ELC
Community Description and Classification

Map #: 609 654 2394 / 2717		Polygon: SWD2-2	
Surveyor(s): Jess Prette + Tom Searcey	Date: May 31 2012	Time start: 8:10AM	finish: 11:40AM
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	FRAPENN >> ACEFREE
2	3	2	ACEFREE >> FRAPENN
3	5	2	rubidae > ACEFREE > FRAPENN
4	6	2	[illegible] > Solidago sp. > [illegible] Iris 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:	R	<10	A	10-24	A	25-50	R	>50
	Standing Snags:	N	<10	N	10-24	N	25-50	N	>50
BA:	Deadfall / Logs:	R	<10	R	10-24	N	25-50	N	>50

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

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

Ecosite:	ASH Mineral Deciduous Swamp Ecosite	Code:	SWD2
Vegetation Type:	Green ASH Mineral Deciduous Swamp Type	Code:	SWD2-2
Inclusion:	Coniferous Plantation	Code:	CUP3
Complex:		Code:	

Community Profile Diagram/Comments

wetland communities / [illegible] watercourse
→ Two small coniferous inclusions behind house

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	457223							
		Northing	4795195							
	Slope	Position	Bottom							
		Aspect	NW							Drainage
		Percent	60%							
		Slope Length	40m							
Depth to...	Mottles		3cm							
	Gley		–							Effective Texture (indicate below)
	Water Table		45cm							
	Carbonates		/							
	Bedrock		/							
Soil Horizon Description	1	Depth from zero	26cm	% CF		% CF		% CF		% CF
		Texture	L							
	2	Depth from zero	35cm	% CF		% CF		% CF		% CF
		Texture	MFS							
	3	Depth from zero	56cm	% CF		% CF		% CF		% CF
		Texture	SC							
	4	Depth from zero		% CF		% CF		% CF		% CF
		Texture								
		% Surface Stone/Rock								
	Moisture Regime		6							
	Drainage		P/I							

ELC Community Description and Classification

Map #: 6096SH2394/2717		Polygon: SWT2-2	
Surveyor(s): Jess Hall + Tim Shorney	Date: May 31, 2012	Time start: 8:10 am	finish: 11:40 pm
UTMZ:	UTMZ:	UTMN:	

Polygon Description

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

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 = Frapenn
2	–	–	
3	3	4	salpria >> cornite = corserI
4	6/5	4	phaarun >> lapcana >> impcape > solidago 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:	A	<10	N	10-24	R	25-50	N	>50
BA:	Deadfall / Logs:	N	<10	N	10-24	N	25-50	N	>50
		R	<10	R	10-24	N	25-50	N	>50

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

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

Ecosite:	Mineral Thicket Swamp Ecosite	Code:	SWT2
Vegetation Type:	Willow Mineral Thicket Swamp Type	Code:	SWT2-2
Inclusion:	Open Aquatic	Code:	OAO
Complex:		Code:	

Community Profile Diagram/Comments

small pond observed within SWT

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	457195							
		Northing	4795193							
	Slope	Position	Flat							
		Aspect	/							Drainage
		Percent	/							
		Slope Length	/							
Depth to...	Mottles		7cm							
	Gley		/							Effective Texture (indicate below)
	Water Table		/							
	Carbonates		/							
	Bedrock		/							
Soil Horizon Description	1	Depth from zero	19cm	% CF		% CF		% CF		% CF
		Texture	SiS							
	2	Depth from zero	53cm	% CF		% CF		% CF		% CF
		Texture	SCL							
	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
Conifers					
Balsam Fir *(Abies balsamea)*	U				
Common Juniper *(Juniperus communis)*					
Eastern Red Cedar *(Juniperus virginiana)*					
Tamarack *(Larix laricina)*					
Norway Spruce (Picea abies)	U				
White Spruce *(Picea glauca)*	U				
Black Spruce *(Picea mariana)*					
Jack Pine *(Pinus banksiana)*					
Red Pine *(Pinus resinosa)*					
Eastern White Pine *(Pinus strobus)*	U				
Scotch Pine *(Pinus sylvestris)*					
Canada Yew *(Taxus canadensis)*					
Eastern White Cedar *(Thuja occidentalis)*					
Eastern Hemlock *(Tsuga canadensis)*					
Deciduous					
Manitoba Maple *(Acer negundo)*					
Black Maple *(Acer nigrum)*					
Norway Maple *(Acer platanoides)*					
Red Maple *(Acer rubrum)*					
Silver Maple *(Acer saccharinum)*					
Freeman's Maple *(Acer X freemanii)*	U				
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)*					
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)*					
Black Ash *(Fraxinus nigra)*					
Green Ash *(Fraxinus pennsylvanica)*	D	R			
Witch-hazel *(Hamamelis virginiana)*					
Winterberry *(Ilex verticilata)*					
Butternut *(Juglans cinerea)*					
Black Walnut *(Juglans nigra)*	R				
Common Privet *(Ligustrum vulgare)*					
Spicebush *(Lindera benzoin)*					
Fly Honeysuckle *(Lonicera canadensis)*					
Glaucous Honeysuckle *(Lonicera dioica)*					
Morrow's Honeysuckle *(Lonicera morrowii)*					
Tartarian Honeysuckle *(Lonicera tatarica)*					
Common Apple *(Malus pumila)*					
White Mulberry *(Morus alba)*					
Sweet Gale *(Myrica gale)*					
Ironwood *(Ostrya virginiana)*					
Thicket-creeper *(Parthenocissus inserta)*	U				
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)*					
Prunus					

Tree & Shrubs	1	2	3	4	5
Deciduous					
White Oak *(Quercus alba)*					
Bur Oak *(Quercus macrocarpa)*	R				
Red Oak *(Quercus rubra)*					
Alder Buckthorn *(Rhamnus alnifolia)*					
Common Buckthorn *(Rhamnus cathartica)*	R				
Smooth Sumac *(Rhus glabra)*					
Staghorn Sumac *(Rhus hirta)*					
Wild Black Currant *(Ribes americanum)*					
Prickly Gooseberry *(Ribes cynosbati)*					
Swamp Black Currant *(Ribes lacustre)*					
Red Currant *(Ribes rubrum)*					
Ribes					
Black Locust *(Robinia pseudo-acacia)*					
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)*		D			
Shining Willow *(Salix lucida)*					
Black Willow *(Salix nigra)*					
Slender Willow *(Salix petiolaris)*					
Salix					
Hybrid Crack Willow *(Salix X rubens)*	R	R			
Black-berried Elder *(Sambucus nigra)*					
Red-berried Elder *(Sambucus racemosa)*					
Buffaloberry *(Shepherdia canadensis)*					
Eur. Mountain Ash *(Sorbus aucuparia)*					
Narrow Meadow-sweet *(Spiraea alba)*					
Common Lilac *(Syringa vulgaris)*					
Poison-ivy *(Toxicodendron rydbergii)*					
Climbing Poison-ivy *(Toxicodendron radicans)*	R				
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)*					
Cornus Alternifolia		U			
Ferns & Allies					
Lady Fern *(Athyrium filix-femina)*					
Rattlesnake Fern *(Botrychium virginianum)*					
Bulbet Bladder Fern *(Cystopteris bulbifera)*					
Spin. Wood Fern *(Dryopteris carthusiana)*					
Crested Wood Fern *(Dryopteris cristata)*					
Marginal Wood Fern *(Dryopteris marginalis)*					
Dryopteris					
Ostrich Fern *(Matteuccia struthiopteris)*					
Sensitive Fern *(Onoclea sensibilis)*					
Cinnamon Fern *(Osmunda cinnamomea)*					
Interrupted Fern *(Osmunda claytoniana)*					
Royal Fern *(Osmunda regalis)*					
Christmas Fern *(Polystichum acrostichoides)*					
Eastern Bracken-fern *(Pteridium aquilinum)*					
Marsh Fern *(Thelypteris palustris)*					
Field Horsetail *(Equisetum arvense)*					
Scouring-rush *(Equisetum hyemale)*					
Variegated Horsetail *(Equisetum variegatum)*					
Equisetum					
Ground-cedar*(Lycopodium digitatum)*					
Shining Clubmoss *(Lycopodium lucidulum)*					
Ground-pine *(Lycopodium obscurum)*					

