

GSH1499

GSH1743

249 FOD

GSH1500

A: FOD 6-5

various 2" ELC  
pool → J

244

AIR32

GSH1744

AMP bio log monitoring station

GSH1743

OK stick out (ASA)

GSH1501

448250



Legend

- GE Turbine
- ▭ Turbine Buffer (216 m)
- ▭ Property Boundary
- ▭ ELC Completed 2011
- ▭ Natural Feature and ID
- ▭ ELC Polygon Boundary
- ▭ Disturbance Areas
- ▭ Area of Disturbance, plus 10m
- ▭ ANSI
- ▭ Evaluated Wetlands - PSW
- ▭ ABCA Watercourse



Basemapping from Ontario Ministry of Natural Resources  
Orthophotography 2010



UTM Zone 17N, NAD 83

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Goshen ELC Survey

244\_GSH1744/GSH1743

April 2012  
Project 60156032

**AECOM**

Figure 1



pond.  
Forsythe.

30m x 15m.

Salix hybrid.

pop deltoidea.

Chokeberry

90% rooted.

Fra. penn.

silver maple.

Dryas ides.

reed craggs?

Forsythe

6/11/1910



**ELC**  
Community Description and Classification

Map #: 244 GSA 1744/1743 Polygon: 2

Surveyors: S, R.A. Date: April 27, 2012 Time start: 8:00am finish: 10:30am

UTMZ: UTMZ: UTMZ:

**Polygon Description**

System	Substrate	Topographic Feature	Plant Form	Community
<input checked="" type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic <input type="checkbox"/> Site <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input checked="" type="checkbox"/> Surficial Dep. <input type="checkbox"/> Bedrock	<input 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 checked="" type="checkbox"/> Tableland <input type="checkbox"/> Roli. Upland <input type="checkbox"/> Cliff <input type="checkbox"/> Talus <input type="checkbox"/> Crevice/Cave <input type="checkbox"/> Alvar <input type="checkbox"/> Rckland <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 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	Ace Fee 77 6m penn
2	2	2	Ace Fee 77 6m penn
3	3	2	elm omer 77 6m penn
4	6	4	oax sp 77 6m penn

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

**Stand Composition: Size Class Analysis:**

Standing Stock:	A < 10	A 10-24	O 25-50	M > 50
Deadfall / Logs:	O < 10	A 10-24	R 25-50	R > 50

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

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

**Ecosite:** mple mineral rich swamp o.c. Code: SWD3

**Vegetation Type:** Swamp maple mineral rich swamp Code: SWD3-3

**Inclusion:** Code: Code:

**Complex:** Code: Code:

**Community Profile Diagram/Comments**

Notes:

**Tree Tally by Species**

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

**Soils Ontario and ELC Soils Description**

Site Metrics		Pit/Auger #	Soil Horizon Description				Summary
Zone		17T					Moisture Regime
Easting		0446425					
Northing		4793331					
Position		Table					
Aspect							Drainage
Percent							
Slope							
Length							Effective Texture (Indicate below)
Mottles		20					
Gley		32					
Water Table							
Carbonates							% CF
Bedrock							
1	Depth from zero	0-20	% CF				
Texture		SCL					
2	Depth from zero	20+	% CF				% CF
Texture		clay					
3	Depth from zero		% CF				% CF
Texture							
4	Depth from zero		% CF				% CF
Texture							
% Surface Stone/Rock							Moisture Regime
Moisture Regime		very moist					
Drainage		P/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> )		R			U	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> )						<i>Bromus</i>					
Norway Spruce ( <i>Picea abies</i> )						Common Buckthorn ( <i>Rhamnus cathartica</i> )				U		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> )			U	U		Quack Grass ( <i>Elymus repens</i> )					
Red Pine ( <i>Pinus resinosa</i> )						Prickly Gooseberry ( <i>Ribes cynosbati</i> )			U			Virginia Wild Rye ( <i>Elymus virginicus</i> )					
Eastern White Pine ( <i>Pinus strobus</i> )						Swamp Black Currant ( <i>Ribes lacustre</i> )			R			<i>Elymus</i>					
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> )						<i>Glyceria</i>					
Eastern Hemlock ( <i>Tsuga canadensis</i> )		R				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> )						<i>Muhlenbergia</i>					
						<i>Rosa</i>						Witch-grass ( <i>Panicum capillare</i> )					
						Com. Blackberry ( <i>Rubus allegheniensis</i> )						<i>Panicum</i>					
Manitoba Maple ( <i>Acer negundo</i> )						Wild Red Raspberry ( <i>Rubus idaeus</i> )					U	Reed Canary Grass ( <i>Phalaris arundinacea</i> )	U	D		F	
Black Maple ( <i>Acer nigrum</i> )						Black Raspberry ( <i>Rubus occidentalis</i> )			U	U		Timothy ( <i>Phleum pratense</i> )					
Norway Maple ( <i>Acer platanoides</i> )						Purple-fl. Raspberry ( <i>Rubus odoratus</i> )						Common Reed ( <i>Phragmites australis</i> )					
Red Maple ( <i>Acer rubrum</i> )						Dwarf Raspberry ( <i>Rubus pubescens</i> )						Canada Blue Grass ( <i>Poa compressa</i> )					
Silver Maple ( <i>Acer saccharinum</i> )						<i>Rubus</i>						Fowl Meadow Grass ( <i>Poa palustris</i> )					
Freeman's Maple ( <i>Acer X freemanii</i> )		U	D			Peach-leaved Willow ( <i>Salix amygdaloides</i> )						Kentucky Bluegrass ( <i>Poa pratensis</i> )				U	
Sugar Maple ( <i>Acer saccharum</i> )		D				Bebb's Willow ( <i>Salix bebbiana</i> )						Yellow Foxtail ( <i>Setaria pumila</i> )				U	
Mountain Maple ( <i>Acer spicatum</i> )						Pussy Willow ( <i>Salix discolor</i> )						Green Foxtail ( <i>Setaria viridis</i> )					
Speckled Alder ( <i>Alnus incana</i> )						Missouri Willow ( <i>Salix eriocephala</i> )											
Downy Serviceberry ( <i>Amelanchier arborea</i> )						Sandbar Willow ( <i>Salix exigua</i> )											
Serviceberry ( <i>Amelanchier sanguinea</i> )						Shining Willow ( <i>Salix lucida</i> )											
Yellow Birch ( <i>Betula alleghaniensis</i> )						Black Willow ( <i>Salix nigra</i> )											
White Birch ( <i>Betula papyrifera</i> )						Slender Willow ( <i>Salix petiolaris</i> )											
European Birch ( <i>Betula pendula</i> )						<i>Salix sp.</i>				R							
