

APPENDIX E
ACCDC REPORT

DATA REPORT 8198: Rhodena, NS

Prepared 20 August 2024
by K.Tenwolde,
Conservation Data Analyst

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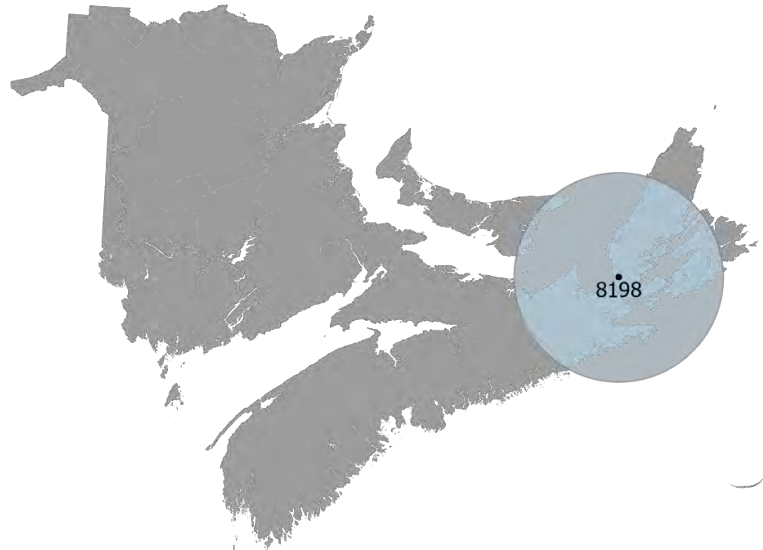
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1.0 PREFACE

The Atlantic Canada Conservation Data Centre (AC CDC; www.accdc.com) is part of a network of NatureServe data centres and heritage programs serving 50 states in the U.S.A, 10 provinces and 1 territory in Canada, plus several Central and South American countries. The NatureServe network is more than 30 years old and shares a common conservation data methodology. The AC CDC was founded in 1997, and maintains data for the jurisdictions of New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador. Although a non-governmental agency, the AC CDC is supported by 6 federal agencies and 4 provincial governments, as well as through outside grants and data processing fees.

Upon request and for a fee, the AC CDC queries its database and produces customized reports of the rare and endangered flora and fauna known to occur in or near a specified study area. As a supplement to that data, the AC CDC includes locations of managed areas with some level of protection and known sites of ecological interest or sensitivity.

1.1 DATA LIST

Included datasets:

Filename

RhodenaNS_8198ob.xls
RhodenaNS_8198ob100km.xls
RhodenaNS_8198msa.xls
RhodenaNS_8198ff_py.xls

Contents

Rare or legally protected Flora and Fauna in your study area
A list of Rare and legally protected Flora and Fauna within 100 km of your study area
Managed and Biologically Significant Areas in your study area
Rare Freshwater Fish in your study area (DFO database)

1.2 RESTRICTIONS

The AC CDC makes a strong effort to verify the accuracy of all the data that it manages, but it shall not be held responsible for any inaccuracies in data that it provides. By accepting AC CDC data, recipients assent to the following limits of use:

- a) Data is restricted to use by trained personnel who are sensitive to landowner interests and to potential threats to rare and/or endangered flora and fauna posed by the information provided.
- b) Data is restricted to use by the specified Data User; any third-party requiring data must make its own data request.
- c) The AC CDC requires Data Users to cease using and delete data 12 months after receipt, and to make a new request for updated data, if necessary, at that time.
- d) AC CDC data responses are restricted to the data in our Data System at the time of the data request.
- e) Each record has an estimate of locational uncertainty, which must be referenced to understand the record's relevance to a particular location. Please see attached Data Dictionary for details.
- f) AC CDC data responses are not to be construed as exhaustive inventories of taxa in an area.
- g) The absence of a taxon cannot be inferred by its absence in an AC CDC data response.

1.3 ADDITIONAL INFORMATION

The accompanying Data Dictionary provides metadata for the data provided.

Please direct any additional questions about AC CDC data to the following individuals:

Plants, Lichens, Ranking Methods, All other Inquiries

Sean Blaney
Senior Scientist / Executive Director
(506) 364-2658
sean.blaney@accdc.ca

Animals (Fauna)

John Klymko
Zoologist
(506) 364-2660
john.klymko@accdc.ca

Data Management, GIS

Charity Robicheau
Senior Conservation Data Analyst
charity.robicheau@accdc.ca

Billing

Jean Breau
Financial Manager / Executive Assistant
(506) 364-2657
jean.breau@accdc.ca

Questions on the biology of Federal Species at Risk can be directed to AC CDC: (506) 364-2658, with questions on Species at Risk regulations to: Samara Eaton, Canadian Wildlife Service (NB and PE): (506) 364-5060 or Julie McKnight, Canadian Wildlife Service (NS): (902) 426-4196.

For provincial information about rare taxa and protected areas, or information about game animals, deer yards, old growth forests, archeological sites, fish habitat etc., in New Brunswick, please contact Hubert Askanas, Energy and Resource Development: (506) 453-5873.

For provincial information about rare taxa and protected areas, or information about game animals, deer yards, old growth forests, archeological sites, fish habitat etc., in Nova Scotia, please contact Donna Hurlburt, NS DLF: (902) 679-6886. To determine if location-sensitive species (section 4.3) occur near your study site please contact a NS DLF Regional Biologist:

Western: Emma Vost
(902) 670-8187
Emma.Vost@novascotia.ca

Western: Sarah Spencer
(902) 541-0081
Sarah.Spencer@novascotia.ca

Central: Shavonne Meyer
(902) 893-0816
Shavonne.Meyer@novascotia.ca

Central: Kimberly George
(902) 890-1046
Kimberly.George@novascotia.ca

Eastern: Harrison Moore
(902) 497-4119
Harrison.Moore@novascotia.ca

Eastern: Maureen Cameron-MacMillan
(902) 295-2554
Maureen.Cameron-MacMillan@novascotia.ca

Eastern: Elizabeth Walsh
(902) 563-3370
Elizabeth.Walsh@novascotia.ca

For provincial information about rare taxa and protected areas, or information about game animals, fish habitat etc., in Prince Edward Island, please contact Garry Gregory, PEI Dept. of Communities, Land and Environment: (902) 569-7595.

2.0 RARE AND ENDANGERED SPECIES

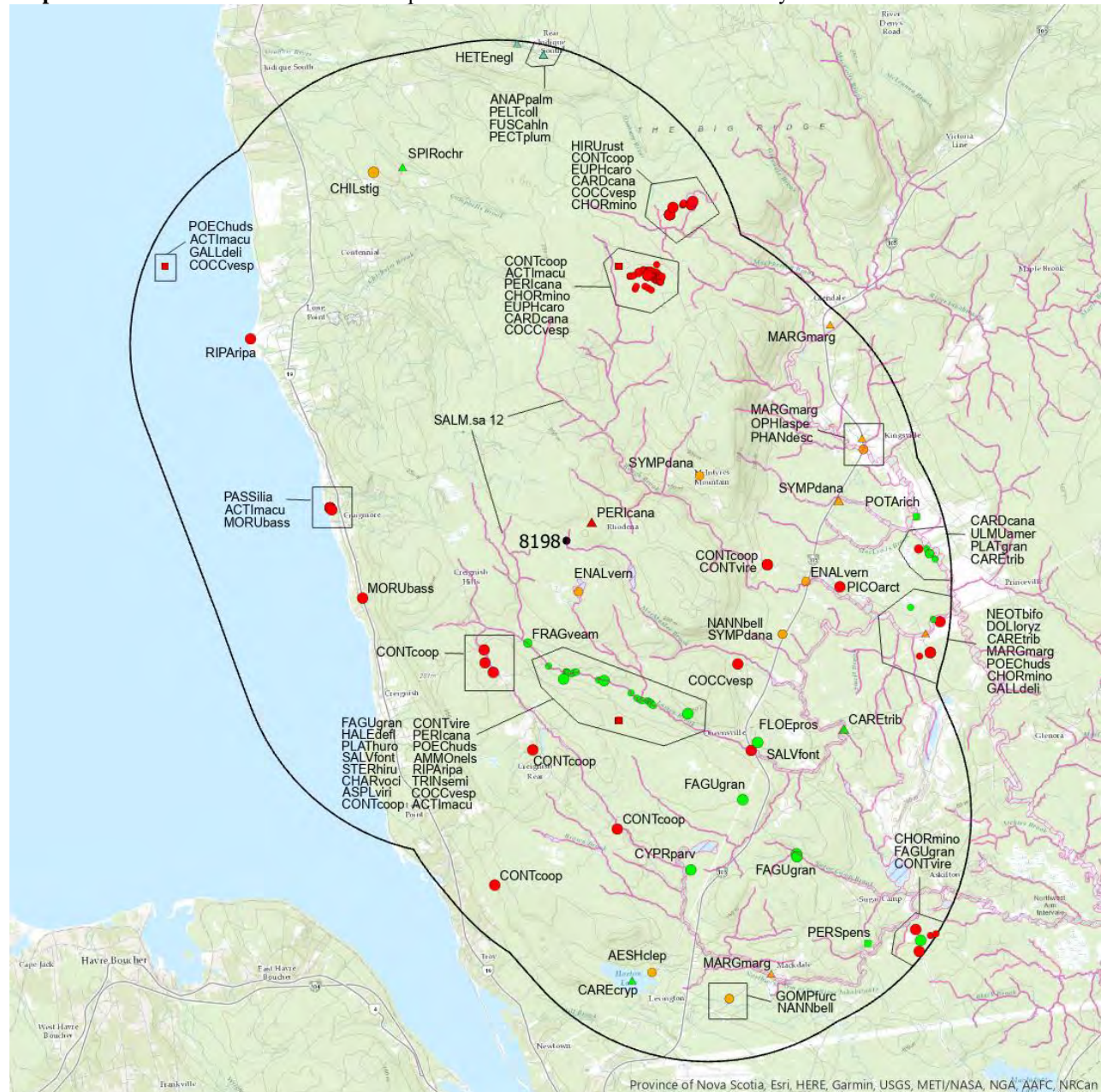
2.1 FLORA

The study area contains 40 records of 15 vascular and 7 records of 5 nonvascular flora (Map 2 and attached: *ob.xls), excluding 'location-sensitive' species.

2.2 FAUNA

The study area contains 136 records of 21 vertebrate and 22 records of 9 invertebrate fauna (Map 2 and attached data files - see 1.1 Data List), excluding 'location-sensitive species'. Please see section 4.3 to determine if 'location-sensitive' species occur near your study site.

Map 2: Known observations of rare and/or protected flora and fauna within the study area.



Resolution

- 1.0 = Within 10s of metres
- 1.7 = Within 50s of metres
- 2.0 = Within 100s of metres
- △ 2.7 = Within 500s of metres
- △ 3.0 = Within kilometres
- 3.7 = Within 5s of kilometres
- 4.0 = Within 10s of kilometres
- 4.7 = Within 50s of kilometres

Higher taxon

- Vertebrate fauna
- Invertebrate fauna
- Vascular flora
- Nonvascular flora

3.0 SPECIAL AREAS

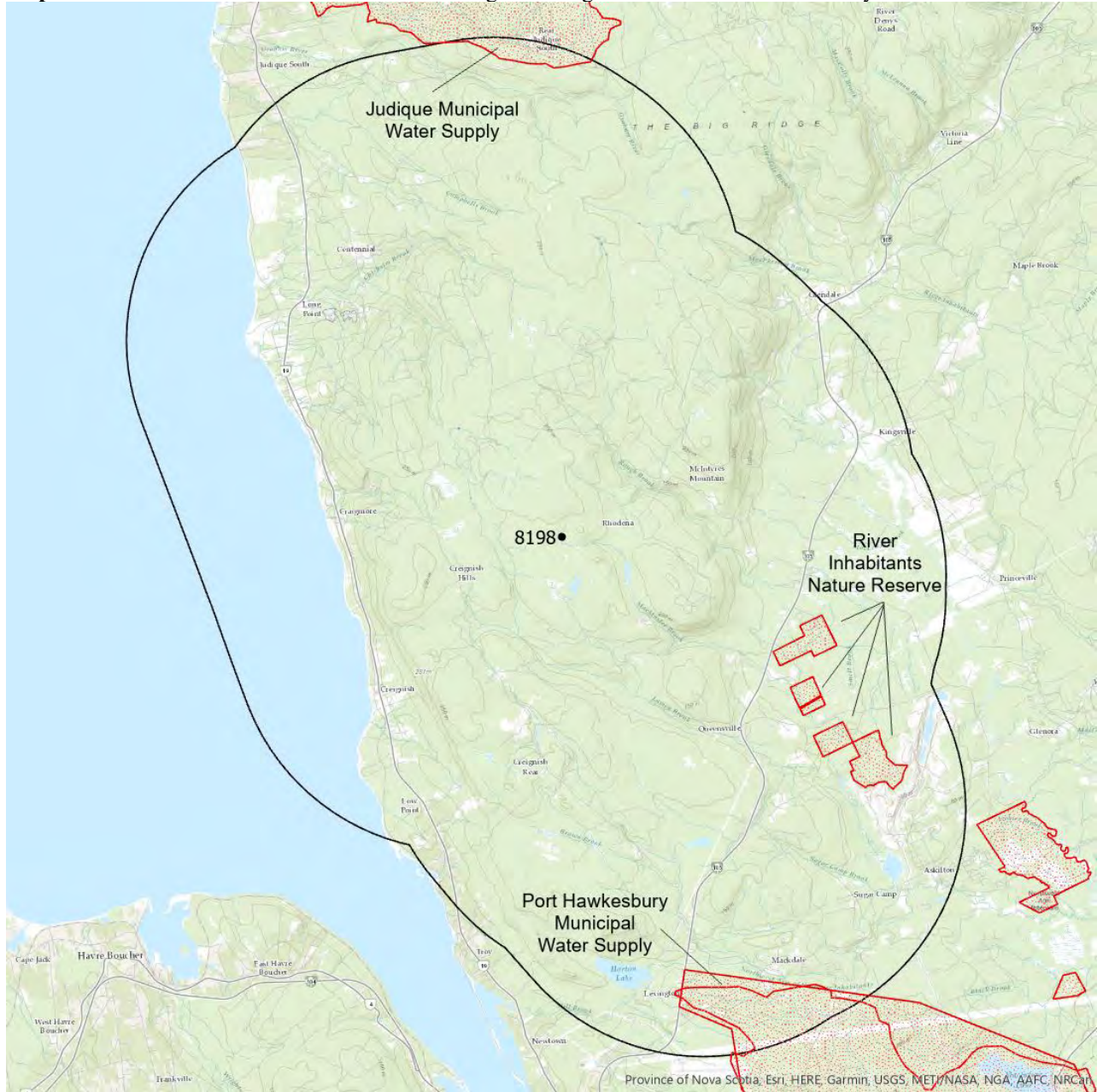
3.1 MANAGED AREAS

The GIS scan identified 5 managed areas in the vicinity of the study area (Map 3 and attached file: *msa.xls).

3.2 SIGNIFICANT AREAS

The GIS scan identified no biologically significant sites in the vicinity of the study area (Map 3).

Map 3: Boundaries and/or locations of known Managed and Significant Areas within the study area.



Province of Nova Scotia, Esri, HERE, Garmin, USGS, METI/NASA, NGA, AAFC, NRCAN
Managed Area Significant Area

4.0 RARE SPECIES LISTS

Rare and/or endangered taxa (excluding “location-sensitive” species, section 4.3) within the study area listed in order of concern, beginning with legally listed taxa, with the number of observations per taxon and the distance in kilometers from study area centroid to the closest observation (\pm the precision, in km, of the record). [P] = vascular plant, [N] = nonvascular plant, [A] = vertebrate animal, [I] = invertebrate animal, [C] = community. Note: records are from attached files *ob.xls/*ob.shp only.

4.1 FLORA

	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)
N	<i>Pectenia plumbea</i>	Blue Felt Lichen	Special Concern	Special Concern	Vulnerable	S3	2	10.7 \pm 0.5
N	<i>Fuscopannaria ahlneri</i>	Roughened Shingle Lichen				S3	1	10.7 \pm 0.5
N	<i>Peltigera collina</i>	Tree Pelt Lichen				S3	2	10.7 \pm 0.5
N	<i>Anaptychia palmulata</i>	Shaggy Fringed Lichen				S3S4	1	10.7 \pm 0.5
N	<i>Heterodermia neglecta</i>	Fringe Lichen				S3S4	1	11.0 \pm 0.5
P	<i>Floerkea proserpinacoides</i>	False Mermaidweed	Not At Risk			S2S3	1	6.1 \pm 0.1
P	<i>Platanthera huronensis</i>	Fragrant Green Orchid				S1S2	1	4.6 \pm 0.2
P	<i>Halenia deflexa</i>	Spurred Gentian				S3	18	2.8 \pm 0.01
P	<i>Carex cryptolepis</i>	Hidden-scaled Sedge				S3	1	9.8 \pm 0.7
P	<i>Carex tribuloides</i>	Blunt Broom Sedge				S3	3	7.4 \pm 1.0
P	<i>Cypripedium parviflorum</i>	Yellow Lady's-slipper				S3	1	7.7 \pm 0.2
P	<i>Neottia bifolia</i>	Southern Twayblade				S3	1	7.7 \pm 0.01
P	<i>Platanthera grandiflora</i>	Large Purple Fringed Orchid				S3	2	8.0 \pm 0.05
P	<i>Potamogeton richardsonii</i>	Richardson's Pondweed				S3	1	7.7 \pm 1.0
P	<i>Asplenium viride</i>	Green Spleenwort				S3	2	3.0 \pm 0.2
P	<i>Spiranthes ochroleuca</i>	Yellow Ladies'-tresses				S3?	1	9.0 \pm 0.36
P	<i>Fagus grandifolia</i>	American Beech				S3S4	5	11.8 \pm 0.2
P	<i>Persicaria pensylvanica</i>	Pennsylvania Smartweed				S3S4	1	11.1 \pm 5.0
P	<i>Fragaria vesca ssp. americana</i>	Woodland Strawberry				S3S4	1	2.4 \pm 0.04
P	<i>Ulmus americana</i>	White Elm				S3S4	1	7.9 \pm 0.01

4.2 FAUNA

	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)
A	<i>Riparia riparia</i>	Bank Swallow	Threatened	Threatened	Endangered	S2B	2	4.1 \pm 7.07
A	<i>Euphagus carolinus</i>	Rusty Blackbird	Special Concern	Special Concern	Endangered	S2B	2	6.2 \pm 7.07
A	<i>Hirundo rustica</i>	Barn Swallow	Special Concern	Threatened	Endangered	S3B	1	8.0 \pm 0.05
A	<i>Cardellina canadensis</i>	Canada Warbler	Special Concern	Threatened	Endangered	S3B	68	5.8 \pm 0.01
A	<i>Chordeiles minor</i>	Common Nighthawk	Special Concern	Special Concern	Threatened	S3B	6	11.5 \pm 0.15
A	<i>Contopus cooperi</i>	Olive-sided Flycatcher	Special Concern	Special Concern	Threatened	S3B	17	3.0 \pm 0.15
A	<i>Dolichonyx oryzivorus</i>	Bobolink	Special Concern	Threatened	Vulnerable	S3B	1	8.4 \pm 0.2
A	<i>Coccothraustes vespertinus</i>	Evening Grosbeak	Special Concern	Special Concern	Vulnerable	S3B,S3N,S3M	7	10.7 \pm 7.07
A	<i>Contopus virens</i>	Eastern Wood-Pewee	Special Concern	Special Concern	Vulnerable	S3S4B	3	11.9 \pm 0.2
A	<i>Sterna hirundo</i>	Common Tern	Not At Risk			S3B	2	4.1 \pm 7.07
A	<i>Ammospiza nelsoni</i>	Nelson's Sparrow	Not At Risk			S3S4B	1	4.1 \pm 7.07
A	<i>Perisoreus canadensis</i>	Canada Jay				S3	4	0.7 \pm 1.51
A	<i>Poecile hudsonicus</i>	Boreal Chickadee				S3	4	10.7 \pm 7.07
A	<i>Salvelinus fontinalis</i>	Brook Trout				S3	2	2.9 \pm 0.01
A	<i>Charadrius vociferus</i>	Killdeer				S3B	2	4.1 \pm 7.07
A	<i>Tringa semipalmata</i>	Willet				S3B	2	4.1 \pm 7.07
A	<i>Gallinago delicata</i>	Wilson's Snipe				S3B,S5M	2	10.7 \pm 7.07
A	<i>Picoides arcticus</i>	Black-backed Woodpecker				S3S4	1	6.1 \pm 0.2
A	<i>Actitis macularius</i>	Spotted Sandpiper				S3S4B,S5M	5	10.7 \pm 7.07
A	<i>Passerella iliaca</i>	Fox Sparrow				S3S4B,S5M	2	5.2 \pm 0.15

	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)
A	<i>Morus bassanus</i>	Northern Gannet				SHB	2	4.7 ± 0.15
I	<i>Margaritifera margaritifera</i>	Eastern Pearlshell				S2	4	10.6 ± 0.5
I	<i>Chilocorus stigma</i>	Twice-stabbed Lady Beetle				S3	1	9.2 ± 0.2
I	<i>Phanogomphus descriptus</i>	Harpoon Clubtail				S3	4	6.8 ± 0.05
I	<i>Ophiogomphus aspersus</i>	Brook Snaketail				S3	2	6.8 ± 0.05
I	<i>Enallagma vernale</i>	Vernal Bluet				S3	2	1.1 ± 0.05
I	<i>Aeshna clepsydra</i>	Mottled Darner				S3S4	1	9.7 ± 0.05
I	<i>Gomphaeschna furcillata</i>	Harlequin Darner				S3S4	2	10.7 ± 0.05
I	<i>Nannothemis bella</i>	Elfin Skimmer				S3S4	3	10.7 ± 0.05
I	<i>Sympetrum danae</i>	Black Meadowhawk				S3S4	3	3.3 ± 0.05

4.3 LOCATION SENSITIVE SPECIES

The Department of Natural Resources in each Maritimes province considers a number of species “location sensitive”. Concern about exploitation of location-sensitive species precludes inclusion of precise coordinates in this report. Those intersecting your study area are indicated below with “YES”.

Nova Scotia

Scientific Name	Common Name	SARA	Prov Legal Prot	Known within the Study Site?
<i>Alces alces americana</i>	Moose – Mainland population		Endangered	No
<i>Fraxinus nigra</i>	Black Ash		Threatened	No
<i>Emydoidea blandingii</i>	Blanding's Turtle - Nova Scotia pop.	Endangered	Endangered	No
<i>Glyptemys insculpta</i>	Wood Turtle	Threatened	Threatened	YES
<i>Falco peregrinus pop. 1</i>	Peregrine Falcon - anatum/tundrius pop.		Vulnerable	No
Bat <i>Hibernaculum</i> or bat species occurrence		[Endangered]¹	[Endangered]¹	YES
<i>Snake hibernaculum</i>		[Threatened] ²	[Threatened] ²	No

1 *Myotis lucifugus* (Little Brown Myotis), *Myotis septentrionalis* (Long-eared Myotis), and *Perimyotis subflavus* (Tri-colored Bat or Eastern Pipistrelle) are all Endangered under the Federal Species at Risk Act and the NS Endangered Species Act.

2 *Thamnophis sauritus* (Eastern Ribbonsnake) is Threatened under the Federal Species at Risk Act (SARA) and the Nova Scotia Endangered Species Act. Occurrences between October 15 – April 15 are considered location sensitive.

4.4 SOURCE BIBLIOGRAPHY

The recipient of these data shall acknowledge the AC CDC and the data sources listed below in any documents, reports, publications or presentations, in which this dataset makes a significant contribution.

# recs	CITATION
65	Staicer, Cindy. 2023. 2022 SAR Bird field occurrences from the Landbirds at Risk Project, NS. Dalhousie University, 446 records.
44	Lepage, D. 2014. Maritime Breeding Bird Atlas Database. Bird Studies Canada, Sackville NB, 407,838 recs.
22	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2014. Atlantic Canada Conservation Data Centre Fieldwork 2014. Atlantic Canada Conservation Data Centre, # recs.
16	Benjamin, L.K. 2009. D. Anderson Odonata Records for Cape Breton, 1997-2004. Nova Scotia Dept Natural Resources, 1316 recs.
10	iNaturalist.ca. 2023. iNaturalist Data Export December 2022. iNaturalist.org; iNaturalist.ca, Web site: 128634 recs.
10	Staicer, Cindy. 2022. 2021 Landbird Species at Risk observations. Dalhousie University.
8	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2015. Atlantic Canada Conservation Data Centre Fieldwork 2015. Atlantic Canada Conservation Data Centre, # recs.
7	Clayden, S. Digitization of Wolfgang Maass Nova Scotia forest lichen collections, 1964-2004. New Brunswick Museum. 2018.
6	Staicer, Cindy. 2023. 2022 SAR Bird ARU occurrences. Dalhousie University, 379 records.
5	Benjamin, L.K. (compiler). 2007. Significant Habitat & Species Database. Nova Scotia Dept Natural Resources, 8439 recs.
3	Nova Scotia Dept Natural Resources, Forestry Branch. 2007. Restricted & Limited Use Land Database (RLUL). , http://www.gov.ns.ca/natr/FORESTRY/rlul/downloadrlul.htm .
2	Canadian Wildlife Service. 2019. Canadian Protected and Conserved Areas Database (CPCAD). December 2019. ECCC. https://www.canada.ca/en/environment-climate-change/services/national-wildlife-areas/protected-conserved-areas-database.html .
2	iNaturalist. 2020. iNaturalist Data Export 2020. iNaturalist.org and iNaturalist.ca, Web site: 128728 recs.
2	iNaturalist.ca. 2024. iNaturalist Data Export December 2023 botany records. iNaturalist.org; iNaturalist.ca.

# recs	CITATION
2	Newell, R.E. 2000. E.C. Smith Herbarium Database. Acadia University, Wolfville NS, 7139 recs.
2	Newell, R.E. 2005. E.C. Smith Digital Herbarium. E.C. Smith Herbarium, Irving Biodiversity Collection, Acadia University, Web site: http://luxor.acadiau.ca/library/Herbarium/project/ . 582 recs.
1	Brunelle, P.-M. (compiler). 2009. ADIP/MDDS Odonata Database: data to 2006 inclusive. Atlantic Dragonfly Inventory Program (ADIP), 24200 recs.
1	Erskine, A.J. 1992. Maritime Breeding Bird Atlas Database. NS Museum & Nimbus Publ., Halifax, 82, 125 recs.
1	iNaturalist.ca. 2024. iNaturalist Data Export December 2023. iNaturalist.org; iNaturalist.ca.
1	Munro, Marian K. Nova Scotia Provincial Museum of Natural History Herbarium Database. Nova Scotia Provincial Museum of Natural History, Halifax, Nova Scotia. 2013.
1	Staicer, C. 2021. Additional compiled Nova Scotia Species at Risk bird records, 2005-2020. Dalhousie University.

5.0 RARE SPECIES WITHIN 100 KM

A 100 km buffer around the study area contains 34505 records of 143 vertebrate and 1226 records of 67 invertebrate fauna; 6591 records of 253 vascular and 3924 records of 138 nonvascular flora (attached: *ob100km.xls).

Taxa within 100 km of the study site that are rare and/or endangered in the province in which the study site occurs (including “location-sensitive” species). All ranks correspond to the province in which the study site falls, even for out-of-province records. Taxa are listed in order of concern, beginning with legally listed taxa, with the number of observations per taxon and the distance in kilometers from study area centroid to the closest observation (\pm the precision, in km, of the record).

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
A	<i>Myotis lucifugus</i>	Little Brown Myotis	Endangered	Endangered	Endangered	S1	85	10.6 \pm 0.1	NS
A	<i>Myotis septentrionalis</i>	Northern Myotis	Endangered	Endangered	Endangered	S1	33	89.7 \pm 0.5	PE
A	<i>Perimyotis subflavus</i>	Tricolored Bat	Endangered	Endangered	Endangered	S1	1	96.7 \pm 0.01	NS
A	<i>Salmo salar pop. 4</i>	Atlantic Salmon - Eastern Cape Breton population	Endangered			S1	41	10.8 \pm 0.5	NS
A	<i>Salmo salar pop. 6</i>	Atlantic Salmon - Nova Scotia Southern Upland population	Endangered			S1	20	33.9 \pm 1.0	NS
A	<i>Eubalaena glacialis</i>	North Atlantic Right Whale	Endangered	Endangered		S1	1	53.9 \pm 1.62	NS
A	<i>Charadrius melodus melodus</i>	Piping Plover melodus subspecies	Endangered	Endangered	Endangered	S1B	1538	18.6 \pm 0.5	NS
A	<i>Sterna dougallii</i>	Roseate Tern	Endangered	Endangered	Endangered	S1B	58	55.1 \pm 7.07	NS
A	<i>Dermochelys coriacea pop. 2</i>	Leatherback Sea Turtle - Atlantic population	Endangered	Endangered		S1S2N	2	13.1 \pm 0.47	NS
A	<i>Catharus bicknelli</i>	Bicknell's Thrush	Threatened	Threatened	Endangered	S1B	51	43.4 \pm 7.07	NS
A	<i>Asio flammeus</i>	Short-eared Owl	Threatened	Special Concern		S1B	11	62.2 \pm 0.15	NS
A	<i>Glyptemys insculpta</i>	Wood Turtle	Threatened	Threatened	Threatened	S2	7874	10.6 \pm 0.4	NS
A	<i>Riparia riparia</i>	Bank Swallow	Threatened	Threatened	Endangered	S2B	1062	11.8 \pm 7.07	NS
A	<i>Chaetura pelagica</i>	Chimney Swift	Threatened	Threatened	Endangered	S2S3B,S1M	593	17.1 \pm 0.5	NS
A	<i>Limosa haemastica</i>	Hudsonian Godwit	Threatened			S2S3M	14	38.7 \pm 0.5	NS
A	<i>Acipenser oxyrinchus</i>	Atlantic Sturgeon	Threatened			S2S3N	1	87.0 \pm 0.5	NS
A	<i>Hydrobates leucorhous</i>	Leach's Storm-Petrel	Threatened			S3B	30	13.6 \pm 0.2	NS
A	<i>Tringa flavipes</i>	Lesser Yellowlegs	Threatened			S3M	331	21.3 \pm 0.5	NS
A	<i>Anguilla rostrata</i>	American Eel	Threatened			S3N	15	18.0 \pm 0.2	NS
A	<i>Sturnella magna</i>	Eastern Meadowlark	Threatened	Threatened		SHB	2	55.1 \pm 7.07	NS
A	<i>Hylocichla mustelina</i>	Wood Thrush	Threatened	Threatened		SUB	10	38.8 \pm 7.07	NS
A	<i>Salmo salar pop. 12</i>	Atlantic Salmon - Gaspé - Southern Gulf of St. Lawrence population	Special Concern			S1	22	23.6 \pm 1.0	NS
A	<i>Antrostomus vociferus</i>	Eastern Whip-Poor-Will	Special Concern	Threatened	Threatened	S1?B	3	39.1 \pm 7.07	NS
A	<i>Passerculus sandwichensis princeps</i>	Ipswich Sparrow	Special Concern	Special Concern		S1B	13	58.1 \pm 0.2	NS
A	<i>Euphagus carolinus</i>	Rusty Blackbird	Special Concern	Special Concern	Endangered	S2B	265	16.5 \pm 0.15	NS
A	<i>Histrionicus histrionicus pop. 1</i>	Harlequin Duck - Eastern population	Special Concern	Special Concern	Endangered	S2N	38	44.6 \pm 16.6	NS
A	<i>Balaenoptera physalus pop. 1</i>	Fin Whale - Atlantic population	Special Concern	Special Concern		S2S3	2	71.1 \pm 0.2	NS
A	<i>Phalaropus lobatus</i>	Red-necked Phalarope	Special Concern	Special Concern		S2S3M	1	77.5 \pm 0.2	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
A	<i>Morone saxatilis</i> pop. 1	Striped Bass - Southern Gulf of St. Lawrence population	Special Concern			S2S3N	1	42.4 ± 1.0	NS
A	<i>Chelydra serpentina</i>	Snapping Turtle	Special Concern	Special Concern	Vulnerable	S3	145	100.0 ± 0.01	NS
A	<i>Hirundo rustica</i>	Barn Swallow	Special Concern	Threatened	Endangered	S3B	1370	10.2 ± 0.5	NS
A	<i>Cardellina canadensis</i>	Canada Warbler	Special Concern	Threatened	Endangered	S3B	740	100.0 ± 0.1	PE
A	<i>Chordeiles minor</i>	Common Nighthawk	Special Concern	Special Concern	Threatened	S3B	289	11.5 ± 0.15	NS
A	<i>Contopus cooperi</i>	Olive-sided Flycatcher	Special Concern	Special Concern	Threatened	S3B	1148	11.0 ± 0.05	NS
A	<i>Dolichonyx oryzivorus</i>	Bobolink	Special Concern	Threatened	Vulnerable	S3B	559	11.8 ± 7.07	NS
A	<i>Coccothraustes vespertinus</i>	Evening Grosbeak	Special Concern	Special Concern	Vulnerable	S3B,S3N,S3M	955	10.7 ± 7.07	NS
A	<i>Podiceps auritus</i>	Horned Grebe	Special Concern	Special Concern		S3N,SUM	36	17.0 ± 0.2	NS
A	<i>Contopus virens</i>	Eastern Wood-Pewee	Special Concern	Special Concern	Vulnerable	S3S4B	554	11.9 ± 0.2	NS
A	<i>Phocoena phocoena</i> pop. 1	Harbour Porpoise - Northwest Atlantic Population	Special Concern			S4	21	12.5 ± 0.49	NS
A	<i>Chrysemys picta picta</i>	Eastern Painted Turtle	Special Concern	Special Concern		S4	9	59.2 ± 1.0	NS
A	<i>Accipiter cooperii</i>	Cooper's Hawk	Not At Risk			S1?B,SUN,SUM	10	39.8 ± 1.52	NS
A	<i>Fulica americana</i>	American Coot	Not At Risk			S1B	14	51.8 ± 0.5	NS
A	<i>Chlidonias niger</i>	Black Tern	Not At Risk			S1B	4	30.0 ± 0.05	NS
A	<i>Falco peregrinus</i> pop. 1	Peregrine Falcon - anatum/tundrius	Not At Risk		Vulnerable	S1B,SUM	15	12.8 ± 0.15	NS
A	<i>Aegolius funereus</i>	Boreal Owl	Not At Risk			S2?B,SUM	8	40.3 ± 0.15	NS
A	<i>Lynx canadensis</i>	Canada Lynx	Not At Risk		Endangered	S2S3	72	11.6 ± 1.0	NS
A	<i>Globicephala melas</i>	Long-finned Pilot Whale	Not At Risk			S2S3	4	49.5 ± 0.43	NS
A	<i>Hemidactylium scutatum</i>	Four-toed Salamander	Not At Risk			S3	19	11.3 ± 1.0	NS
A	<i>Megaptera novaeangliae</i>	Humpback Whale	Not At Risk			S3	12	12.7 ± 0.2	NS
A	<i>Sterna hirundo</i>	Common Tern	Not At Risk			S3B	731	10.0 ± 0.05	NS
A	<i>Sialia sialis</i>	Eastern Bluebird	Not At Risk			S3B	22	25.5 ± 7.07	NS
A	<i>Buteo lagopus</i>	Rough-legged Hawk	Not At Risk			S3N	10	17.2 ± 0.5	NS
A	<i>Accipiter atricapillus</i>	American Goshawk	Not At Risk			S3S4	184	14.0 ± 7.07	NS
A	<i>Lagenorhynchus acutus</i>	Atlantic White-sided Dolphin	Not At Risk			S3S4	2	12.8 ± 0.2	NS
A	<i>Ammospiza nelsoni</i>	Nelson's Sparrow	Not At Risk			S3S4B	137	13.1 ± 0.15	NS
A	<i>Calidris canutus rufa</i>	Red Knot rufa subspecies	E,SC	Endangered	Endangered	S2M	35	30.3 ± 0.5	NS
A	<i>Morone saxatilis</i>	Striped Bass	E,SC			S2S3B,S2S3N	13	32.5 ± 0.2	NS
A	<i>Salmo salar</i>	Atlantic Salmon	E,T,SC			S1B,S1N	14	67.8 ± 0.96	NS
A	<i>Alces alces americana</i>	Moose			Endangered	S1	73	27.0 ± 0.01	NS
A	<i>Alces alces</i>	Moose				S1	7	67.7 ± 0.2	NS
A	<i>Picoides dorsalis</i>	American Three-toed Woodpecker				S1?	9	39.1 ± 0.15	NS
A	<i>Uria aalge</i>	Common Murre				S1?B	5	43.6 ± 0.2	NS
A	<i>Passerina cyanea</i>	Indigo Bunting				S1?B,SUM	24	36.7 ± 0.15	NS
A	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron				S1B	2	39.1 ± 7.07	NS
A	<i>Oxyura jamaicensis</i>	Ruddy Duck				S1B	11	47.1 ± 0.2	NS
A	<i>Myiarchus crinitus</i>	Great Crested Flycatcher				S1B	1	57.7 ± 3.42	NS
A	<i>Mimus polyglottos</i>	Northern Mockingbird				S1B	25	13.7 ± 0.15	NS
A	<i>Toxostoma rufum</i>	Brown Thrasher				S1B	7	30.0 ± 0.15	NS
A	<i>Charadrius semipalmatus</i>	Semipalmated Plover				S1B,S4M	567	18.4 ± 0.2	NS
A	<i>Calidris minutilla</i>	Least Sandpiper				S1B,S4M	251	21.3 ± 0.5	NS
A	<i>Anas acuta</i>	Northern Pintail				S1B,SUM	32	100.0 ± 0.2	NS
A	<i>Vireo gilvus</i>	Warbling Vireo				S1B,SUM	9	11.8 ± 7.07	NS
A	<i>Vespertilionidae</i> sp.	bat species				S1S2	117	10.4 ± 0.1	NS
A	<i>Poocetes gramineus</i>	Vesper Sparrow				S1S2B,SUM	10	11.8 ± 7.07	NS
A	<i>Microtus chrotorrhinus</i>	Rock Vole				S2	14	39.9 ± 0.5	NS
A	<i>Vireo philadelphicus</i>	Philadelphia Vireo				S2?B,SUM	19	20.3 ± 0.5	NS
A	<i>Alca torda</i>	Razorbill				S2B	57	13.4 ± 0.2	NS
A	<i>Fratercula arctica</i>	Atlantic Puffin				S2B	19	52.4 ± 0.35	NS
A	<i>Empidonax traillii</i>	Willow Flycatcher				S2B	10	41.3 ± 7.07	NS
A	<i>Molothrus ater</i>	Brown-headed Cowbird				S2B	76	17.9 ± 7.07	NS
A	<i>Somateria mollissima</i>	Common Eider				S2B,S2N,S4M	557	12.5 ± 0.34	NS
A	<i>Spatula clypeata</i>	Northern Shoveler				S2B,SUM	13	31.1 ± 0.5	NS
A	<i>Mareca strepera</i>	Gadwall				S2B,SUM	21	32.0 ± 7.07	NS
A	<i>Piranga olivacea</i>	Scarlet Tanager				S2B,SUM	14	35.0 ± 7.07	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
A	<i>Calidris alba</i>	Sanderling				S2N,S3M	238	28.1 ± 0.2	NS
A	<i>Martes americana</i>	American Marten			Endangered	S2S3	24	36.7 ± 0.01	NS
A	<i>Asio otus</i>	Long-eared Owl				S2S3	30	14.0 ± 7.07	NS
A	<i>Rallus limicola</i>	Virginia Rail				S2S3B	12	26.4 ± 7.07	NS
A	<i>Rissa tridactyla</i>	Black-legged Kittiwake				S2S3B	52	12.8 ± 0.2	NS
A	<i>Petrochelidon pyrrhonota</i>	Cliff Swallow				S2S3B	213	10.2 ± 2.5	NS
A	<i>Phalacrocorax carbo</i>	Great Cormorant				S2S3B,S2S3N	438	12.8 ± 0.2	NS
A	<i>Cathartes aura</i>	Turkey Vulture				S2S3B,S4S5M	23	31.8 ± 0.5	NS
A	<i>Setophaga pinus</i>	Pine Warbler				S2S3B,S4S5M	36	16.2 ± 0.2	NS
A	<i>Icterus galbula</i>	Baltimore Oriole				S2S3B,SUM	67	14.0 ± 7.07	NS
A	<i>Pluvialis dominica</i>	American Golden-Plover				S2S3M	39	38.7 ± 0.5	NS
A	<i>Numenius phaeopus hudsonicus</i>	Whimbrel				S2S3M	102	38.7 ± 0.5	NS
A	<i>Phalaropus fulicarius</i>	Red Phalarope				S2S3M	2	77.7 ± 0.36	NS
A	<i>Perisoreus canadensis</i>	Canada Jay				S3	692	0.7 ± 1.51	NS
A	<i>Poecile hudsonicus</i>	Boreal Chickadee				S3	1409	10.7 ± 7.07	NS
A	<i>Spinus pinus</i>	Pine Siskin				S3	855	11.8 ± 7.07	NS
A	<i>Salvelinus fontinalis</i>	Brook Trout				S3	86	16.5 ± 0.01	NS
A	<i>Synaptomys cooperi</i>	Southern Bog Lemming				S3	6	39.9 ± 0.5	NS
A	<i>Pekania pennanti</i>	Fisher				S3	8	25.9 ± 0.01	NS
A	<i>Calcarius lapponicus</i>	Lapland Longspur				S3?N,SUM	11	38.6 ± 0.2	NS
A	<i>Spatula discors</i>	Blue-winged Teal				S3B	138	18.3 ± 7.07	NS
A	<i>Charadrius vociferus</i>	Killdeer				S3B	246	14.0 ± 7.07	NS
A	<i>Tringa semipalmata</i>	Willet				S3B	754	10.0 ± 0.05	NS
A	<i>Sterna paradisaea</i>	Arctic Tern				S3B	99	15.1 ± 7.07	NS
A	<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo				S3B	52	19.5 ± 7.07	NS
A	<i>Tyrannus tyrannus</i>	Eastern Kingbird				S3B	122	11.8 ± 7.07	NS
A	<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak				S3B	382	11.8 ± 7.07	NS
A	<i>Alosa pseudoharengus</i>	Alewife				S3B	43	10.8 ± 0.5	NS
A	<i>Tringa melanoleuca</i>	Greater Yellowlegs				S3B,S4M	513	12.8 ± 0.2	NS
A	<i>Falco sparverius</i>	American Kestrel				S3B,S4S5M	350	10.2 ± 0.5	NS
A	<i>Mergus serrator</i>	Red-breasted Merganser				S3B,S4S5N,S5M	308	12.7 ± 0.2	NS
A	<i>Gallinago delicata</i>	Wilson's Snipe				S3B,S5M	709	10.2 ± 0.5	NS
A	<i>Setophaga striata</i>	Blackpoll Warbler				S3B,S5M	227	14.0 ± 7.07	NS
A	<i>Cardellina pusilla</i>	Wilson's Warbler				S3B,S5M	162	14.0 ± 7.07	NS
A	<i>Pinicola enucleator</i>	Pine Grosbeak				S3B,S5N,S5M	226	11.8 ± 1.49	NS
A	<i>Setophaga tigrina</i>	Cape May Warbler				S3B,SUM	188	16.5 ± 7.07	NS
A	<i>Branta bernicla</i>	Brant				S3M	1	44.6 ± 16.6	NS
A	<i>Pluvialis squatarola</i>	Black-bellied Plover				S3M	355	21.3 ± 0.5	NS
A	<i>Arenaria interpres</i>	Ruddy Turnstone				S3M	182	12.9 ± 0.2	NS
A	<i>Calidris pusilla</i>	Semipalmated Sandpiper				S3M	331	21.3 ± 0.5	NS
A	<i>Calidris melanotos</i>	Pectoral Sandpiper				S3M	46	38.7 ± 0.5	NS
A	<i>Limnodromus griseus</i>	Short-billed Dowitcher				S3M	169	38.7 ± 0.5	NS
A	<i>Chroicocephalus ridibundus</i>	Black-headed Gull				S3N	136	16.8 ± 0.2	NS
A	<i>Picoides arcticus</i>	Black-backed Woodpecker				S3S4	113	16.5 ± 0.15	NS
A	<i>Loxia curvirostra</i>	Red Crossbill				S3S4	124	15.9 ± 0.01	NS
A	<i>Sorex albibarbis</i>	Eastern Water Shrew				S3S4	1	96.4 ± 0.1	PE
A	<i>Botaurus lentiginosus</i>	American Bittern				S3S4B,S4S5M	256	12.7 ± 7.07	NS
A	<i>Setophaga castanea</i>	Bay-breasted Warbler				S3S4B,S4S5M	410	11.8 ± 7.07	NS
A	<i>Actitis macularius</i>	Spotted Sandpiper				S3S4B,S5M	929	10.7 ± 7.07	NS
A	<i>Leiophylax peregrina</i>	Tennessee Warbler				S3S4B,S5M	428	14.0 ± 7.07	NS
A	<i>Passerella iliaca</i>	Fox Sparrow				S3S4B,S5M	210	14.0 ± 7.07	NS
A	<i>Calidris maritima</i>	Purple Sandpiper				S3S4N	33	19.5 ± 10.0	NS
A	<i>Lanius borealis</i>	Northern Shrike				S3S4N	21	38.0 ± 0.2	NS
A	<i>Bucephala clangula</i>	Common Goldeneye				S4B,S4N,S5M	354	100.0 ± 0.2	NS
A	<i>Morus bassanus</i>	Northern Gannet				SHB	310	11.8 ± 0.98	NS
A	<i>Aythya americana</i>	Redhead				SHB	12	47.0 ± 1.18	NS
A	<i>Leucophaeus atricilla</i>	Laughing Gull				SHB	7	52.6 ± 0.5	NS

