

Observer:

Job Number:

1: polygon #1 4: _____
2: _____ 5: _____
3: _____ 6: _____

SITE LOCATIONS

1 CONIFERS						2 TREES and SHRUBS						3 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						Bromus inermis					
Picea glauca						Rubus odoratus						Calamagrostis canadensis					
Pinus resinosa						Rubus pubescens						Carex arctata					
Pinus strobus						Salix alba						Carex aurea					
Pinus sylvestris						Salix amygdaloides						Carex bebbii					
Thuja occidentalis						Salix bebbiana						Carex blanda					
Tsuga canadensis						* 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	X					Sambucus canadensis						Carex vulpinoidea					
Acer saccharum	X					Sambucus racemosa						Carex grayi				X	
Acer spicatum						Sorbus aucuparia						Carex					
Alnus rugosa						Spiraea alba						Carex					
Amelanchier						Syringa vulgaris						Carex					
Berberis thunbergii						* Tilia americana			X			Carex					
Betula alleghaniensis	X					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						Hamamelis virginiana			X			Danthonia spicata					
Cornus stolonifera	X											Echinochloa crus-galli					
Corylus cornuta												Eleocharis erythropoda					
Crataegus monogyna						Zanthoxylum americanum			X			Eleocharis					
Crataegus punctata						Eonymus obovatus			X			Elymus virginicus					
Crataegus sp.												Elymus hystrix				X	
Crataegus												Festuca arundinacea					
Diervilla lonicera												Glyceria striata				X	
Fagus grandifolia	X											Glyceria					
Fraxinus americana	X											Juncus dudleyi					
Fraxinus nigra						FERNS						Juncus effusus					
Fraxinus pennsylvanica	X					Adiantum pedatum						Juncus tenuis					
Ilex verticillata						Athyrium filix-femina						Juncus					
Juglans cinerea						Botrychium multifidum						Juncus					
Juglans nigra						Botrychium virginianum						Leersia oryzoides					
Lonicera morrowi						Cystopteris bulbifera						Muhlenbergia					
Lonicera tatarica						Dryopteris carthusiana						Oryzopsis asperifolia					
Lonicera						Dryopteris cristata						Panicum					
Malus pumila	X					Dryopteris marginalis						Panicum					
Ostrya virginiana						Dryopteris						Phalaris arundinacea					
Parthenocissus inserta						Equisetum arvense						Phleum pratense					
Populus balsamifera						Equisetum hyemale						Phragmites australis					
Populus grandidentata						Equisetum variegatum						Poa compressus					
Populus tremuloides						Equisetum						Poa pratensis					
Populus						Gymnocarpium dryoperis						Poa					
Prunus pennsylvanica						Lycopodium digitatum						Scirpus atrovirens					
Prunus serotina						Lycopodium obscurum						Scirpus cyperinus					
Prunus virginiana	X					Lycopodium						Scirpus validus					
Prunus						Lycopodium						Scirpus					
Quercus macrocarpa	X					Matteucia struthiopteris						Scirpus					
Quercus rubra						Onoclea sensibilis						Setaria					
Quercus						Osmunda cinnamomea						Sparganium					
Rhamnus cathartica						Osmunda regalis						Typha angustifolia					
Rhus radicans	X					Polystichum acrostichoides			X			Typha latifolia					
Rhus typhina						Pteridium aquilinum						Typha X glauca					
Ribes americana						Thelypteris palustris											
Ribes cynosbati	X																
Ribes x rubrum																	
Robinia pseudo-acacia																	
Carya ovata	X																
Cornus racemosa	X																
Crataegus mollis	X																



Significant Wildlife Habitat Form

AECOM

Study Area:	BLW JER (GSH)	Map #:	189-GSH 1023
Date:	2012-04-17	Time Started:	11:30
Field Staff:	Tom Shorney Jess Piette	Time Finished:	12:30
Weather Conditions: Cloudy, 5°C 15 km/h			

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

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

UTMs: _____ Number of nests: _____

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

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

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

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

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

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

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

Area and soil/substrate of shoreline habitat: _____

Type and abundance of cover in open water habitat: _____

Type and abundance of cover in surrounding habitat: _____

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

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

Some water in site - due to dry year less than 10cm depth. Most were dry but could see potential

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

Field Staff: Tom Sharkey
Less Retic

Time Started: 11:30
Time Finished: 12:30

Observed Species List

[illegible]

Note:	Evidence Codes (EV)	Breeding Bird (Possible)	SH=Suitable Habitat SM=Singina 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=Eggs/Faecal sack, AE=Nest Entry

