

PRE-SURVEY COMMENT: wpa 88

* Very nice hardwood forest
has been carefully managed/cut

ELC
Community Description and Classification

Site: 326_GSH1126 / GSH1289 Polygon: 500
 Surveyor(s): SAH Date: 5/12/11 Time start: 1400h finish: 1507h
 UTMZ: 17T UTMZ: 448895 UTMN: 4800234

Polygon Description

<input checked="" type="checkbox"/> Terrestrial	<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"/> Submerged	<input type="checkbox"/> Pond
<input type="checkbox"/> Aquatic	<input type="checkbox"/> Parent Min.	<input type="checkbox"/> Floating-LVD.	<input type="checkbox"/> River
	<input type="checkbox"/> Acidic Bedrk	<input type="checkbox"/> Graminoid	<input type="checkbox"/> Stream
<input type="checkbox"/> Open Water	<input type="checkbox"/> Basic Bedrk	<input type="checkbox"/> Forb	<input type="checkbox"/> Marsh
<input type="checkbox"/> Shallow Water	<input type="checkbox"/> Carb. Bedrk	<input type="checkbox"/> Lichen	<input type="checkbox"/> Swamp
<input checked="" type="checkbox"/> Surficial Dep.	<input type="checkbox"/> Soil 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"/> Alvar	<input type="checkbox"/> Rockland	<input type="checkbox"/> Prairie
Cover	<input type="checkbox"/> Beach / Bar	<input type="checkbox"/> Beach / Bar	<input type="checkbox"/> Thicket
<input type="checkbox"/> Open	<input type="checkbox"/> Sand Dune	<input type="checkbox"/> Sand Dune	<input type="checkbox"/> Savannah
<input type="checkbox"/> Shrub	<input type="checkbox"/> Bluff		<input type="checkbox"/> Woodland
<input checked="" type="checkbox"/> Tree			<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	2	4	Bp >> Kt = Aw > Bc
2	3	3	Blue Beech > White Ash > Sugar Maple
3	5	2	21-24g Giberna > Calliope > Blue G > h > Fowl Noddy
4	6-7	3	Ench. Nightshade > Red-Strawberry > Garlic Mustard > Herb

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

BA: 37

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

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

Ecoalle: Dry-Fresh Sugar Maple-Deciduous Forest Code: F0D5
Vegetation Type: Dry-Fresh Sugar Maple-Basswood Code: F0D5-6
Inclusion: Deciduous Forest Type
Complex: ---

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Prism Factor
Av	8	1			9	24
Av	3	6			9	24
Bc	6	7			13	35
Bc	2	3			5	14
lp		1			1	3
Total	18	18			37	100
Basal Area (BA)	38	36			74	37
Dead						

Soils Ontario and ELC Soils Description

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

326-65H

wp 287

- good selective cut mgnd. no old growth + lots of mature trees

ELC

Community Description and Classification

Star: 326-65H-1134/188 Polygon: 2 Date: 5 Oct 2011 Time start: 1400 h finish: 1507 h UTMZ: 11T UTMZ: 449184 UTMN: 4800276

Polygon Description

System: Terrestrial, Wetland, Aquatic, Shrub, Tree, etc. Substrate: Organic, Mineral Soil, etc. Topographic Feature: Lacustrine, Riverine, etc. Plant Form: Plankton, Submerged, etc. Community: Lake, Pond, River, etc.

Stand Description

Table with columns: Layer, HT, CVR. Rows 1-4 with handwritten data: 1 2.4 4, 2 3-4 2-3, 3 5 3, 4 6-7 3

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

Stand Composition: Size Class Analysis, Standing Snags, Deadfall / Logs. BA: 32

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

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

Ecosite: Dry-Fresh Sugar Maple-Beech Deciduous Forest Code: FOD5-2

Community Profile Diagram/Comments

Tree Tally by Species

Table with columns: Species, Tally 1, Tally 2, Tally 3, Tally 4, Total, Rel. Avg. Species: MH, BP, BC

Soils Ontario and ELC Soils Description

Site Metrics, Depth to..., Soil Horizon Description. Includes fields for P/Auger #, Zone, Easting, Northing, Position, Aspect, Percent, Slope, Length, Mottles, Gley, Water Table, Carbonates, Bedrock, etc.

ELC Plant Species List	SITE: 288 GSH 1289 326 GSH 1289
	POLYGON: (1) (2) /1126
	DATE: Sept. 22/11
	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	
As As	.					White Birch but stems					
PI PI						Glossy Irid					
MH MH		White Birch					
Bp		Grk Mustard					.
Aw		Zig Zag					.
Be		Bristly Black Currant					.
Cb		Blue Beech					.
N Y Fern		False Soli Saul					.
Ip							
Anonymous (trapping)											
Jack											
Rn. spruce bush.											
Prickly Gooseberry											
Ribes frise											
Carex roser											
Sambucus rub.	
BS Ntshd											.
Leek											
Witch Hazel											
Sour Cherry											
Calico Aster											
Plantain Sedge											
Ground Squirrel											
Herb Rabbit											
Red											
Blue											
Blue Ash											
Ench Ntshd											

Wood Proj
preceded
CEWA
Spring peeper

RvBA

ELC WILDLIFE	SITE: 326-GSH 1126/1289	
	POLYGON: ① 4②	
	DATE: Sept. 22/11	
	SURVEYORS: SAK	
	START TIME: 1400h	END TIME: 1507h

TEMP (°C): 19	CLOUD (10th): 5	WIND: 1-2	PRECIPITATION: hi
CONDITIONS:			

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	Wood Frog	OB		3					
H	Gray Treefrog	VO		1					
B	Dowd	VO		1					
B	PIWO	HO		1					
B	CEWA	VO		2					
H	Spring Peep	VO		1					
B	rwBB	VO		4					

FAUNAL TYPE CODES (TY):

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

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:

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

BREEDING BIRD - CONFIRMED:

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

OTHER WILDLIFE EVIDENCE:

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



Legend

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

0.5 ha

Basemapping from Ontario Ministry of Natural Resources
Orthorectification 2010



0 25 50 100
Metres

UTM Zone 17N MAD 83

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Goshen Amphibian Survey
326_GSH1126
April 2012
Project 80155032

AECOM

Figure 1

32665H1176

ELC (Community Description and Classification)

