

Species Conservation Concern Habitat and Incidental Wildlife – Goshen

ADOM

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
TP01, TPS1, TPW1, CUM1	Tall Blazing Star (<i>Liatris aspera</i>)-S3/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y (N) UTM:
FE0, FES, FET, MAM2, MAM3	Tuberous Indian Plantain (<i>Amoglossum plantagineum</i>) - S3 Bloom Time –mid-March to mid-June	Occurs mainly in flat, sandy areas of the Bruce Peninsula. Fens, wet meadows, and calcareous river flats.	Y (N) UTM:
FOC1, FOC2, FOC3, FOC4	Woodland Pinedrops (<i>Pterospora andromedea</i>) - S2 Bloom Time - summer	Found in conifer woods, under pines, but also hemlock, spruce, fir, and white cedar. In dry or rocky soil, often with common juniper and sometimes aspen or birch.	Y (N) UTM:
CUM1, CUT1, CUW1, RBO1, SBO1	Yellow Ladies'-tresses (<i>Spiranthes ochroleuca</i>) - S2 Bloom Time - August to November	Dry, open sites, usually on acidic sandy soil, dry to mesic open woodland, thickets, meadows, barrens, ledges, outcrops, banks and roadsides, old fields.	Y (N) UTM:
BIRDS			
-	Bald Eagle (<i>Haliaeetus leucocephalus</i>) - SC	Assessed as SWH. Record species if found.	not required.
CUW, SDO, RBO, TPS	Common Nighthawk (<i>Chordeiles minor</i>) - SC	Hunts insects over a wide variety of habitats, in particular open or semi-open areas. Nests on ground in a wide range of open, sparse or vegetation-free habitats.	Y (N) UTM:
FOD, FOM	Louisiana Waterthrush (<i>Seiurus motacilla</i>) - SC	Inhabits mature forests along steeply sloped ravines adjacent to running water. Trees, bushes, exposed roots, cliffs, banks and mossy logs are favoured nesting spots. Riparian woodlands are preferred stopover sites during migration	Y (N) UTM:
FOD, CUW, CUT	Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>) - SC	Species inhabits open woodland/ edges (oak savannahs and riparian forest), open deciduous forest with little understory, fields or pasture lands with scattered large trees; wooded swamps; orchards, small woodlots or forest edges; groves of dead or dying trees; requires cavity trees with at least 40 cm dbh; requires about 4 ha for a territory.	Y N UTM:
-	Short Eared Owl (<i>Asio flammeus</i>) - SC	Assessed as SWH. Record species if found.	not required.
CUT1	Yellow-breasted Chat (<i>Icteria virens</i>) - SC	Inhabits thickets, tall tangles of shrubbery beside streams, ponds; overgrown bushy clearings with deciduous thickets; nests above ground in bush, vines	Y (N) UTM:
REPTILES			
-	Eastern Ribbonsnake (<i>Thamnophis sauritus</i>) - SC	Assessed as SWH. Record species if found.	not required.
-	Milksnake (<i>Lampropeltis triangulum</i>) -SC	Assessed as SWH. Record species if found.	not required.
-	Snapping Turtle (<i>Chelydra serpentina</i>) - SC	Assessed as SWH. Record species if found.	not required.
INSECTS			
OAO, SA, SWM, SWD	Azure Bluet (<i>Enallagma aspersum</i>) -S3	Species inhabits fishless ponds, lakes and boggy swamps	Y (N) UTM:
TPS, TPW	Sleepy Duskywing (<i>Erynnis brize</i>) - S1	Occurs in oak/oak-pine scrub, chaparral, barrens, well-drained sandy or shaly soils. Species regularly seen at flowers in oak woods, on the ground, and at mud puddles	Y (N) UTM:
CUM1, CUT1, CUW1	Monarch Butterfly (<i>Danaus plexippus</i>) - SC	Their larvae only feed on milkweeds (<i>Asclepius</i> spp.). Habitat includes abandoned farmland, along roadsides, open spaces where these plants grow	Y (N) UTM:
TPS, CUW	Mottled Duskywing (<i>Erynnis martialis</i>) -S2	Usually seen nectaring or on wet sandy roads. Larvae feeds on New Jersey Tea and adults only likely near where this plant is present	Y (N) UTM:
SWT, SWD, SWM, FOM, FOD4-3, TPW, TPS, CUM1	Tawny Emperor (<i>Asterocampa clyten</i>) - S3	Species inhabits densely wooded riparian areas, dry woods, open woods, fencerows and parks. Usually occurs near Hackberry, the larval foodplant	Y (N) UTM:
FOD5	West Virginia White (<i>Pteris virginianensis</i>) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y (N) UTM:

(Properties that contain Features within 125m from Collection lines and 171.5m from Turbines)

October 28, 2011



— Roads
— Access/Collection Line
— Survey to be Completed
— Turbine Buffer (171.5m)

 ELC Survey Completed
 Turbine Buffer/Feature Intersect
 Property Fabric
 Goshen Wind Energy Centre

NEW SITE
(1st survey)



System	Substrate	Topographic Feature	Plant Form	Community
☐ Terrestrial	☐ Organic	☐ Lacustrine	☐ Plankton	☐ Lake
☐ Wetland	☐ Mineral Soil	☐ Rivine	☐ Submerged	☐ Pond
☐ Aquatic	☐ Parent Min.	☐ Bottomland	☐ Floating-LVD.	☐ River
Site	☐ Parent Min.	☐ Terrace	☐ Graminoid	☐ Stream
☐ Open Water	☐ Acidic Bedrk	☐ Valley Slope	☐ Forb	☐ Marsh
☐ Shallow Water	☐ Basic Bedrk	☒ Plateau	☐ Lichen	☐ Swamp
☐ Surficial Dep.	☐ Carb. Bedrk	☐ Roll. Upland	☐ Bryophyte	☐ Fen
☐ Bedrock		☐ Cliff	☒ Deciduous	☐ Bog
History		☐ Talus	☐ Coniferous	☐ Barren
☐ Natural		☐ Crevice/Cave	☐ Mixed	☐ Meadow
☐ Cultural		☐ Alvar		☐ Prairie
Cover		☐ Rockland		☐ Thicket
☐ Open		☐ Beach / Bar		☐ Savannah
☐ Shrub		☐ Sand Dune		☐ Woodland
☐ Treed		☐ Bluff		☒ Forest
				☐ Plantation

Layer	HT	GVR	Species In Order of Decreasing Dominance (up to 4 sp) (P > Much Greater Than; > Greater Than; = About Equal To)
1	2	4	Tilamer > Carcard > Hummer - Eucopen
2	3	2	Hummer - Ost wing
3			
4	6	3	Ruvardi - Ast lane > Sol flex

Stand Composition:		Size Class Analysis:				
		Standing snags:				
BA:		Deadfall / Logs:				
		<10	10-24	25-50	>50	
		<10	10-24	25-50	>50	
		<10	10-24	25-50	>50	

Comp. Age:	Pioneer	Young	Mid-Age	Mature	Old Growth
	☐	☐	☒	☐	☐

Ecosite:			
Vegetation			
Type:	Basswood - hickory		FOD 9-6
Inclusion:	Fresh Moist		
Complex:	Difficult - Basswood		

Small woodlot w edge effects

Tree Tally by Species							Priam Factor	2
Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Avg.		
Total							100	
Basal Area (BA)								
Dead								

Site Metrics		PIV/Auger #						Summary	
Soil Horizon Description	UTM	Zone						Moisture Regime	
		Easting							
	Slope	Northing						Drainage	
		Position							
		Aspect							
		Percent							
		Slope							
		Length							
	Depth to ...	Mottles							Effective Texture (Indicate below)
		Gley							
	Water Table								
	Carbonates								
	Bedrock								
	1	Depth from zero	% CF		% CF		% CF		
	2	Texture						% CF	
		Depth from zero	% CF		% CF		% CF		
	3	Texture						% CF	
		Depth from zero	% CF		% CF		% CF		
	4	Texture						% CF	
		Depth from zero	% CF		% CF		% CF		
		Texture							
		% Surface Stone/Rock							
	Moisture Regime								
	Drainage								

⑧ S Part of Woodlot

Freeman Maple - Green Ash Swamp
broken canopy, and some seasonal flooding though
likely brief

1 CONIFERS						2 TREES and SHRUBS						3 GRAMINOIDS					
1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Abies balsamea						+ Rosa multiflora						Agrostis gigantea					
Juniperus communis						Rosa						Agrostis stolonifera					
Juniperus virginiana						Rubus allegheniensis						Agropyron repens					
Larix laricina						Rubus idaeus		X				Alopecurus					
Picea abies						Rubus occidentalis						Bromus inermis					
Picea glauca						Rubus odoratus						Calamagrostis canadensis					
Pinus resinosa						Rubus pubescens						Carex arctata					
Pinus strobus						Salix alba						Carex aurea					
Pinus sylvestris						Salix amygdaloides						Carex bebbii					
Thuja occidentalis						Salix bebbiana						Carex blanda					
Tsuga canadensis						+ Salix discolor						Carex gracillima		X			
						Salix ericophylla						Carex granularis					
						Salix exigua						Carex lysterioides					
						Salix lucida						Carex pennsylvanica					
						Salix petiolaris						Carex radiata				X	
TREES and SHRUBS						+ Salix purpurea						Carex retrorsa					
Acer negundo						Salix x rubens						Carex stipata					
Acer rubrum		X				+ Salix						Carex stricta					
Acer saccharinum	X	free	X			Sambucus canadensis						Carex vulpinoidea					
Acer saccharum		X				Sambucus racemosa						Carex					
Acer spicatum		X				Sorbus aucuparia						Carex					
Alnus rugosa						Spiraea alba						Carex					
Amelanchier						Syringa vulgaris						Carex					
Berberis thunbergii						+ Tibia americana		X				Carex					
Betula alleghaniensis						Ulmus americana		X				Carex					
Betula papyrifera						Ulmus						Carex					
Carpinus caroliniana		X				Vaccinium						Carex					
Carya cordiformis		X				Viburnum lentago		X				Carex					
Celastrus scandens						Viburnum opulus						Cyperus					
Cornus alternifolia						Viburnum						Cyperus					
Cornus amomum						Vitis riparia						Dactylis glomerata			X		
Cornus rugosa												Danthonia spicata					
Cornus stolonifera												Echinochloa crus-galli					
Corylus cornuta												Eleocharis erythropoda					
Crataegus monogyna		X										Eleocharis					
Crataegus punctata												Elymus virginicus					
Crataegus sp.												Elymus					
Crataegus												Festuca arundinacea					
Diervilla lonicera												Glyceria striata					
Fagus grandifolia		X										Glyceria					
Fraxinus americana												Juncus dudleyi					
Fraxinus nigra						FERNS						Juncus effusus					
Fraxinus pennsylvanica		X				Adiantum pedatum						Juncus tenuis					
Ilex verticillata						Athyrium filix-femina						Juncus					
Juglans cinerea						Botrychium multifidum						Juncus					
Juglans nigra						Botrychium virginianum						Leersia oryzoides					
Lonicera morrowi						Cystopteris bulbilifera						Muhlenbergia					
Lonicera tatarica						Dryopteris carthusiana						Oryzopsis asperifolia					
Lonicera						Dryopteris cristata						Panicum					
Malus pumila						Dryopteris marginalis						Panicum					
Ostrya virginiana		X				Dryopteris						Phalaris arundinacea					
Parthenocissus vitacea						Equisetum arvense						Phleum pratense					
Populus balsamifera						Equisetum hyemale						Platanus australis					
Populus grandidentata						Equisetum variegatum						Poa compressa					
Populus tremuloides						Equisetum						Poa pratensis			X		
Populus						Gymnocarpium dryopteris						Poa					
Prunus pennsylvanica						Lycopodium digitatum						Scirpus atrovirens					
Prunus serotina		X				Lycopodium obscurum						Scirpus cyperinus					
Prunus virginiana		X				Lycopodium						Scirpus validus					
Prunus						Lycopodium						Scirpus					
Quercus macrocarpa		X				Melastoma stratiolites						Scirpus					
Quercus rubra						Oenothera biennis						Setaria					
Quercus						Oenothera lamarckiana						Spartanum					
Rhamnus cathartica						Oenothera rugosa						Typus angustifolia					
Rhus radicans		X				Polypodium acrostichoides						Typus latifolia					
Rhus typhina						Prunella aquifolium						Typus Xglauca					
Ribes americana						Thelypteris palustris											
Ribes cynosbati																	
Ribes x rubrum																	
Robinia pseudo-acacia																	
climbing Poison Ivy		X															
Eurospina ebor																	

