

Environmental Impact Assessment Registration Document

Water Supply Source Assessment - New Well Development

Ocean Surf RV Park
73 Belliveau Beach Road, Pointe du Chêne, NB

EIA Registration Document - Version 0B

June 13, 2022
2002425.001



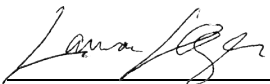
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Ocean Surf RV Park

Prepared by:

Sarah Banks, M.A.Sc.
Environmental Professional
Environmental Engineering

Reviewed, supplemented, and approved by:



Laura Leger, P.Eng.
Project Engineer
Municipal Engineering

Production team

General Manager	Sophie Belliveau-Doiron
-----------------	-------------------------

Englobe Corp.

Project Manager	Laura Leger, P.Eng.
Report Preparation	Sarah Banks, M.A.Sc.

Revisions and publications log

REVISION No.	DATE	DESCRIPTION
0A	May 26, 2022	Preliminary version published for Owner review
0B	June 13, 2022	Initial Submission

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- Appendix B Englobe Corp. Figure 03 - 1:25,000 Scale Map - Overall Location Plan
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- Appendix D Atlantic Canada Conservation Data Centre (ACCDC) Report - April 14, 2022

Registration Form

PURSUANT TO SECTION 5 (2) OF
THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATION 87-83
CLEAN ENVIRONMENT ACT

1 The Proponent

Name of Proponent: Ocean Surf RV Park

Principal Contact Name: Sophie Belliveau-Doiron

Title: General Manager

Principal Contact Person for purposes of Environmental Impact Assessment

Name: Laura Leger, P.Eng.

Official Title: Project Engineer- Municipal Engineering

Telephone: 506.857.2777, ext. 178047

Email: laura.leger@englobecorp.com

Property Ownership

This project is located on PID 70086335, in Pointe du Chêne, NB. The land is owned by the Proponent, Ocean Surf RV Park.

2 The Undertaking

2.1 Name of the Undertaking

New Well Development - Ocean Surf RV Park.

2.2 Project Overview

The Proponent (Ocean Surf RV Park) proposes to construct one (1) new potable water well on their property, PID 70086335. The Park is currently served by four (4) existing water wells, as well as a water distribution piping network and several pressure tanks to help manage peak demands. However, the current water system operates near its maximum capacity during the peak season and an additional water source is necessary to manage the peak season water demands.

The Park currently has a total of approximately 475 fully serviced sites, three (3) washroom/laundry facilities and a swimming pool. There is also an administration building and an activity center which would also consume water. Based on current planning and in accordance with the previous Environmental Impact Assessment (EIA, File #1225), the Park may add another 27 sites in the future which would complete the 195-site expansion approved in the previous EIA file. Further expansion of the Park beyond the previously approved size would not be anticipated. Therefore, the Park's ultimate capacity would be approximately 502 sites.

This EIA Registration Document is being submitted in accordance with Schedule A of the NBDELG Guide to Environmental Assessment since the desired pumping capacity of the new well is greater than 50 cu. m./day.

The following work will be undertaken by the Proponent for the new water source:

- Drilling of one (1) test well to determine the yield and water quality of the proposed well site.
- Use of an existing well in the area for observation is anticipated based on available information on nearby well characteristics. However, if this is not possible following discussions with the owners of these nearby wells, drilling of one (1) new observation well may be required, to be located within 20 m of the new test well.
- If the test well is found to be acceptable, the following work will be required:
 - Development of the test well, and related works as required under the WSSA guidelines, including use of an existing well for observation or drilling of one (1) observation well as per the WSSA Guidelines.
 - Construction of well control building, or re-use of an existing building for this purpose.
 - New water piping to connect the new well to the existing system. It will be determined during a future detailed design phase if upgrades to any of the existing water distribution piping in the Park would also be beneficial to the overall operation of the water system.
 - Final well construction in accordance with WSSA guidelines.
- If the test hole is found to be unacceptable, it may be decided to drill additional test holes (with approval of the Department).

2.3 Purpose / Rationale / Need for the Undertaking

The work proposed herein is required to evaluate the potential for an additional reliable water source on PID 70086335 (at the Ocean Surf RV Park, in Pointe du Chêne, NB).

A “do-nothing” approach is not acceptable in this case since the Park’s existing wells are currently nearing the limit of their pumping capacity during peak periods of the season. A reliable water well is a primary need for the Park to ensure the supply of a safe and reliable water system to their users.

Therefore, drilling of a new groundwater production well and related infrastructure is required to continue providing access to a safe and reliable water system in the Park.

2.4 Project Location

The proposed well site is located in southeastern New Brunswick, in Pointe du Chêne, NB, along the Northumberland Strait.

