

ASFA

Species of Conservation Concern Habitat and Incidental Wildlife - Goshen

AECOM

Map No: 635-63H 2369/65H2371
 Date (yyyy-mm-dd): 2012-06-05

Field Staff: Tom Stoney
 JSS, JCH

Time Started: 12:00 P.m.
 Time Finished: 12:48 P.m.

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Field Sparrow		Ub					
Song Sparrow		Ub					
White-throated Sparrow		Ob					
Flicker		Ob					
Common Yellowthroat		Vo					
Veery		Vo					
Robin		Ob					
Killdeer	On tracks	Ob					
Housecat		Vo					

Note: Evidence Codes (EV) SH=Suitable Habitat, SM=Singing Male; Breeding Bird (Possible) T=Territory, D=Display, P=Pair, N=Nest Building, V=Visiting Nest; A=Anxiety Behavior; Breeding Bird (Probable) DD=Distracted, NU=Used Nest, FY=Fledged Young, NE=Eggs, NY=Young, FS=Foos/Faecal sack, AE=Nest Entry; Breeding Bird (Confirmed) DP=Distinctive Parts, HO=House/Den, FY=Eggs/Young, TK=Tracks, FE=Feeding evidence, SC=Scat, SI=Other signs (Specify)

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)

* N/O - Not Observed

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM)	description of habitat if present
PLANTS				
FOD7	American Gromwell (<i>Lithospermum latifolium</i>) - 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 (<i>Astomum muehlenbergianum</i>) - 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 (<i>Corallorhiza odontorhiza</i>) - 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 (<i>Eonymus atropurpureus</i>) - 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 (<i>Conioseium chinense</i>) - S2 Bloom Time - summer to fall	Swampy places with deciduous trees, white cedars, tamarack; springy river banks, wet borders of streams and rivers. Also found among calcareous seepage slopes.	Y N UTM:	
SWC, SWM, SWD, SWT, MAM, MAS	Crowned Beggarticks (<i>Bidens trichosperma</i>) - S2 Bloom Time - late summer	Found in openings in swamps, marshes, along shores & wet fields within the Carolinian zone and southeastern Georgian bay. Boys, fens, tamarack swamps	Y N UTM:	
ALT1, FOD7	Eastern Green-violet (<i>Hybanthus concolor</i>) - 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 (<i>Chenopodium foggii</i>) - S2	Species occurs in sandy areas on limestone under oak or pine-oak forests	Y N UTM:	
TPO2, TPS2, TPW2,	Giant Ironweed (<i>Vernonia gigantea</i>) - S1? Bloom Time -	Found in mesic prairies, thickets, moist woods, roadsides and grassy meadows	Y N UTM:	

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ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
CUM1, MAM	June – August		
FOD6, FOD7, FOD9	Green Dragon (<i>Arisaema dracontium</i>) - 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:
TP01, 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:
FE01, FES1, FET1, SWC, SWM, SWD, SWT, TPO, TPS, TPW	Hairy Valerian (<i>Valeriana edulis</i>) - S1 <u>Bloom Time – June to August</u>	Inhabits swampy river flats and meadows, wet prairies, and wooded, rocky riverbanks and fens.	Y (N) UTM:
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>Erigenia bulbosa</i>) - S3 <u>Bloom Time – early to late April</u>	Occurs in rich, moist deciduous woods, especially on floodplains.	Y (N) UTM:
SAS1, SAM1, SAF1	Hill's Pond Weed (<i>Potamogeton hillii</i>) - SC/S2 <u>Bloom Time – summer</u>	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters	Y (N) UTM:
FOM6, FOM7, FOM8	Large Round-leaved Orchid (<i>Platanthera macrophylla</i>) - S2 <u>Bloom Time – June to August</u>	Species inhabits moist mixed woods. Found in fairly mature, upland sugar maple-beech-eastern hemlock woodlands.	Y (N) UTM:
MAM2, MAM3, MAS2, MAS3, SWD	Lizard's Tail (<i>Saururus cernuus</i>) - S3 <u>Bloom Time – June – September</u>	Species inhabits shores and streambanks along shallow water. As well as swamps, floodplains, shallow water and mudflats at the borders of streams and ponds.	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:
FOM8, FOD6, FOD7, FOD9, CUM1	Pilose Evening Primrose (<i>Oenothera pilosella</i>) - S2 <u>Bloom Time – Late Spring – Early Summer</u>	Moist edges of woods and open, disturbed ground	Y (N) UTM: N/O
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 lumarina</i>) - S3?	Species occurs in old fields, poorly managed pastures, fencelines and roadside	Y (N) UTM: N/O
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:
SBS, 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:

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TP01, TPS1, TPW1, CUM1	Tall Blazing Star (<i>Liatris aspera</i>) - S2/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y N UTM:
FEO, FES, FET, MAM2, MAM3	Tuberous Indian Plantain (<i>Arnoglossum 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:
(CUM) CUT1, CUW1, RBO1, SBO1	Yellow Ladies'-tresses (<i>Spiranthes ochroleuca</i>) - S2 Bloom Time - August to November	On 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	Units insects over a wide variety of habitats, in particular open or semi-open areas. Feeds on ground in a wide range of open, sparse or vegetation-free habitats.	Y N UTM:
FOD, FOM	Louisiana Waterthrush (<i>Seiurus motacilla</i>) - SC	Inhabits mature forests along steeply sloped ravines adjacent to running water. Trees, bushes, exposed roots, cliffs, banks and mossy logs are favoured nesting spots. Riparian woodlands are preferred stopover sites during migration	Y N UTM:
FOD, CUW, CUT	Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>) - SC	Species inhabits open woodland/edges (oak savannahs and riparian forest), open, deciduous forest with little 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:
CUT1	Short Eared Owl (<i>Asio flammeus</i>) - SC	Assessed as SWH. Record species if found	not required.
	Yellow-breasted Chat (<i>Icteria virens</i>) - SC	Inhabits thickets, tall grasses or 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			
DAO, 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:
(CUM) 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: N/A
TPS, CUW	Mottled Duskywing (<i>Erynnis martialis</i>) - S2	Usually seen nectaring or on wet sandy roads. Larvae feeds on New Jersey Tea and adults only likely near where this plant is present	Y N UTM:
SWT, SWD, SWM, FOM, FOD4-3, TPW, TPS, CUM1	Tawny Emperor (<i>Asterocampa clyton</i>) - S3	Species inhabits densely wooded riparian areas, dry woods, open woods, fencerows and parks. Usually occurs near Hackberry, the larval foodplant	Y N UTM:
FOD5	West Virginia White (<i>Pieris virginiensis</i>) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y N UTM:

Legend

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



Basemapping from Ontario Ministry of Natural Resources
 Orthophotography 2010
 Update Epoch: April 4, 2012



UTM Zone 17N, NAD 83
 11 600

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ELC Survey
**Goshen ELC Survey -
 Transmission Line**
636_GSH2613/2480
 April 2012
 Project: 80155032



ELC
Community Description and Classification

Map #: G36GSH2613/2480 Polygon: CUM1-1

Surveyor(s): Jess Heite/Tam Shroyer/Mary S, 2012 Date: 1:46 pm start: 3:15 pm finish:

UTMZ: 459634 UTMZ: 4795983 UTMN:

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic Site <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input checked="" type="checkbox"/> Surficial Dep. <input type="checkbox"/> Bedrock	<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 type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input checked="" type="checkbox"/> Valley Slope <input checked="" 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 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 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

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			
3			
4	6.4	4	grass sp > Soil sp = Syn sp > Tar off.

HT Codes: 7 < 0.2m 6 > 0.2-0.5m 5 > 0.5-1m 4 > 1-2m 3 > 2-8m 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:	<10	10-24	25-50	>50
Deadfall / Logs:	<10	10-24	25-50	>50

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

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

EcoSite: Mineral Cultural Meadow Ecosite Code: CUM-1
 Vegetation Type: Dry-moist Old Field meadow Type Code: CUM 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	Prism Factor
Total						2
Basal Area (BA)						
Dead						

