	on: PL=Pore Lining, M=Matrix		
Hydric	Soil Indicator	rs:			I				Indicators for Problem		
Histosol (A1)						ed Matrix			2 cm Muck (A10) (LRR K, L,	MLRA 149B)	
	Histic Epipedon (A2)					,		R,MLRA 149B)	Coast Prairie Redox (A16)		
	Black Histic (A3)						v Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)	
	Hydrogen Sul			MLRA	1496)			Dark Surface (S7) (LRR K, L, M)			
	Stratified Layers (A5) Thin Dark						ce (S9)		Polyvalve Below Surface (S8) (LRR K, L)		
Χ	C Depleted Below Dark Surface (A11)					Mucky N	/lineral (F	⁻ 1)	Thin Dark Surface (S9) (LRF	R K, L)	
	Thick Dark Su	urface (A12)			Loamy	Gleyed	Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)	
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)	
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	rface (F6	6)	Red Parent Material (F21)		
	Sandy Redox	(S5)			Deplet	ed Dark	Surface ((F7)	Very Shallow Dark Surface (TF12)		
					Redox	Depress	ions (F8)	Other (Explain in Remarks)		
	tive Layer (if	observed)									
	Type:			None							
Dept	th (inches):						Hydri	c Soil Present?	Yes X No		
Remark	(S.										
	erion for hydri	c soil is met.									

Site: Water Distribution System Extension to the Town of	f Peshtigo City/County: Marinette Coun	sampling Date: 9/10/2019				
Applicant/Owner: Tyco Fire Products L.		State: WI Sampling Point: DP26				
· · ·		o, Range: Section 24, Township 30N, Range 23E				
		convex, none): Concave Slope (%): 1%				
Subregion(LRR or MLRA): LRR K - Northc		Long. 87.646627° W Datum: WGS 84				
		WWI Classification: None				
		No (If no, explain in the Remarks)				
	or Hydrologysignific					
· · · · · · · · · · · · · · · · · · ·	or Hydrologynatural					
Are Normal Circumstances Present?						
		•				
SUMMARY OF FINDINGS						
Hydrophytic Vegetation Present?	Yes X No Is the	Sampled Area within a Wetland?				
Hydric Soil Present?	Yes X No Yes	sX No				
Wetland Hydrology Present?	Yes X No If yes,	optional Wetland Site ID: W05				
Remarks:						
		was considered significantly disturbed due to recent mowing.				
Based on the presence of all three paramet	ers, this area is a wetland. All data points w	ere recorded along existing roadsides.				
HYDROLOGY						
Wetland Hydrology Indicators:						
	ne is required; check all that apply)	Secondary Indicators (minimum of two required)				
Surface Water (A1)	Water Stained Leaves (B9)	Surface Soil Cracks (B6)				
High Water Table (A2)	Aquatic Fauna (B13)	X Drainage Patterns (B10)				
Saturation (A3)	Marl Deposits (B15)	Moss Tim Lines (B6)				
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)				
Sediment Deposits (B2)	Oxidized Rhizospheres on Living	Crayfish Burrows (C8)				
Drift Deposits (B3)	Roots (C3)	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soil	X Geomorphic Position (D2)				
Inundation Visible on Aerial	(C6)	Shallow Aquitard (D3)				
Imagery (B7)	Thin Muck Surface (C7)	Microtopographic Relief (D4)				
Sparsely Vegetated Concave	Other (Explain in Remarks)	FAC-Neutral Test (D5)				
Surface (B8)	Ottor (2.p.a.r. ii. romano)	1.710 1104.14.1 1001 (20)				
Field Observations:						
	No X Depth (inches)	Wetland Hydrology Present?				
	No X Depth (inches)	Yes X No				
	No X Depth (inches)					
	No					
Describe Recorded Data (stream guage, m	onitoring well, aerial photos, previous inspe	ctions), if available:				
Topographic maps, aerial imagery, WWI da	· · ·	5.107,57, 11 4.14.14.2.16.				
Remarks:	ta, 172.111 Tronana maloatoro adia.					
	Based on WETS analysis, antecedent hydro	logic conditions are within a normal range.				

VEGETATION				Sampling Point: DP26				
	Absolute %	Dominant		Dominance Test Worksheet				
<u>Tree Stratum</u> Plot size: <u>30'</u>	Cover	Species	Indicator Status	Dominianos rest tromentes				
1				Number of dominant species that are OBL,				
2.				FACW, or FAC:1(A)				
3				Total number of dominant species across				
4				all strata: 2 (B)				
5				Percent of dominant species that are OBL,				
6			-	FACW, or FAC:(A/B)				
7			-	Prevalence Index Worksheet:				
50%= 0.0% 20%= 0.0%	0	Total Cover		Total % cover of:				
Shrub Stratum Plot size: 15'				OBL species 0 x 1 0				
1				FACW species <u>40</u> x 2 <u>80</u>				
2			-	FAC species0 x30				
3		-		FACU species <u>60</u> x 4 <u>240</u>				
4			-	UPL species0 x 50				
5				Column Totals: 100 (A) 320 (B)				
6			-	Prevalence Index: 3.2 (B/A)				
7				Hydrophytic Vegetation Indicators:				
50%= 0.0% 20%= 0.0%	0	Total Cover		Rapid Test for Hydrophytic Vegetation				
Herb Stratum Plot size: 5'				Dominance Test is >50%				
1. Poa pratensis	60	Y	FACU	Prevalence Index is <3.0*				
2. Onoclea sensibilis	40	Y	FACW	Morphological Adaptations*				
3				X Problematic Hydrophytic Vegetation*				
4				* Indicators of hydric soil and wetland hydrology must be present,				
5				unless disturbed or problematic				
6				Definitions of Vegetation Strata:				
7				Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast				
8.				height (DBH), regardless of height				
9				Sapling/shrub - Woody plants less than 3 in. DBH and greater				
10				than or equal to 3.28 ft (1M) tall.				
11				Herb - All herbaceous (non-woody) plants, regardless of size,				
12				and woody plants less than 3.28 ft tall.				
50%= 50.0% 20%= 20.0%	100	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.				
Woody Vine Stratum Plot size: 30'								
1			_					
2			-					
3				Hydrophytic Vegetaion Present?				
4								
50%= 0.0% 20%= 0.0%	0	Total Cover		Yes <u>X</u> No				

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

The criterion for problematic hydrophytic vegetation is met by utilizing the Problematic Hydrophytic Vegetation Section 4d(4) of the Regional Supplement, which covers managed plant communities (mowed lawn) with no unmanaged vegetative condition available for comparison. Vegetation was considered significantly disturbed due to recent mowing. The recently mowed turf grass consisted of Kentucky blue grass, which is a managed lawn species. Between mowing events, sensitive fern (FACW) can be observed. Based on the presence of hydric soils, wetland hydrology, and the presence of hydrophytic volunteer species between mowings, it is anticipated that the sample point would support a hydrophytic plant community under normal circumstances.