Site: GOSHEN Polygon: F005-1

Surveyor(s): JESSICA T. THOMPSON Date: 3:00 pm
 APR 26, 2012 finish: 4:15 pm

UTMZ: 449248 UTMZ: 4800243 UTMN:

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input checked="" type="checkbox"/> Terrestrial	<input type="checkbox"/> Organic	<input type="checkbox"/> Lacustrine	<input type="checkbox"/> Plankton	<input type="checkbox"/> Lake
<input type="checkbox"/> Wetland	<input 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"/> Tableland	<input type="checkbox"/> Lichen	<input type="checkbox"/> Swamp
<input type="checkbox"/> Surficial Dep.	<input type="checkbox"/> Bedrock	<input type="checkbox"/> Roll, Upland	<input type="checkbox"/> Bryophyte	<input type="checkbox"/> Fen
History	<input type="checkbox"/> Cliff	<input type="checkbox"/> Talus	<input type="checkbox"/> Deciduous	<input type="checkbox"/> Bog
<input type="checkbox"/> Natural	<input type="checkbox"/> Crevice/Cave	<input type="checkbox"/> Alvar	<input type="checkbox"/> Coniferous	<input type="checkbox"/> Barren
<input type="checkbox"/> Cultural	<input type="checkbox"/> Rockland	<input type="checkbox"/> Beach / Bar	<input type="checkbox"/> Mixed	<input type="checkbox"/> Meadow
Cover	<input type="checkbox"/> Sand Dune	<input type="checkbox"/> Bluff		<input type="checkbox"/> Prairie
<input type="checkbox"/> Open				<input type="checkbox"/> Thicket
<input type="checkbox"/> Shrub				<input type="checkbox"/> Savannah
<input checked="" type="checkbox"/> Tree				<input type="checkbox"/> Woodland
				<input type="checkbox"/> Forest
				<input type="checkbox"/> Plantation

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (> > Much Greater Than; > Greater Than; = About Equal To)
1	1-4	4	ACESAC >> FAGGRAN - TILAMER - FRAMER
2	2	3	ACESAC
3	3	3	ACESAC > PRUVIG > OSTVIE
4	6	3	EUCAME > VIOPAB > CACCONC - CAUTHAL

HT Codes: 7 < 0.2m 8 > 0.2-0.5m 5 > 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%

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

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

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

Ecocite:	Code:
Vegetation Type:	Code: F005-1
Inclusion:	Code:
Complex:	Code:

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Total
ACESAC	HHH-ttt			10
Total				10
Basal Area (BA)				20
Dead				n/c

Soils Ontario and ELC Soils Description

Site Metrics	PIVAuger #				Summary
	Zone	Easting	Northing	Position	
Slope	Aspect				Moisture Regime
	Percent				
Mottles	Slope				Drainage
	Length				
Depth to...	Gley				Effective Texture (Indicate below)
	Water Table				
Soil Horizon Description	Carbonates				% CF
	Bedrock				
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	Drainage				% CF

Significant Wildlife Habitat Form

AECOM

Study Area:	BLW	JER	<u>GSH</u>	Map #:	<u>326-GSH126</u>
Date:	<u>2012-04-26</u>			Time Started:	<u>3:00</u>
Field Staff:	<u>Tom Stoney Jess Piette</u>			Time Finished:	<u>4:15</u>
Weather Conditions:	<u>cloudy, 5°C, 40km/h</u>				

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

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

UTMs: _____ Number of nests: _____

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

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

Waterfowls Stopover/Nesting, Amphibian Breeding, Turtle Nesting/Over-wintering, Marsh Breeding Birds
(CUM1, CUT1, MAM, MAS, SAS1, SAM1, SAF1, SWD, SWT1, SWT2) (FOC, FOM, FOD, SWC, SWM, SWD, BO01, 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): _____

NHA Site Investigation - Significant Wildlife Habitat Form

AECOM

Colonial Nesting Bird Breeding Habitat (Bank and Cliff Swallows)

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

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

No

Yes (if yes, photograph and complete the following)

UTMs: _____

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

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

Colonial Nesting Ground Breeding Birds, Shorebird Migratory Stopover Areas

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

Shoreline of lake, large river or large wetland present:

No

Yes (if yes, photograph and complete the following)

UTMs: _____

Rocky island or peninsula present: _____

Mudflat present: _____

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

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

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

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

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

Large open habitat present: No

Yes (if yes, photograph and complete the following)

UTMs: _____

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

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

Old-growth or Mature Forests, Interior Forest Breeding Birds

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

Mature forest present: No

Yes (if yes, photograph and complete the following)

UTMs: _____

Age of oldest trees: _____

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

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

Photo #	Location or Subject	Photo #	Location or Subject

Species Conservation Concern Habitat and Incidental Wildlife - Goshen



Map No: 326-65H1126
 Date (yyyy-mm-dd): 2017-04-26
 Field Staff: Tom Jones
 Time Started: 3:00
 Time Finished: 4:15

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Blue Jay		No	Called in deciduous trees				
Crow		ob	Flying over Fernald				