Soils Ontario and ELC Soils Description

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

Plant Species List
2012

Trees & Shrubs						Tree & Shrubs						Graminoids					
1	2	3	4	5		1	2	3	4	5		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>)						Awlless Brome (<i>Bromus inermis</i>)					
Tamarack (<i>Larix laricina</i>)						Alder Buckthorn (<i>Rhamnus alnifolia</i>)						Bromus					
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>)						Elymus					
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>)					
Deciduous						<i>Rosa</i>						<i>Panicum</i>					
Manitoba Maple (<i>Acer negundo</i>)						Com. Blackberry (<i>Rubus allegheniensis</i>)						Reed Canary Grass (<i>Phalaris arundinacea</i>)					
Black Maple (<i>Acer nigrum</i>)						Wild Red Raspberry (<i>Rubus idaeus</i>)						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>)						<i>Rubus</i>						Kentucky Bluegrass (<i>Poa pratensis</i>)					
Sugar Maple (<i>Acer saccharum</i>)						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>)						gms p					
Yellow Birch (<i>Betula alleghaniensis</i>)						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>)						<i>Salix</i>											
Bitternut hickory (<i>Carya cordiformis</i>)						Hybrid Crack Willow (<i>Salix X rubens</i>)											
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>)						Sedges					
Buttonbush (<i>Cephalanthus occidentalis</i>)						Eur. Mountain Ash (<i>Sorbus aucuparia</i>)						Drooping Wood Sedge (<i>Carex arctata</i>)					
Alt-leaved Dogwood (<i>Cornus alternifolia</i>)						Narrow Meadow-sweet (<i>Spiraea alba</i>)						Golden-fruited Sedge (<i>Carex aurea</i>)					
Silky Dogwood (<i>Cornus amomum</i>)						Common Lilac (<i>Syringa vulgaris</i>)						Graceful Sedge (<i>Carex gracillima</i>)					
Bunchberry (<i>Cornus canadensis</i>)						Poison-ivy (<i>Toxicodendron rydbergii</i>)						Inland Sedge (<i>Carex interior</i>)					
Gray dogwood (<i>Cornus racemosa</i>)						Climbing Poison-ivy (<i>Toxicodendron radicans</i>)						Bladder Sedge (<i>Carex intumescens</i>)					
Round-leaved Dogwood (<i>Cornus rugosa</i>)						White Elm (<i>Ulmus americana</i>)						Lake-bank Sedge (<i>Carex laxifolia</i>)					
Red-osier Dogwood (<i>Cornus sericea</i>)						Siberian Elm (<i>Ulmus pumila</i>)						Hop Sedge (<i>Carex lupulina</i>)					
American Hazel (<i>Corylus americana</i>)						Slippery Elm (<i>Ulmus rubra</i>)						Pennsylvania Sedge (<i>Carex pensylvanica</i>)					
Beaked Hazel (<i>Corylus comuta</i>)						Low Blueberry (<i>Vaccinium angustifolium</i>)						Awl-fruited Sedge (<i>Carex stipata</i>)					
Cockspur Thorn (<i>Crataegus crus-galli</i>)						Maple-leaf Viburnum (<i>Viburnum acerifolium</i>)						Fox Sedge (<i>Carex vulpinoidea</i>)					
English Hawthorn (<i>Crataegus monogyna</i>)						Hobblebush (<i>Viburnum lantanoides</i>)						Carex (virgata)					
Large-fruited Thorn (<i>Crataegus punctata</i>)						Nannyberry (<i>Viburnum lentago</i>)						Carex m?					
<i>Crataegus</i>						Guelder-Rose (<i>Viburnum opulus</i>)						Carex					
<i>Crataegus</i>						Downy Arrow-wood (<i>Vib. rafinesquianum</i>)						Carex					
Bush Honeysuckle (<i>Dierilla lonicera</i>)						Riverbank Grape (<i>Vitis riparia</i>)						Carex					
Russian Olive (<i>Elaeagnus angustifolia</i>)						Am. Prickly-ash (<i>Zanthoxylum americanum</i>)						Carex					
Autumn Olive (<i>Elaeagnus umbellata</i>)												Carex					
Run. Strawberry-bush (<i>Euonymus obovata</i>)						<i>Fragaria virginiana</i>						Carex					
American Beech (<i>Fagus grandifolia</i>)												Carex					
Glossy Buckthorn (<i>Frangula alnus</i>)												Carex					
White Ash (<i>Fraxinus americana</i>)												Carex					
Black Ash (<i>Fraxinus nigra</i>)												Carex					
Green Ash (<i>Fraxinus pennsylvanica</i>)												Cyperus					
Witch-hazel (<i>Hamamelis virginiana</i>)												Redroot Spike-rush (<i>Eleocharis erythropoda</i>)					
Winterberry (<i>Ilex verticillata</i>)												<i>Eleocharis</i>					
Butternut (<i>Juglans chereae</i>)												Hard-stem Bulrush (<i>Schoenoplectus acutus</i>)					
Black Walnut (<i>Juglans nigra</i>)												Three-square Bulrush (<i>Sch. pungens</i>)					
Common Privet (<i>Ligustrum vulgare</i>)												Soft-stem Bulrush (<i>Sch. tabernaemontani</i>)					
Spicebush (<i>Lindera benzoin</i>)												Dark-green Bulrush (<i>Scirpus atrovirens</i>)					
Fly Honeysuckle (<i>Lonicera canadensis</i>)												Wool-grass (<i>Scirpus cyperinus</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>)												Other Graminoids					
Ninebark (<i>Physocarpus opulifolius</i>)						Field Horsetail (<i>Equisetum arvense</i>)						Broad Bur-reed (<i>Sparganium eurycarpum</i>)					
Balsam Poplar (<i>Populus balsamifera</i>)						Scouring-rush (<i>Equisetum hyemale</i>)						Narrow-leaved Cattail (<i>Typha angustifolia</i>)					
Eastern Cottonwood (<i>Populus deltoides</i>)						Variegated Horsetail (<i>Equisetum variegatum</i>)						Broad-leaved Cattail (<i>Typha latifolia</i>)					
Large-tooth Aspen (<i>Populus grandidentata</i>)						<i>Equisetum</i>						Broad-leaved Cattail (<i>Typha X glauca</i>)					
Trembling Aspen (<i>Populus tremuloides</i>)						Ground-cedar (<i>Lycopodium digitatum</i>)						Articulated Rush (<i>Juncus articulatus</i>)					
Sweet Cherry (<i>Prunus avium</i>)						Shining Clubmoss (<i>Lycopodium lucidulum</i>)						Soft Rush (<i>Juncus effusus</i>)					
Pin Cherry (<i>Prunus pensylvanica</i>)						Ground-pine (<i>Lycopodium obscurum</i>)						Path Rush (<i>Juncus tenuis</i>)					
Black Cherry (<i>Prunus serotina</i>)												<i>Juncus</i>					
Choke Cherry (<i>Prunus virginiana</i>)												<i>Juncus</i>					
<i>Prunus</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: 6766SH2613/2480																	
Date: May 3, 2012																	
Surveyors: JP+TS																	

Significant Wildlife Habitat Form

AECOM

Study Area: BLW JER (GSH) Map #: 636-GSH2613/2486
 Date: 2012-05-03 Time Started: 1:46 P.m.
 Field Staff: Tom Shoney Jess Picke Time Finished: 3:15 P.m.
 Weather Conditions: Cloudy, 25°C, Light breeze

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, FE01)

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

UTMs: Large Pond outside of study area Area of standing water delineated on field map

Water depth (m): unknown % open water: 295 % emergent vegetation: _____

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

* Large Pond, Approx 100m long and 15-20m long - head Area Tow
 Area and soil/substrate of shoreline habitat: and green Frags.

Type and abundance of cover in open water habitat: * Swamp is dry this year, but shows evidence of water in wetter years

Type and abundance of cover in surrounding habitat: _____

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

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

*****Complete Vernal Pool Habitat Description Form*****

Snake Hibernacula

Fissured rock/foundation or rock/debris pile present:

No Yes (if yes, photograph and complete the following)

UTMs: _____ Likelihood to extend below frost line: _____

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

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

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

Seeps and Springs

(FOC, FOM, FOD, SWC, SWM, SWD)

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

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

NHA Site Investigation - Significant Wildlife Habitat Form

AECOM

Colonial Nesting Bird Breeding Habitat (Bank and Cliff Swallows)
 (CUM1, CUT1, CUS, BLO1, BLS1, BLT1, CLO1, CLS1, CLT1)

Eroding bank, sandy hill, pits, steep slope or rock face present:
 No **Yes (if yes, photograph and complete the following)**

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

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

Colonial Nesting Ground Breeding Birds, Shorebird Migratory Stopover Areas
 (BBO1, BBO2, BBS1, BBS2, BBT1, BBT2, SDO1, SDS2, SDT1, MAM1, MAM2, MAM3, MAM4, MAM5)

Shoreline of lake, large river or large wetland present:
 No **Yes (if yes, photograph and complete the following)**

UTMs: _____ Rocky island or peninsula present: _____
 Mudflat present: _____ Evidence of disturbance (e.g. cattle grazing): _____

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

Raptor Winter Feeding and Roosting, Open Country or Shrub/Early Successional Bird Breeding Habitat
 CUT1, CUS1, >30ha, CUM1 >30ha, FOC, FOD, FOM with a CUM, CUT, CUS, CUW > 20ha, or a CUM, CUS, CUT, CUW >15ha

Large meadow, old field or generally open habitat (e.g. CUM, CUS, CUT, CUS, CUW) present:
 Large open habitat present: **No** **Yes (if yes, photograph and complete the following)**

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

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

Old-growth or Mature Forests, Interior Forest Breeding Birds
 (FOD, FOC, FOM, SWC, SWM, SWD. Mature forest (>60 years) present)

Mature forest present: **No** **Yes (if yes, photograph and complete the following)**

UTMs: _____ Age of oldest trees: _____

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

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

Photo #	Location or Subject	Photo #	Location or Subject

Species Conservation Concern Habitat and Incidental Wildlife - Goshen

Map No: 636-6SH2613/2480
 Date (yyyy-mm-dd): 2012-05-03

Field Staff: Tom Storney
 Jess Pethe

Time Started: 1:46 PM
 Time Finished: 3:15 PM

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
<i>Castanopsis</i>		06					
<i>Catalpa</i>		06					
<i>Aster</i>		Vo					
Deer		TKS					
<i>Chimney Swift</i>		HO	Along wet area				
<i>Redstart</i>		Vo					
<i>Green Frog</i>		VO	in pond				

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=observed, CA=Carcass, DP=Distinctive Parts, HO=House/Den, FY=Eggs/young, TK=tracks, FE=Feeding evidence, SC=Scat, S=Other signs (specify)
 Not observed → N/O