Graminoids	1	2	3	4	5
Grasses					
Giant Redtop *(Agrostis gigantea)*					
Redtop *(Agrostis stolonifera)*					
Awnless Brome *(Bromus inermis)*	R				
Bromus					
Blue-joint Grass *(Calamagrostis canadensis)*					
Orchard Grass *(Dactylis glomerata)*	R				
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)*	R				
Timothy *(Phleum pratense)*					
Common Reed *(Phragmites australis)*					
Canada Blue Grass *(Poa compressa)*					
Fowl Meadow Grass *(Poa palustris)*					
Kentucky Bluegrass *(Poa pratensis)*					
Yellow Foxtail *(Setaria pumila)*					
Green Foxtail *(Setaria viridis)*					
Sedges					
Drooping Wood Sedge *(Carex arctata)*					
Golden-fruited Sedge *(Carex aurea)*					
Graceful Sedge *(Carex gracillima)*					
Inland Sedge *(Carex interior)*					
Bladder Sedge *(Carex intumescens)*					
Lake-bank Sedge *(Carex lacustris)*					
Hop Sedge *(Carex lupulina)*					
Pennsylvania Sedge *(Carex pensylvanica)*					
Awl-fruited Sedge *(Carex stipata)*					
Fox Sedge *(Carex vulpinoidea)*					
Carex					
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)*		R			
Dark-green Bulrush *(Scirpus atrovirens)*					
Wool-grass *(Scirpus cyperinus)*					
[illegible]		R			
Other Graminoids					
Broad Bur-reed *(Sparganium eurycarpum)*					
Narrow-leaved Cattail *(Typha angustifolia)*					
Broad-leaved Cattail *(Typha latifolia)*					
Broad-leaved Cattail *(Typha X glauca)*					
Articulated Rush *(Juncus articulatus)*					
Soft Rush *(Juncus effusus)*					
Path Rush *(Juncus tenuis)*					
Juncus					
Juncus					

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

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

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

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

Map Number: 609(SH27H 27 — 1 — 4

Date: May 31, 2012 — 2 — 5

Surveyors: JPI — 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	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 (*Erig. philadelphicus*)	R	R			
Erigeron					
Joe-pye-weed (*Eupatorium maculatum*)		R			
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*)	R				
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.	U	U			
Field Sow-thistle (*Sonchus arvensis*)					
Sonchus					
Heart-leaf Aster (*Symph. cordifolium*)					
Heath Aster (*Symphyotrichum ericoides*)					
Tall White Aster (*Symph. lanceolatum*)					
Calico Aster (*Symphyotrichum lateriflorum*)					
New England Aster (*Symph. novae-angliae*)					
Purple-stem Aster (*Symph. puniceus*)					
Common Tansy (*Tanacetum vulgare*)					
Common Dandelion (*Taraxacum officinale*)	R	R			
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*)	R	R			
Green Amaranth (*Amaranthus retroflexus*)					
Hog-peanut (*Amphicarpa bracteata*)					
Pearly Everlasting (*Anaphalis margaritacea*)					
Canada Anemone (*Anemone canadensis*)	U	U			
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*)	U				
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*)	R				
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*)					
Yellow Avens (*Geum aleppicum*)	U				
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*)	U	U			
Wood Nettle (*Laportea canadensis*)	F	F			
Motherwort (*Leonurus cardiaca*)					
Field Peppergrass (*Lepidium campestre*)					
Eur. Gromwell (*Lithospermum officinale*)					
Butter & Eggs (*Linaria vulgaris*)					
Great Lobelia (*Lobelia siphilitica*)					
Lobelia					
Cut-leaf Bugleweed (*Lycopus americanus*)					
Northern Bugleweed (*Lycopus uniflorus*)					
Fringed Loosestrife (*Lysimachia ciliata*)					
Moneywort (*Lysimachia nummularia*)					
Lysimachia					
Purple Loosestrife (*Lythrum salicaria*)					
Black Medick (*Medicago lupulina*)	R				
Alfalfa (*Medicago sativa*)					
White Sweet-clover (*Melilotus alba*)					
Yellow Sweet-clover (*Melilotus officinalis*)	R				
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 bertenii*)					
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 Sept	U	[illegible]			
Sheep Sorrel (*Rumex acetosella*)					
Curly-leaf Dock (*Rumex crispus*)					
Bitter Dock (*Rumex obtusifolius*)					
Bloodroot (*Sanginaria canadense*)					
Black Snakeroot (*Sanicula marilandica*)					
Bouncing Bet (*Saponaria officinalis*)					
Marsh Skullcap (*Scutellaria galericulata*)					
Mad Dog Skullcap (*Scutellaria lateriflora*)					
White Campion (*Silene latifolia*)					
Bladder Campion (*Silene vulgaris*)					
Hemlock Water-parsnip (*Sium suave*)					
Bitter Nightshade (*Solanum dulcamara*)		R			
Black Nightshade (*Solanum ptychanthum*)					
Grassleaf Stitchwort (*Stellaria graminea*)					
Common Chickweed (*Stellaria media*)					
Early Meadow-rue (*Thalictrum dioicum*)					
Tall Meadow-rue (*Thalictrum pubescens*)	U	U			
Field Penny-cress (*Thlaspi arvense*)					
Foamflower (*Tiarella cordifolia*)					
Star-flower (*Trientalis borealis*)					
Red Clover (*Trifolium pratense*)	R				
White Clover (*Trifolium repens*)					
Trifolium					
Stinging Nettle (*Urtica dioica*)		R			
Greater Bladderwort (*Utricularia vulgaris*)					
Common Mullein (*Verbascum thapsus*)					
Blue Vervain (*Verbena hastata*)					
White Vervain (*Verbena urticifolia*)					
Water Speedwell (*Veron. anagallis-aquatica*)					
Common Speedwell (*Veronica officinalis*)					
Veronica					
Cow Vetch (*Vicia cracca*)					
Vicia					
Periwinkle (*Vinca minor*)					
Dog Violet (*Viola conspersa*)					
Yellow Violet (*Viola pubescens*)					
Com. Blue Violet (*Viola sororia*)					
Viola					
Yellow Pond lily (Water nurse)		R			
Monocot Herbs					
Water-plantain (*Alisma plantago-aquatica*)					
Wild Leek (*Allium tricoccum*)					
Jack-in-the-pulpit (*Arisaema triphyllum*)					
Asparagus (*Asparagus officinalis*)					
Wild Calla (*Calla palustris*)					
Bluebead-lily (*Clintonia borealis*)					
Garden Lily-of-valley (*Convallaria majalis*)					
Yel. Lady's Slipper (*Cypripedium parviflora*)					
Canada Waterweed (*Elodea canadensis*)					
Helleborine (*Epipactis helleborine*)					
Yellow Trout Lily (*Erythronium americanum*)					
Blue-flag Iris (*Iris versicolor*)					
Orange Day Lily (*Hemerocallus fulva*)					
Lesser Duckweed (*Lemna minor*)					
Starry Duckweed (*Lemna trisulca*)					
Wild Lily-of-valley (*Maianthemum canadense*)					
False Solom Seal (*Maianthemum racemosum*)					
Star False Solomon (*Maianthemum stellatum*)					
True Solomon Seal (*Polygonatum pubescens*)					
Pickerel-weed (*Pontederia cordata*)					
Curly-leaf Pondweed (*Potamogeton crispus*)					
Sago Pondweed (*Potamogeton pectinatus*)					
Potamogeton					
Potamogeton					
Broad-leaved Arrowhead (*Sagittaria latifolia*)					
Blue-eyed-grass (*Sisyrinchium montanum*)					
Herb. Carrion Flower (*Smilax herbacea*)					
Bristly Greenbrier (*Smilax hispida*)					
Nodding Ladies' Tresses (*Spiranthes cernua*)					
Rose Twisted-stalk (*Streptopus lanceolatus*)					
Skunk-cabbage (*Symplocarpus foetidus*)					
Purple Trillium (*Trillium erectum*)					
White Trillium (*Trillium grandiflorum*)					
Large-flowered Bellwort (*Uvularia grandiflora*)					
[illegible]	[illegible]	R			

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: 60 61 2

Date: [illegible] 3

Surveyors: [illegible]

1		4
2		5
3		

Significant Wildlife Habitat Form

AECOM

Study Area:	BLW JER (GSH)	Map #:	609_GSH 2394/2717
Date:	2012-05-31	Time Started:	8:10 am
Field Staff:	Tom Shorney Jess Piette	Time Finished:	11:40 am
Weather Conditions:	Sunny, 16°C, Light breeze		

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

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

UTMs: _____ Number of nests: _____

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

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

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

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

UTMs: — ☒ Area of standing water delineated on field map

Water depth (m): +3m % open water: 100 % emergent vegetation: 0

Potential to hold water until at least July in most years: Yes / No

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

Area and soil/substrate of shoreline habitat: mineral soil → very little exposed

Type and abundance of cover in open water habitat: —

Type and abundance of cover in surrounding habitat: Salix sp, Cornus Ser, Fraxinus Penn, grass sp.