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 N/O

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

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen



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

Species Conservation Concern Habitat and Incidental Wildlife - Goshen

ACOM

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
TPQ1, TPS1, TPW1, CUM1	Tall Blazing Star (<i>Liatris aspera</i>) - S3/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y (N) UTM:
FEO, FES, FET, MAM2, MAM3	Tuberous Indian Plantain (<i>Arnoglossum plantagineum</i>) - S3 Bloom Time - mid-March to mid-June	Occurs mainly in flat, sandy areas of the Bruce Peninsula. Fens, wet meadows, and calcareous river flats.	Y (N) UTM:
FOC1, FOC2, FOC3, FOC4	Woodland Pinedrops (<i>Pterospora andromedea</i>) - S2 Bloom Time - summer	Found in conifer woods, under pines, but also hemlock, spruce, fir, and white cedar. In dry or rocky soil, often with common juniper and sometimes aspen or birch.	Y (N) UTM:
CUM1, CUT1, CUW1, RBO1, SBO1	Yellow Ladies'-tresses (<i>Spiranthes ochroleuca</i>) - S2 Bloom Time - August to November	Dry, open sites, usually on acidic sandy soil, dry to mesic open woodland, thickets, meadows, barrens, ledges, outcrops, banks and roadsides, old fields.	Y (N) UTM:
BIRDS			
-	Bald Eagle (<i>Haliaeetus leucocephalus</i>) - SC	Assessed as SWH. Record species if found.	not required.
CUW, SDO, RBO, TPS	Common Nighthawk (<i>Chordeiles minor</i>) - SC	Hunts insects over a wide variety of habitats, in particular open or semi-open areas. Nests on ground in a wide range of open, sparse or vegetation-free habitats.	Y (N) UTM:
FOD, FOM	Louisiana Waterthrush (<i>Seiurus motacilla</i>) - SC	Inhabits mature forests along steeply sloped ravines adjacent to running water. Trees, bushes, exposed roots, cliffs, banks and mossy logs are favoured nesting spots. Riparian woodlands are preferred stopover sites during migration.	Y (N) UTM:
FOD, CUW, CUT	Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>) - SC	Species inhabits open woodland/edges (oak savannahs and riparian forest), open deciduous forest with little understorey; fields or pasture lands with scattered large trees; wooded swamps; orchards, small woodlots or forest edges; groves of dead or dying trees; requires cavity trees with at least 40 cm dbh; requires about 4 ha for a territory.	Y (N) UTM: No
-	Short Eared Owl (<i>Asio flammeus</i>) - SC	Assessed as SWH. Record species if found.	not required.
CUT1	Yellow-breasted Chat (<i>Icteria virens</i>) - SC	Inhabits thickets, tall tangles of shrubby beside streams, ponds; overgrown bushy clearings with deciduous thickets; nests above ground in bush, vines	Y (N) UTM:
REPTILES			
-	Eastern Ribbonsnake (<i>Thamnophis sauritus</i>) - SC	Assessed as SWH. Record species if found.	not required.
-	Milksnake (<i>Lampropeltis triangulum</i>) - SC	Assessed as SWH. Record species if found.	not required.
-	Snapping Turtle (<i>Chelydra serpentina</i>) - SC	Assessed as SWH. Record species if found.	not required.
INSECTS			
OAO, SA, SWM, SWD	Azure Bluet (<i>Enallagma aspersum</i>) - S3	Species inhabits fishless ponds, lakes and boggy swamps	Y (N) UTM:
TPS, TPW	Sleepy Duskywing (<i>Erynnis brizo</i>) - S1	Occurs in oak/oak-pine scrub, chaparral, barrens, well-drained sandy or shaly soils. Species regularly seen at flowers in oak woods, on the ground, and at mud puddles	Y (N) UTM:
CUM1, CUT1, CUW1	Monarch Butterfly (<i>Danaus plexippus</i>) - SC	Their larvae only feed on milkweeds (<i>Asclepius</i> spp.). Habitat includes abandoned farmland, along roadsides, open spaces where these plants grow	Y (N) UTM:
TPS, CUW	Mottled Duskywing (<i>Erynnis martialis</i>) - S2	Usually seen nectaring on or wet sandy roads. Larvae feeds on New Jersey Tea and adults only likely near where this plant is present	Y (N) UTM:
SWT, SWD, SWM, FOM, FOD4-3, TPW, TPS, CUM1	Tawny Emperor (<i>Asterocampa clyton</i>) - S3	Species inhabits densely wooded riparian areas, dry woods, open woods, fencerows and parks. Usually occurs near Hackberry, the larval foodplant	Y (N) UTM:
FOD5	West Virginia White (<i>Pteris virginensis</i>) - SC	This species is restricted to rich, moist, deciduous woods where its foodplant Toothwort occur.	Y (N) UTM: N/D

* Plenty of cut-leaved Toothwort *

331 - GSH1347



ASA

ELC
Community Description and Classification

Map #: 331 GSH 1347 Polygon: 2

Surveyor(s): SE Date: July 4, 2012 Time start: 2:00pm finish: 3:45pm

UTMZ: 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"/> 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 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 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	ACE SALL = Fagagard.
2	2	3	ACE SALL = Fagagard.
3	4	3	C. axillata = ACE SALL = Fagagard.
4	2	3	pruvig = Citrate = Toxicops = ACE SALL

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

Stand Composition: Size Class Analysis:

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

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

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

Ecotope: Dry-Fresh sugar maple Dec. For. Code: FODS

Vegetation Type: Dry-Fresh sugar maple-Black Dec. For. Code: FODS-2

Inclusion: Code:

Complex: Code:

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

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

Soils Ontario and ELC Soils Description

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

ASA

Plant Species List 2012

Table with columns for plant species names and abundance indicators (1-5) for three categories: Dicots - Asteraceae, Dicots, and Dicots. Includes handwritten entries like 'Fragaria virginiana' and 'U'.

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

Map Number: 231 GS4 1347
Date: July 4, 2012
Surveyors: [names]