Other Wildlife Evidence: OB=observed, VO=Vocalization, CA=Carcass, DP=Distinctive Parts, HO=House/Den, FY=Eggs/young, 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 (<i>Lithospermum latifolium</i>) - S3 <u>Bloom Time - Spring</u>	Shaded river banks, wooded floodplains. River floodplains, woods and edges of woods.	Y <u>N</u> UTM:
ALO, TPO	Muehlenberg's astorum moss (<i>Astorum muehlenbergianum</i>) - S2 Bloom Time - Spring	Thin soil over level outcrop ledges and on soil under grasses in open prairie	Y <u>N</u> UTM:
FOM1, FOM2, CUP3	Autumn Coral-root (<i>Coralorhiza odontorhiza</i>) - S2 <u>Bloom Time - summer to fall</u>	Oak-pine woods or occasionally in open, red pine or white pine plantations. Dry, sandy woods.	Y <u>N</u> UTM:
FOC, FOM, FOD	Burning Bush (<i>Euonymus atropurpureus</i>) - S3 Bloom <u>Time - April - June</u>	Species occurs in dry to moist deciduous thickets and woods	Y <u>N</u> UTM: <u>N/A</u>
SWC1, SWC3, SWC4, SWM1, SWM2, SWM4, SWM5, SWM6	Chinese Hemlock Parsley (<i>Conioselinum chinense</i>) - S2 <u>Bloom Time - summer to fall</u>	Swampy places with deciduous trees, white cedars, tamarack; springy river banks, wet borders of streams and rivers. Also found among calcareous seepage slopes.	Y <u>N</u> UTM:
SWC, SWM, SWD, SWT, MAM, MAS	Crowned Beggarticks (<i>Bidens trichosperma</i>) -S2 <u>Bloom Time - late summer</u>	Found in openings in swamps, marshes, along shores & wet fields within the Carolinian zone and southeastern Georgian bay. Bogs, fens, tamarack swamps	Y <u>N</u> UTM
ALT1, FOD7	Eastern Green-violet (<i>Hybanthus concolor</i>) - S2 <u>Bloom Time -mid March to August</u>	Occurs in rich, wet-mesic floodplain forests as well as mesic forests over limestone. Includes floodplains and river banks	Y <u>N</u> UTM
TPS, TPW, FOM1, FOM2	Fogg's Goosefoot (<i>Chenopodium foggii</i>) -S2	Species occurs in sandy areas on limestone under oak or pine-oak forests	Y <u>N</u> UTM
TPO2, TPS2, TPW2,	Giant Ironweed (<i>Vernonia gigantea</i>) -S1? <u>Bloom Time-</u>	Found in mesic prairies, thickets, moist woods, roadsides and grassy meadows	Y <u>N</u> 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,	June – August		
FOD6, FOD7, FOD9	Green Dragon (<i>Arisaema dracontium</i>) - SC/S3 <u>Bloom Time – May and June</u>	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	Hairy Bedstraw (<i>Galium pilosum</i>) - S3 <u>Bloom Time – June-August</u>	Occurs in dry, sandy woods and thickets; occasionally in dry sandy fields	Y N UTM:
FE01, FES1, FET1, SWC, SWM, SWD, SWT, TPO, TPW	Hairy Valerian (<i>Valeriana edulis</i>) - S1 <u>Bloom Time – June to August</u>	Inhabits swampy river flats and meadows, wet prairies, and wooded, rocky riverbanks and fens.	Y N UTM:
FOD6, FOD7, SWM, SWD	Hairy Wood Mint (<i>Blephilia hirsuta</i>) - S1 <u>Bloom Time – Summer</u>	Woodlands, often rocky, especially rivers. Rich woods, swamp forests, floodplains.	Y N UTM: N/A
FOD6, FOD7, FOD8, FOD9	Harbinger-of-spring (<i>Erigenia bulbosa</i>) - S3 <u>Bloom Time – early to late April</u>	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 <u>Bloom Time – summer</u>	Aquatic plant found in highly alkaline waters of ditches, ponds, beaver ponds, and slow-moving cold waters.	Y N UTM:
FOM6, FOM7, FOM8	Large Round-leaved Orchid (<i>Platanthera macrophylla</i>) - S2 <u>Bloom Time – June to August</u>	Species inhabits moist mixed woods. Found in fairly mature, upland sugar maple-beech-eastern hemlock woodlands.	Y N UTM:
MAM2, MAM3, MAS2, MAS3, SWD	Lizard's Tail (<i>Saururus cernuus</i>) - S3 <u>Bloom Time – June – September</u>	Species inhabits shores and streambanks along shallow water. As well as swamps, floodplains, shallow water and mudflats at the borders of streams and ponds.	Y N UTM:
FOD6, FOD7, FOD9	Pawpaw (<i>Asimina triloba</i>) - S3 <u>Bloom Time – March-May</u>	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 <u>Bloom Time – Late Spring – Early Summer</u>	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 <u>Bloom Time – July-September</u>	Dry, sandy or rocky woods	Y N UTM:
FOD7, SWD	Pumpkin Ash (<i>Fraxinus profunda</i>) - S2? <u>Bloom Time – March – June</u>	Swamps and floodplains	Y N UTM:
CUW1, ALO, FET1, SWC	Rain's-head Lady's-slipper (<i>Cypripedium arietinum</i>) - S3 <u>Bloom Time – mid May to mid June</u>	Found in cedar woodlands, limestone plains and wooded fens, moist coniferous swamps, dry-sandy woods, and limestone barren.	Y N UTM:
FOD1, FOD2, FOD3, FOD4, FOD5, FOC1, FOM1, FOM5	Rattlesnake Hawkweed (<i>Hieracium venosum</i>) - S2 <u>Bloom Time – April – September</u>	Species inhabits open, dry sandy woods. Jack pine, oak, and aspen woodlands.	Y N UTM:
FOD6, FOD7, FOD9	Round-leaved Groundsel (<i>Packera obovata</i>) - S3 <u>Bloom Time – May – June</u>	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 <u>Bloom Time – May to October</u>	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 Muhly (<i>Muhlenbergia tenuiflora</i>) - S2	Found in rich deciduous forest, often on rocky or sandy soils, wooded dunes, hillsides, and riverbanks whether in oak or beech-maple woods	Y N UTM:
BLO1, BLS1, BLT1, TPO2, TPS2, TPW2, MAM2, FOD7	Stiff Gentian (<i>Gentianella quinquefolia</i>) - S2 <u>Bloom Time – late summer to mid fall</u>	Found in moist soils of streambanks, edges of woods, wet prairies, marshy meadows, bluffs and wooded hillsides.	Y N UTM:
TPS1, TPW1, CUW1, RBO, SBO	Sundial Lupine (<i>Lupinus perennis</i>) - S3 <u>Bloom Time – mid-March to mid-June</u>	Inhabits dry, sandy oak savannahs, prairies, open barrens or clearings in woodlands of oak, jack pine, and/or aspen.	Y N UTM:

Species Conservation Concern Habitat and Incidental Wildlife – Goshen

AM

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
TP01, TPS1, TPW1, CUM1	Tall Blazing Star (<i>Liatris aspera</i>) - S3/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y (N) UTM:
FE0, FES, FET, MAM2, MAM3	Tuberous Indian Plantain (<i>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: N/A
FOD, CUW, CUT	Red-headed Woodpecker (<i>Meelanerpes erythrocephalus</i>) - SC	Species inhabits open woodland/ edges (oak savannahs and riparian forest), open, deciduous forest with little understory, fields or pasture lands with scattered large trees; wooded swamps; orchards, small woodlots or forest edges; groves of dead or dying trees; requires cavity trees with at least 40 cm dbh; requires about 4 ha for a territory.	Y (N) UTM: N/A
-	Short Eared Owl (<i>Asio flammeus</i>) - SC	Assessed as SWH. Record species if found.	not required.
CUT1	Yellow-breasted Chat (<i>Icteria virens</i>) - SC	Inhabits thickets, tall tangles of shrubbery beside streams, ponds; overgrown bushy clearings with deciduous thickets; nests above ground in bush, vines	Y (N) UTM:
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 on or wet sandy roads. Larvae feeds on New Jersey Tea and adults only likely near where this plant is present	Y (N) UTM:
SWT, SWD, SWM, FOM, FOD4-3, TPW, TPS, CUM1	Tawny Emperor (<i>Asterocampa clyten</i>) - S3	Species inhabits densely wooded riparian areas, dry woods, open woods, fencerows and parks. Usually occurs near Hackberry, the larval foodplant	Y (N) UTM:
FOD5	West Virginia White (<i>Pieris virginianensis</i>) - SC	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y (N) UTM:

Goshen Feature: 189 GSH1095/1557

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

October 28, 2011



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

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



VASCULAR PLANT CHECKSHEET

Location:

189 GSH 1557

Date:

November 7, 2011

Observer:

J. Kamstra

Job Number:

MONOCOT HERBS												MONOCOT HERBS					
1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
<i>Actaea rubra</i>						<i>Erigeron annuus</i>						<i>Plantago lanceolata</i>	☒				
<i>Agalinis</i>						<i>Erigeron philadelphicus</i>						<i>Plantago major</i>					
<i>Agrostis hyemalis</i>						<i>Erigeron strigosus</i>						<i>Plantago rugelii</i>					
<i>Alliaria petiolata</i>	☒					<i>Erythronium americanum</i>						<i>Podophyllum peltatum</i>					
<i>Amaranthus retrofractus</i>						<i>Eupatorium maculatum</i>						<i>Polygonum</i>					
<i>Ambrosia trifida</i>						<i>Eupatorium perfoliatum</i>						<i>Polygonum</i>					
<i>Amphicarpaea baccata</i>						<i>Eupatorium rugosum</i>						<i>Polygonum</i>					
<i>Anaphalis margaritacea</i>						<i>Euphorbia</i>						<i>Polygonum lapathifolium</i>					
<i>Anemone</i>						<i>Euthamia granatula</i>						<i>Polygonum persicaria</i>					
<i>Anemone canadensis</i>						<i>Fraxinus virginiana</i>	☒					<i>Potentilla</i>					
<i>Anemone virginiana</i>						<i>Fraxinus vesca</i>						<i>Potentilla norvegica</i>					
<i>Antennaria neglecta</i>						<i>Galium</i>						<i>Potentilla recta</i>					
<i>Apocynum androsaemifolium</i>						<i>Galium</i>						<i>Prunella alba</i>					
<i>Apocynum cannabinum</i>						<i>Galium palustre</i>						<i>Prunella vulgaris</i>					
<i>Aquilegia canadensis</i>						<i>Galium triflorum</i>						<i>Pyrola elliptica</i>					
<i>Arnica montana</i>						<i>Geranium maculatum</i>	☒					<i>Ranunculus abortivus</i>					
<i>Aster</i>						<i>Geranium robertianum</i>	☒					<i>Ranunculus acris</i>					
<i>Aster cordifolius</i>						<i>Geum aleppicum</i>						<i>Rubus idaeus</i>					
<i>Aster ericoides</i>						<i>Geum canadense</i>	☒					<i>Rumex acetosella</i>					
<i>Aster lanceolatus</i>	☒					<i>Geum</i>						<i>Rumex crispus</i>					
<i>Aster laevis</i>	☒					<i>Geranium</i>						<i>Rumex</i>					
<i>Aster macrophyllus</i>						<i>Glechoma hederacea</i>						<i>Sanguinaria canadensis</i>					
<i>Aster novae-angliae</i>						<i>Hepatica scutellaria</i>						<i>Sanicula marilandica</i>					
<i>Aster purpureus</i>						<i>Hesperis matronalis</i>						<i>Saponaria officinalis</i>					
<i>Barbarea vulgaris</i>						<i>Hieracium aurantiacum</i>						<i>Satureja vulgaris</i>					
<i>Bidens cernua</i>						<i>Hieracium caespitosum</i>						<i>Scutellaria perfoliata</i>					
<i>Bidens frondosa</i>						<i>Hieracium</i>						<i>Silene vulgaris</i>					
<i>Boehmeria cylindrica</i>						<i>Hydrophyllum virginianum</i>						<i>Slum suave</i>					
<i>Calla palustris</i>						<i>Hypericum perforatum</i>						<i>Solanum elaeagnifolium</i>					
<i>Caryophyllus</i>						<i>Impatiens capensis</i>						<i>Solidago</i>					
<i>Cardenia</i>						<i>Linum catharticum</i>						<i>Solidago altissima</i>	☒				
<i>Caulophyllum thalictroides</i>						<i>Lactuca</i>						<i>Solidago canadensis</i>					
<i>Ceanothus americanus</i>						<i>Lappula canadensis</i>						<i>Solidago flexuosa</i>					
<i>Cerastium arvense</i>						<i>Lappula canadensis</i>						<i>Solidago gigantea</i>	☒				
<i>Cerastium diurnum</i>						<i>Leonurus cardiaca</i>						<i>Solidago nemoralis</i>					
<i>Chelidonium majus</i>						<i>Lepidium</i>						<i>Solidago rugosa</i>					
<i>Chenopodium album</i>						<i>Linaria vulgaris</i>						<i>Sonchus oleraceus</i>					
<i>Chrysanthemum leucanthemum</i>						<i>Lithospermum officinale</i>						<i>Sonchus asper</i>					
<i>Clostridium intybus</i>						<i>Lobelia</i>						<i>Sonchus</i>					
<i>Cnicus</i>						<i>Lobelia inflata</i>						<i>Taraxacum vulgare</i>					
<i>Cnicus leucanthemum</i>						<i>Lobelia spicata</i>						<i>Taraxacum officinale</i>	☒				
<i>Cirsium arvense</i>						<i>Lycopus americanus</i>						<i>Thalictrum flavum</i>					
<i>Cirsium vulgare</i>						<i>Lycopus</i>						<i>Thalictrum pubescens</i>					
<i>Clematis vitalba</i>						<i>Lymnaea stagnalis</i>						<i>Thalictrum minus</i>					
<i>Cnicus baccata</i>						<i>Lythrum salicaria</i>						<i>Thalictrum minus</i>					
<i>Coryza canadensis</i>						<i>Medicago lupulina</i>						<i>Thalictrum minus</i>					
<i>Coronilla varia</i>						<i>Medicago sativa</i>						<i>Thalictrum minus</i>					
<i>Cynanchum latifolium</i>						<i>Melilotus alba</i>						<i>Thalictrum minus</i>					
<i>Cynopogon officinalis</i>						<i>Mentha arvensis</i>						<i>Thalictrum minus</i>					
<i>Dianthus barbatus</i>						<i>Mimulus ringens</i>						<i>Thalictrum minus</i>					
<i>Desmodium canadense</i>						<i>Mimulus ringens</i>						<i>Thalictrum minus</i>					
<i>Dianthus armeria</i>						<i>Mimulus ringens</i>						<i>Thalictrum minus</i>					
<i>Dipsacus filiformis</i>						<i>Mimulus ringens</i>						<i>Thalictrum minus</i>					
<i>Echinops latifolius</i>						<i>Mimulus ringens</i>						<i>Thalictrum minus</i>					
<i>Echium vulgare</i>						<i>Mimulus ringens</i>						<i>Thalictrum minus</i>					
<i>Epilobium</i>						<i>Mimulus ringens</i>						<i>Thalictrum minus</i>					
<i>Epilobium ciliatum</i>						<i>Mimulus ringens</i>						<i>Thalictrum minus</i>					
<i>Epilobium hirsutum</i>						<i>Mimulus ringens</i>						<i>Thalictrum minus</i>					
<i>Epilobium parviflorum</i>						<i>Mimulus ringens</i>						<i>Thalictrum minus</i>					