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

Evidence of use by waterfowl, amphibians, turles (e.g. broken eggs), marsh breeding birds: Spotted amphibians along pond

******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: 457158 4795112 Likelihood to extend below frost line: YES

% canopy cover: 10 % slope: ≈50% Distance to open canopy (m): 5m

Description of fissure or stone pile (composition/material, dimenstions, etc): old Barn foundation exposed, as well as small pile of cement slabs along watercourse

Description of surrounding habitat (type & abundance of cover, evidence of disturbance, etc): Surrounding habitat is Swamp thicket bordering onto stream community

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: 609 - GSH2394/2717 **Field Staff:** Tom Shorney Jess Piette **Time Started:** 8:10 am
Date (yyyy-mm-dd): 2012-05-31 **Time Finished:** 11:40 am

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Baltimore oriole		ob		Rose-breasted Grosbeak		Ob	
Gray catbird		VO		Cabbage White		ob	
Red-winged		VO		Monarch Butt		Ob	
Robin		Vo		Peewee		VO	
Chimney Crayfish		Da		great crested Flycatcher		VO	
Magnolia Warbler		VO		Chipping Sparrow		VO	
Song Sparrow		VO		White-throated Sparrow		VO	
Swallow sp.		ob					
Turkey Vult		ob					
Leopard Frog		ob					
Green Frog		ob					
American Goldfinch		ob					
Milbert's tortoiseshell		Ob					
Woodpecker sp.	Pecking	VO					

Note: ***Evidence Codes (EV)***
Breeding Bird (Possible) *SH=Suitable Habitat, SM=Singing Male;*
Breeding Bird (Probable) *T=Territory, D=Display, P=Pair, N=Nest Building, V= Visiting Nest; A=Anxiety Behavior;*
Breeding Bird (Confirmed) *DD=Distraction, NU=Used Nest, FY=Fledged Young, NE=Eggs, NY=Young, FS=Foos/Faecal sack, AE=Nest Entry*
Other Wildlife Evidence: *OB=Observed, VO=Vocalization, CA=Carcass, DP=Distincitve Parts, HO=House/Den, FY=Eggs/young, TK=Tracks, FE=Feeding evidence, SC= Scat, SI=Other signs (specify)*
* Not observed → N/O *

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
PLANTS			
FOD7	**American Gromwell** (Lithospermum latifolium) - S3 *Bloom Time - Spring*	Shaded river banks, wooded floodplains. River floodplains, woods and edges of woods.	Y (N) UTM:
ALO, TPO	**Muehlenberg's astomum moss** (*Astomum muehlenbergianum*)- S2 Bloom Time - Spring	Thin soil over level outcrop ledges and on soil under grasses in open prairie	Y (N) UTM:
FOM1, FOM2, CUP3	**Autumn Coral-root** (Corallorhiza odontorhiza) - S2 *Bloom Time - summer to fall*	Oak-pine woods or occasionally in open, red pine or white pine plantations. Dry, sandy woods.	Y (N) UTM:
FOC, FOM, FOD	**Burning Bush** *(Euonymus atropurpureus)* – *S3 Bloom Time- April - June*	Species occurs in dry to moist deciduous thickets and woods	Y (N) UTM:
SWC1, SWC3, SWC4, SWM1, SWM2, SWM4, SWM5, SWM6	**Chinese Hemlock Parsley** *(Conioselinum chinense)* - S2 *Bloom Time –summer to fall*	Swampy places with deciduous trees, white cedars, tamarack; springy river banks, wet borders of streams and rivers. Also found among calcareous seepage slopes.	Y (N) UTM:
SWC, SWM, SWD, SWT, MAM, MAS	**Crowned Beggarticks** *(Bidens trichosperma)* -S2 *Bloom Time – late summer*	Found in openings in swamps, marshes, along shores & wet fields within the Carolinian zone and southeastern Georgian bay. Bogs, fens, tamarack swamps .	(Y) N UTM: N/O (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: N/O
FOD6, FOD7, SWM, SWD	**Hairy Wood Mint** *(Blephilia hirsuta) –S1* *Bloom Time- Summer*	Woodlands, often rocky, especially rivers. Rich woods, swamp forests, floodplains.	Y N UTM: N/O
FOD6, FOD7, FOD8, FOD9	**Harbinger-of-spring** (Erigenia bulbosa) - S3 *Bloom Time – early to late April*	Occurs in rich, moist deciduous woods, especially on floodplains.	Y N UTM:
SAS1, SAM1, SAF1	**Hill's Pond Weed** (Potamogeton hillii) - SC/S2 *Bloom Time – summer*	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters.	Y N UTM:
FOM6, FOM7, FOM8	**Large Round-leaved Orchid** (Platanthera macrophylla) - S2 *Bloom Time – June to August*	Species inhabits moist mixed woods. Found in fairly mature, upland sugar maple-beech-eastern hemlock woodlands.	Y N UTM:
MAM2, MAM3, MAS2, MAS3, SWD	**Lizard's Tail** (Saururus cernuus) - S3 *Bloom Time – June – September*	Species inhabits shores and streambanks along shallow water. As well as swamps, floodplains, shallow water and mudflats at the borders of streams and ponds.	Y N UTM: N/O
FOD6, FOD7, FOD9	**Pawpaw** *(Asimina triloba) –S3* *Bloom Time – March-May*	Occurs in moist deciduous woods and stream banks.	Y N UTM:
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: N/O
CUW1, ALO, FET1, SWC	**Ram's-head Lady's-slipper** (Cypripedium arietinum) - S3 *Bloom Time –mid May to mid June*	Found in cedar woodlands, limestone plains and wooded fens, moist coniferous swamps, dry-sandy woods, and limestone barren .	Y N UTM:
FOD1, FOD2, FOD3, FOD4, FOD5, FOC1, FOM1, FOM5	**Rattlesnake Hawkweed** (Hieracium venosum) - S2 *Bloom Time – April – September*	Species inhabits open, dry sandy woods, Jack pine, oak, and aspen woodlands.	Y N UTM:
FOD6, FOD7, FOD9	**Round-leaved Groundsel** *(Packera obovata) –S3* *Bloom Time- May - June*	Found in moist woods	Y N UTM:
CUM1, CUT1, CUS1	**Round-leaved hawthorn** *(Crataegus lumaria) –S3?*	Species occurs in old fields, poorly managed pastures, fencelines and roadsides	Y N UTM:
FOD6, FOD7, FOD8, FOD9, SWT2, SWT3	**Scarlet Beebalm** (Monarda didyma) - S3 *Bloom Time – May to October*	Found in moist, rich woods, thicket swamps, banks and floodplains.	Y N UTM: N/O
ALO, ALS, ALT, TPO, TPS, TPW	**Slender Blazing Star** *(Liatris cylindracea) –S3*	Species occurs in limestone and dolostone pavement, prairies, open woods; alvars and moist sandy meadows.	Y N UTM:
SBO, SBS, SBT, TPO1, TPS1, TPW1, FOD1, FOD2	**Slender Knotweed** *(Polygonum tenue)-S2*	Found in dry, sandy, open areas in deciduous (often oak woods), prairie meadows; at edges of sand pits	Y N UTM:
SDT1, FOD5, FOD9	**Slim-flowered Muhly** (Muhlenbergia tenuiflora) - S2	Found in rich deciduous forest, often on rocky or sandy soils, wooded dunes, hillsides, and riverbanks whether in oak or beech-maple woods	Y N UTM:
BLO1, BLS1, BLT1, TPO2, TPS2, TPW2, MAM2, FOD7	**Stiff Gentian** (Gentianella quinquefolia) - S2 *Bloom Time – late summer to mid fall*	Found in moist soils of streambanks, edges of woods, wet prairies, marshy meadows, bluffs and wooded hillsides.	Y N UTM:
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: N/O
TPS, TPW	**Sleepy Duskywing** (Erynnis brize) - 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: N/O
FOD5	**West Virginia White (Pieris virginiensis) - SC**	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y (N) UTM:

Valleylands Data Collection Sheet

AECOM

Study area:	Goshen	Feature No.:	609 FSH 2394/2717
Date (yyyy-mm-dd):	2012-05-31	Time Started:	8:10 am
Field Staff:	Jen Piette + Tom Sharney	Time Finished:	11:40 AM
UTM Coordinates	Easting	Northing	

Landform prominence

is area well defined? ☐ no ☒ yes - if yes see below

Does area have an average width of 25m or more ☐ no ☒ yes

width (from top of slope to top of slope) ~ 100-200 m
depth (from top of slope to valley bottom) ~ 20m m

Surfacewater functions

watercourse

Is there surface water drainage? ☐ no ☒ yes - if yes, flowing/direction [illegible] watercourse

Is there standing water? ☐ no ☒ yes - if yes, width ~ 10-15 m depth unknown m

Is there exposed soil? ☐ no ☒ yes very vegetated banks with areas of exposed soil — meandering water

What is the degree of slope? 45-50°

Are there wetland communities present? ☐ no ☒ yes - if yes what type ☐ marsh ☒ swamp ☐ bog ☐ fen SWT2-2/SWD2-2
(refer to ELC and wetland data cards for data entry)

Groundwater/Distinctive geomorphic landforms

Is there evidence of groundwater? ☒ no ☐ yes - (if yes please check all that apply)

☐ bank seepage ☐ iron staining ☐ groundwater indicator species observed

Distinctive geomorphic landforms

Is one of the following landforms present? (check all that apply)

☐ None ☒ terraces ☐ exposed soil strata
☐ Oxbow ☐ deltas ☐ bottomlands
☐ erodings slopes along riverbanks or valley walls

Brief Description of area: banks are very solid, well vegetated dogwoods, willows

Degree of naturalness

What is the vegetation cover around feature (refer to ELC and wetland data cards for data entry)