Plant Species List
2012

Trees & Shrubs						Tree & Shrubs						Graminoids					
1	2	3	4	5		1	2	3	4	5		1	2	3	4	5	
Conifers						Deciduous						Grasses					
Balsam Fir (<i>Abies balsamea</i>)						White Oak (<i>Quercus alba</i>)						Giant Redtop (<i>Agrostis gigantea</i>)					
Common Juniper (<i>Juniperus communis</i>)						Bur Oak (<i>Quercus macrocarpa</i>)						Redtop (<i>Agrostis stolonifera</i>)					
Eastern Red Cedar (<i>Juniperus virginiana</i>)						Red Oak (<i>Quercus rubra</i>)						Awnless Brome (<i>Bromus inermis</i>)					
Tamarack (<i>Larix laricina</i>)						Alder Buckthorn (<i>Rhamnus alnifolia</i>)						Bromus					
Norway Spruce (<i>Picea abies</i>)						Common Buckthorn (<i>Rhamnus cathartica</i>)						Blue-joint Grass (<i>Calamagrostis canadensis</i>)					
White Spruce (<i>Picea glauca</i>)						Smooth Sumac (<i>Rhus glabra</i>)						Orchard Grass (<i>Dactylis glomerata</i>)					
Black Spruce (<i>Picea mariana</i>)						Staghorn Sumac (<i>Rhus hirta</i>)						Poverty Oat Grass (<i>Danthonia spicata</i>)					
Jack Pine (<i>Pinus banksiana</i>)						Wild Black Currant (<i>Ribes americanum</i>)						Quack Grass (<i>Elymus repens</i>)					
Red Pine (<i>Pinus resinosa</i>)						Prickly Gooseberry (<i>Ribes cynosbati</i>)						Virginia Wild Rye (<i>Elymus virginicus</i>)					
Eastern White Pine (<i>Pinus strobus</i>)						Swamp Black Currant (<i>Ribes lacustre</i>)						Elymus					
Scotch Pine (<i>Pinus sylvestris</i>)						Red Currant (<i>Ribes rubrum</i>)											
Canada Yellow (<i>Taxus canadensis</i>)						Ribes						Fowl Manna Grass (<i>Glyceria striata</i>)					
Eastern White Cedar (<i>Thuja occidentalis</i>)						Black Locust (<i>Robinia pseudo-acacia</i>)						Glyceria					
Eastern Hemlock (<i>Tsuga canadensis</i>)						Prickly Rose (<i>Rosa acicularis</i>)						Rice Cut Grass (<i>Leersia oryzoides</i>)					
						Smooth Rose (<i>Rosa blanda</i>)						Tall Fescue (<i>Lolium arundinaceum</i>)					
						Multiflora Rose (<i>Rosa multiflora</i>)						Muhlenbergia					
						Rosa						Witch-grass (<i>Panicum capillare</i>)					
Deciduous																	
Manitoba Maple (<i>Acer negundo</i>)						Com. Blackberry (<i>Rubus allegheniensis</i>)						Panicum					
Black Maple (<i>Acer nigrum</i>)						Wild Red Raspberry (<i>Rubus idaeus</i>)						Reed Canary Grass (<i>Phalaris arundinacea</i>)					
Norway Maple (<i>Acer platanoides</i>)						Black Raspberry (<i>Rubus occidentalis</i>)						Timothy (<i>Phleum pratense</i>)					
Red Maple (<i>Acer rubrum</i>)						Purple-fl. Raspberry (<i>Rubus odoratus</i>)						Common Reed (<i>Phragmites australis</i>)					
Silver Maple (<i>Acer saccharinum</i>)						Dwarf Raspberry (<i>Rubus pubescens</i>)						Canada Blue Grass (<i>Poa compressa</i>)					
Freeman's Maple (<i>Acer X freemanii</i>)						Rubus						Fowl Meadow Grass (<i>Poa palustris</i>)					
Sugar Maple (<i>Acer saccharum</i>)						Peach-leaved Willow (<i>Salix amygdaloides</i>)						Kentucky Bluegrass (<i>Poa pratensis</i>)					
Mountain Maple (<i>Acer spicatum</i>)						Bebb's Willow (<i>Salix bebbiana</i>)						Yellow Foxtail (<i>Setaria pumila</i>)					
Speckled Alder (<i>Alnus incana</i>)						Pussy Willow (<i>Salix discolor</i>)						Green Foxtail (<i>Setaria viridis</i>)					
Downy Serviceberry (<i>Amelanchier arborea</i>)						Missouri Willow (<i>Salix eriocephala</i>)											
Serviceberry (<i>Amelanchier sanguinea</i>)						Sandbar Willow (<i>Salix exigua</i>)											
Yellow Birch (<i>Betula alleghaniensis</i>)						Shining Willow (<i>Salix lucida</i>)											
White Birch (<i>Betula papyrifera</i>)						Black Willow (<i>Salix nigra</i>)											
European Birch (<i>Betula pendula</i>)						Slender Willow (<i>Salix petiolaris</i>)											
Blue Beech (<i>Carpinus caroliniana</i>)						Salix											
Bitternut hickory (<i>Carya cordiformis</i>)						Hybrid Crack Willow (<i>Salix X rubens</i>)											
Shagbark Hickory (<i>Carya ovata</i>)						Black-berried Elder (<i>Sambucus nigra</i>)											
Climbing Bittersweet (<i>Celastrus scandens</i>)						Red-berried Elder (<i>Sambucus racemosa</i>)											
Common Hackberry (<i>Celtis occidentalis</i>)						Buffaloberry (<i>Shepherdia canadensis</i>)											
Buttonbush (<i>Cephalanthus occidentalis</i>)						Eur. Mountain Ash (<i>Sorbus aucuparia</i>)											
Alt.-leaved Dogwood (<i>Cornus alternifolia</i>)						Narrow Meadow-sweet (<i>Spiraea alba</i>)											
Silky Dogwood (<i>Cornus amomum</i>)						Common Lilac (<i>Syringa vulgaris</i>)											
Bunchberry (<i>Cornus canadensis</i>)						Poison-ivy (<i>Toxicodendron rydbergii</i>)						F					
Gray dogwood (<i>Cornus racemosa</i>)						Climbing Poison-ivy (<i>Toxicodendron radicans</i>)						U					
Round-leaved Dogwood (<i>Cornus rugosa</i>)						White Elm (<i>Ulmus americana</i>)						F					
Red-osier Dogwood (<i>Cornus sericea</i>)						Siberian Elm (<i>Ulmus pumila</i>)											
American Hazel (<i>Corylus americana</i>)						Slippery Elm (<i>Ulmus rubra</i>)											
Beaked Hazel (<i>Corylus cornuta</i>)						Low Blueberry (<i>Vaccinium angustifolium</i>)											
Cockspur Thorn (<i>Crataegus crus-galli</i>)						Maple-leaf Viburnum (<i>Viburnum acerifolium</i>)						Fox Sedge (<i>Carex vulpinoidea</i>)					
English Hawthorn (<i>Crataegus monogyna</i>)						Hobblebush (<i>Viburnum lantanoides</i>)						Carex					
Large-fruited Thorn (<i>Crataegus punctata</i>)						Nannyberry (<i>Viburnum lentago</i>)						Carex					
Crataegus						Guelder-Rose (<i>Viburnum opulus</i>)						Carex					
Crataegus						Downy Arrow-wood (<i>Vib. rafinesquianum</i>)						Carex					
Bush Honeysuckle (<i>Diervilla lonicera</i>)						Riverbank Grape (<i>Vitis riparia</i>)						R					
Russian Olive (<i>Elaeagnus angustifolia</i>)						Am. Prickly-ash (<i>Zanthoxylum americanum</i>)						Carex					
Autumn Olive (<i>Elaeagnus umbellata</i>)						Tilia americana						U					
Run. Strawberry-bush (<i>Euonymus obovata</i>)												Carex					
American Beech (<i>Fagus grandifolia</i>)												Carex					
Glossy Buckthorn (<i>Frangula alnus</i>)												Carex					
White Ash (<i>Fraxinus americana</i>)												Carex					
Black Ash (<i>Fraxinus nigra</i>)												Carex					
Green Ash (<i>Fraxinus pennsylvanica</i>)												Cyperus					
Witch-hazel (<i>Hamamelis virginiana</i>)												Redroot Spike-rush (<i>Eleocharis erythropoda</i>)					
Winterberry (<i>Ilex verticillata</i>)												Eleocharis					
Butternut (<i>Juglans cinerea</i>)												Hard-stem Bulrush (<i>Schoenoplectus acutus</i>)					
Black Walnut (<i>Juglans nigra</i>)												Three-square Bulrush (<i>Sch. pungens</i>)					
Common Privet (<i>Ligustrum vulgare</i>)												Soft-stem Bulrush (<i>Sch. tabernaemontani</i>)					
Spicebush (<i>Lindera benzoin</i>)												Dark-green Bulrush (<i>Scirpus atrovirens</i>)					
Fly Honeysuckle (<i>Lonicera canadensis</i>)												Wool-grass (<i>Scirpus cyperinus</i>)					
Glaucous Honeysuckle (<i>Lonicera dioica</i>)																	
Morrow's Honeysuckle (<i>Lonicera morrowii</i>)																	
Tartarian Honeysuckle (<i>Lonicera tatarica</i>)																	
Common Apple (<i>Malus pumila</i>)																	
White Mulberry (<i>Morus alba</i>)																	
Sweet Gale (<i>Myrica gale</i>)																	
Ironwood (<i>Ostrya virginiana</i>)																	
Thicket-creeper (<i>Parthenocissus inserta</i>)																	
Ninebark (<i>Physocarpus opulifolius</i>)																	
Balsam Poplar (<i>Populus balsamifera</i>)						Field Horsetail (<i>Equisetum arvense</i>)											
Eastern Cottonwood (<i>Populus deltoides</i>)						Scouring-rush (<i>Equisetum hyemale</i>)											
Large-tooth Aspen (<i>Populus grandidentata</i>)						Variegated Horsetail (<i>Equisetum variegatum</i>)						Articulated Rush (<i>Juncus articulatus</i>)					
Trembling Aspen (<i>Populus tremuloides</i>)						Equisetum						Soft Rush (<i>Juncus effusus</i>)					
Sweet Cherry (<i>Prunus avium</i>)						Ground-cedar (<i>Lycopodium digitatum</i>)						Path Rush (<i>Juncus tenuis</i>)					
Pin Cherry (<i>Prunus pensylvanica</i>)						Shining Clubmoss (<i>Lycopodium lucidulum</i>)						Juncus					
Black Cherry (<i>Prunus serotina</i>)						Ground-pine (<i>Lycopodium obscurum</i>)						Juncus					
Choke Cherry (<i>Prunus virginiana</i>)																	
Prunus																	

