

NATURAL ENVIRONMENT LEVEL I STUDY



Potential Orchid Rarities Searched for in Forest

Prepared for:

Mr. D. Breadner
Part Lot 28, Concession XI
Former Collingwood now Town of Blue Mountains
County of Grey

PREPARED BY:

SAAR Environmental Limited

October 28, 2009

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EXECUTIVE SUMMARY

Mr. Dennis Breadner is seeking a Class 'A' License, Category 3 under the Aggregate Resources Act to for an aggregate extraction operation for approximately 11 hectares. Under Category 3, the pit operation is restricted to extracting aggregate material no closer than 1.5 metres above the established groundwater table. The property in question is legally referenced as Part Lot 28, Concession 11 in the former Collingwood Township, now part of the Town of the Blue Mountains, in the County of Grey.

The Breadner property is located on the west side of Grey County Road 13, approximately 1 kilometer southwest of the community of Clarksburg. The site is presently used for an apple orchard and it is understood that the site would return to this orchard use following the lifespan of the aggregate operation. Mr. Breadner owns additional lands adjacent to the eastern limits of the subject property, which are also west of Grey Road 13. These lands are also legally described as Part Lot 28, Concession 11 in the Geographic Township of Collingwood and are municipally identified as 788227 Grey Road 13. These additional lands owned by Mr. Breadner contain his residence and shop associated with the apple orchard.

One of the studies required under the 1997 Aggregate Resources Act is a Natural Environment Study. The purpose of the study is to determine whether aggregate extraction can occur without significant negative impact to the natural environment.

SAAR Environmental Ltd. was retained in the fall of 2008 to initiate the Natural Environment Level I Study which was completed in the following June of 2009 due to requiring full summer plant growth to assess rarities.

Study tasks included a review of all known environmental information, identify any sensitive areas and based on that; determine whether more field investigation and review in the form of a Level II report would be required. The Level I report found no cause to broaden the assignment to the next level.

Local rarities were searched based on our field notes in this Eco-District, including:

- Rare orchids
- Heart's-tongue Fern
- Red-shouldered Hawk
- Butternut
- Loggerhead Shrike
- Blandings Turtle

We also inspected the site for rare alvar vegetation types which were not present.

June morning bird reconnaissance also confirmed that no rare bird species were singing during the morning chorus.

Our Level I submission confirms that the proposed site alteration associated with extraction and access areas will not result in a significant negative impact to natural heritage features and functions if consistent with our recommended mitigation.

Mitigation includes timing restrictions on heavy machinery to avoid disruption during dawn and dusk sensitive periods for wildlife on the site, and a future restoration plan including native flora re-introduction based on our Ecological Planting Plan.

1.0 APPROACH

Before conducting our fieldwork we consulted existing significant area mapping from the following sources:

- *OMNR Mapping (Owen Sound OMNR)*
- *OMNR Aerial Photography (Wildlife Branch, Toronto)*
- *OMNR Rare Species Occurrence Report Mapping (NHIC)*
- *Ecological Life Science Inventory Reporting*
- *Township Environmental Mapping*
- *County Planning Documents*
- *Local Naturalist Species Lists*
- *OMNR Areas of Natural and Scientific Interest (ANSI) Mapping*
- *Inter-disciplinary studies (e.g. existing archaeology results)*
- *Current science reporting (e.g. Breeding Bird, Herpetofaunal and Mammal Atlas)*

1.1 INTRODUCTION

The Natural Heritage Section 2.1 of the Provincial Policy Statement (PPS) states that development adjacent to or in natural areas can proceed if the appropriate studies demonstrate sustainability. We summarized field results and assessment using these PPS natural area headings:

- *fish habitat*
- *significant wetlands in the Canadian Shield*
- *significant woodlands south and east of the Canadian Shield*
- *significant valleylands south and east of the Canadian Shield*
- *significant wildlife habitat, and*
- *significant areas of natural and scientific interest*

Many of our studies incorporate a four season approach to wildlife viewing, however the altered character of the site did not warrant that level of study because the majority of proposed expansion is planted apple orchard. We were able to address potential wildlife corridor paths during fall movement of White-tailed deer and bedding sites during our summer vegetation reconnaissance.

STUDY SITE

The following color plate identifies the proposed area of extraction on the landscape.

