

## 9.0 References

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Ontario Ministry of Natural Resources (OMNR). 2011. Natural Heritage Assessment Guide for Renewable Energy Projects.

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[http://www.rom.on.ca/ontario/risk.php?doc\\_type=fact&id=120&lang=en](http://www.rom.on.ca/ontario/risk.php?doc_type=fact&id=120&lang=en)

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<http://wisplants.uwsp.edu/index.html>

**Appendix I**  
Photo Appendix

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**Appendix I: Photo Appendix**

MEMM4 Habitat: Facing southeast from Kerwood Road



MEMM4 Habitat: Facing east from Kerwood Road



MEMM4 Habitat: Facing northeast from Kerwood Road



**Appendix II**  
Field Notes

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**Wildlife Observation Form**  
NATURAL RESOURCE SOLUTIONS INC.

Site: Kornish #11E 1231 / 1230 Adelaide, WOD-048  
 Polygon: WOD 004  
 UTM: 17T 442379 4775637  
 Date: 25/08/11 Time: 9:20  
 Surveyor(s): JRW KNP  
 Weather: Sunny 20°C CC=60% Wind=4

Species Observed					Check for Wildlife Habitat that may be associated with an observation				
TY	Species	EV	Notes	#	TY	Species	EV	Notes	#
B	Mourning Dove	VO		2					
M	Mouse e6	OB		1					
B	Goldfinch	VO		2					
L	Bluebird	OB		1					
R	Am Robin	OB		1					
B	Great catbird	VO		1					
L	Parula white	OB		1					
M	Deer	TK		1					
H	Green Frog	VO		1					
M	Squirrel	VO	E.U.W	1					
E	Wood Pewee	VO		1					
B	Cardinal	OB		3					
B	Red cardinal	VO		1					

**Faunal Type Codes (TY)**

B=Bird M=Mammal H=Herpetofauna L=Lepidoptera F=Fish D=Dragonfly or Damselfly

**Evidence Codes (EV)**

**Breeding Birds**

- SH- Suitable Habitat
- SM- Singing Male
- T- Territory
- A- Anxiety Behavior
- D- Courtship Display
- N- Nest Building
- P- Pair
- V- Visiting Nest
- DD- Distraction Display
- NE- Nest with Eggs
- AE-Adult entering nest
- NU- Used nest
- FY- Fledged Young
- FS- Food/Fecal Sac

**Other Wildlife**

- OB- Observed
- DP- Distinctive Parts
- TK- Tracks
- VO- Vocalization
- HO- House/Den
- FE- Feeding Evidence
- CA- Carcass/Bones
- FY- Eggs or young
- SC- Scat
- SI- Other Signs (Specify)

**Wildlife Habitat Form**  
NATURAL RESOURCE SOLUTIONS INC.

Site: 1231 Kornish / 1230 Adelaide, WOD-048  
 Polygon: WOD 004  
 UTM: 17T 442379 4775637  
 Date: 25/08/11 Time: 9:20  
 Surveyor(s): JRW KNP  
 Weather: Sunny 20°C CC=60% Wind 4

**Wildlife Habitat (Check all that apply AND record UTM / mark on map)**  
 \*Habitats and Habitat Features are independent of wildlife observations\*

Habitat Type	Habitat Features	Snakes
<input checked="" type="checkbox"/> Deciduous Forest	<input type="checkbox"/> Spring Flooded Field	<input type="checkbox"/> Burrow
<input type="checkbox"/> Mixed Forest	<input type="checkbox"/> Stick Nest (Raptors, Herons)	<input type="checkbox"/> Fallen Rotting Log
<input type="checkbox"/> Coniferous Forest	<input type="checkbox"/> Marsh	<input type="checkbox"/> Old Well
<input type="checkbox"/> Swamp	<input type="checkbox"/> Tree Cavity Nest (Ducks)	<input checked="" type="checkbox"/> Rock Pile/Stone Wall
<input type="checkbox"/> Bog	<input type="checkbox"/> Seep/Spring (Turkeys/Grouse)	<input type="checkbox"/> Organics Pile
<input type="checkbox"/> Fen	<input type="checkbox"/> Cliffs/Banks	<input type="checkbox"/> Log Pile
<input type="checkbox"/> Water	<b>Bats</b>	<input type="checkbox"/> Karst
<input type="checkbox"/> (Shallow & Open)	<input type="checkbox"/> Cave Entrance	<input type="checkbox"/> Broken/Fissured Rock
<input type="checkbox"/> Meadow	<input type="checkbox"/> Mine Shaft	<input type="checkbox"/> Old Foundation
<input type="checkbox"/> Tallgrass Prairie	<input checked="" type="checkbox"/> Snag (>20cm DBH)	<input type="checkbox"/> Old Bridge/Concrete Culvert
<input type="checkbox"/> Thicket	<b>Mink/Otter/Fisher/Marten</b>	<b>Amphibians and Turtles</b>
<input type="checkbox"/> Savannah	<input type="checkbox"/> Snag	<input type="checkbox"/> Vernal Pool/Woodland Pond (Amphibian Breeding)
<input type="checkbox"/> Woodland	<input type="checkbox"/> Burrow	<input type="checkbox"/> Sand (Turtle Nesting)
<input checked="" type="checkbox"/> Valley	<input type="checkbox"/> Den	<input type="checkbox"/> Fine/Sandy Gravel (Turtle Nesting)
<input type="checkbox"/> (Describe Below)	<input type="checkbox"/> Tree Cavity	<b>Invertebrates</b>
<input type="checkbox"/> Headwater Area	<input type="checkbox"/> Fallen Log	<input type="checkbox"/> Crayfish Chimney
<input type="checkbox"/> (check for Seeps/Springs)	<b>Deer/Moose</b>	
<input type="checkbox"/> Valley F	<input type="checkbox"/> Seep/Spring	
<input type="checkbox"/> Creek running through road on SW side.	<input type="checkbox"/> Mineral Lick	

