

# 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	June - August Green Dragon ( <i>Arisaema dracontium</i> ) - S3/S3 Bloom Time - May and June	Species found in damp deciduous forest and along river streams. Particularly Maple forest and forest dominated by Red Ash and White Elm.	Y	N	N/O
TPO1, TPS1, TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	June-August Hairy Bedstraw ( <i>Galium pilosum</i> ) - S3 Bloom Time - June-August	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 Bloom Time - June to August	Inhabits swampy river flats and meadows, wet prairies, and wooded, rocky riverbanks and fens.	Y	N	UTM: N/O
FOD9, FOD7, SWM, SWD	Hairy Wood Mint ( <i>Blephilia hirsuta</i> ) - S1 Bloom Time - Summer	Woodlands, often rocky, especially rivers. Rich woods, swamp forests, floodplains.	Y	N	UTM: N/O
FOD6, FOD7, FOD8, FOD9	Harbinger-of-spring ( <i>Eriogonum bulbosum</i> ) - S3 Bloom Time - early to late April	Occurs in rich, moist deciduous woods, especially on floodplains.	Y	N	UTM: N/O
SAS1, SAM1, SAF1	Hill's Pond Weed ( <i>Potamogeton hillii</i> ) - S3/S2 Bloom Time - summer	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 Bloom Time - June to August	Species inhabits moist mixed woods.	Y	N	UTM:
MAM2, MAM3, MAS2, MAS3, SWD	Lizard's Tail ( <i>Saururus cernuus</i> ) - S3 Bloom Time - June - September	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/O
FOD6, FOD7, FOD9	Pawpaw ( <i>Asimina triloba</i> ) - S3 Bloom Time - March-May	Occurs in moist deciduous woods and stream banks.	Y	N	UTM: N/O
FOM6, FOD6, FOD7, FOD8, CUM1	Pilose Evening Primrose ( <i>Oenothera pilosella</i> ) - S2 Bloom Time - Late Spring - Early Summer	Moist edges of woods and open, disturbed ground.	Y	N	UTM: N/O
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	Prostrate Tick-trefoil ( <i>Desmodium rotundifolium</i> ) - S2 Bloom Time - July-September	Dry, sandy or rocky woods	Y	N	UTM:
FOD7, SWD	Pumpkin Ash ( <i>Fraxinus profunda</i> ) - S2? Bloom Time - March - June	Swamps and floodplains	Y	N	UTM:
CUM1, ALO, FET1, SWC	Ram's-head Lady's-slipper ( <i>Cypripedium arietinum</i> ) - S3 Bloom Time - mid May to mid June	Found in cedar woodlands, limestone plains and wooded fens, moist coniferous swamps, dry-sandy woods, and limestone barrens.	Y	N	UTM:
FOD1, FOD2, FOD3, FOD4, FOD5, FOC1, FOM1, FOM5	Rattlesnake Hawkweed ( <i>Hieracium venosum</i> ) - S2 Bloom Time - April - September	Species inhabits open, dry sandy woods. Jack pine, oak, and aspen woodlands.	Y	N	UTM: N/O
FOD6, FOD7, FOD9	Round-leaved Groundsel ( <i>Packera obovata</i> ) - S3 Bloom Time - May - June	Found in moist woods	Y	N	UTM: N/O
CUM1, CUM1, CUS1	Round-leaved hawthorn ( <i>Crataegus lumarina</i> ) - S3?	Species occurs in old fields, poorly managed pastures, fencelines and roadsides	Y	N	UTM: N/O
FOD6, FOD7, FOD8, FOD9, SWT2, SWT3	Scarlet Beebalm ( <i>Monarda didyma</i> ) - S3 Bloom Time - May to October	Found in moist, rich woods, thicket swamps, banks and floodplains	Y	N	UTM: N/O
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	Y	N	UTM:
SOT1, FOD5, FOD8	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:
BLO1, BLS1, BLT1, TPO2, TPS2, TPW2, MAM2, FOD7	Stiff Gentian ( <i>Gentiana quinquefolia</i> ) - S2 Bloom Time - late summer to mid fall	Found in moist soils of streambanks, edges of woods, wet prairies, marshy meadows, bluffs and wooded hillsides.	Y	N	UTM: N/O
TPS1, TPW1, CUW1, RBO, SBO	Sundial Lupine ( <i>Lupinus perennis</i> ) - S3 Bloom Time - mid-March to mid-June	Inhabits dry, sandy oak savannahs, prairies, open barrens or clearings in woodlands of oak, jack pine, and/or aspen.	Y	N	UTM:

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ELC	Species	Habitat Description	Habitat Present Y/N, UTM; description of habitat if present
TPW1, TPW1, CUV3	Tail Blazing Star ( <i>Liatris aspera</i> ) - S3/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y N UTM: N/A
FE0, FES, FET, MAM3	Tuberous Indian Plantain ( <i>Aimoglossum plantagineum</i> ) - S3 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: N/A
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:
CUW1, 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: N/A
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 space 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 understorey; 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:
CUW1, 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, FOC4-3, TPW, TPS, CUW1, FOD	Tawny Emperor ( <i>Asterocampa clyton</i> ) - S3	Species inhabits densely wooded riparian areas, dry woods, open woods, fence-rows and parks. Usually occurs near Hackberry, the larval foodplant	Y N UTM: N/A
FOD	West Virginia White ( <i>Pieris virginiana</i> ) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y N UTM: N/A

# Wetland Data Collection Sheet



Study area: <i>Co. Shen</i> Date (yyyy-mm-dd): <i>2012-07-03</i> Field Staff: <i>Tom Shoracy Sam Gildner</i>	Map No: <i>738GSH 2588/2587/2441</i> Time Started: <i>1:00 P.M.</i> Time Finished: <i>3:15 P.M.</i>
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**Presence of Groundwater**      No  Yes

bank seepage       iron staining       groundwater indicator

**Site Type**

Lacustrine  (associated with lakes)      Isolated

Riverine  (associated with rivers)

Palustrine  absent or intermittent inflow and either intermittent or permanent outflow

what are the water inputs and outputs? *input - stream during high water*  
*output - stream*

**Soils**      refer to ELC card for soils information

**% open Water**

Type 1 - <5%  *No surface water at this point in time*      Type 5 - 26-75%  (water occurring in a small pattern)

Type 2 - 5-25%  (water occurring in one central location)      Type 6 - 76-95%  (occurring in a central location, vegetation is peripherial)

Type 3 - 5-25%  (water occurring in ponds of various sizes)      Type 7 - 76-95%  (vegetation occurs in patches or diffuse, open stands)

Type 4 - 26-75%  (water occurring in a central location)      Type 8 - >95%  (water occupies over 95% of the area)

**Community Descriptions**

**Vegetation forms**

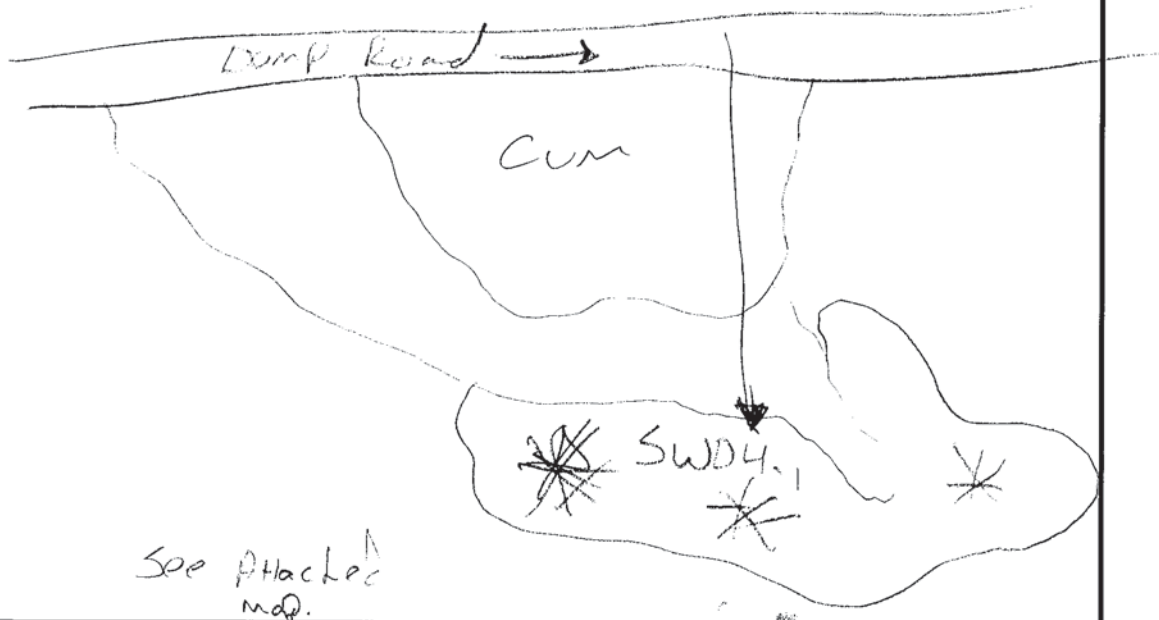
h (deciduous trees)	ne (narrow leaved emergents)	ts (tall shrubs 1-6m)	f (aquatic with floating leaf)
c (coniferous trees)	be (broad leaved emergents)	ls (low shrubs up to 1m)	ff (free floating)
dh (dead deciduous trees)	gc (ground cover)	ds (dead shrubs)	su (all under water)
dc (dead coniferous trees)	m (mosses)	re (robust emergents)	u (unvegetated)

Map Code/ ELC Code	Community Description - list at least four dominant species for each form
<i>SWDL-1 P2</i>	<i>h → Salix</i> <i>ts → Corolla</i> <i>re → Phalaris</i> <i>gc → Impatiens</i>

# Wetland Data Collection Sheet


### Notes on Ecological Functions or features

should include notes on: furbearer, cranberries, wild rice, baitfish, bullfrogs, winter cover for wildlife, suitability for waterfowl breeding staging, moulting, evidence of recreational activities, disturbance, surrounding topography (flat, rolling, hilly, steep), and surrounding habitat diversity





- Legend**
- Transmission Line
  - Waterbodies
  - Watercourse
  - PSW
  - ABCA Regulation Limit
  - Properties
  - ELC
  - Valleylands
  - Disturbance Area (180m Buffer)

Basemap from Ontario Ministry of Natural Resources  
 Orthophotography 2010  
 Turbine Layout April 4, 2012

UTM Zone 17N, NAD 83  
 0 12,525 50 14,000  
 m

This drawing has been prepared for the use of AECOM's client and may not be used for any other purpose without the express written consent of AECOM and its client, as required by law. AECOM does not warrant the accuracy of the information for use by government reviewing agencies. AECOM accepts no liability for any errors or omissions in this drawing. No indication has been made without AECOM's express written consent.