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A	<i>Progne subis</i>	Purple Martin				SHB	5	74.2 ± 0.34	NS
A	<i>Eremophila alpestris</i>	Horned Lark				SHB,S4S5N,S5M	10	46.1 ± 0.53	NS
	<i>Bombus bohemicus</i>	Ashton Cuckoo Bumble Bee	Endangered	Endangered	Endangered	S1	19	33.3 ± 0.5	NS
	<i>Danaus plexippus</i>	Monarch	Endangered	Special Concern	Endangered	S2?B,S3M	187	17.6 ± 0.2	NS
	<i>Lampsilis cariosa</i>	Yellow Lampmussel	Special Concern	Special Concern	Threatened	S1	54	91.0 ± 0.1	NS
	<i>Alasmidonta varicosa</i>	Brook Floater	Special Concern	Special Concern	Threatened	S3	9	44.1 ± 0.1	NS
	<i>Bombus terricola</i>	Yellow-banded Bumble Bee	Special Concern	Special Concern	Vulnerable	S3	407	15.5 ± 0.2	NS
	<i>Coccinella transversoguttata richardsoni</i>	Transverse Lady Beetle	Special Concern		Endangered	SH	1	34.5 ± 2.5	NS
	<i>Quedius spelaeus</i>	Spelean Rove Beetle				S1	1	98.7 ± 1.0	NS
	<i>Papilio brevicauda</i>	Short-tailed Swallowtail				S1	1	84.3 ± 1.0	NS
	<i>Papilio brevicauda bretonensis</i>	Short-tailed Swallowtail				S1	13	62.2 ± 2.5	NS
	<i>Coenagrion interrogatum</i>	Subarctic Bluet				S1	1	80.9 ± 0.05	NS
	<i>Atlanticoncha ochracea</i>	Tidewater Mucket				S1	28	88.9 ± 1.45	NS
	<i>Polygonia satyrus</i>	Satyr Comma				S1?	2	57.7 ± 2.5	NS
	<i>Euphyes bimacula</i>	Two-spotted Skipper				S1S2	2	63.7 ± 0.1	NS
	<i>Boloria chariclea grandis</i>	Purple Lesser Fritillary				S1S2	2	66.5 ± 2.5	NS
	<i>Somatochlora albicincta</i>	Ringed Emerald				S1S2	2	99.0 ± 0.05	NS
	<i>Haematopota rara</i>	Shy Cleg				S1S3	1	58.4 ± 0.05	NS
	<i>Tharsalea dorcas</i>	Dorcas Copper				S2	36	23.0 ± 0.01	NS
	<i>Tharsalea dospassosi</i>	Maritime Copper				S2	1	33.1 ± 0.05	NS
	<i>Neurocordulia michaeli</i>	Broad-tailed Shadowdragon				S2	22	76.4 ± 0.05	NS
	<i>Somatochlora septentrionalis</i>	Muskeg Emerald				S2	9	60.3 ± 0.05	NS
	<i>Coenagrion resolutum</i>	Taiga Bluet				S2	6	95.6 ± 1.0	PE
	<i>Margaritifera margaritifera</i>	Eastern Pearlshell				S2	144	10.6 ± 0.5	NS
	<i>Pantala hymenaea</i>	Spot-Winged Glider				S2?B	2	67.2 ± 0.05	NS
	<i>Nymphalis l-album j-album</i>	Compton Tortoiseshell				S2S3	3	66.5 ± 2.5	NS
	<i>Aglais milberti</i>	Milbert's Tortoiseshell				S2S3	2	63.3 ± 2.5	NS
	<i>Lanthus vernalis</i>	Southern Pygmy Clubtail				S2S3	8	46.0 ± 0.2	NS
	<i>Somatochlora williamsoni</i>	Williamson's Emerald				S2S3	8	66.7 ± 0.05	NS
	<i>Alasmidonta undulata</i>	Triangle Floater				S2S3	5	40.5 ± 0.1	NS
	<i>Sphaeroderus nitidicollis</i>	Polished Snail-eating Beetle				S3	1	45.0 ± 0.2	NS
	<i>Astyleiopus variegatus</i>	Variiegated Long-horned Beetle				S3	1	69.7 ± 0.2	NS
	<i>Psephenus herricki</i>	Herrick's Water Penny Beetle				S3	1	49.1 ± 0.2	NS
	<i>Hormorus undulatus</i>	Undulated Broad-nosed Weevil				S3	2	98.0 ± 0.2	NS
	<i>Platydacus fossator</i>	Digging Rove Beetle				S3	2	79.4 ± 0.2	NS
	<i>Oxyporus lateralis</i>	Lateral Cross-toothed Rove Beetle				S3	1	84.3 ± 0.2	NS
	<i>Chrysochus auratus</i>	Dogbane Leaf Beetle				S3	1	79.5 ± 0.2	NS
	<i>Naemia seriata</i>	Seaside Lady Beetle				S3	3	48.5 ± 0.54	NS
	<i>Tachyerges ephippiatus</i>	Caparison Weevil				S3	1	79.5 ± 0.2	NS
	<i>Chilocorus stigma</i>	Twice-stabbed Lady Beetle				S3	2	87.3 ± 0.2	PE
	<i>Myzia pullata</i>	Streaked Lady Beetle				S3	2	79.3 ± 0.2	NS
	<i>Ipthiminius opacus</i>	Cloudy Darkling Beetle				S3	2	23.5 ± 0.01	NS
	<i>Monochamus marmorator</i>	Balsam Fir Sawyer				S3	3	80.4 ± 0.2	NS
	<i>Satyrium calanus falacer</i>	Falacer Hairstreak				S3	1	98.4 ± 2.5	NS
	<i>Callophrys lanoraieensis</i>	Bog Elf				S3	1	93.0 ± 0.2	NS
	<i>Strymon melinus</i>	Gray Hairstreak				S3	2	37.7 ± 0.1	NS
	<i>Phanogomphus descriptus</i>	Harpoon Clubtail				S3	16	16.5 ± 0.05	NS
	<i>Ophiogomphus aspersus</i>	Brook Snaketail				S3	5	16.5 ± 0.05	NS
	<i>Ophiogomphus mainensis</i>	Maine Snaketail				S3	4	61.4 ± 0.1	NS
	<i>Ophiogomphus rupinsulensis</i>	Rusty Snaketail				S3	36	76.4 ± 0.05	NS
	<i>Somatochlora forcipata</i>	Forcinate Emerald				S3	7	55.7 ± 1.0	NS
	<i>Enallagma vernale</i>	Vernal Bluet				S3	8	1.1 ± 0.05	NS
	<i>Polygonia interrogationis</i>	Question Mark				S3B	23	37.7 ± 0.1	NS
	<i>Cecroppteris pylades</i>	Northern Cloudywing				S3S4	18	17.6 ± 0.1	NS
	<i>Amblyscirtes hegon</i>	Pepper and Salt Skipper				S3S4	8	17.0 ± 1.0	NS
	<i>Argynnis aphrodite winni</i>	Aphrodite Fritillary				S3S4	7	38.9 ± 2.5	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
I	<i>Polygonia faunus</i>	Green Comma				S3S4	16	17.3 ± 0.05	NS
I	<i>Oeneis jutta ascerta</i>	Jutta Arctic				S3S4	7	17.9 ± 0.01	NS
I	<i>Aeshna clepsydra</i>	Mottled Darner				S3S4	1	9.7 ± 0.05	NS
I	<i>Aeshna constricta</i>	Lance-Tipped Darner				S3S4	5	79.5 ± 0.2	NS
I	<i>Boyeria grafiana</i>	Ocellated Darner				S3S4	5	48.3 ± 0.2	NS
I	<i>Gomphaeschna furcillata</i>	Harlequin Darner				S3S4	3	10.7 ± 0.05	NS
I	<i>Somatochlora franklini</i>	Delicate Emerald				S3S4	1	97.3 ± 1.0	PE
I	<i>Erythrodiplax berenice</i>	Seaside Dragonlet				S3S4	8	75.4 ± 0.2	NS
I	<i>Nannothemis bella</i>	Elfin Skimmer				S3S4	10	10.7 ± 0.05	NS
I	<i>Sympetrum danae</i>	Black Meadowhawk				S3S4	10	3.3 ± 0.05	NS
I	<i>Amphiagrion saucium</i>	Eastern Red Damsel				S3S4	24	23.7 ± 0.05	NS
I	<i>Icaricia saepiolus amica</i>	Greenish Blue				SH	1	98.8 ± 2.5	NS
I	<i>Polygonia gracilis</i>	Hoary Comma				SH	1	63.3 ± 2.5	NS
N	<i>Erioderma mollissimum</i>	Graceful Felt Lichen	Endangered	Endangered	Endangered	S1	5	100.0 ± 0.5	NS
N	<i>Erioderma pedicellatum</i> (Atlantic pop.)	Boreal Felt Lichen - Atlantic pop.	Endangered	Endangered	Endangered	S1	364	100.0 ± 0.5	NS
N	<i>Peltigera hydrothyria</i>	Eastern Waterfan	Threatened	Threatened	Threatened	S1	120	14.6 ± 0.01	NS
N	<i>Pannaria lurida</i>	Wrinkled Shingle Lichen	Threatened	Threatened	Threatened	S2S3	292	15.7 ± 0.01	NS
N	<i>Anzia colpodes</i>	Black-foam Lichen	Threatened	Threatened	Threatened	S3	5	80.3 ± 1.0	NS
N	<i>Fuscopannaria leucosticta</i>	White-rimmed Shingle Lichen	Threatened			S3	2	49.6 ± 0.01	NS
N	<i>Pectenia plumbea</i>	Blue Felt Lichen	Special Concern	Special Concern	Vulnerable	S3	958	10.7 ± 0.5	NS
N	<i>Sclerophora peronella</i> (Atlantic pop.)	Frosted Glass-whiskers (Atlantic population)	Special Concern	Special Concern		S3S4	17	28.3 ± 0.01	NS
N	<i>Pseudevernia cladonia</i>	Ghost Antler Lichen	Not At Risk			S2S3	6	54.5 ± 0.01	NS
N	<i>Fissidens exilis</i>	Pygmy Pocket Moss	Not At Risk			S3	9	34.6 ± 1.0	NS
N	<i>Cinclidium stygium</i>	Sooty Cupola Moss				S1	2	26.8 ± 0.01	NS
N	<i>Seligeria diversifolia</i>	a Moss				S1	1	84.7 ± 0.3	NS
N	<i>Cladonia brevis</i>	Short Peg Lichen				S1	1	59.3 ± 0.0	NS
N	<i>Lathagrium cristatum</i>	Fingered Jelly Lichen				S1	3	46.4 ± 0.05	NS
N	<i>Scytinium schraderi</i>	Wrinkled Jellyskin Lichen				S1	1	43.0 ± 1.0	NS
N	<i>Polychidium muscicola</i>	Eyed Mossthorns Woollybear Lichen				S1	4	27.6 ± 0.05	NS
N	<i>Sticta limbata</i>	Powdered Moon Lichen				S1	2	40.0 ± 2.0	NS
N	<i>Dermatocarpon miniatum</i>	Common Stippleback Lichen				S1	1	70.8 ± 0.01	NS
N	<i>Peltigera lepidophora</i>	Scaly Pelt Lichen				S1	3	46.7 ± 0.01	NS
N	<i>Hypogymnia hultenii</i>	Powdered Honeycomb Lichen				S1	19	41.1 ± 0.5	NS
N	<i>Jubula pennsylvanica</i>	a liverwort				S1?	3	24.1 ± 0.2	NS
N	<i>Eocalypogeia schusteriana</i>	Schuster's Pouchwort				S1?	2	69.3 ± 0.01	NS
N	<i>Brachythecium erythrorrhizon</i>	Taiga Ragged Moss				S1?	4	69.3 ± 0.01	NS
N	<i>Conardia compacta</i>	Coast Creeping Moss				S1?	2	34.8 ± 2.0	NS
N	<i>Oligotrichum hercynicum</i>	Hercynian Hair Moss				S1?	3	64.4 ± 0.01	NS
N	<i>Paludella squarrosa</i>	Tufted Fen Moss				S1?	1	63.3 ± 5.0	NS
N	<i>Syntrichia ruralis</i>	a Moss				S1?	1	92.2 ± 1.0	NS
N	<i>Lathagrium undulatum var. granulorum</i>	Granular Jelly Flakes Lichen				S1?	1	53.6 ± 1.0	NS
N	<i>Scytinium intermedium</i>	Forty-five Jellyskin Lichen				S1?	3	40.7 ± 4.0	NS
N	<i>Peltigera malacea</i>	Veinless Pelt Lichen				S1?	1	17.1 ± 0.01	NS
N	<i>Buxbaumia minakatae</i>	Hump-Backed Elves				S1S2	1	67.9 ± 100.0	NS
N	<i>Platydictya confervoides</i>	a Moss				S1S2	1	93.0 ± 3.0	NS
N	<i>Hamatocaulis vernicosus</i>	a Moss				S1S2	1	27.6 ± 0.01	NS
N	<i>Enchylum bachmanianum</i>	Bachman's Jelly Lichen				S1S2	2	49.3 ± 1.0	NS
N	<i>Placidium squamulosum</i>	Limy Soil Stipplescale Lichen				S1S2	1	46.6 ± 4.0	NS
N	<i>Cladonia labradorica</i>	Labrador Lichen				S1S2	1	57.9 ± 0.05	NS
N	<i>Parmotrema reticulatum</i>	Netted Ruffle Lichen				S1S2	1	47.7 ± 0.5	NS
N	<i>Solorina spongiosa</i>	Fringed Chocolate Chip Lichen				S1S2	11	53.3 ± 0.2	NS
N	<i>Parmeliella parvula</i>	Poor-man's Shingles Lichen				S1S2	25	47.7 ± 0.5	NS
N	<i>Barbilophozia lycopodioides</i>	Greater Pawwort				S1S3	1	62.1 ± 0.01	NS
N	<i>Odontoschisma sphagni</i>	Bog-Moss Flapwort				S1S3	1	78.2 ± 0.01	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
N	<i>Xylopsora friesii</i>	a Lichen				S1S3	1	79.6 ± 0.01	NS
N	<i>Peltigera neckeri</i>	Black-saddle Pelt Lichen				S1S3	5	23.4 ± 0.66	NS
N	<i>Stereocaulon grande</i>	Grand Foam Lichen				S1S3	1	89.3 ± 0.01	NS
N	<i>Anacamptodon splachnoides</i>	a Moss				S2	2	20.5 ± 0.2	NS
N	<i>Scorpidium scorpioides</i>	Hooked Scorpion Moss				S2	12	21.4 ± 0.01	NS
N	<i>Sphagnum platyphyllum</i>	Flat-leaved Peat Moss				S2	4	26.9 ± 0.01	NS
N	<i>Sphagnum subnitens</i>	Lustrous Peat Moss				S2	2	56.8 ± 0.01	NS
N	<i>Scorpidium cossonii</i>	Cosson's Hook Moss				S2	6	25.8 ± 0.65	NS
N	<i>Flavocetraria nivalis</i>	Crinkled Snow Lichen				S2	2	97.0 ± 0.5	NS
N	<i>Scytinium imbricatum</i>	Scaly Jellyskin Lichen				S2	1	46.2 ± 0.05	NS
N	<i>Nephroma arcticum</i>	Arctic Kidney Lichen				S2	3	57.5 ± 0.5	NS
N	<i>Nephroma resupinatum</i>	a lichen				S2	2	27.6 ± 0.01	NS
N	<i>Anaptychia crinalis</i>	Hanging Fringed Lichen				S2	1	93.5 ± 0.5	NS
N	<i>Moerckia flotoviana</i>	Flotow's Ruffwort				S2?	2	69.3 ± 0.01	NS
N	<i>Riccardia multifida</i>	Delicate Germanderwort				S2?	2	27.3 ± 0.2	NS
N	<i>Anomodon viticulosus</i>	a Moss				S2?	2	34.6 ± 0.01	NS
N	<i>Atrichum angustatum</i>	Lesser Smoothcap Moss				S2?	2	48.7 ± 3.0	NS
N	<i>Drepanocladus polygamus</i>	Polygamous Hook Moss				S2?	2	53.3 ± 0.01	NS
N	<i>Pseudocampyllum radicale</i>	Long-stalked Fine Wet Moss				S2?	1	21.4 ± 0.01	NS
N	<i>Dicranum condensatum</i>	Condensed Broom Moss				S2?	2	87.2 ± 0.01	PE
N	<i>Fontinalis sullivantii</i>	Sullivant's Water Moss				S2?	1	67.9 ± 100.0	NS
N	<i>Grimmia anomala</i>	Mountain Forest Grimmia				S2?	1	82.7 ± 0.01	NS
N	<i>Philonotis marchica</i>	a Moss				S2?	1	78.2 ± 0.01	NS
N	<i>Platydictya jungermannioides</i>	False Willow Moss				S2?	5	24.1 ± 0.01	NS
N	<i>Tortella fragilis</i>	Fragile Twisted Moss				S2?	8	40.7 ± 0.01	NS
N	<i>Cyrtomnium hymenophylloides</i>	Short-pointed Lantern Moss				S2?	1	69.1 ± 0.01	NS
N	<i>Platylomella lescurii</i>	a Moss				S2?	1	64.8 ± 0.2	NS
N	<i>Scorpidium revolvens</i>	Limprichtia Moss				S2S3	8	27.0 ± 0.01	NS
N	<i>Moelleropsis nebulosa</i>	Blue-gray Moss Shingle Lichen				S2S3	22	100.0 ± 0.5	NS
N	<i>Moelleropsis nebulosa ssp. frullaniae</i>	Blue-gray Moss Shingle Lichen				S2S3	1	100.0 ± 0.5	NS
N	<i>Ramalina thrausta</i>	Angelhair Ramalina Lichen				S2S3	11	19.0 ± 0.5	NS
N	<i>Collema leptaleum</i>	Crumpled Bat's Wing Lichen				S2S3	286	15.9 ± 0.01	NS
N	<i>Usnea hirta</i>	Bristly Beard Lichen				S2S3	1	61.1 ± 0.2	NS
N	<i>Usnea rubicunda</i>	Red Beard Lichen				S2S3	3	54.3 ± 0.01	NS
N	<i>Ahtiana aurescens</i>	Eastern Candlewax Lichen				S2S3	1	85.1 ± 6.33	NS
N	<i>Usnocetraria oakesiana</i>	Yellow Band Lichen				S2S3	1	99.1 ± 0.01	PE
N	<i>Cetraria muricata</i>	Spiny Heath Lichen				S2S3	2	61.1 ± 0.01	NS
N	<i>Cladonia incassata</i>	Powder-foot British Soldiers Lichen				S2S3	1	97.9 ± 0.05	NS
N	<i>Scytinium tenuissimum</i>	Birdnest Jellyskin Lichen				S2S3	18	34.6 ± 1.0	NS
N	<i>Parmelia fertilis</i>	Fertile Shield Lichen				S2S3	20	100.0 ± 0.5	NS
N	<i>Parmeliopsis ambigua</i>	Green Starburst Lichen				S2S3	4	60.9 ± 0.5	NS
N	<i>Usnea mutabilis</i>	Bloody Beard Lichen				S2S3	1	19.1 ± 0.5	NS
N	<i>Fuscopannaria sorediata</i>	a Lichen				S2S3	13	100.0 ± 0.5	NS
N	<i>Stereocaulon condensatum</i>	Granular Soil Foam Lichen				S2S3	15	24.6 ± 0.01	NS
N	<i>Cladonia coccifera</i>	Eastern Boreal Pixie-cup Lichen				S2S3	5	59.4 ± 0.01	NS
N	<i>Fissidens taxifolius</i>	Yew-leaved Pocket Moss				S3	3	34.6 ± 0.01	NS
N	<i>Sphagnum contortum</i>	Twisted Peat Moss				S3	7	20.7 ± 0.01	NS
N	<i>Tetraplodon angustatus</i>	Toothed-leaved Nitrogen Moss				S3	2	25.3 ± 0.01	NS
N	<i>Tetraplodon mnioides</i>	Entire-leaved Nitrogen Moss				S3	1	58.6 ± 0.01	NS
N	<i>Rostania occultata</i>	Crusted Tarpaper Lichen				S3	4	32.2 ± 5.0	NS
N	<i>Solorina saccata</i>	Woodland Owl Lichen				S3	13	12.6 ± 0.05	NS
N	<i>Fuscopannaria ahneri</i>	Roughened Shingle Lichen				S3	105	10.7 ± 0.5	NS
N	<i>Scytinium lichenoides</i>	Tattered Jellyskin Lichen				S3	19	12.8 ± 0.2	NS
N	<i>Leptogium milligranum</i>	Stretched Jellyskin Lichen				S3	1	16.5 ± 0.01	NS
N	<i>Nephroma bellum</i>	Naked Kidney Lichen				S3	15	26.4 ± 1.5	NS

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N	<i>Platismatia norvegica</i>	Oldgrowth Rag Lichen				S3	197	23.2 ± 0.01	NS
N	<i>Punctelia appalachensis</i>	Appalachian Speckleback Lichen				S3	1	22.7 ± 0.01	NS
N	<i>Viridothelium virens</i>	a lichen				S3	1	65.3 ± 5.0	NS
N	<i>Ephebe lanata</i>	Waterside Rockshag Lichen				S3	3	29.3 ± 0.01	NS
N	<i>Phaeophyscia adiaetola</i>	Powder-tipped Shadow Lichen				S3	2	98.5 ± 0.01	PE
N	<i>Phaeophyscia pusilloides</i>	Pompom-tipped Shadow Lichen				S3	7	29.2 ± 0.01	NS
N	<i>Peltigera collina</i>	Tree Pelt Lichen				S3	209	10.7 ± 0.5	NS
N	<i>Cladonia pocillum</i>	Rosette Pixie-cup Lichen				S3	1	69.3 ± 0.01	NS
N	<i>Calliergon giganteum</i>	Giant Spear Moss				S3?	4	42.9 ± 0.01	NS
N	<i>Mnium stellare</i>	Star Leafy Moss				S3?	2	69.3 ± 0.01	NS
N	<i>Sphagnum lindbergii</i>	Lindberg's Peat Moss				S3?	4	55.8 ± 0.01	NS
N	<i>Sphagnum riparium</i>	Streamside Peat Moss				S3?	2	63.9 ± 0.01	NS
N	<i>Cladonia stygia</i>	Black-footed Reindeer Lichen				S3?	14	33.2 ± 0.2	NS
N	<i>Dicranum leioneuron</i>	a Dicranum Moss				S3S4	1	39.6 ± 0.01	NS
N	<i>Encalypta ciliata</i>	Fringed Extinguisher Moss				S3S4	1	36.8 ± 2.5	NS
N	<i>Encalypta procera</i>	Slender Extinguisher Moss				S3S4	14	39.7 ± 0.2	NS
N	<i>Splachnum ampullaceum</i>	Cruet Dung Moss				S3S4	1	57.7 ± 0.01	NS
N	<i>Thamnobryum alleghaniense</i>	a Moss				S3S4	26	62.2 ± 0.01	NS
N	<i>Schistidium agassizii</i>	Elf Bloom Moss				S3S4	1	81.5 ± 3.0	NS
N	<i>Hylocomiastrum pyrenaicum</i>	a Feather Moss				S3S4	2	50.4 ± 3.0	NS
N	<i>Bryoria pseudofuscescens</i>	Mountain Horsehair Lichen				S3S4	9	100.0 ± 0.05	PE
N	<i>Enchylium tenax</i>	Soil Tarpaper Lichen				S3S4	14	40.1 ± 0.01	NS
N	<i>Sticta fuliginosa</i>	Peppered Moon Lichen				S3S4	16	28.4 ± 0.5	NS
N	<i>Arctoparmelia incurva</i>	Finger Ring Lichen				S3S4	17	59.8 ± 0.01	NS
N	<i>Scytinium teretiusculum</i>	Curly Jellyskin Lichen				S3S4	4	41.0 ± 0.01	NS
N	<i>Leptogium acadense</i>	Acadian Jellyskin Lichen				S3S4	72	16.1 ± 0.01	NS
N	<i>Scytinium subtile</i>	Appressed Jellyskin Lichen				S3S4	19	16.3 ± 0.01	NS
N	<i>Chaenotheca brachypoda</i>	a stubble lichen				S3S4	2	56.7 ± 1.17	NS
N	<i>Cladonia floerkeana</i>	Gritty British Soldiers Lichen				S3S4	5	59.4 ± 0.01	NS
N	<i>Vahlia leucophaea</i>	Shelter Shingle Lichen				S3S4	33	15.0 ± 0.01	NS
N	<i>Heterodermia speciosa</i>	Powdered Fringe Lichen				S3S4	34	17.1 ± 0.01	NS
N	<i>Leptogium corticola</i>	Blistered Jellyskin Lichen				S3S4	14	23.7 ± 0.01	NS
N	<i>Melanohalea olivacea</i>	Spotted Camouflage Lichen				S3S4	3	70.0 ± 0.5	NS
N	<i>Parmeliopsis hyperopta</i>	Gray Starburst Lichen				S3S4	5	60.9 ± 0.5	NS
N	<i>Peltigera hymenina</i>	Cloudy Pelt Lichen				S3S4	2	13.8 ± 0.5	NS
N	<i>Sphaerophorus fragilis</i>	Fragile Coral Lichen				S3S4	1	60.9 ± 0.2	NS
N	<i>Sclerophora peronella</i>	Frosted Glass-whiskers Lichen				S3S4	3	21.8 ± 0.01	NS
N	<i>Coccocarpia palmicola</i>	Salted Shell Lichen				S3S4	457	100.0 ± 0.5	NS
N	<i>Physcia tenella</i>	Fringed Rosette Lichen				S3S4	1	87.2 ± 0.01	PE
N	<i>Anaptychia palmulata</i>	Shaggy Fringed Lichen				S3S4	114	10.7 ± 0.5	NS
N	<i>Evernia prunastri</i>	Valley Oakmoss Lichen				S3S4	12	38.7 ± 0.7	NS
N	<i>Heterodermia neglecta</i>	Fringe Lichen				S3S4	56	100.0 ± 0.01	NS
P	<i>Clethra alnifolia</i>	Coast Pepper-Bush	Endangered	Threatened	Vulnerable	S2	2	69.5 ± 0.2	NS
P	<i>Fraxinus nigra</i>	Black Ash	Threatened		Threatened	S1S2	456	10.6 ± 0.01	NS
P	<i>Juncus caesariensis</i>	New Jersey Rush	Special Concern	Special Concern	Vulnerable	S3	246	56.9 ± 0.01	NS
P	<i>Isoetes prototypus</i>	Prototype Quillwort	Special Concern	Special Concern	Vulnerable	S3	11	96.2 ± 0.05	NS
P	<i>Floerkea proserpinacoides</i>	False Mermaidweed	Not At Risk			S2S3	28	11.4 ± 1.5	NS
P	<i>Salix candida</i>	Sage Willow			Endangered	S1	57	42.6 ± 0.01	NS
P	<i>Arnica lonchophylla</i>	Northern Arnica				S1	1	34.1 ± 7.07	NS
P	<i>Betula minor</i>	Dwarf White Birch				S1	1	79.4 ± 0.01	NS
P	<i>Cardamine dentata</i>	Toothed Bittercress				S1	5	22.0 ± 0.5	NS
P	<i>Cochlearia tridactylites</i>	Limestone Scurvy-grass				S1	4	61.2 ± 0.1	NS
P	<i>Draba norvegica</i>	Norwegian Whitlow-Grass				S1	1	82.3 ± 2.5	NS
P	<i>Stellaria crassifolia</i>	Fleshy Stitchwort				S1	2	28.6 ± 2.0	NS
P	<i>Hudsonia tomentosa</i>	Woolly Beach-heath				S1	19	33.8 ± 1.7	NS
P	<i>Utricularia ochroleuca</i>	Yellowish-white Bladderwort				S1	1	93.7 ± 1.0	NS
P	<i>Fraxinus pennsylvanica</i>	Red Ash				S1	1	98.9 ± 0.35	PE
P	<i>Bistorta vivipara</i>	Alpine Bistort				S1	1	42.4 ± 1.0	NS

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P	<i>Montia fontana</i>	Water Blinks				S1	2	16.9 ± 1.0	NS
P	<i>Agalinis tenuifolia</i>	Slender Agalinis				S1	1	34.8 ± 0.01	NS
P	<i>Scrophularia lanceolata</i>	Lance-leaved Figwort				S1	2	37.6 ± 1.5	NS
P	<i>Carex alopecoidea</i>	Foxtail Sedge				S1	4	32.6 ± 0.2	NS
P	<i>Carex granularis</i>	Limestone Meadow Sedge				S1	21	22.8 ± 0.01	NS
P	<i>Carex tenuiflora</i>	Sparse-Flowered Sedge				S1	2	56.8 ± 0.5	NS
P	<i>Carex tinctoria</i>	Tinged Sedge				S1	2	32.6 ± 0.2	NS
P	<i>Carex viridula</i> ssp. <i>brachyrrhyncha</i>	Greenish Sedge				S1	1	39.9 ± 0.01	NS
P	<i>Carex viridula</i> var. <i>elatior</i>	Greenish Sedge				S1	59	21.9 ± 0.01	NS
P	<i>Carex grisea</i>	Inflated Narrow-leaved Sedge				S1	6	43.3 ± 0.01	NS
P	<i>Cyperus lupulinus</i> ssp. <i>macilentus</i>	Hop Flatsedge				S1	18	33.0 ± 0.01	NS
P	<i>Eleocharis erythropoda</i>	Red-stemmed Spikerush				S1	7	33.2 ± 0.01	NS
P	<i>Rhynchospora capillacea</i>	Slender Beakrush				S1	8	38.0 ± 1.0	NS
P	<i>Scirpus atrovirens</i>	Dark-green Bulrush				S1	3	39.8 ± 0.01	NS
P	<i>Blysmopsis rufa</i>	Red Bulrush				S1	1	97.9 ± 1.0	NS
P	<i>Iris prismatica</i>	Slender Blue Flag				S1	3	48.3 ± 0.1	NS
P	<i>Triantha glutinosa</i>	Sticky False-Asphodel				S1	18	42.6 ± 0.01	NS
P	<i>Malaxis monophyllos</i> var. <i>brachypoda</i>	North American White Adder's-mouth				S1	1	25.5 ± 7.07	NS
P	<i>Calamagrostis stricta</i> ssp. <i>inexpansa</i>	Slim-stemmed Reed Grass				S1	3	18.3 ± 0.01	NS
P	<i>Elymus hystrix</i>	Spreading Wild Rye				S1	1	99.5 ± 1.6	NS
P	<i>Hordeum brachyantherum</i>	Meadow Barley				S1	1	89.2 ± 0.01	NS
P	<i>Phleum alpinum</i>	Alpine Timothy				S1	2	87.5 ± 0.01	NS
P	<i>Torreyochloa pallida</i> var. <i>pallida</i>	Pale False Manna Grass				S1	2	91.8 ± 1.5	NS
P	<i>Graphephorum melicoides</i>	Purple False Oats				S1	3	76.1 ± 0.01	NS
P	<i>Potamogeton nodosus</i>	Long-leaved Pondweed				S1	1	96.6 ± 5.0	NS
P	<i>Sparganium angrocladum</i>	Branching Bur-Reed				S1	3	52.1 ± 0.03	NS
P	<i>Dryopteris goldieana</i>	Goldie's Woodfern				S1	4	62.8 ± 0.2	NS
P	<i>Equisetum palustre</i>	Marsh Horsetail				S1	8	31.1 ± 0.01	NS
P	<i>Botrychium lunaria</i>	Common Moonwort				S1	2	95.6 ± 1.0	NS
P	<i>Botrychium ascendens</i>	Upswept Moonwort				S1	1	36.0 ± 0.2	NS
P	<i>Bolboschoenus robustus</i>	Sturdy Bulrush				S1?	2	62.8 ± 5.0	NS
P	<i>Allium schoenoprasum</i>	Wild Chives				S1?	1	70.4 ± 0.2	NS
P	<i>Allium schoenoprasum</i> var. <i>sibiricum</i>	Wild Chives				S1?	3	39.3 ± 7.07	NS
P	<i>Huperzia selago</i>	Northern Firmoss				S1?	4	70.8 ± 0.01	NS
P	<i>Sanicula odorata</i>	Clustered Sanicle				S1S2	8	20.3 ± 0.5	NS
P	<i>Ageratina altissima</i>	White Snakeroot				S1S2	2	40.5 ± 1.5	NS
P	<i>Cornus suecica</i>	Swedish Bunchberry				S1S2	3	59.4 ± 6.0	NS
P	<i>Anemone virginiana</i> var. <i>alba</i>	Virginia Anemone				S1S2	8	30.6 ± 0.1	NS
P	<i>Parnassia parviflora</i>	Small-flowered Grass-of-Parnassus				S1S2	18	35.2 ± 1.2	NS
P	<i>Carex haydenii</i>	Hayden's Sedge				S1S2	4	22.3 ± 0.05	NS
P	<i>Platanthera huronensis</i>	Fragrant Green Orchid				S1S2	15	25.4 ± 0.01	NS
P	<i>Calamagrostis stricta</i> ssp. <i>stricta</i>	Slim-stemmed Reed Grass				S1S2	2	63.5 ± 1.0	NS
P	<i>Woodsia alpina</i>	Alpine Cliff Fern				S1S2	4	97.2 ± 2.0	NS
P	<i>Selaginella selaginoides</i>	Low Spikemoss				S1S2	5	51.5 ± 0.8	NS
P	<i>Carex vacillans</i>	Estuarine Sedge				S1S3	3	32.6 ± 0.5	NS
P	<i>Zizia aurea</i>	Golden Alexanders				S2	13	39.0 ± 1.0	NS
P	<i>Rudbeckia laciniata</i>	Cut-Leaved Coneflower				S2	2	41.3 ± 7.07	NS
P	<i>Solidago multiradiata</i>	Multi-rayed Goldenrod				S2	1	97.5 ± 2.0	NS
P	<i>Arabis pycnocarpa</i>	Cream-flowered Rockcress				S2	7	94.7 ± 0.1	NS
P	<i>Hudsonia ericoides</i>	Pinebarren Golden Heather				S2	15	87.2 ± 0.01	PE

