Fisheries and Aquaculture
1575A Lake Rd
Sandy Point, Nova Scotia
B0T 1W0
novascotia.ca

Public Notice – Administrative Application Posted

These documents have been submitted with respect to an administrative aquaculture licence / lease application. The information in these documents is provided as part of the routine disclosure of information by the Department of Fisheries and Aquaculture (the "Department"). Some information may be redacted as business confidential information or personal information.

These documents were provided to the Department by the applicant. The Department is not responsible for the content of these documents, including, but not limited to, the accuracy, reliability, or currency of the information contained within.

Applicant: Hamilton's Eel Fishery Ltd.	**Type of Application:** New Land-based licence
Application File Number: AQ#1465	**Species:** American eel
Location: Cranville Ferry, Annapolis County	**Method of Cultivation:** Nursery and grow out
Application Received On: January 9, 2024	

To learn more about the aquaculture lease and license application process, please visit https://novascotia.ca/fish/aquaculture/licensing-leasing/Aqua-Licensing-and-Leasing-Overview.pdf

Table of Contents (Page 1 starts after this table)

Doc ID: **AQ-ADM-PNO-02**
Version **1.0**

NOVA SCOTIA

Office Use Only
Received Via Email Janaury 9, 2024

Aquaculture Licence/Lease Application

Applicant Information:

Applicant: Hamilton's Eel Fishery Limited Contact Person: Sunny White

Nova Scotia Registry of Joint Stocks Number: 2457802

Revenue Canada Business Number: [redacted]

Telephone No. (Work): 902-526-4122 (Home): _____ (Cell): [redacted]

Fax No.: _____ E-mail: sunny@hamiltonsfishfarm.com

Mailing Address: P.O. Box 731

Bridgetown, NS Postal Code: B0S 1C0

Civic Address: 35 Devaney Marsh Right of Way

Bridgetown, NS Postal Code: B0S 1C0

Proposed Site Information:

Location of Site: 5165 Hwy 1 Granville Ferry, NS County: Annapolis Site Size (Ha): n/a

Site Dimensions: Building is 40'X 80'

Hydrographic Chart No.: n/a

Approximate Center Coordinates: Latitude: 44°45'57.51" N

Longitude: 65°28'40.23" W

Type of Licence Application

(Check appropriate boxes):

- [x] Commercial licence/lease
- [ ] Experimental licence/lease

- [ ] Marine Plants
- [x] Finfish
- [ ] Shellfish
- [ ] Other

Submit completed applications to: **Nova Scotia Department of Fisheries and Aquaculture, Aquaculture Division**
1575 Lake Road, Shelburne, NS B0T 1W0
E-mail: aquaculture@novascotia.ca

NOVA SCOTIA

Office Use Only

- ☐ Land-based
  - ☒ Freshwater
  - ☐ Saltwater
  - ☐ U-Fish
  - ☐ Hatchery
  - ☒ Nursery Facility
  - ☒ Growout
- ☐ Marine
  - ☐ Cage culture
  - ☐ Suspended shellfish or marine plants
  - ☐ Bottom shellfish with gear
  - ☐ Bottom shellfish without gear

Application Materials

A complete application includes the following:

- Application fee (payable to Minister of Finance) according to Section 77 of the Aquaculture Licence and Lease Regulations for Nova Scotia made under Section 64, Chapter 25 of the Acts of 1996, *the Fisheries and Coastal Resources Act*
- Application Form
- Development Plan according to application
- Report on Public Engagement during Scoping (for all Marine applications and for other applications, as applicable)
- Copy of up-to-date Shareholder's Register which sets out the shareholdings of the company (if applicable, and if not already provided during the Option to Lease application process.

Public Notice and Disclosure

As part of the process for deciding on an aquaculture application, the Nova Scotia Department of Fisheries and Aquaculture ("Fisheries and Aquaculture") will disclose application information to other government bodies, including, if applicable, the Nova Scotia Aquaculture Review Board for use at an adjudicative hearing relating to the application.

In accordance with departmental policy, which seeks to promote public involvement in the process for deciding on aquaculture applications, Fisheries and Aquaculture may disclose application information – not including, however, personal or business confidential information – on the departmental website.

Privacy Statement

The personal and business confidential information collected as part of an aquaculture application will only be used or disclosed by Fisheries and Aquaculture for the purpose of deciding on the application.

Submit completed applications to: **Nova Scotia Department of Fisheries and Aquaculture, Aquaculture Division**
1575 Lake Road, Shelburne, NS B0T 1W0
E-mail: aquaculture@novascotia.ca

NOVA SCOTIA

Office Use Only

All application information collected is subject to the Freedom of Information and Protection of Privacy Act ("FOIPOP") and will only be used or disclosed in accordance with FOIPOP.

By signing and submitting this form, I acknowledge that I have read, understand, and accept the above statements regarding the collection, use, and disclosure of the information provided on this form.

Signature of Applicant

[redacted]

Date

Jan 8/2024

Signature of Nova Scotia Department of Fisheries and Aquaculture Designate

[redacted]

Date

January 9, 2024

Submit completed applications to:

Nova Scotia Department of Fisheries and Aquaculture, Aquaculture Division
1575 Lake Road, Shelburne, NS B0T 1W0
E-mail: aquaculture@novascotia.ca

Development Plan Land-based Aquaculture – Eel Facility, Hamilton's Eel Fishery. August 1, 2024

SECTION 1: PROJECT OVERVIEW

Hamilton's Eel Fishery Limited is applying for a commercial aquaculture licence for growing the American eel (*Anguilla rostrata*) to a larger size prior to sale. Hamilton's currently fishes and sells glass elvers overseas where they are on-grown before sale to the food market. On-growing eels elsewhere represents a lost opportunity for Nova Scotia. This proposed new aquaculture licence will enable Hamilton's to locally add significant value to their eels, keeping the income in the province.

Hamilton's will convert their current eel holding facility in Granville Ferry, NS, to a recirculating aquaculture system (RAS) that will support the sale of 9.4 MT of eel production annually. Hamilton's operates several successful businesses and has staff experienced with handling eels and recirculating aquaculture systems. It, therefore, has demonstrated financial and technical competence to execute these plans. Hamilton's has also demonstrated compliance with the Fisheries and Coastal Resources Act and is a known innovator in the land-based aquaculture industry in Nova Scotia.

SECTION 2: TECHNICAL VIABILITY

2.1 Production Plan

Species: American eel (*Anguilla rostrata*).

Stock source: Glass eels will be collected under Fishing Licence 123208. Although this license allows the collection of elvers from nine rivers, the primary rivers to supply the eel grow out will include Meteghan, Sissiboo, and Annapolis rivers. A copy of the Fishing Licence is attached (Appendix A). In the event that this fishery is not successful or available, purchase of elvers from elsewhere can occur through the use of Fish Buyer's Licence BL2812. A copy of the Fish Buyer's Licence is attached (Appendix B). Finally, a letter from [redacted] indicating the intent to use these licences to support this operation is attached (Appendix C).

Maximum site biomass: 6.6 MT. (Because sales occur over a few months, this will allow the sale of 9.4MT annually.)

Maximum fish number: 25,000 – introduced annually at the beginning of each growth cycle.

Expected mortality: [redacted]

Maximum feed (annual, in tons): [redacted]

Maximum tank density (kg/m3): [redacted]

Maximum total tank volume (m^3): 41.5 m^3.

Intended initial stocking date: April-May 2025. Exact date depends on timing of spring eel run.

Expected FCR: [redacted]

Expected production or grow out period for each cohort: [redacted]

Expected time to achieve maximum production at the site: Intend to stock to density in spring 2025, to achieve maximum production in a year.

The biomass plan is shown in Table 1.

2.2 Location

Civic address: 5165 Highway 1, Granville Ferry, NS.

PID: 05192992 (privately owned, no lease or deed). See Appendix D for the Property Map.

Ortho/aerial photos of the location are shown in Figure 1, a topographic map is shown in Figure 2, the water drainage network for the area is shown in Figure 3, a site layout drawing is shown in Figure 4.

Table 1: Annual biomass plan for elvers in the proposed facility*, showing monthly Total weight (or biomass) being held, in kg; the Average weight (of an individual eel), in g; and the Number of eels.*

Figure 1: Satellite/ortho images from Google Earth, with the proposed aquaculture site indicated by the pin.

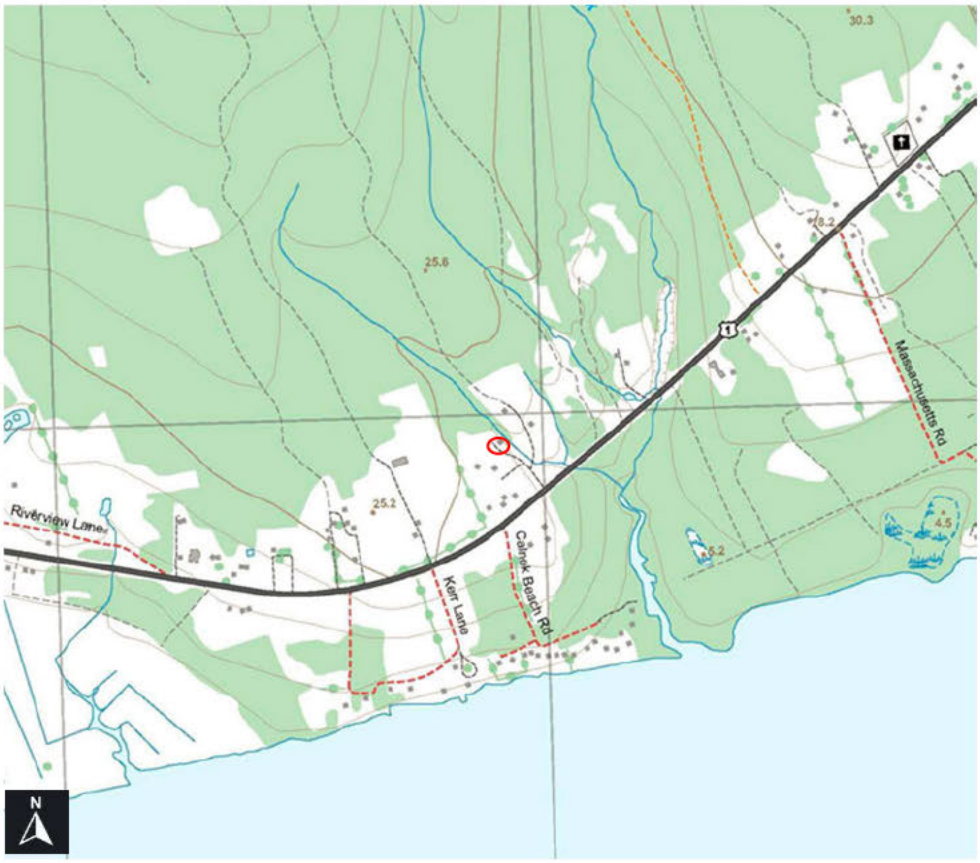


Figure 2: Snapshot of topographic map 1044750065400 of the area shown in Figure 1, as extracted from https://nsgi.novascotia.ca/datalocator/indexing/; accessed November 29, 2023; , used with permission from Service Nova Scotia and Internal Services. The proposed site location is circled in red. The corresponding map and its legend can be found in Appendix E.

Watershed: The proposed location is identified by DFO as the Bay of Fundy Watershed Region, sub-sub-drainage area Annapolis A_2[1], otherwise known as Annapolis by Nova Scotia Department of Environment and Labour[2], Water and Wastewater Branch. The water drainage pattern for the area is shown in Figure 3.

[1] https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/41061068.pdf
[2] https://www.novascotia.ca/nse/water/docs/waterstrategy_nswatershedmap.pdf

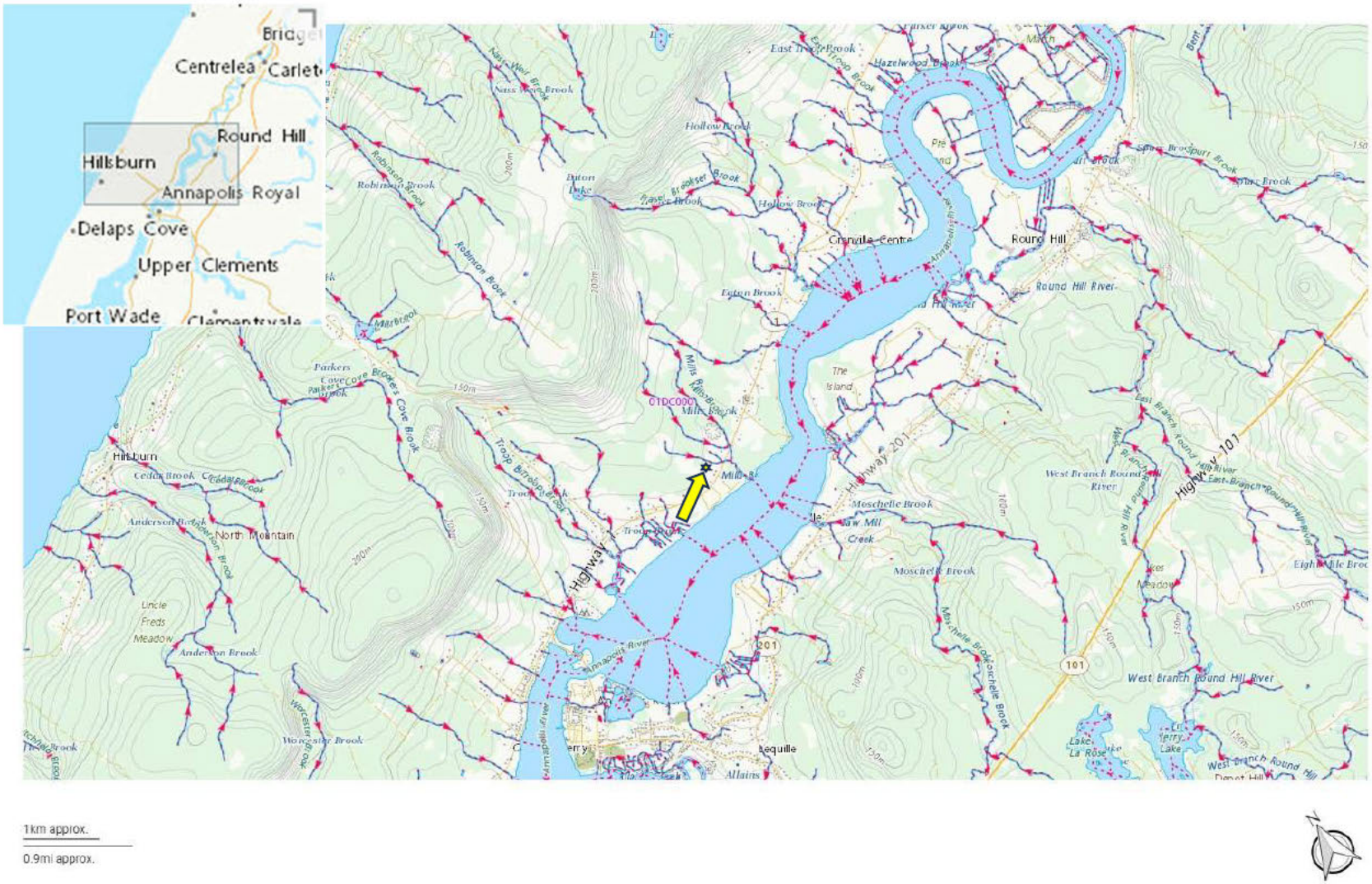


Figure 3: Water drainage network for the local area, as published by the National Hydro Network. The proposed site location is indicated by the yellow star and pointed to with the yellow arrow. Extracted from https://search.open.canada.ca/openmap/a4b190fe-e090-4e6d-881e-b87956c07977. Accessed November 29, 2023.

Figure 4: Site layout drawing showing the locations of the well, septic tank and septic field. The septic tank is 5678 L (1500 Gal). The septic field is a standard install with perforated pipe consisting of three lengths of 75', two lengths 50' and one length of 40', as shown in the figure as yellow lines. Note that the well, the septic tank and septic field are already in place. No new construction is needed outside of the building. An enlarged view of the RAS system, as imposed on this scaled image, in white, is shown in Figure 5..

2.3 Water source

The make-up water for the recirculating aquaculture system (RAS) is an existing drilled well: Well # 070030. The well log is attached as Appendix F. This well has a driller's estimate of yield of 70 imperial gallons per minute (318 lpm, or 457,920 L/day). The well water composition is shown in Table 2. It is suitable for freshwater aquaculture. The full analysis results are attached as Appendix G. The well water is already piped to the building that will house the RAS, so that no construction is required outside of the building to use this water. There is no navigable water body affected by the water withdrawal.

Maximum make-up flow rate per day is expected to be 2072 L/day or 1.4 lpm.

*Table 2: Water quality of well water relative to recommended values for fresh water aquaculture. *Recommended values were taken from Timmons et al., 2001.[3]*

Parameter	Concentration in well water (mg/L)	Recommended concentration[3] (mg/L)	Parameter	Concentration in well water (mg/L)	Recommended concentration (mg/L)
Sodium	3.72	<75	Alkalinity (as $CaCO_3$)	88	50-300
Potassium	0.8	<5	Arsenic	<0.002	<5
Calcium	40.1	4-160	Cadmium	<0.00009	<0.0005
Magnesium	5.1	<15	Sulfate	6	<50
Iron	<0.05	<0.15	Barium	0.022	<5
Manganese	<0.002	<0.01	Lead	0.009	<0.02
Copper	<0.002	0.006	Nickel	<0.002	<0.1
Zinc	<0.005	<0.005	Selenium	<0.001	<0.01
Ammonia (as-N)	<0.03	<1.0	Total phosphorous	3.64	n/a
pH (units)	6.92	6.5-8.5	Turbidity (NTU)	<0.5	n/a

2.4 Water discharge

The maximum water discharge rate will be 2072 L/day, or 1.4 lpm. The discharge water will enter a septic tank (5678 L or 1500 Gal) and be treated in a septic field which is used exclusively for the farm. As shown in Figure 4, the septic bed consists of perforated pipe in a manifold with three lengths of 75', two lengths of 50' and a length of 40'. Both the septic tank and field are in place and located on the east side of the building which will house the RAS, so that no construction is required outside of the building to treat this water. There is no navigable water body affected by the water discharge.

The septic tank will be pumped according to need, as per measurements to be taken biweekly with a probe. Connell's Septic Services Ltd. will pump the tanks

2.5 Infrastructure

Current infrastructure includes a 40' X 80' building on ¾ acre of property with a 240-amp electrical service. The property is accessed via a driveway off Highway 1 for which the applicant has a right of way. There is also a small (8' X 10') storage shed on the property. At present, there is a water distribution system and tanks for holding stock in place, as well as a septic system, described above. A back up 12,000-watt generator is also on site. The well supply was described in section 2.3. The civic address was provided in Section 2.2. An aerial view of the property is shown in Figure 1.

The RAS system and tank system for supporting eel growth will be a new installation inside of the existing building. No construction is required outside of the building.

2.6 System

Figure 5 shows the tank and equipment layout as planned to be installed in the existing building as well as the water flow. Table 3 lists the rearing tanks to be available for the stock.

[3] Timmons, M.B., J. M. Ebeling; F. W. Wheaton; S. T. Summerfelt; B. J. Vinci. 2001. Recirculating Aquaculture Systems. Second Ed. Cayuga Aqua Ventures, Itaca, NY. NRAC Publication No. 01-002. 650 pp.

Table 3: Holding tank listing

Holding unit name	Holding unit identification	Volume (m^3)	Fish size in g
6’ DIA ROUND TANK	1	3.2	0.2g - 15g & 15g -450g
6’ DIA ROUND TANK	2	3.2	0.2g - 15g & 15g -450g
6’ DIA ROUND TANK	3	3.2	0.2g - 15g & 15g -450g
6’ DIA ROUND TANK	4	3.2	0.2g - 15g & 15g -450g
6’ DIA ROUND TANK	5	3.2	0.2g - 15g & 15g -450g
6’ DIA ROUND TANK	6	3.2	0.2g - 15g & 15g -450g
6’ DIA ROUND TANK	7	3.2	0.2g - 15g & 15g -450g
4’ x 8’ RECTANGULAR	8	2.7	15g to 450g
4’ x 8’ RECTANGULAR	9	2.7	15g to 450g
4’ x 8’ RECTANGULAR	10	2.7	15g to 450g
4’ x 8’ RECTANGULAR	11	2.7	15g to 450g
4’ x 8’ RECTANGULAR	12	2.7	15g to 450g
4’ x 8’ RECTANGULAR	13	2.7	15g to 450g
4’ x 8’ RECTANGULAR	14	2.7	15g to 450g
Total tank volume		**41.5 m^3, 10,945 Gal**	

[4] Since the make-up water will enter at the drum filter or sump tank, it will be degassed again in the biofilter which is equipped with an air blower, and will be UV treated and oxygenated with the rest of the system water, prior to entering the fish tanks.

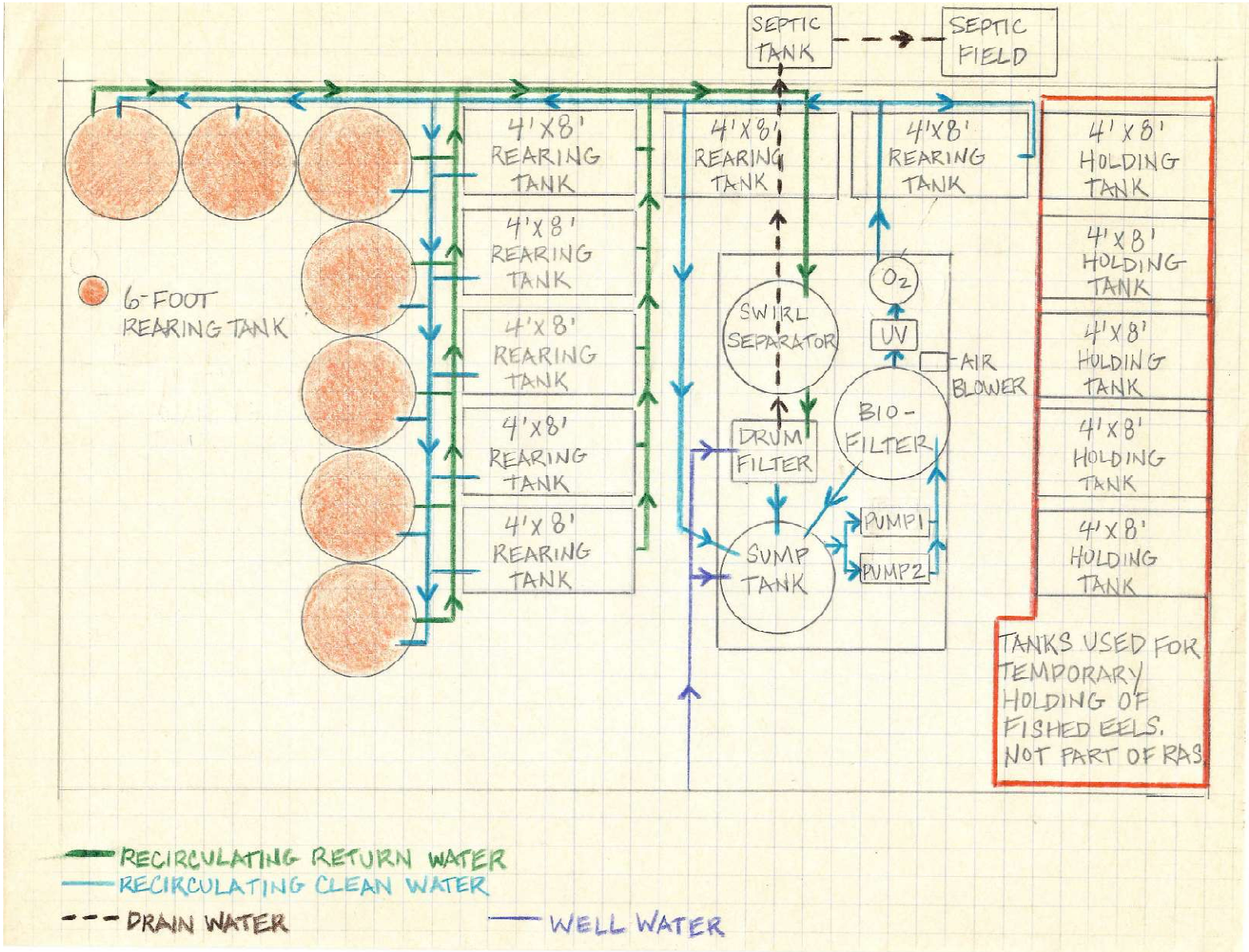


Figure 5: Schematic hand-drawing of RAS system to be installed to support the on-growing of eels. This figure shows the flow of water through the tanks and water treatment equipment. Note that the five tanks on the south side of the building (located on the right side of the drawing), outlined with a red line, will continue to serve as temporary holding for fished eels prior to transport. They will not be part of the RAS. There is an office, lab, and mechanical area on the north end of the building that houses the RAS and are not depicted in this figure (located to the left of the area shown).

2.7 Containment

Eel escape is prevented by a multiple screen system that includes a screen at the tank standpipe, drain screens, a screen in the sump and the drum filter screen on the reuse water. Finally, all effluent will be discharged to the septic bed which will not allow passage of fish. The integrity of the containment screens will be checked daily.

This site is not prone to flooding. The closest source of flooding is the Annapolis River which is 500 m away and water levels would have to cover Highway 1 before reaching the proposed aquaculture facility.

2.8 Site history

The property is a former aquaculture site for rainbow and speckled trout. It is currently used for short term American eel holding from April to June.

2.9 Technical ability

The applicant (Hamilton's Eel Fishery Limited) currently operates a recirculating aquaculture system growing rainbow trout at a licensed aquaculture site (AQ 1411) about 15 km away in Bridgetown – Hamilton's Fish Farm. This is an Ocean Wise certified land-based finfish farm that produces rainbow trout from egg to plate. Hamilton's has been culturing salmonids since 2018 on its 125-acre site that is supplied with quality fresh water from two wells. Its three buildings include a hatchery capable of rearing 100,000 eggs quarterly, and four recirculating aquaculture systems for on-growing the fish to market size. The farm is currently harvesting 25 tons of rainbow trout annually, selling to local restaurants and retail stores as well as wholesalers in Atlantic Canada and Ontario, with expansions intended for the near future. In addition to the rainbow trout, the site is licensed to grow striped bass, American eel, Arctic char, and speckled (brook) trout. The farm operates under a Farm Management Plan that has been approved for implementation. The farm is supported by an experienced staff with demonstrated technical expertise in the production of salmonids in a land-based facility. This land-based technical expertise will be available for advising the eel holding facility in its construction and operation. In particular, Sunny White has been a significant player in the fish farm development. He managed several of the RAS technology installations from start to finish and plays a critical role in running day to day operations. Sunny understands the Nova Scotia Aquaculture Management Regulations and will be the key technical manager for the eel grow-out. In addition to his fish farm experience, Sunny has successfully operated the elver holding facility for ten years and has fished elvers for decades. Through this experience, he has gained an excellent understanding of eel behaviour and physiology, as well as the requisite record keeping for traceability. He is also familiar with the site's infrastructure, including its limitations and potential. Sunny will be supported by [redacted] [redacted] background is in terrestrial farming, and she has been working at the eel holding facility off and on for three years.

[redacted], the owner of the venture has been working with eels for decades. He will also lend his expertise to the construction and operation of the facility.

2.10 Compliance history

There are no outstanding compliance issues.

SECTION 3: FINANCIAL VIABILITY

The owner of the business applying for the licence ([redacted]) has been successfully operating an eel harvest business since 1995, employing fishers on an annual basis (Hamilton's Eel Fishery). [redacted] also initiated Annapolis Valley Cranberry Limited in 1998, which operated for 18 years, employing more than 20 people. This business was successfully replaced with Hamilton's Hop Yard which currently supplies local brewers with dried, pelletized hops. In the meantime, [redacted] and his daughter also began Hamilton's Fish Farm, established in 2018. This family and their team hope to continue their successes in their local community by increasing the value of elvers and on-growing them to a larger size. This is a practice normally done overseas. This group intends to value-add this product in Nova Scotia, while taking advantage of the infrastructure and technical expertise already in place.

A five-year financial projection is shown in Table 4. Assumptions and supporting information for this are as follows:

- Most equipment is already on site. Equipment on site includes the 14 holding units, RAS water treatment equipment, water pumps and other equipment. Installation has been or will be done with current staff and not be incremental. The only incremental expense to be incurred is for the heat pump, air blower, oxygen equipment, and plumbing at a cost of [redacted].
- Anticipated operating costs are listed in the cash flow projections (Table 4). It is notable that [redacted]
- Farm gate price is assumed to be $[redacted]. This is conservative relative to retail pricing reported at $[redacted][5].
- [redacted]
- The product will be promoted by the marketing team employed by Hamilton's Eel Fishery Ltd and other businesses operated by [redacted]. [redacted] businesses employ a five-person marketing team.
- [redacted]
- Administrative expenses will be covered under Hamilton's Eel Fishery and are not incremental.
- As described in Section 2.1, disruption to the elver supply due to local fishing restrictions will be mitigated by purchasing elvers from other regions. A cost of [redacted] for elver input is shown in the five-year projection (Table 4). This would only be required if the purchase of elvers was necessary due to a lapse in the local fishery.

Historical Income Statements are available as a separate document.

[5] https://www.selinawamucii.com/insights/prices/canada/eels/#google_vignette Accessed July 29, 2024.

Table 4: Five-year projections of the proposed eel nursery

SECTION 4: OTHERS USERS OF AREA SURROUNDING THE PROPOSED AQUACULTURAL OPERATION

4.1 Description of other users

Land cover in this area, as published by Environment and Climate Change Canada, is shrubs, agriculture and mixed forest, as shown in Figure 6. The satellite image of the property (Figure 1) shows that the area is cleared land bordered by wooded areas.

The closest neighbor to the facility is [redacted] who runs [redacted]. A good relationship exists between [redacted] and Hamilton's. There are a handful of other properties with homes adjacent to the site. All installations and activities will take place inside the building with a nominal, temporary increase in activity in the parking lot outside of the building during system installation. Neighbors are used to the current activities associated with temporary eel holding and shipping. There is no substantial increase in activity expected outside of the existing building once installation is complete.

The closest relatively dense area of population is the Granville Ferry/Annapolis Royal area which is over 3 km away. According to the 2021 census, Granville Ferry had a population of 152 people[6]. Annapolis Royal had a population of 530[7].

There are no known or suspected pre-contact or historic archaeological resources; and since no outdoor construction will be required to support this application, there are none expected to be uncovered.

[6] https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Granville%20Ferry&DGUIDlist=2021A0006120021&GENDERlist=1,2,3&STATISTIClist=1,4&HEADERlist=0. Accessed November 29, 2023

[7] https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Annapolis%20Royal&DGUIDlist=2021A00051205008&GENDERlist=1,2,3&STATISTIClist=1&HEADERlist=0. Accessed November 29, 2023.