SOIL											
									Sampling Point:	DP26	
Profile	Description:	(Describe to	o depth	needed to d	locume	ent the ir	ndicator	or confirm abse	ence of indicators.)	1	
	Depth	Matri	Х	Redox Fea	atures		1				
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks		
	0-7	10YR 2/1	100					Silt Loam			
	7-18	10YR 4/2	98	10YR 4/6	2	С	М	Loamy Sand	Prominent redox concentrations.		
* T		D D	atian DA	4 Dadwaad	N.A. dada	00 0	tl Ol		ione DL. Done Lining M. Matrice		
			etion, Ri	/I=Reduced	iviatrix,	CS=Coa	ted Sand	grains **Locati	ion: PL=Pore Lining, M=Matrix	and a Calle	
Hyaric	Soil Indicato	rs:			C4=:=====	al Madaire	(00)		Indicators for Problem		
	Histosol (A1)					ed Matrix		D.M. D.A. 4.40D)	2 cm Muck (A10) (LRR K, L	, MLRA 149B)	
	Histic Epipedon (A2)					,		R,MLRA 149B)	Coast Prairie Redox (A16)	. K I D)	
	Black Histic (A3)					149B)	v Suriace	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR K, L, R)		
	Hydrogen Suilide (A4)						(00)		Dark Surface (S7) (LRR K, L, M) Polyvalve Below Surface (S8) (LRR K, L)		
Х	Stratified Laye	000 (111	\		ark Surfa Mucky N	` '	=1)	Thin Dark Surface (S9) (LRR K, L)			
	C Depleted Below Dark Surface (A11) Thick Dark Surface (A12)								`	` ′	
	Sandy Mucky				·	Gleyed ed Matrix	,	2)	Iron-Manganese Masses (F Mesic Spodic (TA6) (MLRA	, ,	
						Dark Su		<u> </u>	Red Parent Material (F21)	144A, 145, 149B)	
	Sandy Gleyed Sandy Redox							•	Very Shallow Dark Surface (TF12)		
	Sandy Redux	(33)			Depleted Dark Surface (F7) Redox Depressions (F8)				Other (Explain in Remarks)		
					INEGUX	Depress	10115 (1 0)	Other (Explain in Remarks)		
Restric	tive Layer (if	observed)									
	Type:		ı	None							
Dept	th (inches):						Hydri	c Soil Present?	YesXNo	-	
Remark											
The crit	terion for hydri	c soil is met.									

Site:	Water Distribution System Extension to the Town	n of Peshtigo City/	County: Marinette Count	ty		Sampling Date:	9/10/2019	
	ant/Owner: Tyco Fire Products I		-	,	State: WI	Sampling Point:		
		hael Meisenger	Section, Township	, Range	e: Section 24, Towns			
Landfo	orm (hillslope,terrace,etc.): Toe Slo							
	gion(LRR or MLRA): LRR K - North							
	ap Unit Name: Rousseau loamy fin							
	imatic/hydrologic conditions on the s							
Are			drology signification	_	· · ·	,		
Are	Vegetation Soi							
	ormal Circumstances Present?					s)		
				,		•		
SUMN	MARY OF FINDINGS							
	Hydrophytic Vegetation Present?	? Yes X No	Is the S	Sample	d Area within a Wet	land?		
	Hydric Soil Present?			-	No			
	Wetland Hydrology Present?				Wetland Site ID:	W05		
	, 6,				_			
Rema	rks:							
	27 in Appendix B. PEM data point r							
otusid	e of the ESA. Based on the present	e of all three paramet	ters, this area is a wetlar	nd. All da	ata points were reco	rded along existing r	oadsides.	
HYDI	ROLOGY							
	nd Hydrology Indicators:							
TTOTIC	Primary Indicators (minimum of	one is required: che	ck all that annly)		Secondary Indicate	ors (minimum of tw	o required)	
	Surface Water (A1)	Water Stained			Surface Soil Crack		o roquirou)	
Х	High Water Table (A2)	Aquatic Fauna			Drainage Patterns	,		
Х	Saturation (A3)	Marl Deposits		†	Moss Tim Lines (E	•		
	Water Marks (B1)	Hydrogen Sulfi	•	†	Dry-Season Water	,		
	Sediment Deposits (B2)	1 1	ospheres on Living	†	Crayfish Burrows	, ,		
	Drift Deposits (B3)	Roots (C3)	Jophiolog ong	Saturation Visible on Aerial Imagery (C9)				
	Algal Mat or Crust (B4)	Presence of R	educed Iron (C4)	Stunted or Stressed Plants (D1)				
	Iron Deposits (B5)		eduction in Tilled Soil	Х	, ,			
	Inundation Visible on Aerial	(C6)	eduction in Timed Con	-	1	, ,		
	Imagery (B7)		4 (07)	+	Shallow Aquitard (
		Thin Muck Sur		Х	Microtopographic	` '		
	Sparsely Vegetated Concave Surface (B8)	Other (Explain	in Remarks)	^	FAC-Neutral Test	(D5)		
Tiple!	` '							
	Observations:	N. V	= a a		111 Indiana Bases	:•		
		No X		Wetiai	nd Hydrology Prese			
			Depth (inches) 10	Yes X No				
Satura	ation Present? Yes_	X No	Depth (inches) 0					
	ibe Recorded Data (stream guage, i	-		ctions), i	f available:			
	raphic maps, aerial imagery, WWI o	data, WDNR Wetland	Indicators data.					
Rema	rks: riterion for wetland hydrology is met.	Based on WETS and	alveie antecedent hydrol	ogic cor	nditions are within a	normal range		
THE CI	iterior for wettarid flydrology is filet.	based on WE13 and	alysis, antecedent flydror	ogic coi	iditions are within a	nomariange.		

VEGE	TATION		Absolute 0/	Daminant		Sampling Point: DP27
Tree St	ratum Plot size:	30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet
1.	Frangula alnus		20	Y	FAC	Number of dominant species that are OBL,
2.					· -	FACW, or FAC:4(A)
3.						Total number of dominant species across
4.						all strata: 4 (B)
5.						Percent of dominant species that are OBL,
6.						FACW, or FAC:100%(A/B)
7.					· -	Prevalence Index Worksheet:
50%=	10.0% 20%	= 4.0%	20	Total Cover		Total % cover of:
Shrub S	Stratum Plot size:	15'				OBL species 50 x1 50
1.	Alnus incana		100	Y	FACW	FACW species <u>155</u> x 2 <u>310</u>
2.					· -	FAC species <u>20</u> x 3 <u>60</u>
3.						FACU species <u>0</u> x 4 <u>0</u>
4.					·	UPL species <u>0</u> x 5 <u>0</u>
5.					·	Column Totals: <u>225</u> (A) <u>420</u> (B)
6.					· -	Prevalence Index: 1.9 (B/A)
7.				-		Hydrophytic Vegetation Indicators:
50%=		= 20.0%	100	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb St	ratum Plot size:	5'				x Dominance Test is >50%
-	Carex stipata		50	Y	OBL	x Prevalence Index is <3.0*
-	Onoclea sensibilis		50	Y	FACW	Morphological Adaptations*
-	Phalaris arundinacea		5	N	FACW	Problematic Hydrophytic Vegetation*
4. 5.						* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6.				-	. <u></u>	Definitions of Vegetation Strata:
7.					· -	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.					· -	height (DBH), regardless of height
9.					· -	Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.						than or equal to 3.28 ft (1M) tall.
11.						Herb - All herbaceous (non-woody) plants, regardless of size,
12.						and woody plants less than 3.28 ft tall.
50%=	52.5% 20%	= 21.0%	105	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
Woody	Vine Stratum Plot size:	30'				, , , ,
1.						
2.						
3.					·	Hydrophytic Vegetaion Present?
4.						
50%=	0.0% 20%	= 0.0%	0	Total Cover		Yes <u>X</u> No
	s: (Include photo number			e sheet.)		

SOIL											
									Sampling Point:	DP27	
Profile	Description:	(Describe to	o depth	needed to d	locume	ent the ir	ndicator	or confirm abse	ence of indicators.)		
	Depth	Matri	Х	Redox Fea	atures						
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks		
	0-18	10YR 2/1	100					Silt Loam			
	18-24	10YR 4/2	95	10YR 4/6	5	С	М	Loamy Sand	Prominent redox concentrations.		
			etion, RN	/I=Reduced	Matrix,	CS=Coa	ted Sand	grains **Locati	on: PL=Pore Lining, M=Matrix		
Hydric	Soil Indicato	rs:							Indicators for Problem		
	Histosol (A1)					ed Matrix			2 cm Muck (A10) (LRR K, L	, MLRA 149B)	
	Histic Epipedon (A2)					surface (S	87)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)		
	Black Histic (A3)						v Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)	
	Hydrogen Sul			MLRA	149B)			Dark Surface (S7) (LRR K, L, M)			
	Stratified Laye			Thin Dark Surface (S9)				Polyvalve Below Surface (S8) (LRR K, L)			
	Depleted Below Dark Surface (A11)					Mucky N	/lineral (F	⁻ 1)	Thin Dark Surface (S9) (LRI	R K, L)	
Χ	Thick Dark Su	urface (A12)			Loamy	Gleyed	Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)	
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)	
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	rface (F6	5)	Red Parent Material (F21)		
	Sandy Redox	(S5)			Deplet	ed Dark	Surface (F7)	Very Shallow Dark Surface (TF12)		
					Redox	Depress	ions (F8)	Other (Explain in Remarks)		
Restric	tive Layer (if	observed)									
	Type:		1	None							
Dept	th (inches):						Hydri	c Soil Present?	Yes X No		
Remarl						<u> </u>					
The crit	terion for hydri	c soil is met.									

