



2009

# Wildlife Monitoring Report



*What we do on the land is mirrored in the water*

Working In Partnership:



Report No.: 2010-01MR



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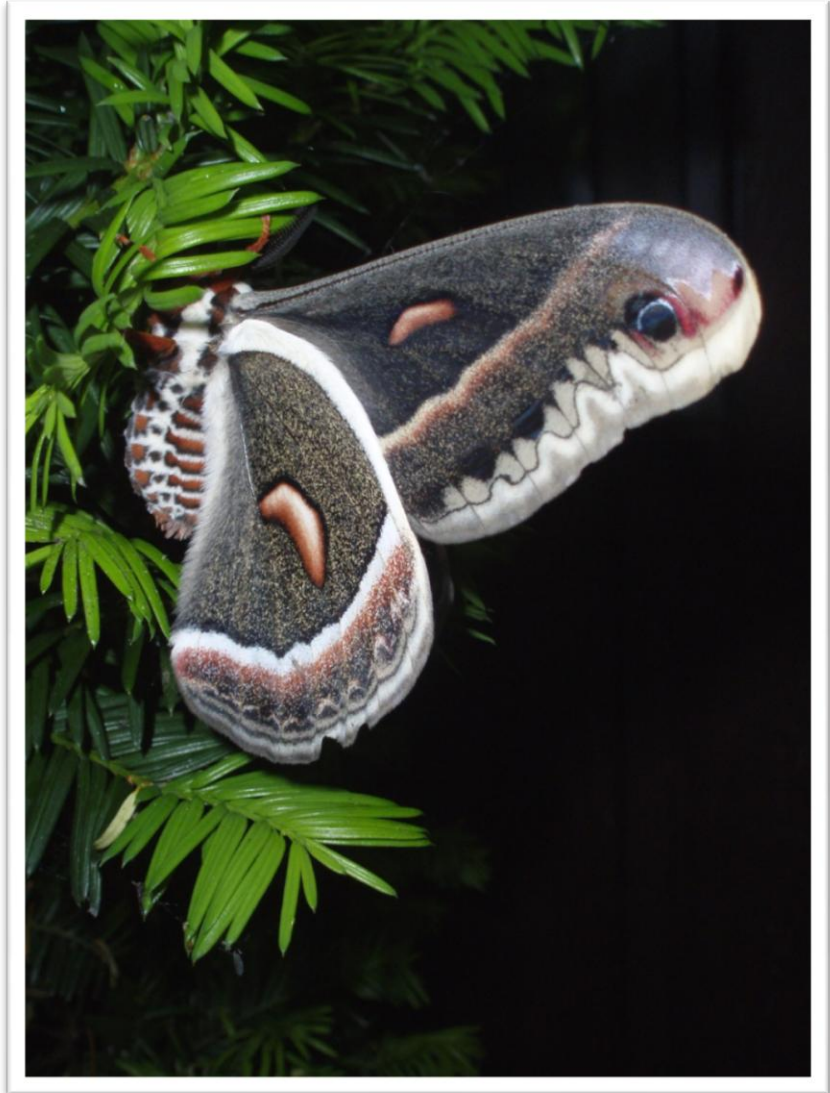
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## EXECUTIVE SUMMARY

A number of wildlife monitoring projects successfully took place in 2009:

- CLOCA continued its participation in the Forest Bird Monitoring Program;
- Long Sault, Cane Tract, and Stephen's Gulch were monitored in preparation for the development of their Conservation Area Management Plans;
- Breeding bird surveys were conducted throughout the Bowmanville – Soper watershed to assist with the development of its existing conditions report;
- Marsh bird and amphibian data was once again collected at the coastal wetlands in conjunction with the Durham Region Coastal Wetland Monitoring Project; and,
- Red-shouldered Hawk surveys took place at strategic locations throughout the jurisdiction.



Overall, the habitats surveyed in 2009 were shown to support a broad range of wildlife, including species of conservation concern as well as species at risk. All of the scheduled monitoring projects were completed successfully and on time, except for one, and the information gathered through the surveys was integral to the development of a variety of management documents, land-use planning applications, and restoration strategies.



## 1.0 INTRODUCTION

Knowledge about watershed health, and the impacts that development may have on watershed health, is the backbone of all sound planning decisions. In order to facilitate such decisions, the Central Lake Ontario Conservation Authority (CLOCA) conducts long-term monitoring for aquatic and terrestrial conditions, as well as water quality and quantity. The information gathered through these programs enables CLOCA to better understand the existing conditions within a watershed, determine ecological trends over time, and provide guidance to planning agencies to assist them in making informed land-use decisions.

### 1.1 Background

The CLOCA jurisdiction is approximately 638 km<sup>2</sup> and its boundaries are defined by the 15 watersheds that drain this area into Lake Ontario. 7 of these watersheds are large, originating on the Oak Ridges Moraine. They are:

- Lynde Creek
- Oshawa Creek
- Black-Harmony-Farewell Creeks, and
- Bowmanville-Soper Creeks.

These watersheds, as they have been grouped, define the monitoring areas for watershed management and planning. The remaining watersheds are relatively small and for monitoring purposes are generally grouped together and labeled “small watersheds”. This grouping includes, from west to east:

- Cranberry
- Pringle Creek
- Corbett Creek
- Pumphouse
- Robinson Creek
- Tooley Creek
- Darlington Creek
- Bennett Creek, and
- Westside Creek.

Seven municipalities are located in whole or in part within the CLOCA jurisdiction. They are the Cities of Oshawa and Pickering, the Towns of Ajax and Whitby, the Municipality of Clarington, and the Townships of Scugog and Uxbridge. CLOCA is entirely located within the Regional Municipality of Durham. The Authority works in partnership with each of these planning agencies to provide information on the terrestrial and aquatic conditions within their boundaries, and assists them in making planning decisions that are consistent with the natural heritage values set out in the Provincial Policy Statement (2005).

Figure 1 depicts the CLOCA jurisdiction, its watersheds, and the lower tier municipalities within its boundaries.



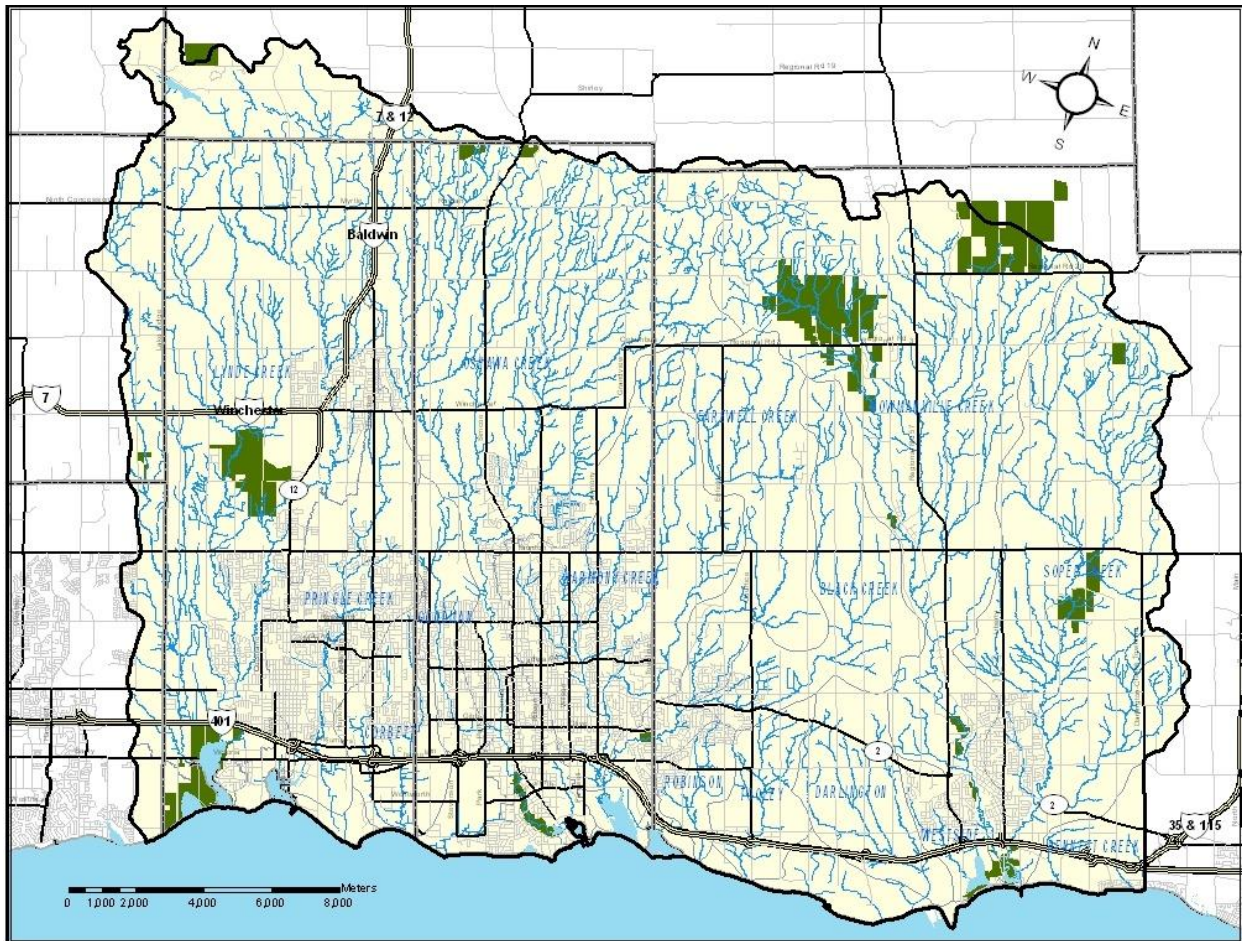


Figure 1: CLOCA jurisdiction.

### 1.2 Monitoring Wildlife

Wildlife occupy virtually every niche and habitat type in the CLOCA jurisdiction: some are specialized to one habitat type and others can thrive in almost any habitat, but the presence or absence of any given species can offer some insight into the overall health of the ecosystem. This is the importance of monitoring wildlife in the CLOCA jurisdiction.

Birds and amphibians are the most commonly monitored wildlife because they attract mates using songs, and consequently can be readily counted and identified. Furthermore, both of these wildlife groups contain some individuals that are more sensitive to habitat change or degradation and others that are more tolerant. The identification of certain species in a monitoring location, therefore, can be used to assess the overall quality of that habitat.

Knowing where high quality habitats exist in a watershed is important not only for assessing the overall health of each watershed, but also improving land management and guiding development. Without this knowledge, sensitive habitat and the wildlife that depend on them are at risk of being lost.



## 2.0 BIRD MONITORING

### 2.1 Conservation Area Management

Bird monitoring has occurred in each of CLOCA's Conservation Areas in the past, however due to resource constraints it is not possible to conduct bird monitoring annually at every location. As such, CLOCA's Conservation Area bird monitoring program is generally set up to coincide with the development of Conservation Area and Watershed Management Plans so that current data can be incorporated into these documents.