ELC	Species	Habitat Description	Habitat Present (Y/N) UTM	description of habitat if present
FOD7	American Gromwell (<i>Lithospermum latifolium</i>) - 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 (<i>Astorum muehlenbergianum</i>) - 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 (<i>Corallorhiza odontorhiza</i>) - 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 (<i>Eryonymus atropurpureus</i>) - 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 (<i>Conioselinum chinense</i>) - S2 Bloom Time - summer to fall	Swampy places with deciduous trees, white cedars, tamarack; springy river banks, wet borders of streams and rivers. Also found among calcareous seepage slopes.	Y (N) UTM	
SWC, SWM, SWD, SWT, MAM, MAS	Crowned Beggarticks (<i>Bidens trichosperma</i>) - 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	N/O
ALT1, FOD7	Eastern Green-violet (<i>Hybanthus concolor</i>) - 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 (<i>Chenopodium foggii</i>) - S2	Species occurs in sandy areas on limestone under oak or pine-oak forests	Y (N) UTM	
TPO2, TPS2, TPW2,	Giant Ironweed (<i>Vernonia gigantea</i>) - S17 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 (Y/N) UTM	UTM description of habitat (present)
CUM1, MAM, FOD6, FOD7, FOD9	June-August 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	June-August Hairy Bedstraw (<i>Gallium pilosum</i>) - S3 Bloom Time - June to August	Occurs in dry, sandy woods and thickets, occasionally in dry sandy fields	Y (N) UTM:	
FE01, FES1, FET1, SWC, SWM1, SWD, SWT, TPO, TPS, TPW	June to August 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	Summer 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	Time - early to late April Harbinger-of-spring (<i>Erigenia bulbosa</i>) - S3 Bloom Time - summer	Occurs in rich, moist deciduous woods, especially on floodplains.	Y (N) UTM:	
SAS1, SAM1, SAF1	Time - summer Hill's Pond Weed (<i>Potamogeton hillii</i>) - SC/S2 Bloom Time - June to August	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters.	Y (N) UTM:	
FOM6, FOM7, FOM8	S2 Bloom Time - June to August Large Round-leaved Orchid (<i>Platanthera macrophylla</i>) - S2 Bloom Time - June - September	Species inhabits moist mixed woods. Found in fairly mature, upland sugar maple-beech-eastern hemlock woodlands.	Y (N) UTM:	
MAM2, MAM3, MAS2, MAS3, SWD	June - September Lizard's Tail (<i>Saururus cernuus</i>) - S3 Bloom Time - March-May	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	March - June 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)	Bloom Time - Late Spring - Early Summer Ploose Evening Primrose (<i>Oenothera pifosella</i>) - S2 Bloom Time - July-September	Moist edges of woods and open, disturbed ground.	Y (N) UTM: N/O	
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	March - June Pumpkin Ash (<i>Fraxinus profunda</i>) - S2 Bloom Time - March - June	Dry, sandy or rocky woods	Y (N) UTM:	
CUM1, ALO, FET1, SWC	Bloom Time - mid May to mid June Ram's-head Lady's-slipper (<i>Cypripedium arietinum</i>) - S3 Bloom Time - April - September	Swamps and floodplains	Y (N) UTM: N/O	
FOD1, FOD2, FOD3, FOD4, FOD5, FOC1, FOM1, FOM5	Time - May - June Round-leaved Groundsel (<i>Packera obovata</i>) - S3 Bloom Time - May - June	Found in cedar woodlands, limestone plains and wooded fens, moist coniferous swamps, dry-sandy woods, and limestone barren.	Y (N) UTM:	
FOD6, FOD7, FOD9	Round-leaved Hawthorn (<i>Crataegus lumaris</i>) - S3 Bloom Time - May to October	Species inhabits open, dry sandy woods. Jack pine, oak, and aspen woodlands.	Y (N) UTM:	
CUM1, TPT1, CUS1	Slender Knotweed (<i>Polygonum tenue</i>) - S2 Bloom Time - late summer to mid fall	Found in moist woods	Y (N) UTM:	
FOD6, FOD7, FOD8, FOD9, SWT2, SWT3	Slender Knotweed (<i>Polygonum tenue</i>) - S2 Bloom Time - late summer to mid fall	Species occurs in old fields, poorly managed pastures, fencelines and roadsides	Y (N) UTM: N/O	
ALO, ALS, ALT, TPO, TPS, TPW	Slender Knotweed (<i>Polygonum tenue</i>) - S2 Bloom Time - late summer to mid fall	Found in moist, rich woods, thicket swamps, banks and floodplains.	Y (N) UTM:	
SBO, SBS, SBT, TPO1, TPS1, TPW1, FOD1, FOD2	Slender Knotweed (<i>Polygonum tenue</i>) - S2 Bloom Time - late summer to mid fall	Species occurs in limestone and dolostone pavement, prairies, open woods, alvars and moist sandy meadows.	Y (N) UTM:	
SDT1, FOD5, FOD9	Slender Knotweed (<i>Polygonum tenue</i>) - S2 Bloom Time - late summer to mid fall	Found in dry, sandy, open areas in deciduous (often oak woods), prairie meadows; at edges of sand pits	Y (N) UTM:	
BLO1, BLS1, BLT1, TPO2, TPS2, TPW2, MAM2, FOD7	Slender Knotweed (<i>Polygonum tenue</i>) - S2 Bloom Time - late summer to mid fall	Found in rich deciduous forest, often on rocky or sandy soils, wooded dunes, meadows, and riverbanks whether in oak or beech-maple woods	Y (N) UTM:	
TPS1, TPW1, CUM1, RBO, SBO	Slender Knotweed (<i>Polygonum tenue</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:	
TPS1, TPW1, CUM1, RBO, SBO	Slender Knotweed (<i>Polygonum tenue</i>) - S2 Bloom Time - late summer to mid fall	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

AM

ELC	Species	Habitat Description	Habitat Presence (Y/N) UTM	description of habitat if present
TP01, TPS1, TPW1, CUM1	Tall Blazing Star (<i>Liatris aspera</i>) - S3/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y (N) UTM:	
FEO, FES, FET, MAM2, MAM3	Tuberous Indian Plantain (<i>Amoglossum plantagineum</i>) - S3 Bloom Time - mid-March to mid-June	Occurs mainly in flat, sandy areas of the Bruce Peninsula. Fens, wet meadows, and calcareous river flats	Y (N) UTM:	
FOC1, FOC2, FOC3, FOC4	Woodland Pinedrops (<i>Pterospora andromedea</i>) - S2 Bloom Time - summer	Found in conifer woods, under pines, but also hemlock, spruce, fir, and white cedar. In dry or rocky soil, often with common juniper and sometimes aspen or birch.	Y (N) UTM:	
CUM1, CUT1, CUW1, RBO1, SBO1	Yellow Ladies'-tresses (<i>Spiranthes ochroleuca</i>) - S2 Bloom Time - August to November	Dry, open sites, usually on acidic sandy soil, dry to mesic open woodland, thickets, meadows, barrens, ledges, outcrops, banks and roadsides, old fields.	Y (N) UTM:	
BIRDS				
CUW, SDO, RBO, TPS	Bald Eagle (<i>Haliaeetus leucocephalus</i>) - SC Common Nighthawk (<i>Chordeiles minor</i>) - SC	Assessed as SWH. Record species if found. Hunts insects over a wide variety of habitats, in particular open or semi-open areas. Inhabits mature forests along steeply sloped ravines adjacent to running water.	not required Y (N) UTM:	
FOD, FOM	Louisiana Waterthrush (<i>Seiurus motacilla</i>) - SC	rees, 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, mixed 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:	
CUT1	Short Eared Owl (<i>Asio flammeus</i>) - SC Yellow-breasted Chat (<i>Icteria virens</i>) - SC	Assessed as SWH. Record species if found. Inhabits thickets, tall tangles of shrubbery beside streams, ponds, overgrown bushy clearings with deciduous thickets, nests above ground in bush, vines	not required Y (N) UTM:	
REPTILES				
	Eastern Ribbonsnake (<i>Thamnophis sauritus</i>) - SC Milksnake (<i>Lampropeltis triangulum</i>) - SC Snapping Turtle (<i>Chelydra serpentina</i>) - SC	Assessed as SWH. Record species if found. Assessed as SWH. Record species if found. Assessed as SWH. Record species if found.	not required not required not required.	
INSECTS				
OAO, SA, SWM, SWD	Azure Bluet (<i>Eralia 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 open 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 toxic milkweed (<i>Asclepius</i> spp.) Habitat includes abandoned farmland, along roadsides, open spaces where these plants grow	Y (N) UTM:	N/D
TPS, CUW	Mottled Duskywing (<i>Erynnis martialis</i>) - S2	usually seen migrating 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, CUM3	Tawny Emperor (<i>Asterocampa clyton</i>) - S3	Species inhabits densely wooded riparian areas, dry woods, open woods, barrens and parks. Usually occurs near Hackberry, the larval foodplant	Y (N) UTM:	N/D
FOD5	West Virginia White (<i>Pieris virginianensis</i>) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant toothwort occur	Y (N) UTM:	

Wetland Data Collection Sheet



Study area: <u>GOSHEN</u>	Map No: <u>636GSH 26/3/2480</u>
Date (yyyy-mm-dd): <u>May 3, 2012</u>	Time Started: <u>1:46pm</u>
Field Staff: <u>Jess Pietke + Tom Shornely</u>	Time Finished: <u>3:15pm</u>

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 + effects from pond

Soils refer to ELC card for soils information

% 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
<u>SWD2-2/ S1</u>	<u>h*: Fraxinus, Acer, Ulm, Alnus</u> <u>ne: Carex, Carex sp</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

- Waterfowl breeding potential in adjacent pond
- undulating topography throughout
- evidence of management within 5 years



- Legend**
- Property Boundary
 - Prime Transmission Line
 - Prime Transmission Line Buffer (180 m)
 - ELC Completed 2011
 - Natural Feature and ID
 - ELC Polygon Boundary
 - ANSI
 - Evaluated Wetlands - PSW
 - ABCA Watercourse

0.1 ha

Base mapping from Ontario Ministry of Natural Resources
Orthophotography 2010

Metres
0 25 50 100

UTM Zone 17N, NAD 83
1:3,000

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Goshen ELC Survey
637_GSH2370
May 2012
Project 60155032

AECOM

ELC
 Community Description and Classification

Map #: 6376SH2370 Polygon: CUP30
 Surveyor(s): Date: May 31, 2012 Time start: 1:07 PM finish: 3:51 PM
 UTMZ: UTMN:

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input checked="" type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input checked="" type="checkbox"/> Surficial Dep. <input type="checkbox"/> Bedrock <input type="checkbox"/> History <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Cultural <input type="checkbox"/> Cover <input type="checkbox"/> Open <input type="checkbox"/> Shrub <input checked="" type="checkbox"/> Treeed	<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 type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input checked="" type="checkbox"/> Valley Slope <input type="checkbox"/> Tableland <input type="checkbox"/> Roli. 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 type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Mixed <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 checked="" type="checkbox"/> Plantation	<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"/> 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 checked="" 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	2	4	Pinus > hostre > Juniper > Populus
2	-	-	
3	4	1	FRAXINUS
4	6	3	Macglen - grass species

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

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

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

Ecotope: *Coniferous Plantation Type* Code: CUP30
Vegetation Type: Code:
Inclusion: *Black Walnut Deciduous Plantation Type* Code: CUP1-3
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						

Prism Factor 2

Soils Ontario and ELC Soils Description

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

ELC Map #: 6376SHA370 Polygon: CUP3b
 Surveyor(s): Date: start: 1:07 PM finish: 3:57 PM
 UTMZ: UTMZ: UTMZ: UTMZ:

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input checked="" 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"/> Bedrock	<input type="checkbox"/> Lacustrine <input type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input type="checkbox"/> Valley Slope <input checked="" type="checkbox"/> Tableland <input type="checkbox"/> Roli. 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 type="checkbox"/> Deciduous <input checked="" 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"/> 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 checked="" 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	2	4	Picea - Picea > Pin stro
2	-	-	
3	-	-	
4	6	4	Solidus sp. > grass sp. > Carex > lot

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: A < 10 0 10-24 N 25-50 N > 50
 Deadfall / Logs: N < 10 N 10-24 N 25-50 N > 50
 BA: N < 10 N 10-24 N 25-50 N > 50

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

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

Ecosite: Code: CUP3b
 Vegetation Type: Coniferous Montane
 Inclusion: Code:
 Complex: Code:

Community Profile Diagram/Comments
 Active Christiana tree plantation
 composed mainly coniferous with deciduous

Tree Tally by Species

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

Soils Ontario and ELC Soils Description

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

ELC Community Description and Classification

Map #: 11 Polygon: 2

Surveyor(s): 102 Date: 11/11/11 Time start: 1:03 PM finish: 3:51 PM

UTMZ: UTM

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 type="checkbox"/> Wetland	<input checked="" type="checkbox"/> Mineral Soil	<input 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 type="checkbox"/> River
	<input type="checkbox"/> Acidic Bedrk	<input type="checkbox"/> Terrace	<input type="checkbox"/> Graminoid	<input type="checkbox"/> Stream
<input type="checkbox"/> Open Water	<input type="checkbox"/> Basic Bedrk	<input type="checkbox"/> Valley Slope	<input type="checkbox"/> Forb	<input type="checkbox"/> Marsh
<input type="checkbox"/> Shallow Water	<input type="checkbox"/> Carb. Bedrk	<input type="checkbox"/> Tableland	<input type="checkbox"/> Lichen	<input type="checkbox"/> Swamp
<input checked="" type="checkbox"/> Surficial Dep.		<input type="checkbox"/> Roli. Upland	<input type="checkbox"/> Bryophyte	<input type="checkbox"/> Fen
<input type="checkbox"/> Bedrock		<input type="checkbox"/> Cliff	<input type="checkbox"/> Deciduous	<input type="checkbox"/> Bog
History		<input type="checkbox"/> Talus	<input type="checkbox"/> Coniferous	<input type="checkbox"/> Barren
<input checked="" type="checkbox"/> Natural		<input type="checkbox"/> Crevice/Cave	<input type="checkbox"/> Mixed	<input type="checkbox"/> Meadow
<input type="checkbox"/> Cultural		<input type="checkbox"/> Alvar		<input type="checkbox"/> Prairie
Cover		<input type="checkbox"/> Rockland		<input type="checkbox"/> Thicket
<input checked="" type="checkbox"/> Open		<input type="checkbox"/> Beach / Bar		<input type="checkbox"/> Savannah
<input type="checkbox"/> Shrub		<input type="checkbox"/> Sand Dune		<input type="checkbox"/> Woodland
<input type="checkbox"/> Tree		<input type="checkbox"/> Bluff		<input type="checkbox"/> Forest
				<input type="checkbox"/> Plantation

Stand Description

Layer	HT	CVR	Species In Order of Decreasing Dominance (up to 4 sp)
1	3	1	<i>Fragaria - Selfing</i>
2			
3	4	2	<i>Carex > Crataegus sp. > MRP</i>
4	6	4	<i>Solidago sp. > Ph. sp. > Lactuca > MRP</i>

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%

BA:	Stand Composition:			
	Size Class Analysis:	Standing Snags:	Deadfall / Logs:	
	N < 10	N < 10	N < 10	R > 50
	N < 10	N < 10	N < 10	N > 50
	N < 10	N < 10	N < 10	N > 50

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

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

Ecosite: Dev-Moist Old Field Meadow Type Code: CUMF-1

Vegetation Type: Dev-Moist Old Field Meadow Type Code: DAO

Inclusion: DAO aquatic Code: DAO

Complex: DAO Code: DAO

Community Profile Diagram/Comments

moist old field meadow type

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

Plant Species List
2012

Trees & Shrubs						Tree & Shrubs						Graminoids					
1	2	3	4	5		1	2	3	4	5		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>)					
Tamarack (<i>Larix laricina</i>)						Alder Buckthorn (<i>Rhamnus alnifolia</i>)						Bromus					
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>)						Elymus					
Scotch Pine (<i>Pinus sylvestris</i>)						Red Currant (<i>Ribes rubrum</i>)						Fowl Manna Grass (<i>Glyceria striata</i>)					
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					
Deciduous						Com. Blackberry (<i>Rubus allegheniensis</i>)						Reed Canary Grass (<i>Phalaris arundinacea</i>)					
Manitoba Maple (<i>Acer negundo</i>)						Wild Red Raspberry (<i>Rubus idaeus</i>)						Timothy (<i>Phleum pratense</i>)					
Black Maple (<i>Acer nigrum</i>)						Black Raspberry (<i>Rubus occidentalis</i>)						Common Reed (<i>Phragmites australis</i>)					
Norway Maple (<i>Acer platanoides</i>)						Purple-fl. Raspberry (<i>Rubus odoratus</i>)						Canada Blue Grass (<i>Poa compressa</i>)					
Red Maple (<i>Acer rubrum</i>)						Dwarf Raspberry (<i>Rubus pubescens</i>)						Fowl Meadow Grass (<i>Poa palustris</i>)					
Silver Maple (<i>Acer saccharinum</i>)						Rubus						Kentucky Bluegrass (<i>Poa pratensis</i>)					
Freeman's Maple (<i>Acer X freemanii</i>)						Peach-leaved Willow (<i>Salix amygdaloides</i>)						Yellow Foxtail (<i>Setaria pumila</i>)					
Sugar Maple (<i>Acer saccharum</i>)						Bebb's Willow (<i>Salix bebbiana</i>)						Green Foxtail (<i>Setaria viridis</i>)					
Mountain Maple (<i>Acer spicatum</i>)						Pussy Willow (<i>Salix discolor</i>)											
Speckled Alder (<i>Alnus incana</i>)						Missouri Willow (<i>Salix eriocephala</i>)											
Downy Serviceberry (<i>Amelanchier arborea</i>)						Sandbar Willow (<i>Salix exigua</i>)						a l l s m r					
Serviceberry (<i>Amelanchier sanguinea</i>)						Shining Willow (<i>Salix lucida</i>)						u d					
Yellow Birch (<i>Betula alleghaniensis</i>)						Black Willow (<i>Salix nigra</i>)											
White Birch (<i>Betula papyrifera</i>)						Slender Willow (<i>Salix petiolaris</i>)											
European Birch (<i>Betula pendula</i>)						Salix											
Blue Beech (<i>Carpinus caroliniana</i>)						Hybrid Crack Willow (<i>Salix X rubens</i>)											
Bitternut hickory (<i>Carya cordiformis</i>)						Black-berried Elder (<i>Sambucus nigra</i>)											
Shagbark Hickory (<i>Carya ovata</i>)						Red-berried Elder (<i>Sambucus racemosa</i>)											
Climbing Bittersweet (<i>Celastrus scandens</i>)						Buffaloberry (<i>Shepherdia canadensis</i>)											
Common Hackberry (<i>Celtis occidentalis</i>)						Eur. Mountain Ash (<i>Sorbus aucuparia</i>)											
Buttonbush (<i>Cephalanthus occidentalis</i>)						Narrow Meadow-sweet (<i>Spiraea alba</i>)											
Alt.-leaved Dogwood (<i>Cornus alternifolia</i>)						Common Lilac (<i>Syringa vulgaris</i>)											
Silky Dogwood (<i>Cornus amomum</i>)						Poison-ivy (<i>Toxicodendron rydbergii</i>)											
Bunchberry (<i>Cornus canadensis</i>)						Climbing Poison-ivy (<i>Toxicodendron radicans</i>)											
Gray dogwood (<i>Cornus racemosa</i>)						White Elm (<i>Ulmus americana</i>)											
Round-leaved Dogwood (<i>Cornus rugosa</i>)						Siberian Elm (<i>Ulmus pumila</i>)											
Red-osier Dogwood (<i>Cornus sericea</i>)						Slippery Elm (<i>Ulmus rubra</i>)											
American Hazel (<i>Corylus americana</i>)						Low Blueberry (<i>Vaccinium angustifolium</i>)											
Beaked Hazel (<i>Corylus cornuta</i>)						Maple-leaf Viburnum (<i>Viburnum acerifolium</i>)											
Cockspur Thom (<i>Crataegus crus-galli</i>)						Hobblebush (<i>Viburnum lantanoides</i>)											
English Hawthorn (<i>Crataegus monogyna</i>)						Nannyberry (<i>Viburnum lentago</i>)											
Large-fruited Thom (<i>Crataegus punctata</i>)						Guelder-Rose (<i>Viburnum opulus</i>)											
Crataegus sp.						Downy Arrow-wood (<i>Vib. rafinesquianum</i>)											
Crataegus						Riverbank Grape (<i>Vitis riparia</i>)											
Bush Honeysuckle (<i>Diervilla lonicera</i>)						Am. Prickly-ash (<i>Zanthoxylum americanum</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 pensylvanica</i>)																	
Black Cherry (<i>Prunus serotina</i>)																	
Choke Cherry (<i>Prunus virginiana</i>)																	
Prunus																	
						Ferns & Allies						Other Graminoids					
						Lady Fern (<i>Athyrium filix-femina</i>)						Broad Bur-reed (<i>Sparganium eurycarpum</i>)					
						Rattlesnake Fern (<i>Botrychium virginianum</i>)						Narrow-leaved Cattail (<i>Typha angustifolia</i>)					
						Bulbet Bladder Fern (<i>Cystopteris bulbifera</i>)						Broad-leaved Cattail (<i>Typha latifolia</i>)					
						Spin. Wood Fern (<i>Dryopteris carthusiana</i>)						Broad-leaved Cattail (<i>Typha X glauca</i>)					
						Crested Wood Fern (<i>Dryopteris cristata</i>)						Articulated Rush (<i>Juncus articulatus</i>)					
						Marginal Wood Fern (<i>Dryopteris marginalis</i>)						Soft Rush (<i>Juncus effusus</i>)					
						Dryopteris						Path Rush (<i>Juncus tenuis</i>)					
						Ostrich Fern (<i>Matteuccia struthiopteris</i>)						Juncus					
						Sensitive Fern (<i>Onoclea sensibilis</i>)						Juncus					
						Cinnamon Fern (<i>Osmunda cinnamomea</i>)											
						Interrupted Fern (<i>Osmunda claytoniana</i>)											
						Royal Fern (<i>Osmunda regalis</i>)											
						Christmas Fern (<i>Polystichum acrostichoides</i>)											
						Eastern Bracken-fern (<i>Pteridium aquilinum</i>)											
						Marsh Fern (<i>Thelypteris palustris</i>)											
						Field Horsetail (<i>Equisetum arvense</i>)											
						Scouring-rush (<i>Equisetum hyemale</i>)											
						Variegated Horsetail (<i>Equisetum variegatum</i>)											
						Equisetum											
						Ground-cedar (<i>Lycopodium digitatum</i>)											
						Shining Clubmoss (<i>Lycopodium lucidulum</i>)											
						Ground-pine (<i>Lycopodium obscurum</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: 637 642 370	1					4										
Date: May 31, 2012	2					5										
Surveyors: JP + TS	3															