Site: v	Water Distribution System Extension to the Town	of Peshtigo City	/County: Marinette	County		Sampling Date:	9/10/2019		
	nt/Owner: Tyco Fire Products L					Sampling Point:			
Investiga	ator(s): Ryan Bombeck, Mich	nael Meisenger	Section, To	wnship, Range: Se	ction 24, Town	ship 30N, Range 23E			
Landforn	m (hillslope,terrace,etc.): Back Sl	ope	Local relief (con-	cave, convex, none): Concave	Slo	ppe (%):5%		
Subregio	on(LRR or MLRA): LRR K - North	central Forests	Lat. 45.056333	<u>8° N</u> Long. <u>87.</u>	642602° W	Datum: WC	GS 84		
Soil Map	Unit Name: Rousseau loamy fine	e sand, 1 to 6 percen	nt slopes		WWI Clas	sification: None			
	atic/hydrologic conditions on the si								
Are	Vegetation X Soil								
Are	Vegetation Soil	i or Hy	drologyr	naturally problemation	?				
Are Norr	mal Circumstances Present?	Yes X No	(If needed	d, explain any answ	ers in Remark	s)			
SUMMA	ARY OF FINDINGS								
	Hydrophytic Vegetation Present?	·	<u> </u>	s the Sampled Are					
	Hydric Soil Present?		X	Yes	No X				
	Wetland Hydrology Present?	Yes No	XII	f yes, optional Wetla	and Site ID:				
<u> </u>									
Remarks		e e e e e e e e e e e e e e e e e e e	1		. I stanificana	et i Port di cal alca da as	to the second all all as		
	8 in Appendix B. Upland data point hydrophytic pioneeer species. Bas								
roadside		od on the about to	n an anoo paramer	oro, uno aroa lo	upiuiiai / uc	a pointo noto 1000	od diong own		
HYDRO	OLOGY								
Wetland	d Hydrology Indicators:			T					
P	Primary Indicators (minimum of o	one is required; che	eck all that apply)	Seco	ndary Indicat	ors (minimum of tw	o required)		
	Surface Water (A1)	Water Stained	d Leaves (B9)	Su	face Soil Crac	ks (B6)			
<u> </u>	High Water Table (A2)	Aquatic Fauna	` '	Dra	ainage Patterns	s (B10)			
	Saturation (A3)	Marl Deposits	(B15)	Mo	ss Tim Lines (I	B6)			
\	Water Marks (B1)	Hydrogen Sulf	fide Odor (C1)	Dry	-Season Wate	er Table (C2)			
15	Sediment Deposits (B2)		cospheres on Living	· -	Crayfish Burrows (C8)				
<u> </u>	Drift Deposits (B3)	Roots (C3)		Sat	Saturation Visible on Aerial Imagery (C9)				
l l	Algal Mat or Crust (B4)	Presence of F	Reduced Iron (C4)	Stu	inted or Stress	ed Plants (D1)			
<u> </u>	Iron Deposits (B5)	+	Reduction in Tilled S	Soil Ge	omorphic Posi	tion (D2)			
	Inundation Visible on Aerial	(C6)		Sha	Shallow Aquitard (D3)				
	Imagery (B7)	Thin Muck Su	rface (C7)	Mic	Microtopographic Relief (D4)				
	Sparsely Vegetated Concave	Other (Explain	ı in Remarks)	FA	C-Neutral Test	(D5)			
	Surface (B8)								
Field Ob	bservations:								
Surface		No <u>X</u>			drology Pres	ent?			
Water Ta		No X			Yes	No	X		
Saturation	on Present? Yes_	No <u>X</u>	Depth (inches) _						
<u> </u>									
Describe	e Recorded Data (stream guage, n	nonitoring well, aeria	l photos, previous	inspections), if avai	lable:				
Topogra	aphic maps, aerial imagery, WWI d	lata, WDNR Wetland	Indicators data.						
Remarks									
The crite	erion for wetland hydrology is not n	net. Based on WETS	3 analysis, anteced	lent hydrologic cond	litions are with	in a normal range.			

	TATION		Absolute %	Dominant		Sampling Point: DP28 Dominance Test Worksheet
Tree St	ratum Plot size	30'	Cover	Species	Indicator Status	Dominance Test worksheet
1. 2.						Number of dominant species that are OBL, FACW, or FAC: 0 (A)
3. 4.		<u>.</u>		• •		Total number of dominant species across all strata:1(B)
5. 6.						Percent of dominant species that are OBL, FACW, or FAC: (A/B)
7.					- · · <u></u>	Prevalence Index Worksheet:
50%=	0.0% 20	0.0%	0	Total Cover		Total % cover of:
Shrub S	Stratum Plot size:	15'				OBL species0 x10
1.						FACW species0 x20
2.						FAC species0 x30
3.						FACU species 87 x 4 348
4.						UPL species 15 x 5 75
5.						Column Totals: 102 (A) 423 (B)
6.						Prevalence Index: 4.1 (B/A)
7.						Hydrophytic Vegetation Indicators:
50%=	0.0% 20	0.0%	0	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb St	ratum Plot size:	5'				Dominance Test is >50%
1.	Poa pratensis		80	Υ	FACU	Prevalence Index is ≤3.0*
-	Bromus inermis		15	N	UPL	Morphological Adaptations*
3.	Ambrosia artemisiifolia		5	N	FACU	Problematic Hydrophytic Vegetation*
4. 5.	Taraxacum officinale		2	N	FACU	* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6.						Definitions of Vegetation Strata:
7.						Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.						height (DBH), regardless of height
9.						 Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.						than or equal to 3.28 ft (1M) tall.
11.						 Herb - All herbaceous (non-woody) plants, regardless of size,
12.						and woody plants less than 3.28 ft tall.
50%=	51.0% 20	0%= 20.4%	102	Total Cover		
	Vine Stratum Plot size		102	10101 00101		Woody Vines - All woody vines greater than 3.28 ft in height.
1.						
2.						1
-						Hydrophytic Vegetaion Present?
3. 4						Inydrophytic vegetalon Fresent:
4.	0.00/ 0.0			Total Cover		. You No Y
50%=	0.0% 20	0.0%	0	Total Cover		YesNoX
	s: (Include photo numberion for hydrophytic ve			e sheet.)		,

SOIL										
									Sampling Point:	DP28
Profile	Description:	(Describe to	depth	needed to d	locume	ent the ir	ndicator	or confirm abse	ence of indicators.)	
	Depth	Matri	X	Redox Fea	atures		1			
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks	
	0-9	10YR 2/2	100					Silt Loam		
	9-18	10YR 3/2	98	10YR 4/6	2	С	М	Loamy Sand	Prominent redox concentrations.	
* Tuno	v. C. Concentre	ation D-Donl	otion DA	1-Bodusod	Motrix	CS- Coo	tad Cana	Laroino **Locati	on: PL=Pore Lining, M=Matrix	
	Soil Indicato		ellon, Kr	//=Reduced	iviatrix,	CS=C0a	teu Sanc	rgrains Locati	Indicators for Problem	natic Soils
,	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L	
	Histic Epiped	on (A2)						R,MLRA 149B)	Coast Prairie Redox (A16)	,
	Black Histic (A3)			Polyva	lve Belov	w Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)
	Hydrogen Su	fide (A4)			MLRA	149B)			Dark Surface (S7) (LRR K, I	
	Stratified Lay	ers (A5)			Thin D	ark Surfa	ace (S9)		Polyvalve Below Surface (S8) (LRR K, L)	
	Depleted Below Dark Surface (A11) Loamy Muck							- 1)	Thin Dark Surface (S9) (LRI	R K, L)
	Thick Dark S	urface (A12)			Loamy	Gleyed	Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	Surface (F6) Red Parent Material			
	Sandy Redox	(S5)			Deplet	ed Dark	Surface	(F7)	Very Shallow Dark Surface	(TF12)
					Redox	Depress	ssions (F8) Other (Explain in Remarks)			
						1				
Restri	ctive Layer (if	observed)								
	Type:			None						
Dep	th (inches):						Hydri	ic Soil Present?	YesNoX	
Remar	ks:					I				
The cri	terion for hydri	c soil is not m	net.							