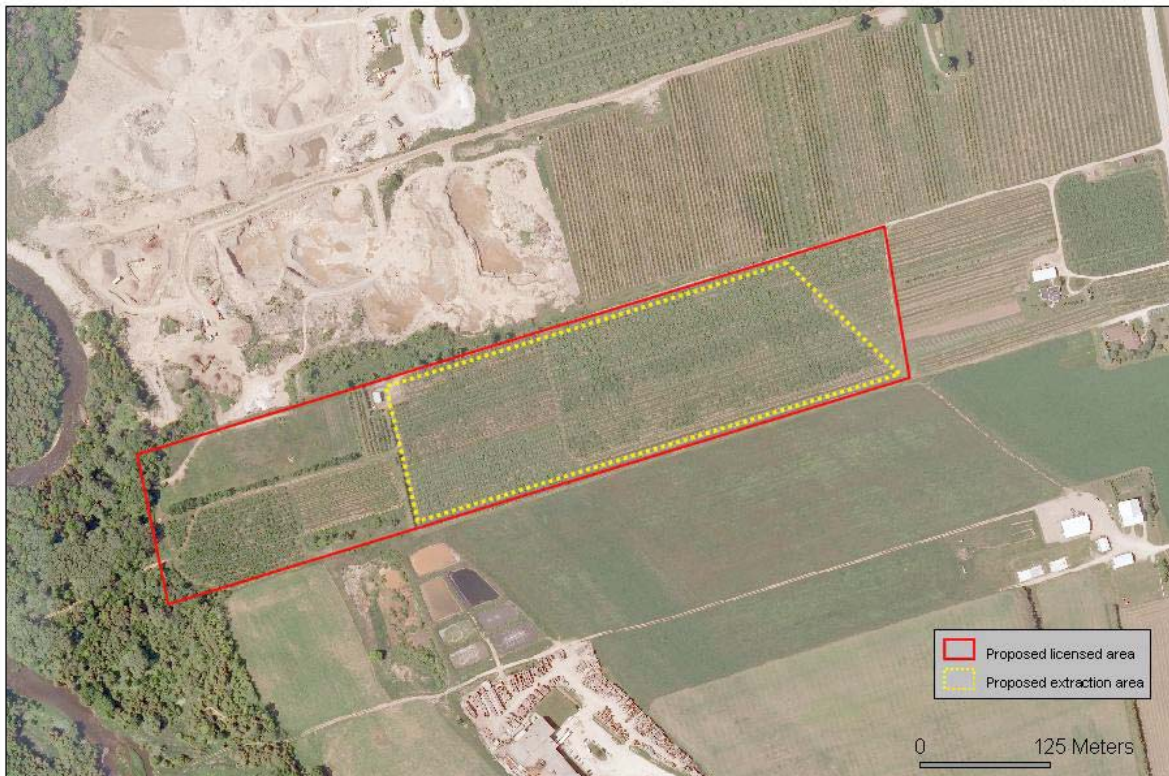


Figure 3. Proposed licensed and extraction areas

The results of our survey indicate that it would be prudent and perhaps also time effective if the applicant fine tuned the proposed location of license area such that all forested zones to the west remained well outside of the licensed area.

Typically based upon the interior forest breeding birds we inventoried within this woodlot our team would recommend a setback from development of at least 50 metres to buffer noise effects but also maintain a travel corridor for mammals at the periphery.

These often overlapping maps and zones to establish the license limit, setback limit and noise buffer limit for the natural area can be accommodated by adjusting the license area outside of the forest by 50 metres. The end result would be a wavy rather than straight line offset from the forest which the consulting planners have mapped for consideration.

