

ELC Community Description and Classification

Map #: 209 G5H 1066 Polygon: 7

Surveyor(s): SS Date: 2012-06-29 Time start: 2:45pm finish: 4:00pm

UTMZ: UTMZ: UTMN:

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input checked="" type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic	<input type="checkbox"/> 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"/> 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-LV/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
Site	<input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input checked="" type="checkbox"/> Surficial Dep. <input type="checkbox"/> Bedrock			
History	<input type="checkbox"/> Natural <input checked="" type="checkbox"/> Cultural			
Cover	<input type="checkbox"/> Open <input type="checkbox"/> Shrub <input checked="" type="checkbox"/> Tree			

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp)
1	2-1	3-4	Pine Strub
2	3-2	4	Ace sacce
3	5	2	Ace sacce → Pin virgin Rubocci
4	6	3	Parcense → box roots → Sela F

HT Codes: 7 < 0.2m 6 > 0.2-0.5m 5 > 0.5-1.1m 4 > 1-2m 3 > 2-6m 2 > 6-25m 1 > 25m
 CVR Codes: 0 = none 1 0% - 10% 2 10 - 25% 3 25 - 60% 4 > 60%

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

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

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

Ecosite: Coniferous plantation Code: CUP3
 Vegetation Type: White pine coniferous plantation. Code: CUP3-2
 Inclusion: Code:
 Complex: Code:

Community Profile Diagram/Comments

old white pine plantation. white pine abundant
 overstory, with high cover of sugar maple understorey
 will be a mixed stand when sugar maple matures,
 but is still a plantation.

Tree Tally by Species

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

Soils Ontario and ELC Soils Description

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

ELC
Community Description and Classification

Map #: Polygon: 2
 Surveyor(s): SG, Date: 2012-06-29, Time start: 2:45 pm, finish: 4:00 pm
 UTMZ: UTMN:

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input checked="" type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input checked="" type="checkbox"/> Surficial Dep. <input type="checkbox"/> Bedrock	<input type="checkbox"/> 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"/> Roli. Upland <input type="checkbox"/> Cliff <input type="checkbox"/> Talus <input type="checkbox"/> Crevice/Cave <input type="checkbox"/> Alvar <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 checked="" 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 checked="" type="checkbox"/> Meadow <input type="checkbox"/> Prairie <input type="checkbox"/> Thicket <input type="checkbox"/> Savannah <input type="checkbox"/> Woodland <input type="checkbox"/> Forest <input type="checkbox"/> Plantation

Stand Description

Layer	HT	CVR	Species In Order of Decreasing Dominance (up to 4 sp)
1	3-2	2	Pin. strob = Popdelt
2	3	1	Pin. strob
3	4	3	Salix sp.
4	6	4	Solidit > lat con.

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:	R	R	R	R
Deadfall / Logs:	R	R	R	R

BA: >50 >50 >50

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

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

Ecosite: mineral cultural meadow Code: CUM1
Vegetation Type: Dry - Fresh mineral cultural meadow Code: CUM1-1
Inclusion: Code:
Complex: Code:

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

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

Soils Ontario and ELC Soils Description

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

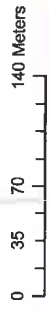
(Sw) GE64 Turbine ELC Completed July 12/11 -JP

210- GSH 1022/1075/1090

210- GSH 1022/1090/1075

Goshen Access Road / Collection Lines

- Roads
- Access/Collection Line
- No Access (as of August 2011)
- Access
- ELC to Evaluate
- Waterbodies
- Goshen Wind Energy Centre
- 120m Buffer



210 1075/1090/1022 Polygon: 1032
 Site: 65H 7 km in 510
 Surveyor(s): SAM Date: Aug. 11/11 Time start: 17:30 h finish: 17:30 h
 UTMZ: 17T UTMZ: wp 193 4194

ELC Community Description and Classification

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 checked="" type="checkbox"/> Riverine	<input type="checkbox"/> Submerged	<input type="checkbox"/> Pond
<input type="checkbox"/> Aquatic	<input type="checkbox"/> Parent Min.	<input type="checkbox"/> Bottomland	<input type="checkbox"/> Floating-LVD.	<input 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 type="checkbox"/> Swamp
<input checked="" type="checkbox"/> Surficial Dep.	<input type="checkbox"/> Bedrock	<input type="checkbox"/> Roli. Upland	<input checked="" type="checkbox"/> Bryophyte	<input type="checkbox"/> Fen
<input type="checkbox"/> Bedrock	History	<input type="checkbox"/> Cliff	<input type="checkbox"/> Deciduous	<input type="checkbox"/> Bog
<input checked="" type="checkbox"/> Natural	<input type="checkbox"/> Cultural	<input type="checkbox"/> Talus	<input type="checkbox"/> Coniferous	<input type="checkbox"/> Barren
<input type="checkbox"/> Cultural	Cover	<input type="checkbox"/> Crevice/Cave	<input type="checkbox"/> Mixed	<input type="checkbox"/> Meadow
<input type="checkbox"/> Open	<input type="checkbox"/> Natural	<input type="checkbox"/> Alvar	<input type="checkbox"/> Rockland	<input type="checkbox"/> Prairie
<input type="checkbox"/> Shrub	<input type="checkbox"/> Cultural	<input type="checkbox"/> Rockland	<input type="checkbox"/> Beach / Bar	<input type="checkbox"/> Thicket
<input checked="" type="checkbox"/> Tree	<input type="checkbox"/> Cultural	<input type="checkbox"/> Beach / Bar	<input type="checkbox"/> Sand Dune	<input type="checkbox"/> Savannah
	<input type="checkbox"/> Cultural	<input type="checkbox"/> Bluff	<input type="checkbox"/> Bluff	<input type="checkbox"/> Woodland
	<input type="checkbox"/> Cultural			<input checked="" type="checkbox"/> Forest
	<input type="checkbox"/> Cultural			<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	4
2	3	3
3	5	2
4	7-6	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: Aw > Ew > N > H
 17 Cretaegus mollis > Aw > Choke Cherry
 2 Yellow Awns > Red Currant > May Apple > Tall Bushy
 4 Poison Ivy > Virginia Creeper > ~~Blackberry~~ > ~~Swamp~~ > ~~obov.~~

Stand Composition: Size Class Analysis:

Aw 48-Ew 35-MH 17	A < 10	0	10-24	0	25-50	A	25-50	R	> 50
BA: 23	Standing Snags:	0	10-24	R	25-50	N	25-50	N	> 50
	Deadfall / Logs:	R	10-24	R	25-50	R	25-50	N	> 50

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

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

Ecosite: Dry-fresh Deciduous Forest Ecosite Code: FOD 4
Vegetation Type: Dry-fresh white Ash-white Elm Deciduous forest Type Code: FOD 4-2
Inclusion:
Complex:

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Avg.
MH	2	2			4	17
Aw	6	5			11	48
Ew	4	4			8	35
Total	12	11			23	100
Basal Area (BA)	24	22			46	23
Dead					1	

Soils Ontario and ELC Soils Description

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

ELC
Community
Description and
Classification

Site: 210GSA-1075/090/paa Polygon: 2
 Surveyor(s): 5AM Date: Aug 11/11 Time start: 1731h finish: 1807h
 UTMZ: 17T UTMZ: 195 UTMN:

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input checked="" type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic <input type="checkbox"/> Site <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input checked="" type="checkbox"/> Surficial Dep. <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> History <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Cultural <input type="checkbox"/> Cover <input type="checkbox"/> Open <input type="checkbox"/> Shrub <input checked="" type="checkbox"/> Tree	<input type="checkbox"/> Organic <input checked="" type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Min. <input type="checkbox"/> Acidic Bedrk <input type="checkbox"/> Basic Bedrk <input type="checkbox"/> Carb. Bedrk	<input type="checkbox"/> Lacustrine <input checked="" type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input type="checkbox"/> Valley Slope <input type="checkbox"/> Tableland <input type="checkbox"/> Roll. Upland <input type="checkbox"/> Cliff <input type="checkbox"/> Talus <input type="checkbox"/> Crevice/Cave <input type="checkbox"/> 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 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	MS >> Ew > Aw > WB
2	3	3	Aw > Crataegus nms > Prickly Ash
3	5-4	3-2	Wood Nettle > Big Raspberry > Prickly Ash
4	7-6	3	Garlic Mustard > Poison Ivy > Viny. Creeper > Yellow Awe

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 - 50% 4 > 50%

Stand Composition:	Size Class Analysis:
MS45-EwD-AwLS	Standing Snags: R < 10 A 25-50 A > 50 R < 10 R 25-50 R > 50 Deadfall / Logs: R < 10 O 10-24 O 25-50 R > 50
BA: 20	

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

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

Ecosite: Fresh-Moist Lowland Deciduous forest Ec site Code: F07
 Vegetation Type: Fresh-Moist White Elm-Silver Maple Lowland Deciduous forest type Code: F07-1
 Inclusion: Code:
 Complex: Code:

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	% of Sp.
Ew	3	3			6	30
Aw	2	1			3	15
MS	5	4			9	45
WB	1	1			2	10
Total					20	100
Basal Area (BA)					40	20
Dead						