ELC Survey  
**Goshen ELC Survey -  
 Transmission Line**  
 739\_GSH2914  
 April 2012  
 Project 60155032

**AECOM**  
 Figure 1







# ELC

Community Description and Classification

Map #: 739 GSH 2914 Polygon: 1  
 Surveyor(s): SG Date: July 5, 2012 Time start: 1:00pm finish: 3:30pm  
 UTMZ: UTMZ: UTMZ:

## Polygon Description

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

## 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	1-2	Sals. x sibe
2			
3	4-3	1-2	Fragaria = Crataegus sp
4	4-3	4	Phacelia

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

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

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

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

Ecote: mineral meadow marsh Code: MAM 2  
 Vegetation Type: Rock-Carry mineral meadow Code: MAM 2-2  
 Inclusion: Code:  
 Complex: Code:

## Community Profile Diagram/Comments

Notes:

## 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	PI/Auger #	Soils Description	Summary
Zone	17t		
Easting	0474870		
Northing	4799121		
Position	N3		
Aspect	W3		
Percent	21%		
Slope	15m		
Length	15		
Mottles	25		
Gley			
Water Table			
Carbonates			
Bedrock			
Depth from zero	40+	% CF	% CF
Texture	Silt	% CF	% CF
Depth from zero		% CF	% CF
Texture		% CF	% CF
Depth from zero		% CF	% CF
Texture		% CF	% CF
Depth from zero		% CF	% CF
Texture		% CF	% CF
% Surface Stone/Rock			
Moisture Regime	Very moist		
Drainage	PTE		

## Soil Horizon Description





Plant Species List  
2012

2: saddle thick  
Impat  
GA  
sol: lower 1/6  
0474715, 4799057

3. sm. 2012  
sm.  
BC/GA - R  
PA, low, Chokecherry, nightshade

Trees & Shrubs	1 2 3 4 5					Tree & Shrubs	1 2 3 4 5					Graminoids	1 2 3 4 5				
	Conifers						Deciduous						Grasses				
Balsam Fir ( <i>Abies balsamea</i> )						White Oak ( <i>Quercus alba</i> )						Giant Redtop ( <i>Agrostis gigantea</i> )					
Common Juniper ( <i>Juniperus communis</i> )						Bur Oak ( <i>Quercus macrocarpa</i> )						Redtop ( <i>Agrostis stolonifera</i> )					
Eastern Red Cedar ( <i>Juniperus virginiana</i> )						Red Oak ( <i>Quercus rubra</i> )						Awnless Brome ( <i>Bromus inermis</i> )					VR
Tamarack ( <i>Larix laricina</i> )						Alder Buckthorn ( <i>Rhamnus alnifolia</i> )						Bromus					
Norway Spruce ( <i>Picea abies</i> )						Common Buckthorn ( <i>Rhamnus cathartica</i> )					2	Blue-joint Grass ( <i>Calamagrostis canadensis</i> )					
White Spruce ( <i>Picea glauca</i> )						Smooth Sumac ( <i>Rhus glabra</i> )						Orchard Grass ( <i>Dactylis glomerata</i> )					
Black Spruce ( <i>Picea mariana</i> )						Staghorn Sumac ( <i>Rhus hirta</i> )						Poverty Oat Grass ( <i>Danthonia spicata</i> )					
Jack Pine ( <i>Pinus banksiana</i> )						Wild Black Currant ( <i>Ribes americanum</i> )						Quack Grass ( <i>Elymus repens</i> )					
Red Pine ( <i>Pinus resinosa</i> )						Prickly Gooseberry ( <i>Ribes cynosbati</i> )						Virginia Wild Rye ( <i>Elymus virginicus</i> )					
Eastern White Pine ( <i>Pinus strobus</i> )						Swamp Black Currant ( <i>Ribes lacustre</i> )						Elymus					
Scotch Pine ( <i>Pinus sylvestris</i> )						Red Currant ( <i>Ribes rubrum</i> )						Fowl Manna Grass ( <i>Glyceria striata</i> )					R
Canada Yew ( <i>Taxus canadensis</i> )						Ribes						Glyceria					
Eastern White Cedar ( <i>Thuja occidentalis</i> )						Black Locust ( <i>Robinia pseudo-acacia</i> )						Rice Cut Grass ( <i>Leersia oryzoides</i> )					
Eastern Hemlock ( <i>Tsuga canadensis</i> )						Prickly Rose ( <i>Rosa acicularis</i> )						Tall Fescue ( <i>Lolium arundinaceum</i> )					
						Smooth Rose ( <i>Rosa blanda</i> )						Muhlenbergia					
						Multiflora Rose ( <i>Rosa multiflora</i> )						Witch-grass ( <i>Panicum capillare</i> )					
						Rosa						Panicum					
Manitoba Maple ( <i>Acer negundo</i> )						Corn. Blackberry ( <i>Rubus allegheniensis</i> )						Reed Canary Grass ( <i>Phalaris arundinacea</i> )					DD
Black Maple ( <i>Acer nigrum</i> )						Wild Red Raspberry ( <i>Rubus idaeus</i> )					RV	Timothy ( <i>Phleum pratense</i> )					
Norway Maple ( <i>Acer platanoides</i> )						Black Raspberry ( <i>Rubus occidentalis</i> )						Common Reed ( <i>Phragmites australis</i> )					
Red Maple ( <i>Acer rubrum</i> )						Purple-fl. Raspberry ( <i>Rubus odoratus</i> )						Canada Blue Grass ( <i>Poa compressa</i> )					
Silver Maple ( <i>Acer saccharinum</i> )						Dwarf Raspberry ( <i>Rubus pubescens</i> )						Fowl Meadow Grass ( <i>Poa palustris</i> )					
Freeman's Maple ( <i>Acer X freemanii</i> )						Rubus						Kentucky Bluegrass ( <i>Poa pratensis</i> )					
Sugar Maple ( <i>Acer saccharum</i> )					D	Peach-leaved Willow ( <i>Salix amygdaloides</i> )						Yellow Foxtail ( <i>Setaria pumila</i> )					
Mountain Maple ( <i>Acer spicatum</i> )						Bebb's Willow ( <i>Salix bebbiana</i> )						Green Foxtail ( <i>Setaria viridis</i> )					
Speckled Alder ( <i>Alnus incana</i> )						Pussy Willow ( <i>Salix discolor</i> )											
Downy Serviceberry ( <i>Amelanchier arborea</i> )						Missouri Willow ( <i>Salix eriocephala</i> )											
Serviceberry ( <i>Amelanchier sanguinea</i> )						Sandbar Willow ( <i>Salix exigua</i> )											
Yellow Birch ( <i>Betula alleghaniensis</i> )					R	Shining Willow ( <i>Salix lucida</i> )											
White Birch ( <i>Betula papyrifera</i> )						Black Willow ( <i>Salix nigra</i> )											
European Birch ( <i>Betula pendula</i> )						Slender Willow ( <i>Salix petiolaris</i> )											
Blue Beech ( <i>Carpinus caroliniana</i> )						Salix											
Bitternut hickory ( <i>Carya cordiformis</i> )						Hybrid Crack Willow ( <i>Salix X rubens</i> )					RR						
Shagbark Hickory ( <i>Carya ovata</i> )						Black-berried Elder ( <i>Sambucus nigra</i> )											
Climbing Bittersweet ( <i>Celastrus scandens</i> )						Red-berried Elder ( <i>Sambucus racemosa</i> )											
Common Hackberry ( <i>Celtis occidentalis</i> )						Buffaloberry ( <i>Shepherdia canadensis</i> )											
Buttonbush ( <i>Cephalanthus occidentalis</i> )						Eur. Mountain Ash ( <i>Sorbus aucuparia</i> )											
Ait.-leaved Dogwood ( <i>Cornus alternifolia</i> )						Narrow Meadow-sweet ( <i>Spiraea alba</i> )											
Silky Dogwood ( <i>Cornus amomum</i> )						Common Lilac ( <i>Syringa vulgaris</i> )											
Bunchberry ( <i>Cornus canadensis</i> )						Poison-ivy ( <i>Toxicodendron rydbergii</i> )											
Gray dogwood ( <i>Cornus racemosa</i> )					RR	Climbing Poison-ivy ( <i>Toxicodendron radicans</i> )											
Round-leaved Dogwood ( <i>Cornus rugosa</i> )						White Elm ( <i>Ulmus americana</i> )					R U						
Red-osier Dogwood ( <i>Cornus sericea</i> )					RR	Siberian Elm ( <i>Ulmus pumila</i> )											
American Hazel ( <i>Corylus americana</i> )						Slippery Elm ( <i>Ulmus rubra</i> )											
Beaked Hazel ( <i>Corylus cornuta</i> )						Low Blueberry ( <i>Vaccinium angustifolium</i> )											
Cockspur Thorn ( <i>Crataegus crus-galli</i> )						Maple-leaf Viburnum ( <i>Viburnum acerifolium</i> )					R						
English Hawthorn ( <i>Crataegus monogyna</i> )						Hobblebush ( <i>Viburnum lantanoides</i> )											
Large-fruited Thorn ( <i>Crataegus punctata</i> )						Nannyberry ( <i>Viburnum lentago</i> )											
Crataegus sp.						Guelder-Rose ( <i>Viburnum opulus</i> )											
Crataegus						Downy Arrow-wood ( <i>Vib. rafinesquianum</i> )											
Bush Honeysuckle ( <i>Diervilla lonicera</i> )						Riverbank Grape ( <i>Vitis riparia</i> )					RV						
Russian Olive ( <i>Elaeagnus angustifolia</i> )						Am. Prickly-ash ( <i>Zanthoxylum americanum</i> )					R						
Autumn Olive ( <i>Elaeagnus umbellata</i> )						<del>Ulmus americana</del>											
Run. Strawberry-bush ( <i>Euonymus obovata</i> )																	
American Beech ( <i>Fagus grandifolia</i> )					R												
Glossy Buckthorn ( <i>Frangula alnus</i> )																	
White Ash ( <i>Fraxinus americana</i> )					F												
Black Ash ( <i>Fraxinus nigra</i> )																	
Green Ash ( <i>Fraxinus pennsylvanica</i> )					RV												
Witch-hazel ( <i>Hamamelis virginiana</i> )																	
Winterberry ( <i>Ilex verticillata</i> )																	
Butternut ( <i>Juglans cinerea</i> )																	
Black Walnut ( <i>Juglans nigra</i> )					R												
Common Privet ( <i>Ligustrum vulgare</i> )																	
Spicebush ( <i>Lindera benzoin</i> )																	
Fly Honeysuckle ( <i>Lonicera canadensis</i> )																	
Glaucous Honeysuckle ( <i>Lonicera dioica</i> )																	
Morrow's Honeysuckle ( <i>Lonicera morrowii</i> )																	
Tartarian Honeysuckle ( <i>Lonicera tatarica</i> )																	
Common Apple ( <i>Malus pumila</i> )																	
White Mulberry ( <i>Morus alba</i> )																	
Sweet Gale ( <i>Myrica gale</i> )																	
Ironwood ( <i>Ostrya virginiana</i> )					U												
Thicket-creeper ( <i>Parthenocissus inserta</i> )																	
Ninebark ( <i>Physocarpus opulifolius</i> )																	
Balsam Poplar ( <i>Populus balsamifera</i> )																	
Eastern Cottonwood ( <i>Populus deltoides</i> )					RR												
Large-tooth Aspen ( <i>Populus grandidentata</i> )																	
Trembling Aspen ( <i>Populus tremuloides</i> )					R												
Sweet Cherry ( <i>Prunus avium</i> )																	
Pin Cherry ( <i>Prunus pensylvanica</i> )																	
Black Cherry ( <i>Prunus serotina</i> )																	
Choke Cherry ( <i>Prunus virginiana</i> )					F												
Prunus																	
D - Dominant: represented by large numbers; generally forming >10% ground cover or >25% vegetation cover in any one stratum																	
F - Fairly common (=Abundant in ELC): generally widespread represented by fairly large numbers of individual clumps; usually forming >10% ground cover																	
U - Uncommon (=Occasional in ELC): present as widespread scattered individuals or represented by one or more clumps of many individuals (most species will fall into this category)																	
R - Rare: represented in the polygon by less than about five individuals or small clumps																	
Map Number:																	
Date:																	
Surveyors:																	

