



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

**Goshen Feature: 229 GSH1740**

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



September 1, 2011



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



**ELC** Community Description and Classification

Site: 229\_GSH1740 Polygon: **14:30**

Surveyor(s): **Kamstra** Date: **Oct 13/11** Time **15:00**

UTMZ: **17** UTMZ: **450740** UTMN: **4792270**

**Polygon Description**

System	Substrate	Topographic Feature	Plant Form	Community
<input type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic	<input type="checkbox"/> Organic <input type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Mtn. <input type="checkbox"/> Acidic Bedrk <input type="checkbox"/> Basic Bedrk <input type="checkbox"/> Shallow Water <input type="checkbox"/> Surficial Dep. <input type="checkbox"/> Bedrock	<input type="checkbox"/> Lacustrine <input type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input type="checkbox"/> Valley Slope <input type="checkbox"/> Stableland <input type="checkbox"/> Roll, Upland <input type="checkbox"/> Cliff <input type="checkbox"/> Talus <input type="checkbox"/> Crevice/Cave <input type="checkbox"/> AValer <input type="checkbox"/> Rockland <input type="checkbox"/> Beach / Bar <input type="checkbox"/> Sand Dune <input type="checkbox"/> Bluff	<input type="checkbox"/> Plankton <input type="checkbox"/> Submerged <input type="checkbox"/> Floating-L.V.D. <input type="checkbox"/> Graminoid <input type="checkbox"/> Forb <input type="checkbox"/> Lichen <input type="checkbox"/> Bryophyte <input type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Mixed	<input type="checkbox"/> Lake <input type="checkbox"/> Pond <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Marsh <input type="checkbox"/> Swamp <input type="checkbox"/> Fen <input type="checkbox"/> Bog <input type="checkbox"/> Barren <input type="checkbox"/> Meadow <input type="checkbox"/> Prairie <input type="checkbox"/> Thicket <input type="checkbox"/> Savannah <input type="checkbox"/> Woodland <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Plantation

**Stand Description**

Species in Order of Decreasing Dominance (up to 4 sp)  
 (> Much Greater Than, > Greater Than, = About Equal To)

Layer	HT	CVR	Notes
1	2	4	Timber -> Almones - Carced-Fectur
2	3	3	Portbey - Fucua -> Mopulu
3	3	3	Rubide
4	6	2	Alpits - Gucaven - Ast-lave.

HT Codes: 7 <0.2m 8 >0.2-0.5m 5 >0.5-1m 4 >1-2m 3 >2-6m 2 >6-25m 1 >25m

CVR Codes: 0 = none 1 0% - 10% 2 10 - 25% 3 25 - 50% 4 50 - 75% 5 75 - 90% 6 >90%

Stand Composition: Size Class Analysis:  <10  10-24  25-50  >50

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

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

Ecocler:  Veg. station **df Basswood Dec Forest** Code: **KSD 4-**

Inclusion:  Code:

Comp. lev:  Code:

**Community Profile Diagram/Comments**

Notes: *Broad-headedness of trees - 2 Field edge effects*

**Tree Tally by Species**

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

**Soils Ontario and ELC Soils Description**

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

**Soil Horizon Description**

Horizon	Depth to... (cm)	Texture	% CF
1	Depth from zero		% CF
2	Depth from zero		% CF
3	Depth from zero		% CF
4	Depth from zero		% CF



VASCULAR PLANT CHECKSHEET

Location: *Coshen 229 BSH*  
 Observer:

Date: *Oct*  
 Job Number:

DICOT HERBS												MONOCOT HERBS											
1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6						
Achillea millefolida						Erigeron annuus	X					Plantago lanceolata						Alisma plantago-aquatica					
Actaea pachypoda						Erigeron philadelphicus						Plantago major						Allium tricoccum					
Actaea rubra						Erigeron strigosus						Plantago rugelii						Allium					
Agalinus						Erysimum chrisanthoides	X					Podophyllum peltatum						Arisaema phytolium					
Agrimonia gryposepala						Eupatorium maculatum						Polygonum						Asteraceae officinalis					
Alliaria petiolata	X					Eupatorium perfoliatum						Polygonum <i>perfoliatum</i>	X					Celastrus					
Amaranthus retrofractus	X					Eupatorium rugosum						Polygonum						Cirsium boreale					
Ambrosia artemisiifolia	X					Euphorbia						Polygonum lapathifolium						Conwallaria maia					
Amphicarpaea baccata						Euthamia graminifolia						Polygonum persicaria						Cypripedium calceolus					
<del>Anemone</del>						Fragaria virginiana						Potentilla						Echinocandensis					
Anemone canadensis						Fragaria vesca						Potentilla norvegica						Equisetum hyemale					
Anemone virginiana						Galeopsis tetrahit						Potentilla recta						Erythronium americanum					
Antennaria neglecta						Galium						Prenanthes alba						Hemerocallis flava					
Apocynum androsaemifolium						Galium						Prunella vulgaris						Iris versicolor					
Apocynum cannabinum						Galium pilosum						Pyrola elliptica						Lemna minor					
Aquilegia canadensis						Galium triflorum						Ranunculus						Lemna trilineata					
Aralia nudicaulis						Geranium maculatum						Ranunculus abortivus						Lilium					
Arcifolium minus	X					Geranium robertianum	X					Ranunculus acris						Moronechium canadense					
Artemisia						Geum aleppicum						Rumex crispus						Moronechium racemosa					
Asarum canadense						Geum canadense	X					Rumex acetosella						Moronechium stellata					
Asclepias incarnata						Geum <i>albigenum</i>	X					Rumex crispus						Podalyria					
Asclepias syriaca						Glocoma hederacea						Rumex						Potentilla cordata					
Aster						Hepatica acutiloba						Sanguinaria canadensis						Polygonatum pubescens					
Aster cordifolius						Hebeptis matronalis						Sanicula marilandica						Potamogeton crispus					
Aster ericoides						Hieracium aurantiacum						Saponaria officinalis						Potamogeton pectinatus					
Aster lanceolatus	X					Hieracium caespitosum						Satureja vulgaris						Potamogeton					
Aster lateriflorus						Hieracium						Scutellaria galericulata						Potamogeton					
Aster macrophyllus						Hydrophyllum virginianum						Silene vulgaris						Potamogeton					
Aster novae-angliae	X					Hypocitricum perforatum						Sium suave						Sagittaria latifolia					
Aster puniceus						Impatiens capensis						Solanum dulcamara	X					Skarynchim montanum					
Barbarea vulgaris						Inula helenium						Solidago						Smilax herbacea					
Bidens cernua						Lactuca <i>serotina</i>	X					Solidago altissima						Spiranthes cernua					
Bidens frondosa						Laportea canadensis						Solidago cassia						Spirodela polyrriza					
Boerhaeria cylindrica						Lapsana communis						Solidago canadensis	X					Strepitopus roseus					
Caltha palustris						Leonurus cardiaca						Solidago flexicaulis						Trillium erectum					
Calyssegia asplum						Lepidium						Solidago gigantea						Trillium grandiflorum					
Cardamine diphylla						Linaria vulgaris						Solidago nemoralis						Urtularia grandiflora					
Cardamine						Lithospermum officinale						Solidago rugosa											
Caulyophyllum thalictroides						Lobelia						Sonchus orensensis											
Cerastium fontanum						Lobelia inflata						Sonchus asper											
Ceratophyllum demersum						Lotus corniculatus						Stellaria											
Chalidonium majus						Lycopus americanus						Tanacetum vulgare											
Chenopodium album						Lycopus						Tanacetum officinale	X										
Chrysanth. leucanthemum						Lysimachia ciliata						Thalictrum dictum											
Cichorium intybus						Lythrum salicaria						Thalictrum pubescens											
Cicuta						Medicago lupulina						Tiarella cordifolia											
Circaea leutelliana						Medicago sativum						Tragopogon pratensis											
Cirsium arvense						Mallofus alba						Trifolium borealis											
Cirsium vulgare						Mertitha arvensis						Trifolium											
Clematis virginiana						Mimulus ringens						Trifolium pratense											
Cirsionia borealis						Mimulus ringens						Trifolium repens											
Coryza canadensis						Moronechium fistulosa						Tussilago farfara											
Coronilla varia						Mycospha						Urtica dioica											
Cynanchum roseum						Nasturtium officinale						Urticularia vulgaris											
Cynoglossum officinale						Nasturtium oleraceum						Verbascum thapsus											
Daucus carota	X					Nuphar variegatum						Verbena hastata											
Desmodium canadense						Nymphaea odorata						Verbena urticifolia											
Dianthus ameria						Oenothera biennis						Veronica											
Dipsacus fulorum	X					Osmorhiza						Veronica officinalis											
Echinochysis lobata						Oxalis stricta						Viola cracca	X										
Echium vulgare						Phytolacca heterophylla						Viola tetrasperma											
Epilobium						Physalis heterophylla						Viola											
Epilobium ciliatum												Viola pubescens											
Epilobium hirsutum												Viola sororia											
Epilobium parviflorum												<i>Viola minor</i>	X										
<i>Abutilon</i>	X																						

SITE LOCATIONS

- 1: *BSH 1970*
- 2: \_\_\_\_\_
- 3: \_\_\_\_\_
- 4: \_\_\_\_\_
- 5: \_\_\_\_\_
- 6: \_\_\_\_\_

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

<b>ELC</b>  <b>WILDLIFE</b>	<b>SITE:</b> 229 GSH 1740	
	<b>POLYGON:</b>	
	<b>DATE:</b> Oct 13 / 2011	
	<b>SURVEYORS:</b> J. Kainstva	
	<b>START TIME:</b> 19:30	<b>END TIME:</b>

<b>TEMP (°C):</b> 15	<b>CLOUD (10th):</b> 10	<b>WIND:</b> 2	<b>PRECIPITATION:</b> 0
<b>CONDITIONS:</b> earlier rain, heavy overcast			

**POTENTIAL WILDLIFE HABITAT:**

<input type="checkbox"/>	VERNAL POOLS	<input checked="" type="checkbox"/>	SNAGS	Some
<input type="checkbox"/>	HIBERNACULA	<input type="checkbox"/>	FALLEN LOGS	
<input checked="" type="checkbox"/>	Hedgeow			

**SPECIES LIST:**

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	AMPipit	OB	in field	10	L	Monarch	OB		
	AMGO	..		3					
	SOSP	..	flock	15					
	NOFL	VO		1					
	BLJA	VO		1					
	WCSP	OB	flocks	5					
M	coyote	TK							

