

WETLAND DELINEATION REPORT

Route 59 and Bartlett Road South Barrington, Cook County, Illinois

McNaughton Development

MT2017

September 11, 2020



WETLAND DELINEATION REPORT

Route 59 and Bartlett Road

South Barrington, Cook County, Illinois

Prepared for:

McNaughton Developoment 11S220 Jackson Street, Suite #101 South Barrington, Cook County, Illinois

Attn: John Barry

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Project Reference Information

MT2017

September 11, 2020

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1.0 INTRODUCTION

Project Name:	Route 59 and Bartlett Rd	Client:	McNaughton Development
Location:	South Barrington, Cook County, Illing	ois	
Coordinates:	NE S21 T42N R9E		
	Latitude: 42.106169 Longitude: -88	.181692	
Date of site visit:	9/10/2020		

Gary R Weber Associates performed a formal wetland delineation within the study area located on southwest of IL-Route 59 and Bartlett Road in South Barrington, Cook County, Illinois (Exhibit A: Location), hereafter referred to as the study area. It is generally bounded by residential development to the north, east, and south, and IL Rt 59 and a railway to the west. The study area, as presented in this report, represents the property limits investigated by GRWA for the presence of regulated surface water resources. These limits do not necessarily reflect the boundaries of any proposed development activities. It is within the Spring Creek subwatershed and the Fox River watershed.

The study area consists of a landscape nursery containing rows of cultivated trees and shrubs. A stormwater management pond associated with the residential development is located in the southern portion of the study area.

1.1 DELINEATION SUMMARY

Seven (7) wetlands were identified within the project area. Wetland acreages provided in this report are estimations; a survey of staked boundaries must be performed to obtain exact size and location information. Wetland descriptions and sizes are included in the table below.

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Wetland ID	Size (ac)	C-Value	FQI	(ft)
Wetland 1	3.34	2.79	13.68	50
Wetland 2	1.91	2.88	14.4	50
Wetland 3	0.21	2.14	8.02	30
Wetland 4	0.02	1.75	4.95	
Wetland 5	0.16	1.9	6.01	30
Wetland 6	0.17	2.11	6.33	30
Wetland 7	1.13	2.93	10.96	50

1.2 REGULATION SUMMARY

As of June 22, 2020, the Navigable Waters Protection Rule is in effect in all states but Colorado. Briefly, under the 2020 Rule (33 C.F.R. § 328.3) there are four categories of WOTUS:

- 1. Territorial seas and traditional navigable waters;
- 2. Tributaries of jurisdictional waters;
 - a. Tributary must be perennial or intermittent in a typical year
- 3. Lakes, ponds, and impoundments that contribute surface water flow to a jurisdictional water in a typical year; and
- 4. Wetlands adjacent to non-wetland jurisdictional waters.
 - a. Adjacent means: touching at least at one point of a water identified above; inundated by flooding from a water identified above; only separated by a natural berm, bank or similar; separated by a structure and still maintains a direct hydrologic surface connection during a typical year.

In Cook County, isolated wetlands are regulated under the Metropolitan Water Reclamation Districts (MWRD) Watershed Management Ordinance (WMO).

No observable connections to regulated waterways described were noted. Wetlands 1 - 7 may be considered isolated and under MWRD regulation.

At the time of this wetland delineation report, current regulations state that this delineation is valid for 3 years from the date of site visit.

1.3 THREATENED AND ENDANGERED SPECIES

Based on a 9/11/2020 review of the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) website, sensitive (federally threatened or endangered) plant or animal species habitat are not located on or adjacent to the study area (see attached USFWS Review Summary).

According to the Illinois Department of Natural Resources (IDNR), the following protected resources may be in the vicinity of the project location: Black-Billed Cuckoo (Coccyzus erythropthalmus), Common Moorhen (Gallinula chloropus), King Rail (Rallus elegans), Yellow-Headed Blackbird (Xanthocephalus xanthocephalus), and Crabtee Nature Center INAI Site. Further information from the IDNR is forthcoming (see Appendix F). (see attached IDNR EcoCAT Results Report).

2.0 PROJECT PURPOSE

The purpose of the site visit was to identify regulated surface wetland, non-wetland water resources or Waters of the United States (WOUS) on, or within 100 feet, of the study area. A floodplain determination was not included as part of our investigation.

On-site wetland areas encountered were delineated using standard methods sanctioned by the United States Army Corps of Engineers in the <u>Corps of Engineers Wetlands Delineation Manual (1987)</u> and 2010 <u>Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region</u>. Plant observations were made for calculating the Coefficient of Conservatism (ĉ) and Floristic Quality Index (FQI) for each wetland plant community using the Wilhelm method (Swink and Wilhelm, 1994).

On-site non-wetland water resources encountered were given established Ordinary High Water Mark (OHWM) boundaries using the definitions described in Section 404 of the Clean Water Act (CWA Section 404(b).(1) Guidelines (40CFR230)

3.0 EXHIBIT REVIEW

- The **Location Map** identifies approximate location of study area and nearby major roadways (Exhibit A)
- The **National Wetlands Inventory** identifies two (2) freshwater, emergent, persistent wetlands (PEM1F/C) within the southern portion of the study area (Exhibit B).
- The **Soil Map** identifies the following soils within the study area:

1903A Muskego and Houghton Mucks - Hydric 232A Ashkum Silty Clay Loam – Predominantly Hydric 146B Elliot Silt Loam – Predominantly Non-hydric 531B/C2 Markham Silt Loam – Predominantly Non-hydic

Field evaluations are made to determine if a hydric inclusion may be present (Exhibit C).

- The United States Geologic Survey (USGS) Topographic Map identifies a marsh or swamp in the southeastern portion of the site (Exhibit D).
- The **Flood Insurance Rate Map** identifies the study area outside the 500-year floodplain (Exhibit E).
- The **Aerial Photograph** identifies the present conditions within the study area. Locations of Wetland 1-7 are denoted (Exhibit F).
- The **Site Photographs** show conditions exhibited within the study area at the time of the site visit (Exhibit G)

4.0 METHODS

Prior to the site visit, a preliminary site evaluation is performed using aerial photography and natural resource mapping. Potential wetland areas and non-wetland waters units identified by these resources are evaluated in the field.

1987 USACE Wetland Delineation Manual and 2010 Regional Supplement.

Potential wetland areas were investigated to determine if they meet the requirements for a wetland based on the USACE parameters of vegetation, hydrology, and soils. In general, positive indication of each of the three parameters must be demonstrated to classify an area as wetland. Each of these parameters is discussed below.

Vegetation – Three vegetative indicators are applied to plant communities in order to determine if the hydrophytic vegetation criterion is met.

- More than 50% of the dominant plant species across all strata must be hydrophytic (water tolerant). Wetland plants fall into three indicator classes based on differing tolerances to water level and soil saturation. These indicators are rated obligate wetland (OBL), facultative wetland (FACW), or facultative (FAC).
- 2. The prevalence index is 3.0 or less. The prevalence index is a weighted-average wetland indicator status of all plant species in a sampling plot. The index is used to determine whether hydrophytic vegetation is present on sites where indicators of hydric soil and wetland hydrology are present but the vegetation initially fails the dominance test.
- 3. Over 50% of non-wetland plants in a sample area exhibit morphological adaptations for life in wetlands. To apply this indicator, adapted plants must occur in areas where indicators of hydric soil and wetland hydrology are present.

Hydrology – To be considered a wetland, an area must have 14 or more consecutive days of flooding or ponding, or a water table 12 inches or less below the soil surface, during the growing season at a minimum frequency of 5 years in 10. Wetland hydrology indicators are divided into four groups as described below:

Group A – Observation of Surface Water or Saturated Soils

Group B – Evidence of Recent Inundation

Group C – Evidence of Recent Soil Saturation

Group D –Evidence from Other Site Conditions or Data

Soils - To be considered a wetland, an area must contain hydric soil. Hydric soils are formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic (lacking oxygen) conditions in the upper part. Soils generally, but not always, will develop indicators that are formed predominantly by the accumulation or loss of iron, manganese, sulfur, or carbon compounds in a saturated and anaerobic environment. The most current edition of the United States Department of Agriculture, Natural Resource Conservation Service *Field Indicators of Hydric Soils in the United States* is used for identification of hydric soils. Field indicators of hydric soils include but are not limited to the presence of any of the following: histic epipedon, sulfidic odor, at least 2 centimeters of

muck, depleted matrix, and/or redoximorphic features. Field indicators are usually examined in the top 20 inches of the soil. Soil colors are determined using *Munsell Soil Color Charts*.

Areas meeting these three criteria are staked in the field for surveying purposes. Boundaries are demarcated in the field with pink flagged pin stakes labeled "WETLAND DELINEATION." Staked boundaries are mapped on an aerial photograph included in this report. Approximate off-site wetland boundaries are identified on the aerial photograph and were determined using available aerial photographs, wetland maps, and field observation.

The Ordinary High Water Mark (OHWM)

Potential non-wetland water resources were investigated to determine if they meet requirements for a regulated WOUS or isolated waters unit based on USACE parameters.

Ordinary High Water Mark (OHWM) boundaries were established using the definition provided in 33 CFT Part 328.3 of the Clean Water Act. The OHWM is defined as the line on the shore established by the fluctuations of water. This line can be identified by physical characteristics such as a clear, natural line on the bank, changes in the character of the soil, shelving, vegetation matted down, bent, or absent, leaf litter disturbed or washed away, sediment deposition, water staining, the presence of litter and debris, destruction of terrestrial vegetation, sediment sorting, scour, multiple observed or predicted flow events, and abrupt change in plant community.

5.0 REVIEWED ON-SITE CONDITIONS

5.1 SITE SUMMARY

The study area consists of a tree nursery dominated by rows of cultivated trees and open field. The nursery began production in 1980 and remained largely unchanged until 2008 with the development of Acadia Dr and the stormwater detention basin.

The site is characterized by tree rows with open field dominated by weedy uplands species (Photos 1-7).

5.2 WATER RESOURCES SUMMARY

Wetland 1. This wetland (approximately 1.91 acres in total size) is located within the southern portion of the study area. The wetland is an emergent wetland with open water and portions of scrub-shrub and wooded communities associated with the tree farm (see Photos 8-9). The wetland is a depressional feature and that existed prior to the surrounding development.

Sample points were established within and adjacent to Wetland 1 to characterize the vegetation, soils, and hydrology (Exhibit F: Aerial Photograph). The wetland boundaries were demarcated with pink flagged pin stakes.

Wetland 1 was primarily vegetated by Reed Canary Grass, Cattail (*Typha sp.*), Eastern Cottonwood (*Populus deltoides*), Goldenrod (*Solidago sp*) and Sawtooth Sunflower (*Helianthus grosseserratus*) and Common Reed (*Phragmites sp*). The mapped soil series is Ashkum Silty Clay Loam, a predominantly hydric soil. USDA field indicator A11: Depleted Below Dark Surface provided evidence of hydric soil. Surface water, saturation, and water-stained leaves provided evidence of persistent hydrology (See Wetland Determination Data Forms).

The Coefficient of Conservatism (ĉ) for the on-site portion of Wetland 1 was 2.79, and the Floristic Quality Index (FQI) was 13.68 (see attached Floristic Quality Data). These values indicate a moderate quality plant community.

Wetland 2. This wetland (approximately 1.91 acres in total size) is located along the west-central portion of the study area. It is a depressional, emergent wetland with portions of scrub-shrub and wooded communities (see Photo 10-13). No observable outlets were noted.

Sample points were established within Wetland 2 to characterize the vegetation, soils, and hydrology (Exhibit F: Aerial Photograph). The wetland boundaries were demarcated with pink flagged pin stakes.

Wetland 2 was primarily vegetated by Reed Canary Grass (*Phalaris arundinacea*), European Buckthorn (*Rhamnus sp*) and Common Reed. The mapped soil series is Ashkum Silty Clay Loam, a predominantly hydric soil. USDA field indicator A12: Thick Dark Surface provided evidence of hydric soil. Surface water, saturation, and water-stained leaves provided evidence of persistent hydrology (See Wetland Determination Data Forms).

The Coefficient of Conservatism (ĉ) for the on-site portion of Wetland 2 was 2.88, and the Floristic Quality Index (FQI) was 14.40 (see attached Floristic Quality Data). These values indicate a moderate quality plant community.

Wetland 3. This wetland (approximately 0.21 acres in total size) is located along Rt 59 at the western boundry. It is a depressional, concave feature that is part of the roadside ditch (see Photo 14-15).

Sample points were established within Wetland 3 to characterize the vegetation, soils, and hydrology (Exhibit F: Aerial Photograph). The wetland boundaries were demarcated with pink flagged pin stakes.

Wetland 3 was primarily vegetated by European Buckthorn and Pinkweed (*Persicaria pensylvanica*) The mapped soil series is Muskego and Houghton mucks, a hydric soil. USDA field indicator A11: Depleted Below Dark Surface provided evidence of hydric soil. Surface water, saturation, and water-stained leaves provided evidence of persistent hydrology (See Wetland Determination Data Forms).

The Coefficient of Conservatism (ĉ) for Wetland 3 was 2.14, and the Floristic Quality Index (FQI) was 8.02 (see attached Floristic Quality Data). These values indicate a low quality plant community.

Wetland 4. This wetland (approximately 0.02 acres in total size) is a small wetland in the central portion of the study area. It is a depressional feature in the field (see Photo 16).

Sample points were established within Wetland 4 to characterize the vegetation, soils, and hydrology (Exhibit F: Aerial Photograph). The wetland boundaries were demarcated with pink flagged pin stakes.

Wetland 4 was primarily vegetated by Reed Canary Grass and Pink Weed. The mapped soil series is Ashkum Silty Clay Loam, a predominantly hydric soil. USDA field indicator A11: Depleted provided evidence of hydric soil. Surface water, Saturation, and drift deposits provided evidence of persistent hydrology (See Wetland Determination Data Forms).

The Coefficient of Conservatism (ĉ) for Wetland 4 was 1.75, and the Floristic Quality Index (FQI) was 4.95 (see attached Floristic Quality Data). These values indicate a low quality plant community.

Wetland 5. This wetland (approximately 0.16 acres in total size) is located in the central portion of the study area. It is a depressional area surrounded by the tree farm (see Photo 17).

Sample points were established within Wetland 5 to characterize the vegetation, soils, and hydrology (Exhibit F: Aerial Photograph). The wetland boundaries were demarcated with pink flagged pin stakes.

Wetland 5 was primarily vegetated by Reed Canary Grass. The mapped soil series is Ashkum Silty Clay Loam, a predominantly hydric soil. USDA field indicator A12: Depleted Below Dark Surface provided evidence of hydric soil. Geomorphic position and the FAC-neutral test provided evidence of persistent hydrology (See Wetland Determination Data Forms).

The Coefficient of Conservatism (ĉ) for Wetland 5 was 1.9, and the Floristic Quality Index (FQI) was 6.01 (see attached Floristic Quality Data). These values indicate a low quality plant community.

Wetland 6. This wetland (approximately 0.17 acres in total size) is in the eastern portion of the site. It is a depressional associated with a roadside ditch (see Photo 18).

Sample points were established within Wetland 6 to characterize the vegetation, soils, and hydrology (Exhibit F: Aerial Photograph). The wetland boundaries were demarcated with pink flagged pin stakes.

Wetland 6 was primarily vegetated by Reed Canary Grass The mapped soil series is Ashkum Silty Clay Loam, a predominantly hydric soil. USDA field indicator A11: Depleted Below Dark Surface provided evidence of hydric soil. Geomorphic position and the FAC-Neutral test provided evidence of persistent hydrology (See Wetland Determination Data Forms).

The Coefficient of Conservatism (ĉ) for Wetland 6 was 2.11, and the Floristic Quality Index (FQI) was 6.33 (see attached Floristic Quality Data). These values indicate a low quality plant community.

Wetland 7. This wetland (approximately 1.13 acres in total size) is in the east-southern portion of the site. It is a depressional wetland associated with the roadside ditch and adjacent detention basin (see Photo 19-21). The wetland was previously avoided by development. An excavated roadside ditch enters the site within Wetland 7 through a culvert. The culvert and ditch were modified through the installation of an entrance from Bartlett Rd in 2018.

Sample points were established within Wetland 7 to characterize the vegetation, soils, and hydrology (Exhibit F: Aerial Photograph). The wetland boundaries were demarcated with pink flagged pin stakes.

Wetland 7 was primarily vegetated by Reed Canary Grass. The mapped soil series is Ashkum Silty Clay Loam, a predominantly hydric soil. USDA field indicator A12: Thick Dark Surface provided evidence of hydric soil. Sparsely vegetated concave surface and drift deposits provided evidence of persistent hydrology (See Wetland Determination Data Forms).

The Coefficient of Conservatism (ĉ) for Wetland 7 was 2.93, and the Floristic Quality Index (FQI) was 10.96 (see attached Floristic Quality Data). These values indicate a moderate quality plant community.

6.0 REGULATORY STATEMENT

6.1 Federal Regulations

The deposition of dredge or fill materials into federally jurisdictional wetlands or Waters of the United States is regulated by the USACE under Section 404 of the Clean Water Act.

The Chicago District USACE has implemented a Regional Permit Program (RPP), replacing the previous Nationwide Permit Program. Generally, the RPP authorizes up to 0.10 acre of low quality wetland to be filled without mitigation. Low quality wetland impacts totaling between 0.10 acre and 1.0 acres may qualify for a Regional Permit with compensatory wetland mitigation. Under the RPP, total wetland impacts in excess of 1.0 acre or any single crossing greater than 0.25 acre will not qualify for a Regional Permit and will require an Individual Permit.

Projects qualifying for a Regional Permit must also establish and/or enhance an upland buffer of native plants (or other appropriate vegetation approved by the District) adjacent to all created, restored, enhanced or preserved waters of the U.S., including wetlands. Created buffers should be established on 6:1 or gentler slopes. Minimum buffer widths are as follows:

- For any waters of the U.S. that do not qualify as wetland (e.g., lakes, rivers, ponds, etc.) the buffer shall be a minimum of 50 feet from the Ordinary High water Mark (OHWM);
- For any jurisdictional wetland from 0.25 acres and up to 0.50 acre, the buffer shall be a minimum of 30 feet;
- For any jurisdictional wetland over 0.50 acre, the buffer shall be a minimum of 50 feet; and
- For any waters of the U.S. determined to be a high-quality aquatic resource, the buffer shall be a minimum of 100 feet.

The District may allow buffer widths below the above-required minimums. It shall be incumbent on the applicant to demonstrate that no practicable alternatives are available that would not impact the required buffer widths.

Under the regulations, secondary impacts (both on-site and off-site) from filling also must be evaluated. Mitigation may be required at a higher rate if a project will significantly alter wetland functions such as stormwater detention, water filtration, sediment trapping, and/or wildlife habitat.

Before mitigation will be approved, reasonable proof that avoidance or minimization of wetland impacts has been attempted must be provided to the USACE.

A USACE permit is not required if the wetlands are avoided and construction erosion near a wetland is controlled.

6.2 Municipal and State Regulations

Cook County (MWRD): In Cook County, isolated wetlands are regulated under the Metropolitan Water Reclamation Districts (MWRD) Watershed Management Ordinance (WMO). Permit submittal for impact to an isolated wetland shall describe all development in accordance with Article 6 of the ordinance. Either the District or authorized municipality shall verify all onsite isolated wetland determinations and delineations.

Development of wetlands that fall under the USACE Jurisdiction will be prohibited unless a permit for all regulated activities is obtained from appropriate state and federal employees.

The District or authorized municipality has final determination of the status of the isolated wetland per §603.8 of the ordinance. Assessed isolated wetlands will be classified as high quality or standard isolated wetlands. High quality wetlands meet the following criteria:

- Swink and Wilhelm Floristic Quality Index (FQI) value ≥20 during a single season assessment or a native mean C-value of 3.5 or higher; or
- The wetland is known to possess a federal or state listed threatened and endangered species based on FWS and IDNR consultations

The WMO authorizes up to 0.10 acre of isolated wetland to be filled without mitigation. Impacts to standard isolated wetlands that are \geq 0.10 acre will be prohibited unless documentation is submitted which demonstrates that no practical alternative to wetland modification exits. Impacts to high quality wetlands will be prohibited unless it is demonstrated that no practical alternative to wetland modification exits or avoidance of high quality wetlands would create a hazardous road condition. The District or authorized municipality will make the final determination as to whether the modification represents the least amount of wetland impact required to allow economic use of the parcel or to mitigate the road hazard.