Map Number: 738 654 2914  
Date: July 5, 2012  
Surveyors: SG

MAIN 2  
SWT 2-2  
FOD 5-8







Plant Species List  
2012

Dicot Herbs - Asteraceae					Dicot Herbs					Dicot Herbs				
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Common Yarrow ( <i>Achillea millefolium</i> )					Shepherd's Purse ( <i>Capsella bursa-pastoris</i> )					Kidney-leaf Buttercup ( <i>Ranunculus abortivus</i> )				
White Snakeroot ( <i>Ageratina altissima</i> )					Cutleaf Toothwort ( <i>Cardamine concatenata</i> )					Tall Buttercup ( <i>Ranunculus acris</i> )				
Com. Ragweed ( <i>Ambrosia artemisiifolia</i> )					Toothwort ( <i>Cardamine diphylla</i> )					Hooked Buttercup ( <i>Ranunculus recurvatus</i> )				
Giant Ragweed ( <i>Ambrosia trifida</i> )					Penn. Bitter-cress ( <i>Cardamine pensylvanica</i> )					<i>Ranunculus</i>				
Field Pussytoes ( <i>Antennaria neglecta</i> )					<i>Cardamine</i>					Sheep Sorrel ( <i>Rumex acetosella</i> )				
<i>Artemisia</i>					Blue Cohosh ( <i>Caulophyllum thalictroides</i> )					Curly-leaf Dock ( <i>Rumex crispus</i> )				
Common Burdock ( <i>Arctium minus</i> )	R				Mouse-ear Chickweed ( <i>Cerastium fontanum</i> )					Bitter Dock ( <i>Rumex obtusifolius</i> )				
Nodding Beggar-ticks ( <i>Bidens cernua</i> )					Turtlehead ( <i>Chelone glabra</i> )					Bloodroot ( <i>Sanguinaria canadense</i> )				
Devil's Beggar-ticks ( <i>Bidens frondosa</i> )					Spotted Water-hemlock ( <i>Cicuta maculata</i> )					Black Snakeroot ( <i>Sanicula marilandica</i> )				
Spotted Knapweed ( <i>Centaurea biebersteinii</i> )					Water-hemlock ( <i>Cicuta virosa</i> )					Bouncing Bet ( <i>Saponaria officinalis</i> )				
Brown Knapweed ( <i>Centaurea jacea</i> )					Enchanter's Nightshade ( <i>Circaea lutetiana</i> )			C		Marsh Skullcap ( <i>Scutellaria galericulata</i> )				
Chicory ( <i>Cichorium intybus</i> )					Carolina Spring Beauty ( <i>Claytonia caroliniana</i> )					Mad Dog Skullcap ( <i>Scutellaria lateriflora</i> )				
Canada Thistle ( <i>Cirsium arvense</i> )					Virginia Spring Beauty ( <i>Claytonia virginica</i> )					White Campion ( <i>Silene latifolia</i> )				
Bull Thistle ( <i>Cirsium vulgare</i> )					Virgin's-bower ( <i>Clematis virginiana</i> )					Bladder Campion ( <i>Silene vulgaris</i> )				
Horseweed ( <i>Conyza canadensis</i> )					Field Bindweed ( <i>Convolvulus arvensis</i> )					Hemlock Water-parsnip ( <i>Slum suave</i> )				
Daisy Fleabane ( <i>Erigeron annuus</i> )					Dog-strangling Vine ( <i>Cynanchum rossicum</i> )					Bitter Nightshade ( <i>Solanum dulcamara</i> )				
Philadelphia Fleabane ( <i>Erig. philadelphicus</i> )					Wild Carrot ( <i>Daucus carota</i> )					Black Nightshade ( <i>Solanum pycnanthum</i> )				
<i>Erigeron</i>					Deptford Pink ( <i>Dianthus armeria</i> )					Grassleaf Stitchwort ( <i>Stellaria graminea</i> )				
Joe-pye-weed ( <i>Eupatorium maculatum</i> )	U				Squirrel-corn ( <i>Dicentra canadensis</i> )					Common Chickweed ( <i>Stellaria media</i> )				
Boneset ( <i>Eupatorium perfoliatum</i> )		K			Dutchman's-breeches ( <i>Dicentra cucullaria</i> )					Early Meadow-rue ( <i>Thalictrum dioicum</i> )				
Large-leaved Aster ( <i>Eurybia macrophylla</i> )					Wild Teasel ( <i>Dipsacus fullonum</i> )					Tall Meadow-rue ( <i>Thalictrum pubescens</i> )				
Flat-top Goldenrod ( <i>Euthamia graminifolia</i> )					Wild Cucumber ( <i>Echinocystis lobata</i> )			R		Field Penny-cress ( <i>Thlaspi arvense</i> )				
Orange Hawkweed ( <i>Hieracium aurantiacum</i> )					Viper's Bugloss ( <i>Echium vulgare</i> )					Foamflower ( <i>Tiarella cordifolia</i> )				
Field Hawkweed ( <i>Hieracium caespitosum</i> )					Northern Willow-herb ( <i>Epilobium ciliatum</i> )					Star-flower ( <i>Trientalis borealis</i> )				
<i>Hieracium</i>					Hairy Willow-herb ( <i>Epilobium hirsutum</i> )					Red Clover ( <i>Trifolium pratense</i> )				
Elecampane ( <i>Inula helenium</i> )					Small-fl. Willow-herb ( <i>Epilobium perfolium</i> )					White Clover ( <i>Trifolium repens</i> )				
Prickly Lettuce ( <i>Lactuca scariola</i> )					<i>Epilobium</i>					<i>Trifolium</i>				
<i>Lactuca</i>					Worm Mustard ( <i>Erysimum cheiranthoides</i> )					Stinging Nettle ( <i>Urtica dioica</i> )			R	R
Ox-eye Daisy ( <i>Leucanthemum vulgare</i> )					<i>Euphorbia</i>					Greater Bladderwort ( <i>Utricularia vulgaris</i> )				
Pineapple-weed ( <i>Matricaria discolor</i> )					Hemp Nettle ( <i>Galeopsis tetrahit</i> )					Common Mullein ( <i>Verbascum thapsus</i> )			R	
Tall White Lettuce ( <i>Prenanthes altissima</i> )	V				Wild Madder ( <i>Galium mollugo</i> )			R		Blue Vervain ( <i>Verbena hastata</i> )				
Black-eyed Susan ( <i>Rudbeckia hirta</i> )					Marsh Bedstraw ( <i>Galium palustre</i> )					White Vervain ( <i>Verbena urticifolia</i> )				
Tall Goldenrod ( <i>Solidago altissima</i> )					Sweet-scented Bedstraw ( <i>Galium triflorum</i> )					Water Speedwell ( <i>Veron. anagallis-aquatica</i> )				
Blue-stem Goldenrod ( <i>Solidago caesia</i> )					<i>Galium</i>					Common Speedwell ( <i>Veronica officinalis</i> )				
Canada Goldenrod ( <i>Solidago canadensis</i> )					Spotted Geranium ( <i>Geranium maculatum</i> )				V	<i>Veronica</i>				
Zig-zag Goldenrod ( <i>Solidago flexicaulis</i> )					Herb-robert ( <i>Geranium robertianum</i> )				R	Cow Vetch ( <i>Vicia cracca</i> )				
Giant Goldenrod ( <i>Solidago gigantea</i> )					Yellow Avens ( <i>Geum alepiticum</i> )					<i>Vicia</i>				
Early Goldenrod ( <i>Solidago juncea</i> )					White Avens ( <i>Geum canadense</i> )				V	Periwinkle ( <i>Vinca minor</i> )				
Gray Goldenrod ( <i>Solidago nemoralis</i> )					Urban Avens ( <i>Geum urbanum</i> )					Dog Violet ( <i>Viola conspersa</i> )				
<i>Solidago</i>					Dame's Rocket ( <i>Hesperis matronalis</i> )			R		Yellow Violet ( <i>Viola pubescens</i> )				
Field Sow-thistle ( <i>Sonchus arvensis</i> )					Virg. Water-leaf ( <i>Hydrophyllum virginianum</i> )					Com. Blue Violet ( <i>Viola sororia</i> )				
<i>Sonchus</i>					Com. St. John's-wort ( <i>Hypericum perforatum</i> )					<i>Viola</i>				
Heart-leaf Aster ( <i>Symph. cordifolium</i> )					Spotted Jewelweed ( <i>Impatiens capensis</i> )					Tufts cap lily			R	
Heath Aster ( <i>Symphytichum ericoides</i> )					Wood Nettle ( <i>Laportea canadensis</i> )			R	R					
Tall White Aster ( <i>Symph. lanceolatum</i> )					Motherwort ( <i>Leonurus cardiaca</i> )									
Calico Aster ( <i>Symphytichum lateriflorum</i> )					Field Peppergrass ( <i>Lepidium campestre</i> )									
New England Aster ( <i>Symph. novae-angliae</i> )					Eur. Gromwell ( <i>Lithospermum officinale</i> )									
Purple-stem Aster ( <i>Symph. puniceus</i> )					Butter & Eggs ( <i>Linaria vulgaris</i> )									
Common Tansy ( <i>Tanacetum vulgare</i> )					Great Lobelia ( <i>Lobelia siphilitica</i> )									
Common Dandelion ( <i>Taraxacum officinale</i> )					<i>Lobelia</i>									
Com. Goatsbeard ( <i>Tragopogon pratensis</i> )					Cut-leaf Bugleweed ( <i>Lycopus americanus</i> )					Water-plantain ( <i>Alisma plantago-aquatica</i> )				
Coltsfoot ( <i>Tussilago farfara</i> )					Northern Bugleweed ( <i>Lycopus uniflorus</i> )					Wild Leek ( <i>Allium tricoccum</i> )				
					Fringed Loosetrife ( <i>Lysimachia ciliata</i> )					Jack-in-the-pulpit ( <i>Arisaema triphyllum</i> )			U	
					Moneywort ( <i>Lysimachia nummularia</i> )					Asparagus ( <i>Asparagus officinalis</i> )				
					<i>Lysimachia</i>					Wild Calla ( <i>Calla palustris</i> )				
					Purple Loosetrife ( <i>Lythrum salicaria</i> )					Bluebead-lily ( <i>Clintonia borealis</i> )				
					Black Medick ( <i>Medicago lupulina</i> )					Garden Lily-of-valley ( <i>Convallaria majalis</i> )				
					Alfalfa ( <i>Medicago sativa</i> )					Yel. Lady's Slipper ( <i>Cypripedium parviflora</i> )				
					White Sweet-clover ( <i>Melilotus alba</i> )					Canada Waterweed ( <i>Elodea canadensis</i> )				
					Yellow Sweet-clover ( <i>Melilotus officinalis</i> )					Helleborine ( <i>Epipactis helleborine</i> )				
					Wild Mint ( <i>Mentha arvensis</i> )					Yellow Trout Lily ( <i>Erythronium americanum</i> )				
					Wild Bergamot ( <i>Monarda fistulosa</i> )					Blue-flag Iris ( <i>Iris versicolor</i> )				
					Small Forget-me-not ( <i>Myosotis laxa</i> )					Orange Day Lily ( <i>Hemerocallis fulva</i> )				
					Forget-me-not ( <i>Myosotis scorpioides</i> )					Lesser Duckweed ( <i>Lemna minor</i> )				
					Water-cress ( <i>Nasturtium officinale</i> )					Starry Duckweed ( <i>Lemna trisulca</i> )				
					Com. Evening-primrose ( <i>Oenothera biennis</i> )					Wild Lily-of-valley ( <i>Maianthemum canadense</i> )				
					Sweet-cicely ( <i>Osmorhiza berterii</i> )					False Solomon Seal ( <i>Maianthemum racemosum</i> )				
					Yellow Wood-sorrel ( <i>Oxalis stricta</i> )					Star False Solomon ( <i>Maianthemum stellatum</i> )				
					Wild Parsnip ( <i>Pastinaca sativa</i> )					True Solomon Seal ( <i>Polygonatum pubescens</i> )				
					English Plantain ( <i>Plantago lanceolata</i> )					Pickeral-weed ( <i>Pontederia cordata</i> )				
					Common Plantain ( <i>Plantago major</i> )					Curly-leaf Pondweed ( <i>Potamogeton crispus</i> )				
					Rugel's Plantain ( <i>Plantago rugelii</i> )					Sago Pondweed ( <i>Potamogeton pectinatus</i> )				
					May-apple ( <i>Podophyllum peltatum</i> )					<i>Potamogeton</i>				
					Pale Smartweed ( <i>Polygonum lapathifolium</i> )					<i>Potamogeton</i>				
					Lady's-thumb ( <i>Polygonum persicaria</i> )					Broad-leaved Arrowhead ( <i>Sagittaria latifolia</i> )				
					Virginia Knotweed ( <i>Polygonum virginianum</i> )					Blue-eyed-grass ( <i>Systirinchium montanum</i> )				
					<i>Polygonum</i>					Herb. Carrion Flower ( <i>Smilax herbacea</i> )				
					<i>Polygonum</i>					Bristly Greenbrier ( <i>Smilax hispida</i> )				
					Rough Cinquefoil ( <i>Potentilla norvegica</i> )					Nodding Ladies' Tresses ( <i>Spiranthes cernua</i> )				
					Rough-fruited Cinquefoil ( <i>Potentilla recta</i> )					Rose Twisted-stalk ( <i>Streptopus lanceolatus</i> )				
					Common Cinquefoil ( <i>Potentilla simplex</i> )					Skunk-cabbage ( <i>Symplocarpus foetidus</i> )				
					<i>Potentilla</i>					Purple Trillium ( <i>Trillium erectum</i> )				
					Heal-all ( <i>Prunella vulgaris</i> )					White Trillium ( <i>Trillium grandiflorum</i> )				
					Shinleaf ( <i>Pyrola elliptica</i> )					Large-flowered Bellwort ( <i>Uvularia grandiflora</i> )				