Blue Beech ( <i>Carpinus caroliniana</i> )		R				Hybrid Crack Willow ( <i>Salix X rubens</i> )											
Bitternut hickory ( <i>Carya cordiformis</i> )		R				Black-berried Elder ( <i>Sambucus nigra</i> )											
Shagbark Hickory ( <i>Carya ovata</i> )		U			R	Red-berried Elder ( <i>Sambucus racemosa</i> )				R							
Climbing Bittersweet ( <i>Celastrus scandens</i> )						Buffaloberry ( <i>Shepherdia canadensis</i> )											
Common Hackberry ( <i>Celtis occidentalis</i> )						Eur. Mountain Ash ( <i>Sorbus aucuparia</i> )											
Buttonbush ( <i>Cephalanthus occidentalis</i> )						Narrow Meadow-sweet ( <i>Spiraea alba</i> )											
Alt.-leaved Dogwood ( <i>Cornus alternifolia</i> )						Common Lilac ( <i>Syringa vulgaris</i> )											
Silky Dogwood ( <i>Cornus amomum</i> )						Poison-ivy ( <i>Toxicodendron rydbergii</i> )				R							
Bunchberry ( <i>Cornus canadensis</i> )						Climbing Poison-ivy ( <i>Toxicodendron radicans</i> )				U							
Gray dogwood ( <i>Cornus racemosa</i> )						White Elm ( <i>Ulmus americana</i> )				E	F						
Round-leaved Dogwood ( <i>Cornus rugosa</i> )						Siberian Elm ( <i>Ulmus pumila</i> )											
Red-osier Dogwood ( <i>Cornus sericea</i> )		R			R	Slippery Elm ( <i>Ulmus rubra</i> )											
American Hazel ( <i>Corylus americana</i> )						Low Blueberry ( <i>Vaccinium angustifolium</i> )											
Beaked Hazel ( <i>Corylus comuta</i> )						Maple-leaf Viburnum ( <i>Viburnum acerifolium</i> )											
Cockspur Thorn ( <i>Crataegus crus-galli</i> )						Hobblebush ( <i>Viburnum lantanoides</i> )											
English Hawthorn ( <i>Crataegus monogyna</i> )						Nannyberry ( <i>Viburnum lentago</i> )				R	U	Carex <i>pedunculata</i>				U	
Large-fruited Thorn ( <i>Crataegus punctata</i> )						Guelder-Rose ( <i>Viburnum opulus</i> )						Carex					
<i>Crataegus sp.</i>		R			F	Downy Arrow-wood ( <i>Vib. rafinesquianum</i> )						Carex					
<i>Crataegus</i>						Riverbank Grape ( <i>Vitis riparia</i> )				R		Carex					
Bush Honeysuckle ( <i>Diervilla lonicera</i> )						Am. Prickly-ash ( <i>Zanthoxylum americanum</i> )						Carex					
Russian Olive ( <i>Elaeagnus angustifolia</i> )					U	<b>JILIA AEMER</b>				U	R	Carex					
Autumn Olive ( <i>Elaeagnus umbellata</i> )						<b>MALUS PUMILA</b>				R	R	Carex					
Run. Strawberry-bush ( <i>Euonymus obovata</i> )		U				<b>AMELANCHIER SP.</b>				R		Carex					
American Beech ( <i>Fagus grandifolia</i> )		U										Carex					
Glossy Buckthorn ( <i>Fragula alnus</i> )												Carex					
White Ash ( <i>Fraxinus americana</i> )					U							Carex					
Black Ash ( <i>Fraxinus nigra</i> )		R										Carex					
Green Ash ( <i>Fraxinus pennsylvanica</i> )		U	U			<b>Ferns &amp; Allies</b>						Carex					
Witch-hazel ( <i>Hamamelis virginiana</i> )						Lady Fern ( <i>Athyrium filix-femina</i> )						Cyperus					
Winterberry ( <i>Ilex verticillata</i> )						Rattlesnake Fern ( <i>Botrychium virginianum</i> )						Redroot Spike-rush ( <i>Eleocharis erythropoda</i> )					
Butternut ( <i>Juglans cinerea</i> )						Bulb Bladder Fern ( <i>Cystopteris bulbifera</i> )						<i>Eleocharis</i>					
Black Walnut ( <i>Juglans nigra</i> )						Spin. Wood Fern ( <i>Dryopteris carthusiana</i> )						Hard-stem Bulrush ( <i>Schoenoplectus acutus</i> )					
Common Privet ( <i>Ligustrum vulgare</i> )						Crested Wood Fern ( <i>Dryopteris cristata</i> )						Three-square Bulrush ( <i>Sch. pungens</i> )					
Spicebush ( <i>Lindera benzoin</i> )		U				Marginal Wood Fern ( <i>Dryopteris marginalis</i> )						Soft-stem Bulrush ( <i>Sch. tabernaemontani</i> )					
Fly Honeysuckle ( <i>Lonicera canadensis</i> )						<i>Dryopteris</i>						Dark-green Bulrush ( <i>Scirpus atrovirens</i> )					
Glaucous Honeysuckle ( <i>Lonicera dioica</i> )						Ostrich Fern ( <i>Matteuccia struthiopteris</i> )						Wool-grass ( <i>Scirpus cyperinus</i> )					
Morrow's Honeysuckle ( <i>Lonicera morrowii</i> )						Sensitive Fern ( <i>Onoclea sensibilis</i> )				U							
Tartarian Honeysuckle ( <i>Lonicera tatarica</i> )						Cinnamon Fern ( <i>Osmunda cinnamomea</i> )											
Common Apple ( <i>Malus pumila</i> )						Interrupted Fern ( <i>Osmunda claytoniana</i> )											
White Mulberry ( <i>Morus alba</i> )						Royal Fern ( <i>Osmunda regalis</i> )											
Sweet Gale ( <i>Myrica gale</i> )						Christmas Fern ( <i>Polystichum acrostichoides</i> )					U						
Ironwood ( <i>Ostrya virginiana</i> )		R				Eastern Bracken-fern ( <i>Pteridium aquilinum</i> )											
Thicket-creeper ( <i>Parthenocissus inserta</i> )						Marsh Fern ( <i>Thelypteris palustris</i> )											
Ninebark ( <i>Physocarpus opulifolius</i> )																	
Balsam Poplar ( <i>Populus balsamifera</i> )						Field Horsetail ( <i>Equisetum arvense</i> )						Broad Bur-reed ( <i>Sparganium eurycarpum</i> )					
Eastern Cottonwood ( <i>Populus deltoides</i> )						Scouring-rush ( <i>Equisetum hyemale</i> )						Narrow-leaved Cattail ( <i>Typha angustifolia</i> )					
Large-tooth Aspen ( <i>Populus grandidentata</i> )						Variegated Horsetail ( <i>Equisetum variegatum</i> )						Broad-leaved Cattail ( <i>Typha latifolia</i> )					
Trembling Aspen ( <i>Populus tremuloides</i> )						<i>Equisetum</i>						Broad-leaved Cattail ( <i>Typha X glauca</i> )					
Sweet Cherry ( <i>Prunus avium</i> )						Ground-cedar ( <i>Lycopodium digitatum</i> )						Articulated Rush ( <i>Juncus articulatus</i> )					
Pin Cherry ( <i>Prunus pensylvanica</i> )						Shining Clubmoss ( <i>Lycopodium lucidulum</i> )						Soft Rush ( <i>Juncus effusus</i> )				U	
Black Cherry ( <i>Prunus serotina</i> )						Ground-pine ( <i>Lycopodium obscurum</i> )						Path Rush ( <i>Juncus tenuis</i> )					
Choke Cherry ( <i>Prunus virginiana</i> )		U										<i>Juncus</i>					
<i>Prunus</i>												<i>Juncus</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: 244-GSP/1744/1743

