VASCULAR PLANT LIST – FEATURE 216

POLYGON 12.

Dec. 13, 2011

B. Miller
R. Aitken

TREES	C	SC	U	GL
FRAXPENN	O	O	O	O
QUEMACR	D	A	O	R
FAGGRAN		R	R	
CARONAT	A	A	R	R
MALPUMI			O	
VLMAMER	R	O	R	
JUNVIRG			R	
POPGRAN		R	R	
TILAMER	R	O	A	R
CARCARO		R	D	O
POPDELT	R			
ACESASA		R		
Amelanchier sp.			R	
OSTVIRG			R	

HERBACEOUS FLORA	U	GL
	U	GL
ALLPETI		R
GEUM SP.		A
TAXOFFI		R
FRAVIRG		O
SOL cf. CANA		O
Carex gracillima		D
PRUVULG		R
DAUCARO		R
EUTGRAM		R
SYMERIC		O
SYMLANC		O
SYMPILO		R
LEUVULG		R
Carex cf. projecta		R
CLIVULG		R

SHRUBS	C	SC	U	GL
RUBIDAE				R
RUBOCCI				R
VITRIPA			O	O
PRUVIRG				O
CORRACE			O	O
CRAT SP.		R	O	
COROBLI			O	O
VIBLENT		R	R	
RHACATH			R	
HAMVIRG			R	
SMILAX TAMNOIDES				R
EUOOBOV				R
Rosa sp.			R	

POLYGON 12

WILDLIFE:
- Cottontail observed
- Deer rub on POPGRAN sapling

INCLUSIONS:
CUMI-1
SWT2

POLYGON 12.

VASCULAR PLANT CHECKSHEET

Location: Feature 216

Date: Dec. 13, 2011

Observer: B. Miller, R. Aitken

Job Number:

[illegible] HERBS	1	2	3	4	5	6
[illegible] (row 7)	X					
Aster						
Aster [illegible]						
Aster [illegible]	X					
Aster [illegible]	X					
Aster [illegible]						
Aster [illegible]						
Aster [illegible]						
Aster [illegible]						
[illegible]	X					
[illegible]		X				
Aster pilosus		X				
Chenopodium vulgare		X				

[illegible]	1	2	3	4	5	6
[illegible] annuus						
[illegible]	X					
[illegible]	X					
[illegible] vesca						
[illegible] sp.	X					
[illegible]						
Lactuca canadensis						

[illegible]	1	2	3	4	5	6
[illegible]	X					
[illegible] acris						
[illegible] canadensis						
[illegible] suave						
[illegible]	X					
[illegible]	X					

MONOCOT HERBS	1	2	3	4	5	6
[illegible] americanum						
[illegible] cernui						

SITE LOCATIONS

1:

2:

3:

4:

5:

6:

FEATURE 216

POLYGON 12.

CONIFERS	1	2	3	4	5	6
Abies balsamea						
Juniperus communis						
Juniperus virginiana	X					
Larix laricina						
Picea abies						
Picea glauca						
Pinus resinosa						
Pinus strobus						
Pinus sylvestris						
Thuja occidentalis						
Tsuga canadensis						
TREES and SHRUBS						
Acer negundo						
Acer rubrum						
Acer saccharinum						
Acer saccharum	X					
Acer spicatum						
Alnus rugosa						
Amelanchier sp.	X					
Berberis thunbergii						
Betula alleghaniensis						
Betula papyrifera						
Carpinus caroliniana	X					
Carya cordiformis						
Celastrus scandens						
Cornus alternifolia						
Cornus amomum	X					
Cornus racemosa						
Cornus stolonifera						
Corylus cornuta						
Crataegus monogyna						
Crataegus punctata						
Ribes sp.	X					
Crataegus						
Diervilla lonicera						
Fagus grandifolia	X					
Fraxinus americana						
Fraxinus nigra						
Fraxinus pennsylvanica	X					
Ilex verticillata						
Juglans cinerea						
Juglans nigra						
Lonicera morrowi						
Lonicera tatarica						
Lonicera						
Malus pumila	X					
Ostrya virginiana	X					
Parthenocissus inserta						
Populus balsamifera						
Populus grandidentata	X					
Populus tremuloides						
Populus DELTOIDES	X					
Prunus pensylvanica						
Prunus serotina						
Prunus virginiana	X					
Prunus						
Quercus macrocarpa	X					
Quercus rubra						
Quercus						
Rhamnus cathartica	X					
Rhus radicans						
Rhus typhina						
Ribes americana						
Ribes cynosbati						
Ribes x rubrum						
Robinia pseudo-acacia						

TREES and SHRUBS	1	2	3	4	5	6
Rosa multiflora						
Rosa sp.	X					
Rubus allegheniensis						
Rubus idaeus	X					
Rubus occidentalis	X					
Rubus odoratus						
Rubus pubescens						
Salix alba						
Salix amygdaloides						
Salix bebbiana						
Salix discolor						
Salix eriocephala						
Salix eulepis						
Salix lucida						
Salix petiolaris						
Salix purpurea						
Salix x rubens						
Salix						
Sambucus canadensis						
Sambucus racemosa						
Sorbus aucuparia						
Spiraea alba						
Syringa vulgaris						
Tilia americana	X					
Ulmus americana	X					
Ulmus						
Vaccinium						
Viburnum lentago	X					
Viburnum opulus						
Viburnum						
Vitis riparia	X					
CARYA OVATA	X					
CORNUS RACEMOSA	X					
HAMAMELIS VIRGINIANA	X					
SMILAX TAMNOIDES	X					
EUONYMOUS OBOVATUS	X					
FERNS						
Adiantum pedatum						
Athyrium filix-femina						
Botrychium multifidum						
Botrychium virginianum						
Cystopteris bulbifera						
Dryopteris carthusiana						
Dryopteris cristata						
Dryopteris filix-mas						
Dryopteris						
Lycopodium arvense						
Equisetum hyemale						
Equisetum variegatum						
Equisetum						
Gymnocarpium dryopteris						
Lycopodium digitatum						
Lycopodium obscurum						
Lycopodium						
Lycopodium						
Matteuccia struthiopteris						
Osmunda cinnamomea						
Osmunda claytoniana						
Osmunda regalis						
Polypodium acrostichoides						
Pteridium aquilinum						
Thelypteris palustris						

GRAMINOIDS	1	2	3	4	5	6
Agrostis gigantea						
Agrostis stolonifera						
Agropyron repens						
Alopecurus						
Bromus inermis						
Calamagrostis canadensis						
Carex aquatilis						
Carex aurea						
Carex bebbii						
Carex blanda						
Carex gracillima	X					
Carex globularis						
Carex hyperlinea						
Carex pensylvanica						
Carex radiata						
Carex retrorsa						
Carex sibirica						
Carex stricta						
Carex vulpinoidea						
Carex cf. projecta	X					
Carex						
Carex						
Carex						
Carex						
Carex						
Carex						
Carex						
Carex						
Cyperus						
Cyperus						
Dactylis glomerata						
Dactylis glomerata						
Dichanthelium clandestinum						
Eleocharis erythropoda						
Eleocharis						
Elymus virginicus						
Elymus						
Festuca arundinacea						
Glyceria striata						
Glyceria						
Juncus dudleyi						
Juncus effusus						
Juncus tenuis						
Juncus						
Juncus						
Leersia oryzoides						
Muhlenbergia						
Oryzopsis asperifolia						
Panicum						
Panicum						
Phalaris arundinacea						
Phleum pratense						
Phragmites australis						
Poa compressa						
Poa pratensis						
Poa						
Scirpus atrovirens						
Scirpus cyperinus						
Scirpus validus						
Scirpus						
Scirpus						
Setaria						
Sparganium						
Typha angustifolia						
Typha latifolia						
Typha X glauca						

ELC Community Description and Classification

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

Polygon Description

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

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1	1	4	ACESASA > CAROVAT > FRAPENN = ACEFREE
2	2	3	ACESASA > CAROVAT = CARCARO = TILAMER
3	3	4	TILAMER = OSTVIRG = CARCARO
4	4-7	2	ACESASA = GEUM SP. = PRUVIRG

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	O	R
BA:	Deadfall / Logs:	R	O	O	R

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

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

Ecosite:	Fresh-Moist Oak-Maple-Hickory	Code:	FOD9
Vegetation Type:	Deciduous Forest	Code:	
Inclusion:	Swamp Maple Mineral Deciduous Swamp	Code:	SWD3-3
Complex: Inclusion	Green Ash Mineral Deciduous Swamp	Code:	SWD2-2

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Plot Radius: 2

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

Soils Ontario and ELC Soils Description

						Summary
Site Metrics		Pit/Auger #				
	UTM	Zone				Moisture Regime
		Easting				
		Northing				
	Slope	Position				
		Aspect				Drainage
		Percent				
		Slope Length				
Depth to...		Mottles				
		Gley				Effective Texture (indicate below)
		Water Table				
		Carbonates				
		Bedrock				

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									

POLYGON 13.

VASCULAR PLANT LIST - FEATURE 216

Dec. 13, 2011

B. Miller
R. Aitken

TREE LIST 1	TREE LIST 2	TREES	C	SC	U	GL
		OSTVIRG		R	A	
		CAROVAT	A	O	R	R
		TILAMER	R	R	A	O
		TSUCANA		R	R	R
		FAGGRAN	R	O	O	R
		ACESASA	D	D	O	O
		FRANIGR			R	
		CARCARO		O	A	R
		FRAPENN	O	O	O	O
		QUERUBR			R	
		QUEMACR	R	O	R	
		ACEFREE	O	R		
		ULMAMER	R	O	O	
		Amelanchier sp.			R	
		BETALLE			R	
		PRUSERO	R			
		CARCORD				R

HERBACEOUS	U	GL
SOLFLEX		O
CARPEDU		O
Viola sp.		R
TAROFFI		R
ELYHYST		R
GEUM SP		O
PROVULG		R
CARGRAC		O
CARINTU		R
DRYCART		R
ONOSENS		R
DRYMARG		R
POLACRO		R
SYMLATC		O

SHRUBS	C	SC	U	GL
PRUVIRG				O
EUO 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 WOODLOT

INCLUSIONS:

North End → Soft Maple → WHITE ELM SWAMP

South End → Green Ash Swamp

POLYGON 13.

VASCULAR PLANT CHECKSHEET

Location: FEATURE 216

Date: Dec. 13, 2011

Observer: B. Miller, R. Aitken

Job Number:

[illegible] HERBS	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6	MONOCOT HERBS	1	2	3	4	5	6
[illegible]							Geum sp.	X						Viola sp.		X					[illegible]						

SITE LOCATIONS

1: ____________________ 4: ____________________

2: ____________________ 5: ____________________

3: ____________________ 6: ____________________

FEATURE 216

POLYGON 13.

I	CONIFERS	1	2	3	4	5	6
	Abies balsamea						
	Juniperus communis						
	Juniperus virginiana						
	Larix laricina						
	Picea abies						
	Picea glauca						
	Pinus resinosa						
	Pinus strobus						
	Pinus sylvestris						
	Thuja occidentalis						
	Tsuga canadensis	X					
	TREES and SHRUBS						
	Acer negundo						
	Acer rubrum						
	Acer saccharinum						
	Acer saccharum	X					
	Acer spicatum						
	Alnus rugosa						
	Amelanchier sp.	X					
	Berberis thunbergii						
	Betula alleghaniensis	X					
	Betula papyrifera						
	Carpinus caroliniana	X					
	Carya cordiformis	X					
	Celastrus scandens						
	Cornus alternifolia						
	Cornus amomum						
	Cornus rugosa						
	Cornus stolonifera						
	Corylus cornuta						
	Ostrya virginiana						
	Ostrya sp.						
	Ostrya						
	Diervilla lonicera						
	Fagus grandifolia	X					
	Fraxinus americana						
	Fraxinus nigra	X					
	Fraxinus pennsylvanica	X					
	Ilex verticillata						
	Juglans cinerea						
	Juglans nigra						
	Lonicera morrowi						
	Lonicera tatarica						
	Lonicera						
	Malus pumila						
	Ostrya virginiana	X					
	Parthenocissus inserta						
	Populus balsamifera						
	Populus grandidentata						
	Populus tremuloides						
	Populus						
	Prunus pensylvanica						
	Prunus serotina	X					
	Prunus virginiana	X					
	Prunus						
	Quercus macrocarpa	X					
	Quercus rubra	X					
	Quercus						
	Rhamnus cathartica						
	Rhus radicans						
	Rhus typhina						
	Ribes americanum						
	Ribes cynosbati						
	Ribes x rubrum						
	Robinia pseudo-acacia						

I	TREES and SHRUBS	1	2	3	4	5	6
+	Rosa multiflora						
	Rosa						
	Rubus allegheniensis						
	Rubus idaeus						
	Rubus occidentalis						
	Rubus odoratus						
	Rubus pubescens						
	Salix alba						
	Salix amygdaloides						
	Salix bebbiana						
+	Salix discolor						
	Salix eriocephala						
	Salix eulgra						
	Salix lucida						
	Salix petiolaris						
+	Salix purpurea						
	Salix x rubens						
+	Salix						
	Sambucus canadensis						
	Sambucus racemosa						
	Shrubs accyparis						
	Sylvan alba						
	Syringa vulgaris						
+	Ulmus americana	X					
	Ulmus americana	X					
	Ulmus						
	Viburnum						
	Viburnum lentago						
	Viburnum opulus						
	Viburnum						
	Vitis riparia						
	CARYA OVATA	X					
	ACER X FREEMANII	X					
	EUONYMOUS ORBICULATUS	X					
	CORNUS RACEMOSA	X					
	CEPHALANTHUS OCCIDENTALIS	X					
	FERNS						
	Adiantum pedatum						
	Athyrium filix-femina						
	Botrychium multifidum						
	Botrychium virginianum						
	Cystopteris bulbifera						
	Dryopteris carthusiana	X					
	Dryopteris cristata						
	Dryopteris marginalis	X					
	Dryopteris						
	Equisetum arvense						
	Equisetum hyemale						
	Equisetum variegatum						
	Equisetum						
	Gymnocarpium dryopteris						
	Lycopodium clavatum						
	Lycopodium obscurum						
	Lycopodium						
	Lycopodium						
	Matteuccia struthiopteris						
	Onoclea sensibilis	X					
	Osmunda claytoniana						
	Osmunda regalis						
	Polypodium acrostichoides	X					
	Pteridium aquilinum						
	Thelypteris palustris						

I	GRAMINOIDS	1	2	3	4	5	6
	Agrostis gigantea						
	Agrostis stolonifera						
	Agropyron repens						
	Alopecurus						
	Bromus inermis						
	Calamagrostis canadensis						
	Carex arctata						
	Carex aurea						
	Carex bebbii						
	Carex blanda						
	Carex gravida	X					
	Carex glaucodea						
	Carex hystericina						
	Carex pensylvanica						
	Carex radiata						
	Carex retrorsa						
	Carex stipata						
	Carex striata						
	Carex vulpinoidea						
	Carex pedunculata	X					
	Carex						
	Carex intumescens	X					
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Cyperus						
	Cyperus						
	Dactylis glomerata						
	Deschampsia caespitosa						
	Echinochloa crus-galli						
	Elaeocharis cylindrostachys						
	Eleocharis						
	Elymus virginicus						
	Elymus hystrix	X					
	Festuca arundinacea						
	Glyceria striata						
	Glyceria						
	Juncus dudleyi						
	Juncus effusus						
	Juncus tenuis						
	Juncus						
	Juncus						
	Leersia oryzoides						
	Muhlenbergia						
	Oryzopsis asperifolia						
	Panicum						
	Panicum						
	Phalaris arundinacea						
	Phragmites australis						
	Poa compressa						
	Poa pratensis						
	Poa						
	Scirpus atrovirens						
	Scirpus cyperinus						
	Scirpus validus						
	Scirpus						
	Scirpus						
	Setaria						
	Sparganium						
	Typha angustifolia						
	Typha latifolia						
	Typha X glauca						