☒ open agriculture			90%
☐ woodland	(CUW, CUP, FOD, FOC, FOM)	%cover	
☒ wetland	(MAM, MAS, SWT, SWD, SWM)	%cover	
☒ meadow	(CUM)	%cover	10%
☐ thicket	(CUT)	%cover	

What is the estimated width of natural cover on either side of feature 2 m, 2 m } of valley land but is naturally vegetated within

Is there evidence of disturbance? ☐ no ☒ yes

description: slight disturbance on west/east sides by agriculture; agricultural road through feature

Unique Communities and Species

Evidence of Seasonally Important Habitat (deer winter yards, stopover areas, hibernacula) ☐ no ☒ yes
(refer to significant wildlife data card for data entry)
deer yards, hibernacula + stopover

Is there evidence of an existing linkage area or potential for restoration ☐ no ☐ yes

description: doesn't need restoration very good area

Notes

pictures 30-39 west side
41-46 east side

Wetland Data Collection Sheet

AECOM

Study area: Goshen	Map No: 609GSH2394/2717
Date (yyyy-mm-dd): 2012-05-31	Time Started: 8:10am
Field Staff: Jen Piotti + Tim Sherry	Time Finished: 11:40am

Presence of Groundwater No ☒ Yes ☐

☐ bank seepage ☐ iron staining ☐ groundwater indicator

Site Type

Lacustrine ☐ (associated with lakes) Isolated ☐

Riverine ☒ (associated with rivers)

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

what are the water inputs and outputs? River influenced + surface water inputs

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
SWD2-2	h* - Frapenn, Acefree gc - lapcana, impcape, goldenrod sp
SWT2-2	ts - Salexig, Corseri, Coralte ne - phaarun gc - lapcana, impcape, anecana

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

→ winter cover within 2 inclusions
→ waterfowl breeding, staging, moulting
→ Area is within valleyland
→ farm field surrounds

Legend

- Property Boundary
- Prime Transmission Line
- Prime Transmission Line Buffer (180 m)
- ELC Completed 2011
- Natural Feature and ID
- ELC Polygon Boundary
- ANSI
- Evaluated Wetlands - PSW
- ABCA Watercourse

0.5 ha

Basemapping from Ontario Ministry of Natural Resources Orthophotography 2010

N
W E
S

Metres
0 25 50 100
1:3,000
UTM Zone 17N, NAD 83

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Goshen ELC Survey

611_GSH2411

May 2012
Project 60155032

AECOM

Figure

Map Document: (V:\projects-aecom\60155032\2010\Results\GIS\Spatial\MXDs\Fields\Map\MXDs\Project_ELC_Mapping\Goshen\GSH_Amphibians\60155032_GSH_Amphibians\ELC\SurveySites_372_GSH1115.mxd)
4/12/2012 – 8:19:21 PM

* ASA fenceline from distant property * with 20x scope

ELC Community Description and Classification

Map #: 611-GSH2411 4610 GSH2871/2411		Polygon: 1	
Surveyor(s): S.A.M.	Date: June 13/12	Time start: 1117h finish: 1145h	
UTMZ: 17T	UTMZ: 456468	UTMN: 4795074	

location of ASA survey, not feature

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	TIL AMER > ULM AMER > CAR CORD = QUE MACR
2	3	3	TIL AMER > QUE MACR
3	4-3	?	TIL AMER
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
BA: N/A	Standing Snags:	<10	10-24	25-50	>50
	Deadfall / Logs:	<10	10-24	25-50	>50

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

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

Ecosite:	Fresh-moist Oak-Maple-Hickory Decid. Forest	Code:	FOD9
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.
ASA - n/a						
Total						100
Basal Area (BA)						
Dead						

Soils Ontario and ELC Soils Description

		Pit/Auger #				Summary
Site Metrics	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	% CF	% CF	% CF
		Texture							
	2	Depth from zero	% CF	% CF	% CF	% CF	% CF	% CF	% CF
		Texture							
	3	Depth from zero	% CF	% CF	% CF	% CF	% CF	% CF	% CF
		Texture							
	4	Depth from zero	% CF	% CF	% CF	% CF	% CF	% CF	% CF
		Texture							
		% Surface Stone/Rock							
	Moisture Regime								
	Drainage								

* Photos 106-784 to 789

Plant Species List
2012

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

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

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

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

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

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

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

Map Number: 6U_65H_411 & 6U_65H_[illegible]1/2411	1	FOD 9	4
Date: June 13/12	2		5
Surveyors: S.A.M.	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*)					
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*)					
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*)					
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*)					
Yellow Avens (*Geum aleppicum*)					
White Avens (*Geum canadense*)					
Urban Avens (*Geum urbanum*)					
Dame's Rocket (*Hesperis matronalis*)					
Virg. Water-leaf (*Hydrophyllum virginianum*)					
Com. St. John's-wort (*Hypericum perforatum*)					
Spotted Jewelweed (*Impatiens capensis*)					
Wood Nettle (*Laportea canadensis*)					
Motherwort (*Leonurus cardiaca*)					
Field Pepper-grass (*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*)					
Pale Smartweed (*Polygonum lapathifolium*)					
Lady's-thumb (*Polygonum persicaria*)					
Virginia Knotweed (*Polygonum virginianum*)					
Polygonum					
Polygonum					
Rough Cinquefoil (*Potentilla norvegica*)					
Rough-fruited Cinquefoil (*Potentilla recta*)					
Common Cinquefoil (*Potentilla simplex*)					
Potentilla					
Heal-all (*Prunella vulgaris*)					
Shinleaf (*Pyrola elliptica*)					

Dicot Herbs	1	2	3	4	5
Kidney-leaf Buttercup (*Ranunculus abortivus*)					
Tall Buttercup (*Ranunculus acris*)					
Hooked Buttercup (*Ranunculus recurvatus*)					
Ranunculus					
Sheep Sorrel (*Rumex acetosella*)					
Curly-leaf Dock (*Rumex crispus*)					
Bitter Dock (*Rumex obtusifolius*)					
Bloodroot (*Sanginaria canadense*)					
Black Snakeroot (*Sanicula marilandica*)					
Bouncing Bet (*Saponaria officinalis*)					
Marsh Skullcap (*Scutellaria galericulata*)					
Mad Dog Skullcap (*Scutellaria lateriflora*)					
White Campion (*Silene latifolia*)					
Bladder Campion (*Silene vulgaris*)					
Hemlock Water-parsnip (*Sium suave*)					
Bitter Nightshade (*Solanum dulcamara*)					
Black Nightshade (*Solanum ptychanthum*)					
Grassleaf Stitchwort (*Stellaria graminea*)					
Common Chickweed (*Stellaria media*)					
Early Meadow-rue (*Thalictrum dioicum*)					
Tall Meadow-rue (*Thalictrum pubescens*)					
Field Penny-cress (*Thlaspi arvense*)					
Foamflower (*Tiarella cordifolia*)					
Star-flower (*Trientalis borealis*)					
Red Clover (*Trifolium pratense*)					
White Clover (*Trifolium repens*)					
Trifolium					
Stinging Nettle (*Urtica dioica*)					
Greater Bladderwort (*Utricularia vulgaris*)					
Common Mullein (*Verbascum thapsus*)					
Blue Vervain (*Verbena hastata*)					
White Vervain (*Verbena urticifolia*)					
Water Speedwell (*Veron. anagallis-aquatica*)					
Common Speedwell (*Veronica officinalis*)					
Veronica					
Cow Vetch (*Vicia cracca*)					
Vicia					
Periwinkle (*Vinca minor*)					
Dog Violet (*Viola conspersa*)					
Yellow Violet (*Viola pubescens*)					
Com. Blue Violet (*Viola sororia*)					
Viola					
Monocot Herbs					
Water-plantain (*Alisma plantago-aquatica*)					
Wild Leek (*Allium tricoccum*)					
Jack-in-the-pulpit (*Arisaema triphyllum*)					
Asparagus (*Asparagus officinalis*)					
Wild Calla (*Calla palustris*)					
Bluebead-lily (*Clintonia borealis*)					
Garden Lily-of-valley (*Convallaria majalis*)					
Yel. Lady's Slipper (*Cypripedium parviflora*)					
Canada Waterweed (*Elodea canadensis*)					
Helleborine (*Epipactis helleborine*)					
Yellow Trout Lily (*Erythronium americanum*)					
Blue-flag Iris (*Iris versicolor*)					
Orange Day Lily (*Hemerocallus fulva*)					
Lesser Duckweed (*Lemna minor*)					
Starry Duckweed (*Lemna trisulca*)					
Wild Lily-of-valley (*Maianthemum canadense*)					
False Solom Seal (*Maianthemum racemosum*)					
Star False Solomon (*Maianthemum stellatum*)					
True Solomon Seal (*Polygonatum pubescens*)					
Pickerel-weed (*Pontederia cordata*)					
Curly-leaf Pondweed (*Potamogeton crispus*)					
Sago Pondweed (*Potamogeton pectinatus*)					
Potamogeton					
Potamogeton					
Broad-leaved Arrowhead (*Sagittaria latifolia*)					
Blue-eyed-grass (*Sisyrinchium montanum*)					
Herb. Carrion Flower (*Smilax herbacea*)					
Bristly Greenbrier (*Smilax hispida*)					
Nodding Ladies' Tresses (*Spiranthes cernua*)					
Rose Twisted-stalk (*Streptopus lanceolatus*)					
Skunk-cabbage (*Symplocarpus foetidus*)					
Purple Trillium (*Trillium erectum*)					
White Trillium (*Trillium grandiflorum*)					
Large-flowered Bellwort (*Uvularia grandiflora*)					