**FAUNAL TYPE CODES (TY):**

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

**EVIDENCE CODES (EV):**

**BREEDING BIRD - POSSIBLE:**

SH = SUITABLE HABITAT SM = SINGING MALE

**BREEDING BIRD - PROBABLE:**

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

**BREEDING BIRD - CONFIRMED:**

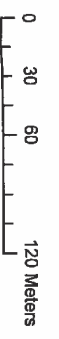
DD = DISTRACTION NU = USED NEST FY = FLEDGED YOUNG  
NE = EGGS NY = YOUNG FS = FOOD/FECAL SACK  
AE = NEST ENTRY

**OTHER WILDLIFE EVIDENCE:**

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

**Goshen Feature: 229 GSH1975/1976/1740**

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

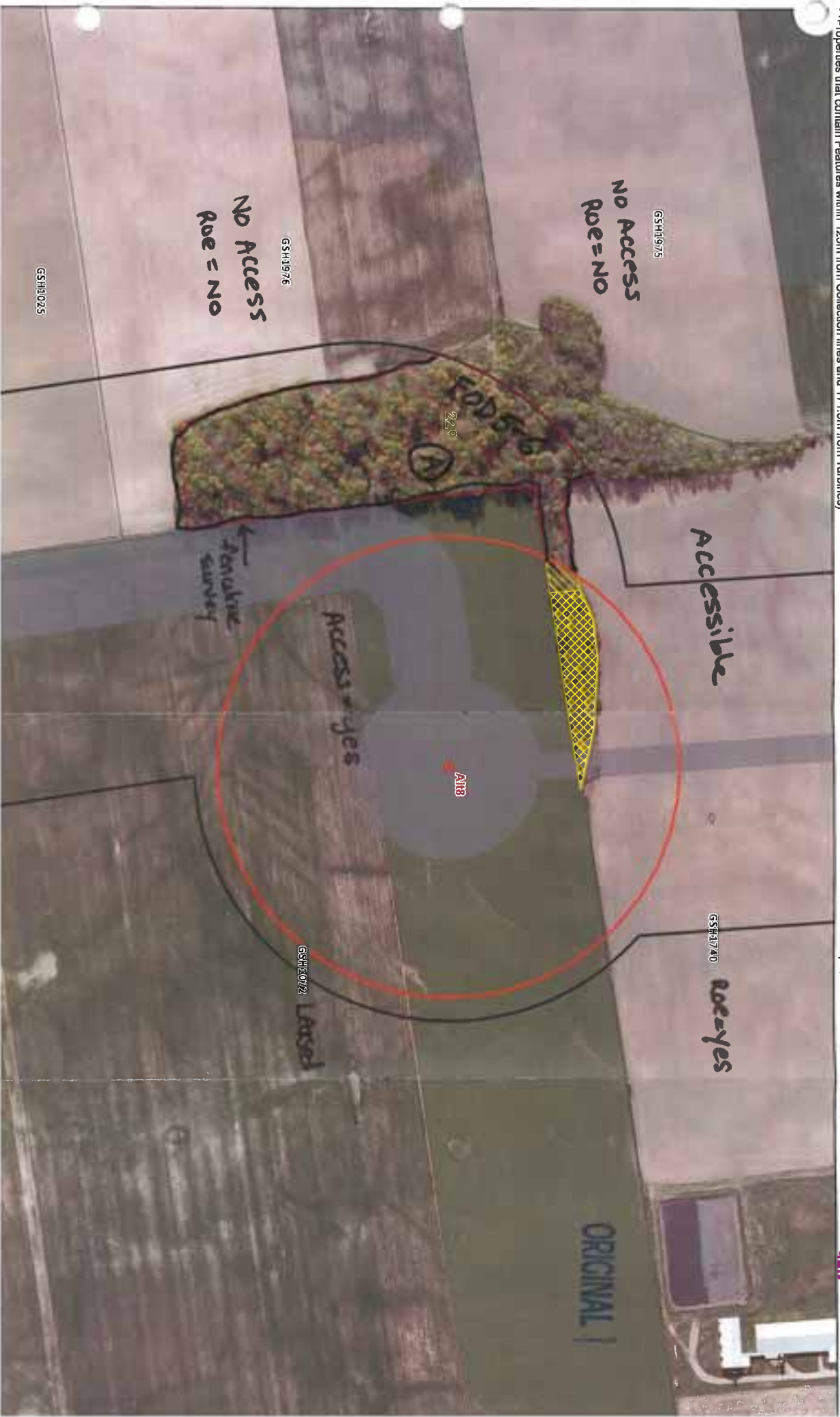


October 28, 2011



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

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







VASCULAR PLANT CHECKSHEET

Location: G51  
 Observer: JES+JAB

Date: July 28, 2011  
 Job Number: Nov 9, 2011

Dicot Herbs						Dicot Herbs						Monocot Herbs											
1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6						
Achillea millefolium	X					Erigeron annuus	X					Parthenocissus vitacea						Alopecurus pratensis					
Actaea pachypoda						Erigeron philadelphicus	X					Parthenocissus major						Alopecurus tricochium					
Actaea rubra						Erigeron strigosus						Parthenocissus rugellii						Allium					
Agalinus						Erysimum cheiranthoides						Polypodium carolinianum						Aster multiflorus					
Agrostis gryposepala						Eupatorium maculatum						Polypodium						Aster officinalis					
Agrostis pallens	X	X				Eupatorium perfoliatum						Polypodium						Centaurea					
Amaranthus retrofractus						Eupatorium rugosum						Polypodium						Centaurea montana					
Ambrosia artemisiifolia						Eupatorium						Polypodium bipartitum						Centaurea scabra					
Ampelodesmos braconia						Eupatorium						Polypodium canadense						Centaurea uniflora					
Anaphalis margaritacea						Eupatorium						Polypodium						Centaurea jacobaea					
Anemone						Eupatorium						Polypodium						Centaurea leucantha					
Anemone canadensis						Eupatorium						Polypodium						Centaurea nigra					
Anemone virginiana						Eupatorium						Polypodium						Centaurea scabra					
Arenaria neglecta						Eupatorium						Polypodium						Centaurea uniflora					
Apocynum androsaemifolium						Eupatorium						Polypodium						Centaurea uniflora					
Apocynum cannabinum	X					Eupatorium						Polypodium						Centaurea uniflora					
Asplenium canadense						Eupatorium						Polypodium						Centaurea uniflora					
Asplenium nidus						Eupatorium						Polypodium						Centaurea uniflora					
Aster minus	X					Eupatorium						Polypodium						Centaurea uniflora					
Artemisia						Eupatorium						Polypodium						Centaurea uniflora					
Asarum canadense						Eupatorium						Polypodium						Centaurea uniflora					
Asclepias incarnata						Eupatorium						Polypodium						Centaurea uniflora					
Asclepias syriaca						Eupatorium						Polypodium						Centaurea uniflora					
Aster	X					Eupatorium						Polypodium						Centaurea uniflora					
Aster cordifolius						Eupatorium						Polypodium						Centaurea uniflora					
Aster ericoides						Eupatorium						Polypodium						Centaurea uniflora					
Aster lanceolatus						Eupatorium						Polypodium						Centaurea uniflora					
Aster laevis						Eupatorium						Polypodium						Centaurea uniflora					
Aster macrophyllus						Eupatorium						Polypodium						Centaurea uniflora					
Aster novae-angliae						Eupatorium						Polypodium						Centaurea uniflora					
Aster purpureus						Eupatorium						Polypodium						Centaurea uniflora					
Barbarea vulgaris						Eupatorium						Polypodium						Centaurea uniflora					
Bidens cernua						Eupatorium						Polypodium						Centaurea uniflora					
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CONIFERS							TREES and SHRUBS							GRAMINOIDS						
1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6			
Abies balsamea						+	Rosa multiflora										Agrostis gigantea			
Juniperus communis							Rosa										Agrostis stolonifera			
Juniperus virginiana							Rubus allegheniensis										Agropyron repens			
Larix laricina							Rubus idaeus			X							Alopecurus			
Picea abies							Rubus occidentalis			X							Bromus inermis			
Picea glauca							Rubus odoratus			X							Calamagrostis canadensis			
Pinus resinosa							Rubus ptibescens										Carex arctata			
Pinus strobus							Salix alba										Carex aurea			
Pinus sylvestris							Salix amygdaloides										Carex bebbii			
Thuja occidentalis							Salix bebbiana										Carex blanda			
Tsuga canadensis						+	Salix discolor										Carex gracillima			
							Salix eriocephala										Carex graminifera			
							Salix exigua										Carex hystericina			
							Salix lucida										Carex pensylvanica			
							Salix petiolaris										Carex radiata			
TREES and SHRUBS						+	Salix purpurea										Carex retrorsa			
Acer negundo							Salix x rubens										Carex stricta			
Acer rubrum						+	Salix										Carex stricta			
Acer saccharinum							Sambucus canadensis										Carex vulpinoidea			
Acer saccharum	X		X				Sambucus racemosa										Carex			
Acer spicatum							Sorbus aucuparia										Carex			
Alnus rugosa							Sorbus alba										Carex			
Amelanchier							Syringa vulgaris										Carex			
Berberis thunbergii						+	Tilia americana		X	X							Carex			
Betula alleghaniensis							Ulmus americana		X	X							Carex			
Betula papyrifera							Ulmus										Carex			
Carpinus caroliniana							Vaccinium										Carex			
Carya cordiformis			X				Viburnum lentago										Carex			
Celastrus scandens							Viburnum opulus										Cyperus			
Cornus alternifolia	X						Viburnum										Cyperus			
Cornus amomum			X				Vitis riparia		X	X							Dactylis glomerata			
Cornus rugosa			X														Danthionia spicata			
Cornus stolonifera			X														Echinochloa crus-galli			
Corylus cornuta																	Eleocharis erythropoda			
Crataegus monogyna																	Eleocharis			
Crataegus punctata																	Elymus virginicus			
Crataegus sp.	X																Elymus			
Crataegus																	Festuca arundinacea			
Diervilla lonicera																	Glyceria striata			
Fagus grandifolia			X														Glyceria			
Fraxinus americana	X		X														Juncus dudleyi			
Fraxinus nigra							FERNS										Juncus effusus			
Fraxinus pensylvanica							Adiantum pedatum										Juncus tenuis			
Ilex verticillata							Athyrium filix-femina										Juncus			
Juglans cinerea							Botrychium multifidum										Juncus			
Juglans nigra							Botrychium virginianum										Leersia oryzoides			
Lonicera morrowi							Cyatopteris bulbifera										Muhlenbergia			
Lonicera tatarica							Dryopteris carthusiana										Oryzopsis asperifolia			
Lonicera							Dryopteris cristata										Panicum			
Malus pumila	X						Dryopteris marginalis										Panicum			
Ostrya virginiana			X				Dryopteris										Phalaris arundinacea			
Parthenocissus inberia							Equisetum arvense										Phleum pratense			
Populus balsamifera							Equisetum hyemale										Phragmites australis			
Populus grandidentata							Equisetum variegatum										Poa compressa			
Populus tremuloides	X						Equisetum										Poa pratensis			
Populus							Gymnocarpium dioprepis										Poa			
Prunus pensylvanica							Lycopodium digitatum										Scirpus atrovirens			
Prunus serotina							Lycopodium obscurum										Scirpus cyperinus			
Prunus virginiana							Lycopodium										Scirpus validus			
Prunus							Lycopodium										Scirpus			
Quercus macrocarpa							Mattencia struthiopteris										Scirpus			
Quercus rubra			X				Ozoclea sensibilis			X							Setaria			
Quercus							Osmunda cinnamomea										Sparganium			
Rhamnus cathartica							Osmunda regalis										Typha angustifolia			
Rhus radicans			X				Polystichum acrostichoides										Typha latifolia			
Rhus typhina							Pteridium aquilinum										Typha Xglauca			
Ribes americana							Thelypteris palustris													
Ribes cynosbati																				
Ribes x rubrum																				
Robinia pseudo-acacia																				
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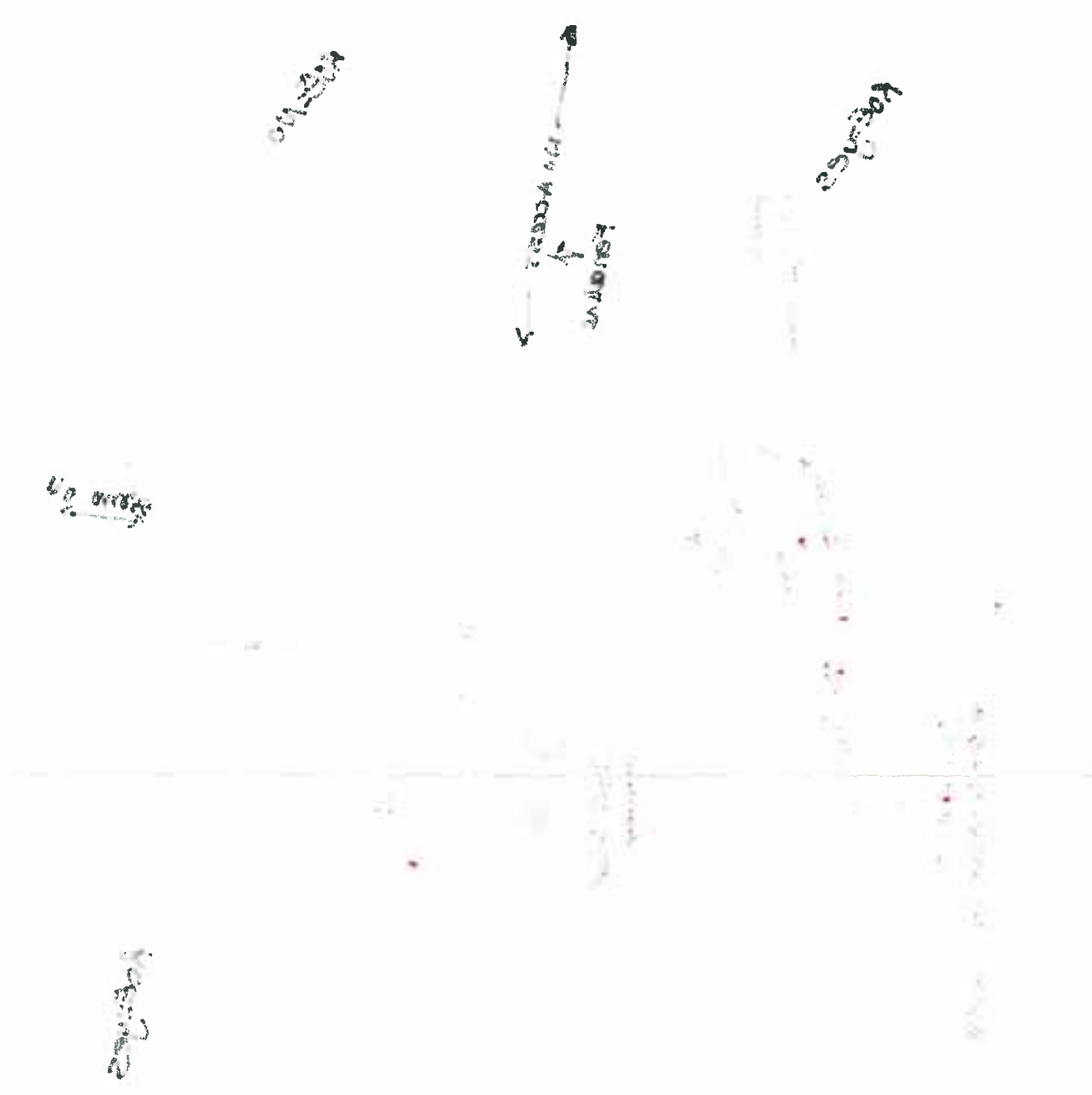
with Adolite