As Table 1 outlines, Lynde Shores, Heber Down, Bowmanville-Westside Marshes, Bowmanville Valleylands, Stephen's Gulch, Cane Tract, Hampton Pond, and Long Sault were targeted for bird monitoring in 2009.

**Table 1: Bird Monitoring efforts within CLOCA's Conservation Areas**

CONSERVATION AREA	2009 BIRD MONITORING (PROGRAM*)
Lynde Shores	Yes (MMP)
Heber Down	Yes (FBMP)
Crow's Pass	No
Audley Woods	No
Purple Woods	No
Rhamani	No
Toadhollow	No
Oshawa Valleylands	No
Bowmanville-Westside Marshes	Yes (MMP/WMP)
Bowmanville Valleylands	Yes (WMP)
Stephen's Gulch	Yes (CAMP)
Enniskillen Valley	No
Hampton Pond	Yes (WMP)
Cane Tract (New acquisition)	Yes (CAMP)
Long Sault	Yes (FBMP/CAMP)

\*MMP (Marsh Monitoring Program); FBMP (Forest Bird Monitoring Program); WMP (Watershed Management Planning); CAMP (Conservation Area Management Planning)

The rationale for this monitoring schedule is as follows:

- Lynde Shores, which contains the Lynde Creek and Cranberry Marshes, and Bowmanville-Westside Marshes are all coastal wetlands and as such are monitored annually in conjunction with the Durham Region Coastal Wetland Monitoring Project (DRCWMP);
- Heber Down and Long Sault are monitored as part of Environment Canada's Forest Bird Monitoring Program (FBMP) and are therefore surveyed annually;
- Conservation areas within the Bowmanville-Soper Creek watershed were monitored in 2009 as part of the Bowmanville-Soper Watershed Management Plan. These areas included the

terrestrial part of Bowmanville-Westside Marshes C.A., the Bowmanville Valleylands, and Hampton Pond. The Enniskillen Valley C.A. was excluded from monitoring despite its location in the watershed because it was extensively monitored in 2008 as part of the Enniskillen Valley Conservation Area Management Plan; and,

- Stephen’s Gulch, Cane Tract, and Long Sault were targeted for bird monitoring in 2009 to support the development of Conservation Area Management Plans for these properties.

The data collected from each of these initiatives is discussed in the subsections below.

### 2.1.1 Durham Region Coastal Wetland Monitoring Project

Wildlife data collected through the DRCWM Project is published every 5 years by Environment Canada. Please refer to the *2009 Durham Region Coastal Wetland Monitoring Project 5-year Technical Report* (currently in draft format) for specific information relating to marsh birds in the Lynde Shores and Bowmanville-Westside Marshes Conservation Areas.

### 2.1.2 Forest Bird Monitoring Program

Table 2 outlines the 2009 FBMP results for Heber Down Conservation Area and Table 3 contains the 2009 FBMP results for Long Sault. The locations of these monitoring stations are shown in Figure 2 and Figure 3 respectively. No species at risk, either federal or provincial, or species tracked by the Natural Heritage Information Centre (NHIC), were observed during the course of any of the FBMP surveys.

Area sensitive and forest interior birds, such as Black-throated Green Warbler, Ovenbird, and Winter Wren were identified at multiple stations at Heber Down. This suggests that the forest habitat within this Conservation Area is of relatively good quality and size for some of the more habitat-sensitive wildlife. These species are identified in Table 2 with an asterisk.

Although it is not possible to state that all of the birds observed at Heber Down were breeding, or were successful in their breeding attempts, it can be assumed that if a species was heard in suitable habitat, it is a *Possible Breeder*. Birds that were heard at the same station on both visits can be considered *Probable Breeders* and these species are highlighted in Table 2 in bold font.

**Table 2: Forest Bird Monitoring Program results for Heber Down C.A. (2009)**

COMMON NAME	SCIENTIFIC NAME	COSSARO	COSEWIC	PROVINCIAL RANK	BSC PRIORITY	NHIC
Station A						
American Robin	<i>Turdus migratorius</i>			5		No
<b>Black-capped Chickadee</b>	<i>Poecile atricapillus</i>			5	4	No
<b>Black-throated Green Warbler*</b>	<i>Dendroica virens</i>			5	1	No
<b>Blue Jay</b>	<i>Cyanocitta cristata</i>			5		No
Cedar Waxwing	<i>Bombycilla cedrorum</i>			5		No
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			5		No
Ovenbird*	<i>Seiurus aurocapillus</i>			5	4	No

COMMON NAME	SCIENTIFIC NAME	COSSARO	COSEWIC	PROVINCIAL RANK	BSC PRIORITY	NHIC
Red-eyed Vireo	<i>Vireo olivaceus</i>			5		No
<b>Wood Thrush</b>	<i>Hylocichla mustelina</i>			5	4	No
Yellow Warbler	<i>Dendroica petechia</i>			5		No
Station B						
American Robin	<i>Turdus migratorius</i>			5		No
<b>Black-capped Chickadee</b>	<i>Poecile atricapillus</i>			5	4	No
Blue Jay	<i>Cyanocitta cristata</i>			5		No
Cedar Waxwing	<i>Bombycilla cedrorum</i>			5		No
<b>Eastern Wood-pewee</b>	<i>Contopus virens</i>			5		No
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			5		No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
Wood Thrush	<i>Hylocichla mustelina</i>			5	4	No
Station C						
Black-capped Chickadee	<i>Poecile atricapillus</i>			5	4	No
Blue Jay	<i>Cyanocitta cristata</i>			5		No
Brown Creeper	<i>Certhia americana</i>			5	2	No
Eastern Wood-pewee	<i>Contopus virens</i>			5		No
<b>Great Crested Flycatcher</b>	<i>Myiarchus crinitus</i>			5		No
Ovenbird*	<i>Seiurus aurocapillus</i>			5	4	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
Station D						
Black-capped Chickadee	<i>Poecile atricapillus</i>			5	4	No
<b>Blue Jay</b>	<i>Cyanocitta cristata</i>			5		No
Brown Creeper	<i>Certhia americana</i>			5	2	No
Red-eyed Vireo	<i>Vireo olivaceus</i>			5		No
Station E						
American Robin	<i>Turdus migratorius</i>			5		No
Eastern Wood-pewee	<i>Contopus virens</i>			5		No
<b>Great Crested Flycatcher</b>	<i>Myiarchus crinitus</i>			5		No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
<b>Winter Wren*</b>	<i>Troglodytes troglodytes</i>			5	3	No
Station F						
Blue Jay	<i>Cyanocitta cristata</i>			5		No
Eastern Wood-pewee	<i>Contopus virens</i>			5		No
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			5		No
Northern Waterthrush	<i>Seiurus noveboracensis</i>			5	2	No
Red-eyed Vireo	<i>Vireo olivaceus</i>			5		No
<b>Winter Wren*</b>	<i>Troglodytes troglodytes</i>			5	3	No
<b>Wood Thrush</b>	<i>Hylocichla mustelina</i>			5	4	No

\*Species that are Area Sensitive or require Forest Interior habitats; Species in bold are considered *Probable Breeders*.

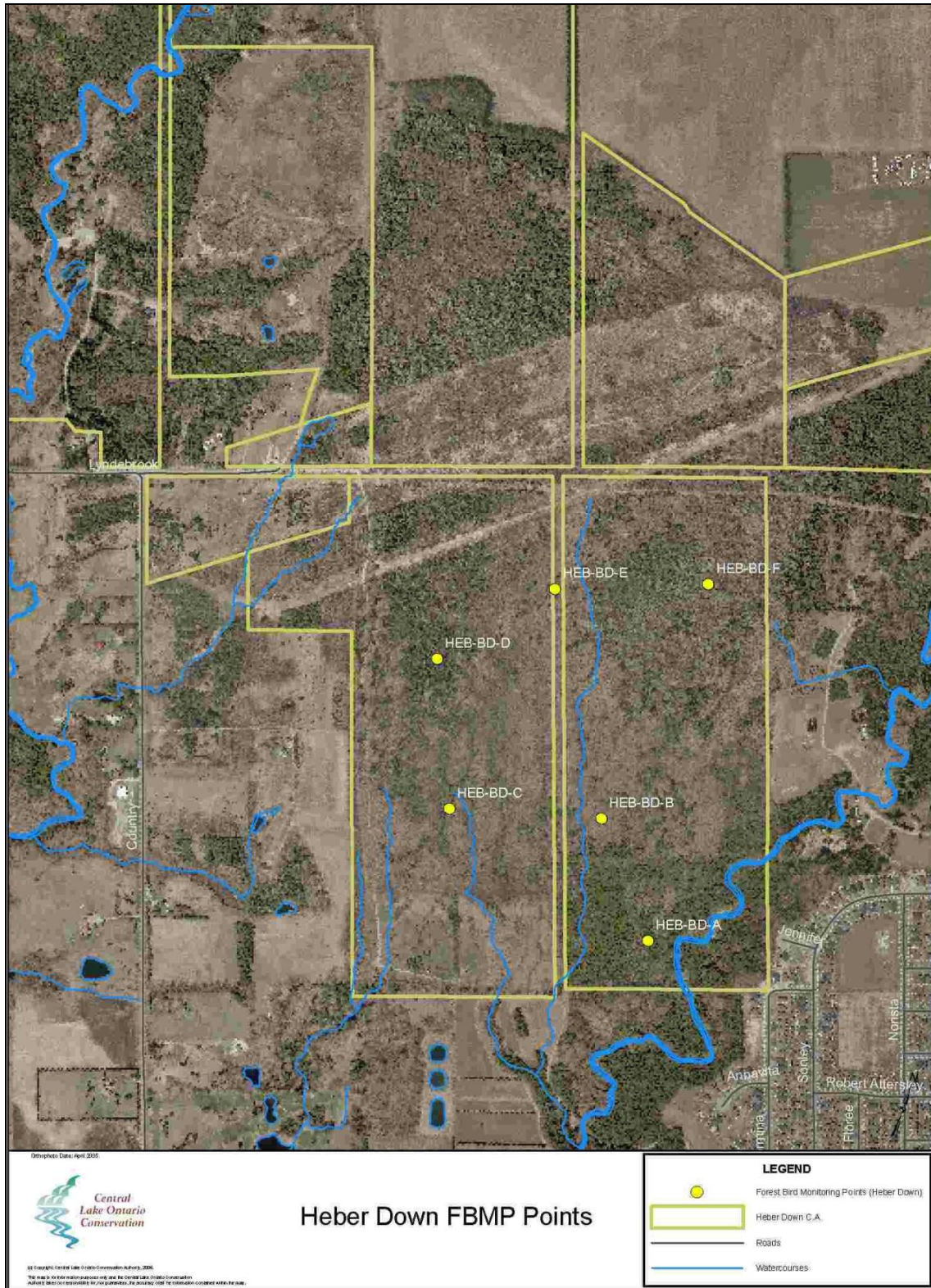


Figure 2: Forest Bird Monitoring Program point count locations at Heber Down C.A.