CLIP 3A
CLIP 1-1
CLIP 3B

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							
				R		Common Yarrow (<i>Achillea millefolium</i>)						Shepherd's Purse (<i>Capsella bursa-pastoris</i>)						Kidney-leaf Buttercup (<i>Ranunculus abortivus</i>)					
				R		White Snakeroot (<i>Ageratina altissima</i>)						Cutleaf Toothwort (<i>Cardamine concatenata</i>)						Tall Buttercup (<i>Ranunculus acris</i>)				R	
						Com. Ragweed (<i>Ambrosia artemisiifolia</i>)						Toothwort (<i>Cardamine diphylia</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>)						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>Coryza 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>)					
						Philadelphian Fleabane (<i>Erig. philadelphicus</i>)		R				Wild Carrot (<i>Daucus carota</i>)				U		Black Nightshade (<i>Solanum nigrum</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>)					
						Fiat-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>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>)				R	
						Elecampagne (<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>)						Singing Nettle (<i>Urtica dioica</i>)					
						Ox-eye Daisy (<i>Leucanthemum vulgare</i>)		U				<i>Euphorbia</i>						Greater Bladderwort (<i>Utricularia vulgaris</i>)					
						Pineapple-weed (<i>Matricaria discoidea</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>)	R	F	F			Spotted Geranium (<i>Geranium maculatum</i>)						<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>)						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</i>	R	F	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</i>					
						Heart-leaf Aster (<i>Symph. cordifolium</i>)						Spotted Jewelweed (<i>Impatiens capensis</i>)											
						Heath Aster (<i>Symphotrichum ericoides</i>)						Wood Nettle (<i>Laportea canadensis</i>)						lotus + s					U
						Tall White Aster (<i>Symph. lanceolatum</i>)						Motherwort (<i>Leonurus cardiaca</i>)						mentha sp					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>Linaris vulgaris</i>)											
						Common Tansy (<i>Tanacetum vulgare</i>)						Great Lobelia (<i>Lobelia siphilitica</i>)											
						Common Dandelion (<i>Taraxacum officinale</i>)	R					<i>Lobelia</i>											
						Com. Goatsbeard (<i>Tragopogon pratensis</i>)						Cut-leaf Bugleweed (<i>Lycopus americanus</i>)											
						Coltsfoot (<i>Tussilago farfara</i>)						Northern Bugleweed (<i>Lycopus uniflorus</i>)											
												Fringed Loosestrife (<i>Lysimachia ciliata</i>)											
												Moneywort (<i>Lysimachia nummularia</i>)											
												<i>Lysimachia</i>											
												Purple Loosestrife (<i>Lythrum salicaria</i>)											
												Black Medick (<i>Medicago lupulina</i>)											
												Alfalfa (<i>Medicago sativa</i>)											
												White Sweet-clover (<i>Melilotus alba</i>)											
												Yellow Sweet-clover (<i>Melilotus officinalis</i>)											
												Wild Mint (<i>Mentha arvensis</i>)											
												Wild Bergamot (<i>Monarda fistulosa</i>)											
												Small Forget-me-not (<i>Myosotis laxa</i>)											
												Forget-me-not (<i>Myosotis scorpioides</i>)											
												Water-cress (<i>Nasturtium officinale</i>)											
												Com. Evening-primrose (<i>Oenothera biennis</i>)											
												Sweet-cicely (<i>Osmorhiza berterii</i>)											
												Yellow Wood-sorrel (<i>Oxalis stricta</i>)											
												Wild Parsnip (<i>Pastinaca sativa</i>)											
												English Plantain (<i>Plantago lanceolata</i>)											
												Common Plantain (<i>Plantago major</i>)											
												Rugel's Plantain (<i>Plantago rugelii</i>)											
												May-apple (<i>Podophyllum peltatum</i>)											
												Pale Smartweed (<i>Polygonum lapathifolium</i>)											
												Lady's-thumb (<i>Polygonum persicaria</i>)											
												Virginia Knotweed (<i>Polygonum virginianum</i>)											
												<i>Polygonum</i>											
												<i>Polygonum</i>											
												Rough Cinquefoil (<i>Potentilla norvegica</i>)											
												Rough-fruited Cinquefoil (<i>Potentilla recta</i>)											
												Common Cinquefoil (<i>Potentilla simplex</i>)											
												<i>Potentilla</i>											
												Heal-all (<i>Prunella vulgaris</i>)											
												Shinleaf (<i>Pyrola elliptica</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

Significant Wildlife Habitat Form

AECOM

Study Area: BLW JER GSH Map #: 637-65H2370
 Date: 2012-05-31 Time Started: 1:07 P.M.
 Field Staff: Tom Shorney Jess Piette Time Finished: 3:30 P.M.
 Weather Conditions: Sunny, 16°C, light breeze

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: 461030 4795496 Area of standing water delineated on field map
 Water depth (m): 6m (asked) open water: 100% % emergent vegetation: 1%
 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): Permanent pool dug by landowner.
 Area and soil/substrate of shoreline habitat: Soil exposed along edges -> clay
 Type and abundance of cover in open water habitat: 1% duckweed
 Type and abundance of cover in surrounding habitat: Cum 1-1 -> Solidago Sp, grass Sp, Vetch, etc.
 Evidence of disturbance (e.g. cattle grazing): Tree Planting, recreational vehicle use
 Evidence of use by waterfowl, amphibians, turtles (e.g. broken eggs); marsh breeding birds: Amphibian tadpoles

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

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

Evidence of seep or spring: No Yes (if yes, photograph and complete the following)
 UTMs: _____ Description (indicator species, etc): _____

NHA Site Investigation - Significant Wildlife Habitat Form

AZCOM

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, 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 of Conservation Concern Habitat and Incidental Wildlife - Goshen



Map No: 637-6SH2370
Date (yyyy-mm-dd): 2012-05-31

Field Staff: Tom Shorney
Jess Rette

Time Started: 1:07 P.m.
Time Finished: 3:30 P.m.