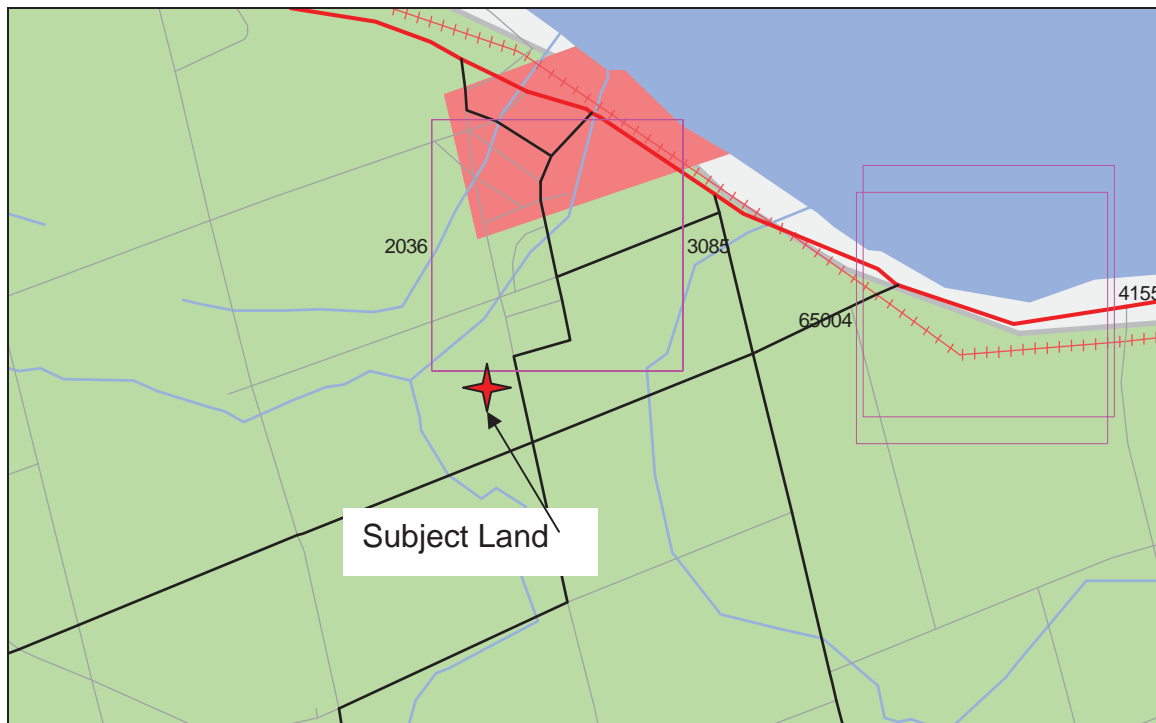
Landscape Level Connectivity

On a broader landscape level review, our team concluded that although there is a large neighboring quarry, wildlife are still afforded the riverine forested corridor of deciduous and mixed woodlot to the west of the extraction lands, and continued access across two portions of the parcels more open apple orchard.

1.2 NATURAL HERITAGE INFORMATION CENTRE

The Natural Heritage Information Centre (NHIC) is a provincial database, housed and manned by the OMNR in Peterborough, Ontario.

We reviewed the historical and present day sightings of rare species to help shape our field search before attending the site. The intent is that if rarities are found, they are afforded adequate conservation setbacks.



There are 1 element occurrence records in this area that you have public access to. Each occurrence record (EO_ID) may have more than one separate observation associated with it (i.e. more than one row in this table). Coordinates are rounded down to within 1km. Please contact the local MNR district office ecologist if you require more details for these records.

EO_ID	Scientific Name	Common Name	UTM Centroid (rounded)	Srank	MNR COSEWIC	Date
2036	<i>Hypericum</i>	Shrubby St. Johnswort	17 543000 4933000		S2	1943-08-19

Our site inspection confirmed the common St. Johnswort is present (*Hypericum perforatum*) but not the rare Shrubby St. Johnswort. (*Hypericum prolificum*).

The rare shrub is characterized by larger leaves and shorter petioles, as well as having clustered flowers on branch tips with three chambered pistils.

1.3 GENERAL SITE CHARACTER

The photo gallery indicates the disturbed character of the site, with the majority in a man made habitat of apple orchard, and a past extraction zone.

The western boundary of the site borders a deciduous forest. This requires setback from extraction and we also recommend a shortening of the proposed extraction limits to maintain separation of quarry noise from the forest interior bird community. We recommend refining the location of the license limit to 50m outside of the forest and riverine block.



Plate 1: Apple orchard and plough zones for archaeology test



Plate 2: Access road at White Cedar hedgerow past orchard



Plate 3: Specimen White Spruce and Staghorn Sumac border existing areas of prior aggregate disturbance

2.0 RESULTS

2.1 VEGETATION COMMUNITIES

Plant communities are described using the provincial **Nested ELC Community Unit** terminology of Lee, Bowles et al., (1998); a dichotomous ranking key providing a provincial standard for identifying and mapping vegetation communities and ultimately determining relative abundance and function for conservation purposes.