Soils Ontario and ELC Soils Description

Site Metrics	PI/Auger #	Soils Description				Summary
Zone						Moisture Regime
Easting						
Nothing						
Position						
Aspect						Drainage
Percent						
Slope						Effective Texture (Indicate below)
Slope Length						
Mottles						
Gley						
Water Table						% CF
Carbonates						
Bedrock						% CF
Depth from zero						
Texture						% CF
Depth from zero						
Texture						% CF
Depth from zero						
Texture						% CF
Depth from zero						
Texture						% CF
Depth from zero						
Texture						% CF
Depth from zero						
% Surface Stone/Rock						% CF
Moisture Regime						
Drainage						

210_GSA - 1075/1090/1022

ELC Plant Species List	SITE: 6511 Transmission
	POLYGON: 1 ①
	DATE: Aug. 11/11
	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	
MH	O				
PI				D	
PI					
PI					
An	D				
Thimbleweed					
PI BLK Rasp					
Shagbark					
Field Horsetail					
Mman					
Tessol					
Tall Grass					
Apple					
Walnut					
Ragwort					
Cor. Thistle					
Pan. Aster					
Eu	D				
Garlic Mustard					
Bur oak					
Yell. Anem.					
Tall Buttercup					
Prickly Gooseberry					
Choke Cherry					
Strawb.					
Grey Dogwood					
Crataegus (English)					
Amelanchier					

SPECIES CODE	LAYER				COLL.
	1	2	3	4	
Ving. Creeper				D	
May Apple			.		
Crataegus punct.					
Choke Nettle				.	
Run. Strawberry				.	
Sin Red Currant			A	D	
Crat (Crataegus) mollis					
Bd					
Rasp.					
Prickly Gooseberry				.	
AG					

210 GSA
 ELM

ELC WILDLIFE	SITE: 210 Gochen 1075/1090/1022	
	POLYGON: $\text{\textcircled{D}}$	
	DATE: Aug 11/11	
	SURVEYOR(S): SAM	
	START TIME: 1632	END TIME: 17.51 h

TEMP (°C): 24	CLOUD (10th): 1	WIND: 2	PRECIPITATION: nil
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CONDITIONS: warm, light breeze, sunny

POTENTIAL WILDLIFE HABITAT:

<input checked="" type="checkbox"/> VERNAL POOLS	<input 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	BCCH	SM							
B	DOWO	OB							
B	HOWR	VO							
B	REVI	SM							
M	Raccoon	TR							
M	WT Deer	TR							
B	TNBCU	SM							

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

210_GSH1075/1090/1022

ELC WILDLIFE	SITE: ██████████	
	POLYGON: ██████████ (2)	
	DATE: Aug. 11/11	
	SURVEYOR(S): SAH	
	START TIME: 12/1h	END TIME: ██████████

1807h

TEMP (°C): 22	CLOUD (10th): 1	WIND: 1	PRECIPITATION: nil
CONDITIONS: Sunny, warm, 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	BBCU	SM		1					
B	BCCH	SM		2					
B	AMCR	VO		3					
B	Dowo	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/FAECAL SACK
 AE = NEST ENTRY

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

Goshen Feature: 210 GSH1022

Nov 7, 2011

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

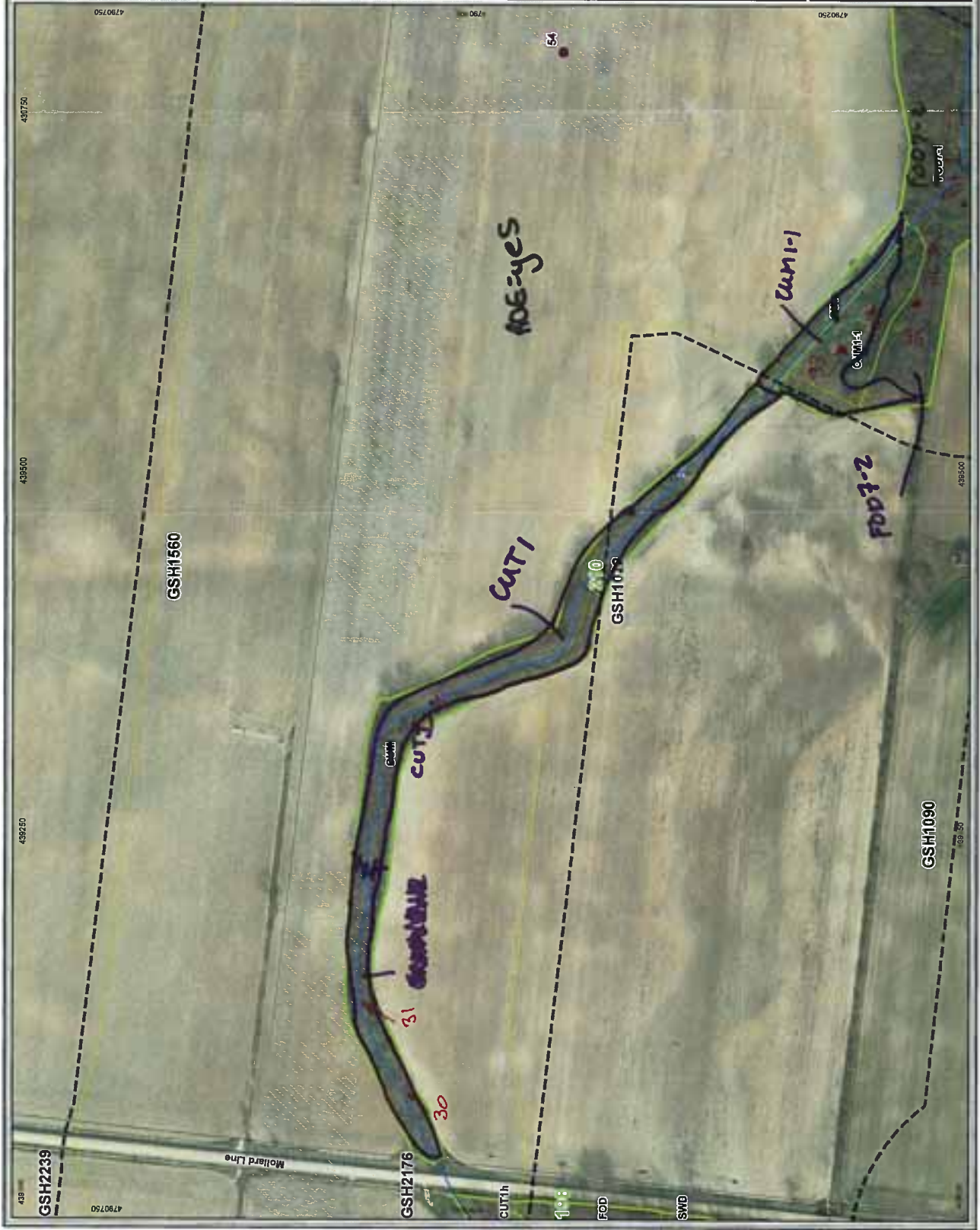


October 3, 2011



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





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



Resembling from Ontario Ministry of Natural Resources
 Orthophotography 2010
 UTM Zone 17N NAD 83
 12,500

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Goshan ELC Survey
 210_GSH1022

April 2012
 Project 60155032

AECOM

Figure 1

ELC
Community Description and Classification

Site: 2106SH/022 Polygon: CA11

Surveyor(s): Jess Kettle + Tom Survey Date: May 1st 2012 Time start: 3:40pm finish: 5:20pm

UTMZ: 439599 UTMZ: 474086 UTMN:

Polygon Description

System	Substrata	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 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"/> AVar <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 checked="" type="checkbox"/> Thicket <input type="checkbox"/> Savannah <input type="checkbox"/> Woodland <input type="checkbox"/> Forest <input type="checkbox"/> Plantation

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1			Fern - Acanth
2			
3			Carex - Maximum = 1.2m ctk
4			Alliaria - maximum 1.1m

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

Stand Composition: Size Class Analysis:

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

BA: < 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: Mixed Cultural Thicket Ecotone Code: CA11

Vegetation Type: Code:

Inclusion: Code:

Complex: Code:

Community Profile Diagram/Comments

Thicket dominates entire length of polygon

Notes:

Tree Tally by Species

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

Soils Ontario and ELC Soils Description

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

ELC
Community Description and Classification

Site: 2106SH1022 Polygon: CUMI-1

Surveyor(s): Jess Kette + Tom Shanley Date: May 1st, 2012 Time start: 3:40 pm finish: 5:20 pm

UTMZ: 4395A9 UTMZ: 47901X4 UTMN:

Polygon Description

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

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (> Much Greater Than; > Greater Than; = About Equal To)
1	3	1	ALC NEGUN - JUNIFER
2			
3			
4	6	4	phacelia - galpe fl - Taroffi - Solidago species

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

Stand Composition: Size Class Analysis: <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

Ecositer:	Code: CUMI-1
Vegetation Type:	Code: CUMI-1
Inclusion:	Code:
Complex:	Code:

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

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

Soils Ontario and ELC Soils Description

Site Metrics		Soils Ontario and ELC Soils Description				Summary
Pit/Auger #						
Zone						
Easting						
Northing						
Position						
Aspect						
Percent						
Slope						
Length						
Mottles						
Gley						
Water Table						
Carbonates						
Bedrock						
Depth from zero		% CF	% CF	% CF	% CF	% CF
Texture						
Depth from zero		% CF	% CF	% CF	% CF	% CF
Texture						
Depth from zero		% CF	% CF	% CF	% CF	% CF
Texture						
Depth from zero		% CF	% CF	% CF	% CF	% CF
Texture						
% Surface Stone/Rock						
Moisture Regime						
Drainage						

Site: 210 681022 **Polygon:** F007-2
Surveyor(s): Jess Belter + Tom Gwynn **Date:** May 11, 2012 **Time start:** 3:40 pm **finish:** 5:20 pm
UTMZ: 439599 **UTMN:**

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input type="checkbox"/> Terrestrial <input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Aquatic Sites <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input checked="" type="checkbox"/> Surficial Dep. <input type="checkbox"/> Bedrock History <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Cultural Cover <input type="checkbox"/> Open <input type="checkbox"/> Shrub <input checked="" type="checkbox"/> Treed	<input type="checkbox"/> Organic <input checked="" type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Min. <input type="checkbox"/> Acidic 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"/> A1var <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"/> 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	<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 4 sp)
 (>> Much Greater Than; > Greater Than; = About Equal To)
 1 4 FRAPPE (N) > ALENEGA > LUMINAR
 2 3 CRINGENS = FRAXON = ALENEGA
 3 TAKOFF (I) = ALPETI = ALENEGA = FLAMIC
 4

HT Codes: 7 < 0.2m 6 > 0.2-0.5m 5 > 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:
 Standing Snags: A < 10 A 10-24 A 10-24 A 10-24 A > 50
 Deadfall / Logs: N < 10 N 10-24 R 10-24 N > 50
 O < 10 A 10-24 R 25-50 R 25-50 N > 50

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

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

Ecosite: FRESH-MOIST Lowland Deciduous Forest
Vegetation Type: FRESH-MOIST ASH Lowland Deciduous Forest 194E
Inclusion:
Centplex:

Community Profile Diagram/Comments

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

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

Soils Ontario and ELC Soils Description

Site Metrics	PI/Auger #		Summary	
	1	17		
Zone				
Easting		439599		
Northing		4790189		
Position				
Aspect				
Percent				
Slope				
Length				
Mottles		32cm		
Gley				
Water Table				
Carbonates				
Bedrock				
Depth from zero		30cm	% CF	% CF
Texture		SIL		
Depth from zero		50cm	% CF	% CF
Texture		SIC		
Depth from zero			% CF	% CF
Texture				
Depth from zero			% CF	% CF
Texture				
% Surface Stone/Rock				
Moisture Regime		S		
Drainage		1/P		

**Plant Species List
2012**

Trees & Shrubs					Tree & Shrubs					Graminoids				
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Conifers					Deciduous					Grasses				
Balsam Fir (<i>Abies balsamea</i>)					White Oak (<i>Quercus alba</i>)					Giant Redtop (<i>Agrostis gigantea</i>)				
Common Juniper (<i>Juniperus communis</i>)					Bur Oak (<i>Quercus macrocarpa</i>)					Redtop (<i>Agrostis stolonifera</i>)				
Eastern Red Cedar (<i>Juniperus virginiana</i>)					Red Oak (<i>Quercus rubra</i>)					Awnless Brome (<i>Bromus inermis</i>)				
Tamarack (<i>Larix laricina</i>)					Alder Buckthorn (<i>Rhamnus alnifolia</i>)					Bromus				
Norway Spruce (<i>Picea abies</i>)					Common Buckthorn (<i>Rhamnus cathartica</i>)					Blue-joint Grass (<i>Calamagrostis canadensis</i>)				
White Spruce (<i>Picea glauca</i>)					Smooth Sumac (<i>Rhus glabra</i>)					Orchard Grass (<i>Dactylis glomerata</i>)				
Black Spruce (<i>Picea mariana</i>)					Staghorn Sumac (<i>Rhus hirta</i>)					Poverty Oat Grass (<i>Danthonia spicata</i>)				
Jack Pine (<i>Pinus banksiana</i>)					Wild Black Currant (<i>Ribes americanum</i>)					Quack Grass (<i>Elymus repens</i>)				
Red Pine (<i>Pinus resinosa</i>)					Prickly Gooseberry (<i>Ribes cynosbati</i>)					Virginia Wild Rye (<i>Elymus virginicus</i>)				
Eastern White Pine (<i>Pinus strobus</i>)					Swamp Black Currant (<i>Ribes lacustre</i>)					Elymus				
Scotch Pine (<i>Pinus sylvestris</i>)					Red Currant (<i>Ribes rubrum</i>)									
Canada Yew (<i>Taxus canadensis</i>)					<i>Ribes</i>					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>Lersia oryzoides</i>)				
					Smooth Rose (<i>Rosa blanda</i>)					Tall Fescue (<i>Lolium arundinaceum</i>)				
					Multiflora Rose (<i>Rosa multiflora</i>)					Muhlenbergia				
					<i>Rosa</i>					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>)					<i>Rubus</i>					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>)				
Spangled 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>)					<i>Salix</i>									
Bitternut hickory (<i>Carya cordiformis</i>)					Hybrid Crack Willow (<i>Salix X rubens</i>)									
Shagbark Hickory (<i>Carya ovata</i>)					Black-berried Elder (<i>Sambucus nigra</i>)									
Climbing Bittersweet (<i>Celastrus scandens</i>)					Red-berried Elder (<i>Sambucus racemosa</i>)									
Common Hackberry (<i>Celtis occidentalis</i>)					Buffaloberry (<i>Shepherdia canadensis</i>)					Sedges				
Buttonbush (<i>Cephalanthus occidentalis</i>)					Eur. Mountain Ash (<i>Sorbus aucuparia</i>)					Drooping Wood Sedge (<i>Carex arcata</i>)				
Alt.-leaved Dogwood (<i>Cornus alternifolia</i>)					Narrow Meadow-sweet (<i>Spiraea alba</i>)					Golden-fruited Sedge (<i>Carex aurea</i>)				
Silky Dogwood (<i>Cornus amomum</i>)					Common Lilac (<i>Syringa vulgaris</i>)					Graceful Sedge (<i>Carex gracillima</i>)				
Bunchberry (<i>Cornus canadensis</i>)					Poison-ivy (<i>Toxicodendron rydbergii</i>)					Inland Sedge (<i>Carex interior</i>)				
Gray dogwood (<i>Cornus racemosa</i>)					Climbing Poison-ivy (<i>Toxicodendron radicans</i>)					Bladder Sedge (<i>Carex intumescens</i>)				
Round-leaved Dogwood (<i>Cornus rugosa</i>)					White Elm (<i>Ulmus americana</i>)					Lake-bank Sedge (<i>Carex lacustris</i>)				
Red-osier Dogwood (<i>Cornus sericea</i>)					Siberian Elm (<i>Ulmus pumila</i>)					Hop Sedge (<i>Carex lupulina</i>)				
American Hazel (<i>Corylus americana</i>)					Slippery Elm (<i>Ulmus rubra</i>)					Pennsylvania Sedge (<i>Carex pensylvanica</i>)				
Beaked Hazel (<i>Corylus cornuta</i>)					Low Blueberry (<i>Vaccinium angustifolium</i>)					Awl-fruited Sedge (<i>Carex stipata</i>)				
Cockspur Thorn (<i>Crataegus crus-galli</i>)					Maple-leaf Viburnum (<i>Viburnum acerifolium</i>)					Fox Sedge (<i>Carex vulpinoidea</i>)				
English Hawthorn (<i>Crataegus monogyna</i>)					Hobblebush (<i>Viburnum lantanoides</i>)					Carex				
Large-fruited Thorn (<i>Crataegus punctata</i>)					Nannyberry (<i>Viburnum lentago</i>)					Carex				
Crataegus <i>Mollis</i>					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>)					Carex				
Russian Olive (<i>Elaeagnus angustifolia</i>)					Am. Prickly-ash (<i>Zanthoxylum americanum</i>)					Carex				
Autumn Olive (<i>Elaeagnus umbellata</i>)										Carex				
Run. Strawberry-bush (<i>Euonymus obovata</i>)										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>)					Ferns & Allies					Carex				
Witch-hazel (<i>Hamamelis virginiana</i>)					Lady Fern (<i>Athyrium filix-femina</i>)					Cyperus				
Winterberry (<i>Ilex verticillata</i>)					Rattlesnake Fern (<i>Botrychium virginianum</i>)					Redroot Spike-rush (<i>Eleocharis erythropoda</i>)				
Butternut (<i>Juglans cinerea</i>)					Bulbet Bladder Fern (<i>Cystopteris bulbifera</i>)					Eleocharis				
Black Walnut (<i>Juglans nigra</i>)					Spin. Wood Fern (<i>Dryopteris carthusiana</i>)					Hard-stem Bulrush (<i>Schoenoplectus acutus</i>)				
Common Privet (<i>Ligustrum vulgare</i>)					Crested Wood Fern (<i>Dryopteris cristata</i>)					Three-square Bulrush (<i>Sch. pungens</i>)				
Spicebush (<i>Lindera benzoin</i>)					Marginal Wood Fern (<i>Dryopteris marginalis</i>)					Soft-stem Bulrush (<i>Sch. tabernaemontani</i>)				
Fly Honeysuckle (<i>Lonicera canadensis</i>)					<i>Dryopteris</i>					Dark-green Bulrush (<i>Scirpus atrovirens</i>)				
Glaucous Honeysuckle (<i>Lonicera dioica</i>)					Ostrich Fern (<i>Matteuccia struthiopteris</i>)					Wool-grass (<i>Scirpus cyperinus</i>)				
Morrow's Honeysuckle (<i>Lonicera morrowii</i>)					Sensitive Fern (<i>Onoclea sensibilis</i>)									
Tartarian Honeysuckle (<i>Lonicera tatarica</i>)					Cinnamon Fern (<i>Osmunda cinnamomea</i>)									
Common Apple (<i>Malus pumila</i>)					Interrupted Fern (<i>Osmunda claytoniana</i>)									
White Mulberry (<i>Morus alba</i>)					Royal Fern (<i>Osmunda regalis</i>)									
Sweet Gale (<i>Myrica gale</i>)					Christmas Fern (<i>Polystichum acrostichoides</i>)									
Ironwood (<i>Ostrya virginiana</i>)					Eastern Bracken-fern (<i>Pteridium aquilinum</i>)									
Thicket-creeper (<i>Parthenocissus inserta</i>)					Marsh Fern (<i>Thelypteris palustris</i>)					Other Graminoids				
Ninebark (<i>Physocarpus opulifolius</i>)										Broad Bur-reed (<i>Sparganium eurycarpum</i>)				
Balsam Poplar (<i>Populus balsamifera</i>)					Field Horsetail (<i>Equisetum arvense</i>)					Narrow-leaved Cattail (<i>Typha angustifolia</i>)				
Eastern Cottonwood (<i>Populus deltoides</i>)					Scouring-rush (<i>Equisetum hyemale</i>)					Broad-leaved Cattail (<i>Typha latifolia</i>)				
Large-tooth Aspen (<i>Populus grandidentata</i>)					Variegated Horsetail (<i>Equisetum variegatum</i>)					Broad-leaved Cattail (<i>Typha X glauca</i>)				
Trembling Aspen (<i>Populus tremuloides</i>)					<i>Equisetum</i>					Articulated Rush (<i>Juncus articulatus</i>)				
Sweet Cherry (<i>Prunus avium</i>)					Ground-cedar (<i>Lycopodium digitatum</i>)					Soft Rush (<i>Juncus effusus</i>)				
Pin Cherry (<i>Prunus pensylvanica</i>)					Shining Clubmoss (<i>Lycopodium lucidulum</i>)					Path Rush (<i>Juncus tenuis</i>)				
Black Cherry (<i>Prunus serotina</i>)					Ground-pine (<i>Lycopodium obscurum</i>)					Juncus				
Choke Cherry (<i>Prunus virginiana</i>)										Juncus				
Prunus														