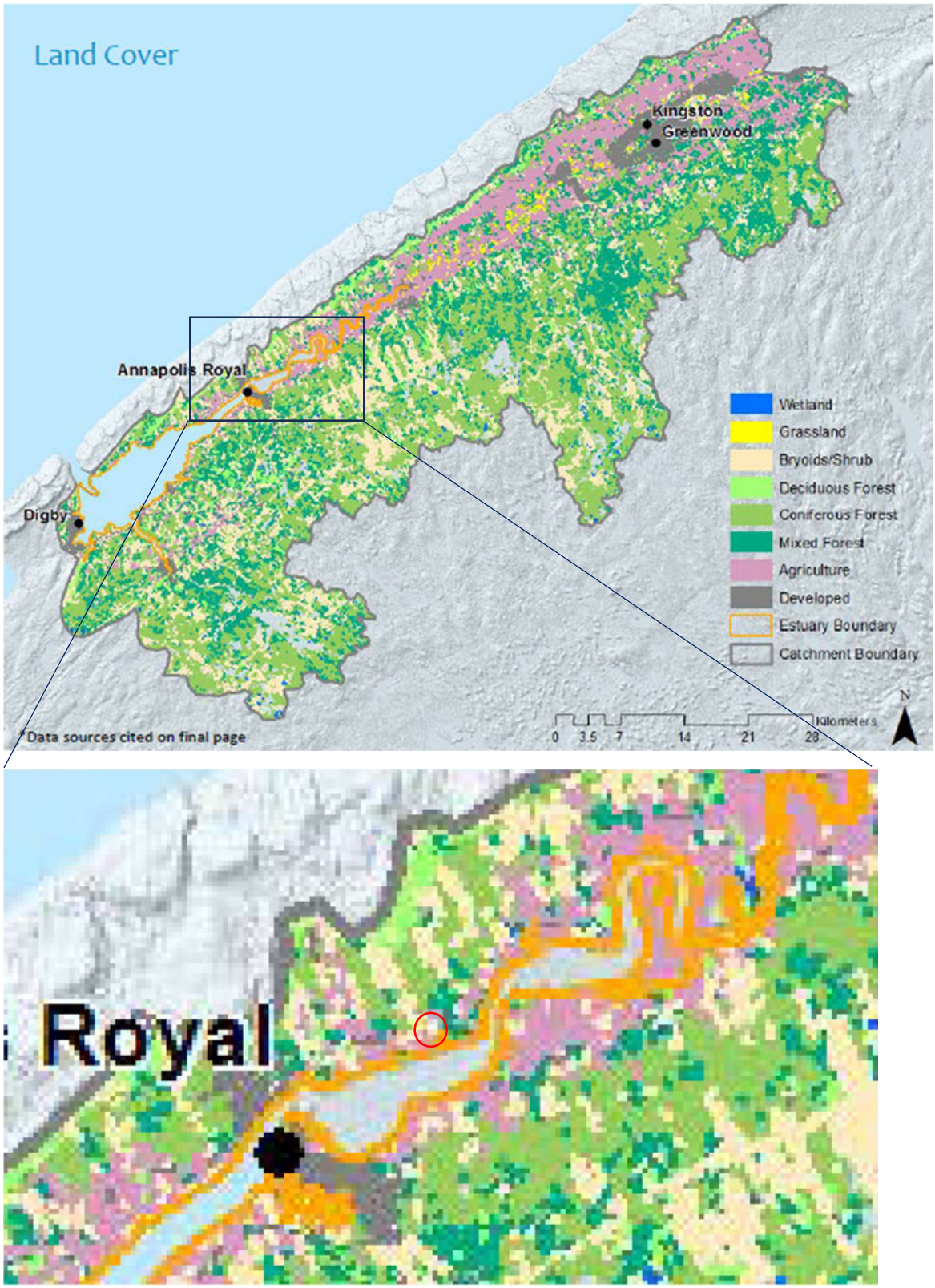


Figure 6: Land use of the Annapolis Basin, as extracted from: 2017. Bay of Fundy Estuary Profile, Annapolis Basin. ECCC. 8pp.

4.2 Significance of proposed area to wildlife

Known Managed and Significant Areas are identified in Figure 7 below, as extracted from: Atlantic Canada Conservation Data Centre (ACCDC), DATA REPORT 7903, Granville, NS which is attached as Appendix H.

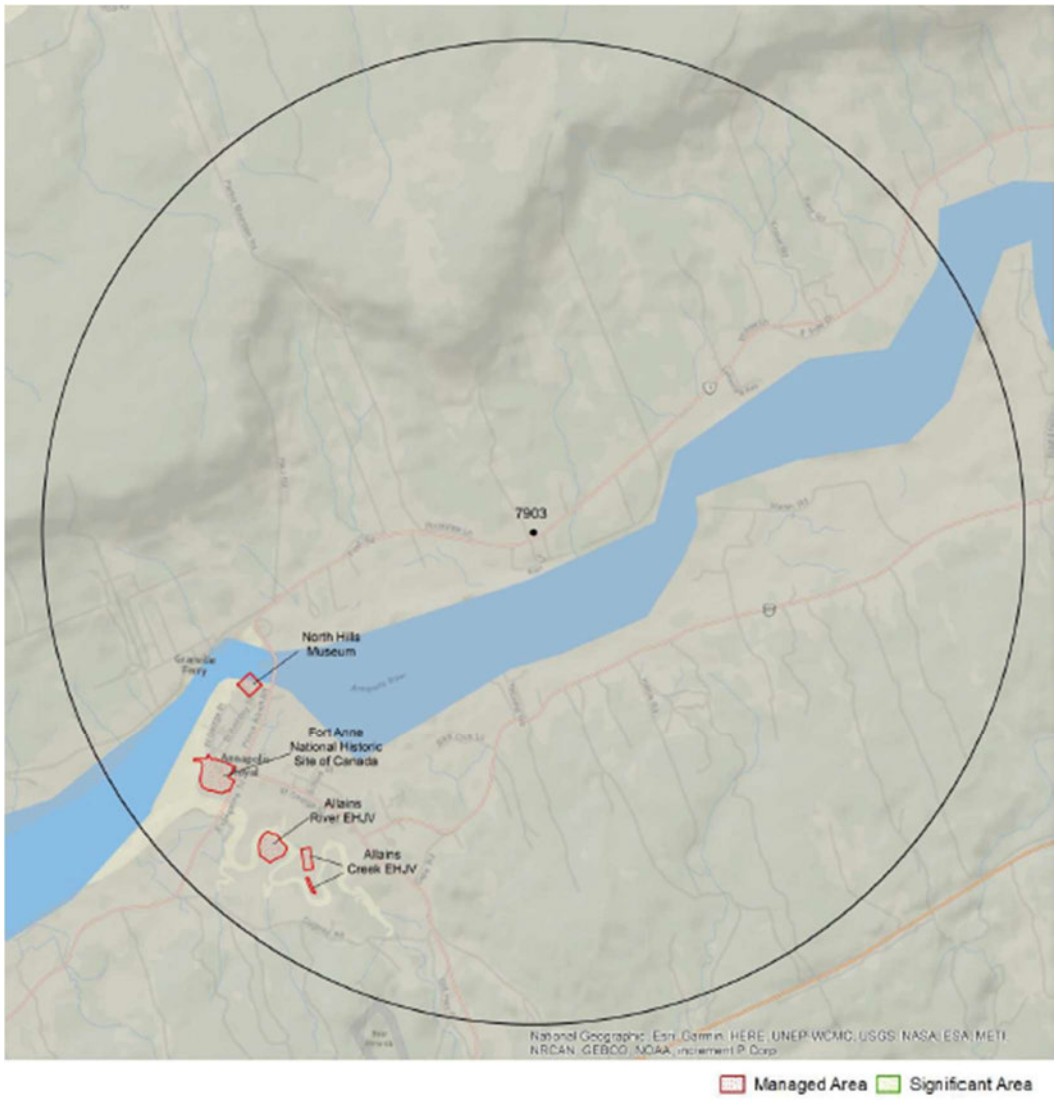


Figure 7: Known Managed and Significant Areas within 5 km of the proposed aquaculture land-based site, as identified by the ACCDC. The approximate site location is identified by the black dot labelled "7903". There were no biologically significant areas identified within this 5 km radius. All known managed areas are across the Annapolis River and adjacent to, or within, Granville Ferry or Annapolis Royal.

The managed areas within 5-km of the proposed site include the following:

- North Hills Museum (NS Museum)
- Fort Anne National Historic Site of Canada (Parks Canada)
- Allains River Eastern Habitat Joint Venture (NSDNR)
- Allains Creek Eastern Habitat Joint Venture (NSDNR)

These are all across the Annapolis River and unlikely to be affected by the proposed aquaculture site.

There are no known biologically significant areas within 5-km of the proposed site.

Rare and endangered species

The afore-mentioned data report from the ACCDC provides more in-depth detail on the possibility of the presence of rare and endangered species that may use the proposed development area. A summary follows:

<u>Rare species list</u>

Figure 8 shows the observed presence of all rare and/or endangered taxa as designated by COSEWIC, SARA, and/or the Province of Nova Scotia, including those that are not legally protected. The vast majority of the observed rare or endangered species are in the vicinity of Annapolis Royal, and located on the other side of the river, almost 3 km to the southwest of the site.

Within 5-km of the proposed site center, records indicate the presence of twelve species of SARA-listed rare or endangered vertebrates (ten birds, two turtles), and two species of SARA-listed rare or endangered invertebrate fauna (both insects).

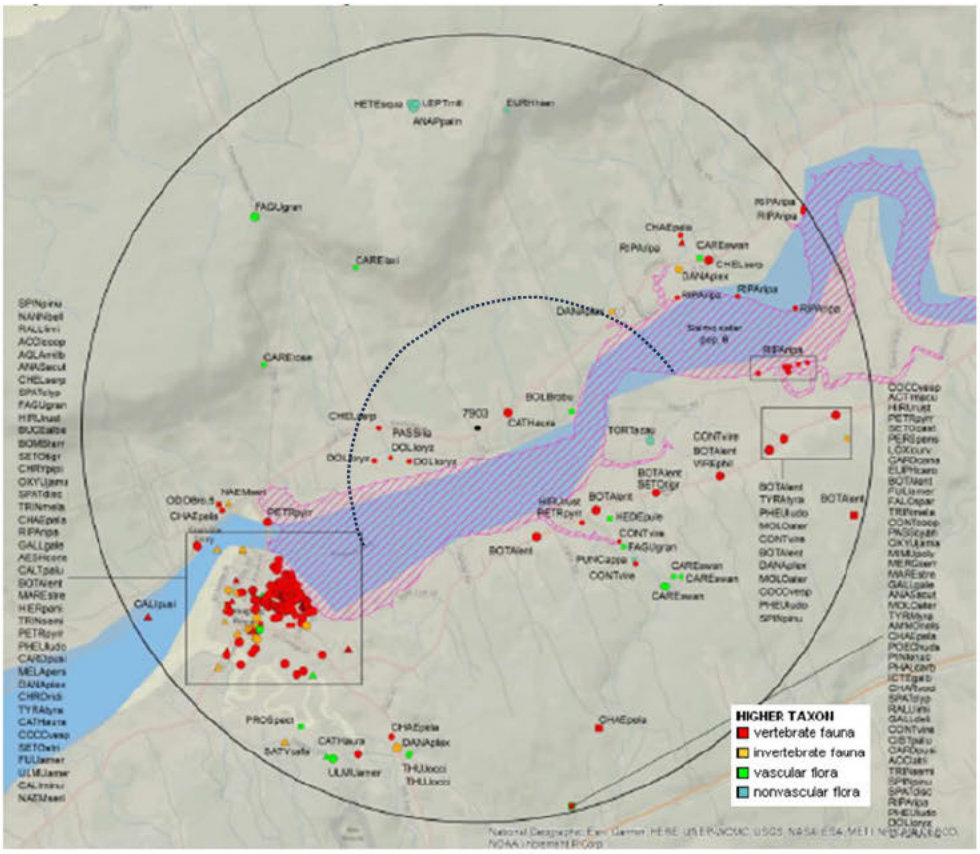


Figure 8: Known observations of rare and/or protected flora and fauna within 5 km of the proposed aquaculture site are indicated by the colored dots within the black circle. The approximate location of the proposed aquaculture site is indicated by the black dot at the center and labelled "7903. A 2 km radius from the proposed site on the same side of the river is indicated by the hashed line. The base figure was extracted from the ACCDC Data Report 7903, attached as Appendix H.

SARA-listings

The Species at Risk on record as being in the region are listed in the table below.

Table 5: Species at risk within 5-km radius of proposed site as extracted from Atlantic Canada Conservation Data Center Report 7903. Species habitat and other comments were obtained from sources referenced in footnotes.

Scientific name	Common name	SARA status	Habitat, other comments
Chaetura pelagica	Chimney Swift	Threatened	Forests along the water's edge, the edges of tropical lowland forests, regenerating shrub areas, farmland, suburban areas and city centre zones.[8]
Riparia riparia	Bank Swallow	Threatened	Nests in burrows excavated in eroding banks of coastal cliffs and other steep vertical soft soil faces.[9]
Dolichonyx oryzivorus	Bobolink	Threatened	Open grasslands and hayfields.[10]
Contopus cooperi	Olive-sided Flycatcher	Special Concern	Spruce and fir swamps and bogs.[11]
Contopus virens	Eastern Wood-pewee	Special Concern	Woodlands.[12]
Euphagus carolinus	Rusty Blackbird	Special Concern	Utilize wetlands around lake edges, bogs, swamps and edges of fens for breeding.[13]
Hirundo rustica	Barn Swallow	Threatened	Forage over a wide range of open country habitats. Nests are commonly situated inside or outside of buildings, under bridges and wharves and in road culverts. A small portion

[8] https://novascotia.ca/natr/wildlife/species-at-risk/docs/recovery-plan-chimney-swift.pdf . Accessed December 15, 2023

[9] https://novascotia.ca/natr/wildlife/species-at-risk/#bank-swallow. Accessed December 15, 2023

[10] https://novascotia.ca/natr/wildlife/species-at-risk/#bobolink. Accessed December 15, 2023

[11] https://novascotia.ca/natr/wildlife/species-at-risk/#olive-sided-flycatcher. Accessed December 15, 2023

[12] https://novascotia.ca/natr/wildlife/species-at-risk/docs/EAPW_Management_Plan_Final_7March2022.pdf . Accessed December 15, 2023

[13] https://novascotia.ca/natr/wildlife/species-at-risk/#rusty-blackbird. Accessed December 15, 2023

Scientific name	Common name	SARA status	Habitat, other comments
			of the population nests on cliff faces.[14]
Chordeiles minor	Common Nighthawk	Special Concern	Nests on the ground in open land or forest clearings, and on gravel roofs in cities.[15]
Coccothraustes vespertinus	Evening Grosbeak	Special Concern	Lives in mature mixed and softwood boreal forest; forages in treetops and branches for insects.[16]
Cardellina canadensis	Canada Warbler	Threatened	Use wetlands, swamps, bogs and fens in forest habitats for nesting.[17]
Chrysemys picta picta	Eastern Painted Turtle	Special Concern	Live in shallow waters of ponds, marshes, lakes or creeks with slow moving water with a soft bottom.[18]
Chelydra serpentina	Snapping Turtle	Special Concern	Live in shallow freshwater habitats with slow-moving water and a soft mud or sand bottom.[19]
Danaus plexippus	Monarch	Special Concern	Adult Monarchs require nectaring habitat. Native swamp milkweed (wetland) and the introduced common milkweed (well-drained soils) are essential adult breeding

[14] https://novascotia.ca/natr/wildlife/species-at-risk/docs/RECOVERY_PLAN_Adopted_BARN_SWALLOW.pdf . Accessed December 15, 2023

[15] https://novascotia.ca/natr/wildlife/species-at-risk/docs/RECOVERY_PLAN_Adopted_Common_nighthawk_10Feb21.pdf . Accessed December 15, 2023

[16] https://novascotia.ca/natr/wildlife/species-at-risk/#evening-grosbeak . Accessed December 15, 2023

[17] https://novascotia.ca/natr/wildlife/species-at-risk/#canada-warbler . Accessed December 15, 2023

[18] https://www.natureconservancy.ca/en/what-we-do/resource-centre/featured-species/reptiles-and-amphibians/painted-turtle.html#:~:text=What%20is%20the%20painted%20turtle's%20range%20and%20habitat%3F&text=Painted%20turtles%20can%20be%20found,water%20with%20a%20soft%20bottom. Accessed December 15, 2023

[19] https://www.natureconservancy.ca/en/what-we-do/resource-centre/featured-species/reptiles-and-amphibians/snapping-turtle.html Accessed December 15, 2023

Scientific name	Common name	SARA status	Habitat, other comments
			habitat and larval food sources in Nova Scotia. [20]
Bombus terricola	Yellow-banded Bumble Bee	Special Concern	Occupies a wide variety of habitats. It remains an important pollinator of cultivated crops and native plants. Nest sites are usually underground in soil cavities or rotting logs. [21]

Location sensitive species

The only location sensitive species expected in the region are bats (Little Brown Myotis, Long-eared Myotis, and Tri-colored Bat).

Day and night roosts for bats commonly include tree hollows, spaces between tree bark, rock crevices, caves, barns and buildings, and tree foliage. Over-winter hibernation typically occurs in caves and old mining shafts. [22]

4.3 Impacts to other users, including wildlife

Hamilton's will use areas of operation and infrastructure that are currently in use for elver holding from April to June. Activities will extend throughout the year with this proposed aquaculture site, but there is no anticipated significant increase in traffic or other potential disturbances to other human users of the local land area.

Equipment (pumps and air blowers) running on site will be indoors or muffled to reduce any potential noise impact and deliveries will be scheduled during business hours.

As this is a land-based operation, there is no expected impact to any fishers, pleasure craft or boat traffic, or other activities that may occur on the nearby Annapolis River.

A potential impact to other users is pollution from waste or hazardous materials, if left unmanaged. The plan for operational waste will be described in the Farm Management Plan which will be approved for implementation by NSDFA. To summarize, waste will be sorted, collected and contained in sealed containers, to be collected by Valley Waste[23] biweekly. Valley Waste is a municipal waste facility located in Lawrencetown, NS. If necessary, surplus operational waste can be managed by using waste dumpsters

[20] https://novascotia.ca/natr/wildlife/species-at-risk/docs/MonarchRecoveryPlan.pdf Accessed December 15, 2023
[21] https://novascotia.ca/natr/wildlife/species-at-risk/#yellow-banded-bumble-bee Accessed December 15, 2023
[22] https://www.natureconservancy.ca/en/what-we-do/resource-centre/featured-species/mammals Accessed December 30, 2023.
[23] https://www.vwrm.com/ Accessed July 29, 2024.

located at [redacted] other businesses in the local area. Hazardous waste will be disposed of at an approved facility. Fuel will be properly stored in the fuel storage shed in a double walled, approved fuel storage vessel. The facility grounds will be inspected daily to ensure tidiness and maintenance of order.

Most activities will occur indoors and be innocuous to the surrounding flora and fauna. As stated previously, Hamilton's will use areas of operation and infrastructure that are currently in use for elver holding from April to June. Activities will extend throughout the year with this proposed aquaculture site, but there is no anticipated significant increase in traffic or other potential disturbances to wildlife. Since the majority of sensitive species known to be in the area include birds and bats, special attention will be paid to outdoor lighting. Hamilton's will restrict use of outdoor lighting for only safety purposes, and any outdoor lighting used will be shielded to shine down and limit escape of lighting to the sky. Hamilton's will also keep doors and windows closed to prevent entry of wildlife.

Due to the innocuous nature of the request, and current operation of the eel holding facility without issue, there has been no public consultation.

The request seeks another economic opportunity for the rural area and may complement other users by adding two full-time employees and increasing spending in the local community for goods and services.

4.4 Impacts by other users, including wildlife

Some small mammals, such as rodents, weasels and mink can sometimes cause issues for land-based operations. In order to reduce these chances, building doors and windows will be kept closed to prevent the entry of wildlife. Feed and mortalities will be stored in plastic containers to prevent attraction of small mammals. Small rodents will be managed by the use of pest traps which will be checked daily. If necessary, larger mammals will be trapped by a licensed trapper, according to the NS Wildlife Act.

Because it will be a relatively closed system in a closed building, there are no anticipated effects of other users.

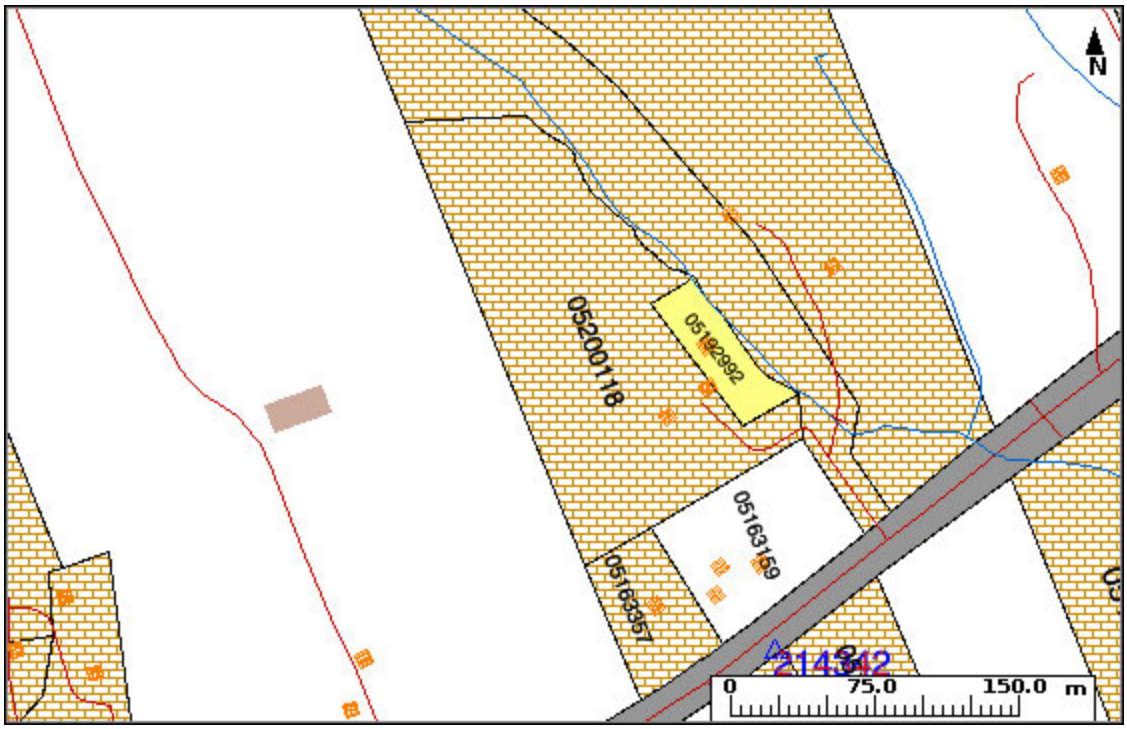
4.5 Navigation Protection Act (NPA) approval

The proposed activities will not affect the public right of navigation. There is no approval required.

PROPERTY Online NOVA SCOTIA

Property Online Map

Date: **Nov 29, 2023 9:14:19 AM**

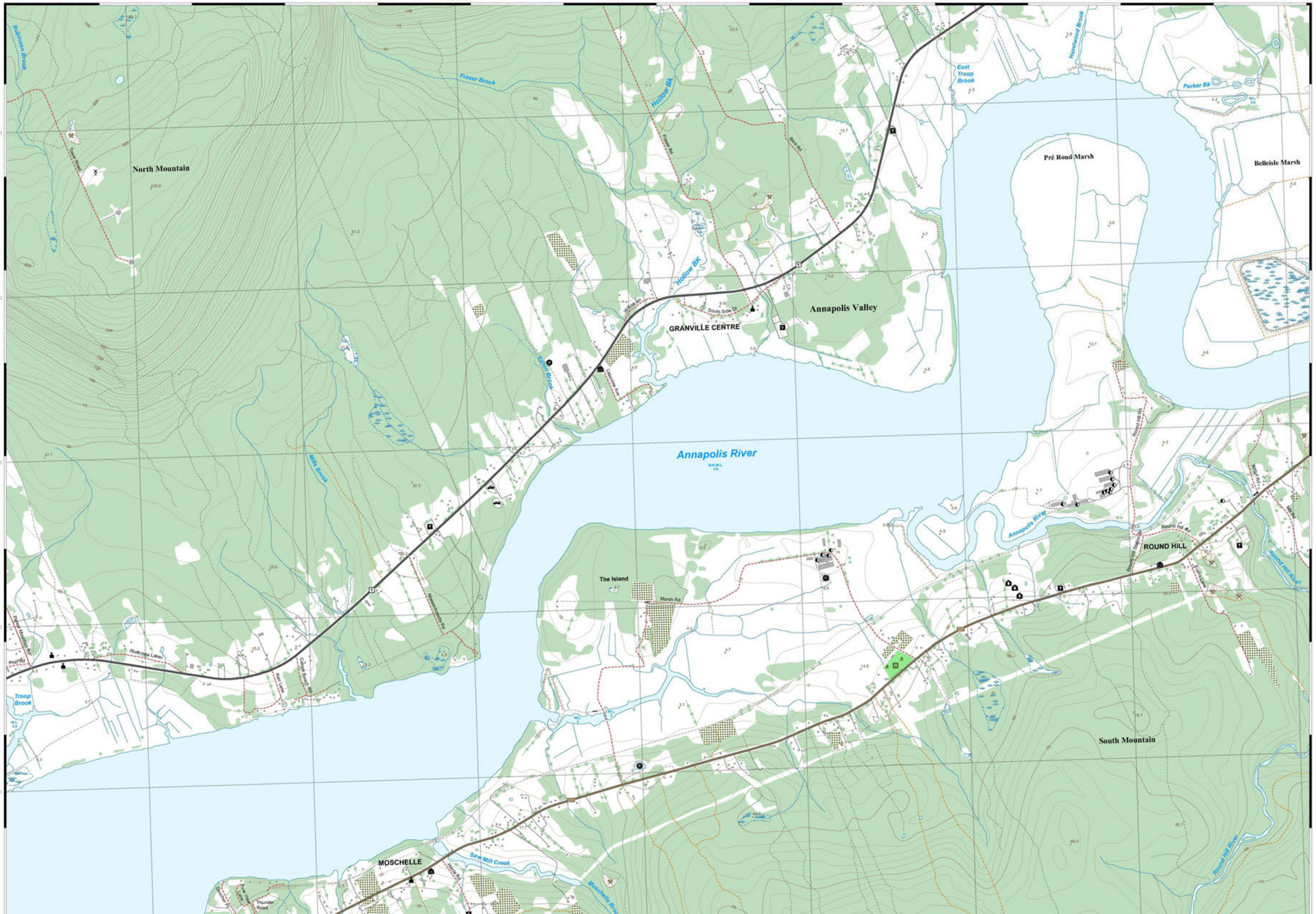


PID:	05192992	Owner:	HAMILTON'S EEL FISHERY LTD	AAN:	03135934
County:	ANNAPOLIS COUNTY			Value:	$123,600 (2023 RESOURCE TAXABLE)
LR Status:	NOT LAND REGISTRATION	Address:	5165 HIGHWAY 1 GRANVILLE CENTRE		

The Provincial mapping is a graphical representation of property boundaries which approximate the size, configuration and location of parcels. Care has been taken to ensure the best possible quality, however, this map is not a land survey and is not intended to be used for legal descriptions or to calculate exact dimensions or area. The Provincial mapping is not conclusive as to the location, boundaries or extent of a parcel [*Land Registration Act* subsection 21(2)]. THIS IS NOT AN OFFICIAL RECORD.

Property Online version 2.0

SHEET 10 447500 65400 FEUILLE



Granville Centre

SHEET	10 447500 65400	FEUILLE
SCALE	1:10,000	ÉCHELLE

ANNAPOLIS COUNTY
COMTÉ D'ANNAPOLIS

NOVA SCOTIA
NOUVELLE-ÉCOSSE

CONTOUR INTERVAL 5 METRES
EQUIDISTANCE DES COURBES DE NIVEAU 5 MÈTRES

Contours have been generated from Digital Elevation Models
Les courbes de niveaux ont été des modèles d'élevation digiteaux

Elevations in metres above mean sea level
Élévations en mètres au-dessus du niveau moyen de la mer

Compilation extends to the mean high water level in tidal areas and to the water level at the time of photography for other water features. Notations of mean high water levels are intended for information purposes rather than accuracy, and therefore should not be considered definitive. In heavily wooded areas contours have been estimated. For more information concerning accuracy and content of this map, please contact Nova Scotia Geomatics Centre, Amherst, NS.
La cartographie s'étend jusqu'au niveau d'eau moyen le plus élevé dans les régions de marée et pour les autres éléments hydrographiques jusqu'au niveau d'eau au moment où les photos ont été prises. Les notations relatives aux niveaux moyens des hautes eaux sont incluses pour information seulement et ne devraient pas être considérées comme définitives. Dans le cas des surfaces fortement boisées, les courbes ont été évaluées. Pour obtenir de plus amples renseignements sur l'exactitude et le contenu de cette carte, prière de communiquer avec le Centre Géomatique de la Nouvelle-Écosse, Amherst, N.-É.

Some bounday features have been modified for cartographic representation purposes
Certaines frontières ont été modifiées à des fins cartographiques

Topographic features were compiled from aerial photography acquired in fall 2015
Les éléments topographiques ont été compilés d'après la photographie aérienne capturée en automne 2015

Produced by DEPARTMENT OF INTERNAL SERVICES
NOVA SCOTIA GEOMATICS CENTRE, AMHERST, N.S.

Préparé par la MINISTÈRE DES SERVICES INTERNES
LE CENTRE GÉOMATIQUE DE LA NOUVELLE-ÉCOSSE, AMHERST, N.-É.

Scale 1:10,000

INDEX TO NTS: / SNRC DE RÉFÉRENCE: 21A14

Universal Transverse Mercator (UTM) Zone 20

SHEET 10 447500 65400 FEUILLE

Groundwater

Well Log Record

Well Log Record: # 070030

Well Number: 070030
Type: DRILLED
Date Well Completed (mm-dd-yyyy): 3-13-2007

Go Back

Well Owner/Contractor and Location

Well Drilled for: [redacted]
or Contractor/Builder/Consultant: n/a

Civic Address of Well: 5165 HIGHWAY #1
Lot #: 1-B
Subdivision: n/a
County: ANNAPOLIS
Postal Code: n/a
Nearest Community in Atlas/Map Book: GRANVILLE CENTRE

Certified Well Contractor

Driller Name: [redacted]
Certificate No: 401
Company: W & R WELL DRILLING CO. LTD.

Well Status / Water Use

Final Status of Well: Water Supply Well
Water Use: Commercial
Method of Drilling: Rotary

Well Location

Nova Scotia Atlas or Map Book Reference

Atlas or Map Book: MAP
Map Page No.: 8
Reference Letter: A
Reference Number: 3
Roamer Letter: M
Roamer Number: 15

NTS Map Reference

Map Sheet: n/a
Reference Map: n/a
Tract No.: n/a
Claim: n/a

GPS (WGS84 UTM)

Northing (m): 4959928
Easting (m): 303922
Property (PID): 05192992
Well Location Sketch Available: Yes

Stratigraphy Log

Geology	Colour	Description	Lithology	Water Found
From (depth in ft): 0 to: 40				
Primary Geology	Brown	n/a	CLAY & BOULDERS	n/a
Secondary Geology	n/a	n/a	n/a	
From (depth in ft): 40 to: 230				
Primary Geology	Red	n/a	SANDSTONE	Yes
Secondary Geology	n/a	n/a	n/a	

Well Construction Information

Total Depth Below Surface (ft): 230
Depth to Bedrock (ft): 40
Water Bearing Fractures Encountered at (ft): 55, 130, 210
Outer Well Casing: From (ft): 0 To: 80
Diameter (in): 6
Length of Casing Above Ground (ft): 2 and (in): n/a
Driveshoe Make: unknown

Water Yield

Estimated Yield (igpm): n/a
Method: AIR LIFT
Rate (igpm): 70
Duration (hrs): n/a
Depth to Water at end of Test (ft): n/a
Total Drawdown (ft): n/a
Water Level Recovered to (ft): n/a
Recovery Time (hrs): n/a

Depth to Static Level (ft): 40
Overflow: n/a

Comments

DIST TO PROP 200? 500? FT, TO WATERCOURSE 1000+ FT. PID FROM CIVIC (DIFF OWNER). GPS EST FROM POL.