ELC WILDLIFE	SITE: 235 GSH	
	POLYGON:	
	DATE: November 7 / 2011	
	SURVEYORS: J. Kounstler	
	START TIME: 12:30	END TIME: 13:00

TEMP (°C): 140	CLOUD (10th): 5	WIND: 2	PRECIPITATION: 0
CONDITIONS:			

POTENTIAL WILDLIFE HABITAT:

☐ VERNAL POOLS	☐ SNAGS
☐ HIBERNACULA	☐ FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
M	WT. Deer	TK	fresh tracks on N edge						
B	AMCR	OB							
H	Spring Peeper	VO	interior of woodlot						
O	Common Sulfur	OB							
	Alfalfa Butterfly								

FAUNAL TYPE CODES (TY):

B = BIRD M = MAMMAL H = HERPETOFAUNA L = LEPIDOPTERA F = FISH O = OTHER

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT

SM = SINGING MALE

BREEDING BIRD - PROBABLE:

T = TERRITORY

D = DISPLAY

P = PAIR

A = ANXIETY BEHAVIOUR

N = NEST BUILDING

V = VISITING NEST

BREEDING BIRD - CONFIRMED:

DD = DISTRACTION

NU = USED NEST

FY = FLEDGED YOUNG

NE = EGGS

NY = YOUNG

FS = FOOD/FECAL SACK

AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:

OB = OBSERVED

VO = VOCALIZATION

CA = CARCASS

DP = DISTINCTIVE PARTS

HO = HOUSE/DEN

FY = EGGS/YOUNG

TK = TRACKS

FE = FEEDING EVIDENCE

SC = SCAT

SI = OTHER SIGNS (specify)



- Legend**
- Property Boundary
 - GE Turbine
 - ELC Completed 2011
 - Natural Feature and ID
 - ELC Polygon Boundary
 - Disturbance Areas
 - Area of Disturbance, plus 10m
 - ANSI
 - Evaluated Wetlands - PSW
 - ABCA Watercourse



Base mapping from Ontario Ministry of Natural Resources
Orthophotography: 2010



UTM Zone 17N, NAD 83
1:2,500
0 25 50 100
Metres

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ELC
Goshan Amphibian Survey
235_GSH2061
April 2012
Project 60-156032

AECOM
Figure 1

Significant Wildlife Habitat Form

AECOM

Study Area:	BLW JER <u>GSH</u>	Map #:	<u>235-GSH2081</u>
Date:	<u>2012-04-19</u>	Time Started:	<u>2:39</u>
Field Staff:	<u>Tom Sharney Jess Pette</u>	Time Finished:	<u>4:20</u>
Weather Conditions: <u>Sunny 12°C, 10 km/h</u>			

Colonial Nesting Tree/Shrub Birds, Osprey Breeding/Feeding, Bald Eagle Breeding/Nesting Habitat
(FET1, FOC, FOM, FOD, SWC, SWM, SWD)

Nest bowls present: ☒ No ☐ Yes (if yes, photograph and complete the following)

UTMs: _____ Number of nests: _____

Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present): _____

Description of habitat (note riparian areas if present, evidence of disturbance): _____

Waterfowls Stopover/Nesting, Amphibian Breeding, Turtle Nesting/Over-wintering, Marsh Breeding Birds
(CUM1, CUT1, MAM, MAS, SAS1, SAM1, SAF1, SWD, SWT1, SWT2) (FOC, FOM, FOD, SWC, SWM, SWD, BOO1, FEO1)

Standing water present: ☐ No ☒ Yes (if yes, photograph and complete the following)

UTMs: See Amphibian Form ☒ Area of standing water delineated on field map

Water depth (m): _____ % open water: _____ % emergent vegetation: _____

Description of standing water (permanent pool, evidence of annual spring flooding, etc): _____

Area and soil/substrate of shoreline habitat: _____

Type and abundance of cover in open water habitat: _____

Type and abundance of cover in surrounding habitat: _____

Evidence of disturbance (e.g. cattle grazing): _____

Evidence of use by waterfowl, amphibians, turtles (e.g. broken eggs), marsh breeding birds: _____

Complete Vernal Pool Habitat Description Form

Snake Hibernacula

Fissured rock/foundation or rock/debris pile present: ☐ No ☒ Yes (if yes, photograph and complete the following)

UTMs: See Hibernacula Form Likelihood to extend below frost line: _____

% canopy cover: _____ % slope: _____ Distance to open canopy (m): _____

Description of fissure or stone pile (composition/material, dimenstions, etc): _____

Description of surrounding habitat (type & abundance of cover, evidence of disturbance, etc): _____

Seeps and Springs (FOC, FOM, FOD, SWC, SWM, SWD)

Evidence of seep or spring: ☒ No ☐ Yes (if yes, photograph and complete the following)

UTMs: _____ Description (indicator species, etc): _____

NHA Site Investigation - Significant Wildlife Habitat Form

AECOM

Colonial Nesting Bird Breeding Habitat (Bank and Cliff Swallows)

(CUM1, CUT1, CUS, BLO1, BLS1, BLT1, CLO1, CLS1, CLT1)

Eroding bank, sandy hill, pits, steep slope or rock face present:

☒ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Location (e.g. aggregate pit, bridge): _____

Evidence of use by bank or cliff swallows (provide number of nests): _____

Colonial Nesting Ground Breeding Birds, Shorebird Migratory Stopover Areas

(BBO1, BBO2, BBS1, BBS2, BBT1, BBT2, SDO1, SDS2, SDT1, MAM1, MAM2, MAM3, MAM4, MAM5)

Shoreline of lake, large river or large wetland present:

☒ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Rocky island or peninsula present: _____

Mudflat present: _____

Evidence of disturbance (e.g. cattle grazing): _____

Description of habitat (size of rocky outcrop/mudflat, substrate/soil type, type and abundance of cover): _____

Raptor Winter Feeding and Roosting, Open Country or Shrub/Early Successional Bird Breeding Habitat

CUT1, CUS1, >30ha, CUM1 >30ha, FOC, FOD, FOM with a CUM, CUT, CUS, CUW > 20ha, or a CUM, CUS, CUT, CUW >15ha

Large meadow, old field or generally open habitat (e.g. CUM, CUS, CUT, CUS, CUW) present:

Large open habitat present: ☒ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Evidence of disturbance (e.g. cattle grazing): _____

Description of habitat (abundance of food plants for rodents, abundance of perches, height of vegetation): _____

Old-growth or Mature Forests, Interior Forest Breeding Birds

(FOD, FOC, FOM, SWC, SWM, SWD. Mature forest (>60 years) present)

Mature forest present: ☒ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Age of oldest trees: _____

Evidence of disturbance (e.g. selective cutting): _____

Description of habitat (structural complexity, abundance of snags and/or downed woody debris, etc): _____

Photo #	Location or Subject	Photo #	Location or Subject
30,31	Habitat		

Species Conservation Concern Habitat and Incidental Wildlife - Goshen

Map No: 235 GSH 2061
Date (yyyy-mm-dd): 2012-04-19

Field Staff: Tom Sharkey
Tessa Pierce

Time Started: 2:39
Time Finished: 4:10pm



Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Red-winged Blackbird		VO		Green heron		Ob	
cowbird		VO					
white breasted nuthatch		VO					
Downy Woodpecker		VO					
Flicker		Ob	within forest				
warbler		Ob	from wet area				
red-winged blackbird		Ob	flitting within forest				
Song Sparrow		VO	calling within swamp				
red admiral		Ob					
cabotage white		Ob					
Eastern crow		Ob					
5 deer		Ob	running towards us				

Note: Evidence Codes (EV) Breeding Bird (Possible) SH=Suitable Habitat, SM=Singing Male;

Breeding Bird (Probable) T-Territory, D=Display, P=Pair, N=Nest Building, V=Visiting Nest; A=Anxiety Behavior;

Breeding Bird (Confirmed) DD=Distraction, NU=Used Nest, FV=Fledged Young, NE=Eggs, NY=Young, FS=Feeds/Faecal sack, AE=Nest Entry

Other Wildlife Evidence: OB=observed, VO=Vocalization, CA=Carcass, DP=Distinctive Parts, HO=House/Den, FY=Eggs/Young, TK=Tracks, FE=Feeding evidence, SC=Scat, SI=Other signs (specify)

ELC	Species	Habitat Description	Habitat Present (Y/N); UTM; description of habitat if present
PLANTS			
FOD7	American Gromwell (Lithospermum latifolium) - S3 Bloom Time - Spring	Shaded river banks, wooded floodplains. River floodplains, woods and edges of woods.	Y N UTM:
ALO, TPO	Muehlenberg's astomum moss (Astomum muehlenbergianum) - S2 Bloom Time - Spring	Thin soil over level outcrop ledges and on soil under grasses in open prairie	Y N UTM:
FOM1, FOM2, CUP3	Autumn Coral-root (Corallorhiza odontorhiza) - S2 Bloom Time - summer to fall	Oak-pine woods or occasionally in open, red pine or white pine plantations. Dry, sandy woods.	Y N UTM:
FOG, FOM, FOD	Burning Bush (Euonymus atropurpureus) - S3 Bloom Time - April - June	Species occurs in dry to moist deciduous thickets and woods	Y N UTM: not observed
SWC1, SWC3, SWC4, SWM1, SWM2, SWM4, SWM5, SWM6	Chinese Hemlock Parsley (Corioselinum chinense) - S2 Bloom Time - summer to fall	Swampy places with deciduous trees, white cedars, tamarack; springy river banks, wet borders of streams and rivers. Also found among calcareous seepage slopes.	Y N UTM:
SWC, SWM, SWD, SWT, MAM, MAS	Crowned Beggarticks (Bidens trichosperma) - S2 Bloom Time - late summer	Found in openings in swamps, marshes, along shores & wet fields within the Carolinian zone and southeastern Georgian Bay. Bogs, fens, tamarack swamps.	Y N UTM: not observed
ALT1, FOD7	Eastern Green-violet (Hybanthus concolor) - S2 Bloom Time - mid March to August	Occurs in rich, wet-mesic floodplain forests as well as mesic forests over limestone. Includes floodplains and river banks.	Y N UTM:
TPS, TPW, FOM1, FOM2	Fogg's Goosefoot (Chenopodium foggii) - S2	Species occurs in sandy areas on limestone under oak or pine-oak forests	Y N UTM:
TPO2, TPS2, TPW2	Giant Ironweed (Vernonia gigantea) - S1? Bloom Time -	Found in mesic prairies, thickets, moist woods, roadsides and grassy meadows	Y N UTM:

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

AECOM

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
CUM1, MAM, FOD6, FOD7, FOD9	Green Dragon (<i>Arisaema dracontium</i>) - SC/S3 <u>Bloom Time - May and June</u>	Species found in damp deciduous forest and along river streams. Particularly Maple forest and forest dominated by Red Ash and White Elm.	Y (N) UTM:
TPO1, TPS1, TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	Hairy Bedstraw (<i>Galium pilosum</i>) - S3 <u>Bloom Time - June-August</u>	Occurs in dry, sandy woods and thickets; occasionally in dry sandy fields	Y (N) UTM:
FEOT, FES1, FET1, SWC, SWM, SWD, SWT, TPO, TPS, TPW	Hairy Valerian (<i>Valeriana edulis</i>) - S1 <u>Bloom Time - June to August</u>	Inhabits swampy river flats and meadows, wet prairies, and wooded, rocky riverbanks and fens.	N UTM: not observed
FOD6, FOD7, SWM, SWD	Hairy Wood Mint (<i>Blephilia hirsuta</i>) - S1 <u>Bloom Time - Summer</u>	Woodlands, often rocky, especially rivers. Rich woods, swamp forests, floodplains.	N UTM: not observed
FOD6, FOD7, FOD8, FOD9	Harbinger-of-spring (<i>Erigenia bulbosa</i>) - S3 <u>Bloom Time - early to late April</u>	Occurs in rich, moist deciduous woods, especially on floodplains.	Y (N) UTM:
SAS1, SAM1, SAF1	Hill's Pond Weed (<i>Potamogeton hillii</i>) - SC/S2 <u>Bloom Time - summer</u>	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters.	Y (N) UTM:
FOM6, FOM7, FOM8	Large Round-leaved Orchid (<i>Platanthera macrophylla</i>) - S2 <u>Bloom Time - June to August</u>	Species inhabits moist mixed woods. Found in fairly mature, upland sugar maple-beech-eastern hemlock woodlands.	Y (N) UTM:
MAM2, MAM3, MAS2, MAS3, SWD	Lizard's Tail (<i>Saururus cernuus</i>) - S3 <u>Bloom Time - June - September</u>	Species inhabits shores and streambanks along shallow water. As well as swamps, floodplains, shallow water and mudflats at the borders of streams and ponds.	N UTM: not observed
FOD6, FOD7, FOD9	Pawpaw (<i>Asimina triloba</i>) - S3 <u>Bloom Time - March-May</u>	Occurs in moist deciduous woods and stream banks.	N UTM: not observed
FOM8, FOD6, FOD7, FOD9, CUM1	Pilose Evening Primrose (<i>Oenothera pilosella</i>) - S2 <u>Bloom Time - Late Spring - Early Summer</u>	Moist edges of woods and open, disturbed ground.	N UTM: not observed
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	Prostrate Tick-trefoil (<i>Desmodium rotundifolium</i>) - S2 <u>Bloom Time - July-September</u>	Dry, sandy or rocky woods	Y (N) UTM:
FOD7, SWD	Pumpkin Ash (<i>Fraxinus profunda</i>) - S2? <u>Bloom Time - March - June</u>	Swamps and floodplains	N UTM: not observed
CUM1, ALO, FET1, SWC	Ram's-head Lady's-slipper (<i>Cypripedium arietinum</i>) - S3 <u>Bloom Time - mid May to mid June</u>	Found in cedar woodlands, limestone plains and wooded fens, moist coniferous swamps, dry-sandy woods, and limestone barren.	Y (N) UTM:
FOD1, FOD2, FOD3, FOD4, FOD5, FOC1, FOM1, FOM5	Rattlesnake Hawkweed (<i>Hieracium venosum</i>) - S2 <u>Bloom Time - April - September</u>	Species inhabits open, dry sandy woods. Jack pine, oak, and aspen woodlands.	Y (N) UTM:
FOD6, FOD7, FOD9	Round-leaved Groundsel (<i>Packera obovata</i>) - S3 <u>Bloom Time - May - June</u>	Found in moist woods	N UTM: not observed
CUM1, CUT1, CUS1	Round-leaved hawthorn (<i>Crataegus lumaria</i>) - S3?	Species occurs in old fields, poorly managed pastures, fencelines and roadsides	Y (N) UTM:
FOD6, FOD7, FOD8, FOD9, SWT2, SWT3	Scarlet Beebalm (<i>Monarda didyma</i>) - S3 <u>Bloom Time - May to October</u>	Found in moist, rich woods, thicket swamps, banks and floodplains.	N UTM: not observed
ALO, ALS, ALT, TPO, TPS, TPW	Slender Blazing Star (<i>Liatris cylindracea</i>) - S3	Species occurs in limestone and dolomite pavement, prairies, open woods, alvars and moist sandy meadows.	Y (N) UTM:
SBO, SBS, SBT, TPO1, TPS1, TPW1, FOD1, FOD2	Slender Knotweed (<i>Polygonum tenue</i>) - S2	Found in dry, sandy, open areas in deciduous (often oak woods), prairie meadows; at edges of sand pits	N UTM:
SDT1, FOD5, FOD9	Slim-flowered Muhly (<i>Muhlenbergia tenuiflora</i>) - S2	Found in rich deciduous forest, often on rocky or sandy soils, wooded dunes, hillsides, and riverbanks whether in oak or beech-maple woods	N UTM: not observed
BLO1, BLS1, BLT1, TPO2, TPS2, TPW2, MAM2, FOD7	Stiff Gentian (<i>Gentiana quinquefolia</i>) - S2 <u>Bloom Time - late summer to mid fall</u>	Found in moist soils of streambanks, edges of woods, wet prairies, marshy meadows, bluffs and wooded hillsides.	Y (N) UTM:
TPS1, TPW1, CUW1, RBO, SBO	Sundial Lupine (<i>Lupinus perennis</i>) - S3 <u>Bloom Time - mid-March to mid-June</u>	Inhabits dry, sandy oak savannahs, prairies, open barrens or clearings in woodlands of oak, jack pine, and/or aspen.	Y (N) UTM:

Species Conservation Concern Habitat and Incidental Wildlife – Goshen

ATCOM

ELC	Species	Description	Habitat Present (Y/N); UTM; description or habitat if present
TP01, TPS1, TPW1, CUM1	Tall Blazing Star (<i>Liatis aspera</i>) - S3/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y (N) UTM:
FEO, FES, FET, MAM2, MAM3	Tuberous Indian Plantain (<i>Amoglossum plantagineum</i>) - S3 Bloom Time – mid-March to mid-June	Occurs mainly in flat, sandy areas of the Bruce Peninsula. Fens, wet meadows, and calcareous river flats.	Y (N) UTM:
FOC1, FOC2, FOC3, FOC4	Woodland Pinedrops (<i>Pterospora andromedea</i>) - S2 Bloom Time – summer	Found in conifer woods, under pines, but also hemlock, spruce, fir, and white cedar. In dry or rocky soil, often with common juniper and sometimes aspen or birch.	Y (N) UTM:
CUM1, CUT1, CUW1, RBO1, SBO1	Yellow Ladies'-tresses (<i>Spiranthes ochroleuca</i>) - S2 Bloom Time – August to November	Dry, open sites, usually on acidic sandy soil, dry to mesic open woodland, thickets, meadows, barrens, ledges, outcrops, banks and roadsides, old fields.	Y (N) UTM:
BIRDS			
-	Bald Eagle (<i>Haliaeetus leucocephalus</i>) - SC	Assessed as SWH. Record species if found.	not required.
CUW, SDO, RBO, TPS	Common Nighthawk (<i>Chordeiles minor</i>) - SC	Hunts insects over a wide variety of habitats, in particular open or semi-open areas. Nests on ground in a wide range of open, sparse or vegetation-free habitats.	Y (N) UTM:
FOD, FOM	Louisiana Waterthrush (<i>Seiurus motacilla</i>) - SC	Inhabits mature forests along steeply sloped ravines adjacent to running water. Trees, bushes, exposed roots, cliffs, banks and mossy logs are favoured nesting spots. Riparian woodlands are preferred stopover sites during migration	Y (N) UTM:
FOD, CUW, CUT	Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>) - SC	Species inhabits open woodland/ edges (oak savannahs and riparian forest), open, deciduous forest with little understory; fields or pasture lands with scattered large trees; wooded swamps; orchards, small woodlots or forest edges; groves of dead or dying trees; requires cavity trees with at least 40 cm dbh; requires about 4 ha for a territory.	Y (N) UTM:
-	Short Eared Owl (<i>Asio flammeus</i>) - SC	Assessed as SWH. Record species if found.	not required.
CUT1	Yellow-breasted Chat (<i>Icteria virens</i>) - SC	Inhabits thickets, tall tangles of shrubbery beside streams, ponds; overgrown bushy clearings with deciduous thickets; nests above ground in bush, vines	Y (N) UTM:
REPTILES			
-	Eastern Ribbonsnake (<i>Thamnophis sauritus</i>) - SC	Assessed as SWH. Record species if found.	not required.
-	Milksnake (<i>Lampropeltis triangulum</i>) - SC	Assessed as SWH. Record species if found.	not required.
-	Snapping Turtle (<i>Chelydra serpentina</i>) - SC	Assessed as SWH. Record species if found.	not required.
INSECTS			
OAO, SA, SWM, SWD	Azure Bluet (<i>Enallagma aspersum</i>) - S3	Species inhabits fishless ponds, lakes and boggy swamps	(Y) N UTM: not observed
TPS, TPW	Sleepy Duskywing (<i>Erynnis brize</i>) - S1	Occurs in oak/oak-pine scrub, chaparral, barrens, well-drained sandy or shaly soils. Species regularly seen at flowers in oak woods, on the ground, and at mud puddles	Y (N) UTM:
CUM1, CUT1, CUW1	Monarch Butterfly (<i>Danaus plexippus</i>) - SC	Their larvae only feed on milkweeds (<i>Asclepius</i> spp.). Habitat includes abandoned farmland, along roadsides, open spaces where these plants grow	Y (N) UTM:
TPS, CUW	Mottled Duskywing (<i>Erynnis martialis</i>) - S2	Usually seen nectaring or on wet sandy meads. Larvae feeds on New Jersey Tea and adults only likely near where this plant is present	Y (N) UTM:
SWT, SWD, SWM, FOM, FOD4-3, TPW, TPS, CUM1	Tawny Emperor (<i>Asterocampa clyton</i>) - S3	Species inhabits densely wooded riparian areas, dry woods, open woods, fencerows and parks. Usually occurs near Hackberry, the larval foodplant	(Y) N UTM: not observed
FOD5	West Virginia White (<i>Pieris virginiensis</i>) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y (N) UTM:

Significant Wildlife Habitat Form

Re-visit Nest Bowls

AECOM

Study Area:	BLW JER <u>GSH</u>	Map #:	<u>236-GSH1079-1509</u>
Date:	<u>18-May-2012</u>	Time Started:	<u>7:50am</u>
Field Staff:	<u>J. Kamstra + A. Da +</u>	Time Finished:	<u>8:20am</u>
Weather Conditions:	<u>70% cloud cover 15°C</u>		<u>8:40am</u>

Colonial Nesting Tree/Shrub Birds, Osprey Breeding/Feeding, Bald Eagle Breeding/Nesting Habitat
(FET1, FOC, FOM, FOD, SWC, SWM, SWD)

Nest bowls present: ☐ No ☒ Yes (if yes, photograph and complete the following)

UTMs: 446497, 4791529 Number of nests: 1

Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):
Large stick w/ 15m in crch of bech, prob RTHA, no recent material on nest + prob not active this year.