Site:	Water Distribution System Extension to the Town	n of Peshtigo City/	County: Marinette Count	y		Sampling Date:	9/10/2019
	ant/Owner: Tyco Fire Products I		-	,	State: WI	Sampling Point:	
Invest	igator(s): Ryan Bombeck, Mic	hael Meisenger	Section, Township	, Range	e: Section 24, Towns		
Landfo	orm (hillslope,terrace,etc.): Toe Slo						
	gion(LRR or MLRA): LRR K - North						
	ap Unit Name: Deford and Cormant						
	matic/hydrologic conditions on the s						
Are			drologysignifica	_	<u> </u>	,	
Are	Vegetation Soi						
	ormal Circumstances Present?					s)	
				•		•	
SUMN	MARY OF FINDINGS						
	Hydrophytic Vegetation Present?	? Yes X No	Is the S	Sample	d Area within a Wet	land?	
	Hydric Soil Present?			Х	No		
	Wetland Hydrology Present?				Wetland Site ID:	W05	
		 -			_		
Rema	rks:						
	29 in Appendix B. PEM data point re	·	· ·			,,	tuside of the ESA.
Based	I on the presence of all three parame	eters, this area is a w	etland. All data points we	ere reco	orded along existing r	oadsides.	
HYDI	ROLOGY						
Wetla	nd Hydrology Indicators:						
	Primary Indicators (minimum of	one is required; che	ck all that apply)		Secondary Indicate	ors (minimum of tv	vo required)
	Surface Water (A1)	Water Stained	Leaves (B9)		Surface Soil Crack	ks (B6)	
Х	High Water Table (A2)	Aquatic Fauna			Drainage Patterns	(B10)	
Х	Saturation (A3)	Marl Deposits	(B15)		Moss Tim Lines (E	36)	
Х	Water Marks (B1)	Hydrogen Sulf	ide Odor (C1)		Dry-Season Water	r Table (C2)	
	Sediment Deposits (B2)	Oxidized Rhize	ospheres on Living		Crayfish Burrows ((C8)	
	Drift Deposits (B3)	Roots (C3)			Saturation Visible	on Aerial Imagery (0	C9)
	Algal Mat or Crust (B4)	Presence of R	educed Iron (C4)		Stunted or Stresse	ed Plants (D1)	,
	Iron Deposits (B5)	Recent Iron R	eduction in Tilled Soil	Х	Geomorphic Positi	ion (D2)	
	Inundation Visible on Aerial	(C6)			Shallow Aquitard (,	
	Imagery (B7)	Thin Muck Sur	face (C7)		Microtopographic		
	Sparsely Vegetated Concave	Other (Explain	` '	Х	FAC-Neutral Test	` '	
	Surface (B8)					(= 5)	
Field	Observations:						
		No X	Depth (inches)	Wetla	nd Hydrology Prese	ent?	
			Depth (inches) 10			X No_	
		X No					
Catare		<u> </u>					
Descri	ibe Recorded Data (stream guage, r	monitoring well aeria	nhotos previous inspec	tions) i	f available:		
	raphic maps, aerial imagery, WWI	-		110110), 1	r available.		
Rema		add, WDITT Worlding	maioatoro data.				
	riterion for wetland hydrology is met.	Based on WETS and	alysis, antecedent hydrol	ogic cor	nditions are within a i	normal range.	

TLOL	TATION	Absolute %	Dominant		Sampling Point: DP29 Dominance Test Worksheet
Tree St	ratum Plot size: 30'	Cover	Species	Indicator Status	Dominance Test Worksneet
1.	Frangula alnus	25	Y	FAC	Number of dominant species that are OBL,
2.	Fraxinus pennsylvanica	25	Y	FACW	FACW, or FAC:4(A)
3.					Total number of dominant species across
4.					all strata: 4 (B)
5.					Percent of dominant species that are OBL,
6.					FACW, or FAC: <u>100%</u> (A/B)
7.				·	Prevalence Index Worksheet:
50%=	25.0% 20%= 10.0%	50	Total Cover		Total % cover of:
Shrub S			.,	540	OBL species 90 x 1 90
1.	Rhamnus cathartica	50	Y	FAC	FACW species <u>35</u> x 2 <u>70</u>
2.			-		FAC species <u>75</u> x 3 <u>225</u>
3.				-	FACU species 0 x
4.				· -	UPL species <u>0</u> x 5 <u>0</u>
5.				· -	Column Totals: 200 (A) 385 (B)
6.					Prevalence Index: 1.9 (B/A)
7.	05.00/ 000/ 10.00/				Hydrophytic Vegetation Indicators:
50%=	25.0% 20%= 10.0%	50	Total Cover		Rapid Test for Hydrophytic Vegetation x Dominance Test is >50%
Herb St		90	Y	OBL	
1.	Carex stricta		N	FACW	x Prevalence Index is ≤3.0*
2. 3.	Onoclea sensibilis Impatiens capensis	5	N	FACW FACW	Morphological Adaptations* Problematic Hydrophytic Vegetation*
3. 4.				FACV	* Indicators of hydric soil and wetland hydrology must be present,
4. 5.					unless disturbed or problematic
6.					Definitions of Vegetation Strata:
7.					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.					height (DBH), regardless of height
9.					Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.					than or equal to 3.28 ft (1M) tall.
11.					Herb - All herbaceous (non-woody) plants, regardless of size,
12.					and woody plants less than 3.28 ft tall.
50%=	50.0% 20%= 20.0%	100	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
Woody	Vine Stratum Plot size: 30'				
1.		-			
2.				· -	
3.		-			Hydrophytic Vegetaion Present?
4.				· -	
50%=	0.0% 20%= 0.0%	0	Total Cover		Yes <u>X</u> No
	ss: (Include photo numbers here or erion for hydrophytic vegetation is		e sheet.)		

SOIL														
									Sampling Point:	DP29				
Profile	Description:	(Describe to	o depth	needed to d	locume	ent the in	ndicator	or confirm abse	ence of indicators.)					
	Depth	Matri	Х	Redox Fea	atures									
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks					
	0-18	10YR 2/1	100					Silt Loam						
	18-24	10YR 4/2	95	10YR 4/6	5	С	М	Loamy Sand	Prominent redox concentrations.					
* Type	: C=Concentra	ation, D=Depl	etion, RI	∕I=Reduced	Matrix,	CS=Coat	ted Sand	grains **Locati	on: PL=Pore Lining, M=Matrix					
Hydric	Hydric Soil Indicators: Indicators for Problematic Soils													
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L	, MLRA 149B)				
	Histic Epiped	on (A2)			Dark S	Surface (S	S7)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)					
	Black Histic (A3)			_		v Surfac	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	K, L, R)				
	Hydrogen Sul	fide (A4)			MLRA	149B)			Dark Surface (S7) (LRR K, I	_, M)				
	Stratified Laye	ers (A5)			Thin D	ark Surfa	ce (S9)		Polyvalve Below Surface (S8) (LRR K, L)					
	Depleted Below Dark Surface (A11) Loamy Mu							- 1)	Thin Dark Surface (S9) (LRI	R K, L)				
Χ	X Thick Dark Surface (A12) Loamy GI							2)	Iron-Manganese Masses (F	12) (LRR K, L, R)				
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)				
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	rface (F6	6)	Red Parent Material (F21)					
	Sandy Redox	(S5)			Deplet	ed Dark	k Surface (F7) Very Shallow Da			(TF12)				
					Redox	Depress	ions (F8)	Other (Explain in Remarks)					
Restric	ctive Layer (if	observed)												
	Type:		l	None										
Dep	th (inches):						Hydr	ic Soil Present?	Yes X No					
Remar														
The cri	terion for hydri	c soil is met.												