Wetland buffers for isolated wetlands shall be determined according to the classification of the wetland according to §603.8 in the ordinance. Minimum wetland buffer widths will be as follows:

- For standard isolated wetlands greater than or equal to 0.10 acre and less than 0.50 acre, the buffer will be a minimum of 30ft from the boundary
- For standard isolated wetlands greater than or equal to 0.50 acre, the buffer will be a minimum of 50ft from the boundary
- For high quality wetlands, the buffer will be a minimum of 100ft from the boundary

The wetland buffer for isolated wetlands may be varied to a minimum of the greater of one-half the required buffer width or thirty feet, upon approval of either the District or authorized municipality. Mitigation for impacts to an isolated wetland shall provide for the replacement of lost wetland environment. Impacts to standards isolated wetlands <0.10 acre do not require mitigation. Impacts to standard isolated wetlands \geq 0.10 acre require a 1.5:1 mitigation ratio. Impacts to high quality wetlands will require a 3:1 mitigation ratio. Mitigated isolated wetlands will be designed to duplicate or improve hydrologic and biologic features of the original wetland.

Any developments within a riparian environment that is not a Waters of the U.S. (WOUS) will require a buffer 30ft from the Ordinary High-Water Mark (OHWM).

Illinois Department of Natural Resources Agency Action Plans for Interagency Wetlands Policy Act of 1989: The Illinois Interagency Wetlands Policy Act of 1989 is intended to ensure that there is no overall net loss of the State's existing wetland acres or their functional values resulting from State-supported activities. The Act charges State agencies with a further duty to "preserve, enhance and create wetlands where necessary to increase the quality and quantity of the State's wetland resource base."

The Interagency Wetlands Policy Act of 1989 states that any construction, land management or other activity performed by, or for which financial assistance is administered or provided by, a State agency that will result in an adverse impact to a wetland shall be subject to compliance. This includes, but is not limited to the following:

- The alteration, removal, excavation, or dredging of soil, sand, gravel, minerals, organic matter, vegetation, or naturally occurring minerals of any kind from a wetland;
- The discharge or deposit of fill material or dredged material in a wetland;
- The alteration of existing drainage characteristics, sedimentation patterns, or flood retention characteristics of a wetland;
- The disturbance of water level or water table of a wetland;
- The destruction or removal of plant life that would alter the character of a wetland, except for activities undertaken in accordance with the Illinois Noxious Weed Act;
- The transfer of State owned wetlands to any entity other than another state agency; and
- Other actions that cause or may cause adverse wetland impacts.

The Act is to be implemented through a State Wetland Mitigation Policy. The State Wetland Mitigation Policy requires preservation of wetlands as the primary objective. Where adverse wetland impacts are unavoidable, progressive levels of compensation based upon the level of impact to the existing wetland and the location of compensation wetlands are required.

Archaeological Survey Requirements: An archaeological survey may be required before a Section 404 permit will be issued for wetland impacts. The U.S. Army Corps of Engineers will make this determination as part of the permit application review. The archaeological survey must cover all areas of the study area, not wetlands only. If you already have a letter from the Illinois Historic Preservation Agency (IHPA) stating an archaeological survey is required, you should act on it because the USACE will support this notification.

7.0 RECOMMENDATIONS

Wetland ID	Size (ac)	C-Value	FQI	Buffer (ft)
Wetland 1	3.34	2.79	13.68	50
Wetland 2	1.91	2.88	14.4	50
Wetland 3	0.21	2.14	8.02	30
Wetland 4	0.02	1.75	4.95	
Wetland 5	0.16	1.9	6.01	30
Wetland 6	0.17	2.11	6.33	30
Wetland 7	1.13	2.93	10.96	50

Seven (7) wetlands totaling approximately 6.94 acres were identified on the study area. Wetland size and locations presented in this report are estimations.

The U.S. Army Corps of Engineers has the final authority in determining the jurisdictional status of the wetlands identified on site. GRWA recommends that a request for jurisdictional determination be sent to the U.S. Army Corps of Engineers as soon as possible.

Regulated buffer areas extend from wetland boundaries and are to remain free of development. Any impacts to jurisdictional wetland, Waters of the U.S., or associated buffers will require U.S. Army Corps of Engineers and MWRD notification.

8.0 REFERENCES

- Environmental Laboratory, 1987, "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- Illinois Department of Natural Resources. "Agency Action Plans for Interagency Wetlands Policy Act of 1989." <u>http://dnr.state.il.us/wetlands/ch6d.htm</u>.
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin, 2016, The National Wetland Plant List: 2016 wetland ratings, Phytoneuron 2016-30: 1-17, Published 28 April 2016.
- Metropolitan Water Reclamation District. 2014. "Watershed Management Ordinance". Revised July 10, 2014
- Munsell Soil Color Charts, 2012 (2009) Revised/2012 Production. Munsell Color x-rite. Grand Rapids, MI 49512.
- Swink F. and G. Wilhelm, 1994, "Plants of the Chicago Region", 4th Edition, Indianapolis: Indiana Academy of Science.
- United States. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0), U.S. Army Engineer Research and Development Center.
- United States Department of Agriculture, 1994, National Food Security Act manual, 180-V-NFSAM, Third Edition, 2nd Amendment, December 20, 1996.
- United States Department of Agriculture, Natural Resources Conservation Service, 2013, "Web Soil Survey 3.0/ National Cooperative Soil Survey." http://websoilsurvey.nrcs.usda.gov.
- United States Department of Agriculture, Natural Resources Conservation Service. "Field Indicators of Hydric Soils in the U.S. - Guide for Identifying and Delineating Hydric Soils". Version 6.0, 2006.
- United States Department of the Army, Corps of Engineers, Chicago District, "Regional Permit Program," April 1, 2012.
- Wilhelm, G. and L. Masters. Floristic Quality Assessment Computer Program, Version 1.0. Conservation Research Institute. Elmhurst, Illinois. October 2000.

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LAND PLANNING ECOLOGICAL CONSULTING LANDSCAPE ARCHITECTURE

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WETLAND DELINEATION REPORT Route 59 and Bartett Rd – MT2017

Appendix A: Water Resource Maps (Exhibits A-F)





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Appendix B: Site Photographs (Exhibit G)





Photo 1. Tree nursery in southern portion west of Wetland 1



Photo 2. Tree nursery north o Wetland 1



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Photo 3. Tree nursery area east of Wetland 3



Photo 4. Upland field north of Wetland.



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Photo 5. Upland field south of Wetland 2



Photo 6. Upland field east of Wetland 3



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Photo 7. Grassed paths between tree rows



Photo 8. Overview of Wetland 1 facing southeast.



Route 59 and Bartlett Rd South Barrington, Illinois

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Photo 9. The densely vegetated portion of southwest side of Wetland 1



Photo 10. South side of Wetland 2 near Sample Points E and F



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Photo 11. Wetland 2 near Sample Point G. Facing east.



Photo 12. Northern portion of Wetland 2



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Photo 13. Where Wetland 2 meets cell-phone tower fence at the west boundary. Facing east.



Photo 14. Wetland 3 merges with roadside ditch. Facing north.



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Photo 15. Wetland 3 expanding into project area. Facing west.



Photo 16. Wetland 4. Facing southeast.



Route 59 and Bartlett Rd South Barrington, Illinois

> MT2017 McNaughton Development

SITE PHOTOGRAPHS 9/10/2020



Photo 17. Wetland 5. Facing south.



Photo 18. Wetland 6 near Sample Point M. Facing south.



Route 59 and Bartlett Rd South Barrington, Illinois

> MT2017 McNaughton Development

SITE PHOTOGRAPHS 9/10/2020



Photo 19. Overview of Wetland 7 near Sample Point O. Facing south.



Photo 20. Central portion of Wetland 7. Facing east



Route 59 and Bartlett Rd South Barrington, Illinois

> MT2017 McNaughton Development

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Photo 21. Stormwater management facility. Facing west.



Route 59 and Bartlett Rd South Barrington, Illinois

> MT2017 McNaughton Development

SITE PHOTOGRAPHS 9/10/2020
Appendix C: Wetland Determination Data Forms



Project/Site MT2017/Bartlet Road and Rt 59	City/Co	ounty: S. E	Barrington/C	ook Co Sampling Date: 9/10/2020
Applicant/Owner: McNaughton Development		State:	IL	Sampling Point: A
Investigator(s): E. Raimondi		Sectio	n, Township	, Range: NE S21 T42N R9E
Landform (hillslope, terrace, etc.):		Local re	lief (concave	e, convex, none):
Slope (%): Lat: 42.106169		Long:	-88.18169	2 Datum:
Soil Map Unit Name Muskego and Houghton Mucks		- <u> </u>	NWI C	lassification: PEM1F
Are climatic/hydrologic conditions of the site typical for this	time of t	he year?	Y (If	no, explain in remarks)
Are vegetation , soil , or hydrology		significantly	disturbed?	Are "normal circumstances"
Are vegetation , soil , or hydrology	ı	naturally pro	blematic?	present? Yes
SUMMARY OF FINDINGS				(If needed, explain any answers in remarks.)
Hydrophytic vegetation present? Y				
Hydric soil present? Y		Is the sa	mpled area	within a wetland? Y
Indicators of wetland hydrology present? Y		f yes, opt	ional wetlan	d site ID: Wetland 1
Remarks: (Explain alternative procedures here or in a sena	arate rep	ort)		
		011.)		
	man-m	ade featu	re	
VECETATION Los scientific nomes of plants				
	soluto	Dom	Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: 30) %	Cover	Species	Staus	Number of Dominant Species
1		-1		that are OBL, FACW, or FAC: 3 (A)
2				Total Number of Dominant
3				Species Across all Strata: <u>3</u> (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 100.00% (A/B)
Sapling/Shrub stratum (Plot size: 15)	=	Total Cover	-	Provalanca Indax Warkshoot
				Total % Cover of:
2		· ·		OBL species $0 \times 1 = 0$
3				FACW species 100 x 2 = 200
4				FAC species $0 \times 3 = 0$
5				FACU species 0 x 4 = 0
	0 =	Total Cover		UPL species $0 \times 5 = 0$
Herb stratum (Plot size: 5)				Column totals 100 (A) 200 (B)
1 Phalaris arundinacea	50	<u>Y</u>	FACW	Prevalence Index = B/A = 2.00
2 Helianthus grosseserratus	30	Y	FACW	Hydrophytic Vagatation Indicatory
	20		FACW	Ranid test for hydrophytic vegetation
5		· ·		X Dominance test is >50%
6				X Prevalence index is ≤3.0*
7				Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9				separate sheet)
10	100 -	Total Covor		Problematic hydrophytic vegetation*
Woody vine stratum (Plot size: 5)	100 =			
1				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2		·		Hydrophytic
	0 =	Total Cover		vegetation
				present? Y
Remarks: (Include photo numbers here or on a separate sh	heet)			

Profile Desc	cription: (Descr	ibe to th	e depth need	ed to docu	ment the	e indicat	or or confirm t	the absend	e of indicators.)
Depth	Matrix			Redox Feat	ures				·
(Inches)	Color (moist)	%	Color (mois	t) %	Type*	Loc**	Textu	re	Remarks
0-6	10YR 3/1								
6-12	10YR 2/1		10YR 5/6		С	М			
_									
*Type: C = C	Concentration, D =	= Depleti	on, RM = Red	uced Matrix	., MS = N	lasked S	and Grains.	**Locatio	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:		-,		, -		Indicators	for Probl	ematic Hydric Soils:
Hist	tisol (A1)		Ş	Sandy Gley	ed Matrix	(S4)	Coast	Prairie Re	dox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		;	Sandy Redo	ox (S5)		Dark	Surface (S7	7) (LRR K, L)
Blac	ck Histic (A3)		;	Stripped Ma	trix (S6)		Iron-M	langanese	Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	4)	ı	oamy Muc	ky Minera	al (F1)	Very S	Shallow Da	rk Surface (TF12)
Stra	atified Layers (A5))	<u> </u>	oamy Gley	ed Matrix	x (F2)	Other	(explain in	remarks)
2 cr	m Muck (A10)			Depleted Ma	atrix (F3)				
X Dep	leted Below Dark	Surface	e (A11)	Redox Dark	Surface	(F6)			
Thic	ck Dark Surface (A12)		Depleted Da	ark Surfa	ce (F7)	*Indicat	ors of hydr	ophytic vegetation and weltand
San	idy Mucky Minera	l (S1)	I	Redox Depr	essions ((F8)	hydrol	ogy must b	e present, unless disturbed or
5 cr	m Mucky Peat or	Peat (S3	5)						problematic
Restrictive	Layer (if observe	ed):							
Туре:							Hydric s	oil presen	t? Y
Depth (inche	es):				_				
Remarks:									
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required; che	ck all that a	pply)		Sec	condary Ind	icators (minimum of two required)
X Surface	Water (A1)		_	Aquatic	Fauna (B	13)		Surface	Soil Cracks (B6)
High Wa	ater Table (A2)		=	True Aq	uatic Plar	nts (B14)	_	Drainage	e Patterns (B10)
X Saturatio	on (A3)		-	Hydroge	en Sulfide	Odor (C1	I)	Dry-Seas	son Water Table (C2)
Water M	larks (B1)			Oxidized	d Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	nt Deposits (B2)		-	(C3)	o of Dod	upped lines	(C4)	Saturatio	on Visible on Aerial Imagery (C9)
	ousits (D3)		-	Presend	ron Podu	uced from	(C4) Tillod Soils	Geomorr	bic Position (D2)
	nosits (B5)			(C6)	IIOII Redu			EAC-Nei	itral Test (D5)
Inundatio	on Visible on Aeria	l Imager	v (B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge d	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)	· / -	Other (E	xplain in	Remarks)		
Field Obser	vations:		-	,	-				
Surface wate	er present?	Yes	X No)	Depth (i	inches):	1		
Water table	present?	Yes	No)	Depth (i	inches):		Inc	licators of wetland
Saturation p	resent?	Yes	No)	Depth (i	inches):		hy	/drology present? Y
(includes ca	pillary fringe)				-				
Describe rec	corded data (strea	am gauge	e, monitoring v	vell, aerial p	hotos, pi	revious ir	nspections), if a	vailable:	
Remarks:									

Project/Site MT2017/Bartlet Road and Rt 59	City/C	ounty: S. I	Barrington/C	ook Co Sampling Date: 9/10/2020
Applicant/Owner: McNaughton Development		State:	IL	Sampling Point: B
Investigator(s): E. Raimondi		Sectio	on, Township	, Range: NE S21 T42N R9E
Landform (hillslope, terrace, etc.):		Local re	elief (concav	e, convex, none):
Slope (%): Lat: 42.106169		Long:	-88.18169	2 Datum:
Soil Map Unit Name Muskego and Houghton Mucks			NWI C	Classification: PEM1F
Are climatic/hydrologic conditions of the site typical for this	s time of	the year?	Y (If	no, explain in remarks)
Are vegetation , soil , or hydrology		significantly	disturbed?	Are "normal circumstances"
Are vegetation , soil , or hydrology		naturally pro	oblematic?	present? Yes
SUMMARY OF FINDINGS				(If needed, explain any answers in remarks.)
Hydrophytic vegetation present? Y				
Hydric soil present? N		Is the sa	ampled area	within a wetland? N
Indicators of wetland hydrology present? N		f yes, opt	tional wetlan	d site ID: Wetland 1
Remarks: (Explain alternative procedures here or in a sena	arate ren	ort)		
	arate rep	on.)		
	man-n	nade featu	re	
VEGETATION Use scientific names of plants.	a a luit a	Dom	Indiantar	Dominance Test Workshoot
ADS Tree Stratum (Plot size: 30) %(Cover	Species	Staus	Number of Dominant Species
1 Fraxinus pennsylvanica	25	Y	FACW	that are OBL, FACW, or FAC: 3 (A)
2				Total Number of Dominant
3				Species Across all Strata:4 (B)
4				Percent of Dominant Species
5		<u> </u>		that are OBL, FACW, or FAC: 75.00% (A/B)
Conting/Christ stratum (Dist size)	25 =	Total Cover		Drevelance Index Werkeheet
Sapling/Shrub stratum (Plot size: 15)				Total % Cover of:
2		·		OBL species $0 \times 1 = 0$
3	·			FACW species $85 \times 2 = 170$
4				FAC species $0 \times 3 = 0$
5				FACU species 40 x 4 = 160
	0 =	Total Cover		UPL species $0 \times 5 = 0$
Herb stratum (Plot size: 5)				Column totals 125 (A) 330 (B)
1 Dipsacus fullonum	40	Y .	FACU	Prevalence Index = $B/A = 2.64$
2 Phalaris arundinacea	30	Y .	FACW	Induced to Managerian Indiantema
	30	Y	FACW	Banid tost for hydrophytic vegetation
5	,			\overline{X} Dominance test is >50%
6	·			X Prevalence index is ≤3.0*
7				Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9				separate sheet)
10	100	Tatal Causer		Problematic hydrophytic vegetation*
Woody vine stratum (Plot size: 5)	100 =	Total Cover		
1				*Indicators of hydric soil and wetland hydrology must be
2				Hydrophytic
	0 =	Total Cover		vegetation
				present? Y
Remarks: (Include photo numbers here or on a separate sl	heet)			

Profile Descr	ription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absence	e of indicators.)
Depth	<u>Matrix</u>		Ree	dox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Text	ure	Remarks
0-10	10YR 3/1								Mixed soil
	10VP 4/4								
	101 K 4/4								
	10YR 5/3								
*Type: C = Co	oncentration, D =	= Depleti	on, RM = Reduce	ed Matrix	x, MS = №	lasked S	and Grains.	**Locatior	h: PL = Pore Lining, M = Matrix
Hydric Soil	Indicators:					(a 1)	Indicato	rs for Proble	ematic Hydric Soils:
Histis	sol (A1)		Sar	ndy Gleye	ed Matrix	(S4)	Coas	st Prairie Rec	10X (A16) (LRR K, L, R)
Histic	c Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark	Surface (S7) (LRR K, L) $(1 - 2 - 1)$
Black	< Histic (A3)		Stri	pped Ma	trix (S6)		Iron-	Manganese I	Masses (F12) (LRR K, L, R)
Hydro	ogen Sulfide (A4	4)	Loa	my Mucl	ky Minera	al (F1)	Very	Shallow Dar	k Surface (TF12)
Strati	ified Layers (A5))	Loa	imy Gley	ed Matrix	‹ (F2)	Othe	er (explain in	remarks)
2 cm	Muck (A10)		Dep	pleted Ma	atrix (F3)				
Deple	eted Below Dark	Surface	(A11) Red	dox Dark	Surface	(F6)			
Thick	k Dark Surface (A12)	Dep	pleted Da	ark Surfa	ce (F7)	*Indica	ators of hydro	phytic vegetation and weltand
Sand	ly Mucky Minera	l (S1)	Rec	dox Depr	essions ((F8)	hydro	ology must be	e present, unless disturbed or
5 cm	Mucky Peat or	Peat (S3)				-		problematic
Restrictive L	aver (if observe	ed):							
Type:		54).					Hydric	soil present	? N
Depth (inches	3):				-			p	
	,				-				
Mixed soil	I								
	<u>ev</u>								
	G I Irology Indicato	ve:							
Primary Indica	ators (minimum	n s. of one is	required: check	all that a	nnlv)		Sc	econdary Indi	cators (minimum of two required
<u>Surface M</u>	Votor (A 1)				Eouno (P	12)	<u></u>	Surface C	
	valer (AT)				Fauna (B	13) to (P14)	-	Surface a	Dettorne (P10)
	(A2)				ualic Fiai	Odor(C1			on Water Table (C2)
Water Ma	r(A3)					boros on	living Booto	Dry-Seas	$\frac{1}{2}$
	Doposite (B2)				а кпігозр	neres on		Soturation	Nicible on Aerial Imagony (CQ)
Drift Dopo	Depusits (D2)			- (CS) Brosono	o of Podu	lood Iron	(C4)	Stuntod o	r Strossod Plants (D1)
DInt Depo	or Crust (B4)			Pocont l		uction in T	(C4) Tillod Soils	Geomorp	bic Position (D2)
	or Crust (D4)			(CG)	IIOII Redu				tral Tast (D5)
	n Visible on Aeria	Imagon	(B7)	Thin Mu	ck Surfac	o (C7)	-		
Sparsely \	Vegetated Conca	we Surfa	(B7)			e(07)			
Water_Sta	vegetateu Conca				volain in	ala (D9) Romarke	`		
Field Observe	anica Leaves (D9	/					/		
Surface water	r present?	Yee	No		Depth /i	nchee).			
Water table of	resent?	Vac	No		Depth (i	nchael.		Ind	icators of wetland
Saturation pre	esent?	Yes	No		Depth (i	nches).		hv	drology present? N
(includes capi	illarv fringe)	100			-	nonooj.		,	
Describe reco	orded data (strea	am daulde	monitoring well	aerial n	hotos n	revious ir	spections) if	available:	
		gauge	, montoning well	, cona p		51.005 11			
Remarks:									

