I	CONIFERS	1	2	3	4	5	6
	Abies balsamea						
	Juniperus communis						
	Juniperus virginiana						
	Larix laricina						
	Picea abies						
	Picea glauca						
	Pinus resinosa	P					
	Pinus strobus	P					
	Pinus sylvestris						
	Thuja occidentalis	✓					
	Tsuga canadensis						
	TREES and SHRUBS						
	Acer negundo	X					
	Acer rubrum						
	Acer saccharinum						
	Acer saccharum	X					
	Acer spicatum						
	Alnus rugosa						
	Amelanchier [illegible]	X					
	Berberis thunbergii						
	Betula alleghaniensis						
	Betula papyrifera						
	Carpinus caroliniana						
	Carya cordiformis	X					
	Celastrus scandens						
	Cornus alternifolia						
	Cornus amomum		X				
	Cornus rugosa foemina	X					
	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						
	Lonicera morrowi						
	Lonicera tatarica						
	Lonicera						
	Malus pumila	X					
	Ostrya virginiana						
	Parthenocissus inserta	X					
	Populus balsamifera						
	Populus grandidentata						
	Populus tremuloides						
	Populus						
	Prunus pensylvanica						
	Prunus serotina	X					
	Prunus virginiana	X					
	Prunus avium	X					
	Quercus macrocarpa						
	Quercus rubra						
	Quercus						
	Rhamnus cathartica	X					
	Rhus radicans	X					
	Rhus typhina						
	Ribes americanum		X				
	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	X					
	Rubus occidentalis						
	Rubus odoratus						
	Rubus pubescens						
	Salix alba						
	Salix amygdaloides		X				
	Salix bebbiana						
+	Salix discolor						
	Salix eriocephala						
	Salix nigra						
	Salix lucida						
	Salix petiolaris						
+	Salix purpurea						
	Salix x rubens						
+	Salix						
	Sambucus canadensis						
	Sambucus racemosa						
	Sorbus aucuparia						
	Spiraea alba						
	Syringa vulgaris	X					
+	Tilia americana						
	Ulmus americana						
	Ulmus						
	Vaccinium						
	Viburnum lentago						
	Viburnum opulus	X					
	Viburnum						
	Vitis riparia	X					
	COPY w/ additions						
	FERNS						
	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 dryopteris						
	Lycopodium digitatum						
	Lycopodium obscurum						
	Lycopodium						
	Lycopodium						
	Matteuccia struthiopteris						
	Onoclea sensibilis						
	Osmunda cinnamomea						
	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	X					
	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						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Carex						
	Cyperus						
	Cyperus						
	Dactylis glomerata	X					
	Danthonia spicata						
	Echinochloa crus-galli						
	Eleocharis erythropoda						
	Eleocharis						
	Elymus virginicus						
	Elymus						
	Festuca arundinacea						
	Glyceria striata						
	Glyceria						
	Juncus dudleyi						
	Juncus effusus						
	Juncus tenuis	X					
	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: 379 GSH 1430	
	POLYGON:	
	DATE: Sept 27	
	SURVEYORS: JK	
	START TIME: 17:50	END TIME: 18:20

TEMP (ºC): 18	CLOUD (10th): 5	WIND: 0	PRECIPITATION: 0
CONDITIONS:			

POTENTIAL WILDLIFE HABITAT:

	VERNAL POOLS		SNAGS
	HIBERNACULA		FALLEN LOGS

James Kamstra

Nov 8

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	BLJA	VO				RWBL	VO		
	AMCR					NOFL			
	NOFL	VO				BLJA			
						AMCR			
H	Spring Peeper	VO							
M	W.T Deer	TK							

COPY

w/ additions

FAUNAL TYPE CODES (TY):

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

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:

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

BREEDING BIRD - CONFIRMED:

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

OTHER WILDLIFE EVIDENCE:

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

Legend

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

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

379_GSH1430

April 2012
Project 60155032

AECOM

Figure 1

Map Document: (N:\projects\0-aecom\60155032\2010\Fauna\GIS\Spatial\MXD\ArFile\Map\MXDs\P:\jobs\E-C_Mapping\Goshen\GSH_Amphibian\60155032_GSH_Amphibian\ELC\Survey\Sta_372_GSH1116.mxd)
4/12/2012 - 8:19:21 PM

ELC
Community Description and Classification

Site: 39GSH1430		Polygon: P1 (CUP3-1)	
Surveyor(s): Jess Prette + Tom Sharney	Date: April 24, 2012	Time start: 8:30am finish: 10:10 am	
UTMZ: 451950	UTMZ: 4804676	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	PINRESI >> PINSTRO > PICGLAU > FRAAMER
2	2	3	FRAAMER > PINSTRO > PICGLAU
3	3	3	FRAAMER >> PRUVIRE > RUBIDAE
4	6	3	ALLFETI >> GERROBE > GEUM SP

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

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

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

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

Ecosite:	Coniferous Plantation	Code:	CUP3
Vegetation Type:	Red Pine Coniferous Plantation	Code:	CUP3-1
Inclusion:		Code:	
Complex:		Code:	

Community Profile Diagram/Comments

→ area to the N is still dominated by red pine however has quite number of white ash + balsam fir. There is also a lot of understory growth of prunus virginiana + white ash.

Notes: Where canopy gaps exist caused by fallen trees there is greater abundance of ground cover species as well as shrubs. Plantation has a very thick white ash regeneration layer found throughout

Tree Tally by Species

Polygon Number: 2

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Stem Avg.
PINRESI	~~IIII~~ ~~IIII~~ IIII				14	
PINSTRO	I				1	
ULMAME	I				1	
Total	16				16	100
Basal Area (BA)	32					
Dead	I					

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				Effective Texture (Indicate below)
		Gley				
		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									

ELC
Community Description and Classification

Site: 379GSH1430		Polygon: P2 (MAMZ2)	
Surveyor(s): Jess Pirette + Tom Shorney	Date: April 23, 2012	Time start: 8:30am finish: 10:10am	
UTMZ: 451950	UTMZ: 4804676	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	1	Salfrag > ACENEGU
2			
3	5	3	Corser
4	6	4	Phaarun >> impatiens capensis > allpeti > carexop

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

Stand Composition:	Size Class Analysis:	<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:	Reed canary grass Mineral Meadow Marsh	Code:	MAMZ2
Inclusion:		Code:	
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

							Summary
Site Metrics	Pit/Auger #		1				
	UTM	Zone	17				Moisture Regime
		Easting	451983				
		Northing	4804678				
	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	60cm	% CF		% CF		% CF		% CF
		Texture	SiL							
	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		2							
	Drainage									

— could not hit second layer

Plant Species List
2012

Trees & Shrubs — Conifers	1	2	3	4	5
Balsam Fir (*Abies balsamea*)		U			
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*)	D	D			
Eastern White Pine (*Pinus strobus*)		U			
Scotch Pine (*Pinus sylvestris*)					
Canada Yew (*Taxus canadensis*)					
Eastern White Cedar (*Thuja occidentalis*)		R			
Eastern Hemlock (*Tsuga canadensis*)					

Trees & Shrubs — Deciduous	1	2	3	4	5
Manitoba Maple (*Acer negundo*)	R	R			
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*)					
Mountain Maple (*Acer spicatum*)					
Speckled Alder (*Alnus incana*)					
Downy Serviceberry (*Amelanchier arborea*)					
Serviceberry (*Amelanchier sanguinea*)					
Yellow Birch (*Betula alleghaniensis*)					
White Birch (*Betula papyrifera*)		R			
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*)					
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*)					
Autumn Olive (*Elaeagnus umbellata*)					
Run. Strawberry-bush (*Euonymus obovata*)					
American Beech (*Fagus grandifolia*)					
Glossy Buckthorn (*Frangula alnus*)					
White Ash (*Fraxinus americana*)	D	C			
Black Ash (*Fraxinus nigra*)					
Green Ash (*Fraxinus pennsylvanica*)					
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*)		R			
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*)					
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*)		F			
Prunus					

Tree & Shrubs — Deciduous	1	2	3	4	5
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*)	R	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*)		U			
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*)	R				
Black-berried Elder (*Sambucus nigra*)	R	F			
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*)					
Hobblebush (*Viburnum lantanoides*)					
Nannyberry (*Viburnum lentago*)					
Guelder-Rose (*Viburnum opulus*)					
Downy Arrow-wood (*Vib. rafinesquianum*)					
Riverbank Grape (*Vitis riparia*)					
Am. Prickly-ash (*Zanthoxylum americanum*)					

Ferns & Allies	1	2	3	4	5
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 — Grasses	1	2	3	4	5
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*)	D				
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	1	2	3	4	5
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					
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	1	2	3	4	5
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: 379 ESH 1470	1	MAN2-2	4
Date: Apr 23, 2012	2	EUP3-1	5
Surveyors: JP - TS	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*)		R			
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 (*Erigeron 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 sp.					
Field Sow-thistle (*Sonchus arvensis*)		U			
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*)		U			
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*)	F	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*)					
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*)					
Herb-robert (*Geranium robertianum*)		F			
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*)	D	D			
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 nummulana*)					
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*)					
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 sp.	U	U			
Sheep Sorrel (*Rumex acetosella*)					
Curly-leaf Dock (*Rumex crispus*)					
Bitter Dock (*Rumex obtusifolius*)					
Bloodroot (*Sanguinaria 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 (*Utriculana 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 sp.		U			

Monocot Herbs	1	2	3	4	5
Water-plantain (*Alisma plantago-aquatica*)					
Wild Leek (*Allium tricoccum*)					
Jack-in-the-pulpit (*Arisaema triphyllum*)		U			
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 (*Hemerocallis 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	MAMZ2	4	
Date:	2	CUP3-1	5	
Surveyors:	3			

Significant Wildlife Habitat Form

AECOM

Study Area:	BLW JER (GSH)	Map #:	379-GSH1430
Date:	24/04/2012	Time Started:	8.30
Field Staff:	Tom Shorney Jess Piette	Time Finished:	10:10
Weather Conditions:	cloudy, 3°c, 45km/h winds		

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: See Amphibian Form ☒ Area of standing water delineated on field map

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

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

Area and soil/substrate of shoreline habitat:

Type and abundance of cover in open water habitat:

Type and abundance of cover in surrounding habitat:

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

Evidence of use by waterfowl, amphibians, 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

AECOM

Map No: 379_GSH1430
Date (yyyy-mm-dd): 2012-04-24

Field Staff: Tom Storey
Jess Pieh

Time Started: 8:30
Time Finished: 10:10

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Song Sparrow		VO	Calling				
Downy		VO	in Plantation				
Cowbird		VO					
Red-winged Blackbird		VO					
deer Tracks		TK	neither man / SWD				
Black-capped Chickadee		VO	calling				
Warbler							
Raccoon		Sct	on tree in Plantation				

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: N/O
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:
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:
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:
FOD6, FOD7, FOD8, FOD9	**Harbinger-of-spring** (Erigenia bulbosa) - S3 *Bloom Time – early to late April*	Occurs in rich, moist deciduous woods, especially on floodplains.	Y (N) UTM:
SAS1, SAM1, SAF1	**Hill's Pond Weed** (Potamogeton hillii) - SC/S2 *Bloom Time – summer*	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters.	Y (N) UTM:
FOM6, FOM7, FOM8	**Large Round-leaved Orchid** (Platanthera macrophylla) - S2 *Bloom Time – June to August*	Species inhabits moist mixed woods. Found in fairly mature, upland sugar maple-beech-eastern hemlock woodlands.	Y (N) UTM:
MAM2, MAM3, MAS2, MAS3, SWD	**Lizard's Tail** (Saururus cernuus) - S3 *Bloom Time – June – September*	Species inhabits shores and streambanks along shallow water. As well as swamps, floodplains, shallow water and mudflats at the borders of streams and ponds.	Y (N) UTM:
FOD6, FOD7, FOD9	**Pawpaw** *(Asimina triloba) –S3 Bloom Time – March-May*	Occurs in moist deciduous woods and stream banks.	Y (N) UTM:
FOM8, FOD6, FOD7, FOD9, CUM1	**Pilose Evening Primrose** ***(Oenothera pilosella)*** *–S2 Bloom Time – Late Spring – Early Summer*	Moist edges of woods and open, disturbed ground.	Y (N) UTM:
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	**Prostate Tick-trefoil** *(Desmodium rotundifolium) –S2 Bloom Time – July-September*	Dry, sandy or rocky woods	Y (N) UTM:
FOD7, SWD	**Pumpkin Ash** *(Fraxinus profunda)-S2? Bloom Time – March - June*	Swamps and floodplains	Y (N) UTM
CUW1, ALO, FET1, SWC	**Ram's-head Lady's-slipper** (Cypripedium arietinum) - S3 *Bloom Time –mid May to mid June*	Found in cedar woodlands, limestone plains and wooded fens, moist coniferous swamps, dry-sandy woods, and limestone barren .	Y (N) UTM:
FOD1, FOD2, FOD3, FOD4, FOD5, FOC1, FOM1, FOM5	**Rattlesnake Hawkweed** (Hieracium venosum) - S2 *Bloom Time – April – September*	Species inhabits open, dry sandy woods. Jack pine, oak, and aspen woodlands.	Y (N) UTM:
FOD6, FOD7, FOD9	**Round-leaved Groundsel** *(Packera obovata) –S3 Bloom Time- May - June*	Found in moist woods	Y (N) UTM:
CUM1, CUT1, CUS1	**Round-leaved hawthorn** *(Crataegus lumaria) –S3?*	Species occurs in old fields, poorly managed pastures, 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:
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

ATOM

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** (*Arnoglossum 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: Goshen	Map No: 379_ GSH 1430
Date (yyyy-mm-dd): 2012-04-24	Time Started: 8:30
Field Staff: T.S J.P	Time Finished: 10:10

Presence of Groundwater No ☑ Yes ☐

Jewelweed Present, but no others were found

☐ 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? Drainage feature - Possibly From agricultural practices

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
Mam2-2 M1	ne - Phalaris Arun, carex sp gc - Imp capa, Allpetio ls - Corrus Seri

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

Feature 392
GSH1007
Leased
Road
GSH1008
Leased
GSH1043
GSH1060
3
0
40
80
160 Meters

→ No wildlife observed

ELC Community Description and Classification

Site: 392 GSH 1007	Polygon:		
Surveyor(s): JDM, TS	Date: Nov 29, 2011	Time start: / finish:	
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	4	Ace Sacc > Ulm Ame = Fra Ame
2	3	2	Fag gran
3			
4	6	2	Sol Sp.

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:	Dry-Fresh Sugar Maple Deciduous Forest Ecosite	Code:	FOD5
Vegetation Type:	Dry-Fresh Sugar Maple Deciduous Forest Type	Code:	FOD5-1
Inclusion:		Code:	
Complex:		Code:	

Community Profile Diagram/Comments

Upland Forest

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								

ELC
Community Description and Classification

Site:		Polygon:	
Surveyor(s):	Date:	Time *start:* *finish:*	
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			
3			
4			

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

Stand Composition:	Size Class Analysis:	<10	10-24	25-50	>50
	Standing Snags:	<10	10-24	25-50	>50
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:		Code:	
Inclusion:		Code:	
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

						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: 392 GSH 1007

Date: Nov. 29, 2011

Observer: JDM TS

Job Number:

DICOT HERBS	1	2	3	4	5	6
Achillea millefolia						
Actaea pachypoda						
Actaea rubra						
Agalinus						
Agrimonia gryposepala						
Alliaria petiolaris						
Amaranthus retroflexus						
Ambrosia artemissifolia						
Amphicarpaea bracteata						
Anaphalis margaritacea						
Anemone						
Anemone canadensis						
Anemone virginiana						
Antennaria neglecta						
Apocynum androsaemifolium						
Apocynum cannabinum						
Aquilegia canadensis						
Aralia nudicaulis						
Arctium minus						
Artemisia						
Asarum canadense						
Asclepias incarnata						
Asclepias syriaca						
Aster						
Aster cordifolius						
Aster ericoides						
Aster lanceolatus						
Aster lateriflorus						
Aster macrophyllus						
Aster novae-angliae						
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						
Cirsium arvense						
Cirsium vulgare						
Clematis virginiana						
Clintonia borealis						
Conyza canadensis						
Coronilla varia						
Cynanchum rossicum						
Cynoglossum officinale						
Daucus carota						
Desmodium canadense						
Dianthus armeria						
Dipsacus fullonum						
Echinosystis lobata						
Echium vulgare						
Epilobium						
Epilobium ciliatum						
Epilobium hirsutum						
Epilobium parviflorum						

	1	2	3	4	5	6
Erigeron annuus						
Erigeron philadelphicus						
Erigeron strigosus						
Erysimum chieranthoides						
Eupatorium maculatum						
Eupatorium perfoliatum						
Eupatorium rugosum						
Euphorbia						
Euthamia graminifolia						
Fragaria virginiana						
Fragaria vesca						
Galeopsis tetrahit						
Galium						
Galium						
Galium palustre						
Galium triflorum						
Geranium maculatum						
Geranium robertianum						
Geum aleppicum						
Geum canadense						
Geum						
Glecoma hederacea						
Hepatica acutiloba						
Hesperis matronalis						
Hieracium aurantiacum						
Hieracium caespitosum						
Hieracium						
Hydrophyllum virginianum						
Hypericum perforatum						
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						
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						
Phyrma 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						
Rumex						
Sanguinaria canadensis						
Sanicula marilandica						
Saponaria officinalis						
Satureja vulgaris						
Scutellaria galericulata						
Silene vulgaris						
Sium suave						
Solanum dulcamara						
Solidago sp.	✓					
Solidago altissima						
Solidago caesia						
Solidago canadensis						
Solidago flexicaulis						
Solidago gigantea						
Solidago nemoralis						
Solidago rugosa						
Sonchus arvensis						
Sonchus asper						
Stellaria						
Tanacetum vulgare						
Taraxacum officinale						
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						
Vicia tetrasperma						
Viola						
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						
Cypripedilum calceolus						
Elodea 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						
Potamageton crispus						
Potamageton pectinatus						
Potamageton						
Potamageton						
Potamageton						
Sagittaria latifolia						
Sisrynchim montanum						
Smilax herbacea						
Spiranthes cernua						
Spirodela polyrhiza						
Streptopus roseus						
Trillium erectum						
Trillium grandiflorum						
Uvularia grandiflora						

SITE LOCATIONS

1: _____ 4: _____

2: _____ 5: _____

3: _____ 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						
	TREES and SHRUBS						
	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						
	Cornus rugosa						
	Cornus stolonifera						
	Corylus cornuta						
	Crataegus monogyna						
	Crataegus punctata						
	Crataegus sp.						
	Crataegus						
	Diervilla lonicera						
	Fagus grandifolia	✓					
	Fraxinus americana	✓					
	Fraxinus nigra						
	Fraxinus pennsylvanica						
	Ilex verticillata						
	Juglans cinerea						
	Juglans nigra						
	Lonicera morrowi						
	Lonicera tatarica						
	Lonicera						
	Malus pumila						
	Ostrya virginiana						
	Parthenocissus inserta						
	Populus balsamifera						
	Populus grandidentata						
	Populus tremuloides						
	Populus sp.	✓					
	Prunus pensylvanica						
	Prunus serotina						
	Prunus virginiana						
	Prunus						
	Quercus macrocarpa						
	Quercus rubra						
	Quercus						
	Rhamnus cathartica						
	Rhus radicans						
	Rhus typhina						
	Ribes americana						
	Ribes cynosbati						
	~~Ribes x rubrum~~						
	Robinia pseudo-acacia						
	Pop. Delt	✓					

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	✓					
	Ulmus americana	✓					
	Ulmus						
	Vaccinium						
	Viburnum lentago						
	Viburnum opulus						
	Viburnum						
	Vitis riparia						
	FERNS						
	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						
	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						
	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						

Legend

- Turbine Location
- Road Turn-Around
- Collection Line Layout
- Access Road Layout
- Turbine Turn-Around Box
- Collection Line 20m Buffer
- Access Road 60m Buffer
- Area of Disturbance 120m Buffer
- Natural Feature

Roads

- Major Road
- Local Road

Water Features

- Intermittent Stream
- Permanent Stream

Basemapping from Ontario Ministry of Natural Resources Orthophotography:

N
W E
S

Metres

0 25 50 100 150 200

1:4,000

UTM Zone 17N, NAD 83

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NextEra Energy Canada, ULC
Goshen Wind Energy Centre

Feature 392

December 2011
60155032

AECOM

Figure 1

Path: D:\Projects\AECOM\60155032\2011\GIS\...\Field Maps Dec 2011\GSH_Feature392.mxd

ELC Community Description and Classification

Site: 392		Polygon: 4	
Surveyor(s): B. Miller, R. Aitken	Date: Dec. 12, 2011	Time start: 11:30 am	finish: 12:30 pm
UTMZ: 17	UTMZ: 450925	UTMN: 4805891	

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> FAGGRAN> FRAAMER
2	2	4	ACESASA> FAGGRAN> FRAAMER=TILAMER
3	3	3	ACESASA> FAGGRAN> FRAAMER> CARCARO
4	4-7	2	ACESASA> PRUVIRG> EPIVIRG

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

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

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

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

Ecosite:	Dry-Fresh Sugar Maple Deciduous Forest	Code:	FOD5
Vegetation Type:	Dry-Fresh Sugar Maple-Beech Deciduous Forest	Code:	FOD5-2
Inclusion:		Code:	
Complex:		Code:	

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Plot Factor: 2

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

VASCULAR PLANT LIST

PROJECT / LOCATION: FEATURE 392 POLYGON: 4.

SURVEYOR(S): B. Miller, R. Aitken **DATE(S):** DEC. 12, 2011

VEGETATION TYPE:

NOTES:

Plant Species	ABUNDANCE / LAYER: Canopy (C)	Sub-canopy (SC)	Understory (U)	Ground Layer (GL)	Plant Species	Understory (U)	Ground Layer (GL)	Plant Species	Understory (U)	Ground Layer (GL)
TREES					**HERBACEOUS FLORA**			**HERBACEOUS FLORA**		
TIL AMER	O	O	R		SYM LATE		O			
ACE SASA	D	D	D	D	GEUM SP.		O			
PRU SERO	R		R		ALL PETI		R			
FAG GRAN	A	A	A	R	ARC MINU		R			
FRA AMER	O	O	O	R	CAREX CF. ARCTATA		R			
ULM AMER	R		R		DRY MARG		R			
TSU CANA	R	O	R	R	LEO CARD		R			
OST VIRG		R	O	R	SOL FLEX		R			
BET ALLE	R				ACT PACH		R			
CAR CARO			O	R	CAU THAL		O			
CAR CORD				R	EPI VIRG		A			
					CIR LUTE		R			
					CAREX SP.		O			
					POL ACRO		R			
					ALL TRIC		O			
					POL PUBE		R			
SHRUBS AND WOODY VINES										
RUBIDAE				R						
TOX RADI		O								
SAMPUBE			O							
PRU VIRG			R	A						
RUB cf. ALLE			O	R						
RHA CATH				R						
VIT RIPA			R							
BERBERIS SP.				R						
RUB OCCI				O						
TAX CANA				R						

Relative Abundance: D = Dominant; A = Abundant; O = Occasional; R = Rare
Vegetation Height: C = > 20m; SC = 10 - 20m; U = 2 - 10m; GL = < 2m

ELC Community Description and Classification

Site: 392		Polygon: 5	
Surveyor(s): B. Miller, R. Aitken	Date: Dec. 12, 2011	Time start: 11:30 am	finish: 12:30 pm
UTMZ: 17	UTMZ: 450985	UTMN: 4805735	

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	ACE FREE > FRAPENN
2	2	3	ACE FREE > FRAPENN > TOX RADI
3	3	2	ACE FREE = FRAPENN
4	4-7	3	CORSERI > TOX RYDB = ONOSENS

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

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

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

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

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

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Plot Radius: 2

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Abd.
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 LIST

POLYGON: 5.

PROJECT / LOCATION: FEATURE 392

SURVEYOR(S): B. Miller, R. Aitken DATE(S): DEC. 12, 2011

VEGETATION TYPE:

NOTES:

Plant Species	Abundance / Layer: Canopy (C)	Sub-canopy (SC)	Understory (U)	Ground Layer (GL)	Plant Species	Understory (U)	Ground Layer (GL)	Plant Species	Understory (U)	Ground Layer (GL)
TREES					**HERBACEOUS FLORA**			**HERBACEOUS FLORA**		
FRA NIGR			R		BIDENS SP.		A			
ACE FREE	D	D	O	R	BOE CYLI		O			
FRA PENN	O	O	O		EPILOBIUM SP.		O			
BET ALLE	R				SYM LANC		R			
SALIX SP.	R				GLY STRI		O			
CAR CARO			O		RUMEX SP.		R			
					ONO SENS		A			
					CAREX SP.		O			
					SYM PUNI		O			
SHRUBS AND WOODY VINES										
TOX RYDB				A						
TOX RADI		O								
COR SERI				A						

Relative Abundance: D = Dominant; A = Abundant; O = Occasional; R = Rare
Vegetation Height: C = > 20m; SC = 10 - 20m; U = 2 - 10m; GL = < 2m

POLYGONS 4. & 5.

VASCULAR PLANT CHECKSHEET

Location: FEATURE 392
Date: Dec. 12, 2011
Observer: B. Miller, R. Aitken
Job Number:

DICOT HERBS	1	2	3	4	5	6
Achillea millefolia						
Actaea pachypoda				X		
Actaea rubra						
Agalinus						
Agrimonia gryposepala						
Alliaria petiolata				X		
Amaranthus retroflexus						
Ambrosia artemisiifolia						
Amphicarpaea bracteata						
Anaphalis margaritacea						
Anemone						
Anemone canadensis						
Anemone virginiana						
Antennaria neglecta						
Apocynum androsaemifolium						
Apocynum cannabinum						
Aquilegia canadensis						
Arisia nudicaulis						
Arctium minus				X		
Artemisia						
Asarum canadense						
Asclepias incarnata						
Asclepias syriaca						
Aster						
Aster cordifolius						
Aster ericoides						
Aster lanceolatus					X	
Aster lateriflorus				X		
Aster macrophyllus						
Aster novae-angliae						
Aster puniceus					X	
Barbarea vulgaris						
Bidens cernua						
Bidens frondosa						
Boehmeria cylindrica					X	
Cabra palustris						
Calystegia sepium						
Cardamine diphylla						
Cerastium						
Cerastium fontanum				X		
Ceratophyllum demersum						
Cirsium arvense						
Cirsium vulgare						
Clematis virginiana						
Clintonia borealis						
Conyza canadensis						
Cornus alternifolia						
Cynoglossum officinale						
Dactylis glomerata						
Desmodium canadense						
Dianthus armeria						
Dipsacus fullonum						
Echinocystis lobata						
Echium vulgare						
Epilobium						
Epilobium ciliatum						
Epilobium hirsutum						
Epilobium parviflorum						
EPIFAGUS VIRGINIANA				X		
Bidens sp.					X	
Epilobium sp.					X	

	1	2	3	4	5	6
Erigeron annuus						
Erigeron philadelphicus						
Erigeron strigosus						
Erysimum cheiranthoides						
Eupatorium maculatum						
Eupatorium perfoliatum						
Eupatorium rugosum						
Euphorbia						
Euthamia graminifolia						
Fragaria virginiana						
Fragaria vesca						
Galeopsis tetrahit						
Galium						
Galium						
Galium palustre						
Galium trifidum						
Geranium maculatum						
Geranium robertianum						
Geum aleppicum						
Geum canadense						
Geum sp.				X		
Glechoma hederacea						
Hepatica acutiloba						
Hesperis matronalis						
Hieracium aurantiacum						
Hieracium caespitosum						
Hieracium						
Hydrophyllum virginianum						
Hypericum perforatum						
Impatiens capensis						
Inula helenium						
Lactuca						
Leptotes canadensis						
Lysimachia quadrifolia						
Leonurus cardiaca				X		
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						
Physna 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						
Prunella vulgaris						
Prunella vulgaris						
Pyrola elliptica						
Ranunculus						
Ranunculus abortivus						
Ranunculus acris						
Rudbeckia hirta						
Rumex acetosella						
Rumex crispus						
Rumex sp.					X	
Sanguinaria canadensis						
Sanicula marilandica						
Saponaria officinalis						
Satureja vulgaris						
Scutellaria galericulata						
Silene vulgaris						
Sium suave						
Solanum dulcamara						
Solidago						
Solidago altissima						
Solidago caesia						
Solidago canadensis						
Solidago flexicaulis					X	
Solidago gigantea						
Solidago nemoralis						
Solidago rugosa						
Sonchus arvensis						
Sonchus asper						
Stellaria						
Taraxacum vulgare						
Taraxacum officinale						
Thalictrum dioicum						
Thalictrum pubescens						
Tiarella cordifolia						
Tragopogon pratensis						
Triantalis borealis						
Trifolium						
Trifolium pratense						
Trifolium repens						
Tussilago farfara						
Urtica dioica						
Utricularia vulgaris						
Verbascum thapsus						
Verbena hastata						
Verbena urticifolia						
Veronica						
Veronica officinalis						
Vicia cracca						
Viola brittoniana						
Viola						
Viola						
Viola pubescens						
Viola sororia						

MONOCOT HERBS	1	2	3	4	5	6
Alisma plantago-aquatica						
Allium tricoccum				X		
Allium						
Arisaema triphyllum						
Asparagus officinalis						
Calla palustris						
Clintonia borealis						
Cypripedium parviflorum						
Cypripedium acaule						
Elodea canadensis						
Erigenia bulbosa						
Erythronium americanum						
Hemerocallis fulva						
Iris versicolor						
Lemna minor						
Lemna trisulca						
Lilium						
Maianthemum canadense						
Maianthemum racemosum						
Maianthemum stellata						
Pontederia						
Pontederia cordata						
Polygonatum pubescens				X		
Potamogeton crispus						
Potamogeton pectinatus						
Potamogeton						
Potamogeton						
Potamogeton						
Sagittaria latifolia						
Smilacina montanum						
Smilax herbacea						
Spiranthes cernua						
Spiraeola polyfolia						
Streptopus roseus						
Trillium erectum						
Trillium grandiflorum						
Uvularia grandiflora						

SITE LOCATIONS

1: [redacted]
2:
3:
4: POLYGON 4.
5: POLYGON 5.
6:

FEATURE 392 POLYGONS 4. & 5.

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		
	TAXUS CANADENSIS				X		
	TREES and SHRUBS						
	Acer negundo						
	Acer rubrum						
	Acer saccharinum						
	Acer saccharum				X		
	Acer spicatum						
	Alnus rugosa						
	Amelanchier						
	Berberis thunbergii						
	Betula alleghaniensis				X	X	
	Betula papyrifera						
	Carpinus caroliniana				X	X	
	Carya cordiformis				X		
	Celastrus scandens						
	Cornus alternifolia						
	Cornus amomum						
	Cornus rugosa						
	Cornus stolonifera					X	
	Corylus cornuta						
	Crataegus monogyna						
	Crataegus punctata						
	Crataegus sp.						
	Crataegus						
	Diervilla lonicera						
	Fagus grandifolia				X		
	Fraxinus americana				X		
	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						
	Quercus rubra						
	Quercus						
	Rhamnus cathartica				X		
	Rhus radicans				X	X	
	Rhus typhina						
	Ribes americana						
	Ribes cynosbati						
	Ribes x rubrum						
	Robinia pseudo-acacia						
	ACER X FREE					X	
	Berberis sp.				X		

I	TREES and SHRUBS	1	2	3	4	5	6
+	Rosa multiflora						
	Rosa						
	Rubus allegheniensis				X		
	Rubus idaeus				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						
+	Salix sp.					X	
	Sambucus canadensis						
	Sambucus racemosa				X		
	Sorbus aucuparia						
	Spiraea alba						
	Syringa vulgaris						
+	Tilia americana				X		
	Ulmus americana				X		
	Ulmus						
	Vaccinium						
	Viburnum lentago						
	Viburnum opulus						
	Viburnum						
	Vitis riparia				X		
	TOX RYDB					X	
	FERNS						
	Adiantum pedatum						
	Athyrium filix-femina						
	Botrychium multifidum						
	Botrychium virginianum						
	Cystopteris bulbifera						
	Dryopteris carthusiana						
	Dryopteris cristata						
	Dryopteris marginalis				X		
	Dryopteris						
	Equisetum arvense						
	Equisetum hyemale						
	Equisetum variegatum						
	Equisetum						
	Gymnocarpium dryopteris						
	Lycopodium digitatum						
	Lycopodium obscurum						
	Lycopodium						
	Lycopodium						
	Matteuccia struthiopteris						
	Onoclea sensibilis					X	
	Osmunda cinnamomea						
	Osmunda regalis						
	Polystichum acrostichoides				X		
	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				X		
	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 sp.				X	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					X	
	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 Xglauca						

ELC WILDLIFE	SITE: 392 POLYGON: 4 & 5 DATE: Dec 12, 2011 SURVEYORS: B. Miller, B. Aitken START TIME: 11:30am	END TIME: 12:30 am

TEMP (°C): -2°C	CLOUD (10th): 1	WIND: 1	PRECIPITATION: None
CONDITIONS:			

POTENTIAL WILDLIFE HABITAT:

X	VERNAL POOLS	X	SNAGS
	HIBERNACULA	X	FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	Mourning Dove	OB		2					
B	Blue Jay	OB		1					
B	Black Capped Chickadee	OB		2					
B	American Crow	VO		-					
B	White Breasted Nuthatch	VO		-					
B	American Goldfinch	VO		-					
B	Yellow Bellied Sapsucker	SI	holes in tree	-					

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
- Station

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

392_GSH1043/GSH1060/ GSH1008

April 2012
Project 60155032

AECOM

Figure 1

Map Document: (N:\projects\0-aecom\60155032\2010\Final\GIS\pette\MXDs\Final\Map\MXDs\Project_ELC_Mapping\Goshen\GSH_Amphibian\60155032_GSH_AmphibianELCSurveySites_372_GSH1115.mxd)
4/12/2012 -- 8:19:21 PM

ELC Community Description and Classification

Site: 392 CSH 1043/1060/1008		Polygon:	
Surveyor(s): Jess Petk + Tom Stanney	Date: April 23, 2012	Time start: 407pm finish: 5 00 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	4	ACESACC – FAGGRAN > TILAMER
2	2	3	ACESACC – FAGGRAN
3	3	3	PRUVIRG
4	6	4	ERYAMER > THIGRAN > ALIPETI > VIOPAPI

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

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 Sugar Maple Beech Deciduous Forest	Code:	FOD5-2
Inclusion:		Code:	
Complex:	SWD3-3 SWAMP MAPLE MIXED Deciduous	Code:	SWD3-3

Community Profile Diagram/Comments

undulating topography
lots of small pockets of SWD

Notes:

Tree Tally by Species

Plot Radius: 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				Drainage
		Aspect				
		Percent				
		Slope Length				
Depth to...	Mottles					Effective Texture (indicate below)
	Gley					
	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									

Plant Species List
2012

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

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

F - Fairly common (=Abundant in ELC): generally widespread represented by fairly large numbers of individual clumps; usually forming >10% ground cover

U - Uncommon (=Occasional in ELC): present as widespread scattered individuals or represented by one or more clumps of many individuals (most species will fall into this catergory)

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

Map Number: 392 PSH 1043/1060/1018	1					FOD5-2	4										
Date: April 23, 2012	2					SWD3-3 (complex)	5										
Surveyors: JP + TS	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*)					
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*)	U				
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*)					
Calico Aster (*Symphyotrichum lateriflorum*)					
New England Aster (*Symph. novae-angliae*)					
Purple-stem Aster (*Symph. puniceus*)					
Common Tansy (*Tanacetum vulgare*)					
Common Dandelion (*Taraxacum officinale*)	U				
Com. Goatsbeard (*Tragopogon pratensis*)					
Coltsfoot (*Tussilago farfara*)					

Other Dicot Herbs
White Baneberry (*Actaea pachypoda*)
Red Baneberry (*Actaea rubra*)
Tall Agrimony (*Agrimonia gryposepala*)
Garlic Mustard (*Alliaria petiolata*)
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*)	R				
Penn. Bitter-cress (*Cardamine pensylvanica*)					
Cardamine					
Blue Cohosh (*Caulophyllum thalictroides*)	U				
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*)	R				
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*)	R				
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*)	U				
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*)		F			
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*)	R				
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*)		R			
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*)	R				
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*)		U			
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*)	U				
Com. Blue Violet (*Viola sororia*)					
Viola Papilionacea	U				

Monocot Herbs					
Water-plantain (*Alisma plantago-aquatica*)					
Wild Leek (*Allium tricoccum*)	U				
Jack-in-the-pulpit (*Arisaema triphyllum*)	U				
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*)	U				
Yellow Trout Lily (*Erythronium americanum*)	O				
Blue-flag Iris (*Iris versicolor*)					
Orange Day Lily (*Hemerocallus fulva*)					
Lesser Duckweed (*Lemna minor*)					
Starry Duckweed (*Lemna trisulca*)					
Wild Lily-of-valley (*Maianthemum canadense*)	U				
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				
White Trillium (*Trillium grandiflorum*)	F				
Large-flowered Bellwort (*Uvularia grandiflora*)	U				

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

F - Fairly common (=Abundant in ELC): generally widespread represented by fairly large numbers of individual clumps, usually forming >10% ground cover

U - Uncommon (=Occasional in ELC): present as widespread scattered individuals or represented by one or more clumps of many individuals (most species will fall into this catergory)

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

Map Number: 392GSH1043/1060/1008	1	FOD5-2	4	
Date: June 23, 2012	2	SWD 3-3 (Complex)	5	
Surveyors: JP + TS	3			

