

NHA Site Investigation - Significant Wildlife Habitat Form

AECOM

Colonial Nesting Bird Breeding Habitat (Bank and Cliff Swallows)

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

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

No

Yes (if yes, photograph and complete the following)

UTMs: _____

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

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

Colonial Nesting Ground Breeding Birds, Shorebird Migratory Stopover Areas

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

Shoreline of lake, large river or large wetland present:

No

Yes (if yes, photograph and complete the following)

UTMs: _____

Rocky island or peninsula present: _____

Mudflat present: _____

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

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

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

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

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

Large open habitat present: No

Yes (if yes, photograph and complete the following)

UTMs: _____

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

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

Old-growth or Mature Forests, Interior Forest Breeding Birds

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

Mature forest present: No

Yes (if yes, photograph and complete the following)

UTMs: _____

Age of oldest trees: _____

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

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

Photo #	Location or Subject	Photo #	Location or Subject

Species Conservation Concern Habitat and Incidental Wildlife - Goshen



Map No: 3005SH2114

Field Staff: Tara Stepien

Time Started: 2:00 PM

Date (yyyy-mm-dd): 2012-05-02

JCS

Time Finished: 2:20 PM

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Red-winged Blackbird		OB					
Red-shouldered Hawk		OB					
Song Sparrow		NO					

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

Other Wildlife Evidence: OB=observed, VO=Vocalization, CA=Carcass, DP=Distinctive Parts, HO=House/Den, FY=Eggs/young, TK=tracks, FE=Feeding evidence, SC= Scat, SI=Other signs (specify) *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.	<input type="radio"/> Y <input type="radio"/> 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	<input type="radio"/> Y <input type="radio"/> N UTM:
FOM1, FOM2, CUP3	Autumn Coral-root (Corallorhiza odontrhiza) - S2 Bloom Time - summer to fall	Oak-pine woods or occasionally in open, red pine or white pine plantations. Dry, sandy woods.	<input type="radio"/> Y <input type="radio"/> N UTM:
FOC, FOM, FOD	Burning Bush (Elyonurus atropurpureus) - S3 Bloom Time - April - June	Species occurs in dry to moist deciduous thickets and woods	<input type="radio"/> Y <input type="radio"/> N UTM: N/O
SWC1, SWC3, SWC4, SWM1, SWM2, SWM4, SWM5, SWM6	Chinese Hemlock Parsley (Conioselinum chinense) - S2 Bloom Time - summer to fall	Swampy places with deciduous trees, white cedars, tamarack, springy river banks, wet borders of streams and rivers. Also found among calcareous seepage slopes.	<input type="radio"/> Y <input type="radio"/> 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.	<input type="radio"/> Y <input type="radio"/> N UTM:
ALT1, FOD7	Eastern Green-violet (Hybanthus concolor) - S2 Bloom Time - mid March to August	Occurs in rich, wet-mesic floodplain forest as well as mesic forests over limestone. Includes floodplains and river banks.	<input type="radio"/> Y <input type="radio"/> N UTM: N/O
TPS, TPW, FOM1, FOM2	Fogg's Goosefoot (Chenopodium foggii) - S2	Species occurs in sandy areas on limestone under oak or pine-oak forests	<input type="radio"/> Y <input type="radio"/> N UTM:
TPO2, TPS2, TPW2,	Giant Ironweed (Vermonia gigantean) - S1? Bloom Time	Found in mesic prairies, thickets, moist woods, roadsides and grassy meadows	<input type="radio"/> Y <input type="radio"/> 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 (<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: N/O
TPO1, TPS1, TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	June–August Hairy Bedstraw (<i>Gallium 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	June to August 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	Summer Hairy Wood Mint (<i>Blephilia hirsuta</i>) - S1 <u>Bloom Time – Summer</u>	Woodlands, often rocky, especially rivers, Rich woods, swamp forests, floodplains.	Y N UTM: N/O
FOD6, FOD7, FOD8, FOD9	Time – early to late April 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	SC/S2 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	June – August 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	June – September 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, FOD8	March–May 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	Late Spring – Early Summer Pileose 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	July–September Prostate Tick-trefoil (<i>Desmodium rotundifolium</i>) - S2 <u>Bloom Time – July–September</u>	Dry, sandy or rocky woods	Y N UTM:
FOD7, SWD	March – June Pumpkin Ash (<i>Fraxinus profunda</i>) - S2? <u>Bloom Time – March – June</u>	Swamps and floodplains	Y N UTM: N/O
CUW1, ALO, FET1, SWC	mid June Ram's-head Lady's-slipper (<i>Cypripedium arietinum</i>) - S3 <u>Bloom Time – 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	April – September 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	May – June Round-leaved Groundsel (<i>Packera obovata</i>) - S3 <u>Bloom Time – May – June</u>	Found in moist woods	Y N UTM: N/O
CUM1, CUT1, CUS1	June Round-leaved hawthorn (<i>Crataegus lumarina</i>) - S3?	Species occurs in old fields, poorly managed pastures, fencelines and roadsides	Y N UTM:
FOD6, FOD7, FOD8, FOD9, SWT2, SWT3	May to October 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	June Slender Blazing Star (<i>Liatris cylindracea</i>) - S3	Species occurs in limestone and dolomite pavement, prairies, open woods; alvars and moist sandy meadows.	Y N UTM
SBO, SBS, SBT, TPO1, TPS1, TPW1, FOD1, FOD2	June 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	June 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	mid fall 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	mid-March to mid-June Sundial Lupine (<i>Lupinus perennis</i>) - S3 <u>Bloom Time – mid-March to mid-June</u>	Inhabits dry, sandy oak savannahs, prairies, open barrens or clearings in woodlands of oak, jack pine, and/or aspen.	Y N UTM

Species Conservation Concern Habitat and Incidental Wildlife – Goshen



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TP01, TPS1, TPW1, CUM1	Tall Blazing Star (<i>Liathris 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:
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>Selurus motacilla</i>) - SC	Inhabits mature forests along steeply sloped ravines adjacent to running water. Trees, bushes, exposed roots, cliffs, banks and mossy logs are favoured nesting spots. Riparian woodlands are preferred stopover sites during migration	Y (N) UTM:
FOD, CUW, CUT	Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>) - SC	Species inhabits open woodland/edges (oak savannahs and riparian forest), open, deciduous forest with little understory; fields or pasture lands with scattered large trees; wooded swamps; orchards, small woodlots or forest edges; groves of dead or dying trees; requires cavity trees with at least 40 cm dbh; requires about 4 ha for a territory.	Y (N) UTM:
-	Short Eared Owl (<i>Asio flammeus</i>) - SC	Assessed as SWH. Record species if found.	not required.
CUT1	Yellow-breasted Chat (<i>Icteria virens</i>) - SC	Inhabits thickets, tall tangles of shrubbery beside streams, ponds; overgrown bushy clearings with deciduous thickets; nests above ground in bush, vines	Y (N) UTM:
REPTILES			
-	Eastern Ribbonsnake (<i>Thamnophis sauritus</i>) - SC	Assessed as SWH. Record species if found.	not required.
-	Milksnake (<i>Lampropeltis triangulum</i>) - SC	Assessed as SWH. Record species if found.	not required.
-	Snapping Turtle (<i>Chelydra serpentina</i>) - SC	Assessed as SWH. Record species if found.	not required.
INSECTS			
OAO, SA, SWM, SWD	Azure Bluet (<i>Enallagma aspersum</i>) - S3	Species inhabits fishless ponds, lakes and boggy swamps	Y (N) UTM:
TPS, TPW	Sleepy Duskywing (<i>Erynnis brize</i>) - S1	Occurs in oak/oak-pine scrub, chaparral, barrens, well-drained sandy or shaly soils. Species regularly seen at flowers in oak woods, on the ground, and at mud puddles	Y (N) UTM:
CUM1, CUT1, CUW1	Monarch Butterfly (<i>Danaus plexippus</i>) - SC	Their larvae only feed on milkweeds (<i>Asclepius</i> spp.). Habitat includes abandoned farmland, along roadsides, open spaces where these plants grow	Y (N) UTM:
TPS, CUW	Mottled Duskywing (<i>Erynnis martialis</i>) - S2	Usually seen nectaring or on wet sandy roads. Larvae feeds on New Jersey Tea and adults only likely near where this plant is present	Y (N) UTM:
SWT, SWD, SWM, FOM, FOD4-3, TPW, TPS, CUM1	Tawny Emperor (<i>Asterocampa clyten</i>) - S3	Species inhabits densely wooded riparian areas, dry woods, open woods, fencerows and parks. Usually occurs near Hackberry, the larval foodplant	Y (N) UTM:
FOD5	West Virginia White (<i>Pieris virginliensis</i>) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y (N) UTM:

Oct 31 - 5 AM

Goshen Feature: 309 GSH1015

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

- Roads
- Access/Collection Line
- Collection Buffer (125m)
- Turbine Buffer (171.5m)
- Collection/Feature Intersect
- Turbine Buffer/Feature Intersect
- Property Fabric
- Bluewater Wind Energy Centre

September 1, 2011



Rise - yes

ELC
Community Description and Classification

Site: 309_GSH1015
 Surveyor(s): SAM
 Date: Oct. 3/11
 Polygon: 2
 Time start: 16:46h
 finish: 18:13h
 UTMZ: 17T
 UTMZ: 45156677
 UTMN: 4797988
 WPA 295

Polygon Description

System	Substrata	Topographic Feature	Plant Form	Community
<input checked="" type="checkbox"/> Terrestrial <input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Aquatic	<input checked="" 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 checked="" type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input 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 checked="" type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Mixed	<input type="checkbox"/> Lake <input type="checkbox"/> Pond <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Marsh <input checked="" type="checkbox"/> Swamp <input type="checkbox"/> Fen <input type="checkbox"/> Bog <input type="checkbox"/> Barron <input type="checkbox"/> Meadow <input type="checkbox"/> Prairie <input type="checkbox"/> Thicket <input type="checkbox"/> Savannah <input type="checkbox"/> Woodland <input type="checkbox"/> Forest <input type="checkbox"/> Plantation

mineral over organic

Stand Description

Layer	HT	OVR	Species in Order of Decreasing Dominance (up to 4 sp) <small>> Much Greater Than; > Greater Than; = About Equal To</small>
1	2	4	MS >>> WB > AW > EW
2	3	2	MS > AW > EW > WS > WB
3	4/3/4	4	Jenivalva > Ribes > Dentie > MS > AW > EW > MS > AW > EW > MS > AW > EW
4	7-6	4	Garlic Must > Gum sp > Viola sp. > Ecn. obov.