**For every Habitat Type or Habitat Feature, record UTM below (for each occurrence) or mark on map**

Habitat Feature:	UTM	Description
Rock pile	17T 0442103 4776237	large cement rock block pile
bird snag	±10m east of rock pile	- bird snag in routine & nesting hole
Worm area?	17T 0442131 4776141	- 1m x 1m x 1m subsoil - 1m x 1m x 1m subsoil
Grass	17T 0442288 4775941	- dried up - snag & peeling bark. not specified.

Describe Valley (depth, geomorphological traits):

**Additional Details:**

100 - 1296 = Vernal pool  
1297 - creek



Wildlife Habitat Field Data Collection

confirmed by JRW, KGB

Sept 25/13

1300-1310

10% CC

23' E02

\*Done from roadside\*



Project Name: Parkhill Project #: 1341 Area and/or Polygon ID: W00-045  
 Date: 16 Sept 2013 Start Time: 1220 End Time: 1235 Observers: (SKH, AMI)  
 Weather Conditions: 14°C, 100% CC, 2 wind

Photos: 1772-1776

Indicate whether or not the following habitat features are present within the polygon. If Yes to any, fill in Page 2. Incidental Wildlife Observations on Page 2.

Habitat Features	Present	Information to Record on Page 2
<b>Water</b>	Yes No	<b>Applicable to All:</b>
Spring Flooded Field	<input type="checkbox"/> <input checked="" type="checkbox"/>	Draw extent of all water if not indicated through ELC. Longevity of site (if known, or estimate).
Vernal Pool	<input type="checkbox"/> <input checked="" type="checkbox"/>	Dimensions (length, width, and depth). Sources of disturbance, current use, origin (natural or anthropogenic).
Pond	<input type="checkbox"/> <input checked="" type="checkbox"/>	Vegetation species, woody debris/basking logs within water. Evidence of wildlife use including waterfowl, turtles, amphibians
Shallow Marsh (MAS) or Open Water	<input type="checkbox"/> <input checked="" type="checkbox"/>	Presence of fish
Swamp	<input type="checkbox"/> <input checked="" type="checkbox"/>	<b>All Swamps:</b> Always search for Heron Nest Bowls. Record if active (April-June only) - Evidence includes egg shells, guano, dead young. Map colony/nests if found.

Fields	Yes No	Applicable to All:
Non-rotational Hay or Weakly Grazed Pasture	<input type="checkbox"/> <input checked="" type="checkbox"/>	Height of vegetation
Meadow	<input type="checkbox"/> <input checked="" type="checkbox"/>	Evidence of small mammals
Thicket, Woodland, Hydro Corridor	<input type="checkbox"/> <input checked="" type="checkbox"/>	

Size of site  
 Frequency and source of disturbance  
 Location and abundance of raptor perches (scattered trees, snags, fenceposts)  
 Abundance of nectar-producing plants (e.g. goldenrods and asters)  
 Adjacency to forest and forest size

Substrate and Topography	Yes No	Applicable to All:
Sand or Fine/Loose Gravel	<input type="checkbox"/> <input checked="" type="checkbox"/>	Evidence of use (turtles in or near the area, turtle tracks, raided nests). Proximity to Shallow Marsh (MAS) or Open Water
Banks, Steep Slopes, Sand Piles	<input type="checkbox"/> <input checked="" type="checkbox"/>	Count swallow nest holes and indicate location. Estimate number of breeding pairs. Sources of disturbance. Draw extent if not indicated through ELC.
Cliffs	<input type="checkbox"/> <input checked="" type="checkbox"/>	Height of cliff. Rock type. Presence of ledges or crevices and their size. Draw extent of cliffs if not indicated through ELC.
Karst	<input type="checkbox"/> <input checked="" type="checkbox"/>	Depth of crevices
Cave	<input type="checkbox"/> <input checked="" type="checkbox"/>	Depth of cave, bedrock type
Natural Rock Piles / Talus Slopes	<input type="checkbox"/> <input checked="" type="checkbox"/>	Age. Rock/soil type. Draw extent of talus slopes if not indicated by ELC. Adjacency to large water body with productive fish population (otters).
Exposed Unvegetated Lake/River/Wetland Edge	<input type="checkbox"/> <input checked="" type="checkbox"/>	Source of disturbances. Presence of shorebird food sources (snails, worms, clams, insects). Percent vegetation cover. Distance to a Great Lake.
Seeps or Springs	<input type="checkbox"/> <input checked="" type="checkbox"/>	Ecosite. Number or area of extent. Presence of indicator plants. Iron staining. Water temperature. Degree and length of slope. Soil types.
Islands or Peninsulas in Open Water	<input type="checkbox"/> <input checked="" type="checkbox"/>	Natural or artificial. Record any gulls or terns observed. Draw extent of island or peninsula if not indicated through ELC.