Den Slope  
 oval (Possible Bedden Den)  
 - in Sand  
 #29



Coord 450602  
 4791983





Plant Species List  
2012

Dicot Herbs - Asteraceae					Dicot Herbs					Dicot Herbs				
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Common Yarrow ( <i>Achillea millefolium</i> )					Shepherd's Purse ( <i>Capsella bursa-pastoris</i> )					Kidney-leaf Buttercup ( <i>Ranunculus abortivus</i> )				
White Snakeroot ( <i>Ageratina altissima</i> )					Cutleaf Toothwort ( <i>Cardamine concatenata</i> )					Tall Buttercup ( <i>Ranunculus acris</i> )				
Com Ragwort ( <i>Ambrosia artemisiifolia</i> )					Toothwort ( <i>Cardamine diaphylla</i> )					Hooked Buttercup ( <i>Ranunculus recurvatus</i> )				
Giant Ragwort ( <i>Ambrosia trifida</i> )					Penn Bitter-cress ( <i>Cardamine pensylvanica</i> )					<i>Ranunculus</i>				
Field Puss-toes ( <i>Antennaria neglecta</i> )					<i>Cardamine</i>					Sheep Sorrel ( <i>Rumex acetosella</i> )				
<i>Artemisia</i>					Blue Cohosh ( <i>Caulophyllum thalictroides</i> )					Curly-leaf Dock ( <i>Rumex crispus</i> )				
Common Burdock ( <i>Arctium minus</i> )					Mouse-ear Chickweed ( <i>Cerastium fontanum</i> )					Bitter Dock ( <i>Rumex obtusifolius</i> )				
Nodding Beggarticks ( <i>Bidens cernua</i> )					Turtlehead ( <i>Chelone glabra</i> )					Bloodroot ( <i>Sanguinaria canadense</i> )				
Devil's Beggar-ticks ( <i>Bidens frondosa</i> )					Spotted Water-hemlock ( <i>Cicuta maculata</i> )					Black Snakeroot ( <i>Sanicula marilandica</i> )				
Spotted Knapweed ( <i>Centaurea biebersteinii</i> )					Water-hemlock ( <i>Cicuta virosa</i> )					Bouncing Bet ( <i>Saxifraga officinalis</i> )				
Brown Knapweed ( <i>Centaurea jacea</i> )					Enchanter's Nightshade ( <i>Circaea lutetiana</i> )					Marsh Skullcap ( <i>Scutellaria latifolia</i> )				
Chicory ( <i>Cichorium intybus</i> )					Carolina Spring Beauty ( <i>Claytonia caroliniana</i> )					Mad Dog Skullcap ( <i>Scutellaria lateriflora</i> )				
Canada Thistle ( <i>Cirsium arvense</i> )					Virginia Spring Beauty ( <i>Claytonia virginica</i> )					White Campion ( <i>Silene latifolia</i> )				
Bull Thistle ( <i>Cirsium vulgare</i> )					Virgin's-bower ( <i>Clematis virginiana</i> )					Bladder Campion ( <i>Silene vulgaris</i> )				
Horseweed ( <i>Conyza canadensis</i> )					Field Bindweed ( <i>Convolvulus arvensis</i> )					Hemlock Water-hemlock ( <i>Sium suave</i> )				
Daisy Fleabane ( <i>Erythron annuus</i> )					Drum-straining Vine ( <i>Cyananthus rossicus</i> )					Bitter Nightshade ( <i>Solanum dulcamara</i> )				
Philadelphia Fleabane ( <i>Erythronium philadelphicum</i> )					Wild Carrot ( <i>Daucus carota</i> )					Black Nightshade ( <i>Solanum elaeagnifolium</i> )				
<i>Erythronium</i>					Deerfoot Pink ( <i>Dianthus armeria</i> )					Grassleaf Stitchwort ( <i>Stellaria raminea</i> )				
Joe-pye-weed ( <i>Eupatorium maculatum</i> )					Squirrel-corn ( <i>Dicentra canadensis</i> )					Common Chickweed ( <i>Stellaria media</i> )				
Boneset ( <i>Eupatorium rugosum</i> )					Dutchman's-breeches ( <i>Dicentra cucullaria</i> )					Early Meadow-rue ( <i>Thalictrum dioicum</i> )				
Large-leaved Aster ( <i>Eurythia macrophylla</i> )					Wild Teasel ( <i>Dipsacus fuluorum</i> )					Tall Meadow-rue ( <i>Thalictrum pubescens</i> )				
Flat-top Goldenrod ( <i>Euthamia graminifolia</i> )					Wild Cucumber ( <i>Echinocystis lobata</i> )					Field Penny-cress ( <i>Thlaspi arvense</i> )				
Orange Hawkweed ( <i>Hieracium aurantiacum</i> )					Viola's Blossom ( <i>Echium vulgare</i> )					Foamflower ( <i>Tiarella cordifolia</i> )				
Field Hawkweed ( <i>Hieracium caespitosum</i> )					Northern Willow-herb ( <i>Eriobolium ciliatum</i> )					Star-flower ( <i>Trientalis borealis</i> )				
<i>Hieracium</i>					Hairy Willow-herb ( <i>Eriobolium hirsutum</i> )					Red Clover ( <i>Trifolium pratense</i> )				
Elecampane ( <i>Inula helenium</i> )					Small-fl. Willow-herb ( <i>Eriobolium parviflorum</i> )					White Clover ( <i>Trifolium repens</i> )				
Prickly Lettuce ( <i>Lactuca serriola</i> )					<i>Eriobolium</i>					<i>Trifolium</i>				
<i>Lactuca</i>					Worm Mustard ( <i>Erysimum cheiranthoides</i> )					Stinging Nettle ( <i>Urtica dioica</i> )				
Ox-eye Daisy ( <i>Leucanthemum vulgare</i> )					<i>Euphorbia</i>					Greater Bladderwort ( <i>Utricularia vulgaris</i> )				
Pineapple-weed ( <i>Matricaria discoidea</i> )					Hemp Nettle ( <i>Galeopsis tetrahit</i> )					Common Mullen ( <i>Verbascum thapsus</i> )				
Tall White Lettuce ( <i>Frenanthes altissima</i> )					Wild Madder ( <i>Galium mollugo</i> )					Blue Vervain ( <i>Verbena hastata</i> )				
Black-eyed Susan ( <i>Rudbeckia hirta</i> )					Marsh Bedstraw ( <i>Galium palustre</i> )					White Vervain ( <i>Verbena urticifolia</i> )				
Tall Goldenrod ( <i>Solidago altissima</i> )					Sweet-scented Bedstraw ( <i>Galium triflorum</i> )					Water Speedwell ( <i>Veronica anagallis-aquatica</i> )				
Blue-stem Goldenrod ( <i>Solidago caesia</i> )					<i>Galium</i>					Common Speedwell ( <i>Veronica officinalis</i> )				
Canada Goldenrod ( <i>Solidago canadensis</i> )					Spotted Geranium ( <i>Geranium maculatum</i> )					<i>Veronica</i>				
Zizania Goldenrod ( <i>Solidago flexicaulis</i> )					Herb-robert ( <i>Geranium robertianum</i> )					Cow Vetch ( <i>Vicia cracca</i> )				
Giant Goldenrod ( <i>Solidago gigantea</i> )					Yellow Avens ( <i>Geum aleaicum</i> )					<i>Vicia</i>				
Early Goldenrod ( <i>Solidago uncea</i> )					White Avens ( <i>Geum canadense</i> )					Periwinkle ( <i>Viola minor</i> )				
Gray Goldenrod ( <i>Solidago nemoralis</i> )					Urban Avens ( <i>Geum urbanum</i> )					Dog Violet ( <i>Viola conspersa</i> )				
<i>Solidago</i>					Dame's Rocket ( <i>Hesperis matronalis</i> )					Yellow Violet ( <i>Viola pubescens</i> )				
Field Sow-thistle ( <i>Sonchus arvensis</i> )					Water-leaf ( <i>Hydrophyllum virginianum</i> )					Common Blue Violet ( <i>Viola sororia</i> )				
<i>Sonchus</i>					Common St John's-wort ( <i>Hypericum perforatum</i> )					<i>Viola</i>				
Heart-leaf Aster ( <i>Symphoricarpos cordifolium</i> )					Spotted Jewelweed ( <i>Impatiens capensis</i> )									
Heath Aster ( <i>Symphoricarpos encoides</i> )					Wood Nettle ( <i>Lamortea canadensis</i> )									
Tall White Aster ( <i>Symphoricarpos lanceolatum</i> )					Motherwort ( <i>Leonurus cardiaca</i> )									
Calico Aster ( <i>Symphoricarpos lateriflorum</i> )					Field Pepper-grass ( <i>Leptidium campestre</i> )									
New England Aster ( <i>Symphoricarpos novae-angliae</i> )					Eur Gromwell ( <i>Lithospermum officinale</i> )									