Area sensitive and forest interior birds recorded within the Long Sault Conservation Area included Black-throated Green Warbler, Cooper’s Hawk, Ovenbird, Red-breasted Nuthatch, Scarlet Tanager, Pine Warbler, and Northern Goshawk. These species are listed in Table 3 and are identified with an asterisk. This list is more extensive than the list generated from the Heber Down surveys and this is probably due to the fact that Long Sault’s forest tracts are larger and more isolated from urbanization than those in Heber Down C.A.

All of the birds listed in Table 3 can be considered *Possible Breeders* if heard in suitable habitat. Birds that were recorded at the same station on both visits appear in bold in Table 3 and can be considered *Probable Breeders*. Only one confirmed breeder was noted during the Long Sault survey and that was Northern Goshawk. A nest containing 2 nestlings was observed at Long Sault near Station C in 2009.

**Table 3: Forest Bird Monitoring Program results for Long Sault C.A. (2009)**

COMMON NAME	SCIENTIFIC NAME	COSSARO	COSEWIC	PROVINCIAL RANK	BSC PRIORITY	NHIC
<b>Station A</b>						
Black-throated Green Warbler*	<i>Dendroica virens</i>			5	1	No
<b>Blue Jay</b>	<i>Cyanocitta cristata</i>			5		No
Cooper's Hawk*	<i>Accipiter cooperii</i>		N	4	3	No
<b>Eastern Wood-pewee</b>	<i>Contopus virens</i>			5		No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
Red-breasted Nuthatch*	<i>Sitta canadensis</i>			5	3	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>			5		No
Veery*	<i>Catharus fuscescens</i>			4	3	No
Wood Thrush	<i>Hylocichla mustelina</i>			5	4	No
<b>Station B</b>						
American Goldfinch	<i>Carduelis tristis</i>			5	3	No
<b>Blue Jay</b>	<i>Cyanocitta cristata</i>			5		No
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>			5	1	No
<b>Eastern Wood-pewee</b>	<i>Contopus virens</i>			5		No
Mourning Dove	<i>Zenaid macroura</i>			5		No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
<b>Scarlet Tanager*</b>	<i>Piranga olivacea</i>			5	2	No
<b>Station C</b>						
<b>Black-throated Green Warbler*</b>	<i>Dendroica virens</i>			5	1	No
Blue Jay	<i>Cyanocitta cristata</i>			5		No
Eastern Wood-pewee	<i>Contopus virens</i>			5		No
<b>Northern Goshawk*</b>	<i>Accipiter gentilis</i>		N	4	2	No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
Pine Warbler*	<i>Dendroica pinus</i>			5	3	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No



COMMON NAME	SCIENTIFIC NAME	COSSARO	COSEWIC	PROVINCIAL RANK	BSC PRIORITY	NHIC
<b>Station D</b>						
American Crow	<i>Corvus brachyrhynchos</i>			5		No
American Goldfinch	<i>Carduelis tristis</i>			5	3	No
American Robin	<i>Turdus migratorius</i>			5		No
<b>Black-throated Green Warbler*</b>	<i>Dendroica virens</i>			5	1	No
Blue Jay	<i>Cyanocitta cristata</i>			5		No
<b>Eastern Wood-pewee</b>	<i>Contopus virens</i>			5		No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
Pine Warbler*	<i>Dendroica pinus</i>			5	3	No
Red-breasted Nuthatch*	<i>Sitta canadensis</i>			5	3	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
<b>Station E</b>						
American Crow	<i>Corvus brachyrhynchos</i>			5		No
American Goldfinch	<i>Carduelis tristis</i>			5	3	No
Black-capped Chickadee	<i>Poecile atricapillus</i>			5	4	No
Black-throated Green Warbler*	<i>Dendroica virens</i>			5	1	No
Blue Jay	<i>Cyanocitta cristata</i>			5		No
<b>Eastern Wood-pewee</b>	<i>Contopus virens</i>			5		No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
Pine Warbler*	<i>Dendroica pinus</i>			5	3	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
Scarlet Tanager*	<i>Piranga olivacea</i>			5	2	No

\*Species that are Area Sensitive or require Forest Interior habitats; Species in bold are considered *Probable Breeders*.



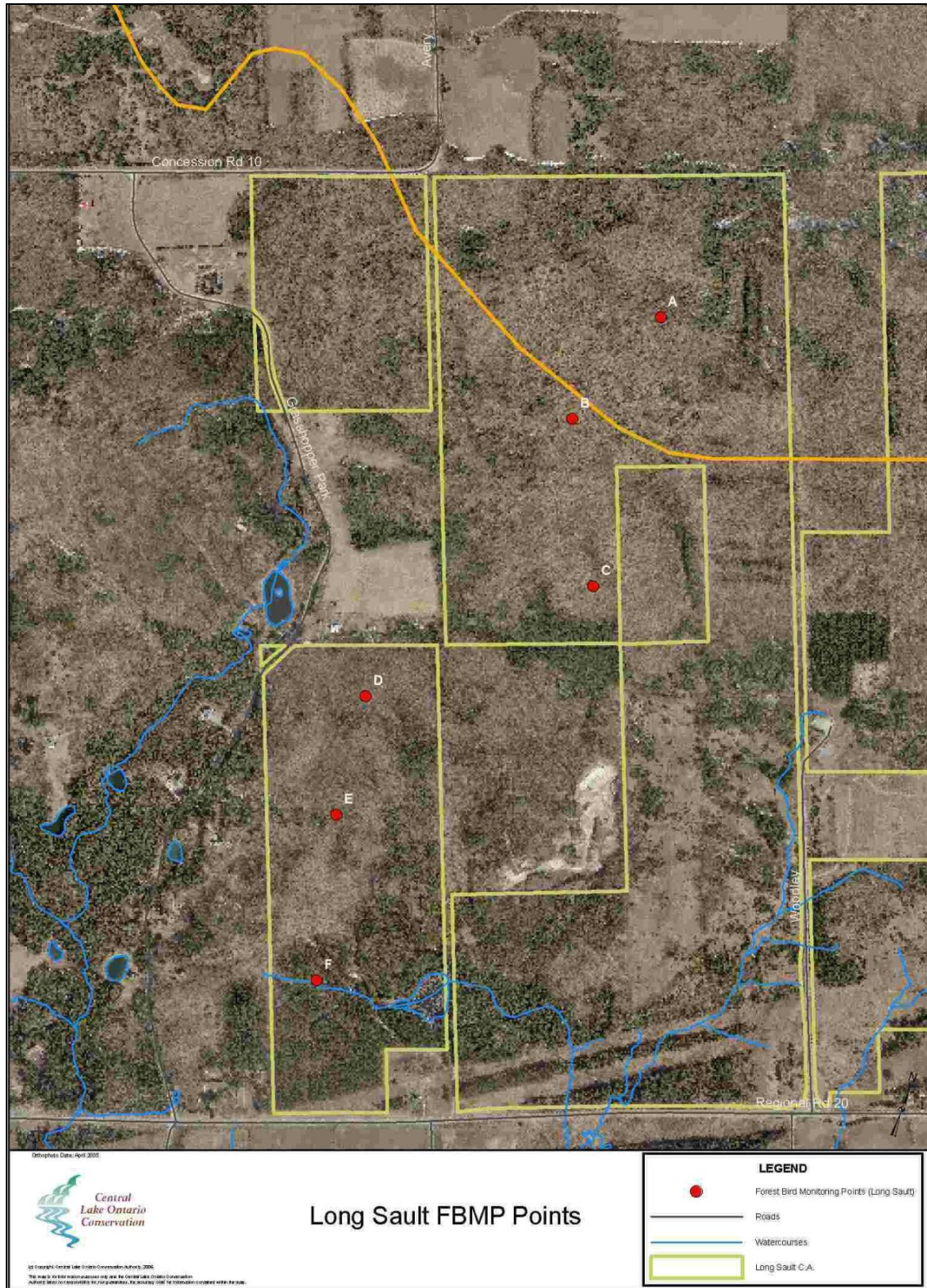


Figure 3: Forest Bird Monitoring Program point count locations at Long Sault C.A.



### 2.1.3 Conservation Area Management Planning

In 2009, the Stephen’s Gulch, Cane Tract, and Long Sault Conservation Areas were targeted for monitoring to coincide with the development of new C.A. management plans or to update existing plans. The following sections contain the data collected for each area as well as a brief discussion about the findings at each location.

Monitoring points were established in each of the C.A.s according to the standards set out in the Forest Bird Monitoring Program, although point locations were not limited to forest habitats. As with the FBMP surveys, these points were visited twice and breeding status was assigned based on whether an individual was heard in suitable habitat in the same location on both visits. Species heard only once were considered *Possible Breeders* and individuals heard twice were considered *Probable Breeders*.

#### STEPHEN’S GULCH CONSERVATION AREA

Seven monitoring points were set up within the Stephen’s Gulch C.A. (Figure 4). The results of the surveys are presented in Table 4. Species believed to be nesting around each station are shown in bold, and species that are considered area-sensitive or forest interior specialist are identified with an asterisk.

Numerous area-sensitive species were observed. These include Ovenbird, Veery, Black-and-white Warbler, and Savannah Sparrow. Many of these sensitive species were also identified as probable breeders within the Conservation Area, confirming the presence of some high quality habitat in the C.A.

No species at risk or species tracked by the NHIC were recorded during the survey, however a few species of conservation concern, such as Black-throated Green Warbler, were noted.