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

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

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

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

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

* ASA from distant property

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

AECOM

Map No: 611_GSH 2411 + 610_GSH 2411/2871 **Field Staff:** S.A.M. **Time Started:** 1017h

Date (yyyy-mm-dd): 2012-06-13 **Time Finished:** 1045h

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes

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:
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:
TPS1, TPW1, CUW1, RBO, SBO	**Sundial Lupine** (Lupinus perennis) - S3 *Bloom Time – mid-March to mid-June*	Inhabits dry, sandy oak savannahs, prairies, open barrens or clearings in woodlands of oak, jack pine, and/or aspen .	Y N UTM:

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

AECOM

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
TPO1, TPS1, TPW1, CUM1	**Tall Blazing Star** *(Liatris aspera)-S3/SC*	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y N UTM:
FEO, FES, FET, MAM2, MAM3	**Tuberous Indian Plantain** (*Amoglossum plantagineum*) - *S3* Bloom Time –mid-March to mid-June	Occurs mainly in flat, sandy areas of the Bruce Peninsula. Fens, wet meadows, and calcareous river flats.	Y N UTM:
FOC1, FOC2, FOC3, FOC4	**Woodland Pinedrops** (Pterospora andromedea) - S2 *Bloom Time – summer*	Found in conifer woods, under pines, but also hemlock, spruce, fir, and white cedar. In dry or rocky soil, often with common juniper and sometimes aspen or birch.	Y N UTM:
CUM1, CUT1, CUW1, RBO1, SBO1	**Yellow Ladies'-tresses** (*Spiranthes ochroleuca*) - *S2* *Bloom Time – August to November*	Dry, open sites, usually on acidic sandy soil, dry to mesic open woodland, thickets, meadows, barrens, ledges, outcrops, banks and roadsides, old fields.	Y N UTM:
BIRDS			
-	**Bald Eagle (Haliaeetus leucocephalus) - SC**	Assessed as SWH. Record species if found.	not required.
CUW, SDO, RBO, TPS	**Common Nighthawk (Chordeiles minor) - SC**	Hunts insects over a wide variety of habitats, in particular open or semi-open areas. Nests on ground in a wide range of open, sparse or vegetation-free habitats	Y N UTM:
FOD, FOM	**Louisiana Waterthrush (Seiurus motacilla) - SC**	Inhabits mature forests along steeply sloped ravines adjacent to running water. Trees, bushes, exposed roots, cliffs, banks and mossy logs are favoured nesting spots. Riparian woodlands are preferred stopover sites during migration	Y N UTM:
FOD, CUW, CUT	**Red-headed Woodpecker (Melanerpes erythrocephalus) - SC**	Species inhabits open woodland/ edges (oak savannahs and riparian forest), open, deciduous forest with little understory; fields or pasture lands with scattered large trees; wooded swamps; orchards, small woodlots or forest edges; groves of dead or dying trees; requires cavity trees with at least 40 cm dbh; requires about 4 ha for a territory.	Y N UTM:
-	**Short Eared Owl (Asio flammeus) - SC**	Assessed as SWH. Record species if found.	not required.
CUT1	**Yellow-breasted Chat (Icteria virens) - SC**	Inhabits thickets, tall tangles of shrubbery beside streams, ponds; overgrown bushy clearings with deciduous thickets; nests above ground in bush, vines	Y N UTM:
REPTILES			
-	**Eastern Ribbonsnake (Thamnophis sauritus) - SC**	Assessed as SWH. Record species if found.	not required.
-	**Milksnake (Lampropeltis triangulum) -SC**	Assessed as SWH. Record species if found.	not required.
-	**Snapping Turtle (Chelydra serpentina) - 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 brize) - 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:

Legend

- Property Boundary
- Prime Transmission Line
- Prime Transmission Line Buffer (180 m)
- ELC Completed 2011
- Natural Feature and ID
- ELC Polygon Boundary
- ANSI
- Evaluated Wetlands - PSW
- ABCA Watercourse

0.5 ha

Basemapping from Ontario Ministry of Natural Resources
Orthophotography: 2010

N W E S

Metres
0 25 50 100
1:3,000
UTM Zone 17N NAD 83

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Goshen ELC Survey

635_GSH2369/GSH2371

May 2012
Project 60155032

AECOM

Figure 1

* ASA * from adjacent property

ELC Community Description and Classification

Map #: C35GSH2369/2371		Polygon: CUT1	
Surveyor(s): Jess Piette + Tim Sharpe	Date: June 5 2012	Time start: 12:?? pm	finish: 12:4? pm
UTMZ:	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.	ASA	[ ] Roll. Upland	[ ] Bryophyte	[ ] Fen
[ ] Bedrock		[ ] Cliff	[x] Deciduous	[ ] Bog
History		[ ] Talus	[ ] Coniferous	[ ] Barren
[x] Natural		[ ] Crevice/Cave	[ ] Mixed	[ ] Meadow
[ ] Cultural		[ ] Alvar		[ ] Prairie
Cover		[ ] Rockland		[x] Thicket
[ ] Open		[ ] Beach / Bar		[ ] Savannah
[x] 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	3	4	Crataegus sp. – Malfurm – Rhacath – Rosblan
4	6	3	Solidago sp. – Symphyotrichum sp. – Phaarun

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 [X] Young [X] Mid-Age [ ] Mature [ ] Old Growth

Ecosite:	Mineral Cultural Thicket Ecosite	Code:	CUT1
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									Drainage
		Aspect									
		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										

* ASA *

ELC Community Description and Classification	Map #: 635GSH2369/2371		Polygon: CUM1-1	
	Surveyor(s): Jess Plett + Tom Shaver	Date: June 5, 2012	Time start: 12:00pm	finish: 12:48pm
	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.	ASA	☐ 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	6	4	phalaris >> solidago sp. - symphyotrichum sp. - Hesperis

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

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

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

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

Ecosite:		Code:	
Vegetation Type:	Dry-Moist Old field meadow Type	Code:	CUM1-1
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				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
Conifers					
Balsam Fir (*Abies balsamea*)					
Common Juniper (*Juniperus communis*)					
Eastern Red Cedar (*Juniperus virginiana*)					
Tamarack (*Larix laricina*)					
Norway Spruce (Picea abies)					
White Spruce (*Picea glauca*)					
Black Spruce (*Picea mariana*)					
Jack Pine (*Pinus banksiana*)					
Red Pine (*Pinus resinosa*)					
Eastern White Pine (*Pinus strobus*)					
Scotch Pine (*Pinus sylvestris*)					
Canada Yew (*Taxus canadensis*)					
Eastern White Cedar (*Thuja occidentalis*)					
Eastern Hemlock (*Tsuga canadensis*)					
Deciduous					
Manitoba Maple (*Acer negundo*)					
Black Maple (*Acer nigrum*)					
Norway Maple (*Acer platanoides*)					
Red Maple (*Acer rubrum*)					
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*)					
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*)					
American Hazel (*Corylus americana*)					
Beaked Hazel (*Corylus cornuta*)					
Cockspur Thorn (*Crataegus crus-galli*)					
English Hawthorn (*Crataegus monogyna*)					
Large-fruited Thorn (*Crataegus punctata*)					
Crataegus M	F				
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*)					
Black Ash (*Fraxinus nigra*)					
Green Ash (*Fraxinus pennsylvanica*)					
Witch-hazel (*Hamamelis virginiana*)					
Winterberry (*Ilex verticilata*)					
Butternut (*Juglans cinerea*)					
Black Walnut (*Juglans nigra*)					
Common Privet (*Ligustrum vulgare*)					
Spicebush (*Lindera benzoin*)					
Fly Honeysuckle (*Lonicera canadensis*)					
Glaucous Honeysuckle (*Lonicera dioica*)					
Morrow's Honeysuckle (*Lonicera morrowii*)					
Tartarian Honeysuckle (*Lonicera tatarica*)					
Common Apple (*Malus pumila*)	F				
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*)					
Prunus					