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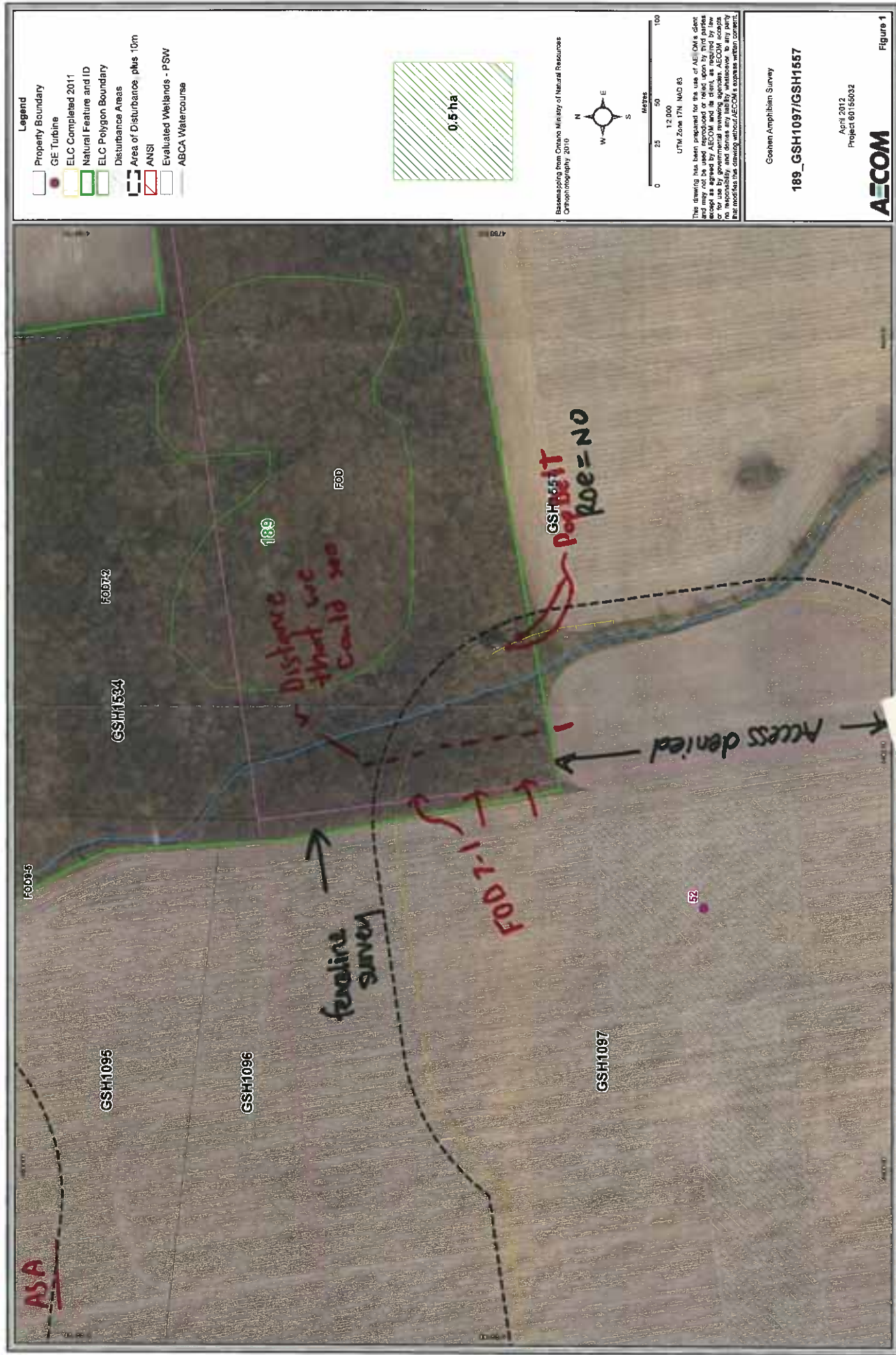
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SITE LOCATIONS