Description of habitat (note riparian areas if present, evidence of disturbance):
semi-open (logged) Maple-Hickory-Ash,

Waterfowls Stopover/Nesting, Amphibian Breeding, Turtle Nesting/Over-wintering, Marsh Breeding Birds
(CUM1, CUT1, MAM, MAS, SAS1, SAM1, SAF1, SWD, SWT1, SWT2) (FOC, FOM, FOD, SWC, SWM, SWD, BOO1, FEO1)

Standing water present: ☐ No ☐ Yes (if yes, photograph and complete the following)

UTMs: _____ Area of standing water delineated on field map _____

Water depth (m): _____ % open water: _____ % emergent vegetation: _____

Description of standing water (permanent pool, evidence of annual spring flooding, etc): _____

Area and soil/substrate of shoreline habitat: _____

Type and abundance of cover in open water habitat: _____

Type and abundance of cover in surrounding habitat: _____

Evidence of disturbance (e.g. cattle grazing): _____

Evidence of use by waterfowl, amphibians, turtles (e.g. broken eggs), marsh breeding birds: _____

Complete Vernal Pool Habitat Description Form

Snake Hibernacula

Fissured rock/foundation or rock/debris pile present: ☐ No ☐ Yes (if yes, photograph and complete the following)

UTMs: _____ Likelihood to extend below frost line: _____

% canopy cover: _____ % slope: _____ Distance to open canopy (m): _____

Description of fissure or stone pile (composition/material, dimensions, etc): _____

Description of surrounding habitat (type & abundance of cover, evidence of disturbance, etc): _____

Seeps and Springs (FOC, FOM, FOD, SWC, SWM, SWD)

Evidence of seep or spring: ☐ No ☐ Yes (if yes, photograph and complete the following)

UTMs: _____ Description (indicator species, etc): _____

Ⓢ Additional- Bird calls heard are noted on back

NHA Site Investigation - Significant Wildlife Habitat Form

AECOM

Colonial Nesting Bird Breeding Habitat (Bank and Cliff Swallows)

(CUM1, CUT1, CUS, BLO1, BLS1, BLT1, CLO1, CLS1, CLT1)

Eroding bank, sandy hill, pits, steep slope or rock face present:

☐ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Location (e.g. aggregate pit, bridge): _____

Evidence of use by bank or cliff swallows (provide number of nests): _____

Colonial Nesting Ground Breeding Birds, Shorebird Migratory Stopover Areas

(BBO1, BBO2, BBS1, BBS2, BBT1, BBT2, SDO1, SDS2, SDT1, MAM1, MAM2, MAM3, MAM4, MAM5)

Shoreline of lake, large river or large wetland present:

☐ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Rocky island or peninsula present: _____

Mudflat present: _____

Evidence of disturbance (e.g. cattle grazing): _____

Description of habitat (size of rocky outcrop/mudflat, substrate/soil type, type and abundance of cover): _____

Raptor Winter Feeding and Roosting, Open Country or Shrub/Early Successional Bird Breeding Habitat

CUT1, CUS1, >30ha, CUM1 >30ha, FOC, FOD, FOM with a CUM, CUT, CUS, CUW > 20ha, or a CUM, CUS, CUT, CUW > 15ha

Large meadow, old field or generally open habitat (e.g. CUM, CUS, CUT, CUS, CUW) present:

Large open habitat present: ☐ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Evidence of disturbance (e.g. cattle grazing): _____

Description of habitat (abundance of food plants for rodents, abundance of perches, height of vegetation): _____

Old-growth or Mature Forests, Interior Forest Breeding Birds

(FOD, FOC, FOM, SWC, SWM, SWD. Mature forest (>60 years) present)

Mature forest present:

☐ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Age of oldest trees: _____

Evidence of disturbance (e.g. selective cutting): _____

Description of habitat (structural complexity, abundance of snags and/or downed woody debris, etc): _____

Photo #	Location or Subject	Photo #	Location or Subject
REV1	calling	NOFL	
INBA	"	RCK1	
SOSP	"	RBGR	
YEWA	"		
COYE	"		
YBSA	"		
SCTA	"		
EWPE	"		
HOWR	"		

NHA Site Investigation - Significant Wildlife Habitat Form

AECOM

Study Area (e.g. Bluewater): <u>Goshen</u>	Natural Area No.: <u>236-GSH 1079/1509</u>
Date (yyyy-mm-dd): <u>2012-04-18/19</u>	ELC Polygon: <u>F009-4/F009</u>
Field Staff (full name): <u>Tom Shortney Jess P</u>	Time Started: <u>5:20</u>
Weather Conditions: <u>Sunny, 9°C, 15km/h</u>	Time Finished: <u>5:50</u>

Colonial Nesting Tree/Shrub Birds, Osprey Breeding/Feeding, Bald Eagle Breeding/Nesting Habitat

Nest bowls present: ☐ No ☒ Yes (if yes, photograph and complete the following)

UTMs: 446497 4991529 Number of nests: 1

Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):
No bird observed in watch of Beech tree → medium sized
approx 10m high

Description of habitat (note riparian areas if present, evidence of disturbance):
SWD 3-3 → in wet habitat

Complete Feature Identification Map (1 sheet)

Waterfowls Stopover/Nesting, Amphibian Breeding, Turtle Nesting/Over-wintering, Marsh Breeding Birds

Standing water present: ☐ No ☒ Yes (if yes, photograph and complete the following)

UTMs: See Amphibian Form ☒ Area of standing water delineated on field map

Water depth (m): _____ % open water: _____ % emergent vegetation: _____

Description of standing water (permanent pool, evidence of annual spring flooding, etc): _____

Area and soil/substrate of shoreline habitat: _____

Type and abundance of cover in open water habitat: _____

Type and abundance of cover in surrounding habitat: _____

Evidence of disturbance (e.g. cattle grazing): _____

Evidence of use by waterfowl, amphibians, turtles (e.g. broken eggs), marsh breeding birds: _____

Complete Vernal Pool Habitat Description Form and Feature Identification Map (2 sheets)

Snake Hibernacula

Fissured rock/foundation or rock/debris pile present: ☐ No ☒ Yes (if yes, photograph and complete the following)

UTMs: See Hibernacula Form Likelihood to extend below frost line: _____

% canopy cover: _____ % slope: _____ Distance to open canopy (m): _____

Description of fissure or stone pile (composition/material, dimensions, etc): _____

Description of surrounding habitat (type & abundance of cover, evidence of disturbance, etc): _____

Complete Feature Identification Map (1 sheet)

NHA Site Investigation - Significant Wildlife Habitat Form

AECOM

Colonial Nesting Bird Breeding Habitat (Bank and Cliff Swallows)

Eroding sand bank, sandy hill, pits, steep slope or rock face present:

☒ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Location (e.g. aggregate pit, bridge): _____

Evidence of use by bank or cliff swallows (provide number of nests): _____

Colonial Nesting Ground Breeding Birds, Shorebird Migratory Stopover Areas

Shoreline of lake, large river or large wetland present:

☒ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Rocky island or peninsula present: _____

Mudflat present: _____

Evidence of disturbance (e.g. cattle grazing): _____

Description of habitat (size of rocky outcrop/mudflat, substrate/soil type, type and abundance of cover): _____

Complete Feature Identification Map (1 sheet)

Raptor Winter Feeding and Roosting, Open Country or Shrub/Early Successional Bird Breeding Habitat

Large meadow, old field or generally open habitat (e.g. CUM, CUS, CUT, CUS, CUW) present:

Large open habitat present: ☒ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Evidence of disturbance (e.g. cattle grazing): _____

Description of habitat (abundance of food plants for rodents, abundance of perches, height of vegetation): _____

Complete Feature Identification Map (1 sheet)

Seeps and Springs

Evidence of seep or spring:

☒ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Description (indicator species, etc): _____

Old-growth or Mature Forests, Interior Forest Breeding Birds

Mature forest present:

☒ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Age of oldest trees: _____

Evidence of disturbance (e.g. selective cutting): _____

Description of habitat (structural complexity, abundance of snags and/or downed woody debris, etc): _____

Photo #	Location or Subject	Photo #	Location or Subject
19	Stick nest		

Species Conservation Concern Habitat and Incidental Wildlife - Goshen

Map No: 236-6541079/6541507
Date (yyyy-mm-dd): 2012-04-19

Field Staff: Ben Stoney
Jesse Hager

Time Started: 10:30
Time Finished: 1:45

ALCOA

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Red Admiral		OB	among hibernowla				
White-breasted Nuthatch		OB	catching flies				
Thrush Vireo		OB	Soaring				
Downy Wood		VO	calling				
Cabbagewhite		OB					
Black-capped Chickadee		VO	calling				
Sparrow		OB	FOD9b				
Kingfisher		OB	near VP4				
Flicker		OB	Flying through SWD3-3				
Deer		TKS	along FOD7-2				
Blue Jays		OB	in FOD7-2				
Gray-Canna		OB	in SWD2-2				

Note: Evidence Codes (EV) SH=Suitable Habitat, SM=Singing Male; T-Territory, D=Display, P=Pair, N=Nest Building, V=Visiting Nest; A=Anxiety Behavior; DD=Distraction, NU=Used Nest, FY=Fledged Young, NE=Eggs, NY=Young, FS=Feces/Faecal sack, AE=Nest Entry

Other Wildlife Evidence: OB=observed, VO=Vocalization, CA=Carcass, DP=Distinctive Parts, HO=House/Den, FY=Eggs/Young, TK=tracks, FE=Feeding evidence, SC=Scat, SI=Other signs (specify)

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
PLANTS			
FOD7	American Gromwell (Lithospermum latifolium) - S3 Bloom Time - Spring	Shaded river banks, wooded floodplains. River floodplains, woods and edges of woods.	Y N UTM: N/A
ALO, TPO	Muehlenberg's astomum moss (Astomum muehlenbergianum) - S2 Bloom Time - Spring	Thin soil over level outcrop ledges and on soil under grasses in open prairie	Y N UTM:
FOM1, FOM2, CUP3	Autumn Coral-root (Corallorhiza odontorhiza) - S2 Bloom Time - summer to fall	Oak-pine woods or occasionally in open, red pine or white pine plantations. Dry, sandy woods.	Y N UTM:
FOC, FOM, FOD	Burning Bush (Euonymus atropurpureus) - S3 Bloom Time - April - June	Species occurs in dry to moist deciduous thickets and woods	Y N UTM: U/A
SWC1, SWC3, SWC4, SWM1, SWM2, SWM4, SWM5, SWM6	Chinese Hemlock Parsley (Conioselinum chinense) - S2 Bloom Time - summer to fall	Swampy places with deciduous trees, white cedars, tamarack; springy river banks, wet borders of streams and rivers. Also found among calcareous seepage slopes.	Y N UTM:
SWC, SWM, SWD, SWT, MAM, MAS	Crowned Beggarticks (Bidens trichosperma) - S2 Bloom Time - late summer	Found in openings in swamps, marshes, along shores & wet fields within the Carolinian zone and southeastern Georgian bay. Bogs, fens, tamarack swamps.	Y N UTM: U/A
ALT1, FOD7	Eastern Green-violet (Hybanthus concolor) - S2 Bloom Time - mid March to August	Occurs in rich, wet-mesic floodplain forests as well as mesic forests over limestone includes floodplains and river banks.	Y N UTM: U/A
TPS, TPW, FOM1, FOM2	Fogg's Goosefoot (Chenopodium foggii) - S2	Species occurs in sandy areas on limestone under oak or pine-oak forests	Y N UTM:
TPO2, TPS2, TPW2,	Giant Ironweed (Vernonia gigantea) - S1? Bloom Time -	Found in mesic prairies, thickets, moist woods, roadsides and grassy meadows	Y N UTM:

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

AECOM

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
CUM1, MAM	June – August		
FOD6, FOD7, FOD9	Green Dragon (<i>Arisaema dracontium</i>) - S3/S3 <u>Bloom Time – May and June</u>	Species found in damp deciduous forest and along river streams. Particularly Maple forest and forest dominated by Red Ash and White Elm.	Y N UTM: N/A
TP01, TP51, TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	Hairy Bedstraw (<i>Galium pilosum</i>) - S3 <u>Bloom Time – June-August</u>	Occurs in dry, sandy woods and thickets; occasionally in dry sandy fields	Y N UTM:
FE01, FES1, FET1, SWC, SWM, SWD, SWT, TPO, TPS, TPW	Hairy Valerian (<i>Valeriana edulis</i>) - S1 <u>Bloom Time – June to August</u>	Inhabits swampy river flats and meadows, wet prairies, and wooded, rocky riverbanks and fens.	Y N UTM: N/A
FOD6, FOD7, SWM, SWD	Hairy Wood Mint (<i>Blephilia hirsuta</i>) - S1 <u>Bloom Time – Summer</u>	Woodlands, often rocky, especially rivers. Rich woods, swamp forests, floodplains.	Y N UTM: N/A
FOD6, FOD7, FOD8, FOD9	Harbinger-of-spring (<i>Erigenia bulbosa</i>) - S3 <u>Bloom Time – early to late April</u>	Occurs in rich, moist deciduous woods, especially on floodplains.	Y N UTM: N/A
SAS1, SAM1, SAF1	Hill's Pond Weed (<i>Potamogeton hillii</i>) - SC/S2 <u>Bloom Time – summer</u>	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters.	Y N UTM:
FOM6, FOM7, FOM8	Large Round-leaved Orchid (<i>Platanthera macrophylla</i>) - S2 <u>Bloom Time – June to August</u>	Species inhabits moist mixed woods. Found in fairly mature, upland sugar maple-beech-eastern hemlock woodlands.	Y N UTM:
MAM2, MAM3, MAS2, MAS3, SWD	Lizard's Tail (<i>Saururus cernuus</i>) - S3 <u>Bloom Time – June – September</u>	Species inhabits shores and streambanks along shallow water. As well as swamps, floodplains, shallow water and mudflats at the borders of streams and ponds	Y N UTM: N/A
FOD6, FOD7, FOD9	Pawpaw (<i>Asimina trioba</i>) - S3 <u>Bloom Time – March-May</u>	Occurs in moist deciduous woods and stream banks.	Y N UTM: N/A
FOM8, FOD6, FOD7, FOD9, CUM1	Pilose Evening Primrose (<i>Oenothera pilosella</i>) - S2 <u>Bloom Time – Late Spring – Early Summer</u>	Moist edges of woods and open, disturbed ground	Y N UTM: N/A
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	Prostrate Tick-trefoil (<i>Desmodium rotundifolium</i>) - S2 <u>Bloom Time – July-September</u>	Dry, sandy or rocky woods	Y N UTM:
FOD7, SWD	Pumpkin Ash (<i>Fraxinus profunda</i>) - S2? <u>Bloom Time – March – June</u>	Swamps and floodplains	Y N UTM: N/A
CUM1, ALO, FET1, SWC	Ram's-head Lady's-slipper (<i>Cypripedium arietinum</i>) - S3 <u>Bloom Time – mid May to mid June</u>	Found in cedar woodlands, limestone plains and wooded fens, moist coniferous swamps, dry-sandy woods, and limestone barren.	Y N UTM:
FOD1, FOD2, FOD3, FOD4, FOD5, FOC1, FOM1, FOM5	Rattlesnake Hawkweed (<i>Hieracium venosum</i>) - S2 <u>Bloom Time – April – September</u>	Species inhabits open, dry sandy woods. Jack pine, oak, and aspen woodlands.	Y N UTM:
FOD6, FOD7, FOD9	Round-leaved Groundsel (<i>Packera obovata</i>) - S3 <u>Bloom Time – May – June</u>	Found in moist woods	Y N UTM: N/A
CUM1, CUT1, CUS1	Round-leaved hawthorn (<i>Crataegus lumana</i>) - S3?	Species occurs in old fields, poorly managed pastures, fencelines and roadsides	Y N UTM:
FOD8, FOD7, FOD8, FOD9, SWT2, SWT3	Scarlet Beebalm (<i>Monarda didyma</i>) - S3 <u>Bloom Time – May to October</u>	Found in moist, rich woods, thicket swamps, banks and floodplains	Y N UTM: N/A
ALO, ALS, ALT, TPO, TPS, TPW	Slender Blazing Star (<i>Liatris cylindracea</i>) - S3	Species occurs in limestone and dolostone pavement, prairies, open woods, alvars and moist sandy meadows.	Y N UTM:
SBO, SBS, SBT, TPO1, TPS1, TPW1, FOD1, FOD2	Slender Knotweed (<i>Polygonum tenue</i>) - S2	Found in dry, sandy, open areas in deciduous (often oak woods), prairie meadows; at edges of sand pits	Y N UTM:
SDT1, FOD5, FOD9	Slim-flowered Muhly (<i>Muhlenbergia tenuiflora</i>) - S2	Found in rich deciduous forest, often on rocky or sandy soils, wooded dunes, hillsides, and riverbanks whether in oak or beech-maple woods	Y N UTM: N/A
BLO1, BLS1, BLT1, TPO2, TPS2, TPW2, MAM2, FOD7	Stiff Gentian (<i>Gentianella quinquefolia</i>) - S2 <u>Bloom Time – late summer to mid fall</u>	Found in moist soils of streambanks, edges of woods, wet prairies, marshy meadows, bluffs and wooded hillsides.	Y N UTM: N/A
TPS1, TPW1, CUW1, RBO, SBO	Sundial Lupine (<i>Lupinus perennis</i>) - S3 <u>Bloom Time – mid-March to mid-June</u>	Inhabits dry, sandy oak savannahs, prairies, open barrens or clearings in woodlands of oak, jack pine, and/or aspen.	Y N UTM:

Species Conservation Concern Habitat and Incidental Wildlife – Goshen

ADOM

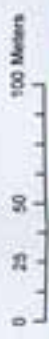
ELC	Species	Habitat Description	Habitat Present Y/N; UTM; description of habitat if present
TP01, TPS1, TPW1, CUM1	Tail Blazing Star (<i>Liatis aspera</i>) - S3/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y N UTM
FE0, FES, FET, MAM2, MAM3	Tuberous Indian Plantain (<i>Amoglossum plantagineum</i>) - S3 Bloom Time – mid-March to mid-June	Occurs mainly in flat, sandy areas of the Bruce Peninsula. Fens, wet meadows, and calcareous river flats.	Y N UTM
FOC1, FOC2, FOC3, FOC4	Woodland Pinedrops (<i>Pterospora andromedea</i>) - S2 Bloom Time – summer	Found in conifer woods, under pines, but also hemlock, spruce, fir, and white cedar. In dry or rocky soil, often with common juniper and sometimes aspen or birch.	Y N UTM
CUM1, CUT1, CUW1, RBO1, SBO1	Yellow Ladies'-tresses (<i>Spiranthes ochroleuca</i>) - S2 Bloom Time – August to November	Dry, open sites, usually on acidic sandy soil, dry to mesic open woodland, thickets, meadows, barrens, ledges, outcrops, banks and roadsides, old fields	Y N UTM
BIRDS			
-	Bald Eagle (<i>Haliaeetus leucocephalus</i>) - SC	Assessed as SWH. Record species if found	not required.
CUW, SDO, RBO, TPS	Common Nighthawk (<i>Chordeiles minor</i>) - SC	Hunts insects over a wide variety of habitats, in particular open or semi-open areas	Y N UTM
FOD, FOM	Louisiana Waterthrush (<i>Selurus motacilla</i>) - SC	Nests on ground in a wide range of open, shrubby or vegetation-free habitats. Inhabits mature forests along steeply sloped ravines adjacent to running water. Trees, bushes, exposed roots, cliffs, banks and mossy logs are favoured nesting spots. Riparian woodlands are preferred stopover sites during migration	Y N UTM
FOD, CUW, CUT	Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>) - SC	Species inhabits open woodland/edges (oak savannahs and riparian forest), open, deciduous forest with little understory; fields or pasture lands with scattered large trees, wooded swamps, orchards, small woodlots or forest edges; groves of dead or dying trees; requires cavity trees with at least 40 cm dbh; requires about 4 ha for a territory	Y N UTM
-	Short Eared Owl (<i>Asio flammeus</i>) - SC	Assessed as SWH. Record species if found.	not required.
CUT1	Yellow-breasted Chat (<i>Icteria virens</i>) - SC	Inhabits thickets, tall tangles of shrubbery beside streams, ponds; overgrown bushy clearings with deciduous thickets; nests above ground in bush, vines	Y N UTM
REPTILES			
-	Eastern Ribbonsnake (<i>Thamnophis sauritus</i>) - SC	Assessed as SWH. Record species if found	not required.
-	Milksnake (<i>Lampropeltis triangulum</i>) - SC	Assessed as SWH. Record species if found.	not required
-	Snapping Turtle (<i>Chelydra serpentina</i>) - SC	Assessed as SWH. Record species if found.	not required.
INSECTS			
OAO, SA, SWM, SWD	Azure Bluet (<i>Enallagma aspersum</i>) - S3	Species inhabits fishless ponds, lakes and boggy swamps	Y N UTM
TPS, TPW	Sleepy Duskywing (<i>Erynnis brizo</i>) - S1	Occurs in oak/oak-pine scrub, chaparral, barrens, well-drained sandy or shaly soils. Species regularly seen at flowers in oak woods, on the ground, and at mud puddles	Y N UTM
CUM1, CUT1, CUW1	Monarch Butterfly (<i>Danaus plexippus</i>) - SC	Their larvae only feed on milkweeds (<i>Asclepius</i> spp.). Habitat includes abandoned farmland, along roadsides, open spaces where these plants grow	Y N UTM
TPS, CUW	Mottled Duskywing (<i>Erynnis martialis</i>) - S2	Usually seen nectaring or on wet sandy roads. Larvae feeds on New Jersey Tea and adults only likely near where this plant is present	Y N UTM
SWT, SWD, SWM, FOM, FOD4-3, TPW, TPS, CUM1	Tawny Emperor (<i>Asterocampa clyton</i>) - S3	Species inhabits densely wooded riparian areas, dry woods, open woods, fencerows and parks. Usually occurs near Hackberry, the larval foodplant	Y N UTM
FOD5	West Virginia White (<i>Pieris virginianensis</i>) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y N UTM

236-GSH1079/b35/1507

- Collection/Feature Interest
- Turbine Buffer (125m)
- Property (100m)
- Stakeholder Wind Energy Centre

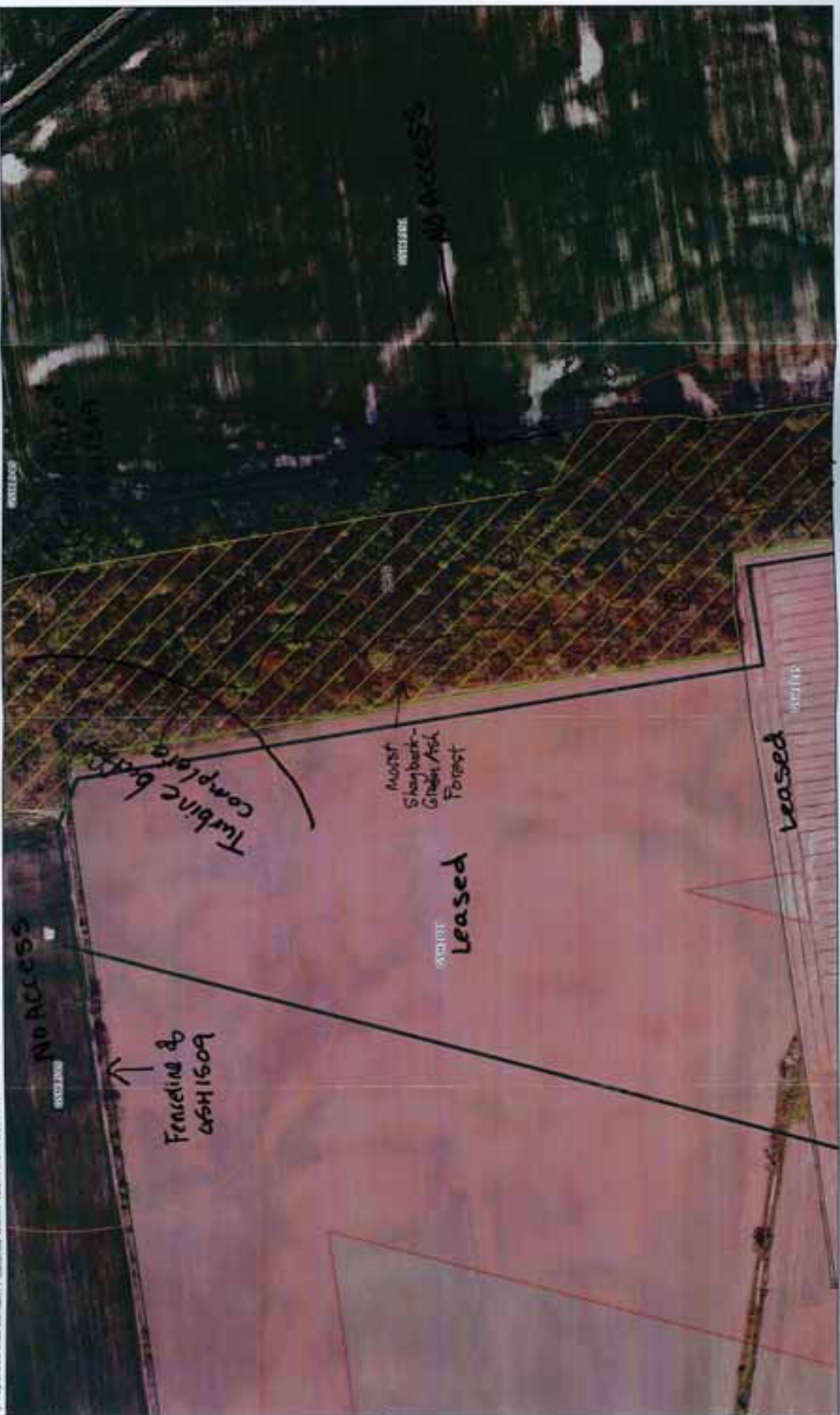
h

September 1, 2011



Goshen Feature: 236 GSH1079

(Properties that contain Features within 125m from Collection lines and 171.5m from Turbines)