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

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

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

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

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

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

Map Number: L35GSH2369/2371	1					CUT1	4						
Date: June 5, 2012	2					CUM1-1	5						
Surveyors: JP/JS	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*)					
Giant Goldenrod (*Solidago gigantea*)					
Early Goldenrod (*Solidago juncea*)					
Gray Goldenrod (*Solidago nemoralis*)					
Solidago [illegible]	F	F			
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	U			
Com. Goatsbeard (*Tragopogon pratensis*)					
Coltsfoot (*Tussilago farfara*)					
Symphyotrichum sp		F			
Other Dicot Herbs					
White Baneberry (*Actaea pachypoda*)					
Red Baneberry (*Actaea rubra*)					
Tall Agrimony (*Agrimonia gryposepala*)					
Garlic Mustard (*Alliaria petiolata*)		U			
Green Amaranth (*Amaranthus retroflexus*)					
Hog-peanut (*Amphicarpe 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*)					
Yellow Avens (*Geum aleppicum*)					
White Avens (*Geum canadense*)					
Urban Avens (*Geum urbanum*)					
Dame's Rocket (*Hesperis matronalis*)		U			
Virg. Water-leaf (*Hydrophyllum virginianum*)					
Com. St. John's-wort (*Hypericum perforatum*)					
Spotted Jewelweed (*Impatiens capensis*)					
Wood Nettle (*Laportea canadensis*)					
Motherwort (*Leonurus cardiaca*)					
Field Peppergrass (*Lepidium campestre*)					
Eur. Gromwell (*Lithospermum officinale*)					
Butter & Eggs (*Linaria vulgaris*)					
Great Lobelia (*Lobelia siphilitica*)					
Lobelia					
Cut-leaf Bugleweed (*Lycopus americanus*)					
Northern Bugleweed (*Lycopus uniflorus*)					
Fringed Loosestrife (*Lysimachia ciliata*)					
Moneywort (*Lysimachia nummularia*)					
Lysimachia					
Purple Loosestrife (*Lythrum salicaria*)					
Black Medick (*Medicago lupulina*)					
Alfalfa (*Medicago sativa*)					
White Sweet-clover (*Melilotus alba*)					
Yellow Sweet-clover (*Melilotus officinalis*)					
Wild Mint (*Mentha arvensis*)					
Wild Bergamot (*Monarda fistulosa*)					
Small Forget-me-not (*Myosotis laxa*)					
Forget-me-not (*Myosotis scorpioides*)					
Water-cress (*Nasturtium officinale*)					
Com. Evening-primrose (*Oenothera biennis*)					
Sweet-cicely (*Osmorhiza berterii*)					
Yellow Wood-sorrel (*Oxalis stricta*)					
Wild Parsnip (*Pastinaca sativa*)					
English Plantain (*Plantago lanceolata*)					
Common Plantain (*Plantago major*)					
Rugel's Plantain (*Plantago rugelii*)					
May-apple (*Podophyllum peltatum*)					
Pale Smartweed (*Polygonum lapathifolium*)					
Lady's-thumb (*Polygonum persicaria*)					
Virginia Knotweed (*Polygonum virginianum*)					
Polygonum					
Polygonum					
Rough Cinquefoil (*Potentilla norvegica*)					
Rough-fruited Cinquefoil (*Potentilla recta*)					
Common Cinquefoil (*Potentilla simplex*)					
Potentilla					
Heal-all (*Prunella vulgaris*)					
Shinleaf (*Pyrola elliptica*)					

Dicot Herbs	1	2	3	4	5
Kidney-leaf Buttercup (*Ranunculus abortivus*)					
Tall Buttercup (*Ranunculus acris*)					
Hooked Buttercup (*Ranunculus recurvatus*)					
Ranunculus					
Sheep Sorrel (*Rumex acetosella*)					
Curly-leaf Dock (*Rumex crispus*)					
Bitter Dock (*Rumex obtusifolius*)					
Bloodroot (*Sanginaria canadense*)					
Black Snakeroot (*Sanicula marilandica*)					
Bouncing Bet (*Saponaria officinalis*)					
Marsh Skullcap (*Scutellaria galericulata*)					
Mad Dog Skullcap (*Scutellaria lateriflora*)					
White Campion (*Silene latifolia*)					
Bladder Campion (*Silene vulgaris*)					
Hemlock Water-parsnip (*Sium suave*)					
Bitter Nightshade (*Solanum dulcamara*)					
Black Nightshade (*Solanum ptychanthum*)					
Grassleaf Stitchwort (*Stellaria graminea*)					
Common Chickweed (*Stellaria media*)					
Early Meadow-rue (*Thalictrum dioicum*)					
Tall Meadow-rue (*Thalictrum pubescens*)					
Field Penny-cress (*Thlaspi arvense*)					
Foamflower (*Tiarella cordifolia*)					
Star-flower (*Trientalis borealis*)					
Red Clover (*Trifolium pratense*)					
White Clover (*Trifolium repens*)					
Trifolium					
Stinging Nettle (*Urtica dioica*)					
Greater Bladderwort (*Utricularia vulgaris*)					
Common Mullein (*Verbascum thapsus*)					
Blue Vervain (*Verbena hastata*)					
White Vervain (*Verbena urticifolia*)					
Water Speedwell (*Veron. anagallis-aquatica*)					
Common Speedwell (*Veronica officinalis*)					
Veronica					
Cow Vetch (*Vicia cracca*)					
Vicia					
Periwinkle (*Vinca minor*)					
Dog Violet (*Viola conspersa*)					
Yellow Violet (*Viola pubescens*)					
Com. Blue Violet (*Viola sororia*)					
Viola					
Monocot Herbs					
Water-plantain (*Alisma plantago-aquatica*)					
Wild Leek (*Allium tricoccum*)					
Jack-in-the-pulpit (*Arisaema triphyllum*)					
Asparagus (*Asparagus officinalis*)					
Wild Calla (*Calla palustris*)					
Bluebead-lily (*Clintonia borealis*)					
Garden Lily-of-valley (*Convallaria majalis*)					
Yel. Lady's Slipper (*Cypripedium parviflora*)					
Canada Waterweed (*Elodea canadensis*)					
Helleborine (*Epipactis helleborine*)					
Yellow Trout Lily (*Erythronium americanum*)					
Blue-flag Iris (*Iris versicolor*)					
Orange Day Lily (*Hemerocallus fulva*)					
Lesser Duckweed (*Lemna minor*)					
Starry Duckweed (*Lemna trisulca*)					
Wild Lily-of-valley (*Maianthemum canadense*)					
False Solom Seal (*Maianthemum racemosum*)					
Star False Solomon (*Maianthemum stellatum*)					
True Solomon Seal (*Polygonatum pubescens*)					
Pickerel-weed (*Pontederia cordata*)					
Curly-leaf Pondweed (*Potamogeton crispus*)					
Sago Pondweed (*Potamogeton pectinatus*)					
Potamogeton					
Potamogeton					
Broad-leaved Arrowhead (*Sagittaria latifolia*)					
Blue-eyed-grass (*Sisyrinchium montanum*)					
Herb. Carrion Flower (*Smilax herbacea*)					
Bristly Greenbrier (*Smilax hispida*)					
Nodding Ladies' Tresses (*Spiranthes cernua*)					
Rose Twisted-stalk (*Streptopus lanceolatus*)					
Skunk-cabbage (*Symplocarpus foetidus*)					
Purple Trillium (*Trillium erectum*)					
White Trillium (*Trillium grandiflorum*)					
Large-flowered Bellwort (*Uvularia grandiflora*)					

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

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

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

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

Map Number: 635 GSH2369/	1	CUT1	4		
Date: June 5, 2012	2	CUM-1	5		
Surveyors: JP/TT	3				

ASA

Significant Wildlife Habitat Form

AECOM

Study Area:	BLW JER (GSH)	Map #:	635-GSH2369/2371
Date:	2012-06-05	Time Started:	12:00 p.m
Field Staff:	Tom Storey, [illegible]	Time Finished:	12:48 p.m
Weather Conditions:	~~Sun~~ Partly Sunny, Light breeze 16°c		

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

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

UTMs: _____ [ ] Area of standing water delineated on field map

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

Potential to hold water until at least July in most years: Yes / No

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

Area and soil/substrate of shoreline habitat:

Type and abundance of cover in open water habitat:

Type and abundance of cover in surrounding habitat:

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

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

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

Snake Hibernacula

Fissured rock/foundation or rock/debris pile present:

[X] 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: [X] 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

✱ ASA ✱

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

AECOM

Map No: 635-GSH 2369 / GSH 2371
Date (yyyy-mm-dd): 2012-06-05
Field Staff: Tom Shorney / Jess Piette
Time Started: 12:00 P.M.
Time Finished: 12:48 P.M.