Purple-stem Aster ( <i>Symphoricarpos purpureus</i> )					Butter & Eggs ( <i>Lunaria vulgaris</i> )									
Common Tansy ( <i>Tanacetum vulgare</i> )					Great Lobelia ( <i>Lobelia siphilitica</i> )									
Common Dandelion ( <i>Taraxacum officinale</i> )					<i>Lobelia</i>									
Com Goatsbeard ( <i>Trigonopogon pratensis</i> )					Cut-leaf Bugleweed ( <i>Lycopus americanus</i> )					Water Plantain ( <i>Alisma plantago-aquatica</i> )				
Coltsfoot ( <i>Tussilago farfara</i> )					Northern Bugleweed ( <i>Lycopus uniflorus</i> )					Wild Leek ( <i>Allium tricoccum</i> )				
					Friar's Loosestrife ( <i>Lysimachia ciliata</i> )					Jack-in-the-pulpit ( <i>Arisaema triphloium</i> )				
					Moneywort ( <i>Lysimachia nummularia</i> )					Asparagus ( <i>Asparagus officinalis</i> )				
					<i>Lysimachia</i>					Wild Calla ( <i>Calla palustris</i> )				
					Purple Loosestrife ( <i>Lysimachia salicaria</i> )					Bluebead-lily ( <i>Clintonia borealis</i> )				
					Black Medick ( <i>Medicago lupulina</i> )					Garden Lily-of-the-valley ( <i>Convallaria majalis</i> )				
					Alfalfa ( <i>Medicago sativa</i> )					Yel. Lady's Slipper ( <i>Cypripedium parviflorum</i> )				
					White Sweet-clover ( <i>Mellilotus alba</i> )					Canada Waterweed ( <i>Elodea canadensis</i> )				
					Yellow Sweet-clover ( <i>Mellilotus officinalis</i> )					Helleborine ( <i>Epipactis helleborine</i> )				
					Wild Mint ( <i>Mentha arvensis</i> )					Yellow Trout Lily ( <i>Erythronium americanum</i> )				
					Wild Bergamot ( <i>Monarda fistulosa</i> )					Blue-flag Iris ( <i>Iris versicolor</i> )				
					Small Forget-me-not ( <i>Myosotis laxa</i> )					Orange Day Lily ( <i>Hermerocallis fulva</i> )				
					Forget-me-not ( <i>Myosotis scorpioides</i> )					Lesser Duckweed ( <i>Lemna minor</i> )				
					Water-cress ( <i>Nasturtium officinale</i> )					Star Duckweed ( <i>Lemna trisulca</i> )				
					Com. Evening-primrose ( <i>Oenothera biennis</i> )					Wild Lily-of-the-valley ( <i>Maianthemum canadense</i> )				
					Sweet-cicely ( <i>Osmorhiza berterii</i> )					False Solom Seal ( <i>Maianthemum racemosum</i> )				
					Yellow Wood-sorrel ( <i>Oxalis stricta</i> )					Star False Solomon ( <i>Maianthemum stellatum</i> )				
					Wild Parsnip ( <i>Pastinaca sativa</i> )					True Solomon Seal ( <i>Polygonatum rubescens</i> )				
					English Plantain ( <i>Plantago lanceolata</i> )					Pickering-weed ( <i>Pontederia cordata</i> )				
					Common Plantain ( <i>Plantago major</i> )					Curly-leaf Pondweed ( <i>Potamogeton crispus</i> )				
					Rugel's Plantain ( <i>Plantago rugelii</i> )					Sago Pondweed ( <i>Potamogeton pectinatus</i> )				
					May-apple ( <i>Podophyllum peltatum</i> )					<i>Potamogeton</i>				
					Pale Smartweed ( <i>Polygonum latifolium</i> )					<i>Potamogeton</i>				
					Lady's-thumb ( <i>Polygonum persicaria</i> )					Broad-leaved Arrowhead ( <i>Sagittaria latifolia</i> )				
					Virginia Knotweed ( <i>Polygonum virginianum</i> )					Blue-eyed Grass ( <i>Sisyrinchium montanum</i> )				
					<i>Polygonum</i>					Herb. Carrion Flower ( <i>Smilax herbacea</i> )				
					<i>Polygonum</i>					Bristle Greenbrier ( <i>Smilax hispida</i> )				
					Rough Cinquefoil ( <i>Potentilla norvegica</i> )					Nodding Ladies' Tresses ( <i>Spiranthes cernua</i> )				
					Rough-fruited Cinquefoil ( <i>Potentilla recta</i> )					Rose Twisted stalk ( <i>Streptopus lanceolatus</i> )				
					Common Cinquefoil ( <i>Potentilla simplex</i> )					Skunk-cabbage ( <i>Symplocarpus foetidus</i> )				
					<i>Potentilla</i>					Purple Trillium ( <i>Trillium erectum</i> )				
					Heal-all ( <i>Prunella vulgaris</i> )					White Trillium ( <i>Trillium grandiflorum</i> )				
					Shinleaf ( <i>Prunella elliptica</i> )					Large-flowered Bellwort ( <i>Uvularia grandiflora</i> )				

Monocot Herbs

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: 2246541979/1976/17  
 Date: Apr 24 2012  
 Surveyors: P-75

# Significant Wildlife Habitat Form

AECOM

Study Area:	BLW	JER	(GSH)	Map #:	229-GSH1975/1976/1974
Date:	2012-04-24			Time Started:	3:18
Field Staff:	Tom Shorey, Jess Piette			Time Finished:	5:00
Weather Conditions:	Cloudy, 5 <sup>o</sup> C, 45 km/h Wind				

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

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

UTMs: \_\_\_\_\_ Number of nests: \_\_\_\_\_

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

\_\_\_\_\_

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

**Waterfowls Stopover/Nesting, Amphibian Breeding, Turtle Nesting/Over-wintering, Marsh Breeding Birds**  
(CUM1, CUT1, MAM, MAS, SAS1, SAM1, SAF1, SWD, SWT1, SWT2) (FOC, FOM, FOD, SWC, SWM, SWD, BOO1, FE01)

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

UTMs: \_\_\_\_\_  Area of standing water delineated on field map

Water depth (m): \_\_\_\_\_ % open water: \_\_\_\_\_ % emergent vegetation: \_\_\_\_\_

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

Area and soil/substrate of shoreline habitat: \_\_\_\_\_

Type and abundance of cover in open water habitat: \_\_\_\_\_

Type and abundance of cover in surrounding habitat: \_\_\_\_\_

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

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

\_\_\_\_\_

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

**Snake Hibernacula**

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

UTMs: \_\_\_\_\_ Likelihood to extend below frost line: \_\_\_\_\_

% canopy cover: \_\_\_\_\_ % slope: \_\_\_\_\_ Distance to open canopy (m): \_\_\_\_\_

Description of fissure or stone pile (composition/material, dimensions, etc): \_\_\_\_\_

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

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

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

UTMs: \_\_\_\_\_ Description (indicator species, etc): \_\_\_\_\_



# NHA Site Investigation - Significant Wildlife Habitat Form

AECOM

## Colonial Nesting Bird Breeding Habitat (Bank and Cliff Swallows)

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

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

No

Yes (if yes, photograph and complete the following)

UTMs: \_\_\_\_\_

Location (e.g. aggregate pit, bridge): \_\_\_\_\_

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

## Colonial Nesting Ground Breeding Birds, Shorebird Migratory Stopover Areas

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

Shoreline of lake, large river or large wetland present:

No

Yes (if yes, photograph and complete the following)