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 10% - 10% 2 10 - 25% 3 25 - 60% 4 > 60%

Stand Composition: size Class Analysis:

Standing strage:	<10	10-24	25-50	>50
BA: 2.5	R	0	A	A
Deadfall / Logs:	N	0	0	0
	R	0	0	0

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

Community Profile Diagram/Comments

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

Ecosite: Maple Mineral Deciduous Swamps
 Vegetation Type: Silver Maple Mineral Deciduous swamp Type
 Code: SWD3
 Code: SWD3-2
 Code: /
 Code: /

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Prism Factor	2
WB	13	4			7		28
MS	7	7			14		56
AW	2	2			4		16
Total							100
Basal Area (BA)	12	13			25		
Dead	27	20			50		

Soils Ontario and ELC Soils Description

Site Metrics	PVAuger #	Soils Description	Summary
Zone	wpa 295	wpa 295	
Easting	451566	451677	
Northing	4797938	4797988	
Position	B	6	
Aspect	SE	SE	
Percent	3		
Slope	20		
Length	50	>120	
Mottles	WB	WB	
Gley	WB	WB	
Water Table	WB	96	
Carbonates	WB	7120	
Bedrock	>120	>120	

Soil Horizon Description

Depth to ...	Depth from zero	Texture	% CF	% CF	% CF
1	0	OSIL	0	0	0
		Texture	OSIL	512	
2	12	Texture	12	34	% CF
		Texture	OF	0F	
3		Depth from zero		83	% CF
		Texture		Om	
4		Depth from zero			% CF
		Texture		OSIL	OF
		% Surface Stone/Rock			
		Moisture Regime		Mod-Moist (4)	
		Drainage			

ELC
 Site: 309-GSH 015 Polygon: ①
 Surveyor(s): SAN Date: Oct. 3/11 Time start: 10:46 finish: 18:13
 UTMZ: 171 UTMZ: 451566 UTMN: 4797988

Polygon Description
 w p # 294

System	Substrate	Topographic Feature	Plant Form	Community
<input checked="" type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic <input type="checkbox"/> 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 type="checkbox"/> Tableland <input type="checkbox"/> Roll. Upland <input type="checkbox"/> Cliff <input type="checkbox"/> Talus <input type="checkbox"/> Crevice/Cave <input type="checkbox"/> Aivar <input type="checkbox"/> Rockland <input type="checkbox"/> Beach / Bar <input type="checkbox"/> Sand Dune <input type="checkbox"/> Bluff	<input type="checkbox"/> Plankton <input type="checkbox"/> Submerged <input type="checkbox"/> Floating-LVD. <input type="checkbox"/> Graminoid <input type="checkbox"/> Forb <input type="checkbox"/> Lichen <input type="checkbox"/> Bryophyte <input checked="" type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Mixed	<input type="checkbox"/> Lake <input type="checkbox"/> Pond <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Marsh <input 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 checked="" 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	4	WB > MS > AW > EW
2	3	2	MS > AW > Chokecherry
3	4	3	Callio Aster > Jewelweeds > Rib. americ. > Dame's Rocket
4	7-6	3	Garlic Mustard > Geum sp. > Eucn. obov.

HT Codes: 7 < 0.2m 8 > 0.2-0.5m 9 > 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	Deadfall / Logs	< 10	10-24	25-50	> 50
WB 44	MS 30	0	0	A	0
AW 17	EW 17	R	R	R	N
BA: 23		0	R	R	R

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

Community Profile Diagram / Comments

Ecotope: Fresh-Moist Lowland Deciduous Forest / Code: F007
 Vegetation Type: Fresh-Moist Black-Walnut Lowland / Code: F007-4
 Inclusion: Deciduous forest type / Code: WB-MS
 Comments: /

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	%	Plot Area
MS	3	4			7	30	
AW	2	2			4	17	
WB	6	4			10	41	
EW		2			2	9	
Total	11	12			23	100	
Basal Area (BA)	22	24			46		
Dead							

Soils Ontario and ELC Soils Description

Site Metrics	PIVAuger #	Soil Horizon Description				Summary
Zone	w p 294 ①					
Easting	451566					
Northing	4797988					
Position	3					
Aspect	SE					
Percent	3					
Slope	20					
Length	57					
Mottles	> 120					
Gley	> 120					
Water Table	> 120					
Carbonates	> 120					
Bedrock	> 120					
1	Depth from zero	0	% CF		% CF	
	Texture	SIL				
2	Depth from zero	72	% CF		% CF	
	Texture	Of				
3	Depth from zero		% CF		% CF	
	Texture					
4	Depth from zero		% CF		% CF	
	Texture	SIL				SIL
	% Surface Stone/Rock					
	Moisture Regime	Mod Moist (4)				Mod. Moist (4)
	Drainage					

Notes:

ELC
Community and
Description and
Classification

Site: _____ Polygon: _____
 Surveyor(s): _____ Date: _____ Time start: _____
 UTMZ: _____ UTMZ: _____ UTMN: _____ UTMN: _____

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic <input type="checkbox"/> Site <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input type="checkbox"/> Surficial Dep. <input type="checkbox"/> Bedrock <input type="checkbox"/> History <input type="checkbox"/> Natural <input type="checkbox"/> Cultural <input type="checkbox"/> Cover <input type="checkbox"/> Open <input type="checkbox"/> Shrub <input type="checkbox"/> Treeed	<input type="checkbox"/> Organic <input type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Min. <input type="checkbox"/> Acidic Bedk <input type="checkbox"/> Basic Bedk <input type="checkbox"/> Carb. Bedk	<input type="checkbox"/> Lacustrine <input type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input type="checkbox"/> Valley Slope <input type="checkbox"/> Tableland <input 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-L.V.D. <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"/> 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 type="checkbox"/> Plantation

Stand Description

Species in Order of Decreasing Dominance (up to 4 sp)
 (> Much Greater Than; > Greater Than; = About Equal To)

Layer	HT	CVR
1		
2		
3		
4		

HT Codes: 7 < 0.2m 8 > 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 - 50% 4 > 50%

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

<10	10-24	25-50	>50
<10	10-24	25-50	>50
<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

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

Community Profile Diagram/Comments

Notes: _____

Tree Tally by Species

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

Soils Ontario and ELC Soils Description

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

Location:
Observer:

309_GSH 1015
SAM

VASCULAR PLANT CHECKSHEET

Date: Oct. 37/11
Job Number:

Table with columns for plant groups (DICOT HERBS, MONOCOT HERBS) and columns 1-6 for site locations. Includes handwritten entries like 'Polygon (1)', 'Polygon (2)', and 'Phytolacca americana'.

1: polygon (1) F007-4
2: polygon (2) SWD 3-2
3: _____
4: _____
5: _____
6: _____

SITE LOCATIONS

ELC WILDLIFE	SITE: 309-GSH 1015	
	POLYGON: 142	
	DATE: Oct. 3/11	
	SURVEYORS: SAT	
	START TIME: 1646	END TIME: 1813

TEMP (°C): 11	CLOUD (10th): 10	WIND: 1-2	PRECIPITATION: fine mist
CONDITIONS: overcast, cool, wet			

POTENTIAL WILDLIFE HABITAT:

<input checked="" type="checkbox"/> VERNAL POOLS	<input checked="" type="checkbox"/> SNAGS
<input type="checkbox"/> HIBERNACULA	<input checked="" type="checkbox"/> FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
H	E. Gray Tree Frog	VO		2					
M	chipmunk	VO		1					

FAUNAL TYPE CODES (TY):
 B = BIRD M = MAMMAL H = HERPETOFAUNA L = LEPIDOPTERA F = FISH O = OTHER

EVIDENCE CODES (EV):
BREEDING BIRD - POSSIBLE:
 SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:
 T = TERRITORY D = DISPLAY P = PAIR
 A = ANXIETY BEHAVIOUR N = NEST BUILDING V = VISITING NEST