**Table 4: Bird monitoring results for Stephen’s Gulch C.A. (2009)**

COMMON NAME	SCIENTIFIC NAME	COSSARO	COSEWIC	PROVINCIAL RANK	BSC PRIORITY	NHIC
Station A						
American Crow	<i>Corvus brachyrhynchos</i>			5		No
<b>Black-capped Chickadee</b>	<i>Poecile atricapillus</i>			5	4	No
<b>Black-throated Green Warbler*</b>	<i>Dendroica virens</i>			5	1	No
<b>Blue Jay</b>	<i>Cyanocitta cristata</i>			5		No
Eastern Meadowlark*	<i>Sturnella magna</i>			5	3	No
<b>Eastern Wood-pewee</b>	<i>Contopus virens</i>			5		No
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			5		No
<b>Northern Cardinal</b>	<i>Cardinalis cardinalis</i>			5		No
<b>Northern Waterthrush</b>	<i>Seiurus noveboracensis</i>			5	2	No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>			5		No
Veery*	<i>Catharus fuscescens</i>			4	3	No
Station B						

COMMON NAME	SCIENTIFIC NAME	COSSARO	COSEWIC	PROVINCIAL RANK	BSC PRIORITY	NHIC
American Crow	<i>Corvus brachyrhynchos</i>			5		No
<b>American Goldfinch</b>	<i>Carduelis tristis</i>			5	3	No
<b>American Robin</b>	<i>Turdus migratorius</i>			5		No
Black-and-white Warbler*	<i>Mniotilta varia</i>			5	3	No
<b>Black-capped Chickadee</b>	<i>Poecile atricapillus</i>			5	4	No
<b>Blue Jay</b>	<i>Cyanocitta cristata</i>			5		No
Brown-headed Cowbird	<i>Molothrus ater</i>			5		No
Eastern Towhee	<i>Pipilo erythrophthalmus</i>			4	2	No
<b>Field Sparrow</b>	<i>Spizella pusilla</i>			5	3	No
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			5		No
House Wren	<i>Troglodytes aedon</i>			5		No
Indigo Bunting	<i>Passerina cyanea</i>			5		No
Nashville Warbler	<i>Vermivora ruficapilla</i>			5	1	No
<b>Song Sparrow</b>	<i>Melospiza melodia</i>			5		No
<b>Station C</b>						
American Crow	<i>Corvus brachyrhynchos</i>			5		No
American Goldfinch	<i>Carduelis tristis</i>			5	3	No
American Robin	<i>Turdus migratorius</i>			5		No
Black-capped Chickadee	<i>Poecile atricapillus</i>			5	4	No
<b>Blue Jay</b>	<i>Cyanocitta cristata</i>			5		No
Cedar Waxwing	<i>Bombycilla cedrorum</i>			5		No
Eastern Towhee	<i>Pipilo erythrophthalmus</i>			4	2	No
European Starling	<i>Sturnus vulgaris</i>					No
Field Sparrow	<i>Spizella pusilla</i>			5	3	No
Nashville Warbler	<i>Vermivora ruficapilla</i>			5	1	No
Northern Flicker	<i>Colaptes auratus</i>			5		No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
<b>Pine Warbler*</b>	<i>Dendroica pinus</i>			5	3	No
Red-breasted Nuthatch*	<i>Sitta canadensis</i>			5	3	No
Red-eyed Vireo	<i>Vireo olivaceus</i>			5		No
Veery*	<i>Catharus fuscescens</i>			4	3	No
<b>Station D</b>						
American Crow	<i>Corvus brachyrhynchos</i>			5		No
<b>American Robin</b>	<i>Turdus migratorius</i>			5		No
Black-capped Chickadee	<i>Poecile atricapillus</i>			5	4	No
Black-throated Green Warbler*	<i>Dendroica virens</i>			5	1	No
Blue Jay	<i>Cyanocitta cristata</i>			5		No
Eastern Wood-pewee	<i>Contopus virens</i>			5		No
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			5		No
Mourning Dove	<i>Zenaidura macroura</i>			5		No
Mourning Warbler	<i>Oporornis philadelphia</i>			5	2	No
Ovenbird*	<i>Seiurus aurocapillus</i>			5	4	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
Scarlet Tanager*	<i>Piranga olivacea</i>			5	2	No

COMMON NAME	SCIENTIFIC NAME	COSSARO	COSEWIC	PROVINCIAL RANK	BSC PRIORITY	NHIC
Song Sparrow	<i>Melospiza melodia</i>			5		No
<b>Wood Thrush</b>	<i>Hylocichla mustelina</i>			5	4	No
Station E						
American Crow	<i>Corvus brachyrhynchos</i>			5		No
American Goldfinch	<i>Carduelis tristis</i>			5	3	No
<b>American Robin</b>	<i>Turdus migratorius</i>			5		No
Black-capped Chickadee	<i>Poecile atricapillus</i>			5	4	No
<b>Black-throated Green Warbler*</b>	<i>Dendroica virens</i>			5	1	No
Blue Jay	<i>Cyanocitta cristata</i>			5		No
Eastern Wood-pewee	<i>Contopus virens</i>			5		No
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			5		No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
Pine Warbler*	<i>Dendroica pinus</i>			5	3	No
Veery*	<i>Catharus fuscescens</i>			4	3	No
Station F						
American Crow	<i>Corvus brachyrhynchos</i>			5		No
American Robin	<i>Turdus migratorius</i>			5		No
Black-and-white Warbler*	<i>Mniotilta varia</i>			5	3	No
Black-capped Chickadee	<i>Poecile atricapillus</i>			5	4	No
Black-throated Green Warbler*	<i>Dendroica virens</i>			5	1	No
<b>Blue Jay</b>	<i>Cyanocitta cristata</i>			5		No
Eastern Wood-pewee	<i>Contopus virens</i>			5		No
Mourning Dove	<i>Zenaida macroura</i>			5		No
Northern Cardinal	<i>Cardinalis cardinalis</i>			5		No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
Red-breasted Nuthatch*	<i>Sitta canadensis</i>			5	3	No
Veery*	<i>Catharus fuscescens</i>			4	3	No
<b>Wood Thrush</b>	<i>Hylocichla mustelina</i>			5	4	No
Station G						
American Crow	<i>Corvus brachyrhynchos</i>			5		No
American Goldfinch	<i>Carduelis tristis</i>			5	3	No
<b>Blue Jay</b>	<i>Cyanocitta cristata</i>			5		No
Common Yellowthroat	<i>Geothlypis trichas</i>			5		No
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			5		No
House Wren	<i>Troglodytes aedon</i>			5		No
Indigo Bunting	<i>Passerina cyanea</i>			5		No
Mourning Warbler	<i>Oporornis philadelphia</i>			5	2	No
Northern Cardinal	<i>Cardinalis cardinalis</i>			5		No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
Savannah Sparrow*	<i>Passerculus sandwichensis</i>			5	1	No
<b>Song Sparrow</b>	<i>Melospiza melodia</i>			5		No
Veery*	<i>Catharus fuscescens</i>			4	3	No
Wood Thrush	<i>Hylocichla mustelina</i>			5	4	No

\*Species that are Area Sensitive or require Forest Interior habitats; Species in bold are considered *Probable Breeders*.





**Figure 4: Bird monitoring locations at Stephen's Gulch C.A.**

## CANE TRACT

Five monitoring stations were set up at this newly acquired property, and their locations are shown in Figure 5. The results of the monitoring effort are presented in Table 5. Species believed to be nesting around each station are shown in bold, and species that are considered area-sensitive or forest interior specialist are identified with an asterisk.

Only 2 area-sensitive species were observed on the property: Black-throated Green Warbler and Eastern Meadowlark. Only the Eastern Meadowlark is suspected to be breeding on site as this species is generally associated with more open, human-modified habitats, which is consistent with the features on this property (Cadman et al., 2007). Forest habitat is present at the Cane Tract but the patch sizes are relatively small.

No species at risk or species tracked by the NHIC were found during the surveys. Two species of conservation concern, Black-throated Green Warbler and Brown Thrasher, were identified on site but were not observed twice.

**Table 5: Bird monitoring results for Cane Tract (2009)**

COMMON NAME	SCIENTIFIC NAME	COSSARO	COSEWIC	PROVINCIAL RANK	BSC PRIORITY	NHIC
<b>Station A</b>						
American Crow	<i>Corvus brachyrhynchos</i>			5		No
<b>American Robin</b>	<i>Turdus migratorius</i>			5		No
<b>Black-capped Chickadee</b>	<i>Poecile atricapillus</i>			5	4	No
Blue Jay	<i>Cyanocitta cristata</i>			5		No
Brown-headed Cowbird	<i>Molothrus ater</i>			5		No
<b>Chipping Sparrow</b>	<i>Spizella passerina</i>			5		No
<b>Station B</b>						
Common Grackle	<i>Quiscalus quiscula</i>			5		No
<b>Eastern Meadowlark*</b>	<i>Sturnella magna</i>			5	3	No
Eastern Wood-pewee	<i>Contopus virens</i>			5		No
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			5		No
<b>Mourning Dove</b>	<i>Zenaida macroura</i>			5		No
Northern Cardinal	<i>Cardinalis cardinalis</i>			5		No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
<b>Red-winged Blackbird</b>	<i>Agelaius phoeniceus</i>			5		No
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>			5		No
Song Sparrow	<i>Melospiza melodia</i>			5		No
Wood Thrush	<i>Hylocichla mustelina</i>			5	4	No
<b>Station C</b>						
<b>American Crow</b>	<i>Corvus brachyrhynchos</i>			5		No
<b>Black-capped Chickadee</b>	<i>Poecile atricapillus</i>			5	4	No
<b>Chipping Sparrow</b>	<i>Spizella passerina</i>			5		No
Eastern Wood-pewee	<i>Contopus virens</i>			5		No

COMMON NAME	SCIENTIFIC NAME	COSSARO	COSEWIC	PROVINCIAL RANK	BSC PRIORITY	NHIC
Indigo Bunting	Passerina cyanea			5		No
<b>Mourning Dove</b>	Zenaida macroura			5		No
Mourning Warbler	Oporornis philadelphia			5	2	No
Northern Cardinal	Cardinalis cardinalis			5		No
<b>Red-eyed Vireo</b>	Vireo olivaceus			5		No
Rose-breasted Grosbeak	Pheucticus ludovicianus			5		No
<b>Station D</b>						
<b>American Crow</b>	Corvus brachyrhynchos			5		No
Black-capped Chickadee	Poecile atricapillus			5	4	No
Black-throated Green Warbler*	Dendroica virens			5	1	No
Chipping Sparrow	Spizella passerina			5		No
Great Crested Flycatcher	Myiarchus crinitus			5		No
Ovenbird*	Seiurus aurocapillus			5	4	No
<b>Red-eyed Vireo</b>	Vireo olivaceus			5		No
Song Sparrow	Melospiza melodia			5		No
<b>Station E</b>						
<b>American Crow</b>	Corvus brachyrhynchos			5		No
American Goldfinch	Carduelis tristis			5	3	No
Black-throated Green Warbler*	Dendroica virens			5	1	No
Blue Jay	Cyanocitta cristata			5		No
Brown Thrasher	Toxostoma rufum			5	1	No
Chipping Sparrow	Spizella passerina			5		No
Common Yellowthroat	Geothlypis trichas			5		No
Eastern Meadowlark*	Sturnella magna			5	3	No
Great Crested Flycatcher	Myiarchus crinitus			5		No
<b>Indigo Bunting</b>	Passerina cyanea			5		No
Mourning Dove	Zenaida macroura			5		No
Northern Cardinal	Cardinalis cardinalis			5		No
Red-eyed Vireo	Vireo olivaceus			5		No
Red-winged Blackbird	Agelaius phoeniceus			5		No
Rose-breasted Grosbeak	Pheucticus ludovicianus			5		No

\*Species that are Area Sensitive or require Forest Interior habitats; Species in bold are considered *Probable Breeders*.