Goshen Feature: 236 GSH1035

(Properties that contain Features within 125m from Collection lines and 171.5m from Turbines)

- Collection Feature Interest
- Turbine Buffer/Feature Interest
- Property Fabric
- Shoreline Wind Energy Corridor

- Roads
- Access/Collection Line
- Collection Buffer (125m)
- Turbine Buffer (171.5m)

h

September 1, 2011



1

Community Description and Classification

Surveyor(s): *Kamstra*
UTMZ: *17*

Date:	Sept 21/11	Time:	
TMZ:	446555		

3/21/2024 7:00 AM	
Do: b	start
	finish

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
☐ Terrestrial	☐ Organic	☐ Lacustrine	☐ Plankton	☐ Lake
☐ Wetland	☒ Mineral Soil	☐ Riverine	☐ Submerged	☐ Pond
☐ Aquatic	☐ Parent Min.	☐ Bottomland	☐ Floating-LVD.	☐ River
☐ <u>Slip</u>	☐ Acidic Bedrk	☐ Terrace	☐ Graminoid	☐ Stream
☐ Open Water	☐ Basic Bedrk	☐ Valley Slope	☐ Forb	☐ Marsh
☐ Shallow Water	☐ Carb. Bedrk	☒ Tableland	☐ Lichen	☒ Swamp
☐ Surficial Dep.	☐ Carb. Bedrk	☐ Roll. Upland	☐ Bryophyte	☐ Fen
☐ Bedrock		☐ Cliff	☒ Deciduous	☒ Bog
☐ <u>History</u>		☐ Talus	☐ Coniferous	☐ Barren
☐ Natural		☐ Crevice/Cave	☐ Mixed	☐ Meadow
☐ Cultural		☐ Alvar		☐ Prairie
☐ <u>Cover</u>		☐ Rockland		☐ Thicket
☐ Open		☐ Beach / Bar		☐ Savannah
☐ Shrub		☐ Sand Dune		☐ Woodland
☐ Treed		☐ Bluff		☐ Forest
				☐ Plantation

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) ($\gg$ Much Greater Than; $>$ Greater Than; $\approx$ About Equal To)
1	2	4	Fraxinus $\gggg$ Aethes - Carabid
2	3		Ulmus $\gg$ Tilia
3			
4	5/6	2	Cox 280 $\gg$ Glvstr $\gg$ Ast lark $\gg$ Alnet

IRT Codes: 7 < 0.2m 8 > 0.2-0.5m 9 > 0.5-1m 4 > 1-2m 3 > 2-6m 2 > 6-25m 1 > 25m
 CWR Codes: 0 = none 1 0% - 10% 2 10 - 25% 3 25 - 60% 4 > 60%

Stand Composition:	Size Class Analysis:	<10	10-24	25-50	>50
	Standing Snags:	0	0	25-50	>50
BA:	Deadfall / Logs:	0	10-24	25-50	>50

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

Com. Age:	☐ Pioneer	☐ Young	☐ Mid-Age	☒ Mature	☐ Old Growth
-----------	----------------------------------	--------------------------------	----------------------------------	--	-------------------------------------

Ecotope:	Code:
Vegetation Type:	Code:
Inclusion:	Code:
Complex:	Code:

Community Profile Diagram/Comments

Shallow seasonal ponds

Victims

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Avg.
Total						100
Basal Area (BA)						
Dead						

Soils Ontario and ELC Soils Description

Site Metrics		Pit/Auger #	Soil Horizon Description				Depth to ...	Summary			
UTM	Zone	#1									Moisture Regime
	Easting										
	Northing										
	Position										
	Aspect										
Slope	Percent									Drainage	
	Slope										
	Length										
Depth to ...	Mottles		15	% CF			% CF			Effective Texture (indicate below)	
	Gley										
	Water Table										
	Carbonates										
	Bedrock										
Soil Horizon Description	1	Depth from zero	15	% CF			% CF			% CF	
		Texture	dark brown silty clay (sandy)								
	2	Depth from zero	30	% CF			% CF			% CF	
		Texture	silty clay gray - w/ load								
	3	Depth from zero		% CF			% CF			% CF	
		Texture									
	4	Depth from zero		% CF			% CF			% CF	
		Texture									
		% Surface Stone/Rock									
		Moisture Regime									
		Drainage									

Community Description and Classification	Site: 236_GSH1079	Polygon: B
	Surveyor(s): Kamster	Date: Sept 21/11
UTMZ:	UTMZ: 446490	UTMN: 4791265
		Time start: 9:45 Time finish:

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
☐ Terrestrial	☐ Organic	☐ Lacustrine	☐ Plankton	☐ Lake
☐ Wetland	☒ Mineral Soil	☐ Riverine	☐ Submerged	☐ Pond
☐ Aquatic	☐ Parent Min.	☐ Bottomland	☐ Floating-LVD	☐ River
Silt	☐ Acidic Bedrk	☐ Terrace	☐ Graminoid	☐ Stream
☐ Open Water	☐ Basic Bedrk	☐ Valley Slope	☐ Forb	☐ Marsh
☐ Shallow Water	☐ Carb. Bedrk	☒ Tableland	☐ Lichen	☐ Swamp
☐ Surficial Dep.		☐ Roll Upland	☐ Bryophyte	☐ Fen
☐ Bedrock		☐ Cliff	☒ Deciduous	☐ Bog
History		☐ Talus	☐ Coniferous	☐ Barren
☒ Natural		☐ Crevice/Cave	☐ Mixed	☐ Meadow
☐ Cultural		☐ Alluvial		☐ Prairie
Cover		☐ Rockland		☐ Thicket
☐ Open		☐ Beach / Bar		☐ Savannah
☐ Shrub		☐ Sand Dune		☐ Woodland
☐ Treed		☐ Bluff		☒ Forest
				☐ Plantation

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) ($\gg$ = Much Greater Than; $>$ = Greater Than; $\approx$ About Equal To)
1	2	4	caricavat $\gg$ fragum - illaenae
2	3	4	carcavo $>$ ostydg $>$ yllen
3			
4	5/6		Euodbor $>$ Euodm - Caravit

HT Codes:	7 = 0.2m	8 = 0.2-0.5m	9 = 0.5-1m	4 = 1-2m	3 = 2-5m	2 = 6-25m	1 = >25m
CVR Codes:	0 = none	1 0% - 10%	2 10 - 20%	3 21 - 60%	4 > 60%		

Stand Composition:		Size Class Analysis:		Abundance Codes:			
		Standing Snags:		N = None	R = Rare		
BA:		Deadfall / Log:		O = Occasional	A = Abundant		
		A	<10	A	10-24	25-50	>50
			<10		10-24	25-50	>50
		A	<10	A	10-24	25-50	>50

Com. Age: ☐ Pioneer ☐ Young ☒ Mid-Age ☐ Mature ☐ Old Growth

Ecosite:		Code:	
Vegetation Type:	moist Shagbark Hickory Forest	Code:	F0D 9-4
Inclusion:	epiphytic plants + Gr Ash Swamp	Code:	
Complex:		Code:	

Community Profile Diagram/Comments

1. 姓名: _____ 性别: _____ 年龄: _____ 职业: _____
 2. 住址: _____ 电话: _____ 邮编: _____
 3. 电子邮箱: _____ 身份证号: _____
 4. 工作单位: _____ 职务: _____
 5. 其他: _____

Tree Tally by Species

[illegible]

Soils Ontario and ELC Soils Description

Site Metrics		Plot/Auger #						Summary		
Site Metrics	UTM	Zone						Moisture Regime		
		Easting								
	Slope	Northing						Drainage		
		Position								
		Aspect								
		Percent								
		Slope						Effective Texture (Indicate below)		
		Length								
	Depth to...	Mottles							% CF	
		Gley								
Water Table							% CF			
Carbonates										
Bedrock								% CF		
Soil Horizon Description		1	Depth from zero						% CF	
			Texture							
		2	Depth from zero						% CF	
			Texture							
	3	Depth from zero						% CF		
		Texture								
	4	Depth from zero						% CF		
		Texture								
		% Surface Stone/Rock						% CF		
		Moisture Regime								
Drainage										



Site: 236_GSH5000	Polygon: 1079	C	
Surveyor(s): Kamstra	Date: Sept 21/11	Time start:	10:10
UTMZ:	UTMZ: 446515	UTMIN:	4491370

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
☐ Terrestrial	☐ Organic	☐ Lacustrine	☐ Plankton	☐ Lake
☐ Wetland	☐ Mineral Soil	☐ Riverine	☐ Submerged	☐ Pond
☐ Aquatic	☐ Parent Min.	☐ Bottomland	☐ Floating-LVD.	☐ River
Site	☐ Acidic Bedrk	☐ Terrace	☐ Graminoid	☐ Stream
☐ Open Water	☐ Basic Bedrk	☐ Valley Slope	☐ Forb	☐ Marsh
☐ Shallow Water	☐ Carb. Bedrk	☒ Tableland	☐ Lichen	☒ Swamp
☐ Surficial Dep.		☐ Roll Upland	☐ Bryophyte	☐ Fen
☐ Bedrock		☐ Cliff	☒ Deciduous	☐ Bog
History		☐ Talus	☐ Coniferous	☐ Barren
☐ Natural		☐ Crevice/Cave	☐ Mixed	☐ Meadow
☐ Cultural		☐ Alvar		☐ Prairie
Cover		☐ Rockland		☐ Thicket
☐ Open		☐ Beach / Bar		☐ Savannah
☐ Shrub		☐ Sand Dune		☐ Woodland
☐ Treed		☐ Bluff		☐ Forest
				☐ Plantation

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (> Much Greater Than, > Greater Than, = About Equal To)
1	1/2	3	Acetree >>> Caroleak
2	3		Winnema - Acetree > Firdlin
3			
4	5/6	3	Cuxman - Claster - CeadyZ - Rubenp

HT Codes:					
7 <0.2m	8 =0.2-0.5m	9 =0.5-1m	4 >1.2m	3 =2-6m	2 =6-25m
CVR Codes: 0 = none 1 0% - 10% 2 10 - 25% 3 25 - 60% 4 > 60%					
Stand Composition:	Size Class Analysis:				
	Standing Snags:				
	Deadfall / Logs:				
BA:		A	<10	10-24	>50
			<10	10-24	>50
			<10	10-24	>50

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

Com. Age: ☐ Pioneer ☐ Young ☒ Mid-Age ☐ Mature ☐ Old Growth

Ecosite:		Code:	
Vegetation Type:	Swamp Maple Swamp (Mineral)	Code:	SWD 3-3
Inclusion:		Code:	
Complex:		Code:	

Community Profile Diagram/Comments

Extensive Swamp thicket, covered area of woodlot seasonal ponds (thawed) but no water at present
- Evidence of selective logging ~ 5 years ago, open canopy + 10

Nordens:

spring peepers colony - two no water at present
prob good site for amp breeding

Tree Tally by Species

[illegible]

Soils Ontario and ELC Soils Description

Site Metrics		PIU/Auger #							Summary
UTM	Zone								Moisture Regime
	Easting								
	Northing								
	Position								
	Aspect								
Slope	Percent								Drainage
	Slope								
	Length								
Depth to...	Mottles								Effective Texture (Indicate below)
	Clay								
	Water Table								
	Carbonates								
	Bedrock								
Soil Horizon Description	1	Depth from zero	% CF	% CF	% CF	% CF	% CF	% CF	
		Texture							
	2	Depth from zero	% CF	% CF	% CF	% CF	% CF	% CF	
		Texture							
	3	Depth from zero	% CF	% CF	% CF	% CF	% CF	% CF	
		Texture							
	4	Depth from zero	% CF	% CF	% CF	% CF	% CF	% CF	
		Texture							
		% Surface Stone/Rock							
		Moisture Regime							
			Drainage						

Job Number:

SITE LOCATIONS

1 CONFERS						2 TREES and SHRUBS						3 GRAMINOIDS					
1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Abies balsamea						+ Rosa multiflora						Agrostis gigantea					
Juniperus communis						Rosa						Agrostis stolonifera					
Juniperus virginiana						Rubus allegheniensis			X			Agropyron repens					
Larix laricina						Rubus idaeus		X	X			Alopecurus					
Picea abies						Rubus occidentalis	X		X			Bromus inermis					
Picea glauca						Rubus odoratus						Calamagrostis canadensis					
Pinus resinosa						Rubus pubescens			X			Carex acutata					
Pinus strobus						Salix alba						Carex aura					
Pinus sylvestris						Salix amygdaloides						Carex bebbii				X	
Thuja occidentalis						Salix bebbiana						Carex blanda				X	
Tsuga canadensis						+ Salix discolor						Carex gracillima				X	
						Salix eriocephala			X			Carex granularis					
						Salix exigua						Carex hystericina					
						Salix lucida						Carex pennsylvanica					
						Salix petiolaris						Carex radiata				X	
TREES and SHRUBS						+ Salix purpurea						Carex retrofracta					
Acer negundo						Salix x rubens						Carex stipata					
Acer rubrum						+ Salix						Carex stricta					
Acer saccharinum						Sambucus canadensis						Carex vulpinoidea					X
Acer saccharum	X		X			Sambucus racemosa						Carex mutabilis				X	
Acer spicatum						Sorbus aucuparia						Carex gracilis				X	
Alnus rugosa						Spiraea alba						Carex crispata				X	
Amelanchier						Syringa vulgaris						Carex lupulina				X	
Berberis thunbergii	X					+ Tilia americana		X	X			Carex intermedia				X	
Betula alleghaniensis						Ulmus americana		X	X			Carex gracilis				X	
Betula papyrifera						Ulmus						Carex albicans				X	
Carpinus caroliniana	X		X			Vaccinium rostratum			X			Carex tuckermanni				X	
Carya cordiformis	X		X			Viburnum lentago						Carex					
Celastrus scandens						Viburnum opulus						Cyperus					
Cornus alternifolia						Viburnum						Cyperus					
Cornus amomum						Vitis riparia		X	X			Dactylis glomerata					
Cornus rugosa	X					Monarda			X			Danthonia spicata					
Cornus stolonifera												Echinochloa crus-galli					
Corylus cornuta												Eleocharis erythropoda					
Crataegus monogyna												Eleocharis					
Crataegus punctata												Elymus virginicus					X
Crataegus sp.	X		X									Elymus					
Crataegus macrocarpa	X											Festuca arundinacea					
Diervilla lonicera												Glyceria striata				X	
Fagus grandifolia			X									Glyceria					
Fraxinus americana												Juncus dudleyi					
Fraxinus nigra						FERNS						Juncus effusus					X
Fraxinus pennsylvanica	X		X			Adiantum pedatum						Juncus tenuis					X
Ilex verticillata						Athyrium filix-femina			X			Juncus					
Juglans cinerea						Botrychium multifidum						Juncus					
Juglans nigra						Botrychium virginianum						Loxia oryzoides					X
Lonicera macrocarpa						Cystopteris bulbifera						Muhlenbergia					
Lonicera tatarica						Dryopteris carthagenica			X			Oryzopsis asperifolia					
Lonicera						Dryopteris cristata						Panicum					
Malus pennsylvanica						Dryopteris marginalis						Panicum					
Ostrya virginiana			X			Dryopteris						Phalaris arundinacea					
Parthenocissus vitacea	X		X			Equisetum arvense						Phleum pratense					
Populus balsamifera						Equisetum hyemale						Phragmites australis					X
Populus grandidentata						Equisetum variegatum						Poa compressa					
Populus tremuloides			X			Equisetum						Poa pratensis					
Populus deltoidea			X			Gymnocarpium dryopteris						Poa					
Prunus pennsylvanica						Lycopodium digitatum						Scirpus atrovirens					X
Prunus serotina						Lycopodium obscurum						Scirpus cyperinus					X
Prunus virginiana	X		X			Lycopodium						Scirpus validus					
Prunus						Lycopodium						Scirpus					
Quercus macrocarpa	X					Matricaria struthiopteris						Scirpus					
Quercus rubra	X		X			Osmunda cinnamomea			X			Setaria					
Quercus						Osmunda regalis						Spiranthes					
Rhamnus cathartica						Polystichum acrostichoides						Typha angustifolia					
Rhus radicans	X		X			Peridinium aquilinum						Typha latifolia					
Rhus typhina						Thelypteris palustris						Typha X glauca					
Ribes americana	X																
Ribes cynosbati	X																
Ribes x rubrum																	
Robinia pseudo-acacia																	
Grayia ovata	X		X														
Elaeagnus oblongifolia	X		X														
Lindera benzoin			X														
Claytonia virginica			X														

ELC WILDLIFE	SITE: <i>Goshen 236 @SH 1035 + 1079</i>		
	POLYGON:		
	DATE: <i>Sept</i>		
	SURVEYORS: <i>Kamstra</i>		
	START TIME: <i>9:00</i>	END TIME:	

TEMP (°C): <i>18</i>	CLOUD (10th): <i>10</i>	WIND: <i>2</i>	PRECIPITATION:
CONDITIONS:			

POTENTIAL WILDLIFE HABITAT:

☒ VERNAL POOLS	☒ SNAGS <i>few</i>
☐ HIBERNACULA	☒ FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	AMCR	VO			L	Monarch	OB		
	BLJA	VO							
	WBNU								
	COYE								
	BCCH								
	EWPE	✓							
	HAJO	OB							
	Pied-billed Grebe	OB	adult migratory	1					
H	Sprig Peepers	VO							
M	WT DRL	OB	crackling through forest						

FAUNAL TYPE CODES (TY):

B = BIRD M = MAMMAL H = HERPETOFAUNA L = LEPIDOPTERA F = FISH O = OTHER

EVIDENCE CODES (EV):
BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT

SM = SINGING MALE

BREEDING BIRD - PROBABLE:

T = TERRITORY

D = DISPLAY

P = PAIR

A = ANXIETY BEHAVIOUR

N = NEST BUILDING

V = VISITING NEST

BREEDING BIRD - CONFIRMED:

DD = DISTRACTION

NU = USED NEST

FY = FLEDGED YOUNG

NE = EGGS

NY = YOUNG

FS = FOOD/FECAL SACK

AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:

OB = OBSERVED

VO = VOCALIZATION

CA = CARCASS

DP = DISTINCTIVE PARTS

HO = HOUSE/DEN

FY = EGGS/YOUNG

TK = TRACKS

FE = FEEDING EVIDENCE

SC = SCAT

SI = OTHER SIGNS (specify)

Goshen Feature: 236 GSH1507

essentially that contain Features within 125m from Collection lines and 171.5m from Turfines)



September 1, 2011

5



Goshen Feature: 236 GSH1508 / GSH36

(Properties that contain Features within 125m from Collection lines and 171.5m from Turbines)

h

September 1, 2011

Access/Collection Line

Collection Buffer (125m)

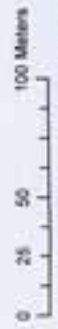
Turbine Buffer (171.5m)

Collection/Feature Intersect

Turbine Buffer/Feature Intersect

Property Feature

Bluestem Wind Energy Centre



NW end of feature
236 @ turbine 36
fairly large chunk
of ac work
GSH1508
GSH1507

Leased

Leased

Leased

Soil Collection / E-of-Skipper (SW)

Goshen Feature: 236 GSH1509

(Properties that contain Features within 125m from Collection lines and 171.5m from Turbines)

h

September 1, 2011



- Roads
- Access/Collection Line
- Collection Buffer (125m)
- Turbine Buffer (171.5m)
- Collection/Feature Intersect
- Turbine Buffer/Feature Intersect
- Property Values
- Hummer Voted Energy Centre



ELC Community Description and Classification	Site: 236_GSH1507		Polygon: D	
	Surveyor(s): JK	Date: Oct 13/11	Time start: 17:15	
	UTMZ: 17	UTMZ: 446240	UTMN: 4792505	

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
☐ Terrestrial	☐ Organic	☐ Lacustrine	☐ Plankton	☐ Lake
☐ Wetland	☐ Mineral Soil	☐ Riverine	☐ Submerged	☐ Pond
☐ Aquatic	☐ Parent Min.	☐ Bottomland	☐ Floating-LVD.	☐ River
☐ <u>Slits</u>	☐ Acidic Bedrk	☐ Terrace	☐ Graminoid	☐ Stream
☐ Open Water	☐ Basic Bedrk	☐ Valley Slope	☐ Forb	☐ Marsh
☐ Shallow Water	☐ Carb. Bedrk	☐ Tableland	☐ Lichen	☐ Swamp
☐ Surficial Dep.		☐ Roll. Upland	☐ Bryophyte	☐ Fen
☐ Bedrock		☐ Cliff	☐ Deciduous	☐ Bog
☐ <u>History</u>		☐ Talus	☐ Coniferous	☐ Barren
☐ Natural		☐ Crevice/Cave	☐ Mixed	☐ Meadow
☐ Cultural		☐ Alvar		☐ Prairie
☐ <u>Cover</u>		☐ Rockland		☐ Thicket
☐ Open		☐ Beach / Bar		☐ Savannah
☐ Shrub		☐ Sand Dune		☐ Woodland
☐ Treed		☐ Bluff		☐ Forest
				☐ Plantation

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1	2	4	Caracat - Fraguen - Paggay - Ovevud
2	3	3	Agasau > Ostruay
3	4	2	Faggay - Abvadu - Caracato
4			Agasau - Agasau

HT Codes:	7 < 0.2m	6 > 0.2-0.6m	5 > 0.5-1m	4 > 1-2m	3 > 2-6m	2 > 6-25m	1 > 25m
CVR Codes:	0 = none	1 0% - 10%	2 10 - 25%	3 25 - 60%	4 > 60%		

Stand Composition:	Size Class Analysis:	Standing Snags:	Deadfall / Logs:			
BA:						

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

Com. Age:	☐ Pioneer	☐ Young	☒ Mid-Age	☐ Mature	☐ Old Growth
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Ecosite:		Code:	
Vegetation Type:		Code:	
Inclusion:		Code:	FOD
Complex:		Code:	

Community Profile Diagram/Comments

Business First is NO clean company

Victims

Tree Tally by Species

[illegible]

Soils Ontario and ELC Soils Description

[illegible]

zero texture
Jessica P.
to Code

⑤ Swamp Maple Swamp - UTM 446265/4792500
edge SWD3-3

⑥ Small Dry Pond at Edge of Woodlot - UTM - 446245/4792465
may be permanent but recent rains, currently about 1m deep in middle
mostly Chara, some Pot. pusillus., 1 clump of Scirpalis
Abundant Green Frog tadpoles.