D - Dominant: represented by large numbers, generally forming >10% ground cover or >25% vegetation cover in any one stratum  
 F - Fairly common (=Abundant in ELC): generally widespread represented by fairly large numbers of individual clumps; usually forming >10% ground cover  
 U - Uncommon (=Occasional in ELC): present as widespread scattered individuals or represented by one or more clumps of many individuals (most species will fall into this category)  
 R - Rare: represented in the polygon by less than about five individuals or small clumps

Map Number: 1 4  
 Date: 2 5  
 Surveyors: 3



# 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

# Significant Wildlife Habitat Form

AECOM

Study Area:	BLW	JER	<u>GSH</u>	Map #:	<u>739 GSH 2914</u>
Date:	<u>July 5, 2012</u>			Time Started:	<u>1:00 pm</u>
Field Staff:	<u>SG</u>			Time Finished:	<u>3:30 pm</u>
Weather Conditions:	<u>31°C, 95% clouds, light breeze</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): \_\_\_\_\_





# Species of Conservation Concern Habitat and Incidental Wildlife – Goshen



ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
CUM1, (MAM1)	June - August		
FOD6, FOD7, FOD9	Green Dragon ( <i>Arisaema dracontium</i> ) - SC/S3 Bloom Time - May and June	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 Bloom Time - June-August	Occurs in dry, sandy woods and thickets, occasionally in dry sandy fields	Y (N) UTM:
FE01, FET1, FET1, SWC, SWM, SWD, SWT, TPO, TPS, TPW	Hairy Valerian ( <i>Valeriana edulis</i> ) - S1 Bloom Time - June to August	Inhabits swampy river flats and meadows, wet prairies, and wooded, rocky riverbanks and fens.	Y (N) UTM:
FOD6, FOD7, SWM, SWD	Hairy Wood Mint ( <i>Blepharita hirsuta</i> ) - S1 Bloom Time - Summer	Woodlands, often rocky, especially rivers, Rich woods, swamp forests, floodplains.	Y (N) UTM:
FOD6, FOD7, FOD8, FOD9	Harbinger-of-spring ( <i>Engenia bulbosa</i> ) - S3 Bloom Time - early to late April	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 Bloom Time - summer	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 Bloom Time - June to August	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 Bloom Time - June - September	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/o.
FOD6, FOD7, FOD9	Pawpaw ( <i>Asimina triloba</i> ) - S3 Bloom Time - March-May	Occurs in moist deciduous woods and stream banks	Y (N) UTM:
FOM8, FOD6, FOD7, FOD9, CUM1	Pilose Evening Primrose ( <i>Oenothera pilosella</i> ) - S2 Bloom Time - Late Spring - Early Summer	Moist edges of woods and open, disturbed ground.	Y (N) UTM:
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	Prostate Tick-trefoil ( <i>Desmodium rotundifolium</i> ) - S2 Bloom Time - July-September	Dry, sandy or rocky woods	Y (N) UTM:
FOD7, SWD	Pumpkin Ash ( <i>Fraxinus profunda</i> ) - S2? Bloom Time - March - June	Swamps and floodplains	Y (N) UTM:
CUW1, ALO, FET1, SWC	Ram's-head Lady's-slipper ( <i>Cypripedium arietinum</i> ) - S3 Bloom Time - mid May to mid June	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 Bloom Time - April - September	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 Bloom Time - May - June	Found in moist woods	Y (N) UTM:
CUM1, CUT1, CUS1	Round-leaved hawthorn ( <i>Crataegus lumarina</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 Bloom Time - May to October	Found in moist, rich woods, thicket swamps, banks and floodplains.	Y (N) UTM: n/o.
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:
SOT1, FOD8, 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/o.
BL01, BL1, BLT1, TPO2, TPS2, TPW2, MAM2, FOD7	Stiff Gentian ( <i>Gentiana quinquefolia</i> ) - S2 Bloom Time - late summer to mid fall	Found in moist soils of streambanks, edges of woods, wet prairies, marshy meadows, bluffs and wooded hillsides.	Y (N) UTM: n/o.
TPS1, TPW1, CUW1, RBO, SBO	Sundial Lupine ( <i>Lupinus perennis</i> ) - S3 Bloom Time - mid-March to mid-June	Inhabits dry, sandy oak savannahs, prairies, open barrens or clearings in woodlands of oak, jack pine, and/or aspen.	Y (N) UTM:

# Species of Conservation Concern Habitat and Incidental Wildlife – Goshen



ELC	Species	Habitat Description	Habitat Present (Y/N); UTM; description of habitat if present)
TP01, TPW1, CUM1	Tail Blazing Star ( <i>Liatrix aspera</i> ) - S2/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; n/a.
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
<b>BIRDS</b>			
-	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; not venture
FOD, CUW, CUT	Red-headed Woodpecker ( <i>Melanerpes erythrocephalus</i> ) - SC	Species inhabits open woodland/edges (oak savannahs and riparian forests), 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; n/a.
-	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; n/a.
<b>REPTILES</b>			
-	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.
<b>INSECTS</b>			
OAC, 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, CUM4	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
FOD3	West Virginia White ( <i>Pieris virginiana</i> ) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y (N) UTM; n/a.

- Legend**
- Transmission Line
  - Waterbodies
  - Watercourse
  - PSW
  - ABCA Regulation Limit
  - Properties
  - ELC
  - Valleylands
  - Disturbance Area (180m Buffer)

Done May 3, 2012  
SG/RA

Basemapping from Ontario Ministry of Natural Resources  
Orthorectified 2010  
Datum: NAD83  
UTM Zone: 17N  
MAD: 83



0 12.5 25 50  
m  
1:1,500

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ELC Survey

**Goshen ELC Survey -  
Transmission Line  
739\_GSH2914**

April 2012  
Project 80150032

**AECOM**

Figure 1





**ELC** Community Description and Classification

Map #: 739-GSH 2914 Polygon: 1

Surveyor(s): Date: May 3, 2012 Time start: 10:15 am finish: 11:15 am

UTMZ: UTMN:

**Polygon Description**

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

**Stand Description**

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp)
1	6	1	>> Much Greater Than; > Greater Than; = About Equal To
2	1	1	Stipa sp. X. spens
3	4	1	Lotus sp. X. spens
4	7	4	Phacelia

HT Codes: 7 <0.2m 6 >0.2-0.5m 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:
	<10	<10	<10
	10-24	10-24	10-24
	25-50	25-50	25-50
	>50	>50	>50

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

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

Ecosite: Mineral meadow marsh Code: MAMZ  
 Vegetation Type: Reed-Carex grass mineral meadow marsh Code: MAMZ-2  
 Inclusion: Code:  
 Complex: Code:

**Community Profile Diagram/Comments**

Community Profile Diagram/Comments

Notes:

**Tree Tally by Species**

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Prism Factor
Total						2
Basal Area (BA)						
Dead						

**Soils Ontario and ELC Soils Description**

Pit/Auger #	Zone	Summary
17F	Easting 0474900	Moisture Regime
	Northing 4779900	Drainage
	Position <del>Field</del> Valley	Effective Texture (indicate below)
	Aspect	% CF
	Percent	% CF
	Slope	% CF
	Length	% CF
	Mottles	% CF
	Gley	% CF
	Water Table	% CF
	Carbonates	% CF
	Bedrock	% CF
	Depth from zero	% CF
	Texture	% CF
	Depth from zero	% CF
	Texture	% CF
	Depth from zero	% CF
	Texture	% CF
	Depth from zero	% CF
	Texture	% CF
	% Surface Stone/Rock	% CF
	Moisture Regime	% CF
	Drainage	% CF