Go Back

Envirosphere Consultants Limited

Unit 5—120 Morison Drive, Box 2906, Windsor, Nova Scotia, B0N 2T0
phone: (902) 798-4022, fax: (902) 798-2614, e-mail: water.enviroco@bellaliant.com, website: www.envirosphere.ca

Complete Water Analysis Package – 5163 Highway 1, Granville Ferry, NS, sample ID 21507.					
Determination	**Result**	**Units**	**Allowable Limits***	**Regulation Status**	**Interpretation**
Total Sodium	13.2	mg/L	200	AO	Acceptable
Total Potassium	0.8	mg/L		NR	Acceptable
Total Calcium	40.1	mg/L		NR	Acceptable
Total Magnesium	5.1	mg/L		NR	Acceptable
Sulphate	6	mg/L	500	AO	Acceptable
Chloride	50	mg/L	250	AO	Acceptable
Fluoride	<0.12	mg/L	1.5	MAC	Acceptable
Nitrate as N	1.03	mg/L	10	MAC	Acceptable
Nitrite as N	<0.05	mg/L	1	MAC	Acceptable
Nitrate + Nitrite as N	1.03	mg/L		NR	Acceptable
Ammonia as N	<0.03	mg/L		NR	Acceptable
Total Aluminum	22	µg/L	100; 2900	OG; MAC	Acceptable
Total Antimony	<2	µg/L	6	MAC	Acceptable
Total Arsenic	<2	µg/L	10	MAC	Acceptable
Total Barium	22	µg/L	2000	MAC	Acceptable
Total Beryllium	<2	µg/L		NR	Acceptable
Total Bismuth	<2	µg/L		NR	Acceptable
Total Boron	<5	µg/L	5000	MAC	Acceptable
Total Cadmium	<0.09	µg/L	7	MAC	Acceptable
Total Chromium	<2	µg/L	50	MAC	Acceptable
Total Cobalt	<1	µg/L		NR	Acceptable
Total Copper	<2	µg/L	1000; 2000	AO; MAC	Acceptable
Total Iron	<50	µg/L	300	AO	Acceptable
Total Lead	0.9	µg/L	5	MAC†	Acceptable
Total Manganese	<2	µg/L	20; 120	AO; MAC	Acceptable
Total Molybdenum	<2	µg/L		NR	Acceptable
Total Nickel	<2	µg/L		NR	Acceptable
Total Phosphorous	3.64	mg/L		NR	Acceptable
Total Selenium	<1	µg/L	50	MAC	Acceptable
Total Silver	<0.1	µg/L		NR	Acceptable
Total Strontium	179	µg/L	7000	MAC	Acceptable
Total Thallium	<0.1	µg/L		NR	Acceptable
Total Tin	<2	µg/L		NR	Acceptable
Total Titanium	<3	µg/L		NR	Acceptable
Total Uranium	1.4	µg/L	20	MAC	Acceptable
Total Vanadium	<2	µg/L		NR	Acceptable
Total Zinc	<5	µg/L	5000	AO	Acceptable
Electrical Conductivity	356	µS/cm		NR	Acceptable

Report generated on November 29, 2023 at 03:43 PM
File Location W:\Water Testing\RESULTS\2023 Results\21507.pdf

Envirosphere Consultants Limited

Unit 5—120 Morison Drive, Box 2906, Windsor, Nova Scotia, B0N 2T0
phone: (902) 798-4022, fax: (902) 798-2614, e-mail: water.enviroco@bellaliant.com, website: www.envirosphere.ca

Complete Water Analysis Package – 5163 Highway 1, Granville Ferry, NS, sample ID 21507.

Determination	Result	Units	Allowable Limits*	Regulation Status	Interpretation
Reactive Silica as SiO2	19.2	mg/L		NR	Acceptable
Ortho-Phosphate as P	0.03	mg/L		NR	Acceptable
Total Organic Carbon	<0.5	mg/L		NR	Acceptable
Turbidity	<0.5	NTU	≤1.0; ≤0.3; ≤0.1	NR×	Acceptable
True Color	<5.00	TCU	15	AO	Acceptable
Calculated TDS	173	mg/L	500	AO	Acceptable
Alkalinity	88	mg/L		NR	Acceptable
Bicarb. Alkalinity (as CaCO3)	88	mg/L		NR	Acceptable
Carb. Alkalinity (as CaCO3)	<10	mg/L		NR	Acceptable
Hydroxide	<5	mg/L		NR	Acceptable
pH	**6.92**	**units**	**7.0 - 10.5**	**AO‡**	**Not Acceptable**
Hardness	121	mg/L	0-30 very soft 31- 60 soft 61-120 moderately soft 121-180 hard >180 very hard	NR	Hard

* Based on: Guidelines for Canadian Drinking Water Quality (Health Canada, 2021). The guidelines are for general reference only and may or may not be relevant for the intended use. Please refer to the applicable standard for regulatory interpretation.

† This guideline is based on a sample of water taken at the tap and using the appropriate protocol for the type of building being sampled.

× Health Canada guidance values for turbidity are:
- ≤ 1.0 NTU – slow sand and diatomaceous earth filtration (i.e. dug/drilled wells);
- ≤ 0.3 NTU – conventional and direct filtration; and
- ≤ 0.1 NTU – membrane filtration.

MAC or AO Health Canada guidelines have not been established for turbidity.

‡ pH range for finished drinking water.

Description of Terms:
- NR = Not currently regulated;
- MAC = Maximum Acceptable Concentration;
- AO = Aesthetic Objective (based on consumer taste and visual preferences);
- OG = Operational Guideline.
- 1mg/L = 1000µg/L

Note: The analyses for chemicals/minerals/metals were subcontracted to an accredited laboratory. *More information is available upon request.* This report includes information supplied to us by the customer or third parties, including property location and mailing address, date and time of sampling, sampling location, water source and treatment.

Report generated on November 29, 2023 at 03:43 PM
File Location W:\Water Testing\RESULTS\2023 Results\21507.pdf

DATA REPORT 7903: Granville, NS

Prepared 11 December 2023
by C. Robicheau, Conservation Data Analyst

CONTENTS OF REPORT

Map 1. A 100 km buffer around the study area

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	Contents
GranvilleNS_7903ob.xls	Rare or legally-protected Flora and Fauna in your study area
GranvilleNS_7903ob100km.xls	A list of Rare and legally protected Flora and Fauna within 100 km of your study area
GranvilleNS_7903msa.xls	Managed and Biologically Significant Areas in your study area
GranvilleNS_7903ff_py.xls	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 in order 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
James Churchill
Conservation Data Analyst / Field Biologist
(902) 679-6146
james.churchill@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

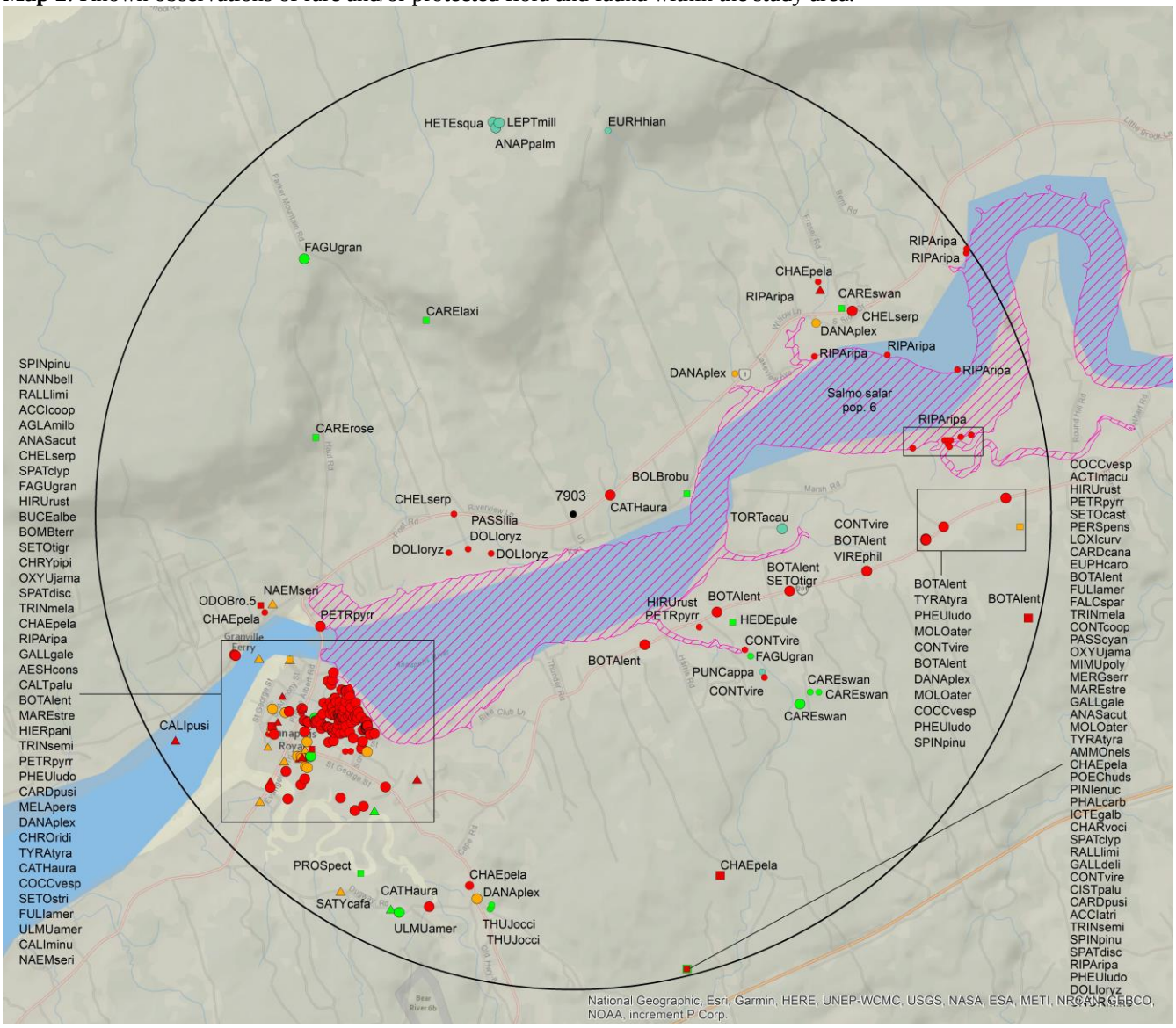
2.1 FLORA

The study area contains 23 records of 12 vascular and 6 records of 6 nonvascular flora (Map 2 and attached: *ob.xls), excluding 'location-sensitive' species.

2.2 FAUNA

The study area contains 498 records of 57 vertebrate and 28 records of 7 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

- 4.7 within 50s of kilometers
- 4.0 within 10s of kilometers
- 3.7 within 5s of kilometers
- 3.0 within kilometers
- 2.7 within 500s of meters
- 2.0 within 100s of meters
- 1.7 within 10s of meters

HIGHER TAXON

- vertebrate fauna
- invertebrate fauna
- vascular flora
- nonvascular flora

3.0 SPECIAL AREAS

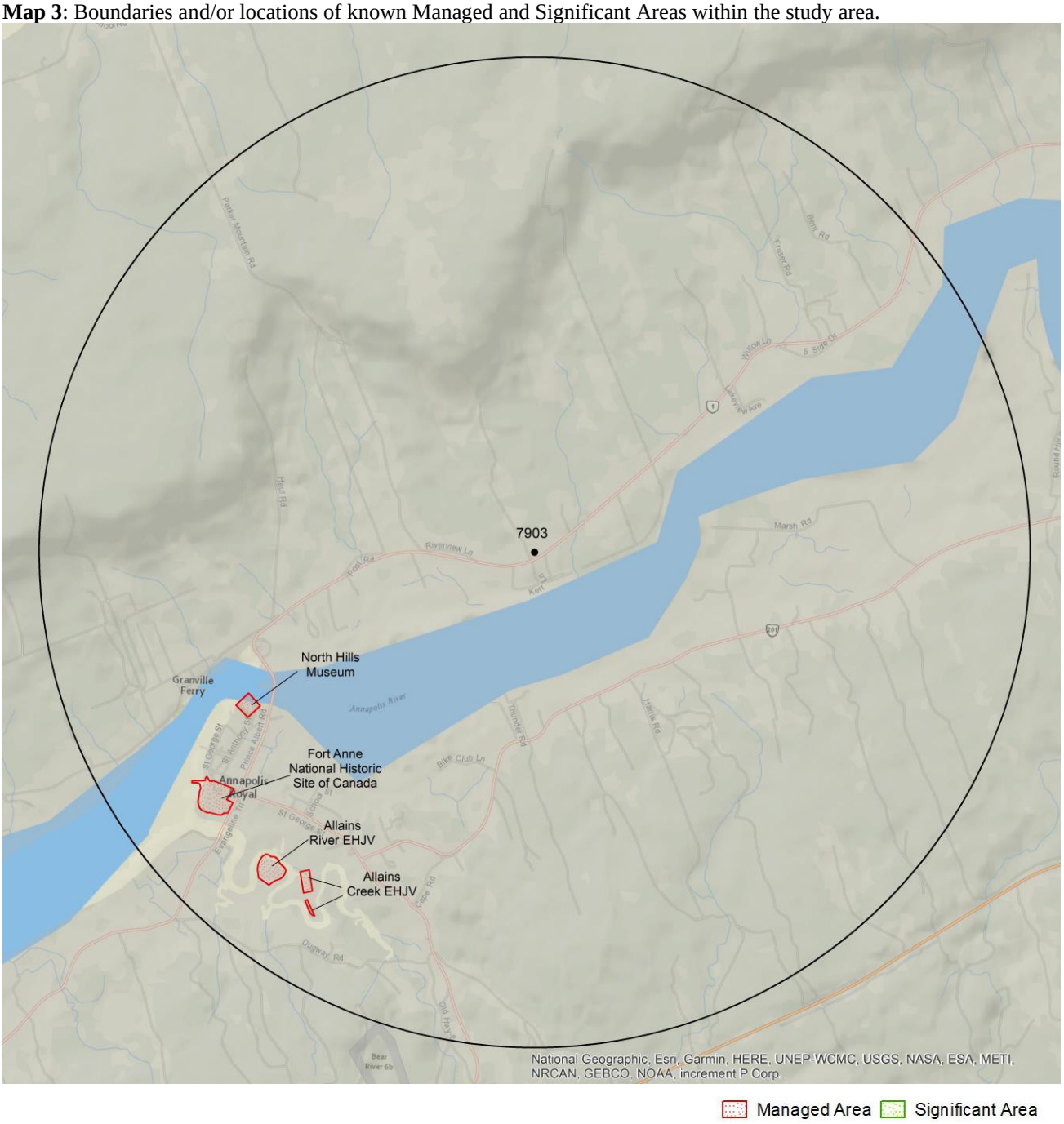
3.1 MANAGED AREAS

The GIS scan identified 4 managed areas in the vicinity of the study area (Map 3 and attached file: *ma*.xls).

3.2 SIGNIFICANT AREAS

The GIS scan identified no biologically significant sites in the vicinity of the study area (Map 3 and attached file: *sa*.xls).

Map 3: Boundaries and/or locations of known Managed and Significant Areas within the study 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 (± 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	*Heterodermia squamulosa*	Scaly Fringe Lichen	Threatened			S3	1	4.2 ± 0.0
N	*Tortula acaulon*	Cuspidate Earth Moss				S1S2	1	2.2 ± 0.0
N	*Oxyrrhynchium hians*	Light Beaked Moss				S2S3	1	4.1 ± 0.0
N	*Leptogium milligranum*	Stretched Jellyskin Lichen				S3	1	4.2 ± 0.0
N	*Punctelia appalachensis*	Appalachian Speckleback Lichen				S3	1	2.6 ± 0.0
N	*Anaptychia palmulata*	Shaggy Fringed Lichen				S3S4	1	4.1 ± 0.0
P	*Carex laxiflora*	Loose-Flowered Sedge				S1	1	2.6 ± 5.0
P	*Bolboschoenus robustus*	Sturdy Bulrush				S1?	1	1.2 ± 5.0
P	*Thuja occidentalis*	Eastern White Cedar			Vulnerable	S2S3	4	4.2 ± 0.0
P	*Hedeoma pulegioides*	American False Pennyroyal				S2S3	1	2.0 ± 5.0
P	*Caltha palustris*	Yellow Marsh Marigold				S2S3	1	3.4 ± 0.0
P	*Carex rosea*	Rosy Sedge				S3	1	2.8 ± 4.0
P	*Carex swanii*	Swan's Sedge				S3	5	3.1 ± 0.0
P	*Hieracium paniculatum*	Panicled Hawkweed				S3S4	1	3.7 ± 1.0
P	*Fagus grandifolia*	American Beech				S3S4	3	2.4 ± 0.0
P	*Proserpinaca pectinata*	Comb-leaved Mermaidweed				S3S4	1	4.4 ± 1.0
P	*Persicaria pensylvanica*	Pennsylvania Smartweed				S3S4	1	4.9 ± 7.0
P	*Ulmus americana*	White Elm				S3S4	3	3.7 ± 0.0

4.2 FAUNA

	Scientific *Name*	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)
A	*Riparia riparia*	Bank Swallow	Threatened	Threatened	Endangered	S2B	79	3.0 ± 0.0
A	*Chaetura pelagica*	Chimney Swift	Threatened	Threatened	Endangered	S2S3B,S1M	18	3.2 ± 0.0
A	*Euphagus carolinus*	Rusty Blackbird	Special Concern	Special Concern	Endangered	S2B	1	4.9 ± 7.0
A	*Chelydra serpentina*	Snapping Turtle	Special Concern	Special Concern	Vulnerable	S3	8	1.2 ± 0.0
A	*Hirundo rustica*	Barn Swallow	Special Concern	Threatened	Endangered	S3B	14	1.8 ± 0.0
A	*Cardellina canadensis*	Canada Warbler	Special Concern	Threatened	Endangered	S3B	1	4.9 ± 7.0
A	*Chordeiles minor*	Common Nighthawk	Special Concern	Special Concern	Threatened	S3B	3	4.9 ± 7.0
A	*Contopus cooperi*	Olive-sided Flycatcher	Special Concern	Special Concern	Threatened	S3B	1	4.9 ± 7.0
A	*Dolichonyx oryzivorus*	Bobolink	Special Concern	Threatened	Vulnerable	S3B	17	1.0 ± 0.0
A	*Coccothraustes vespertinus*	Evening Grosbeak	Special Concern	Special Concern	Vulnerable	S3B,S3N,S3M	4	3.5 ± 0.0
A	*Contopus virens*	Eastern Wood-Pewee	Special Concern	Special Concern	Vulnerable	S3S4B	18	2.3 ± 0.0
A	*Chrysemys picta picta*	Eastern Painted Turtle	Special Concern	Special Concern		S4	60	3.0 ± 0.0
A	*Accipiter cooperii*	Cooper's Hawk	Not At Risk			S1?B,SUN,SUM	1	3.1 ± 0.0
A	*Fulica americana*	American Coot	Not At Risk			S1B	5	3.1 ± 0.0
A	*Accipiter atricapillus*	American Goshawk	Not At Risk			S3S4	2	4.9 ± 7.0
A	*Ammospiza nelsoni*	Nelson's Sparrow	Not At Risk			S3S4B	2	4.9 ± 7.0
A	*Odobenus rosmarus pop. 5*	Atlantic Walrus - Nova Scotia - Newfoundland - Gulf of St Lawrence population	X			SX	1	3.4 ± 5.0
A	*Passerina cyanea*	Indigo Bunting				S1?B,SUM	1	4.9 ± 7.0
A	*Oxyura jamaicensis*	Ruddy Duck				S1B	8	3.2 ± 0.0
A	*Gallinula galeata*	Common Gallinule				S1B	2	3.1 ± 0.0
A	*Cistothorus palustris*	Marsh Wren				S1B	1	4.9 ± 7.0
A	*Mimus polyglottos*	Northern Mockingbird				S1B	1	4.9 ± 7.0
A	*Calidris minutilla*	Least Sandpiper				S1B,S4M	8	3.0 ± 0.0

	Scientific *Name*	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)
A	*Anas acuta*	Northern Pintail				S1B,SUM	10	3.2 ± 0.0
A	*Vireo philadelphicus*	Philadelphia Vireo				S2?B,SUM	1	3.1 ± 0.0
A	*Molothrus ater*	Brown-headed Cowbird				S2B	6	3.7 ± 0.0
A	*Spatula clypeata*	Northern Shoveler				S2B,SUM	29	3.1 ± 0.0
A	*Mareca strepera*	Gadwall				S2B,SUM	39	3.1 ± 0.0
A	*Melanitta perspicillata*	Surf Scoter				S2N,S4M	1	3.2 ± 0.0
A	*Rallus limicola*	Virginia Rail				S2S3B	5	3.1 ± 0.0
A	*Petrochelidon pyrrhonota*	Cliff Swallow				S2S3B	11	1.8 ± 0.0
A	*Phalacrocorax carbo*	Great Cormorant				S2S3B,S2S3N	1	4.9 ± 7.0
A	*Cathartes aura*	Turkey Vulture				S2S3B,S4S5M	4	0.4 ± 0.0
A	*Icterus galbula*	Baltimore Oriole				S2S3B,SUM	4	4.9 ± 7.0
A	*Poecile hudsonicus*	Boreal Chickadee				S3	1	4.9 ± 7.0
A	*Spinus pinus*	Pine Siskin				S3	7	3.4 ± 0.0
A	*Spatula discors*	Blue-winged Teal				S3B	7	3.1 ± 0.0
A	*Charadrius vociferus*	Killdeer				S3B	6	4.9 ± 7.0
A	*Tringa semipalmata*	Willet				S3B	11	4.0 ± 0.0
A	*Tyrannus tyrannus*	Eastern Kingbird				S3B	7	3.5 ± 0.0
A	*Pheucticus ludovicianus*	Rose-breasted Grosbeak				S3B	9	3.2 ± 0.0
A	*Tringa melanoleuca*	Greater Yellowlegs				S3B,S4M	3	3.0 ± 0.0
A	*Falco sparverius*	American Kestrel				S3B,S4S5M	1	4.9 ± 7.0
A	*Mergus serrator*	Red-breasted Merganser				S3B,S4S5N,S5M	1	4.9 ± 7.0
A	*Gallinago delicata*	Wilson's Snipe				S3B,S5M	3	4.9 ± 7.0
A	*Setophaga striata*	Blackpoll Warbler				S3B,S5M	1	3.3 ± 0.0
A	*Cardellina pusilla*	Wilson's Warbler				S3B,S5M	3	3.2 ± 0.0
A	*Pinicola enucleator*	Pine Grosbeak				S3B,S5N,S5M	1	4.9 ± 7.0
A	*Setophaga tigrina*	Cape May Warbler				S3B,SUM	2	2.4 ± 0.0
A	*Calidris pusilla*	Semipalmated Sandpiper				S3M	1	4.8 ± 3.0
A	*Chroicocephalus ridibundus*	Black-headed Gull				S3N	1	3.5 ± 0.0
A	*Loxia curvirostra*	Red Crossbill				S3S4	2	4.9 ± 7.0
A	*Botaurus lentiginosus*	American Bittern				S3S4B,S4S5M	28	1.6 ± 0.0
A	*Setophaga castanea*	Bay-breasted Warbler				S3S4B,S4S5M	1	4.9 ± 7.0
A	*Actitis macularius*	Spotted Sandpiper				S3S4B,S5M	5	4.9 ± 7.0
A	*Passerella iliaca*	Fox Sparrow				S3S4B,S5M	1	1.2 ± 0.0
A	*Bucephala albeola*	Bufflehead				S3S4N	29	3.0 ± 0.0
I	*Danaus plexippus*	Monarch	Endangered	Special Concern	Endangered	S2?B,S3M	15	2.2 ± 0.0
I	*Bombus terricola*	Yellow-banded Bumble Bee	Special Concern	Special Concern	Vulnerable	S3	3	3.3 ± 5.0
I	*Aglais milberti*	Milbert's Tortoiseshell				S2S3	1	3.3 ± 2.0
I	*Naemia seriata*	Seaside Lady Beetle				S3	4	3.3 ± 1.0
I	*Satyrium calanus falacer*	Falacer Hairstreak				S3	1	4.7 ± 2.0
I	*Aeshna constricta*	Lance-Tipped Darner				S3S4	2	3.2 ± 0.0
I	*Nannothemis bella*	Elfin Skimmer				S3S4	2	3.6 ± 1.0

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?
Fraxinus nigra	Black Ash		Threatened	No
Emydoidea blandingii	Blanding's Turtle - Nova Scotia pop.	Endangered	Endangered	No
Glyptemys insculpta	Wood Turtle	Threatened	Threatened	No
Falco peregrinus pop. 1	Peregrine Falcon - anatum/tundrius pop.		Vulnerable	No
Bat hibernaculum or bat species occurrence		**[Endangered][1]**	**[Endangered][1]**	**YES**

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.

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
174	iNaturalist.ca. 2023. iNaturalist Data Export December 2022. iNaturalist.org; iNaturalist.ca, Web site: 128634 recs.
89	Lepage, D. 2014. Maritime Breeding Bird Atlas Database. Bird Studies Canada, Sackville NB, 407,838 recs.
69	Erskine, A.J. 1992. Maritime Breeding Bird Atlas Database. NS Museum & Nimbus Publ., Halifax, 82,125 recs.
60	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.
49	iNaturalist. 2020. iNaturalist Data Export 2020. iNaturalist.org and iNaturalist.ca, Web site: 128728 recs.
38	Pardieck, K.L., Ziolkowski Jr., D.J., Lutmerding, M., Aponte, V.I., and Hudson, M-A.R. 2020. North American Breeding Bird Survey Dataset 1966 - 2019: U.S. Geological Survey data release, https://doi.org/10.5066/P9J6QUF6
13	Churchill, J.L. 2018. Atlantic Canada Conservation Data Centre Fieldwork 2018. Atlantic Canada Conservation Data Centre, 907 recs.
10	McLean, K. 2020. Species occurrence records from Clean Annapolis River Project fieldwork in 2020. Clean Annapolis River Project, 206 records.
7	Belliveau, A.G. 2018. E.C. Smith Herbarium and Atlantic Canada Conservation Data Centre Fieldwork 2018. E.C. Smith Herbarium, 6226 recs.
6	McLean, K. 2019. Species At Risk observations. Clean Annapolis River Project.
4	Majka, C.G. & McCorquodale, D.B. 2006. The Coccinellidae (Coleoptera) of the Maritime Provinces of Canada: new records, biogeographic notes, and conservation concerns. Zootaxa. Zootaxa, 1154: 49–68. 7 recs.
3	Brunelle, P.-M. (compiler). 2009. ADIP/MDDS Odonata Database: data to 2006 inclusive. Atlantic Dragonfly Inventory Program (ADIP), 24200 recs.
3	Klymko, J. 2018. Maritimes Butterfly Atlas database. Atlantic Canada Conservation Data Centre.
3	McNeil, Jeffie. 2022. 2021 Turtle Records. Mersey Tobeatic Research Institute.
3	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.
2	Amiro, P.G. 1998. Atlantic Salmon Inner Bay of Fundy SFA 22 & part of 23. DFO Sci. SSR D3-12.
2	Basquill, S.P. 2009. 2009 field observations. Nova Scotia Dept of Natural Resources.
2	McNeil, Jeffie. 2023. 2022 Turtle Records. Mersey Tobeatic Research Institute.
2	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	Roland, A.E. & Smith, E.C. 1969. The Flora of Nova Scotia, 1st Ed. Nova Scotia Museum, Halifax, 743pp.
2	Scott, F.W. 2002. Nova Scotia Herpetofauna Atlas Database. Acadia University, Wolfville NS, 8856 recs.
1	Amirault, D.L. 1995. Atlantic Canada Conservation Area Database (ARCAD). Canadian Wildlife Service, Sackville.
1	Ferguson, D.C. 1954. The Lepidoptera of Nova Scotia. Part I, macrolepidoptera. Proceedings of the Nova Scotian Institute of Science, 23(3), 161-375.
1	Hagerman, Christianne. 2022. Wisqoq and Eastern White Cedar field work. E.C. Smith Herbarium, Acadia University.
1	Hill, N.M. 1994. Status report on the Long's bulrush Scirpus longii in Canada. Committee on the Status of Endangered Wildlife in Canada, 7 recs.
1	Hubley, Nicole. 2022. Monarch (Danaus plexippus) records submitted to MTRI from the 2021 field season. Mersey Tobeatic Research Institute.
1	Layberry, R.A. & Hall, P.W., LaFontaine, J.D. 1998. The Butterflies of Canada. University of Toronto Press. 280 pp+plates.
1	McNeil, J.A. 2019. Eastern Painted Turtle trapping records, 2019. Mersey Tobeatic Research Institute.
1	McNeil, J.A. 2019. Snapping Turtle records, 2019. Mersey Tobeatic Research Institute.
1	Mersey Tobetic Research Institute. 2021. 2020 Monarch records from the MTRI monitoring program. Mersey Tobetic Research Institute, 72 records.
1	NatureServe Canada. 2019. iNaturalist Maritimes Butterfly Records. iNaturalist.org and iNaturalist.ca.
1	Neily, T.H. 2019. Tom Neily NS Bryophyte records (2009-2013). T.H. Neily, Atlantic Canada Conservation Data Centre, 1029 specimen records.
1	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.
1	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.

# recs	CITATION
1	Richardson, Leif. 2018. Maritimes Bombus records from various sources. Richardson, Leif.
1	Sollows, M.C,. 2008. NBM Science Collections databases: mammals. New Brunswick Museum, Saint John NB, download Jan. 2008, 4983 recs.
1	Staicer, C. 2021. Additional compiled Nova Scotia Species at Risk bird records, 2005-2020. Dalhousie University.
1	Treasury Board of Canada Secretariat. 2020. National Historic Sites. Directory of Federal Real Property.https://www.tbs-sct.gc.ca/dfrp-rbif/home-accueil-eng.aspx.
1	Zinck, M. & Roland, A.E. 1998. Roland's Flora of Nova Scotia. Nova Scotia Museum, 3rd ed., rev. M. Zinck; 2 Vol., 1297 pp.