ELC WILDLIFE	SITE: 216	
	POLYGON: 12. and 13.	
	DATE: DEC. 13, 2011	
	SURVEYORS:	
	START TIME:	END TIME:

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

POTENTIAL WILDLIFE HABITAT:

X	VERNAL POOLS	X	SNAGS
	HIBERNACULA	X	FALLEN LOGS
X	Stick Nest		

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
M	Eastern	Tk		-					
	Cottontail								
M	White Tail	SC		-					
	Deer								
B	White Breasted	VO		-					
	Nuthatch								
B	Tundra or	OB	N10 Flew						
	Trumpeter		over woodlot						
	Swans								

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 EVIDENCI SC = SCAT
SI = OTHER SIGNS (specify)

Goshen Feature: 196 GSH1532

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

0 25 50 100 Meters

September 1, 1011

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

PRE-SURVEY COMMENT: greenbelt

ELC Community Description and Classification	Site: 196_GSH1532		Polygon: 196-GSH 1532 V1
	Surveyor(s): JP-CB	Date: Sept. 7, 2011	Time start: 10:49am finish: 12:22
	UTMZ: 17	UTMZ: 442670	UTMN: 4790410

Polygon Description

15°C, overcast, breezy

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

Stand Description

Riparian treed zone

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1	2	3	FRAPENN > FRAAMER >> SALRUBE
2	3	2	FRAPENN > PRUPENN = RHUHIRT
3	5	2	CORRACE
4	5-4	4	AMBTRIF > SOLCANA = SOLALTI

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:	N	N	N	N
BA:	Deadfall / Logs:				

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

Com. Age: [ ] Pioneer [ ] Young [X] Mid-Age [ ] Mature [ ] Old Growth

Ecosite:	Forest - Deciduous	Code:	FOD7
Vegetation Type:	Fresh-Moist Ash/wetland deciduous	Code:	FOD7-2
Inclusion:		Code:	
Complex:		Code:	

Community Profile Diagram/Comments

FOD along watercourse
Riparian cover 30m wide at max

Notes: Street riparian edge surrounding watercourse

Tree Tally by Species

Prism Factor: 2

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

Soils Ontario and ELC Soils Description

						Summary
Site Metrics		Pit/Auger #				
	UTM	Zone				Moisture Regime
		Easting				
		Northing				
	Slope	Position				
		Aspect				Drainage
		Percent				
		Slope Length				
Depth to...		Mottles				
		Gley				Effective Texture (Indicate below)
		Water Table				
		Carbonates				
		Bedrock				

Soil Horizon Description										
	1	Depth from zero	25cm	% CF		% CF		% CF		% CF
		Texture	SIC							
	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
Community Description and Classification

Site: 196 GSH 1532		Polygon: V2	
Surveyor(s): JP-CB	Date: Sept. 7, 2011	Time start: 10:47 am finish: 12:28 pm	
UTMZ:	UTMZ:	UTMN:	

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
☒ Terrestrial	☐ Organic	☐ Lacustrine	☐ Plankton	☐ Lake
☐ Wetland	☒ Mineral Soil	☐ Riverine	☐ Submerged	☐ Pond
☐ Aquatic	☐ Parent Min.	☐ Bottomland	☐ Floating-LVD.	☐ River
Site	☐ Acidic Bedrk	☐ Terrace	☐ Graminoid	☐ Stream
☐ Open Water	☐ Basic Bedrk	☐ Valley Slope	☐ Forb	☐ Marsh
☐ Shallow Water	☐ Carb. Bedrk	☒ Tableland	☐ Lichen	☐ Swamp
☒ Surficial Dep.		☐ Roll. Upland	☐ Bryophyte	☐ Fen
☐ Bedrock		☐ Cliff	☒ Deciduous	☐ Bog
History		☐ Talus	☐ Coniferous	☐ Barren
☒ Natural		☐ Crevice/Cave	☐ Mixed	☐ Meadow
☐ Cultural		☐ Alvar		☐ Prairie
Cover		☐ Rockland		☐ Thicket
☐ Open		☐ Beach / Bar		☐ Savannah
☐ Shrub		☐ Sand Dune		☒ Woodland
☒ Treed		☐ Bluff		☐ Forest
				☐ 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	JUGNIGR >> FRAPNER
2			
3			
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 - 60% 4 > 60%

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

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

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

Ecosite:	cultural woodland	Code:	CUW
Vegetation Type:	Mineral Cultural Woodland	Code:	CUW1
Inclusion:		Code:	
Complex:		Code:	

Community Profile Diagram/Comments

on other side of watercourse
dominated by Buckthorn

Notes: * no access *

Tree Tally by Species

Prism Factor: 2

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

Soils Ontario and ELC Soils Description

						Summary
Site Metrics		Pit/Auger #				
	UTM	Zone				Moisture Regime
		Easting				
		Northing				
	Slope	Position				
		Aspect				Drainage
		Percent				
		Slope Length				
Depth to...		Mottles				
		Gley				Effective Texture (Indicate below)
		Water Table				
		Carbonates				
		Bedrock				

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									

VASCULAR PLANT CHECKSHEET

Location: 196_GSH/532
Date: Sept 7, 2011
Observer: JP-CB w
Job Number:

DICOT HERBS	1	2	3	4	5	6
Achillea millefolia						
Actaea pachypoda						
Actaea rubra						
Agalinus						
Agrimonia gryposepala						
Alliaria petiolata	X	X				
Amaranthus retroflexus						
Ambrosia artemisiifolia	X	X				
Amphicarpaea bracteata						
Anaphalis margaritacea						
Anemone						
Anemone canadensis	X					
Anemone virginiana						
Antennaria neglecta						
Apocynum androsaemifolium						
Apocynum cannabinum						
Aquilegia canadensis						
Aralia nudicaulis						
Arctium minus	X					
Artemisia						
Asarum canadense						
Asclepias incarnata						
Asclepias syriaca	X					
Aster						
Aster cordifolius						
Aster ericoides	X					
Aster lanceolatus						
Aster lateriflorus						
Aster macrophyllus						
Aster novae-angliae	X	X				
Aster puniceus						
Barbarea vulgaris						
Bidens cernua						
Bidens frondosa						
Boehmeria cylindrica						
Caltha palustris						
Calystegia sepium						
Cardamine diphylla						
Cardamine						
Caulophyllum thalictroides						
Ceratium fontanum						
Ceratophyllum demersum						
Chelidonium majus						
Chenopodium album						
Chrysanth. leucanthemum						
Cichorium intybus						
Cicuta						
Circaea lutetiana	X	X				
Cirsium arvense	X	X				
Cirsium vulgare						
Clematis virginiana						
Clintonia borealis						
Conyza canadensis						
Coronilla varia						
Cynanchum rossicum						
Cynoglossum officinale						
Daucus carota	X	X				
Desmodium canadense						
Dianthus armeria						
Dipsacus fullonum						
Echinocystis lobata						
Echium vulgare						
Epilobium						
Epilobium ciliatum						
Epilobium hirsutum						
Epilobium parviflorum						
Hieracium trifida	X	X				

	1	2	3	4	5	6
Erigeron annuus						
Erigeron philadelphicus						
Erigeron strigosus						
Erysimum chieranthoides						
Eupatorium maculatum						
Eupatorium perfoliatum						
Eupatorium rugosum						
Euphorbia						
Euthamia graminifolia	X					
Fragaria virginiana	X	X				
Fragaria vesca						
Galeopsis tetrahit						
Galium						
Galium						
Galium palustre						
Galium triflorum						
Geranium maculatum						
Geranium robertianum						
Geum aleppicum						
Geum canadense						
Geum rivale	X	X				
Glecoma hederacea						
Hepatica acutiloba						
Hesperis matronalis						
Hieracium aurantiacum						
Hieracium caespitosum						
Hieracium						
Hydrophyllum virginianum						
Hypericum perforatum						
Impatiens capensis	X					
Inula helenium						
Lactuca						
Laportea canadensis						
Lapsana communis						
Leonurus cardiaca						
Lepidium						
Linaria vulgaris						
Lithospermum officinale						
Lobelia						
Lobelia inflata						
Lotus corniculatus						
Lycopus americanus						
Lycopus						
Lysimachia ciliata						
Lythrum salicaria						
Medicago lupulina						
Medicago sativum						
Melilotus alba						
Mentha arvensis						
Mimulus ringens						
Mimulus ringens						
Mitella diphylla						
Monarda fistulosa						
Myosotis						
Nasturtium officinale						
Nepeta cataria						
Nuphar variegatum						
Nymphaea odorata						
Oenothera biennis						
Osmorhiza						
Oxalis stricta	X					
Physma leptostachya						
Physalis heterophylla						

	1	2	3	4	5	6
Plantago lanceolata						
Plantago major						
Plantago rugelii						
Podophyllum peltatum						
Polygonum						
Polygonum						
Polygonum						
Polygonum lapathifolium						
Polygonum persicaria						
Potentilla						
Potentilla norvegica						
Potentilla recta						
Prenanthes alba						
Prunella vulgaris						
Pyrola elliptica						
Ranunculus						
Ranunculus abortivus						
Ranunculus acris						
Rudbeckia hirta						
Rumex acetosella						
Rumex crispus	X	X				
Rumex						
Sanguinaria canadensis						
Sanicula marilandica						
Saponaria officinalis						
Satureja vulgaris						
Scutellaria galericulata						
Silene vulgaris						
Sium suave						
Solanum dulcamara						
Solidago						
Solidago altissima	X					
Solidago caesia						
Solidago canadensis	X					
Solidago flexicaulis						
Solidago gigantea						
Solidago nemoralis						
Solidago rugosa						
Sonchus arvensis						
Sonchus asper						
Stellaria						
Tanacetum vulgare						
Taraxacum officinale	X	X				
Thalictrum dioicum						
Thalictrum pubescens						
Tiarella cordifolia						
Tragopogon pratensis						
Trientalis borealis						
Trifolium						
Trifolium pratense						
Trifolium repens						
Tussilago farfara						
Urtica dioica						
Utricularia vulgaris						
Verbascum thapsus						
Verbena hastata						
Verbena urticifolia						
Veronica						
Veronica officinalis						
Viola cracca						
Viola tetrasperma						
Viola [illegible]			X			
Viola						
Viola pubescens						
Viola sororia						

MONOCOT HERBS	1	2	3	4	5	6
Alisma plantago-aquatica						
Allium tricoccum						
Allium						
Arisaema triphyllum						
Asparagus officinalis						
Calla palustris						
Clintonia borealis						
Convallaria majus						
Cypripedium calceolus						
Erythronium canadensis						
Epipactis helleborine						
Erythronium americanum						
Hemerocallis fulva						
Iris versicolor						
Lemna minor						
Lemna trisulca						
Lilium						
Maianthemum canadense						
Maianthemum racemosa						
Maianthemum stellata						
Platanthera						
Pontederia cordata						
Polygonatum pubescens						
Potamogeton crispus						
Potamogeton pectinatus						
Potamogeton						
Potamogeton						
Potamogeton						
Sagittaria latifolia						
Sparganium montanum						
Smilax herbacea						
Spiranthes cernua						
Spirodela polyrhiza						
Streptopus roseus						
Trillium erectum						
Trillium grandiflorum						
Uvularia grandiflora						

SITE LOCATIONS

1: V1
2: V2 - Blackhawk Park Civil
3:
4:
5:
6:

I	CONIFERS	1	2	3	4	5	6
	Abies balsamea						
	Juniperus communis						
	Juniperus virginiana						
	Larix laricina						
	Picea abies						
	Picea glauca						
	Pinus resinosa						
	Pinus strobus		X				
	Pinus sylvestris						
	Thuja occidentalis						
	Tsuga canadensis						

I	TREES and SHRUBS	1	2	3	4	5	6
	Acer negundo						
	Acer rubrum						
	Acer saccharinum						
	Acer saccharum						
	Acer spicatum						
	Alnus rugosa						
	Amelanchier						
	Berberis thunbergii						
	Betula alleghaniensis						
	Betula papyrifera						
	Carpinus caroliniana						
	Carya cordiformis						
	Celastrus scandens						
	Cornus alternifolia						
	Cornus ~~amomum~~ RACE	X					
	Cornus rugosa						
	Cornus stolonifera						
	Corylus cornuta						
	Crataegus monogyna						
	Crataegus punctata						
	Crataegus sp.						
	Crataegus						
	Diervilla lonicera						
	Fagus grandifolia						
	Fraxinus americana	X					
	Fraxinus nigra						
	Fraxinus pennsylvanica	X					
	Ilex verticillata						
	Juglans cinerea						
	Juglans nigra	X	X				
	Lonicera morrowi						
	Lonicera tatarica						
	Lonicera						
	Malus pumila						
	Ostrya virginiana						
	Parthenocissus inserta						
	Populus balsamifera						
	Populus grandidentata						
	Populus tremuloides	X					
	Populus						
	Prunus pensylvanica	X					
	Prunus serotina						
	Prunus virginiana						
	Prunus						
	Quercus macrocarpa						
	Quercus rubra						
	Quercus						
	Rhamnus cathartica						
	Rhus radicans						
	Rhus typhina	X	X				
	Ribes americana						
	Ribes cynosbati						
	Ribes x rubrum						
	Robinia pseudo-acacia						
+	Rosa multiflora						
	Rosa						
	Rubus allegheniensis						
	Rubus idaeus	X	X				
	Rubus occidentalis	X					
	Rubus odoratus						
	Rubus pubescens						
	Salix alba						
	Salix amygdaloides						
	Salix bebbiana						
+	Salix discolor						
	Salix eriocephala						
	Salix exigua						
	Salix lucida						
	Salix petiolaris						
+	Salix purpurea						
	Salix x rubens	X					
+	Salix						
	Sambucus canadensis						
	Sambucus racemosa						
	Sorbus aucuparia						
	Spiraea alba						
	Syringa vulgaris						
+	Tilia americana						
	Ulmus americana						
	Ulmus						
	Vaccinium						
	Viburnum lentago						
	Viburnum opulus						
	Viburnum						
	Vitis riparia	X	X				

I	FERNS	1	2	3	4	5	6
	Adiantum pedatum						
	Athyrium filix-femina						
	Botrychium multifidum						
	Botrychium virginianum						
	Cystopteris bulbifera						
	Dryopteris carthusiana						
	Dryopteris cristata						
	Dryopteris marginalis						
	Dryopteris						
	Equisetum arvense						
	Equisetum hyemale						
	Equisetum variegatum						
	Equisetum						
	Gymnocarpium dryoperis						
	Lycopodium digitatum						
	Lycopodium obscurum						
	Lycopodium						
	Lycopodium						
	Matteucia struthiopteris						
	Onoclea sensiblis						
	Osmunda cinnamonia						
	Osmunda regalis						
	Polystichum acrostichoides						
	Pteridium aquilinum						
	Thelypteris palustris						