UTMs: \_\_\_\_\_

Rocky island or peninsula present: \_\_\_\_\_

Mudflat present: \_\_\_\_\_

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

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

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

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

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

Large open habitat present:  No

Yes (if yes, photograph and complete the following)

UTMs: \_\_\_\_\_

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

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

## Old-growth or Mature Forests, Interior Forest Breeding Birds

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

Mature forest present:  No

Yes (if yes, photograph and complete the following)

UTMs: \_\_\_\_\_

Age of oldest trees: \_\_\_\_\_

Evidence of disturbance (e.g. selective cutting): \_\_\_\_\_

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

Photo #	Location or Subject	Photo #	Location or Subject



# Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

ELC	Species	Habitat Description	Habitat Present (Y/N); UTM; description of habitat if present
CUM1, MAM, FOD6, FOD7, FOD8	June - August Green Dragon ( <i>Arisaema dracontium</i> ) - S1/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:
TP01, TPS1, TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	June-August Hairy Bedstraw ( <i>Gallium pilosum</i> ) - S3 Bloom Time - June-August	Occurs in dry, sandy woods and thickets; occasionally in dry sandy fields	Y (N) UTM:
FE01, FES1, FET1, SWC, SWM, SWD, SWT, TPO, TPS, TPW	Hairy Valerian ( <i>Valeriana edulis</i> ) - S1 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 ( <i>Blephilia hirsuta</i> ) - S1 Bloom Time - Summer	Woodlands, often rocky, especially rivers. Rich woods, swamp forests, floodplains.	Y (N) UTM:
FOD6, FOD7, FOD8, FOD9	Harbinger-of-spring ( <i>Eriogonum bulbosum</i> ) - S3 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 ( <i>Potamogeton hillii</i> ) - SC/S2 Bloom Time - June - summer	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters.	Y (N) UTM:
FOM6, FOM7, FOM8	Large Round-leaved Orchid ( <i>Platanthera macrophylla</i> ) - S2 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 ( <i>Saururus cernuus</i> ) - 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 ( <i>Asimina triloba</i> ) - S3 Bloom Time - March-May	Occurs in moist deciduous woods and stream banks.	Y (N) UTM:
FOM8, FOD6, FOD7, FOD9, CUM1	Pilose Evening Primrose ( <i>Oenothera pilosella</i> ) - S2 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 ( <i>Desmodium rotundifolium</i> ) - S2 Bloom Time - July-September	Dry, sandy or rocky woods	Y (N) UTM:
FOD7, SWD	Pumpkin Ash ( <i>Fraxinus profunda</i> ) - S2? Bloom Time - March - June	Swamps and floodplains	Y (N) UTM:
CUW1, ALO, FET1, SWC	Ram's-head Lady's-slipper ( <i>Cypripedium arietinum</i> ) - 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 ( <i>Hieracium venosum</i> ) - S2 Bloom Time - April - September	Species inhabits open, dry sandy woods. Jack pine, oak, and aspen woodlands.	Y (N) UTM: N/S
FOD6, FOD7, FOD9	Round-leaved Groundsel ( <i>Packera obovata</i> ) - S3 Bloom Time - May - June	Found in moist woods	Y (N) UTM:
CUM1, CUT1, CUS1	Round-leaved hawthorn ( <i>Crataegus lumarina</i> ) - S3?	Species occurs in old fields, poorly managed pastures, fence-lines and roadsides	Y (N) UTM:
FOD6, FOD7, FOD8, FOD9, SWT2, SWT3	Scarlet Beebalm ( <i>Monarda didyma</i> ) - 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 ( <i>Liatris cylindracea</i> ) - S3	Species occurs in limestone and dolostone pavement, prairies, open woods; always and moist sandy meadows.	Y (N) UTM:
SBO, SBS, SBT, TPO1, TPS1, TPW1, FOD1, FOD2	Slender Knotweed ( <i>Polygonum tenue</i> ) - S2	Found in dry, sandy, open areas in deciduous (often oak woods), prairie meadows; at edges of sand pits	Y (N) UTM:
SDT1, FOD5, FOD9	Slim-flowered Muhly ( <i>Muhlenbergia tenuiflora</i> ) - S2	Found in rich deciduous forest often on rocky or sandy soils, wooded dunes, hillsides, and riverbanks whether in oak or beech-maple woods	Y (N) UTM: N/O
BLO1, BLS1, BLT1, TPO2, TPS2, TPW2, MAM2, FOD7	Stiff Gentian ( <i>Gentiana quinquefolia</i> ) - 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 ( <i>Lupinus perennis</i> ) - 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 Conservation Concern Habitat and Incidental Wildlife - Goshen

ALOM

ELC	Species	Habitat Description	Habitat Present (Y/N); UTM; description of habitat if present
TP01, TPS1, TPW1, CUM1	Tall Blazing Star ( <i>Liatrix aspera</i> ) - S3/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y (N) UTM:
FEO, FES, FET, MAM2, MAM3	Tuberous Indian Plantain ( <i>Arnoglossum plantagineum</i> ) - S3 Bloom Time - mid-March to mid-June	Occurs mainly in flat, sandy areas of the Bruce Peninsula. Fens, wet meadows, and calcareous river flats.	Y (N) UTM:
FOC1, FOC2, FOC3, FOC4	Woodland Pinedrops ( <i>Pterospora andromedea</i> ) - S2 Bloom Time - summer	Found in conifer woods, under pines, but also hemlock, spruce, fir, and white cedar. In dry or rocky soil, often with common juniper and sometimes aspen or birch.	Y (N) UTM:
CUM1, CUT1, CUW1, RBO1, SBO1	Yellow Ladies'-tresses ( <i>Spiranthes ochroleuca</i> ) - S2 Bloom Time - August to November	Dry, open sites, usually on acidic sandy soil, dry to mesic open woodland, thickets, meadows, barrens, ledges, outcrops, banks and roadsides, old fields.	Y (N) UTM:
<b>BIRDS</b>			
-	Bald Eagle ( <i>Haliaeetus leucocephalus</i> ) - SC	Assessed as SWH. Record species if found.	not required.
CUW, SDO, RBO, TPS	Common Nighthawk ( <i>Chordeiles minor</i> ) - SC	Hunts insects over a wide variety of habitats, in particular open or semi-open areas. Nests on ground in a wide range of open, sparse or vegetation-free habitats.	Y (N) UTM:
FOD, FOM	Louisiana Waterthrush ( <i>Seiurus motacilla</i> ) - SC	Inhabits mature forests along steeply sloped ravines adjacent to running water. Trees, bushes, exposed roots, cliffs, banks and mossy logs are favoured nesting spots. Riparian woodlands are preferred stopover sites during migration.	Y (N) UTM:
FOD, CUW, CUT	Red-headed Woodpecker ( <i>Melanerpes erythrocephalus</i> ) - SC	Species inhabits open woodland edges (oak savannahs and riparian forest), open, deciduous forest with little understory, fields or pasture lands with scattered large trees, wooded swamps, orchards, small woodlots or forest edges, groves of dead or dying trees; requires cavity trees with at least 40 cm dbh; requires about 4 ha for a territory.	Y (N) UTM: N/O
-	Short Eared Owl ( <i>Asio flammeus</i> ) - SC	Assessed as SWH. Record species if found.	not required.
CUT1	Yellow-breasted Chat ( <i>Icteria virens</i> ) - SC	Inhabits thickets, tall tangles of shrubbery beside streams, ponds; overgrown bushy clearings with deciduous thickets; nests above ground in bush, vines	Y (N) UTM:
<b>REPTILES</b>			
-	Eastern Ribbonsnake ( <i>Thamnophis sauritus</i> ) - SC	Assessed as SWH. Record species if found.	not required.
-	Milksnake ( <i>Lampropeltis triangulum</i> ) - SC	Assessed as SWH. Record species if found.	not required.
-	Snapping Turtle ( <i>Chelydra serpentina</i> ) - SC	Assessed as SWH. Record species if found.	not required.
<b>INSECTS</b>			
OAO, SA, SWM, SWD	Azure Bluet ( <i>Enallagma aspersum</i> ) - S3	Species inhabits fishless ponds, lakes and boggy swamps	Y (N) UTM:
TPS, TPW	Sleepy Duskywing ( <i>Erynnis brize</i> ) - S1	Occurs in oak/oak-pine scrub, chaparral, barrens, well-drained sandy or shaly soils. Species regularly seen at flowers in oak woods, on the ground, and at mud puddles	Y (N) UTM:
CUM1, CUT1, CUW1	Monarch Butterfly ( <i>Danaus plexippus</i> ) - SC	Their larvae only feed on milkweeds ( <i>Asclepius</i> spp.). Habitat includes abandoned farmland, along roadsides, open spaces where these plants grow	Y (N) UTM:
TPS, CUW	Mottled Duskywing ( <i>Erynnis martialis</i> ) - S2	Usually seen nectaring or on wet sandy roads. Larvae feeds on New Jersey Tea and adults only likely near where this plant is present	Y (N) UTM:
SWT, SWD, SWM, FOM, FOD4-3, TPW, TPS, CUM1	Tawny Emperor ( <i>Asterocampa clyten</i> ) - S3	Species inhabits densely wooded riparian areas, dry woods, open woods, fencerows and parks. Usually occurs near Hackberry, the larval foodplant	Y (N) UTM:
FOD5	West Virginia White ( <i>Pieris virginiensis</i> ) - SC	This species is restricted to rich, moist, deciduous woods where its foodplant Toothwort occur	Y (N) UTM: N/O

Soil Creation / East Corbett (Low)

### Goshen Feature: 232 GSH1619

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

September 1, 2011



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



PRE-SURVEY COMMENT:

**ELC**  
Community Description and Classification

Site: 232\_GSH1619 Polygon: **A**

Surveyor(s): **Kamstra** Date: **Oct 14/11** Time start: **9:45** finish:

UTMZ: **444280** UTMN: **4792500**

**Polygon Description**

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

**Stand Description**

Layer	HT	OVR	Species In Order of Decreasing Dominance (up to 4 sp) (> Much Greater Than; > Greater Than; = About Equal To)
1	2	4	<i>Fragaria</i> > <i>Betula</i> > <i>Acer saccharum</i> > <i>Tilia</i>
2	3	2	<i>Tilia</i> > <i>Acer saccharum</i>
3	2	2	<i>Acer saccharum</i> - <i>Ligustrum</i> - <i>Rubus</i>
4	6	3	<i>Eucalyptus</i> > <i>Viburnum</i> sp

HT Codes: 0 = none 1.0% - 10% 2.0 - 25% 3.25 - 60% 4 > 60%  
 CVR Codes: 0 = none 1.0% - 10% 2.10 - 25% 3.25 - 60% 4 > 60%

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

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

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

Ecotope:	
Vegetation Type:	WASH - P. Birch
Inclusion:	
Complex:	

**Community Profile Diagram/Comments**

Code:	F040
Code:	
Code:	
Code:	

Notes:

**Tree Tally by Species**

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

**Soils Ontario and ELC Soils Description**

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



Monzi

(B) ~~Green~~ Ash Forest

FOD 7-2

UTM 444300  
4792450

2-4 Fraamer  $\Rightarrow$  Tilamer  $\Rightarrow$  Ulmauer

3-3 Acesacu  $\Rightarrow$  Carcato

4-3 Rosmalt - Corfoem - Acesacu - Rubidae

6-4 Geucama - Gerrobe - Gixgrac - Enoobor - Fraving.

irreg canopy w gaps

Disturbed somewhat, selective logging but not recent

(C) Ditch through woodlot, w flowing UTM - could not get reading

2 50cm culverts on ~~at~~ edge of woodlot

under canopy of forest 2m wide, 1.5m deep

currently with abundant flowing muddy water > 50cm deep.