CUM1-1 DRY MOIST OLD FIELD MEADOW TYPE

This type of previously settled and disturbed habitat is referred to as anthropogenic, or man-made.

Present day incursion of weeds is evident and the meadows score high for weediness, dominated by Eastern Bracken Fern, Poison Ivy, Raspberry and clovers.

Native species include Cinquefoil, Mint (*Mentha arvensis*), Leatherwood (*Dirca palustris*), Poverty Grass (*Danthonia spicata*), Buttercup, Common Mullein, Cow Vetch and some Wheat.

RARITY SEARCH

The floral rarity with potential to be on this site is *Hypericum prolificum*. The three chambered seed in particular is a good characteristic in identifying this plant. Our fall search of seeds in 2008 did not uncover any such specimens.



During our searches for the 1942 historical record of Cinquefoil in the regional area, we found an interesting invading plant in the Sumac hedgerow, the English Hawthorn depicted below.



Plate 3: Invasive English Hawthorn (*Crataegus laevigata*) within Staghorn Sumac and White Cedar hedgerow

This is an ornamental tree and therefore a bit unusual to find within the Sumac, and in such healthy shape; typically the more ornamental Hawthorn varieties are subject to insect galls and blight.

2.2 SIGNIFICANCE

Our field observations have been summarized below using the terminology of Natural Heritage Section 2.1 of the current Provincial Policy Statement.

Significant habitat means ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or natural heritage system. Criteria for determining significance may be recommended by the Province, but municipal approaches that achieve the same objective may also be used.

Wildlife habitat

means areas where plants, animals and other organisms live, and find adequate amounts of food, water, shelter and space needed to sustain their populations. Specific wildlife habitats of concern may include areas where species concentrate at a vulnerable point in their annual or life cycle; and areas which are important to migratory or non-migratory species.

2.2.1 ENDANGERED SPECIES

Threatened species:

means any native species that is at risk of becoming endangered through all or a portion of its Ontario range if the limiting factors are not reversed.

Endangered species:

means any native species, as listed in the Regulations under the Endangered Species Act, that is at risk of extinction throughout all or a significant portion of its Ontario range if the limiting factors are not reversed.

We searched for potential local rarities based on our prior field notes within this Eco-District. Species included the Shrubby Cinquefoil, Butternut, Loggerhead Shrike and uncommon forest raptors including the Red-shouldered Hawk at the westerly forest border.

3.0 IMPACT ASSESSMENT

3.1 LANDSCAPE LEVEL

Aerial photography with adjacent land connections was obtained and reviewed to assess the potential for cumulative habitat loss across a larger area.

This is of particular importance because adjacent lands are currently quarried and being potentially expanded.

How the parcels articulate, if at all, with respect to wildlife movement and support needs to be addressed in this reporting.

Figure 1 indicates the proposed quarry and the existing adjacent quarry in red.

3.1.1 NATURAL HERITAGE CRITERIA

Natural heritage systems generally provide one or more of the following functions:

- *wildlife habitat*
- *safe passage for migrating wildlife through forested corridors*
- *transition habitat used by wildlife in seasonal concentrations*
- *wetland habitat for wildlife use for a portion or all of their life cycle*
- *coldwater stream and associated riparian habitat to wildlife*
- *wildlife refuges of early succession field and woodland*

To map landscape ecology in a meaningful way for planning, we illustrate a biophysical inventory of both the living (biotic) and non-living (abiotic) parts of nature. We use science based tools to assess the natural and physical environment following Bastedo's ABC Method (Bastedo, 1986).

Criteria for natural areas and landform on and near the study site used by our team included:

- *Life Science ANSI (Provincial Areas of Natural and Scientific Interest)*
- *ESA (Candidate Environmentally Sensitive Areas)*
- *Aquatic habitat*
- *Seepage zones*
- *Floodplains*
- *Steep slope top of bank setbacks for soil stability*
- *Groundwater discharge/recharge*
- *Aesthetic vistas*

LANDFORM

- *Unique landform (e.g. moraine, esker)*
- *Aesthetic vistas (e.g. views of 10-20 km)*
- *Earth Science ANSI (Areas of Natural and Scientific Interest as designated by the Province such as geodesic dyke rock folds)*

3.2 WILDLIFE CORRIDOR

Any observed “significant” use, based upon Significant Wildlife Habitat Technical Guide (OMNR, 2000) would result in a corridor width being derived and retained on a portion of the parcel.