5.0 RARE SPECIES WITHIN 100 KM

A 100 km buffer around the study area contains 40201 records of 153 vertebrate and 2226 records of 69 invertebrate fauna; 24045 records of 311 vascular and 5498 records of 232 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 (± 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	*Coregonus huntsmani*	Atlantic Whitefish	Endangered	Endangered	Endangered	S1	147	72.9 ± 1.0	NS
A	*Myotis lucifugus*	Little Brown Myotis	Endangered	Endangered	Endangered	S1	771	3.5 ± 0.0	NS
A	*Myotis septentrionalis*	Northern Myotis	Endangered	Endangered	Endangered	S1	108	6.1 ± 0.0	NS
A	*Perimyotis subflavus*	Tricolored Bat	Endangered	Endangered	Endangered	S1	209	6.1 ± 0.0	NS
A	*Salmo salar pop. 1*	Atlantic Salmon - Inner Bay of Fundy population	Endangered	Endangered		S1	27	6.5 ± 0.0	NS
A	*Salmo salar pop. 6*	Atlantic Salmon - Nova Scotia Southern Upland population	Endangered			S1	17	52.2 ± 1.0	NS
A	*Eubalaena glacialis*	North Atlantic Right Whale	Endangered	Endangered		S1	3	21.6 ± 50.0	NS
A	*Charadrius melodus melodus*	Piping Plover melodus subspecies	Endangered	Endangered	Endangered	S1B	11	70.9 ± 0.0	NB
A	*Sterna dougallii*	Roseate Tern	Endangered	Endangered	Endangered	S1B	22	66.2 ± 0.0	NB
A	*Dermochelys coriacea pop. 2*	Leatherback Sea Turtle - Atlantic population	Endangered	Endangered		S1S2N	5	27.9 ± 0.0	NS
A	*Morone saxatilis pop. 2*	Striped Bass - Bay of Fundy population	Endangered			S2S3B,S2S3N	5	21.7 ± 1.0	NS
A	*Rangifer tarandus pop. 2*	Caribou - Atlantic-Gasp├⌐sie population	Endangered	Endangered	Extirpated	SX	2	78.7 ± 5.0	NB
A	*Catharus bicknelli*	Bicknell's Thrush	Threatened	Threatened	Endangered	S1B	7	19.4 ± 7.0	NS
A	*Asio flammeus*	Short-eared Owl	Threatened	Special Concern		S1B	4	89.4 ± 7.0	NS
A	*Glyptemys insculpta*	Wood Turtle	Threatened	Threatened	Threatened	S2	1099	11.4 ± 5.0	NS
A	*Riparia riparia*	Bank Swallow	Threatened	Threatened	Endangered	S2B	1257	3.0 ± 0.0	NS
A	*Thamnophis saurita pop. 3*	Eastern Ribbonsnake - Atlantic population	Threatened	Threatened	Threatened	S2S3	2496	35.8 ± 0.0	NS
A	*Chaetura pelagica*	Chimney Swift	Threatened	Threatened	Endangered	S2S3B,S1M	1678	3.2 ± 0.0	NS
A	*Limosa haemastica*	Hudsonian Godwit	Threatened			S2S3M	35	71.2 ± 0.0	NB
A	*Acipenser oxyrinchus*	Atlantic Sturgeon	Threatened			S2S3N	3	59.9 ± 0.0	NB
A	*Hydrobates leucorhous*	Leach's Storm-Petrel	Threatened			S3B	21	38.8 ± 0.0	NB
A	*Tringa flavipes*	Lesser Yellowlegs	Threatened			S3M	472	63.5 ± 0.0	NB
A	*Anguilla rostrata*	American Eel	Threatened			S3N	330	5.9 ± 0.0	NS
A	*Sturnella magna*	Eastern Meadowlark	Threatened	Threatened		SHB	12	12.3 ± 7.0	NS
A	*Ixobrychus exilis*	Least Bittern	Threatened	Threatened		SUB	11	69.3 ± 0.0	NB
A	*Hylocichla mustelina*	Wood Thrush	Threatened	Threatened		SUB	64	29.1 ± 0.0	NS
A	*Antrostomus vociferus*	Eastern Whip-Poor-Will	Special Concern	Threatened	Threatened	S1?B	17	53.4 ± 7.0	NS
A	*Passerculus sandwichensis princeps*	Ipswich Sparrow	Special Concern	Special Concern		S1B	1	90.6 ± 6.0	NS
A	*Euphagus carolinus*	Rusty Blackbird	Special Concern	Special Concern	Endangered	S2B	326	4.9 ± 7.0	NS
A	*Histrionicus histrionicus pop.*	Harlequin Duck - Eastern	Special Concern	Special Concern	Endangered	S2N	163	15.9 ± 0.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
	1	population							
A	*Balaenoptera physalus pop. 1*	Fin Whale - Atlantic population	Special Concern	Special Concern		S2S3	8	58.2 ± 0.0	NB
A	*Phalaropus lobatus*	Red-necked Phalarope	Special Concern	Special Concern		S2S3M	91	34.3 ± 0.0	NS
A	*Chelydra serpentina*	Snapping Turtle	Special Concern	Special Concern	Vulnerable	S3	792	1.2 ± 0.0	NS
A	*Hirundo rustica*	Barn Swallow	Special Concern	Threatened	Endangered	S3B	1377	1.8 ± 0.0	NS
A	*Cardellina canadensis*	Canada Warbler	Special Concern	Threatened	Endangered	S3B	1123	4.9 ± 7.0	NS
A	*Chordeiles minor*	Common Nighthawk	Special Concern	Special Concern	Threatened	S3B	802	4.9 ± 7.0	NS
A	*Contopus cooperi*	Olive-sided Flycatcher	Special Concern	Special Concern	Threatened	S3B	1297	4.9 ± 7.0	NS
A	*Dolichonyx oryzivorus*	Bobolink	Special Concern	Threatened	Vulnerable	S3B	1337	1.0 ± 0.0	NS
A	*Coccothraustes vespertinus*	Evening Grosbeak	Special Concern	Special Concern	Vulnerable	S3B,S3N,S3M	856	3.5 ± 0.0	NS
A	*Podiceps auritus*	Horned Grebe	Special Concern	Special Concern		S3N,SUM	95	48.4 ± 10.0	NS
A	*Contopus virens*	Eastern Wood-Pewee	Special Concern	Special Concern	Vulnerable	S3S4B	1476	2.3 ± 0.0	NS
A	*Phocoena phocoena pop. 1*	Harbour Porpoise - Northwest Atlantic Population	Special Concern			S4	110	18.9 ± 0.0	NS
A	*Chrysemys picta picta*	Eastern Painted Turtle	Special Concern	Special Concern		S4	1218	3.0 ± 0.0	NS
A	*Accipiter cooperii*	Cooper's Hawk	Not At Risk			S1?B,SUN,SUM	25	3.1 ± 0.0	NS
A	*Fulica americana*	American Coot	Not At Risk			S1B	13	3.1 ± 0.0	NS
A	*Chlidonias niger*	Black Tern	Not At Risk			S1B	6	92.1 ± 0.0	NB
A	*Falco peregrinus pop. 1*	Peregrine Falcon - anatum/tundrius	Not At Risk		Vulnerable	S1B,SUM	415	7.1 ± 1.0	NS
A	*Aegolius funereus*	Boreal Owl	Not At Risk			S2?B,SUM	2	58.3 ± 7.0	NB
A	*Lynx canadensis*	Canada Lynx	Not At Risk		Endangered	S2S3	3	71.9 ± 1.0	NB
A	*Globicephala melas*	Long-finned Pilot Whale	Not At Risk			S2S3	3	59.8 ± 0.0	NB
A	*Hemidactylium scutatum*	Four-toed Salamander	Not At Risk			S3	37	17.8 ± 0.0	NS
A	*Megaptera novaeangliae*	Humpback Whale	Not At Risk			S3	103	20.8 ± 3.0	NS
A	*Sterna hirundo*	Common Tern	Not At Risk			S3B	182	27.2 ± 7.0	NS
A	*Sialia sialis*	Eastern Bluebird	Not At Risk			S3B	163	18.7 ± 0.0	NS
A	*Buteo lagopus*	Rough-legged Hawk	Not At Risk			S3N	3	91.1 ± 0.0	NS
A	*Accipiter atricapillus*	American Goshawk	Not At Risk			S3S4	99	4.9 ± 7.0	NS
A	*Glaucomys volans*	Southern Flying Squirrel	Not At Risk			S3S4	15	48.8 ± 0.0	NS
A	*Lagenorhynchus acutus*	Atlantic White-sided Dolphin	Not At Risk			S3S4	3	68.6 ± 1.0	NB
A	*Ammospiza nelsoni*	Nelson's Sparrow	Not At Risk			S3S4B	297	4.9 ± 7.0	NS
A	*Calidris canutus rufa*	Red Knot rufa subspecies	E,SC	Endangered	Endangered	S2M	110	71.2 ± 0.0	NB
A	*Morone saxatilis*	Striped Bass	E,SC			S2S3B,S2S3N	19	24.6 ± 0.0	NS
A	*Gadus morhua*	Atlantic Cod	E,SC,DD			SNR	2	79.8 ± 0.0	NS
A	*Salmo salar*	Atlantic Salmon	E,T,SC			S1B,S1N	6	74.1 ± 0.0	NS
A	*Odobenus rosmarus pop. 5*	Atlantic Walrus - Nova Scotia - Newfoundland - Gulf of St Lawrence population	X			SX	1	3.4 ± 5.0	NS
A	*Alces alces americana*	Moose			Endangered	S1	151	30.0 ± 0.0	NS
A	*Alces alces*	Moose				S1	14	45.2 ± 0.0	NS
A	*Picoides dorsalis*	American Three-toed Woodpecker				S1?	1	94.7 ± 0.0	NB
A	*Uria aalge*	Common Murre				S1?B	34	28.6 ± 0.0	NS
A	*Passerina cyanea*	Indigo Bunting				S1?B,SUM	61	4.9 ± 7.0	NS
A	*Nycticorax nycticorax*	Black-crowned Night-heron				S1B	18	68.6 ± 0.0	NB
A	*Oxyura jamaicensis*	Ruddy Duck				S1B	56	3.2 ± 0.0	NS
A	*Gallinula galeata*	Common Gallinule				S1B	22	3.1 ± 0.0	NS
A	*Myiarchus crinitus*	Great Crested Flycatcher				S1B	75	18.5 ± 7.0	NS
A	*Cistothorus palustris*	Marsh Wren				S1B	222	4.9 ± 7.0	NS
A	*Mimus polyglottos*	Northern Mockingbird				S1B	129	4.9 ± 7.0	NS
A	*Toxostoma rufum*	Brown Thrasher				S1B	34	21.8 ± 7.0	NS
A	*Charadrius semipalmatus*	Semipalmated Plover				S1B,S4M	895	6.8 ± 0.0	NS
A	*Calidris minutilla*	Least Sandpiper				S1B,S4M	764	3.0 ± 0.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
A	*Anas acuta*	Northern Pintail				S1B,SUM	54	3.2 ± 0.0	NS
A	*Vireo gilvus*	Warbling Vireo				S1B,SUM	40	7.3 ± 0.0	NS
A	*Vespertilionidae sp.*	bat species				S1S2	380	3.3 ± 0.0	NS
A	*Vespertilionidae sp.*	bat species				S1S2	4	49.8 ± 0.0	NS
A	*Pooecetes gramineus*	Vesper Sparrow				S1S2B,SUM	45	46.5 ± 0.0	NS
A	*Vireo philadelphicus*	Philadelphia Vireo				S2?B,SUM	44	3.1 ± 0.0	NS
A	*Alca torda*	Razorbill				S2B	35	18.7 ± 0.0	NS
A	*Fratercula arctica*	Atlantic Puffin				S2B	55	24.5 ± 0.0	NS
A	*Empidonax traillii*	Willow Flycatcher				S2B	76	5.4 ± 7.0	NS
A	*Molothrus ater*	Brown-headed Cowbird				S2B	240	3.7 ± 0.0	NS
A	*Somateria mollissima*	Common Eider				S2B,S2N,S4M	1120	8.8 ± 0.0	NS
A	*Spatula clypeata*	Northern Shoveler				S2B,SUM	124	3.1 ± 0.0	NS
A	*Mareca strepera*	Gadwall				S2B,SUM	199	3.1 ± 0.0	NS
A	*Piranga olivacea*	Scarlet Tanager				S2B,SUM	81	11.5 ± 0.0	NS
A	*Calidris alba*	Sanderling				S2N,S3M	436	27.1 ± 0.0	NS
A	*Martes americana*	American Marten			Endangered	S2S3	34	18.8 ± 0.0	NS
A	*Asio otus*	Long-eared Owl				S2S3	15	58.7 ± 7.0	NS
A	*Rallus limicola*	Virginia Rail				S2S3B	99	3.1 ± 0.0	NS
A	*Rissa tridactyla*	Black-legged Kittiwake				S2S3B	23	67.2 ± 0.0	NS
A	*Petrochelidon pyrrhonota*	Cliff Swallow				S2S3B	325	1.8 ± 0.0	NS
A	*Phalacrocorax carbo*	Great Cormorant				S2S3B,S2S3N	100	4.9 ± 7.0	NS
A	*Cathartes aura*	Turkey Vulture				S2S3B,S4S5M	318	0.4 ± 0.0	NS
A	*Setophaga pinus*	Pine Warbler				S2S3B,S4S5M	46	5.9 ± 0.0	NS
A	*Icterus galbula*	Baltimore Oriole				S2S3B,SUM	147	4.9 ± 7.0	NS
A	*Pluvialis dominica*	American Golden-Plover				S2S3M	103	63.5 ± 0.0	NB
A	*Numenius phaeopus hudsonicus*	Whimbrel				S2S3M	222	63.3 ± 0.0	NB
A	*Phalaropus fulicarius*	Red Phalarope				S2S3M	66	38.8 ± 0.0	NB
A	*Perisoreus canadensis*	Canada Jay				S3	461	10.0 ± 7.0	NS
A	*Poecile hudsonicus*	Boreal Chickadee				S3	322	4.9 ± 7.0	NS
A	*Spinus pinus*	Pine Siskin				S3	476	3.4 ± 0.0	NS
A	*Salvelinus fontinalis*	Brook Trout				S3	128	10.6 ± 0.0	NS
A	*Salvelinus namaycush*	Lake Trout				S3	1	88.8 ± 0.0	NB
A	*Sorex maritimensis*	Maritime Shrew				S3	2	7.2 ± 0.0	NS
A	*Synaptomys cooperi*	Southern Bog Lemming				S3	7	88.6 ± 1.0	NB
A	*Pekania pennanti*	Fisher				S3	17	27.7 ± 5.0	NS
A	*Calcarius lapponicus*	Lapland Longspur				S3?N,SUM	23	64.1 ± 2.0	NB
A	*Spatula discors*	Blue-winged Teal				S3B	147	3.1 ± 0.0	NS
A	*Charadrius vociferus*	Killdeer				S3B	597	4.9 ± 7.0	NS
A	*Tringa semipalmata*	Willet				S3B	275	4.0 ± 0.0	NS
A	*Sterna paradisaea*	Arctic Tern				S3B	36	45.6 ± 7.0	NS
A	*Coccyzus erythropthalmus*	Black-billed Cuckoo				S3B	85	6.3 ± 0.0	NS
A	*Tyrannus tyrannus*	Eastern Kingbird				S3B	310	3.5 ± 0.0	NS
A	*Pheucticus ludovicianus*	Rose-breasted Grosbeak				S3B	601	3.2 ± 0.0	NS
A	*Alosa pseudoharengus*	Alewife				S3B	18	62.9 ± 0.0	NB
A	*Tringa melanoleuca*	Greater Yellowlegs				S3B,S4M	894	3.0 ± 0.0	NS
A	*Falco sparverius*	American Kestrel				S3B,S4S5M	259	4.9 ± 7.0	NS
A	*Mergus serrator*	Red-breasted Merganser				S3B,S4S5N,S5M	207	4.9 ± 7.0	NS
A	*Gallinago delicata*	Wilson's Snipe				S3B,S5M	568	4.9 ± 7.0	NS
A	*Setophaga striata*	Blackpoll Warbler				S3B,S5M	87	3.3 ± 0.0	NS
A	*Cardellina pusilla*	Wilson's Warbler				S3B,S5M	146	3.2 ± 0.0	NS
A	*Pinicola enucleator*	Pine Grosbeak				S3B,S5N,S5M	80	4.9 ± 7.0	NS
A	*Setophaga tigrina*	Cape May Warbler				S3B,SUM	86	2.4 ± 0.0	NS
A	*Branta bernicla*	Brant				S3M	234	62.4 ± 0.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
A	*Pluvialis squatarola*	Black-bellied Plover				S3M	579	27.1 ± 0.0	NS
A	*Arenaria interpres*	Ruddy Turnstone				S3M	319	27.1 ± 0.0	NS
A	*Calidris pusilla*	Semipalmated Sandpiper				S3M	1182	4.8 ± 3.0	NS
A	*Calidris melanotos*	Pectoral Sandpiper				S3M	204	64.1 ± 2.0	NB
A	*Limnodromus griseus*	Short-billed Dowitcher				S3M	469	63.5 ± 0.0	NB
A	*Chroicocephalus ridibundus*	Black-headed Gull				S3N	8	3.5 ± 0.0	NS
A	*Picoides arcticus*	Black-backed Woodpecker				S3S4	62	23.4 ± 0.0	NS
A	*Loxia curvirostra*	Red Crossbill				S3S4	267	4.9 ± 7.0	NS
A	*Sorex albibarbis*	Eastern Water Shrew				S3S4	4	80.3 ± 1.0	NB
A	*Botaurus lentiginosus*	American Bittern				S3S4B,S4S5M	430	1.6 ± 0.0	NS
A	*Setophaga castanea*	Bay-breasted Warbler				S3S4B,S4S5M	394	4.9 ± 7.0	NS
A	*Actitis macularius*	Spotted Sandpiper				S3S4B,S5M	866	4.9 ± 7.0	NS
A	*Leiothlypis peregrina*	Tennessee Warbler				S3S4B,S5M	230	10.0 ± 7.0	NS
A	*Passerella iliaca*	Fox Sparrow				S3S4B,S5M	37	1.2 ± 0.0	NS
A	*Calidris maritima*	Purple Sandpiper				S3S4N	160	33.2 ± 13.0	NS
A	*Lanius borealis*	Northern Shrike				S3S4N	34	72.9 ± 0.0	NB
A	*Bucephala clangula*	Common Goldeneye				S4B,S4N,S5M	262	3.2 ± 7.0	NS
A	*Morus bassanus*	Northern Gannet				SHB	233	18.7 ± 0.0	NS
A	*Aythya americana*	Redhead				SHB	8	74.0 ± 0.0	NB
A	*Leucophaeus atricilla*	Laughing Gull				SHB	16	62.4 ± 0.0	NB
A	*Progne subis*	Purple Martin				SHB	23	34.5 ± 7.0	NS
A	*Eremophila alpestris*	Horned Lark				SHB,S4S5N,S5M	28	44.3 ± 0.0	NS
I	*Bombus bohemicus*	Ashton Cuckoo Bumble Bee	Endangered	Endangered	Endangered	S1	17	12.0 ± 5.0	NS
I	*Epeoloides pilosulus*	Macropis Cuckoo Bee	Endangered	Endangered	Endangered	S1	2	38.6 ± 5.0	NS
I	*Danaus plexippus*	Monarch	Endangered	Special Concern	Endangered	S2?B,S3M	1120	2.2 ± 0.0	NS
I	*Bombus suckleyi*	Suckley's Cuckoo Bumble Bee	Threatened			SH	1	63.8 ± 5.0	NB
I	*Lampsilis cariosa*	Yellow Lampmussel	Special Concern	Special Concern	Threatened	S1	1	96.8 ± 0.0	NB
I	*Alasmidonta varicosa*	Brook Floater	Special Concern	Special Concern	Threatened	S3	2	78.8 ± 0.0	NS
I	*Bombus terricola*	Yellow-banded Bumble Bee	Special Concern	Special Concern	Vulnerable	S3	204	3.3 ± 5.0	NS
I	*Coccinella transversoguttata richardsoni*	Transverse Lady Beetle	Special Concern		Endangered	SH	3	38.0 ± 2.0	NS
I	*Erora laeta*	Early Hairstreak				S1	2	26.1 ± 2.0	NS
I	*Ophiogomphus anomalus*	Extra-Striped Snaketail				S1	8	77.6 ± 0.0	NS
I	*Pachydiplax longipennis*	Blue Dasher				S1	17	85.6 ± 0.0	NS
I	*Atlanticoncha ochracea*	Tidewater Mucket				S1	7	64.5 ± 0.0	NS
I	*Polygonia comma*	Eastern Comma				S1?	16	27.2 ± 2.0	NS
I	*Polygonia satyrus*	Satyr Comma				S1?	6	25.9 ± 2.0	NS
I	*Euphyes bimacula*	Two-spotted Skipper				S1S2	1	80.1 ± 0.0	NB
I	*Satyrium acadica*	Acadian Hairstreak				S2	2	70.6 ± 5.0	NB
I	*Coenagrion resolutum*	Taiga Bluet				S2	5	70.3 ± 1.0	NB
I	*Margaritifera margaritifera*	Eastern Pearlshell				S2	48	12.0 ± 1.0	NS
I	*Pantala hymenaea*	Spot-Winged Glider				S2?B	7	70.8 ± 1.0	NB
I	*Nymphalis l-album j-album*	Compton Tortoiseshell				S2S3	21	26.1 ± 2.0	NS
I	*Aglais milberti*	Milbert's Tortoiseshell				S2S3	8	3.3 ± 2.0	NS
I	*Somatochlora kennedyi*	Kennedy's Emerald				S2S3	5	84.8 ± 0.0	NS
I	*Somatochlora williamsoni*	Williamson's Emerald				S2S3	2	55.6 ± 0.0	NS
I	*Williamsonia fletcheri*	Ebony Boghaunter				S2S3	3	70.5 ± 0.0	NS
I	*Enallagma geminatum*	Skimming Bluet				S2S3	9	45.3 ± 0.0	NS
I	*Stylurus scudderi*	Zebra Clubtail				S2S3	24	17.7 ± 0.0	NS
I	*Alasmidonta undulata*	Triangle Floater				S2S3	15	81.8 ± 0.0	NB
I	*Strophiona nitens*	Chestnut Bark Long-horned Beetle				S3	3	55.6 ± 0.0	NS
I	*Lebia ornata*	Ornate Harp Ground Beetle				S3	1	73.7 ± 0.0	NS
I	*Hippodamia parenthesis*	Parenthesis Lady Beetle				S3	5	70.5 ± 1.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
I	*Chrysochus auratus*	Dogbane Leaf Beetle				S3	4	80.9 ± 0.0	NB
I	*Naemia seriata*	Seaside Lady Beetle				S3	43	3.3 ± 1.0	NS
I	*Pachyrhinus elegans*	Elegant Broad-nosed Weevil				S3	1	66.5 ± 0.0	NS
I	*Chilocorus stigma*	Twice-stabbed Lady Beetle				S3	18	42.0 ± 0.0	NS
I	*Myzia pullata*	Streaked Lady Beetle				S3	2	88.4 ± 0.0	NB
I	*Monochamus marmorator*	Balsam Fir Sawyer				S3	1	70.5 ± 1.0	NB
I	*Dicerca tenebrosa*	Dark Jewel Beetle				S3	2	6.0 ± 0.0	NS
I	*Astylopsis sexguttata*	Six-speckled Long-horned Beetle				S3	2	88.4 ± 0.0	NB
I	*Satyrium calanus falacer*	Falacer Hairstreak				S3	50	4.7 ± 2.0	NS
I	*Callophrys lanoraieensis*	Bog Elfin				S3	10	86.6 ± 0.0	NS
I	*Strymon melinus*	Gray Hairstreak				S3	17	22.9 ± 2.0	NS
I	*Phanogomphus descriptus*	Harpoon Clubtail				S3	1	98.6 ± 0.0	NB
I	*Ophiogomphus aspersus*	Brook Snaketail				S3	6	46.6 ± 0.0	NS
I	*Ophiogomphus mainensis*	Maine Snaketail				S3	18	60.1 ± 0.0	NS
I	*Ophiogomphus rupinsulensis*	Rusty Snaketail				S3	15	41.4 ± 1.0	NS
I	*Epitheca princeps*	Prince Baskettail				S3	10	49.5 ± 1.0	NS
I	*Somatochlora forcipata*	Forcipate Emerald				S3	5	21.4 ± 1.0	NS
I	*Polygonia interrogationis*	Question Mark				S3B	131	5.9 ± 0.0	NS
I	*Lepturopsis biforis*	Two-spotted Long-horned Beetle				S3S4	2	70.5 ± 1.0	NB
I	*Cecropterus pylades*	Northern Cloudywing				S3S4	9	70.6 ± 5.0	NB
I	*Amblyscirtes hegon*	Pepper and Salt Skipper				S3S4	5	70.6 ± 5.0	NB
I	*Cupido comyntas*	Eastern Tailed Blue				S3S4	36	34.3 ± 0.0	NS
I	*Argynnis aphrodite winni*	Aphrodite Fritillary				S3S4	27	26.1 ± 2.0	NS
I	*Polygonia faunus*	Green Comma				S3S4	24	25.9 ± 2.0	NS
I	*Oeneis jutta ascerta*	Jutta Arctic				S3S4	18	75.1 ± 1.0	NB
I	*Aeshna clepsydra*	Mottled Darner				S3S4	41	22.2 ± 0.0	NS
I	*Aeshna constricta*	Lance-Tipped Darner				S3S4	21	3.2 ± 0.0	NS
I	*Boyeria grafiana*	Ocellated Darner				S3S4	18	5.9 ± 0.0	NS
I	*Gomphaeschna furcillata*	Harlequin Darner				S3S4	39	7.4 ± 0.0	NS
I	*Somatochlora franklini*	Delicate Emerald				S3S4	3	21.4 ± 1.0	NS
I	*Erythrodiplax berenice*	Seaside Dragonlet				S3S4	6	48.6 ± 0.0	NS
I	*Nannothemis bella*	Elfin Skimmer				S3S4	32	3.6 ± 1.0	NS
I	*Sympetrum danae*	Black Meadowhawk				S3S4	6	33.2 ± 0.0	NS
I	*Enallagma vesperum*	Vesper Bluet				S3S4	24	6.9 ± 0.0	NS
I	*Amphiagrion saucium*	Eastern Red Damsel				S3S4	3	73.9 ± 0.0	NB
I	*Icaricia saepiolus amica*	Greenish Blue				SH	1	27.2 ± 2.0	NS
I	*Chlosyne nycteis*	Silvery Checkerspot				SH	8	22.9 ± 2.0	NS
I	*Polygonia gracilis*	Hoary Comma				SH	1	68.2 ± 7.0	NB
I	*Eristalis brousii*	Hourglass Drone Fly				SX	1	96.1 ± 0.0	NS
N	*Erioderma mollissimum*	Graceful Felt Lichen	Endangered	Endangered	Endangered	S1	75	79.9 ± 1.0	NS
N	*Erioderma pedicellatum (Atlantic pop.)*	Boreal Felt Lichen - Atlantic pop.	Endangered	Endangered	Endangered	S1	2	81.8 ± 0.0	NS
N	*Peltigera hydrothyria*	Eastern Waterfan	Threatened	Threatened	Threatened	S1	377	85.4 ± 0.0	NS
N	*Pannaria lurida*	Wrinkled Shingle Lichen	Threatened	Threatened	Threatened	S2S3	317	5.3 ± 0.0	NS
N	*Anzia colpodes*	Black-foam Lichen	Threatened	Threatened	Threatened	S3	219	15.6 ± 1.0	NS
N	*Fuscopannaria leucosticta*	White-rimmed Shingle Lichen	Threatened			S3	341	17.2 ± 0.0	NS
N	*Heterodermia squamulosa*	Scaly Fringe Lichen	Threatened			S3	89	4.2 ± 0.0	NS
N	*Pectenia plumbea*	Blue Felt Lichen	Special Concern	Special Concern	Vulnerable	S3	739	7.5 ± 0.0	NS
N	*Sclerophora peronella (Atlantic pop.)*	Frosted Glass-whiskers (Atlantic population)	Special Concern	Special Concern		S3S4	60	15.4 ± 0.0	NS
N	*Pseudevernia cladonia*	Ghost Antler Lichen	Not At Risk			S2S3	29	33.3 ± 0.0	NS
N	*Fissidens exilis*	Pygmy Pocket Moss	Not At Risk			S3	6	12.6 ± 3.0	NS
N	*Frullania selwyniana*	Selwyn's Scalewort				S1	8	88.4 ± 0.0	NS
N	*Harpalejeunea molleri ssp. integra*	a liverwort				S1	3	88.4 ± 0.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
N	*Homalotheciella subcapillata*	Few-haired Moss				S1	3	19.0 ± 0.0	NS
N	*Orthotrichum gymnostomum*	Aspen Bristle Moss				S1	1	55.7 ± 0.0	NS
N	*Orthotrichum pallens*	Pale Bristle Moss				S1	1	47.8 ± 0.0	NS
N	*Seligeria calcarea*	Chalk Brittle Moss				S1	1	83.1 ± 1.0	NB
N	*Seligeria diversifolia*	a Moss				S1	1	70.7 ± 0.0	NB
N	*Sematophyllum demissum*	a Moss				S1	1	64.0 ± 1.0	NS
N	*Sphagnum carolinianum*	Carolina Peat Moss				S1	1	89.9 ± 0.0	NS
N	*Tetrodontium brownianum*	Little Georgia				S1	4	93.9 ± 0.0	NB
N	*Cyrto-hypnum minutulum*	Tiny Cedar Moss				S1	1	46.3 ± 0.0	NS
N	*Umbilicaria vellea*	Grizzled Rocktripe Lichen				S1	1	94.6 ± 1.0	NB
N	*Heterodermia leucomela*	Elegant Fringe Lichen				S1	4	69.2 ± 0.0	NS
N	*Scytinium dactylinum*	Brown-buttoned Jellyskin Lichen				S1	2	41.6 ± 0.0	NS
N	*Flavoparmelia baltimorensis*	Rock Greenshield Lichen				S1	1	49.2 ± 0.0	NS
N	*Lathagrium cristatum*	Fingered Jelly Lichen				S1	3	90.5 ± 1.0	NB
N	*Ephebe hispidula*	Dryside Rockshag Lichen				S1	1	28.8 ± 0.0	NS
N	*Ephebe perspinulosa*	Thread Lichen				S1	2	35.9 ± 0.0	NS
N	*Parmotrema perforatum*	Perforated Ruffle Lichen				S1	46	46.5 ± 0.0	NS
N	*Polychidium muscicola*	Eyed Mossthorns Woollybear Lichen				S1	9	28.0 ± 0.0	NS
N	*Pseudevernia consocians*	Common Antler Lichen				S1	1	97.1 ± 0.0	NS
N	*Spilonema revertens*	Rock Hairball Lichen				S1	4	20.5 ± 0.0	NS
N	*Sticta limbata*	Powdered Moon Lichen				S1	12	79.8 ± 0.0	NS
N	*Lathagrium fuscovirens*	Crumpled Rock Tarpaper Lichen				S1	2	81.8 ± 0.0	NB
N	*Dermatocarpon miniatum*	Common Stippleback Lichen				S1	6	45.0 ± 0.0	NS
N	*Leptogium hibernicum*	Hibernia Jellyskin Lichen				S1	64	34.5 ± 0.0	NS
N	*Hypotrachyna horrescens*	Hairy-spined Shield Lichen				S1	3	47.8 ± 0.0	NS
N	*Peltigera lepidophora*	Scaly Pelt Lichen				S1	6	28.0 ± 0.0	NS
N	*Hypogymnia hultenii*	Powdered Honeycomb Lichen				S1	3	90.7 ± 0.0	NS
N	*Calypogeia neogaea*	Common Pouchwort				S1?	2	70.1 ± 0.0	NS
N	*Jubula pennsylvanica*	a liverwort				S1?	3	15.4 ± 0.0	NS
N	*Brachythecium erythrorrhizon*	Taiga Ragged Moss				S1?	1	78.0 ± 0.0	NB
N	*Imbribryum muehlenbeckii*	Muehlenbeck's Bryum Moss				S1?	3	83.2 ± 1.0	NB
N	*Cirriphyllum piliferum*	Hair-pointed Moss				S1?	2	40.2 ± 0.0	NS
N	*Conardia compacta*	Coast Creeping Moss				S1?	1	93.6 ± 1.0	NB
N	*Tortula obtusifolia*	a Moss				S1?	1	66.1 ± 0.0	NB
N	*Grimmia anodon*	Toothless Grimmia Moss				S1?	4	44.2 ± 3.0	NS
N	*Homomallium adnatum*	Adnate Hairy-gray Moss				S1?	2	46.7 ± 5.0	NS
N	*Meesia triquetra*	Three-ranked Cold Moss				S1?	3	11.2 ± 0.0	NS
N	*Physcomitrium immersum*	a Moss				S1?	9	19.8 ± 0.0	NS
N	*Sphagnum molle*	Blushing Peat Moss				S1?	2	85.9 ± 0.0	NS
N	*Timmia norvegica*	a moss				S1?	3	94.0 ± 0.0	NB
N	*Trichodon cylindricus*	Cylindric Hairy-teeth Moss				S1?	3	41.3 ± 0.0	NS
N	*Plagiomnium ellipticum*	Marsh Leafy Moss				S1?	1	47.2 ± 0.0	NS
N	*Enchylium limosum*	Lime-loving Tarpaper Lichen				S1?	1	94.5 ± 0.0	NS
N	*Euopsis granatina*	Lesser Rockbud Lichen				S1?	1	27.9 ± 1.0	NS
N	*Scytinium intermedium*	Forty-five Jellyskin Lichen				S1?	1	84.8 ± 1.0	NS
N	*Peltigera malacea*	Veinless Pelt Lichen				S1?	2	58.0 ± 0.0	NS
N	*Peltigera venosa*	Fan Pelt Lichen				S1?	1	81.2 ± 0.0	NB
N	*Metzgeria crassipilis*	Hairy Veilwort				S1S2	3	63.3 ± 0.0	NS
N	*Porella pinnata*	Pinnate Scalewort				S1S2	3	58.8 ± 0.0	NS
N	*Reboulia hemisphaerica*	Purple-margined Liverwort				S1S2	3	21.8 ± 0.0	NS
N	*Arrhenopterum heterostichum*	One-sided Groove Moss				S1S2	1	62.9 ± 5.0	NS
N	*Brachythecium turgidum*	Thick Ragged Moss				S1S2	3	72.3 ± 3.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
N	*Didymodon rigidulus*	Rigid Screw Moss				S1S2	12	41.9 ± 0.0	NS
N	*Didymodon ferrugineus*	Rusty Beard Moss				S1S2	2	80.8 ± 1.0	NB
N	*Hygrohypnum montanum*	a Moss				S1S2	1	83.0 ± 1.0	NB
N	*Hypnum pratense*	Meadow Plait Moss				S1S2	2	74.3 ± 3.0	NS
N	*Tortula acaulon*	Cuspidate Earth Moss				S1S2	7	2.2 ± 0.0	NS
N	*Plagiothecium latebricola*	Alder Silk Moss				S1S2	2	70.2 ± 0.0	NB
N	*Sematophyllum marylandicum*	a Moss				S1S2	1	42.0 ± 0.0	NS
N	*Sphagnum trinitense*	a peatmoss				S1S2	3	84.5 ± 0.0	NS
N	*Tortula mucronifolia*	Mucronate Screw Moss				S1S2	2	44.2 ± 3.0	NS
N	*Syntrichia papillosa*	a Moss				S1S2	2	26.2 ± 0.0	NS
N	*Pseudotaxiphyllum distichaceum*	a Moss				S1S2	4	20.2 ± 4.0	NS
N	*Hamatocaulis vernicosus*	a Moss				S1S2	4	11.4 ± 0.0	NS
N	*Haplocladium microphyllum*	Tiny-leaved Haplocladium Moss				S1S2	1	13.5 ± 3.0	NS
N	*Enchylium bachmanianum*	Bachman's Jelly Lichen				S1S2	1	98.5 ± 0.0	NS
N	*Sclerophora amabilis*	Collared Glass-whiskers Lichen				S1S2	3	13.3 ± 0.0	NS
N	*Peltigera ponojensis*	Pale-bellied Pelt Lichen				S1S2	5	87.3 ± 0.0	NS
N	*Pilophorus cereolus*	Powdered Matchstick Lichen				S1S2	1	15.4 ± 3.0	NS
N	*Rhizoplaca subdiscrepans*	Scattered Rock-posy Lichen				S1S2	1	48.2 ± 0.0	NS
N	*Parmotrema reticulatum*	Netted Ruffle Lichen				S1S2	19	18.7 ± 0.0	NS
N	*Parmeliella parvula*	Poor-man's Shingles Lichen				S1S2	1	81.6 ± 0.0	NS
N	*Chaenotheca hygrophila*	a lichen				S1S3	9	30.8 ± 0.0	NS
N	*Lecanora polytropa*	a lichen				S1S3	6	65.8 ± 1.0	NS
N	*Xylopsora friesii*	a Lichen				S1S3	1	94.6 ± 1.0	NB
N	*Peltigera neckeri*	Black-saddle Pelt Lichen				S1S3	1	97.5 ± 5.0	NB
N	*Usnea fragilescens*	Inflationary Beard Lichen				S1S3	3	35.6 ± 0.0	NS
N	*Usnea chaetophora*	Articulated Beard Lichen				S1S3	2	79.0 ± 0.0	NS
N	*Stereocaulon intermedium*	Pacific Brain Foam Lichen				S1S3	7	47.4 ± 0.0	NS
N	*Anacamptodon splachnoides*	a Moss				S2	3	46.5 ± 0.0	NS
N	*Scorpidium scorpioides*	Hooked Scorpion Moss				S2	4	75.4 ± 1.0	NB
N	*Sphagnum platyphyllum*	Flat-leaved Peat Moss				S2	4	11.9 ± 0.0	NS
N	*Sphagnum subnitens*	Lustrous Peat Moss				S2	5	52.1 ± 0.0	NS
N	*Scorpidium cossonii*	CossonΓÇÖs Hook Moss				S2	1	81.4 ± 1.0	NB
N	*Cystocoleus ebeneus*	Rockgossamer Lichen				S2	3	28.0 ± 0.0	NS
N	*Hypotrachyna catawbiensis*	Powder-tipped Antler Lichen				S2	68	40.3 ± 0.0	NS
N	*Scytinium imbricatum*	Scaly Jellyskin Lichen				S2	2	77.8 ± 0.0	NB
N	*Nephroma arcticum*	Arctic Kidney Lichen				S2	1	97.9 ± 1.0	NB
N	*Nephroma resupinatum*	a lichen				S2	7	39.0 ± 0.0	NS
N	*Placynthium flabellosum*	Scaly Ink Lichen				S2	5	41.1 ± 0.0	NS
N	*Cololejeunea biddlecomiae*	Biddlecome's Pouncewort				S2?	1	45.6 ± 0.0	NS
N	*Riccardia multifida*	Delicate Germanderwort				S2?	3	9.8 ± 0.0	NS
N	*Anomodon viticulosus*	a Moss				S2?	7	71.9 ± 1.0	NB
N	*Weissia muhlenbergiana*	a Moss				S2?	2	62.0 ± 0.0	NS
N	*Atrichum angustatum*	Lesser Smoothcap Moss				S2?	8	11.4 ± 0.0	NS
N	*Ptychostomum pendulum*	Drooping Bryum				S2?	2	86.6 ± 0.0	NS
N	*Drepanocladus polygamus*	Polygamous Hook Moss				S2?	5	40.0 ± 0.0	NS
N	*Pseudocampylium radicale*	Long-stalked Fine Wet Moss				S2?	3	45.9 ± 0.0	NS
N	*Climacium americanum*	American Tree Moss				S2?	10	41.9 ± 0.0	NS
N	*Dicranum condensatum*	Condensed Broom Moss				S2?	4	42.4 ± 0.0	NS
N	*Ditrichum rhynchostegium*	a Moss				S2?	5	45.9 ± 1.0	NS
N	*Fissidens bushii*	Bush's Pocket Moss				S2?	17	6.7 ± 0.0	NS
N	*Fontinalis hypnoides*	a moss				S2?	1	46.2 ± 0.0	NS
N	*Fontinalis sullivantii*	Sullivant's Water Moss				S2?	5	42.2 ± 0.0	NS
N	*Grimmia olneyi*	a Moss				S2?	10	41.8 ± 0.0	NS
N	*Grimmia anomala*	Mountain Forest Grimmia				S2?	1	91.9 ± 1.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
N	*Hygrohypnum bestii*	Best's Brook Moss				S2?	1	43.1 ± 0.0	NS
N	*Orthotrichum anomalum*	Anomalous Bristle Moss				S2?	5	47.8 ± 0.0	NS
N	*Philonotis marchica*	a Moss				S2?	1	41.9 ± 0.0	NS
N	*Physcomitrium collenchymatum*	a Moss				S2?	7	72.3 ± 0.0	NS
N	*Platydictya jungermannioides*	False Willow Moss				S2?	3	92.7 ± 0.0	NB
N	*Rhytidium rugosum*	Wrinkle-leaved Moss				S2?	2	94.2 ± 1.0	NB
N	*Tortella fragilis*	Fragile Twisted Moss				S2?	1	94.0 ± 0.0	NB
N	*Anomobryum julaceum*	Slender Silver Moss				S2?	4	70.7 ± 0.0	NB
N	*Rauiella scita*	Smaller Fern Moss				S2?	16	41.5 ± 0.0	NS
N	*Cyrtomnium hymenophylloides*	Short-pointed Lantern Moss				S2?	3	94.0 ± 0.0	NB
N	*Platylomella lescurii*	a Moss				S2?	9	15.5 ± 0.0	NS
N	*Phylliscum demangeonii*	Black Rock-wafer Lichen				S2?	2	28.0 ± 0.0	NS
N	*Oxyrrhynchium hians*	Light Beaked Moss				S2S3	3	4.1 ± 0.0	NS
N	*Platydictya subtilis*	Bark Willow Moss				S2S3	4	41.1 ± 0.0	NS
N	*Plagiomnium rostratum*	Long-beaked Leafy Moss				S2S3	9	12.6 ± 3.0	NS
N	*Moelleropsis nebulosa*	Blue-gray Moss Shingle Lichen				S2S3	54	50.3 ± 0.0	NS
N	*Moelleropsis nebulosa ssp. frullaniae*	Blue-gray Moss Shingle Lichen				S2S3	6	79.6 ± 0.0	NS
N	*Ramalina thrausta*	Angelhair Ramalina Lichen				S2S3	7	82.4 ± 1.0	NS
N	*Collema leptaleum*	Crumpled Bat's Wing Lichen				S2S3	66	22.1 ± 32.0	NS
N	*Usnea ceratina*	Warty Beard Lichen				S2S3	3	82.2 ± 0.0	NS
N	*Usnea rubicunda*	Red Beard Lichen				S2S3	5	34.4 ± 0.0	NS
N	*Ahtiana aurescens*	Eastern Candlewax Lichen				S2S3	32	24.5 ± 0.0	NS
N	*Usnocetraria oakesiana*	Yellow Band Lichen				S2S3	18	11.4 ± 0.0	NS
N	*Catinaria atropurpurea*	a lichen				S2S3	1	63.2 ± 0.0	NS
N	*Cladonia incrassata*	Powder-foot British Soldiers Lichen				S2S3	4	54.9 ± 0.0	NS
N	*Cladonia mateocyatha*	Mixed-up Pixie-cup				S2S3	2	56.3 ± 0.0	NS
N	*Cladonia parasitica*	Fence-rail Lichen				S2S3	1	54.9 ± 0.0	NS
N	*Scytinium tenuissimum*	Birdnest Jellyskin Lichen				S2S3	1	95.1 ± 1.0	NS
N	*Melanohalea septentrionalis*	Northern Camouflage Lichen				S2S3	1	97.3 ± 0.0	NB
N	*Myelochroa aurulenta*	Powdery Axil-bristle Lichen				S2S3	4	79.3 ± 1.0	NS