Date: April 27, 2012

Surveyors: RA, SR

F06G-5

SWD3-3

Ferocline (CUM1-1)



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> )	R	R			
White Snakeroot ( <i>Ageratina altissima</i> )					Cutleaf Toothwort ( <i>Cardamine concatenata</i> )					Tall Buttercup ( <i>Ranunculus acris</i> )					
Com. Ragweed ( <i>Ambrosia artemisiifolia</i> )					Toothwort ( <i>Cardamine diphylla</i> )					Hooked Buttercup ( <i>Ranunculus recurvatus</i> )					
Giant Ragweed ( <i>Ambrosia trifida</i> )					Penn. Bitter-cress ( <i>Cardamine pensylvanica</i> )					<i>Ranunculus</i>					
Field Pussytoes ( <i>Antennaria neglecta</i> )					<i>Cardamine</i>					Sheep Sorrel ( <i>Rumex acetosella</i> )					
<i>Artemisia</i>					Blue Cohosh ( <i>Caulophyllum thalictroides</i> )	R				Curly-leaf Dock ( <i>Rumex crispus</i> )					
Common Burdock ( <i>Arctium minus</i> )	R				Mouse-ear Chickweed ( <i>Cerastium fontanum</i> )					Bitter Dock ( <i>Rumex obtusifolius</i> )					
Nodding Beggar-ticks ( <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>Saponaria officinalis</i> )					
Brown Knapweed ( <i>Centaurea jacea</i> )					Enchanter's Nightshade ( <i>Circaea lutetiana</i> )					Marsh Skullcap ( <i>Scutellaria galericulata</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-parsnip ( <i>Sium suave</i> )					
Daisy Fleabane ( <i>Erigeron annuus</i> )					Dog-strangling Vine ( <i>Cynanchum rossicum</i> )					Bitter Nightshade ( <i>Solanum dulcamara</i> )					
Philadelphia Fleabane ( <i>Erig. philadelphicus</i> )					Wild Carrot ( <i>Daucus carota</i> )					Black Nightshade ( <i>Solanum ptychanthum</i> )					
<i>Erigeron</i>					Deptford Pink ( <i>Dianthus armeria</i> )					Grassleaf Stitchwort ( <i>Stellaria graminea</i> )					
Joe-pye-weed ( <i>Eupatorium maculatum</i> )					Squirrel-corn ( <i>Dicentra canadensis</i> )					Common Chickweed ( <i>Stellaria media</i> )					
Boneset ( <i>Eupatorium perfoliatum</i> )					Dutchman's-breeches ( <i>Dicentra cucullaria</i> )					Early Meadow-rue ( <i>Thalictrum dioicum</i> )					
Large-leaved Aster ( <i>Eurybia macrophylla</i> )					Wild Teasel ( <i>Dipsacus fullonum</i> )					Tall Meadow-rue ( <i>Thalictrum pubescens</i> )					
Fiat-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> )					Viper's Bugloss ( <i>Echium vulgare</i> )					Foamflower ( <i>Tiarella cordifolia</i> )					
Field Hawkweed ( <i>Hieracium caespitosum</i> )					Northern Willow-herb ( <i>Epiobium ciliatum</i> )					Star-flower ( <i>Trientalis borealis</i> )					
<i>Hieracium</i>					Hairy Willow-herb ( <i>Epiobium hirsutum</i> )					Red Clover ( <i>Trifolium pratense</i> )					
Elecampane ( <i>Inula helenium</i> )					Small-fl. Willow-herb ( <i>Epiobium parviflorum</i> )					White Clover ( <i>Trifolium repens</i> )					
Prickly Lettuce ( <i>Lactuca serriola</i> )					<i>Epiobium</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 Mullein ( <i>Verbascum thapsus</i> )					
Tall White Lettuce ( <i>Prenanthes 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> )	U			F	Sweet-scented Bedstraw ( <i>Galium triflorum</i> )					Water Speedwell ( <i>Veron. 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>					
Zig-zag Goldenrod ( <i>Solidago flexicaulis</i> )	U				Herb-robert ( <i>Geranium robertianum</i> )	R				Cow Vetch ( <i>Vicia cracca</i> )					
Giant Goldenrod ( <i>Solidago gigantea</i> )					Yellow Avens ( <i>Geum aleppicum</i> )					<i>Vicia</i>					
Early Goldenrod ( <i>Solidago juncea</i> )					White Avens ( <i>Geum canadense</i> )					Periwinkle ( <i>Vinca 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> )					Virg. Water-leaf ( <i>Hydrophyllum virginianum</i> )	U				Com. Blue Violet ( <i>Viola sororia</i> )					
<i>Sonchus</i>					Com. St. John's-wort ( <i>Hypericum perforatum</i> )					<i>Viola selkirkii</i>					R
Heart-leaf Aster ( <i>Symph. cordifolium</i> )					Spotted Jewelweed ( <i>Impatiens capensis</i> )					<i>Geum maculatum</i>					U
Heath Aster ( <i>Symphotrichum ericoides</i> )					Wood Nettle ( <i>Laportea canadensis</i> )					<i>ANEQUIN</i>					F
Tall White Aster ( <i>Symph. lanceolatum</i> )	U	U		U	Motherwort ( <i>Leonurus cardiaca</i> )					<i>Avenas so.</i>					U
Calico Aster ( <i>Symphotrichum lateriflorum</i> )	U				Field Peppergrass ( <i>Lepidium campestre</i> )					<i>Phlox divaricata</i>					R
New England Aster ( <i>Symph. novae-angliae</i> )					Eur. Gromwell ( <i>Lithospermum officinale</i> )					<i>Uvularia grandiflora</i>					R
Purple-stem Aster ( <i>Symph. puniceus</i> )					Butter & Eggs ( <i>Linaria vulgaris</i> )					<i>ERAVIAR.</i>					U
Common Tansy ( <i>Tanacetum vulgare</i> )					Great Lobelia ( <i>Lobelia siphilitica</i> )					<i>DIPSYLE</i>					R
Common Dandelion ( <i>Taraxacum officinale</i> )	R	U		U	<i>Lobelia</i>					<b>Monocot Herbs</b>					
Com. Goatsbeard ( <i>Tregopogon 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> )					R
					Fringed Loosetrife ( <i>Lysimachia ciliata</i> )					Jack-in-the-pulpit ( <i>Arisaema triphyllum</i> )					
					Moneywort ( <i>Lysimachia nummularia</i> )					Asparagus ( <i>Asparagus officinalis</i> )					
					<i>Lysimachia</i>					Wild Calla ( <i>Calla palustris</i> )					
					Purple Loosetrife ( <i>Lythrum salicaria</i> )					Bluebead-lily ( <i>Clintonia borealis</i> )					
					Black Medick ( <i>Medicago lupulina</i> )					Garden Lily-of-valley ( <i>Convallaria majalis</i> )					
					Alfalfa ( <i>Medicago sativa</i> )					Yel. Lady's Slipper ( <i>Cypripedium parviflorum</i> )					
					White Sweet-clover ( <i>Melilotus alba</i> )					Canada Waterweed ( <i>Elodea canadensis</i> )					
					Yellow Sweet-clover ( <i>Melilotus officinalis</i> )					Helleborine ( <i>Epipactis helleborine</i> )					
					Wild Mint ( <i>Mentha arvensis</i> )					Yellow Trout Lily ( <i>Erythronium americanum</i> )					F
					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>Hamero-callus fulva</i> )					
					Forget-me-not ( <i>Myosotis scorpioides</i> )					Lesser Duckweed ( <i>Lemna minor</i> )					
					Water-cress ( <i>Nasturtium officinale</i> )					Starry Duckweed ( <i>Lemna trisulca</i> )					
					Com. Evening-primrose ( <i>Oenothera biennis</i> )					Wild Lily-of-valley ( <i>Maianthemum canadense</i> )					R
					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 pubescens</i> )					
					English Plantain ( <i>Plantago lanceolata</i> )					Pickeral-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> )				U	<i>Potamogeton</i>					
					Pale Smartweed ( <i>Polygonum lepatifolium</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>					Bristly 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> )					R
					Heal-all ( <i>Prunella vulgaris</i> )				R	White Trillium ( <i>Trillium grandiflorum</i> )					U
					Shinleaf ( <i>Pyrola elliptica</i> )					Large-flowered Bellwort ( <i>Uvularia grandiflora</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:	1	4
Date:	2	6
Surveyors:	3	

# Significant Wildlife Habitat Form

AECOM

Study Area:	BLW JER <b>GSH</b>	Map #:	244-GSH 1744/1743
Date:	April 27, 2012	Time Started:	8:00am
Field Staff:	AA, SG	Time Finished:	10:30am
Weather Conditions:	-3°C, Windy (4), ~50% cloud cover		

**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: N/A on adjacent property (S) Number of nests: 1

Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):  
stick nest at top of tall tree, no activity observed

Description of habitat (note riparian areas if present, evidence of disturbance): heavily logged / disturbed open swampy woodlot

**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 suitable waterfowl, turtle or Marsh Breeding Bird habitat observed

**\*\*\*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:  
 No  Yes (if yes, photograph and complete the following)

Large open habitat present: \_\_\_\_\_ Evidence of disturbance (e.g. cattle grazing): \_\_\_\_\_  
 UTM: \_\_\_\_\_

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
87-88	stick Nest		



# Species Conservation Concern Habitat and Incidence Wildlife - Goshen



Map No: 244-GSH1744/1743  
 Date (yyyy-mm-dd): 2012-04-27

Field Staff: BA, SG

Time Started: 8:00am  
 Time Finished: 10:30am

## Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Turkey vulture		OB					
Brown thrasher		VO					
Wren warbler		VO					
Yellow bellied sapsucker		VO					
Vesper sparrow		VO					
White breasted nuthatch		OB					
Downy woodpecker		VO					
Northern flicker		VO					
Blue jay		VO					
House wren		VO					
American crow		VO					
Brown headed cowbird		VO					

Note: Evidence Codes (EV) SH=Suitable Habitat, SM=Singing Male;

Breeding Bird (Possible) T-Territory, D=Display, P=Pair, N=Nest Building, V=Visiting Nest, A=Anxiety Behavior;

Breeding Bird (Probable) DD=Distraction, NU=Used Nest, FY=Fledged Young, NE=Eggs, NY=Young, FS=Foos/Faecal sack, AE=Nest Entry

Breeding Bird (Confirmed) DD=Distraction, NU=Used Nest, FY=Fledged Young, NE=Eggs, NY=Young, FS=Foos/Faecal sack, AE=Nest Entry

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

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
FOD7	American Gromwell (Lithospermum latifolium) - S3 Bloom Time - Spring	Shaded river banks, wooded floodplains. River floodplains, woods and edges of woods.	Y (N) UTM:
ALO, TPO	Muehlenberg's astomum moss (Astomum muehlenbergianum) - S2 Bloom Time - Spring	Thin soil over level outcrop ledges and on soil under grasses in open prairie	Y (N) UTM:
FOM1, FOM2, CUP3	Autumn Coral-root (Corallorhiza odontorhiza) - S2 Bloom Time - summer to fall	Oak-pine woods or occasionally in open, red pine or white pine plantations. Dry, sandy woods.	Y (N) UTM:
FOC, FOM, FOD	Burning Bush (Euonymus atropurpureus) - S3 Bloom Time - April - June	Species occurs in dry to moist deciduous thickets and woods	Y (N) UTM: NO
SWC1, SWC3, SWC4, SWM1, SWM2, SWM4, SWM5, SWM6	Chinese Hemlock Parsley (Conioselinum chinense) - S2 Bloom Time - summer to fall	Swampy places with deciduous trees, white cedars, tamarack, springy river banks, wet borders of streams and rivers. Also found among calcareous seepage slopes.	Y (N) UTM:
SWC, SWM, SWD, SWT, IMAM, MAS	Crowned Beggarticks (Bidens trichosperma) - S2 Bloom Time - late summer	Found in openings in swamps, marshes, along shores & wet fields within the Carolinian zone and southeastern Georgian bay Bogs, fens, tamarack swamps	Y (N) UTM: NO
ALT1, FOD7	Eastern Green-violet (Hybanthus concolor) - S2 Bloom Time - mid March to August	Occurs in rich, wet-mesic floodplain forests as well as mesic forests over limestone. Includes floodplains and river banks.	Y (N) UTM:
TPS, TPW, FOM1, FOM2	Fogg's Goosefoot (Chenopodium foggii) - S2	Species occurs in sandy areas on limestone under oak or pine-oak forests	Y (N) UTM:
TPO2, TPS2, TPW2,	Giant Ironweed (Vernonia gigantea) - S1? Bloom Time -	Found in mesic prairies, thickets, moist woods, roadsides and grassy meadows	Y (N) UTM:

# Species of Conservation Concern Habitat and Incidental Wildlife – Goshen



ELC	Species	Habitat Description	Habitat Present (Y/N; UTM); description of habitat if present
CUM1, MAM, FOD6, FOD7, FOD9	June - August Green Dragon ( <i>Arisaema dracontium</i> ) - S1/S3 <u>Bloom Time - May and June</u>	Species found in damp deciduous forest and along river streams. Particularly <u>Maple forest</u> and forest dominated by Red Ash and White Elm.	(Y) N UTM: NO
TPO1, TPS1, TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	June - August Hairy Bedstraw ( <i>Gallium pilosum</i> ) - S3 <u>Bloom Time - June-August</u>	Occurs in dry, sandy woods and thickets; occasionally in dry sandy fields	(Y) (N) UTM:
FEO1, FES1, FET1, SWC, SWM, SWD, SWT, TPO, TPS, TPW	June to August Hairy Valerian ( <i>Valeriana edulis</i> ) - S1 <u>Bloom Time - June to August</u>	Inhabits swampy river flats and meadows, wet prairies, and wooded, rocky riverbanks and fens.	(Y) (N) UTM:
FOD6, FOD7, SWM, SWD	Summer Hairy Wood Mint ( <i>Blephilia hirsuta</i> ) - S1 <u>Bloom Time - Summer</u>	Woodlands, often rocky, especially rivers. Rich woods, <u>swamp forests</u> , floodplains.	(Y) N UTM: NO
FOD6, FOD7, FOD8, FOD9	Harbinger-of-spring ( <i>Erigenia bulbosa</i> ) - S3 <u>Bloom Time - early to late April</u>	Occurs in rich, moist <u>deciduous woods</u> , especially on floodplains.	(Y) N UTM: NO
SAS1, SAM1, SAF1	Hill's Pond Weed ( <i>Potamogeton hillii</i> ) - S1/S2 <u>Bloom Time - summer</u>	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 <u>Bloom Time - June to August</u>	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 <u>Bloom Time - June - September</u>	Species inhabits shores and streambanks along shallow water. As well as swamps, floodplains, shallow water and mudflats at the borders of streams and ponds.	(Y) N UTM: NO
FOD6, FOD7, FOD9	Pawpaw ( <i>Asimina triloba</i> ) - S3 <u>Bloom Time - March-May</u>	Occurs in moist <u>deciduous woods</u> and stream banks.	(Y) N UTM: NO
FOM8, FOD6, FOD7, FOD9, CUM1	Pliose Evening Primrose ( <i>Oenothera pilosella</i> ) - S2 <u>Bloom Time - Late Spring - Early Summer</u>	Moist edges of woods and open, <u>disturbed ground</u> .	(Y) N UTM: NO
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	Prostate Tick-trefoil ( <i>Desmodium rotundifolium</i> ) - S2 <u>Bloom Time - July-September</u>	Dry, sandy or rocky woods	(Y) (N) UTM:
FOD7, SWD	Pumpkin Ash ( <i>Fraxinus profunda</i> ) - S2? <u>Bloom Time - March - June</u>	Swamps and floodplains	(Y) N UTM: NO
CUW1, ALO, FET1, SWC	Ram's-head Lady's-slipper ( <i>Cypripedium arietinum</i> ) - S3 <u>Bloom Time - mid May to mid June</u>	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 <u>Bloom Time - April - September</u>	Species inhabits open, dry sandy woods. Jack pine, oak, and aspen woodlands.	(Y) (N) UTM:
FOD6, FOD7, FOD8	Round-leaved Groundsel ( <i>Packera obovata</i> ) - S3 <u>Bloom Time - May - June</u>	Found in moist <u>woods</u>	(Y) N UTM: NO
CUM1, CUT1, CUS1	Round-leaved hawthorn ( <i>Crataegus lumarina</i> ) - S3?	Species occurs in old fields, poorly managed pastures, <u>fencelines</u> and roadsides	(Y) (N) UTM: NO
FOD6, FOD7, FOD8, FOD9, SWT2, SWT3	Scarlet Beebalm ( <i>Monarda didyma</i> ) - S3 <u>Bloom Time - May to October</u>	Found in moist, rich woods, thicket swamps, banks and floodplains.	(Y) N UTM: NO
ALO, ALS, ALT, TPO, TPS, TPW	Slender Blazing Star ( <i>Liatris cylindracea</i> ) - S3	Species occurs in limestone and dolomite 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 Mulyhy ( <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:
BLO1, BLS1, BLT1, TPO2, TPS2, TPW2, MAM2, FOD7	Stiff Gentian ( <i>Gentiana quinquefolia</i> ) - S2 <u>Bloom Time - late summer to mid fall</u>	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 <u>Bloom Time - mid-March to mid-June</u>	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



ELC		Species	Habitat Description	Habitat Present (Y/N); UTM; description or habitat if present
TP01, TPS1, TPW1, CUM1		Tall Blazing Star ( <i>Liatris aspera</i> )-S3/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y (N) UTM:
FE0, 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>Selurus 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: NO
-		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 clyton</i> ) - S3	Species inhabits densely wooded riparian areas, dry woods, open woods, fencearows and parks. Usually occurs near Hackberry , the larval foodplant	Y (N) UTM:
FOD5		West Virginia White ( <i>Pieris virginianensis</i> ) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y (N) UTM:



# Wetland Data Collection Sheet



Study area: <u>Goshen</u>	Map No: <u>244 GSH 1744/1755</u>
Date (yyyy-mm-dd): <u>2012, April 27</u>	Time Started: <u>8:00 am</u>
Field Staff: <u>SG, RA</u>	Time Finished: <u>10:30 pm</u>

**Presence of Groundwater**      No   Yes

bank seepage       iron staining       groundwater indicator

**Site Type**

Lacustrine  (associated with lakes)      Isolated

Riverine  (associated with rivers)

Palustrine  absent or intermittent inflow and either intermittent or permanent outflow

what are the water inputs and outputs?      run off from field, precipitation

**Soils**      refer to ELC card for soils information

Very moist, poor to imperfect. 0-20 cm. silty clay loam. 20+ cm: clay with mottled clay.

**% open Water**

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

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

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

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

**Community Descriptions**

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

Map Code/ ELC Code	Community Description - list at least four dominant species for each form
SWD3-3	h- <u>Ace Free</u> → <u>Fragran</u> <u>Ace Free</u> → <u>Fragran</u> <u>Ulm amer</u> → <u>Vibrant</u> <u>Carex sp</u> → <u>Phalaris</u>

# Wetland Data Collection Sheet




### Notes on Ecological Functions or features

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

- not suitable for water fowl
- influenced by selective logging, rutting has influenced hydrology
- fairly open canopy:
- no standing water
- flat topography



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



Base imagery from Canada Ministry of Natural Resources  
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0 25 50 100  
 Metres  
 12,500  
 UTM Zone 17N, NAD 83

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**AECOM**  
 Geospatial Survey  
 245\_GSH2054