BREEDING BIRD - CONFIRMED:
 DD = DISTRACTION NU = USED NEST FY = FLEDGED YOUNG
 NE = EGGS NY = YOUNG FS = FOOD/FECAL SACK
 AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:
 OB = OBSERVED VO = VOCALIZATION CA = CARCASS
 DP = DISTINCTIVE PARTS HO = HOUSE/DEN FY = EGGS/YOUNG
 TK = TRACKS FE = FEEDING EVIDENC SC = SCAT
 SI = OTHER SIGNS (specify)

Goshen ELC G E U 6 / S M N 1 5

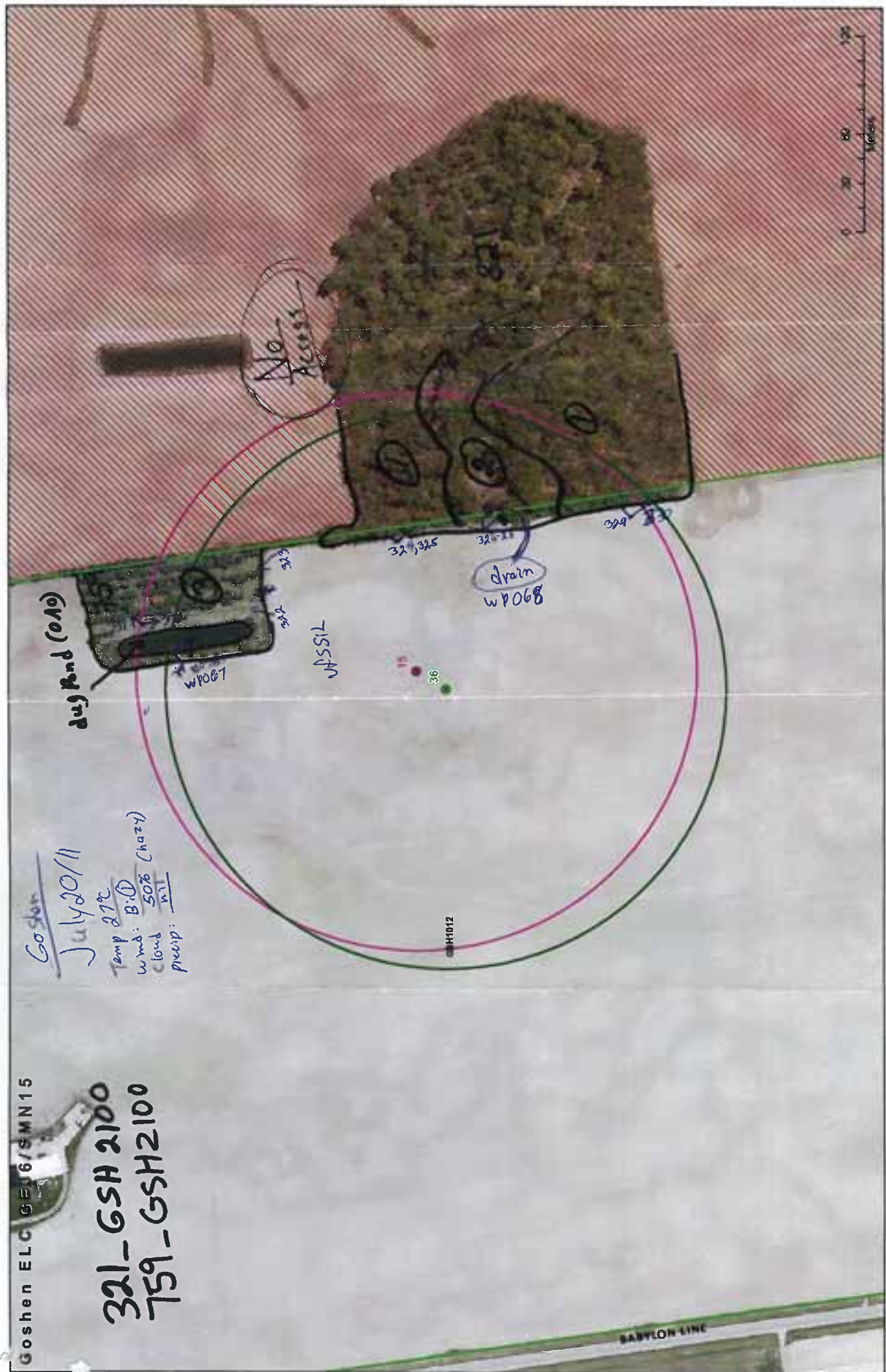
321-GSH 2100
759-GSH 2100

Goshen

July 20/11

Temp 87°C
Wind: B.O (hazy)
Cloud 50%
precip: nil

Dug Pond (01A)



SABWON LINE

321-GSH 2/00/1012 * fence line survey

ELC Community Description and Classification

Site: Gosan GE 345MN 5 Polygon: 0

Surveyors: SAM Date: July 30/11 Time start: 0938h finish: 1026h

UTMZ: 17 UTMZ:

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	<input type="checkbox"/> Organic <input type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Min. <input type="checkbox"/> Acidic Bedk <input type="checkbox"/> Basic Bedk <input type="checkbox"/> Carb. Bedk	<input type="checkbox"/> Lacustrine <input type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input type="checkbox"/> Valley Slope <input type="checkbox"/> Tableland <input type="checkbox"/> Roll. Upland <input type="checkbox"/> Cliff <input type="checkbox"/> Talus <input type="checkbox"/> Crevice/Cave <input type="checkbox"/> Alvar <input type="checkbox"/> Rockland <input type="checkbox"/> Beach / Bar <input type="checkbox"/> Sand Dune <input type="checkbox"/> Bluff	<input type="checkbox"/> Plankton <input type="checkbox"/> Submerged <input type="checkbox"/> Floating-LVD. <input type="checkbox"/> Graminoid <input type="checkbox"/> Forb <input type="checkbox"/> Lichen <input type="checkbox"/> Bryophyte <input 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 checked="" type="checkbox"/> Forest <input type="checkbox"/> Plantation

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp)
1			BD > AS > AH > AW
2			Sour Cherry > Apple > Aw > Cho. R. Cherry
3			Red Bayberry > Maple-leaved Viburnum > Purple Dog
4			Polygonum > Erigeron & Nightshade > Agrimonia > Wild Mint

HT Codes: 7 < 0.2m 8 > 0.2-0.5m 9 > 0.5-1m 4 > 1-2m 3 > 2-8m 2 > 8-25m 1 > 25m
 CVR Codes: 0 = none 1 0% - 10% 2 10 - 25% 3 25 - 50% 4 > 50%

Stand Composition: Size Class Analysis:

< 10	10-24	25-50	> 50
< 10	10-24	25-50	> 50
< 10	10-24	25-50	> 50

Standing Snags: Deadfall / Logs:

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

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

Ecosite: Fresh - Half Sugar Maple Deciduous Forest Code: F066

Vegetation Type: Fresh - Half Sugar Maple - Hardwood Deciduous Forest + Type Code: F066-5

Inclusion: Code: /

Complex: Code: /

Community Profile Diagram/Comments

Notes:

* fence line only

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Total	Rel. Ave.
N/A					
Total					100
Basal Area (BA)					
Dead					

Soils Ontario and ELC Soils Description

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

ELC Plant Species List	SITE: Goshen GE 36 / SMN 15
	POLYGON: ①
	DATE: July 20/11
	SURVEYOR(S): SAM

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTORY 4 = GROUND (GRD.) LAYER
 ABUNDANCE CODES: R = RARE O = OCCASSIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER				COLL.
	1	2	3	4	
Bd	∅	D			
Mh		A			
Ms	②	D			
Aw		A			
Apple					
Grape					
Sour Cherry					
Pl					
wild Mint					
Crch Ntshd					
Chokecherry					
Rasp					
M-L Vib.					
Calico Aster					
Rub allyg.					
Witch Hazel					
Agrimony					
Ew		A			
Wt AuenS					
Yellow AuenS					
Jewelw.					
Red Canon					
Wood Nettle					
Silky Dogw.					
Red Maple					
Blackberry					
Tall Nettle					
Bw					

SPECIES CODE	LAYER				COLL.
	1	2	3	4	
Com. Buckthorn					
BIX Elderberry					

swamp
3

321-GSH 2100/1014
fence line survey

ELC
Community Description and Classification

Site: Goshen GE36/SHN15 Polygon: 2

Surveyors: SAH Date: July 20/11 Time start: 09:30h finish: 10:26h

UTMZ: 17T UTMZ: w p 068

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input type="checkbox"/> Terrestrial <input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Aquatic <input type="checkbox"/> Biotic <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input 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 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 type="checkbox"/> Graminoid <input type="checkbox"/> Forb <input type="checkbox"/> Lichen <input type="checkbox"/> Bryophyte <input checked="" type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Mixed	<input type="checkbox"/> Lake <input type="checkbox"/> Pond <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Marsh <input checked="" type="checkbox"/> Swamp <input type="checkbox"/> Fen <input type="checkbox"/> Bog <input type="checkbox"/> Barren <input type="checkbox"/> Meadow <input type="checkbox"/> Prairie <input type="checkbox"/> Thicket <input type="checkbox"/> Savannah <input type="checkbox"/> Woodland <input type="checkbox"/> Forest <input type="checkbox"/> Plantation

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp)
1	3	3	Red Maple
2	3	3	Silky Dogwood > Black Elderberry
3	4	3	Red Canary > Tall Nettle > Blueberry
4	5	3	Jewelweed > Yellow Avens > Wood Nettle