Our fall inspections confirmed some meandering White-tailed deer but no established large track, pellet, rub, or broad pathway across the parcel.

Our summer inspections found three (3) bedding sites in the meadow vegetation unit which would still be available to the deer during and after extraction.

4.0 MONITORING

MOE notes that where nutrient (Phosphorus exceeding 0.030 mg/L) policies suggest:

Evaluations of existing conditions in problem areas shall be conducted and all reasonable and practical measures shall be taken to upgrade water quality to the Provincial Water Quality Objectives. Where new or expanded discharges are proposed, no further degradation will be permitted, and all practical measures shall be undertaken to upgrade water quality” (MOE, 1994).

In response to this policy, SAAR found no water features within the extraction area.

A riverine forested tract is located on lands adjacent to the potential quarry as seen on Figure 1.

It is our understanding that it is Mr. Breadner’s intention to extract the surficial sand and gravel to a level near the inferred groundwater elevation in accordance with the Category 3 extraction requirements. The Hydrogeological Assessment Report prepared by Genivar Consultants (formerly Henderson Paddon and Associates Ltd.) notes that excavation of the proposed pit would not result in significant impacts to the baseflow contribution to the river and local groundwater resources.

Monitoring for ecology purposes will therefore not focus on surfacewater quality given no surfacewater features are present on the subject property. Rather, the retention of some forest cover and meadow vegetation and enhancement through our planting plan.

5.0 MITIGATION SUMMARY

The impact of noisy machinery on wildlife present can be mitigated in part by:

1. Restricting machinery operation to daytime hours between 7 am – 7 pm daylight timetable through summer months to avoid noise effects during the more sensitive dawn and dusk period.
2. Retaining the maximum amount of tree and shrub borders to act as living buffers for noise effects.
3. Restoring some of the prior native vegetation content on the post quarry environment here through adherence to our recommended Ecological Planting Plan.

Respectfully submitted,



Linda Liisa Söber, H.B.Sc.
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SAAR Environmental Limited
LLS:lls

Glossary

Adjacent lands means those lands, contiguous to a specific natural heritage feature or area, where it is likely that development or site alteration would have a negative impact on the feature or area. The extent of the adjacent lands may be recommended by the Province or based on municipal approaches which achieve the same objectives.

Areas of natural and scientific interest (ANSI) means areas of land and water containing natural landscapes or features that have been identified as having values related to protection, natural heritage, scientific study or education. ANSIs may vary in level of significance. The most significant of these, Candidate Nature Reserves in the site district reports, may contribute to the achievement of the Ministry's protection objective. Those which do not contribute to the provincial protection objective are referred to as significant sites in the site district report.

Candidate nature reserve means sites selected on a systematic basis to represent the natural features and landscapes of Ontario and to complement other protected zones in the provincial park system. Candidate nature reserves contain the best examples of the landform and vegetation features of each site district; features that may be of widespread or restricted occurrence within the site district. They are selected after comparison and evaluation of significant sites sharing similar features. Each candidate nature reserve possesses sufficient ecological integrity, buffering capacity and size that protection appears to be a viable management strategy.

Development means the creation of a new lot, a change in land use, or the construction of buildings and structures, requiring approval under the Planning Act; but does not include activities that create or maintain infrastructure authorized under an environmental assessment process; or works subject to the Drainage Act.

Ecological functions means the natural processes, products or services that living and non-living environments provide or perform within or between species, ecosystems and landscapes. These may include biological, physical and socio-economic interactions.

Endangered species means any native species, as listed in the Regulations under the Endangered Species Act, that is at risk of extinction throughout all or a significant portion of its Ontario range if the limiting factors are not reversed.

Fish habitat means the spawning grounds and nursery, rearing, food supply, and migration areas on which fish depend directly or indirectly in order to carry out their life processes.