I	GRAMINOIDS	1	2	3	4	5	6
	Agrostis gigantea						
	Agrostis stolonifera						
	Agropyron repens						
	Alopecuris						
	Bromus inermis						
	Calamagrostis canadensis						
	Carex arctata						
	Carex aurea						
	Carex bebbii						
	Carex blanda						
	Carex gracillima						
	Carex granularis						
	Carex hystericina						
	Carex pensylvanica						
	Carex radiata						
	Carex retrorsa						
	Carex stipata						
	Carex stricta						
	Carex vulpinoidea						
	Carex species	X					
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Cyperus						
	Cyperus						
	Dactylis glomerata	X	X				
	Danthonia spicata						
	Echinochloa crus-galli						
	Eleocharis erythropoda						
	Eleocharis						
	Elymus virginicus						
	Elymus						
	Festuca arundinacea						
	Glyceria striata						
	Glyceria						
	Juncus dudleyi						
	Juncus effusus						
	Juncus tenuis						
	Juncus						
	Juncus						
	Leersia oryzoides						
	Muhlenbergia						
	Oryzopsis asperifolia						
	Panicum						
	Panicum						
	Phalaris arundinacea						
	Phleum pratense						
	Phragmites australis						
	Poa compressus						
	Poa pratensis						
	Poa						
	Scirpus atrovirens						
	Scirpus cyperinus						
	Scirpus validus						
	Scirpus						
	Scirpus						
	Setaria						
	Sparganium						
	Typha angustifolia						
	Typha latifolia						
	Typha Xglauca						

ELC WILDLIFE	SITE: Featuil 196-GSH1532	
	POLYGON: V1 + V2	
	DATE: September 7, 2011	
	SURVEYORS: JP-CB	
	START TIME: 10:49 am	END TIME: 12:22 pm

TEMP (°C): 15°C	CLOUD (10th):	WIND:	PRECIPITATION:
CONDITIONS:			

POTENTIAL WILDLIFE HABITAT:

N	VERNAL POOLS	N	SNAGS
N	HIBERNACULA	O	FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
	WOFR	OB							
	DEER	TK							
	GREEN DARNER	OB							

FAUNAL TYPE CODES (TY):

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

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:

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

BREEDING BIRD - CONFIRMED:

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

OTHER WILDLIFE EVIDENCE:

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

Goshen Feature: 216 GSH1527/1528/1532 / GE52

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

0 25 50 100 Meters

September 1, 2011

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

PRE-SURVEY COMMENT:

ELC Community Description and Classification

Site: 216_GSH1528		Polygon: V1-FES2	
Surveyor(s): JP-CB	Date: Sep. 7, 2011	Time start: 1244pm finish: 2:30pm	
UTMZ: 17	UTMZ: 442277	UTMN: 4790829	

Polygon Description 16-19 pics 15°C, overcast

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

Site: ☐ Open Water ☐ Shallow Water ☐ Surficial Dep. ☐ Bedrock

History: ☐ Natural ☐ Cultural

Cover: ☐ Open ☐ Shrub ☐ Treed

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1	1	4	TILAMER >CAROVAT >CARCAR >ACESAC
2	2	3	CARCOR >CAROVAT = TILAMER
3			
4	6	3	EUODUJA >CIRLUT >GEUMCA

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								
	Black Cherry	O	<10	A	10-24	A	25-50	R	>50
	Basswood	N	<10	N	10-24	N	25-50	N	>50
BA:	Sugar Maple	O	<10	A	10-24	O	25-50	N	>50

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

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

Ecosite:	Deciduous Forest	Code:	FOD7
Vegetation Type:	Fresh-Moist-Oak-Maple-Hickory deciduous forest Ecosite	Code:	FOD9
Inclusions:			
Complex:			

Community Profile Diagram/Comments

lots of small size trees
→ lots of harvested stumps

Notes:
section within buffer consist mainly of harvested

Tree Tally by Species

Prism Factor: 2

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Avg.
TILAMER	III					
CAROVAT	IIII					
QUERUB	I					
FRAMER	I					
Total	9					100
Basal Area (BA)	8					
Dead						

Soils Ontario and ELC Soils Description

						Summary
Site Metrics		Pit/Auger #	Pit 1			
	UTM	Zone	17			Moisture Regime
		Easting	0442297			
		Northing	4790863			
	Slope	Position				
		Aspect				Drainage
		Percent				
		Slope Length	Flat			
Depth to...		Mottles	30cm			
		Gley				Effective Texture (indicate below)
		Water Table				
		Carbonates				
		Bedrock				

Soil Horizon Description										
	1	Depth from zero	30cm	% CF		% CF		% CF		% CF
		Texture	10cm							
	2	Depth from zero	300m	% CF		% CF		% CF		% CF
		Texture	SC							
	3	Depth from zero		% CF		% CF		% CF		% CF
		Texture								
	4	Depth from zero		% CF		% CF		% CF		% CF
		Texture								
		% Surface Stone/Rock								
	Moisture Regime		Moist							
	Drainage									

Total mottles @ 30cm

ELC Community Description and Classification

Site: 21L-SSH1528		Polygon: V2	
Surveyor(s): JP-CB	Date:	Time start: 12:44 pm finish: 2:20 pm	
UTMZ:	UTMZ:	UTMN:	

Polygon Description

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

Site
☐ Open Water
☐ Shallow Water
☒ Surficial Dep.
☐ Bedrock

History
☒ Natural
☐ Cultural

Cover
☒ Open
☐ Shrub
☐ Treed

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1	2	1	ERAMER
2			
3	4	1	CORRACE > MALPUMI
4	6	4	SOCANA = SOLACH > ASTNOVA ? Broiner

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

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

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

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

Ecosite:		Code:	
Vegetation Type:	Dry ~~Fresh~~ - Moist Cultural Meadow	Code:	CUM1-1
Inclusion:		Code:	
Complex:		Code:	

Community Profile Diagram/Comments

cultural meadow = open area with scattered white ash found with wetland

Notes:

Tree Tally by Species

Prism Factor: 2

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

Soils Ontario and ELC Soils Description

						Summary
Site Metrics		Pit/Auger #				
	UTM	Zone				Moisture Regime
		Easting	442250			
		Northing	4790963			
	Slope	Position				
		Aspect				Drainage
		Percent				
		Slope Length				
Depth to...		Mottles				
		Gley				Effective Texture (Indicate below)
		Water Table				
		Carbonates				
		Bedrock				

Soil Horizon Description										
	1	Depth from zero	30cm	% CF		% CF		% CF		% CF
		Texture	SIC							
	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									

PRE-SURVEY COMMENT:

ELC Community Description and Classification	Site: 216_GSH1532		Polygon: V1-along edge of feature	
	Surveyor(s):	Date:	Time start: 12:23 finish: 12:44	
	UTMZ:	UTMZ:	UTMN:	

Polygon Description p.c 13-

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

Site: ☐ Open Water ☐ Shallow Water ☒ Surficial Dep. ☐ Bedrock

History: ☒ Natural ☐ Cultural

Cover: ☐ Open ☐ Shrub ☒ Treed

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1	1	3	TIAMER>FRAPENN>QUEALBA
2			
3	5	2	CORRACE
4	6	4	SOKANA>ASTNOVA

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%

[redacted]	[redacted] Analysis:	R	<10	A	10-24	A	25-50	N	>50
	[redacted] Fungi:	N	<10	N	10-24	N	25-50	N	>50
[redacted]	[redacted] Moss:	R	<10	A	10-24	R	25-50	N	>50

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

[redacted] ☐ Pioneer ☐ Young ☐ Mid-Age ☐ Mature ☐ Old Growth

[redacted]	Fresh-Moist Oak-Maple-Hickory deciduous	Code:	FOD9
[redacted]		Code:	FOD9
[redacted]		Code:	
[redacted]		Code:	

Community Profile Diagram/Comments

area along edge of the collection line
only small portion is within Mississauga

Notes:

Tree Tally by Species

Prism Factor	2

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

Soils Ontario and ELC Soils Description

						Summary
Site Metrics	Pit/Auger #					
	UTM	Zone				Moisture Regime
		Easting				
		Northing				
	Slope	Position				
		Aspect				Drainage
		Percent				
		Slope Length				
Depth to...	Mottles					
	Gley					Effective Texture (indicate below)
	Water Table					
	Carbonates					
	Bedrock					

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									

VASCULAR PLANT CHECKSHEET

Location: 216_GSH1522

Date: September 7, 2011

Observer: JP-CR

Job Number:

DICOT HERBS	1	2	3	4	5	6
Achillea millefolia		X				
Actaea pachypoda						
Actaea rubra						
Agalinus						
Agrimonia gryposepala						
Alliaria petiolaria						
Amaranthus retroflexus						
Ambrosia artemisiifolia						
Amphicarpaea bracteata						
Anaphalis margaritacea						
Anemone						
Anemone canadensis						
Anemone virginiana						
Antennaria neglecta						
Apocynum androsaemifolium						
Apocynum cannabinum						
Aquilegia canadensis						
Aralia nudicaulis						
Arctium minus		X				
Artemisia						
Asarum canadense						
Asclepias incarnata						
Asclepias syriaca		X				
Aster		X				
Aster cordifolius						
Aster ericoides						
Aster lanceolatus		X				
Aster lateriflorus	X	X				
Aster macrophyllus						
Aster novae-angliae	X	X				
Aster puniceus						
Barbarea vulgaris						
Bidens cernua						
Bidens frondosa						
Boehmeria cylindrica						
Caltha palustris						
Calystegia sepium						
Cardamine diphylla						
Cardamine						
Caulophyllum thalictroides						
Cerastium fontanum						
Ceratophyllum demersum						
Chelidonium majus						
Chenopodium album						
Chrysanth. leucanthemum						
Cichorium intybus						
Cicuta						
Circaea lutetiana		X				
Cirsium arvense						
Cirsium vulgare						
Clematis virginiana						
Clintonia borealis						
Conyza canadensis						
Coronilla varia						
Cynanchum nigrum						
Cynoglossum officinale						
Daucus carota			X			
Desmodium canadense						
Dianthus armeria						
Dipsacus fullonum			X			
Echinocystis lobata						
Echium vulgare						
Epilobium						
Epilobium ciliatum						
Epilobium hirsutum						
Epilobium parviflorum						

	1	2	3	4	5	6
Erigeron annuus						
Erigeron philadelphicus						
Erigeron strigosus						
Eryngium yuccifolium						
Eupatorium maculatum						
Eupatorium perfoliatum						
Eupatorium rugosum						
Euphorbia						
Euthamia graminifolia		X				
Fragaria virginiana		X				
Fragaria vesca						
Galeopsis tetrahit						
Galium						
Galium						
Galium palustre						
Galium triflorum						
Geranium maculatum	X					
Geranium robertianum	X					
Geum aleppicum						
Geum canadense						
Geum	X					
Glechoma hederacea						
Hepatica acutiloba						
Hesperis matronalis						
Hieracium aurantiacum						
Hieracium caespitosum						
Hieracium						
Hydrophyllum virginianum						
Hypericum perforatum		X				
Impatiens capensis						
Inula helenium						
Lactuca						
Laportea canadensis						
Lapsana communis						
Leonurus cardiaca						
Lepidium						
Linaria vulgaris						
Lithospermum officinale						
Lobelia						
Lobelia inflata						
Lotus corniculatus						
Lycopus americanus						
Lycopus						
Lysimachia ciliata						
Lythrum salicaria						
Medicago lupulina			X			
Medicago sativum						
Melilotus alba						
Melilotus arvensis						
Mimulus ringens						
Mitella diphylla						
Mitella nuda						
Mycelis						
Nasturtium officinale						
Nepeta cataria						
Nuphar variegatum						
Nymphaea odorata						
Oenothera biennis						
Osmorhiza						
Oxalis stricta			X			
Pastinaca sativa						
Physalis heterophylla						

	1	2	3	4	5	6
Plantago lanceolata						
Plantago major						
Plantago rugelii						
Podophyllum peltatum						
Polygonum						
Polygonum						
Polygonum						
Polygonum lapathifolium						
Polygonum persicaria						
Potentilla						
Potentilla norvegica						
Potentilla recta						
Prenanthes alba						
Prunella vulgaris						
Pyrola elliptica						
Ranunculus						
Ranunculus abortivus						
Ranunculus acris						
Rudbeckia hirta						
Rumex acetosella						
Rumex crispus			X			
Rumex						
Sanguinaria canadensis						
Sanicula marilandica						
Saponaria officinalis						
Saururus vulgaris						
Scutellaria galericulata						
Silene vulgaris						
Sium suave						
Solanum dulcamara						
Solidago			X			
Solidago altissima			X			
Solidago caesia						
Solidago canadensis			X			
Solidago flexicaulis						
Solidago gigantea						
Solidago nemoralis						
Solidago rugosa						
Sonchus arvensis						
Sonchus asper						
Stellaria						
Tanacetum vulgare						
Taraxacum officinale			X			
Thalictrum dioicum						
Thalictrum pubescens						
Tiarella cordifolia						
Tragopogon pratensis						
Trientalis borealis						
Trifolium						
Trifolium pratense						
Trifolium repens						
Tussilago farfara						
Urtica dioica						
Utricularia vulgaris						
Verbascum thapsus						
Verbena hastata						
Verbena urticifolia						
Veronica						
Veronica officinalis						
Viola cucca						
Viola tetrapetma						
Viola			X	X		
Viola						
Viola pubescens						
Viola sororia						

MONOCOT HERBS	1	2	3	4	5	6
Alisma plantago-aquatica						
Allium tricoccum						
Allium						
Arisaema triphyllum	X					
Asparagus officinalis						
Calla palustris						
Clintonia borealis						
Convallaria majus						
Cypripedium calceolus						
Elodea canadensis						
Epipactis helleborine						
Erythronium americanum						
Hemerocallis fulva						
Iris versicolor						
Lemna minor						
Lemna trisulca						
Lilium						
Maianthemum canadense						
Maianthemum racemosa						
Maianthemum stellata						
Pontederia						
Pontederia cordata						
Polygonatum pubescens						
Potamogeton crispus						
Potamogeton pectinatus						
Potamogeton						
Potamogeton						
Potamogeton						
Sagittaria latifolia						
Stuckenia pectinata						
Smilax herbacea						
Spiranthes cernua						
Spirodela polyrhiza						
Streptopus roseus						
Trillium erectum						
Trillium grandiflorum						
Uvularia grandiflora						

SITE LOCATIONS

1: V1 - FOO

2: V2 - CUM1-1

3:

4:

5:

6:

I	CONIFERS	1	2	3	4	5	6
	Abies balsamea						
	Juniperus communis						
	Juniperus virginiana						
	Larix laricina						
	Picea abies						
	Picea glauca						
	Pinus resinosa						
	Pinus strobus						
	Pinus sylvestris						
	Thuja occidentalis						
	Tsuga canadensis						