Project/Site MT2017/Bartlet Road and Rt 59	City/C	ounty: S. I	Barrington/C	ook Co Sampling Da	ate: 9/10/2020
Applicant/Owner: McNaughton Development	-	State:	IL	Sampling Poi	int: C
Investigator(s): E. Raimondi		Sectio	on, Township	, Range: NI	E S21 T42N R9E
Landform (hillslope, terrace, etc.):		Local re	elief (concav	e, convex, none):	
Slope (%): Lat: 42.106169		Long:	-88.18169	2 Datum:	
Soil Map Unit Name Muskego and Houghton Mucks			NWI C	Classification:	PEM1F
Are climatic/hydrologic conditions of the site typical for th	is time of	the year?	Y (If	no, explain in remarks	s)
Are vegetation , soil , or hydrology	y	significantly	disturbed?	Are "normal	circumstances"
Are vegetation , soil , or hydrology	y	naturally pro	oblematic?		present? Yes
SUMMARY OF FINDINGS				(If needed, explain ar	ny answers in remarks.)
Hydrophytic vegetation present? Y					
Hydric soil present? Y		Is the sa	ampled area	within a wetland?	Y
Indicators of wetland hydrology present? Y		f yes, opt	tional wetlan	d site ID: Wetla	ind 1
Remarks: (Explain alternative procedures here or in a set	narate rer	ort)			
	pulaterop	,011.)			
	man-n	nade featu	re		
VECETATION Lies acientific names of plants					
	bcoluto	Dom	Indicator	Dominance Test W	orksheet
Tree Stratum (Plot size: 30) %	6 Cover	Species	Staus	Number of Dominant 9	Snecies
1 Fraxinus pennsylvanica	25	Y	FACW	that are OBL, FACW, o	or FAC: 4 (A)
2	·			Total Number of Do	ominant
3				Species Across all	Strata: 5 (B)
4				Percent of Dominant S	Species
5		TILO		that are OBL, FACW, o	or FAC: <u>80.00%</u> (A/B)
Sopling/Shrub stratum (Plot size: 15	25 =	Total Cover		Brovalance Index W	lorkshoot
1				Total % Cover of	OINSHEEL
2	·	·		OBL species 20) x 1 = 20
3	·	·		FACW species 85	$5 \times 2 = 170$
4				FAC species 0	x 3 = 0
5				FACU species 20	x 4 = 80
	0 =	Total Cover		UPL species 0	x 5 = 0
Herb stratum (Plot size: 5)				Column totals 12	<u>5 (A) 270 (B)</u>
1 Phalaris arundinacea	40	Y .	FACW	Prevalence Index = E	3/A = 2.16
2 Dipsacus Iulionum	20	v ·		Hydrophytic Vogota	tion Indicators:
4 Symphyotrichum novae-angliae	20	Y .	FACW	Rapid test for hv	drophytic vegetation
5		<u> </u>		X Dominance test i	is >50%
6	·			X Prevalence index	x is ≤3.0*
7				Morphogical ada	ptations* (provide
8				supporting data i	n Remarks or on a
9				separate sheet)	
10	100 -	Total Cover		Problematic hydr	rophytic vegetation*
Woody vine stratum (Plot size: 5)	100 -				
1				*Indicators of hydric soil present, unless	and wetland hydrology must be disturbed or problematic
2	·	·		Hydrophytic	
	0 =	Total Cover		vegetation	
				present?	<u>Y</u>
Remarks: (Include photo numbers here or on a separate	sheet)				

Profile Descri	ption: (Descri	ibe to th	e depth needed	d to docu	ment the	e indicat	or or confirm t	he absence	of indicators.)
Depth <u>Matrix</u> <u>Redox Features</u>									
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textur	е	Remarks
0-6	10YR 3/1	100							
6-12	10YR 2/1		10YR 4/2	1	D	М			
-			10VR 5/6		C	М			
			1011X 3/0			IVI			
	n a contraction D	Dealat				l An alva al O		**! +!	
Type: C = Co	ncentration, D =	= Deplet	ion, RIVI = Reduc	ced Matrix	(, MS = N	lasked S	and Grains.	** Location:	PL = Pore Lining, M = Matrix
Hydric Soli	Indicators:		0.		!	(04)	Indicators	for Problem	natic Hydric Solls:
Histis	0I (A1)		Sa	indy Gley	ed Matrix	(54)	Coast	Prairie Redo	(A16) (LRR K, L, R)
Histic	Epipedon (A2)		Sa	andy Redo	DX (S5)		Dark S	Surface (S7)	
Black	Histic (A3)		St	ripped Ma	itrix (S6)			anganese ivi	asses (F12) (LRR K, L, R)
Hydro	gen Sulfide (A4	4)	Lo	amy Muc	ky Minera	al (F1)	Very S	Shallow Dark	Surface (TF12)
Stratif	ied Layers (A5))	Lo	amy Gley	ed Matrix	x (F2)	Other	(explain in re	marks)
2 cm	Muck (A10)		De	epleted Ma	atrix (F3)				
X Deple	ted Below Dark	Surface	e (A11)Re	edox Dark	Surface	(F6)			
Thick	Dark Surface (A12)	De	epleted Da	ark Surfa	ce (F7)	*Indicate	ors of hydrop	hytic vegetation and weltand
Sandy	/ Mucky Minera	l (S1)	Re	edox Depr	ressions	(F8)	hydrolo	ogy must be	present, unless disturbed or
5 cm	Mucky Peat or	Peat (S3	3)					рі	oblematic
Restrictive La	ver (if observe	ed).							
Type [.]		54).					Hydric s	oil present?	Y
Denth (inches)					-		Tryance 3	on present?	
	-				-				
HYDROLOC	jY ology Indicato	ve.							
	toro (minimum	ns. of one is	required, check	all that a	nnh ()		0		· · · · · · · · · · · · · · · · · · ·
Primary Indica		or one is	s required; check		<u>ppiy)</u>		Sec	ondary Indica	ators (minimum of two required
Surface W	ater (A1)				Fauna (B	313) ata (D4.4)		_Surface So	Il Cracks (B6)
High Wate	(A2)				uatic Plai	nts (B14)	4)	Drainage P	Atterns (BTU)
	(A3) ka (P1)						l)	Crowfish Pu	
	KS (DI) Denesite (D2)			Oxidized	a Rhizosp	oneres on	Living Roots		$\frac{110}{1000}$
Drift Dopor				-(03) 	o of Pod	upod Iron	(C4) —	Saturation	Stressed Plants (D1)
Algal Mat (or Crust (B4)			_Pocont	ron Podu	uceu IIOII		Geomorphi	c Position (D2)
	vite (B5)			(C6)	Iron Real				C = C = C = C = C = C = C = C = C = C =
	Visible on Aeria	l Imaner	v (B7)	Thin Mu	ck Surfac	o (C7)			ai Test (D5)
Sparsely V	egetated Conca	we Surfa	ce (B8)			De(CI)			
Water-Stai	ned Leaves (B9			Other (F	volain in	Romarks			
)				Remarks	')	1	
Field Observa	nrocont?	Voc	No		Dopth (i	inchoc);			
Mator table pr	present?	Voc	No		Depth (inches).		India	ators of wetland
Saturation pre-	sent?	Yee	No		Depth (inches).		hvd	rology present? V
(includes canil	lary fringe)	103			-	incrico).		l iiya	
			., .				··	- I	
Describe recor	rded data (strea	am gaug	e, monitoring we	ell, aerial p	photos, p	revious ir	nspections), if a	vailable:	
- ·									
Remarks:									

Project/Site MT2017/Bartlet Road and Rt 59	City/0	County:	S. Barrington/C	Cook Co Sampling Date	9/10/2020
Applicant/Owner: McNaughton Development	-	State	: IL	Sampling Point	t: D
Investigator(s): E. Raimondi		Se	ction, Township	o, Range: NE S	S21 T42N R9E
Landform (hillslope, terrace, etc.):		Loca	al relief (concav	e, convex, none):	
Slope (%): Lat: 42.106169		Long:	-88.1816	92 Datum:	
Soil Map Unit Name Muskego and Houghton Mucks			NWI	Classification:	
Are climatic/hydrologic conditions of the site typical for th	is time of	f the year	? Y (I	f no, explain in remarks)	
Are vegetation , soil , or hydrology	у	significa	ntly disturbed?	Are "normal cir	rcumstances"
Are vegetation , soil , or hydrology	y	naturally	problematic?		present? Yes
SUMMARY OF FINDINGS		-	-	(If needed, explain any	answers in remarks.)
Hydrophytic vegetation present? N					
Hydric soil present? N		Is the	e sampled area	a within a wetland?	Ν
Indicators of wetland hydrology present? N		f yes,	optional wetlar	d site ID:	
Remarks: (Explain alternative procedures here or in a se	narate re	nort)			
	paratere	port.)			
vegeration Ose scientific harnes of plants.	booluto	Dom	Indiantar	Dominance Test Wor	kshoot
Tree Stratum (Plot size: 30) %	6 Cover	Species	Staus	Number of Dominant Sp	
1 Fraxinus pennsylvanica			FACW	that are OBL, FACW, or	FAC: 1 (A)
2				Total Number of Dom	ninant
3				Species Across all S	itrata: <u> </u>
4				Percent of Dominant Sp	ecies
5				that are OBL, FACW, or	FAC: <u>33.33%</u> (A/B)
Sopling/Shrub stratum (Dist size)	0 =	= I otal Co	ver	Drovalance Index We	rkahaat
<u>Saping/Shiub stratun</u> (Plot size. 15)				Total % Cover of	rksneel
2				OBL species 0	x 1 = 0
3				FACW species 40	x 2 = 80
4				FAC species 0	x 3 = 0
5				FACU species 60	x 4 = 240
	0 =	= Total Co	ver	UPL species 0	x 5 = 0
Herb stratum (Plot size: 5)				Column totals 100	_(A) <u>320</u> (B)
1 Phalaris arundinacea	40	<u>Y</u>	FACW	Prevalence Index = B/A	A = <u>3.20</u>
2 Dipsacus fulionum	40	Y	FACU	Hydrophytic Vogotati	on Indicators:
4	20	I	FACO	Rapid test for hydro	conhytic vegetation
5				Dominance test is	>50%
6				Prevalence index is	s ≤3.0*
7				Morphogical adapt	ations* (provide
8				supporting data in	Remarks or on a
9				separate sheet)	
10	100	Tatal Ca		Problematic hydror	phytic vegetation*
Woody vine stratum (Plot size: 5)	100		iver		
1				*Indicators of hydric soil ar	nd wetland hydrology must be sturbed or problematic
2				Hydrophytic	
	0 :	= Total Co	ver	vegetation	
				present?	N
Remarks: (Include photo numbers here or on a separate	sheet)				

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the	e absence of ir	ndicators.)
Depth	Matrix		Red	dox Feat	ures			•	
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks
0-4	10YR 3/1	100					SiCL		
4-8	10YR 3/4	40					SiCl		
	10VP 4/4	40					0.01		
	101K 4/4	40							
	10YR 4/1	20							
8-16	10YR 4/4	50					SiCL		
	10YR 41	50							
*Type: C = C	Concentration D:	= Depleti	on RM = Reduce	d Matrix	MS = M	lasked S	and Grains	**Location: PL	= Pore Lining M = Matrix
Hvdric So	oil Indicators:	Dopioti		a main	, 110 – 11		Indicators f	or Problematic	: Hvdric Soils:
Hist	tisol (A1)		Sar	dv Gleve	ed Matrix	(S4)	Coast P	rairie Redox (A	16) (LRR K. L. R)
Hist	tic Epipedon (A2)		Sar	dv Redo	x (S5)	(0.)	Dark Su	Inface (S7) (LRI	R K. L)
Blac	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron-Ma	nganese Masse	es (F12) (LRR K, L, R)
	drogen Sulfide (A4	4)	Loa	mv Mucł	v Minera	al (F1)	Verv Sh	allow Dark Surf	ace (TF12)
Stra	atified Lavers (A5))	Loa	mv Glev	ed Matrix	(F2)	Other (e	explain in remar	ks)
2 cr	m Muck (A10)	/	Der	leted Ma	atrix (F3)	(1 –)		, plain in tornai	((0))
Dep	pleted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)			
Thic	ck Dark Surface (A12)		leted Da	ark Surfa	ce (F7)	*Indicator	s of hydrophytic	c vegetation and weltand
San	ndy Mucky Minera	í (S1)	Rec	lox Depr	essions ((F8)	hvdrolog	iv must be pres	ent. unless disturbed or
5 cr	m Mucky Peat or	Peat (S3)			- /		proble	ematic
	l over (if observ	<u>,</u>						•	
	Layer (II Observe	eu).					Hydric so	il prosont?	N
Denth (inche	<i>sc).</i>				-		Tryunc 30		
Boptin (intend					-				
HYDROLO	JGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required; check	all that a	pply)		<u>Seco</u>	ndary Indicators	s (minimum of two required
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface Soil Cr	acks (B6)
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)		Drainage Patter	rns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	I)	Dry-Season Wa	ater Table (C2)
Water M	larks (B1)			Oxidized	Rhizosp	heres on	Living Roots	Crayfish Burrov	vs (C8)
Sedimer	nt Deposits (B2)			(C3)			(CA)	Saturation Visit	ble on Aerial Imagery (C9)
	DOSITS (B3)			Presenc	e of Real	Iced Iron	(C4)	Stunted or Stre	ssed Plants (D1)
	ac of Clusi (D4)			(C6)	Ion Redu			EAC-Neutral Te	(D2)
	on Visible on Aeria	al Imager	/ (B7)	Thin Mu	ck Surfac	e (C7)	<u></u>		St (D0)
Sparsely	Vegetated Conca	ave Surfa	ce (B8)	Gauge c	or Well Da	ata (D9)			
Water-S	tained Leaves (B9			Other (E	xplain in	Remarks)		
Field Obser	vations:	,			r		,		
Surface wate	er present?	Yes	No		Depth (i	nches):			
Water table	present?	Yes	No		Depth (i	nches):		Indicator	rs of wetland
Saturation p	resent?	Yes	No		Depth (i	nches):		hydrolo	gy present? N
(includes ca	pillary fringe)				• • •	,			
Describe rec	corded data (strea	am daude	e monitoring well	aerial n	hotos pr	evious ir	spections) if ava	ailable:	
			.,e	,	, pi	2000 11	sections, in ave		
Remarks:									

Project/Site MT2017/Bartlet Road and Rt 59	City/Co	ounty: S. E	Barrington/C	ook Co	Sampling Date:	9/10/2020
Applicant/Owner: McNaughton Development	-	State:	IL	s	ampling Point:	E
Investigator(s): E. Raimondi		Sectio	n, Township	, Range:	NE S21	T42N R9E
Landform (hillslope, terrace, etc.):		Local re	elief (concave	e, convex,	none):	
Slope (%): Lat: 42.106169		Long:	-88.18169)2 C	Datum:	
Soil Map Unit Name Muskego and Houghton Mucks			NWI C	Classificatio	n:	
Are climatic/hydrologic conditions of the site typical for this	is time of t	he year?	Y (If	ⁱ no, explai	n in remarks)	
Are vegetation , soil , or hydrology	/ 5	- significantly	disturbed?	Δ	vre "normal circum	istances"
Are vegetation , soil , or hydrology	/ <u> </u>	naturally pro	blematic?			present? Yes
SUMMARY OF FINDINGS				(If neede	d, explain any ans	wers in remarks.)
Hydrophytic vegetation present? N						
Hydric soil present? Y		Is the sa	mpled area	within a w	vetland?	Ν
Indicators of wetland hydrology present? Y		f yes, opt	ional wetland	d site ID:	Wetland 2	
Remarks: (Explain alternative procedures here or in a sen	harate ren	ort)				
		011.)				
VEGETATION Use scientific names of plants.						
At	bsolute	Dom.	Indicator	Dominar	ce Test Workshe	et
Tree Stratum (Plot size: 30) %	Cover	Species	Staus	Number o	f Dominant Species	5
1				that are O	BL, FACW, or FAC	: <u> </u>
2				Total N	lumber of Dominan	t (The second seco
3				Specie	es Across all Strata	: <u>3</u> (B)
4				Percent o	f Dominant Species	δ · 33.33% (Λ/₽)
· · · · · · · · · · · · · · · · · · ·		Total Cover				. <u> </u>
Sapling/Shrub stratum (Plot size: 15)			-	Prevalen	ce Index Worksh	eet
1				Total % C	Cover of:	
2				OBL spee	cies 10 x 1	= 10
3				FACW sp	becies <u>30</u> x 2	2 = 60
4				FAC spec	cies <u>0</u> x3	B = 0
5		Tatal Cavar		FACU sp	ecies <u>60</u> x 4	= 240
Horb stratum (Plot sizo: 5)	=	Total Cover		Column t	$\frac{100}{100}$	D = 0 310 (B)
1 Dhalaria arrundinassa	20	V		Drevelen	$\frac{100}{100}$) <u>310</u> (B)
2 Dinsacus fullonum	30		FACIU	Prevalen	Ce Index = B/A =	3.10
3 Solidago altissima	30		FACU	Hydroph	vtic Vegetation Ir	ndicators:
4 Scirpus atrovirens	10	N	OBL	Rapio	d test for hydrophy	tic vegetation
5				 Domi	nance test is >509	%
6				Preva	alence index is ≤3.	.0*
7				Morp	hogical adaptatior	ns* (provide
8				supp	orting data in Rem	arks or on a
9				sepa	rate sneet)	
10 —	100 =	Total Cover		Probl (expl	ematic nydropnyti ain)	c vegetation*
Woody vine stratum (Plot size: 5)	100 -			(0,tp)	f hudris - sil sraduus	
, 1				rindicator	s of nyaric soil and we esent, unless disturbe	d or problematic
2				Hydr	ophytic	-
	0 =	Total Cover		vege	tation	
				pres	ent? <u>N</u>	_
Remarks: (Include photo numbers here or on a separate s	sheet)					

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the abs	ence of indicators.)
Depth	Matrix		Red	dox Feat	ures			,
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-6	10YR 3/1	100					SiL	
6-8	10YR 3/1	50						
	10VP 4/6	50						
0.44		30		10			0:01	
8-14	10YR 3/1	40	10YR 4/2	40			SICL	
			10YR 5/6	20				
14+	10YR 2/1	100					SiCL	
								14+: 10YR 4/4
*Type: C = C	Concentration. D :	= Depleti	on. RM = Reduce	d Matrix	. MS = N	lasked S	and Grains. **Loca	ation: PL = Pore Lining. M = Matrix
Hvdric So	oil Indicators:	2 0 0 10 1	,		, e		Indicators for Pr	oblematic Hydric Soils:
Hist	tisol (A1)		Sar	dv Gleve	ed Matrix	(S4)	Coast Prairie	Redox (A16) (LRR K. L. R)
Hist	tic Epipedon (A2)		Sar	dv Redo	x (S5)	(0.)	Dark Surface	(S7) (LRR K. L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-Mangane	ese Masses (F12) (LRR K, L, R)
	drogen Sulfide (A4	4)	Loa	mv Mucł	kv Minera	al (F1)	Verv Shallow	Dark Surface (TE12)
Stra	atified Lavers (A5))	Loa	mv Glev	ed Matrix	(F2)	Other (explain	in remarks)
2 cr	m Muck (A10)	/	Der	leted Ma	atrix (F3)	. ()		
	pleted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)		
Thic	ck Dark Surface (A12)	Dec	leted Da	ark Surfa	ce (F7)	*Indicators of h	vdrophytic vegetation and weltand
San	dv Muckv Minera	, 1 (S1)	Rec	lox Depr	essions ((F8)	hvdrology mu	st be present, unless disturbed or
5 cr	m Muckv Peat or	Peat (S3)			()	, a. e.e.g.ja.	problematic
<u> </u>	Lover (if choomy		/			1		
Restrictive	Layer (If observe	ea):					Ubudula aali mua	
Type:					-		Hydric soll pres	
Depth (inche					-			
Remarks:								
HYDROLO	DGY							
Wetland Hy	drology Indicato	ors:						
Primary Indi	cators (minimum	of one is	required; check	all that a	pply)		Secondary	Indicators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)	Surfa	ce Soil Cracks (B6)
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)	Drain	age Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1) Dry-S	Season Water Table (C2)
Water M	larks (B1)			Oxidized	l Rhizosp	heres on	Living Roots Crayf	ish Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			Satur	ation Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4) Stunt	ed or Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils X Geon	norphic Position (D2)
Iron Dep	osits (B5)			(C6)			X FAC-	Neutral Test (D5)
Inundatio	on Visible on Aeria	al Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)		
Sparsely	Vegetated Conca	ave Surfa	ce (B8)	Gauge c	or Well Da	ata (D9)		
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser	vations:			-				
Surface wate	er present?	Yes	No		Depth (i	nches):		
Water table	present?	Yes	No		Depth (i	nches):	I	Indicators of wetland
Saturation p	resent?	Yes	No		Depth (i	nches):		hydrology present? Y
(includes ca	pillary fringe)				-			
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pi	revious ir	spections), if available	:
Remarks:								