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Red-shouldered Hawk		OB					
Field Sparrow		VO					
Black-capped Tit		OB					
Blue heron	Flies over	OB					
Robin							
Chimney Swift		Den					
American goldfinch		OB					
Deer		TKS					
Song Sparrow		OB					
Blue Jay		OB					
Great Horned Owl		VO					
Large wood SP		OB					
Wood thrush		OB					
Titliver		VO					

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

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)
 ↪ Not observed → N/O

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: N/O
FOC, FOM, FOD	Burning Bush (Erythronium atropurpureum) - S2 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 (Conioseilinum chinense) - S2 Bloom Time - summer to fall	Swampy places with deciduous trees, white cedars, tamarack; springy river banks, wet borders of streams and rivers. Also found among calcareous seepage slopes.	Y (N) UTM:
SWC, SWM, SWD, SWT, MAM, MAS	Crowned Beggarticks (Bidens trichosperma) - S2 Bloom Time - late summer	Found in openings in swamps, marshes, along shores & wet fields within the Carolinian zone and southeastern Georgian bay. Bogs, fens, tamarack swamps.	Y (N) UTM:
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 (Y/N; UTM); description of habitat if present
CUM1, MAM, FOD6, FOD7, FOD9	June - August Green Dragon (Arisaema dracontium) - 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	June-August Hairy Bedstraw (Galium pilosum) -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	June to August Hairy Valerian (Valeriana edulis) -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 (Blephilia hirsuta) -S1 Bloom Time - Summer	Woodlands, often rocky, especially rivers. Rich woods, swamp forests, floodplains.	Y (N) UTM:
FOD6, FOD7, FOD8, FOD9	Harbinger-of-spring (Erigenia bulbosa) - 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 (Potamogeton hillii) - 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 (Platanthera macrophylla) - 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 (Saururus cernuus) - 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:
FOD6, FOD7, FOD9	Pawpaw (Asimina triloba) -S3 Bloom Time - March-May	Occurs in moist deciduous woods and stream banks.	Y (N) UTM:
FOM8, FOD6, FOD7, FOD9, CUM1	Pilose Evening Primrose (Oenothera pilosella) -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 (Desmodium rotundifolium) -S2 Bloom Time - July-September	Dry, sandy or rocky woods	Y (N) UTM:
FOD7, SWD	Pumpkin Ash (Fraxinus profunda)-S2? Bloom Time - March - June	Swamps and floodplains	Y (N) UTM:
CUW1, ALO, FET1, SWC	Ram's-head Lady's-slipper (Cypripedium arietinum) - 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 (Hieracium venosum) - 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 (Packera obovata) -S3 Bloom Time- May - June	Found in moist woods	Y (N) UTM:
CUM1, CUT1, CUS1	Round-leaved hawthorn (Crataegus lumaria) -S3?	Species occurs in old fields, poorly managed pastures, enclosures and roadside	Y (N) UTM: N/D
FOD6, FOD7, FOD8, FOD9, SWT2, SWT3	Scarlet Beebalm (Monarda didyma) - S3 Bloom Time - May to October	Found in moist, rich woods, thicket swamps, banks and floodplains.	Y (N) UTM:
ALO, ALS, ALT, TPO, TPS, TPW	Slender Blazing Star (Liatris cylindracea) -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 (Polygonum tenue)-S2	Found in dry, sandy, open areas in deciduous (often oak woods), prairie meadows; at edges of sand pits	Y (N) UTM:
SDD1, FOD5, FOD9	Slim-flowered Muhly (Muhlenbergia tenuiflora) - 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 (Gentiana quinquefolia) - 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:
TPS1, TPW1, CUW1, RBO, SBO	Sundial Lupine (Lupinus perennis) - S3 Bloom Time - mid-March to mid-June	Inhabits dry, sandy oak savannas, 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, TPS1, TPW1, CUM1	Tall Blazing Star (<i>Liatris aspera</i>)-S3/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y (N) UTM:
FEO, FES, FET, MAM2, MAM3	Tuberous Indian Plantain (<i>Arnoglossum 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:
CUM4, 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/O
BIRDS			
-	Bald Eagle (<i>Haliaeetus leucocephalus</i>) - SC	Assessed as SWH. Record species if found	not required.
CUW, SDO, RBO, TPS	Common Nighthawk (<i>Chordeiles minor</i>) - SC	Hunts insects over a wide variety of habitats, in particular open or semi-open areas. Nests on ground in a wide range of open, sparse or vegetation-free habitats.	Y (N) UTM:
FOD, FOM	Louisiana Waterthrush (<i>Seiurus motacilla</i>) - SC	Inhabits mature forests along steeply sloped ravines adjacent to running water. Trees, bushes, exposed roots, cliffs, banks and messy logs are favoured nesting spots. Riparian woodlands are preferred stopover sites during migration	Y (N) UTM:
FOD, CUW, CUT	Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>) - SC	Species inhabits open woodland/ edges (oak savannahs and riparian forest), open, deciduous forest with little understory, fields or pasture lands with scattered large trees; wooded swamps; orchards, small woodlots or forest edges; groves of dead or dying trees; requires cavity trees with at least 40 cm dbh; requires about 4 ha for a territory.	Y (N) UTM:
-	Short Eared Owl (<i>Asio flammeus</i>) - SC	Assessed as SWH. Record species if found.	not required.
CUT1	Yellow-breasted Chat (<i>Icteria virens</i>) - SC	Inhabits thickets, tall tangles of shrubbery beside streams, ponds; overgrown bushy clearings with deciduous thickets; nests above ground in bush, vines	Y (N) UTM:
REPTILES			
-	Eastern Ribbonsnake (<i>Thamnophis sauritus</i>) - SC	Assessed as SWH. Record species if found.	not required.
-	Milksnake (<i>Lampropeltis triangulum</i>) -SC	Assessed as SWH. Record species if found.	not required.
-	Snapping Turtle (<i>Chelydra serpentina</i>) - SC	Assessed as SWH. Record species if found.	not required.
INSECTS			
OAO, SA, SWM, SWD	Azure Bluet (<i>Enallagma aspersum</i>) -S3	Species inhabits fishless ponds, lakes and boggy swamps	Y (N) UTM:
TPS, TPW	Sleepy Duskywing (<i>Erynnis brize</i>) - S1	Occurs in oak/oak-pine scrub, chaparral, barrens, well-drained sandy or shaly soils. Species regularly seen at flowers in oak woods, on the ground, and at mud puddles	Y (N) UTM:
CUM1, CUT1, CUW1	Monarch Butterfly (<i>Danaus plexippus</i>) - SC	These larvae only feed on milkweeds (<i>Asclepius</i> spp.). Habitat includes abandoned farmland, along roadsides, open spaces where these plants grow	Y (N) UTM: N/O
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, EQD4-3, TPW, TPS, CUM1	Tawny Emperor (<i>Asterocampa clyten</i>) - S3	Species inhabits densely wooded riparian areas, dry woods, open woods, barrens and parks. Usually occurs near Hackberry, the larval foodplant	Y (N) UTM: N/O
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:

GSH2552

GSH2549

Legend

- Property Boundary
- Prime Transmission Line
- Prime Transmission Line Buffer (180 m)
- ELC Completed 2011
- Natural Feature and ID
- ELC Polygon Boundary
- ANSI
- Evaluated Wetlands - PSW
- ABCA Watercourse

0.5 ha

 UTM Zone 17N, NAD 83
 Basemapping from Ontario Ministry of Natural Resources
 Orthophotography 2010



Goshen ELC Survey

648_GSH2485/GSH2549/GSH2555

May 2012
Project 60165032

AECOM

Figure 1

462628

Tree Tally by Species Polygon: F009-4

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Avg.
CARCOVA	4	1			5	
MAMMER	1				1	
LUMINA	1				1	
OSTVIG	1				1	
Total	7	1			8	100
Basal Area (BA)	3	26				
Dead						

Map #: 648682485/2548/2555
Polygon: F009-4
Surveyor(s): [blank]
Date: June 5, 2012
Time start: 1:30 p.m.
Time finish: 3:50 p.m.
UTMZ: [blank]
UTMN: [blank]

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 type="checkbox"/> Wetland	<input checked="" type="checkbox"/> Mineral Soil	<input 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 type="checkbox"/> River
	<input type="checkbox"/> Acidic Bedrk	<input type="checkbox"/> Terrace	<input type="checkbox"/> Graminoid	<input type="checkbox"/> Stream
<input type="checkbox"/> Open Water	<input type="checkbox"/> Basic Bedrk	<input type="checkbox"/> Valley Slope	<input type="checkbox"/> Forb	<input type="checkbox"/> Marsh
<input type="checkbox"/> Shallow Water	<input type="checkbox"/> Carb. Bedrk	<input type="checkbox"/> Tableland	<input type="checkbox"/> Lichen	<input type="checkbox"/> Swamp
<input checked="" type="checkbox"/> Surficial Dep.		<input type="checkbox"/> Rol. Upland	<input type="checkbox"/> Bryophyte	<input type="checkbox"/> Fen
<input type="checkbox"/> Bedrock		<input type="checkbox"/> Cliff	<input type="checkbox"/> Deciduous	<input type="checkbox"/> Bog
<input checked="" type="checkbox"/> Natural		<input type="checkbox"/> Talus	<input type="checkbox"/> Coniferous	<input type="checkbox"/> Barren
<input type="checkbox"/> Cultural		<input type="checkbox"/> Crevice/Cave	<input type="checkbox"/> Mixed	<input type="checkbox"/> Meadow
<input type="checkbox"/> Cover		<input type="checkbox"/> Alvar		<input type="checkbox"/> Prairie
<input type="checkbox"/> Open		<input type="checkbox"/> Rockland		<input type="checkbox"/> Thicket
<input type="checkbox"/> Shrub		<input type="checkbox"/> Beach / Bar		<input type="checkbox"/> Savannah
<input checked="" type="checkbox"/> Tree		<input type="checkbox"/> Sand Dune		<input type="checkbox"/> Woodland
		<input type="checkbox"/> Bluff		<input type="checkbox"/> Forest
				<input type="checkbox"/> Plantation

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp)
1	1	4	CARCOVA > LUMINA > OSTVIG > MAMMER
2	2	3	CARCOVA > OSTVIG & MAMMER
3	1	2	MAMMER & LUMINA
4	6	6	about equal > no other diag

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

Stand Composition: Size Class Analysis:

<10	10-24	25-50	>50
0	A	A	O

 Standing Snags:

<10	10-24	25-50	>50
N	O	O	R

 Deadfall / Logs:

<10	10-24	25-50	>50
A	R	R	R

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

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

Ecosite: Code: RUD4
Vegetation Type: Code: F009-4
Inclusion: Code: F008-1
Complex: Code: CUP3

Community Profile Diagram/Comments

Frank Moist Bottomland Hicory Deciduous Forest Type
 5' sap
 Congerona Plantation Ecotype