Plant Species List  
2012

Trees & Shrubs					Tree & Shrubs					Graminoids				
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
<b>Conifers</b>					<b>Deciduous</b>					<b>Grasses</b>				
Balsam Fir ( <i>Abies balsamea</i> )					White Oak ( <i>Quercus alba</i> )					Giant Redtop ( <i>Agrostis gigantea</i> )				
Common Juniper ( <i>Juniperus communis</i> )					Bur Oak ( <i>Quercus macrocarpa</i> )					Redtop ( <i>Agrostis stolonifera</i> )				
Eastern Red Cedar ( <i>Juniperus virginiana</i> )					Red Oak ( <i>Quercus rubra</i> )					Awnless Brome ( <i>Bromus inermis</i> )				
Tamarack ( <i>Larix laricina</i> )					Alder Buckthorn ( <i>Rhamnus alnifolia</i> )					<i>Bromus</i>				
Norway Spruce ( <i>Picea abies</i> )					Common Buckthorn ( <i>Rhamnus cathartica</i> )					Blue-joint Grass ( <i>Calamagrostis canadensis</i> )				
White Spruce ( <i>Picea glauca</i> )					Smooth Sumac ( <i>Rhus glabra</i> )					Orchard Grass ( <i>Dactylis glomerata</i> )				
Black Spruce ( <i>Picea mariana</i> )					Staghorn Sumac ( <i>Rhus hirta</i> )					Poverty Oat Grass ( <i>Danthonia spicata</i> )				
Jack Pine ( <i>Pinus banksiana</i> )					Wild Black Currant ( <i>Ribes americanum</i> )					Quack Grass ( <i>Elymus repens</i> )				
Red Pine ( <i>Pinus resinosa</i> )					Prickly Gooseberry ( <i>Ribes cynosbati</i> )					Virginia Wild Rye ( <i>Elymus virginicus</i> )				
Eastern White Pine ( <i>Pinus strobus</i> )					Swamp Black Currant ( <i>Ribes lacustre</i> )					<i>Elymus</i>				
Scotch Pine ( <i>Pinus sylvestris</i> )					Red Currant ( <i>Ribes rubrum</i> )									
Canada Yew ( <i>Taxus canadensis</i> )					<i>Ribes</i>					Fowl Manna Grass ( <i>Glyceria striata</i> )				
Eastern White Cedar ( <i>Thuja occidentalis</i> )					Black Locust ( <i>Robinia pseudo-acacia</i> )					<i>Glyceria</i>				
Eastern Hemlock ( <i>Tsuga canadensis</i> )					Prickly Rose ( <i>Rosa acicularis</i> )					Rice Cut Grass ( <i>Leersia oryzoides</i> )				
					Smooth Rose ( <i>Rosa blanda</i> )					Tall Fescue ( <i>Lolium arundinaceum</i> )				
					Multiflora Rose ( <i>Rosa multiflora</i> )					<i>Muhlenbergia</i>				
					<i>Rosa</i>					Witch-grass ( <i>Panicum capillare</i> )				
					Com. Blackberry ( <i>Rubus allegheniensis</i> )					<i>Panicum</i>				
<b>Deciduous</b>					Wild Red Raspberry ( <i>Rubus idaeus</i> )					Reed Canary Grass ( <i>Phalaris arundinacea</i> )				
Manitoba Maple ( <i>Acer negundo</i> )					Black Raspberry ( <i>Rubus occidentalis</i> )					Timothy ( <i>Phleum pratense</i> )				
Black Maple ( <i>Acer nigrum</i> )					Purple-fl. Raspberry ( <i>Rubus odoratus</i> )					Common Reed ( <i>Phragmites australis</i> )				
Norway Maple ( <i>Acer platanoides</i> )					Dwarf Raspberry ( <i>Rubus pubescens</i> )					Canada Blue Grass ( <i>Poa compressa</i> )				
Red Maple ( <i>Acer rubrum</i> )					<i>Rubus</i>					Fowl Meadow Grass ( <i>Poa palustris</i> )				
Silver Maple ( <i>Acer saccharinum</i> )					Peach-leaved Willow ( <i>Salix amygdaloides</i> )					Kentucky Bluegrass ( <i>Poa pratensis</i> )				
Freeman's Maple ( <i>Acer X freemanii</i> )					Bebb's Willow ( <i>Salix bebbiana</i> )					Yellow Foxtail ( <i>Setaria pumila</i> )				
Sugar Maple ( <i>Acer saccharum</i> )					Pussy Willow ( <i>Salix discolor</i> )					Green Foxtail ( <i>Setaria viridis</i> )				
Mountain Maple ( <i>Acer spicatum</i> )					Missouri Willow ( <i>Salix eriocephala</i> )									
Speckled Alder ( <i>Alnus incana</i> )					Sandbar Willow ( <i>Salix exigua</i> )									
Downy Serviceberry ( <i>Amelanchier arborea</i> )					Shining Willow ( <i>Salix lucida</i> )									
Serviceberry ( <i>Amelanchier sanguinea</i> )					Black Willow ( <i>Salix nigra</i> )									
Yellow Birch ( <i>Betula alleghaniensis</i> )					Slender Willow ( <i>Salix petiolaris</i> )									
White Birch ( <i>Betula papyrifera</i> )					<i>Salix</i>									
European Birch ( <i>Betula pendula</i> )					Hybrid Crack Willow ( <i>Salix X rubens</i> )									
Blue Beech ( <i>Carpinus caroliniana</i> )					Black-berried Elder ( <i>Sambucus nigra</i> )									
Bitternut hickory ( <i>Carya cordiformis</i> )					Red-berried Elder ( <i>Sambucus racemosa</i> )									
Shagbark Hickory ( <i>Carya ovata</i> )					Buffaloberry ( <i>Shepherdia canadensis</i> )									
Climbing Bittersweet ( <i>Celastrus scandens</i> )					Eur. Mountain Ash ( <i>Sorbus aucuparia</i> )									
Common Hackberry ( <i>Celtis occidentalis</i> )					Narrow Meadow-sweet ( <i>Spiraea alba</i> )									
Buttonbush ( <i>Cephalanthus occidentalis</i> )					Common Lilac ( <i>Syringa vulgaris</i> )									
Alt.-leaved Dogwood ( <i>Cornus alternifolia</i> )					Poison-ivy ( <i>Toxicodendron rydbergii</i> )									
Silky Dogwood ( <i>Cornus amomum</i> )					Climbing Poison-ivy ( <i>Toxicodendron radicans</i> )									
Bunchberry ( <i>Cornus canadensis</i> )					White Elm ( <i>Ulmus americana</i> )									
Gray dogwood ( <i>Cornus racemosa</i> )					Siberian Elm ( <i>Ulmus pumila</i> )									
Round-leaved Dogwood ( <i>Cornus rugosa</i> )					Slippery Elm ( <i>Ulmus rubra</i> )									
Red-osier Dogwood ( <i>Cornus sericea</i> )					Low Blueberry ( <i>Vaccinium angustifolium</i> )									
American Hazel ( <i>Corylus americana</i> )					Maple-leaf Viburnum ( <i>Viburnum acerifolium</i> )									
Beaked Hazel ( <i>Corylus cornuta</i> )					Hobblebush ( <i>Viburnum lantanoides</i> )									
Cockspur Thorn ( <i>Crataegus crus-galli</i> )					Nannyberry ( <i>Viburnum lentago</i> )									
English Hawthorn ( <i>Crataegus monogyna</i> )					Guelder-Rose ( <i>Viburnum opulus</i> )									
Large-fruited Thorn ( <i>Crataegus punctata</i> )					Downy Arrow-wood ( <i>Vib. rafinesquianum</i> )									
<i>Crataegus</i>					Riverbank Grape ( <i>Vitis riparia</i> )									
<i>Crataegus</i>					Am. Prickly-ash ( <i>Zanthoxylum americanum</i> )									
Bush Honeysuckle ( <i>Diervillea lonicera</i> )														
Russian Olive ( <i>Elaeagnus angustifolia</i> )														
Autumn Olive ( <i>Elaeagnus umbellata</i> )														
Run. Strawberry-bush ( <i>Euonymus obovata</i> )														
American Beech ( <i>Fagus grandifolia</i> )														
Glossy Buckthorn ( <i>Frangula alnus</i> )														
White Ash ( <i>Fraxinus americana</i> )														
Black Ash ( <i>Fraxinus nigra</i> )														
Green Ash ( <i>Fraxinus pennsylvanica</i> )														
Witch-hazel ( <i>Hamamelis virginiana</i> )														
Winterberry ( <i>Ilex verticillata</i> )														
Butternut ( <i>Juglans cinerea</i> )														
Black Walnut ( <i>Juglans nigra</i> )														
Common Privet ( <i>Ligustrum vulgare</i> )														
Spicebush ( <i>Lindera benzoin</i> )														
Fly Honeysuckle ( <i>Lonicera canadensis</i> )														
Glaucous Honeysuckle ( <i>Lonicera dioica</i> )														
Morrow's Honeysuckle ( <i>Lonicera morrowii</i> )														
Tartarian Honeysuckle ( <i>Lonicera tatarica</i> )														
Common Apple ( <i>Malus pumila</i> )														
White Mulberry ( <i>Morus alba</i> )														
Sweet Gale ( <i>Myrica gale</i> )														
Ironwood ( <i>Ostrya virginiana</i> )														
Thicket-creeper ( <i>Parthenocissus inserta</i> )														
Ninebark ( <i>Physocarpus opulifolius</i> )														
Balsam Poplar ( <i>Populus balsamifera</i> )														
Eastern Cottonwood ( <i>Populus deltoides</i> )														
Large-tooth Aspen ( <i>Populus grandidentata</i> )														
Trembling Aspen ( <i>Populus tremuloides</i> )														
Sweet Cherry ( <i>Prunus avium</i> )														
Pin Cherry ( <i>Prunus pennsylvanica</i> )														
Black Cherry ( <i>Prunus serotina</i> )														
Choke Cherry ( <i>Prunus virginiana</i> )														
<b>Prunus</b>														
D - Dominant: represented by large numbers, generally forming >10% ground cover or >25% vegetation cover in any one stratum														
F - Fairly common (=Abundant in ELC): generally widespread represented by fairly large numbers of individual clumps; usually forming >10% ground cover														
U - Uncommon (=Occasional in ELC): present as widespread scattered individuals or represented by one or more clumps of many individuals (most species will fall into this category)														
R - Rare: represented in the polygon by less than about five individuals or small clumps														
Map Number: 739 GSH 2910														
Date: May 3, 2012														
Surveyors: RA SG														

Map Number	1	2	3	4	5
Date					
Surveyors					







# Significant Wildlife Habitat Form

AECOM

Study Area:	BLW	JER	<u>(GSH)</u>	Map #:	<u>739-GSH-2914</u>
Date:	<u>May 3, 2012</u>			Time Started:	<u>10:15 am</u>
Field Staff:	<u>SF, AA</u>			Time Finished:	<u>11:15 am</u>
Weather Conditions:	<u>humid, 16°C, little wind.</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: \_\_\_\_\_

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:  
frogs observed, but not standing water.