N	*Parmelia fertilis*	Fertile Shield Lichen				S2S3	7	52.6 ± 0.0	NS
N	*Hypotrachyna minarum*	Hairless-spined Shield Lichen				S2S3	8	20.7 ± 0.0	NS
N	*Parmeliopsis ambigua*	Green Starburst Lichen				S2S3	2	90.1 ± 2.0	NS
N	*Racodium rupestre*	Rockhair Lichen				S2S3	1	65.9 ± 0.0	NS
N	*Umbilicaria polyphylla*	Petalled Rocktripe Lichen				S2S3	1	90.1 ± 2.0	NS
N	*Usnea cavernosa*	Pitted Beard Lichen				S2S3	3	50.8 ± 0.0	NS
N	*Usnea mutabilis*	Bloody Beard Lichen				S2S3	3	61.5 ± 0.0	NS
N	*Fuscopannaria sorediata*	a Lichen				S2S3	20	47.7 ± 0.0	NS
N	*Stereocaulon condensatum*	Granular Soil Foam Lichen				S2S3	9	48.1 ± 0.0	NS
N	*Stereocaulon subcoralloides*	Coralloid Foam Lichen				S2S3	1	97.3 ± 1.0	NB
N	*Dimelaena oreina*	Golden Moonglow Lichen				S2S3	2	22.5 ± 0.0	NS
N	*Hypotrachyna revoluta*	Granulating Loop Lichen				S2S3	24	47.8 ± 0.0	NS
N	*Cetraria arenaria*	Sand-loving Icelandmoss Lichen				S2S3	21	46.4 ± 0.0	NS
N	*Cladonia coccifera*	Eastern Boreal Pixie-cup Lichen				S2S3	2	47.4 ± 0.0	NS
N	*Cladonia deformis*	Lesser Sulphur-cup Lichen				S2S3	5	95.2 ± 3.0	NS
N	*Cladonia phyllophora*	Felt Lichen				S2S3	3	74.3 ± 0.0	NS
N	*Hypotrachyna afrorevoluta*	Pustulate Revolute Loop Lichen				S2S3	10	65.2 ± 2.0	NS
N	*Usnea flammea*	Coastal Bushy Beard Lichen				S2S3	2	40.3 ± 0.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
N	*Microlejeunea ulicina*	a pouncewort				S3	6	88.4 ± 0.0	NS
N	*Ephemerum serratum*	a Moss				S3	3	53.8 ± 0.0	NS
N	*Fissidens taxifolius*	Yew-leaved Pocket Moss				S3	5	28.1 ± 0.0	NS
N	*Anomodon tristis*	a Moss				S3	11	18.9 ± 0.0	NS
N	*Sphagnum contortum*	Twisted Peat Moss				S3	4	17.3 ± 0.0	NS
N	*Tetraplodon angustatus*	Toothed-leaved Nitrogen Moss				S3	6	23.9 ± 0.0	NS
N	*Tetraplodon mnioides*	Entire-leaved Nitrogen Moss				S3	3	89.7 ± 0.0	NB
N	*Rostania occultata*	Crusted Tarpaper Lichen				S3	8	39.7 ± 0.0	NS
N	*Collema nigrescens*	Blistered Tarpaper Lichen				S3	78	22.7 ± 0.0	NS
N	*Solorina saccata*	Woodland Owl Lichen				S3	8	90.9 ± 1.0	NB
N	*Fuscopannaria ahlneri*					S3	63	9.7 ± 0.0	NS
N	*Scytinium lichenoides*	Tattered Jellyskin Lichen				S3	23	70.3 ± 0.0	NS
N	*Leptogium milligranum*	Stretched Jellyskin Lichen				S3	69	4.2 ± 0.0	NS
N	*Nephroma bellum*	Naked Kidney Lichen				S3	6	64.2 ± 9.0	NS
N	*Placynthium nigrum*	Common Ink Lichen				S3	1	94.6 ± 1.0	NB
N	*Punctelia appalachensis*	Appalachian Speckleback Lichen				S3	83	2.6 ± 0.0	NS
N	*Viridothelium virens*	a lichen				S3	8	23.5 ± 0.0	NS
N	*Ephebe lanata*	Waterside Rockshag Lichen				S3	9	37.4 ± 0.0	NS
N	*Phaeophyscia adiastola*	Powder-tipped Shadow Lichen				S3	22	7.8 ± 0.0	NS
N	*Phaeophyscia pusilloides*	Pompom-tipped Shadow Lichen				S3	6	34.4 ± 0.0	NS
N	*Peltigera collina*	Tree Pelt Lichen				S3	6	34.1 ± 0.0	NS
N	*Cladonia pocillum*	Rosette Pixie-cup Lichen				S3	1	95.7 ± 0.0	NB
N	*Metzgeria conjugata*	Rock Veilwort				S3?	4	10.2 ± 0.0	NS
N	*Barbula convoluta*	Lesser Bird's-claw Beard Moss				S3?	1	41.9 ± 0.0	NS
N	*Calliergon giganteum*	Giant Spear Moss				S3?	2	39.8 ± 0.0	NS
N	*Drummondia prorepens*	a Moss				S3?	8	11.4 ± 0.0	NS
N	*Elodium blandowii*	Blandow's Bog Moss				S3?	3	47.2 ± 0.0	NS
N	*Sphagnum lindbergii*	Lindberg's Peat Moss				S3?	8	59.1 ± 0.0	NB
N	*Sphagnum riparium*	Streamside Peat Moss				S3?	4	29.9 ± 0.0	NS
N	*Cladonia stygia*	Black-footed Reindeer Lichen				S3?	20	44.9 ± 0.0	NS
N	*Anomodon rugelii*	Rugel's Anomodon Moss				S3S4	11	6.6 ± 0.0	NS
N	*Dichelyma capillaceum*	Hairlike Dichelyma Moss				S3S4	8	44.6 ± 0.0	NS
N	*Encalypta ciliata*	Fringed Extinguisher Moss				S3S4	1	94.4 ± 0.0	NB
N	*Encalypta procera*	Slender Extinguisher Moss				S3S4	6	23.4 ± 0.0	NS
N	*Myurella julacea*	Small Mouse-tail Moss				S3S4	4	20.6 ± 0.0	NS
N	*Splachnum ampullaceum*	Cruet Dung Moss				S3S4	3	23.9 ± 0.0	NS
N	*Thamnobryum alleghaniense*	a Moss				S3S4	22	15.4 ± 0.0	NS
N	*Tomentypnum nitens*	Golden Fuzzy Fen Moss				S3S4	1	11.5 ± 0.0	NS
N	*Schistidium agassizii*	Elf Bloom Moss				S3S4	4	49.8 ± 0.0	NS
N	*Hylocomiastrum pyrenaicum*	a Feather Moss				S3S4	4	31.2 ± 0.0	NS
N	*Bryoria pseudofuscescens*	Mountain Horsehair Lichen				S3S4	11	36.5 ± 0.0	NS
N	*Enchylium tenax*	Soil Tarpaper Lichen				S3S4	1	65.7 ± 0.0	NS
N	*Sticta fuliginosa*	Peppered Moon Lichen				S3S4	100	24.9 ± 0.0	NS
N	*Arctoparmelia incurva*	Finger Ring Lichen				S3S4	20	15.5 ± 0.0	NS
N	*Scytinium teretiusculum*	Curly Jellyskin Lichen				S3S4	27	11.2 ± 0.0	NS
N	*Leptogium acadiense*	Acadian Jellyskin Lichen				S3S4	36	11.2 ± 0.0	NS
N	*Scytinium subtile*	Appressed Jellyskin Lichen				S3S4	26	36.0 ± 0.0	NS
N	*Felipes leucopellaeus*	a lichen				S3S4	7	31.9 ± 0.0	NS
N	*Chaenotheca brachypoda*	a stubble lichen				S3S4	1	78.4 ± 0.0	NS
N	*Cladonia floerkeana*	Gritty British Soldiers Lichen				S3S4	5	89.9 ± 0.0	NS
N	*Vahliella leucophaea*	Shelter Shingle Lichen				S3S4	6	9.2 ± 0.0	NS
N	*Heterodermia speciosa*	Powdered Fringe Lichen				S3S4	104	9.8 ± 0.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
N	*Leptogium corticola*	Blistered Jellyskin Lichen				S3S4	371	12.9 ± 0.0	NS
N	*Melanohalea olivacea*	Spotted Camouflage Lichen				S3S4	5	6.8 ± 0.0	NS
N	*Parmeliopsis hyperopta*	Gray Starburst Lichen				S3S4	3	81.8 ± 0.0	NS
N	*Parmotrema perlatum*	Powdered Ruffle Lichen				S3S4	89	33.4 ± 0.0	NS
N	*Peltigera hymenina*	Cloudy Pelt Lichen				S3S4	1	82.9 ± 1.0	NS
N	*Sphaerophorus fragilis*	Fragile Coral Lichen				S3S4	2	98.2 ± 0.0	NS
N	*Sclerophora peronella*	Frosted Glass-whiskers Lichen				S3S4	25	13.4 ± 0.0	NS
N	*Coccocarpia palmicola*	Salted Shell Lichen				S3S4	409	11.0 ± 0.0	NS
N	*Physcia caesia*	Blue-gray Rosette Lichen				S3S4	3	51.7 ± 20.0	NS
N	*Physcia tenella*	Fringed Rosette Lichen				S3S4	1	80.9 ± 0.0	NB
N	*Anaptychia palmulata*	Shaggy Fringed Lichen				S3S4	295	4.1 ± 0.0	NS
N	*Evernia prunastri*	Valley Oakmoss Lichen				S3S4	15	24.8 ± 0.0	NS
N	*Heterodermia neglecta*	Fringe Lichen				S3S4	195	11.1 ± 0.0	NS
P	*Geum peckii*	Eastern Mountain Avens	Endangered	Endangered	Endangered	S1	3232	69.4 ± 0.0	NS
P	*Rhynchospora macrostachya*	Tall Beakrush	Endangered	Endangered	Endangered	S1	57	62.2 ± 0.0	NS
P	*Lyonia ligustrina*	Maleberry	Endangered			S1	15	100.0 ± 0.0	NS
P	*Coreopsis rosea*	Pink Coreopsis	Endangered	Endangered	Endangered	S2	392	91.9 ± 0.0	NS
P	*Clethra alnifolia*	Coast Pepper-Bush	Endangered	Threatened	Vulnerable	S2	304	40.7 ± 0.0	NS
P	*Sabatia kennedyana*	Plymouth Gentian	Endangered	Endangered	Endangered	S2S3	1230	53.7 ± 0.0	NS
P	*Fraxinus nigra*	Black Ash	Threatened		Threatened	S1S2	648	10.2 ± 0.0	NS
P	*Hydrocotyle umbellata*	Water Pennywort	Special Concern	Special Concern	Endangered	S2	199	43.2 ± 4.0	NS
P	*Eleocharis tuberculosa*	Tubercled Spike-rush	Special Concern	Special Concern	Vulnerable	S2	8	85.0 ± 0.0	NS
P	*Lachnanthes caroliniana*	Redroot	Special Concern	Special Concern	Vulnerable	S2	1483	61.5 ± 0.0	NS
P	*Lophiola aurea*	Goldencrest	Special Concern	Special Concern	Vulnerable	S2	894	57.9 ± 1.0	NS
P	*Lilaeopsis chinensis*	Eastern Lilaeopsis	Special Concern	Special Concern	Vulnerable	S3	154	88.0 ± 0.0	NS
P	*Scirpus longii*	Long's Bulrush	Special Concern		Vulnerable	S3	706	42.3 ± 0.0	NS
P	*Isoetes prototypus*	Prototype Quillwort	Special Concern	Special Concern	Vulnerable	S3	7	22.0 ± 0.0	NS
P	*Floerkea proserpinacoides*	False Mermaidweed	Not At Risk			S2S3	38	74.2 ± 1.0	NS
P	*Acer saccharinum*	Silver Maple				S1	41	71.7 ± 1.0	NB
P	*Toxicodendron vernix*	Poison Sumac				S1	42	61.1 ± 0.0	NS
P	*Osmorhiza depauperata*	Blunt Sweet Cicely				S1	1	94.9 ± 5.0	NS
P	*Antennaria rosea ssp. arida*	Rosy Pussytoes				S1	1	80.7 ± 0.0	NS
P	*Nabalus racemosus*	Glaucous Rattlesnakeroot				S1	53	26.8 ± 0.0	NS
P	*Andersonglossum boreale*	Northern Wild Comfrey				S1	2	82.9 ± 0.0	NS
P	*Turritis glabra*	Tower Mustard				S1	2	69.8 ± 0.0	NS
P	*Lobelia spicata*	Pale-Spiked Lobelia				S1	1	83.6 ± 50.0	NS
P	*Silene antirrhina*	Sleepy Catchfly				S1	5	49.2 ± 0.0	NS
P	*Hudsonia tomentosa*	Woolly Beach-heath				S1	3	94.1 ± 0.0	NB
P	*Callitriche hermaphroditica*	Northern Water-starwort				S1	4	64.3 ± 0.0	NS
P	*Elatine americana*	American Waterwort				S1	4	87.5 ± 0.0	NB
P	*Astragalus robbinsii var. minor*	Robbins' Milkvetch				S1	32	78.0 ± 0.0	NS
P	*Gentianella amarella ssp. acuta*	Northern Gentian				S1	3	71.1 ± 0.0	NB
P	*Ribes americanum*	Wild Black Currant				S1	6	71.7 ± 1.0	NB
P	*Trichostema dichotomum*	Forked Bluecurls				S1	9	65.3 ± 0.0	NS
P	*Fraxinus pennsylvanica*	Red Ash				S1	65	71.1 ± 0.0	NB
P	*Polygonum achoreum*	Leathery Knotweed				S1	4	12.3 ± 10.0	NS
P	*Persicaria careyi*	Carey's Smartweed				S1	1	91.3 ± 5.0	NB
P	*Phytolacca americana*	Common Pokeweed				S1	3	80.6 ± 0.0	NS
P	*Podostemum ceratophyllum*	Horn-leaved Riverweed				S1	4	55.3 ± 0.0	NS
P	*Montia fontana*	Water Blinks				S1	5	84.1 ± 0.0	NS
P	*Lysimachia minima*	Chaffweed				S1	1	44.5 ± 0.0	NS
P	*Lysimachia quadrifolia*	Whorled Yellow Loosestrife				S1	10	86.9 ± 1.0	NB
P	*Clematis occidentalis*	Purple Clematis				S1	13	76.9 ± 5.0	NB
P	*Ranunculus pensylvanicus*	Pennsylvania Buttercup				S1	2	76.9 ± 1.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
P	*Agalinis tenuifolia*	Slender Agalinis				S1	1	99.7 ± 0.0	NS
P	*Scrophularia lanceolata*	Lance-leaved Figwort				S1	4	52.6 ± 1.0	NS
P	*Veronica catenata*	Pink Water-Speedwell				S1	1	66.0 ± 0.0	NS
P	*Carex digitalis*	Slender Wood Sedge				S1	5	44.0 ± 0.0	NS
P	*Carex garberi*	Garber's Sedge				S1	3	81.6 ± 0.0	NB
P	*Carex laxiflora*	Loose-Flowered Sedge				S1	5	2.6 ± 5.0	NS
P	*Carex ormostachya*	Necklace Spike Sedge				S1	5	7.4 ± 0.0	NS
P	*Carex plantaginea*	Plantain-Leaved Sedge				S1	6	92.9 ± 0.0	NB
P	*Carex prairea*	Prairie Sedge				S1	3	49.1 ± 5.0	NS
P	*Carex tincta*	Tinged Sedge				S1	7	66.6 ± 1.0	NB
P	*Carex viridula var. saxilittoralis*	Greenish Sedge				S1	3	88.0 ± 5.0	NS
P	*Carex grisea*	Inflated Narrow-leaved Sedge				S1	3	93.5 ± 0.0	NB
P	*Carex saxatilis*	Russet Sedge				S1	14	75.0 ± 10.0	NB
P	*Cyperus diandrus*	Low Flatsedge				S1	3	91.5 ± 0.0	NS
P	*Eleocharis erythropoda*	Red-stemmed Spikerush				S1	13	65.9 ± 0.0	NB
P	*Fimbristylis autumnalis*	Slender Fimbry				S1	3	54.5 ± 0.0	NS
P	*Schoenoplectus torreyi*	Torrey's Bulrush				S1	17	59.5 ± 0.0	NS
P	*Elodea nuttallii*	Nuttall's Waterweed				S1	1	95.5 ± 0.0	NB
P	*Iris prismatica*	Slender Blue Flag				S1	1	74.4 ± 100.0	NS
P	*Sisyrinchium fuscatum*	Coastal Plain Blue-eyed-grass				S1	7	6.7 ± 1.0	NS
P	*Juncus secundus*	Secund Rush				S1	3	42.0 ± 3.0	NS
P	*Triantha glutinosa*	Sticky False-Asphodel				S1	3	81.7 ± 0.0	NB
P	*Trillium grandiflorum*	White Trillium				S1	3	84.7 ± 1.0	NS
P	*Malaxis monophyllos var. brachypoda*	North American White Adder's-mouth				S1	1	66.4 ± 0.0	NS
P	*Spiranthes casei var. casei*	Case's Ladies'-Tresses				S1	4	10.4 ± 0.0	NS
P	*Dichanthelium xanthophysum*	Slender Panic Grass				S1	10	77.8 ± 0.0	NS
P	*Torreyochloa pallida var. pallida*	Pale False Manna Grass				S1	2	19.0 ± 0.0	NS
P	*Graphephorum melicoides*	Purple False Oats				S1	4	77.9 ± 1.0	NB
P	*Adiantum pedatum*	Northern Maidenhair Fern				S1	11	74.4 ± 100.0	NS
P	*Equisetum palustre*	Marsh Horsetail				S1	4	77.0 ± 0.0	NB
P	*Selaginella rupestris*	Rock Spikemoss				S1	36	39.4 ± 0.0	NS
P	*Solidago hispida*	Hairy Goldenrod				S1?	4	57.5 ± 0.0	NS
P	*Carex pensylvanica*	Pennsylvania Sedge				S1?	1	87.1 ± 10.0	NS
P	*Bolboschoenus robustus*	Sturdy Bulrush				S1?	1	1.2 ± 5.0	NS
P	*Juncus anthelatus*	Greater Poverty Rush				S1?	1	35.5 ± 0.0	NS
P	*Allium schoenoprasum*	Wild Chives				S1?	15	66.5 ± 0.0	NS
P	*Allium schoenoprasum var. sibiricum*	Wild Chives				S1?	6	10.2 ± 7.0	NS
P	*Panicum dichotomiflorum ssp. puritanorum*	Spreading Panicgrass				S1?	6	44.3 ± 0.0	NS
P	*Huperzia selago*	Northern Firmoss				S1?	4	65.8 ± 1.0	NS
P	*Crocanthemum canadense*	Long-branched Frostweed			Endangered	S1S2	149	46.4 ± 0.0	NS
P	*Sanicula odorata*	Clustered Sanicle				S1S2	4	74.8 ± 2.0	NS
P	*Ageratina altissima*	White Snakeroot				S1S2	41	70.7 ± 10.0	NB
P	*Draba glabella*	Rock Whitlow-Grass				S1S2	12	65.8 ± 1.0	NS
P	*Proserpinaca intermedia*	Intermediate Mermaidweed				S1S2	5	70.7 ± 2.0	NS
P	*Carex haydenii*	Hayden's Sedge				S1S2	16	63.6 ± 0.0	NS
P	*Platanthera huronensis*	Fragrant Green Orchid				S1S2	8	82.9 ± 10.0	NS
P	*Calamagrostis stricta ssp. stricta*	Slim-stemmed Reed Grass				S1S2	1	100.0 ± 0.0	NS
P	*Woodsia alpina*	Alpine Cliff Fern				S1S2	11	82.1 ± 0.0	NB
P	*Selaginella selaginoides*	Low Spikemoss				S1S2	12	83.2 ± 0.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
P	*Carex vacillans*	Estuarine Sedge				S1S3	1	98.9 ± 0.0	NB
P	*Zizia aurea*	Golden Alexanders				S2	27	71.7 ± 1.0	NB
P	*Antennaria parlinii ssp. fallax*	Parlin's Pussytoes				S2	30	56.2 ± 0.0	NS
P	*Rudbeckia laciniata*	Cut-Leaved Coneflower				S2	24	5.3 ± 7.0	NS
P	*Arabis pycnocarpa*	Cream-flowered Rockcress				S2	13	71.8 ± 5.0	NB
P	*Cardamine maxima*	Large Toothwort				S2	31	41.1 ± 4.0	NS
P	*Hudsonia ericoides*	Pinebarren Golden Heather				S2	152	40.6 ± 0.0	NS
P	*Desmodium canadense*	Canada Tick-trefoil				S2	22	44.3 ± 0.0	NS
P	*Hylodesmum glutinosum*	Large Tick-trefoil				S2	33	38.1 ± 0.0	NS
P	*Oxytropis campestris var. johannensis*	Field Locoweed				S2	28	80.7 ± 0.0	NS
P	*Conopholis americana*	American Cancer-root				S2	101	18.9 ± 0.0	NS
P	*Anemonastrum canadense*	Canada Anemone				S2	37	10.5 ± 0.0	NS
P	*Hepatica americana*	Round-lobed Hepatica				S2	23	13.8 ± 0.0	NS
P	*Ranunculus sceleratus*	Cursed Buttercup				S2	3	72.0 ± 0.0	NB
P	*Galium boreale*	Northern Bedstraw				S2	6	19.0 ± 0.0	NS
P	*Gratiola neglecta*	Clammy Hedge-Hyssop				S2	17	67.4 ± 0.0	NB
P	*Carex pellita*	Woolly Sedge				S2	5	80.6 ± 0.0	NB
P	*Carex livida*	Livid Sedge				S2	2	71.8 ± 2.0	NB
P	*Juncus alpinoarticulatus ssp. americanus*	Northern Green Rush				S2	6	66.0 ± 0.0	NB
P	*Allium tricoccum*	Wild Leek				S2	93	23.9 ± 7.0	NS
P	*Lilium canadense*	Canada Lily				S2	12	70.6 ± 7.0	NS
P	*Cypripedium parviflorum var. pubescens*	Yellow Lady's-slipper				S2	6	14.8 ± 1.0	NS
P	*Cypripedium parviflorum var. makasin*	Small Yellow Lady's-Slipper				S2	6	67.2 ± 0.0	NS
P	*Cypripedium reginae*	Showy Lady's-Slipper				S2	6	66.5 ± 0.0	NB
P	*Platanthera flava var. flava*	Southern Rein Orchid				S2	379	61.6 ± 0.0	NS
P	*Platanthera flava var. herbiola*	Pale Green Orchid				S2	30	34.7 ± 1.0	NS
P	*Platanthera macrophylla*	Large Round-Leaved Orchid				S2	13	27.4 ± 0.0	NS
P	*Cinna arundinacea*	Sweet Wood Reed Grass				S2	41	65.4 ± 0.0	NS
P	*Elymus wiegandii*	Wiegand's Wild Rye				S2	2	71.8 ± 0.0	NB
P	*Festuca subverticillata*	Nodding Fescue				S2	3	77.2 ± 1.0	NS
P	*Piptatheropsis pungens*	Slender Ricegrass				S2	10	53.6 ± 0.0	NS
P	*Cryptogramma stelleri*	Steller's Rockbrake				S2	3	70.5 ± 0.0	NB
P	*Cuscuta cephalanthi*	Buttonbush Dodder				S2?	4	63.3 ± 0.0	NS
P	*Rumex persicarioides*	Peach-leaved Dock				S2?	3	91.4 ± 0.0	NS
P	*Crataegus submollis*	Quebec Hawthorn				S2?	3	71.6 ± 1.0	NB
P	*Carex peckii*	White-Tinged Sedge				S2?	3	96.3 ± 0.0	NB
P	*Thuja occidentalis*	Eastern White Cedar			Vulnerable	S2S3	588	4.2 ± 0.0	NS
P	*Osmorhiza longistylis*	Smooth Sweet Cicely				S2S3	8	74.4 ± 1.0	NS
P	*Erigeron philadelphicus*	Philadelphia Fleabane				S2S3	15	65.7 ± 0.0	NS
P	*Eutrochium dubium*	Coastal Plain Joe Pye Weed				S2S3	139	71.8 ± 0.0	NS
P	*Lactuca hirsuta*	Hairy Lettuce				S2S3	5	45.5 ± 1.0	NS
P	*Impatiens pallida*	Pale Jewelweed				S2S3	11	65.7 ± 0.0	NS
P	*Caulophyllum thalictroides*	Blue Cohosh				S2S3	27	33.5 ± 8.0	NS
P	*Draba arabisans*	Rock Whitlow-Grass				S2S3	26	65.2 ± 0.0	NS
P	*Boechera stricta*	Drummond's Rockcress				S2S3	16	62.2 ± 0.0	NB
P	*Stellaria humifusa*	Saltmarsh Starwort				S2S3	10	72.6 ± 0.0	NB
P	*Oxybasis rubra*	Red Goosefoot				S2S3	8	71.7 ± 1.0	NB
P	*Hypericum majus*	Large St John's-wort				S2S3	6	63.3 ± 1.0	NS
P	*Hypericum x dissimulatum*	Disguised St. John's-wort				S2S3	8	27.0 ± 0.0	NS
P	*Euphorbia polygonifolia*	Seaside Spurge				S2S3	5	91.9 ± 0.0	NS
P	*Myriophyllum farwellii*	Farwell's Water Milfoil				S2S3	12	37.3 ± 0.0	NS
P	*Hedeoma pulegioides*	American False Pennyroyal				S2S3	62	2.0 ± 5.0	NS
P	*Oenothera fruticosa ssp.*	Narrow-leaved Evening				S2S3	25	37.6 ± 0.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
	tetragona	Primrose							
P	*Polygala polygama*	Racemed Milkwort				S2S3	47	6.3 ± 0.0	NS
P	*Polygonum aviculare ssp. buxiforme*	Box Knotweed				S2S3	3	18.9 ± 7.0	NS
P	*Polygonum oxyspermum ssp. raii*	Ray's Knotweed				S2S3	1	90.1 ± 5.0	NS
P	*Rumex triangulivalvis*	Triangular-valve Dock				S2S3	12	73.3 ± 0.0	NB
P	*Primula mistassinica*	Mistassini Primrose				S2S3	10	76.8 ± 5.0	NB
P	*Anemone quinquefolia*	Wood Anemone				S2S3	57	18.6 ± 1.0	NS
P	*Caltha palustris*	Yellow Marsh Marigold				S2S3	19	3.4 ± 0.0	NS
P	*Amelanchier fernaldii*	Fernald's Serviceberry				S2S3	1	79.2 ± 7.0	NS
P	*Potentilla canadensis*	Canada Cinquefoil				S2S3	14	43.6 ± 0.0	NS
P	*Galium obtusum*	Blunt-leaved Bedstraw				S2S3	17	36.4 ± 0.0	NS
P	*Salix pellita*	Satiny Willow				S2S3	21	46.1 ± 7.0	NS
P	*Tiarella stolonifera*	Stoloniferous Foamflower				S2S3	21	73.0 ± 1.0	NB
P	*Agalinis purpurea var. parviflora*	Small-flowered Purple False Foxglove				S2S3	7	75.2 ± 0.0	NB
P	*Boehmeria cylindrica*	Small-spike False-nettle				S2S3	57	37.7 ± 0.0	NS
P	*Carex adusta*	Lesser Brown Sedge				S2S3	3	55.9 ± 7.0	NS
P	*Carex capillaris*	Hairlike Sedge				S2S3	23	71.8 ± 2.0	NB
P	*Carex comosa*	Bearded Sedge				S2S3	10	11.0 ± 0.0	NS
P	*Carex houghtoniana*	Houghton's Sedge				S2S3	10	41.9 ± 0.0	NS
P	*Carex hystericina*	Porcupine Sedge				S2S3	9	48.0 ± 1.0	NS
P	*Carex longii*	Long's Sedge				S2S3	10	68.4 ± 10.0	NS
P	*Carex scirpoidea*	Scirpuslike Sedge				S2S3	6	97.7 ± 0.0	NB
P	*Eleocharis ovata*	Ovate Spikerush				S2S3	8	49.9 ± 0.0	NS
P	*Scirpus pedicellatus*	Stalked Bulrush				S2S3	25	54.8 ± 5.0	NS
P	*Vallisneria americana*	Wild Celery				S2S3	42	62.6 ± 0.0	NS
P	*Najas gracillima*	Thread-Like Naiad				S2S3	20	48.4 ± 1.0	NS
P	*Goodyera pubescens*	Downy Rattlesnake-Plantain				S2S3	95	26.4 ± 0.0	NS
P	*Spiranthes casei*	Case's Ladies'-Tresses				S2S3	2	46.2 ± 7.0	NS
P	*Spiranthes casei var. novaescotiae*	Case's Ladies'-Tresses				S2S3	7	36.5 ± 0.0	NS
P	*Spiranthes lucida*	Shining Ladies'-Tresses				S2S3	13	24.5 ± 1.0	NS
P	*Calamagrostis stricta*	Slim-stemmed Reed Grass				S2S3	2	83.2 ± 0.0	NB
P	*Potamogeton friesii*	Fries' Pondweed				S2S3	12	81.9 ± 2.0	NS
P	*Cystopteris laurentiana*	Laurentian Bladder Fern				S2S3	1	97.8 ± 1.0	NB
P	*Woodsia glabella*	Smooth Cliff Fern				S2S3	62	62.7 ± 1.0	NB
P	*Botrychium lanceolatum ssp. angustisegmentum*	Narrow Triangle Moonwort				S2S3	12	65.8 ± 1.0	NS
P	*Botrychium simplex*	Least Moonwort				S2S3	3	74.3 ± 0.0	NB
P	*Ophioglossum pusillum*	Northern Adder's-tongue				S2S3	4	5.4 ± 7.0	NS
P	*Potamogeton pulcher*	Spotted Pondweed			Vulnerable	S3	45	10.1 ± 0.0	NS
P	*Conioselinum chinense*	Chinese Hemlock-parsley				S3	36	12.3 ± 1.0	NS
P	*Hieracium robinsonii*	Robinson's Hawkweed				S3	8	95.8 ± 0.0	NB
P	*Iva frutescens*	Big-leaved Marsh-elder				S3	35	89.4 ± 0.0	NS
P	*Symphyotrichum boreale*	Boreal Aster				S3	9	15.3 ± 0.0	NS
P	*Symphyotrichum ciliolatum*	Fringed Blue Aster				S3	13	42.5 ± 0.0	NS
P	*Symphyotrichum undulatum*	Wavy-leaved Aster				S3	152	38.9 ± 0.0	NS
P	*Alnus serrulata*	Smooth Alder				S3	768	39.6 ± 0.0	NS
P	*Betula michauxii*	Michaux's Dwarf Birch				S3	75	63.1 ± 0.0	NS
P	*Betula pumila*	Bog Birch				S3	2	98.3 ± 1.0	NB
P	*Cardamine parviflora*	Small-flowered Bittercress				S3	16	57.1 ± 7.0	NS
P	*Palustricodon aparinoides*	Marsh Bellflower				S3	19	56.6 ± 1.0	NS
P	*Lobelia kalmii*	Brook Lobelia				S3	7	71.7 ± 1.0	NB
P	*Mononeuria groenlandica*	Greenland Stitchwort				S3	76	49.5 ± 0.0	NS
P	*Sagina nodosa*	Knotted Pearlwort				S3	46	14.2 ± 3.0	NS
P	*Sagina nodosa ssp. borealis*	Knotted Pearlwort				S3	2	39.5 ± 5.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
P	*Stellaria longifolia*	Long-leaved Starwort				S3	4	73.5 ± 10.0	NB
P	*Ceratophyllum echinatum*	Prickly Hornwort				S3	10	6.6 ± 0.0	NS
P	*Viburnum edule*	Squashberry				S3	11	93.1 ± 0.0	NB
P	*Crassula aquatica*	Water Pygmyweed				S3	2	99.1 ± 1.0	NB
P	*Vaccinium uliginosum*	Alpine Bilberry				S3	4	89.0 ± 0.0	NS
P	*Halenia deflexa*	Spurred Gentian				S3	12	66.6 ± 1.0	NB
P	*Geranium bicknellii*	Bicknell's Crane's-bill				S3	23	49.7 ± 0.0	NS
P	*Myriophyllum verticillatum*	Whorled Water Milfoil				S3	4	68.9 ± 1.0	NB
P	*Utricularia resupinata*	Inverted Bladderwort				S3	38	51.7 ± 0.0	NS
P	*Epilobium densum*	Downy Willowherb				S3	12	73.1 ± 5.0	NB
P	*Polygala sanguinea*	Blood Milkwort				S3	24	38.6 ± 0.0	NS
P	*Persicaria arifolia*	Halberd-leaved Tearthumb				S3	13	48.4 ± 0.0	NS
P	*Plantago rugelii*	Rugel's Plantain				S3	10	24.5 ± 1.0	NS
P	*Primula laurentiana*	Laurentian Primrose				S3	79	13.8 ± 2.0	NS
P	*Samolus parviflorus*	Seaside Brookweed				S3	58	88.1 ± 0.0	NS
P	*Pyrola minor*	Lesser Pyrola				S3	5	39.3 ± 1.0	NS
P	*Anemone virginiana*	Virginia Anemone				S3	1	85.5 ± 0.0	NS
P	*Cephalanthus occidentalis*	Common Buttonbush				S3	1976	36.5 ± 0.0	NS
P	*Galium labradoricum*	Labrador Bedstraw				S3	1	99.6 ± 1.0	NB
P	*Salix pedicellaris*	Bog Willow				S3	99	15.2 ± 0.0	NS
P	*Salix sericea*	Silky Willow				S3	185	39.1 ± 0.0	NS
P	*Saxifraga paniculata ssp. laestadii*	Laestadius' Saxifrage				S3	47	78.4 ± 1.0	NS
P	*Lindernia dubia*	Yellow-seeded False Pimperel				S3	20	37.6 ± 0.0	NS
P	*Laportea canadensis*	Canada Wood Nettle				S3	24	48.0 ± 0.0	NS
P	*Pilea pumila*	Dwarf Clearweed				S3	7	10.5 ± 0.0	NS
P	*Viola nephrophylla*	Northern Bog Violet				S3	19	76.3 ± 0.0	NB
P	*Carex bebbii*	Bebb's Sedge				S3	6	73.4 ± 0.0	NB
P	*Carex castanea*	Chestnut Sedge				S3	1	93.5 ± 1.0	NB
P	*Carex cryptolepis*	Hidden-scaled Sedge				S3	19	45.9 ± 3.0	NS
P	*Carex eburnea*	Bristle-leaved Sedge				S3	17	89.1 ± 0.0	NB
P	*Carex lupulina*	Hop Sedge				S3	52	32.4 ± 0.0	NS
P	*Carex rosea*	Rosy Sedge				S3	23	2.8 ± 4.0	NS
P	*Carex swanii*	Swan's Sedge				S3	86	3.1 ± 0.0	NS
P	*Carex tenera*	Tender Sedge				S3	12	36.5 ± 0.0	NS
P	*Carex tribuloides*	Blunt Broom Sedge				S3	19	37.2 ± 0.0	NS
P	*Carex tuckermanii*	Tuckerman's Sedge				S3	3	90.3 ± 0.0	NB
P	*Carex atratiformis*	Scabrous Black Sedge				S3	1	71.8 ± 0.0	NB
P	*Eleocharis nitida*	Quill Spikerush				S3	14	6.7 ± 0.0	NS
P	*Eleocharis flavescens var. olivacea*	Bright-green Spikerush				S3	16	30.5 ± 0.0	NS
P	*Eleocharis quinqueflora*	Few-flowered Spikerush				S3	10	57.4 ± 0.0	NS
P	*Eriophorum gracile*	Slender Cottongrass				S3	9	11.1 ± 3.0	NS
P	*Coeloglossum viride*	Long-bracted Frog Orchid				S3	14	80.5 ± 0.0	NS
P	*Cypripedium parviflorum*	Yellow Lady's-slipper				S3	8	74.0 ± 2.0	NB
P	*Neottia bifolia*	Southern Twayblade				S3	110	18.8 ± 0.0	NS
P	*Platanthera flava*	Southern Rein-Orchid				S3	55	63.3 ± 0.0	NS
P	*Platanthera grandiflora*	Large Purple Fringed Orchid				S3	21	27.7 ± 1.0	NS
P	*Platanthera hookeri*	Hooker's Orchid				S3	24	24.2 ± 5.0	NS
P	*Dichanthelium linearifolium*	Narrow-leaved Panic Grass				S3	16	17.5 ± 5.0	NS
P	*Piptatheropsis canadensis*	Canada Ricegrass				S3	16	50.1 ± 0.0	NS
P	*Poa glauca*	Glaucous Blue Grass				S3	18	65.3 ± 0.0	NS
P	*Stuckenia filiformis*	Thread-leaved Pondweed				S3	7	14.8 ± 7.0	NS
P	*Potamogeton praelongus*	White-stemmed Pondweed				S3	12	71.8 ± 1.0	NB
P	*Potamogeton richardsonii*	Richardson's Pondweed				S3	10	71.8 ± 1.0	NB
P	*Potamogeton zosteriformis*	Flat-stemmed Pondweed				S3	13	71.8 ± 0.0	NB
P	*Asplenium viride*	Green Spleenwort				S3	22	58.6 ± 0.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
P	*Dryopteris fragrans*	Fragrant Wood Fern				S3	42	78.4 ± 0.0	NB
P	*Sceptridium dissectum*	Dissected Moonwort				S3	12	48.6 ± 1.0	NS
P	*Polypodium appalachianum*	Appalachian Polypody				S3	29	35.3 ± 0.0	NS
P	*Persicaria amphibia var. emersa*	Long-root Smartweed				S3?	47	54.1 ± 1.0	NS
P	*Spiranthes ochroleuca*	Yellow Ladies'-tresses				S3?	45	29.8 ± 1.0	NS
P	*Diphasiastrum x sabinifolium*	Savin-leaved Ground-cedar				S3?	8	38.6 ± 0.0	NS
P	*Bidens vulgata*	Tall Beggarticks				S3S4	4	88.6 ± 0.0	NS
P	*Erigeron hyssopifolius*	Hyssop-leaved Fleabane				S3S4	77	77.0 ± 0.0	NB
P	*Hieracium paniculatum*	Panicled Hawkweed				S3S4	51	3.7 ± 1.0	NS
P	*Bidens beckii*	Water Beggarticks				S3S4	44	7.0 ± 0.0	NS
P	*Packera paupercula*	Balsam Groundsel				S3S4	19	77.1 ± 0.0	NB
P	*Atriplex glabriuscula var. franktonii*	Frankton's Saltbush				S3S4	3	64.4 ± 1.0	NB
P	*Shepherdia canadensis*	Soapberry				S3S4	1	94.7 ± 0.0	NS
P	*Vaccinium boreale*	Northern Blueberry				S3S4	1	94.8 ± 0.0	NS
P	*Vaccinium cespitosum*	Dwarf Bilberry				S3S4	72	35.3 ± 0.0	NS
P	*Vaccinium corymbosum*	Highbush Blueberry				S3S4	321	27.9 ± 1.0	NS
P	*Fagus grandifolia*	American Beech				S3S4	678	2.4 ± 0.0	NS
P	*Bartonia virginica*	Yellow Bartonia				S3S4	64	36.5 ± 0.0	NS
P	*Proserpinaca pectinata*	Comb-leaved Mermaidweed				S3S4	115	4.4 ± 1.0	NS
P	*Decodon verticillatus*	Swamp Loosestrife				S3S4	244	28.4 ± 0.0	NS
P	*Nuphar microphylla*	Small Yellow Pond-lily				S3S4	9	26.3 ± 0.0	NS
P	*Persicaria pensylvanica*	Pennsylvania Smartweed				S3S4	29	4.9 ± 7.0	NS
P	*Fallopia scandens*	Climbing False Buckwheat				S3S4	17	26.1 ± 7.0	NS
P	*Rumex pallidus*	Seabeach Dock				S3S4	8	59.4 ± 0.0	NB
P	*Pyrola asarifolia*	Pink Pyrola				S3S4	9	31.1 ± 7.0	NS
P	*Endotropis alnifolia*	alder-leaved buckthorn				S3S4	23	37.9 ± 0.0	NS
P	*Amelanchier spicata*	Running Serviceberry				S3S4	67	25.0 ± 3.0	NS
P	*Fragaria vesca ssp. americana*	Woodland Strawberry				S3S4	15	74.9 ± 1.0	NB
P	*Galium aparine*	Common Bedstraw				S3S4	17	71.7 ± 1.0	NB
P	*Geocaulon lividum*	Northern Comandra				S3S4	14	55.1 ± 1.0	NS
P	*Limosella australis*	Southern Mudwort				S3S4	8	93.3 ± 0.0	NS
P	*Ulmus americana*	White Elm				S3S4	74	3.7 ± 0.0	NS
P	*Verbena hastata*	Blue Vervain				S3S4	94	18.3 ± 1.0	NS
P	*Viola sagittata var. ovata*	Arrow-Leaved Violet				S3S4	82	7.2 ± 0.0	NS
P	*Viola selkirkii*	Great-Spurred Violet				S3S4	3	65.8 ± 1.0	NS
P	*Symplocarpus foetidus*	Eastern Skunk Cabbage				S3S4	512	11.8 ± 0.0	NS
P	*Carex argyrantha*	Silvery-flowered Sedge				S3S4	26	7.4 ± 0.0	NS
P	*Sisyrinchium atlanticum*	Eastern Blue-Eyed-Grass				S3S4	344	7.2 ± 0.0	NS
P	*Triglochin gaspensis*	Gasp ├⌐ Arrowgrass				S3S4	24	64.5 ± 0.0	NS
P	*Juncus acuminatus*	Sharp-Fruit Rush				S3S4	12	36.8 ± 1.0	NS
P	*Juncus subcaudatus*	Woods-Rush				S3S4	24	14.5 ± 0.0	NS
P	*Luzula parviflora ssp. melanocarpa*	Black-fruited Woodrush				S3S4	9	54.2 ± 7.0	NS
P	*Goodyera repens*	Lesser Rattlesnake-plantain				S3S4	22	35.5 ± 0.0	NS
P	*Liparis loeselii*	Loesel's Twayblade				S3S4	17	14.8 ± 1.0	NS
P	*Platanthera obtusata*	Blunt-leaved Orchid				S3S4	22	59.9 ± 2.0	NB
P	*Platanthera orbiculata*	Small Round-leaved Orchid				S3S4	48	10.9 ± 0.0	NS
P	*Alopecurus aequalis*	Short-awned Foxtail				S3S4	6	52.2 ± 0.0	NS
P	*Dichanthelium clandestinum*	Deer-tongue Panic Grass				S3S4	269	35.7 ± 0.0	NS
P	*Coleataenia longifolia*	Long-leaved Panicgrass				S3S4	2296	39.3 ± 0.0	NS
P	*Panicum philadelphicum*	Philadelphia Panicgrass				S3S4	32	36.3 ± 0.0	NS
P	*Koeleria spicata*	Narrow False Oats				S3S4	20	77.2 ± 0.0	NB
P	*Asplenium trichomanes*	Maidenhair Spleenwort				S3S4	24	20.5 ± 0.0	NS
P	*Lorinseria areolata*	Netted Chain Fern				S3S4	297	46.1 ± 0.0	NS
P	*Equisetum pratense*	Meadow Horsetail				S3S4	9	39.1 ± 0.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
P	*Diphasiastrum complanatum*	Northern Ground-cedar				S3S4	14	23.3 ± 1.0	NS
P	*Diphasiastrum sitchense*	Sitka Ground-cedar				S3S4	1	95.2 ± 1.0	NS
P	*Huperzia appressa*	Mountain Firmoss				S3S4	39	60.3 ± 5.0	NB
P	*Sceptridium multifidum*	Leathery Moonwort				S3S4	14	45.0 ± 0.0	NS
P	*Botrychium matricariifolium*	Daisy-leaved Moonwort				S3S4	3	65.2 ± 2.0	NB
P	*Bidens discoidea*	Swamp Beggarticks				SH	1	36.3 ± 0.0	NS
P	*Dichanthelium meridionale*	Matting Witchgrass				SH	1	23.9 ± 10.0	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.