Vegetation Type - Stonewort Submerged Shallow Aquatic SAS1-3

ELC Community Description and Classification	Site: 236_GSH1508		Polygon:	
	Surveyor(s): JK		Date: Oct 13/11	Time start: 17:30
	UTMZ:	UTMZ: 446880	UTMIN: 4792390	
	UTMZ:	UTMZ: 446880	UTMIN: 4792390	

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
☐ Terrestrial	☐ Organic	☐ Lacustrine	☐ Plankton	☐ Lake
☐ Wetland	☐ Mineral Soil	☐ Riverine	☐ Submerged	☐ Pond
☐ Aquatic	☐ Parent Min.	☐ Bottomland	☐ Floating-LVD.	☐ River
	☐ Acidic Bedrk	☐ Terrace	☐ Graminoid	☐ Stream
☐ Open Water	☐ Basic Bedrk	☐ Valley Slope	☐ Forb	☐ Marsh
☐ Shallow Water	☐ Carb. Bedrk	☒ Tableland	☐ Lichen	☐ Swamp
☐ Surficial Dep.		☐ Roll. Upland	☐ Bryophyte	☐ Fen
☐ Bedrock		☐ Cliff	☒ Deciduous	☐ Bog
		☐ Talus	☐ Coniferous	☐ Barren
History		☐ Crevice/Cave	☐ Mixed	☐ Meadow
☐ Natural		☐ Alvar		☐ Prairie
☐ Cultural				☐ Thicket
Cover		☐ Rockland		☐ Savannah
☐ Open		☐ Beach / Bar		☐ Woodland
☐ Shrub		☐ Sand Dune		☒ Forest
☐ Treed		☐ Bluff		☐ Plantation

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (p > Much Greater Than; > Greater Than; = About Equal To)
1	3	4	<i>Pinus strobus</i> > <i>Fagus sylvatica</i> > <i>Acer saccharum</i>
2	3	3	<i>Acer saccharum</i> - <i>Q. rubra</i>
3	4	4	<i>Fagus sylvatica</i> > <i>Q. rubra</i>
4	6	4	<i>Salix caprea</i> - <i>Corylus rostrata</i> - <i>Salix flexilis</i> - <i>Gaultheria procumbens</i>

HT Codes: 7 < 0.2m 8 > 0.2-0.5m 9 > 0.5-1m 4 > 1-2m 3 > 2-4m 2 > 4-25m 1 > 25m
CVR Codes: 0 = none 1 0% - 10% 2 10 - 25% 3 25 - 40% 4 > 40%

Stand Composition:		Size Class Analysis:		
BA:		Standing Snags:		
		Deadfall / Logs:		
		☒ A ☐ O ☐	<10	10-24
		☐ A ☒ O ☐	<10	10-24
		☐ A ☐ O ☒	<10	10-24
				25-50
				25-50
				25-50

Bundance Codes: N = None R = Rare O = Occasional A = Abundant

Com. Age:	☐ Pioneer	☐ Young	☒ Mid-Age to	☐ Mature	☐ Old Growth
			X		

Ecotype:		Code:	
Vegetation Type:	W. Ash Deciduous.	Code:	FOD4-2
Inclusion:		Code:	
Complex:		Code:	

Community Profile Diagram/Comments

[illegible]

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Avg.
Total						100
Basal Area (BA)						
Seed						

Soils Ontario and ELC Soils Description

Site Metrics		Pit/Auger #							Summary
Site Metrics	UTM	Zone							Moisture Regime
		Easting							
		Northing							
	Slope	Position							Drainage
		Aspect							
Percent									
		Slope Length							
Depth to ...		Mottles							Effective Texture (Indicate below)
		Gley							
		Water Table							
		Carbonates							
		Bedrock							
Soil Horizon Description	1	Depth from zero	% CF	% CF	% CF	% CF	% CF	% CF	% CF
		Texture							
	2	Depth from zero	% CF	% CF	% CF	% CF	% CF	% CF	% CF
		Texture							
	3	Depth from zero	% CF	% CF	% CF	% CF	% CF	% CF	% CF
		Texture							
	4	Depth from zero	% CF	% CF	% CF	% CF	% CF	% CF	% CF
		Texture							
		% Surface Stone/Rock							
		Moisture Regime							
		Drainage							

⑧ Swamp Maple Swamp UTM - 446280 / 4792431

2-4 Acetre >>> Carovat - Frunigr

3-2 Acetre - Ulmanen

6-1 Glystrin seasonally flooded

Size 0 < 10 A < 25 A < 50

Shrub B

Deadfall A 0

Mature
Veg Type SWD3-3

⑨ Shagbark Hickory Forest UTM - 446300 / 4792180

2-4 Carovat

3-3 Carovat Ulmanen

4-2 Carovat

6-3 Gerrohe - Enoobar - Astlanc - Frunne - Allpetr

Size A < 10 A < 25 R < 50

Shrub R R

Deadfall 0 0

Mid Age
Veg Type FOD9-4

POTENTIAL WILDLIFE HABITAT:

SPECIES LIST:

FAUNAL TYPE CODES (TY):

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT

SM = SINGING MALE

BREEDING BIRD - PROBABLE:

T = TERRITORY

D = DISPLAY

P = PAIR

A = ANXIETY BEHAVIOUR

N = NEST BUILDING

V = VISITING NEST

BREEDING BIRD - CONFIRMED:

DD = DISTRACTION

NU = USED NEST

FY = FLEDGED YOUNG

NE = EGGS

NY = YOUNG

FS = FOOD/FECAL SACK

AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:

OB = OBSERVED

VO = VOCALIZATION

CA = CARCASS

DP = DISTINCTIVE PARTS

HO = HOUSE/DEN

FY = EGGS/YOUNG

TK = TRACKS

FE = FEEDING EVIDENCE

SC = SCAT

SI = OTHER SIGNS (specify)

Significant Wildlife Habitat Form

AECOM

Study Area:	BLW	JER	<u>GSH</u>	Map #:	<u>236-GSH(506/150)/194</u>
Date:	<u>2012-07-04</u>			Time Started:	<u>4:32 p.m.</u>
Field Staff:	<u>Tom Sharney Jess Dick</u>			Time Finished:	<u>6:00 p.m.</u>
Weather Conditions:	<u>Sunny, 34°C</u>				

Colonial Nesting Tree/Shrub Birds, Osprey Breeding/Feeding, Bald Eagle Breeding/Nesting Habitat
(FET1, FOC, FOM, FOD, SWC, SWM, SWD)

Nest bowls present: ☒ No ☐ Yes (if yes, photograph and complete the following)

UTMs: _____ Number of nests: _____

Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present): _____

Description of habitat (note riparian areas if present, evidence of disturbance): _____

Waterfowls Stopover/Nesting, Amphibian Breeding, Turtle Nesting/Over-wintering, Marsh Breeding Birds
(CUM1, CUT1, MAM, MAS, SAS1, SAM1, SAF1, SWD, SWT1, SWT2) (FOC, FOM, FOD, SWC, SWM, SWD, BOO1, FEO1)

Standing water present: ☒ No ☐ Yes (if yes, photograph and complete the following)

UTMs: _____ Area of standing water delineated on field map: _____

Water depth (m): _____ % open water: _____ % emergent vegetation: _____

Potential to hold water until at least July in most years: Yes / No

Description of standing water (permanent pool, evidence of annual spring flooding, etc): _____

Area and soil/substrate of shoreline habitat: _____

Type and abundance of cover in open water habitat: _____

Type and abundance of cover in surrounding habitat: _____

Evidence of disturbance (e.g. cattle grazing): _____

Evidence of use by waterfowl, amphibians, turtles (e.g. broken eggs), marsh breeding birds: _____

Complete Vernal Pool Habitat Description Form

Snake Hibernacula

Fissured rock/foundation or rock/debris pile present: ☒ No ☐ Yes (if yes, photograph and complete the following)

UTMs: _____ Likelihood to extend below frost line: _____

% canopy cover: _____ % slope: _____ Distance to open canopy (m): _____

Description of fissure or stone pile (composition/material, dimensions, etc): _____

Description of surrounding habitat (type & abundance of cover, evidence of disturbance, etc): _____

Seeps and Springs (FOC, FOM, FOD, SWC, SWM, SWD)

Evidence of seep or spring: ☒ No ☐ Yes (if yes, photograph and complete the following)

UTMs: _____ Description (indicator species, etc): _____

NHA Site Investigation - Significant Wildlife Habitat Form

AECOM

Colonial Nesting Bird Breeding Habitat (Bank and Cliff Swallows)

(CUM1, CUT1, CUS, BLO1, BLS1, BLT1, CLO1, CLS1, CLT1)

Eroding bank, sandy hill, pits, steep slope or rock face present:

☒ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Location (e.g. aggregate pit, bridge): _____

Evidence of use by bank or cliff swallows (provide number of nests): _____

Colonial Nesting Ground Breeding Birds, Shorebird Migratory Stopover Areas

(BBO1, BBO2, BBS1, BBS2, BBT1, BBT2, SDO1, SDS2, SDT1, MAM1, MAM2, MAM3, MAM4, MAM5)

Shoreline of lake, large river or large wetland present:

☒ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Rocky island or peninsula present: _____

Mudflat present: _____

Evidence of disturbance (e.g. cattle grazing): _____

Description of habitat (size of rocky outcrop/mudflat, substrate/soil type, type and abundance of cover): _____

Raptor Winter Feeding and Roosting, Open Country or Shrub/Early Successional Bird Breeding Habitat

CUT1, CUS1, >30ha, CUM1 >30ha, FOC, FOD, FOM with a CUM, CUT, CUS, CUW > 20ha, or a CUM, CUS, CUT, CUW > 15ha

Large meadow, old field or generally open habitat (e.g. CUM, CUS, CUT, CUS, CUW) present:

Large open habitat present: ☒ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Evidence of disturbance (e.g. cattle grazing): _____

Description of habitat (abundance of food plants for rodents, abundance of perches, height of vegetation): _____

Old-growth or Mature Forests, Interior Forest Breeding Birds

(FOD, FOC, FOM, SWC, SWM, SWD. Mature forest (>60 years) present)

Mature forest present: ☒ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Age of oldest trees: _____

Evidence of disturbance (e.g. selective cutting): _____

Description of habitat (structural complexity, abundance of snags and/or downed woody debris, etc): _____

Photo #	Location or Subject	Photo #	Location or Subject

A=COM

Time Started:

Time Finished: 6:00 PM

Observed Species List

[illegible]

Note: Evidence Codes (EV)

Breeding Bird (Probable) T=Territory, D=Display, P=Pair, N=Nest Building, V= Visiting Nest A=Anxiety Behavior;

Breeding Bird (Confirmed)

Other Wildlife Evidence: OB=Observed, VO=Vocalization, CA=Carcass, DP=Distinctive Parts, HO=House/Den, FY=Eggs/young, TK=Tracks, FE=Feeding evidence, SC=Scat, SI=Other signs (specify)

2/3 $\uparrow$ 20% observed

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
PLANTS			
FOD7	American Gromwell (<i>Lithospermum latifolium</i>) - S3 <i>Bloom Time - Spring</i>	Shaded river banks, wooded floodplains. River floodplains, woods and edges of woods.	Y ☒ UTM:
ALO, TPO	Muehlenberg's astomum moss (<i>Astomum muehlenbergianum</i>) - S2 Bloom Time - Spring	Thin soil over level outcrop ledges and on soil under grasses in open prairie	Y ☒ UTM:
FOM1, FOM2, CUP3	Autumn Coral-root (<i>Corallorhiza odontorhiza</i>) - S2 <i>Bloom Time - summer to fall</i>	Oak-pine woods or occasionally in open, red pine or white pine plantations. Dry, sandy woods.	Y ☒ UTM
FOC, FOM, FOD	Burning Bush (<i>Euonymus atropurpureus</i>) - S3 Bloom <i>Time- April - June</i>	Species occurs in dry to moist deciduous thickets and woods.	Y ☒ UTM
SWC1, SWC3, SWC4, SWM1, SWM2, SWM4, SWM5, SWM6	Chinese Hemlock Parsley (<i>Conioselinum chinense</i>) - S2 <i>Bloom Time - summer to fall</i>	Swampy places with deciduous trees, white cedars, tamarack; springy river banks, wet borders of streams and rivers. Also found among calcareous seepage slopes.	Y ☒ UTM:
SWC, SWM, SWD, SWT, MAM, MAS	Crowned Beggarticks (<i>Bidens trichosperma</i>) -S2 <i>Bloom Time - late summer</i>	Found in openings in swamps, marshes, along shores & wet fields within the Carolinian zone and southeastern Georgian bay. Bogs, fens, tamarack swamps.	Y ☒ UTM:
ALT1, FOD7	Eastern Green-violet (<i>Hybanthus concolor</i>) - S2 Bloom <i>Time - mid March to August</i>	Occurs in rich, wet-mesic floodplain forests as well as mesic forests over limestone. Includes floodplains and river banks.	Y ☒ UTM:
TPS, TPW, FOM1, FOM2	Fogg's Goosefoot (<i>Chenopodium foggii</i>) -S2	Species occurs in sandy areas on limestone under oak or pine-oak forests	Y ☒ UTM:
TPO2, TPS2, TPW2,	Giant Ironweed (<i>Vernonia gigantea</i>) -S1? Bloom Time-	Found in mesic prairies, thickets, moist woods, roadsides and grassy meadows	Y ☒ UTM: