

Plant Species List 2012

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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>Epilobium ciliatum</i>)						Star-flower (<i>Trientalis borealis</i>)					
<i>Hieracium</i>						Hairy Willow-herb (<i>Epilobium hirsutum</i>)						Red Clover (<i>Trifolium pratense</i>)					
Elecampane (<i>Inula helenium</i>)						Small-fl. Willow-herb (<i>Epilobium parviflorum</i>)						White Clover (<i>Trifolium repens</i>)					
Prickly Lettuce (<i>Lactuca serriola</i>)						<i>Epilobium</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 stricta</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>					
Heart-leaf Aster (<i>Symph. cordifolium</i>)						Spotted Jewelweed (<i>Impatiens capensis</i>)						<i>Geum maculatum</i>					
Heath Aster (<i>Symphyotrichum ericoides</i>)						Wood Nettle (<i>Laportea canadensis</i>)						<i>Aneides</i>					
Tall White Aster (<i>Symph. lanceolatum</i>)	U	U				Motherwort (<i>Leonurus cardiaca</i>)						<i>Avenae sp.</i>					
Calico Aster (<i>Symphyotrichum lateriflorum</i>)						Field Peppergrass (<i>Lepidium campestre</i>)						<i>Phlox divaricata</i>					
New England Aster (<i>Symph. novae-angliae</i>)						Eur. Gromwell (<i>Lithospermum officinale</i>)						<i>Uvularia grandiflora</i>					
Purple-stem Aster (<i>Symph. puniceus</i>)						Butter & Eggs (<i>Linaria vulgaris</i>)						<i>Crav./I.R.</i>					
Common Tansy (<i>Tanacetum vulgare</i>)						Great Lobelia (<i>Lobelia siphilitica</i>)						<i>DIPSAC</i>					
Common Dandelion (<i>Taraxacum officinale</i>)	R	U				<i>Lobelia</i>						Monocot Herbs					
Com. Goatsbeard (<i>Tragopogon 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 Loosestrife (<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 Loosestrife (<i>Lythrum salicaria</i>)						Bluebead-lily (<i>Clintonia borealis</i>)					
						Black Medick (<i>Medicago lupulina</i>)						Garden Lily-of-the-valley (<i>Convallaria majalis</i>)					
						Alfalfa (<i>Medicago sativa</i>)						Yel. Lady's Slipper (<i>Cypripedium parviflorum</i>)					
						White Sweet-clover (<i>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				
Other Dicot Herbs						Wild Bergamot (<i>Monarda fistulosa</i>)						Blue-flag Iris (<i>Iris versicolor</i>)					
White Baneberry (<i>Actaea pachypoda</i>)						Small Forget-me-not (<i>Myosotis laxa</i>)						Orange Day Lily (<i>Hemerocallis fulva</i>)					
Red Baneberry (<i>Actaea rubra</i>)						Forget-me-not (<i>Myosotis scorpioides</i>)						Lesser Duckweed (<i>Lemna minor</i>)					
Tall Agrimony (<i>Agrimonia gryposepala</i>)						Water-cress (<i>Nasturtium officinale</i>)						Starry Duckweed (<i>Lemna trisulca</i>)					
Garlic Mustard (<i>Alliaria petiolata</i>)	U	R				Com. Evening-primrose (<i>Oenothera biennis</i>)						Wild Lily-of-the-valley (<i>Maianthemum canadense</i>)	R				
Green Amaranth (<i>Amaranthus retroflexus</i>)						Sweet-cicely (<i>Osmorhiza berterii</i>)						False Solom Seal (<i>Maianthemum racemosum</i>)					
Hog-peanut (<i>Amphicarpa bracteata</i>)						Yellow Wood-sorrel (<i>Oxalis stricta</i>)						Star False Solomon (<i>Maianthemum stellatum</i>)					
Pearly Everlasting (<i>Anaphalis margaritacea</i>)						Wild Parsnip (<i>Pastinaca sativa</i>)						True Solomon Seal (<i>Polygonatum pubescens</i>)					
Canada Anemone (<i>Anemone canadensis</i>)						English Plantain (<i>Plantago lanceolata</i>)						Pickeral-weed (<i>Pontederia cordata</i>)					
Ivy Hepatica (<i>Anemone acutiloba</i>)						Common Plantain (<i>Plantago major</i>)						Curly-leaf Pondweed (<i>Potamogeton crispus</i>)					
Thimbleweed (<i>Anemone virginiana</i>)						Rugel's Plantain (<i>Plantago rugelii</i>)						Sago Pondweed (<i>Potamogeton pectinatus</i>)					
Purple Angelica (<i>Angelica atropurpurea</i>)						May-apple (<i>Podophyllum peltatum</i>)	U					<i>Potamogeton</i>					
Indian Hemp (<i>Apocynum cannabinum</i>)						Pale Smartweed (<i>Polygonum lapathifolium</i>)						<i>Potamogeton</i>					
Wild Sarsaparilla (<i>Aralia nudicaulis</i>)						Lady's-thumb (<i>Polygonum persicaria</i>)						Broad-leaved Arrowhead (<i>Sagittaria latifolia</i>)					
Spikenard (<i>Aralia racemosa</i>)						Virginia Knotweed (<i>Polygonum virginianum</i>)						Blue-eyed-grass (<i>Sisyrinchium montanum</i>)					
Wild Ginger (<i>Asarum canadense</i>)						<i>Polygonum</i>						Herb. Carnon Flower (<i>Smilax herbacea</i>)					
Swamp Milkweed (<i>Asclepias incarnata</i>)						<i>Polygonum</i>						Bristly Greenbrier (<i>Smilax hispida</i>)					
Common Milkweed (<i>Asclepias syriaca</i>)						Rough Cinquefoil (<i>Potentilla norvegica</i>)						Nodding Ladies' Tresses (<i>Spiranthes cernua</i>)					
Yellow Rocket (<i>Barbarea vulgaris</i>)						Rough-fruited Cinquefoil (<i>Potentilla recta</i>)						Rose Twisted-stalk (<i>Streptopus lanceolatus</i>)					
False Nettle (<i>Boehmeria cylindrica</i>)						Common Cinquefoil (<i>Potentilla simplex</i>)						Skunk-cabbage (<i>Symplocarpus foetidus</i>)					
Black Mustard (<i>Brassica nigra</i>)						<i>Potentilla</i>						Purple Trillium (<i>Trillium erectum</i>)					
Marsh-marigold (<i>Caltha palustris</i>)						Heal-all (<i>Prunella vulgaris</i>)	R					White Trillium (<i>Trillium grandiflorum</i>)					
Creeping Bellflower (<i>Campanula rapunculoides</i>)						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 GSH	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:

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
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
Twelve-lined		OB					
Brown thrasher		VO					
Wing woodpecker		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) Breeding Bird (Possible) SH=Suitable Habitat, SM=Singing Male;

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

Breeding Bird (Confirmed) DD=Distraction, NU=Used Nest, FY=Fledged Young, NE=Eggs, NY=Young, FS=Feeds/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)
PLANTS			
FOD7	American Gromwell (Lithospermum latifolium) - S3 Bloom Time - Spring	Shaded river banks, wooded floodplains. River floodplains, woods and edges of woods.	Y (N) UTM:
ALO, TPO	Muehlenberg's astomum moss (Astomum muehlenbergianum) - S2 Bloom Time - Spring	Thin soil over level outcrop ledges and on soil under grasses in open prairie	Y (N) UTM:
FOM1, FOM2, CUP3	Autumn Coral-root (Corallorhiza odontorhiza) - S2 Bloom Time - summer to fall	Oak-pine woods or occasionally in open, red pine or white pine plantations. Dry, sandy woods.	Y (N) UTM:
FOC, FOM, FOD	Burning Bush (Euonymus atropurpureus) - S3 Bloom Time - April - June	Species occurs in dry to moist deciduous thickets and woods	Y (N) UTM: 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>) - SC/IS3 <u>Bloom Time</u> – May and June	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>Galium pilosum</i>) - S3 <u>Bloom Time</u> – 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	June to August Hairy Valerian (<i>Valeriana edulis</i>) - S1 <u>Bloom Time</u> – June to August	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</u> – Summer	Woodlands, often rocky, especially rivers. Rich woods, <u>swamp forests</u> , floodplains.	Y N UTM: NO
FOD6, FOD7, FOD8, FOD9	Harbinger-of-spring (<i>Eigenia bulbosa</i>) - S3 <u>Bloom Time</u> – early to late April	Occurs in rich, moist deciduous woods, especially on floodplains.	Y N UTM: NO
SAS1, SAM1, SAF1	Hill's Pond Weed (<i>Potamogeton hillii</i>) - SC/IS2 <u>Bloom Time</u> – summer	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters.	Y N UTM:
FOM6, FOM7, FOM8	Large Round-leaved Orchid (<i>Platanthera macrophylla</i>) - S2 <u>Bloom Time</u> – June to August	Species inhabits moist mixed woods. Found in fairly mature, upland sugar maple-beech-eastern hemlock woodlands.	Y N UTM:
MAM2, MAM3, MAS2, MAS3, SWD	Lizard's Tail (<i>Saururus cernuus</i>) - S3 <u>Bloom Time</u> – June – September	Species inhabits shores and streambanks along shallow water. As well as swamps, floodplains, shallow water and mudflats at the borders of streams and ponds.	Y N UTM: NO
FOD6, FOD7, FOD9	Pawpaw (<i>Asimina triloba</i>) - S3 <u>Bloom Time</u> – March–May	Occurs in moist deciduous woods and stream banks.	Y N UTM: NO
FOM8, FOD6, FOD7, FOD9, CUM1	Pilose Evening Primrose (<i>Oenothera pilosella</i>) - S2 <u>Bloom Time</u> – Late Spring – Early Summer	Moist edges of woods and open, disturbed ground.	Y N UTM: NO
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	Prostrate Tick-trefoil (<i>Desmodium rotundifolium</i>) - S2 <u>Bloom Time</u> – July–September	Dry, sandy or rocky woods	Y N UTM:
FOD7, SWD	Pumpkin Ash (<i>Fraxinus profunda</i>) - S2? <u>Bloom Time</u> – March – June	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</u> – mid May to mid June	Found in cedar woodlands, limestone plains and wooded fens, moist coniferous swamps, dry-sandy woods, and limestone barren.	Y N UTM:
FOD1, FOD2, FOD3, FOD4, FOD5, FOC1, FOM1, FOM5	Rattlesnake Hawkweed (<i>Hieracium venosum</i>) - S2 <u>Bloom Time</u> – April – September	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</u> – May – June	Found in moist woods	Y N UTM: NO
CUM1, CUT1, CUS1	Round-leaved hawthorn (<i>Crataegus lumarla</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</u> – May to October	Found in moist, rich woods, thicket swamps, banks and floodplains.	Y N UTM: NO
ALO, ALS, ALT, TPO, TPS, TPW	Slender Blazing Star (<i>Liatris cylindracea</i>) - S3	Species occurs in limestone and dolomite pavement, prairies, open woods; alvars 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>Gentianella quinquefolia</i>) - S2 <u>Bloom Time</u> – late summer to mid fall	Found in moist soils of streambanks, edges of woods, wet prairies, marshy meadows, bluffs and wooded hillsides.	Y N UTM:
TPS1, TPW1, CUW1, RBO, SBO	Sundial Lupine (<i>Lupinus perennis</i>) - S3 <u>Bloom Time</u> – mid-March to mid-June	Inhabits dry, sandy oak savannahs, prairies, open barrens or clearings in woodlands of oak, jack pine, and/or aspen.	Y N UTM:

Species Conservation Concern Habitat and Incidental Wildlife – Goshen

ATCOM

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description or habitat if present)
TP01, TPS1, TPW1, CUM1	Tail Blazing Star (<i>Liatris 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>Amoglossum 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:
BIRDS			
-	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:
REPTILES			
-	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.
INSECTS			
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, fencerows 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

AECOM

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) Riverine ☐ (associated with rivers) Palustrine ☐ absent or intermittent inflow and either intermittent or permanent outflow	Isolated ☒ what are the water inputs and outputs? <u>run off from field, precipitation</u>
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Soils	refer to ELC card for soils information
<u>Very moist, poor to imperfect. 0-20 cm. silty clay loam, 20+ cm: clay with mottled clay.</u>	

% 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>Frag penn</u> <u>Ace Free</u> → <u>Frag penn</u> <u>Ulm amer</u> → <u>Viblant</u> <u>Carex sp</u> → <u>P. horrid</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



**Plant Species List
2012**

Page 1 of 2

Trees & Shrubs						Tree & Shrubs						Graminoids					
Conifers						Deciduous						Grasses					
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		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>)						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>)						<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>)						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>)				R		<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>)				R		Reed Canary Grass (<i>Phalaris arundinacea</i>)					
Black Maple (<i>Acer nigrum</i>)						Black Raspberry (<i>Rubus occidentalis</i>)						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>)						Peach-leaved Willow (<i>Salix amygdaloides</i>)						Kentucky Bluegrass (<i>Poa pratensis</i>)					
Sugar Maple (<i>Acer saccharum</i>)					D	Bebb's Willow (<i>Salix bebbiana</i>)						Yellow Foxtail (<i>Setaria pumila</i>)					
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</i>											
Blue Beech (<i>Carpinus caroliniana</i>)						Hybrid Crack Willow (<i>Salix X rubens</i>)											
Bitternut 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>)											
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>)											
Bunchberry (<i>Cornus canadensis</i>)						Climbing Poison-ivy (<i>Toxicodendron radicans</i>)											
Gray dogwood (<i>Cornus racemosa</i>)						White Elm (<i>Ulmus americana</i>)				F							
Round-leaved Dogwood (<i>Cornus rugosa</i>)						Siberian Elm (<i>Ulmus pumila</i>)											
Red-osier Dogwood (<i>Cornus sericea</i>)						Slippery Elm (<i>Ulmus rubra</i>)											
American Hazel (<i>Corylus americana</i>)						Low Blueberry (<i>Vaccinium angustifolium</i>)											
Beaked Hazel (<i>Corylus cornuta</i>)						Maple-leaf Viburnum (<i>Viburnum acerifolium</i>)											
Cockspur Thorn (<i>Crataegus crus-galli</i>)						Hobblebush (<i>Viburnum lentago</i>)											
English Hawthorn (<i>Crataegus monogyna</i>)						Nannyberry (<i>Viburnum lentago</i>)				R							
Large-fruited Thorn (<i>Crataegus punctata</i>)						Guelder-Rose (<i>Viburnum opulus</i>)											
<i>Crataegus</i>					U	Downy Arrow-wood (<i>Vib. rafinesquianum</i>)											
<i>Crataegus</i>						Riverbank Grape (<i>Vitis riparia</i>)											
Bush Honeysuckle (<i>Lonicera linearis</i>)						Am. Prickly-ash (<i>Zanthoxylum americanum</i>)											
Russian Olive (<i>Elaeagnus angustifolia</i>)						<i>Tilia americana</i>				U							
Autumn Olive (<i>Elaeagnus umbellata</i>)																	
Run. Strawberry-bush (<i>Euonymus obovata</i>)					U												
American Beech (<i>Fagus grandifolia</i>)																	
Glossy Buckthorn (<i>Frangula alnus</i>)																	
White Ash (<i>Fraxinus americana</i>)					F												
Black Ash (<i>Fraxinus nigra</i>)																	
Green Ash (<i>Fraxinus pennsylvanica</i>)					R												
Witch-hazel (<i>Hamamelis virginiana</i>)																	
Winterberry (<i>Ilex verticillata</i>)																	
Butternut (<i>Juglans cinerea</i>)																	
Black Walnut (<i>Juglans nigra</i>)																	
Common Privet (<i>Ligustrum vulgare</i>)																	
Spicebush (<i>Lindera benzoin</i>)																	
Fly Honeysuckle (<i>Lonicera canadensis</i>)																	
Glaucous Honeysuckle (<i>Lonicera dioica</i>)																	
Morrow's Honeysuckle (<i>Lonicera morrowii</i>)																	
Tartarian Honeysuckle (<i>Lonicera tatarica</i>)					R												
Common Apple (<i>Malus pumila</i>)																	
White Mulberry (<i>Morus alba</i>)																	
Sweet Gale (<i>Myrica gale</i>)																	
Ironwood (<i>Ostrya virginiana</i>)					U												
Thicket-creeper (<i>Parthenocissus inserta</i>)																	
Ninebark (<i>Physocarpus opulifolius</i>)																	
Balsam Poplar (<i>Populus balsamifera</i>)																	
Eastern Cottonwood (<i>Populus deltoides</i>)																	
Large-tooth Aspen (<i>Populus grandidentata</i>)																	
Trembling Aspen (<i>Populus tremuloides</i>)																	
Sweet Cherry (<i>Prunus avium</i>)																	
Pin Cherry (<i>Prunus pensylvanica</i>)																	
Black Cherry (<i>Prunus serotina</i>)																	
Choke Cherry (<i>Prunus virginiana</i>)					U												
<i>Prunus</i>																	

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

Map Number: 245 FSH2004 F006-5
 Date: Apr 23, 2012
 Surveyors: JP & TS

Page 2 of 2

H - Hairs represented in the polygon by less than about five mammals or small clumps				
Map Number:	1	F0065	4	
Date:	2	April 23, 2011	6	
Surveyors:	3	JP & JS		

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):
dark nest in center of opening fra Penn. small nest approx. 8-10 m in height

Description of habitat (note riparian areas if present, evidence of disturbance): FOD6-5 in center 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		

AECOM

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
15	Stick nest in beach tree		

Significant Wildlife Habitat Form

AECOM

Study Area:	BLW	JER	GSH	Map #:	245 6512054
Date:	April 23 / 2012			Time Started:	12:00
Field Staff:	Tom Murray, Jess Pfeiffer			Time Finished:	12:10
Weather Conditions:	cloudy 5°C, 30km/h				

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

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

UTMs: 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 watch of white owl

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:

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 Incidence Wildlife - Goshen

Field Staff:

Tan Slattery

Jess Pettit

Map No: 245-GSH 2054

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

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 wooded	Downy		VO	calling
Killdeer		VO	in field	Counting		VO	calling
Pheasant		VO	in feature				
Deer		TK	field				
Black-b. Pheasant		VO	calling				
vesper sparrow		VO	calling				
red admiral		Ob	along water				
Parson		Ca	along edge				
Parson		Ca	center of feature				
Red-winged		VO	in feature calling				
Song Sparrow		VO					
Robin		VO	calling				
Red-tailed		Ob					

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

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

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

Other Wildlife Evidence: OB=observed, VO=Vocalization, CA=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
FOOT	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:
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: 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 wetlands, 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	Foggy's Goosefoot (Chenopodium foggi) - S2	Species occurs in sandy areas on limestone under oak or pine-oak forests	Y N UTM:
TPO2, TPS2, TPW2,	Giant Ironweed (Vernonia 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>) - SC/S3 Bloom Time – May and June	Species found in damp deciduous forest and along river streams. Particularly Maple forest and forest dominated by Red Ash and White Elm.	(Y) N UTM: N/A
TP01, 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	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, SWM, SWD	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
(FOD6), FOD7, FOD8, FOD9	Harbinger-of-spring (<i>Eriogon bulbosa</i>) - S3 Bloom Time – early to late April	Occurs in rich, moist deciduous woods, especially on floodplains.	(Y) N UTM: N/A
SAS1, SAM1, SAF1	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:
FOM6, FOM7, FOM8	Large Round-leaved Orchid (<i>Platanthera macrophylla</i>) - S2 Bloom Time – June to August	Species inhabits moist mixed woods. Found in fairly mature, upland sugar maple-beech-eastern hemlock woodlands.	(Y) N UTM:
MAM2, MAM3, MAS2, MAS3, SWD	Lizard's Tail (<i>Saururus cernuus</i>) - S3 Bloom Time – June – September	Species inhabits shores and streambanks along shallow water. As well as swamps, floodplains, shallow water and mudflats at the borders of streams and ponds.	(Y) N UTM: N/A
(FOD6), FOD7, FOD9	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	Pilose Evening Primrose (<i>Oenothera pilosella</i>) - S2 Bloom Time – Late Spring – Early Summer	Moist edges of woods and open, disturbed ground.	(Y) N UTM: N/A
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	Prostrate Tick-trefoil (<i>Desmodium rotundifolium</i>) - S2 Bloom Time – July-September	Dry, sandy or rocky woods	(Y) N UTM
FOD7, SWD	Pumpkin Ash (<i>Fraxinus profunda</i>) - S2? Bloom Time – March – June	Swamps and floodplains	(Y) N UTM N/A
CUW1, ALO, FET1, SWC	Ram's-head Lady's-slipper (<i>Cypripedium arietinum</i>) - S3 Bloom Time – mid May to mid June	Found in cedar woodlands, limestone plains and wooded fens, moist coniferous swamps, dry-sandy woods, and limestone barren.	(Y) N UTM:
FOD1, FOD2, FOD3, FOD4, FOD5, FOC1, FOM1, FOM5	Rattlesnake Hawkweed (<i>Hieracium venosum</i>) - S2 Bloom Time – April – September	Species inhabits open, dry sandy woods. Jack pine, oak, and aspen woodlands.	(Y) N UTM: N/A
(FOD6), FOD7, FOD9	Round-leaved Groundsel (<i>Packera obovata</i>) - S3 Bloom Time – May – June	Found in moist woods	(Y) N UTM: N/A
CUM1, CUT1, CUS1	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	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	Slender Blazing Star (<i>Liatris cylindracea</i>) - S3	Species occurs in limestone and dolostone pavement, prairies, open woods, alvars and moist sandy meadows.	(Y) N UTM
SBO, SBS, SBT, TPO1, TPS1, TPW1, FOD1, FOD2	Slender Knotweed (<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 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	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	Sundial Lupine (<i>Lupinus perennis</i>) - S3 Bloom Time – mid-March to mid-June	Inhabits dry, sandy oak savannahs, prairies, open barrens or clearings in woodlands of oak, jack pine, and/or aspen.	(Y) N UTM:

Species Conservation Concern Habitat and Incidental Wildlife - Goshen

ALDOM

ELC	Species	Habitat Description	Habitat Present (Y/N): UTM: description of 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>Amoroglossum 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:
BIRDS			
-	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. Feeds 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 understorey; 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:
REPTILES			
-	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.
INSECTS			
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 features

Goshen Feature: 245 GSH1481

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

0 30 60 120 Meters

October 28, 2011



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

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



ELC:
Community
Description and
Classification

Site: 245
Surveyor(s): JK
UTMZ: 159740

Polygon: 1481
Date: Nov 9
UTMZ: 159740

Time start:
finish:
UTMN: 4793115

Polygon Description

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

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	Aspen - Fraxinus
2	3	3	Aspen - Maple
3			
4			

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

Stand Composition:	Size Class Analysis:	Standing Snags:	Deadfall / Logs:
	0 <10 10-24 25-50 >50	0 <10 10-24 25-50 >50	0 <10 10-24 25-50 >50

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

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

Ecosite:	Code:
Vegetation Type:	Code: SWD4a
Inclusion:	Code:
Complex:	Code:

Community Profile Diagram/Comments

Notes:

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Rel. Avg.
* No Validity						
Total						
Basal Area (BA)						100
Dead						

Soils Ontario and ELC Soils Description

Site Metrics		Pit/Auger #	Soil Horizon Description				Summary		
UTM	Zone	Easting	North	Position	Aspect	Percent	Slope	Length	Moisture Regime
Slope	Zone	Easting	North	Position	Aspect	Percent	Slope	Length	
Depth to ...	Mottles	Gley	Water Table	Carbonates	Bedrock	1	Depth from zero	Texture	Effective Texture (Indicate below)
						2	Depth from zero	Texture	
						3	Depth from zero	Texture	% CF
						4	Depth from zero	Texture	
							% Surface Stone/Rock		% CF
							Moisture Regime		
							Drainage		% CF

Notes:

Printed on 2

Soils Ontario and ELC Soils Description

Soils Ontario and ELC Soils Description

D

Soil Horizon Description

Soil Horizon Description						
1	Depth from zero	% CF	% CF	% CF	% CF	% CF
	Texture					
2	Depth from zero	% CF	% CF	% CF	% CF	% CF
	Texture					
3	Depth from zero	% CF	% CF	% CF	% CF	% CF
	Texture					
4	Depth from zero	% CF	% CF	% CF	% CF	% CF
	Texture					
	% Surface Stone/Rock					
	Moisture Regime					
	Drainage					

Site:	245	GST/1481	Polygon:	F
Surveyor(s):	JK	Date:	Nov 9/11	Time
UTMZN:		UTMZN:		UTMZN:
				start/finish

Polygon Description

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

Stand Description

Layer	HT	CVR	Species In Order of Decreasing Dominance (up to 4 sp) (> Much Greater Than, > Greater Than, = About Equal To)
1	1/2	4	Fraxinus - Tilia - Acer - Acer sacrum
2	3	4	Acer - Tilia - Fraxinus - Acer sacrum
3			
4			

HT Codes:	7 <0.2m	8 >0.2-0.5m	9 >0.5-1m	4 >1.2m	3 >2.8m	2 >6-25m	1 >25m
CVR Codes:	0 = none	1 0% - 10%	2 10 - 25%	3 25 - 60%	4 > 60%		

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

Standard Composition: **Size Class Analysis:**

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

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

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

EcoSite:		Code:	
Vegetation Type:	Sagebrush M-N Ash - Basswood	Code:	FOD5b
Inclination:		Code:	
Complex:		Code:	

Community Profile Diagram/Comments

Votes:

Tree Tally by Species

[illegible]

Soils of Ontario and ELC Soils Description

[illegible]

Observer: Jk

Job Number:

Date: Nov. 9, 2011

HERS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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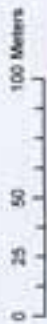
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Goshen Feature: 245 GSH1481

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



September 1, 2011



h

Super Simple - No Wood

SWELL

SWELL

SWELL

SWELL

ROE = YES

VASCULAR PLANT CHECKSHEET
Date: Sept 8, 2011
Job Number:

Location: Goshen 245
Observer: J. Kamstra

Date: Sept 8, 2011
Job Number:

Observer: J. Kamstra						JOU Number:						MONOCOT HERBS						1 2 3 4 5 6					
DICOT HERBS																							
1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Chilisa miltfolia						Erigeron annuus						Plantago lanceolata						Allium plantago-aquatica					
Sam pachypoda						Erigeron philadelphicus	X					Plantago major						Allium tricoccum					
Stasi rubra						Erigeron strigosus						Plantago rugelii						Allium					
Apelinus						Erysimum cheiranthoides						Podophyllum peltatum						Artemisia trifyllum					
Aglymonia gryposepala						Eupatorium maculatum						Polygonum						Asaragum officinale					
Altaria petiolata						Eupatorium perfoliatum						Polygonum						Calla palustris					
Anemone ranunculifolia						Eupatorium rugosum						Polygonum						Cirsium boreale					
Anemone scaberrima						Euphorbia						Polygonum lapathifolium						Conium maculatum					
Anemone nemorosa						Euthamia graminifolia						Polygonum persicaria						Cypripedium calceolus					
Anemone hepatica						Fragaria virginiana						Potentilla						Filago canadensis					
Anemone pulsatilla						Fragaria vesca						Potentilla norvegica						Epipactis helleborine					
Anemone ranunculifolia						Galeopsis tetrahit						Potentilla recta						Erythronium americanum					
Anemone nemorosa						Galium						Prunella alba						Hemerocallis fulva					
Anemone nemorosa						Galium						Prunella vulgaris						Iris versicolor					
Anemone nemorosa						Galium palustre						Pyrola elliptica						Levens minor					
Anemone nemorosa						Galium triflorum						Ranunculus						Levens major					
Anemone nemorosa						Geranium maculatum						Ranunculus abortivus						Urtica					
Anemone nemorosa						Geranium robertianum						Ranunculus acris						Mentham canadense					
Anemone nemorosa						Geum aleppicum						Rubus idaeus						Mentham canadense					
Anemone nemorosa						Geum canadense						Rumex acetosella						Mentham canadense					
Anemone nemorosa						Geum						Rumex crispus						Mentham canadense					
Anemone nemorosa						Glechoma hederacea						Rumex						Mentham canadense					
Anemone nemorosa						Hepatica acutiloba						Sanguinaria canadensis						Mentham canadense					
Anemone nemorosa						Hesperis matronalis						Sarothamnus canadensis						Mentham canadense					
Anemone nemorosa						Hieracium aurantiacum						Saponaria officinalis						Mentham canadense					
Anemone nemorosa						Hieracium caespitosum						Sedum vulgare						Mentham canadense					
Anemone nemorosa						Hieracium						Scutellaria galericulata						Mentham canadense					
Anemone nemorosa						Hydrophyllum virginianum						Silene vulgaris						Mentham canadense					
Anemone nemorosa						Hypoxis perfoliata						Sium suave						Mentham canadense					
Anemone nemorosa						Impatiens capensis						Solanum elaeagnifolium						Mentham canadense					
Anemone nemorosa						Inula helenium						Solidago						Mentham canadense					
Anemone nemorosa						Lactuca						Solidago altissima						Mentham canadense					
Anemone nemorosa						Laportea canadensis						Solidago canadensis						Mentham canadense					
Anemone nemorosa						Lapsana communis						Solidago canadensis						Mentham canadense					
Anemone nemorosa						Leonurus cardica						Solidago flexuosa						Mentham canadense					
Anemone nemorosa						Lepidium						Solidago gigantea						Mentham canadense					
Anemone nemorosa						Linaria vulgaris						Solidago nemoralis						Mentham canadense					
Anemone nemorosa						Lithospermum officinale						Solidago rugosa						Mentham canadense					
Anemone nemorosa						Lobelia						Sonchus oleraceus						Mentham canadense					
Anemone nemorosa						Lobelia inflata						Sonchus asper						Mentham canadense					
Anemone nemorosa						Lolium corniculatum						Stellaria						Mentham canadense					
Anemone nemorosa						Lycopus americanus						Taraxacum vulgare						Mentham canadense					
Anemone nemorosa						Lycopus						Taraxacum officinale						Mentham canadense					
Anemone nemorosa						Lythrum ciliata						Thalictrum dioicum						Mentham canadense					
Anemone nemorosa						Lythrum salicaria						Thalictrum pubescens						Mentham canadense					
Anemone nemorosa						Medicago lupulina						Urtica dioica						Mentham canadense					
Anemone nemorosa						Medicago sativum						Urtica dioica						Mentham canadense					
Anemone nemorosa						Melilotus alba						Urtica dioica						Mentham canadense					
Anemone nemorosa						Mertensia virginica						Urtica dioica						Mentham canadense					
Anemone nemorosa						Miscanthus sinensis						Urtica dioica						Mentham canadense					
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Anemone nemorosa						Miscanthus sinensis						Urtica dioica						Mentham canadense					
Anemone nemorosa						Miscanthus sinensis						Urtica dioica						Mentham canadense					
Anemone nemorosa						Miscanthus sinensis						Urtica dioica						Mentham canadense					
Anemone nemorosa						Miscanthus sinensis						Urtica dioica						Mentham canadense					
Anemone nemorosa						Miscanthus sinensis						Urtica dioica						Mentham canadense					
Anemone nemorosa						Miscanthus sinensis						Urtica dioica						Mentham canadense					
Anemone nemorosa						Miscanthus sinensis						Urtica dioica						Mentham canadense					
Anemone nemorosa						Miscanthus sinensis						Urtica dioica						Mentham canadense					
Anemone nemorosa						Miscanthus sinensis						Urtica dioica						Mentham canadense					
Anemone nemorosa						Miscanthus sinensis						Urtica dioica						Mentham canadense					

1: _____
2: _____
3: _____

4: _____
5: _____
6: _____

SITE LOCATIONS

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

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)

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):
Red-tailed hawk adult flushed off nest (#1 on map)

Description of habitat (note riparian areas if present, evidence of disturbance): **FOD5 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)

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

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

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

Area and soil/substrate of shoreline habitat: _____

Type and abundance of cover in open water habitat: _____

Type and abundance of cover in surrounding habitat: _____

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

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

Complete Vernal Pool Habitat Description Form

Snake Hibernacula

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

UTMs: _____ Likelihood to extend below frost line: _____

% canopy cover: _____ % slope: _____ Distance to open canopy (m): _____

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

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

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

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

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

NHA Site Investigation - Significant Wildlife Habitat Form

AECOM

Colonial Nesting Bird Breeding Habitat (Bank and Cliff Swallows)

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

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

☐ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

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

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

Colonial Nesting Ground Breeding Birds, Shorebird Migratory Stopover Areas

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

Shoreline of lake, large river or large wetland present:

☐ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Rocky island or peninsula present: _____

Mudflat present: _____

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

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

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

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

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

Large open habitat present: ☐ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

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

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

Old-growth or Mature Forests, Interior Forest Breeding Birds

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

Mature forest present: ☐ No

☐ Yes (if yes, photograph and complete the following)

UTMs: _____

Age of oldest trees: _____

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

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

Photo #	Location or Subject	Photo #	Location or Subject

Significant Wildlife Habitat Form

Re-vist Nest Bowls

AECOM

Study Area:	BLW JER <u>GSH</u>	Map #:	<u>45-6SH2054</u>
Date:	<u>May 17 2012</u>	Time Started:	<u>2:43 pm</u>
Field Staff:	<u>J. Kamstra A. Dett</u>	Time Finished:	<u>3:20 pm</u>
Weather Conditions:	<u>Sunny, 18°C</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: 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

Description of habitat (note riparian areas if present, evidence of disturbance):
1 day young - med 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, 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): _____

⊕ Additional Bird calls heard are noted on back.