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

Map Number: 1 4
 Date: 2 8
 Surveyors: 3

ASA

Significant Wildlife Habitat Form

AECOM

Study Area: BLW JER (GSH) Map #: 331 GSH 1347
 Date: July 4, 2012 Time Started: 2:00 pm
 Field Staff: SG. Time Finished: 3:45 pm
 Weather Conditions: 33°C, 5% cloud cover, moderate breeze

Colonial Nesting Tree/Shrub Birds, Osprey Breeding/Feeding, Bald Eagle Breeding/Nesting Habitat
 (FET1, FOC, FOM, FOD, SWC, SWM, SWD)
 Nest bowls present: No Yes (if yes, photograph and complete the following)
 UTM: _____ Number of nests: _____
 Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present): _____
 Description of habitat (note riparian areas if present, evidence of disturbance): _____

Waterfowls Stopover/Nesting, Amphibian Breeding, Turtle Nesting/Over-wintering, Marsh Breeding Birds
 (CUM1, CUT1, MAM, MAS, SAS1, SAM1, SAF1, SWD, SWT1, SWT2) (FOC, FOM, FOD, SWC, SWM, SWD, BOO1, FEO1)
 Standing water present: No Yes (if yes, photograph and complete the following)
 UTM: _____ Area of standing water delineated on field map
 Water depth (m): _____ % open water: _____ % emergent vegetation: _____
 Potential to hold water until at least July in most years: Yes / No
 Description of standing water (permanent pool, evidence of annual spring flooding, etc): _____
 Area and soil/substrate of shoreline habitat: _____
 Type and abundance of cover in open water habitat: _____
 Type and abundance of cover in surrounding habitat: _____
 Evidence of disturbance (e.g. cattle grazing): _____
 Evidence of use by waterfowl, amphibians, turtles (e.g. broken eggs), marsh breeding birds: _____
 Complete Vernal Pool Habitat Description Form

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

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 of Conservation Concern Habitat and Incidental Wildlife – Goshen

Map No: 331 GSA 1397
 Date (yyyy-mm-dd): 2012-07-04
 Field Staff: S6,
 Time Started: 2:00 pm
 Time Finished: 3:45 pm
AECOM

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
red tail hawk		OB					

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;
 Breeding Bird (Probable) DD=Distraction, NU=Used Nest, FY=Fledged Young, NE=Eggs, NY=Young, FS=Food/Faecal sack, AE=Nest Entry
 Breeding Bird (Confirmed) DP=Distinctive Parts, HO=House/Den, FY=Eggs/young, TK=Tracks, FE=Feeding evidence, SC= Scat, SI=Other signs (specify)