Project/Site MT2017/Bartlet Road and Rt 59	City/C	ounty: S.	Barrington/C	ook Co Sampling Date: 9/10/2020
Applicant/Owner: McNaughton Development		State:	IL	Sampling Point: F
Investigator(s): E. Raimondi		Sectio	on, Township	, Range: NE S21 T42N R9E
Landform (hillslope, terrace, etc.):		Local re	elief (concav	e, convex, none):
Slope (%): Lat: 42.106169		Long:	-88.18169	Datum:
Soil Map Unit Name Muskego and Houghton Mucks			NWI C	Classification:
Are climatic/hydrologic conditions of the site typical for this	s time of	the year?	Y (II	no, explain in remarks)
Are vegetation , soil , or hydrology		significantly	disturbed?	Are "normal circumstances"
Are vegetation , soil , or hydrology		naturally pro	oblematic?	present? Yes
SUMMARY OF FINDINGS				(If needed, explain any answers in remarks.)
Hydrophytic vegetation present? N				
Hydric soil present? N		Is the sa	ampled area	within a wetland? N
Indicators of wetland hydrology present? N		f yes, opt	tional wetlan	d site ID:
Remarks: (Explain alternative procedures here or in a sena	arato ror	ort)		
		Jone.)		
VEGETATION Use scientific names of plants.			1. 1	Dominanaa Toot Warkshoot
Abs Trop Stratum (Plot size: 30) %	Solute	Dom. Species	Indicator	Dominance lest worksneet
1 (Flot size) ///	Cover	opecies	Slaus	that are OBL, FACW, or FAC: 2 (A)
2		<u> </u>		Total Number of Dominant Species Across all Strata: 5 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 40.00% (A/B)
	0 =	Total Cover		
Sapling/Shrub stratum (Plot size: 15)				Prevalence Index Worksheet
1 Pyrus calleryana	20	<u>Y</u>		Total % Cover of:
2 Rosa multifiora	15	<u> </u>	FACU	OBL species $0 \times 1 = 0$
4				FAC species $20 \times 3 = 60$
5				FACU species $45 \times 4 = 180$
	35 =	Total Cover		UPL species 20 x 5 = 100
Herb stratum (Plot size: 5)				Column totals 125 (A) 420 (B)
1 Solidago altissima	30	Y	FACU	Prevalence Index = B/A = 3.36
2 Euthamia graminifolia	30	Y	FACW	
3 Verbena urticifolia	20	<u>Y</u>	FAC	Hydrophytic Vegetation Indicators:
4 Phalaris arundinacea	10	<u>N</u>	FACW	Rapid test for hydrophytic vegetation
5		·		$\frac{1}{2} Dominance test is >50\%$
7		·		Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9				separate sheet)
10	90 =	Total Cover		Problematic hydrophytic vegetation* (explain)
Woody vine stratum (Plot size: 5)				*Indicators of hydric soil and wetland hydrology must be
2				Hydrophytic
	0 =	Total Cover		vegetation present? N
Remarks: (Include photo numbers here or on a separate s	heet)			

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm tl	he absenc	e of indicators.)
Depth	Matrix	Matrix Redox Features							-
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textur	e	Remarks
0-6	10YR 3/1	100							
6-12	10YR 3/1								
	10YR 4/6								
10.14	10VP 2/1								
12-14									
	10YR 5/6								
	10YR 4/3								
	10YR 4/6								
14+	10YR 3/1								14+: 10YR 4/4
*Type: C = C	Concentration, D	= Depleti	on, RM = Reduce	ed Matrix	x, MS = №	lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Matrix
Hydric So	oil Indicators:		_			(- .)	Indicators	for Proble	ematic Hydric Soils:
Hist	tisol (A1)		Sar	dy Gley	ed Matrix	: (S4)	Coast	Prairie Red	dox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	idy Redo	ox (S5)		Dark S	Surface (S7	() (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)			anganese	Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	1)	Loa	my Muc	ky Minera	al (⊢1)	Very S	hallow Dai	rk Surface (TF12)
Stra	atified Layers (A5)	Loa	my Gley	ed Matrix	(F2)	Other (explain in	remarks)
2 cr	m Muck (A10)	0		leted Ma	atrix (F3)				
			(A11) Rec	IOX Dark	Surface	(F6) aa (F7)			
	ck Dark Surface (AIZ)	Det	leteu Da			^Indicato	ors of nyar	opnytic vegetation and weitand
5 cr	ndy Mucky Millera	II (31) Doot (83		iox Debi	essions	(ГО)	nyaroid	gy must b	problematic
^{5 Cl}	II MUCKY Feat Of	real (SS)			1			problematic
Restrictive	Layer (if observe	ed):							
Type:	````				-		Hydric so	oil presen	t? <u>N</u>
Depth (inche	es):				-				
Remarks:									
Mixed so	bil								
	JG Y drology Indicato	ve.							
	actors (minimum	ns. of one is	required; sheek	all that a	nnlu)		0		
Primary Indi		or one is	required; check		<u>ppiy)</u> Fausa (D	10)	Seco	ondary Ind	Icators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13) to (P14)		- Surface Surf	Soll Cracks (B6)
	(A2)			Hydroge	ualic Fiai on Sulfido	Odor(C1			son Water Table (C2)
Water M	larks (B1)			Oxidized	1 Rhizoso	heres on	Living Roots	Cravfish	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)	2 T(11200p			Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted of	or Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent	Iron Redu	ction in T	illed Soils	Geomorp	bhic Position (D2)
Iron Dep	oosits (B5)			(C6)				FAC-Net	utral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)		_	
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge of	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wate	er present?	Yes	No		Depth (i	nches):			
Water table	present?	Yes	No		Depth (i	nches):		Ind	licators of wetland
Saturation p	resent?	Yes	No		Depth (i	nches):		hy hy	drology present? N
(includes ca	piliary iringe)		•. •					<u> </u>	
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	photos, pi	revious ir	nspections), if av	/ailable:	
Remarks:									

Project/Site MT2017/Bartlet Road and Rt 59	City/C	ounty: S.	Barrington/C	ook Co Sampling Date: 9/10)/2020			
Applicant/Owner: McNaughton Development		State:	IL	Sampling Point:	G			
Investigator(s): E. Raimondi		Section, Township, Range: NE S21 T42N R9E						
Landform (hillslope, terrace, etc.):		Local r	elief (concav	e, convex, none):				
Slope (%): Lat: 42.106169		Long:	-88.18169	2 Datum:				
Soil Map Unit Name Muskego and Houghton Mucks			NWI C	lassification:				
Are climatic/hydrologic conditions of the site typical for this	time of	the year?	Y (li	no, explain in remarks)				
Are vegetation , soil , or hydrology		significantly	disturbed?	Are "normal circumstances"	"			
Are vegetation , soil , or hydrology		naturally pr	oblematic?	present	? Yes			
SUMMARY OF FINDINGS				(If needed, explain any answers in r	remarks.)			
Hydrophytic vegetation present? Y								
Hydric soil present? Y		Is the s	ampled area	within a wetland? Y				
Indicators of wetland hydrology present? Y		f yes, op	tional wetlan	d site ID: Wetland 2	-			
Remarks: (Explain alternative procedures here or in a sena	arate ren	ort)						
		,						
VEGETATION Use scientific names of plants.	ooluto	Dom	Indiantor	Dominance Test Worksheet				
Tree Stratum (Plot size: 30) %	Cover	Species	Staus	Number of Dominant Species				
1		•		that are OBL, FACW, or FAC: 2	(A)			
2				Total Number of Dominant				
3				Species Across all Strata: 3	(B)			
4				Percent of Dominant Species				
5		Tatalo		that are OBL, FACW, or FAC: 66.67	7% (A/B)			
Sapling/Shrub stratum (Plot size: 15)	=	Total Cover	-	Provalence Index Worksheet				
1				Total % Cover of:				
2				OBL species $30 \times 1 = 30$	30			
3				FACW species 40 x 2 =	80			
4				FAC species 0 x 3 =	0			
5				FACU species $30 \times 4 = 1$	120			
	0 =	Total Cover		UPL species $0 \times 5 =$	0 (D)			
Herb stratum (Plot size: 5)		.,		Column totals 100 (A) 2	<u>230</u> (B)			
1 Euthamia graminitolia	$\frac{40}{20}$	Y	FACW	Prevalence Index = $B/A = 2.3$	0			
2 Dipsacus fuilonum 3 Scirpus atrovirens	20			Hydrophytic Vegetation Indicator	·e·			
4 vthrum salicaria	10	N	OBL	Rapid test for hydrophytic veget	s. tation			
5				X Dominance test is >50%				
6				X Prevalence index is ≤3.0*				
7				Morphogical adaptations* (prov	ide			
8				supporting data in Remarks or o	on a			
9				separate sheet)				
10	100 =	Total Cover		Problematic hydrophytic vegeta (explain)	ition*			
Woody vine stratum (Plot size:5) 1				*Indicators of hydric soil and wetland hydro present, unless disturbed or proble	ology must be ematic			
2				Hydrophytic vegetation				
	0 =	Total Cover		present? Y				
Remarks: (Include photo numbers here or on a separate sh	heet)							

Profile Descr	ription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm th	e absence of	indicators.)
Depth	Depth Matrix Redox Features								
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture)	Remarks
0-16	10YR 3/1	100					SiL		
16-24	10YR 3/1	40	10YR 4/1	60	D	М	SiCL		
^Type: C = Co	oncentration, D :	= Depleti	on, RM = Reduce	ed Matrix	x, MS = №	lasked S	and Grains.	**Location: Pl	_ = Pore Lining, M = Matrix
Hydric Soli	Indicators:		0			(0.4)	Indicators	for Problema	tic Hydric Solls:
Histis	sol (A1)		Sar	idy Gleye	ed Matrix	(S4)	Coast F	rairie Redox ((A16) (LRR K, L, R)
Histic	Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark St	urface (S7) (Li	
Black	(Histic (A3)		Stri	pped Ma	trix (S6)			inganese Mas	ses (F12) (LRR K, L, R)
Hydro	ogen Sulfide (A4	4)	Loa	my Mucl	ky Minera	al (F1)	Very Sł	nallow Dark Su	urface (TF12)
Strati	ified Layers (A5))	Loa	my Gley	ed Matrix	x (F2)	Other (explain in rem	arks)
2 cm	Muck (A10)		Dep	pleted Ma	atrix (F3)				
Deple	eted Below Dark	Surface	e (A11) Red	lox Dark	Surface	(F6)			
X Thick	Coark Surface (A12)	Dep	pleted Da	ark Surfa	ce (F7)	*Indicato	rs of hydrophy	tic vegetation and weltand
Sand	ly Mucky Minera	al (S1)	Rec	lox Depr	essions	(F8)	hydrolog	gy must be pre	esent, unless disturbed or
5 cm	Mucky Peat or	Peat (S3	s)					prob	olematic
Restrictive L	aver (if observe	ed):							
Type:							Hydric so	il present?	Y
Depth (inches	s):				-				<u> </u>
2 op (ooc					-				
	GY Halamu Indiaata								
	rology indicate	ors:		- 4 4 -					, .
Primary Indica	ators (minimum	of one is	required; check	all that a	<u>ppiy)</u>		<u>Seco</u>	ndary Indicato	ors (minimum of two required
X Surface W	Vater (A1)				Fauna (B	(513)		Surface Soil (Cracks (B6)
High wate	er Table (A2)			I rue Aq	uatic Plar	nts (B14)		Drainage Pati	terns (B10)
	1 (A3) rka (B1)			Hydroge	n Suinde		l)	_ Dry-Season v	vater Table (C2)
	Denesite (D2)				a Rhizosp	oneres on	Living Roots	ClayIISh Bull	OWS(CO)
Drift Dopo	Depusits (D2)			Brosono		ucod Iron	(C4)	Saturation Vis	rossod Plants (D1)
Algal Mat	or Crust (B4)			Recent l	Iron Redu	uction in T	(C4) Filled Soils	Geomorphic I	Position (D2)
Iron Deno	sits (B5)			(C6)			X	FAC-Neutral	Test (D5)
Inundation	n Visible on Aeria	al Imager	v (B7)	Thin Mu	ck Surfac	e (C7)			
Sparselv \	Vegetated Conca	ave Surfa	ce (B8)	Gauge c	or Well Da	ata (D9)			
Water-Sta	ained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Observ	ations:						,	1	
Surface water	r present?	Yes	No		Depth (i	inches).			
Water table n	resent?	Yes	No		Depth (i	inches):		Indicat	ors of wetland
Saturation pre	esent?	Yes	No		Depth (i	inches):		hvdro	logy present? Y
(includes capi	illary fringe)				_	/-		,	
Describe reco	orded data (strea	am dalid	e monitoring well	aerial n	hotos n	revious ir	spections) if av	ailable:	
Describe rece		un gaug	e, monitoring wen	, acriai p	notos, p		ispections), if av		
Remarks:									

Project/Site MT2017/Bartlet Road and Rt 59	City/County	: S. Barri	ington/Cook Co	Sampling Date:	9/10/2020
Applicant/Owner: McNaughton Development	St	tate:	IL	Sampling Point:	Н
Investigator(s): E. Raimondi		Section, To	ownship, Range:	NE S21 T4	2N R9E
Landform (hillslope, terrace, etc.):	L	ocal relief ((concave, convex	, none):	
Slope (%): Lat: 42.106169	Long	: -8	8.181692	Datum:	
Soil Map Unit Name Muskego and Houghton Mucks			NWI Classificat	tion:	
Are climatic/hydrologic conditions of the site typical for this t	time of the ye	ear? Y	(If no, expla	ain in remarks)	
Are vegetation , soil , or hydrology	signif	icantly distu	urbed?	Are "normal circumst	ances"
Are vegetation , soil , or hydrology	natur	ally problen	natic?	pr	esent? Yes
SUMMARY OF FINDINGS			(If need	led, explain any answe	ers in remarks.)
Hydrophytic vegetation present? Y					
Hydric soil present? Y	ls	the sampl	led area within a	wetland?	Y
Indicators of wetland hydrology present? Y	fy	es, optional	I wetland site ID:		
Remarks: (Explain alternative procedures here or in a senar	rate report)				
VEGETATION Use scientific names of plants.					
Abso	olute Doi	m. India	cator Domina	ance Test Worksheet	t
Tree Stratum (Plot size:30) % C 1	over Spec	cies Sta	aus Number that are	of Dominant Species OBL, FACW, or FAC:	<u>3</u> (A)
2 3			Total Spec	Number of Dominant cies Across all Strata:	3 (B)
4			Percent	of Dominant Species	
5			that are	OBL, FACW, or FAC:	100.00% (A/B)
() () () () () () () () () () () () () (0 = Total	Cover		<u> </u>	
Sapling/Shrub stratum (Plot size: 15)		, г.		ence Index Workshee	et
1 Rhaminus cathartica 4	iu r	F/		Coveror:	0
3			FACW	species $50 \times 2 =$	100
4			FAC sp	ecies $40 \times 3 =$	120
5			FACU s	species 0 x 4 =	0
4	0 = Total	Cover	UPL sp	ecies 0 x 5 =	. 0
Herb stratum (Plot size: 5)			Column	totals 90 (A)	220 (B)
1 Persicaria pensylvanica 2	25 Y	Í FA	CW Prevale	ence Index = B/A =	2.44
2 Bidens frondosa 2	25 Y	Í FA	CW		•
3			Hydrop	hytic Vegetation Ind	icators:
4				minance test is 50%	vegetation
6				valence index is ≤3 0*	
7				rnhogical adaptations*	(provide
8			sup	porting data in Remar	ks or on a
9			sep	parate sheet)	
105	50 = Total	Cover	Pro(ex	blematic hydrophytic v plain)	vegetation*
<u>Woody vine stratum</u> (Plot size: 5) 1			*Indicat	ors of hydric soil and wetla present, unless disturbed c	nd hydrology must be or problematic
2			Hyo	drophytic	
(0 = Total	Cover	veç pre	petation sent? Y	
Remarks: (Include photo numbers here or on a separate she	eet)				

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicate	or or confirm the abse	nce of indicators.)
Depth Matrix Redox Features								
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-8	10VR 3/1	100	,					
0-0	10110.0/1	100						
8+	10YR 2/1	30	10YR 4/1	60	D	M		
			10YR 4/2	5	D	PL		
			10YR 5/4	5	С	М		
					<u> </u>			
*Type: C = 0	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains. **Locat	ion: PL = Pore Lining, M = Matrix
Hydric So	oil Indicators:						Indicators for Pro	olematic Hydric Soils:
His	tisol (A1)		San	dy Gleye	ed Matrix	: (S4)	Coast Prairie R	edox (A16) (LRR K, L, R)
His	tic Epipedon (A2)		San	dy Redo	x (S5)		Dark Surface (S7) (LRR K, L)
Bla	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron-Manganes	e Masses (F12) (LRR K, L, R)
	droaen Sulfide (A4	4)	Loa	mv Mucl	v Minera	al (F1)	Verv Shallow D	Park Surface (TF12)
Str	atified Lavers (A5)	Ń		my Glev	ed Matrix	(F2)	Other (explain	in remarks)
2	m Muck ($\Delta 10$)	/	Der		atrix (F3)	· (· _)		in romanic)
	nin Mack (A10)	Surface	$(\Lambda 11) = Box$	lov Dark	Surfaco	(E6)		
				loted De		(FU)	41 11 <i>1</i> 1	
	ck Dark Surface (AIZ)			irk Suria		^Indicators of hy	drophytic vegetation and weltand
Sar	ndy Mucky Minera	il (S1)	Rec	lox Depr	essions ((F8)	hydrology must	be present, unless disturbed or
5 c	m Mucky Peat or	Peat (S3)					problematic
Restrictive	Laver (if observe	ed):						
Type:		,					Hydric soil prese	ent? Y
Depth (inch	oc).				•			
Deptil (illeli					-			
Remarks:								
	udrology Indiante							
wetland Hy	drology indicato	ors:						
Primary Indi	icators (minimum	of one is	required; check a	all that a	pply)		Secondary Ir	ndicators (minimum of two required
X Surface	Water (A1)			Aquatic	Fauna (B	13)	Surfac	e Soil Cracks (B6)
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)	Draina	ge Patterns (B10)
X Saturati	on (A3)			Hydroge	n Sulfide	Odor (C1) Dry-Se	ason Water Table (C2)
Water M	Aarks (B1)			Oxidized	Rhizosp	heres on	Living Roots Cravfis	h Burrows (C8)
Sedime	nt Deposits (B2)			(C3)			Satura	tion Visible on Aerial Imagery (C9)
Drift Der	nosits (B3)			Presenc	e of Redu	iced Iron	(C4) Stunte	d or Stressed Plants (D1)
	at or Crust (B4)			Recent I	ron Redu	iction in T		probic Position (D2)
					ION Keuu			outrol Toot (D5)
	ion Visible on Acris	Imagan	((D7)	(00)	al Curfaa	a (C7)		euliai lesi (DS)
			/ (B7)					
Sparser	y vegetated Conca	ve Suna	се (ва)	Gauge c	or vveli Da	ata (D9)		
X Water-S	stained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obse	rvations:							
Surface wat	er present?	Yes	No		Depth (i	nches):	1	
Water table	present?	Yes	No		Depth (i	nches):	h	ndicators of wetland
Saturation p	present?	Yes	No		Depth (i	nches):	1	hydrology present? Y
(includes ca	pillary fringe)				•			
Describe reg	corded data (strea		monitoring well	aorial n	hotos n	ovious ir	spections) if available:	
Describe let		un yauyi	s, mormoring well	, αστιαι μ	notos, pi	Cvious II	ispections, it available.	
Domorkov								
Remarks:								
Remarks:								
Remarks:								