Site:	Water Distribution System Extension to the Town of	of Peshtigo City/County	y: Marinette Coun	ty	Sampling Date:	9/10/2019
	ant/Owner: Tyco Fire Products L.			State: WI		
			Section, Township	, Range: Section 19, Towns		
Landfo	orm (hillslope,terrace,etc.): Back Slo			<u>-</u>		e (%): 2%
	gion(LRR or MLRA): LRR K - Northo			Long. 87.635325° W		
Soil Ma	ap Unit Name: Shawano loamy fine s					
	matic/hydrologic conditions on the sit					
Are	Vegetation Soil	or Hydrology	/significa	antly disturbed?		
Are	Vegetation Soil	or Hydrology	/natural	ly problematic?		
Are No	ormal Circumstances Present?	Yes X No	(If needed, expl	ain any answers in Remarks	s)	
SUMM	MARY OF FINDINGS					
	Hydrophytic Vegetation Present?	Yes NoX	Is the S	Sampled Area within a Wet	tland?	
	Hydric Soil Present?	Yes NoX	Yes	. No X		
	Wetland Hydrology Present?	Yes NoX_	If yes, o	optional Wetland Site ID:		
<u> </u>						
Remar						
	30 in Appendix B. Upland data point oints were recorded along existing ro		of W06. Based on	the absence of all three par	ameters, this area is a	ın upland. All
uaia p	UIIIIS WEIG IECOIDED along Chicking IC	dusiues.				
HYDF	ROLOGY					
Wetlar	nd Hydrology Indicators:			1		
<u> </u>	Primary Indicators (minimum of o			Secondary Indicate	ors (minimum of two	required)
	Surface Water (A1)	Water Stained Leave	es (B9)	Surface Soil Crack	ks (B6)	
	High Water Table (A2)	Aquatic Fauna (B13)		Drainage Patterns	(B10)	
<u> </u>	Saturation (A3)	Marl Deposits (B15)		Moss Tim Lines (E	36)	
<u> </u>	Water Marks (B1)	Hydrogen Sulfide Od	lor (C1)	Dry-Season Wate	r Table (C2)	
<u> </u>	Sediment Deposits (B2)	Oxidized Rhizospher	es on Living	Crayfish Burrows	(C8)	
<u> </u>	Drift Deposits (B3)	Roots (C3)		Saturation Visible	on Aerial Imagery (C9)
<u> </u>	Algal Mat or Crust (B4)	Presence of Reduce	d Iron (C4)	Stunted or Stresse	ed Plants (D1)	
<u> </u>	Iron Deposits (B5)	Recent Iron Reduction	on in Tilled Soil	Geomorphic Posit	ion (D2)	
	Inundation Visible on Aerial	(C6)		Shallow Aquitard ((D3)	
	Imagery (B7)	Thin Muck Surface (0	C7)	Microtopographic	Relief (D4)	
	Sparsely Vegetated Concave	Other (Explain in Rer	marks)	FAC-Neutral Test	(D5)	
<u> </u>	Surface (B8)					
Field (Observations:					
Surfac		No X Dept		Wetland Hydrology Prese	ent?	
Water		No X Dept		Yes_	No	X
Satura	ation Present? Yes_	No X Dept	h (inches)	_		
<u> </u>						
Descri	ibe Recorded Data (stream guage, m	onitoring well, aerial photo	s, previous inspec	ctions), if available:		
Topog	raphic maps, aerial imagery, WWI da	ata, WDNR Wetland Indica	tors data.			
Remar		D I WETO I		112		
The cr	iterion for wetland hydrology is not m	et. Based on WETS analys	sis, antecedent ny	arologic conditions are withi	n a normai range.	

VLGL	TATION	Absolute %	Dominant		Sampling Point: DP30
Tree St	ratum Plot size: 30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1.	Pinus strobus	60	Υ	FACU	Number of dominant species that are OBL,
2.	Acer saccharum	20	Y	FACU	FACW, or FAC:1(A)
3.					Total number of dominant species across
4.					all strata: 4 (B)
5.					Percent of dominant species that are OBL,
6.				·	FACW, or FAC: <u>25%</u> (A/B)
7.				· 	Prevalence Index Worksheet:
50%=	40.0% 20%= 16.0%	80	Total Cover		Total % cover of:
Shrub S	Stratum Plot size: 15'				OBL species 0 x 1 0
1.	Pinus strobus	10	Y	FACU	FACW species <u>0</u> x 2 <u>0</u>
-	Rhamnus cathartica	2	N	FAC	FAC species <u>46</u> x 3 <u>138</u>
3.					FACU species <u>90</u> x 4 <u>360</u>
4.					UPL species 0 x 5 0
5.					Column Totals: <u>136</u> (A) <u>498</u> (B)
6.				-	Prevalence Index: 3.7 (B/A)
7.				·	Hydrophytic Vegetation Indicators:
50%=	6.0% 20%= 2.4%	12	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb St			.,		Dominance Test is >50%
-	Osmunda claytoniana	40	<u>Y</u>	FAC	Prevalence Index is <3.0*
-	Carex blanda	2	N	FAC	Morphological Adaptations*
-	Rhamnus cathartica	2	N	FAC	Problematic Hydrophytic Vegetation*
4. 5.					* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6.			-	. <u></u>	Definitions of Vegetation Strata:
7.				· -	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.				· -	height (DBH), regardless of height
9.					Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.					than or equal to 3.28 ft (1M) tall.
11.					Herb - All herbaceous (non-woody) plants, regardless of size,
12.				· 	and woody plants less than 3.28 ft tall.
50%=	22.0% 20%= 8.8%	44	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
Woody	Vine Stratum Plot size: 30'				
1.					
2.					
3.				·	Hydrophytic Vegetaion Present?
4.				·	
50%=	0.0% 20%= 0.0%	0	Total Cover		YesNoX
	s: (Include photo numbers here or erion for hydrophytic vegetation is		e sheet.)		'

SOIL											
									Sampling Point:	DP30	
Profile	Description:	(Describe to	depth	needed to	docume	ent the ir	ndicator	or confirm abse	ence of indicators.)		
	Depth	Matri	X	Redox Fe	atures						
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks		
	0-14	10YR 2/1	100					Silt Loam			
	14-20	10YR 4/6	100					Loamy Sand			
* Type	e: C=Concentra	ation, D=Depl	etion, RI	/I=Reduced	Matrix,	CS=Coa	ted Sand	I grains **Location	on: PL=Pore Lining, M=Matrix		
Hydric	Soil Indicato	rs:			1				Indicators for Problem	natic Soils	
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L	, MLRA 149B)	
	Histic Epiped	on (A2)			Dark S	Surface (S	S7)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)		
	Black Histic (A3)					w Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRF	R K, L, R)	
	Hydrogen Su	lfide (A4)			MLRA	149B)			Dark Surface (S7) (LRR K,	L, M)	
	Stratified Lay	ers (A5)			Thin D	ark Surfa	ace (S9)		Polyvalve Below Surface (S	8) (LRR K, L)	
	Depleted Below Dark Surface (A11) Loamy Muck							- 1)	Thin Dark Surface (S9) (LR	R K, L)	
	Thick Dark S	urface (A12)			Loamy	Gleyed	Matrix (F	2)	Iron-Manganese Masses (F	12) (LRR K, L, R)	
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	144A, 145, 149B)	
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	rface (F6	6)	Red Parent Material (F21)		
	Sandy Redox	(S5)			Deplet	ed Dark	Surface ((F7)	Very Shallow Dark Surface (TF12)		
					Redox	Depress	sions (F8)	Other (Explain in Remarks)		
Restric	ctive Layer (if	observed)									
	Type:		l	None		_					
Dep	th (inches):						Hydri	ic Soil Present?	YesNoX	_	
Remar											
The cri	terion for hydri	ic soil is not n	net.								

