

APPENDIX J

NATURAL HERITAGE ASSESSMENT REPORT





Natural Heritage Impact Assessment Study

Passmore Avenue Road Widening Municipal Class Environmental Assessment

City of Toronto

1160509

September 2016



NATURAL HERITAGE IMPACT ASSESSMENT STUDY

Passmore Avenue Road Widening Municipal Class Environmental Assessment

City of Toronto

Prepared by:

Rebecca Lewis
 Terrestrial Ecologist
 Morrison Hershfield Limited

Reviewed by:

in Acledu

Erin Mclachlan Biophysical Practice Group Lead Morrison Hershfield Limited

Table of Contents

1.0		INTRO	ODUCTION	1			
1	.1	PURPOSE AND SCOPE OF WORK1					
1	.2	LOCA	TION OF WORK	2			
2.0		BACK	(GROUND AND APPROACH	4			
2	2.1	OBJE	CTIVES	4			
2	2.2	BACK	GROUND DATA COLLECTION	4			
2	.3	TERR	ESTRIAL FIELD INVESTIGATIONS	5			
	2.	.3.1	SPECIES AT RISK DATA	5			
	2.	.3.2	WETLAND AREAS	6			
	2.	.3.2	WOODLANDS AND OTHER VEGETATED AREAS	6			
	2.	.3.3	WILDLIFE HABITATS AND MOVEMENTS	6			
3.0		TERR	ESTRIAL ECOSYSTEMS	7			
3	5.1	VEGE	TATION COMMUNITIES	7			
3	5.1.	2 R	ARE VEGETATION 1	0			
3	5.2	WETL	ANDS 1	0			
4.0		WILD	LIFE INVESTIGATIONS1	0			
4	.1	BIRDS	S 1	0			
4	.2	HERP	PETOFAUNA 1	0			
4	.3	MAM	MALS 1	1			
4	.4	INSEC	CTS1	1			
4	.5	SPEC	IES AT RISK 1	1			
5.0		ENVI	RONMENTALLY SIGNIFICANT AREAS1	7			
5	5.1	WETL	ANDS1	7			

M TORONTO

5.2	DESI	GNATED NATURAL AREAS	17
5	5.2.1	PROTECTION PLANS	17
6.0	SIGN	IFICANT WILDLIFE HABITAT	17
7.0	IMPA	CTS ASSESSMENT AND MITIGATION	20
7.1	TERR	ESTRIAL HABITAT	20
7.2	SPEC	CIES AT RISK	20
8.0	PERM	NITS AND APPROVALS	21
8.1	APPL	ICABLE ACTS AND LEGISLATION	21
9.0	CON	CLUSIONS	22

LIST OF FIGURES

Figure 1: Key Map of Passmore Avenue Study Area	3
Figure 2: ELC Communities within Passmore Avenue Study Area	9
Figure 3: Passmore Avenue Study Area Terrestrial Base Map	9

LIST OF TABLES

LIST OF APPENDICES

APPENDIX A	Correspondence with Regulatory Agencies
APPENDIX B	Official Plan Land Use Designation Map
APPENDIX C	Photographic Record
APPENDIX D	Plant Species List
APPENDIX E	Breeding Bird Atlas Species List

1.0 INTRODUCTION

Morrison Hershfield Limited (MH) has been retained by the City of Toronto to prepare a Natural Heritage Impact Assessment report in accordance with the Municipal Class Environmental Assessment (EA) process for Passmore Avenue located in the City of Toronto.

1.1 PURPOSE AND SCOPE OF WORK

The purpose of the Natural Heritage Environmental Impact Assessment Study is to assess the preferred design with respect to the following environmental parameters:

- To identify, protect and restore significant features and functions of the natural environment in the City of Toronto and their connecting linkages including the land, air and water and the life they support; and
- To minimize the negative impact of proposed changes in land use on the natural features and ecological function of the Natural Heritage System;

The Scope of Work for this Natural Heritage Environmental Impact Assessment Study is to:

- Identify and describe the natural heritage features in sufficient detail to assess potential impacts and to develop appropriate mitigation measures to protect; and
- Determine what lands are least impacted by proposed transportation improvements from a natural heritage perspective.

In order to complete this assessment, the study consisted of the following:

- Consultation with Ministry of Natural Resources and Forestry (MNRF) Aurora District and Toronto and Region Conservation Authority (TRCA) staff to confirm existing terrestrial information at the study location;
- Consultation of a variety of online resources to complete background research on flora and fauna within the study area;
- Completion of Terrestrial Investigations using Ecological Land Classification (ELC) within the study area to characterize the existing terrestrial communities, to determine existing environmental features;
- Documentation of any existing critical habitat features (nest sites or other sensitive/notable features);
- Completion of a photographic record;
- Assessment of the impacts of the proposed design alternatives; and
- Documentation of the terrestrial findings in one technical report.

This project has been classified under the Municipal Engineers Association, *Municipal Class Environmental Assessment* as a Schedule C project. As such, the key goal of the





Class Environmental Assessment process is the protection of the environment through wise management of resources.

1.2 LOCATION OF WORK

The study area extends from 120m north of Steeles Avenue East to 120m south of McNicoll Avenue, and from 120m west of Middlefield Road to 120m east of Markham Road. The study focus area occurs on Passmore Avenue from 750m east of Middlefield Road to Markham Road, within the City of Toronto. **Figure 1** displays a key map of the Passmore Avenue study area.



M Toronto



Figure 1: Key Map of Passmore Avenue Study Area



2.0 BACKGROUND AND APPROACH

This report was prepared to document existing terrestrial and land use resources throughout the environmental study area and to assess potential impacts on these resources in relation to the preferred alternative. The need for fisheries investigations was ruled out, as there is no fish habitat within the study area.

Field studies were conducted during an appropriate season and were consistent with methodologies outlined in the Municipal Engineers Association, *Municipal Class Environmental Assessment* (MCEA, 2007).

2.1 OBJECTIVES

The objectives of this report are as follows:

- Define the boundaries of environmental features on and adjacent to the study area;
- Identify and describe the character, natural attributes and functions of the environmental features and their relationship to the proposed designs;
- Identify potential impacts of the proposed designs on environmental features and areas where the environment could be enhanced as part of the designs;
- Recommend specific measures to mitigate potential impacts on environmental features; and
- Outline a management plan to protect and enhance or rehabilitate environmental features during and following construction.

Morrison Hershfield (MH) conducted biological and physical inventories on the property and collected relevant secondary source information to:

- 1. Describe the existing conditions;
- 2. Delineate boundaries of environmentally sensitive areas; and
- 3. Provide background information.

2.2 BACKGROUND DATA COLLECTION

Background information regarding the environmental study area was collected and synthesized from the following sources:

- Natural Heritage Information Centre (NHIC);
- Ministry of Natural Resources and Forestry, Aurora District (MNRF);
- Toronto and Region Conservation Authority (TRCA);
- City of Toronto Official Plan (2015);
- Natural Heritage Reference Manual for Policy 2.3 of the Provincial Policy Statement (MNRF, 2005);

M Toronto

- Significant Wildlife Habitat Technical Guide (MNRF, 2000);
- Committee on the Status of Endangered Wildlife in Canada (COSEWIC);
- Species at Risk in Ontario (SARO);
- Ontario Butterfly Atlas (OBA);
- Ontario Breeding Bird Atlas (OBBA);
- Ontario Reptile and Amphibian Atlas (ORAA);
- Natural Heritage Resources of Ontario Rare Vascular Plants; and
- Land Information Ontario (LIO); and
- Aerial photography.

Ministry of Natural Resources and Forestry: Aurora District

Available information on terrestrial designated areas and Species at Risk (SAR) was requested from the MNRF Aurora District Office on August 29, 2016, and September 21, 2016. No information has been received from the MNRF at this time. All correspondence with the MNRF is located in **Appendix A**.

Toronto and Region Conservation Authority

Existing terrestrial data for the project study area was requested from the Toronto and Region Conservation Authority (TRCA) on August 29, 2016. Data regarding natural cover and fauna within the study area was received from the TRCA on September 23, 2016. All correspondence with the TRCA is located in **Appendix A**.

City of Toronto Official Plan

The City of Toronto Official Plan was consulted for sensitive and/or significant natural features surrounding the study area. Refer to **Appendix B** for a map showing the boundaries of natural features within the City of Toronto official planning area.

2.3 TERRESTRIAL FIELD INVESTIGATIONS

Field investigations were conducted by MH biologists on September 6, 2016. The study area included the area from Middlefield Road to Markham Road, between Steeles Avenue East and McNicoll Avenue. It also included the area within 120 metres of the right-of-way (ROW) along the outer edges of the four roads that form the perimeter of the study area, and any sensitive receptors at a distance greater than 120m that are likely to be adversely affected. Refer to **Figure 1** for a key map of the study area location.

2.3.1 SPECIES AT RISK DATA

SAR background data was requested from the MNRF Aurora District Office. This was supplemented with additional data from various websites and internet sources, including the following:



M TORONTO

- NHIC search within two (2) 1 km by 1 km squares encompassing the study area: 17PJ4054 and 17PJ4054;
- A search of the Ontario Breeding Bird Atlas for the species recorded within two (2) 10 km x 10 km squares encompassing the study area: 17PJ35 and 17PJ45;
- A search of the Ontario Reptile and Amphibian Atlas for the species recorded within two (2) 10 km x 10 km squares encompassing the study area: 17PJ35 and 17PJ45;
- A search of the Ontario Butterfly Atlas for the species recorded within two (2) 10 km x 10 km squares encompassing the study area: 17LM28: 17PJ35 and 17PJ45.

2.3.2 WETLAND AREAS

Data on existing evaluated wetland communities (provincial and local significance) and unevaluated wetlands were obtained from the MNRF, LIO, and NHIC, and were confirmed during 2016 field investigations. Significant wetlands are identified by the MNRF using evaluation procedures established by the Province to determine the significance of the wetland (Ministry of Municipal Affairs and Housing, 2014).

2.3.2 WOODLANDS AND OTHER VEGETATED AREAS

Data on existing terrestrial communities was obtained from the Ministry of Natural Resources and Forestry, LIO, NHIC, and the City of Toronto Official Plan, and were confirmed during field investigations.

A Significant Woodland is an area which is ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history (Ministry of Municipal Affairs and Housing, 2014). Woodland areas include treed communities, woodlots or forested areas and vary in their local significance at the local, regional and provincial levels.

The terrestrial vegetation communities surrounding the project areas are classified to the community level according to the Ecological Land Classification (ELC) for Southern Ontario (MNRF, 1998). Vegetation community boundaries were identified through a review of aerial photographs prior to field investigations. These community assessments were then confirmed in the field to allow for mapping of community boundaries, and detailed community descriptions. Vegetation was described according to the most dominant species in the various strata (i.e. canopy, sub-canopy, shrub layer, and ground layer).

2.3.3 WILDLIFE HABITATS AND MOVEMENTS

Data on wildlife habitat was obtained from the MNRF, LIO, NHIC, and the City of Toronto Official Plan. During field investigations, evidence of wildlife presence was documented. Wildlife observations were based on visual confirmation, auditory confirmation or by way of indicators (tracks, scat). Wildlife habitat, including Significant Wildlife Habitat (e.g.,





seasonal concentration areas, specialized wildlife habitats, rare vegetation communities, species/habitats of conservation concern and animal movement corridors) were also noted in the field.

3.0 TERRESTRIAL ECOSYSTEMS

Section 3.0 discusses the existing terrestrial conditions within the study area surrounding Passmore Avenue.

3.1 VEGETATION COMMUNITIES

The study area contains six (6) ELC communities: Cultural Meadow (CUM), Cultural Thicket (CUT), Cultural Woodlot (CUW), Constructed Green Lands (CGL), Residential (CVR), and Commercial and Institutional (CVI). See **Figure 2** for ELC community boundaries within the study area. Refer to **Appendix C** for a photographic record of the study area. A complete list of plant species within the study area can be found in **Appendix D**.

Cultural Meadow – CUM

Cultural Meadow communities have tree cover less than or equal to 25% and shrub cover less than or equal to 25%. The community results from or is maintained by cultural or anthropogenic-based disturbances. The CUM communities within the project study area included Chicory (*Cichorium intybus*), Swallow-wort Species (*Cynanchum sp*), Common Milkweed (*Asclepias syriaca*), Wild Carrot (*Daucus carota*), Butter-and-eggs (*Linaria vulgaris*), Bird's-foot Trefoil (*Lotus corniculatus*), White Sweet-clover (*Melilotus alba*), Kentucky Blue Grass (*Poa pratensis*), Willow Species (*Salix sp.*) Tall Goldenrod (*Solidago altissima*), Canada Goldenrod (*Solidago canadensis*), Heath Aster (*Symphyotrichum ericoides*), New England Aster (*Symphyotrichum novae-angliae*), and some pockets of Common Reed (*Phragmites australis*).

Cultural Thicket – CUT

Cultural Thicket communities have tree cover less than or equal to 25% and shrub cover greater than 25%. The community results from or is maintained by cultural or anthropogenic-based disturbances. The CUT community contained Silver Maple (*Accer saccharinum*), Trembling Aspen (*Populus tremuloides*), Red-osier Dogwood (*Cornus stolonifera*), and Canada Thistle (*Cirsium arvense*). The groundcover was mostly Grass species (*Poaceae sp*), with some of the forb species also found within the CUM communities.



Cultural Woodlot – CUW

Cultural Woodlot communities have greater than 35% but less than 60% tree cover. This community results from, or is maintained by cultural or anthropogenic-based disturbances and often have a large proportion of non-native species. The Cultural Woodlot consisted of Black Locust (*Robinia pseudoacacia*), White Poplar (*Populus alba*), Largetooth Aspen (*Populus grandidentata*), Jack Pine (*Pinus banksiana*), Red Oak (*Quercus rubra*), Black Walnut (*Juglans nigra*), Sugar Maple (*Accer saccharum*), Eastern White Pine (*Pinus strobus*), White Spruce (*Picea glauca*), Silver Maple, and Trembling Aspen in the canopy and sub canopy. Understory and ground cover species within the CUW included Swallowwort Species, Tall Goldenrod, Canada Goldenrod (*Solidago canadensis*), Thistle Species (*Cirsium sp*), Staghorn Sumac (*Rhus typhina*), and Common Burdock (*Arctium minus ssp. minus*).

Constructed Green Lands – CGL

Constructed Green Lands include parks, picnic areas, playing fields, tent camping areas, common gardens, playgrounds, golf courses, and cemeteries. The CGL areas within the study area were mainly soccer fields and parks.

Residential – CVR

Residential communities include single family homes, low and high density residential areas, rural properties and trailer parks, The CVR areas within the study area were mostly single family units and low density residential properties.

Commercial and Institutional – CVI

Commercial and Institutional communities include business sectors, commercial areas, industrial areas, and educational or health care institutions. The majority of the study area was considered to be commercial or industrial.





Figure 2: ELC Communities within Passmore Avenue Study Area

Passmore Avenue Road Widening Natural Heritage Impact Assessment Municipal Class Environmental Assessment





3.1.2 RARE VEGETATION

No rare plants or rare vegetation communities were identified within the study area.

The NHIC provided no recent records for rare plants within the study area. No data has been received from the MNRF, and the TRCA did not list any rare plants or vegetation communities within the study area. See **Section 4.5** for a discussion of Species at Risk.

3.2 WETLANDS

There are no wetlands within the study area. One unevaluated wetland was identified in NHIC mapping northeast of the study area, north of Select Avenue and east of Markham Road. During field investigations, the unevaluated wetland area was determined to be a storm water retention pond with open water surrounded by shrubs and young trees, mainly Willow. See **Figure 3** for a terrestrial base map including environmentally sensitive and significant areas surrounding the study area.

4.0 WILDLIFE INVESTIGATIONS

4.1 BIRDS

The following bird species were observed within the study area: Canada Goose (*Branta canadensis*), Warbling Vireo (*Vireo gilvus*), American Goldfinch (*Spinus tristis*), Northern Cardinal (*Cardinalis cardinalis*), Killdeer (*Charadrius vociferus*), Gray Catbird (*Dumetella carolinensis*), Blue Jay (*Cyanocitta cristata*) and Cooper's Hawk (*Accipiter cooperi*).

One (1) inactive nest belonging to a Vireo species was observed along Steeles Avenue East within the northernmost portion of the Cultural Woodlot community. No SAR birds, or nests of SAR birds were observed during field investigations.

According to the Ontario Breeding Bird Atlas, eighty-four (84) bird species were recorded within a 10 x 10 km square containing the western portion of the study area, and one hundred twenty-four (124) species were recorded within a 10 x 10 km square containing the eastern portion. Refer to **Appendix E** for a complete list of species provided by the OBBA. Twelve (12) of these birds are listed as Species at Risk. See **Section 4.5** for a discussion of Species at Risk.

4.2 HERPETOFAUNA

No herpetofauna were observed and no evidence of their presence was found during field investigations.

According to the Ontario Reptile and Amphibian Atlas, fifteen (15) herpetofaunal species were recorded within a 10×10 km square containing the western portion of the study area, and twenty-three (23) species were recorded within a 10×10 km square containing





the eastern portion. Five (5) of these herpetofaunal species are listed as SAR. See **Section 4.5** for a discussion of Species at Risk.

4.3 MAMMALS

No mammals were observed during field investigations and no habitat for SAR mammals exists within the study area. No data regarding SAR mammals has been received by the MNRF.

4.4 INSECTS

No SAR insects were observed during field investigations. According to the Ontario Butterfly Atlas, one (1) SAR insect was recorded in both of the 10 km x 10 km squares that encompass the study area.

4.5 SPECIES AT RISK

Species which are listed by the Endangered Species Act (ESA) or the Species at Risk Act (SARA) are discussed in detail in this section. SAR listed as Special Concern are classified as Species of Conservation Concern, and are also discussed below. Refer to **Table 1** for a summary of all potential Species at Risk and their habitat suitability within the study area.

The Ontario Breeding Bird Atlas listed twelve (12) Species at Risk: Bank Swallow (*Riparia riparia*), Barn Swallow (*Hirundo rustica*), Bobolink (*Dolichonyx oryzivorus*), Canada Warbler (*Cardellina canadensis*), Chimney Swift (*Chaetura pelagica*), Common Nighthawk (*Chordeiles minor*), Eastern Meadowlark (*Sturnella magna*), Eastern Wood-pewee (*Contopus virens*), Hooded Warbler (*Setophaga citrina*), Least Bittern (*Ixobrychus exilis*), Peregrine Falcon (*Falco peregrinus*), and Wood Thrush (*Hylocichla mustelina*).

The Ontario Butterfly Atlas provided records for one (1) SAR insect within the study area: Monarch butterfly (*Danaus plexippus*).

The Ontario Reptile and Amphibian Atlas returned records for five (5) SAR herptiles within the study area including Blanding's Turtle (*Emydoidea blandingii*), Snapping Turtle (*Chelydra serpentina*), Northern Map Turtle (*Graptemys geographica*), Eastern Ribbonsnake (*Thamnophis sauritus*), and Western Chorus Frog (*Pseudacris triseriata*).

No data has been received from the MNRF regarding SAR.

Birds

Overall, the study area provides the most suitable habitat for generalist bird species including Savannah Sparrow (*Passerculus sandwichensis*), which was listed within the study area by the TRCA.





Bank Swallows are listed as Threatened under SARA and the ESA. Bank Swallows prefer sand, clay or gravel river banks. They also use steep riverbank cliffs or lakeshore bluffs of easily crumbled sand or gravel, gravel pits, road-cuts, and grassland or cultivated fields that are close to water. Ideal nesting sites are a limiting factor for species presence (MNRF, 2015). The OBBA provided observation records for Bank Swallow surrounding the study area. No nest colonies were observed within the study area, and no suitable habitat for this species was identified.

Barn Swallows are listed as Threatened under the ESA and SARA. Barn Swallows inhabit farmlands or rural areas. They nest in various locations including cliffs, caves, rock niches, buildings or other man-made structures, and open country near a body of water (MNRF, 2000). The OBBA provided observation records for this species surrounding the study area. No suitable habitat for Barn Swallows occurs within the study area.

Bobolinks are listed as Threatened under the ESA and SARA. Bobolinks are found in open grassy fields, particularly hay fields. Bobolinks are sensitive to habitat size and require large areas (MNRF, 2000). The OBBA provided observation records for this species surrounding the study area. No habitat for Bobolink was present within the study area.

Canada Warblers are designated as Threatened under SARA and Special Concern under the ESA. Canada Warblers are interior forest species which inhabit mixed coniferous and deciduous forests with closed canopies (MNRF, 2000). The OBBA provided observation records Canada Warbler surrounding the study area. No suitable habitat for Canada Warbler exists within the study area.

Chimney Swifts are listed as Threatened under the ESA and SARA. Chimney Swifts are commonly found in urban areas near buildings and nest in hollow trees, crevices of rock cliffs, or chimneys. They are highly gregarious and feed over open water (MNRF, 2000). The OBBA provided observation records for this species surrounding the study area. No suitable habitat for Chimney Swift is occurs within the study area.

Common Nighthawks are listed as Special Concern under the ESA and Threatened under SARA. Common Nighthawks are commonly found on open ground, clearings in dense forests or ploughed fields. They are also found on gravel beaches or barren areas with rocky soils, open woodlands and flat gravel roofs (MNRF, 2000). The OBBA provided observation records for this species within the surrounding area, however, there is no suitable habitat for Common Nighthawk within the study area.

Eastern Meadowlarks are listed as Threatened under the ESA and SARA. Eastern Meadowlarks inhabit open, grassy meadows, farmland, pastures, hayfields or grasslands with elevated singing perches, cultivated land and weedy areas with trees, old orchards with adjacent open grassy areas, greater than 10 hectares in size (MNRF, 2000). The OBBA provided observation records for this species surrounding the study area. There is no suitable habitat for Eastern Meadowlarks within the project area.





Eastern Wood-pewee is listed as Special Concern under the ESA and SARA. Eastern Wood-pewee prefers open, deciduous, mixed or coniferous forest with little understory; forest clearings and edges; farm woodlots, or parks (MNRF, 2000). The OBBA provided observation records for this species surrounding the study area. There is suitable habitat for Eastern Wood Peewee in the Cultural Woodlot community within the northwest portion of the environmental study area, west of Middlefield Road.

Hooded Warblers are listed as Threatened under SARA. Hooded Warblers reside in large, mature deciduous and mixed deciduous forests, or smaller forests that lie in close proximity to large forests. It nests in clearings created by natural disturbance and selection logging (SARA, 2016). The OBBA identified this species surrounding the study area. No suitable habitat for Hooded Warbler exists within the study area.

Least Bitterns are listed as Threatened under the ESA and SARA. They live in freshwater or brackish marshes dominated by emergent vegetation. Stands of dense vegetation are essential for nesting because the nests of Least Bittern sit on platforms of stiff stems, and access to open, clear water is essential for foraging (SARA, 2016). The OBBA provided observation records for this species surrounding the study area. There is no suitable habitat for Least Bittern within the project study area.

Peregrine Falcon is listed as Special Concern under the ESA and SARA. Peregrine Falcons inhabit rock cliffs, crags, and tall buildings in urban centers, and prefer locations situated near water (MNRF, 2000). The OBBA provided observation records for this species surrounding the study area. No suitable habitat for Peregrine Falcon occurs within the study area.

Wood Thrush prefer mature deciduous and mixed forests with large trees, moderate understory, shade, and abundant leaf litter for foraging (MNRF, 2000). Wood Thrush is listed as Special Concern under the ESA and Threatened under SARA. The OBBA provided observation records for this species surrounding the study area. There is no suitable habitat for Wood Thrush within the study area.

Herpetofauna

Blanding's Turtles are listed as Threatened under the ESA and SARA. In the summer, they are found in several types of freshwater environments, including lakes, permanent or temporary pools, slow-flowing streams, marshes and swamps. In general, the species prefers shallow water that is rich in nutrients, organic soil and dense vegetation. Adults are generally found in open or partially vegetated sites, whereas juveniles prefer areas that contain thick aquatic vegetation (SARA, 2016). The ORAA provided observation records for Blanding's turtle surrounding the study area. There is no suitable habitat for this species within the study area.

Eastern Ribbonsnakes are listed as Special Concern under the ESA and SARA. They are a semi-aquatic snake and are most frequently found along the edges of shallow ponds, streams, marshes, swamps, or bogs bordered by dense vegetation that provides cover





(SARA, 2016). The ORAA provided observation records for this species surrounding the study area, however no suitable habitat was observed within the study area

Northern Map Turtles are listed as Special Concern under the ESA and SARA. They are highly aquatic turtles that rarely leave the water, except for nesting. They inhabit both lakes and rivers, and show a preference for slow moving currents, muddy bottoms, and abundant aquatic vegetation (SARA, 2016). The ORAA provided observation records for Northern Map Turtle surrounding the study area. No suitable habitat exists within the study area for this species.

Snapping Turtles are listed as Special Concern under the ESA and SARA. They are found in permanent, semi-permanent fresh water or in marshes, swamps or bogs. They prefer rivers and streams with soft muddy banks or bottoms and often use soft soil or clean dry sand on south-facing slopes for nest sites. They may nest at some distance from water and often hibernate together in groups in mud under water (MNRF, 2000). The ORAA provided observation records for this species surrounding the study area. There is no suitable habitat for Snapping Turtle within the study area.

Western Chorus Frogs are listed as Threatened under SARA. Like all frogs, they require both terrestrial and aquatic habitats in close proximity. For breeding and tadpole development, they require seasonally dry temporary ponds devoid of predators. Western Chorus Frogs are very rarely found in permanent ponds. They have relatively low mobility and relatively high fidelity to their natal ponds. Aside from their breeding habitat, they can be found in or near damp meadows, marshes, bottomland swamps, and moist woodlands (SARA, 2016). The ORAA provided observation records for this species surrounding the study area. There is no suitable habitat for Western Chorus Frog within the study area.

Insects

Monarch butterflies are listed as Special Concern under the ESA and SARA. They use a variety of habitats throughout their lifetime. As caterpillars, they are obligated to feed on Common Milkweed and are therefore dependent on the meadows and open areas where this plant occurs. As adults, Monarchs can be found in more diverse habitats that support the wildflowers they utilize for nectar (MNRF, 2015). According to the Ontario Butterfly Atlas, Monarch has been observed surrounding the study area. The CUM communities provide suitable habitat for Monarchs.



Table 1: Potential	Species at Risk an	d Species of	Conservation	Concern
--------------------	--------------------	--------------	--------------	---------

Sr	pecies	Designations		Protection*		Suitable Habitat in
Common Name	Scientific Name	COSSEWIC (SARA)	Provincial (SARO)	Federal Legislation	Provincial Legislation	Environmental Study Area
			Birds			
Bank Swallow	Riparia riparia	THR	THR	MBCA	ESA	No
Barn Swallow	Hirundo rustica	THR	THR	MBCA	ESA	No
Bobolink	Dolichonyx oryzivorus	THR	THR	MBCA	ESA	No
Canada Warbler	Caredellina canadensis	THR	SC	SARA, MBCA	-	No
Chimney Swift	Chaetura pelagica	THR	THR	SARA, MBCA	ESA	No
Common Nighthawk	Chordeiles minor	THR	SC	SARA, MBCA	-	No
Eastern Meadowlark	Sturnella magna	THR	THR	MBCA	ESA	No
Eastern Wood- pewee	Contopus virens	SC	SC	MBCA	-	Yes; within CUW
Hooded Warbler	Setophaga citrina	THR	-	SARA, MBCA	-	No
Least Bittern	Ixobrychus exilis	THR	THR	SARA, MBCA	ESA	No
Peregrine Falcon	Falco peregrinus	SC	SC	-	FWCA	No
Wood Thrush	Hylocichla mustelina	THR	SC	MBCA	-	No





Sp	pecies	Designations		Protection*		Suitable Habitat in			
Common Name	Scientific Name	COSSEWIC (SARA)	Provincial (SARO)	Federal Legislation	Provincial Legislation	Environmental Study Area			
	Herpetofauna								
Blanding's Turtle	Emydoidea blandingii	THR	THR	SARA	ESA, FWCA	No			
Eastern Ribbonsnake	Thamnophis sauritus	SC	SC	-	-	No			
Northern Map Turtle	Graptemys geographica	SC	SC	-	FWCA	No			
Snapping Turtle	Chelydra serpentina	SC	SC	-	FWCA	No			
Western Chorus Frog	Pseudacris triseriata	THR	-	SARA	-	No			
Insects									
Monarch	Danaus plexippus	SC	SC	-	FWCA	Yes; within CUM			

* ESA: Endangered Species Act; FWCA: Fish and Wildlife Conservation Act; SARA: Species at Risk Act; MBCA: Migratory Birds Convention Act; SC: Special Concern; THR: Threatened; END: Endangered





5.0 ENVIRONMENTALLY SIGNIFICANT AREAS

5.1 WETLANDS

There are no wetlands within the study area.

5.2 DESIGNATED NATURAL AREAS

Designated Natural Areas are defined by resource agencies, municipalities, the government and/or public, through legislation, policies, or approved management plans, to have special or unique value. Such areas may have a variety of ecological, recreational, and/or aesthetic features and functions that are highly valued.

There are no Designated Natural Areas within the study area.

5.2.1 Protection Plans

The study area does not fall under any protection plan. The study area is designated entirely as an Employment Area, according to the City of Toronto Official Plan. See **Appendix B** for a map delineating the boundaries of natural features within the City of Toronto official planning area.

6.0 SIGNIFICANT WILDLIFE HABITAT

There are four categories of Significant Wildlife Habitat within Ecoregion 6E, according to the Significant Wildlife Habitat Technical Guide and Eco-Regional Criteria Schedule (MNRF, 2000 and MNRF, 2012):

- Seasonal Concentration Areas;
- Rare Vegetation Communities or Specialized Habitat for Wildlife;
- Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species); and
- Animal Movement Corridors.

Seasonal Concentration Areas

There are no seasonal concentration areas within the study area.

Specialized Habitat for Wildlife

There is no specialized habitat for wildlife within the study area.

Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)

As discussed in detail in **Section 4.5**, there is potential habitat within the study areas for Species of Conservation Concern that are not listed as Endangered or Threatened, but





are instead designated as Special Concern. The CUM communities provide potential habitat for Monarch, however the communities are not large enough (>10 ha), or located in close enough proximity to Lake Ontario to be considered a Migratory Butterfly Stopover Area. The CUW community in the northwest portion of the study area, west of Middlefield Road, provides potential habitat for Eastern Wood-pewee.

Animal Movement Corridors

There are no animal movement corridors within the study area.





Figure 3: Passmore Avenue Study Area Terrestrial Base Map

Passmore Avenue Road Widening Natural Heritage Impact Assessment Municipal Class Environmental Assessment



7.0 IMPACTS ASSESSMENT AND MITIGATION

7.1 TERRESTRIAL HABITAT

Potential impacts to the terrestrial habitat in the project area include loss of/damage to vegetation, disturbance to bird's nests and loss of habitat to other animals. With appropriate mitigation measures, damage can be kept to a minimal level.

The preferred design will involve tree removal and vegetation disturbances along Passmore Avenue.

Recommended mitigation measures to protect terrestrial habitat include the following:

- Use best management practices;
- Advise workers to perform a visual survey of machinery and work area prior to commencing work, as wildlife may be found hiding on, in, or under equipment, rocks, debris piles etc.;
- If any trenches are being filled, visually inspect the trench before filling and release any wildlife that is in the trench;
- Minimize vegetation removal;
- Develop and implement a replanting plan in keeping with the sensitivity of local communities, that is based on native, indigenous species that complement those communities and their ecological functions;
- Trees or shrubs to be removed during construction should be considered with respect to transplanting opportunities within the project area, as feasible regarding slope and exposure characteristics, soil types and moisture regimes, and relative timing considerations;
- Trees being retained should be protected by erecting and maintaining a temporary fence, pruning interfering branches and treating them with approved dressing, and treating any damaged roots or cuts >25mm in diameter with approved dressing;
- The contractor shall not destroy nests and eggs of protected migratory birds during migratory bird nesting season (March 31 to August 27);
- In the event that vegetation and tree removals or clearing must occur within the breeding bird timing window, the Contractor should retain a qualified Avian Specialist prior to clearing, to screen for breeding birds using methods outlined by Environment Canada;

7.2 SPECIES AT RISK

No species at Risk were observed during field investigations and there is no potential habitat within the study area for species protected by the ESA or SARA. There is potential habitat however for one (1) bird and one (1) insect species that are not offered protection under the ESA or SARA and are listed as Special Concern: Eastern Wood-pewee and Monarch. Potential habitat for Eastern Wood-pewee exists in the CUW community within the northwestern portion of the study area, west of Middlefield Road.

M TORONTO

Recommended mitigation measures to protect these species include:

- Advise workers not to harm or harass any wildlife;
- Minimize construction and vegetation removals within CUW and CUM communities;
- Consider planting Common Milkweed as part of the site remediation following construction;
- Trees being removed should be screened for nests prior to their removal as described in **Section 7.1** above;
- All workers should be provided with awareness training that addresses the potential existence of SAR on site, identification of those species, and proper actions when an individual is encountered;
- Advise workers to stop work and inform Contract Administrator if any SAR are encountered;
- Nests shall not be destroyed or removed;
- Report all Species at Risk sightings and encounters to the MNRF Aurora District office using the appropriate reporting form within **two business days**.

8.0 PERMITS AND APPROVALS

8.1 APPLICABLE ACTS AND LEGISLATION

Endangered Species Act

The provincial Endangered Species Act prohibits willful harm or harassment of extirpated, threatened, or endangered species that are listed in regulations under the Act. The ESA also prohibits willful damage to, or destruction of their habitats. If the nest of an SAR is identified, consultations with Ministry of Natural Resources and Forestry Aurora District should be undertaken to determine the need for a permit or approval.

Migratory Birds Convention Act

Under the MBCA, Act, no person shall disturb or destroy, or take a nest, egg, nest shelter, eider duck shelter or duck box of a migratory bird. Where vegetation and tree removals or clearing must occur within the breeding bird timing window, the Contractor should retain a qualified Avian Specialist prior to clearing, to screen for breeding birds. If a nest is encountered, works will not continue in the location of the nest until after August 27, or until the contractor has consulted with Environment Canada to determine the need for a permit or approval.

Fish and Wildlife Conservation Act

Under this Act, a person shall not destroy, take or possess the nest or eggs of a bird that belongs to a species that is wild by nature. This Act does not apply to birds afforded protection through the MBCA. Where vegetation and tree removals or clearing must occur within the breeding bird timing window, the Contractor should retain a qualified Avian Specialist prior to clearing, to screen for breeding birds. If a nest is encountered, works



M TORONTO

will not continue in the location of the nest until after August 27, or until the contractor has consulted with Environment Canada to determine the need for a permit or approval.

9.0 CONCLUSIONS

By applying the mitigation measures prescribed herein, the proposed widening of Passmore Avenue from 750 m east of Middlefield Road to Markham Road can be completed without significant adverse impacts to the existing natural habitat. Compliance with appropriate mitigation measures will ensure that the natural habitat requiring protection will not be adversely impacted.

No species at risk were observed during field investigations, however, potential habitat exists within the study area for two species of Special Concern. Where vegetation and tree removals or clearing must occur within the breeding bird timing window, the Contractor should retain a qualified Avian Specialist prior to clearing, to screen for breeding birds. If a nest is encountered, works will not continue in the location of the nest until after August 27, or until the contractor has consulted with Environment Canada to determine the need for a permit or approval.

The removal or destruction of any nest of a migratory bird protected under the Migratory Birds Convention Act may require approval from Environment Canada.

10.0 REFERENCES

- Cadman, M.D., D.A. Sutherland, G.G. Beck, D. Lepage, and A.R. Couturier (Editors). 2007. Atlas of the Breeding Birds of Ontario, 2001-2005. Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature, Toronto.
- Colin Jones, Ross Layberry, and Alan Macnaughton. Ontario Butterfly Atlas Online. Toronto Entomologists' Association: http://www.ontarioinsects.org/atlas_online.htm
- Dobbyn, J.S. 1994. Atlas of the Mammals of Ontario. Federation of Ontario Naturalists, Don Mills, Ontario.
- Environment Canada. 2016. Species at Risk Act Public Registry. http://www.sararegistry.gc.ca/default_e.cfm
- Municipal Engineers Association. 2007. Municipal Class Environmental Assessment. Mississauga, Ontario.
- Oldham, M.J. 1999. Natural Heritage Resources of Ontario: Rare Vascular Plants. Third Edition. Natural Heritage Information Centre, Ontario Ministry of Natural Resources, Peterborough, Ontario. http://www.carmelacanzonieri.com/6321/readings/sitespecific/Ontario-RareVascularPlants.pdf.

Ontario Breeding Bird Atlas. www.birdsontario.org/atlas/datasummaries.jsp?lang=en

- Ontario Ministry of Natural Resources and Forestry. 2000 2016. Species at Risk in Ontario List, Species Profiles. http://www.ontario.ca/environment-and-energy/species-riskontario-list
- Ontario Ministry of Natural Resources and Forestry. 2016. Natural Heritage Information Centre Make a natural heritage map website https://www.ontario.ca/page/make-naturalheritage-area-map)
- Ontario Ministry of Natural Resources and Forestry. 2000. Significant Wildlife Habitat Technical Guide. Appendix B: Ecological Considerations Underlying Natural Heritage Planning pp 150
- Ontario Ministry of Natural Resources and Forestry. 1998. Ecological Land Classification for Southern Ontario: First Approximation and Its Application. SCSS Field Guide FG-02.
- Ontario Reptile and Amphibian Atlas. 2010-2016. https://www.ontarionature.org/protect/species/herpetofaunal_atlas.php

APPENDIX A

Regulatory Correspondence

Rebecca Lewis2

From: Rebecca Lewis2 Sent: Monday, August 29, 2016 9:39 AM To: 'hpruthi@trca.on.ca' Subject: Corrected Data Request Attachments: Study Area.jpg; DataRequest_TRCA.docx

Good Afternoon,

Morrison Hershfield has been retained by the City of Toronto to conduct environmental investigations for the resurfacing and widening of Passmore Rd., within the TRCA District. Please find attached the following project information and requests:

. Request for Terrestrial Information

. Site location map

Should you have any questions or concerns, please do not hesitate to contact me.

Sincerely, Rebecca Lewis F.W.T., BSc Terrestrial Ecologist RLewis2@morrisonhershfield.com Suite 300, 125 Commerce Valley Drive West | Markham, ON L3T 7W4 Dir: 416 499 3110 x101 1290 | Fax: 416 499 9658 | Cell: 705 341 5353 morrisonhershfield.com

August, 29, 2016

Toronto and Region Conservation Authority

101 Exchange Avenue Vaughan, Ontario L4K 5R6

Re: Data Request for Terrestrial Information for Environmental Assessment of Passmore Avenue between Markham Road and Middlefield Road in the City of Toronto, within the Toronto and Region Conservation Authority District.

Morrison Hershfield Limited would kindly like to request terrestrial data for the study area of Passmore Avenue between Markham Road and Middlefield Road. The proposed works include the resurfacing and widening of Passmore Avenue from Markham Road to approximately 750 meters east of Middlefield Road, as well as providing new and/or extending existing storm and sanitary lines from Markham Road, west of Dynamic Drive, to the existing storm and sanitary lines.

We currently have Land Information Ontario (LIO) and NHIC information, however we would also like to request any data you may have on terrestrial existing conditions (ESA, SWH, wetlands, woodlots etc.) within the study area.

The planned project works have triggered the need to gather terrestrial data and make appropriate recommendations for design and implementation.

A key map displaying the location of study area has also been attached with this correspondence. If you have any questions or require clarification please feel free to contact me.

Regards,

Rebecca Lewis Terrestrial Ecologist RLewis2@morrisonhershfield.com



Suite 300, 125 Commerce Valley Drive West | Markham, ON L3T 7W4 Dir: 416 499 3110 x 1011227 | Fax: 416 499 9658 Mobile: 416 453 9484 morrisonhershfield.com



From: Daniel Brent [mailto:DBrent@trca.on.ca] Sent: Monday, August 29, 2016 11:02 AM To: Rebecca Lewis2 <RLewis2@morrisonhershfield.com> Cc: Lorna Zappone <lzappon@toronto.ca> Subject: Re: Corrected Data Request (TRCA CFN 55182.187) Hi Rebecca, TRCA has natural cover and fauna data for this study area, so I have requested it and will transmit it once our GIS team has pulled it. Thanks, Daniel Daniel Brent, B.Comm., M.SEM. Planner II

Environmental Assessment Planning Planning and Development Toronto and Region Conservation Authority 101 Exchange Ave. | Vaughan, ON L4K 5R6 &416.661.6600 x5774 | &dbrent@trca.on.ca ----- Forwarded by Harsimrat Pruthi/TRCA on 08/29/2016 10:43 AM -----

Rebecca Lewis2

From: Rebecca Lewis2 Sent: Monday, August 29, 2016 11:31 AM To: 'Daniel Brent' Subject: RE: Corrected Data Request (TRCA CFN 55182.187)

That's great Daniel. Thank you, Rebecca

From: Lorna Zappone <lzappon@toronto.ca> To: "Daniel Brent'" < DBrent@trca.on.ca>, Date: 08/29/2016 02:38 PM Subject: RE: Corrected Data Request (TRCA CFN 55182.187) Hi Daniel, a site visit to Passmore Ave has been planned for August 31 (10-11:30am), somewhat last minute. Pls let me know if you are interested/able to attend and I will forward the details. Thanks. Lorna Zappone, Project Manager **Transportation Services Transportation Infrastructure Management City of Toronto** City Hall, 22nd Floor, East Tower 100 Queen Street West Toronto ON M5H 2N2 P: 416-392-8650 lzappon@toronto.ca From: Daniel Brent/TRCA

To: Lorna Zappone </zappon@toronto.ca>, Date: 08/30/2016 10:37 AM Subject: RE: Corrected Data Request (TRCA CFN 55182.187) Hi Lorna, Thanks for keeping me informed. The study area doesn't contain any TRCA areas of interest other than the natural cover and fauna, so TRCA shouldn't need to be participate further on this project unless the scope changes. Thanks! Daniel

From: Daniel Brent [mailto:DBrent@trca.on.ca]

Sent: Tuesday, September 06, 2016 11:43 AM

To: Lorna Zappone <lzappon@toronto.ca>

Cc: Rebecca Lewis2 <RLewis2@morrisonhershfield.com>

Subject: RE: Corrected Data Request (TRCA CFN 55182.187)

Hi Lorna,

Could I please ask you to complete the attached disclaimer, similar to the Glen Road pedestrian bridge EA? It's standard when we transmit data to our municipal partners. Once returned, I can release our natural cover and fauna data to Rebecca. Thank you, Daniel x5774

Rebecca Lewis2

From: Rebecca Lewis2 Sent: Wednesday, September 21, 2016 9:20 AM To: 'Daniel Brent' Subject: RE: Corrected Data Request (TRCA CFN 55182.187) Hi Daniel,

I was wondering when you expect to be able to release the TRCA data that was requested for this project. I am in the process of preparing the draft report now so a timely response would be much appreciated. Thank you, Rebecca Lewis

Rebecca Lewis F.W.T., BSc

Terrestrial Ecologist RLewis2@morrisonhershfield.com Suite 300, 125 Commerce Valley Drive West | Markham, ON L3T 7W4 Dir: 416 499 3110 x101 1290 | Fax: 416 499 9658 | Cell: 705 341 5353 morrisonhershfield.com

From: Daniel Brent [mailto:DBrent@trca.on.ca] Sent: Wednesday, September 21, 2016 9:26 AM To: Rebecca Lewis2 <RLewis2@morrisonhershfield.com> Subject: RE: Corrected Data Request (TRCA CFN 55182.187) Hi Rebecca, Please have Lorna complete the data disclaimer and I can release the data. Thanks, Daniel

Rebecca Lewis2

From: Rebecca Lewis2
Sent: Wednesday, September 21, 2016 11:39 AM
To: 'Daniel Brent'
Subject: RE: Corrected Data Request (TRCA CFN 55182.187)
Hi Daniel,
I apologize as I didn't realize you had not yet received a response. I am looking into it now.
Thanks again, Rebecca

Rebecca Lewis2

From: Rebecca Lewis2
Sent: Wednesday, September 21, 2016 11:36 AM
To: Martin-Pierre Blouin
Subject: Passmore Avenue Data Requests for EA report
Hi Martin,
I am in the process of preparing the draft report for the Passmore Ave EA, however I am having trouble
getting my data requests back from the Conservation Authority. It seems as though they have requested
a disclaimer to be filled out by Lorna Zappone with the City of Toronto and have not yet received a
response from her. Apparently they require the disclaimer before they will release the data. I was
informed that you might be able to get in contact with Lorna and help me to resolve this issue, or point
me in the direction of someone who can. I have included all relevant email correspondence below.
Please let me know if you have any questions regarding this matter.
Thank you very much,
Rebecca Lewis

From: Lorna Zappone [mailto:lzappon@toronto.ca]
Sent: Wednesday, September 21, 2016 2:07 PM
To: John Grebenc <JGrebenc@morrisonhershfield.com>
Cc: Martin-Pierre Blouin <MBlouin@morrisonhershfield.com>
Subject: FW: Corrected Data Request (TRCA CFN 55182.187)
Hi John, TRCA requires the attached form be completed/signed in order to release the data. Once returned to me I'll send on to TRCA so that they can release the natural cover and fauna data to MH.
Lorna

From: John Grebenc Sent: Wednesday, September 21, 2016 2:12 PM To: Rebecca Lewis2 <RLewis2@morrisonhershfield.com>; Lorna Zappone <lzappon@toronto.ca> Cc: Martin-Pierre Blouin <MBlouin@morrisonhershfield.com> Subject: FW: Corrected Data Request (TRCA CFN 55182.187) Rebecca, can you fill in and sign and return to Lorna Zappone. John J. Grebenc, P. Eng. Vice President, Transportation jgrebenc@morrisonhershfield.com

Rebecca Lewis2

From: Rebecca Lewis2 Sent: Thursday, September 22, 2016 9:41 AM To: 'lzappon@toronto.ca' Cc: John Grebenc; Martin-Pierre Blouin Subject: RE: Corrected Data Request (TRCA CFN 55182.187) Attachments: 55182 187 TRCA Data Disclaimer (002).pdf Hi Lorna, here is the signed form requested by the TRCA.

Thank you for passing it along,

Rebecca Lewis

From: Lorna Zappone <lzappon@toronto.ca> To: "Daniel Brent" <DBrent@trca.on.ca>, Cc: Rebecca Lewis2 <RLewis2@morrisonhershfield.com> Date: 09/22/2016 03:41 PM Subject: RE: Corrected Data Request (TRCA CFN 55182.187) Hi Daniel – see attached signed disclaimer. Please release data to MH, copy me on the email. Thanks. Lorna



Digital Data Agreement

All digital data (specified below) is provided with the understanding that it is being used solely by City of Toronto for the purposes of the following project:

All digital data provided will be returned or destroyed upon completion of the above-mentioned project.

Terms and Conditions applicable to Recipient of Digital Data

- 1. TRCA must be acknowledged as the source of the data;
- 2. Recipient will not market the data to third parties without the express written consent of TRCA, which consent shall be at the sole discretion of TRCA;
- 3. Recipient acknowledges that the release of this data by TRCA does not constitute the conveyance of any rights of ownership of the data to Recipient;
- 4. The data and TRCA's authorization to use same may not be transferred without the express written consent of TRCA, which consent shall be at the sole discretion of TRCA;
- 5. In the event that Recipient is a partner or a body corporate and undergoes a change in control or ownership such that Recipient no longer uses the data in the manner set out in its original request for the data, the authorization to use such date shall immediately become null and void without further notification from TRCA. Recipient will be responsible for the removal of all data provided by TRCA from any and all of Recipient's systems;
- 6. Recipient acknowledges that certain data sets are not updated or maintained by TRCA; and
- 7. Recipient will not publish, on the Internet or otherwise, or provide viewing capability of the data to third parties without the express written consent of TRCA, which consent shall be at the sole discretion of TRCA.

Disclaimer

No Liability on the part of Toronto and Region Conservation Authority

Recipient acknowledges that TRCA does not represent or warrant that the digital data supplied to Recipient by TRCA is accurate, free of error, current or up-to-date. In consideration of being supplied with the data by TRCA, Recipient acknowledges and agrees that the use of the data is at the risk of Recipient and subject to the terms and conditions listed above. Any person(s) or organization(s) making use of or relying upon this data is responsible for confirming its accuracy and completeness. TRCA is not responsible for edited or reproduced versions of this digital data.


□ Regulation Limit/Criteria Layers

The Regulation Limit is a compilation of various information sources. Engineered floodplain mapping and estimated floodplain mapping were prepared by engineering consultants and assigned an allowance of up to 15 metres. Erosion Hazards were determined by TRCA and assigned an allowance of up to 15 metres. Shoreline Hazards were determined by TRCA and assigned an allowance of up to 15 metres. Provincially Significant Wetland (PSW), Locally Significant Wetland (LSW) and Oak Ridges Moraine (ORM) wetland delineations were provided by the Ministry of Natural Resources. All other wetlands delineations were determined by using TRCA Ecological Land Classification (ELC) System mapping. PSW and ORM wetlands greater than 0.5 hectares in size were assigned an allowance of 120 metres in order to identify lands where development could interfere with the function of a wetland. LSW and ELC wetlands greater than 0.5 hectares in size were assigned an allowance of 30 metres. Please refer to 'Reference Manual for Determination of Regulation Limits' (TRCA, 2005).

The Regulation Limit Line represents Ontario Regulation 166/06: Development, Interference with Wetlands and Alterations to shorelines and Watercourses. The text of the Regulation takes precedence over the Regulation Limit mapping. Some regulated features may not appear on the Regulation Limit mapping.

The regulation limit and meander belt information from Ontario Regulation 166/06 is a screening layer only (and should be identified as such in any submissions) and is not to be used for any engineering design purposes (i.e. crossings, etc.) as part of the development application. Please contact the TRCA planning department for additional information (416-661-6600).

□ Species at Risk (SARS)

The TRCA can provide flora and fauna observational data within the jurisdiction (where applicable) the MNR, however, is responsible for providing data and subsequent permits/applications related to species at risk (SAR). Please contact the Natural Heritage Information Centre for more information at <u>NHICrequests@ontario.ca</u>.

□ Redside Dace

Please note that Redside Dace fisheries records have been removed from the data provided. Specific requirements around management and/or permits under the Endangered Species Act may be applicable, please contact MNR Aurora District for further information. For a more comprehensive list of fisheries records, please contact MNR Aurora District.

Please state briefly the intended use of the data:



Please list data requested:

Flora Fauna ELC TNHS Natural Cover Regulation Limit ESAs Flood Plain Mapping (don_03w)

[Signature Page Follows]

Tel. 416.661.6600, 1.888.872.2344 | Fax. 416.661.6898 | info@trca.on.ca | 5 Shoreham Drive, Downsview, ON M3N 154



IN WITNESS WHEREOF the parties have executed this Agreement.

I agree to the terms as outlined above:

Signature of Receiver of Digital Data

Date

Organization

Signature of TRCA Representative

Please sign and return to: Planning and Development Toronto and Region Conservation Authority 101 Exchange Ave. Vaughan, ON L4K 5R6

Tel. 416.661.6600, 1.888.872.2344 | Fax. 416.661.6898 | info@trca.on.ca | 5 Shoreham Drive, Downsview, ON M3N 154

From: Daniel Brent [mailto:DBrent@trca.on.ca] Sent: Friday, September 23, 2016 1:14 PM To: Lorna Zappone <lzappon@toronto.ca> Cc: Rebecca Lewis2 <RLewis2@morrisonhershfield.com> Subject: RE: Corrected Data Request (TRCA CFN 55182.187) Hi Lorna and Rebecca, The data for this study area is attached. Should you need assistance with the data, please contact Parth Sheth (x5607 or psheth@trca.on.ca). Thank you! -Daniel x5774 Daniel Brent, B.Comm., M.SEM. Planner II

Environmental Assessment Planning Planning and Development Toronto and Region Conservation Authority 101 Exchange Ave. | Vaughan, ON L4K 5R6 &416.661.6600 x5774 | &dbrent@trca.on.ca

Rebecca Lewis2

From: Rebecca Lewis2 Sent: Monday, August 29, 2016 9:45 AM To: 'esa.aurora@ontario.ca' Subject: Data Request for Terrestrial SAR information Attachments: Study Area.jpg; AuroralnformationRequest_1160509.pdf; AuroraMNRFDataRequest.docx Good Morning, Morrison Hershfield has been retained by the City of Toronto to conduct environmental investigations for Passmore Ave. within the MNRF Aurora District. Please find attached the following project information and requests: . Aurora MNRF Information Request Form . Request for Terrestrial, and Species at Risk . Site location map Should you have any questions or concerns, please do not hesitate to contact me. Sincerely, Rebecca Lewis F.W.T., BSc **Terrestrial Ecologist** RLewis2@morrisonhershfield.com Suite 300, 125 Commerce Valley Drive West | Markham, ON L3T 7W4 Dir: 416 499 3110 x101 1290 | Fax: 416 499 9658 | Cell: 705 341 5353 morrisonhershfield.com

August, 29, 2016

Ministry of Natural Resources and Forestry – Aurora District 50 Bloomington Rd Aurora ON L4G 0L8 **Re:** Data Request for Terrestrial and Species at Risk Information for Environmental Assessment of Passmore Avenue between Markham Road and Middlefield Road in the City of Toronto, within the MNRF Aurora District.

Morrison Hershfield Limited would kindly like to request terrestrial data for the study area of Passmore Avenue between Markham Road and Middlefield Road. The proposed works include the resurfacing and widening of Passmore Avenue from Markham Road to approximately 750 meters east of Middlefield Road, as well as providing new and/or extending existing storm and sanitary lines from Markham Road, west of Dynamic Drive, to the existing storm and sanitary lines.

We currently have Land Information Ontario (LIO) and NHIC information, however we would also like to request any data you may have on terrestrial existing conditions (PSW, ESA, SWH, wetlands, woodlots etc.) within the study area, as well as any information on Species at Risk.

A key map displaying the location of study area has also been attached with this correspondence. If you have any questions or require clarification please feel free to contact me.

Regards,

Rebecca Lewis Terrestrial Ecologist RLewis2@morrisonhershfield.com



Suite 300, 125 Commerce Valley Drive West | Markham, ON L3T 7W4 Dir: 416 499 3110 x 1011227 | Fax: 416 499 9658 Mobile: 416 453 9484 morrisonhershfield.com

Aurora MNRF Information Request Form

Name:				
Company Name:				
Proponent Name:				
Phone Number:				
Email Address:				
Project Name:				
Property Location:				
Township:				
Lot & Concession:				
UTM Coordinates:	Easting (X)		Northing (Y)	
Brief Description of Undertaking				
Have you previously	contacted someone	e at MNRØfor informa	tion on this site? 📋 Yes	No
If yes, when and who?				
Provide a map of accur surrounding landscape corridors, and other hu arrow and legend.	ate scale to illustrate e (e.g. property bound iman landmarks). Use	footprint/study area of laries, roads, waterbodie of aerial photography is	the proposed activity in relation t es, natural features, towns, transn s strongly encouraged. Include sc	o the nission ale, north
ATTACHMENTS - I ha	ve attached a:			
	Picture	🦳 Мар	Other	
REQUEST - I would lik *Requires an appointment	e to request the fol and remittance of fees. S	lowing information fo	or the property identified abovideline for details.	'e:
*Fish Dot Informat (fish and other aqu a watercourse)	tion atic species found in	a particular area of	Species at Risk Other	
For additional na	tural heritage inform	ation please visit Land	Information Ontario Ontari	<u>o.ca</u>
	Please forward t Aurora	he completed form to: Or send by mail: District, Ministry of Nat	esa.aurora@ontario.ca fural Resources	

and Forestry 50 Bloomington Rd Aurora, ON L4G 0L8



Rebecca Lewis2

From: Rebecca Lewis2
Sent: Wednesday, September 21, 2016 9:57 AM
To: 'esa.aurora@ontario.ca'
Cc: 'mark.heaton@ontario.ca'
Subject: FW: Data Request for Terrestrial SAR information
Attachments: Study Area.jpg; AuroralnformationRequest_1160509.pdf; AuroraMNRFDataRequest.docx
Good Morning,
Morrison Hershfield was retained by the City of Toronto to complete environmental assessments along

Passmore Ave. between Middlefield Ave. and Markham Rd. within the Aurora District and we sent a formal data request on August 29, 2016 requesting any available background information that can be provided for the study location. At this time we have not received a response to our data request.

Please see the attached email containing our initial data request letter and project details (i.e. location map) in order to address our background information request. We are currently preparing our draft report, so if you can provide a response at your earliest convenience it would be greatly appreciated. If you have any questions please do not hesitate to contact me.

Thank you, Rebecca Lewis Rebecca Lewis F.W.T., BSc Terrestrial Ecologist RLewis2@morrisonhershfield.com Suite 300, 125 Commerce Valley Drive West | Markham, ON L3T 7W4 Dir: 416 499 3110 x101 1290 | Fax: 416 499 9658 | Cell: 705 341 5353 morrisonhershfield.com

From: McAllister, Aurora (MNRF) < Aurora.McAllister@ontario.ca> Sent: Wednesday, September 21, 2016 2:20 PM To: Rebecca Lewis2 Cc: Funnell, Emily (MNRF); Varga, Steve (MNRF) Subject: RE: Data Request for Terrestrial SAR information Follow Up Flag: Follow up Flag Status: Flagged Rebecca, I can confirm we received your information request in August. It normally takes 4-6 weeks to process an info request, but sometimes longer during the busy times of year. Regards, Aurora AURORA MCALLISTER | MANAGEMENT BIOLOGIST | ONTARIO MINISTRY of NATURAL RESOURCES and FORESTRY | AURORA DISTRICT OFFICE 50 Bloomington Road, Aurora, Ontario, L4G 0L8 | Email: aurora.mcallister@ontario.ca

APPENDIX B

Official Plan Land Use Designation Map



APPENDIX C Photographic Record



Photo 1: View of CVC community facing north from the intersection of Steeles Avenue East and Middlefield Road. September 6. 2016.



Photo 2: View of CVR community facing northeast from the intersection of Steeles Avenue East and Middlefield Road. September 6. 2016.



Photo 3: View of CVC community facing southwest from the intersection of Steeles Avenue East and Middlefield Road. September 6. 2016.



Photo 4: View of CUW community, providing potential habitat for Eastern Wood-pewee, facing southwest from the intersection of Steeles Avenue East and Middlefield Road. September 6. 2016.



Photo 5: View of Understory within CUW community, southwest of the intersection of Steeles Avenue East and Middlefield Road. September 6. 2016.



Photo 6: A Vireo nest located at the northernmost edge of the CUW community west of Middlefield Road and south of Steeles Avenue East. September 6, 2016.



Photo 7: View of CUT community located south of Steeles Avenue East, west of Middlefield Road and north of Passmore Avenue; facing southwest. September 6, 2016.



Photo 8: View of CGL community west of Middlefield Road and north of Passmore Avenue, facing south from the north end of the community. September 6, 2016.



Photo 9: View of CGL community on the west end of Select Avenue, east of Middlefield Road, facing east. September 6, 2016.



Photo 10: View of southern end of CUW community where it borders on a CVC community, , facing southwest from Middlefield Road. September 6, 2016.



Photo 11: View of CVR community on the south end of Middlefield Road, facing southwest. September 6, 2016.



Photo 12: View of CUM community on the south end of Middlefield Road, facing west from just south of the intersection of Middlefield Road and McNicoll Avenue. September 6, 2016.



Photo 13: View of CVC community on the northeast corner of the intersection of McNicoll Avenue and Middlefield Road. September 6, 2016.



Photo 14: View of CVC communities on the northeast and northwest corners of the intersection at Markham Road and McNicoll Avenue. September 6, 2016.



Photo 15: View of CUM community at the northeast corner of the intersection at Passmore Avenue and Markham Road, facing south. September 6, 2016.



Photo 16: View of CUM and CVC communities located at the east end of Select Ave and east of Markham Rd, facing north. September 6, 2016.



Photo 17: View of CGL community at the northwest corner of the intersection at Markham Road and Steeles Avenue East, facing north. September 6, 2016.



Photo 18: View of CUM community located along north side of Steeles Avenue East, and CVC community on the south side, facing east from Marydale Avenue. September 6, 2016.



Photo 19: A sign posted within the CUM community along the north side of Steeles Avenue East declaring the area as a Natural Space. September 6, 2016.



Photo 20: View of a CVR community on the north side of Steeles Avenue East, approaching Middlefield road. September 6, 2016.



Photo 21: View of a large CUM community on the south side of Steeles Avenue East, approaching Middlefield Road. September 6, 2016.



Photo 22: View facing west of Unevaluated Wetland located outside of the study area, east of Markham Road and north of Select Avenue. September 6, 2016.



Photo 23: View of CUM community in the foreground and CGL community in the background at the east end of Select Ave, west of Markham Road, facing south. September 6, 2016.



Photo 24: View north up State Crown Boulevard from Select Avenue showing CVC communities on east and west sides of the intersection. September 6, 2016.



Photo 25: View looking north toward Steeles Avenue East from the north end of State Crown Boulevard showing the CUM communities to the east and west. September 6, 2016.



Photo 26: View looking west down Passmore Avenue from Markham Road. September 6, 2016.



Photo 27: View of the CVC community located southwest of the intersection at Passmore Avenue and Markham Road. September 6, 2016.



Photo 28: View of the CGL community on the east end of Passmore Avenue, northeast of Dynamic Drive. September 6, 2016.



Photo 29: View of the CUM community at the west end of Passmore Avenue, northeast of Maybrook Drive. September 6, 2016.



Photo 30: View of the CVC community on the northeast corner of the intersection at Passmore Avenue and Middlefield Road. September 6, 2016.



Photo 31: View of the CVC community on the northwest corner of the intersection at Middlefield Road and Passmore Avenue. September 6, 2016.



Photo 32: View of the CVC community on the southeast corner of the intersection at Passmore Avenue and Middlefield Road. September 6, 2016.



Photo 33: View facing west down Passmore Avenue from west of State Crown Boulevard. September 6, 2016.



Photo 34: View of the CVC community on the south side of Passmore Avenue, east of Maybrook Drive. September 6, 2016.



Photo 35: View of the small CGL community containing Armadale Free Methodist Cemetery and Church on the north side of Passmore Avenue, facing east from of State Crown Boulevard. September 6, 2016.

APPENDIX D Plant Species List

Туре	Scientific Name	Common Names	Coefficient Conservation	Coefficient Wetness	**SRank
Tree	Acer negundo	Manitoba Maple	0	-2	S5
Tree	Acer saccharinum	Silver Maple	5	-3	S5
Tree	Acer saccharum ssp. saccharum	Sugar Maple	4	3	S5
Tree	Aesculus hippocastanum	Horse Chestnut	0	5	SE2
Herb	Arctium minus ssp. minus	Common Burdock	0	5	SE5
Herb	Asclepias sp	Milkweed Species			
Herb	Cichorium intybus	Chicory	0	5	SE5
Herb	Cirsium arvense	Canada Thistle	0	3	SE5
Shrub	Cornus stolonifera	Red-osier Dogwood	2	-3	S5
Vine	Cynanchum rossicum	White Swallow- wort	0	5	SE5
Herb	Daucus carota	Wild Carrot	0	5	SE5
Tree	Gymnocladus dioicus	Kentucky Coffee- tree	6	5	S2
Tree	Juglans nigra	Black Walnut	5	3	S4
Herb	Linaria vulgaris	Butter-and-eggs	0	5	SE5
	Lotus corniculatus	Bird's-foot Trefoil	0	1	
Herb	Melilotus alba	White Sweet-clover	0	3	SE5
Graminoid	Phragmites australis	Common Reed	0	-4	S5
Tree	Picea sp	Spruce Species			
Tree	Pinus resinosa	Red Pine	8	3	S5
Tree	Pinus strobus	Eastern White Pine	4	3	S5
Graminoid	Poa pratensis ssp. pratensis	Kentucky Blue Grass	0	1	S5
Tree	Populus alba	European White Poplar	0	5	SE5

Tree	Populus grandidentata	Largetooth Aspen	5	3	S5
Tree	Populus tremuloides	Trembling Aspen	2	0	S5
Tree	Quercus rubra	Red Oak	6	3	S5
Tree	Robinia pseudo- acacia	Black Locust	0	4	SE5
Shrub	Salix sp	Willow Species			
Herb	Solidago altissima var. altissima	Tall Goldenrod	1	3	S5
Herb	Solidago canadensis	Canada Goldenrod	1	3	S5
Herb	Symphyotrichum ericoides var. ericoides	Heath Aster	4	4	S5
Herb	Symphyotrichum novae-angliae	New England Aster	2	-3	S5
Tree	Ulmus pumila	Siberian Elm	0	5	SE3

APPENDIX E Breeding Bird Atlas Species List

Passmore Avenue: OBBA Species List



Endangered

Threatened

Special Concern

17PJ35

Square	Species	Breeding Evidence
17PJ35	Canada Goose	CONF
17PJ35	Wood Duck	CONF
17PJ35	Gadwall	PROB
17PJ35	Mallard	CONF
17PJ35	Ring-necked Pheasant	PROB
17PJ35	Ruffed Grouse	POSS
17PJ35	Green Heron	PROB
17PJ35	Turkey Vulture	POSS
17PJ35	Sharp- shinned Hawk	CONF
17PJ35	Cooper's Hawk	CONF
17PJ35	Red-tailed Hawk	CONF
17PJ35	American Kestrel	CONF
17PJ35	Peregrine Falcon	POSS

Square	Species	Breeding
) (invitaita Dail	Evidence
17PJ35	Virginia Rail	POSS
17PJ35	Sora	PROB
17PJ35	Killdeer	CONF
17PJ35	Rock Pigeon	CONF
17PJ35	Spotted Sandpiper	CONF
17PJ35	American Woodcock	PROB
17PJ35	Mourning Dove	CONF
17PJ35	Yellow-billed Cuckoo	POSS
17PJ35	Black-billed Cuckoo	CONF
17PJ35	Eastern Screech-Owl	PROB
17PJ35	Great Horned Owl	CONF
17PJ35	Common Nighthawk	POSS
17PJ35	Chimney Swift	CONF
17PJ35	Ruby- throated Hummingbird	PROB
17PJ35	Belted Kingfisher	CONF
17PJ35	Downy Woodpecker	CONF
17PJ35	Hairy Woodpecker	CONF

Square	Species	Breeding Evidence
17PJ35	Northern Flicker	CONF
17PJ35	Pileated Woodpecker	POSS
17PJ35	Eastern Wood-Pewee	PROB
17PJ35	Willow Flycatcher	CONF
17PJ35	Least Flycatcher	PROB
17PJ35	Eastern Phoebe	CONF
17PJ35	Great Crested Flycatcher	PROB
17PJ35	Eastern Kingbird	CONF
17PJ35	Warbling Vireo	CONF
17PJ35	Red-eyed Vireo	CONF
17PJ35	Blue Jay	CONF
17PJ35	American Crow	CONF
17PJ35	Horned Lark	CONF
17PJ35	Tree Swallow	CONF
17PJ35	Northern Rough- winged Swallow	CONF
17PJ35	Bank Swallow	CONF
17PJ35	Cliff Swallow	CONF

Square	Species	Breeding Evidence
17PJ35	Barn Swallow	CONF
17PJ35	Black-capped Chickadee	CONF
17PJ35	Red-breasted Nuthatch	POSS
17PJ35	White- breasted Nuthatch	CONF
17PJ35	House Wren	CONF
17PJ35	Blue-gray Gnatcatcher	CONF
17PJ35	Wood Thrush	POSS
17PJ35	American Robin	CONF
17PJ35	Gray Catbird	CONF
17PJ35	Northern Mockingbird	CONF
17PJ35	Brown Thrasher	CONF
17PJ35	European Starling	CONF
17PJ35	Cedar Waxwing	CONF
17PJ35	Yellow Warbler	CONF
17PJ35	Pine Warbler	POSS
17PJ35	American Redstart	POSS

Square	Species	Breeding Evidence
17PJ35	Mourning Warbler	POSS
17PJ35	Common Yellowthroat	PROB
17PJ35	Chipping Sparrow	CONF
17PJ35	Field Sparrow	PROB
17PJ35	Vesper Sparrow	CONF
17PJ35	Savannah Sparrow	CONF
17PJ35	Song Sparrow	CONF
17PJ35	Swamp Sparrow	CONF
17PJ35	Northern Cardinal	CONF
17PJ35	Rose- breasted Grosbeak	CONF
17PJ35	Indigo Bunting	CONF
17PJ35	Bobolink	CONF
17PJ35	Red-winged Blackbird	CONF
17PJ35	Eastern Meadowlark	CONF
17PJ35	Common Grackle	CONF

Square	Species	Breeding Evidence
17PJ35	Brown- headed Cowbird	CONF
17PJ35	Orchard Oriole	CONF
17PJ35	Baltimore Oriole	CONF
17PJ35	House Finch	CONF
17PJ35	American Goldfinch	CONF
17PJ35	House Sparrow	CONF

17PJ45

Square	Species	Breeding Evidence
17PJ45	Canada Goose	CONF
17PJ45	Mute Swan	CONF
17PJ45	Trumpeter Swan	CONF
17PJ45	Wood Duck	CONF
17PJ45	Gadwall	CONF
17PJ45	American Black Duck	CONF
17PJ45	Mallard	CONF
17PJ45	Blue-winged Teal	CONF
17PJ45	Hooded Merganser	PROB
17PJ45	Ring-necked Pheasant	POSS

Square	Species	Breeding Evidence
17PJ45	Ruffed Grouse	POSS
17PJ45	Wild Turkey	CONF
17PJ45	Least Bittern	POSS
17PJ45	Great Blue Heron	CONF
17PJ45	Green Heron	CONF
17PJ45	Turkey Vulture	POSS
17PJ45	Northern Harrier	POSS
17PJ45	Sharp- shinned Hawk	CONF
17PJ45	Cooper's Hawk	CONF
17PJ45	Northern Goshawk	CONF
17PJ45	Broad- winged Hawk	POSS
17PJ45	Red-tailed Hawk	CONF
17PJ45	American Kestrel	CONF
17PJ45	Virginia Rail	CONF
17PJ45	Sora	PROB
17PJ45	Killdeer	CONF
17PJ45	Rock Pigeon	CONF
17PJ45	Spotted Sandpiper	CONF
17PJ45	Common Snipe	POSS
17PJ45	American Woodcock	CONF
17PJ45	Mourning Dove	CONF

Square	Species	Breeding Evidence
17PJ45	Yellow-billed Cuckoo	PROB
17PJ45	Black-billed Cuckoo	CONF
17PJ45	Eastern Screech-Owl	CONF
17PJ45	Great Horned Owl	CONF
17PJ45	Common Nighthawk	PROB
17PJ45	Chimney Swift	PROB
17PJ45	Ruby- throated Hummingbird	PROB
17PJ45	Belted Kingfisher	CONF
17PJ45	Red-bellied Woodpecker	POSS
17PJ45	Yellow- bellied Sapsucker	POSS
17PJ45	Downy Woodpecker	CONF
17PJ45	Hairy Woodpecker	CONF
17PJ45	Northern Flicker	CONF
17PJ45	Pileated Woodpecker	CONF
17PJ45	Eastern Wood-Pewee	CONF
Square	Species	Breeding Evidence
--------	---	----------------------
17PJ45	Alder Flycatcher	POSS
17PJ45	Willow Flycatcher	PROB
17PJ45	Least Flycatcher	PROB
17PJ45	Eastern Phoebe	CONF
17PJ45	Great Crested Flycatcher	CONF
17PJ45	Eastern Kingbird	CONF
17PJ45	Blue-headed Vireo	POSS
17PJ45	Warbling Vireo	CONF
17PJ45	Red-eyed Vireo	CONF
17PJ45	Blue Jay	CONF
17PJ45	American Crow	CONF
17PJ45	Horned Lark	CONF
17PJ45	Purple Martin	POSS
17PJ45	Tree Swallow	CONF
17PJ45	Northern Rough- winged Swallow	CONF
17PJ45	Bank Swallow	CONF
17PJ45	Cliff Swallow	CONF
17PJ45	Barn Swallow	CONF

Square	Species	Breeding Evidence
17PJ45	Black-capped Chickadee	CONF
17PJ45	Tufted Titmouse	POSS
17PJ45	Red-breasted Nuthatch	CONF
17PJ45	White- breasted Nuthatch	CONF
17PJ45	Brown Creeper	CONF
17PJ45	Carolina Wren	PROB
17PJ45	House Wren	CONF
17PJ45	Winter Wren	CONF
17PJ45	Sedge Wren	PROB
17PJ45	Blue-gray Gnatcatcher	CONF
17PJ45	Eastern Bluebird	CONF
17PJ45	Veery	PROB
17PJ45	Wood Thrush	CONF
17PJ45	American Robin	CONF
17PJ45	Gray Catbird	CONF
17PJ45	Northern Mockingbird	CONF
17PJ45	Brown Thrasher	CONF
17PJ45	European Starling	CONF

Square	Species	Breeding Evidence
17PJ45	Cedar Waxwing	CONF
17PJ45	Blue-winged Warbler	PROB
17PJ45	Nashville Warbler	POSS
17PJ45	Yellow Warbler	CONF
17PJ45	Chestnut- sided Warbler	POSS
17PJ45	Black- throated Blue Warbler	POSS
17PJ45	Black- throated Green Warbler	CONF
17PJ45	Blackburnian Warbler	POSS
17PJ45	Pine Warbler	CONF
17PJ45	Black-and- white Warbler	PROB
17PJ45	American Redstart	CONF
17PJ45	Ovenbird	CONF
17PJ45	Northern Waterthrush	CONF
17PJ45	Mourning Warbler	CONF
17PJ45	Common Yellowthroat	CONF
17PJ45	Hooded Warbler	POSS
17PJ45	Canada Warbler	POSS

Square	Species	Breeding Evidence
17PJ45	Eastern Towhee	POSS
17PJ45	Chipping Sparrow	CONF
17PJ45	Clay-colored Sparrow	PROB
17PJ45	Field Sparrow	CONF
17PJ45	Vesper Sparrow	CONF
17PJ45	Savannah Sparrow	CONF
17PJ45	Grasshopper Sparrow	POSS
17PJ45	Song Sparrow	CONF
17PJ45	Swamp Sparrow	CONF
17PJ45	White- throated Sparrow	PROB
17PJ45	Scarlet Tanager	CONF
17PJ45	Northern Cardinal	CONF
17PJ45	Rose- breasted Grosbeak	CONF
17PJ45	Indigo Bunting	CONF
17PJ45	Bobolink	CONF
17PJ45	Red-winged Blackbird	CONF
17PJ45	Eastern Meadowlark	CONF
17PJ45	Common Grackle	CONF
17PJ45	Brown- headed Cowbird	CONF

Square	Species	Breeding Evidence
17PJ45	Orchard Oriole	CONF
17PJ45	Baltimore Oriole	CONF
17PJ45	House Finch	CONF
17PJ45	Pine Siskin	POSS
17PJ45	American Goldfinch	CONF
17PJ45	House Sparrow	CONF