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

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

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen



ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
CUM1, MAM,	June – August		
FOD6, FOD7, FOD9	Green Dragon (<i>Arisaema dracontium</i>) - S1/S3 <u>Bloom Time – May and June</u>	Species found in damp deciduous forest and long river streams. Particularly Maple forest and forest dominated by Red Ash and White Elm.	Y (N) UTM
TPO1, TPS1, TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	Hairy Bedstraw (<i>Galium pilosum</i>) - S3 <u>Bloom Time – June-August</u>	Occurs in dry, sandy woods and thickets; occasionally in dry sandy fields	Y (N) UTM
FE01, FES1, FET1, SWC, SWM, SWD, SWT, TPO, TPS, TPW	Hairy Valerian (<i>Valeriana edulis</i>) - S1 <u>Bloom Time – June to August</u>	Inhabits swampy river flats and meadows, wet prairies, and wooded, rocky riverbanks and fens.	Y (N) UTM
FOD6, FOD7, SWM, SWD	Hairy Wood Mint (<i>Blephilia hirsuta</i>) - S1 <u>Bloom Time – Summer</u>	Woodlands, often rocky, especially rivers. Rich woods, swamp forests, floodplains.	Y (N) UTM
FOD6, FOD7, FOD8, FOD9	Harbinger-of-spring (<i>Eriogonum bulbosum</i>) - S3 <u>Bloom Time – early to late April</u>	Occurs in rich, moist deciduous woods, especially on floodplains.	Y (N) UTM
SAS1, SAM1, SAF1	Hill's Pond Weed (<i>Potamogeton hillii</i>) - SC/S2 <u>Bloom Time – summer</u>	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters.	Y (N) UTM
FOM6, FOM7, FOM8	Large Round-leaved Orchid (<i>Platanthera macrophylla</i>) - S2 <u>Bloom Time – June to August</u>	Species inhabits moist mixed woods. Found in fairly mature, upland sugar maple-beech-eastern hemlock woodlands.	Y (N) UTM
MAM2, MAM3, MAS2, MAS3, SWD	Lizard's Tail (<i>Saururus cernuus</i>) - S3 <u>Bloom Time – June – September</u>	Species inhabits shores and streambanks along shallow water. As well as swamps, floodplains, shallow water and mudflats at the borders of streams and ponds.	Y (N) UTM
FOD6, FOD7, FOD9	Pawpaw (<i>Asimina triloba</i>) - S3 <u>Bloom Time – March-May</u>	Occurs in moist deciduous woods and stream banks.	Y (N) UTM
FOM8, FOD6, FOD7, FOD9, CUM1	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
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	Prostrate Tick-trefoil (<i>Desmodium rotundifolium</i>) - S2 <u>Bloom Time – July-September</u>	Dry, sandy or rocky woods	Y (N) UTM
FOD7, SWD	Pumpkin Ash (<i>Fraxinus profunda</i>) - S2? <u>Bloom Time – March – June</u>	Swamps and floodplains	Y (N) UTM
CUW1, ALO, FET1, SWC	Ram's-head Lady's-slipper (<i>Cypripedium arietinum</i>) - S3 <u>Bloom Time – mid May to mid June</u>	Found in cedar woodlands, limestone plains and wooded fens, moist coniferous swamps, dry-sandy woods, and limestone barren.	Y (N) UTM
FOD1, FOD2, FOD3, FOD4, FOD5, FOC1, FOM1, FOM5	Rattlesnake Hawkweed (<i>Hieracium venosum</i>) - S2 <u>Bloom Time – April – September</u>	Species inhabits open, dry sandy woods. Jack pine, oak, and aspen woodlands	Y (N) UTM
FOD6, FOD7, FOD9	Round-leaved Groundsel (<i>Packera obovata</i>) - S3 <u>Bloom Time – May – June</u>	Found in moist woods	Y (N) UTM
CUM1, CUT1, CUS1	Round-leaved hawthorn (<i>Crataegus lumaria</i>) - S3?	Species occurs in old fields, poorly managed pastures, fencelines and roadsides	Y (N) UTM
FOD6, FOD7, FOD8, FOD9, SWT2, SWT3	Scarlet Beebalm (<i>Monarda didyma</i>) - S3 <u>Bloom Time – May to October</u>	Found in moist, rich woods, thicket swamps, banks and floodplains	Y (N) UTM
ALO, ALS, ALT, TPO, TPS, TPW	Slender Blazing Star (<i>Liatris cylindracea</i>) - S3	Species occurs in limestone and dolostone pavement, prairies, open woods, always and moist sandy meadows.	Y (N) UTM
SBO, SBS, SBT, TPO1, TPS1, TPW1, FOD1, FOD2	Slender Knotweed (<i>Polygonum tenue</i>) - S2	Found in dry, sandy, open areas in deciduous (often oak woods), prairie meadows at edges of sand pits	Y (N) UTM
SDT1, FOD5, FOD9	Slim-flowered Muihly (<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
BL01, BLS1, BLT1, TPO2, TPS2, TPW2, MAM2, FOD7	Stiff Gentian (<i>Gentiana quinquefolia</i>) - S2 <u>Bloom Time – late summer to mid fall</u>	Found in moist soils of streambanks, edges of woods, wet prairies, marshy meadows, bluffs and wooded hillsides.	Y (N) UTM
TPS1, TPW1, CUW1, RBO, SBO	Sundial Lupine (<i>Lupinus perennis</i>) - S3 <u>Bloom Time – mid-March to mid-June</u>	Inhabits dry, sandy oak savannahs, prairies, open barrens or clearings in woodlands of oak, jack pine, and/or aspen.	Y (N) UTM

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen



ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
TP01, TPS1, TPW1, CUM1	Tail Blazing Star (<i>Liatris aspera</i>) - S2/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y (N) UTM
FE0, FES, FET, MAM2, MAM3	Tuberous Indian Plantain (<i>Amorpha canescens</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 range 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
(FO) FOM	Louisiana Waterthrush (<i>Sialurus 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 n/o.
(FO) 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/o.
-	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			
OAC, SA, SWM, SWD	Azure Bluet (<i>Enallagma aspersum</i>) - S3	Species inhabits fishless ponds, lakes and boggy swamps	Y (N) UTM
TPS, TPW	Sleepy Duskywing (<i>Erynnis brizo</i>) - S1	Occurs in oak/oak-pine scrub, chaparral, barrens, well-drained sandy or shaly soils	Y (N) UTM
CUM1, CUT1, CUW1	Monarch Butterfly (<i>Danaus plexippus</i>) - SC	Their larvae only feed on milkweeds (<i>Asclepius</i> spp.). Habitat includes abandoned farmland, along roadsides, open spaces where these plants grow	Y (N) UTM
TPS, CUW	Mottled Duskywing (<i>Erynnis martialis</i>) - S2	Usually seen nectaring or on wet sandy roads. Larvae feeds on New Jersey Tea and adults only likely near where this plant is present	Y (N) UTM
SWT, SWD, SWM, FOM, FOD4-3, TPW, TPS, CUM1	Tawny Emperor (<i>Asterocampa clyton</i>) - S3	Species inhabits densely wooded riparian areas, dry woods, open woods, fencerows and parks. Usually occurs near Hackberry, the larval foodplant	Y (N) UTM
FOD5	West Virginia White (<i>Pieris virginianensis</i>) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y (N) UTM n/o no toothwort.