I	TREES and SHRUBS	1	2	3	4	5	6
	Acer negundo						
	Acer rubrum						
	Acer saccharinum						
	Acer saccharum						
	Acer spicatum						
	Alnus rugosa						
	Amelanchier						
	Berberis thunbergii						
	Betula alleghaniensis						
	Betula papyrifera						
	Carpinus caroliniana	X					
	Carya cordiformis	X					
	Celastrus scandens						
	Cornus alternifolia	X					
	Cornus [redacted] FAL.		X				
	Cornus rugosa						
	Cornus stolonifera						
	Corylus cornuta						
	Crataegus monogyna						
	Crataegus punctata						
	Crataegus sp.						
	Crataegus						
	Diervilla lonicera						
	Fagus grandifolia	X					
	Fraxinus americana	X	X				
	Fraxinus nigra						
	Fraxinus pennsylvanica						
	Ilex verticillata						
	Juglans cinerea						
	Juglans nigra						
	Lonicera morrowi						
	Lonicera tatarica						
	Lonicera						
	Malus pumila						
	Ostrya virginiana						
	Parthenocissus inserta	X					
	Populus balsamifera						
	Populus grandidentata						
	Populus tremuloides	X					
	Populus						
	Prunus pensylvanica						
	Prunus serotina						
	Prunus virginiana						
	Prunus						
	Quercus macrocarpa						
	Quercus rubra						
	Quercus ALBA	X					
	Rhamnus cathartica						
	Rhus radicans						
	Rhus typhina						
	Ribes americana						
	Ribes cynosbati						
	Ribes x rubrum						
	Robinia pseudo-acacia						
	CARYA OVATA	X					

I	TREES and SHRUBS	1	2	3	4	5	6
+	Rosa multiflora						
	Rosa						
	Rubus allegheniensis						
	Rubus idaeus						
	Rubus occidentalis						
	Rubus odoratus						
	Rubus pubescens						
	Salix alba						
	Salix amygdaloides						
	Salix bebbiana						
+	Salix discolor						
	Salix eriocephala						
	Salix exigua						
	Salix lucida						
	Salix petiolaris						
+	Salix purpurea						
	Salix x rubens						
+	Salix						
	Sambucus canadensis						
	Sambucus racemosa						
	Sorbus aucuparia						
	Spiraea alba						
	Syringa vulgaris						
+	Tilia americana	X					
	Ulmus americana	X					
	Ulmus						
	Vaccinium						
	Viburnum lentago						
	Viburnum opulus						
	Viburnum						
	Vitis riparia						
	Euonymus obovata	X					
	FERNS						
	Adiantum pedatum						
	Athyrium filix-femina						
	Botrychium multifidum						
	Botrychium virginianum						
	Cystopteris bulbifera						
	Dryopteris carthusiana						
	Dryopteris cristata						
	Dryopteris marginalis						
	Dryopteris						
	Equisetum arvense		X				
	Equisetum hyemale						
	Equisetum variegatum						
	Equisetum						
	Gymnocarpium dryopteris						
	Lycopodium digitatum						
	Lycopodium obscurum						
	Lycopodium						
	Lycopodium						
	Matteuccia struthiopteris						
	Onoclea sensibilis	X					
	Osmunda cinnamomea						
	Osmunda regalis						
	Polystichum acrostichoides						
	Pteridium aquilinum						
	Thelypteris palustris						

I	GRAMINOIDS	1	2	3	4	5	6
	Agrostis gigantea						
	Agrostis stolonifera						
	Agropyron repens						
	Alopecurus						
	Bromus inermis						
	Calamagrostis canadensis						
	Carex arctata						
	Carex aurea						
	Carex bebbii						
	Carex blanda						
	Carex gracillima						
	Carex granularis						
	Carex hystericina						
	Carex pensylvanica						
	Carex radiata						
	Carex retrorsa						
	Carex stipata						
	Carex stricta						
	Carex vulpinoidea						
	Carex [illegible]	X					
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Cyperus						
	Cyperus						
	Dactylis glomerata						
	Danthonia spicata						
	Echinochloa crus-galli						
	Eleocharis erythropoda						
	Eleocharis						
	Elymus virginicus						
	Elymus						
	Festuca arundinacea						
	Glyceria striata						
	Glyceria						
	Juncus dudleyi						
	Juncus effusus						
	Juncus tenuis						
	Juncus						
	Juncus						
	Leersia oryzoides						
	Muhlenbergia						
	Oryzopsis asperifolia						
	Panicum						
	Panicum						
	Phalaris arundinacea		X				
	Phleum pratense		X				
	Phragmites australis						
	Poa compressa						
	Poa pratensis						
	Poa						
	Scirpus atrovirens						
	Scirpus cyperinus						
	Scirpus validus						
	Scirpus						
	Scirpus						
	Setaria						
	Sparganium						
	Typha angustifolia						
	Typha latifolia						
	Typha Xglauca						

ELC WILDLIFE	SITE:	
	POLYGON: 216 GSH—1532	
	DATE: September 7, 2011	
	SURVEYORS: JP-CB	
	START TIME: 12:44	END TIME: 2:10

TEMP (°C): 15°C	CLOUD (10th):	WIND:	PRECIPITATION:
CONDITIONS:			

POTENTIAL WILDLIFE HABITAT:

[illegible]	VERNAL POOLS O		N	SNAGS
N	HIBERNACULA (potential within Fleet)		A	FALLEN LOGS
	many piles of stones			

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
	Monarch	OD							
	WILD TURKEY	OB							
	Deer	TK							
	[illegible]								
	Chipmunk	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 EVIDENCI SC = SCAT
SI = OTHER SIGNS (specify)

Legend

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

0.5 ha

Basemapping from Ontario Ministry of Natural Resources Orthophotography: 2010

N W E S

Metres
0 25 50 100
1:2,000
UTM Zone 17N NAD 83

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Goshen ELC Survey

217_GSH2028

April 2012
Project 60155032

AECOM

Figure 1

Map Document: (N:\projects\0-aecom\60155032\2010\Fieldwork\Maps\MXDs\Project_ELC_Mapping\Goshen\GSH_Amphibian\60155032_GSH_AmphibianELCSurveySites_272_GSH1119.mxd)
4/12/2012 8:19:21 AM

ELC Community Description and Classification	Map #: 217GSH2028		Polygon: FO07-2	
	Surveyor(s): Jess Pletter + Tim Sherney	Date: April 30, 2012	Time start: 1:30pm finish: 2:55pm	
	UTMZ: 452943	UTMZ: 4791192	UTMN:	

Polygon Description

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

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1	1	4	FRAPENN >> UIMAMER – OSTVIR – TILAMER
2	3	3	CRATAEGUS sp. > ACERUBR > UIMAMER
3	3	2	PRUVIR > ACERUBR
4	6	2	Euonymus – TRIGRAN – Allpeti – germacu

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:	N	R	O	N
BA:	Deadfall / Logs:	A	O	R	N

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 Ecosite	Code:	FO07
Vegetation Type:	Fresh-Moist Ash Lowland Deciduous Forest Type	Code:	FO072
Inclusion:	Red Maple Mineral Deciduous Swamp Type	Code:	SWD3-2
Complex:		Code:	

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Prism Factor: 2

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

Soils Ontario and ELC Soils Description

		Pit/Auger #	1 (FOD)	2 (SWD)		Summary
Site Metrics	UTM	Zone	17	17		Moisture Regime
		Easting	452943	452953		
		Northing	4791192	4791212		
	Slope	Position	Flat	Flat		
		Aspect	—	—		Drainage
		Percent	—	—		
		Slope Length	—	—		
Depth to...		Mottles	32cm	5cm		Effective Texture (indicate below)
		Gley	—	—		
		Water Table	—	—		
		Carbonates	—	—		
		Bedrock	—	—		

Soil Horizon Description										
	1	Depth from zero	28cm	% CF	12cm	% CF		% CF		% CF
		Texture	SiL		SiL					
	2	Depth from zero	43cm	% CF	34cm	% CF		% CF		% CF
		Texture	Si		SiC					
	3	Depth from zero		% CF		% CF		% CF		% CF
		Texture								
	4	Depth from zero		% CF		% CF		% CF		% CF
		Texture	Si		SiC					
		% Surface Stone/Rock								
	Moisture Regime		5		6					
	Drainage		1/P		P/1					

Plant Species List
2012

Trees & Shrubs	1	2	3	4	5
Conifers					
Balsam Fir *(Abies balsamea)*					
Common Juniper *(Juniperus communis)*					
Eastern Red Cedar *(Juniperus virginiana)*					
Tamarack *(Larix laricina)*					
Norway Spruce (Picea abies)					
White Spruce *(Picea glauca)*					
Black Spruce *(Picea mariana)*					
Jack Pine *(Pinus banksiana)*					
Red Pine *(Pinus resinosa)*					
Eastern White Pine *(Pinus strobus)*					
Scotch Pine *(Pinus sylvestris)*					
Canada Yew *(Taxus canadensis)*					
Eastern White Cedar *(Thuja occidentalis)*					
Eastern Hemlock *(Tsuga canadensis)*					
Deciduous					
Manitoba Maple *(Acer negundo)*					
Black Maple *(Acer nigrum)*					
Norway Maple *(Acer platanoides)*					
Red Maple *(Acer rubrum)*	R	D			
Silver Maple *(Acer saccharinum)*					
Freeman's Maple *(Acer X freemanii)*					
Sugar Maple *(Acer saccharum)*	R				
Mountain Maple *(Acer spicatum)*					
Speckled Alder *(Alnus incana)*					
Downy Serviceberry *(Amelanchier arborea)*					
Serviceberry *(Amelanchier sanguinea)*					
Yellow Birch *(Betula alleghaniensis)*					
White Birch *(Betula papyrifera)*					
European Birch *(Betula pendula)*					
Blue Beech *(Carpinus caroliniana)*	U				
Bitternut hickory *(Carya cordiformis*	U				
Shagbark Hickory *(Carya ovata)*	U				
Climbing Bittersweet *(Celastrus scandens)*					
Common Hackberry *(Celtis occidentalis)*					
Buttonbush *(Cephalanthus occidentalis)*					
Alt.-leaved Dogwood *(Cornus alternifolia)*					
Silky Dogwood *(Cornus amomum)*					
Bunchberry *(Cornus canadensis)*					
Gray dogwood *(Cornus racemosa)*					
Round-leaved Dogwood *(Cornus rugosa)*					
Red-osier Dogwood *(Cornus sericea)*					
American Hazel *(Corylus americana)*					
Beaked Hazel *(Corylus cornuta)*					
Cockspur Thorn *(Crataegus crus-galli)*					
English Hawthorn *(Crataegus monogyna)*					
Large-fruited Thorn *(Crataegus punctata)*					
Crataegus sp.	F				
Crataegus sp.	F				
Bush Honeysuckle *(Diervilla lonicera)*					
Russian Olive *(Elaeagnus angustifolia)*					
Autumn Olive *(Elaeagnus umbellata)*					
Run. Strawberry-bush *(Euonymus obovata)*					
American Beech *(Fagus grandifolia)*	R				
Glossy Buckthorn *(Frangula alnus)*					
White Ash *(Fraxinus americana)*	R				
Black Ash *(Fraxinus nigra)*					
Green Ash *(Fraxinus pennsylvanica)*	D	U			
Witch-hazel *(Hamamelis virginiana)*					
Winterberry *(Ilex verticilata)*					
Butternut *(Juglans cinerea)*					
Black Walnut *(Juglans nigra)*					
Common Privet *(Ligustrum vulgare)*					
Spicebush *(Lindera benzoin)*					
Fly Honeysuckle *(Lonicera canadensis)*					
Glaucous Honeysuckle *(Lonicera dioica)*					
Morrow's Honeysuckle *(Lonicera morrowii)*					
Tartarian Honeysuckle *(Lonicera tatarica)*					
Common Apple *(Malus pumila)*					
White Mulberry *(Morus alba)*					
Sweet Gale *(Myrica gale)*					
Ironwood *(Ostrya virginiana)*	F				
Thicket-creeper *(Parthenocissus inserta)*					
Ninebark *(Physocarpus opulifolius)*					
Balsam Poplar *(Populus balsamifera)*					
Eastern Cottonwood *(Populus deltoides)*	[illegible]	R			
Large-tooth Aspen *(Populus grandidentata)*					
Trembling Aspen *(Populus tremuloides)*					
Sweet Cherry *(Prunus avium)*					
Pin Cherry *(Prunus pensylvanica)*					
Black Cherry *(Prunus serotina)*					
Choke Cherry *(Prunus virginiana)*	D				
Prunus					

Tree & Shrubs	1	2	3	4	5
Deciduous					
White Oak *(Quercus alba)*					
Bur Oak *(Quercus macrocarpa)*					
Red Oak *(Quercus rubra)*					
Alder Buckthorn *(Rhamnus alnifolia)*					
Common Buckthorn *(Rhamnus cathartica)*					
Smooth Sumac *(Rhus glabra)*					
Staghorn Sumac *(Rhus hirta)*					
Wild Black Currant *(Ribes americanum)*	U				
Prickly Gooseberry *(Ribes cynosbati)*					
Swamp Black Currant *(Ribes lacustre)*					
Red Currant *(Ribes rubrum)*					
Ribes					
Black Locust *(Robinia pseudo-acacia)*					
Prickly Rose *(Rosa acicularis)*					
Smooth Rose *(Rosa blanda)*					
Multiflora Rose *(Rosa multiflora)*					
Rosa					
Com. Blackberry *(Rubus allegheniensis)*					
Wild Red Raspberry *(Rubus idaeus)*					
Black Raspberry *(Rubus occidentalis)*					
Purple-fl. Raspberry *(Rubus odoratus)*					
Dwarf Raspberry *(Rubus pubescens)*					
Rubus					
Peach-leaved Willow *(Salix amygdaloides)*					
Bebb's Willow *(Salix bebbiana)*					
Pussy Willow *(Salix discolor)*					
Missouri Willow *(Salix eriocephala)*					
Sandbar Willow *(Salix exigua)*					
Shining Willow *(Salix lucida)*					
Black Willow *(Salix nigra)*					
Slender Willow *(Salix petiolaris)*					
Salix					
Hybrid Crack Willow *(Salix X rubens)*					
Black-berried Elder *(Sambucus nigra)*					
Red-berried Elder *(Sambucus racemosa)*					
Buffaloberry *(Shepherdia canadensis)*					
Eur. Mountain Ash *(Sorbus aucuparia)*					
Narrow Meadow-sweet *(Spiraea alba)*					
Common Lilac *(Syringa vulgaris)*					
Poison-ivy *(Toxicodendron rydbergii)*	U	U			
Climbing Poison-ivy *(Toxicodendron radicans)*					
White Elm *(Ulmus americana)*	F	U			
Siberian Elm *(Ulmus pumila)*					
Slippery Elm *(Ulmus rubra)*					
Low Blueberry *(Vaccinium angustifolium)*					
Maple-leaf Viburnum *(Viburnum acerifolium)*					
Hobblebush *(Viburnum lantanoides)*					
Nannyberry *(Viburnum lentago)*					
Guelder-Rose *(Viburnum opulus)*					
Downy Arrow-wood *(Vib. rafinesquianum)*					
Riverbank Grape *(Vitis riparia)*					
Am. Prickly-ash *(Zanthoxylum americanum)*					
Tilamer	F				
FRAG VIRG	F				
Ferns & Allies					
Lady Fern *(Athyrium filix-femina)*					
Rattlesnake Fern *(Botrychium virginianum)*					
Bulbet Bladder Fern *(Cystopteris bulbifera)*					
Spin. Wood Fern *(Dryopteris carthusiana)*					
Crested Wood Fern *(Dryopteris cristata)*					
Marginal Wood Fern *(Dryopteris marginalis)*					
Dryopteris					
Ostrich Fern *(Matteuccia struthiopteris)*					
Sensitive Fern *(Onoclea sensibilis)*					
Cinnamon Fern *(Osmunda cinnamomea)*					
Interrupted Fern *(Osmunda claytoniana)*					
Royal Fern *(Osmunda regalis)*					
Christmas Fern *(Polystichum acrostichoides)*					
Eastern Bracken-fern *(Pteridium aquilinum)*					
Marsh Fern *(Thelypteris palustris)*					
Field Horsetail *(Equisetum arvense)*					
Scouring-rush *(Equisetum hyemale)*					
Variegated Horsetail *(Equisetum variegatum)*					
Equisetum					
Ground-cedar*(Lycopodium digitatum)*					
Shining Clubmoss *(Lycopodium lucidulum)*					
Ground-pine *(Lycopodium obscurum)*					