As identified in Section 1, the proposed site is located on the property defined as PID 70086335. One (1) preliminary drilling target has been identified based on proximity to the existing water distribution system as shown in Figure 01 (Appendix A). The figure shows the preliminary location of the proposed well and existing wells in the area and over an existing aerial photograph.

If it is not possible to use existing wells in the area for observation, it is anticipated that an observation well would also be drilled, within 20 m of the new production well and respecting the required setbacks indicated in the NB *Water Well Regulation - Clean Water Act*.

Based on our review of available published data and discussions with local well drilling contractors, the aquifer beneath is understood to be very prolific. Therefore, it is not anticipated that it will be necessary to target a specific bedrock structure. The coordinates noted below are approximate at this time; however, the exact location of the well will be selected to avoid specific site features, (site buildings, proposed expansion area, etc.) and meeting the minimum set back distances as a described in the NB *Water Well Regulation - Clean Water Act*.

The latitude and longitude of the proposed test well is as follows (approximately, to be confirmed on-site):

— PID 70086335:

— Test Well #1

Latitude: 46.228275, Longitude: -64.498033

A 1:25,000 scale map (Figure 03) showing the proposed site in reference to the existing features is also included in Appendix B.

2.5 Siting Considerations

2.5.1 General Site Considerations

The proposed test well location has been established based on the locations of the current infrastructure and is along the outskirts of the developed portion of the Ocean Surf RV Park. The proposed location has been selected to avoid known infrastructure that could negatively affect the wells.

A preliminary site visit was carried out by Englobe Corp. staff on May 6, 2022 and no signs of pollution or contamination hazards were noted nearby the proposed drill targets.

According to a search of the Land Gazette database encompassing a 500m radius around the proposed test well, information is on file with NBDELG for a grouping of three (3) properties to the west of the site (PID Nos. 00882449, 70486022, and 00860106). Therefore, a request for additional information was made to NBDELG, which revealed PID 00860106 as a petroleum storage site, and PIDs 00882449 and 70486022 as being impacted by 3rd party contamination originating from PID 00860106 (refer to the attached WSSA Initial Application in Appendix A for further information including NBDELG Letters dated April 22 & 26, 2022).

As shown in Figure 01 (Appendix A), the proposed drilling target is not within 30m of any wetlands or watercourses according to the GeoNB's wetland and watercourse mapping. A preliminary desktop assessment was completed at the site which includes a review of publicly available information including a 2009 Wetland Delineation that was prepared for the subject parcel by B&B Botanical as part of the Park's previous EIA, file #1225. The desktop review suggests a low likelihood of any wetlands or watercourses within the project footprint. The absence of wetlands was confirmed during the May 6, 2022 site visit by Englobe.

For additional information on the geology and hydrogeology of the area, please refer to the WSSA Initial Application in Appendix A of this document.

It shall be noted that the exact location of any related infrastructure and connections to the existing system will be determined once the final well location has been established (once the well has been drilled and pumping tests have indicated its suitability).

2.5.2 Other Location Considered

No other locations were chosen as alternate areas to drill as this area has historically had ample groundwater supplies in the bedrock aquifer beneath. The well is expected to be drilled near the southern end of the campground.

2.5.3 Zoning

The project (PID 70086335) is in the "General Commercial" Zone of the LSD where campground developments are permitted. No land usage changes are being proposed as part of this project. Therefore, there are no concerns with the Zoning for this project.

2.5.4 Proximity to Wetlands and Watercourses

As shown on the attached figures presented in Appendix A, the proposed drilling targets are located within the developed portion of the subject property (PID #70086335) and are not located within 30m of any mapped wetlands or watercourses according to GeoNB's wetland and watercourse mapping. However, mapped wetlands (including provincially significant wetlands) and mapped watercourses are present at the north and east portions of the property near the subject property boundaries, approximately 150m or more from the planned drilling areas.

As mentioned earlier, a desktop analysis was conducted for potential unmapped wetlands in the area and was conducted based primarily on the findings of a Wetland Delineation Report prepared for the subject parcel by B&B Botanical in 2009, and review of available information including GeoNB Wetland Mapping, NB Topographic Mapping, Google Earth aerial imagery (2004-2021), and Lidar imagery of the project area.

The 2009 Wetland Delineation Report was completed by B&B Botanical, as part of an EIA for the development of an addition of 195 campsites on PID #70086335. The 2009 wetland delineation identified a coastal marsh wetland and a watercourse located on the north/east borders of the parcel, approximately 150m or more from the proposed drilling sites. Based on the current project scope, the wetland and watercourses are unlikely to be impacted by the project. No other wetlands were

identified on the subject parcel. The absence of wetlands was confirmed in the field during the May 6, 2022 site visit by Englobe (refer to WSSA Initial Application in Appendix A).