HT Codes: 7 < 0.2m 8 > 0.2-0.5m 9 > 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 - 50% 4 > 50%

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

EA: N/A

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

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

Ecosite: Maple Mineral Acidulous Swamp Ecotype Code: SWD3

Vegetation Type: Red Maple Mineral Deciduous Swamp Type Code: SWD3-1

Inclusion: Code: Code: Code: Code: Code: Code:

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	% CVR
N/A						
100						
Basal Area (BA)						
Dead						

Soils Ontario and ELC Soils Description

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

CONIFERS						TREES and SHRUBS						GRAMINOIDS					
1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Abies balsamea						+ Rosa multiflora						Agrostis gigantea					
Juniperus communis						Rosa						Agrostis stolonifera					
Juniperus virginiana						Rubus alleghaniensis		X				Agropyron repens					
Larix laricina						Rubus idaeus		X				Alopecurus					
Picea abies			X			Rubus occidentalis						Bromus inermis				X	
Picea glauca			X			Rubus odoratus						Calamagrostis canadensis					
Picea mariana			X			Rubus pubescens						Carex acutata					
Picea strobus			X			Salix alba			X			Carex aurea					
Picea sylvatica						Salix amygdaloides						Carex bebbii					
Thuja occidentalis						Salix bebbiana						Carex blanda					
Thuja canadensis						+ Salix discolor			X			Carex gracillima					
<i>Pinus blyra</i>			X			Salix eriophora			X			Carex granularis					
						Salix exigua			X			Carex hystericus					
						Salix lucida						Carex pennsylvanica					
						Salix petiolaris						Carex radiata					
TREES and SHRUBS						+ Salix purpurea						Carex retrosa					
Acer negundo						Salix x rubens						Carex stipata					
Acer rubrum			X			+ Salix						Carex stricta					
Acer saccharinum		X	X			Sambucus canadensis			X			Carex vulpinoidea					
Acer saccharum		X				Sambucus racemosa						Carex					
Acer spicatum						Sorbus aucuparia						Carex					
Alnus rugosa						Spiraea alba						Carex					
Amelanchier						Syringa vulgaris						Carex					
Berberis thunbergii						+ Tilia americana			X			Carex					
Betula alleghaniensis						Ulmus americana			X			Carex					
Betula papyrifera		X				Ulmus						Carex					
Carpinus caroliniana						Vaccinium						Carex					
Carya cordiformis						Viburnum lentago						Carex					
Celastrus scandens						Viburnum opulus						Cyperus					
Cornus alternifolia						Viburnum <i>acutulum</i>			X			Cyperus					
Cornus amomum		X				Vitis riparia			X		X	Dactylis glomerata				X	
Cornus rugosa						<i>Hamamelis</i>						Danthonia spicata					
Cornus stolonifera						<i>virginiana</i>			X			Echinochloa crus-galli					
Corylus cornuta												Elymus					
Crataegus mollis												Elymus					
Crataegus punctata												Festuca arundinacea					
Crataegus sp.												Glyceria striata					
Crataegus												Glyceria					
Dicentra lonicera												Juncus dudleyi					
Fagus grandifolia												Juncus effusus					
Fraxinus americana		X	X			FERNS						Juncus tenuis					
Fraxinus nigra						Adiantum pedatum						Juncus					
Fraxinus pennsylvanica						Atypium filix-femina						Juncus					
Ilex verticillata						Boraginaceae multifidum						Leersia oryzoides					
Juglans cinerea						Boraginaceae virginiana						Muhlenbergia					
Juglans nigra						Cyanus baltica						Oryzopsis asperifolia					
Lonicera morrowi						Dryopteris caroliniana						Panicum					
Lonicera tatarica						Dryopteris cristata						Panicum					
Lonicera						Dryopteris marginalis						Phacelia arundinacea			X	X	
Malus pensile		X				Equisetum						Phacelia pratensis					
Ostrya virginiana						Equisetum arvense						Phragmites australis					
Parthenocissus vitacea						Equisetum hyemale						Poa compressa					
Populus balsamifera						Equisetum variegatum						Poa pratensis					
Populus grandidentata						Equisetum						Poa					
Populus tremuloides						Gymnocarpium dryopteris						Scirpus atrovirens					
Populus <i>deltoidea</i>				X		Lycopodium digitatum						Scirpus cyperinus					
Prunus pennsylvanica						Lycopodium obscurum						Scirpus validus				X	
Prunus serotina						Lycopodium						Scirpus					
Prunus virginiana		X				Lycopodium						Scirpus					
Prunus <i>cerdasus</i>		X				Mosses						Setaria					
Quercus macrocarpa						Mosses stratioloparia						Sorghastrum					
Quercus rubra						Onoclea sensibilis						Typha angustifolia					
Quercus						Onoclea aquatica						Typha latifolia				X	
Rhamnus cathartica		X				Onoclea rugosa						Typha x glauca					
Rhus glabra		X				Polygonum aviculare											
Rhus typhina						Polygonum aquilinum											
Ribes americanum						Thelypteris palustris											
Ribes cynosbati																	
Ribes x rubrum																	
Robinia pseudo-acacia																	
<i>Cephalanthus</i>																	
<i>occidentalis</i>			X														

ELC WILDLIFE	SITE: GE20/SANIS	
	POLYGON: 1-3	
	DATE: July 20/11	
	SURVEYORS: SAM	
	START TIME: 0938	END TIME: 1026

TEMP (°C): 23	CLOUD (10th): 2	WIND: 1-2	PRECIPITATION: m
CONDITIONS:			

POTENTIAL WILDLIFE HABITAT:	
VERNAL POOLS	SNAGS
HIBERNACULA	FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	SOSP	OB							
B	RWBL	VO							
B	AMRO	OB							
B	CHSP	OB							
B	AMCR	VO							
B	BCCH	OB							
B	COGR	OB							
B	BARS	VO							
B	AMGO	VO							
M	WT Pair	TK							

FAUNAL TYPE CODES (TY):
 B = BIRD M = MAMMAL H = HERPETOFAUNA L = LEPIDOPTERA F = FISH O = OTHER

EVIDENCE CODES (EV):
BREEDING BIRD - POSSIBLE:
 SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:
 T = TERRITORY D = DISPLAY P = PAIR
 A = ANXIETY BEHAVIOUR N = NEST BUILDING V = VISITING NEST

BREEDING BIRD - CONFIRMED:
 DD = DISTRACTION NU = USED NEST FY = FLEDGED YOUNG
 NE = EGGS NY = YOUNG FS = FOOD/FECAL SACK
 AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:
 OB = OBSERVED VO = VOCALIZATION CA = CARCASS
 DP = DISTINCTIVE PARTS HO = HOUSE/DEN FY = EGGS/YOUNG
 TK = TRACKS FE = FEEDING EVIDENCE SC = SCAT
 SI = OTHER SIGNS (specify)

Babylon/Dashwand (Central-East) Oct 5/11 - 5AM

h

Goshen Feature: 321 GSH2100

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

- Roads
- Access/Collection Line
- Collection Buffer (125m)
- Turbine Buffer (171.5m)
- Collection/Feature Intersect
- Turbine Buffer/Feature Intersect
- Property Fabric
- Goshen Wind Energy Centre

100 Meters
0 25 50
September 1, 2011



34

34

34

GSH1012

GSH2100

GSH46899

GSH2034

POE = yes

107m x 50m

102821-87

309

107m x 50m

POE =

107m x 50m

102821-87

107m x 50m

102821-87

107m x 50m

102821-87

107m x 50m

102821-87

107m x 50m

102821-87

107m x 50m

102821-87

wp # 309

ELC Polygon: **D**

Site: 321_GSH2100

Surveyor(s): **SAM** Date: **Oct 5/11** Time start: **12:40**

UTMZ: **17T** UTMZ: **453256** UTMN: **4799527** finish: **13:30**

Polygon Description

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

Stand Description

Species In Order of Decreasing Dominance (up to 4 sp)
 (> Much Greater Than; > Greater Than; = About Equal To)

Layer	HT	CVR	Notes
1	2	4	PH >> Be >> Av
2	3	2-3	PH >> Av >> Eus >> Witon Pa 201
3	5-4	4	Rub. alba > MA > S. carolinensis > Vib. acerif.
4	7-6	3	Palms > MA > Barred Swiftnest >> False Solomon Seal

HT Codes: 7 < 0.2m 8 > 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: **MA 70 - Be 23 - Av 7** Size Class Analysis: **A** <10 **A** 10-24 **A** 25-50 **O** >50
 Standing Snags: **R** <10 **O** 10-24 **O** 25-50 **R** >50
 Deadfall / Logs: **O** <10 **O** 10-24 **O** 25-50 **R** >50

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

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

Ecosite: **Fresh-Moist Sugar Maple Deciduous Forest** Code: **F0D6**
 Vegetation Type: **Fresh-Moist Sugar Maple** Code: **F0D6-5**
 Inclusion: **Silver Maple Mineral Deciduous Swamp Type** Code: **35WB3-2**

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Prism Factor	Rel. Avg.
Av	1	1			2	70	
Be	4	3			7	23	
MA	16	14			30	100	
Basal Area (BA)	32	25			60	30	
Dead							