# recs	CITATION
6456	Lepage, D. 2014. Maritime Breeding Bird Atlas Database. Bird Studies Canada, Sackville NB, 407,838 recs.
4918	iNaturalist.ca. 2023. iNaturalist Data Export December 2022. iNaturalist.org; iNaturalist.ca, Web site: 128634 recs.
4333	Morrison, Guy. 2011. Maritime Shorebird Survey (MSS) database. Canadian Wildlife Service, Ottawa, 15939 surveys. 86171 recs.
3139	Erskine, A.J. 1992. Maritime Breeding Bird Atlas Database. NS Museum & Nimbus Publ., Halifax, 82,125 recs.
3105	Pardieck, K.L., Ziolkowski Jr., D.J., Lutmerding, M., Aponte, V.I., and Hudson, M-A.R. 2020. North American Breeding Bird Survey Dataset 1966 - 2019: U.S. Geological Survey data release, https://doi.org/10.5066/P9J6QUF6
2749	eBird. 2014. eBird Basic Dataset. Version: EBD_relNov-2014. Ithaca, New York. Nov 2014. Cornell Lab of Ornithology, 25036 recs.
2098	iNaturalist. 2020. iNaturalist Data Export 2020. iNaturalist.org and iNaturalist.ca, Web site: 128728 recs.
1693	McNeil, J.A. 2010. Ribbonsnake (Thamophis sauritus) sightings, 1900-2009. Parks Canada, 2521 recs of 716+ individuals.
1592	Paquet, Julie. 2018. Atlantic Canada Shorebird Survey (ACSS) database 2012-2018. Environment Canada, Canadian Wildlife Service.
1520	Toms, B. 2018. A census of Eastern Mountain Avens (Geum peckii) in Big Meadow Bog, Brier Island Nova Scotia 2018. Mersey Tobeatic Research Institute, 326 Records.
1462	Blaney, C.S.; Mazerolle, D.M. 2010. Fieldwork 2010. Atlantic Canada Conservation Data Centre. Sackville NB, 15508 recs.
1198	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2013. Atlantic Canada Conservation Data Centre Fieldwork 2013. Atlantic Canada Conservation Data Centre, 9000+ recs.
1169	Blaney, C.S.; Mazerolle, D.M. 2012. Fieldwork 2012. Atlantic Canada Conservation Data Centre, 13,278 recs.
1139	Belliveau, A. 2012. 2012 Atlantic Coastal Plain Flora observations. Mersey Tobeatic Research Institute, 1543.
1104	Phinney, Lori. 2020. Pre- and post White-nose Syndrome bat acoustic monitoring, NS. Mersey Tobeatic Research Institute, 1279 recs.
939	Toms, Brad. 2012. Atlantic Coastal Plain Flora records, 2011. Mersey-Tobiatic Research Institute, 1109 recs.
916	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2014. Atlantic Canada Conservation Data Centre Fieldwork 2014. Atlantic Canada Conservation Data Centre, # recs.
876	Blaney, C.S. & Mazerolle, D.M. 2011. Atlantic Coastal Plain flora species at risk surveys for Mersey Tobeatic Research Institute. Atlantic Canada Conservation Data Centre, 1724 recs.
871	SwiftWatch. 2022. Total Chimney Swift counts from roost watches for the duration of the SwiftWatch program (2011-2021). Birds Canada.
807	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.
793	Benjamin, L.K. (compiler). 2007. Significant Habitat & Species Database. Nova Scotia Dept Natural Resources, 8439 recs.
783	Toms, B. & Belliveau, A.; LaRue, D.; EMA Recovery Team. 2014. 2013-14 Geum peckii observations. Mersey Tobeatic Research Institute, 783 records.
705	Belliveau, A.G. 2020. E.C. Smith Herbarium and Atlantic Canada Conservation Data Centre Fieldwork 2019, 2020. E.C. Smith Herbarium.
687	Brooks, Delaney. 2023. Port of Saint John Waterbird Survey since 2019. Nature NB.
593	Toms, B. & Belliveau, A.; LaRue, D.; EMA Recovery Team. 2012. 2012 Geum peckii observations. Mersey Tobeatic Research Institute, 594 records.
573	Blaney, C.S.; Spicer, C.D.; Popma, T.M.; Hanel, C. 2002. Fieldwork 2002. Atlantic Canada Conservation Data Centre. Sackville NB, 2252 recs.
560	Berrigan, L. 2019. Maritimes Marsh Monitoring Project 2013, 2014, 2016, 2017, and 2018 data. Bird Studies Canada, Sackville, NB.
527	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2015. Atlantic Canada Conservation Data Centre Fieldwork 2015. Atlantic Canada Conservation Data Centre, # recs.
483	Clayden, S. Digitization of Wolfgang Maass Nova Scotia forest lichen collections, 1964-2004. New Brunswick Museum. 2018.
465	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.
455	Churchill, J.L. 2018. Atlantic Canada Conservation Data Centre Fieldwork 2018. Atlantic Canada Conservation Data Centre, 907 recs.
448	Newell, R.E. 2000. E.C. Smith Herbarium Database. Acadia University, Wolfville NS, 7139 recs.
410	Toms, B. & Hill, N.M.; Neily, T. 2014. Atlantic Coastal Plain Flora records, 2011. Mersey Tobeatic Research Institute, 430 recs.
402	Toms, Brad. 2011. Atlantic Coastal Plain Flora records 2010. Mersey-Tobiatic Research Institute, 1074 recs.
398	Brazner, John. 2022. Clearcut Transect Study. Nova Scotia Department of Natural Resources and Renewables Wildlife Division.
396	Hill, N.M. 1994. Status report on the Long's bulrush Scirpus longii in Canada. Committee on the Status of Endangered Wildlife in Canada, 7 recs.
387	Hicks, Andrew. 2009. Coastal Waterfowl Surveys Database, 2000-08. Canadian Wildlife Service, Sackville, 46488 recs (11149 non-zero).
379	Blaney, C.S.; Mazerolle, D.M. 2008. Fieldwork 2008. Atlantic Canada Conservation Data Centre. Sackville NB, 13343 recs.
377	Churchill, J.L. 2019. Atlantic Canada Conservation Data Centre Fieldwork 2019. Atlantic Canada Conservation Data Centre.
366	Churchill, J.L. 2018. Atlantic Canada Conservation Data Centre Fieldwork 2017. Atlantic Canada Conservation Data Centre, 2318 recs.
366	Neily, T.H. & Pepper, C.; Toms, B. 2020. Nova Scotia lichen database [as of 2020-05-25]. Mersey Tobeatic Research Institute, 668 recs.