April 2012  
 Project 80155032

**AECOM**

Figure 1





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> )						Fowl Manna Grass ( <i>Glyceria striata</i> )					
Canada Yew ( <i>Taxus canadensis</i> )						<i>Ribes</i>						Glyceria					
Eastern White Cedar ( <i>Thuja occidentalis</i> )						Black Locust ( <i>Robinia pseudo-acacia</i> )						Rice Cut Grass ( <i>Leersia oryzoides</i> )					
Eastern Hemlock ( <i>Tsuga canadensis</i> )						Prickly Rose ( <i>Rosa acicularis</i> )						Tall Fescue ( <i>Lolium arundinaceum</i> )					
						Smooth Rose ( <i>Rosa blanda</i> )						Muhlenbergia					
						Multiflora Rose ( <i>Rosa multiflora</i> )						Witch-grass ( <i>Panicum capillare</i> )					
						Rosa						Panicum					
<b>Deciduous</b>						Corn. Blackberry ( <i>Rubus allegheniensis</i> )						Reed Canary Grass ( <i>Phalaris arundinacea</i> )					
Manitoba Maple ( <i>Acer negundo</i> )						Wild Red Raspberry ( <i>Rubus idaeus</i> )						Timothy ( <i>Phleum pratense</i> )					
Black Maple ( <i>Acer nigrum</i> )						Black Raspberry ( <i>Rubus occidentalis</i> )						Common Reed ( <i>Phragmites australis</i> )					
Norway Maple ( <i>Acer platanoides</i> )						Purple-fl. Raspberry ( <i>Rubus odoratus</i> )						Canada Blue Grass ( <i>Poa compressa</i> )					
Red Maple ( <i>Acer rubrum</i> )						Dwarf Raspberry ( <i>Rubus pubescens</i> )						Fowl Meadow Grass ( <i>Poa palustris</i> )					
Silver Maple ( <i>Acer saccharinum</i> )						<i>Rubus</i>						Kentucky Bluegrass ( <i>Poa pratensis</i> )					
Freeman's Maple ( <i>Acer X freemanii</i> )						Peach-leaved Willow ( <i>Salix amygdaloides</i> )						Yellow Foxtail ( <i>Setaria pumila</i> )					
Sugar Maple ( <i>Acer saccharum</i> )						Bebb's Willow ( <i>Salix bebbiana</i> )						Green Foxtail ( <i>Setaria viridis</i> )					
Mountain Maple ( <i>Acer spicatum</i> )						Pussy Willow ( <i>Salix discolor</i> )											
Speckled Alder ( <i>Alnus incana</i> )						Missouri Willow ( <i>Salix eriocephala</i> )											
Downy Serviceberry ( <i>Amelanchier arborea</i> )						Sandbar Willow ( <i>Salix exigua</i> )											
Serviceberry ( <i>Amelanchier sanguinea</i> )						Shining Willow ( <i>Salix lucida</i> )											
Yellow Birch ( <i>Betula alleghaniensis</i> )						Black Willow ( <i>Salix nigra</i> )											
White Birch ( <i>Betula papyrifera</i> )						Slender Willow ( <i>Salix petiolaris</i> )											
European Birch ( <i>Betula pendula</i> )						<i>Salix</i>											
Blue Beech ( <i>Carpinus caroliniana</i> )						Hybrid Crack Willow ( <i>Salix X rubens</i> )											
Bltternut hickory ( <i>Carya cordiformis</i> )						Black-berried Elder ( <i>Sambucus nigra</i> )											
Shagbark Hickory ( <i>Carya ovata</i> )						Red-berried Elder ( <i>Sambucus racemosa</i> )											
Climbing Bittersweet ( <i>Celastrus scandens</i> )						Buffaloberry ( <i>Shepherdia canadensis</i> )											
Common Hackberry ( <i>Celtis occidentalis</i> )						Eur. Mountain Ash ( <i>Sorbus aucuparia</i> )						<b>Sedges</b>					
Buttonbush ( <i>Cephalanthus occidentalis</i> )						Narrow Meadow-sweet ( <i>Spiraea alba</i> )						Drooping Wood Sedge ( <i>Carex arctata</i> )					
Alt.-leaved Dogwood ( <i>Cornus alternifolia</i> )						Common Lilac ( <i>Syringa vulgaris</i> )						Golden-fruited Sedge ( <i>Carex aurea</i> )					
Silky Dogwood ( <i>Cornus amomum</i> )						Poison-ivy ( <i>Toxicodendron rydbergii</i> )						Graceful Sedge ( <i>Carex gracillima</i> )					
Bunchberry ( <i>Cornus canadensis</i> )						Climbing Poison-ivy ( <i>Toxicodendron radicans</i> )						Inland Sedge ( <i>Carex interior</i> )					
Gray dogwood ( <i>Cornus racemosa</i> )						White Elm ( <i>Ulmus americana</i> )						Bladder Sedge ( <i>Carex intumescens</i> )					
Round-leaved Dogwood ( <i>Cornus rugosa</i> )						Siberian Elm ( <i>Ulmus pumila</i> )						Lake-bank Sedge ( <i>Carex lacustris</i> )					
Red-osier Dogwood ( <i>Cornus sericea</i> )						Slippery Elm ( <i>Ulmus rubra</i> )						Hop Sedge ( <i>Carex lupulina</i> )					
American Hazel ( <i>Corylus americana</i> )						Low Blueberry ( <i>Vaccinium angustifolium</i> )						Pennsylvania Sedge ( <i>Carex pennsylvanica</i> )					
Beaked Hazel ( <i>Corylus cornuta</i> )						Maple-leaf Viburnum ( <i>Viburnum acerifolium</i> )						Awl-fruited Sedge ( <i>Carex stipata</i> )					
Cockspur Thorn ( <i>Crataegus crus-galli</i> )						Hobblebush ( <i>Viburnum lantanoides</i> )						Fox Sedge ( <i>Carex vulpinoidea</i> )					
English Hawthorn ( <i>Crataegus monogyna</i> )						Nannyberry ( <i>Viburnum lentago</i> )						Carex <sup>sp</sup>					
Large-fruited Thorn ( <i>Crataegus punctata</i> )						Guelder-Rose ( <i>Viburnum opulus</i> )						Carex <sup>sp</sup>					
Crataegus <sup>sp</sup>						Downy Arrow-wood ( <i>Vib. rafinesquianum</i> )						Carex					
Crataegus						Riverbank Grape ( <i>Vitis riparia</i> )						Carex					
Bush Honeysuckle ( <i>Dierilla lonicera</i> )						Am. Prickly-ash ( <i>Zanthoxylum americanum</i> )						Carex					
Russian Olive ( <i>Elaeagnus angustifolia</i> )						<i>Tilia americana</i>						Carex					
Autumn Olive ( <i>Elaeagnus umbellata</i> )												Carex					
Run. Strawberry-bush ( <i>Euonymus obovata</i> )												Carex					
American Beech ( <i>Fagus grandifolia</i> )												Carex					
Glossy Buckthorn ( <i>Frangula alnus</i> )												Carex					
White Ash ( <i>Fraxinus americana</i> )						<b>Ferns &amp; Allies</b>						Carex					
Black Ash ( <i>Fraxinus nigra</i> )						Lady Fern ( <i>Athyrium filix-femina</i> )						Carex					
Green Ash ( <i>Fraxinus pennsylvanica</i> )						Rattlesnake Fern ( <i>Botrychium virginianum</i> )						Cyperus					
Witch-hazel ( <i>Hamamelis virginiana</i> )						Bulbet Bladder Fern ( <i>Cystopteris bulbifera</i> )						Redroot Spike-rush ( <i>Eleocharis erythropoda</i> )					
Wintersberry ( <i>Ilex verticillata</i> )						Spin. Wood Fern ( <i>Dryopteris carthusiana</i> )						Eleocharis					
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> )						Field Horsetail ( <i>Equisetum arvense</i> )						Broad Bur-reed ( <i>Sparganium eurycarpum</i> )					
Ninebark ( <i>Physocarpus opulifolius</i> )						Scouring-rush ( <i>Equisetum hyemale</i> )						Narrow-leaved Cattail ( <i>Typha angustifolia</i> )					
Balsam Poplar ( <i>Populus balsamifera</i> )						Variegated Horsetail ( <i>Equisetum variegatum</i> )						Broad-leaved Cattail ( <i>Typha latifolia</i> )					
Eastern Cottonwood ( <i>Populus deltoides</i> )						<i>Equisetum</i>						Broad-leaved Cattail ( <i>Typha X glauca</i> )					
Large-tooth Aspen ( <i>Populus grandidentata</i> )						Ground-cedar ( <i>Lycopodium digitatum</i> )						Articulated Rush ( <i>Juncus articulatus</i> )					
Trembling Aspen ( <i>Populus tremuloides</i> )						Shining Clubmoss ( <i>Lycopodium lucidulum</i> )						Soft Rush ( <i>Juncus effusus</i> )					
Sweet Cherry ( <i>Prunus avium</i> )						Ground-pine ( <i>Lycopodium obscurum</i> )						Path Rush ( <i>Juncus tenuis</i> )					
Pin Cherry ( <i>Prunus pensylvanica</i> )												Juncus					
Black Cherry ( <i>Prunus serotina</i> )												Juncus					
Choke Cherry ( <i>Prunus virginiana</i> )																	
Prunus																	

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

Map Number: 245 FSH 2004  
 Date: April 23, 2002  
 Surveyors: JP + JS

F006-5







# Significant Wildlife Habitat Form

AECOM

Study Area: BLW JER GSH Map #: 245-GSH2054  
 Date: April 23 / 2012 Time Started: 8:53  
 Field Staff: Tom Shoney, Jess Piette Time Finished: 12:10  
 Weather Conditions: cloudy, 5°C, 30 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: 454528 4793497 Number of nests: 2  
 Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):  
stick nest in crotch of leaning fra fern. Small nest approx. 8-10 m in height  
 Description of habitat (note riparian areas if present, evidence of disturbance): FOD6-5 in centre of feature -> sub-canopy

**Waterfowls Stopover/Nesting, Amphibian Breeding, Turtle Nesting/Over-wintering, Marsh Breeding Birds**  
 (CUM1, CUT1, MAM, MAS, SAS1, SAM1, SAF1, SWD, SWT1, SWT2) (FOC, FOM, FOD, SWC, SWM, SWD, BOO1, FEO1)  
 Standing water present:  No  Yes (if yes, photograph and complete the following)  
 UTMs: See Multiple Pool Amph Forms  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
7	Stick nest		

# Significant Wildlife Habitat Form

AECOM

Study Area:	BLW	JER	<b>GSH</b>	Map #:	245-GSH2054
Date:	April 23/2012			Time Started:	8:53
Field Staff:	Tom Showen, Jess Liehl			Time Finished:	92:10
Weather Conditions:	cloudy, 5°C, 30 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: 454602 4793445 Number of nests: 1

Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):  
 stick nest, 15m high in beech tree.