LD 50 is the lethal dose at which 50% of test organisms die from a single dose. **LC50** is the concentration of a substance in water lethal to 50% of a population of test organisms given a period of time (24-96 hours), while **EC50** tracks acute effects but not death, including avoidance, immobilization, behavior, respiration, food consumption, growth, physiological effects, reproductive effects and regeneration.

Natural heritage features and areas means features and areas, such as significant wetlands, fish habitats, significant woodlands south and east of the Canadian Shield, significant valleylands south and east of the Canadian Shield, significant portions of the habitat of endangered and threatened species, significant wildlife habitat, and significant areas of natural and scientific interest, which are important for their environmental and social values as a legacy of the natural landscapes of an area.

Negative impact

- a) means in regard to fish habitat, the harmful alteration, disruption or destruction of fish habitat, except where it has been authorized under the Fisheries Act, using the guiding principle of no net loss of productive capacity
- b) in regard to other natural heritage features and areas, the loss of the natural features or ecological functions for which an area is identified

pH measures how many hydrogen ions are found in water. Measurement is on a logarithmic scale where each increment reflects a tenfold change (4 pH is a ten times more acidic concentration than 5 pH). The fewer the ions, the greater the acidity for aquatic environments, reflected by a lower pH reading such as 4. Many Ontario water bodies measure 7-8 in pH.

Physiographic region - Chapman and Putnam (1984) described and mapped fifty-two minor physiographic regions within southern Ontario. These physiographic regions are areas with recognizable local landform patterns.

Significant

- means in regard to wetlands and areas of natural and scientific interest, an area identified as provincially significant by the Ministry of Natural Resources using evaluation procedures established by the Province, as amended from time to time
- in regard to other features and areas in Policy 2.3, ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or natural heritage system. Criteria for determining significance may be recommended by the Province, but municipal approaches that achieve the same objective may also be used
- in regard to other matters, important in terms of amount, content, representation or effect

Significant site means a site of at least regional significance and representative of the landform and vegetation features of the site district. Chosen after reviewing the background information available on sites of biological importance, air-photo analysis and field checking of selected areas. After final evaluation and comparison of similar significant sites, some were chosen as candidate nature reserves. However, all significant sites are recommended for protection through the land use planning process.

Site district means a subdivision of a site region, with a characteristic pattern of physiographic features (Hills, 1959). Site districts are small-scale map units that segregate substantial areas from each other on the basis of broad landform patterns.

Site region means an area of land within which the response of the vegetation to the features of the landform follows a consistent pattern (Hills, 1959).

Threatened species means any native species that is at risk of becoming endangered through all or a portion of its Ontario range if the limiting factors are not reversed.

Turbidity refers to the level of light penetrating through the water column. We measure this with a black and white round disc (Secchi disc), recording to what depth we can still distinguish black vs. white markings on the flat disc. Light zones relate directly to the ability of many forms of life to occupy this space. Poor building practices can contribute sediment and cloud the water column, resulting in high turbidity readings and conversely low (small distance) direct Secchi disc readings. Development should not degrade the turbidity of any water feature.

Valleylands means a natural area that occurs in a valley or other landform depression that has water flowing through or standing for some period of the year.

Wetlands means lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic plants or water tolerant plants. The four major types of wetlands are swamps, marshes, poor fens and fens. Periodically soaked or wet lands being used for agricultural purposes which no longer exhibit wetland characteristics are not considered to be wetlands for the purposes of this definition.

Wildlife habitat means areas where plants, animals and other organisms live, and find adequate amounts of food, water, shelter and space needed to sustain their populations. Specific wildlife habitats of concern may include areas where species concentrate at a vulnerable point in their annual or life cycle; and areas which are important to migratory or non-migratory species.

Woodlands means treed areas that provide environmental and economic benefits such as erosion prevention, water retention, provision of habitat, recreation and the sustainable harvest of woodland products. Woodlands include treed areas, woodlots or forested areas and vary in their level of significance.

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APPENDIX A
BREEDING BIRD ATLAS

Breadner Breeding Bird Atlas

Square Summary (17NK43)

Region summary (#9: Grey)



#species (1st atlas)		#species (2nd atlas)		#hours		#pc done					
poss	prob	conf	total	total	1st	2nd	road	offrd			
11	17	72	100	25	22	51	98	52	36	21	4

#squares		#sq with data		#species		#pc done		target	#pc
1st	2nd	1st	2nd	1st	2nd	1st	2nd		
36	36	35	165	169	815	450			

Target number of point counts in this square: 21 road side, 4 off road (2 in deciduous forest, 1 in mixed forest, 1 in pasture/grassland). Please try to ensure that each off-road station is located such that the entire 100m radius circle is within the prescribed habitat.