Project/Site MT2017/Bartlet Road and Rt 59	City/C	ounty: S. E	Barrington/C	ook Co Sa	ampling Date:	9/10/2020		
Applicant/Owner: McNaughton Development	-	State:	IL	Sa	ampling Point:	I		
Investigator(s): E. Raimondi		Sectio	n, Township	ip, Range: NE S21 T42N R9E				
Landform (hillslope, terrace, etc.):		Local re	elief (concav	e, convex, n	ione):			
Slope (%): Lat: 42.106169		Long:	-88.18169)2 Da	atum:			
Soil Map Unit Name Muskego and Houghton Mucks			NWI C	Classification	יייייייייייייייייייייייייייייייייייייי			
Are climatic/hydrologic conditions of the site typical for thi	is time of	the year?	Y (If	no, explain	in remarks)			
Are vegetation , soil , or hydrology	/	significantly	disturbed?	A	re "normal circums	tances"		
Are vegetation , soil , or hydrology	/	naturally pro	blematic?	,	p	resent? Yes		
SUMMARY OF FINDINGS				(If needed	, explain any answ	vers in remarks.)		
Hydrophytic vegetation present? Y								
Hydric soil present? N		Is the sa	ampled area	within a w	etland?	Ν		
Indicators of wetland hydrology present? N		f yes, opt	ional wetlan	d site ID:				
Remarks: (Explain alternative procedures here or in a ser	narate ren	ort)						
	barate rep	011.)						
VEGETATION Use scientific names of plants.	haaluta	Dom	Indiaator	Dominan	co Tost Workshoe	at		
Tree Stratum (Plot size: 30) %	Cover	Species	Staus	Number of	Dominant Species	ε ι		
1				that are OE	BL, FACW, or FAC:	1 (A)		
2				Total Nu	umber of Dominant			
3				Specie	s Across all Strata:	1 (B)		
4				Percent of	Dominant Species			
5		Tatal O		that are OB	BL, FACW, or FAC:	100.00% (A/B)		
Sanling/Shrub stratum (Plot size: 15)	=	Total Cover		Prevalenc	e Index Workshe	ot		
1				Total % C	over of:	C.		
2				OBL spec	ies 0 x1	= 0		
3				FACW sp	ecies 100 x 2	= 200		
4				FAC spec	ies 0 x 3	= 0		
5				FACU spe	cies 0 x 4	=		
	0 =	Total Cover		UPL speci	$\frac{1}{100}$	= 0 (D)		
Herb stratum (Plot size: 5)					$\frac{100}{100}$ (A)	<u>200</u> (B)		
1 Phalaris arundinacea	100	Y	FACW	Prevalenc	e Index = B/A =	2.00		
3	· ·	·		Hydrophy	tic Vegetation In	dicators:		
4	· ·			Rapid	test for hydrophyti	c vegetation		
5				X Domir	nance test is >50%			
6				X Preva	lence index is ≤3.0	*		
7				Morph	nogical adaptations	s* (provide		
8				suppo	orting data in Rema	irks or on a		
9		·		separa	ate sheet)			
10 —	100 -	Total Cover		Proble (evola	ematic hydrophytic	vegetation [*]		
Woody vine stratum (Plot size: 5)	100 -				·····)			
1				*Indicators pre	of hydric soil and wetla sent, unless disturbed	and hydrology must be or problematic		
2		·		Hydro	ophytic			
	0 =	Total Cover		veget	ation			
				prese	nt? Y			
Remarks: (Include photo numbers here or on a separate s	sheet)							

Profile Des	cription: (Descri	be to th	e depth needed	to docu	ment the	e indicat	or or confirm t	he absenc	e of indicators.)
Depth	Matrix		Red	dox Featu	ures				·
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	re	Remarks
0-30	10YR 2/1	100					granular		drv. no redox
							3		- ,
*Type: C = 0	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Matrix
Hydric Sc	il Indicators:						Indicators	for Proble	ematic Hydric Soils:
Hist	tisol (A1)		Sar	dy Gleye	ed Matrix	(S4)	Coast	Prairie Red	dox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	dy Redo	x (S5)		Dark S	Surface (S7) (LRR K, L)
Bla	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-M	langanese	Masses (F12) (LRR K, L, R)
— Hyd	drogen Sulfide (A4	-)	Loa	my Mucł	v Minera	al (F1)	Very S	Shallow Dar	rk Surface (TF12)
Stra	atified Lavers (A5)	,	Loa	mv Glev	ed Matrix	(F2)	Other	(explain in	remarks)
2 cr	m Muck (A10)		Der	leted Ma	atrix (F3)	()		、 1	,
Der	pleted Below Dark	Surface	(A11) Red	lox Dark	Surface	(F6)			
	ck Dark Surface (A12)	Der	leted Da	rk Surfa	ce (F7)	*Indicat	ors of hydro	onhytic vegetation and weltand
Sar	ndv Mucky Minera	I (S1)	Rec	lox Depr	essions ((F8)	hvdrol	nav must b	e present unless disturbed or
5 cr	n Mucky Peat or	Peat (S3		ion Dopr		()	nyarok	ogy maar b	problematic
0			/			1			problemate
Restrictive	Layer (if observe	ed):							
Туре:							Hydric s	oil presen	t? <u>N</u>
Depth (inche	es):								
Remarks:									
HYDROLO	DGY								
Wetland Hy	drology Indicato	rs:							
Primary Indi	cators (minimum	of one is	required; check	all that a	oply)		Sec	ondary Ind	icators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface S	Soil Cracks (B6)
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)		Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1)	Dry-Seas	son Water Table (C2)
Water N	larks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			<u> </u>	Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4) —	Stunted of	or Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent I	ron Redu	ction in T	illed Soils	Geomorp	phic Position (D2)
Iron Dep	osits (B5)			(C6)				FAC-Neu	ıtral Test (D5)
Inundati	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	r Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wat	er present?	Yes	No		Depth (i	nches):			
Water table	present?	Yes	No		Depth (i	nches):		Ind	licators of wetland
Saturation p	resent?	Yes	No		Depth (i	nches):		hy	drology present? N
(includes ca	pillary fringe)				-				
Describe red	corded data (strea	m gauge	e, monitoring well	, aerial p	hotos, pr	revious ir	spections), if a	vailable:	
	,	0 0	· · · · ·				. ,.		
Pomorko									
the second second									
transition	ial upland								

Project/Site MT2017/Bartlet Road and Rt 59	City/C	ounty: S.	Barrington/C	ook Co Sampling Date: 9/10/2020
Applicant/Owner: McNaughton Development	-	State:	IL	Sampling Point: J
Investigator(s): E. Raimondi		Secti	ion, Township	, Range: NE S21 T42N R9E
Landform (hillslope, terrace, etc.):		Local ı	relief (concav	e, convex, none):
Slope (%): Lat: 42.106169		Long:	-88.18169	2 Datum:
Soil Map Unit Name Muskego and Houghton Mucks		°	NWI (Classification:
Are climatic/hydrologic conditions of the site typical for this	is time of	the year?	Y (I	no, explain in remarks)
Are vegetation , soil , or hydrology	1	significantl	y disturbed?	Are "normal circumstances"
Are vegetation , soil , or hydrology	,	naturally p	roblematic?	present? Yes
SUMMARY OF FINDINGS				(If needed, explain any answers in remarks.)
Hydrophytic vegetation present? Y				
Hydric soil present? Y		Is the s	sampled area	within a wetland? Y
Indicators of wetland hydrology present? Y		f yes, op	- otional wetlan	d site ID:
Pomarks: (Explain alternative precedures here or in a sen	parato ror	port)		
Remarks. (Explain alternative procedures here of in a sep	barate rep	Jon.)		
	Sha	llow Swal	е	
VEGETATION Use scientific names of plants.	a a luta	Dam	Indiantar	Dominanco Tost Workshoot
AL Tree Stratum (Plot size: 30) %	Cover	Species	Staus	Number of Dominant Species
1	00101	Openio	Olduo	that are OBL, FACW, or FAC: 4 (A)
2				Total Number of Dominant
3				Species Across all Strata: 4 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 100.00% (A/B)
	0 =	Total Cove	er	Describer of the law Mind of and
Sapling/Shrub stratum (Plot size: 15)	10	V	FAC	Total % Cover of:
2	10	<u> </u>	FAC	OBI species $0 \times 1 = 0$
3	·			FACW species $70 \times 2 = 140$
4				FAC species 40 x 3 = 120
5				FACU species $0 \times 4 = 0$
	10 =	Total Cove	er	UPL species $0 \times 5 = 0$
Herb stratum (Plot size: 5)				Column totals 110 (A) 260 (B)
1 Phalaris arundinacea	40	Y	FACW	Prevalence Index = $B/A = 2.36$
2 Persicaria pensylvanica	30	Y	FACW	The large last to Manual at the Product
3 Sympnyotricnum lanceolatum	30	Y	FAC	Hydrophytic Vegetation Indicators:
5				X Dominance test is >50%
6				X Prevalence index is $\leq 3.0^*$
7				Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9				separate sheet)
10	400	Tatal O		Problematic hydrophytic vegetation*
Weedwine stratum (Plot size: 5	100 =	I otal Cove	er	(explain)
<u>vvoduý vine stratum</u> (Plot size. <u>5</u>)				*Indicators of hydric soil and wetland hydrology must b
2				Hydrophytic
	0 =	Total Cove	er	vegetation
				present? Y
Remarks: (Include photo numbers here or on a separate s	sheet)			

Profile Desc	ription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm th	e absence of indicato	rs.)
Depth	Depth <u>Matrix</u> <u>Redox Features</u>								
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	e R	emarks
0-20	10YR 2/1	100					SiL	granular	
20-28	10VR 2/1	20	10VR 4/2	70			SiCI	J N N	
20-20	1011(2/1	20	1011(4/2	10			OICL		
			10YR 5/6	10					
*Type: C = C	oncentration, D :	= Depleti	on, RM = Reduce	ed Matrix	k, MS = №	lasked S	and Grains.	**Location: PL = Pore L	ining, M = Matrix
Hydric Soi	I Indicators:						Indicators	for Problematic Hydric	: Soils:
Histi	sol (A1)		Sar	ndy Gleye	ed Matrix	(S4)	Coast I	Prairie Redox (A16) (LR	R K, L, R)
Histi	c Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark S	urface (S7) (LRR K, L)	
Blac	k Histic (A3)		Stri	pped Ma	trix (S6)		Iron-Ma	inganese Masses (F12)	(LRR K, L, R)
Hydr	ogen Sulfide (A4	4)	Loa	my Mucl	ky Minera	al (F1)	Very SI	nallow Dark Surface (TF	12)
Strat	ified Layers (A5))	Loa	imy Gley	ed Matrix	x (F2)	Other (explain in remarks)	
2 cm	Muck (A10)		Dep	pleted Ma	atrix (F3)				
X Depl	eted Below Dark	Surface	e (A11) 📃 Red	dox Dark	Surface	(F6)			
Thic	k Dark Surface (A12)	Dep	pleted Da	ark Surfa	ce (F7)	*Indicato	rs of hydrophytic vegeta	tion and weltand
Sand	dy Mucky Minera	al (S1)	Rec	dox Depr	essions ((F8)	hydrolo	gy must be present, unl	ess disturbed or
5 cm	Mucky Peat or	Peat (S3)	·				problematic	
Bostrictivo I	aver (if observ	<u>,</u>				1		-	
Typo:	ayer (il observ	eu).					Hydric co	il prosont? V	
Type.	-).				-		nyune se		
	s).				-				
	<u></u>								
HYDROLO	GY								
Wetland Hyd	Irology Indicato	ors:							
Primary Indic	ators (minimum	of one is	required; check	all that a	pply)		Seco	ndary Indicators (minim	um of two required
Surface V	Vater (A1)			Aquatic	Fauna (B	513)		Surface Soil Cracks (B6	6)
High Wat	er Table (A2)			True Aq	uatic Plar	nts (B14)		Drainage Patterns (B10)
Saturation	n (A3)			Hydroge	en Sulfide	Odor (C1	l)	Dry-Season Water Tabl	e (C2)
Water Ma	arks (B1)			Oxidized	d Rhizosp	heres on	Living Roots	Crayfish Burrows (C8)	
Sediment	Deposits (B2)			(C3)				Saturation Visible on Ae	erial Imagery (C9)
Drift Depo	osits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted or Stressed Pla	ints (D1)
Algal Mat	or Crust (B4)			Recent I	Iron Redu	uction in T	illed Soils X	Geomorphic Position (D	02)
Iron Depo	osits (B5)		(D-)	(C6)		(- -)	X	FAC-Neutral Test (D5)	
	n Visible on Aeria	al Imager	(B7)	Thin Mu	ck Surfac	ce (C7)			
Sparsely	Vegetated Conca	ave Surfa	ce (B8)	Gauge	or Well Da	ata (D9)	, ,		
Water-Sta	ained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Observ	vations:								
Surface wate	r present?	Yes	No		Depth (i	inches):			
Water table p	present?	Yes	No		Depth (i	inches):		Indicators of we	tland
Saturation pr	esent?	Yes	No		Depth (I	inches):		hydrology pres	ent? Y
(includes cap	mary minge)							<u> </u>	
Describe reco	orded data (strea	am gaug	e, monitoring well	, aerial p	photos, pi	revious ir	nspections), if av	ailable:	
Dava 1									
Remarks:									

Project/Site MT2017/Bartlet Road and Rt 59	City/C	ounty: S. E	Barrington/C	ook Co Sampl	ing Date:	9/10/2020		
Applicant/Owner: McNaughton Development	-	State:	IL	Sampli	ng Point:	К		
Investigator(s): E. Raimondi		Section, Township, Range: NE S21 T42N R9E						
Landform (hillslope, terrace, etc.):		Local re	lief (concave	e, convex, none)	:			
Slope (%): Lat: 42.106169		Long:	-88.18169	2 Datum	.:			
Soil Map Unit Name Muskego and Houghton Mucks			NWI C	classification:				
Are climatic/hydrologic conditions of the site typical for this	s time of	the year?	Y (If	no, explain in re	emarks)			
Are vegetation , soil , or hydrology		significantly	disturbed?	Are "no	ormal circumsta	ances"		
Are vegetation , soil , or hydrology		naturally pro	blematic?		pre	esent? Yes		
SUMMARY OF FINDINGS				(If needed, exp	lain any answe	rs in remarks.)		
Hydrophytic vegetation present? N								
Hydric soil present? Y		Is the sa	mpled area	within a wetlar	nd?	N		
Indicators of wetland hydrology present? N		f yes, opt	ional wetland	d site ID:				
Remarks: (Explain alternative procedures here or in a sen	arate ren	ort)						
	arate rep	011.)						
VEGETATION Use scientific names of plants.	a a luta	Dam	Indiantar	Dominanco Tr	et Workshoot			
AD Tree Stratum (Plot size: 30) %	Cover	Species	Staus	Number of Dom	vinant Species			
1				that are OBL, FA	ACW, or FAC:	1 (A)		
2				Total Numbe	er of Dominant	、		
3				Species Acr	oss all Strata:	2 (B)		
4				Percent of Dom	inant Species			
5				that are OBL, FA	ACW, or FAC:	50.00% (A/B)		
	0 =	Total Cover	-	Descriptions in		4		
Sapling/Shrub stratum (Plot size: 15)				Total % Covor	dex worksnee	t		
2				OBL species	0 x1=	0		
3				FACW species	$\frac{10}{10} \times 2 =$	20		
4				FAC species	30 x 3 =	90		
5				FACU species	60 x 4 =	240		
	0 =	Total Cover		UPL species	0 x 5 =	0		
Herb stratum (Plot size: 5)				Column totals	<u>100</u> (A)	350 (B)		
1 Solidago altissima	60	Y	FACU	Prevalence Ind	lex = B/A =	3.50		
2 Symphyotrichum lanceolatum	30	Y	FAC		/			
3 Unica dioica	5	<u>N</u> -	FACW	Hydropnytic V	for hydrophytic	cators:		
	5	IN	FACW	Dominance	e test is >50%	vegetation		
6				Prevalence	e index is ≤3.0*			
7				Morphogic	al adaptations*	(provide		
8				supporting	data in Remarl	ks or on a		
9				separate s	heet)			
10				Problemati	ic hydrophytic v	egetation*		
	100 =	I otal Cover		(explain)				
<u>vvoody vine stratum</u> (Plot size: <u>5</u>)				*Indicators of hyd	dric soil and wetlar	d hydrology must be		
2				Hvdrophv	tic	problematic		
²	0 =	Total Cover		vegetatior	1			
				present?	N			
Remarks: (Include photo numbers here or on a separate s	sheet)							
	-							

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the	absence of indicators.)
Depth	Matrix		Red	dox Feat	ures			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-20	10YR 2/1	100					SiL	aranular
20-28	10VR 2/1	20	10VR 4/2	70			SICI	
20-20	1011(2/1	20	1011(4/2	10			SICL	
			10YR 5/6	10				
*Type: $C = C$	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains. **	Location: PL = Pore Lining, M = Matrix
Hydric So	oil Indicators:		•			(0.1)	Indicators for	Problematic Hydric Soils:
Hist	tisol (A1)		Sar	idy Gleye	ed Matrix	(S4)	Coast Pra	arie Redox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	idy Redo	ix (S5)		Dark Surf	ace (S7) (LRR K, L)
Blac	ck Histic (A3)	•	Stri	pped Ma	trix (S6)			
Hyd	rogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very Shal	low Dark Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(1+2)	Other (exp	plain in remarks)
2 cr	m Muck (A10)	o (leted Ma	atrix (F3)			
	bleted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)		
	CK Dark Surface (A12)	Dep	pleted Da	Irk Surra		*Indicators	of hydrophytic vegetation and weltand
San	idy Mucky Minera	al (S1) Dest (O2	、	lox Depr	essions ((F8)	hydrology	must be present, unless disturbed or
^{5 cr}	m Mucky Peat or	Peat (S3)					problematic
Restrictive	Layer (if observe	ed):						
Туре:					_		Hydric soil	present? Y
Depth (inche	es):				-			
Remarks:								
HYDROLO	DGY							
Wetland Hy	drology Indicato	ors:						
Primary Indi	cators (minimum	of one is	required: check	all that a	(vlaa		Second	lary Indicators (minimum of two require
Surface	Water (A1)			Aquatic	Fauna (B	13)	<u></u>	Surface Soil Cracks (B6)
High Wa	ater Table (A2)			True Ag	uatic Plar	nts (B14)		Drainage Patterns (B10)
Saturatio	on (A3)			Hvdroae	n Sulfide	Odor (C1	I)D	Prv-Season Water Table (C2)
Water M	larks (B1)			Oxidized	Rhizosp	heres on	Living Roots	Crayfish Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			s	aturation Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4) S	itunted or Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent I	ron Redu	ction in T	illed Soils	Geomorphic Position (D2)
Iron Dep	osits (B5)			(C6)			F	AC-Neutral Test (D5)
Inundatio	on Visible on Aeria	al Imager	y (B7)	Thin Mu	ck Surfac	e (C7)		
Sparsely	Vegetated Conca	ave Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)		
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser	vations:			-				
Surface wate	er present?	Yes	No		Depth (i	nches):		
Water table	present?	Yes	No		Depth (i	nches):		Indicators of wetland
Saturation p	resent?	Yes	No		Depth (i	nches):		hydrology present? N
(includes ca	pillary fringe)							
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pi	revious ir	nspections), if availa	able:
		2	-		-			
Remarks:								

Project/Site MT2017/Bartlet Road and Rt 59	City/County:	S. Barrington/C	Cook Co Sampling Date:	9/10/2020					
Applicant/Owner: McNaughton Development	Stat	te: IL	Sampling Point:	L					
Investigator(s): E. Raimondi	S	Section, Township, Range: NE S21 T42N R9E							
Landform (hillslope, terrace, etc.):	Lo	cal relief (concav	e, convex, none):						
Slope (%): Lat: 42.106169	Long:	-88.1816	92 Datum:						
Soil Map Unit Name Muskego and Houghton Mucks		NWI	Classification:						
Are climatic/hydrologic conditions of the site typical for this	time of the yea	r? Y (I	f no, explain in remarks)						
Are vegetation , soil , or hydrology	signific	antly disturbed?	Are "normal circu	mstances"					
Are vegetation , soil , or hydrology	natural	ly problematic?		present? Yes					
SUMMARY OF FINDINGS			(If needed, explain any ar	swers in remarks.)					
Hydrophytic vegetation present? Y				,					
Hydric soil present? Y	ls ti	he sampled area	a within a wetland?	Y					
Indicators of wetland hydrology present? Y	f yes	s, optional wetlar	d site ID:						
Pemerika: (Evaleia elteractivo preseduros bere or in e conce	roto roport)	· ·							
Remarks. (Explain allemative procedures here of in a separ	ate report.)								
VEGETATION Use scientific names of plants.			Deminence Test Merkel	h 4					
Abso Trop Stratum (Plot size: 30) % C	olute Dom.	. Indicator	Dominance Test Works	neet					
1	over Opecie	5 01203	that are OBL_FACW_or FA	es .C [.] 1 (A)					
2			Total Number of Domina	ant (71)					
3			Species Across all Stra	ta: 1 (B)					
4			Percent of Dominant Speci	es					
5			that are OBL, FACW, or FA	C: <u>100.00%</u> (A/B)					
(0 = Total C	over							
Sapling/Shrub stratum (Plot size: 15)			Prevalence Index Works	sheet					
1			Total % Cover of:						
2			CBL species 0 x	1 = 0					
4	<u> </u>		FAC species 0 x	3 = 0					
5			FACU species 0 x	4 = 0					
	0 = Total C	over	UPL species 0 x	5 = 0					
Herb stratum (Plot size: 5)			Column totals 100 (A) 200 (B)					
1 Phalaris arundinacea 10	00 Y	FACW	Prevalence Index = B/A =	2.00					
2									
3			Hydrophytic Vegetation	Indicators:					
4			Rapid test for hydrop	hytic vegetation					
5			X Dominance test is >5	U% 2 0*					
7									
8			supporting data in Re	marks or on a					
9			separate sheet)						
10			Problematic hydrophy	/tic vegetation*					
1(00 = Total C	over	(explain)						
Woody vine stratum (Plot size: 5)			*Indicators of hydric soil and v	vetland hydrology must be					
2			Hydrophytic	bed of problematic					
	0 = Total C	over	vegetation						
			present? Y						
Remarks: (Include photo numbers here or on a separate sh	eet)								