Soils Ontario and ELC Soils Description

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

wp 308

ELC
community description and classification

Site: 3265H2100 Polygon: (3) Complex

Surveyor(s): SAN Date: Oct 5/11 Time start: 12:40

UTMZ: 17T UTMZ: 453315 UTMN: 4794566 finish: 13:30

Polygon Description

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

Stand Description

Layer	HT	CVR	Species In Order of Decreasing Dominance (up to 4 sp)
1	2	34	M5 >> AG >> MR
2	3	3	M5 >> AG >> Gw
3	4-3	2-3	Buttice bush > Jewelweed > Rameled Aster > String Neck
4	5-6	2	False Nettle >> sensitive fern > Bilobes comae > Marsh

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

Stand Composition: Size Class Analysis:

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

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

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

Ecotope: Maple Mineral Deciduous Swamp Ecotope Code: SWD3

Vegetation Type: Silver Maple Mineral Deciduous Code: SWD3-2

Inclusion: This SWD3-2 is a complex of Code:

Complex: in clusters with polygon 2 - R065 Code:

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Avg.
As	9	5			14	58
Gw	2	2			4	17
AG	3	3			6	25
Total					24	100
Basal Area (BA)					48	24
Dead						

Soils Ontario and ELC Soils Description

Site Metric	PIV Auger #	Soils Description		Summary
Zone	mp 308 (2)	17T	17T	
Easting	453315	453239		Moisture Regime
Northing	4799566	4799558		Drainage
Position	4	5		Effective Texture (Indicate below)
Aspect	SW	NW		% CF
Percent	10			% CF
Slope	15m			% CF
Length	6m	52		% CF
Mottles		66		% CF
Gley		73		% CF
Water Table		38		% CF
Carbonates		720		% CF
Bedrock		720		% CF
Depth from zero	47	A12		% CF
Texture	Om			% CF
Depth from zero	0	0		% CF
Texture	SL	SL		% CF
Depth from zero	15	11		% CF
Texture	L	L		% CF
Depth from zero	48	43		% CF
Texture	5C	5C		% CF
% Surface Stone/Rock	75-C	570		SC
Moisture Regime				Very Moist
Drainage				Poor

CONIFERS						TREES and SHRUBS						GRAMINOIDS					
1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Abies balsamea						+ Rosa multiflora						Agrostis gigantea					
Juniperus communis						Rosa						Agrostis stolonifera					
Juniperus virginiana						Rubus alleghaniensis	X					Agropyron repens					
Larix laricina						Rubus idaeus	X					Alopecurus					
Picea abies						Rubus occidentalis	X					Bromus inermis					
Picea glauca						Rubus odoratus						Calamagrostis canadensis					
Pinus resinosa						Rubus pubescens	X					Carex acutata	X				
Pinus strobus						Salix alba						Carex aurea					
Pinus sylvestris						Salix amygdaloides						Carex bebbii					
Thuja occidentalis						Salix babingtonii						Carex blanda					
Thuja canadensis						+ Salix discolor						Carex gracillima					
						Salix eriocephala						Carex granularis					
						Salix scirpa						Carex hystericina					
						Salix lucida						Carex pennsylvanica					
						Salix petiolaris						Carex radiata					
TREES and SHRUBS						+ Salix purpurea						Carex retrorsa					
Acer negundo						Salix x rubens						Carex stipitata					
Acer rubrum		X				+ Salix						Carex stricta					
Acer saccharinum		X				Sambucus canadensis		X				Carex vulpinoidea					
Acer saccharum	X					Sambucus racemosa						Carex lupulina		X			
Acer spicatum						Sorbus sorbifera						Carex					
Alnus rugosa						Spiraea alba						Carex					
Amelanchier						Syringa vulgaris						Carex					
Berberis thunbergii						+ Tilia americana	X					Carex					
Betula alleghaniensis						Ulmus americana		X				Carex					
Betula papyrifera	X					Ulmus						Carex					
Carpinus caroliniana	X					Vaccinium						Carex					
Carya cordiformis						Viburnum lentago		X				Carex					
Celastrus scandens						Viburnum opulus						Cyperus					
Cornus alternifolia						Viburnum acerifolium	X					Cyperus					
Cornus amomum						Vitis riparia						Dactylis glomerata					
Cornus rugosa						Hamamelis						Danthonia spicata					
Cornus stolonifera	X					Virginiana	X					Echinochloa crus-galli					
Corylus cornuta						Lindera benzoin	X					Eleocharis erythropoda					
Crataegus monogyna						Carya ovata	X					Eleocharis					
Crataegus punctata						Mitchella repens	X					Elymus virginicus					
Crataegus sp.						Cephalanthus						Elymus					
Crataegus						occidentalis	X					Festuca arundinacea					
Diervilla lonicera						Acer freemanii	X					Glyceria striata		X			
Fagus grandifolia	X											Glyceria					
Fraxinus americana	X											Juncus dudleyi					
Fraxinus nigra						FERNS						Juncus effusus		X			
Fraxinus pennsylvanica	X					Adiantum pedatum						Juncus tenuis					
Ilex verticillata						Athyrium filix-femina						Juncus					
Juglans cinerea						Botrychium multifidum						Juncus					
Juglans nigra						Botrychium virginianum						Leersia oryzoides					
Lonicera maurovii						Cystopteris bulbifera						Muhlenbergia					
Lonicera tatarica						Dryopteris caroliniana		X				Oryzopsis asperifolia					
Lonicera						Dryopteris cristata						Panicum					
Mahoe parviflora						Dryopteris marginalis						Panicum					
Ostrya virginiana	X					Dryopteris						Panicum arundinacea		X			
Parthenocissus inserta	X					Equisetum						Panicum pratense					
Populus balsamifera						Equisetum hyemale						Phragmites australis					
Populus grandidentata						Equisetum variegatum						Poa compressa					
Populus tremuloides						Equisetum						Poa pratensis					
Populus						Gymnocarpium dryopteris						Poa					
Prunus pennsylvanica						Lycopodium digitatum						Scirpus atrovirens				X	
Prunus serotina	X					Lycopodium obscurum						Scirpus cyperinus				X	
Prunus virginiana	X					Lycopodium						Scirpus validus					
Prunus						Lycopodium						Scirpus					
Quercus macrocarpa						Mitella struthiopteris						Scirpus					
Quercus rubra						Quercus emablin		X				Setaea					
Quercus						Quercus clematensis						Sparganium					
Rhamnus cathartica						Quercus rugosa			X			Typa angustifolia					
Rhus radicans	X					Polypodium acrostichoides			X			Typa latifolia					
Rhus typhina						Psidium aquilinum						Typa glauca					
Ribes americana						Thelypteris palustris			X								
Ribes cynosbati												Brachyelytrum					
Ribes x rubrum												erectum		X			
Robinia pseudo-acacia																	

ELC Plant Species List	SITE: 321-GS#2100
	POLYGON: ① & ② (complex inclusion)
	DATE: Oct 5/11
	SURVEYOR(S): SAM

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTORY 4 = GROUND (GRD.) LAYER
 ABUNDANCE CODES: R = RARE O = OCCASSIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER				COLL.	SPECIES CODE	LAYER				COLL.
	1	2	3	4			1	2	3	4	
Bw						Marsh Fern					
Aw						M. swamp					
MH						Redstart					
Witch Hazel						Bearded Shortspur					
P. l.						Bp					
Yng. Creeper						Com. Sparrow					
M-L Vib.						Bluebeek					
Rub. alleg.						Id					
Callco						Chickadee					
CB						Carex acutata					
Rasp						Hs					
Yel. Anem.						Be					
Ench. Ntskd						Partridgeberry					
Sens. Fern						Beech Drops					
Royal Fern						Sol. Seal					
Dwarf Rasp											
Spicebush											
Ew											
False Nettle											
Can. G'rod											
Wool Grass											
Pan. Aster											
Ns											
Nannyberry											
AG											
Jewelweed											
Stinging Nettle											
MR											

①
②
including

②
①

Fall Kanna
 Hop sedge
 BK Balm
 ...
 Juncus effusus
 Sp. ...
 Bidens cernua
 Reed Canary
 Marsh Fern

ELC WILDLIFE	SITE: 321-65#2100	
	POLYGON: ① ②	
	DATE: Oct 5/11	
	SURVEYORS: SAM	
	START TIME: 7 1240h	END TIME: 1330h

TEMP (°C): 16	CLOUD (10th): 6	WIND: 1	PRECIPITATION: nil
CONDITIONS: cool, at partly cloudy, very light breeze			

POTENTIAL WILDLIFE HABITAT:

<input checked="" type="checkbox"/>	VERNAL POOLS	<input checked="" type="checkbox"/>	SNAGS
<input type="checkbox"/>	HIBERNACULA	<input checked="" type="checkbox"/>	FALLEN LOGS
<input type="checkbox"/>		<input type="checkbox"/>	

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	AMOR	VO		4					
B	BLWA	VO		3					
B	BCCA	VO		4					
B	AMRO	VO		1					
M	WT Deer	TR		1					
B	DOWO	VO		1					
H	Springs Reptiles	VO		3					
B	WT TU	DP		6+					

FAUNAL TYPE CODES (TY):
 B = BIRD M = MAMMAL H = HERPETOFAUNA L = LEPIDOPTERA F = FISH O = OTHER

EVIDENCE CODES (EV):
BREEDING BIRD - POSSIBLE:
 SH = SUITABLE HABITAT SM = SINGING MALE
BREEDING BIRD - PROBABLE:
 T = TERRITORY D = DISPLAY P = PAIR
 A = ANXIETY BEHAVIOUR N = NEST BUILDING V = VISITING NEST