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

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
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)

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

September 1, 2011



ELC

Community
Description and
Classification

Site: 245_GSH2056

Surveyor(s): SAH

Date:

Time

start:

finish:

Polygon: 0

UTMZ: 17T

UTMZ: 454507

UTMN: 4793299

Polygon Description

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

Stand Description

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (> Much Greater Than; > Greater Than; = About Equal To)
1	2	4	HA > SW > BP > HS
2	3	3	GW > HA > AW > Blue Beech
3	5-4	4	AW > HA > Cahn Aster > Blue Beech
4	7-6	4	Eum. obs > P. W > 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 10% - 10% 20% - 25% 30% - 35% 40% - 45% 50% - 55% 60% - 65% 70% - 75% 80% - 85% 90% - 95% 100%

Stand Composition:	Size Class Analysis:	Standing Snags:	Deadfall / Logs:
HA 25% w 20% Bn 16	A < 10 A 10-24 A 25-50 R > 50	R < 10 R 10-24 R 25-50 R > 50	R < 10 R 10-24 R 25-50 R > 50
BA: 25			

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

Com. Age:	☐ Pioneer	☐ Young	☒ Mid-Age	☐ Mature	☐ Old Growth
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Ecosite:	Fresh-Wet Sugar Maple Deciduous Forest	Code:	F006
Vegetation Type:	Fresh-Wet Sugar Maple White Elm	Code:	F006-4
Inclusion:	Deciduous Forest	Code:	
Complex:		Code:	

Community Profile Diagram/Comments

- cut over in past	
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Notes:

Tree Tally by Species

Species	Tally 1	Tally 2	Tally 3	Tally 4	Total	Prism Factor	2
10	2	1	1		3		8
HA	1	1	1		3		34
HS	1	1	1		3		13
BP	1	1	1		3		16
BE	1	1	1		3		26
Total	12	13	13		38		100
Basal Area (BA)	2	1	2		5		25
Dead							5

Soils Ontario and ELC Soils Description

Site Metrics		PIV/Auger #		Soils Ontario and ELC Soils Description		Summary	
UTM	Zone	Easting	North	Position	Aspect	Percent	Slope
Slope	Length						
Moisture	Regime						
Drainage							
Effective Texture (Indicate below)							
Depth from zero	Texture	Depth from zero	Texture	Depth from zero	Texture	Depth from zero	Texture
1	% CF	2	% CF	3	% CF	4	% CF
2	% CF	3	% CF	4	% CF	5	% CF
3	% CF	4	% CF	5	% CF	6	% CF
4	% CF	5	% CF	6	% CF	7	% CF
5	% CF	6	% CF	7	% CF	8	% CF
6	% CF	7	% CF	8	% CF	9	% CF
7	% CF	8	% CF	9	% CF	10	% CF
8	% CF	9	% CF	10	% CF	11	% CF
9	% CF	10	% CF	11	% CF	12	% CF
10	% CF	11	% CF	12	% CF	13	% CF
11	% CF	12	% CF	13	% CF	14	% CF
12	% CF	13	% CF	14	% CF	15	% CF
13	% CF	14	% CF	15	% CF	16	% CF
14	% CF	15	% CF	16	% CF	17	% CF
15	% CF	16	% CF	17	% CF	18	% CF
16	% CF	17	% CF	18	% CF	19	% CF
17	% CF	18	% CF	19	% CF	20	% CF
18	% CF	19	% CF	20	% CF	21	% CF
19	% CF	20	% CF	21	% CF	22	% CF
20	% CF	21	% CF	22	% CF	23	% CF
21	% CF	22	% CF	23	% CF	24	% CF
22	% CF	23	% CF	24	% CF	25	% CF
23	% CF	24	% CF	25	% CF	26	% CF
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38	% CF	39	% CF	40	% CF	41	% CF
39	% CF	40	% CF	41	% CF	42	% CF
40	% CF	41	% CF	42	% CF	43	% CF
41	% CF	42	% CF	43	% CF	44	% CF
42	% CF	43	% CF	44	% CF	45	% CF
43	% CF	44	% CF	45	% CF	46	% CF
44	% CF	45	% CF	46	% CF	47	% CF
45	% CF	46	% CF	47	% CF	48	% CF
46	% CF	47	% CF	48	% CF	49	% CF
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64	% CF	65	% CF	66	% CF	67	% CF
65	% CF	66	% CF	67	% CF	68	% CF
66	% CF	67	% CF	68	% CF	69	% CF
67	% CF	68	% CF	69	% CF	70	% CF
68	% CF	69	% CF	70	% CF	71	% CF
69	% CF	70	% CF	71	% CF	72	% CF
70	% CF	71	% CF	72	% CF	73	% CF
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91	% CF	92	% CF	93	% CF	94	% CF
92	% CF	93	% CF	94	% CF	95	% CF
93	% CF	94	% CF	95	% CF	96	% CF
94	% CF	95	% CF	96	% CF	97	% CF
95	% CF	96	% CF	97	% CF	98	% CF
96	% CF	97	% CF	98	% CF	99	% CF
97	% CF	98	% CF	99	% CF	100	% CF