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absence	e of indicators.)
Depth	Matrix		Red	dox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	ıre	Remarks
0-10	10YR 2/1	100					SiL		
10-16	10YR 2/1	20	10YR 4/1	60	П		SiCI		
10 10	1011(2/1	20		00			OIOL		
			10YR 5/6	20	C				
*Type: C = C	Concentration, D	= Depleti	on, RM = Reduce	ed Matrix	i, MS = N	lasked S	and Grains.	**Locatior	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicator	s for Proble	matic Hydric Soils:
Hist	tisol (A1)		Sar	dy Gleye	ed Matrix	: (S4)	Coas	t Prairie Rec	lox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	dy Redo	ox (S5)		Dark	Surface (S7) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-I	Manganese I	Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A	4)	Loa	my Mucl	ky Minera	al (F1)	Very	Shallow Dar	k Surface (TF12)
Stra	atified Layers (A5)	Loa	my Gley	ed Matrix	k (F2)	Other	r (explain in i	remarks)
2 cr	m Muck (A10)		Dep	leted Ma	atrix (F3)				
X Dep	leted Below Darl	< Surface	e (A11) Rec	lox Dark	Surface	(F6)			
Thic	ck Dark Surface (A12)	Dep	leted Da	ark Surfa	ce (F7)	*Indica	tors of hvdro	phytic vegetation and weltand
San	dy Mucky Minera	al (S1)	Rec	lox Depr	essions ((F8)	hvdro	loav must be	present. unless disturbed or
5 cr	n Mucky Peat or	Peat (S3)	•		· · ·	,	5, 11, 11, 11, 11, 11, 11, 11, 11, 11, 1	problematic
	, Lever (if cheer)	<u>,</u>	,			r			
Tupor	Layer (II observ	eu):					Ludria	ooil procent	3 ¥
Type:					-		Hydric	son present	r <u>r</u>
Depth (inche					-				
Remarks:									
HYDROLO	DGY								
Wetland Hy	drology Indicate	ors:							
Primary Indi	cators (minimum	of one is	required; check	all that a	pply)		<u>Se</u>	condary Indi	cators (minimum of two required
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface S	Soil Cracks (B6)
High Wa	ter Table (A2)			True Aq	uatic Plar	nts (B14)		Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	I) —	Dry-Seas	on Water Table (C2)
Water M	larks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish I	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)				Saturation	n Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted o	r Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent I	ron Redu	ction in T	illed Soils	X Geomorp	hic Position (D2)
Iron Dep	osits (B5)			(C6)				X FAC-Neu	tral Test (D5)
Inundatio	on Visible on Aeria	al Imager	y (B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ave Surfa	ce (B8)	Gauge of	or Well Da	ata (D9)			
X Water-S	tained Leaves (B9))		Other (E	xplain in	Remarks)		
Field Obser	vations:			-					
Surface wate	er present?	Yes	No		Depth (i	nches):			
Water table	present?	Yes	No		Depth (i	nches):		Ind	icators of wetland
Saturation p	resent?	Yes	No		Depth (i	nches):		hy	drology present? Y
(includes ca	pillary fringe)				-				
Describe rec	corded data (strea	am daud	e monitoring well	aerial n	hotos p	revious ir	spections) if a	available:	
20001100100		an gaag	,	, aonan p					
Remarks:									
-									

Project/Site MT2017/Bartlet Road and Rt 59	City/Co	ounty: S. E	Barrington/C	ook Co Sa	mpling Date:	9/10/2020
Applicant/Owner: McNaughton Development	-	State:	IL	Sar	mpling Point:	М
Investigator(s): E. Raimondi		Sectio	on, Township	, Range:	NE S21 T	42N R9E
Landform (hillslope, terrace, etc.):		Local re	elief (concave	e, convex, no	one):	
Slope (%): Lat: 42.106169		Long:	-88.18169	2 Da	tum:	
Soil Map Unit Name Muskego and Houghton Mucks			NWI C	lassification:	:	
Are climatic/hydrologic conditions of the site typical for thi	is time of t	he year?	Y (If	no, explain i	in remarks)	
Are vegetation , soil , or hydrology	/ 5	significantly	disturbed?	Are	e "normal circums	tances"
Are vegetation , soil , or hydrology	/ <u> </u>	naturally pro	blematic?	7.00	p	resent? Yes
SUMMARY OF FINDINGS				(If needed,	explain any answ	vers in remarks.)
Hydrophytic vegetation present? Y						
Hydric soil present? Y	Is the sa	ampled area	within a we	etland?	Y	
Indicators of wetland hydrology present? Y		f yes, opt	ional wetlan	d site ID:		
Remarks: (Explain alternative procedures here or in a ser	narate ren	ort)				
		011.)				
VEGETATION Use scientific names of plants.	haaluta	Dom	Indiaator	Dominanc	a Tast Worksho	at
Tree Stratum (Plot size: 30) %	Cover	Species	Staus		Cominant Species	A.
1				that are OBL	_, FACW, or FAC:	1 (A)
2				Total Nur	mber of Dominant	()
3				Species	Across all Strata:	1 (B)
4				Percent of E	Dominant Species	
5				that are OBL	, FACW, or FAC:	100.00% (A/B)
Sopling/Shrub stratum (Dist size) 15	= 0	I otal Cover	-	Dravalana	a Index Werkehe	ot
Saping/Snrub stratum (Piot size: 15)				Total % Co		et
2				OBI specie	$res 0 \times 1$	= 0
3		, "		FACW spe	cies 100 x 2	= 200
4				FAC specie	es 0 x 3	= 0
5				FACU spec	cies 0 x 4	= 0
	0 =	Total Cover		UPL specie	es <u>0</u> x5	=
Herb stratum (Plot size: 5)				Column tota	als <u>100</u> (A)	(B)
1 Phalaris arundinacea	100	Y	FACW	Prevalence	Index = B/A =	2.00
2		· •		المراجع والمراجع	ie Menstetien In	diaatara
3				Rapid t	lic vegetation in test for hydrophyt	ic vegetation
5				X Domina	ance test is >50%	
6				X Prevale	ence index is ≤3.0)*
7				Morpho	ogical adaptations	s* (provide
8				suppor	ting data in Rema	arks or on a
9				separa	te sheet)	
10	400	Terral One of		Probler	matic hydrophytic	vegetation*
Weedy vine stratum (Plot size: 5	100 =	l otal Cover		(explain	n)	
1				*Indicators c	of hydric soil and wetle ent, unless disturbed	and hydrology must be or problematic
2				Hydrop	phytic	
	0 =	Total Cover		vegeta	tion	
				presen	nt? <u>Y</u>	
Remarks: (Include photo numbers here or on a separate s	sheet)					

Profile Desc	cription: (Descr	ibe to th	e depth neede	d to docu	ment the	e indicat	or or confirm the ab	sence of indicators.)
Depth	Matrix		F	edox Feat	ures			
(Inches)	Color (moist)	%	Color (moist) %	Type*	Loc**	Texture	Remarks
0-10	10YR 2/1	100					Sil	
10.10	10YR 2/1	20		60				
10-16	10YR 2/1	30	10YR 4/1	60	D		SICL	
			10YR 5/6	10	С			
*Type: C = C	Concentration, D =	= Depleti	on, RM = Redu	ced Matrix	., MS = N	lasked S	and Grains. **Lo	cation: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators for P	roblematic Hydric Soils:
Hist	tisol (A1)		S	andv Glev	ed Matrix	(S4)	Coast Prairie	e Redox (A16) (LRR K. L. R)
Hist	tic Epipedon (A2)		s	andv Redo	ox (S5)	(-)	Dark Surfac	e (S7) (LRR K. L)
Blac	ck Histic (A3)		<u> </u>	tripped Ma	r(00)		Iron-Mangar	nese Masses (F12) (LRR K. L. R)
	Irogen Sulfide (A4	1)	—_ĭ	namy Muc	kv Miner:	al (F1)	Very Shallov	v Dark Surface (TE12)
Stre	tified Lavers (A5)	·/		oamy Glev	od Matrix	(F2)	Other (evola	in in remarks)
	m Muck (A10)	,	—	cally Cley	otriv (E2)	x (i Z)		in in ternarks)
	Noted Relew Dark	Surface		epieteu Ma	Surface			
	bleleu Below Dair	(Sunace (40)	;(ATI)			(FU)	*1	
		ATZ)			ark Suria		"Indicators of	nydropnytic vegetation and weitand
San	idy Mucky Minera	II (51) Dect (00	., — ^k	edox Depr	essions	(F8)	nydrology mi	ust be present, unless disturbed or
5 cr	n Mucky Peat or	Peat (S3	5)					problematic
Restrictive	Layer (if observe	ed):						
Type:							Hydric soil pro	esent? Y
Depth (inche	es):				-			
Demenden					-			
Remarks.								
HYDROLO	DGY							
Wetland Hy	drology Indicato	ors:						
Primary Indi	cators (minimum	of one is	required; chec	k all that a	pply)		Secondar	y Indicators (minimum of two required)
X Surface	Water (A1)			Aquatic	Fauna (B	13)	Sur	ace Soil Cracks (B6)
High Wa	ter Table (A2)			True Aq	uatic Plar	nts (B14)	Drai	nage Patterns (B10)
Saturatio	on (A3)			Hydroge	en Sulfide	Odor (C1	I) Dry-	Season Water Table (C2)
Water M	larks (B1)			Oxidized	d Rhizosp	heres on	Living Roots X Cra	yfish Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			Satu	uration Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4) Stur	nted or Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent	Iron Redu	ction in T	illed Soils X Geo	pmorphic Position (D2)
Iron Dep	osits (B5)			(C6)			X FAC	C-Neutral Test (D5)
Inundatio	on Visible on Aeria	I Imager	y (B7)	Thin Mu	ck Surfac	e (C7)		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)		
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser	vations:						l	
Surface wate	er present?	Yes	X No		Depth (i	nches):	2	
Water table	present?	Yes	No		Depth (i	nches):	<u> </u>	Indicators of wetland
Saturation p	resent?	Yes	No		Depth (i	nches):	———— I	hydrology present? Y
(includes ca	pillary fringe)				-	/		
Describe rec	orded data (strea			all aprial r	hotos n	rovious ir	spections) if availab	<u>م</u> .
Describe rec		in gaug		ell, dellai p	notos, p		ispections), il availabi	ю.
Remarks:								

Project/Site MT2017/Bartlet Road and Rt 59	City/County:	S. Barrington/C	Cook Co Sampling Date:	9/10/2020
Applicant/Owner: McNaughton Development	Sta	te: IL	Sampling Point:	N
Investigator(s): E. Raimondi		Section, Townshi	p, Range: NE S21	T42N R9E
Landform (hillslope, terrace, etc.):	Lo	cal relief (conca	e, convex, none):	
Slope (%): Lat: 42.106169	Long:	-88.1816	92 Datum:	
Soil Map Unit Name Muskego and Houghton Mucks		NWI	Classification:	
Are climatic/hydrologic conditions of the site typical for this ti	ime of the yea	ar? Y (I	f no, explain in remarks)	
Are vegetation , soil , or hydrology	signific	antly disturbed?	Are "normal circun	nstances"
Are vegetation , soil , or hydrology	natural	lly problematic?		present? Yes
SUMMARY OF FINDINGS			(If needed, explain any ans	swers in remarks.)
Hydrophytic vegetation present? Y				
Hydric soil present? Y	ls t	he sampled are	a within a wetland?	Ν
Indicators of wetland hydrology present? N	f ye	s, optional wetlar	nd site ID:	
Pomarka: (Evalain alternativo proceduros baro er in a constr	oto roport)	•		
Remarks. (Explain alternative procedures here of in a separa	ale report.)			
VEGETATION Use scientific names of plants.				t
Abso Trop Stratum (Plot size: 30) % Co	olute Dom	. Indicator	Dominance Test worksn	eet
1 (FIOL SIZE) 70 CC		es Olaus	that are OBL_FACW_or FAC	es C: 1 (A)
2			Total Number of Domina	(//)
3			Species Across all Strate	a: 1 (B)
4			Percent of Dominant Specie	es
5			that are OBL, FACW, or FAC	C: 100.00% (A/B)
0) = Total C	Cover		
Sapling/Shrub stratum (Plot size: 15)			Prevalence Index Works	heet
1			Total % Cover of:	1 0
3			FACW species 100 x	1 = 0 2 = 200
4			FAC species 0 x	3 = 0
5			FACU species 0 x	4 = 0
0	= Total C	Cover	UPL species 0 x	5 = 0
Herb stratum (Plot size: 5)			Column totals 100 (A	A) 200 (B)
1 Phalaris arundinacea 10	00 Y	FACW	Prevalence Index = B/A =	2.00
2				
3			Hydrophytic Vegetation I	ndicators:
4			Rapid test for hydroph	ytic vegetation
6			X Prevalence index is <3	70 8 O*
7				ns* (provido
8			supporting data in Rer	narks or on a
9			separate sheet)	
10			Problematic hydrophyt	ic vegetation*
10	0 = Total C	Cover	(explain)	
Woody vine stratum (Plot size: 5)			*Indicators of hydric soil and we	etland hydrology must be
			present, unless disturbe	ed or problematic
2		<u></u>	vegetation	
0		Jover	present? Y	
Remarks: (Include photo numbers here or on a separate she	eet)		ļ	

Profile Des	cription: (Descr	ibe to th	e depth need	ded	to docu	ment the	e indicat	or or confirm the	absence of indica	tors.)
Depth	Matrix		•	Rec	lox Feat	ures				,
(Inches)	Color (moist)	%	Color (moi	st)	%	Type*	Loc**	Texture		Remarks
0-10	10YR 2/1	100						SiL		
10-16	10VP 2/1	30	10VP 4/1	1	60	П		SICI		
10-10	10111 2/1	30	1011(4/		00	0		SICL		
			10YR 5/6	; ;	10	С				
*Type: C = 0	Concentration, D	= Depleti	on, RM = Re	duce	ed Matrix	, MS = N	lasked S	and Grains. **	Location: PL = Por	e Lining, M = Matrix
Hydric Sc	oil Indicators:							Indicators fo	r Problematic Hyd	ric Soils:
His	tisol (A1)			San	dy Gleye	ed Matrix	: (S4)	Coast Pr	airie Redox (A16) (I	.RR K, L, R)
His His	tic Epipedon (A2)			San	dy Redo	x (S5)		Dark Sur	face (S7) (LRR K, I	.)
Bla	ck Histic (A3)			Strip	oped Ma	trix (S6)		Iron-Man	ganese Masses (F1	2) (LRR K, L, R)
Hyo	drogen Sulfide (A	4)		Loa	my Mucł	ky Minera	al (F1)	Very Sha	llow Dark Surface (TF12)
Stra	atified Layers (A5)		Loa	my Gley	ed Matrix	k (F2)	Other (ex	plain in remarks)	
2 ci	m Muck (A10)			Dep	leted Ma	atrix (F3)				
X Dep	pleted Below Dark	 Surface 	e (A11)	Red	lox Dark	Surface	(F6)			
Thio	ck Dark Surface (A12)		Dep	leted Da	irk Surfa	ce (F7)	*Indicators	of hydrophytic veg	etation and weltand
Sar	ndy Mucky Minera	al (S1)		Red	lox Depr	essions ((F8)	hydrology	v must be present, u	nless disturbed or
5 ci	m Mucky Peat or	Peat (S3	5)						problematio	;
Restrictive	Layer (if observ	ed):								
Type:								Hydric soil	present? Y	
Depth (inche	es):								•	-
	·									
HYDROL	DGY									
Wetland Hy	drology Indicato	ors:								
Primary Indi	cators (minimum	of one is	required: ch	eck a	all that a	(vlac		Secon	dary Indicators (min	imum of two required)
Surface	Water (A1)				Aquatic	Eauna (B	13)	<u>000011</u>	Surface Soil Cracks (B6)
High Wa	ater Table (A2)				True Ag	uatic Plar	nts (B14)		Drainage Patterns (B	10)
Saturatio	on (A3)				Hydroge	n Sulfide	Odor (C	I) <u> </u>	Dry-Season Water Ta	able (C2)
Water M	larks (B1)				Oxidized	l Rhizosp	heres on	Living Roots	Crayfish Burrows (C8	
Sedimer	nt Deposits (B2)				(C3)			<u> </u>	Saturation Visible on	, Aerial Imagery (C9)
Drift Dep	posits (B3)				Presenc	e of Redu	uced Iron	(C4)	Stunted or Stressed	Plants (D1)
Algal Ma	at or Crust (B4)				Recent I	ron Redu	ction in T	illed Soils	Geomorphic Position	(D2)
Iron Dep	oosits (B5)				(C6)			Х	FAC-Neutral Test (D	5)
Inundati	on Visible on Aeria	al Imager	y (B7)		Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ave Surfa	ce (B8)		Gauge o	r Well Da	ata (D9)			
Water-S	tained Leaves (B9)			Other (E	xplain in	Remarks)		
Field Obser	vations:									
Surface wat	er present?	Yes	X N	lo		Depth (i	nches):	2		
Water table	present?	Yes	N	lo		Depth (i	nches):		Indicators of	wetland
Saturation p	resent?	Yes	N	lo		Depth (i	nches):		hydrology pr	esent? N
(includes ca	pillary fringe)					-				
Describe red	corded data (strea	am gaug	e, monitoring	well,	, aerial p	hotos, pi	revious ir	nspections), if avai	lable:	
Remarks:										
unelono	of SP M									
upsiope										

Project/Site MT2017/Bartlet Road and Rt 59	City/Cour	nty: S.E	Barrington/C	ook Co S	Sampling Date:	9/10/2020
Applicant/Owner: McNaughton Development		State:	IL	s	ampling Point:	0
Investigator(s): E. Raimondi		Sectio	n, Township	, Range:	NE S21	T42N R9E
Landform (hillslope, terrace, etc.):		Local re	lief (concave	e, convex, I	none):	
Slope (%): Lat: 42.106169	Lo	ng:	-88.18169	2 C	Datum:	
Soil Map Unit Name Muskego and Houghton Mucks		- <u> </u>	NWI C	lassificatio	n:	
Are climatic/hydrologic conditions of the site typical for this	time of the	year?	Y (If	no, explair	n in remarks)	
Are vegetation , soil , or hydrology	sig	nificantly	disturbed?	Δ	vre "normal circum	istances"
Are vegetation , soil , or hydrology	nat	turally pro	blematic?			present? Yes
SUMMARY OF FINDINGS				(If neede	d, explain any ans	wers in remarks.)
Hydrophytic vegetation present? Y						
Hydric soil present? Y		Is the sa	mpled area	within a v	vetland?	Y
Indicators of wetland hydrology present? Y	ł	f yes, opti	ional wetlan	d site ID:		
Remarks: (Explain alternative procedures here or in a sepa	rate report)				
		.)				
VEGETATION Use scientific names of plants.	aluta F	20.00	Indiantar	Dominar	oo Tost Worksh	oot
ADS Tree Stratum (Plot size: 30) % C	olute L Cover Sc	pom. Decies	Staus	Number o	f Dominant Spacia	
1	ото: ор		0.000	that are O	BL, FACW, or FAC	: 1 (A)
2				Total N	lumber of Dominar	ıt(, , , , , , , , , , , , , , , , ,
3				Specie	es Across all Strata	ແ <u>1</u> (B)
4				Percent o	f Dominant Specie	s
5				that are O	BL, FACW, or FAC	: <u>100.00%</u> (A/B)
	0 = Tot	tal Cover	-	Description	a a lu dan Markal	
Sapling/Shrub stratum (Plot size: 15)				Total % (Ce Index Worksr	leet
2				OBL spec		1 – 0
3				FACW sc	becies $\frac{100}{100}$ x 2	2 = 200
4				FAC spec	cies 0 x 3	3 = 0
5				FACU sp	ecies 0 x 4	1 = 0
	0 = Tot	tal Cover		UPL spec	cies 0 x t	$\tilde{o} = 0$
Herb stratum (Plot size: 5)				Column to	otals <u>100</u> (A) <u>200</u> (B)
1 Phalaris arundinacea 1	00	Y	FACW	Prevalen	ce Index = B/A =	2.00
2						
3				Hyaroph	ytic vegetation in	ndicators:
5					inance test is >50	%
6				X Preva	alence index is ≤3	.0*
7				 Morp	hogical adaptation	ns* (provide
8				supp	orting data in Rem	arks or on a
9				sepa	rate sheet)	
10				Probl	ematic hydrophyti	c vegetation*
	<u>00</u> = 1 ot	tal Cover		(expla	ain)	
<u>vvoody vine stratum</u> (Piot size: <u>5</u>) 1				*Indicators pr	s of hydric soil and we esent, unless disturbe	tland hydrology must be d or problematic
2				Hydr	ophytic	
	0 = Tot	tal Cover		vege	ent? Y	
Remarks: (Include photo numbers here or on a separate sh	eet)					
, ,	,					