Site:	Water Distribution System Extension to the Town	of Pesht	city/County: Marinette Cour	ıty		Sampling Date:	9/10/2019
	ant/Owner: Tyco Fire Products L		<u> </u>	•		Sampling Point:	
	gator(s): Ryan Bombeck, Micl		leisenger Section, Townshi	p, Range: Se		nip 30N, Range 24	
Landfo	·		Local relief (concave,				
	gion(LRR or MLRA): LRR K - North						
			0 to 2 percent slopes				
			ical for time of year? Yes X				
Are			or Hydrologysignific			,	
Are			or Hydrologynatura				
	· · · · · · · · · · · · · · · · · · ·		X No (If needed, exp				
		-					
SUMM	IARY OF FINDINGS						
	Hydrophytic Vegetation Present?	Yes	No Is the	Sampled Are	ea within a Wetl	and?	
	Hydric Soil Present?	Yes		sX	No		
1	Wetland Hydrology Present?	Yes		optional Wetl	land Site ID: <u>W</u>	V06	
<u> </u>							
Remar							
	31 in Appendix B. Representative P ecorded along existing roadsides.	SS dat	ta point for W06. Based on the presen	ce of all three	e parameters, this	s area is a wetland	. All data points
Weici	30010eu along existing roadsides.						
HYDF	ROLOGY						
Wetlar	nd Hydrology Indicators:						
	Primary Indicators (minimum of			Sec	ondary Indicato	rs (minimum of tv	vo required)
Х	Surface Water (A1)	Х	Water Stained Leaves (B9)	Su	urface Soil Cracks	s (B6)	
Х	High Water Table (A2)		Aquatic Fauna (B13)	Dr	ainage Patterns ((B10)	
Х	Saturation (A3)		Marl Deposits (B15)	Mo	oss Tim Lines (Be	6)	
Х	Water Marks (B1)		Hydrogen Sulfide Odor (C1)	Dr	ry-Season Water	Table (C2)	
<u> </u>	Sediment Deposits (B2)		Oxidized Rhizospheres on Living	Cr	ayfish Burrows (0	C8)	
<u> </u>	Drift Deposits (B3)		Roots (C3)	Sa	aturation Visible o	n Aerial Imagery (C9)
<u> </u>	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)	Stu	unted or Stressed	d Plants (D1)	
<u> </u>	Iron Deposits (B5)	-1 1	Recent Iron Reduction in Tilled Soil	X Ge	eomorphic Positic	on (D2)	
	Inundation Visible on Aerial		(C6)	Sh	nallow Aquitard (E	03)	
	Imagery (B7)		Thin Muck Surface (C7)	Mi	crotopographic R	telief (D4)	
	Sparsely Vegetated Concave		Other (Explain in Remarks)	FA	AC-Neutral Test (D5)	
	Surface (B8)						
Field (Observations:						
Surfac	e Water Present? Yes_	Х	No Depth (inches)1	Wetland H	lydrology Preser	nt?	
Water	Table Present? Yes_	Х	No Depth (inches)0		Yes_	X No	
Satura	tion Present? Yes_	Х	No Depth (inches)0				
Descri	be Recorded Data (stream guage, r	nonitor	ring well, aerial photos, previous inspe	ctions), if ava	ailable:		
Topog	raphic maps, aerial imagery, WWI c	ata, W	/DNR Wetland Indicators data.				
Remar		_					
The cr	iterion for wetland hydrology is met.	Based	d on WETS analysis, antecedent hydro	logic conditio	ons are within a n	ormal range.	

V L U L	TATION	Absolute %	Dominant		Sampling Point: DP31 Dominance Test Worksheet
Tree St	ratum Plot size: 30'	Cover	Species	Indicator Status	Dominance Test Worksneet
1.	Acer saccharum	40	Y	FACU	Number of dominant species that are OBL,
2.	Quercus bicolor	5	N	FACW	FACW, or FAC:(A)
3.					Total number of dominant species across
4.					all strata: 3 (B)
5. 6.				. —	Percent of dominant species that are OBL, FACW, or FAC: 67% (A/B)
7.					Prevalence Index Worksheet:
50%=	22.5% 20%= 9.0%	45	Total Cover	-	Total % cover of:
Shrub S					OBL species 81 x 1 81
	Rhamnus cathartica	50	Υ	FAC	FACW species 5 x 2 10
2.	Salix nigra	1	N	OBL	FAC species 60 x 3 180
3.					FACU species 40 x 4 160
4.					UPL species 0 x 5 0
5.					Column Totals: 186 (A) 431 (B)
6.					Prevalence Index: 2.3 (B/A)
7.					Hydrophytic Vegetation Indicators:
50%=	25.5% 20%= 10.2%	51	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb St	ratum Plot size: 5'				x Dominance Test is >50%
1.	Lemna minor	80	Υ	OBL	x Prevalence Index is <3.0*
2.	Rhamnus cathartica	10	N	FAC	Morphological Adaptations*
3.					Problematic Hydrophytic Vegetation*
4. 5.					* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6.					Definitions of Vegetation Strata:
7.					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.					height (DBH), regardless of height
9.					Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.					than or equal to 3.28 ft (1M) tall.
11.			-	. <u></u>	Herb - All herbaceous (non-woody) plants, regardless of size,
12.					and woody plants less than 3.28 ft tall.
50%=	45.0% 20%= 18.0%	90	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
Woody	Vine Stratum Plot size: 30'				
1.				· 	
2.					
3.					Hydrophytic Vegetaion Present?
4.					
50%=	0.0% 20%= 0.0%	0	Total Cover		YesXNo
	s: (Include photo numbers here or erion for hydrophytic vegetation is		e sheet.)		1

SOIL														
									Sampling Point:	DP31				
Profile	Description:	(Describe to	o depth	needed to d	locume	ent the ir	ndicator	or confirm abse	ence of indicators.)	_				
	Depth	Matri	х	Redox Fea	atures									
	(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks					
	0-2	10YR 2/1	100					Silt Loam						
	2-20	10YR 6/1	95	10YR 4/6	5	С	М	Loamy Sand	Prominent redox concentrations.					
* Type	· C=Concentra	ation D=Denl	etion RN	/l=Reduced	Matrix	CS=Coa	ted Sand	grains **Locati	ion: PL=Pore Lining, M=Matrix					
	Soil Indicato		otion, ren	n=reduced	iviatrix,	00-00 a	tou ourio	gramo Locati	Indicators for Proble	matic Soils				
,	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K,					
	Histic Epiped	on (A2)					` '	R,MLRA 149B)	Coast Prairie Redox (A16)	- ,				
	Black Histic (,		e (S8) (LRR R,	5 cm Mucky Peat (S3) (LR	R K, L, R)				
	Hydrogen Sul	fide (A4)			MLRA	149B)			Dark Surface (S7) (LRR K	L, M)				
	Stratified Laye	ers (A5)			Thin D	ark Surfa	ace (S9)		Polyvalve Below Surface (S8) (LRR K, L)					
Χ	X Depleted Below Dark Surface (A11) Loamy M							⁻ 1)	Thin Dark Surface (S9) (LF	RR K, L)				
	<u> </u>						Matrix (F	2)	Iron-Manganese Masses (F12) (LRR K, L, R)				
	Sandy Mucky	Mineral (S1)			Deplet	ed Matrix	(F3)		Mesic Spodic (TA6) (MLRA	A 144A, 145, 149B)				
	Sandy Gleyed	d Matrix (S4)			Redox	Dark Su	Surface (F6) Red Parent Material (F							
Χ	Sandy Redox	(S5)			Deplet	ed Dark	Surface (F7)	Very Shallow Dark Surface	(TF12)				
					Redox	Depress	ions (F8)	Other (Explain in Remarks)				
Restric	tive Layer (if	observed)												
	Type:		1	None										
Dept	th (inches):						Hydri	c Soil Present?	Yes X No	_				
Remarl	ks:					<u> </u>								
The crit	terion for hydri	c soil is met.												