Goshen Feature: 339 GSH1162

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

h
September 1, 2011



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



339 GSH1123
 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 Buffers
 Turbine Buffer/Feature Interest
 Property Fabric
 Hurricane Wind Energy Corridor

0 25 50 100 Meters
 September 1, 2011

MALDONALD RD
 339 GSH1123
 339 GSH1123
 339 GSH1123
 339 GSH1123
 339 GSH1123



ELC Site: 339_GSH1123 Polygon: A

Community Description and Classification

Surveyor(s): JFK Date: Sept 7/11 Time start: 17:00

UTMZ: 17 UTMZ: 449330 UTMN: 4801580

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic	<input checked="" type="checkbox"/> Organic <input type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Min. <input type="checkbox"/> Acidic Bedrk <input type="checkbox"/> Basic Bedrk <input type="checkbox"/> Shallow Water <input type="checkbox"/> Surficial Dep. <input type="checkbox"/> Bedrock	<input type="checkbox"/> Lacustrine <input type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input type="checkbox"/> Valley Slope <input type="checkbox"/> Tableland <input checked="" type="checkbox"/> Roll, Upland <input type="checkbox"/> Cliff <input type="checkbox"/> Talus <input type="checkbox"/> Crewce/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 checked="" 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

Species in Order of Decreasing Dominance (Up to 4sp.)
 (> Much Greater than, = Greater than, = About Equal to)

Layer	HT	CVR	Notes
1	3	4	ACE SOIL - Forgran - Tiller - Frower
2	3	3	Forgran - ACE SOIL
3	3	3	Forgran - ACE SOIL
4	3	3	Forgran - ACE SOIL

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

CVR Codes: 0 = none 1 0% - 10% 2 10 - 25% 3 25 - 50% 4 > 60%

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

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

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

Ecosite: FOD 5-2

Vegetation Type: FOD 5-2

Inclusion: code

Complex: code

Community Profile Diagram/Comments

Active forest had selective cutting in past within past few years

Notes:

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Avg.

Plot Auger # 41 Summary

Moisture Regime

Drainage

Soils Ontario and ELC Soils Description

Soil Horizon Description	Depth to ...	Site Metrics				Summary		
		UTM	Slope	Mottles	Gley	Zone	Eastng	Northng
1	Depth from zero		12	% CF				% CF
	Texture		dark brown loam					
2	Depth from zero			% CF				% CF
	Texture		grcky + brown silty clay					
3	Depth from zero			% CF				% CF
	Texture		brown silty clay					
4	Depth from zero			% CF				% CF
	Texture							
	% Surface Stone/Rock							
	Moisture Regime							
	Drainage		good					

ELC Community and Classification

Site: 339_GSH1162 Polygon:

Surveyor(s): Kamstra Date: Sept 7/11 Time start: 17:30

UTMZ: 17 UTMZ: 449215 UTMN: 4801580

Polygon Description

<input type="checkbox"/> Terrestrial	<input type="checkbox"/> Organic	<input type="checkbox"/> Lacustrine	<input type="checkbox"/> Plankton	<input type="checkbox"/> Lake
<input checked="" type="checkbox"/> Wetland	<input 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 type="checkbox"/> Tableland	<input type="checkbox"/> Lichen	<input checked="" type="checkbox"/> Swamp
<input 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 type="checkbox"/> Deciduous	<input type="checkbox"/> Bog
History		<input type="checkbox"/> Talus	<input type="checkbox"/> Coniferous	<input type="checkbox"/> Barren
<input type="checkbox"/> Natural		<input type="checkbox"/> Crevice/Cave	<input type="checkbox"/> Mixed	<input type="checkbox"/> Meadow
<input type="checkbox"/> Cultural		<input type="checkbox"/> Alvar		<input type="checkbox"/> Prairie
Cover		<input type="checkbox"/> Rockland		<input type="checkbox"/> Thicket
<input type="checkbox"/> Open		<input type="checkbox"/> Beach / Bar		<input type="checkbox"/> Savannah
<input type="checkbox"/> Shrub		<input type="checkbox"/> Sand Dune		<input type="checkbox"/> Woodland
<input type="checkbox"/> Tree		<input type="checkbox"/> Bluff		<input type="checkbox"/> Forest
				<input type="checkbox"/> Plantation

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp)
1	3	3	<i>Asclepias</i> - <i>Fraxinus</i> - <i>Baptisia</i>
2	3	3	<i>Fraxinus</i> - <i>Fraxinus</i> - <i>Fraxinus</i>
3	3	3	<i>Fraxinus</i> - <i>Fraxinus</i> - <i>Fraxinus</i>
4	3	3	<i>Fraxinus</i> - <i>Fraxinus</i> - <i>Fraxinus</i>

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:

Species	HT	CVR	Code
<i>Asclepias</i>	<10	A	10-24
<i>Fraxinus</i>	<10	A	10-24
<i>Baptisia</i>	<10	A	10-24
<i>Fraxinus</i>	<10	A	10-24
<i>Fraxinus</i>	<10	A	10-24
<i>Fraxinus</i>	<10	A	10-24

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

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

Ecoete:

Vegetation Type: SWD 6-3 Code:

Inclusion: Code:

Complex: SWD 6-3 / MFS 2-2 Code:

Community Profile Diagram/Comments

Sample of Swampy Maple Swamp & Birch

Shallow Marsh

Notes:

Tree Tally by Species

Species	Tally	Prism Factor
Total	100	2

Soils Ontario and ELC Soils Description

Soil Horizon Description	Depth to...		Site Metrics		Summary
	Moisture Regime	Drainage	UTM	Moisture Regime	
1	Depth from zero	Texture	Position	Aspect	Effective Texture (Indicate below)
2	Depth from zero	Texture	Position	Aspect	
3	Depth from zero	Texture	Position	Aspect	Effective Texture (Indicate below)
4	Depth from zero	Texture	Position	Aspect	
Soil Horizon Description		Site Metrics		Summary	
Moisture Regime		Drainage		Moisture Regime	
Drainage		Drainage		Drainage	