Profile Descr	ription: (Descr	ibe to th	e depth	needed	to docu	ment the	e indicat	or or confirm th	ne absence o	of indicators.)
Depth	Matrix			Re	dox Featu	ures				·
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	е	Remarks
0-10	10YR 2/1	100						SiL		
10-16	10VR 2/1	30	1075	2 4/1	70		м	SiCI		
10-10	1011(2/1	50	1011	\ 1 /1	10		101	OICE		
*Type: C = Co	oncentration, D :	= Depleti	on, RM =	Reduce	ed Matrix	, MS = N	/lasked S	and Grains.	**Location: I	PL = Pore Lining, M = Matrix
Hydric Soil	Indicators:							Indicators	for Problem	atic Hydric Soils:
Histis	sol (A1)			Sar	ndy Gleye	ed Matrix	(S4)	Coast I	Prairie Redov	: (A16) (LRR K, L, R)
Histic	Epipedon (A2)		-	Sar	ndy Redo	x (S5)		Dark S	urface (S7) (LRR K, L)
Black	(Histic (A3)		•	Stri	pped Ma	trix (S6)		Iron-Ma	anganese Ma	sses (F12) (LRR K, L, R)
Hydro	ogen Sulfide (A4	4)	•	Loa	my Mucł	ky Minera	al (F1)	Very S	hallow Dark \$	Surface (TF12)
Strati	ified Layers (A5)	-	Loa	my Gley	ed Matrix	x (F2)	Other (explain in rer	narks)
2 cm	Muck (A10)		-	Dep	pleted Ma	atrix (F3)				
X Deple	eted Below Dark	Surface	e (A11)	Red	dox Dark	Surface	(F6)			
Thick	Dark Surface (A12)	-	Dep	oleted Da	ark Surfa	ce (F7)	*Indicato	ors of hydroph	nytic vegetation and weltand
Sand	y Mucky Minera	ul (S1)	•	Red	dox Depr	essions ((F8)	hydrolo	gy must be p	resent, unless disturbed or
5 cm	Mucky Peat or	Peat (S3	5)				、 ,	,	pro	blematic
Bestrictive L	over (if cheery	<u>,</u>	,				1			
Tupo:	ayer (il observe	eu):						Uudria aa	ail procent?	×
Type:						-		Hydric Sc	bil present?	<u> </u>
Depth (inches	<i>.</i>					-				
Remarks:										
HYDROLO	GY									
Wetland Hyd	rology Indicato	ors:								
Primary Indica	ators (minimum	of one is	required	; check	all that a	pply)		Seco	ondary Indica	tors (minimum of two required
X Surface W	/ater (A1)				Aquatic	Fauna (B	313)		Surface Soi	Cracks (B6)
High Wate	er Table (A2)				True Aq	uatic Plar	nts (B14)		Drainage Pa	atterns (B10)
Saturation	n (A3)				Hydroge	n Sulfide	Odor (C1	1)	Dry-Season	Water Table (C2)
Water Ma	rks (B1)				Oxidized	l Rhizosp	heres on	Living Roots	Crayfish Bu	rrows (C8)
Sediment	Deposits (B2)				(C3)				Saturation \	isible on Aerial Imagery (C9)
Drift Depo	osits (B3)				Presenc	e of Redu	uced Iron	(C4)	Stunted or S	Stressed Plants (D1)
Algal Mat	or Crust (B4)				Recent I	ron Redu	uction in T	Tilled Soils X	Geomorphic	Position (D2)
Iron Depo	sits (B5)				(C6)			X	FAC-Neutra	I Test (D5)
Inundation	n Visible on Aeria	al Imager	y (B7)		Thin Mu	ck Surfac	ce (C7)			
Sparsely \	Vegetated Conca	ave Surfa	ce (B8)		Gauge o	or Well Da	ata (D9)			
Water-Sta	ained Leaves (B9)			Other (E	xplain in	Remarks)		
Field Observ	ations:	_								
Surface water	present?	Yes	X	No		Depth (i	inches):	2		
Water table p	resent?	Yes		No		Depth (i	inches):		Indica	ators of wetland
Saturation pre	esent?	Yes		No		Depth (i	inches):		hydr	ology present? Y
(includes capi	illary fringe)									
Describe reco	orded data (strea	am gaug	e, monito	ring well	, aerial p	hotos, pi	revious ir	nspections), if av	ailable:	
Remarks:										

WETLAND DELINEATION REPORT Route 59 and Bartett Rd – MT2017

Appendix D: Floristic Quality Index



NOTES: 9/10/2020
NOTES: 9/10/2020

CONSERVATISM- BASED METRICS			ADDITIONAL METRICS
MEAN C (NATIVE SPECIES)	2.79	SPECIES RICHNESS (ALL)	32
MEAN C (ALL SPECIES) MEAN C	2.09	SPECIES RICHNESS (NATIVE)	24
(NATIVE TREES)	3.00	% NON-NATIVE	0.25
(NATIVE SHRUBS)	1.50	(ALL)	-0.78
(NATIVE HERBACEOUS)	2.89	WET INDICATOR (NATIVE)	-0.92
FOAI		% HYDROPHYTE	
(NATIVE SPECIES) FOAI	13.68	(MIDWEST) % NATIVE	0.84
(ALL SPECIES)	11.84	PERENNIAL	0.75
ADJUSTED FQAI	24.18	% NATIVE ANNUAL	0.00
% C VALUE 0	0.34	% ANNUAL	0.00
% C VALUE 1-3	0.31	% PERENNIAL	0.97
% C VALUE 4-6	0.34		
% C VALUE 7-10	0.00		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	R HABIT	DURATION	NATIVITY
APOCAN	cannabinum	sibiricum Carex	Indian-Hemp Greater Straw		2 FAC	FAC		0 Forb	Perennial	Native
CXNORM	Carex normalis	normalis	Sedge		5 FACW	FACW		-1 Sedge	Perennial	Native
CXSTIP	Carex stipata	Carex stipata Carex	Stalk-Grain Sedge		4 OBL	OBL		-2 Sedge	Perennial	Native
CXVULP	Carex vulpinoidea	vulpinoidea Cornus	Common Fox Sedge		2 FACW	OBL		-1 Sedge	Perennial	Native
CORRAC	Cornus racemosa	racemosa DIPSACUS	Gray Dogwood		1 FAC	FAC		0 Shrub	Perennial	Native
DIPFUL	Dipsacus fullonum Epilobium	SYLVESTRIS Epilobium	Fuller's Teasel Purple-Leaf		0 FACU	FACU		1 Forb	Biennial	Adventive
EPICOL	coloratum	coloratum Equisetum	Willowherb		3 OBL	OBL	-	-2 Forb	Perennial	Native
EQUARV	Equisetum arvense	arvense Solidago graminifolia; Solidago graminifolia nuttallii;	Field Horsetail		0 FAC	FAC		0 Fern	Perennial	Native
EUTGRA	Euthamia graminifolia	Euthamia nuttallii Fragaria	Flat-Top Goldentop		4 FACW	FAC		-1 Forb	Perennial	Native
FRAVIR	Fragaria virginiana	virginiana Fraxinus pennsylvanic a subintegerri	Virginia Strawberry		0 FACU	FACU		1 Forb	Perennial	Native
FRAPEN	Fraxinus pennsylvanica	ma; Fraxinus lanceolata Helianthus	Green Ash		4 FACW	FACW		-1 Tree	Perennial	Native
HELGRO	Helianthus grosseserratus	grosseserratu s	Saw-Tooth Sunflower		4 FACW	FACW		-1 Forb	Perennial	Native
JUNDUD	Juncus dudleyi	dudleyi Juncus	Dudley's Rush		2 FACW	FACW		-1 Forb	Perennial	Native
JUNTOR	Juncus torreyi	torreyi LONICERA	Torrey's Rush		2 FACW	FACW		-1 Forb	Perennial	Native
LONMAA	Lonicera maackii Lycopus	MAACKII Lycopus	Amur Honeysuckle Cut-Leaf Water-		0 UPL	UPL		2 Shrub	Perennial	Adventive
LYCAME	americanus	americanus LYTHRUM	Horehound		4 OBL	OBL		-2 Forb	Perennial	Native
LYTSAL	Lythrum salicaria	SALICARIA	Purple Loosestrife		0 OBL	OBL		-2 Forb	Perennial	Adventive

	Dhalaric							
PHAARU	arundinacea Phragmites	A	Reed Canary Grass	0 FACW	FACW	-1 Grass	Perennial	Adventive
	australis ssp.	PHRAGMITES						
PHRAUSU	australis	AUSTRALIS Populus	Common Reed	0 FACW	FACW	-1 Grass	Perennial	Adventive
POPDEL	Populus deltoides	deltoides Sagittaria	Eastern Cottonwood	0 FAC	FAC	0 Tree	Perennial	Native
SAGLAT	Sagittaria latifolia	latifolia	Duck-Potato	3 OBL	OBL	-2 Forb	Perennial	Native
SALINT	Salix interior	Salix interior	Sandbar Willow	2 FACW	FACW	-1 Shrub	Perennial	Native
SALNIG	Salix nigra Sambucus nigra	Salix nigra	Black Willow	5 OBL	OBL	-2 Tree	Perennial	Native
SAMNIG	ssp. nigra	NIGRA	Black Elder	0 FAC	FACW	-1 Shrub	Perennial	Adventive
SCIATV	Scirpus atrovirens	atrovirens	Dark-Green Bulrush	4 OBL	OBL	-2 Sedge	Perennial	Native
SOLALT	Solidago altissima	altissima	Tall Goldenrod	1 FACU	FACU	1 Forb	Perennial	Native
SOLGIG	Solidago gigantea	gigantea SONCHUS	Late Goldenrod	4 FACW	FACW	-1 Forb	Perennial	Native
SONARV	Sonchus arvensis	ARVENSIS	Field Sow-Thistle	0 FACU	FACU	1 Forb	Perennial	Adventive
SYMLAT	lateriflorum Symphyotrichum	lateriflorus	Farewell-Summer	4 FACW	FAC	-1 Forb	Perennial	Native
SYMNOV	novae-angliae	angliae TYPHA	American-Aster	3 FACW	FACW	-1 Forb	Perennial	Native
		ANGUSTIFOL	Narrow-Leaf Cat-					
TYPANG	Typha angustifolia	IA Verbena	Tail	0 OBL	OBL	-2 Forb	Perennial	Adventive
VERHAS	Verbena hastata	hastata	Simpler's-Joy	4 FACW	FACW	-1 Forb	Perennial	Native

WL 2 - Rt 59 and Bartlett Rd S. Barrington E Raimondi 9/10/2020
9/10/2020

0010551/17101/			
BASED METRICS			ADDITIONAL METRICS
MEAN C (NATIVE SPECIES)	2.88	SPECIES RICHNESS (ALL)	33
MEAN C (ALL SPECIES) MEAN C	2.18	SPECIES RICHNESS (NATIVE)	25
(NATIVE TREES)	2.25	% NON-NATIVE	0.24
(NATIVE SHRUBS)	1.50	(ALL)	-1.00
(NATIVE HERBACEOUS)	3.16	WET INDICATOR (NATIVE)	-1.12
FQAI		% HYDROPHYTE	
(NATIVE SPECIES) FQAI	14.40	(MIDWEST) % NATIVE	0.91
(ALL SPECIES)	12.53	PERENNIAL	0.70
ADJUSTED FQAI	25.07	% NATIVE ANNUAL	0.06
% C VALUE 0	0.30	% ANNUAL	0.06
% C VALUE 1-3	0.39	% PERENNIAL	0.91
% C VALUE 4-6	0.30		
% C VALUE 7-10	0.00		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM) Acer negundo	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOF (NUMERIC)	R) HABIT	DURATION	NATIVITY
ACENEG	Acer negundo	violaceum Alisma	Ash-Leaf Maple		0 FAC	FAC		0 Tree	Perennial	Native
ALISUB	subcordatum	subcordatum	Plantain		3 OBL	OBL		-2 Forb	Perennial	Native
APOCAN	cannabinum	sibiricum Bidens	Indian-Hemp		2 FAC	FAC		0 Forb	Perennial	Native
BIDFRO	Bidens frondosa	frondosa Carex	Devil's-Pitchfork Greater Straw		1 FACW	FACW		-1 Forb	Annual	Native
CXNORM	Carex normalis	normalis Carex	Sedge		5 FACW	FACW		-1 Sedge	Perennial	Native
CXVULP	Carex vulpinoidea	vulpinoidea Cornus	Common Fox Sedge		2 FACW	OBL		-1 Sedge	Perennial	Native
CORRAC	Cornus racemosa	racemosa DIPSACUS	Gray Dogwood		1 FAC	FAC		0 Shrub	Perennial	Native
DIPFUL	Dipsacus fullonum Epilobium	SYLVESTRIS Epilobium	Fuller's Teasel Purple-Leaf		0 FACU	FACU		1 Forb	Biennial	Adventive
EPICOL	coloratum	coloratum Solidago graminifolia; Solidago graminifolia nuttallii;	Willowherb		3 OBL	OBL		-2 Forb	Perennial	Native
EUTGRA	Euthamia graminifolia	Euthamia nuttallii Fraxinus pennsylvanic a subintegerri	Flat-Top Goldentop		4 FACW	FAC		-1 Forb	Perennial	Native
	Fraxinus	ma; Fraxinus								
FRAPEN	pennsylvanica	lanceolata Glyceria striata var	Green Ash		4 FACW	FACW		-1 Tree	Perennial	Native
GLYSTR	Glyceria striata	stricta Impatiens	Fowl Manna Grass		4 OBL	OBL		-2 Grass	Perennial	Native
IMPCAP	Impatiens capensis	capensis Juncus	Not		3 FACW	FACW		-1 Forb	Annual	Native
JUNDUD	Juncus dudleyi	dudleyi Juncus	Dudley's Rush		2 FACW	FACW		-1 Forb	Perennial	Native
JUNTOR	Juncus torreyi	torreyi Leersia	Torrey's Rush		2 FACW	FACW		-1 Forb	Perennial	Native
LEEORY	Leersia oryzoides Lycopus	oryzoides Lycopus	Rice Cut Grass Cut-Leaf Water-		3 OBL	OBL		-2 Grass	Perennial	Native
LYCAME	americanus	americanus	Horehound		4 OBL	OBL		-2 Forb	Perennial	Native

		IYTHRUM						
LYTSAL	Lythrum salicaria Penthorum	SALICARIA Penthorum	Purple Loosestrife	0 OBL	OBL	-2 Forb	Perennial	Adventive
PENSED	sedoides	sedoides PHALARIS	Ditch-Stonecrop	4 OBL	OBL	-2 Forb	Perennial	Native
	Phalaris	ARUNDINACE						
PHAARU	arundinacea Phragmites	A	Reed Canary Grass	0 FACW	FACW	-1 Grass	Perennial	Adventive
	australis ssp.	PHRAGMITES						
PHRAUSU	australis	AUSTRALIS Populus	Common Reed	0 FACW	FACW	-1 Grass	Perennial	Adventive
POPDEL	Populus deltoides	deltoides RHAMNUS	Eastern Cottonwood European	0 FAC	FAC	0 Tree	Perennial	Native
RHACAT	Rhamnus cathartica	CATHARTICA ROSA	Buckthorn	0 FAC	FAC	0 Shrub	Perennial	Adventive
ROSMUL	Rosa multiflora	MULTIFLORA	Rambler Rose	0 FACU	FACU	1 Shrub	Perennial	Adventive
SALINT	Salix interior	Salix interior	Sandbar Willow	2 FACW	FACW	-1 Shrub	Perennial	Native
SALNIG	Salix nigra Sambucus nigra	Salix nigra SAMBUCUS	Black Willow	5 OBL	OBL	-2 Tree	Perennial	Native
SAMNIG	ssp. nigra	NIGRA Scirpus	Black Elder	0 FAC	FACW	-1 Shrub	Perennial	Adventive
SCIATV	Scirpus atrovirens	atrovirens Scirpus	Dark-Green Bulrush Cottongrass	4 OBL	OBL	-2 Sedge	Perennial	Native
SCICYP	Scirpus cyperinus	cyperinus Solidago	Bulrush	6 OBL	OBL	-2 Sedge	Perennial	Native
SOLALT	Solidago altissima	altissima Solidago	Tall Goldenrod	1 FACU	FACU	1 Forb	Perennial	Native
SOLGIG	Solidago gigantea Symphyotrichum	gigantea Aster novae-	Late Goldenrod New England	4 FACW	FACW	-1 Forb	Perennial	Native
SYMNOV	novae-angliae	angliae TYPHA	American-Aster	3 FACW	FACW	-1 Forb	Perennial	Native
		ANGUSTIFOL	Narrow-Leaf Cat-					
TYPANG	Typha angustifolia	IA	Tail	0 OBL	OBL	-2 Forb	Perennial	Adventive
SITE: LOCALE: BY: NOTES:	WL 3 - Rt 59 and Bartlett Rd S. Barrington E Raimondi 9/10/2020							
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CONSERVATISM- BASED METRICS			ADDITIONAL METRICS
MEAN C (NATIVE SPECIES)	2.14	SPECIES RICHNESS (ALL)	16
		. ,	
MEAN C (ALL SPECIES) MEAN C	1.88	SPECIES RICHNESS (NATIVE)	14
(NATIVE TREES) MEAN C	2.33	% NON-NATIVE WET INDICATOR	0.13
(NATIVE SHRUBS) MEAN C	1.50	(ALL)	-0.81
(NATIVE HERBACEOUS)	2.38	WET INDICATOR (NATIVE)	-0.79
FOAT		% HYDROPHYTE	
(NATIVE SPECIES) FOAI	8.02	(MIDWEST) % NATIVE	0.94
(ALL SPECIES)	7.50	PERENNIAL	0.81
ADJUSTED FQAI	20.04	% NATIVE ANNUAL	0.06
% C VALUE 0	0.25	% ANNUAL	0.06
% C VALUE 1-3	0.56	% PERENNIAL	0.94
% C VALUE 4-6	0.19		
% C VALUE 7-10	0.00		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK) Alisma	SPECIES (SYNONYM) Alisma	COMMON NAME American Water-	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOF (NUMERIC)	R HABIT	DURATION	NATIVITY
ALISUB	subcordatum	subcordatum	Plantain		3 OBL	OBL		-2 Forb	Perennial	Native
APOCAN	cannabinum	sibiricum Cornus	Indian-Hemp		2 FAC	FAC		0 Forb	Perennial	Native
CORRAC	Cornus racemosa Epilobium	racemosa Epilobium	Gray Dogwood Purple-Leaf		1 FAC	FAC		0 Shrub	Perennial	Native
EPICOL	coloratum	coloratum Fraxinus pennsylvanic a subintegerri	Willowherb		3 OBL	OBL		-2 Forb	Perennial	Native
	Fraxinus	ma; Fraxinus	- · · ·							
FRAPEN	pennsylvanica	lanceolata Juncus	Green Ash		4 FACW	FACW		-1 Iree	Perennial	Native
JUNDUD	Juncus dudleyi Lysimachia	dudleyi LYSIMACHIA	Dudley's Rush		2 FACW	FACW		-1 Forb	Perennial	Native
LYSNUM	nummularia	NUMMULARIA Polygonum	Creeping-Jenny		0 FACW	FACW		-1 Forb	Perennial	Adventive
	Persicaria	pensylvanicu								
PERPEN	pensylvanica	m PHALARIS	Pinkweed		0 FACW	FACW		-1 Forb	Annual	Native
	Phalaris	ARUNDINACE	Dood Conorry Cross			FACW		1 Cross	Devennial	Advantiva
PHAARU	arunumacea	A Populus	Reeu Callary Glass		U FACW	FACW			Perenniai	Auventive
POPDEL	Populus deltoides	deltoides	Eastern Cottonwood		0 FAC	FAC		0 Tree	Perennial	Native
SALINT	Salix interior	Salix interior Solidago	Sandbar Willow		2 FACW	FACW		-1 Shrub	Perennial	Native
SOLALT	Solidago altissima	altissima Solidago	Tall Goldenrod		1 FACU	FACU		1 Forb	Perennial	Native
SOLGIG	Solidago gigantea Symphyotrichum	gigantea Aster	Late Goldenrod		4 FACW	FACW		-1 Forb	Perennial	Native
SYMLAT	lateriflorum	lateriflorus Ulmus	Farewell-Summer		4 FACW	FAC		-1 Forb	Perennial	Native
ULMAME	Ulmus americana	americana Vitis riparia	American Elm		3 FACW	FACW		-1 Tree	Perennial	Native
VITRIP	Vitis riparia	var. syrticola	River-Bank Grape		1 FACW	FAC		-1 Vine	Perennial	Native