(D) W. Pine Plantation (mature) w some dec regen.

UTM 444300  
4792350  
(not accurate)

2-4 Pinstro  $\Rightarrow$  Fraamer

3-2 Ulmauer

6-3 Rhuradi - Fraamer - Gerrobe

veg type CUP3-2

(E) Sugar Maple - Ash

FOD 5-8

UTM 444260  
4792300  
(not accurate)

2-4 Fraamer  $\Rightarrow$  Acesacu  $\Rightarrow$  Betpapy

3-3 Acesacu

4-3 Linbenz Pruseru Acesacu

6-3 Enoobor  $\Rightarrow$  Mitrepe

very gently rolling terrain, mid-age.

Stand	A	< 10	A	< 25	0 < 50
Snag	R		R		
Deadfall	A		A		

VASCULAR PLANT CHECKSHEET

Location: 232 GSH 1619

Date: Oct 14 / 2011

Observer: Kamstra

Job Number:

DICOT HERBS												MONOCOT HERBS												
1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	
						Erigeron annuus						Plantago lanceolata						Alisma plantago-aquatica						
						Erigeron philadelphicus	X					Plantago major						Allium tricoccum						
						Erigeron strigosus						Plantago rugelii						Allium						
						Erysimum chieranthoides						Podophyllum peltatum						Arisaema triphyllum						
						Eupatorium maculatum						Polygonum						Asparagus officinalis						
						Eupatorium perfoliatum						Polygonum						Calla palustris						
						Eupatorium rugosum						Polygonum						Clintonia borealis						
						Euphorbia						Polygonum lapathifolium						Convallaria majus						
						Euthamia graminifolia						Polygonum persicaria						Cypripedium calceolus						
						Fragaria virginiana		X				Potentilla						Eloaea canadensis						
						Fragaria vesca		X				Potentilla norvegica						Epipactis helleborine						
						Galeopsis tetrahit						Potentilla recta						Erythronium americanum						
						Gallium						Prenanthes alba						Hamamelis fulva						
						Gallium						Prunella vulgaris						Iris versicolor						
						Gallium palustre						Pyrola elliptica		X				Lemna minor						
						Gallium triflorum						Ranunculus abortivus		X				Lemna trisulca						
						Geranium maculatum						Ranunculus abortivus						Lilium						
						Geranium robertianum		X				Ranunculus acris						Matanthenum canadense			X			
						Geum aleppicum						Rudbeckia hirta						Matanthenum racemosa						
						Geum canadense		X				Rumex acetosella						Matanthenum stellata			X			
						Geum						Rumex crispus						Platanthera						
						Glechoma hederacea						Rumex						Pontederia cordata						
						Hepatica acutiloba						Sanguinaria canadensis						Polygonatum pubescens						
						Hesperis matronalis						Sanicula marilandica						Potamogeton crispus						
						Hieracium aurantiacum						Saponaria officinalis						Potamogeton pectinatus						
						Hieracium caespitosum						Satureja vulgaris						Potamogeton						
						Hieracium						Scutellaria galericulata						Potamogeton						
						Hydrophyllum virginianum						Silene vulgaris						Potamogeton						
						Hypericum perforatum						Sium suave						Sagittaria latifolia						
						Impatiens capensis						Solanum dulcamara		X				Sisyrinchium montanum						
						Inula helenium						Solidago						Smilax herbacea						
						Lactuca						Solidago altissima		X				Spiranthes cernua						
						Laportea canadensis						Solidago caesia			X			Spirodela polyrrhiza						
						Lapsana communis						Solidago canadensis			X			Streptopus roseus						
						Leonurus cardiaca						Solidago flexicaulis			X			Trillium erectum						
						Lepidium						Solidago gigantea			X			Trillium grandiflorum						
						Linaria vulgaris						Solidago nemoralis			X			Uvularia grandiflora						
						Lithospermum officinale						Solidago rugosa												
						Lobelia						Sonchus arvensis												
						Lobelia trifiata						Sonchus asper												
						Lotus corniculatus						Stellaria												
						Lotus corniculatus						Tanacetum vulgare												
						Lycopus americanus						Taraxacum officinale			X									
						Lycopus						Thalictrum dioicum												
						Lysimachia ciliata						Thalictrum pubescens												
						Lythrum salicaria						Tiarella cordifolia												
						Medicago lupulina						Tragopogon pratensis												
						Medicago sativum						Trifolium												
						Mellilotus alba						Trifolium pratense												
						Meritha arvensis						Trifolium repens												
						Mimulus ringens						Tussilago farfara												
						Mimulus ringens						Urtica dioica												
						Mitella diphylla						Utricularia vulgaris												
						Monarda fistulosa						Verbascum thapsus												
						Mycotis						Verbena hastata												
						Nasturtium officinale						Verbena urticifolia												
						Nepeta cataria						Veronica												
						Nuphar variegatum						Veronica officinalis			X									
						Nymphaea odorata						Vicia cracca												
						Oenothera biennis						Vicia tetrasperma												
						Osmorhiza						Viola												
						Oxalis stricta						Viola canadensis			X									
						Phytolacca leptostachya						Viola pubescens			X									
						Physalis heterophylla						Viola sororia			X									
						Mitella repens		X				Vinca minor			X									

1: \_\_\_\_\_ 4: \_\_\_\_\_  
 2: \_\_\_\_\_ 5: \_\_\_\_\_  
 3: \_\_\_\_\_ 6: \_\_\_\_\_

SITE LOCATIONS



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

<b>ELC</b>  <b>WILDLIFE</b>	SITE: 232 GSM	
	POLYGON:	
	DATE: Oct 14 / 2011	
	SURVEYORS: JK	
	START TIME: 9:45	END TIME: 11:15

TEMP (°C): 15	CLOUD (10th): 10	WIND: 0	PRECIPITATION: drizzle
CONDITIONS:			

**POTENTIAL WILDLIFE HABITAT:**

VERNAL POOLS	SNAGS
HIBERNACULA	FALLEN LOGS

**SPECIES LIST:**

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
B	RTHA	OB							
	AMCR								
	WTSP		dozens						
	WCSP		dozens						
	BLJA								
	HAWD			1					
	SOSP								
	WBNU	VO							
	MODO	OB							
M	Chipmunk	OB							
	Raccoon	FE							

**FAUNAL TYPE CODES (TY):**

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

**EVIDENCE CODES (EV):**

**BREEDING BIRD - POSSIBLE:**

SH = SUITABLE HABITAT SM = SINGING MALE

**BREEDING BIRD - PROBABLE:**

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

**BREEDING BIRD - CONFIRMED:**

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

**OTHER WILDLIFE EVIDENCE:**

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

# Goshen Feature: 232 GSH1619

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

October 3, 2011

0 30 60 120 Meters



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

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





ELC

Site: 232 GSH 1619 Polygon: F  
Surveyor(s): Date: Nov 8/11 Time start: 17:00  
JK UTMZ: 444190 UTMN: 4792570

Polygon Description

Table with 4 columns: System, Substrate, Topographic Feature, Plant Form, Community. Includes checkboxes for various features like Terrestrial, Wetland, Aquatic, Organic, Mineral Soil, etc.

Stand Description

Table with 4 columns: Layer, HT, CVR, Species in Order of Decreasing Dominance (up to 4-sp). Includes handwritten entries for Acer saccharum, Betula papyrifera, and Fagus sylvatica.

HT Codes: 7 <0.2m 8 >0.2-0.5m 9 >0.5-1m 4 >1-2m 3 >2-8m 2 >6-25m 1 >25m  
CVR Codes: 0 = none 1 0% - 10% 2 10 - 26% 3 25 - 40% 4 > 40%

Table for Stand Composition: Size Class Analysis, Standing Snags, Deadfall / Logs. Includes checkboxes for various size classes and snag types.

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

Table for Corn. Age: Pioneer, Young, Mid-Age, Mature, Old Growth. Includes checkboxes for each age class.

Table for Ecotype: Vegetation Type, Inclusion, Complex. Includes handwritten entries for Hemlock - Maple - Birch and FOM6-1.

Community Profile Diagram/Comments

Notes section with a dashed border for additional information.

Tree Tally by Species

Table with columns: Species, Tally 1, Tally 2, Tally 3, Total, BA, Dead. Includes a Total row and Basal Area (BA) row.

Soils Ontario and ELC Soils Description

Large table for Soils Ontario and ELC Soils Description. Columns include P/A/Auger #, Site Metrics, Soil Horizon Description, and Summary. Includes rows for Zone, Easting, Northing, Position, Aspect, Percent, Slope, Length, Mottles, Gley, Water Table, Carbonates, Bedrock, Depth from zero, Texture, and Moisture Regime.