SPECIES	Code		%	
	1st	2nd	1st	2nd
Common Loon	D	H	63	62
Pied-billed Grebe		NE	36	45
American Bittern			47	42
Least Bittern †			8	5
Great Blue Heron \$	S		97	80
Great Egret †		X	2	2
Green Heron \$	FY	AE	83	65
Black-crown N.-Heron † \$	S		25	5
Turkey Vulture	D		91	88
Canada Goose	H	FY	61	97
Mute Swan †		FY	0	2
Wood Duck	P	FY	66	85
Gadwall	FY	P	8	5
American Wigeon †			2	0
American Black Duck	S		33	11
Mallard	FY	NE	97	97
Blue-winged Teal	FY		80	34
Northern Pintail †	P		5	0
Green-winged Teal			0	8
Ring-necked Duck †			2	0
Hooded Merganser			25	51
Common Merganser	FY	FY	44	51

SPECIES	Code		%	
	1st	2nd	1st	2nd
Red-should Hawk †			22	28
Broad-winged Hawk			25	31
Red-tailed Hawk	AE	AE	97	100
American Kestrel	FY	AE	91	94
Merlin		T	11	17
Ring-necked Pheasant			16	2
Ruffed Grouse	FY	S	86	88
Wild Turkey		FY	0	85
Virginia Rail			75	60
Sora			44	37
Common Moorhen			13	8
Coot/Moorhen			0	2
Killdeer	FY	FY	100	97
Spotted Sandpiper	NE	T	100	71
Upland Sandpiper	FY		75	40
Common Snipe	NE		94	82
American Woodcock	FY		97	71
Ring-billed Gull \$			2	14
Herring Gull \$	NE		30	22
Common Tern †\$	FY		5	2
Black Tern † \$			5	2
Rock Dove	FY	AE	94	94

SPECIES	Code		%	
	1st	2nd	1st	2nd
Long-eared Owl †				2
North Saw-whet Owl				33
Common Nighthawk	T	H	33	20
Whip-poor-will	S		25	14
Chimney Swift	AE	NB	58	34
Ruby-thr Hummingbird	NE	D	88	88
Belted Kingfisher	AE	AE	97	88
Red-head Woodpecker †	AE		52	14
Yellow-bellied Sapsucker	FY	FY	94	97
Downy Woodpecker	FY	FY	100	91
Hairy Woodpecker	FY	CF	94	91
Black-back Woodpecker †				2
Northern Flicker	AE	AE	100	97
Pileated Woodpecker	AE		75	82
Olive-sided Flycatcher †				5
Eastern Wood-Pewee	FY	T	94	97
Yellow-bellied Flycatcher				8
Alder Flycatcher	T	S	72	74
Willow Flycatcher		T	30	42
Least Flycatcher	T	S	97	97
Eastern Phoebe	NY	NB	94	94
Gr Crested Flycatcher	FY	D	97	97

Red-breast Merganser			19	14
Ruddy Duck †			2	0
Osprey †			2	17
<u>Northern Harrier</u>	H		86	74
Sharp-shinned Hawk	S	H	33	48
Cooper's Hawk		T	19	48
<u>Northern Goshawk</u>	S		22	14

Mourning Dove	FY	NU	100	100
Black-billed Cuckoo	NE	T	69	68
Yellow-billed Cuckoo			30	14
Black/Yell-billed Cuckoo			0	31
Eastern Screech-Owl	S	NY	91	80
Great Horned Owl	NY	H	97	62
Barred Owl †			2	11

Eastern Kingbird	NE	NY	100	100
Loggerhead Shrike †	D		25	0
Yellow-throated Vireo			38	22
Blue-headed Vireo			16	42
Warbling Vireo	FY	AE	97	100
Red-eyed Vireo	T	T	100	100
Blue Jay	NY	NY	100	100