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Field Sparrow		VO					
Song Sparrow		VO					
Red Winged Blackbird		OB					
Flicker		OB					
Common yellow throat		VO					
Vesper Sparrow		VO					
Robin		OB					
Killdeer	on tracks	OB					
horned lark		VO					

Note: ***Evidence Codes (EV)***

<u>*Breeding Bird (Possible)*</u> *SH=Suitable Habitat, SM=Singing Male;*
<u>*Breeding Bird (Probable)*</u> *T=Territory, D=Display, P=Pair, N=Nest Building, V= Visiting Nest; A=Anxiety Behavior;*
<u>*Breeding Bird (Confirmed)*</u> *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)*

✱ N/O – Not observed ✱

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
PLANTS			
FOD7	**American Gromwell** (Lithospermum latifolium) - S3 <u>*Bloom Time*</u> *- 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 <u>Bloom Time</u> - 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 <u>*Bloom Time*</u> *- 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* <u>*Bloom Time*</u>*- 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 <u>*Bloom Time*</u> *–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* <u>*Bloom Time*</u> *– 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 <u>*Bloom Time*</u> *–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?* <u>*Bloom Time-*</u>	Found in mesic prairies, thickets, moist woods, roadsides and grassy meadows	Y (N) UTM:

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

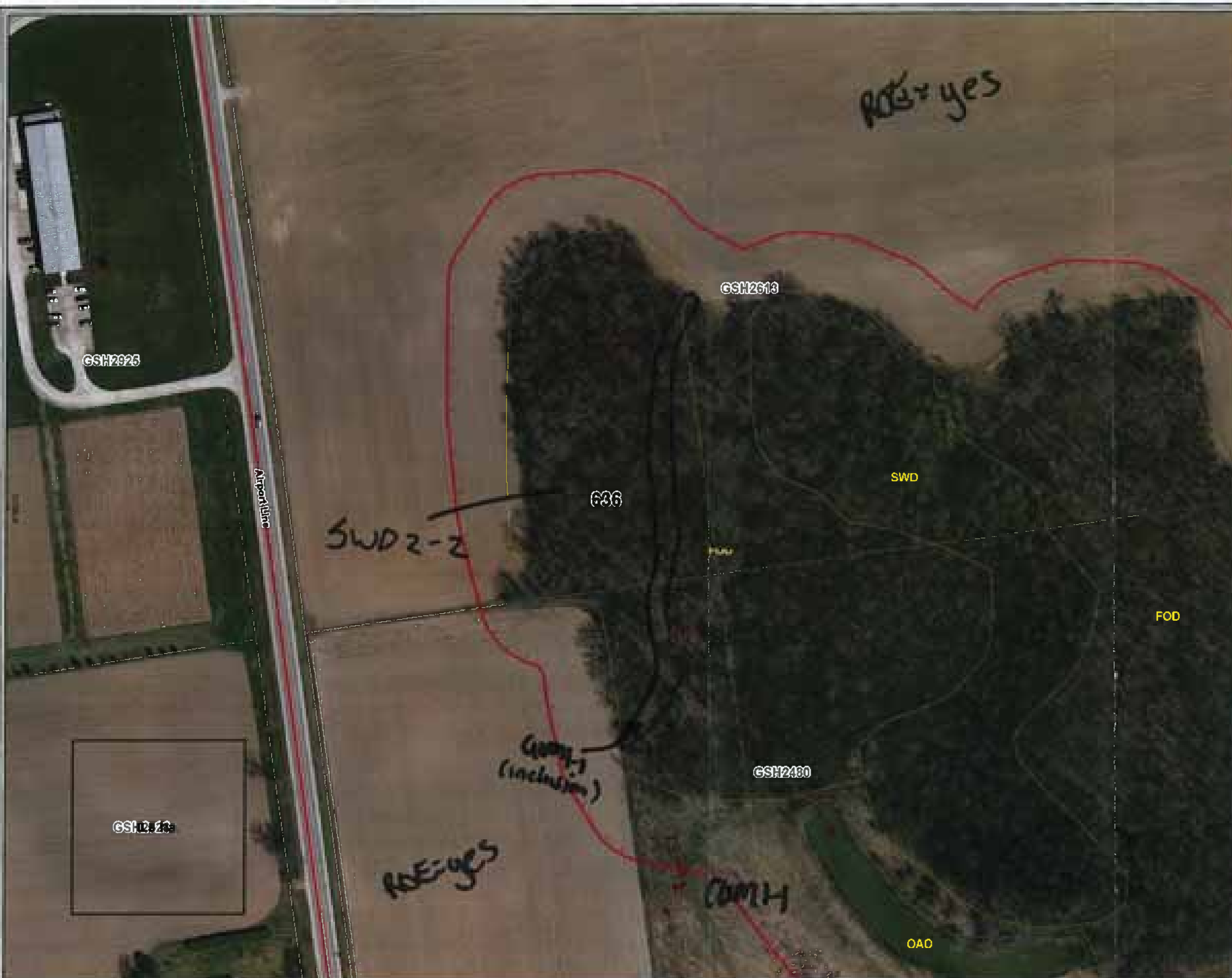
AECOM

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: N/O
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	**Prostate Tick-trefoil** *(Desmodium rotundifolium) –S2 Bloom Time – July-September*	Dry, sandy or rocky woods	Y N UTM:
FOD7, SWD	**Pumpkin Ash** *(Fraxinus profunda)-S2? Bloom Time – March - June*	Swamps and floodplains	Y N UTM:
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: N/O
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:
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: N/O
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: N/O
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:



Legend

- Transmission Line
- Waterbodies
- Watercourse
- PSW
- ABCA Regulation Limit
- Properties
- ELC
- Valleylands
- Disturbance Area (180m Buffer)

Basemapping from Ontario Ministry of Natural Resources
Orthophotography 2010
Turbine Layout April 4, 2012

0 12.5 25 50 m
1:1,500
UTM Zone 17N NAD 83

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ELC Survey

Goshen ELC Survey - Transmission Line 636_GSH2613/2480

April 2012
Project 60155032

AECOM

Figure 1

ELC
Community Description and Classification

Map #: 636GSH2613/2480		Polygon: SWD2-2	
Surveyor(s): Jess Petter Tom Shrivley	Date: May 3, 2012	Time start: 1:46 pm	finish: 3:15 pm
UTMZ: 459634	UTMZ: 4795983	UTMN:	

Polygon Description

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

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1	1	4	FRAPENN >> ALESACC > ULMAMER
2	2	3	ULMAMER > FRAPENN > ACEFARE
3	3	2	PRUVIRG = RHACATH = CRATAEGUS sp.
4	C	3	CARGRAN = CAREX sp. > GEUMACU = MIAYACE

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:	O	<10	A	10-24	A	25-50	R	>50
	Standing Snags:	N	<10	O	10-24	R	25-50	N	>50
	Deadfall / Logs:	O	<10	A	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:	Ash Mineral Deciduous Swamp Ecosite	Code:	SWD2
Vegetation Type:	Green Ash Mineral Deciduous Swamp Type	Code:	SWD2-2
Inclusion:	Dry-Moist Old Field Meadow Type	Code:	CUM1-1
Complex:		Code:	

Community Profile Diagram/Comments

- undulating topography
- drier species on mounds throughout
- >20% pooling within entire community

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	459634				
		Northing	4795983				
	Slope	Position	Flat				Drainage
		Aspect	—				
		Percent	—				
		Slope Length	—				
Depth to...		Mottles	10cm				Effective Texture (indicate below)
		Gley	20cm				
		Water Table	30cm				
		Carbonates	/				
		Bedrock	/				

Soil Horizon Description				% CF		% CF		% CF		% CF
	1	Depth from zero	13cm	% CF		% CF		% CF		% CF
		Texture	SiC							
	2	Depth from zero	50cm	% CF		% CF		% CF		% CF
		Texture	C							
	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	Map #: 636GSH2613/2480		Polygon: CUM1-1	
	Surveyor(s): Jess Riette/Tom Sheehy	Date: May 3, 2012	Time start: 1:46 pm finish: 3:15 pm	
	UTMZ: 459634	UTMZ: 4795983	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	6	4	grass sp > Sal sp = Sym sp > Tar off.

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

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

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

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

Ecosite:	Mineral Cultural Meadow Ecosite	Code:	CUM1
Vegetation Type:	Dry-Moist Old Field Meadow Type	Code:	CUM1-1
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

Site Metrics		Pit/Auger #								Summary
	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									

Plant Species List
2012

Trees & Shrubs	1	2	3	4	5
Conifers					
Balsam Fir *(Abies balsamea)*					
Common Juniper *(Juniperus communis)*					
Eastern Red Cedar *(Juniperus virginiana)*					
Tamarack *(Larix laricina)*					
Norway Spruce (Picea abies)					
White Spruce *(Picea glauca)*					
Black Spruce *(Picea mariana)*					
Jack Pine *(Pinus banksiana)*					
Red Pine *(Pinus resinosa)*					
Eastern White Pine *(Pinus strobus)*					
Scotch Pine *(Pinus sylvestris)*					
Canada Yew *(Taxus canadensis)*					
Eastern White Cedar *(Thuja occidentalis)*					
Eastern Hemlock *(Tsuga canadensis)*					
Deciduous					
Manitoba Maple *(Acer negundo)*					
Black Maple *(Acer nigrum)*					
Norway Maple *(Acer platanoides)*					
Red Maple *(Acer rubrum)*					
Silver Maple *(Acer saccharinum)*					
Freeman's Maple *(Acer X freemanii)*		F			
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)*					
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)*					
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)*					
Black Ash *(Fraxinus nigra)*					
Green Ash *(Fraxinus pennsylvanica)*		D			
Witch-hazel *(Hamamelis virginiana)*					
Winterberry *(Ilex verticilata)*					
Butternut *(Juglans cinerea)*					
Black Walnut *(Juglans nigra)*					
Common Privet *(Ligustrum vulgare)*					
Spicebush *(Lindera benzoin)*					
Fly Honeysuckle *(Lonicera canadensis)*					
Glaucous Honeysuckle *(Lonicera dioica)*					
Morrow's Honeysuckle *(Lonicera morrowii)*					
Tartarian Honeysuckle *(Lonicera tatarica)*					
Common Apple *(Malus pumila)*					
White Mulberry *(Morus alba)*					
Sweet Gale *(Myrica gale)*					
Ironwood *(Ostrya virginiana)*					
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)*					
Prunus					