**\*\*\*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 )  
 UTM: \_\_\_\_\_ 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 )  
 UTM: \_\_\_\_\_ 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 )  
 UTM: \_\_\_\_\_ 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 )  
 UTM: \_\_\_\_\_ 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

# Species Conservation Concern Habitat and Incidental Wildlife - Goshen

Map No: 739 - GSH 2014

Field Staff: SG, RA

Time Started: 10:15 AM

Time Finished: 11:15 AM

Date (yyyy-mm-dd): 2012, Nov 3



## Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Brown headed cowbird		VO					
horned lark		VO					
white collared		OB					
tufted titmouse		OB					
red bellied woodpecker		VO					
American robin		VO					
Downy Woodpecker		HO	PIC 100 - 608				
Red cardinal		OB					

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, FY=Fledged Young, NE=Eggs, NY=Young, FS=Foos/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:
FOC, FOM, FOD	Burning Bush (Elyonimus atropurpureus) - S3 Bloom Time - April - June	Species occurs in dry to moist deciduous thickets and woods	Y (N) UTM:
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, SWM1, 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:
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 (Vermonia 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

ELC	Species	Habitat Description	Habitat Present (VIN; UTM; description of habitat if present)
CUM1, MAM,	June - August		
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
FEO1, 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
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
FOD6, FOD7, FOD8, FOD9	Harbinger-of-spring ( <i>Eigenia 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.	Y (N) UTM
FOD6, FOD7, FOD9	Pawpaw ( <i>Asimina triloba</i> ) - S3 <u>Bloom Time - March-May</u>	Occurs in moist deciduous woods and stream banks	Y (N) UTM: NO (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	Y (N) UTM
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
CUW1, 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
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.	Y (N) UTM
ALO, ALS, ALT, TPO, TPS, TPW	Slender Blazing Star ( <i>Liatris cylindracea</i> ) - S3	Species occurs in limestone and dolostone pavement, prairies, open woods; always 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
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



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/S4	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y (N) UTM:
FE0, FES, FET, MAM2, MAM3	Tuberous Indian Plantain ( <i>Arnoglossum plantagineum</i> ) - S3	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	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	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:
	<b>BIRDS</b>		
	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>Selurus 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:
	<b>REPTILES</b>		
	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.
	<b>INSECTS</b>		
OAD, 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 clyfen</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 virginiensis</i> ) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y (N) UTM:

# Wetland Data Collection Sheet



Study area: <del>739 GSH 2914</del> GSH	Map No: 739 GSH 2914
Date (yyyy-mm-dd): 2012, May 3	Time Started: 10:15am
Field Staff: SG, RA	Time Finished: 11:15am

**Presence of Groundwater**      No  Yes

bank seepage       iron staining       groundwater indicator

**Site Type**

Lacustrine  (associated with lakes)      Isolated

Riverine  (associated with rivers)

Palustrine  absent or intermittent inflow and either intermittent or permanent outflow

what are the water inputs and outputs? \_\_\_\_\_

**Soils** refer to ELC card for soils information

Silty clay loam, 40cm to coarse fragments, culturally mod. field.

**% open Water**

Type 1 - <5%       Type 5 - 26-75%  (water occurring in a small pattern)

Type 2 - 5-25%  (water occurring in one central location)      Type 6 - 76-95%  (occurring in a central location, vegetation is peripheral)

Type 3 - 5-25%  (water occurring in ponds of various sizes)      Type 7 - 76-95%  (vegetation occurs in patches or diffuse, open stands)

Type 4 - 26-75%  (water occurring in a central location)      Type 8 - >95%  (water occupies over 95% of the area)

**Community Descriptions**

**Vegetation forms**

h (deciduous trees)	ne (narrow leaved emergents)	ts (tall shrubs 1-6m)	f (aquatic with floating leaf)
c (coniferous trees)	be (broad leaved emergents)	ls (low shrubs up to 1m)	ff (free floating)
dh (dead deciduous trees)	gc (ground cover)	ds (dead shrubs)	su (all under water)
dc (dead coniferous trees)	m (mosses)	re (robust emergents)	u (unvegetated)

Map Code/ ELC Code	Community Description - list at least four dominant species for each form
MAM22	gc-phalaris arundinacea - 100%



# Wetland Data Collection Sheet


## Notes on Ecological Functions or features

should include notes on: furbearer, cranberries, wild rice, baitfish, bullfrogs, winter cover for wildlife, suitability for waterfowl breeding staging, moulting, evidence of recreational activities, disturbance, surrounding topography (flat, rolling, hilly, steep), and surrounding habitat diversity

-culturally modified



- 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, MAD 83  
 1:2,000

Meters  
 0 25 50 100

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Goshen ELC Survey  
 754\_GSH2119  
 April 2012  
 Project 80155032

**AECOM**

Figure 1



**ELC**  
Community Description and Classification

Site: 754 55N219 Polygon: SWTR  
 Surveyor(s): Date: Time start: 10:20 am  
 Jels Korte + Tom Shovel May 2, 2012 finish: 12:30 pm  
 UTMZ: 45246 UTMZ: 479682 UTMN:

**Polygon Description**

System	Substrate	Topographic Feature	Plant Form	Community
<input type="checkbox"/> Terrestrial <input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Aquatic <b>Site</b> <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input checked="" type="checkbox"/> Surficial Dep. <input type="checkbox"/> Bedrock <b>History</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Cultural <b>Cover</b> <input type="checkbox"/> Open <input type="checkbox"/> Shrub <input checked="" type="checkbox"/> Treed	<input type="checkbox"/> Organic <input checked="" type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Min. <input type="checkbox"/> Acidic Bedk <input type="checkbox"/> Basic Bedk <input type="checkbox"/> Carb. Bedk	<input type="checkbox"/> Lacustrine <input type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input type="checkbox"/> Valley Slope <input type="checkbox"/> Tableland <input checked="" type="checkbox"/> Roll. Upland <input type="checkbox"/> Cliff <input type="checkbox"/> Talus <input type="checkbox"/> Crevice/Cave <input type="checkbox"/> Alvar <input type="checkbox"/> Rockland <input type="checkbox"/> Beach / Bar <input type="checkbox"/> Sand Dune <input type="checkbox"/> Bluff	<input type="checkbox"/> Plankton <input type="checkbox"/> Submerged <input type="checkbox"/> Floating-LVD. <input type="checkbox"/> Graminoid <input type="checkbox"/> Forb <input type="checkbox"/> Lichen <input type="checkbox"/> Bryophyte <input checked="" type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Mixed <input type="checkbox"/> Bare <input type="checkbox"/> Meadow <input type="checkbox"/> Prairie <input checked="" type="checkbox"/> Thicket <input type="checkbox"/> Savannah <input type="checkbox"/> Woodland <input type="checkbox"/> Forest <input type="checkbox"/> Plantation	<input type="checkbox"/> Lake <input type="checkbox"/> Pond <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Marsh <input checked="" type="checkbox"/> Swamp <input type="checkbox"/> Fen <input type="checkbox"/> Bog <input type="checkbox"/> Barren <input type="checkbox"/> Meadow <input type="checkbox"/> Prairie <input checked="" type="checkbox"/> Thicket <input type="checkbox"/> Savannah <input type="checkbox"/> Woodland <input type="checkbox"/> Forest <input type="checkbox"/> 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			Populus >> FRAVENN
2			
3			ARCUS - COUS > FEX
4			

HT Codes: 7 < 0.2m 6 > 0.2-0.5m 5 > 0.5-1m 4 > 1-2m 3 > 2-5m 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:	A < 10 N < 10 O < 10	A 10-24 N 10-24 O 10-24	R 25-50 N 25-50 O 25-50

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

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

Ecosite:	Mineral Thicket Swamp Ecosite	Code:	SWT2
Vegetation Type:		Code:	
Inclusion:	Willow Mineral Deciduous Swamp Type	Code:	SWD4-1
Complex:		Code:	

**Community Profile Diagram/Comments**

\* Community to be 0.2m tall 0.5m tall in this  
 SWD - commoner forest type by w  
 community

Notes:

**Tree Tally by Species**

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

**Soils Ontario and ELC Soils Description**

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

**ELC**  
Community Description and Classification

Site: 754 GSH2119 Polygon: SWD 2-3

Surveyor(s): Date: Time start: finish: 11:20 6  
1000 Patti May 2, 2012 12:30 0:00

UTMZ: 4335810 UTMN:

**Polygon Description**

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

**Stand Description**

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (> Much Greater Than; > Greater Than; = About Equal To)
1	4	4	ACEFIRE >> PRAPENN > LUNAMER > Ppdcif
2	2	3	ACEFIRE >> PRAPENN
3	4	2	PRAPENN - ACIFIRE
4	C	2	PLANT - IMPCARP - SCULLED PIP - VIOLE SP

HT Codes: 7 < 0.2m 6 > 0.2-0.5m 5 > 0.5-1m 4 > 1-2m 3 > 2-5m 2 > 5-10m 1 > 10m  
 CVR Codes: 0 = none 1 0% - 10% 2 10 - 25% 3 25 - 50% 4 > 50%

**Stand Composition: Size Class Analysis:**

Standing Snags:	Deadfall / Logs:	< 10	10-24	25-50	> 50
		O	A	A	R
		O	R	N	N
		A	O	O	O

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

**Com. Age:**  Pioneer  Young  Mid-Age  Mature  Old Growth

**Ecosite:** Mable Organic Deciduous Swamp Ecosite Code: SWD6

**Vegetation Type:** Swamp Mable Organic Deciduous Swamp Type Code: SWD6-3

**Inclusion:** Code:

**Complex:** Code:

**Community Profile Diagram/Comments**

→ Ground cover layer very sparse but with N. umbra patches  
 layers of N. umbra

Notes:

**Tree Tally by Species**

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Prism Factor	2
Total							100
Basal Area (BA)							
Dead							

**Soils Ontario and ELC Soils Description**

Site Metrics	PI/Auger #	Summary
Zone	1	
Easting	13	
Northing	50	
Position	4255810	
Aspect	Flat	
Percent		
Slope		
Length		
Mottles		
Gley		
Water Table		
Carbonates		
Bedrock		
Depth from zero	54cm	% CF
Texture	OM	% CF
Depth from zero		% CF
Texture		% CF
Depth from zero		% CF
Texture		% CF
Depth from zero		% CF
Texture		% CF
% Surface Stone/Rock		
Moisture Regime	7	
Drainage	VP	