Soils Ontario and ELC Soils Description

Site Metrics	PIU/Auger #	Soils Ontario and ELC Soils Description	Summary
UTM	Zone		
	Easting		
	Northing	4	Moisture Regime
	Position		
	Aspect		
	Percent		
	Slope		Drainage
	Length		
	Mottles		
	Gley		
	Water Table		Effective Texture (indicate below)
	Carbonates		% CF
	Bedrock		% CF
Depth to ...	Depth from zero	% CF	% CF
	Texture		% CF
	Depth from zero	% CF	% CF
	Texture		% CF
	Depth from zero	% CF	% CF
	Texture		% CF
	Depth from zero	% CF	% CF
	Texture		% CF
	% Surface Stone/Rock		
	Moisture Regime		
	Drainage		

Notes:

Map #: 4186SH 2485/2548/2555 **Polygon:** MAM2/CUM1 MOSAIC
Surveyor(s): *Shirley I. Sherry* **Date:** *June 5, 2012* **Time start:** *1:30pm* **Time finish:** *3:56pm*
UTMZ: *UTM11N* **UTMZ:** *UTM11N*

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input checked="" type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic Site <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input checked="" 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	<input 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 checked="" 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 checked="" type="checkbox"/> Graminoid <input checked="" 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 checked="" type="checkbox"/> Marsh <input type="checkbox"/> Swamp <input type="checkbox"/> Fen <input type="checkbox"/> Bog <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

Stand Description

Layer	HT	CVR	Species In Order of Decreasing Dominance (up to 4 sp) (> Much Greater Than; > Greater Than; = About Equal To)
1	3	1	<i>Fraxinus = 1 MAM1</i>
2	—	—	
3	4	1	<i>C. glaberrima = 0 RUC2</i>
4	5/1	4	<i>1 MAM 7 deep ap > symp 4 shum > all sp 1</i>

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

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

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

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

Ecosite: *My Next old field Meadow type / mixed / meadow / shrub* **Code:** *CUM1-MAM2*
Vegetatio Type: *Ecotone Mosaic* **Code:** *MOSAIC*
Inclusion: *MAM2 Cultural Thicket Ecotone* **Code:** *CUM1*
Complex **Code:**

Community Profile Diagram/Comments

Mosaic of both cultural meadow -
MAM2. Ecotone

Notes:

Tree Tally by Species

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

Soils Ontario and ELC Soils Description

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

Plant Species List
2012

Trees & Shrubs						Tree & Shrubs						Graminoids					
1	2	3	4	5		1	2	3	4	5		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>)					
Tamarack (<i>Larix laricina</i>)						Alder Buckthorn (<i>Rhamnus alnifolia</i>)						Bromus					
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>)						Elymus					
Scotch Pine (<i>Pinus sylvestris</i>)						Red Currant (<i>Ribes rubrum</i>)											
Canada Yew (<i>Taxus canadensis</i>)						Ribes						Fowl Manna Grass (<i>Glyceria striata</i>)					
Eastern White Cedar (<i>Thuja occidentalis</i>)						Black Locust (<i>Robinia pseudo-acacia</i>)						Glyceria					
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>) *						Muhlenbergia					
						Rosa ♀						Witch-grass (<i>Panicum capillare</i>)					
						Com. Blackberry (<i>Rubus allegheniensis</i>)						Panicum					
Deciduous						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>)						Rubus						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>)						Salix											
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>)						Sedges					
Climbing Bittersweet (<i>Celastrus scandens</i>)						Eur. Mountain Ash (<i>Sorbus aucuparia</i>)						Drooping Wood Sedge (<i>Carex arctata</i>)					
Common Hackberry (<i>Celtis occidentalis</i>)						Narrow Meadow-sweet (<i>Spiraea alba</i>)						Golden-fruited Sedge (<i>Carex aurea</i>)					
Buttonbush (<i>Cephalanthus occidentalis</i>)						Common Lilac (<i>Syringa vulgaris</i>)						Graceful Sedge (<i>Carex gracillima</i>)					
Alt.-leaved Dogwood (<i>Cornus alternifolia</i>)						Poison-ivy (<i>Toxicodendron rydbergii</i>)						Inland Sedge (<i>Carex interior</i>)					
Silky Dogwood (<i>Cornus amomum</i>)						Climbing Poison-ivy (<i>Toxicodendron radicans</i>)						Bladder Sedge (<i>Carex intumescens</i>)					
Bunchberry (<i>Cornus canadensis</i>)						White Elm (<i>Ulmus americana</i>)						Lake-bank Sedge (<i>Carex lacustris</i>)					
Gray dogwood (<i>Cornus racemosa</i>)						Siberian Elm (<i>Ulmus pumila</i>)						Hop Sedge (<i>Carex lupulina</i>)					
Round-leaved Dogwood (<i>Cornus rugosa</i>)						Slippery Elm (<i>Ulmus rubra</i>)						Pennsylvania Sedge (<i>Carex pensylvanica</i>)					
Red-osier Dogwood (<i>Cornus sericea</i>)						Low Blueberry (<i>Vaccinium angustifolium</i>)						Awl-fruited Sedge (<i>Carex stipata</i>)					
American Hazel (<i>Corylus americana</i>)						Maple-leaf Viburnum (<i>Viburnum acerifolium</i>)						Fox Sedge (<i>Carex vulpinoidea</i>)					
Beaked Hazel (<i>Corylus cornuta</i>)						Hobblebush (<i>Viburnum lantanoides</i>)						Carex					
Cockspur Thorn (<i>Crataegus crus-galli</i>)						Nannyberry (<i>Viburnum lentago</i>)						Carex					
English Hawthorn (<i>Crataegus monogyna</i>)						Guelder-Rose (<i>Viburnum opulus</i>)						Carex					
Large-fruited Thorn (<i>Crataegus punctata</i>)						Downy Arrow-wood (<i>Vib. rafinesquianum</i>)						Carex					
Crataegus						Riverbank Grape (<i>Vitis riparia</i>)						Carex					
Crataegus						Am. Prickly-ash (<i>Zanthoxylum americanum</i>)						Carex					
Bush Honeysuckle (<i>Diervilla lonicera</i>)						Fragaria vilg.						Carex					
Russian Olive (<i>Elaeagnus angustifolia</i>)												Carex					
Autumn Olive (<i>Elaeagnus umbellata</i>)												Carex					
Run. Strawberry-bush (<i>Euonymus obovata</i>)												Carex					
American Beech (<i>Fagus grandifolia</i>)												Carex					
Glossy Buckthorn (<i>Frangula alnus</i>)												Carex					
White Ash (<i>Fraxinus americana</i>)												Carex					
Black Ash (<i>Fraxinus nigra</i>)						Ferns & Allies						Carex					
Green Ash (<i>Fraxinus pennsylvanica</i>)						Lady Fern (<i>Athyrium filix-femina</i>)						Carex					
Witch-hazel (<i>Hamamelis virginiana</i>)						Rattlesnake Fern (<i>Botrychium virginianum</i>)						Cyperus					
Winterberry (<i>Ilex verticillata</i>)						Bulbet Bladder Fern (<i>Cystopteris bulbifera</i>)						Redroot Spike-rush (<i>Eleocharis erythropoda</i>)					
Butternut (<i>Juglans cinerea</i>)						Spin. Wood Fern (<i>Dryopteris carthusiana</i>)						Eleocharis					
Black Walnut (<i>Juglans nigra</i>)						Crested Wood Fern (<i>Dryopteris cristata</i>)						Hard-stem Bulrush (<i>Schoenoplectus acutus</i>)					
Common Privet (<i>Ligustrum vulgare</i>)						Marginal Wood Fern (<i>Dryopteris marginalis</i>)						Three-square Bulrush (<i>Sch. pungens</i>)					
Spicebush (<i>Lindera benzoin</i>)						Dryopteris						Soft-stem Bulrush (<i>Sch. tabernaemontani</i>)					
Fly Honeysuckle (<i>Lonicera canadensis</i>)						Ostrich Fern (<i>Matteuccia struthiopteris</i>)						Dark-green Bulrush (<i>Scirpus atrovirens</i>)					
Glaucous Honeysuckle (<i>Lonicera dioica</i>)						Sensitive Fern (<i>Onoclea sensibilis</i>)						Wool-grass (<i>Scirpus cyperinus</i>)					
Morrow's Honeysuckle (<i>Lonicera morrowii</i>)						Cinnamon Fern (<i>Osmunda cinnamomea</i>)											
Tartarian Honeysuckle (<i>Lonicera tatarica</i>)						Interrupted Fern (<i>Osmunda claytoniana</i>)											
Common Apple (<i>Malus pumila</i>)						Royal Fern (<i>Osmunda regalis</i>)											
White Mulberry (<i>Morus alba</i>)						Christmas Fern (<i>Polystichum acrostichoides</i>)											
Sweet Gale (<i>Myrica gale</i>)						Eastern Bracken-fern (<i>Pteridium aquilinum</i>)											
Ironwood (<i>Ostrya virginiana</i>)						Marsh Fern (<i>Thelypteris palustris</i>)											
Thicket-creeper (<i>Parthenocissus inserta</i>)												Other Graminoids					
Ninebark (<i>Physocarpus opulifolius</i>)						Field Horsetail (<i>Equisetum arvense</i>)						Broad Bur-reed (<i>Sparganium eurycarpum</i>)					
Balsam Poplar (<i>Populus balsamifera</i>)						Scouring-rush (<i>Equisetum hyemale</i>)						Narrow-leaved Cattail (<i>Typha angustifolia</i>)					
Eastern Cottonwood (<i>Populus deltoides</i>)						Variegated Horsetail (<i>Equisetum variegatum</i>)						Broad-leaved Cattail (<i>Typha latifolia</i>)					
Large-tooth Aspen (<i>Populus grandidentata</i>)						Equisetum						Broad-leaved Cattail (<i>Typha X glauca</i>)					
Trembling Aspen (<i>Populus tremuloides</i>)						Ground-cedar (<i>Lycopodium digitatum</i>)						Articulated Rush (<i>Juncus articulatus</i>)					
Sweet Cherry (<i>Prunus avium</i>)						Shining Clubmoss (<i>Lycopodium lucidulum</i>)						Soft Rush (<i>Juncus effusus</i>)					
Pin Cherry (<i>Prunus pensylvanica</i>)						Ground-pine (<i>Lycopodium obscurum</i>)						Path Rush (<i>Juncus tenuis</i>)					
Black Cherry (<i>Prunus serotina</i>)												Juncus					
Choke Cherry (<i>Prunus virginiana</i>)												Juncus					
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: 418 GS H 2485 2548/2555	1				F009-4	4				CUT 3 (inclusion)
Date: June 5, 2012	2				CUM1-1/MAM2	5				CUT 1 (inclusion)
Surveyors: JRTS	3				F008-1 (inclusion)					