Graminoids	1	2	3	4	5
Grasses					
Giant Redtop *(Agrostis gigantea)*					
Redtop *(Agrostis stolonifera)*					
Awnless Brome *(Bromus inermis)*					
Bromus					
Blue-joint Grass *(Calamagrostis canadensis)*					
Orchard Grass *(Dactylis glomerata)*					
Poverty Oat Grass *(Danthonia spicata)*					
Quack Grass *(Elymus repens)*					
Virginia Wild Rye *(Elymus virginicus)*					
Elymus					
Fowl Manna Grass *(Glyceria striata)*					
Glyceria					
Rice Cut Grass *(Leersia oryzoides)*					
Tall Fescue *(Lolium arundinaceum)*					
Muhlenbergia					
Witch-grass *(Panicum capillare)*					
Panicum					
Reed Canary Grass *(Phalaris arundinacea)*					
Timothy *(Phleum pratense)*					
Common Reed *(Phragmites australis)*					
Canada Blue Grass *(Poa compressa)*					
Fowl Meadow Grass *(Poa palustris)*					
Kentucky Bluegrass *(Poa pratensis)*					
Yellow Foxtail *(Setaria pumila)*					
Green Foxtail *(Setaria viridis)*					
Sedges					
Drooping Wood Sedge *(Carex arctata)*					
Golden-fruited Sedge *(Carex aurea)*					
Graceful Sedge *(Carex gracillima)*					
Inland Sedge *(Carex interior)*					
Bladder Sedge *(Carex intumescens)*					
Lake-bank Sedge *(Carex lacustris)*					
Hop Sedge *(Carex lupulina)*					
Pennsylvania Sedge *(Carex pensylvanica)*					
Awl-fruited Sedge *(Carex stipata)*					
Fox Sedge *(Carex vulpinoidea)*					
Carex sp.	U				
Carex sp.		U			
Carex					
Carex					
Carex					
Carex					
Carex					
Carex					
Carex					
Carex					
Carex					
Carex					
Cyperus					
Redroot Spike-rush *(Eleocharis erythropoda)*					
Eleocharis					
Hard-stem Bulrush *(Schoenoplectus acutus)*					
Three-square Bulrush *(Sch. pungens)*					
Soft-stem Bulrush *(Sch. tabernaemontani)*					
Dark-green Bulrush *(Scirpus atrovirens)*					
Wool-grass *(Scirpus cyperinus)*					
Other Graminoids					
Broad Bur-reed *(Sparganium eurycarpum)*					
Narrow-leaved Cattail *(Typha angustifolia)*					
Broad-leaved Cattail *(Typha latifolia)*					
Broad-leaved Cattail *(Typha X glauca)*					
Articulated Rush *(Juncus articulatus)*					
Soft Rush *(Juncus effusus)*					
Path Rush *(Juncus tenuis)*					
Juncus					
Juncus					

***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 catergory)*

***R - Rare**: represented in the polygon by less than about five individuals or small clumps*

Map Number: 217 SSH2028	1	FOD7-2
Date: April 30, 2012	2	SWD3-1 (inclusions)
Surveyors: JP + TS	3	
	4	
	5	

Plant Species List
2012

Dicot Herbs - Asteraceae	1	2	3	4	5
Common Yarrow (*Achillea millefolium*)					
White Snakeroot (*Ageratina altissima*)					
Com. Ragweed (*Ambrosia artemisiifolia*)					
Giant Ragweed (*Ambrosia trifida*)					
Field Pussytoes (*Antennaria neglecta*)					
Artemisia					
Common Burdock (*Arctium minus*)					
Nodding Beggar-ticks (*Bidens cernua*)					
Devil's Beggar-ticks (*Bidens frondosa*)					
Spotted Knapweed (*Centaurea biebersteinii*)					
Brown Knapweed (*Centaurea jacea*)					
Chicory (*Cichorium intybus*)					
Canada Thistle (*Cirsium arvesnse*)					
Bull Thistle (*Cirsium vulgare*)					
Horseweed (*Conyza canadensis*)					
Daisy Fleabane (*Erigeron annus*)					
Philadelphia Fleabane (*Erig. philadelphicus*)					
Erigeron					
Joe-pye-weed (*Eupatorium maculatum*)					
Boneset (*Eupatorium perfoliatum*)					
Large-leaved Aster (*Eurybia macrophylla*)					
Flat-top Goldenrod (*Euthamia graminifolia*)					
Orange Hawkweed (*Hieracium aurantiacum*)					
Field Hawkweed (*Hieracium caespitosum*)					
Hieracium					
Elecampane (*Inula helenium*)					
Prickly Lettuce (*Lactuca serriola*)					
Lactuca					
Ox-eye Daisy (*Leucanthemum vulgare*)					
Pineapple-weed (*Matricaria discoidea*)					
Tall White Lettuce (*Prenanthes altissima*)					
Black-eyed Susan (*Rudbeckia hirta*)					
Tall Goldenrod (*Solidago altissima*)					
Blue-stem Goldenrod (*Solidago caesia*)					
Canada Goldenrod (*Solidago canadensis*)					
Zig-zag Goldenrod (*Solidago flexicaulis*)					
Giant Goldenrod (*Solidago gigantea*)					
Early Goldenrod (*Solidago juncea*)					
Gray Goldenrod (*Solidago nemoralis*)					
Solidago m.	U				
Field Sow-thistle (*Sonchus arvensis*)					
Sonchus					
Heart-leaf Aster (*Symph. cordifolium*)					
Heath Aster (*Symphyotrichum ericoides*)					
Tall White Aster (*Symph. lanceolatum*)					
Calico Aster (*Symphyotrichum lateriflorum*)					
New England Aster (*Symph. novae-angliae*)					
Purple-stem Aster (*Symph. puniceus*)					
Common Tansy (*Tanacetum vulgare*)					
Common Dandelion (*Taraxacum officinale*)	R				
Com. Goatsbeard (*Tragopogon pratensis*)					
Coltsfoot (*Tussilago farfara*)					

Other Dicot Herbs	1	2	3	4	5
White Baneberry (*Actaea pachypoda*)					
Red Baneberry (*Actaea rubra*)					
Tall Agrimony (*Agrimonia gryposepala*)	U				
Garlic Mustard (*Alliaria petiolata*)	F				
Green Amaranth (*Amaranthus retroflexus*)					
Hog-peanut (*Amphicarpa bracteata*)					
Pearly Everlasting (*Anaphalis margaritacea*)					
Canada Anemone (*Anemone canadensis*)					
Ivy Hepatica (*Anemone acutiloba*)					
Thimbleweed (*Anemone virginiana*)					
Purple Angelica (*Angelica atropurpurea*)					
Indian Hemp (*Apocynum cannabinum*)					
Wild Sarsaparilla (*Aralia nudicaulis*)					
Spikenard (*Aralia racemosa*)					
Wild Ginger (*Asarum canadense*)					
Swamp Milkweed (*Asclepias incarnata*)					
Common Milkweed (*Asclepias syriaca*)					
Yellow Rocket (*Barbarea vulgaris*)					
False Nettle (*Boehmeria cylindrica*)					
Black Mustard (*Brassica nigra*)					
Marsh-marigold (*Caltha palustris*)					
Creeping Bellflower (*Campanula rapunculoides*)					

Dicot Herbs	1	2	3	4	5
Shepherd's Purse (*Capsella bursa-pastoris*)					
Cutleaf Toothwort (*Cardamine concatenata*)					
Toothwort (*Cardamine diphylla*)					
Penn. Bitter-cress (*Cardamine pensylvanica*)					
Cardamine					
Blue Cohosh (*Caulophyllum thalictroides*)	R				
Mouse-ear Chickweed (*Cerastium fontanum*)					
Turtlehead (*Chelone glabra*)					
Spotted Water-hemlock (*Cicuta maculata*)					
Water-hemlock (*Cicuta virosa*)					
Enchanter's Nightshade (*Circaea lutetiana*)					
Carolina Spring Beauty (*Claytonia caroliniana*)					
Virginia Spring Beauty (*Claytonia virginica*)					
Virgin's-bower (*Clematis virginiana*)					
Field Bindweed (*Convolvulus arvensis*)					
Dog-strangling Vine (*Cynanchum rossicum*)					
Wild Carrot (*Daucus carota*)					
Deptford Pink (*Dianthus armeria*)					
Squirrel-corn (*Dicentra canadensis*)					
Dutchman's-breeches (*Dicentra cucullaria*)					
Wild Teasel (*Dipsacus fullonum*)					
Wild Cucumber (*Echinocystis lobata*)					
Viper's Bugloss (*Echium vulgare*)					
Northern Willow-herb (*Epilobium ciliatum*)					
Hairy Willow-herb (*Epilobium hirsutum*)					
Small-fl. Willow-herb (*Epilobium parviflorum*)					
Epilobium					
Worm Mustard (*Erysimum cheiranthoides*)					
Euphorbia					
Hemp Nettle (*Galeopsis tetrahit*)					
Wild Madder (*Galium mollugo*)					
Marsh Bedstraw (*Galium palustre*)					
Sweet-scented Bedstraw (*Galium triflorum*)					
Galium					
Spotted Geranium (*Geranium maculatum*)	F				
Herb-robert (*Geranium robertianum*)	U				
Yellow Avens (*Geum aleppicum*)					
White Avens (*Geum canadense*)	U				
Urban Avens (*Geum urbanum*)					
Dame's Rocket (*Hesperis matronalis*)					
Virg. Water-leaf (*Hydrophyllum virginianum*)					
Com. St. John's-wort (*Hypericum perforatum*)					
Spotted Jewelweed (*Impatiens capensis*)					
Wood Nettle (*Laportea canadensis*)					
Motherwort (*Leonurus cardiaca*)					
Field Peppergrass (*Lepidium campestre*)					
Eur. Gromwell (*Lithospermum officinale*)					
Butter & Eggs (*Linaria vulgaris*)					
Great Lobelia (*Lobelia siphilitica*)					
Lobelia					
Cut-leaf Bugleweed (*Lycopus americanus*)					
Northern Bugleweed (*Lycopus uniflorus*)					
Fringed Loosestrife (*Lysimachia ciliata*)					
Moneywort (*Lysimachia nummularia*)					
Lysimachia					
Purple Loosestrife (*Lythrum salicaria*)					
Black Medick (*Medicago lupulina*)					
Alfalfa (*Medicago sativa*)					
White Sweet-clover (*Melilotus alba*)					
Yellow Sweet-clover (*Melilotus officinalis*)					
Wild Mint (*Mentha arvensis*)					
Wild Bergamot (*Monarda fistulosa*)					
Small Forget-me-not (*Myosotis laxa*)					
Forget-me-not (*Myosotis scorpioides*)					
Water-cress (*Nasturtium officinale*)					
Com. Evening-primrose (*Oenothera biennis*)					
Sweet-cicely (*Osmorhiza berterii*)					
Yellow Wood-sorrel (*Oxalis stricta*)					
Wild Parsnip (*Pastinaca sativa*)					
English Plantain (*Plantago lanceolata*)					
Common Plantain (*Plantago major*)					
Rugel's Plantain (*Plantago rugelii*)					
May-apple (*Podophyllum peltatum*)	U				
Pale Smartweed (*Polygonum lapathifolium*)					
Lady's-thumb (*Polygonum persicaria*)					
Virginia Knotweed (*Polygonum virginianum*)					
Polygonum					
Polygonum					
Rough Cinquefoil (*Potentilla norvegica*)					
Rough-fruited Cinquefoil (*Potentilla recta*)					
Common Cinquefoil (*Potentilla simplex*)					
Potentilla					
Heal-all (*Prunella vulgaris*)					
Shinleaf (*Pyrola elliptica*)					

Dicot Herbs	1	2	3	4	5
Kidney-leaf Buttercup (*Ranunculus abortivus*)					
Tall Buttercup (*Ranunculus acris*)					
Hooked Buttercup (*Ranunculus recurvatus*)	U				
Ranunculus					
Sheep Sorrel (*Rumex acetosella*)					
Curly-leaf Dock (*Rumex crispus*)					
Bitter Dock (*Rumex obtusifolius*)					
Bloodroot (*Sanginaria canadense*)					
Black Snakeroot (*Sanicula marilandica*)					
Bouncing Bet (*Saponaria officinalis*)					
Marsh Skullcap (*Scutellaria galericulata*)					
Mad Dog Skullcap (*Scutellaria lateriflora*)					
White Campion (*Silene latifolia*)					
Bladder Campion (*Silene vulgaris*)					
Hemlock Water-parsnip (*Sium suave*)					
Bitter Nightshade (*Solanum dulcamara*)					
Black Nightshade (*Solanum ptychanthum*)					
Grassleaf Stitchwort (*Stellaria graminea*)					
Common Chickweed (*Stellaria media*)					
Early Meadow-rue (*Thalictrum dioicum*)					
Tall Meadow-rue (*Thalictrum pubescens*)					
Field Penny-cress (*Thlaspi arvense*)					
Foamflower (*Tiarella cordifolia*)					
Star-flower (*Trientalis borealis*)					
Red Clover (*Trifolium pratense*)					
White Clover (*Trifolium repens*)					
Trifolium					
Stinging Nettle (*Urtica dioica*)					
Greater Bladderwort (*Utricularia vulgaris*)					
Common Mullein (*Verbascum thapsus*)					
Blue Vervain (*Verbena hastata*)					
White Vervain (*Verbena urticifolia*)					
Water Speedwell (*Veron. anagallis-aquatica*)					
Common Speedwell (*Veronica officinalis*)					
Veronica					
Cow Vetch (*Vicia cracca*)					
Vicia					
Periwinkle (*Vinca minor*)					
Dog Violet (*Viola conspersa*)					
Yellow Violet (*Viola pubescens*)					
Com. Blue Violet (*Viola sororia*)					
Viola					