Anthropogenic Features	Yes No	Applicable to All:
Abandoned Mine Shaft	<input type="checkbox"/> <input checked="" type="checkbox"/>	Age Depth into the ground Amount of sun exposure (or direction the slope faces)
Old Rock or Debris Pile, Old Stone Fence	<input type="checkbox"/> <input checked="" type="checkbox"/>	Rock size Vegetation present Substrate composition (or bedrock type)
Abandoned Road or Rail Bed	<input type="checkbox"/> <input checked="" type="checkbox"/>	Evidence of Use Proximity to water and estimated subterranean influence or potential for winter water fluctuation
Abandoned Well	<input type="checkbox"/> <input checked="" type="checkbox"/>	<b>Abandoned Wells Only:</b> Presence and type of capping
Old Foundation	<input type="checkbox"/> <input checked="" type="checkbox"/>	<b>Abandoned Road or Rail Bed Only:</b> Extant in the landscape. Connectivity to other natural features. Overhead vegetation cover.

Burrows or Dens	Yes No	Applicable to Mammal Burrows or Dens:
Small - Rodent or Snake	<input type="checkbox"/> <input checked="" type="checkbox"/>	Diameter of entrance Soil Type Availability of aquatic vegetation or fish
Medium	<input type="checkbox"/> <input checked="" type="checkbox"/>	Ecosite of location Proximity to water and type of water Evidence of use, or tracks or digging marks
Large	<input type="checkbox"/> <input checked="" type="checkbox"/>	
Log Jams, Old Beaver Lodges	<input type="checkbox"/> <input checked="" type="checkbox"/>	Adjacency to large water body with productive fish population. Evidence of otter (observed, tracks, scat, predated fish, turtles, eggs, frogs).
Crayfish Chimney (7E only)	<input type="checkbox"/> <input checked="" type="checkbox"/>	Ecosite of location. Soil type. Source of site moisture (meadow marsh, creek/river edge, swamp etc).

Evidence	Yes No	Applicable to All:
Extensive Browse and/or Ungulate Scat	<input type="checkbox"/> <input checked="" type="checkbox"/>	Vegetation species browsed. Ecosite. Other evidence of ungulate use. Presence of seeps/springs. Barriers to movement to and from the area.
Nest Bowl or Stick Nest (herons or raptors)	<input type="checkbox"/> <input checked="" type="checkbox"/>	Quantity. Ecosite of location. Evidence of use. Species if known or bird group. Size. Height in tree. Tree species.

Outstanding Trees	Yes No	Applicable to All:
Large DBH, Outstanding Tall Snag	<input checked="" type="checkbox"/> <input type="checkbox"/>	Tree species. Evidence of perch usage or nesting. DBH, height. Exposure above canopy. Distance from surrounding forest (m) or within.
Large DBH Cavity Tree (Live or Dead)	<input checked="" type="checkbox"/> <input type="checkbox"/>	Tree species. DBH. Number of cavities. Size and type of cavities. Evidence of use by bats (abundant guano) or other mammals or wood ducks.

Rare Communities or Species	Yes No	Applicable to All:
Old-Growth Forest	<input type="checkbox"/> <input checked="" type="checkbox"/>	Average age of trees. Range of DBH or prism sweep. Sources of disturbance (includes presence of exotics).
Tallgrass Prairie or Savannah	<input type="checkbox"/> <input checked="" type="checkbox"/>	Soil type. Percent cover of trees, shrubs, forbs, and grasses. Sources of disturbance (includes presence of exotics).
Bog	<input type="checkbox"/> <input checked="" type="checkbox"/>	Soil type and depths.
Red Spruce or White Oak Forest	<input type="checkbox"/> <input checked="" type="checkbox"/>	Soil type and drainage regime. DBH range or prism sweep. Approximate Canopy Cover. Source of disturbance or evidence of forestry.
Coastal Marshes (Great Lakes/Shallow Atlantic)	<input type="checkbox"/> <input checked="" type="checkbox"/>	Substrate type (bedrock or soil type). Water level. Evidence of water fluctuation. Presence of Beaver Pond. Amount of exposed shoreline.
Dunes / Beaches / Bars / Ridges	<input type="checkbox"/> <input checked="" type="checkbox"/>	Soil or substrate type. Sand class. Sources of disturbance (includes presence of exotics). Percent cover of trees, shrubs, forbs, and grasses.
Sand Barren	<input type="checkbox"/> <input checked="" type="checkbox"/>	Sand class. Sources of disturbance (includes presence of exotics). Percent area of exposed rock, vegetation, and sand. Sources of erosion or fire.
Alvar	<input type="checkbox"/> <input checked="" type="checkbox"/>	Bedrock type. Soil type and depth. Percent area of exposed rock and vegetation. Sources of disturbance (includes presence of exotics).
Rare Species (Not Species At Risk)	<input type="checkbox"/> <input checked="" type="checkbox"/>	Number of individuals and locations. Ecosite or Vegetation Type.
Rare Vegetation Community	<input type="checkbox"/> <input checked="" type="checkbox"/>	Sources of disturbance (includes presence of exotics).

Characteristics of Identified Wildlife Habitat

Date: Sept 16, 2013



Project Name: Bornish Project #: 1231 Area and/or Polygon ID: W0D-045

Indicate the location of the habitat feature on the Field Map.