Description of habitat (note riparian areas if present, evidence of disturbance): within F006-5

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

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

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

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

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

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

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

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

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

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

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

**Snake Hibernacula**

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

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

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

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

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

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

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

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



# NHA Site Investigation - Significant Wildlife Habitat Form

AECOM

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

Eroding bank, sandy hill, pits, steep slope or rock face present:  
 No  Yes (if yes, photograph and complete the following )

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

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

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

Shoreline of lake, large river or large wetland present:  
 No  Yes (if yes, photograph and complete the following )

UTMs: \_\_\_\_\_ Rocky island or peninsula present: \_\_\_\_\_  
 Mudflat present: \_\_\_\_\_ Evidence of disturbance (e.g. cattle grazing): \_\_\_\_\_

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

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

Large meadow, old field or generally open habitat (e.g. CUM, CUS, CUT, CUW) present:  
 No  Yes (if yes, photograph and complete the following )

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
15	Stick nest in beach tree		

# Significant Wildlife Habitat Form

AECOM

Study Area:	BLW	JER	<u>GSH</u>	Map #:	245-65/2054
Date:	<u>April 23 / 2012</u>			Time Started:	<u>12:00</u>
Field Staff:	<u>Tom Shorney Jess Diethe</u>			Time Finished:	<u>12:10</u>
Weather Conditions:	<u>cloudy 5°C 30km/h</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: 454728 4793049 Number of nests: 1

Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):  
Large - Active Nest → scared Hawk from nest → in catch of white oak

Description of habitat (note riparian areas if present, evidence of disturbance): FODS community  
Along edge

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

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

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

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

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

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

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

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

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

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

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

**Snake Hibernacula**

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

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

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

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

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

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

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

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

# NHA Site Investigation - Significant Wildlife Habitat Form

AECOM

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

Eroding bank, sandy hill, pits, steep slope or rock face present:  
 No  Yes (if yes, photograph and complete the following)

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

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

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

Shoreline of lake, large river or large wetland present:  
 No  Yes (if yes, photograph and complete the following)

UTMs: \_\_\_\_\_ Rocky island or peninsula present: \_\_\_\_\_  
 Mudflat present: \_\_\_\_\_ Evidence of disturbance (e.g. cattle grazing): \_\_\_\_\_

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

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

Large meadow, old field or generally open habitat (e.g. CUM, CUS, CUT, CUS, CUW) present:  
 No  Yes (if yes, photograph and complete the following)

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
30	Active Hawk nest		



# Species Conservation Concern Habitat and Incidental Wildlife - Goshen

Map No: 245-GSH 2054

Date (yyyy-mm-dd): 2012-04-23

Field Staff: Tan Starny  
Jess Picotte

Time Started: 8:53

Time Finished: 12:10



## Observed Species List

Species Code	UTM	EV	Notes	Species Code	UTM	EV	Notes
Song Sparrow		VO	in field	Blue Jay		OB	
Turkey Vulture		OB	Scavenging over woods	Downy Woodpecker		VO	calling
Killdeer		VO	in field	Combird		VO	calling
Pheasant		VO	in feature				
Deer		TK	bell				
White-throated Sparrow		VO	calling				
vesper sparrow		VO	calling				
red admiral		OB	along water				
Parson		CA	along edge				
Parson		CA	center of feature				
Red-winged Blackbird		VO	in feature calling				
Song Sparrow		VO					
Robin		VO	calling				
Red-tailed Hawk		OB					

Note: Evidence Codes (EV) SH=Suitable Habitat, SM=Singing Male; Breeding Bird (Possible) T-Territory, D=Display, P=Pair, N=Nest Building, V=Visiting Nest, A=Anxiety Behavior; Breeding Bird (Probable) DD=Distraction, NU=Used Nest, FY=Fledged Young, NE=Eggs, NY=Young, FS=Foos/Faecal sack, AE=Nest Entry; Breeding Bird (Confirmed) CA=Carass, DP=Distinctive Parts, HO=House/Den, FY=Eggs/Den, FE=Feeding evidence, SC=Scat, SI=Other signs (specify)

Other Wildlife Evidence: OB=observed, VO=vocalization, CA=Carass, DP=Distinctive Parts, HO=House/Den, FY=Eggs/Den, FE=Feeding evidence, SC=Scat, SI=Other signs (specify)

ELC	Species	Habitat Description	Habitat Present (Y/N); UTM; description of habitat if present
PLANTS			
FOD1	American Gromwell (Lithospermum latifolium) - S3 Bloom Time - Spring	Shaded river banks, wooded floodplains. River floodplains, woods and edges of woods.	Y N UTM: N/A
ALO, TPO	Muehlenberg's astomum moss (Astomum muehlenbergianum) - S2 Bloom Time - Spring	Thin soil over level outcrop ledges and on soil under grasses in open prairie	Y N UTM:
FOM1, FOM2, CUP3	Autumn Coral-root (Corallorhiza odontorhiza) - S2 Bloom Time - summer to fall	Oak-pine woods or occasionally in open, red pine or white pine plantations. Dry, sandy woods.	Y N UTM:
FOD, FOM, FOD	Burning Bush (Euonymus atropurpureus) - S3 Bloom Time - April - June	Species occurs in dry to moist deciduous thickets and woods	Y N UTM: N/A
SWC1, SWC3, SWC4, SWM1, SWM2, SWM4, SWM5, SWM6	Chinese Hemlock Parsley (Conioselinum chinense) - S2 Bloom Time - summer to fall	Swampy places with deciduous trees, white cedars, tamarack; springy river banks, wet borders of streams and rivers. Also found among calcareous seepage slopes.	Y N UTM:
SWC, SWM, SWD, SWT, MAM, MAS	Crowned Beggarticks (Bidens trichosperma) - S2 Bloom Time - late summer	Found in openings in swamps, marshes along shores & wet fields within the Carolinian zone and southeastern Georgian bay. Bogs, fens, tamarack swamps.	Y N UTM: N/A
ALT1, FOD7	Eastern Green-violet (Hybanthus concolor) - S2 Bloom Time - mid March to August	Occurs in rich, wet-mesic floodplain forests as well as mesic forests over limestone. Includes floodplains and river banks.	Y N UTM: N/A
TPS, TPW, FOM1, FOM2	Fogg's Goosefoot (Chenopodium foggii) - S2	Species occurs in sandy areas on limestone under oak or pine-oak forests	Y N UTM:
TPO2, TPS2, TPW2,	Giant Ironweed (Vernonia gigantea) - S1? Bloom Time -	Found in mesic prairies, thickets, moist woods, roadsides and grassy meadows	Y N UTM:

# Species of Conservation Concern Habitat and Incidental Wildlife - Goshen

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
CUM1, MAM, (FOD6), FOD7, FOD9	June - August Green Dragon ( <i>Arisaema dracontium</i> ) - S2/S3 Bloom Time - May and June	Species found in damp deciduous forest and along river streams. Particularly Maple forest and forest dominated by Red Ash and White Elm.	(Y) N UTM: N/A
TPO1, TPS1, TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	June-August Hairy Bedstraw ( <i>Galium pilosum</i> ) - S3 Bloom Time - June-August	Occurs in dry, sandy woods and thickets; occasionally in dry sandy fields	(Y) N UTM:
FE01, FES1, FET1, SWC, SWM, SWD, SWT, TPO, TPS, TPW, (FOD6), (FOD7), SWM, (SWD)	June to August Hairy Valerian ( <i>Valeriana edulis</i> ) - S1 Bloom Time - June to August	Inhabits swampy river flats and meadows, wet prairies, and wooded, rocky riverbanks and fens.	(Y) N UTM:
(FOD6), (FOD7), FOD8, FOD9	Summer Hairy Wood Mint ( <i>Blephilia hirsuta</i> ) - S1 Bloom Time - Summer	Woodlands, often rocky, especially rivers, rich woods, swamp forests, floodplains.	(Y) N UTM: N/A
SAS1, SAM1, SAF1	April Harbinger-of-spring ( <i>Eriogonum bulbosa</i> ) - S3 Bloom Time - early to late April	Occurs in rich, moist deciduous woods, especially on floodplains.	(Y) N UTM: N/A
FOM6, FOM7, FOM8	Summer Hill's Pond Weed ( <i>Potamogeton hillii</i> ) - SC/S2 Bloom Time - summer	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters.	(Y) N UTM:
MAM2, MAM3, MAS2, MAS3, (SWD), (FOD6), FOD7, FOD9	June - August 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:
(FOD6), (FOD7), FOD9	June - September 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: N/A
(FOD6), (FOD7), FOD9	March-May Pawpaw ( <i>Asimina triloba</i> ) - S3 Bloom Time - March-May	Occurs in moist, deciduous woods and stream banks.	(Y) N UTM: N/A
FOM8, (FOD6), (FOD7), FOD9, CUM1	Summer Pillose Evening Primrose ( <i>Oenothera pilosella</i> ) - S2 Bloom Time - Late Spring - Early Summer	(Moist) edges of woods and open, disturbed ground.	(Y) N UTM: N/A
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	July-September Prostrate Tick-trefoil ( <i>Desmodium rotundifolium</i> ) - S2 Bloom Time - July-September	Dry, sandy or rocky woods	(Y) N UTM:
(FOD7), (SWD)	March - June Pumpkin Ash ( <i>Fraxinus profunda</i> ) - S2? Bloom Time - March - June	Swamps and floodplains	(Y) N UTM: N/A
CUW1, ALO, FET1, SWC	May to mid June 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, (FOD6), FOC1, FOM1, FOM5	September 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/A
(FOD6), (FOD7), FOD9	May - June Round-leaved Groundsel ( <i>Packera obovata</i> ) - S3 Bloom Time - May - June	Found in moist woods	(Y) N UTM: N/A
CUM1, CUT1, CUS1	Summer Round-leaved hawthorn ( <i>Crataegus lumaria</i> ) - S3?	Species occurs in old fields, poorly managed pastures, fencelines and roadsides	(Y) N UTM:
(FOD6), (FOD7), FOD8, FOD9, SWT2, SWT3	October 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: N/A
ALO, ALS, ALT, TPO, TPS, TPW	Summer 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	Summer 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:
SOT1, (FOD5), FOD9	Summer Slim-flowered Muhy ( <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/A
BLO1, BLS1, BLT1, TPO2, TPS2, TPW2, MAM2, (FOD7)	Summer Stiff Gentian ( <i>Gentianella 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: N/A
TPS1, TPW1, CUW1, RBO, SBO	mid-March to mid-June Sundial Lupine ( <i>Lupinus perennis</i> ) - S3 Bloom Time - mid-March to mid-June	Inhabits dry, sandy oak savannas, 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