Location: 245-GSH 2056
Observer: SAM

245_GSH 2056

Date:

CHECKSHEET
Oct. 4/11

Job Number:

1: Polygon 4: _____
2: _____ 5: _____
3: _____ 6: _____

SITE LOCATIONS

1 CONIFERS						2 TREES and SHRUBS						3 GRAMINIDS					
1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Abies balsamea						+ Rosa multiflora						Agrostis gigantea					
Juniperus communis						Rosa						Agrostis stolonifera					
Juniperus virginiana						Rubus allegheniensis						Agropyron repens					
Larix laricina						Rubus idaeus						Alopecurus					
Picea abies						Rubus occidentalis						Bromus inermis					
Picea glauca						Rubus odoratus						Calamagrostis canadensis					
Pinus resinosa						Rubus pubescens						Carex acutata					
Pinus strobus						Salix alba						Carex aurea					
Pinus sylvestris						Salix amygdaloides						Carex bebbii					
Thuja occidentalis						Salix bebbiana						Carex blanda					
Tsuga canadensis						+ Salix discolor						Carex gracillima					
						Salix eriocephala						Carex granularis					
						Salix exigua						Carex hystericina					
						Salix lucida						Carex pennsylvanica					
						Salix petiolaris						Carex radiata					
TREES and SHRUBS						+ Salix purpurea						Carex retrosa					
Acer negundo						Salix x rubens						Carex stipata					
Acer rubrum						+ Salix						Carex stricta					
Acer saccharinum						Sambucus canadensis						Carex vulpinoides					
Acer saccharum						Sambucus racemosa						Carex blanda					
Acer spicatum						Sorbus aucuparia						Carex					
Alnus rugosa						Spiraea alba						Carex					
Amelanchier						Syringa vulgaris						Carex					
Berberis thunbergii						+ Tilia americana						Carex					
Betula alleghaniensis						Ulmus americana						Carex					
Betula papyrifera						Ulmus						Carex					
Carpinus caroliniana						Vaccinium						Carex					
Carya cordiformis						Viburnum lentago						Carya					
Celastrus scandens						Viburnum opulus						Cyperus					
Cornus alternifolia						Viburnum						Cyperus					
Cornus amomum						Vitis riparia						Dactylis glomerata					
Cornus rugosa												Danthonia spicata					
Cornus stolonifera												Echinochloa crus-galli					
Corylus corata												Eleocharis erythropoda					
Crataegus monogyna												Eleocharis					
Crataegus punctata												Elymus virginicus					
Crataegus sp.												Elymus					
Crataegus												Festuca arundinacea					
Diervilla lonicera												Glyceria striata					
Fagus grandifolia												Glyceria					
Fraxinus americana												Juncus					
Fraxinus nigra						FERNS						Juncus dudleyi					
Fraxinus pennsylvanica						Adiantum pedatum						Juncus effusus					
Ilex verticillata						Asplenium filix-femina						Juncus tenuis					
Juglans cinerea						Botrychium multifidum						Juncus					
Juglans nigra						Botrychium virginianum						Juncus					
Lonicera morrowi						Cystopteris bulbifera						Leersia oryzoides					
Lonicera tatarica						Dryopteris carthusiana						Muhlenbergia					
Lonicera						Dryopteris cristata						Oryzopsis asperifolia					
Malus pumila						Dryopteris marginalis						Panicum					
Ostrya virginiana						Dryopteris						Panicum					
Parthenocissus inserta						Equisetum arvense						Phalaris arundinacea					
Populus balsamifera						Equisetum hyemale						Phleum pratense					
Populus grandidentata						Equisetum variegatum						Platagites australis					
Populus tremuloides						Equisetum						Poa compressa					
Populus						Gymnocarpium dryopteris						Poa pratensis					
Prunus pennsylvanica						Lycopodium digitatum						Poa					
Prunus serotina						Lycopodium obscurum						Scirpus atrovirens					
Prunus virginiana						Lycopodium						Scirpus cyperinus					
Prunus						Lycopodium						Scirpus validus					
Quercus macrocarpa						Matricaria struthiopteris						Scirpus					
Quercus rubra						Oenothera scaberrima						Setaria					
Quercus						Oenothera cinnamomea						Sparganium					
Rhamnus cathartica						Oenothera regalis						Typha angustifolia					
Rhus radicans						Polystichum acrostichoides						Typha latifolia					
Rhus typhina						Pteridium aquilinum						Typha Xglauca					
Ribes americanum						Thelypteris palustris											
Ribes cynosbati																	
Ribes x rubrum																	
Robinia pseudo-acacia																	
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ELC Plant Species List	SITE: 245 GSA 2056
	POLYGON: ①
	DATE: Oct. 4/11
	SURVEYOR(S): SAM

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

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

SPECIES CODE	LAYER				COLL.
	1	2	3	4	
Mn					
Av					
Eu					
grape					
False Sol Seal					
Calico Art.					
Black Resin					
Eum. obv.					
Bn					
Chokecherry					
C. blanda					
Vicia sp.					
As					
Harb R. It					
strawb.					
BS Nts h d					
Yellow Avens					
Agrimony					
Mult. Rose					
Blue Beech					
fat G'vill					
C. arct.					
QB					
Foul Nana					
Hackberry					
Leek					
Zig-zag					
Wp					

Map #: 249	551745	Polygon: 1
Surveyor(s): Sc	Date: July 4, 2012	Time start: 3:45 pm finish: 4:40 pm
UTMZ:	UTMZ:	UTMN:

ASA $\Rightarrow$ not a group for 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 46

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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, closely forming >10% ground cover O - Occasional (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								
Date:	3								
Surveyor:	3								