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P	<i>Anemonastrum canadense</i>	Canada Anemone				S2	5	13.2 ± 3.0	NS
P	<i>Ranunculus sceleratus</i>	Cursed Buttercup				S2	1	59.9 ± 7.07	NS
P	<i>Comandra umbellata</i>	Bastard's Toadflax				S2	45	32.8 ± 0.01	NS
P	<i>Carex gynocrates</i>	Northern Bog Sedge				S2	15	22.3 ± 0.01	NS
P	<i>Carex livida</i>	Livid Sedge				S2	24	41.0 ± 0.01	NS
P	<i>Juncus greenii</i>	Greene's Rush				S2	1	33.8 ± 1.5	NS
P	<i>Juncus alpinoarticulatus ssp. americanus</i>	Northern Green Rush				S2	11	19.0 ± 5.0	NS
P	<i>Luzula spicata</i>	Spiked Woodrush				S2	1	43.4 ± 0.01	NS
P	<i>Lilium canadense</i>	Canada Lily				S2	53	14.9 ± 0.01	NS
P	<i>Cypripedium parviflorum var. pubescens</i>	Yellow Lady's-slipper				S2	40	14.0 ± 7.07	NS
P	<i>Cypripedium parviflorum var. makasin</i>	Small Yellow Lady's-Slipper				S2	18	27.2 ± 0.01	NS
P	<i>Cypripedium reginae</i>	Showy Lady's-Slipper				S2	456	13.5 ± 0.2	NS
P	<i>Platanthera flava var. herbiola</i>	Pale Green Orchid				S2	1	35.6 ± 1.5	NS
P	<i>Platanthera macrophylla</i>	Large Round-Leaved Orchid				S2	6	27.2 ± 1.67	NS
P	<i>Bromus latiglumis</i>	Broad-Glumed Brome				S2	11	10.1 ± 0.01	NS
P	<i>Cinna arundinacea</i>	Sweet Wood Reed Grass				S2	24	8.6 ± 0.01	NS
P	<i>Elymus wiegandii</i>	Wiegand's Wild Rye				S2	9	10.6 ± 0.01	NS
P	<i>Sparganium hyperboreum</i>	Northern Burreed				S2	4	34.8 ± 1.0	NS
P	<i>Cryptogramma stelleri</i>	Steller's Rockbrake				S2	17	32.5 ± 0.3	NS
P	<i>Cuscuta cephalanthi</i>	Buttonbush Dodder				S2?	7	32.0 ± 7.07	NS
P	<i>Rumex persicarioides</i>	Peach-leaved Dock				S2?	1	52.1 ± 0.01	NS
P	<i>Crataegus submollis</i>	Quebec Hawthorn				S2?	2	60.5 ± 7.07	NS
P	<i>Thuja occidentalis</i>	Eastern White Cedar			Vulnerable	S2S3	11	34.8 ± 0.2	NS
P	<i>Osmorhiza longistylis</i>	Smooth Sweet Cicely				S2S3	25	17.0 ± 1.0	NS
P	<i>Bidens hyperborea</i>	Estuary Beggarticks				S2S3	3	41.5 ± 1.0	NS
P	<i>Erigeron philadelphicus</i>	Philadelphia Fleabane				S2S3	16	34.3 ± 1.0	NS
P	<i>Impatiens pallida</i>	Pale Jewelweed				S2S3	29	33.6 ± 1.0	NS
P	<i>Caulophyllum thalictroides</i>	Blue Cohosh				S2S3	27	10.4 ± 0.01	NS
P	<i>Draba arabisans</i>	Rock Whitlow-Grass				S2S3	11	33.3 ± 1.6	NS
P	<i>Boechera stricta</i>	Drummond's Rockcress				S2S3	4	84.2 ± 0.1	NS
P	<i>Stellaria humifusa</i>	Saltmarsh Starwort				S2S3	6	87.4 ± 1.0	PE
P	<i>Oxybasis rubra</i>	Red Goosefoot				S2S3	7	39.1 ± 7.07	NS
P	<i>Hypericum majus</i>	Large St John's-wort				S2S3	6	45.8 ± 0.01	NS
P	<i>Hypericum x dissimulatum</i>	Disguised St. John's-wort				S2S3	2	45.6 ± 1.0	NS
P	<i>Empetrum atropurpureum</i>	Purple Crowberry				S2S3	2	57.4 ± 3.0	NS
P	<i>Euphorbia polygonifolia</i>	Seaside Spurge				S2S3	17	16.3 ± 0.01	NS
P	<i>Myriophyllum farwellii</i>	Farwell's Water Milfoil				S2S3	4	16.5 ± 7.07	NS
P	<i>Hedeoma pulegioides</i>	American False Pennyroyal				S2S3	2	52.4 ± 5.0	NS
P	<i>Oenothera fruticosa ssp. tetragona</i>	Narrow-leaved Evening Primrose				S2S3	2	53.4 ± 1.5	NS
P	<i>Polygonum aviculare ssp. buxiforme</i>	Box Knotweed				S2S3	2	78.9 ± 7.07	NS
P	<i>Polygonum oxyspermum ssp. raii</i>	Ray's Knotweed				S2S3	12	14.3 ± 3.0	NS
P	<i>Rumex triangulivalvis</i>	Triangular-valve Dock				S2S3	9	11.8 ± 10.0	NS
P	<i>Anemone quinquefolia</i>	Wood Anemone				S2S3	16	58.3 ± 1.5	NS
P	<i>Caltha palustris</i>	Yellow Marsh Marigold				S2S3	75	34.4 ± 1.5	NS
P	<i>Amelanchier fernaldii</i>	Fernald's Serviceberry				S2S3	5	58.6 ± 1.5	NS
P	<i>Potentilla canadensis</i>	Canada Cinquefoil				S2S3	1	31.4 ± 2.6	NS
P	<i>Salix pellita</i>	Satiny Willow				S2S3	6	20.3 ± 1.6	NS
P	<i>Tiarella stolonifera</i>	Stoloniferous Foamflower				S2S3	1	22.5 ± 3.81	NS
P	<i>Agalinis purpurea var. parviflora</i>	Small-flowered Purple False Foxglove				S2S3	8	22.1 ± 0.01	NS
P	<i>Carex adusta</i>	Lesser Brown Sedge				S2S3	2	58.8 ± 4.5	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
P	<i>Carex comosa</i>	Bearded Sedge				S2S3	1	57.1 ± 1.5	NS
P	<i>Carex hystericina</i>	Porcupine Sedge				S2S3	40	17.3 ± 0.01	NS
P	<i>Carex scirpoidea</i>	Scirpuslike Sedge				S2S3	4	84.8 ± 4.0	NS
P	<i>Eleocharis ovata</i>	Ovate Spikerush				S2S3	3	49.9 ± 0.01	NS
P	<i>Scirpus pedicellatus</i>	Stalked Bulrush				S2S3	9	10.0 ± 0.03	NS
P	<i>Vallisneria americana</i>	Wild Celery				S2S3	1	88.4 ± 10.0	NS
P	<i>Spiranthes casei</i> var. <i>novaescotiae</i>	Case's Ladies'-Tresses				S2S3	3	47.2 ± 0.2	NS
P	<i>Spiranthes lucida</i>	Shining Ladies'-Tresses				S2S3	28	22.9 ± 0.01	NS
P	<i>Calamagrostis stricta</i>	Slim-stemmed Reed Grass				S2S3	5	90.3 ± 0.01	PE
P	<i>Potamogeton friesii</i>	Fries' Pondweed				S2S3	12	10.0 ± 0.01	NS
P	<i>Cystopteris laurentiana</i>	Laurentian Bladder Fern				S2S3	6	33.5 ± 1.5	NS
P	<i>Woodsia glabella</i>	Smooth Cliff Fern				S2S3	12	33.5 ± 0.1	NS
P	<i>Botrychium lanceolatum</i> ssp. <i>angustisegmentum</i>	Narrow Triangle Moonwort				S2S3	10	16.8 ± 3.0	NS
P	<i>Botrychium simplex</i>	Least Moonwort				S2S3	3	19.8 ± 5.0	NS
P	<i>Ophioglossum pusillum</i>	Northern Adder's-tongue				S2S3	1	89.9 ± 5.0	NS
P	<i>Angelica atropurpurea</i>	Purple-stemmed Angelica				S3	29	10.0 ± 0.01	NS
P	<i>Hieracium robinsonii</i>	Robinson's Hawkweed				S3	9	84.5 ± 1.6	NS
P	<i>Senecio pseudoarnica</i>	Seabeach Ragwort				S3	24	20.4 ± 1.0	NS
P	<i>Symphotrichum boreale</i>	Boreal Aster				S3	69	21.8 ± 0.01	NS
P	<i>Symphotrichum ciliolatum</i>	Fringed Blue Aster				S3	3	42.7 ± 0.01	NS
P	<i>Betula michauxii</i>	Michaux's Dwarf Birch				S3	14	66.9 ± 0.01	NS
P	<i>Betula pumila</i>	Bog Birch				S3	20	20.8 ± 0.01	NS
P	<i>Cardamine parviflora</i>	Small-flowered Bittercress				S3	4	94.2 ± 1.5	NS
P	<i>Palustricodon aparinoides</i>	Marsh Bellflower				S3	6	32.3 ± 5.0	NS
P	<i>Lobelia kalmii</i>	Brook Lobelia				S3	100	21.9 ± 0.01	NS
P	<i>Sagina nodosa</i>	Knotted Pearlwort				S3	2	57.1 ± 5.0	NS
P	<i>Sagina nodosa</i> ssp. <i>borealis</i>	Knotted Pearlwort				S3	1	88.1 ± 5.0	PE
P	<i>Stellaria longifolia</i>	Long-leaved Starwort				S3	1	10.1 ± 0.01	NS
P	<i>Triosteum aurantiacum</i>	Orange-fruited Tinker's Weed				S3	208	17.3 ± 0.01	NS
P	<i>Viburnum edule</i>	Squashberry				S3	8	82.2 ± 7.07	NS
P	<i>Crassula aquatica</i>	Water Pygmyweed				S3	4	43.4 ± 7.07	NS
P	<i>Empetrum eamesii</i>	Pink Crowberry				S3	9	66.9 ± 0.01	NS
P	<i>Vaccinium uliginosum</i>	Alpine Bilberry				S3	3	83.5 ± 0.5	NS
P	<i>Halenia deflexa</i>	Spurred Gentian				S3	25	19.8 ± 0.01	NS
P	<i>Geranium bicknellii</i>	Bicknell's Crane's-bill				S3	1	64.3 ± 0.2	NS
P	<i>Myriophyllum verticillatum</i>	Whorled Water Milfoil				S3	5	21.9 ± 0.01	NS
P	<i>Utricularia resupinata</i>	Inverted Bladderwort				S3	1	64.0 ± 0.8	NS
P	<i>Epilobium densum</i>	Downy Willowherb				S3	28	17.2 ± 5.0	NS
P	<i>Polygala sanguinea</i>	Blood Milkwort				S3	12	46.4 ± 0.2	NS
P	<i>Persicaria arifolia</i>	Halberd-leaved Tearthumb				S3	8	44.2 ± 0.01	NS
P	<i>Plantago rugelii</i>	Rugel's Plantain				S3	1	34.8 ± 0.01	NS
P	<i>Primula laurentiana</i>	Laurentian Primrose				S3	1	77.8 ± 7.07	NS
P	<i>Samolus parviflorus</i>	Seaside Brookweed				S3	23	30.7 ± 0.01	NS
P	<i>Pyrola minor</i>	Lesser Pyrola				S3	11	33.9 ± 2.0	NS
P	<i>Anemone virginiana</i>	Virginia Anemone				S3	30	22.7 ± 0.01	NS
P	<i>Galium kamschaticum</i>	Northern Wild Licorice				S3	14	29.2 ± 0.01	NS
P	<i>Galium labradoricum</i>	Labrador Bedstraw				S3	105	18.6 ± 0.02	NS
P	<i>Salix pedicellaris</i>	Bog Willow				S3	13	19.7 ± 0.01	NS
P	<i>Salix sericea</i>	Silky Willow				S3	1	61.7 ± 0.01	NS
P	<i>Saxifraga paniculata</i> ssp. <i>laestadii</i>	Laestadius' Saxifrage				S3	8	28.3 ± 7.07	NS
P	<i>Lindernia dubia</i>	Yellow-seeded False Pimperel				S3	4	10.3 ± 0.01	NS
P	<i>Laportea canadensis</i>	Canada Wood Nettle				S3	19	10.4 ± 0.01	NS
P	<i>Pilea pumila</i>	Dwarf Clearweed				S3	1	83.1 ± 6.0	NS
P	<i>Viola nephrophylla</i>	Northern Bog Violet				S3	11	10.1 ± 0.01	NS
P	<i>Carex bebbii</i>	Bebb's Sedge				S3	38	25.8 ± 0.01	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
P	<i>Carex castanea</i>	Chestnut Sedge				S3	20	25.9 ± 0.01	NS
P	<i>Carex cryptolepis</i>	Hidden-scaled Sedge				S3	16	13.7 ± 5.0	NS
P	<i>Carex eburnea</i>	Bristle-leaved Sedge				S3	176	40.8 ± 0.01	NS
P	<i>Carex hirtifolia</i>	Pubescent Sedge				S3	12	10.5 ± 0.01	NS
P	<i>Carex lupulina</i>	Hop Sedge				S3	10	40.9 ± 0.01	NS
P	<i>Carex rosea</i>	Rosy Sedge				S3	6	26.8 ± 0.01	NS
P	<i>Carex tenera</i>	Tender Sedge				S3	3	17.9 ± 1.0	NS
P	<i>Carex tribuloides</i>	Blunt Broom Sedge				S3	15	45.6 ± 0.01	NS
P	<i>Carex tuckermanii</i>	Tuckerman's Sedge				S3	2	66.7 ± 0.01	NS
P	<i>Carex atratifomis</i>	Scabrous Black Sedge				S3	3	33.6 ± 7.07	NS
P	<i>Eleocharis flavescens</i> var. <i>olivacea</i>	Bright-green Spikerush				S3	3	47.8 ± 5.0	NS
P	<i>Eleocharis quinqueflora</i>	Few-flowered Spikerush				S3	34	22.4 ± 0.05	NS
P	<i>Eriophorum gracile</i>	Slender Cottongrass				S3	8	19.9 ± 0.01	NS
P	<i>Schoenoplectus americanus</i>	Olney's Bulrush				S3	1	43.4 ± 0.01	NS
P	<i>Juncus stygius</i> ssp. <i>americanus</i>	Moor Rush				S3	31	51.4 ± 1.0	NS
P	<i>Oreojuncus trifidus</i>	Highland Rush				S3	6	42.9 ± 0.75	NS
P	<i>Cypripedium parviflorum</i>	Yellow Lady's-slipper				S3	171	14.5 ± 0.01	NS
P	<i>Goodyera oblongifolia</i>	Menzies' Rattlesnake-plantain				S3	13	57.1 ± 10.0	NS
P	<i>Neottia bifolia</i>	Southern Twayblade				S3	56	15.5 ± 0.01	NS
P	<i>Platanthera grandiflora</i>	Large Purple Fringed Orchid				S3	57	10.0 ± 0.01	NS
P	<i>Platanthera hookeri</i>	Hooker's Orchid				S3	3	20.0 ± 0.1	NS
P	<i>Poa glauca</i>	Glaucous Blue Grass				S3	14	33.4 ± 1.6	NS
P	<i>Stuckenia filiformis</i>	Thread-leaved Pondweed				S3	49	15.9 ± 0.01	NS
P	<i>Potamogeton praelongus</i>	White-stemmed Pondweed				S3	21	30.0 ± 0.05	NS
P	<i>Potamogeton richardsonii</i>	Richardson's Pondweed				S3	10	7.7 ± 1.0	NS
P	<i>Potamogeton zosteriformis</i>	Flat-stemmed Pondweed				S3	14	41.7 ± 0.2	NS
P	<i>Asplenium viride</i>	Green Spleenwort				S3	31	3.0 ± 0.2	NS
P	<i>Dryopteris fragrans</i>	Fragrant Wood Fern				S3	4	24.0 ± 7.07	NS
P	<i>Polystichum lonchitis</i>	Northern Holly Fern				S3	7	19.5 ± 5.0	NS
P	<i>Sceptridium dissectum</i>	Dissected Moonwort				S3	2	69.6 ± 1.0	NS
P	<i>Polypodium appalachianum</i>	Appalachian Polypody				S3	13	19.3 ± 0.01	NS
P	<i>Persicaria amphibia</i> var. <i>emersa</i>	Long-root Smartweed				S3?	1	58.4 ± 0.01	NS
P	<i>Spiranthes ochroleuca</i>	Yellow Ladies'-tresses				S3?	53	11.7 ± 0.2	NS
P	<i>Diphasiastrum x sabinifolium</i>	Savin-leaved Ground-cedar				S3?	15	33.7 ± 1.0	NS
P	<i>Erigeron hyssopifolius</i>	Hyssop-leaved Fleabane				S3S4	92	35.7 ± 5.0	NS
P	<i>Hieracium paniculatum</i>	Panicled Hawkweed				S3S4	1	70.9 ± 0.2	NS
P	<i>Bidens beckii</i>	Water Beggarticks				S3S4	10	41.5 ± 0.5	NS
P	<i>Packera paupercula</i>	Balsam Groundsel				S3S4	182	12.4 ± 5.0	NS
P	<i>Atriplex glabriuscula</i> var. <i>franktonii</i>	Frankton's Saltbush				S3S4	6	22.8 ± 0.01	NS
P	<i>Shepherdia canadensis</i>	Soapberry				S3S4	172	30.8 ± 0.01	NS
P	<i>Vaccinium boreale</i>	Northern Blueberry				S3S4	16	28.3 ± 7.07	NS
P	<i>Vaccinium cespitosum</i>	Dwarf Bilberry				S3S4	26	75.9 ± 7.07	NS
P	<i>Vaccinium corymbosum</i>	Highbush Blueberry				S3S4	2	95.8 ± 2.55	NS
P	<i>Fagus grandifolia</i>	American Beech				S3S4	695	11.6 ± 0.2	NS
P	<i>Bartonia virginica</i>	Yellow Bartonia				S3S4	1	42.9 ± 0.1	NS
P	<i>Decodon verticillatus</i>	Swamp Loosestrife				S3S4	5	28.0 ± 7.07	NS
P	<i>Persicaria pensylvanica</i>	Pennsylvania Smartweed				S3S4	15	10.5 ± 0.01	NS
P	<i>Fallopia scandens</i>	Climbing False Buckwheat				S3S4	19	10.0 ± 0.01	NS
P	<i>Rumex pallidus</i>	Seabeach Dock				S3S4	1	42.2 ± 0.01	NS
P	<i>Pyrola asarifolia</i>	Pink Pyrola				S3S4	19	19.4 ± 0.01	NS
P	<i>Endotropis alnifolia</i>	Alder-leaved Buckthorn				S3S4	520	10.2 ± 0.01	NS
P	<i>Amelanchier spicata</i>	Running Serviceberry				S3S4	10	24.6 ± 0.01	NS
P	<i>Fragaria vesca</i> ssp. <i>americana</i>	Woodland Strawberry				S3S4	72	2.4 ± 0.04	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
P	<i>Fragaria vesca</i>	Woodland Strawberry				S3S4	3	44.4 ± 0.2	NS
P	<i>Galium aparine</i>	Common Bedstraw				S3S4	3	43.5 ± 0.01	NS
P	<i>Geocaulon lividum</i>	Northern Comandra				S3S4	79	16.1 ± 1.9	NS
P	<i>Limosella australis</i>	Southern Mudwort				S3S4	8	52.7 ± 5.0	NS
P	<i>Ulmus americana</i>	White Elm				S3S4	118	10.6 ± 0.01	NS
P	<i>Verbena hastata</i>	Blue Vervain				S3S4	47	31.6 ± 0.1	NS
P	<i>Viola selkirkii</i>	Great-Spurred Violet				S3S4	1	16.9 ± 1.0	NS
P	<i>Carex argyrantha</i>	Silvery-flowered Sedge				S3S4	2	53.7 ± 0.5	NS
P	<i>Triglochin gaspensis</i>	Gaspé Arrowgrass				S3S4	9	18.7 ± 0.01	NS
P	<i>Juncus acuminatus</i>	Sharp-Fruit Rush				S3S4	4	31.1 ± 0.01	NS
P	<i>Juncus subcaudatus</i>	Woods-Rush				S3S4	10	53.1 ± 0.01	NS
P	<i>Luzula parviflora ssp. melanocarpa</i>	Black-fruited Woodrush				S3S4	15	57.1 ± 10.0	NS
P	<i>Goodyera repens</i>	Lesser Rattlesnake-plantain				S3S4	43	10.7 ± 0.01	NS
P	<i>Liparis loeselii</i>	Loesel's Twayblade				S3S4	21	15.8 ± 5.0	NS
P	<i>Platanthera obtusata</i>	Blunt-leaved Orchid				S3S4	15	24.0 ± 10.0	NS
P	<i>Platanthera orbiculata</i>	Small Round-leaved Orchid				S3S4	20	28.0 ± 5.0	NS
P	<i>Alopecurus aequalis</i>	Short-awned Foxtail				S3S4	17	9.2 ± 0.01	NS
P	<i>Dichanthelium clandestinum</i>	Deer-tongue Panic Grass				S3S4	97	76.2 ± 0.01	NS
P	<i>Panicum philadelphicum</i>	Philadelphia Panicgrass				S3S4	1	23.3 ± 0.01	NS
P	<i>Koeleria spicata</i>	Narrow False Oats				S3S4	10	43.2 ± 0.01	NS
P	<i>Asplenium trichomanes</i>	Maidenhair Spleenwort				S3S4	16	20.0 ± 0.2	NS
P	<i>Equisetum pratense</i>	Meadow Horsetail				S3S4	23	14.6 ± 0.01	NS
P	<i>Diphasiastrum complanatum</i>	Northern Ground-cedar				S3S4	9	28.0 ± 5.0	NS
P	<i>Diphasiastrum sitchense</i>	Sitka Ground-cedar				S3S4	35	24.6 ± 0.01	NS
P	<i>Huperzia appressa</i>	Mountain Firmoss				S3S4	4	28.2 ± 1.0	NS
P	<i>Sceptridium multifidum</i>	Leathery Moonwort				S3S4	8	41.3 ± 10.0	NS
P	<i>Botrychium matricariifolium</i>	Daisy-leaved Moonwort				S3S4	6	11.8 ± 10.0	NS
P	<i>Viola canadensis</i>	Canada Violet				SH	1	32.7 ± 0.25	NS
P	<i>Botrychium minganense</i>	Mingan Moonwort				SH	1	96.8 ± 1.5	NS

5.1 SOURCE BIBLIOGRAPHY (100 km)

The recipient of these data shall acknowledge the AC CDC and the data sources listed below in any documents, reports, publications or presentations, in which this dataset makes a significant contribution.

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1149	iNaturalist.ca. 2024. iNaturalist Data Export December 2023. iNaturalist.org; iNaturalist.ca.
959	iNaturalist. 2020. iNaturalist Data Export 2020. iNaturalist.org and iNaturalist.ca, Web site: 128728 recs.
740	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2015. Atlantic Canada Conservation Data Centre Fieldwork 2015. Atlantic Canada Conservation Data Centre, # recs.
654	eBird. 2020. eBird Basic Dataset. Version: EBD_relNov-2019. Ithaca, New York. Nov 2019, Cape Breton Bras d'Or Lakes Watershed subset. Cornell Lab of Ornithology.
608	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2014. Atlantic Canada Conservation Data Centre Fieldwork 2014. Atlantic Canada Conservation Data Centre, # recs.
560	Chapman-Lam, C.J. 2022. Atlantic Canada Conservation Data Centre 2021 botanical fieldwork. Atlantic Canada Conservation Data Centre, 15099 recs.
483	Amirault, D.L. & Stewart, J. 2007. Piping Plover Database 1894-2006. Canadian Wildlife Service, Sackville, 3344 recs, 1228 new.
452	Churchill, J.L. 2023. Atlantic Canada Conservation Data Centre Fieldwork 2023. Atlantic Canada Conservation Data Centre.

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438	Henger, Benjamin. 2023. Barn Swallow observations since 2017. Island Nature Trust.
418	Benjamin, L.K. (compiler). 2012. Significant Habitat & Species Database. Nova Scotia Dept Natural Resources, 4965 recs.
382	SwiftWatch. 2022. Total Chimney Swift counts from roost watches for the duration of the SwiftWatch program (2011-2021). Birds Canada.
378	iNaturalist.ca. 2024. iNaturalist Data Export December 2023 botany records. iNaturalist.org; iNaturalist.ca.
367	Benjamin, L.K. (compiler). 2007. Significant Habitat & Species Database. Nova Scotia Dept Natural Resources, 8439 recs.
320	Belliveau, A.G. 2016. Atlantic Canada Conservation Data Centre Fieldwork 2016. Atlantic Canada Conservation Data Centre, 10695 recs.
320	Churchill, J.L. 2022. Atlantic Canada Conservation Data Centre Fieldwork 2022. Atlantic Canada Conservation Data Centre.
318	Blaney, C.S.; Mazerolle, D.M. 2010. Fieldwork 2010. Atlantic Canada Conservation Data Centre. Sackville NB, 15508 recs.
316	Newell, R.E. 2000. E.C. Smith Herbarium Database. Acadia University, Wolfville NS, 7139 recs.
299	Belliveau, A.G. 2020. E.C. Smith Herbarium and Atlantic Canada Conservation Data Centre Fieldwork 2019, 2020. E.C. Smith Herbarium.
299	Blaney, C.S.; Mazerolle, D.M. 2012. Fieldwork 2012. Atlantic Canada Conservation Data Centre, 13,278 recs.
279	Hicks, Andrew. 2009. Coastal Waterfowl Surveys Database, 2000-08. Canadian Wildlife Service, Sackville, 46488 recs (11149 non-zero).
269	Churchill, J.L. 2020. Atlantic Canada Conservation Data Centre Fieldwork 2020. Atlantic Canada Conservation Data Centre, 1083 recs.
266	Blaney, C.S.; Mazerolle, D.M. 2009. Fieldwork 2009. Atlantic Canada Conservation Data Centre. Sackville NB, 13395 recs.
264	Wildlife Division. 2021. Fraxinus nigra records assembled to define and model habitat. Nova Scotia Department of Natural Resources and Renewables.
258	Wilhelm, S.I. et al. 2011. Colonial Waterbird Database. Canadian Wildlife Service, Sackville, 2698 sites, 9718 recs (8192 obs).
251	Chapman-Lam, C.J. 2021. Atlantic Canada Conservation Data Centre 2020 botanical fieldwork. Atlantic Canada Conservation Data Centre, 17309 recs.
228	Neily, T.H. & Pepper, C.; Toms, B. 2018. Nova Scotia lichen database [as of 2018-03]. Mersey Tobeatic Research Institute.
216	Brooks, Fiona. 2023. Field data - 2023. Atlantic Canada Conservation Data Centre.
202	Staicer, Cindy. 2023. 2022 SAR Bird field occurrences from the Landbirds at Risk Project, NS. Dalhousie University, 446 records.
201	Neily, T.H. & Pepper, C.; Toms, B. 2013. Nova Scotia lichen location database. Mersey Tobeatic Research Institute, 1301 records.
197	Pepper, C. 2021. Rare bird, plant and mammal observations in Nova Scotia, 2017-2021.
192	Clayden, S. Digitization of Wolfgang Maass Nova Scotia forest lichen collections, 1964-2004. New Brunswick Museum. 2018.
179	Pronych, G. & Wilson, A. 1993. Atlas of Rare Vascular Plants in Nova Scotia. Nova Scotia Museum, Halifax NS, I:1-168, II:169-331. 1446 recs.
178	Newell, R.E. 2005. E.C. Smith Digital Herbarium. E.C. Smith Herbarium, Irving Biodiversity Collection, Acadia University, Web site: http://luxor.acadiau.ca/library/Herbarium/project/ . 582 recs.
159	Klymko, J.J.D.; Robinson, S.L. 2012. 2012 field data. Atlantic Canada Conservation Data Centre, 447 recs.
154	Neily, T.H. & Pepper, C. 2020. Nova Scotia SMP lichen surveys 2020. Mersey Tobeatic Research Institute.
154	Neily, T.H. 2017. Nova Scotia lichen records. Mersey Tobeatic Research Institute.
147	Toms, B. 2018. Bat Species data from www.batconservation.ca for Nova Scotia. Mersey Tobeatic Research Institute, 547 Records.
140	Quigley, E.J. & Neily, P.D., 2012. Botanical Discoveries in Inverness County, NS. Nova Scotia Dept Natural Resources. Pers. comm. to C.S. Blaney, Nov. 29, 141 rec.
135	Blaney, C.S.; Mazerolle, D.M.; Hill, N.M. 2011. Nova Scotia Crown Share Land Legacy Trust Fieldwork. Atlantic Canada Conservation Data Centre, 5022 recs.
133	MacDonald, E.C. 2018. CWS Piping Plover Census, 2010-2017. Canadian Wildlife Service, 672 recs.
131	MacDonald, E.C. 2018. Piping Plover nest records from 2010-2017. Canadian Wildlife Service.
129	Cameron, R.P. 2011. Lichen observations, 2011. Nova Scotia Environment & Labour, 731 recs.
119	Blaney, C.S.; Korol, J.B.; Crowell, I. 2023. 2022 AC CDC Botany program field data. Atlantic Canada Conservation Data Centre, 5293 records.
118	LaPaix, R.W.; Crowell, M.J.; MacDonald, M.; Neily, T.D.; Quinn, G. 2017. Stantec Nova Scotia rare plant records, 2012-2016. Stantec Consulting.
104	Richardson, Leif. 2018. Maritimes Bombus records from various sources. Richardson, Leif.
99	Blaney, C.S. 2016. Atlantic Canada Conservation Data Centre Fieldwork 2016. Atlantic Canada Conservation Data Centre, 6719 recs.
97	Mazerolle, D.M. 2016. Atlantic Canada Conservation Data Centre Fieldwork 2017. Atlantic Canada Conservation Data Centre.
95	Belliveau, A.G. 2018. Atlantic Canada Conservation Data Centre Fieldwork 2017. Atlantic Canada Conservation Data Centre.
92	Amirault, D.L. & McKnight, J. 2003. Piping Plover Database 1991-2003. Canadian Wildlife Service, Sackville, unpublished data. 7 recs.
88	Toms, Brad & Pepper, Chris; Neily, Tom. 2022. Nova Scotia lichen database [as of 2022-04]. Mersey Tobeatic Research Institute.
86	Klymko, J. 2018. Maritimes Butterfly Atlas database. Atlantic Canada Conservation Data Centre.
85	Belliveau, A.G., King, K., Vail, C. 2020. Bras d'Or Lakes Watershed Pectenia plumbea records, 2020. Acadia University E.C. Smith Herbarium.
84	Canadian Wildlife Service, Dartmouth. 2010. Piping Plover censuses 2007-09, 304 recs.
84	LaPaix, Rich. 2022. Rare species observations, 2018-2022. Nova Scotia Nature Trust.
83	Arsenault, M. 2019. Cormorant colony nest counts. PE Department of Communities, Land, and Environment.
82	Klymko, J.J.D. 2012. Insect fieldwork & submissions, 2011. Atlantic Canada Conservation Data Centre. Sackville NB, 760 recs.
81	Cameron-MacMillan, Maureen. 2020. Northern Goshawk Nests in Eastern Nova Scotia, as of November, 2020. Nova Scotia Department of Lands and Forestry.
81	Churchill, J.L. 2018. Atlantic Canada Conservation Data Centre Fieldwork 2018. Atlantic Canada Conservation Data Centre, 907 recs.
81	Power, T.; Gilhen, J. 2018. Status, distribution, and nesting ecology of Snapping Turtle (<i>Chelydra serpentina</i>) on Cape Breton Island, Nova Scotia, Canada. The Canadian Field Naturalist, 132(1): 8-17.
78	Island Nature Trust. 2023. Bobolink observations from Farmland Bird Program, 2017-2022. Island Nature Trust. Pers. comm., 1346 records.
74	Blaney, C.S. 2020. Sean Blaney 2020 field data. Atlantic Canada Conservation Data Centre, 4407 records.
72	Staicer, C. 2021. Additional compiled Nova Scotia Species at Risk bird records, 2005-2020. Dalhousie University.
69	Benjamin, L.K. 2012. NSDNR fieldwork & consultant reports 2008-2012. Nova Scotia Dept Natural Resources, 196 recs.
68	Bryson, I.C. 2020. Nova Scotia flora and lichen observations 2020. Nova Scotia Environment, 139 recs.
67	Manthorne, A. 2014. MaritimesSwiftwatch Project database 2013-2014. Bird Studies Canada, Sackville NB, 326 recs.
61	Benjamin, L.K. 2009. D. Anderson Odonata Records for Cape Breton, 1997-2004. Nova Scotia Dept Natural Resources, 1316 recs.
58	Munro, Marian K. Nova Scotia Provincial Museum of Natural History Herbarium Database. Nova Scotia Provincial Museum of Natural History, Halifax, Nova Scotia. 2013.