**Figure 5: Bird monitoring locations at Cane Tract.**

## LONG SAULT CONSERVATION AREA

Two additional monitoring routes were established within the Long Sault C.A. in 2009. A southern route (6 stations) and a northern route (7 stations) are shown in Figure 6. The results of the surveys are presented in Table 6. Species believed to be nesting around each station are shown in bold, and species that are considered area-sensitive or forest interior specialist are identified with an asterisk.

A high diversity of area-sensitive species was observed, which is not surprising given the size and location of the Long Sault Conservation Area. Probable breeders included grassland birds such as Grasshopper Sparrow and Savannah Sparrow, and forest birds such as Scarlet Tanager, Ovenbird, and Pine Warbler. This extensive and diverse list of species is indicative of Long Sault's size, quality, and diversity of habitat types.

One species at risk was observed over the course of these surveys: Olive-sided Flycatcher. This species is listed as Special Concern in Ontario and Threatened in Canada, and is tracked by the NHIC. This species is not thought to be breeding in the area as it was recorded only once and Long Sault is outside of its preferred range. Olive-sided Flycatchers are late migrants, often arriving during survey windows, and are known to call during migration (Cadman et al., 2007). As such, it is expected that the individual observed during this survey was a migrant; however, its presence, even briefly, is still significant because it demonstrates the importance of Conservation Areas, and natural areas in general, in contributing to and supporting the overall success of species at risk.

Numerous species of conservation concern were also noted on site, including Chestnut-sided Warbler, Eastern Bluebird, Clay-colored Sparrow, and Nashville Warbler. Again, this high number of priority species demonstrates the quantity and quality of the habitats present at Long Sault C.A.

**Table 6: Bird monitoring results for Long Sault C.A. (2009)**

COMMON NAME	SCIENTIFIC NAME	COSSARO	COSEWIC	PROVINCIAL RANK	BSC PRIORITY	NHIC
Station A						
<b>Alder Flycatcher</b>	<i>Empidonax alnorum</i>			5	3	No
<b>American Crow</b>	<i>Corvus brachyrhynchos</i>			5		No
American Goldfinch	<i>Carduelis tristis</i>			5	3	No
American Kestrel	<i>Falco sparverius</i>			5	2	No
Black-and-white Warbler*	<i>Mniotilta varia</i>			5	3	No
Black-capped Chickadee	<i>Poecile atricapillus</i>			5	4	No
<b>Blue Jay</b>	<i>Cyanocitta cristata</i>			5		No
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>			5	1	No
Clay-colored Sparrow	<i>Spizella pallida</i>			4	1	No
Common Grackle	<i>Quiscalus quiscula</i>			5		No
<b>Common Yellowthroat</b>	<i>Geothlypis trichas</i>			5		No
Eastern Kingbird	<i>Tyrannus tyrannus</i>			5	3	No
Eastern Towhee	<i>Pipilo erythrophthalmus</i>			4	2	No



COMMON NAME	SCIENTIFIC NAME	COSSARO	COSEWIC	PROVINCIAL RANK	BSC PRIORITY	NHIC
<b>Field Sparrow</b>	<i>Spizella pusilla</i>			5	3	No
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			5		No
Indigo Bunting	<i>Passerina cyanea</i>			5		No
Mourning Dove	<i>Zenaida macroura</i>			5		No
Pine Warbler*	<i>Dendroica pinus</i>			5	3	No
Red-winged Blackbird	<i>Agelaius phoeniceus</i>			5		No
<b>Rose-breasted Grosbeak</b>	<i>Pheucticus ludovicianus</i>			5		No
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>			5		No
Ruby-throated Hummingbird	<i>Archilochus colubris</i>			5	3	No
<b>Song Sparrow</b>	<i>Melospiza melodia</i>			5		No
Song Sparrow	<i>Melospiza melodia</i>			5		No
Yellow Warbler	<i>Dendroica petechia</i>			5		No
<b>Station B</b>						
American Crow	<i>Corvus brachyrhynchos</i>			5		No
American Robin	<i>Turdus migratorius</i>			5		No
Black-and-white Warbler*	<i>Mniotilta varia</i>			5	3	No
Black-throated Green Warbler*	<i>Dendroica virens</i>			5	1	No
<b>Blue Jay</b>	<i>Cyanocitta cristata</i>			5		No
<b>Chestnut-sided Warbler</b>	<i>Dendroica pensylvanica</i>			5	1	No
Mourning Warbler	<i>Oporornis philadelphia</i>			5	2	No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
<b>Station C</b>						
American Crow	<i>Corvus brachyrhynchos</i>			5		No
American Goldfinch	<i>Carduelis tristis</i>			5	3	No
American Robin	<i>Turdus migratorius</i>			5		No
Black-capped Chickadee	<i>Poecile atricapillus</i>			5	4	No
<b>Blue Jay</b>	<i>Cyanocitta cristata</i>			5		No
Bobolink*	<i>Dolichonyx oryzivorus</i>			4	2	No
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>			5	1	No
Chipping Sparrow	<i>Spizella passerina</i>			5		No
Common Yellowthroat	<i>Geothlypis trichas</i>			5		No
Eastern Kingbird	<i>Tyrannus tyrannus</i>			5	3	No
Eastern Towhee	<i>Pipilo erythrophthalmus</i>			4	2	No
<b>Grasshopper Sparrow*</b>	<i>Ammodramus savannarum</i>			4	3	No
Indigo Bunting	<i>Passerina cyanea</i>			5		No
<b>Savannah Sparrow*</b>	<i>Passerculus sandwichensis</i>			5	1	No
<b>Song Sparrow</b>	<i>Melospiza melodia</i>			5		No
Tree Swallow	<i>Tachycineta bicolor</i>			5		No
<b>Station D</b>						
American Goldfinch	<i>Carduelis tristis</i>			5	3	No
American Kestrel	<i>Falco sparverius</i>			5	2	No
American Robin	<i>Turdus migratorius</i>			5		No
Barn Swallow	<i>Hirundo rustica</i>			5	3	No

COMMON NAME	SCIENTIFIC NAME	COSSARO	COSEWIC	PROVINCIAL RANK	BSC PRIORITY	NHIC
<b>Blue Jay</b>	<i>Cyanocitta cristata</i>			5		No
Broad-winged Hawk*	<i>Buteo platypterus</i>			5	1	No
Common Grackle	<i>Quiscalus quiscula</i>			5		No
Common Yellowthroat	<i>Geothlypis trichas</i>			5		No
Eastern Phoebe	<i>Sayornis phoebe</i>			5	3	No
<b>Eastern Wood-pewee</b>	<i>Contopus virens</i>			5		No
Field Sparrow	<i>Spizella pusilla</i>			5	3	No
<b>Grasshopper Sparrow*</b>	<i>Ammodramus savannarum</i>			4	3	No
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			5		No
<b>Indigo Bunting</b>	<i>Passerina cyanea</i>			5		No
Northern Flicker	<i>Colaptes auratus</i>			5		No
Northern Harrier*	<i>Circus cyaneus</i>		N	4	4	No
Ovenbird*	<i>Seiurus aurocapillus</i>			5	4	No
Red-tailed Hawk	<i>Buteo jamaicensis</i>		N	5		No
<b>Red-winged Blackbird</b>	<i>Agelaius phoeniceus</i>			5		No
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>			5		No
Savannah Sparrow*	<i>Passerculus sandwichensis</i>			5	1	No
<b>Song Sparrow</b>	<i>Melospiza melodia</i>			5		No
Tree Swallow	<i>Tachycineta bicolor</i>			5		No
Warbling Vireo	<i>Vireo gilvus</i>			5		No
<b>Station E</b>						
American Crow	<i>Corvus brachyrhynchos</i>			5		No
American Goldfinch	<i>Carduelis tristis</i>			5	3	No
Belted Kingfisher	<i>Ceryle alcyon</i>			5		No
Black-capped Chickadee	<i>Poecile atricapillus</i>			5	4	No
Blue Jay	<i>Cyanocitta cristata</i>			5		No
Brown-headed Cowbird	<i>Molothrus ater</i>			5		No
<b>Chipping Sparrow</b>	<i>Spizella passerina</i>			5		No
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			5		No
<b>House Wren</b>	<i>Troglodytes aedon</i>			5		No
<b>Indigo Bunting</b>	<i>Passerina cyanea</i>			5		No
Mourning Dove	<i>Zenaidura macroura</i>			5		No
Ovenbird*	<i>Seiurus aurocapillus</i>			5	4	No
Red-breasted Nuthatch*	<i>Sitta canadensis</i>			5	3	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>			5		No
Yellow Warbler	<i>Dendroica petechia</i>			5		No
<b>Station F</b>						
<b>American Goldfinch</b>	<i>Carduelis tristis</i>			5	3	No
Black-throated Green Warbler*	<i>Dendroica virens</i>			5	1	No
<b>Blue Jay</b>	<i>Cyanocitta cristata</i>			5		No
Blue-winged Warbler	<i>Vermivora pinus</i>			4	1	No
Brown Thrasher	<i>Toxostoma rufum</i>			5	1	No
Clay-colored Sparrow	<i>Spizella pallida</i>			4	1	No

COMMON NAME	SCIENTIFIC NAME	COSSARO	COSEWIC	PROVINCIAL RANK	BSC PRIORITY	NHIC
<b>Eastern Bluebird</b>	<i>Sialia sialis</i>		N	4	1	No
Eastern Wood-pewee	<i>Contopus virens</i>			5		No
<b>Field Sparrow</b>	<i>Spizella pusilla</i>			5	3	No
Grasshopper Sparrow*	<i>Ammodramus savannarum</i>			4	3	No
<b>House Wren</b>	<i>Troglodytes aedon</i>			5		No
<b>Indigo Bunting</b>	<i>Passerina cyanea</i>			5		No
Nashville Warbler	<i>Vermivora ruficapilla</i>			5	1	No
Northern Cardinal	<i>Cardinalis cardinalis</i>			5		No
Ovenbird*	<i>Seiurus aurocapillus</i>			5	4	No
Red-eyed Vireo	<i>Vireo olivaceus</i>			5		No
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>			5		No
Song Sparrow	<i>Melospiza melodia</i>			5		No
<b>Tree Swallow</b>	<i>Tachycineta bicolor</i>			5		No
<b>Station A (North)</b>						
American Robin	<i>Turdus migratorius</i>			5		No
Black-capped Chickadee	<i>Poecile atricapillus</i>			5	4	No
Blue Jay	<i>Cyanocitta cristata</i>			5		No
<b>Chestnut-sided Warbler</b>	<i>Dendroica pensylvanica</i>			5	1	No
<b>Chipping Sparrow</b>	<i>Spizella passerina</i>			5		No
<b>Eastern Wood-pewee</b>	<i>Contopus virens</i>			5		No
<b>Field Sparrow</b>	<i>Spizella pusilla</i>			5	3	No
House Wren	<i>Troglodytes aedon</i>			5		No
Mourning Warbler	<i>Oporornis philadelphia</i>			5	2	No
Nashville Warbler	<i>Vermivora ruficapilla</i>			5	1	No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
<b>Pine Warbler*</b>	<i>Dendroica pinus</i>			5	3	No
<b>Red-breasted Nuthatch*</b>	<i>Sitta canadensis</i>			5	3	No
Scarlet Tanager*	<i>Piranga olivacea</i>			5	2	No
<b>Station B (North)</b>						
American Crow	<i>Corvus brachyrhynchos</i>			5		No
Black-throated Green Warbler*	<i>Dendroica virens</i>			5	1	No
<b>Great Crested Flycatcher</b>	<i>Myiarchus crinitus</i>			5		No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
Scarlet Tanager*	<i>Piranga olivacea</i>			5	2	No
Veery*	<i>Catharus fuscescens</i>			4	3	No
Wood Thrush	<i>Hylocichla mustelina</i>			5	4	No
<b>Station C (North)</b>						
American Robin	<i>Turdus migratorius</i>			5		No
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>			5	1	No
Eastern Wood-pewee	<i>Contopus virens</i>			5		No
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			5		No
<b>Indigo Bunting</b>	<i>Passerina cyanea</i>			5		No
<b>Mourning Warbler</b>	<i>Oporornis philadelphia</i>			5	2	No