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

Map Number: 2106511022
 Date: May 1st, 2012
 Surveyors: JPTC

4
 6
 3

CUT
 CLM-1
 F07-2

Significant Wildlife Habitat Form

AECOM

Study Area:	BLW	JER	<u>GSH</u>	Map #:	<u>Z10 6SH10ZZ</u>
Date:	<u>2012-05-01</u>			Time Started:	<u>3:40 pm</u>
Field Staff:	<u>Tom Shorney Jess Piette</u>			Time Finished:	<u>5:40 pm</u>
Weather Conditions:	<u>overcast 8°C, Light Wind</u>				

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

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

UTMs: _____ Number of nests: _____

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

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

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

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

UTMs: _____ Area of standing water delineated on field map

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

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

Area and soil/substrate of shoreline habitat: _____

Type and abundance of cover in open water habitat: _____

Type and abundance of cover in surrounding habitat: _____

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

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

*****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: 210 65H1022

Field Staff: Tom Skonec
Jess Pietsch

Date (yyyy-mm-dd): 2012-05-01

Time Started: 3:40 pm

Time Finished: 5:20 pm

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Redstart		Ob					
Eastern Phoebe		ob					
Goldfinch		VO					
Killdeer		VO					
Deer		TKS					
Vesper Sparrow		VO					
House Wren		VO					

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= Feeds/Faecal sack, AE= Nest Entry

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

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
PLANTS FOD7	American Gromwell (Lithospermum latifolium) - S3 Bloom Time - Spring	Shaded river banks, wooded floodplains. River floodplains, woods and edges of woods.	Y N UTM: N/O
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 (Cotinoselinum 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 Careligasque 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, yet-mesic floodplain forests as well as mesic forests over limestone. Includes floodplains and river banks.	Y 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	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 Bloom Time – May and June	Species found in damp deciduous 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>Galium pilosum</i>) - S3 Bloom Time – June-August	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, FOD6, FOD7, SWM, SWD	June to August Hairy Valerian (<i>Valeriana edulis</i>) - S1 Bloom Time – June to August	Inhabits swampy river flats and meadows, wet prairies, and wooded, rocky riverbanks and fens.	(Y) (N) UTM
FOD6, FOD7, FOD8, FOD9	Summer Hairy Wood Mint (<i>Blephilia hirsuta</i>) - S1 Bloom Time – Summer	Woodlands, often rocky, especially rivers, swamp forests, floodplains.	(Y) N UTM: N/O
SAS1, SAM1, SAF1	Time – early to late April Harbinger-of-spring (<i>Erigenia bulbosa</i>) - S3 Bloom Time – early to late April	Occurs in rich, moist deciduous woods, especially on floodplains.	(Y) N UTM: N/O
FOM6, FOM7, FOM8	Time – summer Large Round-leaved Orchid (<i>Platanthera macrophylla</i>) - S2 Bloom Time – June to August	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters.	(Y) (N) UTM:
MAM2, MAM3, MAS2, MAS3, SWD	June – September Lizard's Tail (<i>Saururus cernuus</i>) - S3 Bloom Time – June – September	Species inhabits moist mixed woods. Found in fairly mature, upland sugar maple-beech-eastern hemlock woodlands	(Y) (N) UTM
FOD6, FOD7, FOD9	March-May Pawpaw (<i>Asimina triloba</i>) - S3 Bloom Time – March-May	Species inhabits shores and streambanks along shallow water. As well as swamps, floodplains, shallow water and mudflats at the borders of streams and ponds	(Y) (N) UTM: N/O
FOM8, FOD6, FOD7, FOD9, CUM4	Early Summer Pilosus Evening Primrose (<i>Oenothera pilosella</i>) - S2 Bloom Time – Late Spring – Early Summer	Occurs in moist, deciduous woods and stream banks	(Y) N UTM: N/O
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	July-September Prostate Tick-trefoil (<i>Desmodium rotundifolium</i>) - S2 Bloom Time – July-September	Moist edges of woods and open, disturbed ground	(Y) N UTM: N/O
FOD7, SWD	March - June Pumpkin Ash (<i>Fraxinus profunda</i>) - S2? Bloom Time – March - June	Dry, sandy or rocky woods	(Y) N UTM: N/O
CUW1, ALO, FET1, SWC	Mid June Ram's-head Lady's-slipper (<i>Cypripedium arietinum</i>) - S3 Bloom Time – mid May to mid June	Swamps and floodplains	(Y) N UTM: N/O
FOD1, FOD2, FOD3, FOD4, FOD5, FOC1, FOM1, FOM5	September Rattlesnake Hawkweed (<i>Hieracium venosum</i>) - S2 Bloom Time – April – September	Found in cedar woodlands, limestone plains and wooded fens, moist coniferous swamps, dry-sandy woods, and limestone barren	(Y) (N) UTM
FOD6, FOD7, FOD9	June - June Round-leaved Groundsel (<i>Packera obovata</i>) - S3 Bloom Time – May - June	Species inhabits open, dry sandy woods, Jack pine, oak, and aspen woodlands.	(Y) (N) UTM: N/O
CUM1, CUT1, CUS1	June - June Round-leaved hawthorn (<i>Crataegus lumarina</i>) - S3? Bloom Time – June - June	Found in moist woods	(Y) N UTM: N/O
FOD6, FOD7, FOD8, FOD9, SWT2, SWT3	May to October Scarlet Beebalm (<i>Monarda didyma</i>) - S3 Bloom Time – May to October	Species occurs in old fields, poorly managed pastures, fencelines and roadsides	(Y) N UTM: N/O
ALO, ALS, ALT, TPO, TPS, TPW	September Slender Blazing Star (<i>Liatris cylindracea</i>) - S3 Bloom Time – September	Found in moist, rich woods, thicket swamps, banks and floodplains.	(Y) N UTM: N/O
SBO, SBS, SBT, TPO1, TPS1, TPW1, FOD1, FOD2	September Slender Knotweed (<i>Polygonum tenue</i>) - S2 Bloom Time – September	Species occurs in limestone and dolostone pavement, prairies, open woods, alvars and moist sandy meadows.	(Y) (N) UTM
SDT1, FOD5, FOD9	September Slim-flowered Mulyhy (<i>Muhlenbergia tenuiflora</i>) - S2 Bloom Time – September	Found in dry, sandy, open areas in deciduous (often oak woods), prairie meadows, at edges of sand pits	(Y) (N) UTM
BLO1, BLS1, BLT1, TPO2, TPS2, TPW2, MAM2, FOD7	Mid fall Stiff Gentian (<i>Gentiana quinquefolia</i>) - S2 Bloom Time – late summer to mid fall	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:
TPS1, TPW1, CUW1, RBO, SBO	mid-March to mid-June Sundial Lupine (<i>Lupinus perennis</i>) - S3 Bloom Time – mid-March to mid-June	Found in moist soils of streambanks, edges of woods, wet prairies, marshy meadows, bluffs and wooded hillsides	(Y) N UTM: N/O