ALDOM

ELC	Species	Habitat Description	Habitat Present (Y/N); UTM: description or habitat if present
TP01, TPS1, TPW1, CUM1	Tall Blazing Star ( <i>Liatis 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 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/A
-	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- FOD6	West Virginia White ( <i>Pieris virginianensis</i> ) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y (N) UTM: N/A

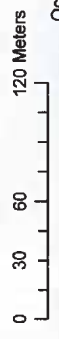
Fairly common in feature A



# Goshen Feature: 245 GSH1481

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

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



October 28, 2011











**ELC**  
Community Description and Classification

Site: 245 GSA 1481 Polygon: G  
 Surveyor(s): JK Date: NOV 9 Time start: 12:15 finish:  
 UTMZ: 17 UTMZ: 454800 UTMN: 4793085

**Polygon Description**

System	Substrate	Topographic Feature	Plant Form	Community
<input type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic <input type="checkbox"/> Site <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input type="checkbox"/> Surficial Dep. <input type="checkbox"/> Bedrock <input type="checkbox"/> History <input type="checkbox"/> Natural <input type="checkbox"/> Cultural <input type="checkbox"/> Cover <input type="checkbox"/> Open <input type="checkbox"/> Shrub <input type="checkbox"/> Tree	<input type="checkbox"/> Organic <input checked="" type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent. Min. <input type="checkbox"/> Acidic Bedrk <input type="checkbox"/> Basic Bedrk <input type="checkbox"/> Carb. Bedrk	<input type="checkbox"/> Lacustrine <input type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input type="checkbox"/> Valley Slope <input checked="" type="checkbox"/> Tableland <input type="checkbox"/> Roli. Upland <input type="checkbox"/> Cliff <input type="checkbox"/> Talus <input type="checkbox"/> Crevice/Cave <input type="checkbox"/> Alvar <input type="checkbox"/> 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 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	5	Frax. penn > Quercus > Acer sac
2	3	5	Frax. penn > Quercus > Acer sac
3	3	5	Frax. penn > Quercus > Acer sac
4	6	5	Asp. lab - Cx

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

**Stand Composition:**

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

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

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

**Ecosite:** *W151*  
**Vegetation Type:** *Green Ash - Am Elm*  
**Inclusion:** Code: *FOD 7-1/2*  
**Complex:** Code: *F07E*

**Community Profile Diagram/Comments**  
*Prob many Ash dead or dying from EAD*

Notes:

**Tree Tally by Species**

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

**Soils Ontario and ELC Soils Description**

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

**ELC**

Site: 245 GS11481 Polygon: F

Surveyors: JR Date: Nov 9/11 Time start: finish

UTMZ: \_\_\_\_\_ UTMZ: \_\_\_\_\_ UTMN: \_\_\_\_\_

**Polygon Description**

System	Substrate	Topographic Feature	Plant Form	Community
<input type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic <b>Site</b> <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input type="checkbox"/> Surficial Dep <input type="checkbox"/> Bedrock <b>History</b> <input type="checkbox"/> Natural <input type="checkbox"/> Cultural <b>Cover</b> <input type="checkbox"/> Open <input type="checkbox"/> Shrub <input type="checkbox"/> Treed	<input type="checkbox"/> Organic <input type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Min. <input type="checkbox"/> Acidic Bedrk <input type="checkbox"/> Basic Bedrk <input type="checkbox"/> Carb. Bedrk	<input type="checkbox"/> Lacustrine <input type="checkbox"/> Riverine <input type="checkbox"/> Bottomland <input type="checkbox"/> Terrace <input type="checkbox"/> Valley Slope <input type="checkbox"/> Tableland <input type="checkbox"/> Roll. Upland <input type="checkbox"/> Cliff <input type="checkbox"/> Talus <input type="checkbox"/> Cravica/Cave <input type="checkbox"/> Aiver <input type="checkbox"/> Rockland <input type="checkbox"/> Beach / Bar <input type="checkbox"/> Sand Dune <input type="checkbox"/> Bluff	<input type="checkbox"/> Epiphyton <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**

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

Layer	HT	CVR	Notes
1	1/2	4	Fraxus - 1 layer - Acer sacrum
2	3	4	Koeleria - 1 layer - Alnus
3	4		Prunus - Acer sacrum
4			

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

**Stand Composition:** Size Class Analysis:

BA:	<10	10-24	25-50	>50
Standing Shags:	A	A	A	A
Deadfall / Logs:	A	A	A	A

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

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

Ecoster: \_\_\_\_\_ Code: \_\_\_\_\_

Vegetation Type: Sugar M-W Ash - Basswood Code: FDD5b

Inclinator: \_\_\_\_\_ Code: \_\_\_\_\_

Complex: \_\_\_\_\_ Code: \_\_\_\_\_

**Community Profile Diagram/Comments**

Notes: \_\_\_\_\_

**Tree Tally by Species**

Species	Tally 1	Tally 2	Tally 3	Tally 4	Tally 5	Phytosocial
Total						100
Basal Area (BA)						
Dead						

**Soils Ontario and ELC Soils Description**

Depth to ...	Site Metrics				Summary
	UTM		Slope		
Moistures	Zone	Easting	Northling	Position	Moisture Regime
Gley	Aspect	Percent	Slope	Length	
Water Table	Drainage				
Carbonates	Effective Texture (Indicate below)				
Bedrock					

**Soil Horizon Description**

Horizon	Depth from zero	Texture	% CF	% CF	% CF	% CF	% CF
1	zero	Texture					
2	Depth from zero	Texture	% CF	% CF	% CF	% CF	% CF
3	Depth from zero	Texture	% CF	% CF	% CF	% CF	% CF
4	Depth from zero	Texture	% CF	% CF	% CF	% CF	% CF
Moisture Regime							
Drainage							







1	2	3	4	5	6	1	2	3	4	5	6
Abies balsamea						Rosa multiflora					
Juniperus communis						Rosa					
Juniperus virginiana						Rubus allegheniensis					
Larix laricina						Rubus idaeus					
Picea abies						Rubus occidentalis					
Picea glauca						Rubus odoratus					
Picea resinosa						Rubus pubescens					
Pinus strobus						Salix alba					
Pinus sylvestris						Salix amygdaloides					
Thuja occidentalis						Salix bebbiana					
Thuja canadensis						Salix discolor					
						Salix eriocephala					
						Salix exigua					
						Salix lucida					
						Salix pedicularis					
						Salix purpurea					
						Salix x rubens					
						Salix x rubra					
						Salix					
						Sambucus canadensis					
						Sambucus racemosa					
						Sorbus aucuparia					
						Spirea alba					
						Syringa vulgaris					
						Thuja americana					
						Ulmus americana					
						Ulmus					
						Viburnum lentago					
						Viburnum opulus					
						Viburnum					
						Vitis riparia					
						Dactylis glomerata					
						Danthonia spicata					
						Betula nana					
						Betula alleghaniensis					
						Betula papyrifera					
						Carpinus caroliniana					
						Carya cordiformis					
						Castanea scabra					
						Cornus alternifolia					
						Cornus amomum					
						Cornus rugosa					
						Cornus stolonifera					
						Corylus cornuta					
						Corylus monozyga					
						Crataegus punctata					
						Crataegus sp.					
						Crataegus					
						Dicentra canadensis					
						Fagus grandifolia					
						Fraxinus americana					
						Fraxinus nigra					
						Fraxinus pennsylvanica					
						Ilex verticillata					
						Ilex chinensis					
						Liriodendron					
						Lonicera morrowii					
						Lonicera xylosteum					
						Dryopteris carthusiana					
						Dryopteris cristata					
						Dryopteris marginalis					
						Lyopodium					
						Rhus glabra					
						Rhus typhina					
						Rhus radicans					
						Rhus copallina					
						Rhus aromatica					
						Rhus glabra					
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						Rhus glabra					
						Rhus typhina					
						Rhus					



**Goshen Feature: 245 GSH1481**

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

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

**h**

September 1, 2011



**ELC**  
Community Description and Classification

Site: 245\_GSH1481 Polygon: Prism Factor 2

Surveyor(s): Kawista Date: Sept 8/2001 Time start: 10:45 finish:

UTMZ: 17T UTMZ: 454740 UTMN: 4793185

**Polygon Description**

System	Substrata	Topographic Feature	Plant Form	Community
<input type="checkbox"/> Terrestrial <input type="checkbox"/> Wetland <input type="checkbox"/> Aquatic <input type="checkbox"/> Site <input type="checkbox"/> Open Water <input type="checkbox"/> Shallow Water <input type="checkbox"/> Surficial Dep. <input type="checkbox"/> Bedrock	<input type="checkbox"/> Organic <input checked="" type="checkbox"/> Mineral Soil <input type="checkbox"/> Parent Mtn. <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"/> Tlabeland <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-LVD. <input type="checkbox"/> Graminoid <input type="checkbox"/> Forb <input type="checkbox"/> Lichen <input type="checkbox"/> Bryophyte <input checked="" type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Mixed	<input type="checkbox"/> Lake <input type="checkbox"/> Pond <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Marsh <input checked="" type="checkbox"/> Swamp <input type="checkbox"/> Fen <input type="checkbox"/> Bog <input type="checkbox"/> Barren <input type="checkbox"/> Meadow <input type="checkbox"/> Prairie <input type="checkbox"/> Thicket <input type="checkbox"/> Savannah <input type="checkbox"/> Woodland <input 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	1/2	4	Fraxinus > Acer tree → Quercus - Tilia
2	3	4	Ulmus
3	4	3	Prunus
4	6	3	Cix grae - Ast low - Euobov - Gerrobe

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 - 60% 4 > 60%

**Stand Composition: Size Class Analysis:**

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

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

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

**Ecosite:** Code: FOD 7-1 /

**Vegetation Type:** Code: Sub 3-3

**Inclusion:** Code:

**Complex:** Green Ash Forest / Swamp Maple Sub

**Community Profile Diagram/Comments**

This is mosaic of deciduous forest from by Green Ash & Swamp Maple Swamp on small seasonally flooded pockets cannot be recognizable separated on Orthophoto

Notes: Swamp mths occupy 25% of area of gc does not show strong wetland comp. \* needs A/P inters.

**Tree Tally by Species**

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

**Soils Ontario and ELC Soils Description**

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







VASCULAR PLANT CHECKSHEET

Location: Goshen 245  
 Observer: J. Kamstra

Date: Sept 8, 2011  
 Job Number:

DICOT HERBS											MONOCOT HERBS				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Chilopsis micrantha															
Cassia pycnopoda															
Cassia rubra															
Agalinis															
Aglyptis gryposepala	X														
Akalis pedata	X														
Anacardium obtusatum															
Anemone canadensis															
Anemone virginiana															
Artemisia neglecta															
Apocynum androsaemifolium															
Apocynum cannabinum															
Aquilegia canadensis															
Arnica montana															
Artemisia															
Asarum canadense															
Asclepias incarnata															
Asclepias syriaca															
Aster															
Aster cordifolius															
Aster ericoides															
Aster lanceolatus	X														
Aster lateriflorus															
Aster macrophyllus															
Aster novae-angliae															
Aster paniculatus															
Barbarea vulgaris															
Bidens cernua															
Bidens frondosa															
Bolanderia cylindrica															
Calla palustris															
Calystegia sepium															
Cantarella daphne															
Ceanothus															
Caulophyllum thalictroides															
Cerastium barbatum															
Caulophyllum demersum															
Chelidonium majus															
Chenopodium album															
Chrysanthemum leucanthemum															
Dichorium intybus															
Cicuta															
Cirsium leucanthemum	X														
Cirsium vulgare															
Clematis virginiana															
Cnicus															
Corymbium canadense															
Coronilla varia															
Cynanchum montanum															
Cynoglossum officinale															
Daucus carota															
Desmodium canadense															
Dianthus armeria															
Dipsacus filiformis															
Echinacea purpurea															
Elychium															
Elychium altatum															
Elychium hirsutum															
Elychium parviflorum															
Erigeron annuus															
Erigeron philadelphicus	X														
Erigeron strigosus															
Erysimum cheiranthoides															
Eupatorium maculatum															
Eupatorium perfoliatum															
Eupatorium rugosum															
Euphorbia															
Euthamia graminifolia															
Fragaria virginiana	X														
Fragaria vesca															
Galeopsis tetrahit															
Galium															
Galium palustre															
Galium villorum															
Geranium maculatum															
Geranium robertianum	X														
Geum aleppicum															
Geum canadense	X														
Geum															
Glechoma hederacea															
Hepatica acutiloba															
Hesperis matronalis															
Hieracium aurantiacum															
Hieracium cespitosum															
Hieracium															
Hydrophyllum virginianum															
Hypoxis perforatum															
Impatiens capensis															
Inula helenium															
Lactuca															
Lagotis canadensis															
Lapsana communis															
Leonurus cardiaca															
Lepidium															
Lithospermum officinale															
Lobelia															
Lobelia inflata															
Lolium comiculata															
Lycopus americanus															
Lycopus															
Lysimachia ciliata															
Lythrum salicaria															
Medicago lupulina															
Medicago sativum															
Melilotus alba															
Melilotus arvensis															
Melilotus rigens															
Melilotus rigens															
Milium diphyllum															
Milvium fistulosum															
Mycodis															
Nemophila officinale															
Nepeta cataracta															
Nepeta variegatum															
Nymphopoda odorata															
Oenothera biennis															
Oenothera															
Oxalis stricta															
Phytolacca heterophylla															
Phytolacca															
Plantago lanceolata															
Plantago major															
Plantago rugelii															
Podophyllum peltatum															
Polygonum															
Polygonum															
Polygonum lapathifolium															
Polygonum persicaria															
Potentilla															
Potentilla norvegica															
Potentilla recta															
Prunella alba															
Prunella vulgaris															
Pyrola elliptica															
Ranunculus															
Ranunculus abortivus															
Ranunculus acris															
Ranunculus hirta															
Rumex acetosella															
Rumex crispus															
Rumex															
Sanguinaria canadensis															
Sarcocolla marilandica															
Saponaria officinalis															
Sedum vulgare															
Scutellaria paleruculata															
Silene vulgaris															
Sium suave															
Solanum elaeagnifolium															







# Significant Wildlife Habitat Form *Re-visit Nest Bowls* **AECOM**

Study Area: BLW JER GSH Map #: 245-GSH2054  
 Date: May 17-2012 Time Started: 2:43 p.m.  
 Field Staff: J. LANSTRA + A. DART Time Finished: 3:20 pm  
 Weather Conditions: SUNNY + 18°C

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

Nest bowls present:  No  Yes (if yes, photograph and complete the following)  
 UTM: 454728, 4793049 Number of nests: 1  
 Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):  
Red-tailed hawk adult flushed off nest  
(#) on map  
 Description of habitat (note riparian areas if present, evidence of disturbance): FODS community  
Along edge of woodlot.

**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)  
 UTM: \_\_\_\_\_  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)  
 UTM: \_\_\_\_\_ 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)  
 UTM: \_\_\_\_\_ 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

**Significant Wildlife Habitat Form**

Re-visit Nest Bowls

AECOM

Study Area:	BLW JER <b>GSH</b>	Map #:	245-GSH2054
Date:	May 17 2012	Time Started:	2:43 pm
Field Staff:	J. Kamstra, A. Duff	Time Finished:	3:20 pm
Weather Conditions:	Sunny, 18°C		

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

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

UTMs: 454602, 4793445 Number of nests: 1

Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):  
Am Crow on nest, Another Crow giving alarm call  
1 day young

Description of habitat (note riparian areas if present, evidence of disturbance):  
mod moist decid forest Par cord - Titane - Fra pen

**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): \_\_\_\_\_

Nest in Ash cut 454578 4793497  
old abandoned crow nest from previous year

⊕ Additional - Bird calls heard are noted on back.



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 (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)  
 UTM: \_\_\_\_\_ 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)  
 UTM: \_\_\_\_\_ 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)  
 UTM: \_\_\_\_\_ 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
AMRO	calling		
GCFL	"		
INBN	"		
COGR	"		
REVI	"		
BCCH	"		
SOSP	"		
Question Mark	Obs		
Red Admiral	"		

**Goshen Feature: 245 GSH2056**

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

Roads

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

h

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

September 1, 2011



059108



w.p. # 306

**ELC**  
Community Description and Classification

Site: 245\_GSH2056 Polygon: 0

Surveyor(s): SAH Date: Oct 4/11 Time start: 15:48 finish: 16:32

UTMZ: 17T UTMZ: 454507 UTMN: 4793299

**Polygon Description**

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

**Stand Description**

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than; > Greater Than; * About Equal To)
1	2	4	HA > SW > BD > HS
2	3	3	GW > HA > AW > Blue Beech
3	5-4	4	AW > HA > Cane Aster > Blue Beech
4	7-6	4	Eum. obov > P.MY > AW > Gum

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

**Stand Composition:** Size Class Analysis: A < 10 10-24 25-50 > 50  
 Standing Snags: R < 10 10-24 25-50 > 50  
 Deadfall / Logs: R < 10 10-24 25-50 > 50  
 BA: 2025

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

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

Ecosite: Fresh-Dist Sugar Maple Deciduous Forest Code: F006  
 Vegetation Type: Fresh-Moist Sugar Maple White Elm Code: F006-4  
 Inclusion: Deciduous Forest Code: /  
 Complex: /

**Community Profile Diagram/Comments**

cut over in past

Notes:

**Tree Tally by Species**

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Prism Factor	2
HA	2	1	1		3	8	
HS	1	2	5		13	34	
BD	2	1	3		6	13	
BE	2	7	1		10	26	
					1	9	
<b>Total</b>					38	100	
<b>Basal Area (BA)</b>	17	13	20		76	25	
<b>Dead</b>	2	1	2		5	5	

**Soils Ontario and ELC Soils Description**

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