Significant Wildlife Habitat Form

AECOM

Study Area:	BLW JER (GSH)	Map #:	392 GSH 1043/1060/1008
Date:	April 23, 2012	Time Started:	4:07 pm
Field Staff:	Jess Piette + Tom Shinney	Time Finished:	6:00 pm
Weather Conditions:	5°C, Cloudy - 45km/h		

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: There are 2 pools ☒ 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): see amphibian data form

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, MAMS)

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

AECOM

Map No: 392–GSH 1043/1060/1008
Date (yyyy-mm-dd): 2012-04-23

Field Staff: Jess Rettie, Tim Stanley

Time Started: 4:07pm
Time Finished: 6:00pm

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Wood duck		Ob	Flushed from Pond				
Raccoon		Ca	FOD5				
American goldfinch		Ob	FOD5				
Robin		Ob	FOD5				
Song Sparrow		Vo	calling				
Redwinged Blackbird		Ob					
Raccoon		Ca					
Downy		Ob	in Deciduous				

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:
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: not observed
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: not observed
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
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
FOD6, FOD7, FOD8, FOD9	**Harbinger-of-spring** (Erigenia bulbosa) - S3 *Bloom Time – early to late April*	Occurs in rich, moist deciduous woods, especially on floodplains.	Y (N) UTM
SAS1, SAM1, SAF1	**Hill's Pond Weed** (Potamogeton hillii) - SC/S2 *Bloom Time – summer*	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters.	Y (N) UTM
FOM6, FOM7, FOM8	**Large Round-leaved Orchid** (Platanthera macrophylla) - S2 *Bloom Time – June to August*	Species inhabits moist mixed woods. Found in fairly mature, upland sugar maple-beech-eastern hemlock woodlands.	Y (N) UTM
MAM2, MAM3, MAS2, MAS3, SWD	**Lizard's Tail** (Saururus cernuus) - S3 *Bloom Time – June – September*	Species inhabits shores and streambanks along shallow water. As well as swamps, floodplains, shallow water and mudflats at the borders of streams and ponds	Y (N) UTM
FOD6, FOD7, FOD9	**Pawpaw** *(Asimina triloba) –S3 Bloom Time – March-May*	Occurs in moist deciduous woods and stream banks.	Y (N) UTM
FOM8, FOD6, FOD7, FOD9, CUM1	**Pilose Evening Primrose** ***(Oenothera pilosella)*** *–S2 Bloom Time – Late Spring – Early Summer*	Moist edges of woods and open, disturbed ground.	Y (N) UTM
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	**Prostate Tick-trefoil** *(Desmodium rotundifolium) –S2 Bloom Time – July-September*	Dry, sandy or rocky woods	Y (N) UTM
FOD7, SWD	**Pumpkin Ash** *(Fraxinus profunda)-S2? Bloom Time – March - June*	Swamps and floodplains	Y (N) UTM:
CUW1, ALO, FET1, SWC	**Ram's-head Lady's-slipper** (Cypripedium arietinum) - S3 *Bloom Time –mid May to mid June*	Found in cedar woodlands, limestone plains and wooded fens, moist coniferous swamps, dry-sandy woods, and limestone barren .	Y (N) UTM
FOD1, FOD2, FOD3, FOD4, FOD5, FOC1, FOM1, FOM5	**Rattlesnake Hawkweed** (Hieracium venosum) - S2 *Bloom Time – April – September*	Species inhabits open, dry sandy woods. Jack pine, oak, and aspen woodlands.	Y (N) UTM:
FOD6, FOD7, FOD9	**Round-leaved Groundsel** *(Packera obovata) –S3 Bloom Time- May - June*	Found in moist woods	Y (N) UTM:
CUM1, CUT1, CUS1	**Round-leaved hawthorn** *(Crataegus lumaria) –S3?*	Species occurs in old fields, poorly managed pastures, 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:
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: not observed
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:
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** *(Arnoglossum 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: not observed – some toothwort observed

Done Aug 15/11 - SAM.

North-Central

392_GSH 1043/1060

Goshen Access Road / Collection Lines

0 35 70 140 Meters

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

VASCULAR PLANT CHECKSHEET

Location: 392-GSH 1043/1060 (GE 2 & GE 4)
Observer: SAM

Date: Aug. 15/11
Job Number:

DICOT HERBS	1	2	3	4	5	6
Achillea millefolia						
Actaea pachypoda						
Actaea rubra						
Agalinus						
Agrimonia gryposepala						
Alliaria petiolaris						
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						
Aster						
Aster cordifolius						
Aster ericoides						
Aster lanceolatus	X			X		
Aster lateriflorus						
Aster macrophyllus						
Aster novae-angliae						
Aster puniceus						
Barbarea vulgaris						
Bidens cernua						
Bidens frondosa	X					
Boehmeria cylindrica	X					
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					
Cirsium arvense						
Cirsium vulgare						
Clematis virginiana						
Clintonia borealis						
Conyza canadensis						
Coronilla varia						
Cynanchum rossicum						
Cynoglossum officinale						
Daucus carota	X					
Desmodium canadense						
Dianthus armeria						
Dipsacus fullonum						
Echinosystis lobata						
Echium vulgare						
Epilobium						
Epilobium ciliatum						
Epilobium hirsutum						
Epilobium parviflorum						

	1	2	3	4	5	6
Erigeron annuus	X					
Erigeron philadelphicus						
Erigeron strigosus						
Erysimum chieranthoides						
Eupatorium maculatum						
Eupatorium perfoliatum						
Eupatorium rugosum						
Euphorbia						
Euthamia graminifolia						
Fragaria virginiana	X					
Fragaria vesca						
Galeopsis tetrahit						
Galium						
Galium						
Galium palustre						
Galium trifiorum						
Geranium maculatum						
Geranium robertianum	X					
Geum aleppicum						
Geum canadense						
Geum						
Glecoma hederacea						
Hepatica acutiloba						
Hesperis matronalis						
Hieraclum aurantiacum						
Hieraclum caespitosum						
Hieraclum						
Hydrophyllum virginianum						
Hypericum perforatum						
Impatiens capensis	X			X		
Inula helenium						
Lactuca						
Laportea canadensis	X			X		
Lapsana communis						
Leonurus cardiaca						
Lepidium						
Linaria vulgaris						
Lithospermum officinale						
Lobelia						
Lobelia inflata						
Lotus corniculatus						
Lycopus americanus				X		
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						
Phyrma leptostachya						
Physalis heterophylla						

	1	2	3	4	5	6
Plantago lanceolata						
Plantago major	X					
Plantago rugelii						
Podophyllum peltatum						
Polygonum						
Polygonum						
Polygonum						
Polygonum lapathifolium						
Polygonum persicaria						
Potentilla						
Potentilla norvegica						
Potentilla recta						
Prenanthes alba						
Prunella vulgaris	X					
Pyrola elliptica						
Ranunculus						
Ranunculus abortivus						
Ranunculus acris						
Rudbeckia hirta						
Rumex acetoselle						
Rumex crispus	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						
Solidago flexicaulis	X					
Solidago gigantea				X		
Solidago nemoralis						
Solidago rugosa						
Sonchus arvensis						
Sonchus asper						
Stellaria						
Tanacetum vulgare						
Taraxacum officinale						
Thalictrum dioicum						
Thalictrum pubescens						
Tiarella cordifolia						
Tragopogon pratensis						
Trientalis borealis						
Trifolium						
Trifolium pratense						
Trifolium repens						
Tussilago farfara						
Urtica dioica				X		
Utricularia vulgaris						
Verbascum thapsus						
Verbena hastata						
Verbena urticifolia						
Veronica						
Veronica officinalis	X					
Vicia cracca						
Vicia tetrasperma						
Viola						
Viola						
Viola pubescens						
Viola sororia						