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



ASA

Significant Wildlife Habitat Form

AECOM

Study Area:	BLW JER <u>GSH</u>	Map #:	<u>189-GSH 1897-1557</u>
Date:	<u>April 23, 2012</u>	Time Started:	<u>5:00 4:20 pm</u>
Field Staff:	<u>SG, RA</u>	Time Finished:	<u>5:30 pm</u>
Weather Conditions:	<u>Extreme wind, overcast</u>		

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

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

UTMs: _____ Number of nests: _____

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

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

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

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

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

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

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

Area and soil/substrate of shoreline habitat: _____

Type and abundance of cover in open water habitat: _____

Type and abundance of cover in surrounding habitat: _____

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

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

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:



☐ 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:



☐ 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

Field Staff:

Time Started:

Date (yyyy-mm-dd):

2012 Apr 23

Time Finished:

ASA.

Note: Evidence Codes (EV)

Breeding Bird (Probable)

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

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

Goshen - SOCC And Incidental Wildlife - 2012-04-13

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

AECOM

ELC	Species	Habitat Description	Habitat Present: Y/N; UTM: description of habitat if present
CUM1, MAM, FOD6, FOD7, FOD9	June - August Green Dragon (<i>Arisaema dracontium</i>) - S3/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	Hairy Valerian (<i>Valeriana edulis</i>) - S1 Bloom Time - June to August	Inhabits swampy river flats and meadows, wet prairies, and wooded, rocky riverbanks and fens.	Y N UTM:
FOD6, FOD7, SWM, SWD	Hairy Wood Mint (<i>Blephilia hirsuta</i>) - S1 Bloom Time - Summer	Woodlands, often rocky, especially rivers. Rich woods, swamp forests, floodplains.	Y N UTM: n/a
FOD6, FOD7, FOD8, FOD9	Harbinger-of-spring (<i>Erigenia 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:
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:
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 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 Muhly (<i>Muhlenbergia tenuiflora</i>) - S2	Found in rich deciduous forest, often on rocky or sandy soils, wooded dunes, hillsides, and riverbanks whether in oak or beech-maple woods	Y N UTM:
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



ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
TP01, TPS1, TPW1, CUM1	Tall Blazing Star (<i>Liatris aspera</i>)-S3/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y (N) UTM:
FE0, FES, FET, MAM2, MAM3	Tuberous Indian Plantain (<i>Amoglossum plantaginifolium</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.	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	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



Map Number: 1 SWDZ
Date: July 4, 2012 2
Surveyors: SG 3

189 GSH 1023 / 1515 ← ASA

ASA.

Significant Wildlife Habitat Form

AECOM

Study Area:	BLW JER (GSH)	Map #:	189 GSH 1023 / (1515) ← ASA
Date:	July 4, 2012	Time Started:	4:50 PM
Field Staff:	SG.	Time Finished:	5:30 PM
Weather Conditions:	33°C, 0% clouds, moderate wind.		

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

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

UTMs: _____ Number of nests: _____

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

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

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

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

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

Area and soil/substrate of shoreline habitat: _____

Type and abundance of cover in open water habitat: _____

Type and abundance of cover in surrounding habitat: _____

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

Evidence of use by waterfowl, amphibians, 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

A=COM

Time Started:

Time Finished:

Observed Species List

[illegible]

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=Food/Faecal sack, AE=Nest Entry

Other Wildlife Evidence: OB=Observed, VO=Vocalization, CA=Carcass, DP=Distinctive Parts, HO=House/Den, FV=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 <i>Bloom Time - Spring</i>	Shaded river banks, wooded floodplains. River floodplains, woods and edges of woods	Y ☒ UTM:
ALO, TPO	Muehlenberg's astorum moss (<i>Astorum muehlenbergianum</i>) - S2 Bloom Time - Spring	Thin soil over level outcrop ledges and on soil under grasses in open prairie	Y ☒ UTM:
FOM1, FOM2, CUP3	Autumn Coral-root (<i>Corallorhiza odoriflora</i>) - S2 <i>Bloom Time - summer to fall</i>	Oak-pine woods or occasionally in open, red pine or white pine plantations. Dry, sandy woods	Y ☒ UTM:
FOC, FOM, FOD	Burning Bush (<i>Euonymus alatus</i>) - S3 Bloom Time - April - June	Species occurs in dry to moist deciduous thickets and woods	Y ☒ UTM
SWC1, SWC3, SWC4, SWM1, SWM2, SWM4, SWM5, SWM6	Chinese Hemlock Parsley (<i>Conioselinum chinense</i>) - S2 <i>Bloom Time - summer to fall</i>	Swampy places with deciduous trees, white cedars, tamarack, springy river banks, wet borders of streams and rivers. Also found among calcareous seepage slopes.	Y ☒ UTM
SWC, SWM, ☒ SWT, MAM, MAS	Crowned Beggarticks (<i>Bidens trichosperma</i>) - S2 <i>Bloom Time - late summer</i>	Found in openings in swamps, marshes, along shores & wet fields within the Carolinian zone and southeastern Georgian Bay Bogs, fens, tamarack swamps.	Y ☒ UTM
ALT1, FOD7	Eastern Green-violet (<i>Hybanthus concolor</i>) - 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 ☒ UTM
TPS, TPW, FOM1, FOM2	Fogg's Goosefoot (<i>Chenopodium foggii</i>) - S2	Species occurs in sandy areas on limestone under oak or pine-oak forests	Y ☒ UTM
TPO2, TPS2, TPW2,	Giant Ironweed (<i>Vernonia gigantea</i>) - S1? Bloom Time -	Found in mesic prairies, thickets, moist woods, roadsides and grassy meadows	Y ☒ UTM:

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

AECOM

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
CUM1, MAM,	June – August		
FOD6, FOD7, FOD9	Green Dragon (<i>Arisaema dracontium</i>) - S3/S3 Bloom Time – May and June	Species found in damp deciduous forest and along river streams. Particularly Maple forest and forest dominated by Red Ash and White Elm.	Y (N) UTM
TP01, TPS1, TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	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	Hairy Valerian (<i>Valeriana edulis</i>) - S1 Bloom Time – June to August	Inhabits swampy river flats and meadows, wet prairies, and wooded, rocky riverbanks and fens	Y (N) UTM
FOD6, FOD7, SWM, SWD	Hairy Wood Mint (<i>Blephilia hirsuta</i>) - S1 Bloom Time – Summer	Woodlands, often rocky, especially rivers. Rich woods, swamp forests, floodplains	Y (N) UTM
FOD6, FOD7, FOD8, FOD9	Harbinger-of-spring (<i>Erigenia bulbosa</i>) - S3 Bloom Time – early to late April	Occurs in rich, moist deciduous woods, especially on floodplains.	Y (N) UTM
SAS1, SAM1, SAF1	Hill's Pond Weed (<i>Potamogeton hillii</i>) - SC/S2 Bloom Time – 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 early mature, upland sugar maple-beech-eastern hemlock woodlands.	Y (N) UTM
MAM2, MAM3, MAS2, MAS3, SWD	Lizard's Tail (<i>Saururus cernuus</i>) - S3 Bloom Time – June – September	Species inhabits shores and streambanks along shallow water. As well as swamps, floodplains, shallow water and mudflats at the borders of streams and ponds.	Y (N) UTM
FOD6, FOD7, FOD9	Pawpaw (<i>Asimina triloba</i>) - S3 Bloom Time – March-May	Occurs in moist deciduous woods and stream banks	Y (N) UTM
FOM8, FOD6, FOD7, FOD9, CUM1	Pilose Evening Primrose (<i>Oenothera pilosella</i>) - S2 Bloom Time – Late Spring – Early Summer	Moist edges of woods and open, disturbed ground.	Y (N) UTM
TPW1, FOM1, FOM2, FOD1, FOD2, FOD3	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
CUM1, 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
FOD6, FOD7, FOD9	Round-leaved Groundsel (<i>Packera obovata</i>) - S3 Bloom Time – May – June	Found in moist woods	Y (N) UTM
CUM1, CUT1, CUS1	Round-leaved hawthorn (<i>Crataegus lumarina</i>) - S3?	Species occurs in old fields, poorly managed pastures, fencelines and roadsides	Y (N) UTM
FOD6, FOD7, FOD8, FOD8, SWT2, SWT3	Scarlet Beebalm (<i>Monarda didyma</i>) - S3 Bloom Time – May to October	Found in moist, rich woods, thicket swamps, banks and floodplains	Y (N) UTM
ALO, ALS, ALT, TPO, TPS, TPW	Slender Blazing Star (<i>Liatris cylindracea</i>) - S3	Species occurs in limestone and dolostone pavement, prairies, open woods, always and moist sandy meadows.	Y (N) UTM
SBO, SBS, SBT, TPO1, TPS1, TPW1, FOD1, FOD2	Slender Knotweed (<i>Polygonum tenue</i>) - S2	Found in dry, sandy, open areas in deciduous (often oak woods), prairie meadows, at edges of sand pits	Y (N) UTM
SDT1, FOD5, FOD9	Slim-flowered Mulberry (<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
BL01, BLS1, BLT1, TP02, TPS2, TPW2, MAM2, FOD7	Stiff Gentian (<i>Gentiana quinquefolia</i>) - S2 Bloom Time – late summer to mid fall	Found in moist soils of streambanks, edges of woods, wet prairies, marshy meadows, bluffs and wooded hillsides.	Y (N) UTM
TPS1, TPW1, CUW1, RBO, SBO	Sundial Lupine (<i>Lupinus perennis</i>) - S3 Bloom Time – mid-March to mid-June	Inhabits dry, sandy oak savannahs, prairies, open barrens or clearings in woodlands of oak, jack pine, and/or aspen.	Y (N) UTM

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

AECOM

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
TP01, TPS1, TPW1, CUM1	Tail Blazing Star (<i>Liatis aspera</i>) - S3/SC	Occurs in open, sandy woods, dry roadsides and sandy prairies	Y (N) UTM
FE0, FES, FET, MAM2, MAM3	Tuberous Indian Plantain (<i>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
-	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 shrubby 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 brizo</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. 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
CUM1, CUT1, CUW1	Monarch Butterfly (<i>Danaus plexippus</i>) - SC	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
TPS, CUW	Mottled Duskywing (<i>Erynnis martialis</i>) - S2	Species inhabits densely wooded riparian areas, dry woods, open woods, fencerows and parks. Usually occurs near Hackberry, the larval foodplant	Y (N) UTM
SWT, SWD, SWM, FOM, FOD4-3, TPW, TPS, CUM1	Tawny Emperor (<i>Asterocampa clyton</i>) - S3	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y (N) UTM
FOD5	West Virginia White (<i>Pieris virginianensis</i>) - SC		Y (N) UTM



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



Basemap: Bing Maps Ontario Ministry of Natural Resources
 Copyright: 2010

UTM Zone 17N, NAD 83

0 25 50 100
 Meters

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Goshen Amphibian Survey

189_GSH1559/GSH1099
1091

April 2012
 Project 60155032

AECOM

Figure 1

Community Description and Classification	ELC		Map #: 89 GST 559/1091	Polygon: 1
	Surveyor(s): SG, RA	Date: Apr 26, 2012	Time start: 9:30 am	
	UTMZ:	UTMZ:	UTMN:	

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
	☐ Basic Bedrk	☒ Valley Slope	☐ Forb	☐ Marsh
	☐ Carb. Bedrk	☐ Tableland	☐ Lichen	☐ Swamp
		☐ Roli. Upland	☐ Bryophyte	☐ Fen
History	☐ Bedrock	☐ Cliff	☒ Deciduous	☐ Bog
		☐ Talus	☐ Coniferous	☐ Barren
	☐ Natural	☐ Crevice/Cave	☐ Mixed	☐ Meadow
	☐ Cultural	☐ Alvar		☐ Prairie
Cover		☐ Rockland		☐ Thicket
	☐ Open	☐ Beach / Bar		☐ Savannah
	☐ Shrub	☐ Sand Dune		☐ Woodland
	☒ Treed	☐ Bluff		☒ Forest
				☐ Plantation

Layer	HT	CVR	Species in Order of Decreasing Dominance (up to 4 sp) (>> Much Greater Than, > Greater Than, = About Equal To)
1	2	4	Carinata > Juglans = Acer sac - Quercus Fendleri
2	2	3	Acer sac = Fraxinus
3	4	3	Quercus
4	7	3	Erigeron > Trielacord.

Stand Composition:	Size Class Analysis:	Standing Sample:	Deadfall / Logs:
A	<10	0	10-24
A	<10	0	10-24
A	<10	0	10-24
h	25-50	0	25-50
h	25-50	h	25-50
h	25-50	0	25-50

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

Ecote:	Fresh-moist dx - maple-hickory dec.	Code:	F0D9
Vegetation Type:	Fresh-moist shagbark hickory dec.	Code:	F0D9-4
Inclusion:		Code:	
Complex:		Code:	

ASA - beam portway
10 ft to top of A & stream

currently planted in clover

Tree Tally by Species						Prism Factor		2
Species	Tally 1	Tally 2	Tally 3	Tally 4	Total		Red Avg	
ASA prism sweep not possible.								
Total							100	
Basal Area (BA)								
Dead								

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

Significant Wildlife Habitat Form

Study Area:	BLW	JER	(GSH)	Map #:	189-GS411559/1091
Date:	April 26, 2012			Time Started:	9:30 am
Field Staff:	RA, SG			Time Finished:	11:00 am
Weather Conditions:	Overcast, light breeze (2). ~ 8°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: 0440038, 4289092 Number of nests: 1

Description of nests (location, e.g. in tree/on built structure; material; evidence of recent use; birds present):
1 stick nest observed from fence line with 5 to 6 Great Blue Herons
observed in trees in area, or flying about calling

Description of habitat (note riparian areas if present, evidence of disturbance):
Sugar Maple Forest adjacent agricultural land

Waterfowls Stopover/Nesting, Amphibian Breeding, Turtle Nesting/Over-wintering, Marsh Breeding Birds (CUM1, CUT1, MAM, MAS, SAS1, SAM1, SAF1, SWD, SWT1, SWT2) (FOC, FOM, FOD, SWC, SWM, SWD, BOO1, FEO1)	
Standing water present: ☒ No	☐ Yes (if yes, photograph and complete the following)
UTM's: _____	☐ Area of standing water delineated on field map
Water depth (m): _____ % open water: _____ % emergent vegetation: _____	
Description of standing water (permanent pool, evidence of annual spring flooding, etc): _____	
Area and soil/substrate of shoreline habitat: _____	
Type and abundance of cover in open water habitat: _____	
Type and abundance of cover in surrounding habitat: _____	
Evidence of disturbance (e.g. cattle grazing): _____	
Evidence of use by waterfowl, amphibians, turtles (e.g. broken eggs), marsh breeding birds: _____	
Complete Vernal Pool Habitat Description Form	

Snake Hibernacula Fissured rock/foundation or rock/debris pile present: ☒ No ☐ Yes (if yes, photograph and complete the following)	
UTM's: _____	Likelihood to extend below frost line: _____
% canopy cover: _____	% slope: _____ Distance to open canopy (m): _____
Description of fissure or stone pile (composition/material, dimensions, etc): _____	
Description of surrounding habitat (type & abundance of cover, evidence of disturbance, etc): _____	

Seeps and Springs (FOC, FOM, FOD, SWC, SWM, SWD)
 Evidence of seep or spring: ☒ **No** ☐ **Yes (if yes, photograph and complete the following)**
 UTM: _____ Description (indicator species, etc): _____

NHA Site Investigation - Significant Wildlife Habitat Form

AECOM

Colonial Nesting Bird Breeding Habitat (Bank and Cliff Swallows)

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

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

☒ No

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

UTMs:

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

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

Colonial Nesting Ground Breeding Birds, Shorebird Migratory Stopover Areas

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

Shoreline of lake, large river or large wetland present:

☒ No

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

UTMs:

Rocky island or peninsula present:

Mudflat present:

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

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

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

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

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

Large open habitat present: ☒ No

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

UTMs:

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

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

Old-growth or Mature Forests, Interior Forest Breeding Birds

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

Mature forest present: ☐ No

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

UTMs:

17T 0440038, 4789092

Age of oldest trees: > 60 years

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

Selective Tree Removal

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

Heron Colony observed therefore interior habitat present

Photo #	Location or Subject	Photo #	Location or Subject
51-57, 60-62	Heron Nest/Colony		

9.3.6

Time Started: 11:00 am
Time Finished: 11:00 am

594

[illegible]

SH=Suitable Habitat. SM=Singaina Male:

T-Territory D=Display P=Pair N=Nest Building V=Visiting Nest A=Anxiety Behavior

DD=Distraction NI=Used Nest EV=Elected Young NE=Eggs NV=Young ES=Eggs

Mass NP=Distinctive Parts, HN=House/Den, EV=Eggs/young, TK=track, EE=Eedding

cases, 21 - Discontinued, 10 - House/Deer, 1 - Eggs/young, 1K-jacks, FE-Feeding

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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Habitat Description	Habitat
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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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Shaded river banks, wooded floodplains. River floodplains, woods and edges of woods

	Thin soil over level outcrop ledges and on soil under grasses in open areas.	y	Q
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1. Soil over level ridges and on soil under grasses in open prairie

Oak	pine	woods or occasionally in open	rod	pine	crabapple	pine	plantations	near

Can-pine woods or occasionally in open, red pine or white pine plantations. Dry, sandy woods.

Species occurs in dry to moist deciduous thickets and woods	Y	N
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1

S2	Swampy places with deciduous trees, white cedars, tamarack; springy river banks.	✓
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wet borders of streams and rivers. Also found among calcareous seepage slopes.

[illegible]

Found in openings in swamps, marshes, along shores & wet fields within the

Carolinian zone and southeastern Georgian bay. Bogs, fens, tamarack swamps	
Occum in rich wet mesic broadleaved forests	

Y N
Y N
Occurs in rich, wet-mesic floodplain forests as well as mesic forests over limestone.
Includes floodplains and river banks

Species occurs in sandy areas on limestone under oak or pine

Species occurs in sandy areas on limestone under oak or pine-oak forests

me-	Found in mesic prairies, thickets, moist woods, roadsides and grassy meadows	Y
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Grasslands and grassy meadows

Species of Conservation Concern Habitat and Incidental Wildlife – Goshen

AECOM

ELC	Species	Habitat Description	Habitat Present (Y/N; UTM; description of habitat if present)
CUM1, MAM,	June – August		
FOD6, FOD7, FOD9	Green Dragon (<i>Arisaema dracontium</i>) - S3/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	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	Hairy Valerian (<i>Valeriana edulis</i>) - S1 Bloom Time – June to August	Inhabits swampy river flats and meadows, wet prairies, and wooded, rocky riverbanks and fens.	(Y) N UTM:
FOD6, FOD7, SWM, SWD	Hairy Wood Mint (<i>Blephilia hirsuta</i>) - S1 Bloom Time – Summer	Woodlands, often rocky, especially rivers. Rich woods, swamp forests, floodplains.	(Y) N UTM:
FOD6, FOD7, FOD8, FOD9	Harbinger-of-spring (<i>Erigenia 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:
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:
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:
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, FOD8, SWT2, SWT3	Scarlet Beebalm (<i>Monarda didyma</i>) - S3 Bloom Time – May to October	Found in moist, rich woods, thickets 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 Muhly (<i>Muhlenbergia tenuiflora</i>) - S2	Found in rich deciduous forest, often on rocky or sandy soils, wooded dunes, hillsides, and riverbanks whether in oak or beech-maple woods	(Y) N UTM: n/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:
TPS1, TPW1, CUW1, RBO, SBO	Sundial Lupine (<i>Lupinus perennis</i>) - S3 Bloom Time – mid-March to mid-June	Inhabits dry, sandy oak savannas, prairies, open barrens or clearings in woodlands of oak, jack pine, and/or aspen.	(Y) N UTM:

Species Conservation Concern Habitat and Incidental Wildlife – Goshen

ADOM

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>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:
-	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. 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:
CUM1, CUT1, CUW1	Monarch Butterfly (<i>Danaus plexippus</i>) - SC	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:
TPS, CUW	Mottled Duskywing (<i>Erynnis martialis</i>) –S2	Species inhabits densely wooded riparian areas, dry woods, open woods, fencerows and parks. Usually occurs near Hackberry, the larval foodplant	Y (N) UTM:
SWT, SWD, SWM, FOM, FOD4-3, TPW, TPS, CUM1	Tawny Emperor (<i>Asterocampa clyton</i>) – S3	This species is restricted to rich, moist, deciduous woods, where its foodplant Toothwort occur	Y (N) UTM:
FOD5	West Virginia White (<i>Pieris virginianensis</i>) - SC		Y (N) UTM:

S-6 heron

gps

~~0440040/478901~~

pt 83

0440040/478901

1 large nest approximately 60 m ~~into~~ ^{directly with} ~~forest~~ ^{dept 83.}
forest dominated by shagbark hickory, sugar maple, beech, Ash.