CONSERVATISM- BASED METRICS			ADDITIONAL METRICS
MEAN C (NATIVE SPECIES)	1.75	SPECIES RICHNESS (ALL)	10
MEAN C (ALL SPECIES)	1.40	SPECIES RICHNESS (NATIVE)	8
(NATIVE TREES)	n/a	% NON-NATIVE	0.20
MEAN C (NATIVE SHRUBS)	1.50	WET INDICATOR (ALL)	-0.50
(NATIVE HERBACEOUS)	1.83	WET INDICATOR (NATIVE)	-0.38
FQAI		% HYDROPHYTE	
(NATIVE SPECIES) FQAI	4.95	(MIDWEST) % NATIVE	0.90
(ALL SPECIES)	4.43	PERENNIAL	0.70
ADJUSTED FQAI	15.65	% NATIVE ANNUAL	0.10
% C VALUE 0	0.30	% ANNUAL	0.10
% C VALUE 1-3	0.60	% PERENNIAL	0.90
% C VALUE 4-6	0.10		
% C VALUE 7-10	0.00		

	SPECIES NAME				MIDWEST		WET			
SPECIES	(NWPL/	SPECIES	COMMON		WET	NC-NE WET	INDICATOR	t i i i i i i i i i i i i i i i i i i i		
ACRONYM	MOHLENBROCK)	(SYNONYM)	NAME	C VALUE	INDICATOR	INDICATOR	(NUMERIC)	HABIT	DURATION	NATIVITY
	Apocynum	Apocynum								
APOCAN	cannabinum	sibiricum	Indian-Hemp		2 FAC	FAC		0 Forb	Perennial	Native
		Cornus								
CORRAC	Cornus racemosa	racemosa	Gray Dogwood		1 FAC	FAC		0 Shrub	Perennial	Native
		Polygonum								
	Persicaria	pensylvanicu								
PERPEN	pensylvanica	m	Pinkweed		0 FACW	FACW		-1 Forb	Annual	Native
		PHALARIS								
	Phalaris	ARUNDINACE								
PHAARU	arundinacea	A	Reed Canary Grass		0 FACW	FACW	-	-1 Grass	Perennial	Adventive
SALINT	Salix interior	Salix interior	Sandbar Willow		2 FACW	FACW	-	-1 Shrub	Perennial	Native
	Sambucus nigra	SAMBUCUS								
SAMNIG	ssp. nigra	NIGRA	Black Elder		0 FAC	FACW	-	-1 Shrub	Perennial	Adventive
		Solidago								
SOLALI	Solidago altissima	altissima	Tall Goldenrod		1 FACU	FACU		1 Forb	Perennial	Native
	<u> </u>	Solidago			4 54 614	FACIN				
SOLGIG	Solidago gigantea	gigantea	Late Goldenrod		4 FACW	FACW		-1 Forb	Perennial	Native
	Sympnyotricnum		white Panicled		2 546	FACIN				
SYMLAN	lanceolatum	Aster simplex	American-Aster		3 FAC	FACW		U FORD	Perennial	Native
		Urtica								
	ortica dioica ssp.	procera;	T-II Notela		1 54 614/	FAC		1. 5	Devenuial	Nettore
UKIDIO	gracilis	Urtica gracilis	Tall Nettle		I FACW	FAC		-1 FOLD	Perenhial	Native

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CONSERVATISM- BASED METRICS			ADDITIONAL METRICS
MEAN C (NATIVE SPECIES)	1.90	SPECIES RICHNESS (ALL)	13
MEAN C (ALL SPECIES) MEAN C	1.46	SPECIES RICHNESS (NATIVE)	10
(NATIVE TREES)	4.00	% NON-NATIVE	0.23
(NATIVE SHRUBS)	1.50	(ALL)	-0.54
(NATIVE HERBACEOUS)	1.83	WET INDICATOR (NATIVE)	-0.50
FQAI		% HYDROPHYTE	
(NATIVE SPECIES) FQAI	6.01	(MIDWEST) % NATIVE	0.92
(ALL SPECIES)	5.27	PERENNIAL	0.69
ADJUSTED FQAI	16.66	% NATIVE ANNUAL	0.08
% C VALUE 0	0.31	% ANNUAL	0.08
% C VALUE 1-3	0.54	% PERENNIAL	0.92
% C VALUE 4-6	0.15		
% C VALUE 7-10	0.00		

SPECIES ACRONYM	SPECIES NAME (NWPL/ MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET INDICATOR	NC-NE WET INDICATOR	WET INDICATOR (NUMERIC)	HABIT	DURATION	NATIVITY
	Apocynum	Apocynum					(
APOCAN	cannabinum	sibiricum Cornus	Indian-Hemp		2 FAC	FAC		0 Forb	Perennial	Native
CORRAC	Cornus racemosa	racemosa Fraxinus pennsylvanic a subintegerri	Gray Dogwood		1 FAC	FAC		0 Shrub	Perennial	Native
	Fraxinus	ma; Fraxinus								
FRAPEN	pennsylvanica	lanceolata Polygonum	Green Ash		4 FACW	FACW		-1 Tree	Perennial	Native
	Persicaria	pensylvanicu								
PERPEN	pensylvanica	m PHALARIS	Pinkweed		0 FACW	FACW	-	-1 Forb	Annual	Native
	Phalaris	ARUNDINACE								
PHAARU	arundinacea	A RUMEX	Reed Canary Grass		0 FACW	FACW	-	-1 Grass	Perennial	Adventive
RUMCRI	Rumex crispus	CRISPUS	Curly Dock		0 FAC	FAC		0 Forb	Perennial	Adventive
SALINT	Salix interior Sambucus nigra	Salix interior SAMBUCUS	Sandbar Willow		2 FACW	FACW	-	-1 Shrub	Perennial	Native
SAMNIG	ssp. nigra	NIGRA Solidago	Black Elder		0 FAC	FACW	-	-1 Shrub	Perennial	Adventive
SOLALT	Solidago altissima	altissima Solidago	Tall Goldenrod		1 FACU	FACU		1 Forb	Perennial	Native
SOLGIG	Solidago gigantea Symphyotrichum	gigantea	Late Goldenrod White Panicled		4 FACW	FACW	-	-1 Forb	Perennial	Native
SYMLAN	lanceolatum	Aster simplex Urtica	American-Aster		3 FAC	FACW		0 Forb	Perennial	Native
	Urtica dioica ssp.	procera;								
URTDIO	gracilis .	Urtica gracilis Vitis riparia	Tall Nettle		1 FACW	FAC	-	-1 Forb	Perennial	Native
VITRIP	Vitis riparia	var. syrticola	River-Bank Grape		1 FACW	FAC	-	-1 Vine	Perennial	Native

CONSERVATISM- BASED METRICS			ADDITIONAL METRICS
MEAN C (NATIVE SPECIES)	2.11	SPECIES RICHNESS (ALL)	12
MEAN C (ALL SPECIES)	1.58	SPECIES RICHNESS (NATIVE)	9
(NATIVE TREES)	n/a	% NON-NATIVE	0.25
MEAN C (NATIVE SHRUBS)	1.50	WET INDICATOR (ALL)	-0.58
(NATIVE HERBACEOUS)	2.50	WET INDICATOR (NATIVE)	-0.56
FQAI		% HYDROPHYTE	
(NATIVE SPECIES) FQAI	6.33	(MIDWEST) % NATIVE	0.92
(ALL SPECIES)	5.48	PERENNIAL	0.67
ADJUSTED FQAI	18.28	% NATIVE ANNUAL	0.08
% C VALUE 0	0.33	% ANNUAL	0.08
% C VALUE 1-3	0.42	% PERENNIAL	0.92
% C VALUE 4-6	0.25		
% C VALUE 7-10	0.00		

	SPECIES NAME				Μ	1IDWEST		WET			
SPECIES	(NWPL/	SPECIES	COMMON		V	VET	NC-NE WET	INDICATOR	ર		
ACRONYM	MOHLENBROCK)	(SYNONYM)	NAME	C VALUE	I	NDICATOR	INDICATOR	(NUMERIC)) HABIT	DURATION	NATIVITY
	Apocynum	Apocynum									
APOCAN	cannabinum	sibiricum	Indian-Hemp		2 F	AC	FAC		0 Forb	Perennial	Native
		Cornus									
CORRAC	Cornus racemosa	racemosa Helianthus	Gray Dogwood		1 F	AC	FAC		0 Shrub	Perennial	Native
	Helianthus	grosseserratu	Saw-Tooth								
HELGRO	grosseserratus	S	Sunflower		4 F	ACW	FACW		-1 Forb	Perennial	Native
		Polygonum									
	Persicaria	pensylvanicu									
PERPEN	pensylvanica	m	Pinkweed		0 F	ACW	FACW		-1 Forb	Annual	Native
		PHALARIS									
	Phalaris	ARUNDINACE									
PHAARU	arundinacea	A	Reed Canary Grass		0 F	ACW	FACW		-1 Grass	Perennial	Adventive
		RUMEX									
RUMCRI	Rumex crispus	CRISPUS	Curly Dock		0 F	AC	FAC		0 Forb	Perennial	Adventive
SALINT	Salix interior	Salix interior	Sandbar Willow		2 F	ACW	FACW		-1 Shrub	Perennial	Native
	Sambucus nigra	SAMBUCUS									
SAMNIG	ssp. nigra	NIGRA	Black Elder		0 F	AC	FACW		-1 Shrub	Perennial	Adventive
		Solidago									
SOLALT	Solidago altissima	altissima	Tall Goldenrod		1 F	ACU	FACU		1 Forb	Perennial	Native
		Solidago									
SOLGIG	Solidago gigantea	gigantea	Late Goldenrod		4 F	ACW	FACW		-1 Forb	Perennial	Native
	Symphyotrichum	Aster									
SYMLAT	Iateriflorum	lateriflorus	Farewell-Summer		4 F	ACW	FAC		-1 Forb	Perennial	Native
		Vitis riparia									
VITRIP	Vitis riparia	var. syrticola	River-Bank Grape		1 F	ACW	FAC		-1 Vine	Perennial	Native

CONSERVATISM- BASED METRICS			ADDITIONAL METRICS
MEAN C	2.02	SPECIES RICHNESS	20
(NATIVE SPECIES)	2.93	(ALL)	20
MEAN C		SPECIES RICHNESS	
(ALL SPECIES)	2.05	(NATIVE)	14
MEAN C			
(NATIVE TREES)	5.00	% NON-NATIVE	0.30
MEAN C		WET INDICATOR	
(NATIVE SHRUBS) MEAN C	1.50	(ALL)	-0.80
(NATIVE		WET INDICATOR	
HERBACEOUS)	3.20	(NATIVE)	-1.00
FQAI		% HYDROPHYTE	
(NATIVE SPECIES)	10.96	(MIDWEST)	0.85
FQAI		% NATIVE	
(ALL SPECIES)	9.17	PERENNIAL	0.65
ADJUSTED FQAI	24.50	% NATIVE ANNUAL	0.05
% C VALUE 0	0.35	% ANNUAL	0.05
% C VALUE 1-3	0.30	% PERENNIAL	0.90
% C VALUE 4-6	0.35		
% C VALUE 7-10	0.00		

	SPECIES NAME				MIDWEST		WET			
SPECIES	(NWPL/	SPECIES	COMMON		WFT	NC-NE WET	INDICATOR	2		
ACRONYM	MOHI ENBROCK)	(SYNONYM)	NAME	C VALUE	INDICATOR	INDICATOR	(NUMERIC)	HABIT	DURATION	NATIVITY
	Anocynum	Anocynum		0 1/1202	11010/11010	111010,11011	()	10.011	201011011	
APOCAN	cannabinum	sibiricum	Indian-Hemp		2 FAC	FAC		0 Forb	Perennial	Native
CIRARV	Cirsium arvense	ARVENSE	Canadian Thistle		0 FACU	FACU		1 Forb	Perennial	Adventive
CORRAC	Cornus racemosa	racemosa	Gray Dogwood		1 FAC	FAC		0 Shrub	Perennial	Native
DIPFUL	Dipsacus fullonum	SYLVESTRIS	Fuller's Teasel		0 FACU	FACU		1 Forb	Biennial	Adventive
	Epilobium	Epilobium	Purple-Leaf							
EPICOL	coloratum	coloratum Helianthus	Willowherb		3 OBL	OBL		-2 Forb	Perennial	Native
	Helianthus	grosseserratu	Saw-Tooth							
HELGRO	grosseserratus	s Polvaonum	Sunflower		4 FACW	FACW		-1 Forb	Perennial	Native
	Persicaria	opelousanum								
PERHYO	hydropiperoides	adenocalyx Polygonum	Swamp Smartweed		6 OBL	OBL		-2 Forb	Perennial	Native
	Persicaria	pensylvanicu								
PERPEN	pensylvanica	m	Pinkweed		0 FACW	FACW		-1 Forb	Annual	Native
	. ,	PHALARIS								
	Phalaris	ARUNDINACE								
PHAARU	arundinacea	A RUMEX	Reed Canary Grass		0 FACW	FACW		-1 Grass	Perennial	Adventive
RUMCRI	Rumex crispus	CRISPUS	Curly Dock		0 FAC	FAC		0 Forb	Perennial	Adventive
SALINT	Salix interior	Salix interior	Sandbar Willow		2 FACW	FACW		-1 Shrub	Perennial	Native
SALNIG	Salix nigra	Salix nigra	Black Willow		5 OBL	OBL		-2 Tree	Perennial	Native
	Sambucus nigra	SAMBUCUS								
SAMNIG	ssp. nigra	NIGRA Scirpus	Black Elder		0 FAC	FACW		-1 Shrub	Perennial	Adventive
SCIATV	Scirpus atrovirens	atrovirens Solidago	Dark-Green Bulrush		4 OBL	OBL		-2 Sedge	Perennial	Native
SOLALT	Solidago altissima	altissima Solidago	Tall Goldenrod		1 FACU	FACU		1 Forb	Perennial	Native
SOLGIG	Solidago gigantea Symphyotrichum	gigantea Aster	Late Goldenrod		4 FACW	FACW		-1 Forb	Perennial	Native
SYMLAT	lateriflorum	lateriflorus TYPHA	Farewell-Summer		4 FACW	FAC		-1 Forb	Perennial	Native
		ANGUSTIFOL	Narrow-Leaf Cat-							
TYPANG	Typha angustifolia	IA Verbena	Tail		0 OBL	OBL		-2 Forb	Perennial	Adventive
VERHAS	Verbena hastata	hastata Vitis riparia	Simpler's-Joy		4 FACW	FACW		-1 Forb	Perennial	Native
VITRIP	Vitis riparia	var. syrticola	River-Bank Grape		1 FACW	FAC		-1 Vine	Perennial	Native

WETLAND DELINEATION REPORT Route 59 and Bartett Rd – MT2017

Appendix E: Threatened and Endangered Species Consultation



September 11, 2020

John Barry McNaughton Develoment 11S220 Jackson Street, Suite #101 Burr Ridge, Illinois 60527

RE: USFWS Threatened and Endangered Species IPaC Review Summary Route 59 and Bartlett Road – South Barrington, Cook County, Illinois

Dear Mr. Barry

Gary R. Weber Associates Inc. reviewed the U.S, Fish and Wildlife Information for Planning and Consultation (IPaC) website on September 11, 2020 for federally listed threatened and endangered species. The IPaC program utilizes known or expected range of species, as well as additional areas outside of the range in which activities may indirectly affect a species.

According to the IPaC consultation, nine (9) species are thought to be present in this location of Will County (See Table 1). **Potential habitat for the Northern-Long eared bat may be present within the wooded portions of the site. Tree removal is recommended to occur in winter months (Nov 1-March 31) to reduce impact.** Further coordination with the IDNR may be required should tree removal and mass grading be required See below for a description of on-site conditions.

Habitat Requirements and on-site availability:

The study area consists of a disused plant nursery. The on-site conditions area characterized young, small caliper nursery trees and upland fields of low-diversity forms. There are patches of emergent and scrub-shrub wetland along the boundaries.

<u>Rusty patched bumble bee (RPBB) (*Bombus affinis*)</u>: The site is located within the Red Zone of the Bee Habitat Map provided by the U.S. Fish and Wildlife Service (USFWS). This area is considered high potential for bee presence.

According to the USFWS guidance, the conditions suitable for bee habitat include a diverse community of plant species that flower from April through September. See USFWS RPBB Plant list). The bee typically forages within a few hundred meters to one kilometer from the nest location. Woodland and spring ephemerals are important food sources during spring emergence, and late season blooms help to maximize resources needed to over winter. Summer nesting is presumed to take place in upland grassland/shrublands, and winter nesting is presumed to be limited to upland forest and woodland. Conditions not suitable for be habitat include dense scrub-shrub thickets, agricultural fields, lawns, open water, or unvegetated areas.

Current site conditions present in the project area that may suit the RPBB include the upland areas between nursery trees. These areas, however, are limited in diversity and primarily consist of Avens (*Geum sp.)*, Goldenrod (*Solidago sp*.) and Blue grass (*Poa sp*.). The scrub-shrub boundary is dominated by dense Honeysuckle (*Lonicera maackii*), and Grey Dogwood (*Cornus racemosa*).

Due to the low-quality conditions and small size of the upland areas, habitat for the RPBB does **not appear present** on this site.

Table 1

Species	Status*	Habitat	Habitat Present**
<u>Northern long-eared bat</u> <u>(Myotis septentrionalis</u>)	т	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests, floodplain forest, around streams, edge habitats and mature woods.	Not Present
<u>Eastern massasauga</u> <u>(Sistrurus catenatus)</u>	т	Graminoid dominated plant communities (fens, sedge meadows, peatlands, wet prairies, open woodlands, and shrublands)	Not Present
<u>Piping Plover</u> (Charadrius melodus)	E	Open sandy beaches	Not Present
<u>Rufa Red Knot</u> (<u>Calidris canutus rufa)</u>	т	Sparsely vegetated hillside, marine habitats	Not Present
Hine's emerald dragonfly (Somatochlora hineana)	Е	Spring fed wetlands, wet meadows, and marshes	Not Present
<u>Rusty Patched Bumble Bee</u> (<i>Bombus affinis)</i>	E	Grasslands with flowering plants from April through October, underground and abandoned rodent cavities or clumps of grasses above ground as nesting sites, and undisturbed soil for hibernating queens to overwinter.	The site is located in the Red Zone of the Bee Habitat Map provided by the USFWS. See review of on-site habitat availability
Eastern prairie fringed orchid (Platanthera leucophaea)	т	Moderate to high quality wetlands, sedge meadow, marsh, and mesic to wet prairie	Not Present
Leafy-prairie clover (Dalea foliosa)	E	Prairie remnants on thin soil over limestone	Not Present
<u>Mead's milkweed (Asclepias</u> meadii)	т	Late successional tallgrass prairie, tallgrass prairie converted to hay meadow, and glades or barrens with thin soil	Not Present
Prairie Bush-clover (<i>Lespedeza leptostachya</i>)	т	Dry gravel prairies and dry-mesic tallgrass prairies with steep, well drained calcareous soils.	Not Present

*T=Threatened, E=Endangered, C= Candidate, CH=Critical Habitat ** Y=Yes, N=No, P=Possible