MONOCOT HERBS	1	2	3	4	5	6
Alisma plantago-aquatica						
Allium tricoccum	X					
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	X					
Maianthemum racemosa	X					
Maianthemum stellata						
Platanthera						
Pontederia cordata						
Polygonatum pubescens						
Potamageton crispus						
Potamageton pectinatus						
Potamageton						
Potamageton						
Potamageton						
Sagittaria latifolia						
Sisyrnchim montanum						
Smilax herbacea						
Spiranthea cernua						
Spirodela polyrhiza						
Streptopus roseus						
Trillium erectum						
Trillium grandiflorum	X					
Uvularia grandiflora						

SITE LOCATIONS

1: Polygon 1 (GSH 1043)
2: " 2 (GSH 1043/1060)
3: " 3 (GSH 1060)
4: Swamp Inclusion in poly (2)
5:
6:

I	CONIFERS	1	2	3	4	5	6	I	TREES and SHRUBS	1	2	3	4	5	6	I	GRAMINOIDS	1	2	3	4	5	6
	Abies balsamea							+	Rosa multiflora								Agrostis gigantea						
	Juniperus communis								Rosa								Agrostis stolonifera						
	Juniperus virginiana								Rubus allegheniensis	X	X						Agropyron repens						
	Larix laricina								Rubus idaeus	X	X						Alopecuris						
	Picea abies								Rubus occidentalis								Bromus inermis						
	Picea glauca								Rubus odoratus								Calamagrostis canadensis						
	Pinus resinosa								Rubus pubescens								Carex arctata						
	Pinus strobus								Salix alba								Carex aurea						
	Pinus sylvestris								Salix amygdaloides								Carex bebbii						
	Thuja occidentalis								Salix bebbiana								Carex blanda						
	Tsuga canadensis		X					+	Salix discolor								Carex gracillima						
									Salix eriocephala								Carex granularis						
									Salix exigua								Carex hystericina						
									Salix lucida								Carex pensylvanica						
									Salix petiolaris								Carex radiata						
	TREES and SHRUBS							+	Salix purpurea								Carex retrorsa						
	Acer negundo								Salix x rubens								Carex stipata						
	Acer rubrum							+	Salix								Carex stricta						
	Acer saccharinum	X			X				Sambucus canadensis		X		X				Carex vulpinoidea						
	Acer saccharum	X	X						Sambucus racemosa								Carex lupulina	X			X		
	Acer spicatum								Sorbus aucuparia								Carex						
	Alnus rugosa								Spiraea alba								Carex						
	Amelanchier								Syringa vulgaris								Carex						
	Berberis thunbergii							+	Tilia americana	X	X						Carex						
	Betula alleghaniensis	X	X						Ulmus americana	X			X				Carex						
	Betula papyrifera								Ulmus								Carex						
	Carpinus caroliniana	X	X						Vaccinium								Carex						
	Carya cordiformis								Viburnum lentago								Carex						
	Celastrus scandens								Viburnum opulus								Cyperus						
	Cornus alternifolia		X						Viburnum								Cyperus						
	Cornus amomum								Vitis riparia	X							Dactylis glomerata						
	Cornus rugosa								Zanthoxylum americanum								Danthonia spicata						
	Cornus stolonifera										X						Echinochloa crus-galli						
	Corylus cornuta																Eleocharis erythropoda						
	Crataegus monogyna																Eleocharis						
	Crataegus punctata																Elymus virginicus						
	Crataegus sp.																Elymus						
	Crataegus																Festuca arundinacea						
	Diervilla lonicera																Glyceria striata	X	X				
	Fagus grandifolia		X														Glyceria						
	Fraxinus americana	X	X														Juncus dudleyi						
	Fraxinus nigra				X				FERNS								Juncus effusus						
	Fraxinus pennsylvanica								Adiantum pedatum								Juncus tenuis						
	Ilex verticillata								Athyrium filix-femina				X				Juncus						
	Juglans cinerea								Botrychium multifidum								Juncus						
	Juglans nigra		X						Botrychium virginianum								Leersia oryzoides						
	Lonicera morrowi								Cystopteris bulbifera								Muhlenbergia						
	Lonicera tatarica								Dryopteris carthusiana								Oryzopsis asperifolia						
	Lonicera								Dryopteris cristata								Panicum						
	Malus pumila	X							Dryopteris marginalis	X	X						Panicum						
	Ostrya virginiana	X							Dryopteris								Phalaris arundinacea	X					
	Parthenocissus inserta	X							Equisetum arvense								Phleum pratense						
	Populus balsamifera								Equisetum hyemale								Phragmites australis						
	Populus grandidentata								Equisetum variegatum								Poa compressus						
	Populus tremuloides								Equisetum								Poa pratensis						
	Populus								Gymnocarpium dryoperis								Poa						
	Prunus pensylvanica		X						Lycopodium digitatum								Scirpus atrovirens	X					
	Prunus serotina	X	X						Lycopodium obscurum								Scirpus cyperinus						
	Prunus virginiana	X	X						Lycopodium								Scirpus validus						
	Prunus								Lycopodium								Scirpus						
	Quercus macrocarpa								Matteucia struthiopteris								Scirpus						
	Quercus rubra								Onoclea sensibilis	X	X						Setaria						
	Quercus								Osmunda cinnamonia								Sparganium						
	Rhamnus cathartica		X						Osmunda regalis								Typha angustifolia						
	Rhus radicans	X	X		X				Polystichum acrostichoides		X						Typha latifolia						
	Rhus typhina		X						Pteridium aquilinum								Typha Xglauca						
	Ribes americana								Thelypteris palustris														
	Ribes cynosbati																Brachyelytrum erectum	X	X				
	Ribes x rubrum																						
	Robinia pseudo-acacia																						
	Ribes frigidum	X																					
	Euonymus obovatus	X																					
	Carya ovata	X																					

ELC
Community Description and Classification

Site: GSH 1043/1060	Polygon: 1		
Surveyor(s): SAM	Date: Aug 15/11	Time start: 1350 finish: 1446	
UTMZ: 17	UTMZ:	UTMN:	

Polygon Description

WP# 202

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	4	MH >> ~~Bp~~ > Ew = ~~[illegible]~~
2	3	3	MH > Blue Beech > Ip ≥ > Bp
3	5	3	Bp > Aw > Blue Beech = MH
4	6	3	~~Bp > [illegible]~~ > Bearded Shorthusk >> Jack Pine > Bp =

Aw

Ving. Creeper

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%

MH 52 - Aw 19 - Bp 10

Stand Composition:	Size Class Analysis:	A	<10	O	10-24	A	25-50	O	>50
~~[illegible]~~	Standing Snags:	N	<10	O	10-24	R	25-50	N	>50
BA: 31	Deadfall / Logs:	O	<10	O	10-24	R	25-50	N	>50

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

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

Ecosite:	~~[illegible]~~ Fresh-Moist Sugar Maple ~~[illegible]~~ Decid Forest	Code:	FOD6
Vegetation Type:	Fresh-Moist Sugar Maple-Hardwood Deciduous Forest Type (Maple-Bp-Aw)	Code:	FOD6-5
Inclusion:	/	Code:	/
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.
MH	☐ 9	☐ 7			16	52
Ip	1	2			3	10
Bp	1	2			3	10
Ew	2	1			3	10
Aw	3	3			6	19
Total	16	15			31	100
Basal Area (BA)	32	30			~~[illegible]~~	31
Dead	—	1				