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58	Staicer, Cindy. 2022. 2021 Landbird Species at Risk observations. Dalhousie University.
57	Scott, F.W. 2002. Nova Scotia Herpetofauna Atlas Database. Acadia University, Wolfville NS, 8856 recs.
56	Benjamin, L.K. (compiler). 2001. Significant Habitat & Species Database. Nova Scotia Dept of Natural Resources, 15 spp, 224 recs.
53	Korol, Burke. 2023. Field data - 2023. Atlantic Canada Conservation Data Centre.
52	Williams, M. Cape Breton University Digital Herbarium. Cape Breton University Digital Herbarium. 2013.
49	Neily, T.H. & Pepper, C.; Toms, B. 2020. Nova Scotia lichen database [as of 2020-03-18]. Mersey Tobeatic Research Institute.
46	Crowell, Iain & Crowell, Iain. 2023. Field data - 2023. Atlantic Canada Conservation Data Centre.
46	Zinck, M. & Roland, A.E. 1998. Roland's Flora of Nova Scotia. Nova Scotia Museum, 3rd ed., rev. M. Zinck; 2 Vol., 1297 pp.
45	Belliveau, A.G. 2018. E.C. Smith Herbarium and Atlantic Canada Conservation Data Centre Fieldwork 2018. E.C. Smith Herbarium, 6226 recs.
45	Churchill, J.L. 2021. Atlantic Canada Conservation Data Centre Fieldwork 2021. Atlantic Canada Conservation Data Centre.
45	Paquet, Julie. 2019. Atlantic Canada Shorebird Survey ACSS database for 2019. Environment Canada, Canadian Wildlife Service.
45	Unama'ki Institute of Natural Resources. 2023. Species at Risk records from the Maliamu'kik Msit to Ko'kmanaq project. Unama'ki Institute of Natural Resources, 49 records.
44	Staicer, Cindy. 2023. 2022 SAR Bird ARU occurrences. Dalhousie University, 379 records.
42	Roland, A.E. & Smith, E.C. 1969. The Flora of Nova Scotia, 1st Ed. Nova Scotia Museum, Halifax, 743pp.
41	Sollows, M.C.. 2008. NBM Science Collections databases: mammals. New Brunswick Museum, Saint John NB, download Jan. 2008, 4983 recs.
40	Pulsifer, M.D. 2002. NS Freshwater Mussel Fieldwork. Nova Scotia Dept Natural Resources, 369 recs.
39	Patrick, A.; Horne, D.; Noseworthy, J. et. al. 2017. Field data for Nova Scotia and New Brunswick, 2015 and 2017. Nature Conservancy of Canada.
38	anon. 2001. S.. H.. NS Freshwater Mussel Fieldwork. Nova Scotia Dept Natural Resources, 76 recs.
38	Blaney, C.S.; Spicer, C.D. 2001. Fieldwork 2001. Atlantic Canada Conservation Data Centre. Sackville NB, 981 recs.
37	Neily, T.H. 2010. Erioderma Pedicellatum records 2005-09. Mersey Tobiatic Research Institute, 67 recs.
37	Neily, T.H. 2017. Maritimes Lichen and Bryophyte records. Atlantic Canada Conservation Data Centre, 1015 recs.
36	Patrick, Allison. 2021. Animal and plant records from NCC properties from 2019 and 2020. Nature Conservancy Canada.
36	Staicer, C. & Bliss, S.; Achenbach, L. 2017. Occurrences of tracked breeding birds in forested wetlands. , 303 records.
35	Catling, P.M., Erskine, D.S. & MacLaren, R.B. 1985. The Plants of Prince Edward Island with new records, nomenclatural changes & corrections & deletions, 1st Ed. Research Branch, Agriculture Canada, Ottawa, Publication 1798. 22pp.
35	Mazerolle, D.M. 2018. Atlantic Canada Conservation Data Centre botanical fieldwork 2018. Atlantic Canada Conservation Data Centre, 13515 recs.
35	Nickerson, Shayla. 2020. UINR Field Observations 2020-2021. Unama'ki Institute of Natural Resources.
35	Rock, J. 2020. Atlantic Canada Piping Plover field surveys: Nesting pairs by beach, 2018-2020. Environment and Climate Change Canada - Canadian Wildlife Service, 216 records.
35	Wilhelm, S.I. et al. 2019. Colonial Waterbird Database. Canadian Wildlife Service.
34	Brunelle, P.-M. (compiler). 2009. ADIP/MDDS Odonata Database: data to 2006 inclusive. Atlantic Dragonfly Inventory Program (ADIP), 24200 recs.
34	Siemens-Worsley, Allison. 2024. iNaturalist Wood Turtle observations for New Brunswick and Nova Scotia. NatureServe Canada.
32	Mazerolle, D.M. 2017. Atlantic Canada Conservation Data Centre Fieldwork 2017. Atlantic Canada Conservation Data Centre.
32	Munro, Marian K. Tracked lichen specimens, Nova Scotia Provincial Museum of Natural History Herbarium. Atlantic Canada Conservation Data Centre. 2019.
30	Island Nature Trust. 2023. PEI Bank Swallow Survey Data. Island Nature Trust, 164 recs.
29	Blaney, C.S.; Spicer, C.D.; Mazerolle, D.M. 2005. Fieldwork 2005. Atlantic Canada Conservation Data Centre. Sackville NB, 2333 recs.
28	Birds Canada. 2023. Maritimes Swiftwatch project data for 2023. Pers. comm., 270 recs.
28	Parker, G.R., Maxwell, J.W., Morton, L.D. & Smith, G.E.J. 1983. The ecology of Lynx , Lynx canadensis, on Cape Breton Island. Canadian Journal of Zoology, 61:770-786. 51 recs.
27	iNaturalist. 2018. iNaturalist Data Export 2018. iNaturalist.org and iNaturalist.ca, Web site: 11700 recs.
26	Belliveau, A.G. 2021. E.C. Smith Herbarium and Atlantic Canada Conservation Data Centre Fieldwork 2021. E.C. Smith Herbarium.
26	Neily, T.H. 2019. Tom Neily NS Bryophyte records (2009-2013). T.H. Neily, Atlantic Canada Conservation Data Centre, 1029 specimen records.
25	Anderson, Frances; Neily, Tom. 2014. A Reconnaissance Level Survey of Cryptogams in Selected Karst Topography in Cape Breton. Mersey Tobeatic Research Institute.
25	Basquill, S.P., Porter, C. 2019. Bryophyte and lichen specimens submitted to the E.C. Smith Herbarium. NS Department of Lands and Forestry.
24	Neily, T.H. 2013. Email communication to Sean Blaney regarding <i>Listera australis</i> observations made from 2007 to 2011 in Nova Scotia. , 50.
23	Adams, J. & Herman, T.B. 1998. Thesis, Unpublished map of <i>C. insculpta</i> sightings. Acadia University, Wolfville NS, 88 recs.
23	Benjamin, L.K. 2009. Boreal Felt Lichen, Mountain Avens, Orchid and other recent records. Nova Scotia Dept Natural Resources, 105 recs.
23	iNaturalist. 2020. iNaturalist butterfly records selected for the Maritimes Butterfly Atlas. iNaturalist.
23	Pepper, C. 2013. 2013 rare bird and plant observations in Nova Scotia. , 181 records.
22	Chapman, C.J. 2018. Atlantic Canada Conservation Data Centre botanical fieldwork 2018. Atlantic Canada Conservation Data Centre, 11171 recs.
22	Hill, N.M. 1994. Status report on the Long's bulrush <i>Scirpus longii</i> in Canada. Committee on the Status of Endangered Wildlife in Canada, 7 recs.
21	Anderson, Frances; Neily, Tom. 2010. A Reconnaissance Level Survey of Calciphilous Lichens in Selected Karst Topography in Nova Scotia with Notes on Incidental Bryophytes. Mersey Tobeatic Research Institute.
20	Hirtle, Sarah. 2023. 2022 Bank Swallow occurrence data. Island Nature Trust.
19	Gillis, J. 2015. Rare plant records from Cape Breton gypsum sites. Pers. comm., 25 rare plant records.
19	Island Nature Trust. 2016. Farmland birds project. Mader, Shannon (ed.) .
19	Porter, C.J.M. 2014. Field work data 2007-2014. Nova Scotia Nature Trust, 96 recs.
19	Toms, Brad. 2022. Non-Lichen Observations from Lichen SMP and NCC Property Searches. Mersey Tobeatic Research Institute.
18	Bell, G. 2018. Moose, bat and bird records from Goldboro LNG Project, NS, Environmental Assessment. Amec Foster Wheeler.
18	Benjamin, L.K. 2011. NSDNR fieldwork & consultant reports 1997, 2009-10. Nova Scotia Dept Natural Resources, 85 recs.
18	Misc. rare species records gathered by NSDNR staff or communicated to NSDNR and forwarded to ACCDC
17	Busby, D.G. 1999. 1997-1999 Bicknell's Thrush data, unpublished files. Canadian Wildlife Service, Sackville, 17 recs.

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17	Knapton, R. & Power, T.; Williams, M. 2001. SAR Inventory: Fortress Louisbourg NP. Parks Canada, Atlantic, SARINV01-13. 157 recs.
17	Lundholm, Jeremy. 2021. Bras d'Or Watershed Field Survey. Saint Mary's University.
16	Blaney, C.S.; Mazerolle, D.M. 2008. Fieldwork 2008. Atlantic Canada Conservation Data Centre. Sackville NB, 13343 recs.
16	MacDonald, M. 2008. PEI Power Corridor Floral Surveys, 2004-08. Jacques Whitford Ltd, 2238 recs (979 rare).
16	Moore, Lance. 2023. Island Nature Trust 2023 Field Observations. Island Nature Trust.
16	Neily, T.H. 2012. 2012 Erioderma pedicellatum records in Nova Scotia.
15	Cameron, R.P. 2009. Erioderma pedicellatum database, 1979-2008. Dept Environment & Labour, 103 recs.
15	Cameron, R.P. 2012. Rob Cameron 2012 vascular plant data. NS Department of Environment, 30 recs.
15	Campbell, G. 2017. Maritimes Bicknell's Thrush database 2002-2015. Bird Studies Canada, Sackville NB, 609 recs.
15	Newell, R.E. 2004. Assessment and update status report on the New Jersey Rush (<i>Juncus caesariensis</i>) in Canada. Committee on the Status of Endangered Wildlife in Canada, 15 recs.
14	Basquill, S.P. 2012. 2012 Bryophyte specimen data. Nova Scotia Department of Natural Resources, 37 recs.
14	Birds Canada. 2022. Maritimes Swiftwatch project data for 2022. Pers. comm., 155 records.
14	Chapman, C.N. (Cody). 2020. Nova Scotia Black Ash (<i>Fraxinus nigra</i>) field observations by Confederacy of Mainland Mi'kmaq. Forestry Program, Confederacy of Mainland Mi'kmaq.
14	Haughian, Sean. 2021. Update to lichen data from 2017-2021. Nova Scotia Museum.
14	Taylor, B.R., and Tam, J.C. 2012. Local distribution of the rare plant <i>Triosteum aurantiacum</i> in northeastern Nova Scotia, Canada. <i>Rhodora</i> , 114(960): 366-382.
13	Belland, R.J. Maritimes moss records from various herbarium databases. 2014.
13	Burns, L. 2013. Personal communication concerning bat occurrence on PEI. Winter 2013. Pers. comm.
13	Cameron, R.P. 2017. 2017 rare species field data. Nova Scotia Environment, 64 recs.
13	Downes, C. 1998-2000. Breeding Bird Survey Data. Canadian Wildlife Service, Ottawa, 111 recs.
13	Klymko, J.J.D. 2016. 2015 field data. Atlantic Canada Conservation Data Centre.
12	Basquill, S.P. 2012. 2012 rare vascular plant field data. Nova Scotia Department of Natural Resources, 37 recs.
12	Birds Canada. 2023. Maritimes Marsh Monitoring Program occurrences from 2022-2023. Birds Canada, 4603 records.
12	Klymko, J. 2021. Atlantic Canada Conservation Data Centre zoological fieldwork 2020. Atlantic Canada Conservation Data Centre.
12	Layberry, R.A. & Hall, P.W., LaFontaine, J.D. 1998. The Butterflies of Canada. University of Toronto Press. 280 pp+plates.
12	Skomorowski, Joanna. 2024. 2022 Nova Scotia Nature Trust SAR occurrences. Nova Scotia Nature Trust, 58 records.
11	Blaney, C.S.; Mazerolle, D.M.; Oberndorfer, E. 2007. Fieldwork 2007. Atlantic Canada Conservation Data Centre. Sackville NB, 13770 recs.
11	Cameron, R.P. 2013. 2013 rare species field data. Nova Scotia Department of Environment, 71 recs.
11	Hirtle, Sarah. 2023. Piping Plover nest occurrence data - 2023. Island Nature Trust.
11	McRae, Daniel. 2023. 2023 species occurrences for Prince Edward Island. MacPhail Woods Ecological Forestry Project, 4921 records.
10	Blaney, C.S & Spicer, C.D.; Popma, T.M.; Basquill, S.P. 2003. Vascular Plant Surveys of Northumberland Strait Rivers & Amherst Area Peatlands. Nova Scotia Museum Research Grant, 501 recs.
10	Blaney, C.S. 2000. Fieldwork 2000. Atlantic Canada Conservation Data Centre. Sackville NB, 1265 recs.
10	Chaput, G. 2002. Atlantic Salmon: Maritime Provinces Overview for 2001. Dept of Fisheries & Oceans, Atlantic Region, Science Stock Status Report D3-14. 39 recs.
10	e-Butterfly. 2016. Export of Maritimes records and photos. Maxim Larrivee, Sambo Zhang (ed.) e-butterfly.org.
10	Klymko, John. 2022. Atlantic Canada Conservation Data Centre zoological fieldwork 2021. Atlantic Canada Conservation Data Centre.
10	McMullin, R.T. 2022. Maritimes lichen records. Canadian Museum of Nature.
10	McNeil, J.A. 2020. Snapping Turtle and Eastern Painted Turtle records, 2020. Mersey Tobeatic Research Institute.
10	Murphy, S. 2006. <i>Juncus caesariensis</i> data from Yava Technologies In Situ Leach Mining Environmental Assessment. Jacques Whitford Inc., 10 recs.
10	White, S. 2018. Notable species sightings, 2016-2017. East Coast Aquatics.
9	Bryson, I. 2020. Nova Scotia and Newfoundland rare species observations, 2018-2020. Nova Scotia Environment.
9	McRae, Daniel. 2023. Black Ash records on PEI for 2023. MacPhail Woods Ecological Forestry Project, 269 records.
9	Neily, T.H. Tom Neily NS Sphagnum records (2009-2014). T.H. Neily, Atlantic Canada Conservation Data Centre. 2019.
9	Ogden, K. Nova Scotia Museum butterfly specimen database. Nova Scotia Museum. 2017.
9	Unama'ki Institute of Natural Resources. 2022. Wissoq (Black Ash) records in Port Hood, NS. pers. comm., 9 records.
8	Envirosphere Consultants Ltd., Strum. 2023. SAR records from three Environmental Assessments in Nova Scotia. Envirosphere Consultants Ltd., Strum, 48 records.
8	Gilhen, J. 1984. Amphibians & Reptiles of Nova Scotia, 1st Ed. Nova Scotia Museum, 164pp.
8	Oldham, M.J. 2000. Oldham database records from Maritime provinces. Oldham, M.J; ONHIC, 487 recs.
7	Blaney, C.S.; Mazerolle, D.M.; Klymko, J; Spicer, C.D. 2006. Fieldwork 2006. Atlantic Canada Conservation Data Centre. Sackville NB, 8399 recs.
7	Neily, T.H. & Pepper, C.; Toms, B. 2015. Nova Scotia lichen location database [as of 2015-02-15]. Mersey Tobeatic Research Institute, 1691 records.
7	Nova Scotia Nature Trust. 2013. Nova Scotia Nature Trust 2013 Species records. Nova Scotia Nature Trust, 95 recs.
7	Robinson, S.L. 2011. 2011 ND dune survey field data. Atlantic Canada Conservation Data Centre, 2715 recs.
7	Whittam, R.M. 1999. Status Report on the Roseate Tern (update) in Canada. Committee on the Status of Endangered Wildlife in Canada, 36 recs.
6	Amirault, D.L. 1997-2000. Unpublished files. Canadian Wildlife Service, Sackville, 470 recs.
6	Archibald, D.R. 2003. NS Freshwater Mussel Fieldwork. Nova Scotia Dept Natural Resources, 213 recs.
6	Bryson, I., Douglas, M., Kennedy, C. 2013. Nova Scotia rare plant observations. CBCL.
6	Dibblee, R.L. 1999. PEI Cormorant Survey. Prince Edward Island Fisheries, Aquaculture & Environment, 1p. 21 recs.
6	Goltz, J.P. & Bishop, G. 2005. Confidential supplement to Status Report on Prototype Quillwort (<i>Isoetes prototypus</i>). Committee on the Status of Endangered Wildlife in Canada, 111 recs.
6	Holder, M.L.; Kingsley, A.L. 2000. Kinglsey and Holder observations from 2000 field work.
6	Nature Conservancy Canada, Prince Edward Island. 2022. NCC PEI 2022 occurrence data. NCC PEI. Pers. comm., 214 records.

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6	Nussey, Pat & NCC staff. 2019. AEI tracked species records, 2016-2019. Chapman, C.J. (ed.) Atlantic Canada Conservation Data Centre, 333.
6	Pepper, Chris. 2020. Species of conservation concern, Powderhorn Lake, NS. pers.comm. to J. Churchill.
6	Phinney, Lori; Toms, Brad; et. al. 2016. Bank Swallows (Riparia riparia) in Nova Scotia: inventory and assessment of colonies. Merset Tobeiatc Research Institute, 25 recs.
6	Plissner, J.H. & Haig, S.M. 1997. 1996 International piping plover census. US Geological Survey, Corvallis OR, 231 pp.
5	Blaney, C.S.; Spicer, C.D.; Rothfels, C. 2004. Fieldwork 2004. Atlantic Canada Conservation Data Centre. Sackville NB, 1343 recs.
5	Cameron, R.P. 2009. Cyanolichen database. Nova Scotia Environment & Labour, 1724 recs.
5	Cameron, R.P. 2018. Degelia plumbea records. Nova Scotia Environment.
5	Ferguson, D.C. 1954. The Lepidoptera of Nova Scotia. Part I, macrolepidoptera. Proceedings of the Nova Scotian Institute of Science, 23(3), 161-375.
5	Lawrence Benjamin. 2009. Wood Anemone records from Victoria Co., from personal communication with S. Ferguson. Nova Scotia Department of Natural Resources, 5 records.
5	Marshall, L. 1998. Atlantic Salmon: Cape Breton SFA 18 (part) & SFA 19. Dept of Fisheries & Oceans, Atlantic Region, Science. Stock Status Report D3-09. 5 recs.
5	McNeil, Jeffie. 2023. 2022 Turtle Records. Mersey Tobeatic Research Institute.
5	NatureServe Canada. 2019. iNaturalist Maritimes Butterfly Records. iNaturalist.org and iNaturalist.ca.
5	Power, T. 2019. Cape Breton Wood Turtle records. NS Lands and Forestry.
5	Whittam, R.M. 1997. Status Report on the Roseate Tern (Sterna dougallii) in Canada. Committee on the Status of Endangered Wildlife in Canada, 5 recs.
4	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2013. Atlantic Canada Conservation Data Centre Fieldwork 2013. Atlantic Canada Conservation Data Centre, 9000+ recs.
4	e-Butterfly. 2019. Export of Maritimes records and photos. McFarland, K. (ed.) e-butterfly.org.
4	eBird. 2021. eBird Basic Dataset. Version: EBD_relOct-2020. Ithaca, New York. Oct 2020, Prince Edward Island Bird SAR subset. Cornell Lab of Ornithology.
4	Erskine, D. 1960. The plants of Prince Edward Island, 1st Ed. Research Branch, Agriculture Canada, Ottawa., Publication 1088. 1238 recs.
4	Hagerman, Christianne. 2022. Wisqoq and Eastern White Cedar field work. E.C. Smith Herbarium, Acadia University.
4	Klymko, John. 2023. Atlantic Canada Conservation Data Centre zoological fieldwork 2022. Atlantic Canada Conservation Data Centre.
4	Neily, T.H. & Pepper, C.; Toms, B. 2018. Nova Scotia lichen database Update. Mersey Tobeatic Research Institute, 14 recs.
4	Newell, R.E. 2001. Fortress Louisbourg Species at Risk Survey 2001. Parks Canada, 4 recs.
4	NS DNR. 2017. Black Ash records from NS DNR Permanent Sample Plots (PSPs), 1965-2016. NS Dept of Natural Resources.
4	Robicheau, Charity. 2023. Field data from 2023. Atlantic Canada Conservation Data Centre, 14 records.
4	Robinson, S.L. 2014. 2013 Field Data. Atlantic Canada Conservation Data Centre.
4	Rousseau, J. 1938. Notes Floristiques sur l'est de la Nouvelle-Ecosse in Contributions de l'Institut Botanique de l'Universite de Montreal. Universite de Montreal, 32, 13-62. 11 recs.
4	Sollows, M.C. 2009. NBM Science Collections databases: molluscs. New Brunswick Museum, Saint John NB, download Jan. 2009, 6951 recs (2957 in Atlantic Canada).
3	Baechler, Lynn. 2012. Plant observations & photos, 2012. Pers. comm. to S. Blaney, July 2012, 4 recs.
3	Blaney, C.S. 2003. Fieldwork 2003. Atlantic Canada Conservation Data Centre. Sackville NB, 1042 recs.
3	Blaney, C.S.; Mazerolle, D.M. 2011. Fieldwork 2011. Atlantic Canada Conservation Data Centre. Sackville NB.
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APPENDIX F
WETLANDS

New ID	WETLAND TYPE	AREA (m ²)	LANDFORM	DIRECTION OF FLOW	SOIL TYPE	SURFACE/ HYDROLOGIC CONDITIONS	FISH-BEARING POTENTIAL	DOMINANT VEGETATION			UPLAND HABITAT
								HERBACEOUS	SHRUB	TREES	
WL1	Shrub swamp; Treed swamp	3,828	Basin	Isolated	A2: Histic epipedon	Saturation	Low	Three-leaved false Soloman's seal (<i>Maianthemum trifolium</i>); Wild sarsaparilla (<i>Aralia nudicaulis</i>)	Baslam fir (<i>Abies balsamea</i>)	Baslam fir (<i>Abies balsamea</i>); Red maple (<i>Acer rubrum</i>); Red spruce (<i>Picea rubens</i>)	Softwood dominant mixedwood forest. lth moderately undulating topography.
WL2	Shrub swamp; Treed swamp	975	Basin	Isolated	A2: Histic epipedon	Saturation	Low	Three-leaved false Soloman's seal (<i>Maianthemum trifolium</i>); Bunchberry (<i>Cornus canadensis</i>); Cinnamon fern (<i>Osmundastrum cinnamomeum</i>)	Mountain holly (<i>Ilex mucronata</i>)	Baslam fir (<i>Abies balsamea</i>); Red maple (<i>Acer rubrum</i>)	Softwood dominant mixedwood forest.
WL3	Treed swamp	20,820	Flat	Throughflow	A2: Histic epipedon	Surface water; Saturation; High water table; Sparsely vegetated concave surfaces; Drainage patterns	Low	Bunchberry (<i>Cornus canadensis</i>); Creeping snowberry (<i>Gaultheria hispidula</i>); Common labrador tea (<i>Rhododendron groenlandicum</i>); Black spruce (<i>Picea mariana</i>); Sheep laurel (<i>Kalmia angustifolia</i>)	Black spruce (<i>Picea mariana</i>); Mountain holly (<i>Ilex mucronata</i>); Sheep laurel (<i>Kalmia angustifolia</i>); Red maple (<i>Acer rubrum</i>)	Red maple (<i>Acer rubrum</i>); Black spruce (<i>Picea mariana</i>); Tamarack (<i>Larix laricina</i>)	Dense conifer stand with sparsely vegetated understory.
WL4	Bog	1,028	Slope	Isolated	A1: Histosol	Saturation; High water table	Low	Northern pitcher plant (<i>Sarracenia purpurea</i>); White fringed orchid (<i>Platanthera blephariglottis</i>); Tamarack (<i>Larix laricina</i>); Leatherleaf (<i>Chamaedaphne calyculata</i>); Small cranberry (<i>Vaccinium oxycoccos</i>); Pale bog laurel (<i>Kalmia polifolia</i>); Three-leaved false Soloman's seal (<i>Maianthemum trifolium</i>); Sheep laurel (<i>Kalmia angustifolia</i>); Mountain holly (<i>Ilex mucronata</i>)	Northern wild raisin (<i>Viburnum nudum</i>); Black spruce (<i>Picea mariana</i>); Mountain holly (<i>Ilex mucronata</i>)	Black spruce (<i>Picea mariana</i>)	Softwood dominant mixedwood forest.
WL5	Fen	724	Slope	Throughflow	A2: Histic epipedon	Surface water; Saturation; High water table; Sparsely vegetated concave surfaces; Water stained leaves; Drainage patterns	High	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Goldthread (<i>Coptis trifolia</i>); Whorled wood aster (<i>Oclemea acuminata</i>); Star sedge (<i>Carex echinata</i>); Brownish sedge (<i>Carex brunnescens</i>); Dwarf red raspberry (<i>Rubus pubescens</i>); Partridgeberry (<i>Mitchella repens</i>)	Speckled alder (<i>Alnus incana</i>); Balsam fir (<i>Abies balsamea</i>)	Baslam fir (<i>Abies balsamea</i>)	Softwood dominant mixedwood forest draining downslope into fen.
WL6	Shrub swamp; Treed swamp	582	Basin	Isolated	A2: Histic epipedon	Saturation; Water stained leaves	Low	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Red maple (<i>Acer rubrum</i>); Bunchberry (<i>Cornus canadensis</i>); White fringed orchid (<i>Platanthera blephariglottis</i>); Sheep laurel (<i>Kalmia angustifolia</i>)	Baslam fir (<i>Abies balsamea</i>); Black spruce (<i>Picea mariana</i>); Mountain holly (<i>Ilex mucronata</i>)	Baslam fir (<i>Abies balsamea</i>); Black spruce (<i>Picea mariana</i>)	Dense conifer stand with sparsely vegetated understory.
WL7	Shrub swamp; Treed swamp	8,147	Basin	Throughflow	A2: Histic epipedon	Surface water; Saturation; High water table; Sparsely vegetated concave surfaces; Drainage patterns; Water stained leaves	Low	Star sedge (<i>Carex echinata</i>); Speckled alder (<i>Alnus incana</i>); Tawny cottongrass (<i>Eriophorum virginicum</i>); Fraser's St.-John's wort (<i>Hypericum fraseri</i>); Boreal bog sedge (<i>Carex magellanica</i>)	Northern wild raisin (<i>Viburnum nudum</i>); Balsam fir (<i>Abies balsamea</i>); Speckled alder (<i>Alnus incana</i>); Mountain holly (<i>Ilex mucronata</i>)	Red maple (<i>Acer rubrum</i>); Black spruce (<i>Picea mariana</i>); Balsam fir (<i>Abies balsamea</i>); Yellow birch (<i>Betula alleghaniensis</i>)	Dense conifer stand with sparsely vegetated understory.
WL8	Treed swamp	389	Flat	Isolated	A2: Histic epipedon	High water table; Saturation; Surface water; Water-stained leaves	Low	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Bunchberry (<i>Cornus canadensis</i>); Red maple (<i>Acer rubrum</i>); Creeping snowberry (<i>Gaultheria hispidula</i>); Soft rush (<i>Juncus effusus</i>); New York fern (<i>Amauropelta noveboracensis</i>); Whorled wood aster (<i>Oclemea acuminata</i>); Fowl manna grass (<i>Glyceria striata</i>); Twinflower (<i>Linnaea borealis</i>); Common wood sorrel (<i>Oxalis montana</i>)	Black spruce (<i>Picea mariana</i>); Mountain holly (<i>Ilex mucronata</i>)	Red maple (<i>Acer rubrum</i>); Black spruce (<i>Picea mariana</i>); Yellow birch (<i>Betula alleghaniensis</i>)	Mixedwood forested with historic disturbance and old machinery tracks.
WL9	Bog	7	Flat	Isolated	A2: Histic epipedon	Saturation; Thin muck surface	Low	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Bunchberry (<i>Cornus canadensis</i>); Black spruce (<i>Picea mariana</i>); Tawny cottongrass (<i>Eriophorum virginicum</i>); Red maple (<i>Acer rubrum</i>); Creeping snowberry (<i>Gaultheria hispidula</i>); Sheep laurel (<i>Kalmia angustifolia</i>); Three-leaved false Soloman's seal (<i>Maianthemum trifolium</i>); Club spur orchid (<i>Platanthera clavellata</i>); Jointed rush (<i>Juncus articulatus</i>)	Black spruce (<i>Picea mariana</i>); Red maple (<i>Acer rubrum</i>); Mountain holly (<i>Ilex mucronata</i>)	Black spruce (<i>Picea mariana</i>)	Mixedwood forested with historic disturbance and old machinery tracks.
WL10	Treed swamp	281	Flat	Isolated	A2: Histic epipedon	Saturation; Water stained leaves; Drainage patterns; Sparsely vegetated concave surfaces	Low	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Red maple (<i>Acer rubrum</i>); Goldthread (<i>Coptis trifolia</i>)	Balsam fir (<i>Abies balsamea</i>)	Balsam fir (<i>Abies balsamea</i>); Yellow birch (<i>Betula alleghaniensis</i>)	Balsam fir dominant forest with sparsely vegetated understory.
WL11	Shrub Swamp	3,123	Basin	Outflow	A1: Histosol	High water table; Saturation; Surface water	High	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Tawny cottongrass (<i>Eriophorum virginicum</i>); Three-leaved false Soloman's seal (<i>Maianthemum trifolium</i>); Canada goldenrod (<i>Solidago canadensis</i>); Wild sarsaparilla (<i>Aralia nudicaulis</i>)	Black spruce (<i>Picea mariana</i>); Red maple (<i>Acer rubrum</i>); Mountain holly (<i>Ilex mucronata</i>); Speckled alder (<i>Alnus incana</i>)	Black spruce (<i>Picea mariana</i>)	Softwood dominant forest on sloped terrain.

New ID	WETLAND TYPE	AREA (m ²)	LANDFORM	DIRECTION OF FLOW	SOIL TYPE	SURFACE/ HYDROLOGIC CONDITIONS	FISH-BEARING POTENTIAL	DOMINANT VEGETATION			UPLAND HABITAT
								HERBACEOUS	SHRUB	TREES	
WL12	Treed Swamp; Shrub Swamp	2,527	Flat	Throughflow	A11: Depleted below dark surface	Surface water; Saturation; Drainage patterns	Low	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); New York fern (<i>Amauropelta noveboracensis</i>); Grass-leaved goldenrod (<i>Euthamia graminifolia</i>); Rough-stemmed goldenrod (<i>Solidago rugosa</i>); Soft rush (<i>Juncus effusus</i>); Two-seeded sedge (<i>Carex disperma</i>); Bebb's willow (<i>Salix bebbiana</i>)	Black spruce (<i>Picea mariana</i>); Balsam fir (<i>Abies balsamea</i>); Paper birch (<i>Betula papyrifera</i>); Red maple (<i>Acer rubrum</i>)	Black spruce (<i>Picea mariana</i>); Balsam fir (<i>Abies balsamea</i>); Red maple (<i>Acer rubrum</i>)	Mixed aged softwood forest with dense bryophyte carpet on forest floor and a thick shrub layer in understory.
WL13	Treed swamp; Bog	30,612	Basin	Inflow	A2: Histic epipedon	Saturation	Low	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Red maple (<i>Acer rubrum</i>)	Northern wild raisin (<i>Viburnum nudum</i>); Black spruce (<i>Picea mariana</i>); Mountain holly (<i>Ilex mucronata</i>)	Balsam fir (<i>Abies balsamea</i>)	Sloping softwood dominant mixedwood forest with abundant deadfall.
WL14	Treed Swamp; Shrub Swamp	907	Basin	Throughflow	A1: Histisol	Saturation; Water stained leaves; Sparsely vegetated concave surfaces	Low	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); New York fern (<i>Amauropelta noveboracensis</i>); Two-seeded sedge (<i>Carex disperma</i>); Tawny cottongrass (<i>Eriophorum virginicum</i>); Bristly dewberry (<i>Rubus hispida</i>)	Black spruce (<i>Picea mariana</i>); Mountain holly (<i>Ilex mucronata</i>); Balsam fir (<i>Abies balsamea</i>); Red maple (<i>Acer rubrum</i>); Bebb's willow (<i>Salix bebbiana</i>)	Black spruce (<i>Picea mariana</i>); Balsam fir (<i>Abies balsamea</i>); Red maple (<i>Acer rubrum</i>)	Sloped softwood stand with abundant moss cover on forest floor.
WL15	Treed Swamp; Shrub Swamp	1,427	Basin	Throughflow	A2: Histic epipedon	Saturation; Water marks; Water stained leaves; Sparsely vegetated concave surface	Low	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Tawny cottongrass (<i>Eriophorum virginicum</i>); Three-leaved false Solomon's seal (<i>Maianthemum trifolium</i>); Wild sarsaparilla (<i>Aralia nudicaulis</i>); New York fern (<i>Amauropelta noveboracensis</i>); Woodland horsetail (<i>Equisetum sylvaticum</i>)	Black spruce (<i>Picea mariana</i>); Mountain holly (<i>Ilex mucronata</i>); Balsam fir (<i>Abies balsamea</i>); Red maple (<i>Acer rubrum</i>)	Black spruce (<i>Picea mariana</i>); Balsam fir (<i>Abies balsamea</i>)	Moderate slope leading into wetland. Dense bryophyte coverage and lush herbaceous layer on forest floor with abundant woody debris.
WL16a	Treed swamp; Shrub swamp	52,142	Basin	Throughflow	A1: Histisol	High water table; Sediment deposits; Sparsely vegetated concave surface; Hydrogen sulfide odor; Drainage patterns	Low	Three-leaved false solomon's-seal (<i>Maianthemum trifolium</i>); Creeping snowberry (<i>Gaultheria hispida</i>); Sheep laurel (<i>Kalmia angustifolia</i>); Three-seeded sedge (<i>Carex trisperma</i>); Velvetleaf blueberry (<i>Vaccinium myrtilloides</i>); Bunchberry (<i>Cornus canadensis</i>)	Black spruce (<i>Picea mariana</i>); Mountain holly (<i>Ilex mucronata</i>); Balsam fir (<i>Abies balsamea</i>); Red maple (<i>Acer rubrum</i>)	Balsam fir (<i>Abies balsamea</i>); Black spruce (<i>Picea mariana</i>)	Softwood forest dominated by black spruce and balsam fir in the overstory with dense bryophyte coverage on hummocky slope leading down to wetland.
WL16b	Treed swamp; Shrub swamp	3,843	Basin	Isolated	F3: Depleted matrix	Surface water; High water table; Saturation; Water stained leaves	Low	Black spruce (<i>Picea mariana</i>); Creeping snowberry (<i>Gaultheria hispida</i>); New York fern (<i>Thelypteris noveboracensis</i>); Bunchberry (<i>Cornus canadensis</i>); Cinnamon fern (<i>Osmundastrum cinnamomeum</i>)	Unidentified Cherry (<i>Prunus</i> sp.); Red maple (<i>Acer rubrum</i>)	Balsam fir (<i>Abies balsamea</i>); Black spruce (<i>Picea mariana</i>)	Moderately sloped upland dominated by spruce and holly.
WL17	Shrub swamp; Bog	2,916	Basin	Isolated	A2: Histic epipedon	Surface water; High water table; Saturation; Water marks; Water stained leaves; Hydrogen sulfide odor	Low	Three-seeded sedge (<i>Carex trisperma</i>); Cotton sedge (<i>Eriophorum angustifolium</i>); Bunchberry (<i>Cornus canadensis</i>); Rose species (<i>Rosa</i> spp.); Twinflower (<i>Linnaea borealis</i>); Sheep laurel (<i>Kalmia angustifolia</i>); Cinnamon Fern (<i>Osmundastrum cinnamomeum</i>); Black spruce (<i>Picea mariana</i>); Round-leaved sundew (<i>Drosera rotundifolia</i>)	Black spruce (<i>Picea mariana</i>); Red maple (<i>Acer rubrum</i>); Northern wild raisin (<i>Viburnum nudum</i>); Mountain holly (<i>Ilex mucronata</i>); Tamarack (<i>Larix laricina</i>)	Black spruce (<i>Picea mariana</i>); Balsam fir (<i>Abies balsamea</i>); Tamarack (<i>Larix laricina</i>); Red maple (<i>Acer rubrum</i>)	Hummocky slope leading down to wetland basin. Dense shrub and herbaceous layer.
WL18	Treed Swamp	482	Slope	Outflow	A2: Histic epipedon	Saturation; High water table; Surface water	Low	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Sensitive fern (<i>Onoclea sensibilis</i>); Rough-stemmed goldenrod (<i>Solidago rugosa</i>); Bristly dewberry (<i>Rubus hispida</i>); Woodland horsetail (<i>Equisetum sylvaticum</i>); New York aster (<i>Symphotrichum novi-belgii</i>)	Red maple (<i>Acer rubrum</i>); Green alder (<i>Alnus alnobetula</i>); Balsam fir (<i>Abies balsamea</i>)	Black spruce (<i>Picea mariana</i>); Balsam fir (<i>Abies balsamea</i>); Red maple (<i>Acer rubrum</i>)	Forested area on sloped terrain with large trees and an understory densely vegetated with herbaceous plants.
WL19	Treed swamp	1,072	Slope	Isolated	A1: Histisol	Saturation; Sparsely vegetated concave surfaces	Low	Three-leaved false Solomon's seal (<i>Maianthemum trifolium</i>); Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Whorled wood aster (<i>Oclemea acuminata</i>); Crested wood fern (<i>Dryopteris cristata</i>); Club spur orchid (<i>Platanthera clavellata</i>)	Balsam fir (<i>Abies balsamea</i>); Red maple (<i>Acer rubrum</i>)	Balsam fir (<i>Abies balsamea</i>); Black spruce (<i>Picea mariana</i>)	Steeply sloped mixedwood forest.
WL20	Shrub Swamp	1,919	Basin	Isolated	A1: Histisol	Saturation; High water table	Low	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Bunchberry (<i>Cornus canadensis</i>); Twinflower (<i>Linnaea borealis</i>); Common woolly bulrush (<i>Scirpus cyperinus</i>); Soft rush (<i>Juncus effusus</i>); Three-seeded sedge (<i>Carex trisperma</i>)	Red maple (<i>Acer rubrum</i>); Green alder (<i>Alnus alnobetula</i>); Red spruce (<i>Picea rubens</i>)	Red spruce (<i>Picea rubens</i>); Balsam fir (<i>Abies balsamea</i>); Paper birch (<i>Betula papyrifera</i>)	Historically disturbed from forestry operations, regenerating with deciduous shrubs.
WL21	Shrub Swamp	128	Basin	Isolated	A1: Histisol	Saturation	Low	Soft rush (<i>Juncus effusus</i>); Crested wood fern (<i>Dryopteris cristata</i>)	Red maple (<i>Acer rubrum</i>); Green alder (<i>Alnus alnobetula</i>); Balsam fir (<i>Abies balsamea</i>)	---	Regenerating shrubs in previously disturbed area on sloped terrain.