# recs	CITATION
361	Belliveau, A.G. 2016. Atlantic Canada Conservation Data Centre Fieldwork 2016. Atlantic Canada Conservation Data Centre, 10695 recs.
357	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.
351	Scott, F.W. 2002. Nova Scotia Herpetofauna Atlas Database. Acadia University, Wolfville NS, 8856 recs.
350	Eaton, S. 2014. Nova Scotia Wood Turtle Database. Environment and Climate Change Canada, 4843 recs.
335	Belliveau, A.G. 2021. E.C. Smith Herbarium and Atlantic Canada Conservation Data Centre Fieldwork 2021. E.C. Smith Herbarium.
311	Staicer, Cindy. 2023. 2022 SAR Bird ARU occurrences. Dalhousie University, 379 records.
308	Churchill, J.L. 2021. Atlantic Canada Conservation Data Centre Fieldwork 2021. Atlantic Canada Conservation Data Centre.
303	Blaney, C.S.; Mazerolle, D.M.; Oberndorfer, E. 2007. Fieldwork 2007. Atlantic Canada Conservation Data Centre. Sackville NB, 13770 recs.
300	McNeil, Jeffie. 2022. Wood Turtle GPS Tracking data, 2021. Mersey Tobeatic Research Institute.
294	Staicer, C. 2021. Additional compiled Nova Scotia Species at Risk bird records, 2005-2020. Dalhousie University.
291	Churchill, J.L. 2022. Atlantic Canada Conservation Data Centre Fieldwork 2022. Atlantic Canada Conservation Data Centre.
289	Toms, Brad & Pepper, Chris; Neily, Tom. 2022. Nova Scotia lichen database [as of 2022-04]. Mersey Tobeatic Research Institute.
279	Belliveau, A.G. 2018. Atlantic Canada Conservation Data Centre Fieldwork 2017. Atlantic Canada Conservation Data Centre.
275	Mazerolle, D.M. 2017. Atlantic Canada Conservation Data Centre Fieldwork 2017. Atlantic Canada Conservation Data Centre.
270	Clayden, S.R. 1998. NBM Science Collections databases: vascular plants. New Brunswick Museum, Saint John NB, 19759 recs.
249	Smith, D. 2013. Personal communication concerning Anguilla rostrata trapping results in Kejimkujik NP, NS. Winter 2013. Pers. comm.
249	Wildlife Division. 2021. Fraxinus nigra records assembled to define and model habitat. Nova Scotia Department of Natural Resources and Renewables.
248	Neily, T.H. 2017. Nova Scotia lichen records. Mersey Tobeatic Research Institute.
247	Chapman, C.J. 2019. Atlantic Canada Conservation Data Centre 2019 botanical fieldwork. Atlantic Canada Conservation Data Centre, 11729 recs.
238	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.
230	Brazner, J. 2016. Nova Scotia Forested Wetland Bird Surveys. Nova Scotia Department of Lands and Forestry.
222	Westwood, A., Staicer, C. 2016. Nova Scotia landbird Species at Risk observations. Dalhousie University.
218	Blaney, C.S.; Mazerolle, D.M. 2009. Fieldwork 2009. Atlantic Canada Conservation Data Centre. Sackville NB, 13395 recs.
214	Mazerolle, D.M. 2016. Atlantic Canada Conservation Data Centre Fieldwork 2017. Atlantic Canada Conservation Data Centre.
213	Belliveau, A.G. 2014. Plant Records from Southern and Central Nova Scotia. Atlantic Canada Conservation Data Centre, 919 recs.
209	Riley, J. 2020. Digby County lichen observations. Pers. comm. to J.L. Churchill.
204	Klymko, J. 2018. Maritimes Butterfly Atlas database. Atlantic Canada Conservation Data Centre.
204	McNeil, Jeffie. 2023. Ribbonsnake records from 2022. Mersey Tobeatic Research Institute.
202	Blaney, C.S. & Mazerolle, D.M. 2011. 2011 botanical surveys in Kejimkujik National Park. Atlantic Canada Conservation Data Centre, 820 recs.
199	Toms, B. 2018. Bat Species data from www.batconservation.ca for Nova Scotia. Mersey Tobeatic Research Institute, 547 Records.
196	Belliveau, A.G. 2018. E.C. Smith Herbarium and Atlantic Canada Conservation Data Centre Fieldwork 2018. E.C. Smith Herbarium, 6226 recs.
193	Staicer, Cindy. 2023. 2022 SAR Bird field occurrences from the Landbirds at Risk Project, NS. Dalhousie University, 446 records.
190	McNeil, J.A. 2019. Eastern Painted Turtle trapping records, 2019. Mersey Tobeatic Research Institute.
184	Belland, R.J. Maritimes moss records from various herbarium databases. 2014.
183	East Coast Aquatics Inc. 2023. Year 3 (2022) Wood Turtle Monitoring Hwy 104 Sutherlands River To Antigonish.
175	Blaney, C.S. 2020. Sean Blaney 2020 field data. Atlantic Canada Conservation Data Centre, 4407 records.
175	Blaney, C.S; Korol, J.B.; Crowell, I. 2023. 2022 AC CDC Botany program field data. Atlantic Canada Conservation Data Centre, 5293 records.
169	Stantec. 2014. Energy East Pipeline Corridor Species Occurrence Data. Stantec Inc., 4934 records.
167	Manthorne, A. 2014. MaritimesSwiftwatch Project database 2013-2014. Bird Studies Canada, Sackville NB, 326 recs.
167	Sollows, M.C,. 2008. NBM Science Collections databases: mammals. New Brunswick Museum, Saint John NB, download Jan. 2008, 4983 recs.
163	iNaturalist. 2018. iNaturalist Data Export 2018. iNaturalist.org and iNaturalist.ca, Web site: 11700 recs.
159	Brunelle, P.-M. (compiler). 2009. ADIP/MDDS Odonata Database: data to 2006 inclusive. Atlantic Dragonfly Inventory Program (ADIP), 24200 recs.
157	Paquet, Julie. 2019. Atlantic Canada Shorebird Survey ACSS database for 2019. Environment Canada, Canadian Wildlife Service.
155	Riley, J. 2019. Digby County lichen observations. Pers. comm. to J.L. Churchill, 50 recs.
148	McNeil, J.A. 2011. Ribbonsnake (Thamophis sauritus) sightings, 2010. Parks Canada, 148 recs of 70+ individuals.
140	Cameron, R.P. 2009. Cyanolichen database. Nova Scotia Environment & Labour, 1724 recs.
139	Benedict, B. Connell Herbarium Specimens. University New Brunswick, Fredericton. 2003.
139	McNeil, Jeffie. 2023. 2022 Turtle Records. Mersey Tobeatic Research Institute.
130	Keddy, C.J. 1989. Habitat securement for redroot, golden crest and Long's bulrush in Ponhook Lake, NS. World Wildlife Fund (Canada), 131 recs.
129	Wallace, S. 2020. Stewardship Department species occurrence data on NTNB preserves. Nature Trust of New Brunswick.
124	Benjamin, L.K. 2009. NSDNR Fieldwork & Consultants Reports. Nova Scotia Dept Natural Resources, 143 recs.
122	Chapman-Lam, C.J. 2021. Atlantic Canada Conservation Data Centre 2020 botanical fieldwork. Atlantic Canada Conservation Data Centre, 17309 recs.
122	McNeil, Jeffie. 2022. Ribbonsnake records, 2021. Mersey Tobeatic Research Institute.
121	McNeil, J.A. 2016. Blandings Turtle (Emydoidea blandingii), Eastern Ribbonsnake (Thamnophis sauritus), Wood Turtle (Glyptemys insculpta), and Snapping Turtle (Chelydra serpentina) sightings, 2016. Mersey Tobeatic Research Institute, 774 records.
121	Staicer, Cindy. 2022. 2021 Landbird Species at Risk observations. Dalhousie University.
119	McNeil, J.A. 2020. Snapping Turtle and Eastern Painted Turtle records, 2020. Mersey Tobeatic Research Institute.
113	Benjamin, L.K. (compiler). 2012. Significant Habitat & Species Database. Nova Scotia Dept Natural Resources, 4965 recs.
113	Munro, Marian K. Nova Scotia Provincial Museum of Natural History Herbarium Database. Nova Scotia Provincial Museum of Natural History, Halifax, Nova Scotia. 2013.

# recs	CITATION
113	Munro, Marian K. Tracked lichen specimens, Nova Scotia Provincial Museum of Natural History Herbarium. Atlantic Canada Conservation Data Centre. 2019.
112	Boyne, A.W. 2000. Tern Surveys. Canadian Wildlife Service, Sackville, unpublished data. 168 recs.
110	Clayden, S.R. 2007. NBM Science Collections databases: vascular plants. New Brunswick Museum, Saint John NB, download Mar. 2007, 6914 recs.
108	McNeil, Jeffie. 2022. 2021 Turtle Records. Mersey Tobeatic Research Institute.
107	MacKinnon, D.S. 2005. Coastal Plains Flora GIS theme, 1999-2000. Dept of Environment & Labour, Protected Areas Branch, 109 shp files. 109 recs.
107	Toms, B. & Neily, T.; Belliveau, A.G.; Newell, R.; Mills, A.; Clapp, H.; Staicer, C.; Anderson, F.; Gray, C.; Beals, L. 2010. Inventory of Nature Conservancy of Canada Lands in Yarmouth and Shelburne Counties. Mersey Tobeatic Research Institute, approx. 1500 recs.
98	Mazerolle, D.M. 2018. Atlantic Canada Conservation Data Centre botanical fieldwork 2018. Atlantic Canada Conservation Data Centre, 13515 recs.
97	Benjamin, L.K. 2012. NSDNR fieldwork & consultant reports 2008-2012. Nova Scotia Dept Natural Resources, 196 recs.
95	Breen, A. 2019. 2019 Atlantic Whitefish observations. Coastal Action, 95 recs.
95	McNeil, J.A. 2019. Eastern Painted Turtle trapping records, 2017. Mersey Tobeatic Research Institute.
94	e-Butterfly. 2019. Export of Maritimes records and photos. McFarland, K. (ed.) e-butterfly.org.
94	Parks Canada. 2010. Specimens in or near National Parks in Atlantic Canada. Canadian National Museum, 3925 recs.
92	Neily, T.H. & Pepper, C.; Toms, B. 2020. Nova Scotia lichen database [as of 2020-03-18]. Mersey Tobeatic Research Institute.
90	Stewart, J.I. 2010. Peregrine Falcon Surveys in New Brunswick, 2002-09. Canadian Wildlife Service, Sackville, 58 recs.
88	Belliveau, A. 2013. Rare species records from Nova Scotia. Mersey Tobeatic Research Institute, 296 records. 296 recs.
88	McMullin, R.T. 2022. Maritimes lichen records. Canadian Museum of Nature.
88	NatureServe Canada. 2019. iNaturalist Maritimes Butterfly Records. iNaturalist.org and iNaturalist.ca.
87	Tims, J. & Craig, N. 1995. Environmentally Significant Areas in New Brunswick (NBESA). NB Dept of Environment & Nature Trust of New Brunswick Inc, 6042 recs. https://doi.org/10.1037/arc0000014.
86	Newell, R. & Neily, T.; Toms, B.; Proulx, G. et al. 2011. NCC Properties Fieldwork in NS: August-September 2010. Nature Conservancy Canada, 106 recs.
81	Hagerman, Christianne. 2022. Wisqoq and Eastern White Cedar field work. E.C. Smith Herbarium, Acadia University.
76	Chapman-Lam, C.J. 2022. Atlantic Canada Conservation Data Centre 2021 botanical fieldwork. Atlantic Canada Conservation Data Centre, 15099 recs.
74	Benjamin, L.K. 2009. Boreal Felt Lichen, Mountain Avens, Orchid and other recent records. Nova Scotia Dept Natural Resources, 105 recs.
74	Brazner, John; MacKinnon, Frances. 2020. Relative conservation value of Nova Scotia's forests: forested wetlands as avian biodiversity hotspots. Canadian Journal of Forest Research, 50(12): 1307-1322. dx.doi.org/10.1139/cjfr-2020-0101.
73	Wilhelm, S.I. et al. 2011. Colonial Waterbird Database. Canadian Wildlife Service, Sackville, 2698 sites, 9718 recs (8192 obs).
69	Blaney, C.S. 2019. Sean Blaney 2019 field data. Atlantic Canada Conservation Data Centre, 4407 records.
69	McNeil, J.A. 2019. Snapping Turtle records, 2019. Mersey Tobeatic Research Institute.
69	Staicer, C. & Bliss, S.; Achenbach, L. 2017. Occurrences of tracked breeding birds in forested wetlands. , 303 records.
68	McGrattan, Alysha. 2023. Monarch conservation in Southern New Brunswick. Nature NB.
65	Haughian, S.R. 2018. Description of Fuscopannaria leucosticta field work in 2017. New Brunswick Museum, 314 recs.
65	Roland, A.E. & Smith, E.C. 1969. The Flora of Nova Scotia, 1st Ed. Nova Scotia Museum, Halifax, 743pp.
64	Birds Canada. 2022. Maritimes Swiftwatch project data for 2022. Pers. comm., 155 records.
64	e-Butterfly. 2016. Export of Maritimes records and photos. Maxim Larrivee, Sambo Zhang (ed.) e-butterfly.org.
64	Klymko, John. 2022. Atlantic Canada Conservation Data Centre zoological fieldwork 2021. Atlantic Canada Conservation Data Centre.
63	McNeil, J.A. 2013. Ribbonsnake (Thamnophis sauritus) sightings, 2012 . Parks Canada, 63 records of 26+ individuals.
63	Roland, A.E. 1976. The Coastal Plain Flora of Kejimkujik National Park. Parks Canada Report, 238 pp.
62	McNeil, J.A. 2015. Blandings Turtle (Emydoidea blandingii), Eastern Ribbonsnake (Thamnophis sauritus), and Snapping Turtle (Chelydra serpentina) sightings, 2015. Mersey Tobeatic Research Institute.
61	Hubley, Nicole. 2022. Monarch (Danaus plexippus) records submitted to MTRI from the 2021 field season. Mersey Tobeatic Research Institute.
60	McLean, K. 2020. Species occurrence records from Clean Annapolis River Project fieldwork in 2020. Clean Annapolis River Project, 206 records.
58	Blaney, C.S.; Spicer, C.D. 2001. Fieldwork 2001. Atlantic Canada Conservation Data Centre. Sackville NB, 981 recs.
58	Parks Canada. 2021. Species at Risk observations from 2019-2020 in Kejimkujik National Park and Historic Site. Parks Canada, 76 records.
56	Richardson, D., Anderson, F., Cameron, R, McMullin, T., Clayden, S. 2014. Field Work Report on Black Foam Lichen (Anzia colpodes). COSEWIC.
55	Blaney, C.S. 2018. Atlantic Canada Conservation Data Centre Fieldwork 2018. Atlantic Canada Conservation Data Centre.
55	Neily, T.H. & Pepper, C.; Toms, B. 2018. Nova Scotia lichen database [as of 2018-03]. Mersey Tobeatic Research Institute.
55	Richardson, Leif. 2018. Maritimes Bombus records from various sources. Richardson, Leif.
54	Haughian, Sean. 2021. Update to lichen data from 2017-2021. Nova Scotia Museum.
53	Churchill, J.L. 2020. Atlantic Canada Conservation Data Centre Fieldwork 2020. Atlantic Canada Conservation Data Centre, 1083 recs.
52	Belliveau, A.G., Churchill, J.L. 2019. Compilation of flora and fauna observation records from Isle Haute, Nova Scotia. Acadia University; Atlantic Canada Conservation Data Centre, 522 recs.
51	Blaney, C.S. 2017. Atlantic Canada Conservation Data Centre Fieldwork 2017. Atlantic Canada Conservation Data Centre.
49	Benedict, B. Connell Herbarium Specimens (Data) . University New Brunswick, Fredericton. 2003.
47	iNaturalist. 2020. iNaturalist butterfly records selected for the Maritimes Butterfly Atlas. iNaturalist.
46	Neily, T.H. & Pepper, C.; Toms, B. 2013. Nova Scotia lichen location database. Mersey Tobeatic Research Institute, 1301 records.
46	Tranquilla, L. 2015. Maritimes Marsh Monitoring Project 2015 data. Bird Studies Canada, Sackville NB, 5062 recs.
45	Bagnell, B.A. 2001. New Brunswick Bryophyte Occurrences. B&B Botanical, Sussex, 478 recs.
45	Bayne, D.M. 2007. Atlantic Coastal Plain Flora record, 2004-06. Nova Scotia Nature Trust. Pers. comm. to C.S. Blaney, 57 recs.
45	Cowie, Faye. 2007. Surveyed Lakes in New Brunswick. Canadian Rivers Institute, 781 recs.
45	Nussey, Pat & NCC staff. 2019. AEI tracked species records, 2016-2019. Chapman, C.J. (ed.) Atlantic Canada Conservation Data Centre, 333.
44	McLean, K. 2019. Wood Turtle observations . Clean Annapolis River Project.

# recs	CITATION
43	Blaney, C.S.; Mazerolle, D.M.; Klymko, J; Spicer, C.D. 2006. Fieldwork 2006. Atlantic Canada Conservation Data Centre. Sackville NB, 8399 recs.
42	LaPaix, Rich. 2022. Rare species observations, 2018-2022. Nova Scotia Nature Trust.
41	MacKinnon, D.S. & Maass, O.C. 1995. Fieldwork 1995. Dept Natural Resources, Parks Division, 45 recs.
41	MacKinnon, D.S. 1999. Fieldwork 1999. Dept of Environment and Labour, Protected Areas Branch, 48 recs.
41	Zinck, M. & Roland, A.E. 1998. Roland's Flora of Nova Scotia. Nova Scotia Museum, 3rd ed., rev. M. Zinck; 2 Vol., 1297 pp.
40	Sollows, M.C. 2009. NBM Science Collections databases: molluscs. New Brunswick Museum, Saint John NB, download Jan. 2009, 6951 recs (2957 in Atlantic Canada).
39	Blaney, C.S.; Mazerolle, D.M. 2011. Fieldwork 2011. Atlantic Canada Conservation Data Centre. Sackville NB.
39	Patrick, Allison. 2021. Animal and plant records from NCC properties from 2019 and 2020. Nature Conservancy Canada.
38	Mazerolle, D.M. 2020. Atlantic Canada Conservation Data Centre botanical fieldwork 2019. Atlantic Canada Conservation Data Centre.
37	Layberry, R.A. & Hall, P.W., LaFontaine, J.D. 1998. The Butterflies of Canada. University of Toronto Press. 280 pp+plates.
37	Newell, R.E. 2019. Crocanthemum canadense records compiled for provincial status report. pers. comm. from Ruth Newell to AC CDC.
37	Tsehtik, M.; Leblanc, M.; Creaser, T. 2020. Coastal Action: 2020 Species at Risk Data. Coastal Action, 40 records.
36	McNeil, J.A. 2017. Eastern Ribbonsnake (Thamnophis sauritus) sightings, 2017. Mersey Tobeatic Research Institute, 36 recs.
35	East Coast Aquatics Inc. 2021. Species at Risk records from Spicer North Mountain Quarry Expansion Environmental Assessment. East Coast Aquatics, 44 records.
35	Feltham, Carter. 2022. Monarch (Danaus plexippus) and Milkweed MTRI records from the 2022 Field Season. Mersey Tobeatic Research Institute.
35	Neily, T.H. 2019. Tom Neily NS Bryophyte records (2009-2013). T.H. Neily, Atlantic Canada Conservation Data Centre, 1029 specimen records.
35	Roland, A.E. 1980. Checklist of Vascular Plants of Kejimkujik National Park in Lichens, Liverworts, Mosses and Flowering Plants of Kejimkujik National Park. Roland, A.E. (ed.) Parks Canada Report, pp. 52-140, 160 pp.
34	Benjamin, L.K. (compiler). 2001. Significant Habitat & Species Database. Nova Scotia Dept of Natural Resources, 15 spp, 224 recs.
33	McNeil, J.A. 2018. Wood Turtle records, 2018. Mersey Tobeatic Research Institute, 68 recs.
33	Phinney, L. 2019. Little Brown Myotis maternal colony counts and birdSAR, 2019. Mersey Tobeatic Research Institute.
33	Porter, Caitlin. 2021. Field data for 2020 in various locations across the Maritimes. Atlantic Canada Conservation Data Centre, 3977 records.
33	Taylor, P.D. 2006. Long-term monitoring of Listera australis in southwestern Nova Scotia; summary report for 2006, year 3. Acadia University, 33.
32	Churchill, J.L. 2023. Atlantic Canada Conservation Data Centre Fieldwork 2023. Atlantic Canada Conservation Data Centre.
32	Kennedy, Joseph. 2010. New Brunswick Peregrine records, 2009. New Brunswick Dept Natural Resources, 19 recs (14 active).
31	Hinds, H.R. 1986. Notes on New Brunswick plant collections. Connell Memorial Herbarium, unpubl, 739 recs.
31	Jobin, C. & Clow, A., Van Dijk, J. 2019. Eastern Waterfan data, Mount Allison Fundy Field Camp 2019. Chapman, C.J. (ed.) Fundy National Park and Mount Allison University, 31 recs.
31	MacKinnon, D.S. 2001. Fieldwork 2001. Dept of Environment & Labour, Protected Areas Branch, 43 recs.
30	Klymko, J.J.D. 2018. 2017 field data. Atlantic Canada Conservation Data Centre.
29	Frittaion, C. 2012. NSNT 2012 Field Observations. Nova Scotia Nature Trust, Pers comm. to S. Blaney Feb. 7, 34 recs.
29	McAlpine, D.F. New Brunswick Museum bee specimens. New Brunswick Museum. 2013.
29	Mersey Tobetic Research Institute. 2021. 2020 Monarch records from the MTRI monitoring program. Mersey Tobetic Research Institute, 72 records.
29	Nature Conservancy Canada. 2008. Geum peckii on Brier Island. Nature Conservancy Canada, 29 recs.
28	Benedict, B. Connell Herbarium Specimen Database Download 2004. Connell Memorial Herbarium, University of New Brunswick. 2004.
27	Robinson, Sarah. 2022. Winter bird obserations at Woodwards Cove, NB. CBCL.
26	Erskine, A.J. 1999. Maritime Nest Records Scheme (MNRS) 1937-1999. Canadian Wildlife Service, Sackville, 313 recs.
26	McLean, K. 2020. Wood Turtle observations . Clean Annapolis River Project.
25	Burnie, B. 2013. 2013 Scirpus longii field data. Mount Saint Vincent University, 51 recs.
25	McNeil, J.A. 2014. Blandings Turtle (Emydoidea blandingii) and Snapping Turtle (Chelydra serpentina) sightings, 2014. Mersey Tobeatic Research Institute.
25	McNeil, J.A. 2019. Snapping Turtle records, 2017. Mersey Tobeatic Research Institute.
25	Speers, L. 2008. Butterflies of Canada database: New Brunswick 1897-1999. Agriculture & Agri-Food Canada, Biological Resources Program, Ottawa, 2048 recs.
24	Bayne, D.M., Cameron, R.C. 2014. 2014 Lichen records near Little Bon Mature Lake, Queens NS. NS Department of Natural Resources.
24	Belliveau, A.G. 2021. New Black ash site records near Kentville, NS. Acadia University, 47 records.
24	Broders, H.G. 2006. Unpublished data. , 24 recs.
24	Honeyman, K. 2019. Unique Areas Database, 2018. J.D. Irving Ltd.
24	Sollows, M.C. 2008. NBM Science Collections databases: herpetiles. New Brunswick Museum, Saint John NB, download Jan. 2008, 8636 recs.
23	Bateman, M.C. 2001. Coastal Waterfowl Surveys Database, 1965-2001. Canadian Wildlife Service, Sackville, 667 recs.
23	McLean, K. 2019. Species At Risk observations. Clean Annapolis River Project.
23	Oldham, M.J. 2000. Oldham database records from Maritime provinces. Oldham, M.J; ONHIC, 487 recs.
23	Porter, Caitlin. 2020. Observations for 26 EcoGifts sites in southwest New Brunswick. Atlantic Canada Conservation Data Centre, 1073 records.
22	Breen, A. 2018. 2018 Atlantic Whitefish observations. Coastal Action.
22	Richardson, D., Anderson, F., Cameron, R, Pepper, C., Clayden, S. 2015. Field Work Report on the Wrinkled Shingle lichen (Pannaria lurida). COSEWIC.
22	Wallace, Shaylyn. 2023. Painted Turtle and Snapping Turtle records since 2015. New Brunswick Department of Energy and Resource Development.
21	Basquill, S.P. 2003. Fieldwork 2003. Atlantic Canada Conservation Data Centre, Sackville NB, 69 recs.
21	Blaney, C.S.; Spicer, C.D.; Mazerolle, D.M. 2005. Fieldwork 2005. Atlantic Canada Conservation Data Centre. Sackville NB, 2333 recs.
21	Envirosphere Consultants Ltd., Strum. 2023. SAR records from three Environmental Assessments in Nova Scotia. Envirosphere Consultants Ltd., Strum, 48 records.
21	MacKinnon, D.S. & O'Brien, M.K.H.; Cameron, R.P. 2002. Fieldwork 2000. Dept of Environment & Labour, Protected Areas Branch, 252 recs.
21	Riley, J. 2023. Rare and at Risk lichens and plants near Goldsmith Lake, NS. Pers. comm. to J.L. Churchill.
20	Blaney, C.S. & Mazerolle, D.M. 2011. Field data from NCC properties at Musquash Harbour NB & Goose Lake NS. Atlantic Canada Conservation Data Centre, 1739 recs.

# recs	CITATION
20	O'Grady, Sally. 2010. Water Pennywort in Kejimkujik National Park, 2010. Parks Canada, 20 shapefiles.
19	Klymko, J.J.D.; Robinson, S.L. 2012. 2012 field data. Atlantic Canada Conservation Data Centre, 447 recs.
18	Basquill, S.; Sam, D. 2019. Crocanthemum canadense observations near Greenwood, NS, 2015-2019. pers. commun. from Nova Scotia Department of Lands and Forestry to AC CDC, 18 recs.
16	Basquill, S.P., Porter, C. 2019. Bryophyte and lichen specimens submitted to the E.C. Smith Herbarium. NS Department of Lands and Forestry.
16	Chapman, C.J. 2018. Atlantic Canada Conservation Data Centre botanical fieldwork 2018. Atlantic Canada Conservation Data Centre, 11171 recs.
16	Holder, M. 2003. Assessment and update status report on the Eastern Lilaeopsis (Lilaeopsis chinensis) in Canada. Committee on the Status of Endangered Wildlife in Canada, 16 recs.
16	Hunsinger, J. 2021. Species at Risk records from Medway Community Forest Cooperative monitoring plots and baited game cameras, 2019-2020. Medway Community Forest Cooperative, 16 records.
16	LaPaix, R.W.; Crowell, M.J.; MacDonald, M.; Neily, T.D.; Quinn, G. 2017. Stantec Nova Scotia rare plant records, 2012-2016. Stantec Consulting.
16	MacKinnon, D.S. 2000. Fieldwork 2000. Dept of Environment and Labour, Protected Areas Branch, 17 recs.
16	McKendry, Karen. 2016. Rare species observations, 2016. Nova Scotia Nature Trust, 19 recs.
16	Neily, T.H. Hectanooga, Nova Scotia Liverwort records. T.H. Neily. 2017.
15	Basquill, S.P. 2011 vascular plant field data. Nova Scotia Department of Natural Resources, 37 recs.
15	Klymko, J.J.D. 2012. Odonata specimens & observations, 2010. Atlantic Canada Conservation Data Centre, 425 recs.
15	Manthorne, A. 2019. Incidental aerial insectivore observations. Birds Canada.
15	NS DNR. 2017. Black Ash records from NS DNR Permanent Sample Plots (PSPs), 1965-2016. NS Dept of Natural Resources.
14	Askanas, H. 2016. New Brunswick Wood Turtle Database. New Brunswick Department of Energy and Resource Development.
14	Cameron, R.P. 2018. Degelia plumbea records. Nova Scotia Environment.
14	McNeil, J.A. 2018. Snapping Turtle records, 2018. Mersey Tobeatic Research Institute.
14	Thomas, A.W. 1996. A preliminary atlas of the butterflies of New Brunswick. New Brunswick Museum.
14	Toms, Brad. 2011. Species at Risk data from 2011 field surveys. Mersey Tobeatic Research Institute, 17 recs.
13	Blaney, C.S. 2000. Fieldwork 2000. Atlantic Canada Conservation Data Centre. Sackville NB, 1265 recs.
13	Canadian National Collection of Insects Arachnids, and Nematodes Bombus specimen database export. Government of Canada. 2022.
13	Clayden, S.R. 2005. Confidential supplement to Status Report on Ghost Antler Lichen (Pseudevernia cladonia). Committee on the Status of Endangered Wildlife in Canada, 27 recs.
13	G.Proulx, R. Newell, A. Mills, D. Bayne. 2018. Selaginella rupestris records, Digby Co. Nova Scotia Lands and Forestry, 1387601 recs.
13	Klymko, J.J.D.; Robinson, S.L. 2014. 2013 field data. Atlantic Canada Conservation Data Centre.
13	MacKinnon, D.S. 1998. Ponhook Lake survey map & notes. Dept of Environment and Labour, Protected Areas Branch, 13 recs.
13	Neily, T.H. & Pepper, C.; Toms, B. 2015. Nova Scotia lichen location database [as of 2015-02-15]. Mersey Tobeatic Research Institute, 1691 records.
13	New Brunswick Department of Natural Resources and Energy Development. 2023. Wood turtle records from 2016-2021. New Brunswick Department of Natural Resources and Energy Development, 637 records.
13	Toms, Brad. 2022. Non-Lichen Observations from Lichen SMP and NCC Property Searches. Mersey Tobeatic Research Institute.
13	Voscort, L. Bombus terricola specimens collected during MSc research in southwestern Nova Scotia. Acadia University. 2022.
12	Blaney, C.S.; Mazerolle, D.M.; Hill, N.M. 2011. Fieldwork for Sabatia kennedyana & Coreopsis rosea COSEWIC status reports.
12	Hill, N.M. 2021. Observation of Carex haydenii and black ash near Marshy Hope and Ponhook Lake. pers. comm.
12	Nova Scotia Nature Trust. 2013. Nova Scotia Nature Trust 2013 Species records. Nova Scotia Nature Trust, 95 recs.
11	Bryson, I. 2020. Nova Scotia and Newfoundland rare species observations, 2018-2020. Nova Scotia Environment.
11	Ferguson, D.C. 1954. The Lepidoptera of Nova Scotia. Part I, macrolepidoptera. Proceedings of the Nova Scotian Institute of Science, 23(3), 161-375.
11	Kennedy, Bob. 2021. Results of Oct 15 & 16 Field Trip. Nova Scotia Wild Flora Society.
11	Neily, T.H. 2013. Email communication to Sean Blaney regarding Listera australis observations made from 2007 to 2011 in Nova Scotia. , 50.
10	Adams, J. & Herman, T.B. 1998. Thesis, Unpublished map of C. insculpta sightings. Acadia University, Wolfville NS, 88 recs.
10	Belliveau, A.G. & Vail, Cole; King, Katie. 2020. New Allium tricoccum locations, Cornwallis River. Chapman, C.J. (ed.) Acadia University.
10	Brunelle, P.-M. (compiler). 2010. ADIP/MDDS Odonata Database: NB, NS Update 1900-09. Atlantic Dragonfly Inventory Program (ADIP), 935 recs.
10	Cameron, R.P. 2013. 2013 rare species field data. Nova Scotia Department of Environment, 71 recs.
10	e-Butterfly. 2018. Selected Maritimes butterfly records from 2016 and 2017. Maxim Larrivee, Sambo Zhang (ed.) e-butterfly.org.
10	Parker, M.S.R. 2011. Hampton Wind Farm 2010: significant floral/faunal observations. , 13 recs.
10	Patrick, A.; Horne, D.; Noseworthy, J. et. al. 2017. Field data for Nova Scotia and New Brunswick, 2015 and 2017. Nature Conservancy of Canada.
10	Robinson, S.L. 2014. 2013 Field Data. Atlantic Canada Conservation Data Centre.
10	Sollows, M.C,. 2009. NBM Science Collections databases: Coccinellid & Cerambycid Beetles. New Brunswick Museum, Saint John NB, download Feb. 2009, 569 recs.
9	Bryson, I.C. 2020. Nova Scotia flora and lichen observations 2020. Nova Scotia Environment, 139 recs.
9	Caissie, A. Herbarium Records. Fundy National Park, Alma NB. 1961-1993.
9	Cameron, R.P. 2011. Lichen observations, 2011. Nova Scotia Environment & Labour, 731 recs.
9	deGooyer, K. 2019. Snapping Turtle and Eastern White Cedar observations. Nova Scotia Environment.
9	Downes, C. 1998-2000. Breeding Bird Survey Data. Canadian Wildlife Service, Ottawa, 111 recs.
9	Edsall, J. 2007. Personal Butterfly Collection: specimens collected in the Canadian Maritimes, 1961-2007. J. Edsall, unpubl. report, 137 recs.
9	Kennedy, Joseph. 2010. New Brunswick Peregrine records, 2010. New Brunswick Dept Natural Resources, 16 recs (11 active).
9	Klymko, J. 2016. Atlantic Canada Conservation Data Centre Fieldwork 2016. Atlantic Canada Conservation Data Centre.
9	MacKinnon, D.S. & Maass, O.C. 1996. Fieldwork 1996. Dept Natural Resources, Parks Division, 9 recs.
9	McAlpine, D.F. 1983. Status & Conservation of Solution Caves in New Brunswick. New Brunswick Museum, Publications in Natural Science, no. 1, 28pp.
9	McAlpine, D.F. 1998. NBM Science Collections: Wood Turtle records. New Brunswick Museum, Saint John NB, 329 recs.
8	Cameron, R.P. 2017. 2017 rare species field data. Nova Scotia Environment, 64 recs.
8	Hinds, H.R. 1999. Connell Herbarium Database. University New Brunswick, Fredericton, 131 recs.