Soils Ontario and ELC Soils Description

												Summary
Site Metrics		Pit/Auger #	WP 202									
	UTM	Zone										Moisture Regime
		Easting										
		Northing										
	Slope	Position	4									
		Aspect	SW									Drainage
		Percent	5									
		Slope Length	4m									
Depth to...		Mottles	26									Effective Texture (indicate below)
		Gley	64									
		Water Table	/									
		Carbonates	45									
		Bedrock	/									
Soil Horizon Description	1	Depth from zero	0	% CF /		% CF		% CF		% CF		
		Texture	fSCL									
	2	Depth from zero	16	% CF /		% CF		% CF		% CF		
		Texture	fSC									
	3	Depth from zero	22	% CF /		% CF		% CF		% CF		
		Texture	C									
	4	Depth from zero		% CF		% CF		% CF		% CF		
		Texture										
		% Surface Stone/Rock										
	Moisture Regime											
	Drainage											

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ELC Plant Species List	
	SITE: GSH 1043 / 1060 (GE2 & GE4)
	POLYGON: D FM FOD MH BD
	DATE: Aug. 15/11
	SURVEYOR(S): SAM

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

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

SPECIES CODE	LAYER 1	2	3	4	COLL.
Aw	O		A		
BD	D	O	A	D	
MH	D	A	O	A	
Choke Cherry		O			
Strawb.					
Grape				A	
Ra sp.			A		
Foul Mama			O		
Pan. Aster					
Bl Mountain					
Jewelwd			O		
Blue Beech		A	O		
Herb Robt					
Grch Nfshd				A	
Pop Sedge				O	
Curled Dock					
Ann Fleabane					
EW	O				
Tall G'rod					
Apple					
Self Heal				O	
MS	O	O			
Bidens frondosa					
Burdock					
Zig Zag				A	
Wing Creeper				D	
PP				A	
Rub. allegh.			A		

SPECIES CODE	LAYER 1	2	3	4	COLL.
Com. Speedwell				O	
CB	R	O			
wt Trillium					
Jack				A	
False Sol. Seal				O	
Can. Mayflower					
GAlace					
Int. wood fern				R	
Prickly Gooseberry					
Sens Fern			O		
Red Canary					
False Nettle					
Blk Bulrush					
Smp Rob Cursd			A		
Leek				O	
By	R			A	
Id		O			
Run. Strawb Hop				R	
Hs					
Bearded Shorthask				D	
Wood Nettle			A		

ELC	SITE: GSH 1043/1060	
	POLYGON:	
	DATE: Aug 15/11	
WILDLIFE	SURVEYORS: SAM	
	START TIME: 1350 h	END TIME: 1446 h

TEMP (°C): 26	CLOUD (10th): 3	WIND: 3	PRECIPITATION: nil
CONDITIONS:			

POTENTIAL WILDLIFE HABITAT:

X	VERNAL POOLS	X	SNAGS
	HIBERNACULA	X	FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
H	Wood Frog	OB		1					
M	WTDeer	TK							
M	Raccoon	TK							
B	WBNH	SM							

FAUNAL TYPE CODES (TY):

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

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:

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

BREEDING BIRD - CONFIRMED:

DD = DISTRACTION NU = USED NEST FY = FLEDGED YOUNG
NE = EGGS NY = YOUNG FS = FOOD/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)

* Small Swamp Inclusion @ E 450887 N 4805527

ELC Community Description and Classification

Site: GSH 1043/1060	Polygon: 2		
Surveyor(s): SAM	Date: Aug. 15/11	Time start: 1452h finish: 1524h	
UTMZ: 17	UTMZ:	UTMN:	

Polygon Description

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

Layer	HT	CVR	Species In Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1	2	4	MH >> Bo = Be > He
2	3-4	3	MH > Aw > Cb > ~~[illegible]~~ Alt. Dogwood
3			Prickly Ash > Blk. Elder > Blue Beech
4	6-7	3	Herb Robert > Com. May Flower > Bearded Short Husk > False Nettle

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
MH 35 - Bo 18 - Be 18	Standing Snags:	R	O	R	N
BA: 34	Deadfall / Logs:	O	A	O	R

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

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

Ecosite:	Fresh-Moist Sugar Maple Deciduous Forest	Code:	FOD6
Vegetation Type:	Fresh-Moist Sugar Maple-Hardwood Silver Deciduous Forest Type.	Code:	FOD6-5
Inclusion:	Black Ash-~~[illegible]~~ Maple Mixed. Swamp Type	Code:	SWD2-1
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.
Bo	3				3	18
Ew	1				1	5
Be	3				3	18
MH	6				6	35
Aw	2				2	12
He	2				2	12
Total	17				17	100
Basal Area (BA)	34				34	34
Dead	2				2	2

Soils Ontario and ELC Soils Description Inclusion

	Pit/Auger #	WP 203 (1)		WP 204	Summary
Site Metrics – UTM	Zone			17T	Moisture Regime
	Easting			450887	
	Northing			4805527	
Site Metrics – Slope	Position			5	
	Aspect	S		W	Drainage
	Percent	5		/	
	Slope Length	2m		/	
Depth to...	Mottles	26		0	
	Gley	64		12	Effective Texture (indicate below)
	Water Table	73		0	
	Carbonates	38		27	
	Bedrock	/		>120	

Soil Horizon Description										
1	Depth from zero	0	% CF /		% CF	-27	% CF		% CF
	Texture	VFSCL				Oh-m			
2	Depth from zero	17	% CF /		% CF	0	% CF		% CF
	Texture	vfSC				C		(C)	
3	Depth from zero	24	% CF /		% CF		% CF		% CF
	Texture	C							
4	Depth from zero		% CF		% CF		% CF		% CF
	Texture								
	% Surface Stone/Rock								
Moisture Regime						Very Moist (6)			
Drainage						poor (6)			

ELC Plant Species List	
	SITE: GSH 1043/1060
	POLYGON: 2 — FM MH BD Be He FOD
	DATE: Aug. 15/11
	SURVEYOR(S): SAM

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

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

SPECIES CODE	LAYER 1	2	3	4	COLL.
WB					
CB					
Cpn					
SH Sumac					
MH					
BJ					
Rasp.					
Rub. allegh					
Catmint					
Wd. Bame.					
Aw					
Be					
Sens fern					
False Nettle					
BlK Elder					
He					
Zig Zag					
Prickly Ash					
Alt Dog.					
False Sol Seal					
Can. MayFlower					
Jack					
Rattlesnake Root					
Fow Panna					
BD					
Int Wd. Fern					
Bearded Shorthy Grass				D	
Ench. Nightsh					

SPECIES CODE	LAYER 1	2	3	4	COLL.
Herb Robt					
Ench. Nightsh					
Blue Beech					
PI					
Jewelweed					
Ms					
N. Lady Fern					
Nettle (Wood)					
Cut water Horsehoof					
Pop Sedge					
BlK Elder					
Pan Aster					
Tall Nettle					
Smooth rod					
AB					
Ev					

MsEw Swamp Inclusion

* Com. Buckthorn
Choke cherry
Xmas Fern
Wd Bamebery

6 photos 531-532 to 537
w pm 204

ELC WILDLIFE		
	SITE: GSH 1043	
	POLYGON: 2	
	DATE: Aug 15/11	
	SURVEYORS: SAM	
	START TIME: 1452	END TIME: 1524 h

TEMP (°C): 26	CLOUD (10th): 2	WIND: 2-3	PRECIPITATION: nil
CONDITIONS: warm, breezy, sunny			

POTENTIAL WILDLIFE HABITAT:

X	VERNAL POOLS	X	SNAGS
	HIBERNACULA	X	FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	~~EA~~ EAWP	SM		2					
B	SOSP	SM		1					
B	BCCH	SM		1					
B	REVI	SM		1					
B	RBGB	SM		1					

FAUNAL TYPE CODES (TY):

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

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:

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

BREEDING BIRD - CONFIRMED:

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

OTHER WILDLIFE EVIDENCE:

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