SPECIES	Code		%	
	1st	2nd	1st	2nd
American Crow	FY	CF	100	100
Common Raven		D	11	88
Horned Lark	AE		83	60
Purple Martin	NY	NY	36	17
Tree Swallow	AE	NY	100	100
North Rgh-wing Swallow	AE	NY	80	60
Bank Swallow \$	AE	AE	80	62
Cliff Swallow \$		NY	86	74
Barn Swallow	NY	NY	100	97
Black-capp Chickadee	FY	NE	100	100
Red-breast Nuthatch	FY	T	75	82
White-breast Nuthatch	P	AE	97	91
<u>Brown Creeper</u>			61	65
House Wren	NY	NY	100	100
Winter Wren		T	77	91
Sedge Wren			13	22
Marsh Wren			36	22
Golden-crown Kinglet		H	16	34
Blue-gr Gnatcatcher †			2	0

SPECIES	Code		%	
	1st	2nd	1st	2nd
Cedar Waxwing	NE	NE	100	100
Golden-winged Warbler			8	31
Blue/Gold-wing Warbler			0	11
Tennessee Warbler †			5	0
Nashville Warbler	H	T	77	88
Northern Parula †		S	2	2
Yellow Warbler	CF	NU	100	100
Chestn-sided Warbler		S	69	88
Magnolia Warbler		S	22	51
<u>Black-thr Blue Warbler</u>			33	80
Yellow-rumped Warbler	CF	S	55	82
Black-thr Green Warbler		S	50	94
Blackburnian Warbler			25	48
<u>Pine Warbler</u>			16	57
Cerulean Warbler †			2	2
Black-white Warbler	FY	T	88	94
American Redstart	FY	FY	86	97
Ovenbird	T	S	91	97
<u>North Waterthrush</u>			80	82

SPECIES	Code		%	
	1st	2nd	1st	2nd
Savannah Sparrow	FY	CF	91	97
Grasshopper Sparrow		T	47	60
Henslow's Sparrow †			2	8
Song Sparrow	CF	CF	100	100
Swamp Sparrow		S	86	97
White-throat Sparrow	NE	S	88	91
Dark-eyed Junco	P	H	19	20
Northern Cardinal	NE	NE	75	88
Rose-breast Grosbeak	NE	T	97	97
Indigo Bunting	FY	T	97	94
Bobolink	NE	S	97	97
Red-wing Blackbird	CF	NY	100	97
Eastern Meadowlark	FY	S	100	97
Western Meadowlark			11	2
Rusty Blackbird †			2	2
Common Grackle	CF	NY	100	100
Brown-head Cowbird	FY	NY	100	100
Orchard Oriole †			5	5
Baltimore Oriole	CF	NY	100	97

Veery	T	S	97	91	Mourning Warbler	S	72	71	House Finch	NE	2	77
Swainson's Thrush			8	0	Common Yellowthroat	AE	T	100	Pine Siskin		8	8
<u>Hermit Thrush</u>	P		8	37	Canada Warbler			33	American Goldfinch	NE	100	100
Wood Thrush	T	S	83	88	<u>Scarlet Tanager</u>	P		77	Evening Grosbeak		11	2
American Robin	CF	NE	100	100	Eastern Towhee	P	S	77	House Sparrow	CF	AE	94
Gray Catbird	FY	T	100	97	Chipping Sparrow	FY	NE	100				
Northern Mockingbird			11	2	Clay-colored Sparrow ‡			5				
Brown Thrasher	NE	T	97	94	Field Sparrow	NE	S	94				

This list includes all species found during the Ontario Breeding Bird Atlas (1st atlas: 1981-1985, 2nd atlas: 2001-2005) in the region #9 (Grey). Underlined species are those that you should try to add to this square. They have not yet been reported during the 2nd atlas, but were found during the 1st atlas in this square or have been reported in more than 50% of the squares in this region during the 2nd atlas so far. In the species table, "BE 2nd" and "BE 1st" are the codes for the highest breeding evidence for that species in square 17NK43 during the 2nd and 1st atlas respectively. The % columns give the percentage of squares in that region where that species was reported during the 2nd and 1st atlas (this gives an idea of the expected chance of finding that species in region #9). Rare/Colonial Species Report Forms should be completed for species marked: § (Colonial), ‡ (regionally rare), or † (provincially rare). Current as of 12/08/2008. An up-to-date version of this sheet is available from <http://www.birdsontario.org/atlas/summaryform.jsp?squareID=17NK43>