Site:	Water Distribution System Extension to the Town	of Peshtigo City/County: Ma	rinette County		Sampling Date:	9/11/2019
	ant/Owner: Tyco Fire Products L		-			
			on, Township, Ra	inge: Section 18, Towns		
Landfo	orm (hillslope,terrace,etc.): Toe Slo			'		
	gion(LRR or MLRA): LRR K - North			ong. 87.630406° W		
	ap Unit Name: Wainola loamy fine s					
	matic/hydrologic conditions on the si					
Are		or Hydrology		· · · · · · · · · · · · · · · · · · ·		
Are	Vegetation Soil					
	ormal Circumstances Present?				3)	
SUMN	MARY OF FINDINGS					
	Hydrophytic Vegetation Present?	Yes X No	Is the Sam	pled Area within a Wet	land?	
	Hydric Soil Present?		Yes	X No		
	Wetland Hydrology Present?	<u> </u>	·	nal Wetland Site ID: \	W07	
<u> </u>						
Rema	rks:					
	32 in Appendix B. PEM data point re	ecorded in W07. Based on the pr	esence of all thre	ee parameters, this area	is a wetland. All data	points were
record	led along existing roadsides.					
HYDI	ROLOGY					
Wetla	nd Hydrology Indicators:					
	Primary Indicators (minimum of c	one is required; check all that a	apply)	Secondary Indicate	ors (minimum of two	o required)
Х	Surface Water (A1)	Water Stained Leaves (B9		Surface Soil Crack	•	-
Х	High Water Table (A2)	Aquatic Fauna (B13)		Drainage Patterns	(B10)	
Х	Saturation (A3)	Marl Deposits (B15)		Moss Tim Lines (B	36)	
	Water Marks (B1)	Hydrogen Sulfide Odor (C	1)	Dry-Season Water	Table (C2)	
	Sediment Deposits (B2)	Oxidized Rhizospheres on		Crayfish Burrows ((C8)	
	Drift Deposits (B3)	Roots (C3)		Saturation Visible	on Aerial Imagery (C	9)
	Algal Mat or Crust (B4)	Presence of Reduced Iron	(C4)	Stunted or Stresse	ed Plants (D1)	
	Iron Deposits (B5)	Recent Iron Reduction in 7	Tilled Soil	X Geomorphic Positi	ion (D2)	
	Inundation Visible on Aerial	(C6)		Shallow Aquitard (D3)	
l	Imagery (B7)	Thin Muck Surface (C7)		Microtopographic F	Relief (D4)	
	Sparsely Vegetated Concave	Other (Explain in Remarks	s)	X FAC-Neutral Test	(D5)	
	Surface (B8)			<u> </u>		
Field	Observations:					
Surfac	ce Water Present? Yes	X No Depth (inc	hes) 1 We	tland Hydrology Prese	ent?	
		X No Depth (inc			X No	
		X No Depth (inc		_		
	_		,			
Descri	ibe Recorded Data (stream guage, n		evious inspections	s). if available:		
	raphic maps, aerial imagery, WWI d		•	o),		
Rema		dia, 1.2	autu.			
	riterion for wetland hydrology is met.	Based on WETS analysis, antec	edent hydrologic	conditions are within a r	normal range.	

VEGE	TATION			Absolute %	Dominant		Sampling Point: DP32
Tree St	ratum_	Plot size:	30'	Cover	Species	Indicator Status	Dominance Test Worksheet
1. 2.							Number of dominant species that are OBL, FACW, or FAC: 1(A)
3. 4.							Total number of dominant species across all strata:1(B)
5. 6.							Percent of dominant species that are OBL, FACW, or FAC: 100% (A/B)
7.					. <u></u>		Prevalence Index Worksheet:
50%=	0.0%	20%=	= 0.0%	0	Total Cover		Total % cover of:
Shrub S	Stratum_	Plot size:	15'				OBL species
1.							FACW species 2 x 2 4
2.							FAC species 0 x 3 0
3.							FACU species 0 x 4 0
4.							UPL species 0 x 5 0
5.							Column Totals: 102 (A) 104 (B)
6.							Prevalence Index: 1.0 (B/A)
7.							Hydrophytic Vegetation Indicators:
50%=	0.0%	20%=	= 0.0%	0	Total Cover		x Rapid Test for Hydrophytic Vegetation
Herb St	ratum	Plot size:	5'				x Dominance Test is >50%
	Typha angu	stifolia		90	Υ	OBL	x Prevalence Index is ≤3.0*
-	Scirpus atro			10	N	OBL	Morphological Adaptations*
3.	Impatiens ca	apensis		2	N	FACW	Problematic Hydrophytic Vegetation*
4. 5.							* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6.							Definitions of Vegetation Strata:
7.					-	-	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
8.							height (DBH), regardless of height
9.							 Sapling/shrub - Woody plants less than 3 in. DBH and greater
10.					· 		than or equal to 3.28 ft (1M) tall.
11.							 Herb - All herbaceous (non-woody) plants, regardless of size,
12.						-	and woody plants less than 3.28 ft tall.
50%=	51.0%	20%=	= 20.4%	102	Total Cover	-	<u></u>
Woodv	Vine Stratun		30'				Woody Vines - All woody vines greater than 3.28 ft in height.
1.		=					
2.							
3.							Hydrophytic Vegetaion Present?
4.							.,,,
50%=	0.0%	20%=	= 0.0%	0	Total Cover		Yes <u>X</u> No
		hoto number rophytic vege		r on a separat met.	e sheet.)		1

SOIL											
	Sampling Point: DP32										
Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)											
	Depth	Redox Fea	atures								
	(inches) Color % Co			Color	olor %		ype* Loc** Texture		Remarks		
	0-2 10YR 2/1 100						Silt Loam				
	2-10	10YR 2/1	98	10YR 4/6	2	С	М	Silt Loam	Prominent redox concentrations.		
	10-20	10YR 4/6	98	2.5YR 4/8	2	С	М	Loamy Sand	Prominent redox concentrations.		
* Type:	C=Concentra	ation, D=Depl	etion, RI	∕/I=Reduced	Matrix,	CS=Coat	ted Sand	d grains **Locati	on: PL=Pore Lining, M=Matrix		
Hydric	Soil Indicato	rs:		1	1				Indicators for Problem	atic Soils	
	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L,	MLRA 149B)	
	Histic Epipede	on (A2)			Dark S	Surface (S	S7)(LRR	R,MLRA 149B)	Coast Prairie Redox (A16)		
	Black Histic (A		,		w Surface	e (S8) (LRR R,	5 cm Mucky Peat (S3) (LRR	5 cm Mucky Peat (S3) (LRR K, L, R)			
	Hydrogen Sul		MLRA 149B)				Dark Surface (S7) (LRR K, L, M)				
	Stratified Laye	ers (A5)			Thin Dark Surface (S9)				Polyvalve Below Surface (S8) (LRR K, L)		
	Depleted Belo	ow Dark Surfa	ace (A11)	Loamy Mucky Mineral (F1)				Thin Dark Surface (S9) (LRR K, L)		
	Thick Dark Su	urface (A12)			Loamy Gleyed Matrix (F2)				Iron-Manganese Masses (F	12) (LRR K, L, R)	
	Sandy Mucky	Mineral (S1)			Depleted Matrix (F3)				Mesic Spodic (TA6) (MLRA	144A, 145, 149B)	
	Sandy Gleyed	d Matrix (S4)		X	Redox Dark Surface (F6)				Red Parent Material (F21)		
	Sandy Redox (S5)					ed Dark	Surface	(F7)	Very Shallow Dark Surface (TF12)	
					Redox	Depress	ions (F8)	Other (Explain in Remarks)		
Restric	tive Layer (if	observed)									
	Туре:		l	None							
Dept	h (inches):						Hydri	ic Soil Present?	YesXNo		
Remark		9									
i ne crit	erion for hydri	c soil is met.									