Monocot Herbs	1	2	3	4	5
Water-plantain (*Alisma plantago-aquatica*)					
Wild Leek (*Allium tricoccum*)	U				
Jack-in-the-pulpit (*Arisaema triphyllum*)	R				
Asparagus (*Asparagus officinalis*)					
Wild Calla (*Calla palustris*)					
Bluebead-lily (*Clintonia borealis*)					
Garden Lily-of-valley (*Convallaria majalis*)					
Yel. Lady's Slipper (*Cypripedium parviflora*)					
Canada Waterweed (*Elodea canadensis*)					
Helleborine (*Epipactis helleborine*)	R				
Yellow Trout Lily (*Erythronium americanum*)	D				
Blue-flag Iris (*Iris versicolor*)					
Orange Day Lily (*Hemerocallus fulva*)					
Lesser Duckweed (*Lemna minor*)					
Starry Duckweed (*Lemna trisulca*)					
Wild Lily-of-valley (*Maianthemum canadense*)					
False Solom Seal (*Maianthemum racemosum*)					
Star False Solomon (*Maianthemum stellatum*)					
True Solomon Seal (*Polygonatum pubescens*)					
Pickerel-weed (*Pontederia cordata*)					
Curly-leaf Pondweed (*Potamogeton crispus*)					
Sago Pondweed (*Potamogeton pectinatus*)					
Potamogeton					
Potamogeton					
Broad-leaved Arrowhead (*Sagittaria latifolia*)					
Blue-eyed-grass (*Sisyrinchium montanum*)					
Herb. Carrion Flower (*Smilax herbacea*)					
Bristly Greenbrier (*Smilax hispida*)					
Nodding Ladies' Tresses (*Spiranthes cernua*)					
Rose Twisted-stalk (*Streptopus lanceolatus*)					
Skunk-cabbage (*Symplocarpus foetidus*)					
Purple Trillium (*Trillium erectum*)	U	R			
White Trillium (*Trillium grandiflorum*)		F			
Large-flowered Bellwort (*Uvularia grandiflora*)					

***D - Dominant**: represented by large numbers; generally forming >10% ground cover or >25% vegetation cover in any one stratum*

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Map Number: 217GSH2024	1	F007-2	4	
Date: April 30, 2012	2	SW03-1 (inclusion)	5	
Surveyors: JP, TS	3			

Significant Wildlife Habitat Form

AECOM

Study Area:	BLW JER (GSH)	Map #:	217 GSH 2028
Date:	2012-04-30	Time Started:	1:30 P.m
Field Staff:	Tom Storey Jess Piette	Time Finished:	2:55 P.m
Weather Conditions:	overcast, Rain, 6°C		

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

Nest bowls present: ☐ No ☒ Yes (*if yes, photograph and complete the following*) nest # 1

UTMs: 452953 4791173 Number of nests: 1

Decription of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):
Stick nest in crotch of green Ash - roughly 10-12m high. unoccupied

Description of habitat (note riparian areas if present, evidence of disturbance): FOD7-2-Agriculture disturbance ie → Rock Piles etc
Pic # 20

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, turles (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, dimenstions, etc):

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

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

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

UTMs: Description (indicator species, etc):

NHA Site Investigation - Significant Wildlife Habitat Form

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
Pic #20	Stick nest		

Significant Wildlife Habitat Form

AECOM

Study Area:	BLW JER (GSH)	Map #:	217 GSH 2028
Date:	2012-04-30	Time Started:	1:30 P.M
Field Staff:	Tom Stoney Jess Pietr	Time Finished:	2:55 P.M
Weather Conditions:	Overcast, Rain, 6°C		

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

Nest bowls present: ☐ No ☒ Yes (*if yes, photograph and complete the following*) Nest #2

UTMs: 452942 4791206 Number of nests: 1

Decription of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):
Medium sized stick nest, Approx 15m high in coniferous area ASL.

Description of habitat (note riparian areas if present, evidence of disturbance): FOD2-2 bordering
Pic #21 SWD3-1

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, turles (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, dimenstions, etc):

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

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

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

UTMs: Description (indicator species, etc):

NHA Site Investigation - Significant Wildlife Habitat Form

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
21	Stickest #2		

Significant Wildlife Habitat Form

AECOM

Study Area:	BLW JER (GSH)	Map #:	217 GSH 2028
Date:	2012-04-30	Time Started:	1:30 p.m
Field Staff:	Tom Shorey Jess Pfeffe	Time Finished:	2:55 p.m
Weather Conditions:	overcast, 6°C Rain		

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*) Nest #3

UTMs: 452945 4791243 Number of nests: 1

Decription of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):
Medium sized stick nest in crotch of green ASH, Approx 15-20m high, near edge of woods

Description of habitat (note riparian areas if present, evidence of disturbance): FOD7-2-Near Pic #22 & agricultural fields

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, turles (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, dimenstions, etc):

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

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

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

UTMs: Description (indicator species, etc):

NHA Site Investigation - Significant Wildlife Habitat Form

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
Pic # 22	Stick nest # 3		

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

AECOM

Map No: 217 GSH 2028
Date (yyyy-mm-dd): 2012-04-30

Field Staff: Tom Shortney, Jess Pettit

Time Started: 1:30 p.m.
Time Finished: 2:55 p.m.

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Red Winged Blackbird		VO	Along edges				
Downy Woodpecker		VO	Within Feature				
Coyote/Fox		HO	Along edge				

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

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

☆ Not observed → N/O ☆

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

AECOM

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

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

AECOM

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
TPO1, TPS1, TPW1, CUM1	**Tall Blazing Star** *(Liatris aspera)-S3/SC*	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y N UTM:
FEO, FES, FET, MAM2, MAM3	**Tuberous Indian Plantain** *(Amoglossum plantagineum)* - *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** (Pterospora andromedea) - S2 *Bloom Time – summer*	Found in conifer woods, under pines, but also hemlock, spruce, fir, and white cedar. In dry or rocky soil, often with common juniper and sometimes aspen or birch.	Y N UTM:
CUM1, CUT1, CUW1, RBO1, SBO1	**Yellow Ladies'-tresses** *(Spiranthes ochroleuca) - S2* *Bloom Time – August to November*	Dry, open sites, usually on acidic sandy soil, dry to mesic open woodland, thickets, meadows, barrens, ledges, outcrops, banks and roadsides, old fields.	Y N UTM:
BIRDS			
-	**Bald Eagle (Haliaeetus leucocephalus) - SC**	Assessed as SWH. Record species if found.	not required.
CUW, SDO, RBO, TPS	**Common Nighthawk (Chordeiles minor) - 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 (Seiurus motacilla) - 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 (Melanerpes erythrocephalus) - 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 (Asio flammeus) - SC**	Assessed as SWH. Record species if found.	not required.
CUT1	**Yellow-breasted Chat (Icteria virens) - SC**	Inhabits thickets, tall tangles of shrubbery beside streams, ponds; overgrown bushy clearings with deciduous thickets; nests above ground in bush, vines	Y N UTM:
REPTILES			
-	**Eastern Ribbonsnake (Thamnophis sauritus) - SC**	Assessed as SWH. Record species if found.	**not required.**
-	**Milksnake (Lampropeltis triangulum) -SC**	Assessed as SWH. Record species if found.	not required.
-	**Snapping Turtle (Chelydra serpentine) - SC**	Assessed as SWH. Record species if found.	not required.
INSECTS			
OAO, SA, SWM, SWD	**Azure Bluet** *(Enallagma aspersum) –S3*	Species inhabits fishless ponds, lakes and boggy swamps	Y N UTM:
TPS, TPW	**Sleepy Duskywing** (Erynnis brizo) - S1	Occurs in oak/oak-pine scrub, chaparral, barrens, well-drained sandy or shaly soils. Species regularly seen at flowers in oak woods, on the ground, and at mud puddles	Y N UTM:
CUM1, CUT1, CUW1	**Monarch Butterfly (Danaus plexippus) - SC**	Their larvae only feed on milkweeds (Asclepius spp.). Habitat includes abandoned farmland, along roadsides, open spaces where these plants grow	Y N UTM:
TPS, CUW	**Mottled Duskywing (Erynnis martialis) –S2**	Usually seen nectaring or on wet sandy roads. Larvae feeds on New Jersey Tea and adults only likely near where this plant is present	Y N UTM:
SWT, SWD, SWM, FOM, FOD4-3, TPW, TPS, CUM1	**Tawny Emperor** *(Asterocampa clyton)* – S3	Species inhabits densely wooded riparian areas, dry woods, open woods, fencerows and parks. Usually occurs near Hackberry , the larval foodplant	Y N UTM:
FOD5	**West Virginia White (Pieris virginiensis) - SC**	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y N UTM:

Wetland Data Collection Sheet

AECOM

Study area: Gosher	Map No: 217 GSH 2028
Date (yyyy-mm-dd): 2012-04-30	Time Started: 1.30 Pm
Field Staff: Tom Shoney Jess Pettie	Time Finished: 2 55 P.m.

Presence of Groundwater No ☒ Yes ☐

☐ bank seepage ☐ iron staining ☐ groundwater indicator

Site Type Lacustrine ☐ (associated with lakes) Isolated ☒

Riverine ☐ (associated with rivers)

Palustrine ☐ absent or intermittnet inflow and either intermittnet or permanent outflow

what are the water inputs and outputs? _____

Soils refer to ELC card for soils information

% open Water

Type 1 - <5% ☒

Type 2 - 5-25% ☐ (water occuring in one central location)

Type 3 - 5-25% ☐ (water occuring in ponds of various sizes)

Type 4 - 26-75% ☐ (water occuring in a central location)

Type 5 - 26-75% ☐ (water occuring in a small patern)

Type 6 - 76-95% ☐ (occuring in a central location, vegeation is peripehral)

Type 7 - 76-95% ☐ (vegetation occurs inpatches or diffuse, open stands)

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
FOD7-2	h → Frapenn >> Ulmamer = Ost Virg = Tilamer +S → Acerubr > Ulmamer

Wetland Data Collection Sheet

AECOM

Notes on Ecological Functions or features

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

Small SWD 3-1 inclusion included in FOD 7-2 Wetland Form

ASA

Legend

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

COPY

0.5 ha

Basemapping from Ontario Ministry of Natural Resources Orthophotography 2010

N W E S

Metres

0 25 50 100

1:2,500

UTM Zone 17N NAD 83

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ELC &

Goshen Amphibian Survey

220_GSH1539

April 2012
Project 60155032

AECOM

Figure 1

Map Document: (N:\projects\0-aecom\0155032\29\10\Fauna\GIS\Fauna\Mxd\Drf\Wildlife\MXD\Project_ELC_Mapping\Goshen\GSH_Fingal\Batch\60155032_GSH_AmphibianELCSurveySites_22Z_GSH1118.mxd)
4/12/2012 -- 9:19:21 PM

ASA.

ELC Community Description and Classification

Map #:		Polygon: 220GS 1539	
Surveyor(s): SG RA	Date: Aug 26 12	Time start: 8:00am	finish: 15
UTMZ:	UTMZ:	UTMN:	

Polygon Description

System	Substrate	Topographic Feature	Plant Form	Community
☑ Terrestrial	☐ Organic	☐ Lacustrine	☐ Plankton	☐ Lake
☐ Wetland	☑ Mineral Soil	☐ Riverine	☐ Submerged	☐ Pond
☐ Aquatic	☐ Parent Min.	☐ Bottomland	☐ Floating-LVD.	☐ River
Site	☐ Acidic Bedrk	☐ Terrace	☑ Graminoid	☐ Stream
☐ Open Water	☐ Basic Bedrk	☑ Valley Slope	☐ Forb	☐ Marsh
☐ Shallow Water	☐ Carb. Bedrk	☐ Tableland	☐ Lichen	☐ Swamp
☑ Surficial Dep.		☐ Roll. Upland	☐ Bryophyte	☐ Fen
☐ Bedrock		☐ Cliff	☐ Deciduous	☐ Bog
History		☐ Talus	☐ Coniferous	☐ Barren
☐ Natural		☐ Crevice/Cave	☐ Mixed	☑ Meadow
☑ Cultural		☐ Alvar		☐ Prairie
Cover		☐ Rockland		☐ Thicket
☑ Open		☐ Beach / Bar		☐ Savannah
☐ Shrub		☐ Sand Dune		☐ Woodland
☐ Treed		☐ Bluff		☐ Forest
				☐ 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	1	Picaob = Pin Resi
2	—	—	
3	—	—	
4	6	4	Bromus sp. > Phaarud

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
A:	Standing Snags:	R	R	R	R
	Deadfall / Logs:	R	R	R	R

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

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

Ecosite:	cultural meadow.	Code:	CUM
Vegetation Type:	mineral cultural meadow	Code:	CUM1-1
Inclusion:		Code:	
Complex:		Code:	

Community Profile Diagram/Comments

ASA → roadside.
- cultural meadow adjacent to shrub and field.

Notes:

Tree Tally by Species

Prism Factor: 2

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

Soils Ontario and ELC Soils Description

						Summary
Site Metrics	Pit/Auger #					
	UTM	Zone				Moisture Regime
		Easting				
		Northing				
	Slope	Position				
		Aspect				
		Percent				Drainage
		Slope Length				
Depth to...	Mottles					
	Gley					Effective Texture (indicate below)
	Water Table					
	Carbonates					
	Bedrock					

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									

COPY

ASA

Brome

Plant Species List
2012

Trees & Shrubs	1	2	3	4	5
Conifers					
Balsam Fir (*Abies balsamea*)					
Common Juniper (*Juniperus communis*)	U				
Eastern Red Cedar (*Juniperus virginiana*)					
Tamarack (*Larix laricina*)					
Norway Spruce (*Picea abies*)	F				
White Spruce (*Picea glauca*)	U				
Black Spruce (*Picea mariana*)					
Jack Pine (*Pinus banksiana*)					
Red Pine (*Pinus resinosa*)	F				
Eastern White Pine (*Pinus strobus*)	F				
Scotch Pine (*Pinus sylvestris*)					
Canada Yew (*Taxus canadensis*)					
Eastern White Cedar (*Thuja occidentalis*)					
Eastern Hemlock (*Tsuga canadensis*)					
Deciduous					
Manitoba Maple (*Acer negundo*)					
Black Maple (*Acer nigrum*)					
Norway Maple (*Acer platanoides*)					
Red Maple (*Acer rubrum*)					
Silver Maple (*Acer saccharinum*)					
Freeman's Maple (*Acer X freemanii*)					
Sugar Maple (*Acer saccharum*)	R				
Mountain Maple (*Acer spicatum*)					
Speckled Alder (*Alnus incana*)					
Downy Serviceberry (*Amelanchier arborea*)					
Serviceberry (*Amelanchier sanguinea*)					
Yellow Birch (*Betula alleghaniensis*)					
White Birch (*Betula papyrifera*)					
European Birch (*Betula pendula*)					
Blue Beech (*Carpinus caroliniana*)					
Bitternut hickory (*Carya cordiformis*)					
Shagbark Hickory (*Carya ovata*)					
Climbing Bittersweet (*Celastrus scandens*)					
Common Hackberry (*Celtis occidentalis*)					
Buttonbush (*Cephalanthus occidentalis*)					
Alt.-leaved Dogwood (*Cornus alternifolia*)					
Silky Dogwood (*Cornus amomum*)					
Bunchberry (*Cornus canadensis*)					
Gray dogwood (*Cornus racemosa*)	U				
Round-leaved Dogwood (*Cornus rugosa*)					
Red-osier Dogwood (*Cornus sericea*)	U				
American Hazel (*Corylus americana*)					
Beaked Hazel (*Corylus cornuta*)					
Cockspur Thorn (*Crataegus crus-galli*)					
English Hawthorn (*Crataegus monogyna*)					
Large-fruited Thorn (*Crataegus punctata*)					
Crataegus					
Crataegus					
Bush Honeysuckle (*Diervilla lonicera*)					
Russian Olive (*Elaeagnus angustifolia*)	R				
Autumn Olive (*Elaeagnus umbellata*)					
Run. Strawberry-bush (*Euonymus obovata*)					
American Beech (*Fagus grandifolia*)					
Glossy Buckthorn (*Frangula alnus*)					
White Ash (*Fraxinus americana*)					
Black Ash (*Fraxinus nigra*)					
Green Ash (*Fraxinus pennsylvanica*)	R				
Witch-hazel (*Hamamelis virginiana*)					
Winterberry (*Ilex verticillata*)					
Butternut (*Juglans cinerea*)					
Black Walnut (*Juglans nigra*)					
Common Privet (*Ligustrum vulgare*)					
Spicebush (*Lindera benzoin*)					
Fly Honeysuckle (*Lonicera canadensis*)					
Glaucous Honeysuckle (*Lonicera dioica*)					
Morrow's Honeysuckle (*Lonicera morrowii*)					
Tartarian Honeysuckle (*Lonicera tatarica*)	R				
Common Apple (*Malus pumila*)					
White Mulberry (*Morus alba*)					
Sweet Gale (*Myrica gale*)					
Ironwood (*Ostrya virginiana*)					
Thicket-creeper (*Parthenocissus inserta*)					
Ninebark (*Physocarpus opulifolius*)					
Balsam Poplar (*Populus balsamifera*)					
Eastern Cottonwood (*Populus deltoides*)	U				
Large-tooth Aspen (*Populus grandidentata*)					
Trembling Aspen (*Populus tremuloides*)					
Sweet Cherry (*Prunus avium*)					
Pin Cherry (*Prunus pensylvanica*)					
Black Cherry (*Prunus serotina*)					
Choke Cherry (*Prunus virginiana*)	U				
Prunus					