Identified Habitat Feature	# Observed	UTM(s)	Photo Numbers	Habitat Details (refer to Page 1)	Associated Wildlife Observed and Evidence
Thicket	1	17T 04S 0825 4774403	100-165 to 100-169	1 potential snag tree for perch (do not have access to prop) scattered trees.	1

TY	Species	EV	#	Notes	TY	Species	EV	#	Notes
B		H, OB	1	flew from perch on e. side of					
M	WT Deer	CA		roadside (hit) ditch					

<b>Faunal Type Codes (TY)</b> B=Bird M=Mammal H=Herpetofauna L=Lepidoptera F=Fish D=Dragonfly or Damselfly	<b>Evidence Codes (EV)</b> <b>Breeding Birds</b> H- Suitable Habitat S- Singing Male P- Pair T- Territory D- Courtship Display V- Visiting Nest A- Anxiously Behavior N- Nest Building (not wren or woodpecker) NB- Nest Building (not wren or woodpecker) DD- Distraction Display NU- Used nest FY- Fledged Young FS- Food/Fecal Sac CF- Adult carrying food NE- Nest with eggs NY- Nest with young AE-Adult entering/leaving nest	<b>Other Wildlife</b> OB- Observed DP- Distinctive Parts TK- Tracks VO- Vocalization HO- House/Den FE- Feeding Evidence CA- Carcass/Bones FY- Eggs or young SC- Scat SI- Other Signs (Specify)
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\* 1 dead deer on side of road.



**Wildlife Habitat Field Data Collection**

Project Name: <u>Parkhill</u>	Project #: <u>1341</u>	Area and/or Polygon ID: <u>W00-045</u>
Date: <u>SEP 25 2013</u>	Start Time: <u>13:00</u>	End Time: <u>13:40</u>
Weather Conditions: <u>23°C, 10% C.C. Wind 2 From E</u>		Observers: <u>JRW, KGB</u>

Indicate whether or not the following habitat features are present within the polygon. If Yes to any, fill in Page 2. Incidental Wildlife Observations on Page 2.

Habitat Features	Present	Information to Record on Page 2
<b>Water</b>	Yes No	<b>Applicable to All:</b>
Spring Flooded Field	<input type="checkbox"/> <input checked="" type="checkbox"/>	Draw extent of all water if not indicated through ELC. Longevity of site (if known, or estimate).
Vernal Pool	<input type="checkbox"/> <input checked="" type="checkbox"/>	Dimensions (length, width, and depth) Sources of disturbance, current use, origin (natural or anthropogenic).
Pond	<input type="checkbox"/> <input checked="" type="checkbox"/>	Vegetation species, woody debris/basking logs within water. Evidence of wildlife use including waterfowl, turtles, amphibians
Shallow Marsh (MAS) or Open Water	<input type="checkbox"/> <input checked="" type="checkbox"/>	Presence of fish
Swamp	<input type="checkbox"/> <input checked="" type="checkbox"/>	<b>All Swamps:</b> Always search for Heron Nest Bowls. Record if active (April-June only) - Evidence includes egg shells, guano, dead young. Map colony/nests if found.

Habitat Features	Present	Information to Record on Page 2
<b>Fields</b>	Yes No	<b>Applicable to All:</b>
Non-rotational Hay or Weakly Grazed Pasture	<input type="checkbox"/> <input checked="" type="checkbox"/>	Height of vegetation Size of site Abundance of nectar-producing plants (e.g. goldenrods and asters)
Meadow	<input type="checkbox"/> <input checked="" type="checkbox"/>	Evidence of small mammals Frequency and source of disturbance Adjacency to forest and forest size
Thicket, Woodland, Hydro Corridor	<input checked="" type="checkbox"/> <input type="checkbox"/>	Location and abundance of raptor perches (scattered trees, snags, fenceposts)

Habitat Features	Present	Information to Record on Page 2
<b>Substrate and Topography</b>	Yes No	<b>Applicable to All:</b>
Sand or Fine/Loose Gravel	<input type="checkbox"/> <input checked="" type="checkbox"/>	Evidence of use (turtles in or near the area, turtle tracks, raided nests). Proximity to Shallow Marsh (MAS) or Open Water
Banks, Steep Slopes, Sand Piles	<input type="checkbox"/> <input checked="" type="checkbox"/>	Count swallow nest holes and indicate location. Estimate number of breeding pairs. Sources of disturbance. Draw extent if not indicated through ELC.
Cliffs	<input type="checkbox"/> <input checked="" type="checkbox"/>	Height of cliff. Rock type. Presence of ledges or crevices and their size. Draw extent of cliffs if not indicated through ELC.
Karst	<input type="checkbox"/> <input checked="" type="checkbox"/>	Depth of crevices
Cave	<input type="checkbox"/> <input checked="" type="checkbox"/>	Depth of cave, bedrock type
Natural Rock Piles / Talus Slopes	<input type="checkbox"/> <input checked="" type="checkbox"/>	Age. Rock/soil type. Draw extent of talus slopes if not indicated by ELC. Adjacency to large water body with productive fish population (otters).
Exposed Unvegetated Lake/River/Wetland Edge	<input type="checkbox"/> <input checked="" type="checkbox"/>	Source of disturbances. Presence of shorebird food sources (snails, worms, clams, insects). Percent vegetation cover. Distance to a Great Lake.
Seeps or Springs	<input type="checkbox"/> <input checked="" type="checkbox"/>	Ecosite. Number or area of extent. Presence of indicator plants. Iron staining. Water temperature. Degree and length of slope. Soil types.
Islands or Peninsulas in Open Water	<input type="checkbox"/> <input checked="" type="checkbox"/>	Natural or artificial. Record any gulls or terns observed. Draw extent of island or peninsula if not indicated through ELC.