Site: Water Distribution System Extension to the Town of I	Peshtigo City/County:	Marinette County		Sampling Date:	9/11/2019		
Applicant/Owner: Tyco Fire Products L.P			State: WI				
Investigator(s): Ryan Bombeck, Michael	el Meisenger Se	ection, Township, R	Range: Section 18, Towr	nship 30N, Range 24E			
Landform (hillslope,terrace,etc.): Shoulder S	Slope Local re	elief (concave, cor	nvex, none): Convex	Slope	e (%): 5%		
Subregion(LRR or MLRA): LRR K - Northce	entral Forests Lat. 4	5.070847° N	Long. 87.630405° W	Datum: WGS	3 84		
Soil Map Unit Name: Wainola loamy fine san							
Are climatic/hydrologic conditions on the site	typical for time of year?	Yes X	No(If no, exp	plain in the Remarks)			
	or Hydrology						
Are Vegetation Soil _	or Hydrology	naturally p	problematic?				
Are Normal Circumstances Present?	Yes X No	(If needed, explain	any answers in Remark	ks)			
SUMMARY OF FINDINGS							
Hydrophytic Vegetation Present? Y			mpled Area within a W				
Hydric Soil Present? Y		·	NoX	-			
Wetland Hydrology Present? Y	Yes NoX	If yes, opti	ional Wetland Site ID:				
Remarks:	accorded at the boundary of l	MOZ Bood on the	a abassas of all three po	aramatara this araa is ar	a waland All		
Photo 32 in Appendix B. Upland data point re data points were recorded along existing roa	-	WU7. Baseu on un	e absence or an innee pa	irameters, triis area is ar	i upianu. Aii		
January 1, 12 1, 1							
HYDROLOGY							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of one			Secondary Indicators (minimum of two required)				
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 Tim Lines (B6)				
Water Marks (B1)	Hydrogen Sulfide Odor		Dry-Season Water Table (C2)				
Sediment Deposits (B2)	Oxidized Rhizospheres Roots (C3)	on Living	Crayfish Burrows (C8)				
Drift Deposits (B3)	. ,		Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Presence of Reduced I	` ′	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)	Recent Iron Reduction (C6)	in Tilled Soil	Geomorphic Pos	· ·			
Inundation Visible on Aerial	,		Shallow Aquitard (D3)				
Imagery (B7)	Thin Muck Surface (C7)	·	Microtopographic	` '			
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Rema	arks)	FAC-Neutral Test (D5)				
` ′							
Field Observations:							
	No X Depth (letland Hydrology Pres				
	No X Depth (Yes NoX				
Saturation Present? Yes	No X Depth ((inches)					
			N. 97 91.111				
Describe Recorded Data (stream guage, mo	-		ns), if available:				
Topographic maps, aerial imagery, WWI data	a, WDNR Wetland Indicator	rs data.					
Remarks: The criterion for wetland hydrology is not met	t Based on WETS analysis	antecedent hydro	plogic conditions are with	nin a normal range.			
The discrimination would be a second of the	1. Duood on 112. 2 ana., 2.2	, 411100040111111	nogio conditione are	mi a nomiai .ago.			

VLGL	TATION			Absolute %	Dominant		Sampling Point: DP33
<u>Tree Stratum</u> Plot size: <u>30'</u>		Cover	Species	Indicator Status	Dominance Test Worksheet		
1. 2.							Number of dominant species that are OBL, FACW, or FAC: 0 (A)
3. 4.							Total number of dominant species across all strata:2(B)
5. 6.							Percent of dominant species that are OBL, FACW, or FAC: 0% (A/B)
7.							Prevalence Index Worksheet:
50%=	0.0%	20%=	= 0.0%	0	Total Cover		Total % cover of:
Shrub S	stratum_	Plot size:	15'	 :			OBL species 0 x 1 0
1.							FACW species 0 x 2 0
2.							FAC species 0 x 3 0
3.							FACU species 103 x 4 412
4.							UPL species 0 x 5 0
5.							Column Totals: 103 (A) 412 (B)
6.					_		Prevalence Index: 4.0 (B/A)
7.					_		Hydrophytic Vegetation Indicators:
50%=	0.0%	20%=	= 0.0%	0	Total Cover		Rapid Test for Hydrophytic Vegetation
Herb St	ra <u>tum</u>	Plot size:	5'				Dominance Test is >50%
	Poa pratensi			50	Υ	FACU	Prevalence Index is ≤3.0*
-	Ambrosia art			30	Υ Υ	FACU	Morphological Adaptations*
-	Festuca rubr			20	N	FACU	Problematic Hydrophytic Vegetation*
4.	Taraxacum o	officinale		2	N	FACU	* Indicators of hydric soil and wetland hydrology must be present,
5.	Trifolium pra	tense		1	N	FACU	unless disturbed or problematic
6.							Definitions of Vegetation Strata:
7.							Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height
8.							1
9.							Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1M) tall.
10.						-	-
11.							Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
12.							allu woody pianto 1655 than 5.20 it tail.
50%=	51.5%		= 20.6%	103	Total Cover		Woody Vines - All woody vines greater than 3.28 ft in height.
-	Vine Stratum	Plot size:	30'				
1					· 	<u>. </u>	-
2					· 	<u>. </u>	
3						<u>. </u>	Hydrophytic Vegetaion Present?
4.						<u> </u>	
50%=	0.0%	20%=	= 0.0%	0	Total Cover		YesNoX
Remark	s: (Include n	hoto number	s here o	r on a separat	te sheet)		
		rophytic vege		•	e silect.		

SOIL	SOIL											
									Sampling Point:	DP33		
Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)												
	Depth Matrix Redox			Redox Fe	atures							
	(inches) Color % Col		Color	Color %		Loc**	Texture	Remarks				
	0-4	10YR 2/2	100					Silt Loam				
	4-18	10YR 4/6	100					Loamy Sand				
* Tuno	· C - Concentra	otion D-Donl	otion DN	1-Daduard	Motrix	CS_Coo	tod Cond	Laroino **Locoti	on: DIDoro Lining MMotriy			
* Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: Indicators for Problematic Soils												
,	Histosol (A1)				Strippe	ed Matrix	(S6)		2 cm Muck (A10) (LRR K, L,			
	Histic Epiped	on (A2)						R MI RA 149B)	Coast Prairie Redox (A16)			
	Black Histic (Dark Surface (S7)(LRR R,MLRA 149B) Polyvalve Below Surface (S8) (LRR R,				5 cm Mucky Peat (S3) (LRR K, L, R)			
	Hydrogen Sulfide (A4)					149B)		,	Dark Surface (S7) (LRR K, L, M)			
	Stratified Layers (A5)					ark Surfa	ace (S9)			Polyvalve Below Surface (S8) (LRR K, L)		
	Depleted Belo		ace (A11)	Loamy Mucky Mineral (F1)				Thin Dark Surface (S9) (LRR K, L)			
	Thick Dark Su	urface (A12)	,	,	Loamy Gleyed Matrix (F2)				Iron-Manganese Masses (F12) (LRR K, L, R)			
	Sandy Mucky			Depleted Matrix (F3)				Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
	Sandy Gleyed			Redox Dark Surface (F6)				Red Parent Material (F21)				
							Surface ((F7)	Very Shallow Dark Surface ((TF12)		
					Redox Depressions (F8)				Other (Explain in Remarks)			
Restric	tive Layer (if	observed)										
	Type:			None								
Dept	th (inches):						Hydri	c Soil Present?	YesNoX			
Remark	ks: terion for hydri	c soil is not n	net									
1110 0111	ichon for flydri	0 3011 13 1101 11	iiot.									



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