Tree & Shrubs	1	2	3	4	5
Deciduous					
White Oak (*Quercus alba*)					
Bur Oak (*Quercus macrocarpa*)					
Red Oak (*Quercus rubra*)					
Alder Buckthorn (*Rhamnus alnifolia*)					
Common Buckthorn (*Rhamnus cathartica*)					
Smooth Sumac (*Rhus glabra*)					
Staghorn Sumac (*Rhus hirta*)					
Wild Black Currant (*Ribes americanum*)					
Prickly Gooseberry (*Ribes cynosbati*)					
Swamp Black Currant (*Ribes lacustre*)					
Red Currant (*Ribes rubrum*)					
Ribes					
Black Locust (*Robinia pseudo-acacia*)	R				
Prickly Rose (*Rosa acicularis*)					
Smooth Rose (*Rosa blanda*)					
Multiflora Rose (*Rosa multiflora*)					
Rosa					
Com. Blackberry (*Rubus allegheniensis*)					
Wild Red Raspberry (*Rubus idaeus*)	U				
Black Raspberry (*Rubus occidentalis*)	U				
Purple-fl. Raspberry (*Rubus odoratus*)					
Dwarf Raspberry (*Rubus pubescens*)					
Rubus					
Peach-leaved Willow (*Salix amygdaloides*)					
Bebb's Willow (*Salix bebbiana*)					
Pussy Willow (*Salix discolor*)					
Missouri Willow (*Salix eriocephala*)					
Sandbar Willow (*Salix exigua*)					
Shining Willow (*Salix lucida*)					
Black Willow (*Salix nigra*)					
Slender Willow (*Salix petiolaris*)					
Salix					
Hybrid Crack Willow (*Salix X rubens*)					
Black-berried Elder (*Sambucus nigra*)					
Red-berried Elder (*Sambucus racemosa*)					
Buffaloberry (*Shepherdia canadensis*)					
Eur. Mountain Ash (*Sorbus aucuparia*)					
Narrow Meadow-sweet (*Spiraea alba*)					
Common Lilac (*Syringa vulgaris*)					
Poison-ivy (*Toxicodendron rydbergii*)					
Climbing Poison-ivy (*Toxicodendron radicans*)					
White Elm (*Ulmus americana*)					
Siberian Elm (*Ulmus pumila*)					
Slippery Elm (*Ulmus rubra*)					
Low Blueberry (*Vaccinium angustifolium*)					
Maple-leaf Viburnum (*Viburnum acerifolium*)	R				
Hobblebush (*Viburnum lantanoides*)					
Nannyberry (*Viburnum lentago*)					
Guelder-Rose (*Viburnum opulus*)					
Downy Arrow-wood (*Vib. rafinesquianum*)					
Riverbank Grape (*Vitis riparia*)					
Am. Prickly-ash (*Zanthoxylum americanum*)	R				
Ferns & Allies					
Lady Fern (*Athyrium filix-femina*)					
Rattlesnake Fern (*Botrychium virginianum*)					
Bulbet Bladder Fern (*Cystopteris bulbifera*)					
Spin. Wood Fern (*Dryopteris carthusiana*)					
Crested Wood Fern (*Dryopteris cristata*)					
Marginal Wood Fern (*Dryopteris marginalis*)					
Dryopteris					
Ostrich Fern (*Matteuccia struthiopteris*)					
Sensitive Fern (*Onoclea sensibilis*)					
Cinnamon Fern (*Osmunda cinnamomea*)					
Interrupted Fern (*Osmunda claytoniana*)					
Royal Fern (*Osmunda regalis*)					
Christmas Fern (*Polystichum acrostichoides*)					
Eastern Bracken-fern (*Pteridium aquilinum*)					
Marsh Fern (*Thelypteris palustris*)					
Field Horsetail (*Equisetum arvense*)					
Scouring-rush (*Equisetum hyemale*)					
Variegated Horsetail (*Equisetum variegatum*)					
Equisetum					
Ground-cedar (*Lycopodium digitatum*)					
Shining Clubmoss (*Lycopodium lucidulum*)					
Ground-pine (*Lycopodium obscurum*)					

Graminoids	1	2	3	4	5
Grasses					
Giant Redtop (*Agrostis gigantea*)					
Redtop (*Agrostis stolonifera*)					
Awnless Brome (*Bromus inermis*)					
Bromus sp.	D				
Blue-joint Grass (*Calamagrostis canadensis*)					
Orchard Grass (*Dactylis glomerata*)					
Poverty Oat Grass (*Danthonia spicata*)					
Quack Grass (*Elymus repens*)					
Virginia Wild Rye (*Elymus virginicus*)					
Elymus					
Fowl Manna Grass (*Glyceria striata*)					
Glyceria					
Rice Cut Grass (*Leersia oryzoides*)					
Tall Fescue (*Lolium arundinaceum*)					
Muhlenbergia					
Witch-grass (*Panicum capillare*)					
Panicum					
Reed Canary Grass (*Phalaris arundinacea*)	D				
Timothy (*Phleum pratense*)	D				
Common Reed (*Phragmites australis*)	F				
Canada Blue Grass (*Poa compressa*)					
Fowl Meadow Grass (*Poa palustris*)					
Kentucky Bluegrass (*Poa pratensis*)					
Yellow Foxtail (*Setaria pumila*)					
Green Foxtail (*Setaria viridis*)					
~~[illegible]~~					
~~[illegible]~~					
Sedges					
Drooping Wood Sedge (*Carex arctata*)					
Golden-fruited Sedge (*Carex aurea*)					
Graceful Sedge (*Carex gracillima*)					
Inland Sedge (*Carex interior*)					
Bladder Sedge (*Carex intumescens*)					
Lake-bank Sedge (*Carex lacustris*)					
Hop Sedge (*Carex lupulina*)					
Pennsylvania Sedge (*Carex pensylvanica*)					
Awl-fruited Sedge (*Carex stipata*)					
Fox Sedge (*Carex vulpinoidea*)					
Carex					
Carex					
Carex					
Carex					
Carex					
Carex					
Carex					
Carex					
Carex					
Carex					
Carex					
Carex					
Cyperus					
Redroot Spike-rush (*Eleocharis erythropoda*)					
Eleocharis					
Hard-stem Bulrush (*Schoenoplectus acutus*)					
Three-square Bulrush (*Sch. pungens*)					
Soft-stem Bulrush (*Sch. tabernaemontani*)					
Dark-green Bulrush (*Scirpus atrovirens*)					
Wool-grass (*Scirpus cyperinus*)					
Other Graminoids					
Broad Bur-reed (*Sparganium eurycarpum*)					
Narrow-leaved Cattail (*Typha angustifolia*)					
Broad-leaved Cattail (*Typha latifolia*)					
Broad-leaved Cattail (*Typha X glauca*)					
Articulated Rush (*Juncus articulatus*)					
Soft Rush (*Juncus effusus*)					
Path Rush (*Juncus tenuis*)					
Juncus					
Juncus					

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 catergory)

R - Rare represented in the polygon by less than about five individuals or small clumps

Map Number: 220 CSH1584 | 1 Cum1-4 | 4

Date: April 26 2012 | 2 | 5

Surveyors: SG, AA | 3

Plant Species List
2012

Dicot Herbs - Asteraceae	1	2	3	4	5
Common Yarrow (*Achillea millefolium*)					
White Snakeroot (*Ageratina altissima*)					
Com. Ragweed (*Ambrosia artemisiifolia*)					
Giant Ragweed (*Ambrosia trifida*)					
Field Pussytoes (*Antennaria neglecta*)					
Artemisia					
Common Burdock (*Arctium minus*)	U				
Nodding Beggar-ticks (*Bidens cernua*)					
Devil's Beggar-ticks (*Bidens frondosa*)					
Spotted Knapweed (*Centaurea biebersteinii*)					
Brown Knapweed (*Centaurea jacea*)					
Chicory (*Cichorium intybus*)					
Canada Thistle (*Cirsium arvesnse*)					
Bull Thistle (*Cirsium vulgare*)					
Horseweed (*Conyza canadensis*)					
Daisy Fleabane (*Erigeron annus*)					
Philadelphia Fleabane (*Erig. philadelphicus*)					
Erigeron					
Joe-pye-weed (*Eupatorium maculatum*)					
Boneset (*Eupatorium perfoliatum*)					
Large-leaved Aster (*Eurybia macrophylla*)					
Flat-top Goldenrod (*Euthamia graminifolia*)					
Orange Hawkweed (*Hieracium aurantiacum*)					
Field Hawkweed (*Hieracium caespitosum*)					
Hieracium					
Elecampane (*Inula helenium*)					
Prickly Lettuce (*Lactuca serriola*)					
Lactuca					
Ox-eye Daisy (*Leucanthemum vulgare*)					
Pineapple-weed (*Matricaria discoidea*)					
Tall White Lettuce (*Prenanthes altissima*)					
Black-eyed Susan (*Rudbeckia hirta*)					
Tall Goldenrod (*Solidago altissima*)	F				
Blue-stem Goldenrod (*Solidago caesia*)					
Canada Goldenrod (*Solidago canadensis*)					
Zig-zag Goldenrod (*Solidago flexicaulis*)					
Giant Goldenrod (*Solidago gigantea*)					
Early Goldenrod (*Solidago juncea*)					
Gray Goldenrod (*Solidago nemoralis*)					
Solidago					
Field Sow-thistle (*Sonchus arvensis*)					
Sonchus					
Heart-leaf Aster (*Symph. cordifolium*)					
Heath Aster (*Symphyotrichum ericoides*)					
Tall White Aster (*Symph. lanceolatum*)	U				
Calico Aster (*Symphyotrichum lateriflorum*)					
New England Aster (*Symph. novae-angliae*)					
Purple-stem Aster (*Symph. puniceus*)					
Common Tansy (*Tanacetum vulgare*)					
Common Dandelion (*Taraxacum officinale*)					
Com. Goatsbeard (*Tragopogon pratensis*)					
Coltsfoot (*Tussilago farfara*)					

Other Dicot Herbs	1	2	3	4	5
White Baneberry (*Actaea pachypoda*)					
Red Baneberry (*Actaea rubra*)					
Tall Agrimony (*Agrimonia gryposepala*)					
Garlic Mustard (*Alliaria petiolata*)	U				
Green Amaranth (*Amaranthus retroflexus*)					
Hog-peanut (*Amphicarpa bracteata*)					
Pearly Everlasting (*Anaphalis margaritacea*)					
Canada Anemone (*Anemone canadensis*)					
Ivy Hepatica (*Anemone acutiloba*)					
Thimbleweed (*Anemone virginiana*)					
Purple Angelica (*Angelica atropurpurea*)					
Indian Hemp (*Apocynum cannabinum*)					
Wild Sarsaparilla (*Aralia nudicaulis*)					
Spikenard (*Aralia racemosa*)					
Wild Ginger (*Asarum canadense*)					
Swamp Milkweed (*Asclepias incarnata*)					
Common Milkweed (*Asclepias syriaca*)					
Yellow Rocket (*Barbarea vulgaris*)					
False Nettle (*Boehmeria cylindrica*)					
Black Mustard (*Brassica nigra*)					
Marsh-marigold (*Caltha palustris*)					
Creeping Bellflower (*Campanula rapunculoides*)					

Dicot Herbs	1	2	3	4	5
Shepherd's Purse (*Capsella bursa-pastoris*)					
Cutleaf Toothwort (*Cardamine concatenata*)					
Toothwort (*Cardamine diphylla*)					
Penn. Bitter-cress (*Cardamine pensylvanica*)					
Cardamine					
Blue Cohosh (*Caulophyllum thalictroides*)					
Mouse-ear Chickweed (*Cerastium fontanum*)					
Turtlehead (*Chelone glabra*)					
Spotted Water-hemlock (*Cicuta maculata*)					
Water-hemlock (*Cicuta virosa*)					
Enchanter's Nightshade (*Circaea lutetiana*)					
Carolina Spring Beauty (*Claytonia caroliniana*)					
Virginia Spring Beauty (*Claytonia virginica*)					
Virgin's-bower (*Clematis virginiana*)					
Field Bindweed (*Convolvulus arvensis*)					
Dog-strangling Vine (*Cynanchum rossicum*)					
Wild Carrot (*Daucus carota*)	U				
Deptford Pink (*Dianthus armeria*)					
Squirrel-corn (*Dicentra canadensis*)					
Dutchman's-breeches (*Dicentra cucullaria*)					
Wild Teasel (*Dipsacus fullonum*)					
Wild Cucumber (*Echinocystis lobata*)					
Viper's Bugloss (*Echium vulgare*)					
Northern Willow-herb (*Epilobium ciliatum*)					
Hairy Willow-herb (*Epilobium hirsutum*)					
Small-fl. Willow-herb (*Epilobium parviflorum*)					
Epilobium					
Worm Mustard (*Erysimum cheiranthoides*)					
Euphorbia					
Hemp Nettle (*Galeopsis tetrahit*)					
Wild Madder (*Galium mollugo*)					
Marsh Bedstraw (*Galium palustre*)					
Sweet-scented Bedstraw (*Galium triflorum*)					
Galium aparine	U				
Spotted Geranium (*Geranium maculatum*)	U				
Herb-robert (*Geranium robertianum*)					
Yellow Avens (*Geum aleppicum*)					
White Avens (*Geum canadense*)					
Urban Avens (*Geum urbanum*)					
Dame's Rocket (*Hesperis matronalis*)					
Virg. Water-leaf (*Hydrophyllum virginianum*)					
Com. St. John's-wort (*Hypericum perforatum*)					
Spotted Jewelweed (*Impatiens capensis*)					
Wood Nettle (*Laportea canadensis*)					
Motherwort (*Leonurus cardiaca*)					
Field Peppergrass (*Lepidium campestre*)					
Eur. Gromwell (*Lithospermum officinale*)					
Butter & Eggs (*Linaria vulgaris*)					
Great Lobelia (*Lobelia siphilitica*)					
Lobelia					
Cut-leaf Bugleweed (*Lycopus americanus*)					
Northern Bugleweed (*Lycopus uniflorus*)					
Fringed Loosestrife (*Lysimachia ciliata*)					
Moneywort (*Lysimachia nummularia*)					
Lysimachia					
Purple Loosestrife (*Lythrum salicaria*)					
Black Medick (*Medicago lupulina*)	R				
Alfalfa (*Medicago sativa*)					
White Sweet-clover (*Melilotus alba*)					
Yellow Sweet-clover (*Melilotus officinalis*)					
Wild Mint (*Mentha arvensis*)					
Wild Bergamot (*Monarda fistulosa*)					
Small Forget-me-not (*Myosotis laxa*)					
Forget-me-not (*Myosotis scorpioides*)					
Water-cress (*Nasturtium officinale*)					
Com. Evening-primrose (*Oenothera biennis*)	R				
Sweet-cicely (*Osmorhiza berterii*)					
Yellow Wood-sorrel (*Oxalis stricta*)					
Wild Parsnip (*Pastinaca sativa*)					
English Plantain (*Plantago lanceolata*)					
Common Plantain (*Plantago major*)					
Rugel's Plantain (*Plantago rugelii*)					
May-apple (*Podophyllum peltatum*)					
Pale Smartweed (*Polygonum lapathifolium*)					
Lady's-thumb (*Polygonum persicaria*)					
Virginia Knotweed (*Polygonum virginianum*)					
Polygonum					
Polygonum					
Rough Cinquefoil (*Potentilla norvegica*)					
Rough-fruited Cinquefoil (*Potentilla recta*)					
Common Cinquefoil (*Potentilla simplex*)					
Potentilla					
Heal-all (*Prunella vulgaris*)					
Shinleaf (*Pyrola elliptica*)					