232 - GSH 1640/1639/1621

Goshen Feature: 232 GSH1620/1621 / GSH18

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

- h
- Access/Collection Line
- Collection Buffer (125m)
- Turbine Buffer (171.5m)
- Collection/Feature Intersect
- Turbine Buffer/Feature Intersect
- Property Fabric

September 2011

0 25 50 100 Meters









**ELC** Community Description and Classification

Site: 232\_GSH1620 Polygon: ①

Surveyor(s): SAN Date: 8/15/11 Time start: 14:40 finish: 16:50

UTMZ: 17T UTMZ: UTMN:

**Polygon Description**

System	Substrate	Topographic Feature	Plant Form	Community
<input checked="" type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic	<input type="checkbox"/> Organic <input checked="" type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Min. <input type="checkbox"/> Acidic Bedrk <input type="checkbox"/> Basic Bedrk <input type="checkbox"/> Carb. Bedrk	<input type="checkbox"/> Lacustrine <input type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input type="checkbox"/> Valley Slope <input checked="" type="checkbox"/> Tableland <input type="checkbox"/> Roll. Upland <input type="checkbox"/> Cliff <input type="checkbox"/> Talus <input type="checkbox"/> Crevice/Cave <input type="checkbox"/> Ahear <input type="checkbox"/> Rockland <input type="checkbox"/> Beach / Bar <input type="checkbox"/> Sand Dune <input type="checkbox"/> Bluff	<input type="checkbox"/> Plankton <input type="checkbox"/> Submerged <input type="checkbox"/> Floating-LVO. <input type="checkbox"/> Graminoid <input type="checkbox"/> Forb <input type="checkbox"/> Lichen <input type="checkbox"/> Bryophyte <input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Mixed	<input type="checkbox"/> Lake <input type="checkbox"/> Pond <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Marsh <input type="checkbox"/> Swamp <input type="checkbox"/> Fen <input type="checkbox"/> Bog <input type="checkbox"/> Meadow <input type="checkbox"/> Prairie <input type="checkbox"/> Thicket <input type="checkbox"/> Savannah <input type="checkbox"/> Woodland <input type="checkbox"/> Forest <input checked="" type="checkbox"/> Plantation
History	Cover			
<input type="checkbox"/> Natural <input checked="" type="checkbox"/> Cultural	<input type="checkbox"/> Open <input type="checkbox"/> Shrub <input checked="" type="checkbox"/> Tree			

**Stand Description**

Layer	HT	CVR	Species In Order of Decreasing Dominance (up to 4 sp) <i>p &gt; Much Greater Than; &gt; Greater Than; = About Equal; To</i>
1	3	4	Pw >>> Aw > MH
2	3	3	Pw >>> Aw > MH
3	3	3	Aw > MH > Calluna Aster > False Solomon's Seal
4	3	3	Poison Ivy > Herb Robert > Garlic Mustard

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

**Stand Composition: Size Class Analysis:**

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:** Coniferous Plantation  
**Vegetation Type:** White Pine Coniferous Plantation Type  
**Inclusion:**  
**Complex:**

Code: CUP3  
 Code: CUP3-2  
 Code:  
 Code:

**Community Profile Diagram/Comments**



Notes:

**Tree Tally by Species**

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

**Soils Ontario and ELC Soils Description**

Pit/Auger #	Soils Description		Summary
①	Zone		Moisture Regime
	Easting		
	Northing		
	Position	1 SE	
	Aspect	2	Drainage
	Percent	4m	
	Slope		Effective Texture (Indicate below)
	Length	94	
	Mottles	>120	% CF
	Gley		
	Water Table	>120	% CF
	Carbonates	43	
	Bedrock	>120	% CF
	Depth from zero	8	
	Texture	vPSL	% CF
	Depth from zero	18	
	Texture	SL vFS	% CF
	Depth from zero	27	
	Texture	vFSC	% CF
	Depth from zero	39	
	Texture	C	% CF
	Depth from zero	5	
	Texture	∅	% CF
	Depth from zero		
	% Surface Stone/Rock		% CF
	Moisture Regime		
	Drainage		% CF





PRE-SURVEY COMMENT: ~~232 GSH 1639/1640/1620/1620 (Baseline)~~  
 \*lots of Hawthorn is sign of previous clearing/grazing

**ELC** Community Description and Classification

Site: 232-GSH-06-0003 Polygon: ②

Surveyor(s): SAH Date: Sept 15/11 Time start: 15:50 finish: 15:50

UTMZ: 17T UTMZ: UTMN:

**Polygon Description**

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

**Stand Description**

Layer	HT	CVR	Species In Order of Decreasing Dominance (up to 4 sp)
1	3	4	Aw → Fr → Cottonwood → Th
2	3	3	Crataegus sp → Aw → Witch Hazel → Blue Birch
3	5	3	Blueberry → Ribes flowers → Aralia h. h. b. → B. N. Wish d
4	7-6	3	Stem. obs. → Can. May flower → fowl Manag → Jack in Pulpit

HT Codes: 7 < 0.2m 8 > 0.2-0.5m 9 > 0.5-1m 4 > 1-2m 3 > 2-6m 2 > 6-25m 1 > 25m  
 CVR Codes: 9 = none 1 0% - 10% 2 10 - 20% 3 25 - 50% 4 > 50%

Stand Composition: Size Class Analysis: <10 10-24 25-50 >50  
 Aw 35-Pl 30-Cottonwood  
 BA: 30  
 Deadfall / Log: <10 10-24 25-50 >50

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

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

Ecosite: Dry-Fresh Poplar-white Birch Deciduous Forest Code: F003  
 Vegetation Type: Dry-Fresh Poplar Deciduous Forest-white Ash Code: F003-1  
 Inclusion: Forest type  
 Complex: ✓

**Community Profile Diagram/Comments**

Soil Horizon Description

Depth to...	1	2	3	4
Depth from zero	0	13	32	56
Texture	vfSL	13 %CF	32 %CF	56 %CF
Depth from zero	0	18	29	71
Texture	vfSL	18 %CF	29 %CF	71 %CF
Depth from zero	0	29	56	94
Texture	0	29 %CF	56 %CF	94 - Clay/12 Clay
% Surface Stone/Rock				
Moisture Regime				Very Fresh (3)
Drainage				Medwell (4)

232 GSH 1639/1640/1620/1620 (Baseline)  
 \*lots of Hawthorn is sign of previous clearing/grazing

**Tree Tally by Species**

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Prism Factor	2
Pl	1	4			5	6	30
Cottonwood	3	2			5	5	25
Aw	4	3			7	7	35
PH	1	1			2	2	10
Total	10	10			20	20	100
Basal Area (BA)	20	20			40	40	20
Dead					1		

**Soils Ontario and ELC Soils Description**

Site Metrics	Plu/Auger #	Soils Ontario and ELC Soils Description	Summary
Zone	①		
Easting			
Northing			
Position	3		
Aspect	NE		
Percent	5%		
Slope	6m		
Slope Length	10.2		
Mottles	>130		
Gley	>180		
Water Table	>120		
Carbonates	>120		
Bedrock	>120		
Depth from zero	0		
Texture	vfSL		
Depth from zero	13		
Texture	vfSCL		
Depth from zero	32		
Texture	CvFS		
Depth from zero	56		
Texture	vfS		
% Surface Stone/Rock			
Moisture Regime			
Drainage			

**Soils Ontario and ELC Soils Description**

Site Metrics	Plu/Auger #	Soils Ontario and ELC Soils Description	Summary
Zone	②		
Easting			
Northing			
Position	3		
Aspect	SW		
Percent	5%		
Slope	4m		
Slope Length	7.3		
Mottles	>120		
Gley	>120		
Water Table	>120		
Carbonates	>120		
Bedrock	>120		
Depth from zero	0		
Texture	vfSL		
Depth from zero	18		
Texture	vfSCL		
Depth from zero	32		
Texture	CvFS		
Depth from zero	56		
Texture	vfS		
% Surface Stone/Rock			
Moisture Regime			
Drainage			

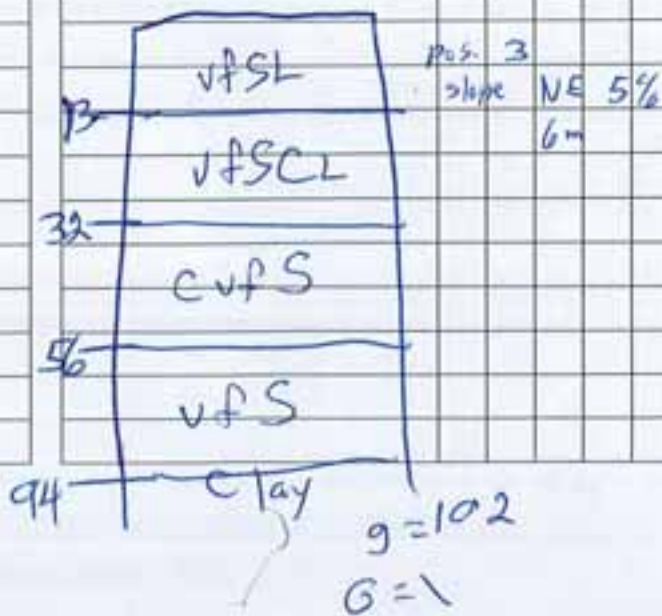
<b>ELC</b>  Plant Species List	SITE: GSH 1639/1620/1621 (fence line) /1640
	POLYGON: ②
	DATE: Sept. 15/11
	SURVEYOR(S): SAM

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

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

SPECIES CODE	LAYER				COLL.
	1	2	3	4	
Aw	D				
Paw					
Rub					
Ros					
Wit					
Bp					
Pl					
Mh	O				
Ag	O				
Bw					
Be					
HBN					
Srs					
Sens					
Bk					
Bl					
Gr					
Co	D				
Ca					
Jck					
Fm					
Ge					
Hs					
BS					
Ar					
Jo					
Bl					
Pr					

SPECIES CODE	LAYER				COLL.
	1	2	3	4	
Hop					
Sp					
St					
Eu					
Cr					
Br					
Ap					
Gr					
Rt	A			R	





PRE-SURVEY COMMENT: Fenceline Survey from GSH1639 and GSH1640  
 1620 is  
 1640  
 GSH1639 and GSH1640

**ELC**  
 Community Description and Classification

Site: 232\_GSH1621 / 1620/1639/1640 Polygon: **3**

Surveyor(s): **SAH** Date: **Sept. 15/11** Time start: **15:30 h** finish: **16:30 h**

UTMZ: **VTT** UTMZ: UTMN:

**Polygon Description**

<b>System</b>	<b>Substrate</b>	<b>Topographic Features</b>	<b>Plant Form</b>	<b>Community</b>
<input checked="" type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic <input type="checkbox"/> Site <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input checked="" type="checkbox"/> Surficial Dep <input type="checkbox"/> Bedrock	<input type="checkbox"/> Organic <input checked="" type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Min. <input type="checkbox"/> Acidic Bedck <input type="checkbox"/> Basic Bedck <input type="checkbox"/> Carb. Bedck	<input type="checkbox"/> Lacustrine <input type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input type="checkbox"/> Valley Slope <input checked="" type="checkbox"/> Tableland <input type="checkbox"/> Rot. Upland <input type="checkbox"/> Cliff <input type="checkbox"/> Crevice/Cave <input type="checkbox"/> Alvar <input type="checkbox"/> Rockland <input type="checkbox"/> Beach / Bar <input type="checkbox"/> Sand Dune <input type="checkbox"/> Bluff	<input type="checkbox"/> Plankton <input type="checkbox"/> Submerged <input type="checkbox"/> Floating-LVD <input type="checkbox"/> Graminoid <input type="checkbox"/> Forb <input type="checkbox"/> Lichen <input checked="" type="checkbox"/> Bryophyte <input type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Mixed	<input type="checkbox"/> Lake <input type="checkbox"/> Pond <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Marsh <input type="checkbox"/> Swamp <input type="checkbox"/> Fen <input type="checkbox"/> Bog <input type="checkbox"/> Barren <input type="checkbox"/> Meadow <input type="checkbox"/> Prairie <input type="checkbox"/> Thicket <input type="checkbox"/> Savannah <input type="checkbox"/> Woodland <input type="checkbox"/> Forest <input type="checkbox"/> Plantation