Species Conservation Concern Habitat and Incidental Wildlife – Goshen

ADOM

ELC	Species	Description	Habitat Present (Y/N; UTM; description or habitat if present)
TP01, TPS1, TPW1, CUM1	Tall Blazing Star (<i>Liatris aspera</i>) - S3/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y (N) UTM:
FEO, FES, FET, MAM2, MAM3	Tuberous Indian Plantain (<i>Amoglossum plantagineum</i>) - S3 Bloom Time - mid-March to mid-June	Occurs mainly in flat, sandy areas of the Bruce Peninsula. Fens, wet meadows, and calcareous river flats.	Y (N) UTM:
FOC1, FOC2, FOC3, FOC4	Woodland Pinedrops (<i>Pterospora andromedea</i>) - S2 Bloom Time - summer	Found in conifer woods, under pines, but also hemlock, spruce, fir, and white cedar. In dry or rocky soil, often with common juniper and sometimes aspen or birch.	Y (N) UTM:
(CUM4), CUT1, CUW1, RBO1, SBO1	Yellow Ladies'-tresses (<i>Spiranthes ochroleuca</i>) - S2 Bloom Time - August to November	Dry, open sites, usually on acidic sandy soil, dry to mesic open woodland, thickets, meadows, barrens, ledges, outcrops, banks and roadsides, old fields.	Y (N) UTM: N/O
BIRDS			
-	Bald Eagle (<i>Haliaeetus leucocephalus</i>) - SC	Assessed as SWH. Record species if found.	not required.
CUW, SDO, RBO, TPS	Common Nighthawk (<i>Chordeiles minor</i>) - SC	Hunts insects over a wide variety of habitats, in particular open or semi-open areas. Nests on ground in a wide range of open, sparse or vegetation-free habitats.	Y (N) UTM:
FOD, FOM	Louisiana Waterthrush (<i>Seiurus motacilla</i>) - SC	Inhabits mature forests along steeply sloped ravines adjacent to running water. Trees, bushes, exposed roots, cliffs, banks and 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.
CUT	Yellow-breasted Chat (<i>Icteria virens</i>) - SC	Inhabits thickets, tall tall grasses, shrubbery beside streams, ponds; overgrown bushy clearings with deciduous thickets; nests above-ground in bush, vines	Y (N) UTM: N/O
REPTILES			
-	Eastern Ribbonsnake (<i>Thamnophis sauritus</i>) - SC	Assessed as SWH. Record species if found.	not required.
-	Milksnake (<i>Lampropeltis triangulum</i>) - SC	Assessed as SWH. Record species if found.	not required.
-	Snapping Turtle (<i>Chelydra serpentina</i>) - SC	Assessed as SWH. Record species if found.	not required.
INSECTS			
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:
(CUM), CUT1, CUW1	Monarch Butterfly (<i>Danaus plexippus</i>) - SC	Their larvae only feed on milkweeds (<i>Asclepias</i> spp.). Habitat includes abandoned farmland, along roadsides, open spaces where these plants grow	Y (N) UTM: N/O
TPS, CUW	Mottled Duskywing (<i>Erynnis martialis</i>) - S2	Usually seen nectaring on 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, fence rows and parks. Usually occurs near Hackberry, the larval foodplant	Y (N) UTM: N/O
FOD5	West Virginia White (<i>Pteris virginianensis</i>) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y (N) UTM:

Wetland Data Collection Sheet



Study area: <i>GOSHEN</i>	Map No: <i>210 GSH1022</i>
Date (yyyy-mm-dd): <i>May 1st, 2012</i>	Time Started: <i>3:40pm</i>
Field Staff: <i>Jess Piette + Tom Shorley</i>	Time Finished: <i>5:20pm</i>

Presence of Groundwater No Yes

bank seepage iron staining groundwater indicator

Site Type Lacustrine (associated with lakes) Isolated

Riverine (associated with rivers) *onsite watercourse*

Palustrine absent or intermittent inflow and either intermittent or permanent outflow

what are the water inputs and outputs? *surface water + watercourse*

Soils refer to ELC card for soils information

% open Water

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

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

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

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

Community Descriptions

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

Map Code/ ELC Code	Community Description - list at least four dominant species for each form
<i>F07-2 S1</i>	<i>h*: Fraxinus, ACENEGU, ULMAMEX ts: Fraxinus, ACENEGU, CRATAEGUS sp</i>

Wetland Data Collection Sheet



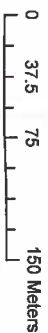
Notes on Ecological Functions or features

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

- Community was not thought to be wetland as there was no evidence of pooling within community and was on a slope

Goshen Feature: 215 GSH1067/2018

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



October 3, 2011



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

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

GSH1065

Access - yes

GSH1064

Access - yes

forming
survey

GSH1067

AITB

SH 72

CUM

GSH2018

NO ACCESS

Access - yes

GSH2016

ORIGINAL



ELC Community Classification (Crescentalton)

Site: 215 GSH Polygon: Nov 8 1987

Surveyor(s): Kamstra Date: Nov 8/11 Time start: 9:15 finish: 10:15

UTMZ: 17 UTMZ: 450785 UTMN: 479120

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input 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 type="checkbox"/> Tableland	<input type="checkbox"/> Lichen	<input type="checkbox"/> Swamp
<input type="checkbox"/> Surficial Dep.		<input checked="" type="checkbox"/> R. Hill. 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 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"/> Treed		<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) <i>P >> Much Greater Than; > Greater Than; = About Equal To</i>
1	2.4	4	<i>Eragrostis - Tilomania - Urtica</i>
2	2.4	4	<i>Tilomania - Eragrostis - Urtica</i>
3	2.4	4	<i>Pruina - Fragaria - Ti - Anemone</i>
4	6.3	3	<i>Rhus glabra - Geucaledon - Astilbe</i>

HT Codes: 7 < 0.2m 8 > 0.2-0.6m 9 > 0.6-1m 4 > 1-2m 3 > 2-8m 2 > 6-25m 1 > 25m
CVR Codes: 0 = none 10% - 10% 20 - 25% 35 - 50% 4 > 50%

Stand Composition: Size Class Analysis: A < 10 A 10-24 25-50 > 50
Standing Shaga: < 10 R 10-24 25-50 > 50
Deadfall / Logs: < 10 A 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:	Code:
Vegetation Type: df W. Ash - Basswood	Code: FSD 4-F	Code: FSD 4-F
Inclusion:	Code:	Code:
Complex:	Code:	Code:

Community Profile Diagram/Comments

In Veg canopy about 60%

Tree Tally by Species

Species	Tally	Tally	Tally	Tally	Tally	Tally	Tally	Photo
								2

Total
Basal Area (BA)
Dead

Soils Ontario and ELC Soils Description

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

Soil Horizon Description

Soil Horizon Description	Depth 1	Depth 2	Depth 3	Depth 4	Moisture Regime	Drainage

ELC
Community Description and Classification

Site: 215 GSH 1067 Polygon: B
 Surveyor(s): JKS Date: Nov 8 Time start: 9:45 finish: 9:45
 UTMZ: 450760 UTMN: 4790970

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input 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 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 checked="" type="checkbox"/> Cliff <input checked="" 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	Tilaxer 7 Herbaceous - Fragaria > Fragaria
2	3	4	Acer 2 > Osprey > Prunus
3	3	3	Aosach - Prunus
4			

HT Codes: <0.2m none 0%-10% 2 10-25% 3 25-60% 4 >60%
 CVR Codes: 0 none 1 0% - 10% 2 10 - 25% 3 25 - 60% 4 > 60%

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

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

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

Ecosite: Pioneer Young Mid-Age Mature Old Growth
 Vegetation Type: Basswood - Maple - Beech Code: FOD 6-6
 Inclusion: Code: 6-5
 Complex: Code:

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

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

Soils Ontario and ELC Soils Description

Site Metrics	Pit/Auger #	Soils Description				Summary
Zone Easting Northing Position Aspect Percent Slope Length Mottles Gley Water Table Carbonates Bedrock	5					Moisture Regime
						Drainage
						Effective Texture (Indicate below)
						% CF
						% CF
Soil Horizon Description	1	Depth from zero	% CF	% CF	% CF	% CF
		Texture				
	2	Depth from zero	% CF	% CF	% CF	% CF
		Texture				
	3	Depth from zero	% CF	% CF	% CF	% CF
		Texture				
	4	Depth from zero	% CF	% CF	% CF	% CF
		Texture				
		% Surface Stone/Rock				
		Moisture Regime				
		Drainage				

ELC WILDLIFE	SITE: 215 2018 + 1067
	POLYGON:
	DATE: Nov 8, 2011
	SURVEYORS: Kaminster
	START TIME: 9:15 END TIME:

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

POTENTIAL WILDLIFE HABITAT:

VERNAL POOLS	SNAGS
HIBERNACULA	FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
	BLTA	VO							
	AMGO								
	DOWO								
	Gray Squirrel								
	Spring Peeper	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:

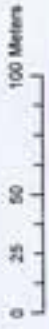
OB = OBSERVED VO = VOCALIZATION CA = CARCASS
DP = DISTINCTIVE PARTS HO = HOUSE/DEN FY = EGGS/YOUNG
TK = TRACKS FE = FEEDING EVIDENCE SC = SCAT
SI = OTHER SIGNS (specify)

h

- Collection/Feature Intersect
- Turbine Buffer/Feature Intersect
- Property Fabric
- 171.5m Turbine Wind Energy Centre

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

September 1, 2011



Goshen Feature: 215 GSH1067

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



Leased

171.5m
125m
171.5m

171.5m
125m
171.5m

ELC
Community Description and Classification

Site: 215_GSH1067 Polygon: 1

Surveyor(s): SJM Date: Oct. 4/11 Time start: 13:28 finish: 14:40

UTMZ: 17T UTMZ: 45Q663 UTMN: 47A0901

wp #301 + 304K E 450788
N J790628

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input checked="" type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic	<input type="checkbox"/> Organic <input checked="" type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Min. <input type="checkbox"/> Acidic Bedrk <input type="checkbox"/> Basic Bedrk <input type="checkbox"/> Carb. Bedrk	<input type="checkbox"/> 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"/> AVar <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	<u>BP > MH = BE = HS</u>
2			<u>Blue Beech > MH = BE > Choke Cherry</u>
3			<u>White Baneberry > Prickly Goose Berry > Black Raspberry</u>
4			<u>Goat's Wood > False Solomon Seal > Yellow-Ash > Virginian Water-hat</u>

HT Codes: 1 < 0.2m 2 0.2-0.5m 3 0.5-1m 4 1-1.2m 3 > 2-6m 2 > 6-25m 1 > 25m
 CVR Codes: 0 = none 1 0% - 10% 2 10 - 25% 3 25 - 60% 4 > 60%

BP 39 - 400 - MH 17 - BE 15 - HS 15

Stand Composition: Size Class Analysis:

BA: <u>19</u>	Size Class Analysis:	A < 10	A 10-24	A 25-50	O > 50
	Standing Snags:	O < 10	R 10-24	O 25-50	R > 50
	Deadfall / Logs:	A < 10	R 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 - Hardwood Deciduous Forest Code: F0NG-5

Inclusion: Code: /

Complex: Code: /

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Prism Factor	Rel. Avg.
BP	2	9			11	15	
BP	6	5	12	6	29	34	
MH	4	0	5	4	13	17	
BE	1	1	1	4	7	15	
HS			2	1	3	4	
HA			5	1	6	8	
HA			1	1	2	2	
HA			24	23	47	100	
HA	13	15	48	46	122	19	
HA	20	30	2	2	54	5	
Total					75		
Basal Area (BA)					150		
Dead					5		

Soils Ontario and ELC Soils Description

Site Metrics	Zone	Easting	Northing	Position	Aspect	Percent	Slope	Length	Moisture Regime	Drainage	Effective Texture (Indicate below)	Summary
UTM												
Slope												
Moisture Regime												
Drainage												
Effective Texture												
Depth from zero												
Texture												
Depth from zero												
Texture												
Depth from zero												
Texture												
Depth from zero												
Texture												
% Surface Stone/Rock												
Moisture Regime												
Drainage												

ELC
Community Description and Classification

Site: 215-GSH 067 Polygon: 2
 Surveyor(s): SAM Date: Oct. 4/11 Time start: 13:42h finish: 14:20h
 UTMZ: 17T UTMZ: 450708 UTMN: 4790665

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input type="checkbox"/> Terrestrial <input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Aquatic Site <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input checked="" type="checkbox"/> Surficial Dep. <input type="checkbox"/> Bedrock	<input type="checkbox"/> Organic <input checked="" type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Min. <input type="checkbox"/> Acidic Bedrk <input type="checkbox"/> Basic Bedrk <input type="checkbox"/> Carb. Bedrk	<input type="checkbox"/> Lacustrine <input type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input 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) (>> Much Greater Than; > Greater Than; = About Equal To)
1	2	4	MS >>> MS = AG
2	4-3	2	ME >>> AG > Black Birch
3	5	3	Sensitive fern > False Nettle > Lady Fern > Four Plant
4	7-6	3	Woodland Strawberry > Milkberry > Carex in tussocks

HT Codes: 7 < 0.2m 8 > 0.2-0.5m 9 > 0.5-1m 4 > 1-2m 3 > 2-5m 2 > 6-25m 1 > 25m
 CVR Codes: 0 = none 1 0% - 10% 2 10 - 25% 3 25 - 50% 4 > 50%

Stand Composition: Size Class Analysis:

BA: 18	10-24	10-24	10-24	25-50	25-50	25-50	>50
MA: 17-18	A	A	A	A	A	A	A
	<10	<10	<10	>50	>50	>50	>50
	N	N	N	R	R	R	R
	O	O	O	O	O	O	O

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

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

Ecosite: Ingle Mineral Deciduous Swamp Ecotype Code: SWD3
 Vegetation Type: Swamp Maple Mineral Deciduous Code: SWD3-3
 Inclusion: Swamp Type Code: /
 Complex: /

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Avg.
MS	1	2			3	17
ME	6	6			12	67
AG	2	1			3	16
Total					19	100
Basal Area (BA)	9	9			18	18
Dead	18	18			36	

Soils Ontario and ELC Soils Description

Pit/Auger #	Zone	Summary
1	17T	
2	450708	Moisture Regime
3	4790665	Drainage
4	5	
5	5W	
6	-	
7	-	
8	13	
9	53	
10	41	
11	>120	
12	>120	

Site Metrics

Mottles	% CF
Gley	% CF
Water Table	% CF
Carbonates	% CF
Bedrock	% CF
Depth from zero	% CF
Texture	% CF
Depth from zero	% CF
Texture	% CF
Depth from zero	% CF
Texture	% CF
Depth from zero	% CF
Texture	% CF
% Surface Stone/Rock	% CF
Moisture Regime	% CF
Drainage	% CF

Soil Horizon Description

1	Depth from zero	+ 27	% CF
2	Texture	Oh	% CF
3	Depth from zero	+ 13	% CF
4	Texture	Of	% CF
5	Depth from zero	0	% CF
6	Texture	CL	% CF
7	Depth from zero	43	% CF
8	Texture	C	% CF

Effective Texture (Indicate below)

1	% CF
2	% CF
3	% CF
4	% CF
5	% CF
6	% CF
7	% CF
8	% CF

Moisture Regime: Very Moist (6)
 Drainage: Imperfect (5)

VASCULAR PLANT CHECKSHEET

Location: 215-GSH1067
 Observer: SAM

Date: Oct 4/11
 Job Number:

DICOT HERBS											MONOCOT HERBS												
	1	2	3	4	5	1	2	3	4	5	6	1	2	3	4	5	6						
<i>Chilos mifolius</i>						<i>Erigeron annuus</i>						<i>Plantago lanceolata</i>						<i>Alopecurus pratensis-aquatica</i>					
<i>Senecio pectinifolius</i>	X					<i>Erigeron philadelphicus</i>						<i>Plantago major</i>						<i>Allium tricoccum</i>					
<i>Senecio rubra</i>						<i>Erigeron strigosus</i>						<i>Plantago rugellii</i>						<i>Allium</i>					
<i>Agalinus</i>						<i>Erythronium chersanthoides</i>						<i>Podophyllum peltatum</i>						<i>Artemisia trichophyllum</i>					
<i>Agrimonia gryposepala</i>	X					<i>Eupatorium maculatum</i>						<i>Polygonum</i>						<i>Asplenium officinale</i>					
<i>Althaea petiolaris</i>						<i>Eupatorium perfoliatum</i>						<i>Polygonum</i>						<i>Caltha palustris</i>					
<i>Anemone hepatica</i>						<i>Eupatorium rugosum</i>						<i>Polygonum</i>						<i>Cicuta horrida</i>					
<i>Anemone ranunculoides</i>						<i>Euphorbia</i>						<i>Polygonum leptophyllum</i>						<i>Conularia majus</i>					
<i>Anemone virginiana</i>						<i>Euthamia graminifolia</i>						<i>Polygonum persicaria</i>						<i>Cypripedium calceolus</i>					
<i>Aster novae-angliae</i>						<i>Fragaria virginiana</i>						<i>Potentilla</i>						<i>Eloaea canadensis</i>					
<i>Aster longifolius</i>						<i>Fragaria vesca</i>		X				<i>Potentilla norvegica</i>						<i>Epipactis helleborine</i>					
<i>Aster multiflorus</i>						<i>Galeopsis tetrahytes</i>						<i>Potentilla recta</i>						<i>Erythronium americanum</i>					
<i>Aster macrophyllus</i>						<i>Galium</i>						<i>Parthenocissis alba</i>						<i>Hemerocallis fulva</i>					
<i>Aster purpureus</i>						<i>Galium palustre</i>						<i>Prunella vulgaris</i>						<i>Iris versicolor</i>					
<i>Barbarea vulgaris</i>						<i>Galium triflorum</i>						<i>Pyrola elliptica</i>						<i>Lemna minor</i>					
<i>Bidens cernua</i>						<i>Geranium maculatum</i>		X				<i>Ranunculus</i>						<i>Lemna trisulca</i>					
<i>Bidens frondosa</i>						<i>Geranium robertianum</i>		X				<i>Ranunculus abortivus</i>						<i>Lilium</i>					
<i>Bistorta caroliniana</i>	X					<i>Geum alepnicum</i>		X				<i>Ranunculus acris</i>						<i>Maianthemum canadense</i>					
<i>Caltha palustris</i>						<i>Geum canadense</i>						<i>Rubus hirta</i>						<i>Maianthemum racemosum</i>		X			
<i>Calystegia sepium</i>						<i>Geum</i>						<i>Rumex acetosella</i>						<i>Maianthemum stellata</i>					
<i>Candollea dioica</i>						<i>Glecoma hederacea</i>						<i>Rumex crispus</i>						<i>Palafoxia</i>					
<i>Candollea</i>						<i>Hepatica scutifolia</i>						<i>Rumex</i>						<i>Parthenocissis vitacea</i>					
<i>Castilleja foliolosa</i>						<i>Hesperis matronalis</i>						<i>Sanguinaria canadensis</i>						<i>Polygonatum pubescens</i>					
<i>Cerastium fontanum</i>						<i>Hieracium aurantiacum</i>						<i>Sanicula marilandica</i>						<i>Polygonatum crispum</i>					
<i>Cerastium demersum</i>						<i>Hieracium caespitosum</i>						<i>Scutellaria galericulata</i>						<i>Potamogeton pectinatus</i>					
<i>Chailodorum majus</i>						<i>Hieracium</i>						<i>Silene vulgaris</i>						<i>Potamogeton</i>					
<i>Chenopodium album</i>						<i>Hydrophyllum virginianum</i>	X					<i>Sum. suave</i>						<i>Sagittaria latifolia</i>					
<i>Chrysanth. leucanthemum</i>						<i>Hypericum perforatum</i>						<i>Solanum dulcamara</i>	X					<i>Sarynholm montanum</i>					
<i>Cichorium intybus</i>						<i>Impatiens capensis</i>						<i>Solidago</i>						<i>Smilax herbacea</i>					
<i>Circaea lutetiana</i>						<i>Inula helenium</i>						<i>Solidago altissima</i>						<i>Spiranthes cernua</i>					
<i>Circaea arvensis</i>						<i>Lactuca</i>						<i>Solidago canadensis</i>						<i>Sporobolus polytrichus</i>					
<i>Cirsium vulgare</i>						<i>Lapsana canadensis</i>						<i>Solidago canadensis</i>						<i>Stachys rosea</i>					
<i>Cnicus virginicus</i>						<i>Lepidium</i>						<i>Solidago flexuosa</i>						<i>Trifolium erectum</i>					
<i>Cicuta horrida</i>						<i>Linaria vulgaris</i>						<i>Solidago gigantea</i>						<i>Trifolium grandiflorum</i>					
<i>Coryphaea lanceolata</i>						<i>Lithospermum officinale</i>						<i>Solidago nemoralis</i>						<i>Urtica grandiflora</i>					
<i>Coryphaea</i>						<i>Lobelia</i>						<i>Solidago rugosa</i>											
<i>Cystopteris bulbifera</i>						<i>Lobelia inflata</i>						<i>Sanctus arvensis</i>											
<i>Cystopteris</i>						<i>Lolium comiculatum</i>						<i>Sanctus asper</i>											
<i>Cystopteris bulbifera</i>						<i>Lycopodium americanum</i>						<i>Sisymbrium</i>											
<i>Cystopteris</i>						<i>Lycopodium</i>						<i>Taraxacum vulgare</i>											
<i>Cystopteris bulbifera</i>						<i>Lysimachia ciliata</i>						<i>Taraxacum officinale</i>											
<i>Cystopteris bulbifera</i>						<i>Lythrum salicaria</i>						<i>Thalictrum dioicum</i>											
<i>Cystopteris bulbifera</i>						<i>Medicago lupulina</i>						<i>Thalictrum pubescens</i>											
<i>Cystopteris bulbifera</i>						<i>Medicago sativum</i>						<i>Thymus cordifolia</i>											
<i>Cystopteris bulbifera</i>						<i>Melilotus alba</i>						<i>Thymopogon pratensis</i>											
<i>Cystopteris bulbifera</i>						<i>Mertensia arvensis</i>						<i>Trientalis borealis</i>											
<i>Cystopteris bulbifera</i>						<i>Mesochorus ringens</i>						<i>Trifolium</i>											
<i>Cystopteris bulbifera</i>						<i>Mesochorus ringens</i>						<i>Trifolium pratense</i>											
<i>Cystopteris bulbifera</i>						<i>Milium dactyloides</i>						<i>Trifolium repens</i>											
<i>Cystopteris bulbifera</i>						<i>Moroneja toblerensis</i>						<i>Tussilago farfara</i>											
<i>Cystopteris bulbifera</i>						<i>Muscicella</i>						<i>Urtica dioica</i>											
<i>Cystopteris bulbifera</i>						<i>Nasturtium officinale</i>						<i>Urticularia vulgaris</i>											
<i>Cystopteris bulbifera</i>						<i>Nepeta cataractae</i>						<i>Verbascum thapsus</i>											
<i>Cystopteris bulbifera</i>						<i>Nepeta</i>						<i>Verbena hastata</i>											
<i>Cystopteris bulbifera</i>						<i>Nepeta hederifolia</i>						<i>Verbena urticifolia</i>											
<i>Cystopteris bulbifera</i>						<i>Nepeta multiflora</i>						<i>Veronica</i>											
<i>Cystopteris bulbifera</i>						<i>Nepeta racemosa</i>						<i>Veronica officinale</i>											
<i>Cystopteris bulbifera</i>						<i>Nepeta stricta</i>						<i>Vicia cracca</i>											
<i>Cystopteris bulbifera</i>						<i>Nepeta xanthocoma</i>						<i>Vicia lutea</i>											
<i>Cystopteris bulbifera</i>						<i>Nepeta xanthocoma</i>						<i>Vicia sativa</i>											
<i>Cystopteris bulbifera</i>						<i>Nepeta xanthocoma</i>						<i>Vicia</i>											
<i>Cystopteris bulbifera</i>						<i>Nepeta xanthocoma</i>						<i>Vicia pubescens</i>											
<i>Cystopteris bulbifera</i>						<i>Nepeta xanthocoma</i>						<i>Vicia vicia</i>											

- 1: polygon #1
 2: Polygon #2
 3: _____
 4: _____
 5: _____
 6: _____

SITE LOCATIONS

ELC Plant Species List	SITE: 215_GSH1067
	POLYGON: ①
	DATE: Oct. 4/11
	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	
① Pt						② Sns. Fern					
Bw						Xmas Fern					
Mh						Acer Freemanii					
Aw						C. sp. intenses					
Bp						calico Ast.					
Blue Beech						Dwarf Rasp.					
HBN						Wood Stramb					
Pj						C. rosea					
Virg. waterleaf						Lady fern					
As						Ms					
grape						foal nouna					
Ag						Blk. Rubrush					
Ag						C. tuckermanii					
Virg. Creeper						AG					
Brist. Blk Currant						fake ventle					
Be						Int. Wood Fern					
Yell. Anem											
ln											
Bs Nitshd											
Herb Rob +						mp	9				
Swon. abov.						AG	2				
Choked cherry						As	2				
Gray Dogwood											
CB											
wt. Blueberry											
Leaf											
Agromony											
Prickly Gooseberry											
Wid. Geranium											
Blk Rasp.											
False Sol Seal											