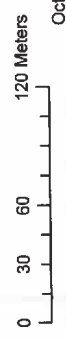
BREEDING BIRD - CONFIRMED:
 DD = DISTRACTION NU = USED NEST FY = FLEDGED YOUNG
 NE = EGGS NY = YOUNG FS = FOOD/FECAL SACK
 AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:
 OB = OBSERVED VO = VOCALIZATION CA = CARCASS
 DP = DISTINCTIVE PARTS HO = HOUSE/DEN FY = EGGS/YOUNG
 TK = TRACKS FE = FEEDING EVIDENCE SC = SCAT
 SI = OTHER SIGNS (specify)

James Kamstra

Goshen Feature: 321 GSH2100

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



October 28, 2011

- ELC Survey Completed
- Turbine Buffer/Feature Intersect
- Property Fabric
- Goshen Wind Energy Centre
- Roads
- Access/Collection Line
- Survey to be Completed
- Turbine Buffer (171.5m)



ORIGINAL

SAME AS PERMITS

Confirm buffer Area & red hatched

Aoe-yes (Accessible)

34

GSH2099

GSH2100

GSH1012

01101014

Map Document: N:\a\2012\321\GIS\MapDocs\321_GSH2100.mxd
 Project: 60156032
 Date: April 2012

Legend

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

0.5 ha

UTM Zone 17N NAD 83
 1:2,000
 Metres

Basemap from Ontario Ministry of Natural Resources
 Copyright 2010

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Goshen Amphibian Survey
321_GSH2100

AECOM

Figure 1



Significant Wildlife Habitat Form

AECOM

Study Area: BLW JER (GSH) Map #: 321-GSH2106/1012
 Date: 23/04/2012 Time Started: 2:40
 Field Staff: Tom Stoney Jess Piette Time Finished: 2:55
 Weather Conditions: cloudy 5°C 45km/h wind

Colonial Nesting Tree/Shrub Birds, Osprey Breeding/Feeding, Bald Eagle Breeding/Nesting Habitat
 (FET1, FOC, FOM, FOD, SWC, SWM, SWD) sticknest #3

Nest bowls present: No Yes (if yes, photograph and complete the following)
 UTM: 453370 4799519 Number of nests: 1
 Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):
Sticknest in crotch of tree, Beech - 15-20m high along skidder trail
 Description of habitat (note riparian areas if present, evidence of disturbance): FOD6-5

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)
 UTM: _____ Area of standing water delineated on field map _____
 Water depth (m): _____ % open water: _____ % emergent vegetation: _____
 Description of standing water (permanent pool, evidence of annual spring flooding, etc): _____
 Area and soil/substrate of shoreline habitat: _____
 Type and abundance of cover in open water habitat: _____
 Type and abundance of cover in surrounding habitat: _____
 Evidence of disturbance (e.g. cattle grazing): _____
 Evidence of use by waterfowl, amphibians, turtles (e.g. broken eggs), marsh breeding birds: _____

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

Snake Hibernacula

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

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
56	Stick nest along trail		

Significant Wildlife Habitat Form

AECOM

Study Area: BLW JER (GSH) Map #: 321-GSH 2100 / 1012
 Date: 23/04/2012 Time Started: 1:10
 Field Staff: Tom Sharney Jess Piette Time Finished: 3:50
 Weather Conditions: Cloudy, 5°C 40km/h wind

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

Nest bowls present: No Yes (if yes, photograph and complete the following)
 UTM: 453278 4799535 Number of nests: 1+2
 Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):
stick nest in notch of beech tree, approx. 15-20m high
 Description of habitat (note riparian areas if present, evidence of disturbance): F006-5 approx 20m from edge

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)
 UTM: See amphibian Form Area of standing water delineated on field map
 Water depth (m): _____ % open water: _____ % emergent vegetation: _____
 Description of standing water (permanent pool, evidence of annual spring flooding, etc):
 Area and soil/substrate of shoreline habitat: _____
 Type and abundance of cover in open water habitat: _____
 Type and abundance of cover in surrounding habitat: _____
 Evidence of disturbance (e.g. cattle grazing): _____
 Evidence of use by waterfowl, amphibians, turtles (e.g. broken eggs), marsh breeding birds: _____

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

Snake Hibernacula

Fissured rock/foundation or rock/debris pile present: No Yes (if yes, photograph and complete the following)
 UTM: See Hibernacula Form Likelihood to extend below frost line: _____
 % canopy cover: _____ % slope: _____ Distance to open canopy (m): _____
 Description of fissure or stone pile (composition/material, dimensions, etc): _____
 Description of surrounding habitat (type & abundance of cover, evidence of disturbance, etc): _____

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

Evidence of seep or spring: No Yes (if yes, photograph and complete the following)
 UTM: _____ 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
# 5b	Stickwa		

Species Conservation Concern Habitat and Incidental Wildlife - Goshen



Map No: BL-GSH/012/2100
 Date (yyyy-mm-dd): 2012-04-23

Field Staff: Tom Skaggs
Jessie

Time Started: 1:10
 Time Finished: 3:50

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
<u>Carolina snake</u>		<u>OB</u>	<u>in Plantation</u>				
<u>collared</u>		<u>OB</u>	<u>Plantation</u>				
<u>Coyote</u>		<u>SC</u>	<u>along farm field near den</u>				
<u>Turtle</u>		<u>OB</u>	<u>tree row</u>				
<u>Red-tailed hawk</u>		<u>OB</u>	<u>along trail</u>				
<u>Red-shouldered hawk</u>		<u>NO</u>	<u>Sighting</u>				
<u>Unidentified</u>		<u>OB</u>	<u>flying from wet area</u>				

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

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

ELC	Species	Habitat Description	Habitat Present (Y/N); UTM; description of habitat if present
FOD7	American Gromwell (Lithospermum latifolium) - S3 <u>Bloom Time - Spring</u>	Shaded river banks, wooded floodplains. River floodplains, woods and edges of woods.	Y (N) UTM: <u>N/A</u>
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 (Coralorrhiza odontorhiza) - S2 <u>Bloom Time - summer to fall</u>	Oak-pine woods or occasionally in open, red pine or white pine plantations. Dry, sandy woods.	Y (N) UTM:
FOC, FOM, FOD	Burning Bush (Euonymus atropurpureus) - S3 Bloom Time - April - June	Species occurs in dry to moist deciduous thickets and woods	Y (N) UTM: <u>N/A</u>
SWC1, SWC3, SWC4, SWM1, SWM2, SWM4, SWM5, SWM6	Chinese Hemlock Parsley (Conioselinum chinense) - S2 <u>Bloom Time - summer to fall</u>	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 <u>Bloom Time - late summer</u>	Found in openings in swamps, marshes, along shores & wet fields within the Carolinian zone and southeastern Georgian Bay. Bogs, fens, tamarack swamps.	Y (N) UTM: <u>N/A</u>
ALT1, FOD7	Eastern Green-violet (Hybanthus concolor) - S2 Bloom Time - mid March to August	Occurs in rich, wet-mesic floodplain forests as well as mesic forests over limestone. Includes floodplains and river banks.	Y (N) UTM: <u>N/A</u>
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: <u>N/A</u>
TPO2, TPS2, TPW2	Giant Ironweed (Vermonia gigantea) - S1? Bloom Time	Found in mesic prairies, thickets, moist woods, roadsides and grassy meadows	Y (N) UTM: <u>N/A</u>