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>)					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 perfoliatum</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>Tiarella cordifolia</i>)				
Field Hawkweed (<i>Hieracium caespitosum</i>)					Northern Willow-herb (<i>Epiobium ciliatum</i>)					Star-flower (<i>Trientalis borealis</i>)				
<i>Hieracium</i>					Hairy Willow-herb (<i>Epiobium hirsutum</i>)					Red Clover (<i>Trifolium pratense</i>)				
Elecampane (<i>Inula helenium</i>)					Small-fl. Willow-herb (<i>Epiobium parviflorum</i>)					White Clover (<i>Trifolium repens</i>)				
Prickly Lettuce (<i>Lactuca serriola</i>)					<i>Epiobium</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 discoidea</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>)					<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>)					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>)					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>)									
Heath Aster (<i>Symphotrichum ericoides</i>)					Wood Nettle (<i>Laportea canadensis</i>)									
Tall White Aster (<i>Symph. lanceolatum</i>)					Motherwort (<i>Leonurus cardiaca</i>)									
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. purpureus</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>)				
<i>Lythrum</i>					Fringed Loosetrife (<i>Lysimachia ciliata</i>)					Jack-in-the-pulpit (<i>Arisaema triphyllum</i>)				
					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>)					Bluebeard-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 parviflorum</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 Solom Seal (<i>Maianthemum racemosum</i>)				
					Yellow Wood-sorrel (<i>Oxalis stricta</i>)					Star False Solom Seal (<i>Maianthemum stellatum</i>)				
					Wild Parsnip (<i>Pastinaca sativa</i>)					True Solom Seal (<i>Polygonatum pubescens</i>)				
					English Plantain (<i>Plantago lanceolata</i>)					Pickereel-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>Sisyrinchium montanum</i>)				
					<i>Polygonum</i>					Herb. Carnion 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>)				
										<i>Uvularia</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	F09-4	4	CUP3 (Inclusion)
Date:	2	04/11/11	5	CLT1 (Inclusion)
Surveyors:	3	FORDS (Inclusion)		

Significant Wildlife Habitat Form

AECOM

Study Area: BLW JER **GSH** Map #: 648-6542485/754812555
 Date: 2012-06-05 Time Started: 1:30 p.m.
 Field Staff: Tom Shorney Jess Pieter Time Finished: 3:50 p.m.
 Weather Conditions: Partly Sunny, 15°C, Light breeze

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: 462753 4795845 Area of standing water delineated on field map

Water depth (m): 3cm % open water: 100 % emergent vegetation: 1%

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): Vernal pool
- was probably dry before rainfall

Area and soil/substrate of shoreline habitat: mineral soil - exposed

Type and abundance of cover in open water habitat: 2% Salix sp.

Type and abundance of cover in surrounding habitat: 30% Salix sp, Crataegus sp, Frax sp.

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

Evidence of use by waterfowl, amphibians, turtles (e.g. broken eggs), marsh breeding birds: No evidence of use

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 of Conservation Concern Habitat and Incidental Wildlife - Goshen



Map No: 648-65H 248512548/2555
 Date (yyyy-mm-dd): 2017-06-05
 Field Staff: Tom Skorney, Jess Petter
 Time Started: 1:30 p.m.
 Time Finished: 3:36 p.m.

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Common Yellowthroat		Vo					
Eastern Wood Pewee		Vo					
Downy Woodpecker		Ob					
Blue Jay		Vo					
House Wren		Vo					
Chipping Sparrow		Vo					
Downy Woodpecker		Ob					
Blue Jay		Vo					
Downy Woodpecker		Ob					
Blue Jay		Ob					
Downy Woodpecker		Ob					

Note: Evidence Codes (EV) Breeding Bird (Possible) SH=Suitable Habitat, SM=Singling Male;
 Breeding Bird (Probable) T=Territory, D=Display, P=Pair, N=Nest Building, V= Visiting Nest; A=Anxiety Behavior;
 Breeding Bird (Confirmed) DD=Distracted, NU=Used Nest, FY=Fledged Young, NE=Eggs, NY=Young, FS=Feeds/Faecal sack, AE=Nest Entry

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

N/O = Not observed

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 (Astorum 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 (Eonymus atropurpureus) - S3 Bloom Time - April - June	Species occurs in dry to moist deciduous thickets and woods	Y (N) UTM: N/O
SWC1, SWC3, SWC4, SWM1, SWM2, SWM4, SWM5, SWM6	Chinese Hemlock Parsley (Conioselinum chinense) - S2 Bloom Time - summer to fall	wampy places with deciduous trees, white cedars, tamarack; springy river banks, wet borders of streams and rivers. Also found among calcareous seepage slopes.	Y (N) UTM:
SWC, SWM, SWD, SWT, MAM, MAS	Crowned Beggarticks (Bidens trichosperma) - S2 Bloom Time - late summer	Found in openings in swamps, marshes, along shores & wet fields within the Carolinian zone and southeastern Georgian bay. Bogs, fens, tamarack swamps	Y (N) UTM:
ALT1, FOD7	Eastern Green-violet (Hybanthus concolor) - S2 Bloom Time - mid March to August	Occurs in rich, wet-mesic floodplain forests as well as mesic forests over limestone. Includes floodplains and river banks.	Y (N) UTM:
TPS, TPW, FOM1, FOM2	Fogg's Goosefoot (Chenopodium foggii) - S2	Species occurs in sandy areas on limestone under oak or pine-oak forests	Y (N) UTM:
TPO2, TPS2, TPW2,	Giant Ironweed (Vernonia gigantea) - S1? Bloom Time -	Found in mesic prairies, thickets, moist woods, roadsides and grassy meadows	Y (N) UTM:

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen



ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
CUM1, MAM	June – August		
FOD6, FOD7, FOD9	Green Dragon (<i>Arisaema dracontium</i>) - 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, CUM1	Harbinger-of-spring (<i>Erigenia bulbosa</i>) - S3 <u>Bloom Time – early to late April</u>	Occurs in rich, moist deciduous woods, especially on floodplains.	Y (N) UTM: N/O
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: N/O
FOM8, FOD6, FOD7, FOD9, CUM1	Pilose Evening Primrose (<i>Oenothera pilosella</i>) - S2 <u>Bloom Time – Late Spring – Early Summer</u>	Moist edges of woods and open, disturbed ground	Y (N) UTM: N/O
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:
CUM1, ALO, FET1, SWC	Ram's-head Lady's-slipper (<i>Cypripedium arietinum</i>) - S3 <u>Bloom Time – mid May to mid June</u>	Found in cedar woodlands, limestone plains and wooded fens, moist coniferous swamps, dry-sandy woods, and limestone barren.	Y (N) UTM:
FOD1, FOD2, FOD3, FOD4, FOD5, FOC1, FOM1, FOM5	Rattlesnake Hawkweed (<i>Hieracium venosum</i>) - S2 <u>Bloom Time – April – September</u>	Species inhabits open, dry sandy woods. Jack pine, oak, and aspen woodlands.	Y (N) UTM:
FOD6, FOD7, FOD9	Round-leaved Groundsel (<i>Packera obovata</i>) - S3 <u>Bloom Time – May - June</u>	Found in moist woods	Y (N) UTM:
CUM1, CUM1, CUS1	Round-leaved hawthorn (<i>Crataegus lumaria</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 <u>Bloom Time – May to October</u>	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; always in 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 in oak or beech-maple woods	Y (N) UTM: N/O
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: N/O
TPS1, TPW1, CUM1, 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 of 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>Arnoglossum 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: N/O
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	Units 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 messy 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 shrubby beside streams, ponds; overgrown bushy clearings with deciduous thickets; nests above ground in bush, vines	Y (N) UTM: N/O
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			
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: N/O
TPS, CUW	Mottled Duskywing (<i>Erynnis martialis</i>) -S2	Usually seen nectaring or on wet sandy roads. Larvae feeds on New Jersey Tea and adults only likely near where this plant is present	Y (N) UTM:
SWT, SWD, SWM, FOM, FOD4-3, TPW, TPS, CUM1	Tawny Emperor (<i>Asterocampa clyton</i>) - S3	Species inhabits densely wooded riparian areas, dry woods, open woods, fencerows and parks. Usually occurs near Hackberry, the larval foodplant	Y (N) UTM:
FOD5	West Virginia White (<i>Pteris virginiensis</i>) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant (foxtail) occur	Y (N) UTM:

- Legend**
- Property Boundary
 - Prime Transmission Line
 - Prime Transmission Line Buffer (100 m)
 - ELC Computed 2011
 - Natural Feature and ID
 - ELC Polygon Boundary
 - ANSI
 - Evaluated Wetlands - PSW
 - ABCA Watercourse

*Survey All
of 648 - 64th 2025*

0.5 Ha

Photography from Ontario Ministry of Natural Resources
(Ontario.gov.on.ca)



0 20 40 60 80
1:2,000
1/4" = 100'

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October 2012
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Nov 2012
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Figure 1