COMMON NAME	SCIENTIFIC NAME	COSSARO	COSEWIC	PROVINCIAL RANK	BSC PRIORITY	NHIC
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
<b>Pine Warbler*</b>	<i>Dendroica pinus</i>			5	3	No
<b>Red-breasted Nuthatch*</b>	<i>Sitta canadensis</i>			5	3	No
Red-eyed Vireo	<i>Vireo olivaceus</i>			5		No
Scarlet Tanager*	<i>Piranga olivacea</i>			5	2	No
<b>Station D (North)</b>						
American Crow	<i>Corvus brachyrhynchos</i>			5		No
American Robin	<i>Turdus migratorius</i>			5		No
Black-throated Green Warbler*	<i>Dendroica virens</i>			5	1	No
Blue Jay	<i>Cyanocitta cristata</i>			5		No
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>			5	1	No
Eastern Wood-pewee	<i>Contopus virens</i>			5		No
Indigo Bunting	<i>Passerina cyanea</i>			5		No
Northern Waterthrush	<i>Seiurus noveboracensis</i>			5	2	No
Ovenbird*	<i>Seiurus aurocapillus</i>			5	4	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
Veery*	<i>Catharus fuscescens</i>			4	3	No
<b>Station E (North)</b>						
<b>American Robin</b>	<i>Turdus migratorius</i>			5		No
Black-capped Chickadee	<i>Poecile atricapillus</i>			5	4	No
<b>Blue Jay</b>	<i>Cyanocitta cristata</i>			5		No
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>			5	1	No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
Red-eyed Vireo	<i>Vireo olivaceus</i>			5		No
<b>Scarlet Tanager*</b>	<i>Piranga olivacea</i>			5	2	No
Veery*	<i>Catharus fuscescens</i>			4	3	No
<b>Station F (North)</b>						
American Goldfinch	<i>Carduelis tristis</i>			5	3	No
Black-capped Chickadee	<i>Poecile atricapillus</i>			5	4	No
Black-throated Blue Warbler*	<i>Dendroica caerulescens</i>			5	3	No
<b>Black-throated Green Warbler*</b>	<i>Dendroica virens</i>			5	1	No
Olive-sided Flycatcher	<i>Contopus cooperi</i>	S	T	4	2	Yes
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
Red-breasted Nuthatch*	<i>Sitta canadensis</i>			5	3	No
<b>Red-eyed Vireo</b>	<i>Vireo olivaceus</i>			5		No
Scarlet Tanager*	<i>Piranga olivacea</i>			5	2	No
Wood Thrush	<i>Hylocichla mustelina</i>			5	4	No
<b>Station G (North)</b>						
American Crow	<i>Corvus brachyrhynchos</i>			5		No
American Robin	<i>Turdus migratorius</i>			5		No
Cedar Waxwing	<i>Bombicilla cedrorum</i>			5		No
<b>Ovenbird*</b>	<i>Seiurus aurocapillus</i>			5	4	No
Red-eyed Vireo	<i>Vireo olivaceus</i>			5		No
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>			5		No

\*Species that are Area Sensitive or require Forest Interior habitats; Species in bold are considered *Probable Breeders*.



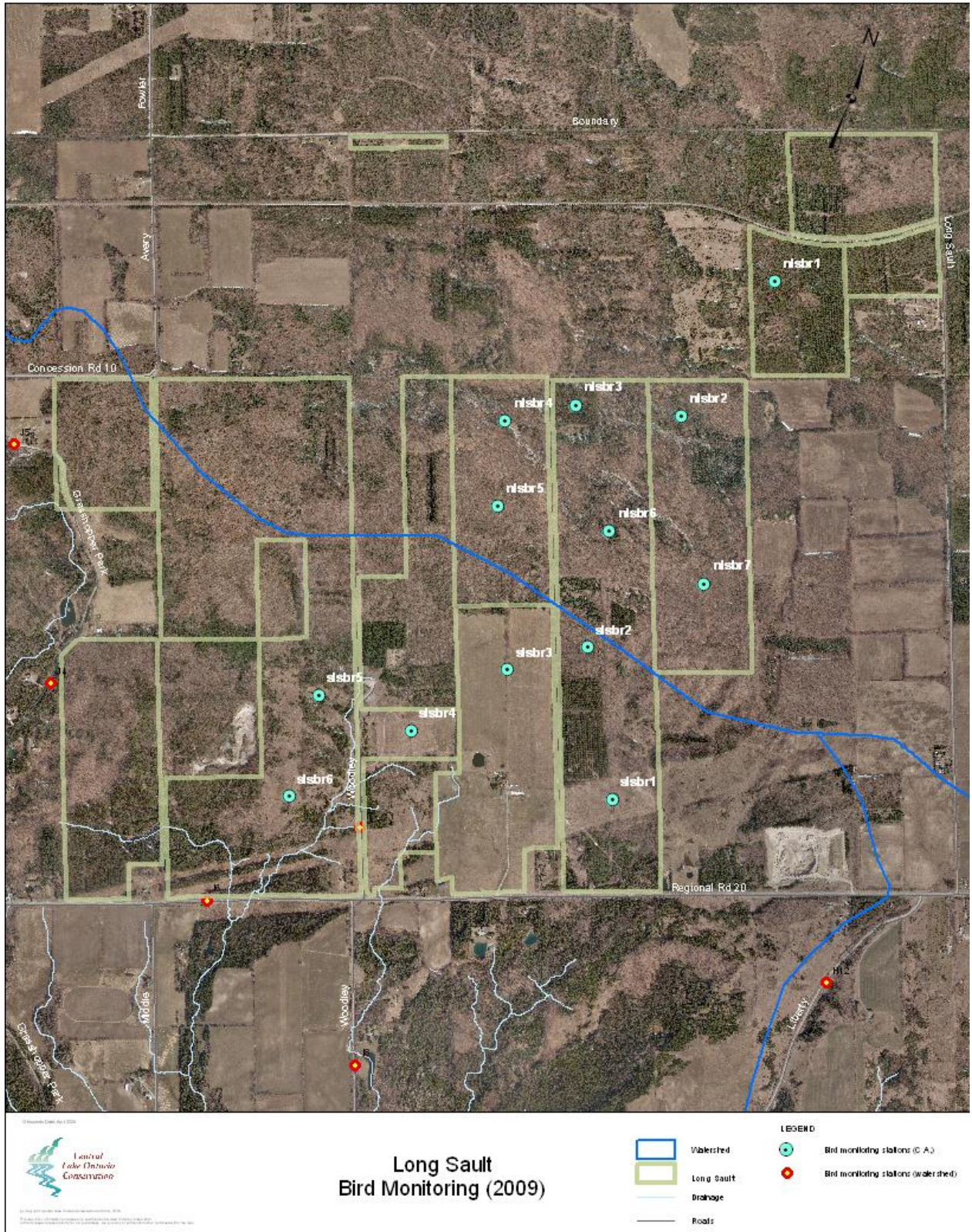


Figure 6: Bird monitoring locations at Long Sault C.A.



## 2.2 Watershed Management

In 2009, the Bowmanville – Soper watershed was monitored to gather information on habitat quality and wildlife diversity for inclusion in the Bowmanville – Soper Watershed Existing Conditions Report (Draft Report due out in 2011). Table 7 summarizes the birds that were seen in the watershed in the spring of 2009. The locations of the monitoring points throughout the watershed are shown in Figure 7.

In total, 82 different bird species were observed within the various habitats in the Bowmanville – Soper watershed. None of the species identified are species at risk in Ontario, however many of them are area-sensitive. These species are generally sensitive to disturbance and prefer to nest in large, contiguous habitat patches. This group includes Black-throated Blue Warbler, Bobolink, Grasshopper Sparrow, and White-breasted Nuthatch, and their presence indicates that there are some higher quality habitats available in this watershed. Area-sensitive species are identified with an asterisk in Table 7.

Species highlighted in bold are confirmed breeders as they were observed nest-building, feeding young, or sitting on a nest. All other species on the list are considered *possible breeders* because the watershed surveys were only conducted once, so it is not possible to assign a higher breeding certainty.

None of the species observed are tracked by the NHIC, however, several species of conservation concern were noted. These include Black-throated Green Warbler, Brown Thrasher, Nashville Warbler, and Savannah Sparrow. Generally, species included on this list are done so because of habitat loss, so the presence of some higher priority species in the watershed is encouraging.

Incidental observations of other wildlife, such as coyote, green frog, red fox, and white-tailed deer were also recorded during the surveys. These observations are also included in Table 7.