Habitat Features	Present	Information to Record on Page 2
<b>Anthropogenic Features</b>	Yes No	<b>Applicable to All:</b>
Abandoned Mine Shaft	<input type="checkbox"/> <input checked="" type="checkbox"/>	Age Depth into the ground Amount of sun exposure (or direction the slope faces)
Old Rock or Debris Pile, Old Stone Fence	<input type="checkbox"/> <input checked="" type="checkbox"/>	Rock size Vegetation present Substrate composition (or bedrock type)
Abandoned Road or Rail Bed	<input type="checkbox"/> <input checked="" type="checkbox"/>	Evidence of Use Proximity to water and estimated subterranean influence or potential for winter water fluctuation.
Abandoned Well	<input type="checkbox"/> <input checked="" type="checkbox"/>	<b>Abandoned Wells Only:</b> Presence and type of capping
Old Foundation	<input type="checkbox"/> <input checked="" type="checkbox"/>	<b>Abandoned Road or Rail Bed Only:</b> Extent in the landscape Connectivity to other natural features. Overhead vegetation cover.

Habitat Features	Present	Information to Record on Page 2
<b>Burrows or Dens</b>	Yes No	<b>Applicable to Mammal Burrows or Dens:</b>
Small - Rodent or Snake	<input type="checkbox"/> <input checked="" type="checkbox"/>	Diameter of entrance Soil Type Availability of aquatic vegetation or fish
Medium	<input type="checkbox"/> <input checked="" type="checkbox"/>	Ecosite of location Proximity to water and type of water Evidence of use, or tracks or digging marks
Large	<input type="checkbox"/> <input checked="" type="checkbox"/>	Adjacency to large water body with productive fish population Evidence of otter (observed, tracks, scat, predated fish, turtles, eggs, frogs).
Log Jams, Old Beaver Lodges	<input type="checkbox"/> <input checked="" type="checkbox"/>	Ecosite of location. Soil type Source of site moisture (meadow marsh, creek/river edge, swamp etc).
Crayfish Chimney (7E only)	<input type="checkbox"/> <input checked="" type="checkbox"/>	

Habitat Features	Present	Information to Record on Page 2
<b>Evidence</b>	Yes No	<b>Applicable to All:</b>
Extensive Browse and/or Ungulate Scat	<input checked="" type="checkbox"/> <input type="checkbox"/>	Vegetation species browsed. Ecosite (Other evidence of ungulate use) Presence of seeps/springs. Barriers to movement to and from the area.
Nest Bowl or Stick Nest (herons or raptors)	<input type="checkbox"/> <input checked="" type="checkbox"/>	Quantity. Ecosite of location. Evidence of use. Species if known or bird group. Size. Height in tree. Tree species.

Habitat Features	Present	Information to Record on Page 2
<b>Outstanding Trees</b>	Yes No	<b>Applicable to All:</b>
Large DBH, Outstanding Tall Snag	<input checked="" type="checkbox"/> <input type="checkbox"/>	Tree species. Evidence of perch usage or nesting. DBH, height. Exposure above canopy. Distance from surrounding forest (m) or within.
Large DBH Cavity Tree (Live or Dead)	<input type="checkbox"/> <input checked="" type="checkbox"/>	Tree species. DBH. Number of cavities. Size and type of cavities. Evidence of use by bats (abundant guano) or other mammals or wood ducks.

Habitat Features	Present	Information to Record on Page 2
<b>Rare Communities or Species</b>	Yes No	<b>Applicable to All:</b>
Old-Growth Forest	<input type="checkbox"/> <input checked="" type="checkbox"/>	Average age of trees. Range of DBH or prism sweep. Sources of disturbance (includes presence of exotics).
Tallgrass Prairie or Savannah	<input type="checkbox"/> <input checked="" type="checkbox"/>	Soil type. Percent cover of trees, shrubs, forbs, and grasses. Sources of disturbance (includes presence of exotics).
Bog	<input type="checkbox"/> <input checked="" type="checkbox"/>	Soil type and depths.
Red Spruce or White Oak Forest	<input type="checkbox"/> <input checked="" type="checkbox"/>	Soil type and drainage regime. DBH range or prism sweep. Approximate Canopy Cover. Source of disturbance or evidence of forestry.
Coastal Marshes (Great Lakes/Shallow Atlantic)	<input type="checkbox"/> <input checked="" type="checkbox"/>	Substrate type (bedrock or soil type). Water level. Evidence of water fluctuation. Presence of Beaver Pond. Amount of exposed shoreline.
Dunes / Beaches / Bars / Ridges	<input type="checkbox"/> <input checked="" type="checkbox"/>	Soil or substrate type. Sand class. Sources of disturbance (includes presence of exotics). Percent cover of trees, shrubs, forbs, and grasses.
Sand Barren	<input type="checkbox"/> <input checked="" type="checkbox"/>	Sand class. Sources of disturbance (includes presence of exotics). Percent area of exposed rock, vegetation, and sand. Sources of erosion or fire.
Alvar	<input type="checkbox"/> <input checked="" type="checkbox"/>	Bedrock type. Soil type and depth. Percent area of exposed rock and vegetation. Sources of disturbance (includes presence of exotics).
Rare Species (Not Species At Risk)	<input type="checkbox"/> <input checked="" type="checkbox"/>	Number of individuals and locations. Ecosite or Vegetation Type
Rare Vegetation Community	<input type="checkbox"/> <input checked="" type="checkbox"/>	Sources of disturbance (includes presence of exotics).