New ID	WETLAND TYPE	AREA (m ²)	LANDFORM	DIRECTION OF FLOW	SOIL TYPE	SURFACE/ HYDROLOGIC CONDITIONS	FISH-BEARING POTENTIAL	DOMINANT VEGETATION			UPLAND HABITAT
								HERBACEOUS	SHRUB	TREES	
WL22	Treed Swamp; Fen	2,742	Basin	Throughflow	A2: Histic epipedon	Saturation; High water table; Surface water	High	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Bunchberry (<i>Cornus canadensis</i>); New York fern (<i>Amauropelta noveboracensis</i>); Northern starflower (<i>Lysimachia borealis</i>); Twinflower (<i>Linnaea borealis</i>)	Red spruce (<i>Picea rubens</i>); Red maple (<i>Acer rubrum</i>); Mountain holly (<i>Ilex mucronata</i>); Balsam fir (<i>Abies balsamea</i>)	Black spruce (<i>Picea mariana</i>); Red maple (<i>Acer rubrum</i>); Mountain holly (<i>Ilex mucronata</i>); Balsam fir (<i>Abies balsamea</i>)	Sloping down from road, cutover area with regenerating shrubs.
WL23	Fen	13,669	Basin	Throughflow	A1: Histosol	High water table; Saturation; Surface water	High	White beakrush (<i>Rhynchospora alba</i>); Small cranberry (<i>Vaccinium oxycoccos</i>); Northern long sedge (<i>Carex folliculata</i>); Northern pitcher plant (<i>Sarracenia purpurea</i>); Northern wild raisin (<i>Viburnum nudum</i>); Common labrador tea (<i>Rhododendron groenlandicum</i>); Leatherleaf (<i>Chamaedaphne calyculata</i>); Swamp dewberry (<i>Rubus hispida</i>)	Tamarack (<i>Larix laricina</i>); Northern wild raisin (<i>Viburnum nudum</i>); Red maple (<i>Acer rubrum</i>); Sweet gale (<i>Myrica gale</i>)	Red maple (<i>Acer rubrum</i>); Tamarack (<i>Larix laricina</i>)	Softwood dominant mixedwood forest upslope from wetland.
WL24	Shrub swamp	284	Flat	Outflow	A1: Histosol	High water table; Saturation; Surface water	High	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Sensitive fern (<i>Onoclea sensibilis</i>); Soft rush (<i>Juncus effusus</i>); Rough-stemmed goldenrod (<i>Solidago rugosa</i>); Northern long sedge (<i>Carex folliculata</i>); Bog aster (<i>Oclemena nemoralis</i>); Broad-leaved cattail (<i>Typha latifolia</i>); Fringed sedge (<i>Carex crinita</i>); Fraser's St.-John's wort (<i>Hypericum fraseri</i>); Common woolly bulrush (<i>Scirpus cyperinus</i>)	White birch (<i>Betula papyrifera</i>); Red maple (<i>Acer rubrum</i>); Black spruce (<i>Picea mariana</i>)	Red maple (<i>Acer rubrum</i>); Black spruce (<i>Picea mariana</i>); White birch (<i>Betula papyrifera</i>); White pine (<i>Pinus strobus</i>)	Immature mixedwood forest with sloping terrain.
WL25	Treed swamp	1,485	Slope	Throughflow	A2: Histic epipedon	Saturation	High	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Whorled wood aster (<i>Oclemena acuminata</i>); Northern wild raisin (<i>Viburnum nudum</i>); Tall meadow-rue (<i>Thalictrum pubescens</i>); Creeping snowberry (<i>Gaultheria hispida</i>); Bunchberry (<i>Cornus canadensis</i>); Dwarf red raspberry (<i>Rubus pubescens</i>); Mountain maple (<i>Acer spicatum</i>); Sheep laurel (<i>Kalmia angustifolia</i>); Velvet-leaved blueberry (<i>Vaccinium myrtilloides</i>)	Northern wild raisin (<i>Viburnum nudum</i>); Balsam fir (<i>Abies balsamea</i>); Black spruce (<i>Picea mariana</i>)	Balsam fir (<i>Abies balsamea</i>); Black spruce (<i>Picea mariana</i>); Tamarack (<i>Larix laricina</i>)	N/A
WL26	Shrub swamp	62	Slope	Outflow	A2: Histic epipedon	High water table; Saturation; Surface water	High	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Soft rush (<i>Juncus effusus</i>); Rough-stemmed goldenrod (<i>Solidago rugosa</i>); Fringed sedge (<i>Carex crinita</i>); Eastern marsh fern (<i>Thelypteris palustris</i>); Creeping snowberry (<i>Gaultheria hispida</i>); Black spruce (<i>Picea mariana</i>); Bunchberry (<i>Cornus canadensis</i>); Northern wild raisin (<i>Viburnum nudum</i>); Twinflower (<i>Linnaea borealis</i>)	Northern wild raisin (<i>Viburnum nudum</i>); Black spruce (<i>Picea mariana</i>); Yellow birch (<i>Betula alleghaniensis</i>); Red maple (<i>Acer rubrum</i>); Mountain holly (<i>Ilex mucronata</i>)	American mountain ash (<i>Sorbus americana</i>); Black spruce (<i>Picea mariana</i>); Red maple (<i>Acer rubrum</i>); Yellow birch (<i>Betula alleghaniensis</i>)	Sloped habitat with birch-dominant open canopy.
WL27	Bog	161	Flat	Isolated	A1: Histosol	High water table; Saturation; Surface water	High	Red maple (<i>Acer rubrum</i>); Tawny cottongrass (<i>Eriophorum virginicum</i>); Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Soft rush (<i>Juncus effusus</i>); Fringed sedge (<i>Carex crinita</i>); Bog aster (<i>Oclemena nemoralis</i>); Speckled alder (<i>Alnus incana</i>); Swamp dewberry (<i>Rubus hispida</i>); Black spruce (<i>Picea mariana</i>); Star sedge (<i>Carex echinata</i>)	Red maple (<i>Acer rubrum</i>); Black spruce (<i>Picea mariana</i>); Speckled alder (<i>Alnus incana</i>)	Black spruce (<i>Picea mariana</i>); White birch (<i>Betula papyrifera</i>)	Sloped habitat with birch-dominant open canopy.
WL28	Bog	989	Basin	Isolated	A1: Histosol	High water table; Saturation	Low	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Northern pitcher plant (<i>Sarracenia purpurea</i>); Bog aster (<i>Oclemena nemoralis</i>); Large false Solomon's seal (<i>Maianthemum racemosum</i>); Tussock sedge (<i>Carex stricta</i>); Creeping snowberry (<i>Gaultheria hispida</i>); Bunchberry (<i>Cornus canadensis</i>); Three-seeded sedge (<i>Carex trisperma</i>); Red maple (<i>Acer rubrum</i>)	Black spruce (<i>Picea mariana</i>); Red maple (<i>Acer rubrum</i>); Red spruce (<i>Picea rubens</i>); Mountain holly (<i>Ilex mucronata</i>); Speckled alder (<i>Alnus incana</i>)	Black spruce (<i>Picea mariana</i>); Red maple (<i>Acer rubrum</i>); Red spruce (<i>Picea rubens</i>)	Sloped mixedwood forest.
WL29	Treed swamp	948	Slope; Fringe	Lentic	A1: Histosol	Surface water; Saturation; Iron deposits; Inundation visible on aerial imagery	High	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Three-seeded sedge (<i>Carex trisperma</i>); Eastern marsh fern (<i>Thelypteris palustris</i>); Dwarf red raspberry (<i>Rubus pubescens</i>); Canada goldenrod (<i>Solidago canadensis</i>); Soft rush (<i>Juncus effusus</i>)	Red maple (<i>Acer rubrum</i>); Balsam fir (<i>Abies balsamea</i>); Yellow birch (<i>Betula alleghaniensis</i>); Sheep laurel (<i>Kalmia angustifolia</i>)	Red maple (<i>Acer rubrum</i>); Black spruce (<i>Picea mariana</i>); Balsam fir (<i>Abies balsamea</i>); Yellow birch (<i>Betula alleghaniensis</i>)	Gradually sloping mixedwood habitat.

New ID	WETLAND TYPE	AREA (m ²)	LANDFORM	DIRECTION OF FLOW	SOIL TYPE	SURFACE/ HYDROLOGIC CONDITIONS	FISH-BEARING POTENTIAL	DOMINANT VEGETATION			UPLAND HABITAT
								HERBACEOUS	SHRUB	TREES	
WL30	Fen	5,573	Flat	Throughflow	A2: Histic epipedon	High water table; Saturation; Surface water	High	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Sensitive fern (<i>Onoclea sensibilis</i>); Bog aster (<i>Oclemena nemoralis</i>); Broad-leaved cattail (<i>Typha latifolia</i>); Fringed sedge (<i>Carex crinita</i>); Tawny cottongrass (<i>Eriophorum virginicum</i>); Virginia St.-John's wort (<i>Hypericum virginicum</i>); Canada manna grass (<i>Glyceria canadensis</i>); Reed canary grass (<i>Phalaris arundinacea</i>); Northern bog goldenrod (<i>Solidago uliginosa</i>)	Speckled alder (<i>Alnus incana</i>); Black spruce (<i>Picea mariana</i>); Yellow birch (<i>Betula alleghaniensis</i>); Red maple (<i>Acer rubrum</i>); Black huckleberry (<i>Gaylussacia baccata</i>)	Red maple (<i>Acer rubrum</i>); Black spruce (<i>Picea mariana</i>)	Softwood dominant forest on sloped terrain.
WL31	Treed Swamp	168	Basin	Isolated	A2: Histic epipedon	Saturation; High water table	Low	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Bunchberry (<i>Cornus canadensis</i>); Creeping snowberry (<i>Gaultheria hispida</i>); New York fern (<i>Amauropelta noveboracensis</i>); Northern starflower (<i>Lysimachia borealis</i>)	Black spruce (<i>Picea mariana</i>); Red maple (<i>Acer rubrum</i>); Mountain holly (<i>Ilex mucronata</i>); Green alder (<i>Alnus alnobetula</i>); Balsam fir (<i>Abies balsamea</i>)	Red maple (<i>Acer rubrum</i>); Black spruce (<i>Picea mariana</i>); Balsam fir (<i>Abies balsamea</i>); Green alder (<i>Alnus alnobetula</i>);	Mixedwood forest on sloped terrain.
WL32	Treed Swamp	1,578	Basin	Throughflow	F1: Loamy mucky mineral	Saturation; Surface water; Drainage patterns; Water stained leaves	Low	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); New York fern (<i>Amauropelta noveboracensis</i>); Dwarf red raspberry (<i>Rubus pubescens</i>); Three-seeded sedge (<i>Carex trisperma</i>)	Black spruce (<i>Picea mariana</i>); Balsam fir (<i>Abies balsamea</i>)	Black spruce (<i>Picea mariana</i>); Balsam fir (<i>Abies balsamea</i>); Red maple (<i>Acer rubrum</i>); Yellow birch (<i>Betula alleghaniensis</i>)	Mixedwood forest on sloped, undulating terrain. Some small moist depressions, and an abundance of woody debris.
WL33	Treed swamp	2,125	Basin	Isolated	F3: Depleted matrix	High water table; Saturation; Drainage patterns	Low	Eastern teaberry (<i>Gaultheria procumbens</i>); Woodland horsetail (<i>Equisetum sylvaticum</i>); Canada mayflower (<i>Maianthemum canadense</i>)	Speckled alder (<i>Alnus incana</i>); Balsam fir (<i>Abies balsamea</i>)	Balsam fir (<i>Abies balsamea</i>); Black spruce (<i>Picea mariana</i>)	Dense forest dominated by balsam fir, abundant leaf litter with little or no herbaceous vegetation
WL34	Shrub swamp	290	Basin	Isolated	A1: Histisol	High water table; Saturation; Water stained leaves; Hydrogen sulfide odor; Sparsely vegetated concave surface	Low	Tawny cottongrass (<i>Eriophorum virginicum</i>); Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Common woolly bulrush (<i>Scirpus cyperinus</i>)	Yellow birch (<i>Betula alleghaniensis</i>); Black spruce (<i>Picea mariana</i>)	Yellow birch (<i>Betula alleghaniensis</i>); Red maple (<i>Acer rubrum</i>)	Heavily disturbed area with abundant evidence of historic harvesting including stumps and machinery tracks.
WL35	Treed swamp; Shrub swamp	1,758	Flat	Isolated	A1: Histisol	Surface water; High water table; Saturation; Water marks; Water stained leaves; Drainage patterns	Low	Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Unknown sedges (<i>Carex spp.</i>)	Balsam fir (<i>Abies balsamea</i>); Yellow birch (<i>Betula alleghaniensis</i>); Speckled alder (<i>Alnus incana</i>); Black spruce (<i>Picea mariana</i>)	Red maple (<i>Acer rubrum</i>); Balsam fir (<i>Abies balsamea</i>); Black spruce (<i>Picea mariana</i>); Yellow birch (<i>Betula alleghaniensis</i>)	Previously harvested area with regenerating balsam fir and red maple, low diversity in herbaceous vegetation.
WL36	Treed swamp; Shrub swamp	1,102	Basin	Isolated	F3: Depleted matrix	High water table; Saturation; Water marks; Water stained leaves	Low	Grass-leaved goldenrod (<i>Euthamia graminifolia</i>); Cinnamon fern (<i>Osmundastrum cinnamomeum</i>); Red maple (<i>Acer rubrum</i>); Bunchberry (<i>Cornus canadensis</i>)	Black spruce (<i>Picea mariana</i>); Moutain holly (<i>Ilex mucronata</i>); Yellow birch (<i>Betula alleghaniensis</i>); Red maple (<i>Acer rubrum</i>)	Balsam fir (<i>Abies balsamea</i>); Black spruce (<i>Picea mariana</i>); Red maple (<i>Acer rubrum</i>)	Heavily disturbed mixed wood forest with abundant woody debris, strumps, machinery tracks, and young regenerating trees.



Photo 1: Representative photo of WL1.



Photo 2: Representative photo of WL2.



Photo 3: Representative photo of WL3.



Photo 4: Representative photo of WL4.



Photo 5: Representative photo of WL5.



Photo 6: Representative photo of WL6.



Photo 7: Representative photo of WL7.



Photo 8: Representative photo of WL8.



Photo 9: Representative photo of WL9.



Photo 10: Representative photo of WL10.



Photo 11: Representative photo of WL11.



Photo 12: Representative photo of WL12.



Photo 13: Representative photo of WL13.



Photo 14: Representative photo of WL14.



Photo 15: Representative photo of WL15.



Photo 16: Representative photo of WL16A/B.



Photo 17: Representative photo of WL17.



Photo 18: Representative photo of WL18.



Photo 19: Representative photo of WL19.



Photo 20: Representative photo of WL20.



Photo 21: Representative photo of WL21.



Photo 22: Representative photo of WL22.



Photo 23: Representative photo of WL23.



Photo 24: Representative photo of WL24.



Photo 25: Representative photo of WL25.



Photo 26: Representative photo of WL26.



Photo 27: Representative photo of WL27.



Photo 28: Representative photo of WL28.



Photo 29: Representative photo of WL29.



Photo 30: Representative photo of WL30.



Photo 31: Representative photo of WL31.



Photo 32: Representative photo of WL32.



Photo 33: Representative photo of WL33.



Photo 34: Representative photo of WL34.



Photo 35: Representative photo of WL35.



Photo 36: Representative photo of WL36.

Assessment Area (AA) Results:

Wetland ID: WL2

Date: 07/24/2024

Observer: Renee MacQuarrie

Latitude & Longitude (decimal degrees): 45.77173662, -61.42341835

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	8.51	Higher	7.67	Higher	8.30	3.40
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	5.02	Moderate	1.36	Moderate	6.11	0.67
Phosphorus Retention (PR)	1.38	Lower	1.29	Moderate	4.61	1.00
Nitrate Removal & Retention (NR)	10.00	Higher	3.33	Lower	10.00	3.33
Carbon Sequestration (CS)	8.44	Higher			9.19	
Organic Nutrient Export (OE)	10.00	Higher			6.83	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	5.57	Higher	1.16	Moderate	5.77	1.87
Amphibian & Turtle Habitat (AM)	3.60	Moderate	1.39	Lower	5.01	2.90
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	7.14	Moderate	2.50	Lower	6.21	2.50
Pollinator Habitat (POL)	7.75	Moderate	0.00	Lower	6.42	0.00
Native Plant Habitat (PH)	3.18	Lower	4.21	Lower	5.17	4.21
Public Use & Recognition (PU)			0.29	Lower		0.50
Wetland Sensitivity (Sens)			10.00	Higher		5.65
Wetland Ecological Condition (EC)			4.78	Moderate		7.50
Wetland Stressors (STR) (higher score means more stress)			4.27	Moderate		2.24
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	8.51	Higher	7.67	Higher	8.30	3.40
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	8.10	Higher	2.66	Lower	8.74	2.50
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	6.95	Higher	0.78	Lower	4.99	1.25
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	2.16	Lower	0.83	Lower	3.01	1.74
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.88	Higher	3.22	Lower	6.18	3.22
WETLAND CONDITION (EC)			4.78	Moderate		7.50
WETLAND RISK (average of Sensitivity & Stressors)			7.14	Higher		3.94

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	65.28549703	High
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	21.58635391	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	5.385210888	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	1.796363006	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	22.19429709	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL1

Date: 07/24/2024

Observer: Jordan Davis

Latitude & Longitude (decimal degrees): 45.77182018, -61.43060884

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	8.51	Higher	7.33	Higher	8.30	3.25
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	5.02	Moderate	1.36	Moderate	6.11	0.67
Phosphorus Retention (PR)	1.38	Lower	1.29	Moderate	4.61	1.00
Nitrate Removal & Retention (NR)	10.00	Higher	3.33	Lower	10.00	3.33
Carbon Sequestration (CS)	7.57	Higher			8.78	
Organic Nutrient Export (OE)	10.00	Higher			6.83	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	5.74	Higher	0.96	Lower	5.84	1.76
Amphibian & Turtle Habitat (AM)	3.15	Lower	2.23	Lower	4.77	3.60
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	6.65	Moderate	5.00	Moderate	5.79	5.00
Pollinator Habitat (POL)	7.07	Moderate	0.00	Lower	5.86	0.00
Native Plant Habitat (PH)	3.59	Moderate	3.88	Lower	5.34	3.88
Public Use & Recognition (PU)			0.46	Lower		0.62
Wetland Sensitivity (Sens)			10.00	Higher		5.51
Wetland Ecological Condition (EC)			4.78	Moderate		7.50
Wetland Stressors (STR) (higher score means more stress)			4.27	Moderate		2.24
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	8.51	Higher	7.33	Higher	8.30	3.25
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	8.00	Higher	2.66	Lower	8.69	2.50
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	6.97	Higher	0.64	Lower	5.00	1.17
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	1.89	Lower	1.34	Lower	2.86	2.16
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.42	Moderate	3.98	Lower	5.76	3.98
WETLAND CONDITION (EC)			4.78	Moderate		7.50
WETLAND RISK (average of Sensitivity & Stressors)			7.14	Higher		3.87

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	62.40525452	High
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	21.29463153	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	4.455700059	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	2.523345715	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	25.56751537	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: Site is not a WSS

Assessment Area (AA) Results:

Wetland ID: WL3

Date: 07/24/2024

Observer: Renee MacQuarrie

Latitude & Longitude (decimal degrees): 45.77151831, -61.42063605

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	9.07	Higher	10.00	Higher	8.71	4.68
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	6.44	Moderate	1.59	Moderate	7.22	0.78
Phosphorus Retention (PR)	0.99	Lower	1.50	Moderate	4.36	1.17
Nitrate Removal & Retention (NR)	10.00	Higher	3.89	Moderate	10.00	3.89
Carbon Sequestration (CS)	8.44	Higher			9.19	
Organic Nutrient Export (OE)	9.94	Higher			6.50	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	7.87	Higher	1.35	Moderate	6.70	1.97
Amphibian & Turtle Habitat (AM)	3.75	Moderate	1.61	Lower	5.09	3.08
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	7.76	Higher	10.00	Higher	6.75	10.00
Pollinator Habitat (POL)	8.53	Higher	0.00	Lower	7.07	0.00
Native Plant Habitat (PH)	6.02	Moderate	4.61	Lower	6.30	4.61
Public Use & Recognition (PU)			0.29	Lower		0.50
Wetland Sensitivity (Sens)			10.00	Higher		5.91
Wetland Ecological Condition (EC)			8.26	Higher		9.17
Wetland Stressors (STR) (higher score means more stress)			4.27	Moderate		2.24
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	9.07	Higher	10.00	Higher	8.71	4.68
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	8.23	Higher	3.11	Lower	8.85	2.92
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.19	Higher	0.90	Lower	5.00	1.32
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	2.25	Lower	0.96	Lower	3.05	1.85
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.98	Higher	7.43	Moderate	6.89	7.43
WETLAND CONDITION (EC)			8.26	Higher		9.17
WETLAND RISK (average of Sensitivity & Stressors)			7.14	Higher		4.07

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	90.70384122	High
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	25.58385399	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	6.498450878	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	2.166834829	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	59.3590932	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL5

Date: 07/23/2024

Observer: Renee MacQuarrie

Latitude & Longitude (decimal degrees): 45.77100923, -61.43304015

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	2.47	Lower	9.98	Higher	3.79	4.43
Stream Flow Support (SFS)	2.79	Moderate	9.83	Higher	2.25	6.54
Water Cooling (WC)	6.80	Higher	3.54	Moderate	4.53	1.92
Sediment Retention & Stabilisation (SR)	3.72	Moderate	1.78	Moderate	5.10	0.87
Phosphorus Retention (PR)	1.43	Lower	1.50	Moderate	4.64	1.17
Nitrate Removal & Retention (NR)	3.78	Moderate	7.50	Higher	5.50	7.50
Carbon Sequestration (CS)	4.50	Moderate			7.33	
Organic Nutrient Export (OE)	8.78	Higher			5.74	
Anadromous Fish Habitat (FA)	7.31	Higher	1.58	Moderate	4.79	1.00
Resident Fish Habitat (FR)	7.52	Higher	1.60	Moderate	4.09	1.00
Aquatic Invertebrate Habitat (INV)	9.22	Higher	8.11	Higher	7.25	5.61
Amphibian & Turtle Habitat (AM)	5.44	Moderate	5.23	Moderate	5.98	6.07
Waterbird Feeding Habitat (WBF)	6.57	Higher	5.00	Moderate	5.00	5.00
Waterbird Nesting Habitat (WBN)	7.72	Higher	5.00	Higher	5.60	5.00
Songbird, Raptor, & Mammal Habitat (SBM)	9.44	Higher	5.00	Moderate	8.21	5.00
Pollinator Habitat (POL)	7.91	Moderate	0.00	Lower	6.56	0.00
Native Plant Habitat (PH)	6.43	Higher	4.92	Lower	6.47	4.92
Public Use & Recognition (PU)			0.29	Lower		0.50
Wetland Sensitivity (Sens)			10.00	Higher		5.37
Wetland Ecological Condition (EC)			7.10	Higher		8.61
Wetland Stressors (STR) (higher score means more stress)			4.27	Moderate		2.24
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	2.47	Lower	9.98	Higher	3.79	4.43
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.93	Moderate	5.55	Moderate	6.49	5.34
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	8.06	Higher	8.49	Higher	6.10	5.61
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	7.31	Higher	4.46	Moderate	5.53	4.84
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	8.68	Higher	4.15	Lower	7.65	4.15
WETLAND CONDITION (EC)			7.10	Higher		8.61
WETLAND RISK (average of Sensitivity & Stressors)			7.14	Higher		3.81

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	24.63119192	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	21.79678999	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	68.42951124	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	32.60398711	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	36.06442725	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL6

Date: 07/23/2024

Observer: Renee MacQuarrie

Latitude & Longitude (decimal degrees): 45.77053718, -61.43464285

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	8.51	Higher	7.33	Higher	8.30	3.25
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	5.02	Moderate	1.36	Moderate	6.11	0.67
Phosphorus Retention (PR)	1.38	Lower	1.29	Moderate	4.61	1.00
Nitrate Removal & Retention (NR)	10.00	Higher	3.33	Lower	10.00	3.33
Carbon Sequestration (CS)	7.86	Higher			8.92	
Organic Nutrient Export (OE)	9.82	Higher			6.42	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	6.25	Higher	0.67	Lower	6.04	1.60
Amphibian & Turtle Habitat (AM)	1.03	Lower	2.30	Lower	3.66	3.65
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	6.85	Moderate	5.00	Moderate	5.96	5.00
Pollinator Habitat (POL)	9.07	Higher	0.00	Lower	7.52	0.00
Native Plant Habitat (PH)	3.69	Moderate	4.49	Lower	5.37	4.49
Public Use & Recognition (PU)			0.29	Lower		0.50
Wetland Sensitivity (Sens)			10.00	Higher		5.69
Wetland Ecological Condition (EC)			8.26	Higher		9.17
Wetland Stressors (STR) (higher score means more stress)			4.27	Moderate		2.24
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	8.51	Higher	7.33	Higher	8.30	3.25
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	8.03	Higher	2.66	Lower	8.70	2.50
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	6.92	Higher	0.45	Lower	4.77	1.07
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	0.62	Lower	1.38	Lower	2.20	2.19
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.81	Higher	4.08	Lower	6.90	4.08
WETLAND CONDITION (EC)			8.26	Higher		9.17
WETLAND RISK (average of Sensitivity & Stressors)			7.14	Higher		3.96

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	62.40525452	High
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	21.39219754	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	3.081147915	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	0.847901194	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	31.86187006	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL7

Date: 07/24/2024

Observer: Renee MacQuarrie

Latitude & Longitude (decimal degrees): 45.77056587, -61.4302817

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	2.67	Lower	7.22	Higher	3.94	3.20
Stream Flow Support (SFS)	2.79	Moderate	8.22	Higher	2.25	5.47
Water Cooling (WC)	4.92	Moderate	1.78	Lower	3.28	0.96
Sediment Retention & Stabilisation (SR)	1.99	Lower	1.59	Moderate	3.75	0.78
Phosphorus Retention (PR)	1.41	Lower	1.29	Moderate	4.63	1.00
Nitrate Removal & Retention (NR)	3.34	Moderate	5.00	Moderate	5.18	5.00
Carbon Sequestration (CS)	4.98	Moderate			7.55	
Organic Nutrient Export (OE)	8.06	Higher			5.27	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	6.72	Higher	1.45	Moderate	3.65	0.90
Aquatic Invertebrate Habitat (INV)	5.62	Higher	5.92	Moderate	5.79	4.44
Amphibian & Turtle Habitat (AM)	5.79	Moderate	5.00	Moderate	6.16	5.88
Waterbird Feeding Habitat (WBF)	5.94	Moderate	5.00	Moderate	4.52	5.00
Waterbird Nesting Habitat (WBN)	5.74	Moderate	5.00	Higher	4.16	5.00
Songbird, Raptor, & Mammal Habitat (SBM)	9.33	Higher	5.00	Moderate	8.12	5.00
Pollinator Habitat (POL)	8.95	Higher	0.00	Lower	7.42	0.00
Native Plant Habitat (PH)	5.65	Moderate	5.18	Lower	6.16	5.18
Public Use & Recognition (PU)			0.29	Lower		0.50
Wetland Sensitivity (Sens)			10.00	Higher		5.24
Wetland Ecological Condition (EC)			8.26	Higher		9.17
Wetland Stressors (STR) (higher score means more stress)			4.27	Moderate		2.24
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	2.67	Lower	7.22	Higher	3.94	3.20
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.95	Moderate	3.81	Moderate	6.42	3.63
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	6.70	Higher	6.77	Moderate	4.97	4.55
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	5.78	Moderate	4.14	Moderate	4.93	4.62
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	8.65	Higher	4.29	Lower	7.68	4.29
WETLAND CONDITION (EC)			8.26	Higher		9.17
WETLAND RISK (average of Sensitivity & Stressors)			7.14	Higher		3.74

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	19.29829276	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	15.07750719	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	45.37162722	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	23.95500028	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	37.08214149	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL8

Date: 02/01/2023

Observer: Lucas Bonner

Latitude & Longitude (decimal degrees): -62.3753 50.71141

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	8.65	Higher	5.02	Moderate	8.40	2.23
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	5.73	Moderate	1.80	Moderate	6.67	0.88
Phosphorus Retention (PR)	3.41	Moderate	1.70	Moderate	5.88	1.32
Nitrate Removal & Retention (NR)	10.00	Higher	4.17	Moderate	10.00	4.17
Carbon Sequestration (CS)	8.80	Higher			9.36	
Organic Nutrient Export (OE)	7.48	Higher			4.89	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	3.02	Lower	0.69	Lower	4.72	1.62
Amphibian & Turtle Habitat (AM)	2.67	Lower	1.98	Lower	4.52	3.39
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	5.95	Moderate	5.00	Moderate	5.18	5.00
Pollinator Habitat (POL)	6.17	Moderate	0.00	Lower	5.12	0.00
Native Plant Habitat (PH)	2.38	Lower	3.43	Lower	4.85	3.43
Public Use & Recognition (PU)			4.05	Moderate		3.08
Wetland Sensitivity (Sens)			8.28	Higher		4.53
Wetland Ecological Condition (EC)			3.04	Lower		6.67
Wetland Stressors (STR) (higher score means more stress)			6.00	Moderate		3.07
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	8.65	Higher	5.02	Moderate	8.40	2.23
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	8.49	Higher	3.36	Moderate	8.99	3.14
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.05	Moderate	0.46	Lower	3.65	1.08
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	1.60	Lower	1.19	Lower	2.71	2.04
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	5.50	Moderate	3.91	Lower	5.11	3.91
WETLAND CONDITION (EC)			3.04	Lower		6.67
WETLAND RISK (average of Sensitivity & Stressors)			7.14	Higher		3.80

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	43.42438997	Moderate
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	28.53186095	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	2.33219643	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	1.903072128	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	21.49391785	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL9

Date: 02/01/2023

Observer: Lucas Bonner

Latitude & Longitude (decimal degrees): -62.3636 50.69704

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	8.79	Higher	5.41	Moderate	8.51	2.40
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	5.73	Moderate	0.91	Lower	6.67	0.44
Phosphorus Retention (PR)	3.41	Moderate	0.86	Lower	5.88	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	2.67	Lower	10.00	2.67
Carbon Sequestration (CS)	7.99	Higher			8.98	
Organic Nutrient Export (OE)	7.27	Moderate			4.75	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	6.06	Higher	0.16	Lower	5.96	1.33
Amphibian & Turtle Habitat (AM)	0.42	Lower	3.79	Moderate	3.34	4.88
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	5.33	Moderate	10.00	Higher	4.64	10.00
Pollinator Habitat (POL)	6.19	Moderate	0.00	Lower	5.13	0.00
Native Plant Habitat (PH)	2.86	Lower	3.26	Lower	5.04	3.26
Public Use & Recognition (PU)			2.43	Moderate		1.96
Wetland Sensitivity (Sens)			10.00	Higher		5.13
Wetland Ecological Condition (EC)			6.52	Higher		8.33
Wetland Stressors (STR) (higher score means more stress)			4.62	Moderate		2.40
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	8.79	Higher	5.41	Moderate	8.51	2.40
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	8.39	Higher	2.07	Lower	8.94	1.96
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.30	Moderate	0.11	Lower	4.32	0.89
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	0.25	Lower	2.27	Moderate	2.01	2.93
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	5.49	Moderate	7.21	Moderate	5.03	7.21
WETLAND CONDITION (EC)			6.52	Higher		8.33
WETLAND RISK (average of Sensitivity & Stressors)			7.31	Higher		3.77

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	47.5957026	Moderate
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	17.38569802	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	0.57005853	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	0.571067172	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	39.59496561	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: Site is not a WSS

Assessment Area (AA) Results:

Wetland ID: WL10

Date: 07/23/2024

Observer: Renee MacQuarrie

Latitude & Longitude (decimal degrees): 45.76952601, -61.43869231

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	7.76	Higher	7.44	Higher	7.73	3.30
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	5.02	Moderate	1.36	Moderate	6.11	0.67
Phosphorus Retention (PR)	0.85	Lower	1.29	Moderate	4.28	1.00
Nitrate Removal & Retention (NR)	10.00	Higher	3.33	Lower	10.00	3.33
Carbon Sequestration (CS)	9.44	Higher			9.67	
Organic Nutrient Export (OE)	8.86	Higher			5.79	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	3.53	Moderate	0.43	Lower	4.93	1.48
Amphibian & Turtle Habitat (AM)	0.74	Lower	2.04	Lower	3.51	3.45
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	6.13	Moderate	5.00	Moderate	5.34	5.00
Pollinator Habitat (POL)	7.35	Moderate	0.00	Lower	6.09	0.00
Native Plant Habitat (PH)	1.95	Lower	3.81	Lower	4.68	3.81
Public Use & Recognition (PU)			0.29	Lower		0.50
Wetland Sensitivity (Sens)			10.00	Higher		5.56
Wetland Ecological Condition (EC)			4.78	Moderate		7.50
Wetland Stressors (STR) (higher score means more stress)			4.27	Moderate		2.24
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	7.76	Higher	7.44	Higher	7.73	3.30
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	8.16	Higher	2.66	Lower	8.76	2.50
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.98	Higher	0.29	Lower	4.24	0.98
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	0.45	Lower	1.23	Lower	2.11	2.07
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.25	Moderate	3.97	Lower	5.73	3.97
WETLAND CONDITION (EC)			4.78	Moderate		7.50
WETLAND RISK (average of Sensitivity & Stressors)			7.14	Higher		3.90

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	57.75269493	High
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	21.74064125	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	1.713710372	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	0.547994487	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	24.78341744	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
CONCLUSION:	Site is not a WSS

Assessment Area (AA) Results:

Wetland ID: WL11

Date: 02/01/2023

Observer: Brayden Thomas

Latitude & Longitude (decimal degrees): -62.3262 50.96515

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	0.00	Lower	5.08	Moderate	1.92	2.25
Stream Flow Support (SFS)	9.38	Higher	10.00	Higher	7.56	6.75
Water Cooling (WC)	9.15	Higher	8.57	Higher	6.10	4.65
Sediment Retention & Stabilisation (SR)	2.49	Lower	0.45	Lower	4.14	0.22
Phosphorus Retention (PR)	3.00	Lower	1.71	Moderate	5.62	1.33
Nitrate Removal & Retention (NR)	3.71	Moderate	3.33	Lower	5.46	3.33
Carbon Sequestration (CS)	2.73	Lower			6.49	
Organic Nutrient Export (OE)	8.67	Higher			5.67	
Anadromous Fish Habitat (FA)	6.36	Higher	5.30	Higher	4.17	3.36
Resident Fish Habitat (FR)	6.07	Higher	5.38	Higher	3.30	3.36
Aquatic Invertebrate Habitat (INV)	6.17	Higher	6.22	Higher	6.01	4.59
Amphibian & Turtle Habitat (AM)	4.10	Moderate	4.46	Moderate	5.27	5.43
Waterbird Feeding Habitat (WBF)	4.55	Moderate	5.00	Moderate	3.47	5.00
Waterbird Nesting Habitat (WBN)	4.86	Moderate	5.00	Higher	3.53	5.00
Songbird, Raptor, & Mammal Habitat (SBM)	9.00	Higher	5.00	Moderate	7.83	5.00
Pollinator Habitat (POL)	8.39	Higher	0.00	Lower	6.95	0.00
Native Plant Habitat (PH)	4.34	Moderate	4.93	Lower	5.63	4.93
Public Use & Recognition (PU)			2.98	Moderate		2.34
Wetland Sensitivity (Sens)			10.00	Higher		5.26
Wetland Ecological Condition (EC)			4.78	Moderate		7.50
Wetland Stressors (STR) (higher score means more stress)			7.37	Higher		3.72
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	0.00	Lower	5.08	Moderate	1.92	2.25
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.35	Moderate	2.58	Lower	5.96	2.48
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	8.86	Higher	9.13	Higher	6.94	6.04
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	5.77	Moderate	5.21	Higher	4.61	4.93
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	8.12	Higher	4.15	Lower	7.32	4.15
WETLAND CONDITION (EC)			4.78	Moderate		7.50
WETLAND RISK (average of Sensitivity & Stressors)			8.69	Higher		4.49

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	0	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	8.649059386	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	80.90684465	Moderate
HABITAT SUPERGROUP - AQUATIC HABITAT	30.04847996	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	33.73645796	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL12

Date: 08/30/2024

Observer: Paul McCarron

Latitude & Longitude (decimal degrees): 45.76654183, -61.41992455

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	7.31	Moderate	5.53	Moderate	7.40	2.45
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	4.30	Moderate	0.91	Lower	5.56	0.44
Phosphorus Retention (PR)	0.00	Lower	0.86	Lower	3.57	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	2.50	Lower	10.00	2.50
Carbon Sequestration (CS)	4.00	Moderate			7.09	
Organic Nutrient Export (OE)	9.47	Higher			6.19	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	8.46	Higher	1.15	Moderate	6.94	1.86
Amphibian & Turtle Habitat (AM)	3.18	Lower	1.45	Lower	4.79	2.96
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	7.32	Moderate	2.50	Lower	6.37	2.50
Pollinator Habitat (POL)	7.01	Moderate	0.00	Lower	5.81	0.00
Native Plant Habitat (PH)	4.46	Moderate	4.06	Lower	5.68	4.06
Public Use & Recognition (PU)			2.17	Moderate		1.79
Wetland Sensitivity (Sens)			10.00	Higher		5.22
Wetland Ecological Condition (EC)			8.26	Higher		9.17
Wetland Stressors (STR) (higher score means more stress)			4.42	Moderate		2.31
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	7.31	Moderate	5.53	Moderate	7.40	2.45
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	7.29	Higher	1.96	Lower	8.28	1.85
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	6.97	Higher	0.76	Lower	5.11	1.24
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	1.91	Lower	0.87	Lower	2.88	1.77
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.79	Higher	3.12	Lower	6.16	3.12
WETLAND CONDITION (EC)			8.26	Higher		9.17
WETLAND RISK (average of Sensitivity & Stressors)			7.21	Higher		3.77

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	40.40769096	Moderate
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	14.28924366	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	5.32736702	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	1.664116983	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	21.22825695	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL13

Date: 07/22/2024

Observer: Jordan Davis

Latitude & Longitude (decimal degrees): 45.7674384, -61.4433287

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	1.95	Lower	7.56	Higher	3.40	3.35
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	5.73	Moderate	1.80	Moderate	6.67	0.88
Phosphorus Retention (PR)	0.39	Lower	1.88	Moderate	3.99	1.46
Nitrate Removal & Retention (NR)	3.06	Moderate	5.42	Moderate	4.99	5.42
Carbon Sequestration (CS)	6.89	Higher			8.46	
Organic Nutrient Export (OE)	7.45	Moderate			4.87	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	5.61	Higher	0.98	Lower	5.78	1.77
Amphibian & Turtle Habitat (AM)	3.27	Lower	1.21	Lower	4.84	2.76
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	6.64	Moderate	2.50	Lower	5.78	2.50
Pollinator Habitat (POL)	5.18	Moderate	0.00	Lower	4.30	0.00
Native Plant Habitat (PH)	3.32	Lower	3.36	Lower	5.23	3.36
Public Use & Recognition (PU)			2.25	Moderate		1.85
Wetland Sensitivity (Sens)			7.07	Moderate		4.19
Wetland Ecological Condition (EC)			3.04	Lower		6.67
Wetland Stressors (STR) (higher score means more stress)			8.00	Higher		4.02
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	1.95	Lower	7.56	Higher	3.40	3.35
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	5.45	Higher	4.22	Moderate	7.24	4.00
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.36	Moderate	0.65	Lower	4.22	1.18
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	1.96	Lower	0.73	Lower	2.90	1.66
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	5.85	Moderate	2.66	Lower	5.44	2.66
WETLAND CONDITION (EC)			3.04	Lower		6.67
WETLAND RISK (average of Sensitivity & Stressors)			7.53	Higher		4.10

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	14.73449389	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	23.02934666	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	3.490270574	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	1.429128498	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	15.53198092	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL14

Date: 08/30/2024

Observer: Paul McCarron

Latitude & Longitude (decimal degrees): 45.7656505, -61.42015734

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	8.32	Higher	5.53	Moderate	8.15	2.45
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	4.30	Moderate	0.91	Lower	5.56	0.44
Phosphorus Retention (PR)	0.78	Lower	0.86	Lower	4.23	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	2.50	Lower	10.00	2.50
Carbon Sequestration (CS)	7.11	Higher			8.56	
Organic Nutrient Export (OE)	9.89	Higher			6.47	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	6.98	Higher	0.80	Lower	6.34	1.68
Amphibian & Turtle Habitat (AM)	1.06	Lower	1.45	Lower	3.68	2.96
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	7.33	Moderate	2.50	Lower	6.38	2.50
Pollinator Habitat (POL)	7.01	Moderate	0.00	Lower	5.81	0.00
Native Plant Habitat (PH)	5.11	Moderate	4.06	Lower	5.94	4.06
Public Use & Recognition (PU)			2.17	Moderate		1.79
Wetland Sensitivity (Sens)			10.00	Higher		5.47
Wetland Ecological Condition (EC)			8.26	Higher		9.17
Wetland Stressors (STR) (higher score means more stress)			4.42	Moderate		2.31
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	8.32	Higher	5.53	Moderate	8.15	2.45
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	7.77	Higher	1.96	Lower	8.54	1.85
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.06	Higher	0.54	Lower	4.83	1.12
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	0.64	Lower	0.87	Lower	2.21	1.78
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.91	Higher	3.13	Lower	6.21	3.13
WETLAND CONDITION (EC)			8.26	Higher		9.17
WETLAND RISK (average of Sensitivity & Stressors)			7.21	Higher		3.89

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	45.96363805	Moderate
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	15.24298412	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	3.781779472	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	0.555317122	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	21.59429071	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL16