# recs	CITATION
8	Nature Trust of New Brunswick. 2022. Nature Trust of New Brunswick 2022 staff and volunteer observations of species occurence data. Nature Trust of New Brunswick.
8	Neily, T.H. Tom Neily NS Sphagnum records (2009-2014). T.H. Neily, Atlantic Canada Conservation Data Centre. 2019.
8	Pepper, C. 2021. Rare bird, plant and mammal observations in Nova Scotia, 2017-2021.
8	Pike, E., Tingley, S. & Christie, D.S. 2000. Nature NB Listserve. University of New Brunswick, listserv.unb.ca/archives/naturenb. 68 recs.
8	Sabine, D.L. 2005. 2001 Freshwater Mussel Surveys. New Brunswick Dept of Natural Resources & Energy, 590 recs.
7	Basquill, S.P. 2009. 2009 field observations. Nova Scotia Dept of Natural Resources.
7	Benedict, B. Connell Herbarium Specimens, Digital photos. University New Brunswick, Fredericton. 2005.
7	Benjamin, L.K. 2011. NSDNR fieldwork & consultant reports 1997, 2009-10. Nova Scotia Dept Natural Resources, 85 recs.
7	Blaney, C.S. 1999. Fieldwork 1999. Atlantic Canada Conservation Data Centre. Sackville NB, 292 recs.
7	Goltz, J.P. 2012. Field Notes, 1989-2005. , 1091 recs.
7	Hinds, H.R. 1992. Rare Vascular Plants of Fundy National Park. , 10 recs.
7	Kennedy, B.; Cron, C. 2019. observations of Poison Sumac andButtonbush, Nova Scotia. pers. commun to AC CDC.
7	Ogden, K. Nova Scotia Museum butterfly specimen database. Nova Scotia Museum. 2017.
7	Pepper, C. 2013. 2013 rare bird and plant observations in Nova Scotia. , 181 records.
7	Sabine, D.L. Bombus terricola specimens in Dwayne Sabine's personal collection. pers. comm. 2022.
7	Sollows, M.C. Export of New Brunswick Museum butterfly records for the Maritimes provinces. New Brunswick Museum. 2016.
6	Belliveau, A. 2013. email to Sean Blaney regarding Listera australis observations in SW Nova Scotia. Mersey Tobeatic Research Institute, 8.
6	Brazner, J.; Hill, N. 2018. Plant observations along the Cornwallis River, Nova Scotia. Nova Scotia Department of Lands and Forestry.
6	Bredin, K.A. 2001. WTF Project: Freshwater Mussel Fieldwork in Freshwater Species data. Atlantic Canada Conservation Data Centere, 101 recs.
6	Bredin, K.A. 2002. NS Freshwater Mussel Fieldwork. Atlantic Canada Conservation Data Centere, 30 recs.
6	Catling, P.M. 1981. Taxonomy of autumn-flowering Spiranthes species of southern Nova Scotia in Can. J. Bot. , 59:1250-1273. 30 recs.
6	Edsall, J. 2001. Lepidopteran records in New Brunswick, 1997-99. , Pers. comm. to K.A. Bredin. 91 recs.
6	Klymko, J. 2019. Atlantic Canada Conservation Data Centre zoological fieldwork 2018. Atlantic Canada Conservation Data Centre.
6	Klymko, J.J.D. 2011. Insect fieldwork & submissions, 2010. Atlantic Canada Conservation Data Centre. Sackville NB, 742 recs.
6	McMullin, Troy. 2021. Anzia colpodes observations near Kejimkujik National Park. Canadian Museum of Nature.
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	Porter, C.J.M. 2014. Field work data 2007-2014. Nova Scotia Nature Trust, 96 recs.
6	Riley, Johnathan. 2023. Wisqoq north of Kejimkujik National Park. Pers. comm. Municipality of the District of Digby, 6 records.
6	Wissink, R. 2000. Rare Plants of Fundy: maps. Parks Canada, 20 recs.
6	Wood, E.W. 2011. Sabatia kennedyana locations in Nova Scotia. Pers. comm. to C.S. Blaney. Gray Herbarium, Harvard University, 8 recs.
5	Boyne, A.W. 2000. Harlequin Duck Surveys. Canadian Wildlife Service, Sackville, unpublished data. 5 recs.
5	Chaput, G. 2002. Atlantic Salmon: Maritime Provinces Overview for 2001. Dept of Fisheries & Oceans, Atlantic Region, Science Stock Status Report D3-14. 39 recs.
5	Christie, D.S. 2000. Christmas Bird Count Data, 1997-2000. Nature NB, 54 recs.
5	Goltz, J.P. & Bishop, G. 2005. Confidential supplement to Status Report on Prototype Quillwort (Isoetes prototypus). Committee on the Status of Endangered Wildlife in Canada, 111 recs.
5	Keddy, C. 1986. Status report on the eastern mountain avens, Geum peckii, in Canada Ottawa, Ontario, Canada: Committee on the Status of Endangered Wildlife in Canada (COSEWIC).
5	Tingley, S. (compiler). 2001. Butterflies of New Brunswick. , Web site: www.geocities.com/Yosemite/8425/buttrfly. 142 recs.
4	Anon. Dataset of butterfly records for the Maritime provinces. Museum of Comparative Zoology, Harvard University. 2017.
4	Belliveau, A.G. 2019. Maleberry (Lyonia ligustrina) count at Long Lake, Yarmouth Co., NS. E.C Smith Herbarium, Acadia University, Wolfville NS, 4 records.
4	Cameron, R.P. 2009. Nova Scotia nonvascular plant observations, 1995-2007. Nova Scotia Dept Natural Resources, 27 recs.
4	Cody, W.J. 2003. Nova Scotia specimens of Equisetum pratense at the DAO herbarium in Ottawa. , Pers. comm. to C.S. Blaney. 4 recs.
4	Hennigar, Briana; Gow, Jonas. 2023. Bank Swallow Nesting Site in Waterville. The Jijuktu'kwejk Watershed Alliance.
4	Majka, C.G. & McCorquodale, D.B. 2006. The Coccinellidae (Coleoptera) of the Maritime Provinces of Canada: new records, biogeographic notes, and conservation concerns. Zootaxa. Zootaxa, 1154: 49–68. 7 recs.
4	Marx, M. & Kenney, R.D. 2001. North Atlantic Right Whale Database. University of Rhode Island, 4 recs.
4	Misc. rare species records gathered by NSDNR staff or communicated to NSDNR and forwared to ACCDC
4	Munro, Marian K. Nova Scotia Provincial Museum of Natural History Herbarium Database. Nova Scotia Provincial Museum of Natural History, Halifax, Nova Scotia. 2014.
4	NatureServe Canada. 2018. iNaturalist Butterfly Data Export . iNaturalist.org and iNaturalist.ca.
4	Newell, R.E. 2006. Rare plant observations in Digby Neck. Pers. comm. to S. Blaney, 6 recs.
4	Ogden, J. NS DNR Butterfly Collection Dataset. Nova Scotia Department of Natural Resources. 2014.
4	Olsen, R. Herbarium Specimens. Nova Scotia Agricultural College, Truro. 2003.
4	Speers, L. 2001. Butterflies of Canada database. Agriculture & Agri-Food Canada, Biological Resources Program, Ottawa, 190 recs.
4	Toms, B. 2015. Lophiola aurea (Goldencrest) records from Molega Lake. Mersey Tobeatic Research Institute, 4 records.
4	Toms, B. 2016. Email list of four GPS locations of Golden Crest (Lophiola aurea) from the previously documented site on Molega Lake, NS. Mersey Tobeatic Research Institute, 4 records.
3	Amiro, Peter G. 1998. Atlantic Salmon: Inner Bay of Fundy SFA 22 & part of SFA 23. Dept of Fisheries & Oceans, Atlantic Region, Science Stock Status Report D3-12. 4 recs.
3	Boyne, A.W. & Grecian, V.D. 1999. Tern Surveys. Canadian Wildlife Service, Sackville, unpublished data. 23 recs.
3	Bradford, R. 2004. Coregonus huntsmani locations. Dept of Fisheries & Oceans, Atlantic Region, Pers. comm. to K. Bredin. 4 recs.
3	Cowie, F. 2007. Electrofishing Population Estimates 1979-98. Canadian Rivers Institute, 2698 recs.
3	deGooyer, K. 2019. Eastern White Cedar observations, Norwood, Nova Scotia. Nova Scotia Environment.
3	Hill, N.M., Myra, M. 2017. Email to Sean Blaney regarding rich intervale flora on Nictaux River. Fern Hill Institute, 3 records.
3	Holder, M.L.; Kingsley, A.L. 2000. Kinglsey and Holder observations from 2000 field work.

# recs	CITATION
3	Hope, P. 2002. Field survey of Goodyera pubescens population at Kejimkujik National Park. Kejimkujik National Park, 3 recs.
3	Klymko, J. Butterfly records at the Nova Scotia Museum not yet accessioned by the museum. Atlantic Canada Conservation Data Centre. 2017.
3	LaPaix, R.W. 2014. Trans-Canada Energy East Pipeline Environmental Assessment, Records from 2013-14. Stantec Consulting, 5 recs.
3	McAlpine, D.F. 1998. NBM Science Collections databases to 1998. New Brunswick Museum, Saint John NB, 241 recs.
3	Mersey Tobeatic Research Institute. 2022. Nova Scotia Bobolink observations. pers. comm. to J. Churchill.
3	Mills, Pamela. 2008. Clethra alnifolia at Mudflat Lake. Nova Scotia Dept of Natural Resources, Wildlife Div. Pers. comm. to D.M. Mazerolle, 4 recs.
3	Nash, Vicky. 2018. Hammond River Angling Association Wood Turtle observations. Hammond River Angling Association, 3 recs.
3	Nature Conservancy of Canada. 2022. NCC Field data for Nova Scotia. Nature Conservancy of Canada.
3	Newington, Nina. 2023. Anzia colpodes at Beal's Brook, NS. Pers. comm. to J. Churchill.
3	Nova Scotia Department of Lands and Forestry. 2018. Wood Turtle observations in, or near, the cornwallis River watershed. NS DLF, pers. comm. to AC CDC.
3	Powell, B.C. 1967. Female sexual cycles of Chrysemy spicta & Clemmys insculpta in Nova Scotia. Can. Field-Nat., 81:134-139. 26 recs.
3	Riley, J. 2020. Digby County Pannaria lurida observations. Pers. comm. to J.L. Churchill.
3	Staicer, C. 2013. Personal communication concerning Hirundo rustica nesting in and around Kejimkujik NP, NS. Pers. comm.
3	Watts, Todd. 2021. Todd Watts rare species data 2021. Peskotomakuti First Nation at Skutik, 152 records.
3	White, S. 2019. Notable species sightings, 2018. East Coast Aquatics.
3	Whittam, R.M. 1999. Status Report on the Roseate Tern (update) in Canada. Committee on the Status of Endangered Wildlife in Canada, 36 recs.
2	Anon. 2017. Export of Maritimes Butterfly records. Global Biodiversity Information Facility (GBIF).
2	Basquill, S.P. 2018. Various specimens, NS DNR field work. NS Department of Natural Resources, 10.
2	Bayne, D.Z. 2014. 2014 rare species observations from southwest Nova Scotia. Nova Scotia Department of Natural Resources, 46 recs.
2	Belliveau, A.G. 2020. Email to Colin Chapman on new NS locations for Allium tricoccum. Chapman, C.J. (ed.) Acadia University.
2	Belliveau, A.G. E.C. Smith Herbarium Specimen Database 2019. E.C. Smith Herbarium, Acadia University. 2019.
2	Belliveau, Alain. 2021. Wisqoq observations in Clare, Digby County, NS. Acadia University.
2	Benjamin, L.K. 2002. Rare plant observations by P. MacDonald, P. Mills, S. Eaton, H. MacKinnon, B. Colpitts at Sloans Lake, NS. Pers. comm. to L.K. Benjamin, NSDNR, with P. MacDonald, 3 recs.
2	Bishop, G. 2012. Field data from September 2012 Anticosti Aster collection trip. , 135 rec.
2	Brunelle, P.-M. 2009. NS Power odonata records for Mersey, Tusket & Sissiboo systems. Nova Scotia Power, 218 recs.
2	Cameron, R.P. 2014. 2013-14 rare species field data. Nova Scotia Department of Environment, 35 recs.
2	Doucet, D.A. 2008. Fieldwork 2008: Odonata. ACCDC Staff, 625 recs.
2	Elderkin M.F. 2007. Selaginella rupestris, Iris prismatica & Lophiola aurea records in NS. NS Dept of Natural Resources, Wildlife Div. Pers. comm. to C.S. Blaney, 3 recs.
2	Emma Vost. 2022. Bank swallow colony and broad-winged hawk sightings in Bridgetown, NS. Personal communication, 4.
2	Gilhen, J., Jones, A., McNeil, J., Tanner, A.W. 2012. A Significant Range Extension for the Eastern Ribbonsnake, Thamnophis sauritus, in Nova Scotia, Canada. The Canadian Field-Naturalist, 126(3): 231-233.
2	Goltz, J. 2017. Harlequin Duck observations. New Brunswick Department of Agriculture, Aquaculture and Fisheries.
2	Hill, N.M. 2013. email communications to Sean Blaney and David Mazerolle regarding the discovery of Listera australis populations at Black River Lake and Middlewood. , 2.
2	Hill, N.M. 2019. Observation of Crocanthemum canadense near Auburn, Annapolis Co. NS on May 29, 2019. Fern Hill Institute, 2 recs.
2	Hinds, H.R. 1999. A Vascular Plant Survey of the Musquash Estuary in New Brunswick. , 12pp.
2	Hinds, H.R. 2000. Rare plants of Fundy in Rare Plants of Fundy: maps. Wissink, R. (ed.) Parks Canada, 2 recs.
2	Kennedy, B. & Cron, C.; Patriquin, D. 2018. Email to Sean Blaney on observations of Trichostema dichotomum at Shingle Lake, Nova Scotia. , 2 records.
2	Kermit deGooyer. 2022. Two Eastern White Cedar records near Hectanooga, NS. Personal communication, 2 records.
2	Klymko, J.J.D. 2016. 2014 field data. Atlantic Canada Conservation Data Centre.
2	Klymko, J.J.D. 2016. 2015 field data. Atlantic Canada Conservation Data Centre.
2	Layberry, R.A. 2012. Lepidopteran records for the Maritimes, 1974-2008. Layberry Collection, 1060 recs.
2	Manning, I. 2020. Peregrine Falcon nest site observations. pers. comm. to J. Churchill.
2	McIntosh, W. 1899. The Butterflies of New Brunswick. Bulletin of the Natural History Society of New Brunswick, 18: 223-225.
2	Mills, P. 2016. Email communication to S. Blaney, re: Scirpus longii at Upper Great Brook, Queens Co. NS. NS DNR, 2 recs.
2	Mills, Pamela. 2007. Iva frutescens records. Nova Scotia Dept of Natural Resources, Wildlife Div. Pers. comm. to S. Basquil, 4 recs.
2	Neily, T.H. & Pepper, C.; Toms, B. 2018. Nova Scotia lichen database Update. Mersey Tobeatic Research Institute, 14 recs.
2	Olsen, Ervin. 2018. Nova Scotia Atlantic Coastal Plain Flora observations. Halifax Field Naturalists Nova Scotia Nature Archive Facebook Page.
2	Perrin, J., Russel, J. 1912. Catalogue of Butterflies and Moths, Mostly Collected in the Neighborhood of Halifax and Digby, Nova Scotia. Proceedings and Transactions of the Nova Scotian Institute of Science, 12(3), 258-290.
2	Phillips, B. 2017. Emails to John Klymko regarding Eastern Waterfan (Peltigera hydrothyria) occurrences in Fundy National Park. Fundy Biosphere Reserve, 3 recs.
2	Proulx, V.D. 2002. Selaginella rupestris sight record at Centreville, Nova Scotia. Virginia D. Proulx collection, 2 recs.
2	Scott, F.W. 1988. Status Report on the Southern Flying Squirrel (Glaucomys volans) in Canada. Committee on the Status of Endangered Wildlife in Canada, 2 recs.
2	Sheffield, C.S. 2004. The Rare Cleptoparasitic Bee Epeoloides pilosula (Hymenoptera: Apoidea: Apidae) Discovered in Nova Scotia, Canada, with Distributional Notes
2	WIlliams, M. Cape Breton University Digital Herbarium. Cape Breton University Digital Herbarium. 2013.
2	Wissink, R. 2006. Fundy National Park Digital Database. Parks Canada, 41 recs.
2	Wong, Sarah. 2020. Two Chimney Swift observation made by Sarah Wong. pers. comm. to Sean Blaney.
2	Wong, Sarah. 2021. Chimney Swift observations, Beverly Lake, NS. pers. comm.
1	Allan Smith. 2011. Cedar stand location at South Williamston. Abitibi Bowater, 1 Rec.
1	Amirault, D.L. 1997-2000. Unpublished files. Canadian Wildlife Service, Sackville, 470 recs.
1	Amiro, Peter G. 1998. Atlantic Salmon: Southern Nova Scotia SFA 21. Dept of Fisheries & Oceans, Atlantic Region, Science. Stock Status Report D3-11. 1 rec.

# recs	CITATION
1	Anderson, Frances. 2022. Heterodermia squamulosa record near Lunenburg, NS. pers. comm.
1	Arsenault, R. 2009. Goodyera pubescens record in Kejimkujik National Park. Pers. comm. to C.S. Blaney, 1 rec.
1	Atlantic Canada Bank Swallow Working Group. 2022. 2021 Bank Swallow colony records. Birds Canada.
1	Austin-Smith, P. 2014. 2014 Common Nighthawk personal communication report, NS. NS Department of Natural Resources.
1	Bagnell, B.A. 2003. Update to New Brunswick Rare Bryophyte Occurrences. B&B Botanical, Sussex, 5 recs.
1	Basquill, S.P. 2004. C. americana and Sedum sp records, 2002. Pers. comm. to C.S. Blaney. 2 recs, 2 recs.
1	Basquill, S.P.; Neily, T. 2015. Database of Sphagnum records for Nova Scotia. NS Department of Natural Resources, 4 recs.
1	Bateman, M.C. 2000. Waterfowl Brood Surveys Database, 1990-2000. Canadian Wildlife Service, Sackville, unpublished data. 149 recs.
1	Belliveau, A. & Toms, B. 2012. Email regarding Lophiola aurea (Goldencrest) location on Molega Lake, NS. Mersey Tobeatic Research Institute, 3 records.
1	Benedict, B. Connell Herbarium Specimens. University New Brunswick, Fredericton. 2000.
1	Berg, L. 2020. Canada Warbler observations, Birch Lake, NS. pers. comm. to J. Churchill.
1	Bernard, Laurel. 2013. Email to Sean Blaney regarding Listera australis at Lake Rossignol. Nature Conservancy of Canada, 1.
1	Bishop, G., Bagnell, B.A. 2004. Site Assessment of Musquash Harbour, Nature Conservancy of Canada Property - Preliminary Botanical Survey. B&B Botanical, 12pp.
1	Blaney, C.S. 2003. Fieldwork 2003. Atlantic Canada Conservation Data Centre. Sackville NB, 1042 recs.
1	Blaney, C.S. Miscellaneous specimens received by ACCDC (botany). Various persons. 2001-08.
1	Bredin, K.A. 2000. NB & NS Bog Project, fieldwork. Atlantic Canada Conservation Data Centre, Sackville, 1 rec.
1	Breen, A. 2017. 2017 Atlantic Whitefish observation. Coastal Action.
1	Brooks, Fiona. Erioderma mollissimum records in Lunenburg County, NS. Pers. comm., 2 records.
1	Brown, Constance Lynn. 2023. Wood turtle records for New Brunswick. University of New Brunswick. Pers. comm., 2 records.
1	Brunton, Dan. 2022. Record of Isoetes prototypus near Sand Lake, NS. pers. comm.
1	Butt, Brad. 2020. Email from Brad Butt to Sean Blaney regarding a Blue Felt Lichen (Pectenia plumbea) from near Deception Lake, Shelburne Co., NS. pers. comm., 1 record.
1	Cameron, R.P. 2009. Erioderma pedicellatum database, 1979-2008. Dept Environment & Labour, 103 recs.
1	Cameron, R.P. 2012. Additional rare plant records, 2009. , 7 recs.
1	Chapman-Lam, Colin J. 2022. Atlantic Canada Conservation Data Centre 2022 contracted project work. Atlantic Canada Conservation Data Centre.
1	Chapman, Cody. Unreported Species at Risk Records across Nova Scotia. Chapman, Cody, 5 records.
1	Clayden, S.R. 2006. Pseudevernia cladonia records. NB Museum. Pers. comm. to S. Blaney, Dec, 4 recs.
1	Clayden, S.R. 2020. Email regarding Blue Felt Lichen (Pectenia plumbea) occurrences in New Brunswick, from Stephen Clayden to Sean Blaney. pers. comm., 2 records.
1	Clayden, S.R. 2020. Email to Sean Blaney regarding Pilophorus cereus and P. fibula at Fidele Lake area, Charlotte County, NB. pers. comm., 2 records.
1	Clayden, S.R. 2022. Email to Sean Blaney regarding Heterodermia squamulosa record in Loch Alva PNA. , 1 record.
1	Cook, K. 2016. Wood Turtle record. Pers comm. to Nova Scotia Department of Lands and Forestry.
1	COSEWIC (Committee on the Status of Wildlife in Canada). 2013. COSEWIC Assessment and Status Report on the Eastern Waterfan Peltigera hydrothyria in Canada. COSEWIC, 46 pp.
1	Creaser, Alissa & Belliveau, Alain Bombus specimens collected in Wolfville, Nova Scotia, in July 2022. E.C. Smith Herbarium. 2022.
1	Cronin, P. & Ayer, C.; Dubee, B.; Hooper, W.C.; LeBlanc, E.; Madden, A.; Pettigrew, T.; Seymour, P. 1998. Fish Species Management Plans (draft). NB DNRE Internal Report. Fredericton, 164pp.
1	Crowell, M.J. Plant specimens from Nictaux, NS sent to Sean Blaney for identification. Jacques Whitford Limited. 2005.
1	deGooyer, K. 2018. Chelydra serpentina observation record. Nova Scotia Environment.
1	deGooyer, K. 2020. Eastern White Cedar observations, Norwood, Nova Scotia. Nova Scotia Environment.
1	Dept of Fisheries & Oceans. 1999. Status of Wild Striped Bass, & Interaction between Wild & Cultured Striped Bass in the Maritime Provinces. , Science Stock Status Report D3-22. 13 recs.
1	Edge, Thomas A. 1984. Status report on the Atlantic Whitefish (Coregonus huntsmani). Committee on the Status of Endangered Wildlife in Canada.
1	Goltz, J.P. 2001. Botany Ramblings April 29-June 30, 2001. N.B. Naturalist, 28 (2): 51-2. 8 recs.
1	Hall, Duane. 2018. Martes americana record by Duane Sabine, emailed to J. Klymko on 13 12 2018. pers. comm.
1	Hicklin, P.W. 1990. Shorebird Concentration Sites (unpubl. data). Canadian Wildlife Service, Sackville, 296 sites, 30 spp.
1	Hill, N. 2014. 2014 Monarch email report, Bridgetown, NS. Fern Hill Institute for Plant Conservation.
1	Hill, N.; Manning, I. 2020. Wild Leek observation, Cornwallis River, NS, floodplain. pers. comm. to J. Churchill.
1	Hill, N.M. 2016. Email communications to Sean Blaney and Alain Belliveau regarding the discovery of Fimbristylis autumnalis on the shores of Loon Lake, Kejimkujik National Park. Pers. comm., 1 rec.
1	Hope, P. 2007. Water-pennywort (Hydrocotyle umbellata) on Ell Island. Parks Canada, Kejimkujik NP, 1 record.
1	Horace Mouland. 2022. Monarch observation in Wilmot, Nova Scotia. Personal communication, 1 record.
1	Hughes, Cory. 2020. Atlantic Forestry Centre Coccinella transversoguttata collections. Canadian Forest Service, Atlantic Forestry Centre.
1	iNaturalist.ca. 2022. iNaturalist records 2022. iNaturalist.ca (ed.) iNaturalist.org; iNaturalist.ca, Web site: 3 recs.
1	Johnstone, D.; Churchill J. 2014. 2014 Chimney Swift observation, Kejimkujik NP, NS. Atlantic Canada Conservation Data Centre.
1	Kennedy, B. 2019. observations of Crocanthemum canadense at Bangs Falls, Nova Scotia. iNaturalist.ca.
1	Klymko, J. Dataset of butterfly records at the New Brunswick Museum not yet accessioned by the museum. Atlantic Canada Conservation Data Centre. 2016.
1	Klymko, J.J.D. 2012. Insect fieldwork & submissions, 2011. Atlantic Canada Conservation Data Centre. Sackville NB, 760 recs.
1	LaPaix, R.W.; Crowell, M.J.; MacDonald, M. 2011. Stantec rare plant records, 2010-11. Stantec Consulting, 334 recs.
1	MacFarlane, Wayne. 2018. Skunk Cabbage observation on Long Island, Kings Co. NB. Pers. comm., 1 records.
1	MacKinnon, D.S. 2002. Fieldwork 2002. Dept of Environment & Labour, Protected Areas Branch, 1 rec.
1	MacKinnon, D.S. 2012. Goodyera pubescens observation, photo. Pers. comm. to S. Blaney, Sep 18, 1 rec.
1	MacKinnon, D.S. 2013. Email report of Peregrine Falcon nest E of St. Martins NB. NS Department of Environment and Labour, 1 record.
1	Manning, I. 2020. Peregrine Falcon observation. Pers. comm. to J.L. Churchill.
1	Marshall, L. 1998. Atlantic Salmon: Southwest New Brunswick outer-Fundy SFA 23. Dept of Fisheries & Oceans, Atlantic Region, Science. Stock Status Report D3-13. 6 recs.

# recs	CITATION
1	Mazerolle, David. 2021. Botanical fieldwork 2019-20200. Parks Canada.
1	McAlpine, D.F. 1983. Species Record Cards. Fundy National Park, Library, 1 rec.
1	McCarthy, C. 2003. Ecological Inventory of Melanson Property, Annapolis County, Nova Scotia. Kejimkujik National Park.
1	McIntosh, W. 1904. Supplementary List of the Lepidoptera of New Brunswick. Bulletin of the Natural History Society of New Brunswick, 23: 355-357.
1	McMahon, R. 2019. Mainland Moose observation. Pers. comm. to A. Belliveau.
1	Nature Trust of New Brunswick. 2020. Nature Trust of New Brunswick 2020 staff observations of species occurence data. Nature Trust of New Brunswick, 133 records.
1	NatureServe Canada. 2018. iNaturalist Maritimes Butterfly Records. iNaturalist.org and iNaturalist.ca.
1	Neily, P.D. Plant Specimens. Nova Scotia Dept Natural Resources, Truro. 2006.
1	Neily, T.N. 2021. Hectanooga Bryophytes. pers. comm., 1 record.
1	Newell, R.E. 2000. Assessment and update status report on the Eastern Mountain Avens (Geum peckii) in Canada. Committee on the Status of Endangered Wildlife in Canada, 1 rec.
1	Parker, M. 2018. East Coast Aquatics ACCDC 2018 Report. East Coast Aquatics, 12 records.
1	Pohl, G.P. Specimen data from Northern Forest Research Centre. Northern Forest Research Centre. 2022.
1	Proulx, Lisa. 2022. Email to Sean Blaney regarding Sclerophora peronella (Frosted Glass Whiskers, a lichen) occurrence at Goldsmith Lake, Annapolis Co., NS. pers. comm., 1 record.
1	Proulx, V. 2008. Geum peckii observation. Pers. comm. to D. Mazerolle, 1 rec.
1	Riley, Jonathan. 2019. Fraxinus nigra observation near Kejimkujik National Park. iNaturalist.
1	Robicheau, C. 2019. Atlantic Canada Conservation Data Centre Fieldwork 2019. Atlantic Canada Conservation Data Centre.
1	Rothrock, P. 2002. Carex longii in NS. Taylor University, Pers. com. to L. Benjamin, forwarded to S. Blaney. 5 recs.
1	Sabine, D.L. & Goltz, J.P. 2006. Discovery of Utricularia resupinata at Little Otter Lake, CFB Gagetown. Pers. comm. to D.M. Mazerolle, 1 rec.
1	Sabine, D.L. 2013. Dwaine Sabine butterfly records, 2009 and earlier.
1	Sabine, M. 2016. Black Ash records from the NB DNR Forest Development Survey. New Brunswick Department of Natural Resources.
1	Shortt, R. UNB specimen data for various tracked species formerly considered secure. Connell Memorial Herbarium, UNB, Fredericton NB. 2019.
1	Smith, M. 2016. Email regarding additional location of Fimbristylis autumnalis on shores of Loon Lake, Kejimkujik National Park. pers. comm., 1 record.
1	Standley, L.A. 2002. Carex haydenii in Nova Scotia. , Pers. comm. to C.S. Blaney. 4 recs.
1	Stewart, P. 2013. email to Sean Blaney regarding the discovery of a Listera australis population at Blockhouse. Envirosphere Consultants Limited, 1.
1	Timmons, M. 2019. Telephone report of Polygala polygama at Aylesford Mountain, Kings Co., NS by Megan Timmons to C.S. Blaney. , 1 record.
1	Toms, Brad. 2009. New Scirpus longii record on Lake Rossignol. Mersey Tobeatic Research Institute.
1	Tummer, Kevin. 2016. Email communication (April 30, 2016) to John Klymko regarding Snapping Turtle observation in Nova Scotia. Pers. Comm.
1	Vinison, Neil. 2018. Record of Saxifraga paniculata from Fundy NP, emailed to S. Blaney 19 July 2018. Pers. comm.
1	Vinson, N. 2018. Email to S. Blaney regarding new occurrence of Saxifraga paniculata on Point Wolfe River. Parks Canada, 1 record.
1	Vinson, Neil. 2016. Emails to Sean Blaney regarding yellow flower (Primula veris) and coastal habitat leaf rosettes (Primula laurentiana) in Fundy National Park. pers. comm., 2 rec.
1	Vinson, Neil. 2020. Email - additional Peltigera hydrothyria records, Fundy National Park. Chapman-Lam, Colin J. (ed.) Fundy National Park, 2.
1	Weatherby, C.A. 1942. Two weeks in southwestern Nova Scotia. Rhodora, 44: 229-236.
1	Webster, R.P. Atlantic Forestry Centre Insect Collection, Maritimes butterfly records. Natural Resources Canada. 2014.
1	White, S. 2018. Notable species sightings, 2016-2017. East Coast Aquatics.
1	Wilhelm, S.I. et al. 2019. Colonial Waterbird Database. Canadian Wildlife Service.
1	Wissink, R. 2000. Four-toed Salamander Survey results, 2000. Fundy National Park, Internal Documents, 1 rec.
1	Wong, Sarah. 2020. Eastern Ribbonsnake (Thamnophis sauritus) sighting at Mersey River inflow to Lake Rossignol, August 24, 2020. pers, comm., 1 record.
1	Zinck, M. 2008. Nova Scotia Museum. Pers. comm. to D.M. Mazerolle, 1 rec.