Dicot Herbs	1	2	3	4	5
Kidney-leaf Buttercup (*Ranunculus abortivus*)					
Tall Buttercup (*Ranunculus acris*)					
Hooked Buttercup (*Ranunculus recurvatus*)					
Ranunculus					
Sheep Sorrel (*Rumex acetosella*)					
Curly-leaf Dock (*Rumex crispus*)					
Bitter Dock (*Rumex obtusifolius*)					
Bloodroot (*Sanginaria canadense*)					
Black Snakeroot (*Sanicula marilandica*)					
Bouncing Bet (*Saponaria officinalis*)					
Marsh Skullcap (*Scutellaria galericulata*)					
Mad Dog Skullcap (*Scutellaria lateriflora*)					
White Campion (*Silene latifolia*)					
Bladder Campion (*Silene vulgaris*)					
Hemlock Water-parsnip (*Sium suave*)					
Bitter Nightshade (*Solanum dulcamara*)					
Black Nightshade (*Solanum ptychanthum*)					
Grassleaf Stitchwort (*Stellaria graminea*)					
Common Chickweed (*Stellaria media*)					
Early Meadow-rue (*Thalictrum dioicum*)					
Tall Meadow-rue (*Thalictrum pubescens*)					
Field Penny-cress (*Thlaspi arvense*)					
Foamflower (*Tiarella cordifolia*)					
Star-flower (*Trientalis borealis*)					
Red Clover (*Trifolium pratense*)	U				
White Clover (*Trifolium repens*)					
Trifolium					
Stinging Nettle (*Urtica dioica*)					
Greater Bladderwort (*Utricularia vulgaris*)					
Common Mullein (*Verbascum thapsus*)					
Blue Vervain (*Verbena hastata*)					
White Vervain (*Verbena urticifolia*)					
Water Speedwell (*Veron. anagallis-aquatica*)					
Common Speedwell (*Veronica officinalis*)					
Veronica					
Cow Vetch (*Vicia cracca*)	U				
Vicia					
Periwinkle (*Vinca minor*)					
Dog Violet (*Viola conspersa*)					
Yellow Violet (*Viola pubescens*)					
Com. Blue Violet (*Viola sororia*)					
Viola					
Dipsacus sylvestris	U				
Ranunculus hispida	R				

Monocot Herbs	1	2	3	4	5
Water-plantain (*Alisma plantago-aquatica*)					
Wild Leek (*Allium tricoccum*)					
Jack-in-the-pulpit (*Arisaema triphyllum*)					
Asparagus (*Asparagus officinalis*)					
Wild Calla (*Calla palustris*)					
Bluebead-lily (*Clintonia borealis*)					
Garden Lily-of-valley (*Convallaria majalis*)					
Yel. Lady's Slipper (*Cypripedium parviflora*)					
Canada Waterweed (*Elodea canadensis*)					
Helleborine (*Epipactis helleborine*)					
Yellow Trout Lily (*Erythronium americanum*)					
Blue-flag Iris (*Iris versicolor*)					
Orange Day Lily (*Hemerocallus fulva*)					
Lesser Duckweed (*Lemna minor*)					
Starry Duckweed (*Lemna trisulca*)					
Wild Lily-of-valley (*Maianthemum canadense*)					
False Solom Seal (*Maianthemum racemosum*)					
Star False Solomon (*Maianthemum stellatum*)					
True Solomon Seal (*Polygonatum pubescens*)					
Pickerel-weed (*Pontederia cordata*)					
Curly-leaf Pondweed (*Potamogeton crispus*)					
Sago Pondweed (*Potamogeton pectinatus*)					
Potamogeton					
Potamogeton					
Broad-leaved Arrowhead (*Sagittaria latifolia*)					
Blue-eyed-grass (*Sisyrinchium montanum*)					
Herb. Carrion Flower (*Smilax herbacea*)					
Bristly Greenbrier (*Smilax hispida*)					
Nodding Ladies' Tresses (*Spiranthes cernua*)					
Rose Twisted-stalk (*Streptopus lanceolatus*)					
Skunk-cabbage (*Symplocarpus foetidus*)					
Purple Trillium (*Trillium erectum*)					
White Trillium (*Trillium grandiflorum*)					
Large-flowered Bellwort (*Uvularia grandiflora*)					

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 catergory)

R - Rare: represented in the polygon by less than about five individuals or small clumps

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

ASA

Significant Wildlife Habitat Form

AECOM

Study Area:	BLW JER (GSH)	Map #:	220_GSH1539
Date:	April ~~25~~ 26, 2012	Time Started:	8:30 am
Field Staff:	SG, RA	Time Finished:	9:00 am
Weather Conditions:	overcast, 8°C		

COPY

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: _____

Decription 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, turles (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, dimenstions, etc):

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

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

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

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

NHA Site Investigation - Significant Wildlife Habitat Form

AECOM

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

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

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

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

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

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

Shoreline of lake, large river or large wetland present:

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

UTMs: _____ Rocky island or peninsula present: _____

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

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

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

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

Large open habitat present: ☑ **No** ☐ **Yes (*if yes, photograph and complete the following*)**

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

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

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

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

UTMs: _____ Age of oldest trees: _____

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

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

Photo #	Location or Subject	Photo #	Location or Subject

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

ASA

AECOM

Map No: 220 GSH 1539

Date (yyyy-mm-dd): 2012, Apr 26

Field Staff: SG, RA

Time Started: 8:00 am

Time Finished: 8:30 am

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Turkey vulture		OB					
American crow		OB					
Robin		VO					
R. wing blackbird		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=Foos/Faecal sack, AE=Nest Entry

Other Wildlife Evidence: *OB=observed, VO=Vocalization, CA=Carcass, DP=Distincitve 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: NO
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: NO
FOM1, FOM2, CUP3	**Autumn Coral-root** (Corallorhiza odontorhiza) - S2 *Bloom Time - summer to fall*	Oak-pine woods or occasionally in open, red pine or white pine plantations. Dry, sandy woods	Y (N) UTM: NO
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: NO
SWC1, SWC3, SWC4, SWM1, SWM2, SWM4, SWM5, SWM6	**Chinese Hemlock Parsley** *(Conioselinum chinense) - S2 Bloom Time –summer to fall*	Swampy places with deciduous trees, white cedars, tamarack, springy river banks, wet borders of streams and rivers. Also found among calcareous seepage slopes	Y (N) UTM: NO
SWC, SWM, SWD,SWT, MAM, MAS	**Crowned Beggarticks** *(Bidens trichosperma) -S2 Bloom Time – late summer*	Found in openings in swamps, marshes, along shores & wet fields within the Carolinian zone and southeastern Georgian bay. Bogs, fens, tamarack swamps .	Y (N) UTM: NO
ALT1, FOD7	**Eastern Green-violet** (Hybanthus concolor) - S2 *Bloom Time –mid March to August*	Occurs in rich, wet-mesic floodplain forests as well as mesic forests over limestone. Includes floodplains and river banks	Y (N) UTM: NO
TPS, TPW, FOM1, FOM2	**Fogg's Goosefoot** *(Chenopodium foggi) -S2*	Species occurs in sandy areas on limestone under oak or pine-oak forests	Y (N) UTM: NO
TPO2, TPS2, TPW2,	**Giant Ironweed** *(Vernonia gigantean)-S1? Bloom Time-*	Found in mesic prairies, thickets, moist woods, roadsides and grassy meadows	Y (N) UTM: NO

COPY

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

AECOM

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
CUM1, MAM,	*June –August*		
FOD6, FOD7, FOD9	**Green Dragon (Arisaema dracontium) - SC/S3** *Bloom Time – May and June*	Species found In damp deciduous forest and along river streams. Particularly Maple forest and forest dominated by Red Ash and White Elm.	Y (N) UTM: NO
TPO1, TPS1, TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	**Hairy Bedstraw** *(Galium pilosum) -S3 Bloom Time – June-August*	Occurs in dry, sandy woods and thickets; occasionally in dry sandy fields	Y (N) UTM: NO
FEO1, FES1, FET1, SWC, SWM, SWD, SWT, TPO, TPS, TPW	**Hairy Valerian** (Valeriana edulis) -S1 *Bloom Time – June to August*	Inhabits swampy river flats and meadows, wet prairies, and wooded, rocky riverbanks and fens.	Y (N) UTM: NO
FOD6, FOD7, SWM, SWD	**Hairy Wood Mint** *(Blephilia hirsuta) –S1 Bloom Time- Summer*	Woodlands, often rocky, especially rivers Rich woods, swamp forests, floodplains	Y (N) UTM: NO
FOD6, FOD7, FOD8, FOD9	**Harbinger-of-spring** (Erigenia bulbosa) - S3 *Bloom Time – early to late April*	Occurs in rich, moist deciduous woods, especially on floodplains	Y (N) UTM: NO
SAS1, SAM1, SAF1	**Hill's Pond Weed** (Potamogeton hillii) - SC/S2 *Bloom Time – summer*	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters.	Y (N) UTM: NO
FOM6, FOM7, FOM8	**Large Round-leaved Orchid** (Platanthera macrophylla) - S2 *Bloom Time – June to August*	Species inhabits moist mixed woods. Found in fairly mature, upland sugar maple-beech-eastern hemlock woodlands.	Y (N) UTM: NO
MAM2, MAM3, MAS2, MAS3, SWD	**Lizard's Tail** (Saururus cernuus) - S3 *Bloom Time – June – September*	Species inhabits shores and streambanks along shallow water As well as swamps, floodplains, shallow water and mudflats at the borders of streams and ponds.	Y (N) UTM: NO
FOD6, FOD7, FOD9	**Pawpaw** *(Asimina triloba) –S3 Bloom Time – March-May*	Occurs in moist deciduous woods and stream banks.	Y (N) UTM: NO
FOM8, FOD6, FOD7, FOD9, CUM1	**Pilose Evening Primrose** ***(Oenothera pilosella)*** *–S2 Bloom Time – Late Spring – Early Summer*	Moist edges of woods and open, disturbed ground.	(Y) N UTM: NO
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	**Prostate Tick-trefoil** *(Desmodium rotundifolium) –S2 Bloom Time – July-September*	Dry, sandy or rocky woods	Y (N) UTM: NO
FOD7, SWD	**Pumpkin Ash** *(Fraxinus profunda)-S2? Bloom Time – March - June*	Swamps and floodplains	Y (N) UTM: NO
CUW1, ALO, FET1, SWC	**Ram's-head Lady's-slipper** (Cypripedium arietinum) - S3 *Bloom Time –mid May to mid June*	Found in cedar woodlands, limestone plains and wooded fens, moist coniferous swamps, dry-sandy woods, and limestone barren .	Y (N) UTM: NO
FOD1, FOD2, FOD3, FOD4, FOD5, FOC1, FOM1, FOM5	**Rattlesnake Hawkweed** (Hieracium venosum) - S2 *Bloom Time – April – September*	Species inhabits open, dry sandy woods. Jack pine, oak, and aspen woodlands.	Y (N) UTM: NO
FOD6, FOD7, FOD9	**Round-leaved Groundsel** *(Packera obovata) –S3 Bloom Time- May - June*	Found in moist woods	Y (N) UTM: NO
CUM1, CUT1, CUS1	**Round-leaved hawthorn** *(Crataegus lumaria) –S3?*	Species occurs in old fields, poorly managed pastures, fencelines and roadsides	(Y) N UTM: NO
FOD6, FOD7, FOD8, FOD9, SWT2, SWT3	**Scarlet Beebalm** (Monarda didyma) - S3 *Bloom Time – May to October*	Found in moist, rich woods, thicket swamps, banks and floodplains	Y (N) UTM: NO
ALO, ALS, ALT, TPO, TPS, TPW	**Slender Blazing Star** *(Liatris cylindracea) –S3*	Species occurs in limestone and dolostone pavement, prairies, open woods, alvars and moist sandy meadows.	Y (N) UTM: NO
SBO, SBS, SBT, TPO1, TPS1, TPW1, FOD1, FOD2	**Slender Knotweed** *(Polygonum tenue)-S2*	Found in dry, sandy, open areas in deciduous (often oak woods), prairie meadows; at edges of sand pits	Y (N) UTM: NO
SDT1, FOD5, FOD9	**Slim-flowered Muhly** (Muhlenbergia tenuiflora) - S2	Found in rich deciduous forest, often on rocky or sandy soils, wooded dunes, hillsides, and riverbanks whether in oak or beech-maple woods	Y (N) UTM: NO
BLO1, BLS1, BLT1, TPO2, TPS2, TPW2, MAM2, FOD7	**Stiff Gentian** (Gentianella quinquefolia) - S2 *Bloom Time – late summer to mid fall*	Found in moist soils of streambanks, edges of woods, wet prairies, marshy meadows, bluffs and wooded hillsides.	Y (N) UTM: NO
TPS1, TPW1, CUW1, RBO, SBO	**Sundial Lupine** (Lupinus perennis) - S3 *Bloom Time – mid-March to mid-June*	Inhabits dry, sandy oak savannahs, prairies, open barrens or clearings in woodlands of oak, jack pine, and/or aspen .	Y (N) UTM: NO