ELC WILDLIFE	SITE: Goshen 339	
	POLYGON:	
	DATE: Sept 7, 2011	
	SURVEYORS: JK	
	START TIME: 17:00	END TIME: 18:00

TEMP (°C): 16	CLOUD (10th): 10	WIND: 2	PRECIPITATION:
CONDITIONS:			

POTENTIAL WILDLIFE HABITAT:

<input 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	EWPE	VD							
	MDPO	OB							
	AMGO	VD							
	WBNH	"							
	DOWD	"							
	WITU		feather						
	Cooper's H	OB							

FAUNAL TYPE CODES (TY):

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

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:

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

BREEDING BIRD - CONFIRMED:

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

OTHER WILDLIFE EVIDENCE:

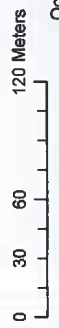
OB = OBSERVED VO = VOCALIZATION CA = CARCASS
DP = DISTINCTIVE PARTS HO = HOUSE/DEN FY = EGGS/YOUNG
TK = TRACKS FE = FEEDING EVIDENCE SC = SCAT
SI = OTHER SIGNS (specify)

Goshen Feature: 339 GSH1123/1162

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

Legend:

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



October 28, 2011



ELC WILDLIFE	SITE: <u>Goshen 339</u>	
	POLYGON:	
	DATE: <u>Sept 7, 2011</u>	
	SURVEYORS: <u>JK</u>	
	START TIME: <u>17:00</u>	END TIME: <u>18:00</u>

TEMP (°C): <u>16</u>	CLOUD (10th): <u>0</u>	WIND: <u>2</u>	PRECIPITATION:
CONDITIONS:			

POTENTIAL WILDLIFE HABITAT:	
<input 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	#
B	EWPE	VO			H	Spring Peep	VO		
	MORO	OB							
	AMGO	VO							
	WBNU	"				BLJA			
	DOWN	"				Snow Bunting		fly over	
	WITU		feather						
	Cooper's H	OB							

James Kamstra
Nov 8

- 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)

347 - 05H 1049

Completed Aug 14/11 - SAM North-Central

Goshen Access Road / Collection Lines



- Roads
- Access/Collection Line
- No Access (as of August 2011)
- Access

- E/G to E/Guide
- Waterbodies
- Open Wind Energy Centre
- 100m Buffer



ELC
Community
Description and
Classification

Site: 65H1049 Polygon: D
 Surveyor(s): SAM Date: Aug. 16/11 Time start: 13:42h finish: 15:01h
 UTMZ: 11T UTMZ: WP#210 (6209-record) 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
<input type="checkbox"/> 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 type="checkbox"/> Tabeiland	<input type="checkbox"/> Lichen	<input type="checkbox"/> Swamp
<input type="checkbox"/> Surface Dep.	<input type="checkbox"/> Surf. Bedrk	<input type="checkbox"/> Roll Upland	<input type="checkbox"/> Bryophyte	<input type="checkbox"/> Fen
<input type="checkbox"/> Bedrock	<input type="checkbox"/> Cliff	<input type="checkbox"/> Talus	<input checked="" type="checkbox"/> Deciduous	<input type="checkbox"/> Bog
<input type="checkbox"/> History	<input type="checkbox"/> Crevice/Cave	<input type="checkbox"/> Alvar	<input type="checkbox"/> Coniferous	<input type="checkbox"/> Barran
<input checked="" type="checkbox"/> Natural	<input type="checkbox"/> Aivar	<input type="checkbox"/> Rockland	<input type="checkbox"/> Mixed	<input type="checkbox"/> Meadow
<input type="checkbox"/> Cultural	<input type="checkbox"/> Beach / Bar	<input type="checkbox"/> Sand Dune		<input type="checkbox"/> Prairie
<input type="checkbox"/> Cover	<input type="checkbox"/> Bluff			<input type="checkbox"/> Thicket
<input type="checkbox"/> Open				<input type="checkbox"/> Sav innah
<input type="checkbox"/> Shrub				<input type="checkbox"/> Wo-land
<input checked="" type="checkbox"/> Tree				<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			MH > Hs > Aw > Be
2			MH > Aw > Hs > Be
3			MH > Hs > Be
4			Jack In The Pulpit > MH > Ench V. lshd > Zigzag Goldenrod

HT Codes: 7 < 0.2m 8 > 0.2-0.5m 5 > 0.5-1m 4 > 1-2m 3 > 2-5m 2 > 5-10m 1 > 10m
 CVR Codes: 0 = none 1 0% - 10% 2 10 - 25% 3 25 - 50% 4 50 - 60%

Stand Composition: Size Class Analysis: A < 10 A 10-24 A > 5-5f A > 50
 BA: 32 MH4H23Aw3Be9 Standing Snags: A < 10 A 10-24 A > 5-5f A > 50
 Deadfall / Logs: A < 10 A 10-24 A > 5-5f A > 50

Abundance Codes: N = None R = Rare O = Occasional A = Abundant
 Com. Age: Pioneer Young Mid-Age Mature Old Growth

Ecocline: Dry-Fresh Sugar Maple/Deciduous Forest Code: FODS
 Vegetation Type: Dry-Fresh Sugar Maple-Hickory Code: FODS-5
 Inclusion: Deciduous Forest Type Code: /
 Complex: /

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Avg.
Be	1	7			8	9
MH	6	1			7	41
Aw	2	1			3	9
Hs	4	3			7	13
Be	1	2			3	6
BP					2	6
Total	14	13			27	100
Basal Area (BA)	29	34			64	32
Dead					2	

Soils Ontario and ELC Soils Description

Soil Metrics	Soils Ontario	ELC Soils Description	Summary
Pit/Auger #	WP#210 (WP#210)		
Zone			
Easting			
Northing			
Position	2	4	
Aspect	SW	SW	
Percent	5	2	
Slope	3m	4m	
Length			
Mottles	27	9	
Gley	> 20	> 20	
Water Table	> 20	> 20	
Carbonates	52	23	
Bedrock	> 20	> 20	
Depth from zero	0	0	% CF
Texture	vfSSICL	vfSCL	% CF
Depth from zero	12	18	% CF
Texture	Sic	C	% CF
Depth from zero	23	24	% CF
Texture	C	C	% CF
Depth from zero			% CF
Texture			% CF
% Surface Stone/Rock			
Moisture Regime			
Drainage			

Soil Horizon Description	1	2	3	4	% CF
Depth to					
Effective Texture (Indicate below)					% CF
Drainage					