Characteristics of Identified Wildlife Habitat

Date: Sept. 25, 2013

Project Name: Parkhill Project #: 1341 Area and/or Polygon ID: W0D-045

Indicate the location of the habitat feature on the Field Map.

Identified Habitat Feature	# Observed	UTM(s)	Photo Numbers	Habitat Details (refer to Page 1)	Associated Wildlife Observed and Evidence
Thicket	1	17T 0450852 4774424	1772-1776	One snag tree, no evidence of pecking or nesting. Scattered trees in thicket.	None
Ungulate presence	1	17T 0450852 4774424	1772-1776	Dead white-tailed deer on side of the road	White-tailed deer

TY	Species	EV	#	Notes	TY	Species	EV	#	Notes
B	turkey vulture	OB	•						
B	mourning dove	OB	•						
M	white-tailed deer	CA	•	on side of road					

<b>Faunal Type Codes (TY)</b> B=Bird M=Mammal H=Herpetofauna L=Lepidoptera F=Fish D=Dragonfly or Damselfly	<b>Evidence Codes (EV)</b> <b>Breeding Birds</b> H- Suitable Habitat S- Singing Male P- Pair T- Territory D- Courtship Display V- Visiting Nest A- Anxiety Behavior N- Nest Building (not wren or woodpecker) NB- Nest Building (not wren or woodpecker) DD- Distraction Display NU- Used nest FY- Fledged Young FS- Food/Fecal Sac CF- Adult carrying food NE- Nest with eggs NY- Nest with young AE-Adult entering/leaving nest	<b>Other Wildlife</b> OB- Observed DP- Distinctive Parts TK- Tracks VO- Vocalization HO- House/Den FE- Feeding Evidence CA- Carcass/Bones FY- Eggs or young SC- Scat SI- Other Signs (Specify)
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# NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

Page 1 of 1

Site: Parkhill Interconnect 1341  
 Polygon: W0D-048  
 UTM: 17T 0441695 4776451  
 Date: Sept 16/13 Time: 11:25  
 Surveyor(s): AMD GKM  
 Weather: 14°C, 100% c.c., wind 3 NW

### Community Classification

Vegetation Type: Fresh-moist mixed meadow MEMMY  
 Inclusion:  
 Complex:

### Polygon Description

System	Substrate	Topo Feature	Community		
<input checked="" type="checkbox"/> Terrestrial	Organic	Lacustrine	Talus	Lake	Barren
<input type="checkbox"/> Wetland	<input checked="" type="checkbox"/> Mineral Soil	Riverine	Crevice/Cave	Pond	<input checked="" type="checkbox"/> Meadow
<input type="checkbox"/> Aquatic	Parent Min.	<input checked="" type="checkbox"/> Bottomland	Alvar	River	Prairie
	Acidic Bedrock	Terrace	Rockland	Stream	Thicket
<b>History</b>	Basic Bedrock	Valley Slope	Besch/Bar	Marsh	Savannah
<input type="checkbox"/> Natural	Carb. Bedrock	Tableland	Sand Dune	Swamp	Woodland
<input checked="" type="checkbox"/> Cultural		Roll Upland	Bluff	Fen	Forest
	Site	Cliff		Bog	Plantation

Cover	Open Water	Plant Form		
<input checked="" type="checkbox"/> Open	Shallow Water	Plankton	<input checked="" type="checkbox"/> Forb	Coniferous
<input type="checkbox"/> Shrub	<input checked="" type="checkbox"/> Surficial Dep.	Submerged	Lichen	Mixed
<input type="checkbox"/> Treed	Bedrock	Floating-Lvd.	Bryophyte	
		<input checked="" type="checkbox"/> Graminoid	Deciduous	

### Stand Description

Layer	HT	Cover	Species
Super-canopy			
1 Canopy	2	2	white elm
2 Sub-canopy	3	2	white elm > common buckthorn > scotts pine
3 Understorey	4	4	common buckthorn > red osier dogwood
4 Groundcover	5-7	4	Canada goldenrod > lance-leaf osters > smooth brome

HT Codes: 1: >25m 2: 25-10m 3: 10-2m 4: 2-1m 5: 1-0.5m 6: 0.5-0.2m 7: <0.2m

Cover Codes: 0:none 1: 0-10% 2: 10-25 3: 25-60% 4: >60%

Size Class Analysis	R	K	K	N
Snags	<10	10-24	25-50	>50
Deadfall/Logs	<10	10-24	25-50	>50

Abundance Codes: N: None R: Rare O: Occasional A: Abundant

Community Age	Pioneer	Young	Mid-age	Mature	Old Growth
		<input checked="" type="checkbox"/>			

# NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

Page 1 of 1

### PLANT SPECIES LIST

Site: Parkhill 1341  
 Polygon: W0D-048  
 UTM: 17T 0441695 4776451  
 Date: Sept 16/13 Time: 11:25  
 Surveyor(s): AMD GKM  
 Weather: 14°C, 100% c.c., wind 3 NW