Plant Species List  
2012

Dicot Herbs - Asteraceae						Dicot Herbs						Dicot Herbs					
1	2	3	4	5		1	2	3	4	5		1	2	3	4	5	
					Common Yarrow ( <i>Achillea millefolium</i> )						Shepherd's Purse ( <i>Capsella bursa-pastoris</i> )						Kidney-leaf Buttercup ( <i>Ranunculus abortivus</i> )
					White Snakeroot ( <i>Ageratina altissima</i> )						Cutleaf Toothwort ( <i>Cardamine concatenata</i> )						Tall Buttercup ( <i>Ranunculus acris</i> )
					Com. Ragweed ( <i>Ambrosia artemisiifolia</i> )						Toothwort ( <i>Cardamine diphylla</i> )						Hooked Buttercup ( <i>Ranunculus recurvatus</i> )
					Giant Ragweed ( <i>Ambrosia trifida</i> )						Penn. Bitter-cress ( <i>Cardamine pennsylvanica</i> )						<i>Ranunculus</i>
					Field Pussytoes ( <i>Antennaria neglecta</i> )						<i>Cardamine</i>						Sheep Sorrel ( <i>Rumex acetosella</i> )
					<i>Artemisia</i>						Blue Cohosh ( <i>Caulophyllum thalictroides</i> )	U					Curly-leaf Dock ( <i>Rumex crispus</i> )
					Common Burdock ( <i>Arctium minus</i> )						Mouse-ear Chickweed ( <i>Cerastium fontanum</i> )						Bitter Dock ( <i>Rumex obtusifolius</i> )
					Nodding Beggar-ticks ( <i>Bidens cernua</i> )						Turtlehead ( <i>Chelone glabra</i> )						Bloodroot ( <i>Sanguinaria canadense</i> )
					Devil's Beggar-ticks ( <i>Bidens frondosa</i> )						Spotted Water-hemlock ( <i>Cicuta maculata</i> )						Black Snakeroot ( <i>Sanicula marilandica</i> )
					Spotted Knapweed ( <i>Centaurea biebersteinii</i> )						Water-hemlock ( <i>Cicuta virosa</i> )						Bouncing Bet ( <i>Saponaria officinalis</i> )
					Brown Knapweed ( <i>Centaurea jacea</i> )						Enchanter's Nightshade ( <i>Circaea lutetiana</i> )						Marsh Skullcap ( <i>Scutellaria galericulata</i> )
					Chicory ( <i>Cichorium intybus</i> )						Carolina Spring Beauty ( <i>Claytonia caroliniana</i> )						Mad Dog Skullcap ( <i>Scutellaria lateriflora</i> )
					Canada Thistle ( <i>Cirsium arvense</i> )						Virginia Spring Beauty ( <i>Claytonia virginica</i> )						White Campion ( <i>Silene latifolia</i> )
					Bull Thistle ( <i>Cirsium vulgare</i> )						Virgin's-bower ( <i>Clematis virginiana</i> )						Bladder Campion ( <i>Silene vulgaris</i> )
					Horseweed ( <i>Conyza canadensis</i> )						Field Bindweed ( <i>Convolvulus arvensis</i> )						Hemlock Water-parsnip ( <i>Sium suave</i> )
					Daisy Fleabane ( <i>Erigeron annuus</i> )						Dog-strangling Vine ( <i>Cynanchum rossicum</i> )						Bitter Nightshade ( <i>Solanum dulcamara</i> )
					Philadelphia Fleabane ( <i>Erig. philadelphicus</i> )						Wild Carrot ( <i>Daucus carota</i> )						Black Nightshade ( <i>Solanum ptychanthum</i> )
					<i>Erigeron</i>						Deptford Pink ( <i>Dianthus armeria</i> )						Grassleaf Stitchwort ( <i>Stellaria graminea</i> )
					Joe-pye-weed ( <i>Eupatorium maculatum</i> )						Squirrel-corn ( <i>Dicentra canadensis</i> )						Common Chickweed ( <i>Stellaria media</i> )
					Boneset ( <i>Eupatorium perforatum</i> )						Dutchman's-breeches ( <i>Dicentra cucullaria</i> )						Early Meadow-rue ( <i>Thalictrum dioicum</i> )
					Large-leaved Aster ( <i>Eurybia macrophylla</i> )						Wild Teasel ( <i>Dipsacus fullonum</i> )						Tall Meadow-rue ( <i>Thalictrum pubescens</i> )
					Flat-top Goldenrod ( <i>Euthamia graminifolia</i> )						Wild Cucumber ( <i>Echinocystis lobata</i> )						Field Penny-cress ( <i>Thlaspi arvense</i> )
					Orange Hawkweed ( <i>Hieracium aurantiacum</i> )						Viper's Bugloss ( <i>Echium vulgare</i> )						Foamflower ( <i>Tiarola cordifolia</i> )
					Field Hawkweed ( <i>Hieracium caespitosum</i> )						Northern Willow-herb ( <i>Epilobium ciliatum</i> )						Star-flower ( <i>Trientalis borealis</i> )
					<i>Hieracium</i>						Hairy Willow-herb ( <i>Epilobium hirsutum</i> )						Red Clover ( <i>Trifolium pratense</i> )
					Elecampane ( <i>Inula helenium</i> )						Small-fl. Willow-herb ( <i>Epilobium parviflorum</i> )						White Clover ( <i>Trifolium repens</i> )
					Prickly Lettuce ( <i>Lactuca scariola</i> )						<i>Epilobium</i>						<i>Trifolium</i>
					<i>Lactuca</i>						Worm Mustard ( <i>Erysimum cheiranthoides</i> )						Stinging Nettle ( <i>Urtica dioica</i> )
					Ox-eye Daisy ( <i>Leucanthemum vulgare</i> )						<i>Euphorbia</i>						Greater Bladderwort ( <i>Utricularia vulgaris</i> )
					Pineapple-weed ( <i>Matricaria discoides</i> )						Hemp Nettle ( <i>Galeopsis tetrahit</i> )						Common Mullein ( <i>Verbascum thapsus</i> )
					Tall White Lettuce ( <i>Prenanthes altissima</i> )						Wild Madder ( <i>Galium mollugo</i> )						Blue Vervain ( <i>Verbena hastata</i> )
					Black-eyed Susan ( <i>Rudbeckia hirta</i> )						Marsh Bedstraw ( <i>Galium palustre</i> )						White Vervain ( <i>Verbena urticifolia</i> )
					Tall Goldenrod ( <i>Solidago altissima</i> )						Sweet-scented Bedstraw ( <i>Galium triflorum</i> )						Water Speedwell ( <i>Veron. anagallis-aquatica</i> )
					Blue-stem Goldenrod ( <i>Solidago caesia</i> )						<i>Galium</i>						Common Speedwell ( <i>Veronica officinalis</i> )
					Canada Goldenrod ( <i>Solidago canadensis</i> )						Spotted Geranium ( <i>Geranium maculatum</i> )	R					<i>Veronica</i>
					Zig-zag Goldenrod ( <i>Solidago flexicaulis</i> )						Herb-robert ( <i>Geranium robertianum</i> )						Cow Vetch ( <i>Vicia cracca</i> )
					Giant Goldenrod ( <i>Solidago gigantea</i> )						Yellow Avens ( <i>Geum aleppicum</i> )						<i>Vicia</i>
					Early Goldenrod ( <i>Solidago juncea</i> )						White Avens ( <i>Geum canadense</i> )	U					Periwinkle ( <i>Viola minor</i> )
					Gray Goldenrod ( <i>Solidago nemoralis</i> )						Urban Avens ( <i>Geum urbanum</i> )						Dog Violet ( <i>Viola conspersa</i> )
					<i>Solidago sp.</i>	F					Dame's Rocket ( <i>Hesperis matronalis</i> )						Yellow Violet ( <i>Viola pubescens</i> )
					Field Sow-thistle ( <i>Sonchus arvensis</i> )						Virg. Water-leaf ( <i>Hydrophyllum virginianum</i> )						Com. Blue Violet ( <i>Viola sororia</i> )
					<i>Sonchus</i>						Com. St. John's-wort ( <i>Hypericum perforatum</i> )						<i>Viola sp.</i>
					Hearth Aster ( <i>Symph. cordifolium</i> )						Spotted Jewelweed ( <i>Impatiens capensis</i> )	F					
					Heath Aster ( <i>Symphotrichum ericoides</i> )						Wood Nettle ( <i>Laportea canadensis</i> )						<i>Ranunculus sp.</i>
					Tall White Aster ( <i>Symph. lanceolatum</i> )						Motherwort ( <i>Leonurus cardiaca</i> )						U
					Calico Aster ( <i>Symphotrichum lateriflorum</i> )						Field Peppergrass ( <i>Lepidium campestre</i> )						
					New England Aster ( <i>Symph. novae-angliae</i> )						Eur. Gromwell ( <i>Lithospermum officinale</i> )						
					Purple-stem Aster ( <i>Symph. puniceus</i> )						Butter & Eggs ( <i>Linaria vulgaris</i> )						
					Common Tansy ( <i>Tanacetum vulgare</i> )						Great Lobelia ( <i>Lobelia siphilitica</i> )						
					Common Dandelion ( <i>Taraxacum officinale</i> )	F	U				<i>Lobelia</i>						
					Com. Goatbeard ( <i>Tragopogon pratensis</i> )						Cut-leaf Bugleweed ( <i>Lycopus americanus</i> )						Water-plantain ( <i>Alisma plantago-aquatica</i> )
					Coolfoot ( <i>Tussilago farfara</i> )						Northern Bugleweed ( <i>Lycopus uniflorus</i> )						Wild Leek ( <i>Allium tricoccum</i> )
					<i>Symphotrichum sp.</i>	F					Fringed Loosestrife ( <i>Lysimachia ciliata</i> )						Jack-in-the-pulpit ( <i>Arisaema triphyllum</i> )
											Moneywort ( <i>Lysimachia nummularia</i> )						R
											<i>Lysimachia</i>						Asparagus ( <i>Asparagus officinalis</i> )
											Purple Loosestrife ( <i>Lythrum salicaria</i> )						Wild Calla ( <i>Calla palustris</i> )
											Black Medick ( <i>Medicago lupulina</i> )						Bluebead-lily ( <i>Clintonia borealis</i> )
											Alfalfa ( <i>Medicago sativa</i> )						Garden Lily-of-valley ( <i>Convallaria majalis</i> )
											White Sweet-clover ( <i>Melilotus alba</i> )						Yel. Lady's Slipper ( <i>Cypripedium parviflora</i> )
											Yellow Sweet-clover ( <i>Melilotus officinalis</i> )						Canada Waterweed ( <i>Elodea canadensis</i> )
											Wild Mint ( <i>Mentha arvensis</i> )						Helleborine ( <i>Epipactis helleborine</i> )
											Wild Bergamot ( <i>Monarda fistulosa</i> )						Yellow Trout Lily ( <i>Erythronium americanum</i> )
											Small Forget-me-not ( <i>Myosotis laxa</i> )						Blue-flag Iris ( <i>Iris versicolor</i> )
											Forget-me-not ( <i>Myosotis scorpioides</i> )						Orange Day Lily ( <i>Hemerocallis fulva</i> )
											Water-cress ( <i>Nasturtium officinale</i> )						Lesser Duckweed ( <i>Lemna minor</i> )
											Com. Evening-primrose ( <i>Oenothera biennis</i> )						Starry Duckweed ( <i>Lemna trisulca</i> )
											Sweet-cicely ( <i>Osmorhiza berterii</i> )						Wild Lily-of-valley ( <i>Maianthemum canadense</i> )
											Yellow Wood-sorrel ( <i>Oxalis stricta</i> )						False Solom Seal ( <i>Maianthemum racemosum</i> )
											Wild Parsnip ( <i>Pastinaca sativa</i> )						Star False Solomon ( <i>Maianthemum stellatum</i> )
											English Plantain ( <i>Plantago lanceolata</i> )						True Solomon Seal ( <i>Polygonatum pubescens</i> )
											Common Plantain ( <i>Plantago major</i> )						Pickeral-weed ( <i>Pontederia cordata</i> )
											Rugel's Plantain ( <i>Plantago rugelii</i> )						Curly-leaf Pondweed ( <i>Potamogeton crispus</i> )
											May-apple ( <i>Podophyllum peltatum</i> )						Sago Pondweed ( <i>Potamogeton pectinatus</i> )
											Pale Smartweed ( <i>Polygonum lapathifolium</i> )						<i>Potamogeton</i>
											Lady's-thumb ( <i>Polygonum persicaria</i> )						<i>Potamogeton</i>
											Virginia Knotweed ( <i>Polygonum virginianum</i> )						Broad-leaved Arrowhead ( <i>Sagittaria latifolia</i> )
											<i>Polygonum</i>						Blue-eyed-grass ( <i>Sisyrinchium montanum</i> )
											<i>Polygonum</i>						Herb. Carrion Flower ( <i>Smilax herbacea</i> )
											Rough Cinquefoil ( <i>Potentilla norvegica</i> )						Bristly Greenbrier ( <i>Smilax hispida</i> )
											Rough-fruited Cinquefoil ( <i>Potentilla recta</i> )						Nodding Ladies' Tresses ( <i>Spiranthes cernua</i> )
											Common Cinquefoil ( <i>Potentilla simplex</i> )						Rose Twisted-stalk ( <i>Streptopus lanceolatus</i> )
											<i>Potentilla</i>						Skunk-cabbage ( <i>Symplocarpus foetidus</i> )
											Heal-all ( <i>Prunella vulgaris</i> )						Purple Trillium ( <i>Trillium erectum</i> )
											Shinleaf ( <i>Pyrola elliptica</i> )						White Trillium ( <i>Trillium grandiflorum</i> )
																	Large-flowered Bellwort ( <i>Uvularia grandiflora</i> )