**Table 7: Wildlife observed throughout the Bowmanville – Soper watershed in 2009.**

COMMON NAME	SCIENTIFIC NAME	COSEWIC	COSSARO	PROVINCIAL RANK	BSC PRIORITY
Birds					
Alder Flycatcher	<i>Empidonax alnorum</i>			5	3
American Crow	<i>Corvus brachyrhynchos</i>			5	
American Goldfinch	<i>Carduelis tristis</i>			5	3
American Kestrel	<i>Falco sparverius</i>			5	

COMMON NAME	SCIENTIFIC NAME	COSEWIC	COSSARO	PROVINCIAL RANK	BSC PRIORITY
American Redstart*	<i>Setophaga ruticilla</i>			5	2
<b>American Robin</b>	<i>Turdus migratorius</i>			5	
Baltimore Oriole	<i>Icterus galbula</i>			5	
Bank Swallow	<i>Riparia riparia</i>			5	2
Barn Swallow	<i>Hirundo rustica</i>			5	3
Belted Kingfisher	<i>Ceryle alcyon</i>			5	
Black-and-white Warbler*	<i>Mniotilta varia</i>			5	3
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>			4	2
Black-capped Chickadee	<i>Poecile atricapillus</i>			5	4
Black-throated Blue Warbler*	<i>Dendroica caerulescens</i>			5	
Black-throated Green Warbler*	<i>Dendroica virens</i>			5	1
Blue Jay	<i>Cyanocitta cristata</i>			5	
Bobolink*	<i>Dolichonyx oryzivorus</i>			4	2
Brown Thrasher	<i>Toxostoma rufum</i>			5	1
Brown-headed Cowbird	<i>Molothrus ater</i>			5	
Canada Goose	<i>Branta canadensis</i>			5	
Cedar Waxwing	<i>Bombycilla cedrorum</i>			5	
<b>Chipping Sparrow</b>	<i>Spizella passerina</i>			5	
Common Grackle	<i>Quiscalus quiscula</i>			5	
Common Yellowthroat	<i>Geothlypis trichas</i>			5	
Cooper's Hawk*	<i>Accipiter cooperii</i>			4	3
Downy Woodpecker	<i>Picoides pubescens</i>			5	
Eastern Kingbird	<i>Tyrannus tyrannus</i>			5	3
Eastern Meadowlark*	<i>Sturnella magna</i>			5	3
<b>Eastern Phoebe</b>	<i>Sayornis phoebe</i>			5	3
Eastern Wood-pewee	<i>Contopus virens</i>			5	
European Starling	<i>Sturnus vulgaris</i>				
Field Sparrow	<i>Spizella pusilla</i>			5	3
Grasshopper Sparrow*	<i>Ammodramus savannarum</i>			4	3
<b>Gray Catbird</b>	<i>Dumetella carolinensis</i>			5	4
Great Blue Heron	<i>Ardea herodias</i>			5	
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			5	
Green Heron	<i>Butorides virescens</i>			4	4
<b>Hairy Woodpecker*</b>	<i>Picoides villosus</i>			5	
House Sparrow	<i>Passer domesticus</i>				
House Wren	<i>Troglodytes aedon</i>			5	
Indigo Bunting	<i>Passerina cyanea</i>			5	
Killdeer	<i>Charadrius vociferus</i>			5	
Mallard	<i>Anas platyrhynchos</i>			5	
Marsh Wren	<i>Cistothorus palustris</i>			5	2
Merlin	<i>Falco columbarius</i>	N		4	
Mourning Dove	<i>Zenaida macroura</i>			5	
Mourning Warbler	<i>Oporornis philadelphia</i>			5	2
Mute Swan	<i>Cygnus olor</i>				

COMMON NAME	SCIENTIFIC NAME	COSEWIC	COSSARO	PROVINCIAL RANK	BSC PRIORITY
Nashville Warbler	<i>Vermivora ruficapilla</i>			5	1
Northern Cardinal	<i>Cardinalis cardinalis</i>			5	
Northern Flicker	<i>Colaptes auratus</i>			5	
Northern Harrier*	<i>Circus cyaneus</i>	N		4	4
Orchard Oriole	<i>Icterus spurius</i>				4
Osprey	<i>Pandion haliaetus</i>			4	2
Ovenbird*	<i>Seiurus aurocapillus</i>			5	4
Pileated Woodpecker*	<i>Dryocopus pileatus</i>			4	2
Pine Warbler*	<i>Dendroica pinus</i>			5	3
Purple Martin	<i>Progne subis</i>			4	2
Red-breasted Nuthatch*	<i>Sitta canadensis</i>			5	3
Red-eyed Vireo	<i>Vireo olivaceus</i>			5	
Red-tailed Hawk	<i>Buteo jamaicensis</i>			5	
<b>Red-winged Blackbird</b>	<i>Agelaius phoeniceus</i>			5	
Ring-billed Gull	<i>Larus delawarensis</i>			5	
Ring-necked Duck	<i>Aythya collaris</i>			5	3
Ring-necked Pheasant	<i>Phasianus colchicus</i>				
Rock Dove	<i>Columba livia</i>				
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>			5	
<b>Ruffed Grouse</b>	<i>Bonasa umbellus</i>			5	3
Savannah Sparrow*	<i>Passerculus sandwichensis</i>			5	1
Scarlet Tanager*	<i>Piranga olivacea</i>			5	2
<b>Song Sparrow</b>	<i>Melospiza melodia</i>			5	
Swamp Sparrow	<i>Melospiza georgiana</i>			5	2
<b>Tree Swallow</b>	<i>Tachycineta bicolor</i>			5	
Turkey Vulture	<i>Cathartes aura</i>			4	4
Veery*	<i>Catharus fuscescens</i>			4	3
<b>Warbling Vireo</b>	<i>Vireo gilvus</i>			5	
White-breasted Nuthatch*	<i>Sitta carolinensis</i>			5	
Wild Turkey	<i>Meleagris gallopavo</i>			4	
Willow Flycatcher	<i>Empidonax traillii</i>			5	
Winter Wren*	<i>Troglodytes troglodytes</i>			5	3
Wood Thrush	<i>Hylocichla mustelina</i>			5	4
Yellow Warbler	<i>Dendroica petechia</i>			5	
<b>Mammals</b>					
Coyote	<i>Canis latrans</i>			5	
Eastern Cottontail	<i>Sylvilagus floridanus</i>			5	
Mink	<i>Mustela vison</i>			5	
Muskrat	<i>Ondatra zibethicus</i>			5	
<b>Raccoon</b>	<i>Procyon lotor</i>			5	
Red Fox	<i>Vulpes vulpes</i>			5	
White-tailed Deer	<i>Odocoileus virginianus</i>			5	
<b>Amphibians</b>					
Green Frog	<i>Rana clamitans</i>			5	

\*Area-sensitive; **Confirmed breeding**

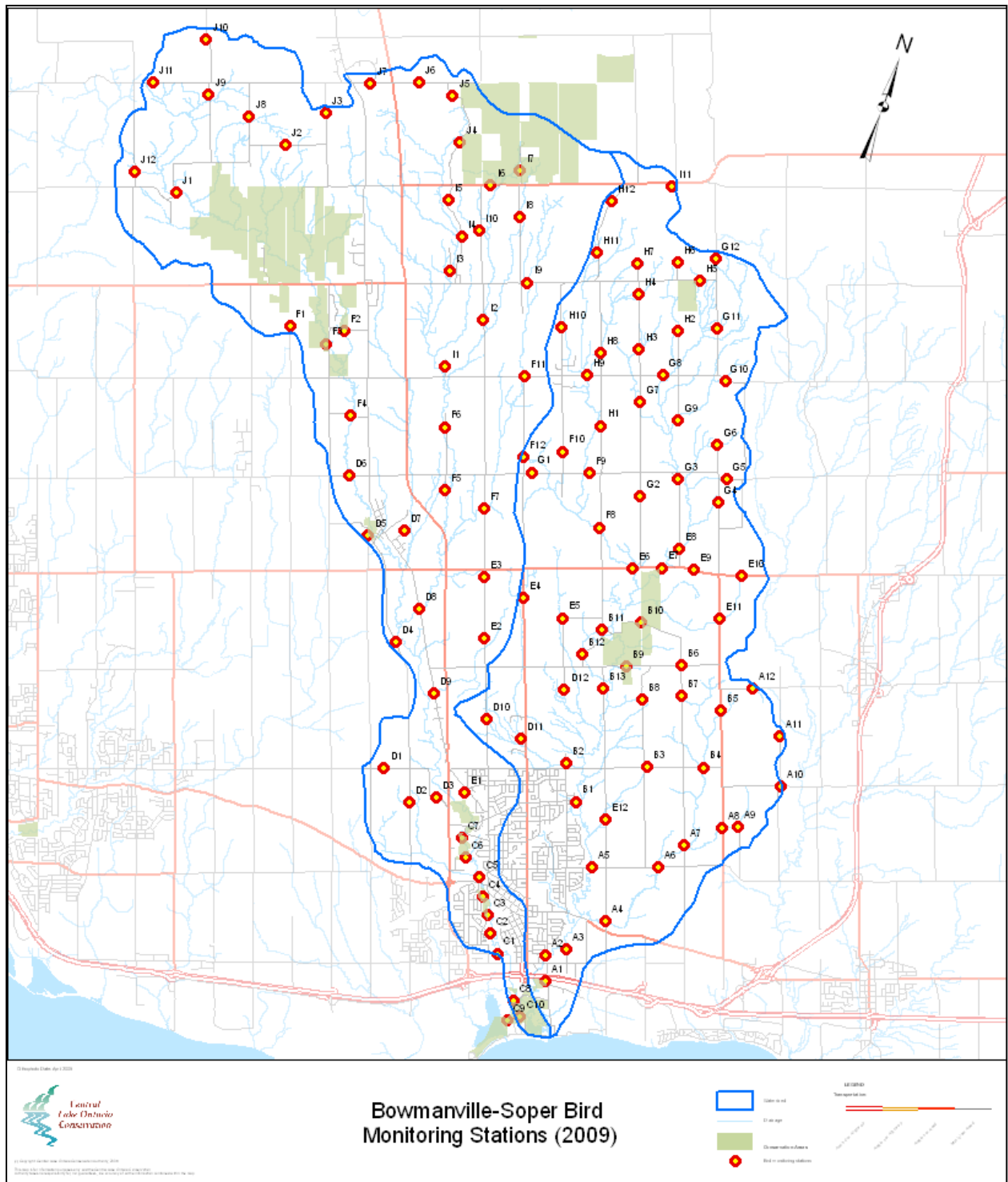


Figure 7: Bird monitoring points in the Bowmanville-Soper watershed.



## 3.0 AMPHIBIAN MONITORING

### 3.1 Frogs & Toads

#### 3.1.1 Durham Region Coastal Wetland Monitoring Project

Wildlife data collected through the DRCWM Project is published every 5 years by Environment Canada. Please refer to the *2009 Durham Region Coastal Wetland Monitoring Project 5-year Technical Report* (currently in draft format) for specific information relating to amphibians in the Lynde Shores and Bowmanville-Westside Marshes Conservation Areas.

#### 3.1.2 Hampton Pond

Frog and Toad monitoring at Hampton Pond identified numerous amphibians breeding on site (Table 8). The high diversity of species and presence of many individuals suggests that the pond is providing good quality amphibian habitat. Furthermore, the presence of Spring Peepers also suggests that water quality in the wetland is relatively good as well.