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

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

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

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

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

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

Map Number: 676GSH2613/2480	1			4	Cum 1-1
Date: May 3, 2012	2			5	SWD 2-2
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*)					
Giant Goldenrod (*Solidago gigantea*)					
Early Goldenrod (*Solidago juncea*)					
Gray Goldenrod (*Solidago nemoralis*)					
Solidago	F				
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*)	F	U			
Com. Goatsbeard (*Tragopogon pratensis*)					
Coltsfoot (*Tussilago farfara*)					
Symphyotrichum sp	F				

Other Dicot Herbs	1	2	3	4	5
White Baneberry (*Actaea pachypoda*)					
Red Baneberry (*Actaea rubra*)					
Tall Agrimony (*Agrimonia gryposepala*)					
Garlic Mustard (*Alliaria petiolata*)	U				
Green Amaranth (*Amaranthus retroflexus*)					
Hog-peanut (*Amphicarpa bracteata*)					
Pearly Everlasting (*Anaphalis margaritacea*)					
Canada Anemone (*Anemone canadensis*)					
Ivy Hepatica (*Anemone acutiloba*)					
Thimbleweed (*Anemone virginiana*)					
Purple Angelica (*Angelica atropurpurea*)					
Indian Hemp (*Apocynum cannabinum*)					
Wild Sarsaparilla (*Aralia nudicaulis*)					
Spikenard (*Aralia racemosa*)					
Wild Ginger (*Asarum canadense*)					
Swamp Milkweed (*Asclepias incarnata*)					
Common Milkweed (*Asclepias syriaca*)	U				
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 np		R			
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*)	F				
Deptford Pink (*Dianthus armeria*)					
Squirrel-corn (*Dicentra canadensis*)					
Dutchman's-breeches (*Dicentra cucullaria*)					
Wild Teasel (*Dipsacus fullonum*)	F				
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*)					
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*)		U			
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*)					
Pale Smartweed (*Polygonum lapathifolium*)					
Lady's-thumb (*Polygonum persicaria*)					
Virginia Knotweed (*Polygonum virginianum*)					
Polygonum					
Polygonum					
Rough Cinquefoil (*Potentilla norvegica*)					
Rough-fruited Cinquefoil (*Potentilla recta*)	U				
Common Cinquefoil (*Potentilla simplex*)					
Potentilla					
Heal-all (*Prunella vulgaris*)					
Shinleaf (*Pyrola elliptica*)					

Dicot Herbs	1	2	3	4	5
Kidney-leaf Buttercup (*Ranunculus abortivus*)		U			
Tall Buttercup (*Ranunculus acris*)					
Hooked Buttercup (*Ranunculus recurvatus*)					
Ranunculus					
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 (*Utricularia vulgaris*)					
Common Mullein (*Verbascum thapsus*)					
Blue Vervain (*Verbena hastata*)					
White Vervain (*Verbena urticifolia*)					
Water Speedwell (*Veron. anagallis-aquatica*)					
Common Speedwell (*Veronica officinalis*)					
Veronica					
Cow Vetch (*Vicia cracca*)					
Vicia					
Periwinkle (*Vinca minor*)					
Dog Violet (*Viola conspersa*)					
Yellow Violet (*Viola pubescens*)					
Com. Blue Violet (*Viola sororia*)					
Viola np		U			

Monocot Herbs	1	2	3	4	5
Water-plantain (*Alisma plantago-aquatica*)					
Wild Leek (*Allium tricoccum*)					
Jack-in-the-pulpit (*Arisaema triphyllum*)		R			
Asparagus (*Asparagus officinalis*)					
Wild Calla (*Calla palustris*)					
Bluebead-lily (*Clintonia borealis*)					
Garden Lily-of-valley (*Convallaria majalis*)					
Yel. Lady's Slipper (*Cypripedium parviflora*)					
Canada Waterweed (*Elodea canadensis*)					
Helleborine (*Epipactis helleborine*)					
Yellow Trout Lily (*Erythronium americanum*)		R			
Blue-flag Iris (*Iris versicolor*)					
Orange Day Lily (*Hemerocallus fulva*)					
Lesser Duckweed (*Lemna minor*)					
Starry Duckweed (*Lemna trisulca*)					
Wild Lily-of-valley (*Maianthemum canadense*)					
False Solom Seal (*Maianthemum racemosum*)	U	U			
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*)					

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

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

Map Number: 636PSH2613/2480	1	CUM1-1	4	
Date:	2	SWD2-2	5	
Surveyors:	3			

Significant Wildlife Habitat Form

AECOM

Study Area: BLW JER (GSH) Map #: 636-GSH2613/2480
Date: 2012-05-03 Time Started: 1:46 P.m
Field Staff: Tom Sheeney Jess Pichette Time Finished: 3:15 P.m
Weather Conditions: Cloudy, 25°c Light breeze

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

Nest bowls present: ☒ No ☐ Yes (*if yes, photograph and complete the following*)
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: Large Pond outside of study area ☐ Area of standing water delineated on field map
Water depth (m): unknown % open water: ≥95 % emergent vegetation:
Description of standing water (permanent pool, evidence of annual spring flooding, etc):
* Large Pond, Approx 100 m long and 15-20 m long + heard Am. Toad
Area and soil/substrate of shoreline habitat: and green Frog. *
Type and abundance of cover in open water habitat: * Swamp is dry this year, but shows evidence of water in wetter years *
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, dimentions, 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

Map No: 636 – 6SH2613/2480
Date (yyyy-mm-dd): 2012-05-03
Field Staff: Tom Shorney, Jess Piette
Time Started: 1:46 P.m.
Time Finished: 3:15 P.m.

Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Eastern com[illegible]		OB					
Cabbage white		OB					
American Toad		VO					
Deer		TKS					
Chimney Crayfish		HO	Along wet area				
Red-winged Blackbird		VO					
Green Frog		VO	in Pond				

Note: *Evidence Codes (EV)*

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

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

Not observed → N/O

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

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

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

A. OM

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: N/O
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: N/O
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: 636GSH 2613/2480
Date (yyyy-mm-dd): May 3, 2012	Time Started: 1:46pm
Field Staff: Jess Pietke + Tom Shorney	Time Finished: 3:15pm

Presence of Groundwater No ☒ Yes ☐

☐ bank seepage ☐ iron staining ☐ groundwater indicator

Site Type

Lacustrine ☐ (associated with lakes) Isolated ☒

Riverine ☐ (associated with rivers)

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

what are the water inputs and outputs? Surface water + effects from pond

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
SWD2-2/ S1	h*: Frapenn, Acefree, Ulmamer ne: Carcrin, carex sp

Wetland Data Collection Sheet

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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

→ Waterfowl breeding potential in adjacent pond

→ undulating topography throughout

→ evidence of management within 5 years

Legend
- Property Boundary
- Prime Transmission Line
- Prime Transmission Line Buffer (180 m)
- ELC Completed 2011
- Natural Feature and ID
- ELC Polygon Boundary
- ANSI
- Evaluated Wetlands - PSW
- ABCA Watercourse

Basemapping from Ontario Ministry of Natural Resources Orthophotography 2010

Metres: 0 25 50 100

1:3,000

UTM Zone 17N NAD 83

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Goshen ELC Survey

637_GSH2370

May 2012
Project 60155032

AECOM

Figure 1

Map Document: (N:\projects\0-aecom\60155032\2010\Final\GIS\Spatial\MXDs\Field\Maps\MXDs\Project_ELC_Mapping\Goshen\GSH_Amphibian\60155032_GSH_Amphibian\ELCSurveySites_372_GSH1115.mxd)
4/12/2012 - 8:19:21 PM

ELC Community Description and Classification	Map #: 637GSH2370		Polygon: CUP3a	
	Surveyor(s): Jess Reitt + Tom Shorney	Date: May 31, 2012	Time start: 1:07 pm	finish: 3:51 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	2	4	PinSylv > PinStro > JugNigR > PopDelt
2	—	—	
3	4	1	FraPenN –
4	6	5	Dacglom > grass species

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

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

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

Ecosite:	Coniferous Plantation Type	Code:	CUP3a
Vegetation Type:		Code:	
Inclusion:	Black Walnut Deciduous Plantation Type	Code:	CUP1-3
Complex:		Code:	

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Prism Factor	2

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

Soils Ontario and ELC Soils Description

		Pit/Auger #				Summary
Site Metrics	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									