Date: 08/19/2024

Observer: Paul McCarron

Latitude & Longitude (decimal degrees): 45.75867218, -61.41502602

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	2.47	Lower	4.62	Moderate	3.79	2.05
Stream Flow Support (SFS)	5.17	Higher	8.03	Higher	4.17	5.35
Water Cooling (WC)	5.92	Higher	2.24	Moderate	3.94	1.21
Sediment Retention & Stabilisation (SR)	4.16	Moderate	0.83	Lower	5.44	0.41
Phosphorus Retention (PR)	2.38	Lower	0.43	Lower	5.23	0.33
Nitrate Removal & Retention (NR)	3.84	Moderate	5.00	Moderate	5.55	5.00
Carbon Sequestration (CS)	4.07	Moderate			7.12	
Organic Nutrient Export (OE)	10.00	Higher			6.82	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	9.75	Higher	5.87	Moderate	7.47	4.40
Amphibian & Turtle Habitat (AM)	6.36	Moderate	5.69	Higher	6.45	6.45
Waterbird Feeding Habitat (WBF)	7.56	Higher	5.00	Moderate	5.76	5.00
Waterbird Nesting Habitat (WBN)	7.75	Higher	5.00	Higher	5.62	5.00
Songbird, Raptor, & Mammal Habitat (SBM)	9.87	Higher	5.00	Moderate	8.59	5.00
Pollinator Habitat (POL)	9.90	Higher	0.00	Lower	8.20	0.00
Native Plant Habitat (PH)	6.61	Higher	5.60	Moderate	6.54	5.60
Public Use & Recognition (PU)			1.91	Moderate		1.61
Wetland Sensitivity (Sens)			10.00	Higher		5.13
Wetland Ecological Condition (EC)			7.10	Higher		8.61
Wetland Stressors (STR) (higher score means more stress)			4.35	Moderate		2.28
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	2.47	Lower	4.62	Moderate	3.79	2.05
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.88	Moderate	3.54	Moderate	6.48	3.46
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	8.86	Higher	6.71	Moderate	6.54	4.50
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	6.04	Moderate	4.41	Moderate	5.01	4.87
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	9.35	Higher	4.57	Lower	8.18	4.57
WETLAND CONDITION (EC)			7.10	Higher		8.61
WETLAND RISK (average of Sensitivity & Stressors)			7.18	Higher		3.70

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	11.41106066	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	13.7603254	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	59.37953308	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	26.65940118	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	42.67117875	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO

Support Rule Satisfied? NO

Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL18

Date: 09/25/2024

Observer: Emily Maclean/Katrina Ferrari

Latitude & Longitude (decimal degrees): 45.75783313, 61.42793073

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	1.70	Lower	9.36	Higher	3.22	4.15
Stream Flow Support (SFS)	3.52	Moderate	8.02	Higher	2.83	5.34
Water Cooling (WC)	6.17	Higher	5.03	Moderate	4.11	2.73
Sediment Retention & Stabilisation (SR)	1.69	Lower	8.98	Higher	3.51	4.40
Phosphorus Retention (PR)	0.19	Lower	8.57	Higher	3.87	6.67
Nitrate Removal & Retention (NR)	3.24	Moderate	10.00	Higher	5.11	10.00
Carbon Sequestration (CS)	3.65	Moderate			6.92	
Organic Nutrient Export (OE)	8.36	Higher			5.46	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	3.06	Lower	3.39	Moderate	4.74	3.07
Amphibian & Turtle Habitat (AM)	5.73	Moderate	3.23	Moderate	6.13	4.42
Waterbird Feeding Habitat (WBF)	4.69	Moderate	3.33	Moderate	3.57	3.33
Waterbird Nesting Habitat (WBN)	3.24	Moderate	3.33	Moderate	2.35	3.33
Songbird, Raptor, & Mammal Habitat (SBM)	7.31	Moderate	3.33	Moderate	6.37	3.33
Pollinator Habitat (POL)	6.86	Moderate	3.33	Moderate	5.69	3.33
Native Plant Habitat (PH)	4.71	Moderate	5.13	Lower	5.78	5.13
Public Use & Recognition (PU)			2.19	Moderate		1.80
Wetland Sensitivity (Sens)			10.00	Higher		5.11
Wetland Ecological Condition (EC)			3.62	Lower		6.94
Wetland Stressors (STR) (higher score means more stress)			8.46	Higher		4.24
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	1.70	Lower	9.36	Higher	3.22	4.15
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	2.92	Moderate	9.59	Higher	5.89	8.51
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	6.82	Higher	6.75	Moderate	4.87	4.53
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	4.23	Moderate	2.66	Moderate	4.27	3.32
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.81	Higher	4.53	Lower	6.16	4.53
WETLAND CONDITION (EC)			3.62	Lower		6.94
WETLAND RISK (average of Sensitivity & Stressors)			9.23	Higher		4.67

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	15.93008251	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	28.02012674	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	46.02446542	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	11.23977821	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	30.83206223	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
CONCLUSION:	Site is not a WSS

Assessment Area (AA) Results:

Wetland ID: WL19

Date: 07/25/2024

Observer: Renee MacQuarrie

Latitude & Longitude (decimal degrees): 45.757549 -61.42213785

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	7.51	Moderate	6.71	Higher	7.55	2.98
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	2.88	Lower	1.36	Moderate	4.44	0.67
Phosphorus Retention (PR)	0.94	Lower	1.29	Moderate	4.33	1.00
Nitrate Removal & Retention (NR)	10.00	Higher	3.33	Lower	10.00	3.33
Carbon Sequestration (CS)	6.53	Higher			8.29	
Organic Nutrient Export (OE)	10.00	Higher			7.67	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	6.76	Higher	1.03	Lower	6.25	1.80
Amphibian & Turtle Habitat (AM)	3.51	Lower	1.23	Lower	4.96	2.78
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	6.70	Moderate	2.50	Lower	5.83	2.50
Pollinator Habitat (POL)	8.27	Higher	0.00	Lower	6.85	0.00
Native Plant Habitat (PH)	3.47	Lower	4.23	Lower	5.28	4.23
Public Use & Recognition (PU)			0.46	Lower		0.62
Wetland Sensitivity (Sens)			10.00	Higher		5.79
Wetland Ecological Condition (EC)			8.26	Higher		9.17
Wetland Stressors (STR) (higher score means more stress)			4.27	Moderate		2.24
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	7.51	Moderate	6.71	Higher	7.55	2.98
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	7.54	Higher	2.66	Lower	8.38	2.50
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.10	Higher	0.69	Lower	5.57	1.20
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	2.11	Lower	0.74	Lower	2.98	1.67
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.21	Higher	3.23	Lower	6.42	3.23
WETLAND CONDITION (EC)			8.26	Higher		9.17
WETLAND RISK (average of Sensitivity & Stressors)			7.14	Higher		4.01

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	50.37830272	Moderate
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	20.08879531	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	4.872374087	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	1.556052333	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	23.30848703	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO
CONCLUSION: Site is not a WSS

Assessment Area (AA) Results:

Wetland ID: WL22

Date: 09/25/2024

Observer: Emily Maclean and Katrina Ferrari

Latitude & Longitude (decimal degrees): 45.75636056, -61.43466391

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	1.81	Lower	9.31	Higher	3.29	4.13
Stream Flow Support (SFS)	5.59	Higher	9.00	Higher	4.50	5.99
Water Cooling (WC)	4.42	Moderate	6.86	Higher	2.94	3.72
Sediment Retention & Stabilisation (SR)	2.13	Lower	8.65	Higher	3.86	4.24
Phosphorus Retention (PR)	0.21	Lower	8.21	Higher	3.88	6.39
Nitrate Removal & Retention (NR)	2.99	Moderate	10.00	Higher	4.93	10.00
Carbon Sequestration (CS)	4.77	Moderate			7.45	
Organic Nutrient Export (OE)	9.12	Higher			5.96	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	7.30	Higher	2.67	Moderate	3.97	1.67
Aquatic Invertebrate Habitat (INV)	3.61	Moderate	5.42	Moderate	4.97	4.16
Amphibian & Turtle Habitat (AM)	5.78	Moderate	4.91	Moderate	6.15	5.81
Waterbird Feeding Habitat (WBF)	5.70	Moderate	6.67	Moderate	4.34	6.67
Waterbird Nesting Habitat (WBN)	5.64	Moderate	6.67	Higher	4.09	6.67
Songbird, Raptor, & Mammal Habitat (SBM)	7.38	Moderate	6.67	Moderate	6.42	6.67
Pollinator Habitat (POL)	8.55	Higher	6.67	Moderate	7.08	6.67
Native Plant Habitat (PH)	6.11	Moderate	6.72	Moderate	6.34	6.72
Public Use & Recognition (PU)			2.19	Moderate		1.80
Wetland Sensitivity (Sens)			10.00	Higher		5.03
Wetland Ecological Condition (EC)			7.10	Higher		8.61
Wetland Stressors (STR) (higher score means more stress)			9.17	Higher		4.58
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	1.81	Lower	9.31	Higher	3.29	4.13
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.65	Moderate	9.48	Higher	6.24	8.44
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.40	Higher	8.05	Higher	5.28	5.31
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	6.10	Moderate	5.43	Higher	4.93	5.41
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.95	Higher	6.70	Moderate	6.85	6.70
WETLAND CONDITION (EC)			7.10	Higher		8.61
WETLAND RISK (average of Sensitivity & Stressors)			9.58	Higher		4.80

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	16.79925474	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	34.57934388	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	59.53656899	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	33.06990218	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	53.27827287	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
CONCLUSION:	Site is not a WSS

Assessment Area (AA) Results:

Wetland ID: WL23

Date: 07/23/2024

Observer: Jordan Davis

Latitude & Longitude (decimal degrees): 45.75467418, -61.41219022

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	1.15	Lower	9.98	Higher	2.81	4.43
Stream Flow Support (SFS)	5.86	Higher	8.47	Higher	4.72	5.64
Water Cooling (WC)	2.92	Moderate	4.43	Moderate	1.94	2.40
Sediment Retention & Stabilisation (SR)	2.96	Lower	2.33	Moderate	4.51	1.14
Phosphorus Retention (PR)	1.22	Lower	1.88	Moderate	4.51	1.46
Nitrate Removal & Retention (NR)	2.81	Moderate	5.00	Moderate	4.80	5.00
Carbon Sequestration (CS)	4.39	Moderate			7.28	
Organic Nutrient Export (OE)	9.01	Higher			5.89	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	8.76	Higher	1.84	Moderate	4.76	1.15
Aquatic Invertebrate Habitat (INV)	6.08	Higher	7.08	Higher	5.97	5.06
Amphibian & Turtle Habitat (AM)	6.74	Higher	10.00	Higher	6.66	10.00
Waterbird Feeding Habitat (WBF)	7.53	Higher	0.00	Lower	5.74	0.00
Waterbird Nesting Habitat (WBN)	8.77	Higher	0.00	Lower	6.36	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	7.85	Higher	0.00	Lower	6.83	0.00
Pollinator Habitat (POL)	7.97	Higher	0.00	Lower	6.60	0.00
Native Plant Habitat (PH)	5.80	Moderate	4.48	Lower	6.22	4.48
Public Use & Recognition (PU)			2.08	Moderate		1.73
Wetland Sensitivity (Sens)			5.01	Moderate		3.60
Wetland Ecological Condition (EC)			4.78	Moderate		7.50
Wetland Stressors (STR) (higher score means more stress)			9.65	Higher		4.81
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	1.15	Lower	9.98	Higher	2.81	4.43
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.62	Moderate	4.03	Moderate	6.27	3.77
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.49	Higher	7.57	Moderate	5.30	5.00
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	7.57	Higher	6.18	Higher	5.68	6.11
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.59	Higher	2.99	Lower	6.69	2.99
WETLAND CONDITION (EC)			4.78	Moderate		7.50
WETLAND RISK (average of Sensitivity & Stressors)			7.33	Higher		4.21

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	11.49048616	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	14.60679793	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	56.64647744	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	46.78372178	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	22.64965835	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: Site is not a WSS

Assessment Area (AA) Results:

Wetland ID: WL24

Date: 02/01/2023

Observer: Brayden Thomas

Latitude & Longitude (decimal degrees): -62.4908 50.67759

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	0.90	Lower	4.51	Moderate	2.61	2.00
Stream Flow Support (SFS)	4.21	Moderate	9.49	Higher	3.39	6.32
Water Cooling (WC)	7.40	Higher	8.31	Higher	4.93	4.51
Sediment Retention & Stabilisation (SR)	2.77	Lower	1.21	Moderate	4.36	0.59
Phosphorus Retention (PR)	2.14	Lower	0.86	Lower	5.08	0.67
Nitrate Removal & Retention (NR)	2.51	Lower	3.33	Lower	4.58	3.33
Carbon Sequestration (CS)	3.36	Moderate			6.79	
Organic Nutrient Export (OE)	8.27	Higher			5.41	
Anadromous Fish Habitat (FA)	8.22	Higher	5.03	Higher	5.39	3.19
Resident Fish Habitat (FR)	3.46	Moderate	5.11	Higher	1.88	3.19
Aquatic Invertebrate Habitat (INV)	7.69	Higher	7.19	Higher	6.63	5.12
Amphibian & Turtle Habitat (AM)	4.39	Moderate	5.40	Moderate	5.42	6.21
Waterbird Feeding Habitat (WBF)	7.80	Higher	5.00	Moderate	5.94	5.00
Waterbird Nesting Habitat (WBN)	6.06	Moderate	5.00	Higher	4.39	5.00
Songbird, Raptor, & Mammal Habitat (SBM)	8.83	Higher	5.00	Moderate	7.69	5.00
Pollinator Habitat (POL)	8.06	Higher	0.00	Lower	6.68	0.00
Native Plant Habitat (PH)	4.28	Moderate	4.79	Lower	5.61	4.79
Public Use & Recognition (PU)			4.65	Higher		3.49
Wetland Sensitivity (Sens)			8.28	Higher		4.53
Wetland Ecological Condition (EC)			5.36	Moderate		7.78
Wetland Stressors (STR) (higher score means more stress)			5.58	Moderate		2.86
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	0.90	Lower	4.51	Moderate	2.61	2.00
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.03	Moderate	2.57	Lower	6.00	2.43
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.58	Higher	8.91	Higher	5.86	5.82
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	7.10	Higher	5.25	Higher	5.27	5.36
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.95	Higher	4.13	Lower	7.17	4.13
WETLAND CONDITION (EC)			5.36	Moderate		7.78
WETLAND RISK (average of Sensitivity & Stressors)			6.93	Higher		3.70

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	4.041575432	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	7.772891553	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	67.58085535	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	37.3192775	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	32.82749708	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL25

Date: 02/01/2023

Observer: Brayden Thomas

Latitude & Longitude (decimal degrees): -62.5389 50.6781

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	0.43	Lower	3.72	Lower	2.27	1.65
Stream Flow Support (SFS)	10.00	Higher	9.33	Higher	8.11	6.21
Water Cooling (WC)	6.79	Higher	8.36	Higher	4.53	4.53
Sediment Retention & Stabilisation (SR)	2.36	Lower	7.56	Higher	4.04	3.70
Phosphorus Retention (PR)	2.25	Lower	7.93	Higher	5.15	6.17
Nitrate Removal & Retention (NR)	2.49	Lower	10.00	Higher	4.57	10.00
Carbon Sequestration (CS)	3.02	Lower			6.62	
Organic Nutrient Export (OE)	9.04	Higher			5.91	
Anadromous Fish Habitat (FA)	9.83	Higher	4.83	Higher	6.44	3.06
Resident Fish Habitat (FR)	8.27	Higher	4.90	Higher	4.49	3.06
Aquatic Invertebrate Habitat (INV)	7.40	Higher	8.52	Higher	6.51	5.83
Amphibian & Turtle Habitat (AM)	7.54	Higher	2.34	Lower	7.07	3.69
Waterbird Feeding Habitat (WBF)	7.84	Higher	1.67	Lower	5.97	1.67
Waterbird Nesting Habitat (WBN)	8.16	Higher	0.00	Lower	5.92	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	5.87	Moderate	0.00	Lower	5.11	0.00
Pollinator Habitat (POL)	7.60	Moderate	0.00	Lower	6.30	0.00
Native Plant Habitat (PH)	5.47	Moderate	3.80	Lower	6.09	3.80
Public Use & Recognition (PU)			1.21	Lower		1.13
Wetland Sensitivity (Sens)			7.01	Moderate		4.17
Wetland Ecological Condition (EC)			6.52	Higher		8.33
Wetland Stressors (STR) (higher score means more stress)			4.63	Moderate		2.41
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	0.43	Lower	3.72	Lower	2.27	1.65
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	2.77	Moderate	9.25	Higher	5.86	8.31
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	9.15	Higher	9.03	Higher	7.19	5.87
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	9.08	Higher	3.83	Moderate	6.53	2.99
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.96	Higher	2.54	Lower	6.06	2.54
WETLAND CONDITION (EC)			6.52	Higher		8.33
WETLAND RISK (average of Sensitivity & Stressors)			5.82	Moderate		3.29

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	1.617841441	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	25.63593906	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	82.68199895	Moderate
HABITAT SUPERGROUP - AQUATIC HABITAT	34.71816013	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	17.63489879	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO

Support Rule Satisfied? NO

Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL26

Date: 02/01/2023

Observer: Brayden Thomas

Latitude & Longitude (decimal degrees): -62.4770 50.67733

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	0.59	Lower	4.57	Moderate	2.39	2.03
Stream Flow Support (SFS)	1.59	Moderate	7.25	Moderate	1.28	4.82
Water Cooling (WC)	2.40	Moderate	1.81	Lower	1.60	0.98
Sediment Retention & Stabilisation (SR)	0.00	Lower	0.76	Lower	1.33	0.37
Phosphorus Retention (PR)	0.90	Lower	0.86	Lower	4.31	0.67
Nitrate Removal & Retention (NR)	0.87	Lower	2.22	Lower	3.40	2.22
Carbon Sequestration (CS)	1.27	Lower			5.79	
Organic Nutrient Export (OE)	6.53	Moderate			4.27	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	1.12	Lower	0.00	Lower	0.61	0.00
Aquatic Invertebrate Habitat (INV)	1.34	Lower	3.13	Moderate	4.04	2.93
Amphibian & Turtle Habitat (AM)	2.20	Lower	2.89	Moderate	4.28	4.14
Waterbird Feeding Habitat (WBF)	4.70	Moderate	2.50	Lower	3.58	2.50
Waterbird Nesting Habitat (WBN)	3.83	Moderate	2.50	Moderate	2.78	2.50
Songbird, Raptor, & Mammal Habitat (SBM)	7.28	Moderate	2.50	Lower	6.34	2.50
Pollinator Habitat (POL)	7.71	Moderate	0.00	Lower	6.39	0.00
Native Plant Habitat (PH)	2.88	Lower	4.24	Lower	5.05	4.24
Public Use & Recognition (PU)			2.34	Moderate		1.90
Wetland Sensitivity (Sens)			3.96	Lower		3.30
Wetland Ecological Condition (EC)			3.04	Lower		6.67
Wetland Stressors (STR) (higher score means more stress)			4.48	Moderate		2.34
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	0.59	Lower	4.57	Moderate	2.39	2.03
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	1.01	Lower	1.75	Lower	4.75	1.65
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	4.75	Moderate	5.66	Moderate	3.53	3.87
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	3.54	Moderate	2.23	Moderate	3.26	2.98
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.83	Higher	3.24	Lower	6.16	3.24
WETLAND CONDITION (EC)			3.04	Lower		6.67
WETLAND RISK (average of Sensitivity & Stressors)			4.22	Lower		2.82

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	2.699868733	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	1.774149012	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	26.86474998	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	7.89941545	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	22.16739215	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL27

Date: 02/01/2023

Observer: Lucas Bonner

Latitude & Longitude (decimal degrees): -62.4599 50.67702

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	2.27	Lower	4.34	Moderate	3.64	1.93
Stream Flow Support (SFS)	1.69	Moderate	6.82	Moderate	1.36	4.54
Water Cooling (WC)	1.13	Lower	0.00	Lower	0.75	0.00
Sediment Retention & Stabilisation (SR)	1.89	Lower	1.59	Moderate	3.67	0.78
Phosphorus Retention (PR)	1.12	Lower	1.29	Moderate	4.45	1.00
Nitrate Removal & Retention (NR)	3.07	Moderate	3.33	Lower	4.99	3.33
Carbon Sequestration (CS)	3.86	Moderate			7.02	
Organic Nutrient Export (OE)	7.70	Higher			5.03	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	1.60	Lower	4.02	Moderate	4.14	3.41
Amphibian & Turtle Habitat (AM)	4.84	Moderate	4.86	Moderate	5.66	5.77
Waterbird Feeding Habitat (WBF)	6.37	Moderate	5.00	Moderate	4.85	5.00
Waterbird Nesting Habitat (WBN)	3.43	Moderate	5.00	Higher	2.49	5.00
Songbird, Raptor, & Mammal Habitat (SBM)	8.57	Higher	5.00	Moderate	7.46	5.00
Pollinator Habitat (POL)	9.20	Higher	0.00	Lower	7.62	0.00
Native Plant Habitat (PH)	1.41	Lower	5.03	Lower	4.46	5.03
Public Use & Recognition (PU)			1.07	Lower		1.03
Wetland Sensitivity (Sens)			8.82	Higher		4.69
Wetland Ecological Condition (EC)			3.62	Lower		6.94
Wetland Stressors (STR) (higher score means more stress)			4.60	Moderate		2.40
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	2.27	Lower	4.34	Moderate	3.64	1.93
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.17	Moderate	2.70	Lower	6.03	2.52
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.36	Moderate	5.22	Moderate	3.93	3.60
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	4.65	Moderate	3.99	Moderate	4.13	4.46
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.79	Higher	4.18	Lower	7.07	4.18
WETLAND CONDITION (EC)			3.62	Lower		6.94
WETLAND RISK (average of Sensitivity & Stressors)			6.71	Higher		3.54

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	9.842186882	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	8.569093173	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	27.9988778	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	18.52969564	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	32.60190271	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO

Support Rule Satisfied? NO

Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL28

Date: 02/01/2023

Observer: Brayden Thomas

Latitude & Longitude (decimal degrees): -61.24875 45.45073

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	9.18	Higher	4.74	Moderate	8.80	2.10
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	5.73	Moderate	1.36	Moderate	6.67	0.67
Phosphorus Retention (PR)	2.21	Lower	1.29	Moderate	5.13	1.00
Nitrate Removal & Retention (NR)	10.00	Higher	3.33	Lower	10.00	3.33
Carbon Sequestration (CS)	7.21	Higher			8.61	
Organic Nutrient Export (OE)	7.80	Higher			5.10	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	5.79	Higher	0.87	Lower	5.85	1.71
Amphibian & Turtle Habitat (AM)	2.86	Lower	2.17	Lower	4.62	3.55
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	6.48	Moderate	5.00	Moderate	5.64	5.00
Pollinator Habitat (POL)	8.82	Higher	0.00	Lower	7.31	0.00
Native Plant Habitat (PH)	4.07	Moderate	4.32	Lower	5.52	4.32
Public Use & Recognition (PU)			4.31	Moderate		3.25
Wetland Sensitivity (Sens)			10.00	Higher		5.15
Wetland Ecological Condition (EC)			6.52	Higher		8.33
Wetland Stressors (STR) (higher score means more stress)			5.20	Moderate		2.68
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	9.18	Higher	4.74	Moderate	8.80	2.10
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	8.14	Higher	2.66	Lower	8.80	2.50
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.60	Higher	0.58	Lower	4.30	1.14
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	1.72	Lower	1.30	Lower	2.77	2.13
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.64	Higher	4.05	Lower	6.73	4.05
WETLAND CONDITION (EC)			6.52	Higher		8.33
WETLAND RISK (average of Sensitivity & Stressors)			7.60	Higher		3.92

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	43.49822214	Moderate
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	21.68963928	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	3.235275284	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	2.231955702	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	30.94338075	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: Site is not a WSS

Assessment Area (AA) Results:

Wetland ID: WL30

Date: 02/01/2023

Observer: Lucas Bonner

Latitude & Longitude (decimal degrees): -62.4009 5067597

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	0.79	Lower	4.85	Moderate	2.54	2.15
Stream Flow Support (SFS)	5.59	Higher	10.00	Higher	4.50	7.03
Water Cooling (WC)	6.65	Higher	9.88	Higher	4.43	5.36
Sediment Retention & Stabilisation (SR)	1.98	Lower	1.59	Moderate	3.74	0.78
Phosphorus Retention (PR)	1.89	Lower	1.29	Moderate	4.93	1.00
Nitrate Removal & Retention (NR)	1.95	Lower	3.33	Lower	4.18	3.33
Carbon Sequestration (CS)	3.40	Moderate			6.80	
Organic Nutrient Export (OE)	10.00	Higher			6.78	
Anadromous Fish Habitat (FA)	8.68	Higher	5.04	Higher	5.69	3.20
Resident Fish Habitat (FR)	7.05	Higher	5.12	Higher	3.83	3.20
Aquatic Invertebrate Habitat (INV)	8.31	Higher	8.55	Higher	6.88	5.85
Amphibian & Turtle Habitat (AM)	5.48	Moderate	3.58	Moderate	5.99	4.72
Waterbird Feeding Habitat (WBF)	7.85	Higher	0.00	Lower	5.98	0.00
Waterbird Nesting Habitat (WBN)	7.49	Higher	0.00	Lower	5.43	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	9.39	Higher	0.00	Lower	8.17	0.00
Pollinator Habitat (POL)	7.51	Moderate	0.00	Lower	6.22	0.00
Native Plant Habitat (PH)	4.92	Moderate	4.80	Lower	5.87	4.80
Public Use & Recognition (PU)			4.31	Moderate		3.25
Wetland Sensitivity (Sens)			7.01	Moderate		4.17
Wetland Ecological Condition (EC)			4.78	Moderate		7.50
Wetland Stressors (STR) (higher score means more stress)			4.76	Moderate		2.47
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	0.79	Lower	4.85	Moderate	2.54	2.15
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	2.85	Moderate	2.70	Lower	5.86	2.52
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	8.82	Higher	9.74	Higher	6.27	6.56
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	8.00	Higher	3.93	Moderate	5.69	3.47
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	8.33	Higher	3.20	Lower	7.46	3.20
WETLAND CONDITION (EC)			4.78	Moderate		7.50
WETLAND RISK (average of Sensitivity & Stressors)			5.89	Moderate		3.32

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	3.833913614	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	7.701132151	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	85.88051387	Moderate
HABITAT SUPERGROUP - AQUATIC HABITAT	31.45580474	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	26.63065229	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO

Support Rule Satisfied? NO

Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL31

Date: 09/25/2024

Observer: Emily Maclean/Katrina Ferrari

Latitude & Longitude (decimal degrees): 45.74985744, -61.38677181

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	7.69	Higher	9.77	Higher	7.68	4.33
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	5.44	Moderate	1.98	Moderate	6.44	0.97
Phosphorus Retention (PR)	0.00	Lower	2.05	Moderate	3.24	1.60
Nitrate Removal & Retention (NR)	10.00	Higher	4.83	Moderate	10.00	4.83
Carbon Sequestration (CS)	3.85	Moderate			7.02	
Organic Nutrient Export (OE)	6.18	Moderate			4.04	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	6.37	Higher	0.73	Lower	6.09	1.64
Amphibian & Turtle Habitat (AM)	2.51	Lower	2.73	Moderate	4.44	4.01
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	6.17	Moderate	6.67	Moderate	5.37	6.67
Pollinator Habitat (POL)	8.01	Higher	6.67	Moderate	6.64	6.67
Native Plant Habitat (PH)	3.74	Moderate	6.23	Moderate	5.39	6.23
Public Use & Recognition (PU)			2.46	Moderate		1.98
Wetland Sensitivity (Sens)			10.00	Higher		5.98
Wetland Ecological Condition (EC)			7.10	Higher		8.61
Wetland Stressors (STR) (higher score means more stress)			5.99	Moderate		3.06
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	7.69	Higher	9.77	Higher	7.68	4.33
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	7.41	Higher	3.90	Moderate	8.34	3.65
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	4.76	Moderate	0.48	Lower	4.31	1.09
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	1.51	Lower	1.64	Lower	2.66	2.41
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.99	Higher	6.59	Moderate	6.22	6.59
WETLAND CONDITION (EC)			7.10	Higher		8.61
WETLAND RISK (average of Sensitivity & Stressors)			7.99	Higher		4.52

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	75.10712432	High
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	28.87113045	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	2.305742869	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	2.469909102	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	46.10773726	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO
CONCLUSION: Site is not a WSS

Assessment Area (AA) Results:

Wetland ID: WL32

Date: 08/20/2024

Observer: Jason Astels

Latitude & Longitude (decimal degrees): 45.73394663, -61.38338592

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	7.31	Moderate	5.64	Moderate	7.40	2.50
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	4.02	Moderate	0.91	Lower	5.33	0.44
Phosphorus Retention (PR)	0.00	Lower	0.86	Lower	3.44	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	2.50	Lower	10.00	2.50
Carbon Sequestration (CS)	4.25	Moderate			7.21	
Organic Nutrient Export (OE)	8.90	Higher			5.82	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	4.94	Moderate	1.00	Lower	5.51	1.79
Amphibian & Turtle Habitat (AM)	3.12	Lower	4.32	Moderate	4.76	5.32
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	6.84	Moderate	10.00	Higher	5.95	10.00
Pollinator Habitat (POL)	7.77	Moderate	10.00	Higher	6.44	10.00
Native Plant Habitat (PH)	3.36	Lower	7.46	Moderate	5.24	7.46
Public Use & Recognition (PU)			2.05	Moderate		1.71
Wetland Sensitivity (Sens)			10.00	Higher		5.46
Wetland Ecological Condition (EC)			3.62	Lower		6.94
Wetland Stressors (STR) (higher score means more stress)			4.42	Moderate		2.31
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	7.31	Moderate	5.64	Moderate	7.40	2.50
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	7.28	Higher	1.96	Lower	8.25	1.85
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	6.18	Higher	0.67	Lower	4.32	1.19
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	1.87	Lower	2.59	Moderate	2.86	3.19
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.88	Higher	9.58	Higher	6.16	9.58
WETLAND CONDITION (EC)			3.62	Lower		6.94
WETLAND RISK (average of Sensitivity & Stressors)			7.21	Higher		3.89

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	41.23233772	Moderate
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	14.28120956	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	4.139028544	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	4.848731353	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	65.88663947	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO
CONCLUSION: Site is not a WSS

Assessment Area (AA) Results:

Wetland ID: WL33

Date: 08/20/2024

Observer: Jason A

Latitude & Longitude (decimal degrees): 45.73259891, -61.3851399

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	3.46	Lower	2.31	Lower	4.53	1.03
Stream Flow Support (SFS)	1.47	Lower	5.42	Moderate	1.19	3.60
Water Cooling (WC)	5.75	Higher	1.20	Lower	3.83	0.65
Sediment Retention & Stabilisation (SR)	1.71	Lower	0.76	Lower	3.53	0.37
Phosphorus Retention (PR)	0.00	Lower	0.86	Lower	3.73	0.67
Nitrate Removal & Retention (NR)	2.54	Lower	5.00	Moderate	4.61	5.00
Carbon Sequestration (CS)	2.51	Lower			6.38	
Organic Nutrient Export (OE)	7.61	Higher			4.97	
Anadromous Fish Habitat (FA)	3.94	Higher	2.47	Moderate	2.58	1.57
Resident Fish Habitat (FR)	3.67	Moderate	2.35	Moderate	2.00	1.47
Aquatic Invertebrate Habitat (INV)	3.09	Lower	5.24	Moderate	4.75	4.07
Amphibian & Turtle Habitat (AM)	4.67	Moderate	4.38	Moderate	5.57	5.37
Waterbird Feeding Habitat (WBF)	4.39	Moderate	5.00	Moderate	3.34	5.00
Waterbird Nesting Habitat (WBN)	4.33	Moderate	5.00	Higher	3.14	5.00
Songbird, Raptor, & Mammal Habitat (SBM)	8.93	Higher	5.00	Moderate	7.77	5.00
Pollinator Habitat (POL)	9.98	Higher	0.00	Lower	8.27	0.00
Native Plant Habitat (PH)	4.52	Moderate	5.35	Moderate	5.70	5.35
Public Use & Recognition (PU)			2.02	Moderate		1.68
Wetland Sensitivity (Sens)			9.78	Higher		4.96
Wetland Ecological Condition (EC)			7.10	Higher		8.61
Wetland Stressors (STR) (higher score means more stress)			4.48	Moderate		2.34
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	3.46	Lower	2.31	Lower	4.53	1.03
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	2.12	Lower	3.60	Moderate	5.47	3.51
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	6.04	Higher	4.68	Moderate	4.33	3.42
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	4.43	Moderate	4.42	Moderate	4.45	4.53
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	8.89	Higher	4.40	Lower	7.76	4.40
WETLAND CONDITION (EC)			7.10	Higher		8.61
WETLAND RISK (average of Sensitivity & Stressors)			7.13	Higher		3.65

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	8.011509344	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	7.623076252	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	28.30008698	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	19.60509402	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	39.1213836	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: Site is not a WSS

Assessment Area (AA) Results:

Wetland ID: WL35

Date: 08/29/2024

Observer: Leah Riehl

Latitude & Longitude (decimal degrees): 45.71754804 -61.3793

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	2.71	Lower	3.83	Moderate	3.97	1.70
Stream Flow Support (SFS)	2.76	Moderate	6.24	Moderate	2.22	4.15
Water Cooling (WC)	4.13	Moderate	1.69	Lower	2.75	0.91
Sediment Retention & Stabilisation (SR)	2.07	Lower	0.76	Lower	3.81	0.37
Phosphorus Retention (PR)	1.12	Lower	0.86	Lower	4.45	0.67
Nitrate Removal & Retention (NR)	2.79	Moderate	2.22	Lower	4.79	2.22
Carbon Sequestration (CS)	4.15	Moderate			7.16	
Organic Nutrient Export (OE)	7.18	Moderate			4.69	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	2.52	Lower	3.96	Moderate	4.52	3.38
Amphibian & Turtle Habitat (AM)	5.92	Moderate	6.23	Higher	6.22	6.89
Waterbird Feeding Habitat (WBF)	4.15	Moderate	10.00	Higher	3.16	10.00
Waterbird Nesting Habitat (WBN)	4.65	Moderate	10.00	Higher	3.37	10.00
Songbird, Raptor, & Mammal Habitat (SBM)	8.63	Higher	10.00	Higher	7.51	10.00
Pollinator Habitat (POL)	9.83	Higher	0.00	Lower	8.15	0.00
Native Plant Habitat (PH)	3.39	Lower	5.22	Lower	5.26	5.22
Public Use & Recognition (PU)			1.79	Moderate		1.53
Wetland Sensitivity (Sens)			8.14	Higher		4.49
Wetland Ecological Condition (EC)			5.94	Moderate		8.06
Wetland Stressors (STR) (higher score means more stress)			4.35	Moderate		2.28
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	2.71	Lower	3.83	Moderate	3.97	1.70
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.34	Moderate	1.75	Lower	6.10	1.65
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.66	Higher	5.10	Moderate	4.12	3.48
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	4.43	Moderate	7.62	Higher	4.39	7.69
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	8.56	Higher	7.54	Moderate	7.56	7.54
WETLAND CONDITION (EC)			5.94	Moderate		8.06
WETLAND RISK (average of Sensitivity & Stressors)			6.25	Moderate		3.38

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	10.39908077	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	5.844527809	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	28.89404176	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	33.77499509	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	64.49284109	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

Assessment Area (AA) Results:

Wetland ID: WL36

Date: 08/20/2024

Observer: Paul McCarron

Latitude & Longitude (decimal degrees): 45.71193056, -61.37130412

Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.

Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	7.31	Moderate	3.38	Lower	7.40	1.50
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	4.02	Moderate	0.91	Lower	5.33	0.44
Phosphorus Retention (PR)	0.40	Lower	0.86	Lower	4.00	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	2.50	Lower	10.00	2.50
Carbon Sequestration (CS)	3.55	Moderate			6.87	
Organic Nutrient Export (OE)	9.99	Higher			6.53	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	6.51	Higher	1.02	Lower	6.15	1.79
Amphibian & Turtle Habitat (AM)	3.42	Lower	2.25	Lower	4.91	3.61
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	6.71	Moderate	5.00	Moderate	5.84	5.00
Pollinator Habitat (POL)	6.98	Moderate	0.00	Lower	5.79	0.00
Native Plant Habitat (PH)	2.72	Lower	3.87	Lower	4.99	3.87
Public Use & Recognition (PU)			2.07	Moderate		1.72
Wetland Sensitivity (Sens)			10.00	Higher		5.35
Wetland Ecological Condition (EC)			3.62	Lower		6.94
Wetland Stressors (STR) (higher score means more stress)			4.48	Moderate		2.34
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	7.31	Moderate	3.38	Lower	7.40	1.50
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	7.25	Higher	1.96	Lower	8.28	1.85
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.06	Higher	0.68	Lower	4.85	1.19
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	2.05	Lower	1.35	Lower	2.95	2.17
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.23	Moderate	3.98	Lower	5.69	3.98
WETLAND CONDITION (EC)			3.62	Lower		6.94
WETLAND RISK (average of Sensitivity & Stressors)			7.24	Higher		3.85

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

NOVA SCOTIA - Functional WSS Interpretation Tool

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	24.73940263	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	14.20766769	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	4.787583551	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	2.762162329	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	24.77363562	Low

3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO
 Support Rule Satisfied? NO
 Habitat/Support Hybrid Rule Satisfied? NO

CONCLUSION: **Site is not a WSS**

APPENDIX G
FLORA

All SAR/SOC flora found within the Assessment Area during field work.