**Table 8: Amphibian monitoring results for Hampton Pond C.A. (2009)**

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
American Toad	<i>Bufo americanus</i>	Spring Peeper	<i>Pseudacris crucifer</i>
Northern Leopard Frog	<i>Rana pipiens</i>	Gray Treefrog	<i>Hyla versicolor</i>
Green Frog	<i>Rana clamitans</i>		

### 3.2 Salamanders

Salamander plots were established in 2006 within the Heber Down and Lynde Shores Conservation Areas. Monitoring procedures for these plots follow the EMAN protocol (Parks Canada, 2004) which is discussed in detail in the CLOCA Wildlife Monitoring Program Report (2008).

Due to resource constraints, salamander plots were not surveyed in 2009. Sites will be re-surveyed in Spring 2010.

## 4.0 SPECIAL PROJECTS

Periodically, CLOCA undertakes monitoring projects which are not related to either Conservation Area management, coastal wetland monitoring, or watershed management planning. These projects are discussed in the following sections.

### 4.1 Red-shouldered Hawk Surveys

The Ministry of Natural Resources (Aurora District), with assistance from partner agencies such as Conservation Authorities, implemented a Red-shouldered Hawk survey program in 2009. The purpose of the program was to re-visit known historical nesting sites to determine if nesting habitat still existed and was still being used by Red-shouldered Hawks. Additionally, areas where suitable Red-shouldered Hawk nesting habitat existed but no data had previously been collected were also surveyed in an effort to discover new nesting sites.

In the CLOCA jurisdiction, 8 historical sites and 11 new sites were visited (Figure 8). Sites were selected and surveyed following protocols set out by Bird Studies Canada (available online), and many of these new locations were within Conservation Areas because Red-shouldered Hawks are area-sensitive and prefer to nest in extensive, contiguous, mature, upland forest blocks (Cadman et al., 2007).

Results of the 2009 survey are displayed in Table 9. No Red-shouldered Hawks were observed or heard at any of the survey sites; however, the *Atlas of the Breeding Birds of Ontario, 2001-2005* (Cadman et al., 2007) indicates that breeding Red-shouldered Hawks were observed in numerous squares in the CLOCA jurisdiction. As such, it is probable that there are breeding Red-shouldered Hawks in this area but the spring surveys didn't pick them up. This may be due to inappropriate survey locations, inadequate broadcasting equipment, bad timing, or a combination of any of these factors.

**Table 9: Red-shouldered Hawk survey results (2009).**

EO NUMBER	UTM CENTROID (2009)	LOCATION	LAST OBSERVED	2009 SURVEY RESULTS			COMMENTS
				TIME (AM)	DATE (YYYY-MM-DD)	RESPONSE	
New	17 658958 4865660	CLOCA lands east of Audley Rd.	N/A	8:45	2009-05-05	No	
946	17 662087 4864985	Whitby Northwest	1963-04-27	7:00	2009-05-05	No	Raptor seen at location but could not be ID'd. Did not appear to be nesting - did not respond to recording.
New	17 662167 4866038	Heber Down C.A.	N/A	7:35	2009-05-05	No	
009	17 663674 4863450	Whitby North	1983	6:30	2009-05-05	No	

EO NUMBER	UTM CENTROID (2009)	LOCATION	LAST OBSERVED	2009 SURVEY RESULTS			COMMENTS
				TIME (AM)	DATE (YYYY-MM-DD)	RESPONSE	
947	17 668329 4867169	Oshawa Airport North	1964-05-02	9:20	2009-05-05	No	
518	17 672000 4866000	Oshawa North	1984-06-02	-	-	-	Not surveyed. No longer any suitable nesting habitat at this location.
948	17 674725 4865918	Taunton South	1963-04-17	6:30	2009-04-29	No	
949	17 676700 4866800	Mitchell's Corner South	1966-04-02	-	-	-	Not surveyed. No longer any suitable nesting habitat at this location.
New	17 678689 4867550	Solina	N/A	8:00	2009-04-29	No	
950	17 680459 4868510	Hampton Southwest	1964-05-02	9:35	2009-04-29	No	
New	17 676931 4869992	Solina Bog	N/A	9:00	2009-04-29	No	
951	17 686000 4865000	Bowmanville	1928-05-20	-	-	-	Not surveyed. No longer any suitable nesting habitat at this location.
New	17 686231 4870731	Stephen's Gulch West	N/A	7:00	2009-05-13	No	
New	17 686667 4871105	Stephen's Gulch East	N/A	7:45	2009-05-13	No	
New	17 678300 4874549	Enniskillen South	N/A	8:50	2009-05-12	No	
New	17 676728 4875438	Barton Rd	N/A	9:15	2009-05-12	No	
New	17 677027 4877587	Enniskillen North	N/A	9:30	2009-05-12	No	
New	17 679630 4880805	Long Sault	N/A	8:35	2009-05-13	No	
New	17 666706 4878068	Purple Woods	N/A	9:10	2009-05-13	No	

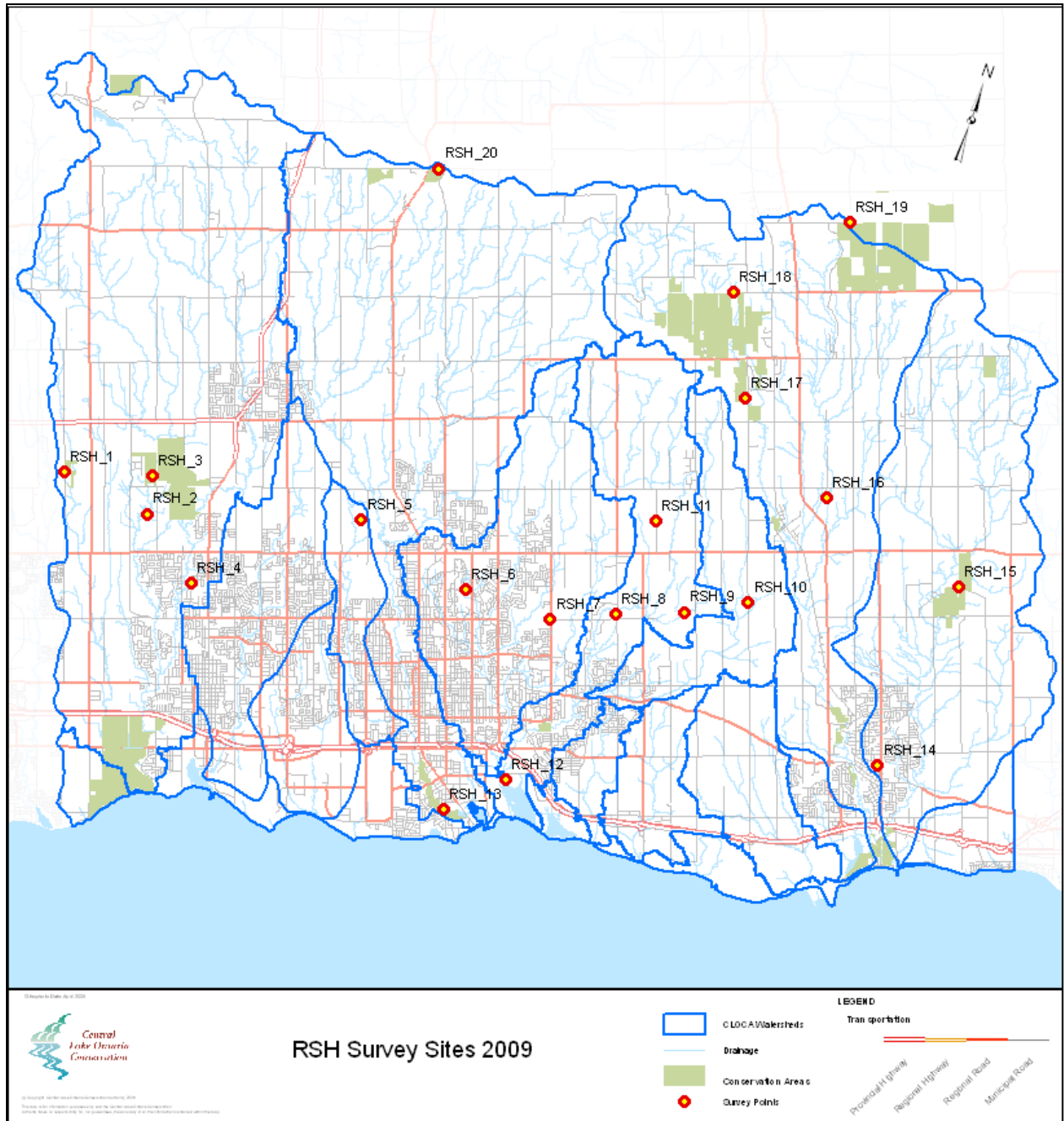


Figure 8: Red-shouldered Hawk survey locations in the CLOCA jurisdiction.



## 5.0 SPECIES AT RISK

In 2009, 2 species at risk records were added to the CLOCA species database. Both occurrences were from the Long Sault Conservation Area.



Photo courtesy of H. Sellers

The first report was of a Blanding's turtle along the Oak Ridges Trail. This is the first time this species has been observed at this Conservation Area. Blanding's turtle is a provincially and federally Threatened species.

The second observation was made by CLOCA staff while conducting bird monitoring at Long Sault and was of a Milksnake. This species is listed as Special Concern in both Canada and the province of Ontario.



Reports were submitted for both species to the Natural Heritage Information Centre for inclusion into their provincial database.

## 6.0 SUMMARY

Overall, the 2009 monitoring program was a success. All of the scheduled monitoring projects were completed on time except for one (salamander monitoring) and the information that was gathered was valuable.

CLOCA continues to strengthen its partnerships with Environment Canada and Bird Studies Canada by contributing data to the Forest Bird Monitoring Program and by coordinating the Durham Region Coastal Wetland Monitoring Project. CLOCA also continued to build its relationship with MNR by participating in the 2009 Red-shouldered Hawk surveys.

Important wildlife data was collected in the Long Sault, Cane Tract, and Stephen's Gulch Conservation Areas to assist Conservation Area Planners in developing and updating the Conservation Area Management Plans for these properties. This information helps to ensure that these C.A.s are managed to protect and enhance their unique natural heritage features.



The Bowmanville – Soper watershed was targeted for wildlife monitoring in 2009 and the data gathered offered valuable insight into the quality and diversity of habitat types available throughout the watershed. This information will assist Watershed Planners in developing the Bowmanville – Soper Existing Conditions Report and will help identify where future development should occur in the watershed.

Finally, 2 new species at risk observations were made for the CLOCA jurisdiction in 2009. These records were submitted to the Natural Heritage Information Centre as part of an ongoing agreement with the MNR.

## 7.0 REFERENCES

- Bird Studies Canada. A Citizen Scientist's Guide to Conducting Red-shouldered Hawk and Spring Woodpecker Surveys. Accessed on February 13, 2010. [<http://www.bsc-eoc.org/download/rshaguide.pdf>]
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