Layers: 1=canopy 2=sub-canopy 3=understorey 4=ground layer

Abundance Codes: R=rare O=occasional A=abundant D=dominant

Species	Layer				Sample	Species	Layer				Sample
	1	2	3	4			1	2	3	4	
wh. elm	R	O				Smooth brome					A
scotts pine		R				tail goldenrod					O
green ash		R				teasel					R
hawthorn sp.		R				Elymus repens					O
red osier dogwood			K			Canada goldenrod					A
common apple			K			lanceleaf aster					A
common buckthorn			O			N.E. aster					O
red cedar			K			Festuca arundinacea					O
river grape				R		Poa pratensis					O
						bitter nightshade					O
						lamb's quarters					R
						Mentha arvensis					R
						Canada thistle					O
						Southwistle					R
						Common milkweed					R
						gray goldenrod					R
						Curly dock					K
						early goldenrod					R

### Wildlife and Other Notes

-watercourse flowing through meadow  
 -lots of dead standing white elm

Wildlife Habitat Field Data Collection

Project Name: Parkhill Interconnect Project #: 1341 Area and/or Polygon ID: W0D-04B  
 Date: Sept 16, 2015 Start Time: 11:25 End Time: 12:15 Observers: GEM, AND  
 Weather Conditions: 14°C 100% CC, wind 2.

Indicate whether or not the following habitat features are present within the polygon. If Yes to any, fill in Page 2. Incidental Wildlife Observations on Page 2.

Habitat Features	Present		Information to Record on Page 2	
	Yes	No	Applicable to All:	
Water				
Spring Flooded Field		<input checked="" type="checkbox"/>	Draw extent of all water if not indicated through ELC.	Longevity of site (if known, or estimate).
Vernal Pool		<input checked="" type="checkbox"/>	Dimensions (length, width, and depth).	Sources of disturbance, current use, origin (natural or anthropogenic).
Pond		<input checked="" type="checkbox"/>	Vegetation species, woody debris/basking logs within water.	Evidence of wildlife use including waterfowl, turtles, amphibians
Shallow Marsh (MAS) or Open Water		<input checked="" type="checkbox"/>	Presence of fish	
Swamp		<input checked="" type="checkbox"/>	<b>All Swamps:</b> Always search for Heron Nest Bowls. Record if active (April-June only) - Evidence includes egg shells, guano, dead young. Map colony/nests if found.	

Habitat Features	Yes	No	Applicable to All:	
Non-rotational Hay or Weakly Grazed Pasture		<input checked="" type="checkbox"/>	Height of vegetation	Size of site
Meadow	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Evidence of small mammals	Frequency and source of disturbance <u>Intd.</u> Abundance of nectar-producing plants (e.g. goldenrods and asters)
Thicket, Woodland, Hydro Corridor		<input checked="" type="checkbox"/>		Adjacency to forest and forest size <u>no</u> Location and abundance of raptor perches (scattered trees, snags, fenceposts)

Habitat Features	Yes	No	Applicable to All:	
Sand or Fine/Loose Gravel		<input checked="" type="checkbox"/>	Evidence of use (turtles in or near the area, turtle tracks, raided nests). Proximity to Shallow Marsh (MAS) or Open Water	
Banks, Steep Slopes, Sand Piles		<input checked="" type="checkbox"/>	Count swallow nest holes and indicate location. Estimate number of breeding pairs. Sources of disturbance. Draw extent if not indicated through ELC.	
Cliffs		<input checked="" type="checkbox"/>	Height of cliff. Rock type. Presence of ledges or crevices and their size. Draw extent of cliffs if not indicated through ELC.	
Karst		<input checked="" type="checkbox"/>	Depth of crevices	
Cave		<input checked="" type="checkbox"/>	Depth of cave, bedrock type	
Natural Rock Piles / Talus Slopes		<input checked="" type="checkbox"/>	Age, Rock/soil type. Draw extent of talus slopes if not indicated by ELC. Adjacency to large water body with productive fish population (otters).	
Exposed Unvegetated Lake/River/Wetland Edge		<input checked="" type="checkbox"/>	Source of disturbances. Presence of shorebird food sources (snails, worms, clams, insects). Percent vegetation cover. Distance to a Great Lake.	
Seeps or Springs		<input checked="" type="checkbox"/>	Ecosite. Number or area of extent. Presence of indicator plants. Iron staining. Water temperature. Degree and length of slope. Soil types	
Islands or Peninsulas in Open Water		<input checked="" type="checkbox"/>	Natural or artificial. Record any gulls or terns observed. Draw extent of island or peninsula if not indicated through ELC.	

Habitat Features	Yes	No	Applicable to All:	
Abandoned Mine Shaft		<input checked="" type="checkbox"/>	Age	Depth into the ground
Old Rock or Debris Pile, Old Stone Fence	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Rock size <u>cobble</u>	Vegetation present <u>yes</u>
Abandoned Road or Rail Bed		<input checked="" type="checkbox"/>	Evidence of Use	Amount of sun exposure (or direction the slope faces)
Abandoned Well		<input checked="" type="checkbox"/>	<b>Abandoned Wells Only:</b> Presence and type of capping	Substrate composition (or bedrock type) <u>concrete, cobble</u>
Old Foundation		<input checked="" type="checkbox"/>	<b>Abandoned Road or Rail Bed Only:</b> Extent in the landscape. Connectivity to other natural features. Overhead vegetation cover.	Proximity to water and estimated subterranean influence or potential for winter water fluctuation.