**Stand Description**

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (> Much Greater Than; > Greater Than; = About Equal To)
1	2	4	MH > Aw > Bw > BC
2	3	3	MH > Aw > Bw = Bc
3	4	2	Aw >> Callio Aster > Red Raspbry > Black Currant
4	7	3	Running Strawberry Bush > Ribon Ivy > Jack In The Pulpit

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

**Stand Composition: Size Class Analysis:**

BA: <b>39</b>	<b>10-24</b>	<b>10-24</b>	<b>25-50</b>	<b>&gt;50</b>
<b>A</b>	<b>N</b>	<b>R</b>	<b>O</b>	<b>R</b>
<b>&lt;10</b>	<b>&lt;10</b>	<b>&lt;10</b>	<b>25-50</b>	<b>&gt;50</b>
<b>Deadfall / Logs:</b>	<b>10-24</b>	<b>10-24</b>	<b>25-50</b>	<b>&gt;50</b>
<b>R</b>	<b>O</b>	<b>O</b>	<b>R</b>	<b>R</b>

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

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

**Ecosite:** **Dry-Fresh Sugar Maple Deciduous Forest** Code: **F0D5**

**Vegetation Type:** **Dry-Fresh Sugar Maple-White Ash** Code: **F0D5-8**

**Inclusion:** **Deciduous Forest Type** Code: **F0D5-8**

**Complex:** **/** Code: **/**

**Community Profile Diagram/Comments**

Notes:

**Tree Tally by Species**

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Prism Factor	2
Aw	3	4	3		10		26
MH	5	3	6		14		37
BP	1		2		3		8
Bs	1	1			2		5
Bw	3		2		5		13
Be	1		2		3		8
<b>Total</b>	<b>15</b>	<b>8</b>	<b>15</b>		<b>38</b>		<b>100</b>
<b>Basal Area (BA)</b>	<b>30</b>	<b>16</b>	<b>30</b>		<b>76</b>		<b>38</b>
<b>Dead</b>	<b>1</b>	<b>1</b>	<b>1</b>		<b>3</b>		<b>8</b>

**Soils Ontario and ELC Soils Description**

Site Metrics	Plt/Auger #	Soils Description				Summary
Zone	177	177	177	177	177	
Easting						
Northing						
Position	2	3	3	3	3	
Aspect	NE	NW	SE	SE	SE	
Percent	5	10	3	3	3	
Slope	3m	6m	5m	5m	5m	
Length						
Mottles	>120	102	84	84	84	
Clay	>120	>120	>120	>120	>120	
Water Table	>120	>120	>120	>120	>120	
Carbonates	>120	>120	>120	>120	>120	
Bedrock	>120	>120	>120	>120	>120	
Depth from zero	0	0	0	0	0	% CF
Texture	vFSL	vFSL	vFSL	vFSL	vFSL	% CF
Depth from zero	18	13	18	18	18	% CF
Texture	vFSC	vFSL	vFSC	vFSC	vFSC	% CF
Depth from zero	21	33	40	40	40	% CF
Texture	C	CvFS	vFS	vFS	vFS	% CF
Depth from zero		56	101	101	101	% CF
Texture		vFS	Clay	Clay	Clay	% CF
% Surface Stone/Rock			94% Clay			
Moisture Regime						
Drainage						







**ELC**  
Community Description and Classification

Map #: 232 - GSH 1689 Polygon: 1  
 Surveyor(s): S, RA Date: April 25, 2012 Time start: 2:00 pm finish: 4:00 pm  
 UTMZ: UTMN:

**Polygon Description**

System	Substrate	Topographic Feature	Plant Form	Community
<input checked="" type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic  <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input checked="" type="checkbox"/> Surficial Dep. <input type="checkbox"/> Bedrock	<input type="checkbox"/> Organic <input checked="" type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Min. <input type="checkbox"/> Acidic Bedrk <input type="checkbox"/> Basic Bedrk <input type="checkbox"/> Carb. Bedrk <input type="checkbox"/> Bedrock	<input type="checkbox"/> Lacustrine <input type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input type="checkbox"/> Valley Slope <input checked="" type="checkbox"/> Tableland <input type="checkbox"/> Roll. Upland <input type="checkbox"/> Cliff <input type="checkbox"/> Talus <input type="checkbox"/> Crevice/Cave <input type="checkbox"/> Alvar <input type="checkbox"/> Rockland <input type="checkbox"/> Beach / Bar <input type="checkbox"/> Sand Dune <input type="checkbox"/> Bluff	<input type="checkbox"/> Plankton <input type="checkbox"/> Submerged <input type="checkbox"/> Floating-LVD. <input type="checkbox"/> Graminoid <input type="checkbox"/> F-orb <input type="checkbox"/> Lichen <input checked="" type="checkbox"/> Bryophyte <input checked="" type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Mixed	<input type="checkbox"/> Lake <input type="checkbox"/> Pond <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Marsh <input type="checkbox"/> Swamp <input type="checkbox"/> Fen <input type="checkbox"/> Bog <input type="checkbox"/> Barren <input type="checkbox"/> Meadow <input type="checkbox"/> Prairie <input type="checkbox"/> Thicket <input type="checkbox"/> Savarinah <input type="checkbox"/> Woodland <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Plantation

**Stand Description**

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; = About Equal To)
1	2	3	Fragaria >> Ulex cuneata
2	2	4	Fragaria > Ulex cuneata
3	4	3	Viburnum >> Prunus
4	7	4	Allpeti > Phacelia

HT Codes: 7 < 0.2m 6 > 0.2-0.5m 5 > 0.5-1m 4 > 1-2m 3 > 2-8m 2 > 8-25m 1 > 25m  
 CVR Codes: 0 = none 1 0% - 10% 2 10 - 25% 3 25 - 50% 4 > 60%

**Stand Composition: Size Class Analysis:**

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

**Standing Snags:** Deadfall / Logs:

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

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

**Ecosite:** Fish-moist lowland deciduous forest. Code: FOD7  
**Vegetation Type:** Fish-moist lowland deciduous forest. Code: FOD7-2  
**Inclusion:** Code:  
**Complex:** Code:

**Community Profile Diagram/Comments**

Notes:

**Tree Tally by Species**

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

**Soils Ontario and ELC Soils Description**

Site Metrics	PI/Auger #		Soils Description		Summary
	UTM	Zone	Easting	Northing	
Depth to ...					
Mottles					
Gley					
Water Table					
Carbonates					
Bedrock					
Depth from zero	1				% CF
Texture					
Depth from zero	2				% CF
Texture					
Depth from zero	3				% CF
Texture					
Depth from zero	4				% CF
Texture					
% Surface Stoner/Rock					
Moisture Regime					
Drainage					

**Soil Horizon Description**

0-15 % CF  
 silty clay loam  
 4-15+ % CF  
 silty clay

Very moist  
 P/I

**ELC** Community Description and Classification

Map #: 292-GSH1639 Polygon: 42

Surveyor(s): AA, SG Date: April 25, 2017 Time start: 2:00pm finish: 4:00pm

UTMZ: UTMZ: UTMN:

**Polygon Description**

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

**Stand Description**

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (> Much Greater Than; > Greater Than; = About Equal To)
1	2	4	SPX OVOB > Acs SAC
2	2	3	SPX SAC
3	4	4	VIBANT = ORV VIM
4	7	3	EUBOV = ERY OTHR

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

**Standing Snags:** A: Deadfall / Logs: A: 0

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

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

**Ecosite:** Dry - Fresh Sugar maple - beeches Code: FOS5

**Vegetation Type:** Dry - Fresh Sugar maple - hickory Code: FOS5-5

**Inclusion:** Code:

**Complex:** Code:

**Community Profile Diagram/Comments**

Notes:

**Tree Tally by Species**

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

**Soils Ontario and ELC Soils Description**

Site Metrics	Pit/Auger #	Soil Horizon Description	Summary
Zone	177		
Easting	0444848		
Northing	4791951		
Position	Table		
Aspect			
Percent			
Slope			
Length			
Mottles			
Gley			
Water Table			
Carbonates			
Bedrock			
Depth from zero	16cm	% CF	% CF
Texture	loam	% CF	% CF
Depth from zero	16+	% CF	% CF
Texture	Sandy clay loam	% CF	% CF
Depth from zero		% CF	% CF
Texture		% CF	% CF
Depth from zero		% CF	% CF
Texture		% CF	% CF
% Surface Stone/Rock			
Moisture Regime	Very Fresh		
Drainage	MW/I		

Plant Species List  
2012

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

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: 232-GS-11639	1	F00.7-2	4
Date: April 25, 2012	2	F00.5-5	6
Surveyors: RA, SG	3		



# Significant Wildlife Habitat Form

AECOM

Study Area:	BLW    JER <u>GSH</u>	Map #:	<u>232-GSH 1639</u>
Date:	<u>Sept April 25, 2012</u>	Time Started:	<u>2:00 pm</u>
Field Staff:	<u>SG, RA.</u>	Time Finished:	<u>4:00 pm</u>
Weather Conditions:	<u>Sunny, Warm.</u>		

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

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

UTMs: \_\_\_\_\_                      Number of nests: \_\_\_\_\_

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

\_\_\_\_\_

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

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

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

UTMs: \_\_\_\_\_                       Area of standing water delineated on field map

Water depth (m): \_\_\_\_\_                      % open water: \_\_\_\_\_                      % emergent vegetation: \_\_\_\_\_

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

\_\_\_\_\_

Area and soil/substrate of shoreline habitat: \_\_\_\_\_

Type and abundance of cover in open water habitat: \_\_\_\_\_

Type and abundance of cover in surrounding habitat: \_\_\_\_\_

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

Evidence of use by waterfowl, amphibians, turtles (e.g. broken eggs), marsh breeding birds:  
See vernal pool sheet, no waterfowl, marsh birds, or turtle habitat.

\_\_\_\_\_

\*\*\*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: - See map.                      Likelihood to extend below frost line: ✓

% canopy cover: \_\_\_\_\_                      % slope: \_\_\_\_\_                      Distance to open canopy (m): \_\_\_\_\_

Description of fissure or stone pile (composition/material, dimensions, etc):  
See hibernacula sheet.

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, 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