Common name	Scientific Name	COSEWIC	SARA	ESA	S-Rank
Vascular Plants					
A Cotton grass	<i>Eriophorum sp.</i>	---	---	---	NA
A Scalewort	<i>Frullania sp.</i>	---	---	---	NA
A Violet	<i>Viola sp.</i>	---	---	---	NA
A Willow	<i>Salix sp.</i>	---	---	---	NA
Alternate leaved dogwood	<i>Cornus alternifolia</i>	---	---	---	S5
American Beech	<i>Fagus grandifolia</i>	---	---	---	S3S4
American mountain ash	<i>Sorbus americana</i>	---	---	---	S5
Awl-fruited sedge	<i>Carex stipata</i>	---	---	---	S5
Balsam fir	<i>Abies balsamea</i>	---	---	---	S5
Beaked hazelnut	<i>Corylus cornuta</i>	---	---	---	S5
Black cherry	<i>Prunus serotina</i>	---	---	---	S5
Black spruce	<i>Picea Mariana</i>	---	---	---	S5
Bladder sedge	<i>Carex intumescens</i>	---	---	---	S5
Blue ground-cedar	<i>Diphasiastrum tristachyum</i>	---	---	---	S4
Bog aster	<i>Oclemena nemoralis</i>	---	---	---	S5
Bog rosemary	<i>Andromeda polifolia</i>	---	---	---	S5
Bracken fern	<i>Pteridium aquilinum</i>	---	---	---	S5
Bunch berry	<i>Cornus canadensis</i>	---	---	---	S5
Christmas fern	<i>Polystichum acrostichoides</i>	---	---	---	S5
Cinnamon fern	<i>Osmundastrum cinnamomeum</i>	---	---	---	S5
Cloudberry	<i>Rubus chamaemorus</i>	---	---	---	S4
Common haircap moss	<i>Polytrichum commune</i>	---	---	---	S5
Common hawkweed	<i>Hieracium lachenalii</i>	---	---	---	SNA (Exotic)
Common labrador tea	<i>Rhododendron groenlandicum</i>	---	---	---	S5
Common oak fern	<i>Gymnocarpium dryopteris</i>	---	---	---	S5
Common woolly bulrush	<i>Scirpus cyperinus</i>	---	---	---	S5
Common wood sorrel	<i>Oxalis montana</i>	---	---	---	S5
Creeping snowberry	<i>Gaultheria hispidula</i>	---	---	---	S5
Crested wood fern	<i>Dryopteris cristata</i>	---	---	---	S5
Cucumber root	<i>Medeola virginiana</i>	---	---	---	S5
Dwarf red raspberry	<i>Rubus pubescens</i>	---	---	---	S5
Eastern hay-scented fern	<i>Dennstaedtia punctilobula</i>	---	---	---	S5
Electrified cats-tail	<i>Rhytidiadelphus triquetrus</i>	---	---	---	S5
Evergreen wood fern	<i>Dryopteris intermedia</i>	---	---	---	S5
False Solomon's seal	<i>Maianthemum stellatum</i>	---	---	---	S4

Common name	Scientific Name	COSEWIC	SARA	ESA	S-Rank
Feathery neckera moss	<i>Neckera pennata</i>	---	---	---	S5
Fringed sedge	<i>Carex crinita</i>	---	---	---	S5
Goldthread	<i>Coptis trifolia</i>	---	---	---	S5
Gray birch	<i>Betula populifolia</i>	---	---	---	S5
Green alder	<i>Alnus alnobetula</i>	---	---	---	S5
Harlequin blue flag	<i>Iris versicolor</i>	---	---	---	S5
Knights plume moss	<i>Ptilium crista-castrensis</i>	---	---	---	S5
Large false solomon's seal	<i>Maianthemum stellatum</i>	---	---	---	S4
Large-toothed aspen	<i>Populus grandidentata</i>	---	---	---	S5
Leatherleaf	<i>Chamaedaphne calyculata</i>	---	---	---	S5
Mountain holly	<i>Ilex mucronata</i>	---	---	---	S5
New York fern	<i>Amauropelta noveboracensis</i>	---	---	---	S5
Northern beech fern	<i>Phegopteris connectilis</i>	---	---	---	S5
Northern pitcher plant	<i>Sarracenia purpurea</i>	---	---	---	S5
Northern purple pitcher-plant	<i>Sarracenia purpurea ssp. Purpurea</i>	---	---	---	S5
Northern starflower	<i>Lysimachia borealis</i>	---	---	---	S5
Northern wild raisin	<i>Viburnum cassinoides</i>	---	---	---	S5
Paper birch	<i>Betula papyrifera</i>	---	---	---	S5
Partridgeberry	<i>Mitchella repens</i>	---	---	---	S5
Pearly everlasting	<i>Anaphalis margaritacea</i>	---	---	---	S5
Pinesap	<i>Hypopitys monotropa</i>	---	---	---	S4
Pink lady's-slipper	<i>Cypripedium acaule</i>	---	---	---	S5
Red maple	<i>Acer rubrum</i>	---	---	---	S5
Red raspberry	<i>Rubus idaeus</i>	---	---	---	S5
Red spruce	<i>Picea rubens</i>	---	---	---	S5
Red-stemmed feather moss	<i>Pleurozium schreberi</i>	---	---	---	S5
Rhodora	<i>Rhododendron canadense</i>	---	---	---	S5
Rough bedstraw	<i>Galium asprellum</i>	---	---	---	S5
Rough-stemmed goldenrod	<i>Solidago rugosa</i>	---	---	---	S5
Running clubmoss	<i>Lycopodium clavatum</i>	---	---	---	S5
Sensitive fern	<i>Onoclea sensibilis</i>	---	---	---	S5
Sheep laurel	<i>Kalmia angustifolia</i>	---	---	---	S5
Skunk currant	<i>Ribes glandulosum</i>	---	---	---	S5
Small cranberry	<i>Vaccinium oxycoccos</i>	---	---	---	S5
Soft rush	<i>Juncus effusus</i>	---	---	---	S5
Speckled alder	<i>Alnus incana</i>	---	---	---	S5
Stairstep moss	<i>Hylocomium splendens</i>	---	---	---	S5
Star sedge	<i>Carex echinata</i>	---	---	---	S5
Striped maple	<i>Acer pensylvanicum</i>	---	---	---	S5

Common name	Scientific Name	COSEWIC	SARA	ESA	S-Rank
Sugar maple	<i>Acer saccharum</i>	---	---	---	S4S5
Tall meadow-rue	<i>Thalictrum pubescens</i>	---	---	---	S5
Tamarack	<i>Larix laricina</i>	---	---	---	S5
Three seeded sedge	<i>Carex trisperma</i>	---	---	---	S5
Three-leaved false Solomon's seal	<i>Maianthemum trifolium</i>	---	---	---	S5
Three-lobed whipwort	<i>Bazzania trilobata</i>	---	---	---	S5
Trailing arbutus	<i>Epigaea repens</i>	---	---	---	S5
Trembling aspen	<i>Populus tremuloides</i>	---	---	---	S5
Turkey tail	<i>Trametes versicolor</i>	---	---	---	SU
Twinflower	<i>Linnaea borealis</i>	---	---	---	S5
Two-seeded sedge	<i>Carex disperma</i>	---	---	---	S5
Velvet-leaved blueberry	<i>Vaccinium myrtilloides</i>	---	---	---	S5
White meadowsweet	<i>Spiraea alba</i>	---	---	---	S5
Whorled wood aster	<i>Oclemena acuminata</i>	---	---	---	S5
Wild lily-of-the-valley	<i>Maianthemum canadense</i>	---	---	---	S5
Wild sarsaparilla	<i>Aralia nudicaulis</i>	---	---	---	S5
Yellow birch	<i>Betula alleghaniensis</i>	---	---	---	S5
Yellow bluebead lily	<i>Clintonia borealis</i>	---	---	---	S5
Lichens					
A Menegazzia	<i>Menegazzia sp.</i>	---	---	---	NA
Black-bordered shingles lichen	<i>Parmeliella triptophylla</i>	---	---	---	S5
Blue felt lichen	<i>Pectenium plumbeum</i>	Special Concern	Special Concern	Vulnerable	S3
Freckled tube lichen	<i>Hypogymnia krogiae</i>	---	---	---	S5
Mealy-rimmed shingle lichen	<i>Pannaria conoplea</i>	---	---	---	S4S5
Mustard lichen	<i>Pyxine soorediata</i>	---	---	---	S5
Northern coral lichen	<i>Sphaerophorus globosus</i>	---	---	---	S4
Orange-cored shadow lichen	<i>Phaeophyscia rubropulchra</i>	---	---	---	S5
Rough speckleback lichen	<i>Punctelia rudecta</i>	---	---	---	S5
Ruffled freckle pelt lichen	<i>Peltigera leucophlebia</i>	---	---	---	S4S5
Shaggy fringed lichen	<i>Anaptychia palmulata</i>	---	---	---	S3S4
Smooth lung lichen	<i>Ricasolia quercizans</i>	---	---	---	S5
Textured lungwort lichen	<i>Lobaria scrobiculata</i>	---	---	---	S5
Tree lungwort	<i>Lobaria pulmonaria</i>	---	---	---	S5
Tree pelt lichen	<i>Peltigera collina</i>	---	---	---	S3
Yellow specklebelly lichen	<i>Pseudocyphellaria holarctica</i>	---	---	---	S5

APPENDIX H
ACOUSTIC BAT MONITORING REPORTS

Rhodena Wind Project 2022 Acoustic Bat Monitoring

Prepared for:

ABO Wind Canada Ltd.
210 3015 – 12 Street NE
Calgary, AB T2E 7J2

Project No. 106536-01

Prepared by:

Ausenco
2 Ralston Avenue, Suite 100
Dartmouth, NS B3B 1H7
T: 778.669.0424
ausenco.com

March 28, 2023

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1.0 Introduction

ABO Wind Canada Ltd. (ABO Wind) retained Ausenco Sustainability Inc. (Ausenco), a wholly owned subsidiary of Ausenco Engineering Inc. (formally known as Hemmera), to conduct spring and fall acoustic monitoring of bats at the Rhodena Wind Project (the Project) in 2022 in support of an Environmental Assessment Registration Document (EARD) to the Nova Scotia Department of Environment and Climate Change (NSECC). The Project is located approximately 13 kilometers (km) north of the Town of Port Hastings, Nova Scotia (NS).

ABO Wind is proposing 15 turbine locations for the Project (**Figure 1.1**), which will be 6.8 megawatts (MW) in size, bringing the total Project nameplate capacity up to 100 MW. The turbine model selected for the Project has not yet been determined, however, for the purpose of this analysis and the EARD the NORDEX N163 was used. This turbine model has a hub height of 118 meters (m), rotor diameter of 163 m, and a total turbine height (i.e., tip of blade) of 199.5 m above ground level (agl). The potential rotor swept area (RSA) of each turbine will be 20,867 m².

As outlined in the *Guide to Preparing an EA Registration Document for Wind Power Projects in Nova Scotia* (Government of Nova Scotia 2021), a “pre-development inventory for bats” is required for projects that include turbines greater than 150 m in height. To assess the activity level of bats within the Project Area and to predict potential impacts on bats for the Environmental Impact Assessment (EIA), acoustic bat monitoring was conducted following the guidelines outlined in the *Pre-construction Bat Survey Guidelines for Wind Farm development in NB* (Government of New Brunswick 2009) and in consultation with the Nova Scotia Department of Natural Resources and Renewables (NSDNRR). The objective of bat monitoring was to determine species occurrence, bat activity levels, and the presence of significant bat habitat in the Project Area. This report provides a summary of the acoustic bat survey data collected during the spring, summer, and fall of 2022.

Acoustic Bat Detector Locations



Legend

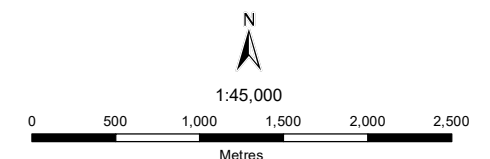
Acoustic Bat Detector Location	Basemap Layers
Substation	Highway
Turbine Location	Road
Collector Line	Trail
Access Road	Mapped Watercourse
Project Area	Mapped Waterbody
	Mapped Wetland

Notes

1. All mapped features are approximate and should be used for discussion purposes only.
2. This map is not intended to be a "stand-alone" document, but a visual aid of the information contained within the referenced Report. It is intended to be used in conjunction with the scope of services and limitations described therein.

Sources

- Contains information licensed under the Open Government Licence(s) - Nova Scotia
- Project Features: ABO Wind Canada Ltd, 2022
- Basemap: ESRI World Topographic Map
- Inset Basemap: ESRI World Topographic Map



NAD 1983 UTM Zone 20N

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Path: S:\GIS\emaps\Project\106536\01\mxd\fig_1_1_106536_01_BatDetector_230214.mxd

1.1 Project Setting

A total of seven species of bat are known to reside within Nova Scotia including three migratory species (hoary bat, eastern red bat, and silver-haired bat) which are known to live in the province for a portion of the year. Nova Scotia's four resident species (little brown myotis, northern myotis, tricolored bat, and big brown bat) hibernate locally (van Zyll de Jong 1985; **Table 1.1**).

Table 1.1 Bat Species Known to Reside in Nova Scotia

Common Name	Scientific Name	Group	S-rank ^a	SARA Status ^b
hoary bat	<i>Lasiurus cinereus</i>	Migratory	SUB, S1M	-
eastern red bat	<i>Lasiurus borealis</i>		SUB, S1M	-
silver-haired bat	<i>Lasionycteris noctivagans</i>		SUB, S1M	-
big brown bat	<i>Eptesicus fuscus</i>	Resident	SNA	-
little brown myotis	<i>Myotis lucifugus</i>		S1	Endangered
northern myotis	<i>Myotis septentrionalis</i>		S1	Endangered
tricolored bat	<i>Perimyotis subflavus</i>		S1	Endangered

Notes:

a = S-rank refers to the sub-national (provincial) rank provided by the Atlantic Canada Conservation Data Center (AC CDC 2023): S1 Critically Imperiled, S2 Imperiled, S3 Vulnerable, S4 Apparently Secure, S5 Secure, SU Unrankable, SNA Not applicable. Breeding Status qualifiers: B Breeding, M Migrant, and N Nonbreeding.

b = Conservation Status according to the *Species at Risk Act* (SARA) (Government of Canada 2022).

- = Not applicable.

2.0 Methods

2.1 Desktop Analysis

To identify if bat critical habitat or bat hibernacula were near the Project Area, the following data sources were reviewed for this report.

A 2022 area-specific data report was obtained from the Atlantic Canada Conservation Data Center (AC CDC) on September 22, 2022 (AC CDC 2022). This report provided a list species within a 10 km and 100 km radius from the center of the Project Area that are provincially listed as Species of Conservation Concern (SoCC) or federally listed under the *Species at Risk Act* (SARA; SC 2002, c. 29). In addition, the report also provided any bat hibernaculum or bat species occurrences listed as location sensitive within 5 km of the Project Area center.

Recovery strategy for the little brown myotis (Myotis lucifugus), the northern myotis (Myotis septentrionalis), and the tri-colored bat (Perimyotis subflavus) in Canada (Government of Canada 2018) was reviewed to identify if critical habitat for these species was present at the Project.

Provincial records of caves, mines, and other bat hibernacula (i.e. areas where bats hibernate) near the Project Area were also reviewed for potential bat habitat (Moseley 2007; Government of Nova Scotia 2020).

2.2 Survey Protocols

Ausenco is not aware of specific guidelines for acoustic bat monitoring in Nova Scotia at the time of this report. Therefore, passive acoustic bat monitoring methods, data analysis, and data reporting were guided by the following best management practices in other regions and regulator consultation:

- NBFW *Pre-construction Bat Survey Guidelines for Wind Farm development in NB* (Government of New Brunswick 2009) which recommended monitoring effort from June 1 to June 30, and August 15 to September 15.
- Consultation with NSDNRR who recommended the monitoring period extend from early May to October 31, 2022 (McGarrigle, M., pers. comm., May 2022).

Passive acoustic monitoring at the Project Area was conducted from May 13 to Oct 31, 2022. Acoustic bat data were collected by Song Meter 3 (SM3) and Song Meter 4 (SM4) (Wildlife Acoustics Inc.) detectors with omni-directional Song Meter Microphone Ultrasonic 1 (SMM-U1) microphones. The bat detector batteries were replaced approximately every one to two weeks during the survey period in conjunction with data downloads. Bat detectors were programmed to turn on 30 minutes prior to sunset and turn off 30 minutes following sunrise.

Bat detectors were located to sample five areas across the Project Area to continuously collect acoustic bat data throughout the monitoring period (**Figure 1.1, Table 2.1**). To survey a variety of habitat types found within the Project Area, detectors were deployed in a variety of habitats with different elevations and topographic features. Four detectors (BAT01G, BAT02, BAT03, BAT04) were deployed at a height of 4.6 m. Two additional detectors were elevated to a height of 7 m (BAT05) and 10 m (BAT01E) to capture bats flying that may have not been picked up at a lower height. One detector (BAT02a) had to be relocated approximately 450 m to a new location (BAT02b) on June 15, 2022, due to rising water levels.

Table 2.1 Bat Monitoring Locations

Detector Location	Easting (20T)	Northing	Microphone Height (m)	Surrounding Habitat	Distance to Water (m) ^a	Distance to Turbine (m) ^b
BAT01G	621639	5067955	4.6	Softwood wet forest	815	1,676
BAT01E	621639	5067955	10	Softwood wet forest	815	1,676
BAT02a	623282	5069490	4.6	Softwood wet forest	11	271
BAT02b	623562	5069153	4.6	Softwood wet forest	424	389
BAT03	624959	5068331	4.6	Cutover, hardwood forest	261	364
BAT04	621051	5070345	4.6	Open wetland	75	1,267
BAT05	620516	5072640	7.0	Veg < 1 m	233	1,001

Notes:

a = Distance to water refers to the nearest wetland, waterbody or other water source which has open water for at least part of the year.

b = Distance to nearest proposed turbine within the Project Area.

2.3 Data Analysis

Data analysis was conducted by biologists with experience and training in bat call classification based on the North American Bat Monitoring Program species codes (NABat 2023). Bat call classification consisted of both automated species identification using Kaleidoscope Pro (v5.4.8 Wildlife Acoustics Inc.) and species-specific filters developed for Analook (v4.5z Titley Scientific) followed by manual verification of these classifications. Bat calls were identified to species and species groups to the extent possible, with a bat “pass” being attributed to a bat calling while flying through the detection radius of the microphone.

During manual verification, acoustic files were identified to species or species groups using call shape, duration, and minimum and maximum call frequency. To assess potential risk of the Project to bats, bat calls were broadly classified by trained experts into migratory and resident species groups. Migratory bats are considered to include the hoary bat, eastern red bat, silver-haired bat, the species complex comprised of big brown bat / silver-haired bat, eastern red bat / big brown bat, tricolored bat / eastern red bat, and low-frequency bat calls that could not be assigned to a further species or species group (i.e., hoary bat, silver-haired bat, or big brown bat). Resident bat species were considered to include the little brown bat, northern myotis, and the tricolored bat. High-frequency bat calls (above a minimum frequency of 40kHz) that could not be assigned to a further species or species group (i.e., little brown myotis, northern myotis, or tricolored bat) were grouped as ‘Myotid’.

Bat passes of species groups were summarized by detector and monitoring period. Bat activity was reported as total bat passes and bat passes per detector night. Reporting bat activity as bat passes per detector night can provide a more accurate measurement of bat activity as it accounts for survey effort including the number of functional bat detectors each night. Bat passes per detector night were calculated following the *Bats and Wind-Turbines – Pre-siting and pre-construction survey protocols* (Lausen et al. 2008) by dividing the number of nightly bat passes by the number of functioning bat detectors (i.e., any nights where bat detectors malfunctioned are factored into the calculation of passes per detector night). Bat passes detected at locations BAT02a and BAT02b were analyzed as one location (BAT02) due to the proximity of both locations and data continuity across the full monitoring period.

The *Pre-Construction Bat Survey Guidelines for Wind Farm development in NB* (Government of New Brunswick 2009) states that surveys should be conducted on a minimum number of nights with seasonal temperatures, wind below 20 km/hr, and no precipitation. To determine the number of suitable sampling nights, weather data for nights in the monitoring period were summarized from a weather monitoring station operated by Environment Canada at the Port Hawkesbury Airport in Port Hawkesbury, NS approximately 12 km from the Project Area (Government of Canada 2023).

3.0 Results

3.1 Desktop Analysis

The AC CDC Data Report indicated a “bat hibernaculum or sensitive bat species occurrence” of a bat species listed as Endangered under the SARA (i.e., little brown Myotis, northern Myotis, or tricolored Bat) was known within the Project Area (AC CDC 2022). Additional information was requested from NSDNR, who confirmed that these records were species occurrences and no hibernacula were known within 60 km of the Project (Spencer, S., pers. comm., October 2022). Based on *Recovery Strategy for Little Brown Myotis (Myotis lucifugus), Northern Myotis (Myotis septentrionalis), and Tri-colored Bat (Perimyotis subflavus) in Canada* (Government of Canada 2018), which uses a 10 km x 10 km grid to buffer known locations of hibernacula, the nearest critical bat habitat is located approximately 75 km northwest of the center of the Project Area.

3.2 Species Composition

A total of 97 migratory bats were identified at the Project Area during the monitoring period comprising two species (hoary bat, eastern red bat) and six species groups (**Table 3.1**). Most migratory bats identified were hoary bats (87 of 97 migratory bat calls). Calls associated with the big brown / silver-haired bat species group are likely to be silver-haired bats as big brown bat is not frequently encountered in Nova Scotia (Moseley 2007).

A total of 42 resident bats calls were identified at the Project Area during the monitoring period comprising two species (little brown myotis and tricolored bat) and one species group (Myotis). All three Myotis species that occur in Nova Scotia, including little brown myotis and tricolored bat, are federally listed under the Species at Risk Act (SARA; SC 2002, c. 29) as Endangered.

Table 3.1 Bat Species Groups Detected per Monitoring Period

Type	Species Group	Date Range (2022)				
		June 1 to June 30	July 1 to July 31	Aug 15 to Sep 15	Sep 15 to Oct 15	May 13 to Oct 31
Migratory	hoary bat	32	38	4	1	87
	big brown / silver-haired bat	0	0	1	3	4
	eastern red bat	0	0	0	0	3
	low frequency bat	0	0	1	0	1
	big brown bat / eastern red bat	0	0	1	0	1
	tricolored bat / eastern red bat	0	0	0	0	1
	Migratory Subtotal	32	38	7	4	97
Resident	Myotid	3	8	15	1	37
	little brown myotis	1	2	1	0	4
	tricolored bat	0	0	0	0	1
	Resident Subtotal	4	10	16	1	42
Total	All Species Combined	36	48	23	5	139

3.3 Bat Passes per Detector Night

Passive acoustic bat monitoring occurred at the Project from May 13 to October 31, 2022, over 172 consecutive nights. During this period, 130 nights (76%) met the weather parameters appropriate for bat monitoring outlined in *Pre-construction Bat Survey Guidelines for Wind Farm development in NB* (Government of New Brunswick 2009). Following discussions with NSDNRR, efforts were made to deploy bat detectors by May 1, but delays in bat detector shipping resulted in monitoring beginning on May 13 (McGarrigle, M., pers. comm., May 2022).

Of the five detectors (six microphones), data was collected on a total of 973 detector nights with two of the five functioning for all 172 nights (BAT02, BAT04) of the monitoring period. Due to restricted access to the Project Area following the touchdown of Hurricane Fiona on September 24, 2022, batteries on the detectors at BAT05 (out for 4 days), and BAT01 (out for 12 days) became depleted leading to no data collection during the outage period. Additionally, a malfunction of the original bat detector deployed at BAT03 led to a 19-day data loss prior to the unit's replacement. If all detectors had functioned correctly from May 13 to October 31, 2022, the total number of detector nights would have been 1020 nights (12 detector nights per the 5 detectors with 5 microphones, 160 nights per the 5 detectors with 6 microphones) meaning 95% of the survey period was monitored.

During the entire monitoring period (May 13 to October 31, 2022), a total of 139 bat passes were recorded with 97 (70%) of the passes classified as a migratory species group and 42 (30%) classified as a resident species group (**Table 3.1**). An average of 0.14 total bat passes per detector night, and 0.10 migratory bat passes per detector night occurred over the entire monitoring period (**Table 3.2**).

Table 3.2 Bat Passes per Detector Night by Bat Monitoring Location

Detector	Surrounding Dominant Habitat	Total Passes	Total BP/DN ^a	Migratory BP/DN ^a
BAT01G	Softwood wet forest	30	0.19	0.13
BAT01E	Softwood wet forest	25	0.17	0.11
BAT02	Softwood wet forest	14	0.08	0.05
BAT03	Cutover, hardwood forest	14	0.09	0.04
BAT04	Open wetland	13	0.08	0.03
BAT05	Vegetation less than 1 m in height	43	0.26	0.24
Total	-	139	0.14	0.10

Notes:

a = BP/DN = bat passes per detector night.

- = not applicable.

3.4 Temporal Trends in Bat Activity

Table 3.3 provides the bat passes per detector night observed at the Project, organized by monitoring periods of interest defined by the *Pre-Construction Bat Survey Guidelines for Wind Farm development in NB* (Government of New Brunswick 2009) and by the total monitoring period. July had the highest number of observed bat passes during the monitoring period (**Figure 3.1; Table 3.3**). The most migratory bats were observed in June and July and the most resident bats were observed in August. The August peak in resident bats is consistent with other reports in the region (Dillon 2022a, 2022b; McCallum Environmental Ltd. 2017; ACAP 2015) and is likely due to juvenile bats leaving their maternity roosts (Reimer et al. 2014).

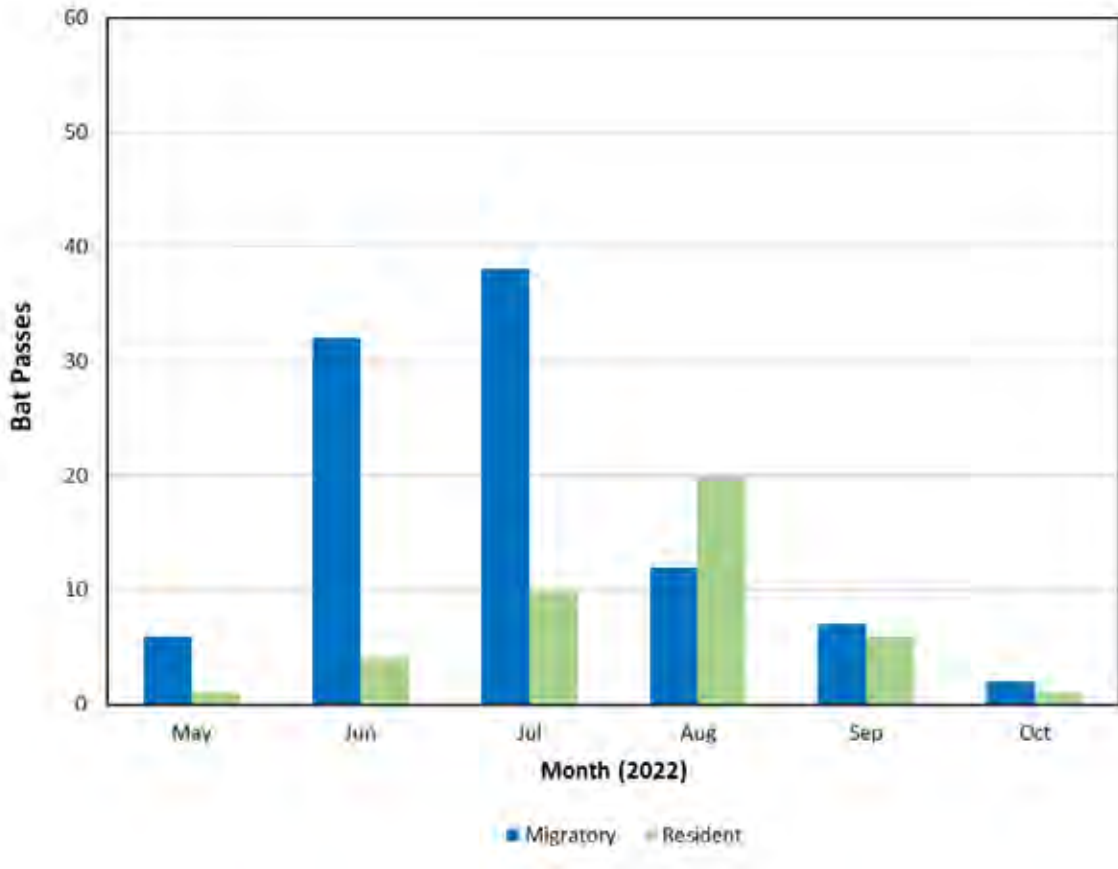


Figure 3.1 Migratory and Resident Bat Passes per Month (May 13 to Oct 31, 2022)

Table 3.3 Bat Passes per Detector Night by Monitoring Period

Date Range (2022)	Detector Nights	Total Bat Passes	Migratory Bat Passes	Total BP/DN ^a	Migratory BP/DN ^a
May 13 – May 31	90	6	7	0.07	0.08
June 1 – June 30	173	36	32	0.21	0.18
July 1 – July 31	186	48	38	0.26	0.20
Aug 15 – Sep 15	192	23	7	0.12	0.04
Sep 15 – Oct 15	158	5	4	0.03	0.03
Oct 15 – Oct 31	102	1	2	0.01	0.02
Total (May 13 – Oct 31)	973	139	97	0.14	0.10

Note: a = Bat passes per detector night.

Monthly bat passes followed a similar trend at each detector location and microphone (BAT01G and BAT01E) with an overall increase in monthly detections to July followed by a decrease thereafter. Bats were only detected in May at the BAT05 location, which almost entirely consisted of migratory species (Figure 3.2, Figure 3.3).

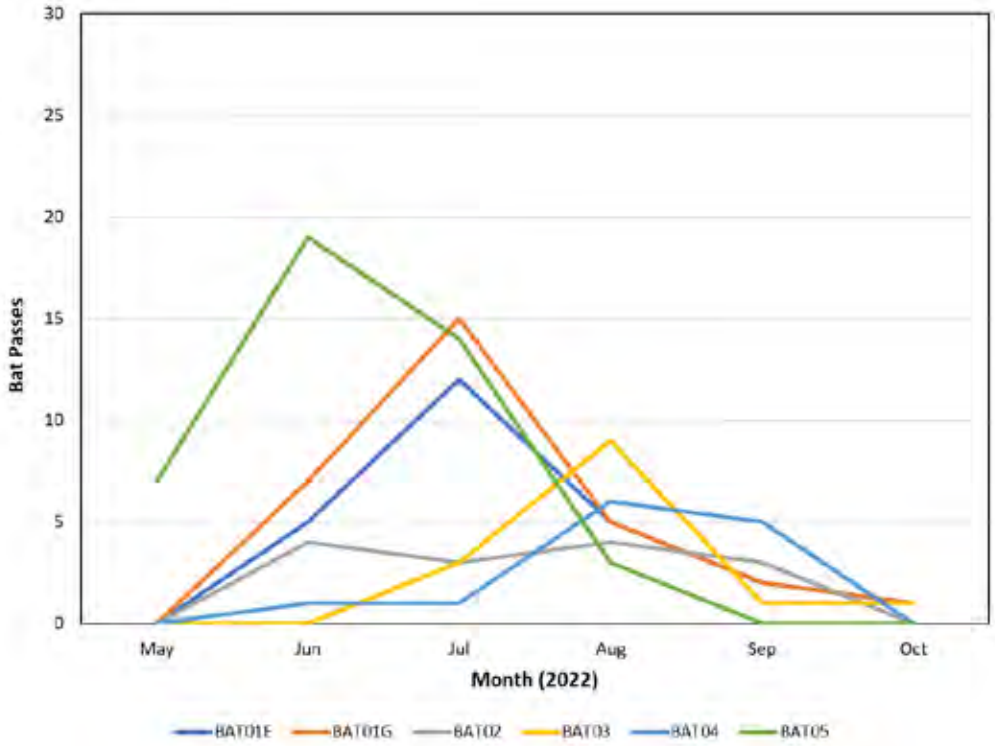


Figure 3.2 Monthly Total Bat Passes per Detector Location (May 13 to Oct 31, 2022)

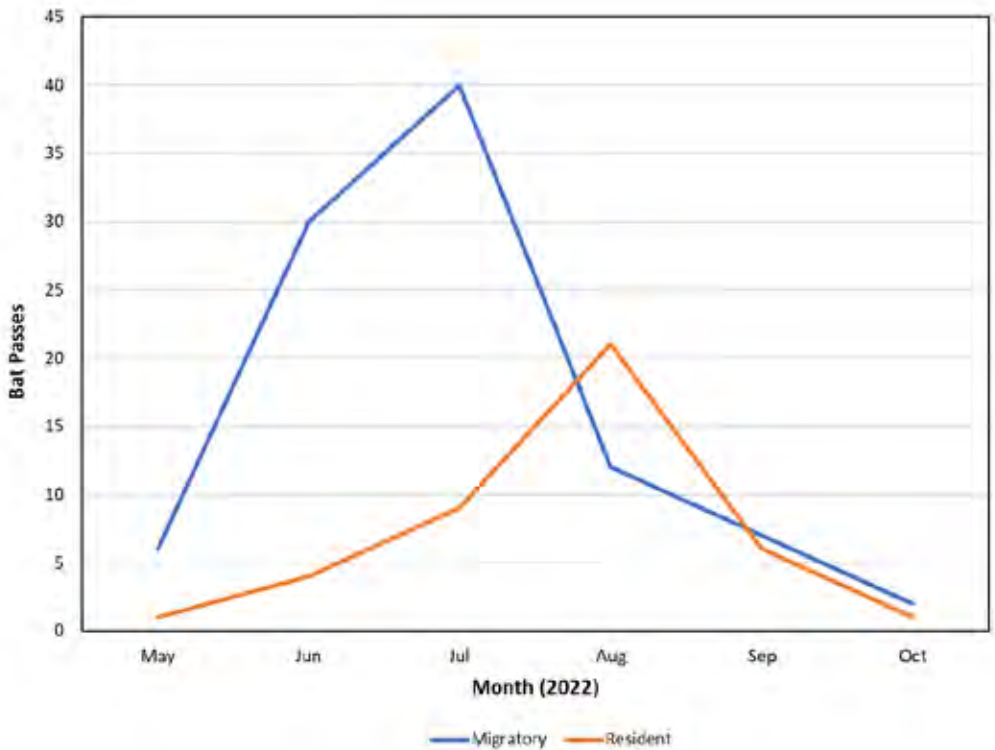


Figure 3.3 Migratory and Resident Bat Passes by Month (May 13 to Oct 31, 2022)

3.5 Spatial Trends in Bat Activity

One detector (BAT05) had more bat passes than any other detector, which predominantly consisted of migratory bats (Figure 3.4). The BAT05 detector microphone was deployed at a greater height than the other ground-based detectors, and thus, may have had an increased likelihood of capturing the higher-flying migrant species.

The BAT01G and BAT01E captured a similar number of average bat passes per detector night with slightly more bat detections at the lower microphone (BAT01G). Like BAT05, a greater proportion of the detections at BAT01 were migratory bat passes (66% migratory at BAT01G, 64% migratory at BAT01E) while the number of resident bats was consistent with detections at BAT02, BAT03, and BAT04. The proximity to the coast may have contributed to the greater number of migratory bat detections (Cryan 2003) at these locations.

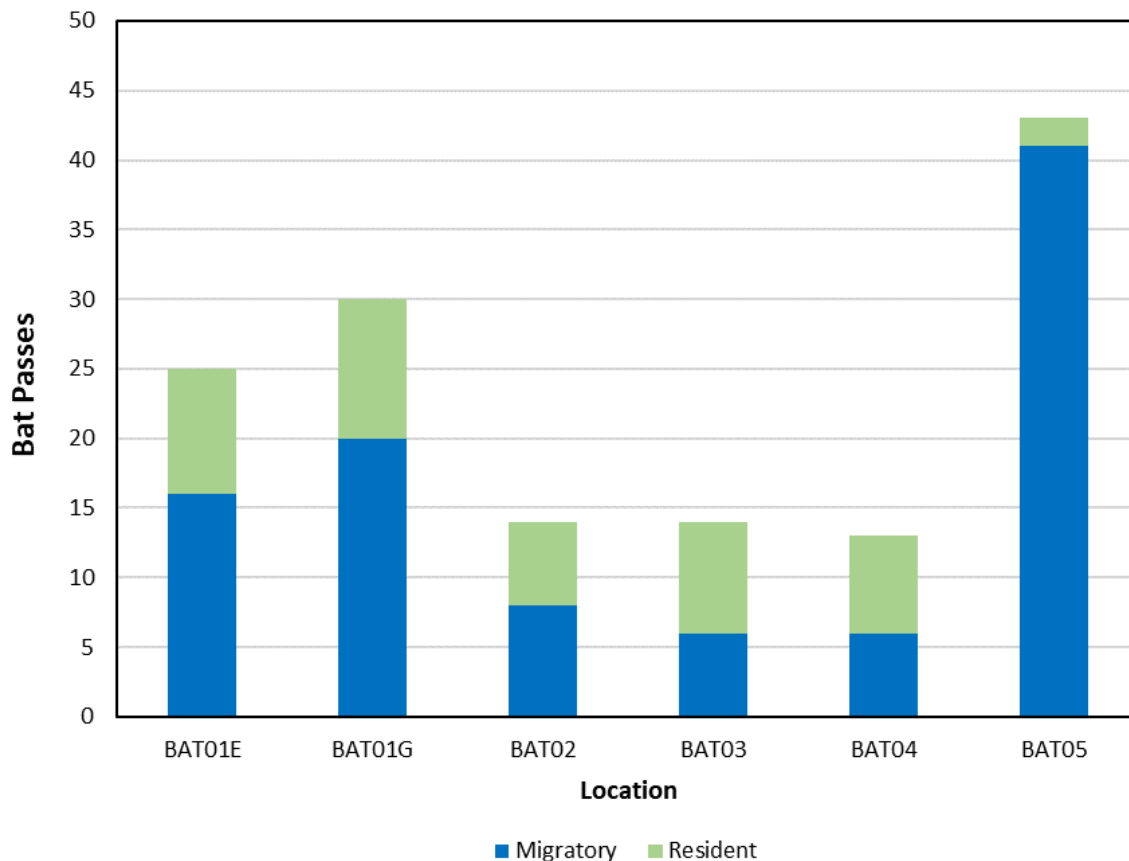


Figure 3.4 Bat Passes per Detector Location and Migratory Type (May 13 to Oct 31, 2022)

4.0 Closure

This work was performed in accordance with the Purchase Order between Ausenco Engineering Canada Inc. (Ausenco), and ABO Wind Canada Ltd., dated February 11, 2022 (Contract). This report has been prepared by Ausenco, based on fieldwork conducted by Ausenco, for the sole benefit and use by ABO Wind Canada Ltd. In performing this work, Ausenco has relied in good faith on information provided by others and has assumed that the information provided by those individuals is both complete and accurate. This work was performed to current industry standard practice for similar environmental work, within the relevant jurisdiction and same locale. The findings presented herein should be considered within the context of the scope of work and Project terms of reference; further, the findings are time sensitive and are considered valid only at the time the report was produced. The conclusions and recommendations contained in this report are based upon the applicable guidelines, regulations, and legislation existing at the time the report was produced; any changes in the regulatory regime may alter the conclusions and/or recommendations.

We sincerely appreciate the opportunity to have assisted you with this Project and if there are any questions, please do not hesitate to contact the undersigned.

Report prepared by:
Ausenco Sustainability Inc.



Hannah Drake, B.Sc.
Environmental Scientist

Report peer reviewed by:
Ausenco Sustainability Inc.



Michael Sveen, B.Sc., P.Biol.
Senior Wildlife Ecologist

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Rhodena Wind Project – Acoustic Bat Monitoring Report

Prepared for:

ABO Wind Canada Ltd.
210 3015 - 12 Street NE
Calgary, Alberta T2E 7J2

Prepared by:

Ausenco Sustainability ULC
2 Ralston Avenue, Suite 100
Dartmouth, NS B3B 1H7

Project No. 106536-02

February 1, 2024

Disclaimer

This work was performed in accordance with Proposal 2202133 between Ausenco Sustainability ULC, a wholly owned subsidiary of Ausenco Engineering Canada Inc. (Ausenco), and ABO Wind Canada Ltd. (ABO), dated March 7th 2023 (Contract). This report has been prepared by Ausenco, based on fieldwork conducted by Ausenco, for sole benefit and use by ABO Wind Canada Ltd. In performing this work, Ausenco has relied in good faith on information provided by others, and has assumed that the information provided by those individuals is both complete and accurate. This work was performed to current industry standard practice for similar environmental work, within the relevant jurisdiction and same locale. The findings presented herein should be considered within the context of the scope of work and project terms of reference; further, the findings are time sensitive and are considered valid only at the time the report was produced. The conclusions and recommendations contained in this report are based upon the applicable guidelines, regulations, and legislation existing at the time the report was produced; any changes in the regulatory regime may alter the conclusions and/or recommendations.