Habitat Features	Yes	No	Applicable to Mammal Burrows or Dens:	
Small - Rodent or Snake		<input checked="" type="checkbox"/>	Diameter of entrance	Soil Type
Medium		<input checked="" type="checkbox"/>	Ecosite of location	Proximity to water and type of water
Large		<input checked="" type="checkbox"/>		Availability of aquatic vegetation or fish
Log Jams, Old Beaver Lodges		<input checked="" type="checkbox"/>	Adjacency to large water body with productive fish population. Evidence of otter (observed, tracks, scat, predated fish, turtles, eggs, frogs).	Evidence of use, or tracks or digging marks
Crayfish Chimney (7E only)		<input checked="" type="checkbox"/>	Ecosite of location. Soil type. Source of site moisture (meadow marsh, creek/river edge, swamp etc).	

Evidence	Yes	No	Applicable to All:	
Extensive Browse and/or Ungulate Scat		<input checked="" type="checkbox"/>	Vegetation species browsed. Ecosite. Other evidence of ungulate use. Presence of seeps/springs. Barriers to movement to and from the area	
Nest Bowl or Stick Nest (herons or raptors)		<input checked="" type="checkbox"/>	Quantity. Ecosite of location. Evidence of use. Species if known or bird group. Size. Height in tree. Tree species.	

Outstanding Trees	Yes	No	Applicable to All:	
Large DBH, Outstanding Tall Snag		<input checked="" type="checkbox"/>	Tree species. Evidence of perch usage or nesting. DBH, height. Exposure above canopy. Distance from surrounding forest (m) or within.	
Large DBH Cavity Tree (Live or Dead)		<input checked="" type="checkbox"/>	Tree species. DBH. Number of cavities. Size and type of cavities. Evidence of use by bats (abundant guano) or other mammals or wood ducks.	

Rare Communities or Species	Yes	No	Applicable to All:	
Old-Growth Forest		<input checked="" type="checkbox"/>	Average age of trees. Range of DBH or prism sweep. Sources of disturbance (includes presence of exotics).	
Tallgrass Prairie or Savannah		<input checked="" type="checkbox"/>	Soil type. Percent cover of trees, shrubs, forbs, and grasses. Sources of disturbance (includes presence of exotics).	
Bog		<input checked="" type="checkbox"/>	Soil type and depths.	
Red Spruce or White Oak Forest		<input checked="" type="checkbox"/>	Soil type and drainage regime. DBH range or prism sweep. Approximate Canopy Cover. Source of disturbance or evidence of forestry.	
Coastal Marshes (Great Lakes/Shallow Atlantic)		<input checked="" type="checkbox"/>	Substrate type (bedrock or soil type). Water level. Evidence of water fluctuation. Presence of Beaver Pond. Amount of exposed shoreline.	
Dunes / Beaches / Bars / Ridges		<input checked="" type="checkbox"/>	Soil or substrate type. Sand class. Sources of disturbance (includes presence of exotics). Percent cover of trees, shrubs, forbs, and grasses.	
Sand Barren		<input checked="" type="checkbox"/>	Sand class. Sources of disturbance (includes presence of exotics). Percent area of exposed rock, vegetation, and sand. Sources of erosion or fire.	
Alvar		<input checked="" type="checkbox"/>	Bedrock type. Soil type and depth. Percent area of exposed rock and vegetation. Sources of disturbance (includes presence of exotics).	
Rare Species (Not Species At Risk)		<input checked="" type="checkbox"/>	Number of individuals and locations. Ecosite or Vegetation Type.	
Rare Vegetation Community		<input checked="" type="checkbox"/>	Sources of disturbance (includes presence of exotics).	



Characteristics of Identified Wildlife Habitat

Date: Sept. 16, 2013

Project Name: Parkhill Project #: 1341 Area and/or Polygon ID: W00-048

Indicate the location of the habitat feature on the Field Map.

Identified Habitat Feature	# Observed	UTM(s)	Photo Numbers	Habitat Details (refer to Page 1)	Associated Wildlife Observed and Evidence
meadow	1	see proj data form	100-0161 to 100-0163	Whole polygon is meadow, limited disturbance	1
old rock pile	1	17T- 0441657 4776300	100-0164	old concrete + cobble from farmers field.	not big enough for candidate snake hibernacula

TY	Species	EV	#	Notes	TY	Species	EV	#	Notes
M	Cottontail	OK	1	observed scampering					

<b>Faunal Type Codes (TY)</b> B=Bird M=Mammal H=Herpetofauna L=Lepidoptera F=Fish D=Dragonfly or Damselfly	<b>Evidence Codes (EV)</b> <b>Breeding Birds</b> H- Suitable Habitat S- Singing Male P- Pair T- Territory D- Courtship Display	V- Visiting Nest A- Anxiety Behavior N- Nest Building (not wren or woodpecker) NB- Nest Building (not wren or woodpecker) DD- Distraction Display	NU- Used nest FY- Fledged Young NE- Nest with eggs NY- Nest with young AE-Adult entering/leaving nest	<b>Other Wildlife</b> OB- Observed DP- Distinctive Parts TK- Tracks VO- Vocalization HO- House/Den	FE- Feeding Evidence CA- Carcass/Bones FY- Eggs or young SC- Scat SI- Other Signs (Specify)
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