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 (<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: N/A
TPO1, TPS1, TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	June-August Hairy Bedstraw (<i>Galium pilosum</i>) - S3 <u>Bloom Time - June-August</u>	Occurs in dry, sandy woods and thickets; occasionally in dry sandy fields	(Y) N UTM:
FEOT, FES1, FET1, SWC, SWM, SWD, SWT, TPO, TPS, TPW	June to August 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	Summer Hairy Wood Mint (<i>Blephilia hirsuta</i>) - S1 <u>Bloom Time - Summer</u>	Woodlands, often rocky, especially rivers. Rich woods, swamp forests, floodplains.	(Y) N UTM: N/A
FOD6, FOD7, FOD8, FOD9	Harbinger-of-spring (<i>Eigenia bulbosa</i>) - S3 <u>Bloom Time - early to late April</u>	Occurs in rich, moist deciduous woods, especially on floodplains.	(Y) N UTM: N/A
SAS1, SAM1, SAF1	Hill's Pond Weed (<i>Potamogeton hillii</i>) - SC/S2 <u>Bloom Time - summer</u>	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters.	(Y) N UTM:
FOM6, FOM7, FOM8	Large Round-leaved Orchid (<i>Platanthera macrophylla</i>) - S2 <u>Bloom Time - June to August</u>	Species inhabits moist mixed woods. Found in fairly mature, upland sugar maple-beech-eastern hemlock woodlands.	(Y) N UTM:
MAM2, MAM3, MAS2, MAS3, SWD	Lizard's Tail (<i>Saururus cernuus</i>) - S3 <u>Bloom Time - June - September</u>	Species inhabits shores and streambanks along shallow water. As well as swamps, floodplains, shallow water and mudflats at the borders of streams and ponds.	(Y) N UTM: N/A
FOD6, FOD7, FOD9	Pawpaw (<i>Asimina triloba</i>) - S3 <u>Bloom Time - March-May</u>	Occurs in moist, deciduous woods and stream banks.	(Y) N UTM: N/A
FOM8, FOD6, FOD7, FOD9, CUW1	Pilose Evening Primrose (<i>Oenothera pilosella</i>) - S2 <u>Bloom Time - Late Spring - Early Summer</u>	Moist edges of woods and open, disturbed ground.	(Y) N UTM: N/A
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	Prostate Tick-trefoil (<i>Desmodium rotundifolium</i>) - S2 <u>Bloom Time - July-September</u>	Dry, sandy or rocky woods	(Y) N UTM:
FOD7, SWD	Pumpkin Ash (<i>Fraxinus profunda</i>) - S2? <u>Bloom Time - March - June</u>	Swamps and floodplains	(Y) N UTM: N/A
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: N/A
CUM1, CUT1, CUS1	Round-leaved hawthorn (<i>Crataegus lumaria</i>) - S3?	Species occurs in old fields, poorly managed pastures, fencelines and roadsides	(Y) N UTM:
FOD6, FOD7, FOD8, FOD9, SWT2, SWT3	Scarlet Beebalm (<i>Monarda didyma</i>) - S3 <u>Bloom Time - May to October</u>	Found in moist, rich woods, thicket swamps, banks and floodplains.	(Y) N UTM: N/A
ALO, ALS, ALT, TPO, TPS, TPW	Slender Blazing Star (<i>Liatris cylindracea</i>) - S3	Species occurs in limestone and dolomite pavement, prairies, open woods, alvars and moist sandy meadows.	(Y) N UTM:
SBO, SBS, SBT, TPO1, TPS1, TPW1, FOD1, FOD2	Slender Knotweed (<i>Polygonum tenue</i>) - S2	Found in dry, sandy, open areas in deciduous (often oak woods), prairie meadows; at edges of sand pits	(Y) N UTM:
SDT1, FOD5, FOD9	Slim-flowered Mully (<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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ELC	Species	Habitat Description	Habitat Present (Y/N); UTM; description of habitat if present
TP01, TPS1, TPW1, CUM1	Tall Blazing Star (<i>Liatris aspera</i>) - S3/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y (N) UTM:
FE0, FES, FET, MAM2, MAM3	Tuberous Indian Plantain (<i>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:
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>Selurus motacilla</i>) - SC	Inhabits mature forests along steeply sloped ravines adjacent to running water. Trees, bushes, exposed roots, cliffs, banks and mossy logs are favoured nesting spots. Riparian woodlands are preferred stopover sites during migration.	Y (N) UTM
FOD, CUW, CUT	Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>) - SC	Species inhabits open-woodland/edges (oak savannahs and riparian forest), open, deciduous forest with little understory, fields or pasture lands with scattered large trees, wooded swamps, orchards, small woodlots or forest edges; groves of dead or dying trees; requires cavity trees with at least 40 cm dbh; requires about 4 ha for a territory.	Y (N) UTM: N/A
-	Short Eared Owl (<i>Aio 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 brizeo</i>) - S1	Occurs in oak/oak-pine scrub, chaparral, barrens, well-drained sandy or shaly soils. Species regularly seen at flowers in oak woods, on the ground, and at mud puddles	Y (N) UTM:
CUM1, CUT1, CUW1	Monarch Butterfly (<i>Danaus plexippus</i>) - SC	Their larvae only feed on milkweeds (<i>Asclepius</i> spp.). Habitat includes abandoned farmland, along roadsides, open spaces where these plants grow	Y (N) UTM:
TPS, CUW	Mottled Duskywing (<i>Erynnis martialis</i>) -S2	Usually seen nectaring or on wet sandy roads. Larvae feeds on New Jersey Tea and adults only likely near where this plant is present	Y (N) UTM:
SWT, SWD, SWM, FOM, FOD4-3, TPW, TPS, CUM1	Tawny Emperor (<i>Asterocampa clyten</i>) - S3	Species inhabits densely wooded riparian areas, dry woods, open woods, fencerows and parks. Usually occurs near Hackberry, the larval foodplant	Y (N) UTM:
FOD5	West Virginia White (<i>Pieris virginienis</i>) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y (N) UTM:

Significant Wildlife Habitat Form

Re-visit Nest Bowls

AECOM

Study Area:	BLW JER <u>GSH</u>	Map #:	<u>321-GSH2100</u>
Date:	<u>18-May-2012</u>	Time Started:	<u>9:20 am</u>
Field Staff:	<u>J. Kamstra + A. Delt</u>	Time Finished:	<u>9:50 am</u>
Weather Conditions:	<u>Sunny, 15C</u>		

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

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

UTMs: 453278, 4799535 Number of nests: 1

Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):
large stick prob Red-tailed Hawk - fresh maple sprig on nest indicates it is active and a hawk, nest actually in Red Maple (not Beech)

Description of habitat (note riparian areas if present, evidence of disturbance):
Red Maple - Sugar Maple - Ash forest

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

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

UTMs: _____ Area of standing water delineated on field map

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

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

Area and soil/substrate of shoreline habitat: _____

Type and abundance of cover in open water habitat: _____

Type and abundance of cover in surrounding habitat: _____

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

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

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

Snake Hibernacula

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

UTMs: _____ Likelihood to extend below frost line: _____

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

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

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

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

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

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

Ⓢ Additional - Bird calls heard are on back of sheet.

NHA Site Investigation - Significant Wildlife Habitat Form

AECOM

Colonial Nesting Bird Breeding Habitat (Bank and Cliff Swallows)

(CUM1, CUT1, CUS, BLO1, BL\$1, 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
RBGR	calling		
AMGO	"		
SDSP	"		
COGR	"		
WAVI	"		
G CFL	"		

Significant Wildlife Habitat Form

Re-visit Nest Bowls

AECOM

Study Area: BLW JER **GSH** Map #: 321-GSH2100/1012
 Date: 18-May-2012 Time Started: 9:20 am
 Field Staff: J. Kamstra & A. Datt Time Finished: 9:50 am
 Weather Conditions: Sunny, 15°C

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)
 UTM: 453370, 4799519 Number of nests: 1
 Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):
Old small nest, possibly crow but smaller than west; in broken
Beech along logging tracks, nest not active. nest
 Description of habitat (note riparian areas if present, evidence of disturbance):
Red maple - Sugar Maple - Ash Forest.

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)
 UTM: _____ Area of standing water delineated on field map: _____
 Water depth (m): _____ % open water: _____ % emergent vegetation: _____
 Description of standing water (permanent pool, evidence of annual spring flooding, etc): _____
 Area and soil/substrate of shoreline habitat: _____
 Type and abundance of cover in open water habitat: _____
 Type and abundance of cover in surrounding habitat: _____
 Evidence of disturbance (e.g. cattle grazing): _____
 Evidence of use by waterfowl, amphibians, turtles (e.g. broken eggs), marsh breeding birds: _____
 Complete Vernal Pool Habitat Description Form

Snake Hibernacula

Fissured rock/foundation or rock/debris pile present: No Yes (if yes, photograph and complete the following)
 UTM: _____ 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)
 UTM: _____ Description (indicator species, etc): _____