Wp n
302
Inclusion

mp 9
AG 2
As 2

13/26 = 50

On	14
Of	27
EL	43
C	

g = 56 (13 from minor 10)
G = 94
WT = 82

ELC WILDLIFE	SITE: 215-GSH 1067	
	POLYGON: ①+②	
	DATE: Oct. 4/11	
	SURVEYORS: gAH	
	START TIME: 1328	END TIME: 1440

TEMP (°C): 13	CLOUD (10th): 0	WIND: 2-3	PRECIPITATION: nil
CONDITIONS: cool, clear sunny, breezy			

POTENTIAL WILDLIFE HABITAT:

VERNAL POOLS	SNAGS
HIBERNACULA	FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	WITU	DP		1					
M	W-Deer	OB		1					
B	ANGR	W		3					
B	BLJA	VO		2					

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

- Turbine Location
 - Road Turn-Around
 - Collection Line Layout
 - Access Road Layout
 - Turbine Turn-Around Box
 - Collection Line 20m Buffer
 - Access Road 60m Buffer
 - Area of Disturbance 120m Buffer
 - Natural Feature
- Roads**
- Major Road
 - Local Road
- Water Features**
- Intermittent Stream
 - Permanent Stream



Derived from Ontario Ministry of Natural Resources
Geoprocessing



Metres
0 30 60 120 180 240
1:5,000
UTM Zone 17N, NAD 83

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Northern Energy Canada, LLC
Green Wind Energy Centre

Feature 216

December 2011
60156032

AECOM

Figure 1

Site: 216 Polygon: 12.
 Surveyor(s): B. Miller Date: DEC. 13, 11 Time start: 12:30 pm
 B. Arken Date: UTMZ: 442203 UTMN: 4791044
 UTMZ: 17

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
<input checked="" type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic <input type="checkbox"/> Silts <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"/> Open <input type="checkbox"/> Shrub <input type="checkbox"/> Tree	<input type="checkbox"/> Organic <input type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Min. <input type="checkbox"/> Acidic Bedrk <input type="checkbox"/> Basic Bedrk <input type="checkbox"/> Carb. Bedrk	<input type="checkbox"/> Lacustrine <input type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input 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"/> Bryophytes <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

Layer	HT	CVR	Species In Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1	1	3	QUERCUS CAROLINENSIS > FRAXINUS
2	2	4	QUERCUS CAROLINENSIS > FRAXINUS > W. MANNA
3	3	3	CAROLINENSIS > FRAXINUS > QUERCUS
4	4-7	2	CAROLINENSIS > G. SP. > PRUNUS

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

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

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

Ecocite: Fresh-Moist Oak-Hickory Deciduous Ecocite Code: FOD9
 Vegetation Type: Fresh-Moist Bur Oak Deciduous Code: FOD9-2
 Inclusion: Mineral Thicket Swamp Code: SWT2
 Comments: Dry-Moist Old Field Deciduous Code: SWT1-1

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

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

Soils Ontario and ELC Soils Description

Site Metrics	PI/Auger #	Soil Horizon Description				Summary
		Zone	Easting	Northing	Position	
UTM						Moisture Regime
Slope						Drainage
Mottles						Effective Texture (indicate below)
Gley						
Water Table						% CF
Carbonates						
Bedrock						% CF
Depth from zero						
Texture						% CF
Depth from zero						
Texture						% CF
Depth from zero						
Texture						% CF
Depth from zero						
Texture						% CF
Depth from zero						
Texture						% CF
Depth from zero						
Texture						% CF
Depth from zero						
% Surface Stone/Rock						% CF
Moisture Regime						
Drainage						

VASCULAR PLANT LIST - FEATURE 216

POLYGON 12.

Dec. 13, 2011

B. Miller
R. Aitken

TREES

C S C U G L

HERBACEOUS FLORA

U G L

FRAX PENN	O	O	O	O
QUE MACE	D	A	O	R
FAG GRAN		R	R	
CARONAT	A	A	R	R
MALPUMI			O	
VL MAMER	R	O	R	
JUN VIRG			R	
POP GRAN		R	R	
TILAMER	R	O	A	R
CAR CARO		R	D	O
POP DELT	R			
ACESASA		R		
Amelanchier sp.			R	
OST VIRG			R	

ALL PETI			R	
GEUM SP.			A	
TAX OFFI			R	
FRA VIRG			O	
SOL et. CANA			O	
Carex gracillima			D	
PRU VULG			R	
DAUCARO			R	
EUT GRAM			R	
SPMERIC			O	
SYMLANC			O	
SYMPILO			R	
LEUVULG			R	
Carex cf. projecta			R	
CLI VULG			R	

SHRUBS

C S C U G L

RUBIDAE				R
RUBOCCI				R
VITRIPA			O	O
PRU VIRG				O
CORRACE			O	O
CRAT SP.	R	O		
COR OBLI			O	O
VIBLENT	R	R		
RHACATH			R	
HAM VIRG			R	
SMILAX TAMNOIDES				R
EUO OBOV				R
ROSA SP.			R	

POLYGON 12

WILDLIFE:

- Cottontail observed
- Deer rub on POP GRAN sapling

INCLUSIONS:

CUMI-1
SWT2

ELC
Community
Description and
Classification

Site: 216 Polygon: 13
 Surveyor(s): B. Miller Date: Dec. 13, 2011 Time start: 12:30 PM
 B. Aitken finish: 2:00 PM
 UTMZ: 17 UTMZ: 442282 UTMN: 4790839

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 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"/> Rolt. Upland <input type="checkbox"/> Cliff <input type="checkbox"/> Talus <input type="checkbox"/> Crevice/Cave <input type="checkbox"/> Aiver <input type="checkbox"/> Rockland <input type="checkbox"/> Beach / Bar <input type="checkbox"/> Sand Dune <input type="checkbox"/> Bluff	<input type="checkbox"/> Plankton <input type="checkbox"/> Submerged <input type="checkbox"/> Floating-LVD. <input type="checkbox"/> Graminoid <input type="checkbox"/> Forb <input type="checkbox"/> Lichen <input type="checkbox"/> Bryophyte <input type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Mixed	<input type="checkbox"/> 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	4	3	ACESASA > CAROVAT > FRAPENN = ACCERSE
2	3	4	ACESASA > CAROVAT = CARCARO = TILANER
3	3	4	TILANER = OVIRG = CARCARO
4	4-7	2	ACESASA = GEUM SP. = PRUVIAG

HT Codes: 1 < 0.2m 2 0.2-0.5m 3 0.5-1m 4 > 1.2m 5 > 2.5m 6 > 2.5m 1 > 2.5m
 CVR Codes: 0 Pioneer 1 5% - 10% 2 10 - 25% 3 25 - 50% 4 > 50%

Stand Composition: Size Class Analysis:

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

Standing Snags: Deadfall / Logs: Abundance Codes: N = None R = Rare O = Occasional A = Abundant

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

Excelsior: Fresh-Moist Oak-Maple-Hickory Code: FOD9
 Vegetation Type: Deciduous Forest
 Inclusion: Swamp Maple/Nirg/Deciduous Stand Code: SWD3-3
 Inclusion: Green Ash/Nirg/Deciduous Stand Code: SWD2-2
 Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Species	Tally	2
/		
Total		100
Dead		

Soils Ontario and ELC Soils Description

Site Metrics	R/Auger #		Summary	
	Zone	Easting	Moisture Regime	Drainage
S M Slope Percent Slope Length				
Mottles Clay Water Table Carbonates Bedrock				
Depth 5... 1 Depth from zero Texture			% CF	% CF
2 Depth from zero Texture			% CF	% CF
3 Depth from zero Texture			% CF	% CF
4 Depth from zero Texture			% CF	% CF
% Surface Stones/Rock Moisture Regime Drainage				

VASCULAR PLANT LIST - FEATURE 216

POLYGON 13.

Dec. 13, 2011

TREE
LHY

TREES		C	S	U	GL	HERBACEOUS	U	GL	B. Miller R. Aitken
1	OSTVIRG			R	A	SOLFLEX		O	
2	CAROVAT	A	O	R	R	CARPEOU		O	
	TILAMER	R	R	A	O	Viola sp.		R	
	TSUCANA		R	R	R	TAROFI		R	
	FAGGRAN	R	O	O	R	ELYMYST		R	
	ACESASA	D	D	O	O	GEUM SP		O	
	FRANIGR				R	PROVULG		R	
	CARCORD		O	A	R	CARBRAC		O	
	FRA PENN	O	O	O	O	CARINTU		R	
	QUERUBR				R	DRYCAR		R	
	QUEMACR	R	O	R		ONOSENS		R	
	ACEFREE	O	R			DRYMARG		R	
	ULMAMER	R	O	O		POB ACRO		R	
	Amelanchier sp.				R	SYM LATE		O	
	BETALLE				R				
	PRUSERO	R							
	CARCORD				R				

SHRUBS

	C	S	U	GL
PRUVIRG				O
EUD OBOV				O
CORRACE				O
CEPOCCI			R	

← in green ash swamp

WILDLIFE:

- W.B. Nuthatch, Deer scat
- Past use by Pileated woodpecker

* Approx. 10 TUNDRA OR TRUMPETER SWANS FLEW OVER

INCLUSIONS:

WOODLOT

North End → Soft Maple → WHITE ELM SWAMP

South End → Green Ash Swamp