D - Dominant: represented by large numbers, generally forming >10% ground cover or >25% vegetation cover in any one stratum  
 F - Fairly common (=Abundant in ELC): generally widespread represented by fairly large numbers of individual clumps; usually forming >10% ground cover  
 U - Uncommon (=Occasional in ELC): present as widespread scattered individuals or represented by one or more clumps of many individuals (most species will fall into this category)  
 R - Rare: represented in the polygon by less than about five individuals or small clumps

Map Number: 754 GS4219  
 Date: May 2, 2012  
 Surveyors: JP+TS

1 Wnd  
 2 SWDG-3  
 3 MAM 3-2



# Significant Wildlife Habitat Form

AECOM

Study Area:	BLW JER <b>GSH</b>	Map #:	754 - GSH 2119
Date:	2012-05-02	Time Started:	10:20 a.m.
Field Staff:	Tom Shorey Jess Piette	Time Finished:	12:30 p.m.
Weather Conditions:	overcast, 15°C, 20km/h wind		

**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: 452461 4796182  Area of standing water delineated on field map

Water depth (m): +2m % open water: 90 % emergent vegetation: 5%

Description of standing water (permanent pool, evidence of annual spring flooding, etc): Permanent pool, in middle of farmers field. Possibly dug.

Area and soil/substrate of shoreline habitat: Shoreline habitat is heavily vegetated with Willow, dogwood, some sedge sp. → mineral soils

Type and abundance of cover in open water habitat: Willow 40% 5% cover overall Sedge sp 60%

Type and abundance of cover in surrounding habitat: Surrounding habitat Swamp thicket gray/red oaks dogwood, Willow, green Ash, cottonwood

Evidence of disturbance (e.g. cattle grazing): - Forest management

Evidence of use by waterfowl, amphibians, turtles (e.g. broken eggs), marsh breeding birds: during vegetation survey heard Spring peepers calling → 2

**\*\*\*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, 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
11, 12	Pond → SWD41/SWT2		





# Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
CUM1, MAM, FOD6, FOD7, FOD9	June – August <b>Green Dragon (Arisaema dracontium)</b> - SC/S3 <u>Bloom Time</u> – May and June	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:
TP01, TPS1, TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	<b>Hairy Bedstraw (Galium pilosum)</b> - S3 <u>Bloom Time</u> – June-August	Occurs in dry, sandy woods and thickets; occasionally in dry sandy fields	Y (N) UTM:
FE01, FE51, FET1, SWC, SWM, SWD, SWT, TPO, TPS, TPW	<b>Hairy Valerian (Valeriana edulis)</b> - S1 <u>Bloom Time</u> – June to August	Inhabits swampy river flats and meadows, wet prairies, and wooded, rocky riverbanks and fens.	Y (N) UTM:
FOD6, FOD7, SWM, SWD	<b>Hairy Wood Mint (Blephilia hirsuta)</b> - S1 <u>Bloom Time</u> - Summer	Woodlands, often rocky, especially rivers, (swamp forests) floodplains.	Y (N) UTM: N/O
FOD6, FOD7, FOD8, FOD9	<b>Harbinger-of-spring (Erigenia bulbosa)</b> - S3 <u>Bloom Time</u> – early to late April	Occurs in rich, moist deciduous woods, especially on floodplains.	Y (N) UTM:
SAS1, SAM1, SAF1	<b>Hill's Pond Weed (Potamogeton hillii)</b> - SC/S2 <u>Bloom Time</u> – summer	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters.	Y (N) UTM:
FOM6, FOM7, FOM8	<b>Large Round-leaved Orchid (Platanthera macrophylla)</b> - S2 <u>Bloom Time</u> – June to August	Species inhabits moist mixed woods. Found in fairly mature, upland sugar maple-beech-eastern hemlock woodlands.	Y (N) UTM:
MAM2, MAM3, MAS2, MAS3, SWD	<b>Lizard's Tail (Saururus cernuus)</b> - S3 <u>Bloom Time</u> – June – September	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/O
FOD6, FOD7, FOD9	<b>Pawpaw (Asimina triloba)</b> - S3 <u>Bloom Time</u> – March-May	Occurs in moist, deciduous woods and stream banks.	Y (N) UTM:
FOM8, FOD6, FOD7, FOD9, CUM1	<b>Pileose Evening Primrose (Oenothera pilosella)</b> - S2 <u>Bloom Time</u> – Late Spring – Early Summer	Moist edges of woods and open, disturbed ground.	Y (N) UTM:
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	<b>Prostate Tick-trefoil (Desmodium rotundifolium)</b> - S2 <u>Bloom Time</u> – July-September	Dry, sandy or rocky woods	Y (N) UTM:
FOD7, SWD	<b>Pumpkin Ash (Fraxinus profunda)</b> - S2? <u>Bloom Time</u> – March - June	Swamps and floodplains	Y (N) UTM: N/O
CUW1, ALO, FET1, SWC	<b>Ram's-head Lady's-slipper (Cypripedium arietinum)</b> - S3 <u>Bloom Time</u> – mid May to mid June	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	<b>Rattlesnake Hawkweed (Hieracium venosum)</b> - S2 <u>Bloom Time</u> – April – September	Species inhabits open, dry sandy woods. Jack pine, oak, and aspen woodlands.	Y (N) UTM:
FOD6, FOD7, FOD9	<b>Round-leaved Groundsel (Packera obovata)</b> - S3 <u>Bloom Time</u> - May - June	Found in moist woods	Y (N) UTM:
CUM1, CUT1, CUS1	<b>Round-leaved hawthorn (Crataegus lumaria)</b> - S3?	Species occurs in old fields, poorly managed pastures, fencelines and roadsides	Y (N) UTM:
FOD6, FOD7, FOD8, FOD9, SWT2, SWT3	<b>Scarlet Beebalm (Monarda didyma)</b> - S3 <u>Bloom Time</u> – May to October	Found in moist, rich woods, (thicket swamps) banks and floodplains.	Y (N) UTM: N/O
ALO, ALS, ALT, TPO, TPS, TPW	<b>Slender Blazing Star (Liatris cylindracea)</b> - 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	<b>Slender Knotweed (Polygonum tenue)</b> - 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	<b>Slim-flowered Muthy (Muhlenbergia tenuiflora)</b> - 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:
BLO1, BLS1, BLT1, TPO2, TPS2, TPW2, MAM2, FOD7	<b>Stiff Gentian (Gentianella quinquefolia)</b> - S2 <u>Bloom Time</u> – late summer to mid fall	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	<b>Sundial Lupine (Lupinus perennis)</b> - S3 <u>Bloom Time</u> – mid-March to mid-June	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



ELC	Species	Habitat Description	Habitat Present (Y/N); UTM; description of habitat if present
TPO1, TPS1, TPW1, CUM1	Tail Blazing Star ( <i>Liatris 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:
<b>BIRDS</b>			
-	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>Selurus 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:
<b>REPTILES</b>			
-	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.
<b>INSECTS</b>			
OAO, SA, SWM, SWD	Azure Bluet ( <i>Enallagma aspersum</i> ) -S3	Species inhabits fishless ponds, lakes and boggy swamps	Y (N) UTM: N/A
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 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: N/A
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:

# Wetland Data Collection Sheet



Study area: <u>GOSHEN</u> Date (yyyy-mm-dd): <u>May 2nd, 2012</u> Field Staff: <u>Jess Pette + Tom Shorney</u>	Map No: <u>279654 2119</u> Time Started: <u>10:20am</u> Time Finished: <u>12:30pm</u>
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**Presence of Groundwater**      No  Yes

bank seepage       iron staining       groundwater indicator

**Site Type**      Lacustrine  (associated with lakes)      Isolated

Riverine  (associated with rivers)  
 Palustrine  absent or intermittent inflow and either intermittent or permanent outflow

what are the water inputs and outputs?      Surface water

**Soils**      refer to ELC card for soils information

**% open Water** dry this year, however in wetter years would be all water

Type 1 - <5%       Type 5 - 26-75%  (water occurring in a small pattern)  
 Type 2 - 5-25%  (water occurring in one central location)      Type 6 - 76-95%  (occurring in a central location, vegetation is peripheral)  
 Type 3 - 5-25%  (water occurring in ponds of various sizes)      Type 7 - 76-95%  (vegetation occurs in patches or diffuse, open stands)  
 Type 4 - 26-75%  (water occurring in a central location)      Type 8 - >95%  (water occupies over 95% of the area)

Community Descriptions			
Vegetation forms			
h (deciduous trees)	ne (narrow leaved emergents)	ts (tall shrubs 1-6m)	f (aquatic with floating leaf)
c (coniferous trees)	be (broad leaved emergents)	ls (low shrubs up to 1m)	ff (free floating)
dh (dead deciduous trees)	gc (ground cover)	ds (dead shrubs)	su (all under water)
dc (dead coniferous trees)	m (mosses)	re (robust emergents)	u (unvegetated)

Map Code/ ELC Code	Community Description - list at least four dominant species for each form
<u>SWDG-3/ S1</u>	<u>h*: Acefrie, Frapenn, Uimamer, ACENEGUN</u>
<u>MAM3-2 M1</u>	<u>ne*: phaargun ts: Salexig</u>
<u>SWT2</u>	<u>h: Popdelt, Frapenn +S: cortace, corseri, Salexig</u>



# Wetland Data Collection Sheet


### Notes on Ecological Functions or features

should include notes on: furbearer, cranberries, wild rice, baitfish, bullfrogs, winter cover for wildlife, suitability for waterfowl breeding staging, moulting, evidence of recreational activities, disturbance, surrounding topography (flat, rolling, hilly, steep), and surrounding habitat diversity

Further N within site gc and ls become more prominent and would occupy >25% however within portion of patch that falls within our study area nothing other than h occupies >25% cover

- area is adjacent to hydro line
- potential for musk, racoon
- surrounding area is a little higher but relatively flat

★ Organic Soils ★

FOD MEM

Lot 11 Con 9  
Hay

Lot 11 Con 10  
Hay

Pepper Rd



FOD

Lot 10 Con 10  
Hay

Lot 10 Con 9  
Hay

SWD

SWD

MAM

Lot 9 Con 9  
Hay

MEM

Lot 9 Con 10  
Hay

SWD

Acres

Plot #7