Additional - Bird calls heard - are on back of sheet

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): _____

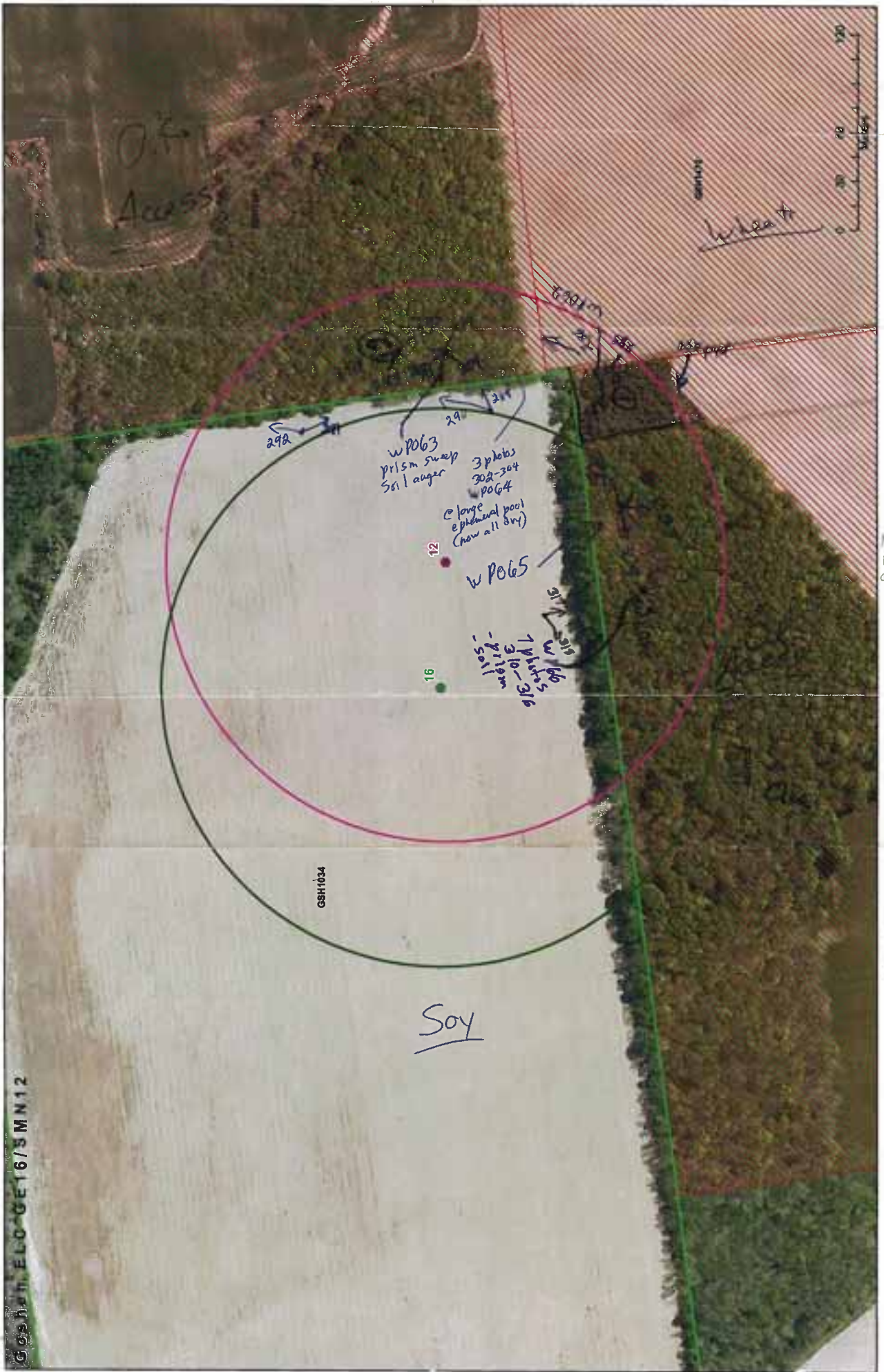
Colonial Nesting Ground Breeding Birds, Shorebird Migratory Stopover Areas
 (BBO1, BBO2, BBS1, BBS2, BBT1, BBT2, SDO1, SDS2, SDT1, MAM1, MAM2, MAM3, MAM4, MAM5)
 Shoreline of lake, large river or large wetland present:
 No Yes (if yes, photograph and complete the following)
 UTM: _____ Rocky island or 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, 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
PIWO	collis		
GCFL	"		
SOSP	"		

366



G:\GIS\DATA\ELC\GE16\SMN12

ELC Community Description and Classification

Site: Casher CE/6/SMN/2 Polygon: 0 Cup
 Surveyors: SJM Date: July 20/11 Time start: 0702h finish:
 UTMZ: UTMZ:

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic	<input type="checkbox"/> Organic <input checked="" type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Min. <input type="checkbox"/> Acidic Bedrk <input type="checkbox"/> Basic Bedrk <input type="checkbox"/> Carb. Bedrk	<input type="checkbox"/> Lacustrine <input type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input 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-L.V.D. <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	1	4	<u>Picea</u>
2			
3			
4			

HT Codes: 7 <0.2m 8 >0.2-0.5m 9 >0.5-1m 4 >1-2m 3 >2-5m 2 >5-25m 1 >25m
 CVR Codes: 0 = none 1 0% - 10% 2 10 - 25% 3 25 - 50% 4 > 50%

Species 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

Community Age

Pioneer Young Mid-Age Mature Old Growth

Species

Vegetation Type	Code
<u>Coniferous Plantation</u>	<u>CUF</u>
<u>Colorado Spruce Coniferous Plantation</u>	<u>CUF30</u>
Intubercata:	Code:
Garruiplex	Code:

Community Profile Diagram/Comments



Notes:

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Total	Percent
Total				100	
Basal Area (BA)					
Dead					

Soils Ontario and ELC Soils Description

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

ELC
Community Description and Classification

Site: Goswin 6E/G/SIN 12 Polygon: 2 FOD
 Surveyor(s): SJA Date: July 20/11 Time start: finish:
 UTMZ: UTMZ: UTMN:

Polygon Description

<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
Site	<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 checked="" type="checkbox"/> Stableland	<input type="checkbox"/> Lichen	<input type="checkbox"/> Swamp
<input checked="" type="checkbox"/> Surficial Dep.		<input type="checkbox"/> Roll. Upland	<input type="checkbox"/> Bryophyte	<input type="checkbox"/> Fen
<input type="checkbox"/> Bedrock		<input type="checkbox"/> Cliff	<input checked="" 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"/> Aivar		<input type="checkbox"/> Prairie
Cover		<input type="checkbox"/> Rockland		<input type="checkbox"/> Thicket
<input 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 checked="" type="checkbox"/> Tree		<input type="checkbox"/> Bluff		<input checked="" 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			

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: <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: Code:
 Vegetation Type: Code:
 Inclusion: Code:
 Complex: Code:

Community Profile Diagram/Comments

Notes:

w pole - Be, MA, D, D, D
 w pole - Be, MA, D, D, D

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Prism Factor	2
MT	4	4			8		
AW	1	1			2		
BD	1	1			2		
BE	7	0			7		
BRCKM	1				1		
Total	16	12			28		100
Basal Area (BA)							
Dead							

Soils Ontario and ELC Soils Description

Pit/Auger #	Soils Description		Summary
(1) w pole 3 w pole 6			
UTM	Zone	Easting	Moisture Regime
	Northing	Position	Drainage
Slope	Aspect	Percent	Effective Texture (indicate below)
	Slope	Length	% CF
	Mottles		% CF
	Gley		% CF
	Water Table		% CF
	Carbonates		% CF
	Bedrock		% CF
Depth to ...	Depth from zero	% CF	% CF
1	0-19	24	24
	Texture	f s s i l	
2	30	35	35
	Texture	v f s s i l	
3	34	63	63
	Texture	s i c l	
4	34+	63+	63+
	Texture	c l	
	% Surface Stone/Rock		
	Moisture Regime		
	Drainage		

ELC Plant Species List	SITE: <i>Goshen GE 16 / \$MN 12</i>
	POLYGON: <i>(2) FOD</i>
	DATE: <i>July 20/11</i>
	SURVEYOR(S): <i>SAM</i>

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTORY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASSIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER				COLL.
	1	2	3	4	
<i>Sour Cherry</i>					
<i>Grape</i>					
<i>h</i>					
<i>B_p</i>					
<i>Aw</i>					
<i>P_f</i>					
<i>Walnut</i>					
<i>Blk Cherry</i>					
<i>Pl</i>				A	
<i>Strawb</i>				D	
<i>Yell Am s</i>				D	
<i>Herb Rod[†]</i>					
<i>Virg. Creeper</i>					
<i>Green Ntsh d</i>					
<i>Calico Aster</i>					
<i>Rocky Gooseberry</i>					
<i>MN</i>					
<i>EW</i>					
<i>Jack</i>					
<i>Hay apple</i>					
<i>Partridgeberry</i>				K	
<i>lp</i>					
<i>Be</i>					
<i>Hop sedge</i>					
<i>Cuc. Vine</i>					
<i>Bebb's sedge</i>					
<i>Rum. Strawb Bush²</i>					
<i>Shag bar k</i>					

SPECIES CODE	LAYER				COLL.
	1	2	3	4	
<i>Bloodroot</i>					
<i>False Sol. Seal</i>					

* - little understory
 - very sparse ground cover

ELC WILDLIFE	SITE: <i>Goshen GE16/SMN 12</i>		
	POLYGON:		
	DATE: <i>July 20/11</i>		
	SURVEYORS: <i>SN</i>		
START TIME: <i>0702 N</i>		END TIME: <i>0907 H</i>	
TEMP (°C): <i>24</i>	CLOUD (10th): <i>30</i>	WIND: <i>Ø</i>	PRECIPITATION: <i>ml</i>
CONDITIONS: <i>Slightly hazy, humid, sunny</i>			

POTENTIAL WILDLIFE HABITAT:

VERNAL POOLS	SNAGS
HIBERNACULA	FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	AMCR	VO							
B	RBWO	VO							
B	SOSP	VO							
B	WOTH	OB							
B	CENA	VO							
B	NOFL	VO							
B	ANRO	VO							
B	TNBH	VO							
B	BLJA	OB							
B	GRC A	OB							
B	BAOR	VO							
B	GCFL	OB							
B	HOWR	VO							

FAUNAL TYPE CODES (TY):

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

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:

T = TERRITORY D = DISPLAY P = PAIR
A = ANXIETY BEHAVIOUR N = NEST BUILDING V = VISITING NEST

BREEDING BIRD - CONFIRMED:

DD = DISTRACTION NU = USED NEST FY = FLEDGED YOUNG
NE = EGGS NY = YOUNG FS = FOOD/FECAL SACK
AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:

OB = OBSERVED VO = VOCALIZATION CA = CARCASS
DP = DISTINCTIVE PARTS HO = HOUSE/DEN FY = EGGS/YOUNG
TK = TRACKS FE = FEEDING EVIDENCE SC = SCAT
SI = OTHER SIGNS (specify)

326-GSH1126/GSH1289

- Collection? feature Internet
- Access/Collection Line
- Collection Buffer (125m)
- Turbine Buffer (171.5m)
- Property Fabric

h

September 1, 2011



Goshen Feature: 326 GSH1126/GSH1289

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