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List of Acronyms and Abbreviations

Acronym / Abbreviation	Definition
ABO	ABO Wind Canada Ltd.
AC CDC	Atlantic Canada Conservation Data Centre
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
EA	environmental assessment
EARD	Environmental Assessment Registration Document
ECCC-CWS	Environment and Climate Change Canada’s Canadian Wildlife Service
NSDNRR	Nova Scotia Department of Natural Resources and Renewables
NSECC	Nova Scotia Department of Environment and Climate Change
PCM	post-construction monitoring
SARA	<i>Species at Risk Act</i> [SC 2002, c 29]

List of Symbols and Units of Measure

Symbol / Unit of Measure	Definition
BP/DN	bat passes/detector night
db	decibels
ha	hectares
hr	hours
kHz	kilohertz
km	kilometres
m	metres
masl	metres above sea level
ms	milliseconds
MW	megawatts
s	seconds

1.0 Introduction

ABO Wind Canada Ltd. (ABO) retained Ausenco Sustainability ULC (Ausenco), a wholly owned subsidiary of Ausenco Engineering Inc, to conduct acoustic monitoring of bats at the Rhodena Wind Project (the Project) in 2023 in support of an Environmental Assessment Registration Document (EARD) to the Nova Scotia Department of Environment and Climate Change (NSECC).

1.1 Project Location and Project Details

The Project is in Inverness County, Nova Scotia, approximately two kilometers (km) east of the Town of St. Georges Bay (**Figure 1.1**). The Project area is located in the Nova Scotia Uplands Ecoregion and the Cape Breton Hills Ecodistrict (Neily et al. 2017). Climate in the region includes warm, rainy summers and mild to cold, snowy winters (Webb and Marshall 1999). The growing season is short, with strong, cold winds off the Gulf of St. Lawrence resulting in a late spring (Neily et al. 2017). The Project area is 85% forested, consisting mainly of softwood wet forest and softwood forest stands, with an additional 2% cutover or cleared. The remaining Project area is made up of wetlands, waterbodies, and short vegetation (McCallum Environmental Ltd. 2023).

ABO Wind Canada LTD proposes to install and operate six Nordex N163 turbines, each with an individual energy capacity of 6.8 megawatts (MW). The total Project rated capacity will be up to 40.8 MW. Turbine models being considered have an approximate maximum height of 200 m above ground level (agl), which includes a tower height of 120 m and a blade length of approximately 80 m.

Rhodena Wind Power Project

Project Area



Legend

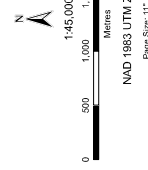
- | | |
|---|--------------------|
| Acoustic Bat Detector Location | Highway |
| Substation | Road |
| Wind Turbine Generator (Deployment 5 Fall 2023) | Trail |
| Wind Turbine Generator (Deployment 5 Fall 2023) | Mapped Watercourse |
| Access Road | Mapped Waterbody |
| Project Area | Mapped Wetland |

NOTES

1. All mapped features are approximate and should be used for discussion purposes only.
 2. This map is not intended to be a "stand-alone" document, but a visual and informational aid to be used in conjunction with the scope of services and limitations described therein.

SOURCES

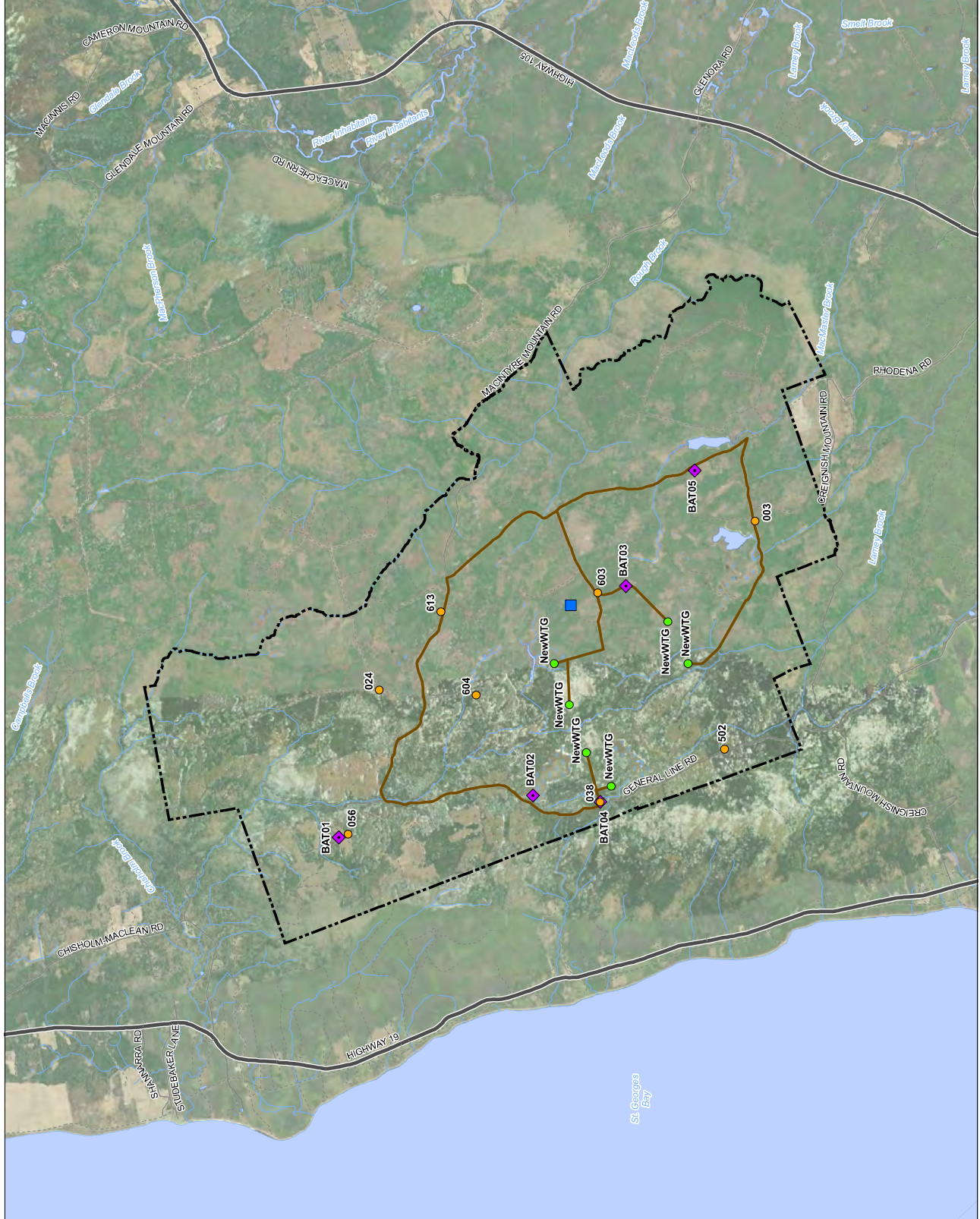
- Contains information licensed under the Open Government Licence(s) - New South Wales: ABO Wind Canada Ltd, 2022
- Basemap: ESRI World Topographic Map
- Inset Basemap: ESRI World Topographic Map



106535-02 Production Date: Jan 16, 2024 Figure 1.1

Ausenco

ABO Wind
Canada Ltd



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1.1 Regulatory Context

The Nova Scotia *Environment Act* [SNS 1994-95, c 1] requires all wind energy projects that produce at least 2 MW of electric capacity to submit a Class I Environmental Assessment (EA) to the Department of Environment. An EARD needs to be prepared and assessed by the EA Branch. As outlined in the *Guide to Preparing an EA Registration Document for Wind Power Projects in Nova Scotia* (Government of Nova Scotia 2021), a “pre-development inventory for bats” is required for projects that include turbines greater than 150 m in height.

Key federal legislation relevant to bats and wind energy development includes the *Species at Risk Act* [SC 2002, c 29] (SARA), which confers legal protection on federal lands to bat species which are listed on the List of Wildlife Species at Risk in Canada, also known as Schedule 1. Three bat species are currently listed on Schedule 1, the little brown myotis (*Myotis lucifugus*), the northern myotis (*Myotis septentrionalis*) and the tri-colored bat (*Perimyotis subflavus*). Three additional migratory bat species, the silver-haired bat (*Lasionycteris noctivagans*), hoary bat (*Lasiurus cinereus*), and eastern red bat (*Lasiurus borealis*), have been recently assessed as Endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). The primary incentive behind the COSEWIC assessment derives from potential population-level impacts associated with bat mortality at wind facilities. Additional threats include habitat loss and degradation, habitat change and pesticide use, and widespread declines in prey insect abundance (Government of Canada 2023a). The assessment establishes the scientific basis for the Government of Canada to provide legal protection to species by adding the species to Schedule 1, although the COSEWIC assessment does not confer legal protection. In October 2023, COSEWIC submitted assessments for the three migratory bat species to the Minister of the Environment and Climate Change for listing consideration under the SARA. The Government of Canada then has one year to determine whether to add species to the Schedule 1 list. Therefore, these migratory bat species may become listed on Schedule 1 of the SARA before the Project becomes operational.

If species on Schedule 1 of the SARA are detected on federal lands, then additional assessment and consultation with the Canadian Wildlife Service of Environment and Climate Change Canada may be required under the SARA where general prohibitions may be contravened (i.e. taking an individual or damaging a residence). In the case where contravention is possible, a permit establishing mitigation measures can be acquired. Standard mitigation measures such as operational curtailment would be sufficient to reduce impacts on migratory bats found on federal lands listed on Schedule 1.

Key federal regulatory requirements relevant to bats and wind energy development include *Wind Turbines and Birds: A Guidance Document for Environmental Assessment* (Government of Canada 2007b), *Recommended Protocols for Monitoring Impacts of Wind Turbines on Birds* (Government of Canada 2007), and *CWS Atlantic Region – Wind Energy & Birds Environmental Assessment Guidance Update* (Government of Canada 2022). The latter document was prepared by Environment and Climate Change Canada’s Canadian Wildlife Service (ECCC-CWS) to provide updated standards and best approaches related to impact assessment for wind energy development in Atlantic Canada. These documents provide protocols for monitoring birds which are, in some cases, relevant to bats as well. These documents were reviewed for this report.

1.2 Bat Species of Conservation Concern at the Project

A total of seven bat species are known to occur in Nova Scotia, including three migratory species and four resident species (**Table 1.1**). The three migratory species travel to Nova Scotia to reproduce during summer and fall and overwinter in regions to the south. Generally, migratory bat species have higher risk of mortality at North American wind energy facilities, particularly during fall migration. Three species of migratory bats in Nova Scotia are designated as Endangered by COSEWIC. Nova Scotia’s four resident species reproduce in the province during summer and fall, but they also hibernate locally within the province (van Zyll de Jong 1985). Three species of resident bats in Nova Scotia are federally listed as Endangered on Schedule 1 of the SARA.

Table 1.1 Bat Species Known to Reside in Nova Scotia

Common Name	Scientific Name	Group	S-rank ^a	Federal Status ^b
hoary bat	<i>Lasiurus cinereus</i>	Migratory	SUB, S1M	COSEWIC Endangered
eastern red bat	<i>Lasiurus borealis</i>		SUB, S1M	COSEWIC Endangered
silver-haired bat	<i>Lasionycteris noctivagans</i>		SUB, S1M	COSEWIC Endangered
big brown bat	<i>Eptesicus fuscus</i>	Resident	SNA	Not listed
little brown myotis	<i>Myotis lucifugus</i>		S1	SARA Endangered
northern myotis	<i>Myotis septentrionalis</i>		S1	SARA Endangered
tricolored bat	<i>Perimyotis subflavus</i>		S1	SARA Endangered

Notes:

- a = S-rank refers to the sub-national (provincial) rank provided by the Atlantic Canada Conservation Data Centre (AC CDC 2023): S1 Critically Imperiled, S2 Imperiled, S3 Vulnerable, S4 Apparently Secure, S5 Secure, SU Unrankable, SNA Not applicable. Breeding Status qualifiers: B Breeding, M Migrant, and N Nonbreeding.
- b = Conservation Status according to the *Species at Risk Act* (SARA) and the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) (Government of Canada 2024).

2.0 Methods

Ultrasonic acoustic monitoring was used to evaluate the activity level and species composition of bats using the Project area during spring and fall migration. The methods used to collect and analyse acoustic bat data are described in the following sections.

2.1 Desktop Assessment of Bat Habitat

To identify if bat critical habitat or bat hibernacula were near the Project area, the following resources were reviewed for this report:

1. An area-specific data report was obtained from the Atlantic Canada Conservation Data Centre (AC CDC) on September 22, 2022 (AC CDC 2022). This report provided a list of species with occurrence records within a 10 km and 100 km radius from the centre of the Project area. that are provincially listed as Species of Conservation Concern or federally listed under the SARA. In addition, the report also provided any bat hibernaculum or bat species occurrences listed as location-sensitive within 5 km of the Project area centre.
2. *Recovery strategy for the little brown myotis (Myotis lucifugus), the northern myotis (Myotis septentrionalis), and the tri-colored bat (Perimyotis subflavus) in Canada* (Government of Canada 2018) was reviewed to identify if critical habitat for these species was present at the Project.
3. Provincial records of caves, mines, and other bat hibernacula (i.e. areas where bats hibernate) near the Project area were also reviewed for potential bat habitat (Moseley 2007; Government of Nova Scotia 2020).

2.2 Acoustic Monitoring

The purpose of acoustic monitoring is to confirm species presence and abundance and to evaluate relative activity patterns by bat species or species groups over the monitoring period within and adjacent to the Project area.

2.2.1 Acoustic Data Collection

Ausenco is not aware of specific guidelines for acoustic bat monitoring in Nova Scotia at the time of this report. Therefore, passive acoustic bat monitoring methods, data analysis, and data reporting follow the best management practices and regulator consultation identified below:

- New Brunswick Fish and Wildlife *Pre-construction Bat Survey Guidelines for Wind Farm development in NB* (Government of New Brunswick 2009) which recommended monitoring effort from June 1 to June 30, and August 15 to September 15
- Consultation with the Nova Scotia Department of Natural Resources and Renewables (NSDNRR) who recommended the monitoring period extend from early May to October 31, 2022 (McGarrigle, M., pers. comm., May 2022)
- Monitoring dates align with the Ontario monitoring period, May 1 to October 31 (Government of Ontario 2019).

Passive acoustic monitoring at the Project area was conducted from May 24 to Oct 31, 2023. Ultrasonic audio files were recorded by Song Meter 4 Bat Full Spectrum (SM4) detectors with omni-directional Song Meter Microphone Ultrasonic 2 (SMM-U2) microphones, manufactured by Wildlife Acoustics Inc. Recording was automated to continuously collect acoustic bat data each night throughout the monitoring period. Bat detectors were programmed to turn on 30 minutes prior to sunset and turn off 30 minutes following sunrise. Gain was set to 12 dB, sample rate to 256 kHz, minimum duration of signal to 1.5 ms, and maximum duration at 15 s. No high-pass filter was used. Detector batteries were replaced approximately every four weeks during the survey period in conjunction with data downloads.

Bat detectors were sited at five sample locations in various habitat within and adjacent to the Project area (**Figure 1.1, Table 2.1**). Detectors were deployed at ground level in a variety of habitats with different elevations and topographic features. Three detectors (i.e. BAT 2, BAT 3, and BAT 5) were deployed at a height of 4.6 m. Two additional detectors were elevated to a height of 7 m (i.e. BAT 1) and 10 m (i.e. BAT 4). No detectors were deployed within the rotor-swept zone. Ultrasonic microphones record omnidirectionally, up to 30 m for bat species with low-frequency vocalizations and 10 m for species with high-frequency vocalizations.

Sites were selected to maximize the likelihood of differentiating species (e.g. in areas with low clutter, no overhanging branches, low vegetation, and no open water) and to maximize habitat types sampled across the Project area. High clutter can impact quality of sound recordings and cause bats to make calls of shorter duration and higher frequency than they might in open environments (Loeb et al. 2015). All microphones were positioned at least 2 m above the level of summer ground vegetation.

Table 2.1 Bat Monitoring Locations

Detector ID	Easting (20T)	Northing	Microphone Height (m)	Surrounding Habitat	Distance to Water (m) ^a	Distance to Turbine (m) ^b
BAT 1	620516.28	5072639.29	7	Cutover	750	3100
BAT 2	621022.06	5070289.32	4.6	Wetlands, softwood trees	0	780
BAT 3	623559.92	5069162.68	4.6	Softwood trees	150	560
BAT 4	620948.39	5069471.20	10	Softwood trees	750	210
BAT 5	624958.02	5068331.13	4.6	Softwood trees, hardwood trees, cutover	250	1880

Notes:

a = Distance to water refers to the nearest wetland, waterbody or other water source which has open water for at least part of the year. A distance of 0 means the acoustic detector was installed in a wetland.

b = Distance to nearest proposed turbine within the Project area.

During the field season, data was stored on 64 GB, high-capacity SD cards for transit to Ausenco offices, where it was uploaded to the Ausenco server and backed up on an external hard drive. The following metadata were embedded in each audio file: bat detector unique identifier, date, time, latitude, longitude, detector voltage, temperature, and microphone type. Calls were batch-processed and classified in the month following the field season (**Section 2.2.2**). Processed and classified files were stored on both the Ausenco server and an external hard drive. During processing, the following metadata were appended to the audio file: the length of the call, the number of pulses, the maximum and minimum frequency, characteristic slope, octaves per second, and time between calls.

2.2.2 Acoustic Data Classification

Bat recordings were identified to species and species groups using manual and automated classification methods. Data analysis was conducted by biologists with experience and training in bat call classification based on the North American Bat Monitoring Program methods (NA Bat 2023). Audio files were first processed with two automated classifiers: Kaleidoscope Pro (v5.4.8 Wildlife Acoustics Inc.) and species-specific filters developed for Analook (v4.5z Titley Scientific). Initial processing assigned putative species classifications to each file. Files were then manually verified in zero-cross format by an experienced biologist to confirm automated classifications were correct. Full-spectrum files were viewed in Kaleidoscope Pro if needed for identification. Bat calls were identified to species and species groups to the highest taxonomic order possible.

During manual verification, acoustic files were identified to species or species groups using call shape, duration, and minimum and maximum call frequency. Migratory bats included the hoary bat, eastern red bat, and silver-haired bat, as well as the species complexes comprised of big brown bat / silver-haired bat, eastern red bat/ little brown myotis, and low-frequency bat calls that could not be assigned to a further species or species group. Resident bat species included the little brown myotis, northern myotis, big brown bat, and tricolored bat, as well as the species complexes myotid and high-frequency bat calls (above a minimum frequency of 40 kHz) that could not be assigned to a further species or species group.

In this report, we identify a bat “pass” as a recording of a bat calling while flying through the detection radius of the microphone. Audio recordings of vocalizing bats occasionally record two individual bats at the same time, resulting in two bat passes in one audio recording. Bat passes were organized into species groups and summarized by detector and monitoring period. Bat activity was reported as total bat passes and bat passes per detector night. Reporting bat activity as bat passes per detector night can provide a more accurate measurement of bat activity as it accounts for survey effort including the number of functional bat detectors each night. Bat passes per detector night were calculated following the *Bats and Wind-Turbines – Pre-siting and pre-construction survey protocols* (Lausen et al. 2008) by dividing the number of nightly bat passes by the number of functioning bat detectors. The number of bat passes recorded represents relative activity levels at a sampling location.

The *Pre-Construction Bat Survey Guidelines for Wind Farm development in NB* (Government of New Brunswick 2009) states that surveys should be conducted on a minimum number of nights with seasonal temperatures, wind below 20 km/hr, and no precipitation. To determine the number of suitable sampling nights, weather data for nights in the monitoring period were summarized from a weather monitoring station operated by Environment Canada at the Port Hawkesbury Airport in Port Hawkesbury, NS approximately 12 km from the Project area (Government of Canada 2023b).

3.0 Results

3.1 Desktop Assessment of Bat Habitat

No critical bat habitat is located in the Project area. The AC CDC Data Report indicated a “bat hibernaculum or sensitive bat species occurrence” was known within the Project area (AC CDC 2022). Additional information was requested from NSDNRR, who confirmed that the records referenced in the AC CDC Report were species occurrences and that no hibernacula were known within 60 km of the Project. Referencing the *Recovery Strategy for Little Brown Myotis (Myotis lucifugus), Northern Myotis (Myotis septentrionalis), and Tri-colored Bat (Perimyotis subflavus) in Canada* (Government of Canada 2018), which uses a 10 km x 10 km grid to buffer known locations of hibernacula, the nearest critical bat habitat is located approximately 75 km northeast of the centre of the Project area.

3.2 Species Composition

Most bats detected at the Project were migratory species. Of the seven bat species known to occur in Nova Scotia, five species were confirmed during acoustic surveys. During the sampling period, 138 bat passes were identified. A bat pass was defined as a pulse or series of pulses contained within one Analook file (Lausen et al. 2008).

A total of 106 migratory bat passes were identified at the Project area during the monitoring period. Of these bat passes, three migratory species were confirmed: hoary bat, silver-haired bat, and eastern red bat (**Table 3.1**). Most migratory bats detected were hoary bats (55 of 106 migratory bat passes). Bat passes associated with the big brown / silver-haired bat species group are likely to be silver-haired bats as big brown bats are not frequently encountered in Nova Scotia (Moseley 2007). The months with highest migratory bat activity were June, September, and October.

A total of 32 resident bats passes were identified at the Project area during the monitoring period comprising big brown bat, little brown myotis, and two species groups (**Table 3.1**). The months with highest resident bat activity were August and September.

Table 3.1 Bat Species Groups Detected per Monitoring Period

Type	Species or Species Group	Date Range (2023)							Total
		May 24 to May 31	June 1 to June 30	July 1 to July 31	August 1 to August 31	September 1 to September 30	October 1 to October 31		
Migratory	hoary bat	0	18	5	8	20	4	55	
	silver-haired bat	0	0	0	0	1	3	4	
	big brown/ silver-haired bat	0	2	0	3	6	6	17	
	eastern red bat	0	0	0	3	2	5	10	
	eastern red bat/ little brown myotis	0	0	0	2	1	0	3	
	low-frequency bat	0	2	0	1	8	6	17	
	Migratory Subtotal	0	22	5	17	38	24	106	
Resident	big brown bat	0	0	0	1	1	0	2	
	little brown myotis	0	0	0	0	1	0	1	
	myotis	1	0	5	13	9	0	28	
	high-frequency bat	0	0	0	0	0	1	1	
	Resident Subtotal	1	0	5	14	11	1	32	
Total	1	22	10	31	49	25	138		

3.3 Bat Passes per Detector-Night

Passive acoustic bat monitoring occurred at the Project from May 24 to October 31, 2023, over 160 consecutive nights. During this period, 110 nights (68%) met the weather parameters appropriate for bat monitoring outlined in *Pre-construction Bat Survey Guidelines for Wind Farm development in NB* (Government of New Brunswick 2009). Following discussions with NSDNRR, efforts were made to deploy bat detectors by May 1, but delays in equipment procurement resulted in monitoring beginning on May 24.

Audio data was collected on 746 detector-nights, accounting for 93% of the monitoring period. Three of the five detectors (i.e. BAT 2, BAT 3, BAT 5) functioned for all nights of the monitoring period. A malfunction of the internal processor resulted in a 25-day data loss at BAT 1 and a 29-day data loss at BAT 4 prior to each unit's replacement.

During the monitoring period, 138 bat passes were recorded with 106 (77%) of the passes classified as a migratory species group and 32 (23%) classified as a resident species group (**Table 3.1**). Across the monitoring period, bat detectors recorded an average of 0.18 total bat passes per detector-night, and 0.14 migratory bat passes per detector-night (**Table 3.2**).

Table 3.2 Bat Passes per Detector-Night by Bat Monitoring Location

Detector	Surrounding Dominant Habitat	Total Bat Passes	Total BP/DN ^a	Migratory BP/DN ^a
BAT 1	Cutover	12	0.09	0.07
BAT 2	Wetlands, softwood trees	28	0.18	0.10
BAT 3	Softwood trees	13	0.08	0.06
BAT 4	Softwood trees	44	0.34	0.29
BAT 5	Mixwood trees, cutover	41	0.26	0.21
Total	Not applicable	138	0.18	0.14

Notes:

a = BP/DN = bat passes per detector-night.

3.4 Temporal Trends in Bat Activity

Recorded bat activity varied with time during the monitoring period. **Table 3.3** provides the monthly and total bat passes per detector-night observed at the Project. September had the highest observed bat passes/detector night (**Figure 3.1; Table 3.3**). The most migratory bats were observed in September, and the most resident bats were observed in August. The August peak in resident bats is consistent with other reports in the region (Dillon 2022a, 2022b; McCallum Environmental Ltd. 2017; ACAP 2015) and is likely due to juvenile bats leaving their maternity roosts (Reimer et al. 2014).

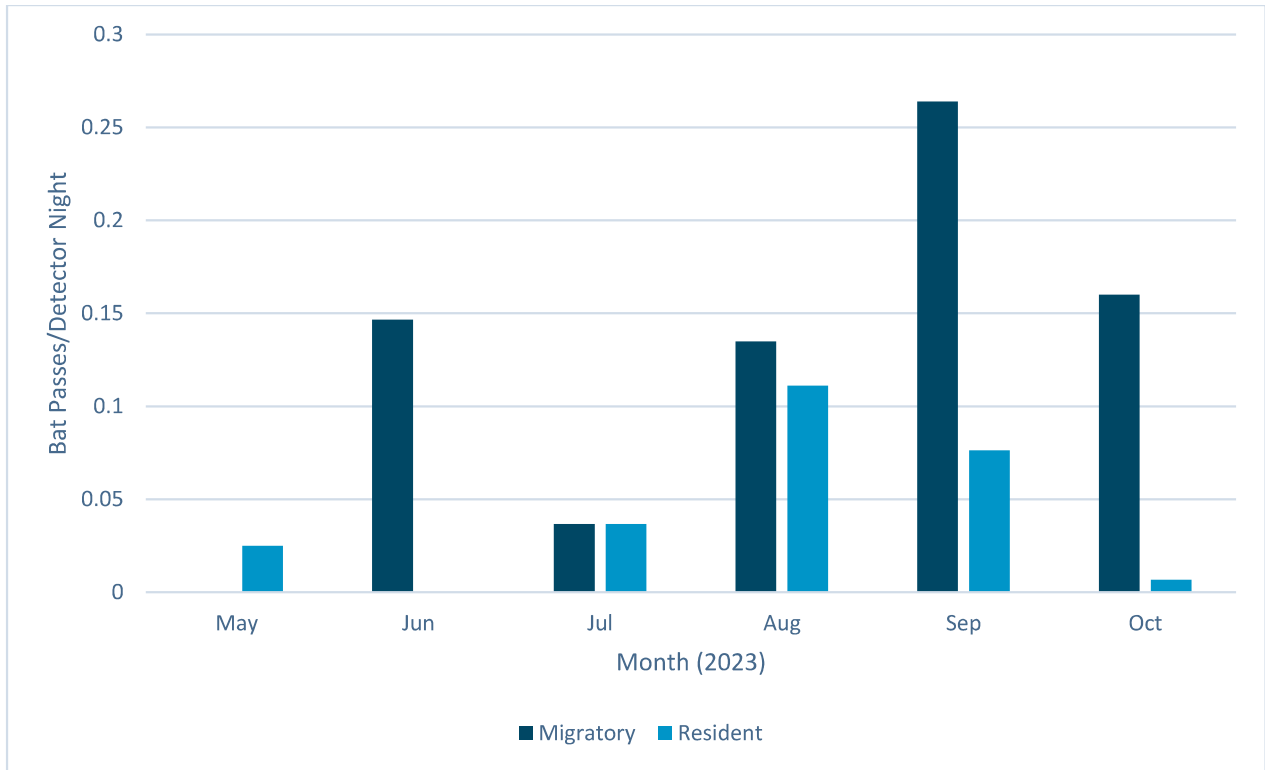


Figure 3.1 Migratory and Resident Bat Passes/Detector-Night (May 24 to October 31, 2023)

Table 3.3 Bat Passes per Detector-Night by Monitoring Period

Date Range (2022)	Detector-Nights	Total Bat Passes	Migratory Bat Passes	Total BP/DN ^a	Migratory BP/DN ^a
May 24 – May 31	40	1	0	0.03	0.00
June 1 – June 30	150	22	22	0.15	0.15
July 1 – July 31	136	10	5	0.07	0.04
August 1 – August 31	126	31	17	0.25	0.13
September 1 – September 30	144	49	38	0.34	0.26
October 1 – October 31	150	25	24	0.17	0.16
Total (May 24 – October 31)	746	138	106	0.18	0.14

Note: a = Bat passes per detector night.

Monthly bat passes followed a similar trend at most detector locations, with a peak observed in August or September (**Figure 3.2**). Bat passes at BAT 4 peaked in June, but this detector was not functioning from August 8- September 6, so discrepancies at this site could be due to gaps in data collection.

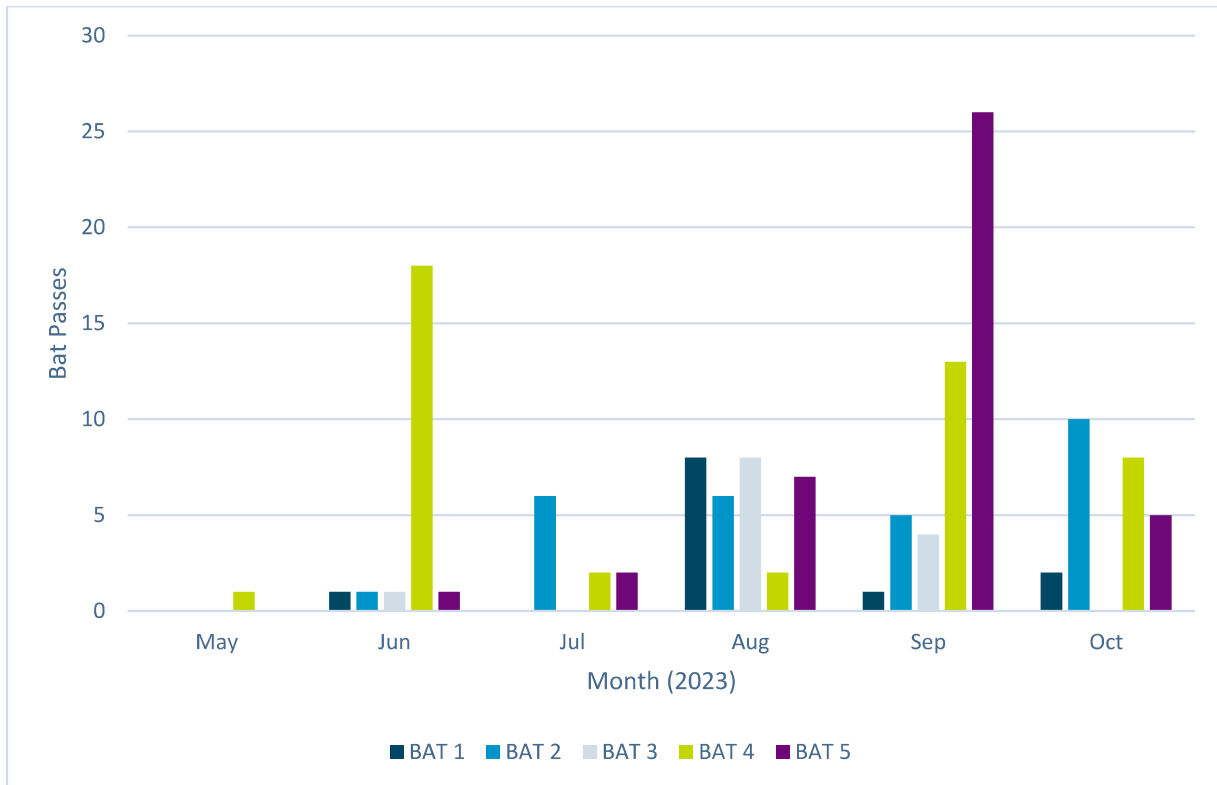


Figure 3.2 Monthly Total Bat Passes at Each Detector Location (May 24 to October 31, 2023)

3.5 Spatial Trends in Bat Activity

Two detectors recorded the majority of bat passes at the Project. BAT 4 detected 44 passes and BAT 5 detected 41 passes (**Figure 3.3**), both predominantly consisting of migratory bats. The BAT 4 detector microphone was deployed at a greater height than the other ground-based detectors, and thus, may have had an increased likelihood of capturing higher-flying migrant species. BAT 5 is distinguished by a hardwood/softwood forest boundary, with a potential flight corridor between the two.

BAT 2 recorded a greater proportion of resident bats than other detectors. It was situated on the edge of the Project area’s largest wetland, which may be a common feeding and roosting area for resident bat populations.

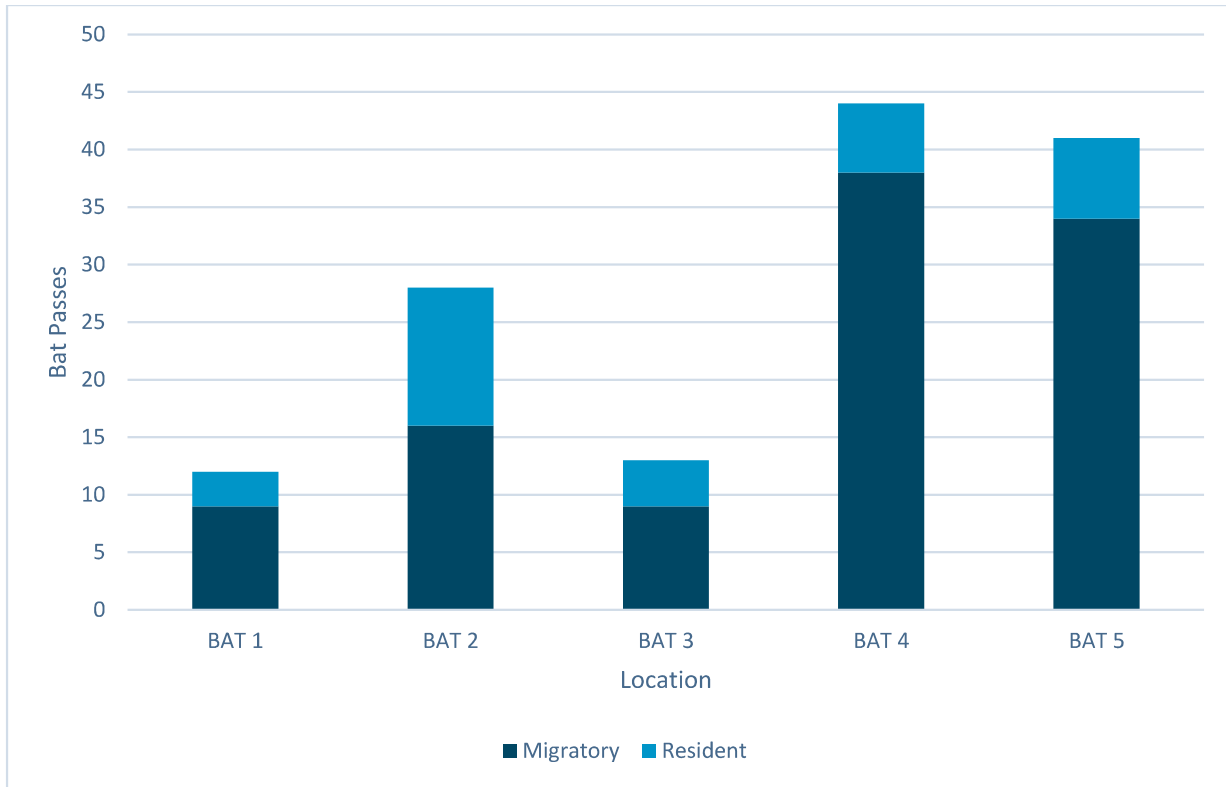


Figure 3.3 Bat Passes per Detector Location and Migratory Type (May 24 to October 31, 2023)

4.0 Conclusions and Recommendations

Ultrasonic acoustic monitoring was used to evaluate the activity level and species composition of bats using the Project area during spring and fall migration. The bat activity detected in the Project area during the monitoring period was low, with less than one bat pass per detector-night during each month of the survey. Across the monitoring period, bat detectors recorded an average of 0.18 total bat passes per detector night, and 0.14 migratory bat passes per detector night (**Table 3.2**). Periods of substantial bat activity were not identified during monitoring. Bat activity was also relatively similar across sites, with no sites having substantially more activity than other sites, suggesting that roosts, hibernacula, and migratory routes through the Project area are unlikely.

The potential impacts of land-based wind energy generation on bats include mortality resulting from direct impact with structures such as turbines, transmission lines and towers, mortality from barotrauma, and impacts to roosting, foraging, and drinking habitat. Our review did not identify any critical habitat, known hibernacula, or known roosts near the Project area. The acoustic data collected do not indicate substantial bat activity or nearby roosts. The potential impacts of wind energy on bats are discussed in more detail below.

Risk due to habitat loss from wind energy siting and construction is poorly understood (Segers & Broders, 2014). Forest clearing and ground-improvements associated with turbine construction has the potential to damage or destroy roosts and/or foraging habitat at wind facilities. The Environmental Assessment Registration Document (EARD) indicates that clearing activities will occur outside of the breeding bird window (April 15 to August 31). This activity window will also afford protection to any potential maternity roosts for bats, if present (Mosley 2007). Operating turbines may result in local impacts to insect prey numbers (Voigt 2021), altering the productivity of bat foraging habitat.

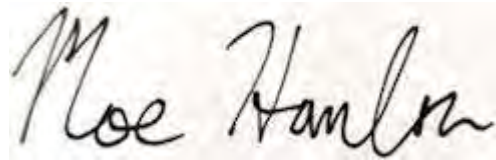
Bat mortality from operational wind turbines may occur during operation of the facility (Grotsky et al. 2011, Baerwald et al. 2008). Most bat mortalities attributed to wind turbines occur in migratory bat populations. In a review of post-construction monitoring (PCM) of bat fatalities at wind sites, the American Wind Wildlife Institute (AWWI) reports that in the northeastern US, 75% of bat fatalities at wind sites were migratory bat species (AWWI 2020). Bird Studies Canada used PCM data to estimate 0.24 ± 0.05 annual bat mortalities per turbine in Atlantic Canada (Bird Studies Canada et al. 2018). Mitigation strategies can be developed for facilities with high bat mortality during operation. Because the annual bat mortality is unknown at the Project, PCM is required to predict the annual mortality at the Project and determine if curtailment is required. Projects with turbines over 150 m in height are classified as Class 4 projects by the Nova Scotia Environmental Assessment Branch. Class 4 projects require two years of post-construction monitoring to determine changes in wildlife use as well as two years of regular carcass searches (Government of Nova Scotia 2021).

In summary, bat activity at the Project is relatively low compared to baseline studies at other wind energy facilities. No roosts or hibernacula are known in the vicinity of the Project area.

5.0 Closure

We sincerely appreciate the opportunity to have assisted you with this project and if there are any questions, please do not hesitate to contact the undersigned by phone at 902.510.0470.

Report prepared by:
Ausenco Sustainability ULC



Moe Hanlon
Field Technician

Report reviewed by:
Ausenco Sustainability ULC



Patrick Burke
National Director, Power

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