For the well drilling, it is anticipated that the disturbance will be limited to the construction of test well(s) in the approximate location shown on the attached Figure 01. The intent is to maintain construction activities a minimum of 30m away from any wetlands or watercourses.

2.6 Physical Components and Dimensions of the Project

2.6.1 Land Requirements

The existing campground covers approximately 23 Ha (including roads, sites, buildings and other features). The well(s) (test well and, if required, one [1] observation well as described in Section 2.4) will be drilled in strategic locations based on the existing campground and water system configuration. Therefore, no additional land is required to construct the wells.

2.7 Construction Details

As soon as the EIA Registration Document and WSSA Initial Application are approved, the drilling of the test hole(s) will be immediately undertaken.

The following preliminary schedule has been developed for the drilling, testing and construction phases of the new well(s). The exact timing of each component will be refined as the project progresses depending on the actual time taken to complete the preceding task(s).

Component	Approx. duration (weeks)	Anticipated completion date
EIA Registration, WSSA Initial Application, and Review	8	August 5, 2022
Preliminary Drilling. Preliminary Well Construction and Pump Testing	5	September 9, 2022
WSSA Hydrogeological Study and NBDELG Reviewing Process	4	October 7, 2022
NBDELG Review Process (WSSA) & Public Consultation	8	December 2, 2022
Final Review and Certificate of Determination	2	December 17, 2022
Final Construction of Well and Related Infrastructure	8	April 18, 2023

The estimated hours of construction will be from Monday to Friday between 7:00 A.M. and 7:00 P.M. except during the constant rate pumping where the work is 24 hrs/day.

The following equipment is anticipated to be used for the construction procedures:

- Well Drilling: Well drilling equipment, pumps, and generators.
- Earthwork (if required to manage runoff water, refer to paragraphs below for further details): Excavators, dozers, dump trucks, compaction equipment.

Potential sources of pollutants during the construction period are anticipated to include:

- Exhaust and other emissions from construction equipment.

- Noise from construction equipment.
- Water during drilling. The run-off water from the drilling operation will be controlled by the installation of erosion control structures. Typical installation for a drilling site includes utilizing site-specific measures to manage and direct the flow of water, installation of erosion control structures (silt fencing and/or hay bales), and utilization of the existing vegetated land where possible to minimize the effect on nearby streams. If necessary, a small sedimentation pond and ditch may be constructed to improve the control drill cuttings and run-off water.
- Silt from disturbed surface areas. This will be minimized by requiring the contractor to install silt fences and other erosion protection devices prior to ground disturbance and to reinstate disturbed areas as soon as is practical.
- Petroleum hydrocarbons from possible leaks, spills, or accidents from construction equipment and vehicles. This will be minimized by requiring the Contractor to have spill kits on-site and to conduct daily inspections of his equipment. No refueling or maintenance of vehicles will occur within 30 m of watercourses.

All waste generated during construction will be stored in containers and removed off-site by the Contractor. The following sequence and procedures are recommended during the construction process:

1. Mobilization of drilling equipment and installation of environmental erosion control structures.
2. Drilling of well(s).
3. If unsuccessful:
 - Abandonment of test wells and casing as per NBDELG guidelines.
 - Clean-up, property restoration, and demobilization.
4. If successful:
 - Final construction of the wells (casing installation).
 - Step pumping tests and constant rate pumping tests including installation of environmental control structures as required for selected pumping rate.
 - Clean-up, property restoration, and demobilization.

As a result of previous land use and current construction activities, it is not anticipated that significant site work (gravel, grading, etc.) will be required to provide access for the drilling equipment. Minimal site work may be required to properly direct drilling water, to be confirmed during a pre-drilling meeting on-site with the Contractor.

2.8 Operation and Maintenance Details

Limited operation and maintenance are expected to operate a water potable well for the purpose of servicing the property. During the initial pumping test, water will be sampled to confirm if it is suitable for consumption and if treatment is required. Based on adjacent wells in the area, extensive treatment is not expected to be required (filtration and UV disinfection are in place at the Park's existing wells). Therefore, Operation and Maintenance costs will be limited to the well pump and treatment if required.

2.9 Future Modification, Extensions, or Abandonment

Any future expansion of the Park would be in accordance with the concept previously approved in EIA File #1225.

With respect to the new well(s) proposed herein, since water is a primary need of Park users, future abandonment of the water system is not foreseen. However, if a well requires abandonment in the future, the NBDELG guidelines will be followed.

2.10 Project-Related Documents

The following project-related documents are appended:

- Water Supply Source Assessment Initial Application prepared by Englobe Corp., including NBDELG Property Based Environmental Information Letter
- ACCDC. (2022). Data Report 7238. Shediac, NB.

In addition, the following project-related documents were referenced from the previous EIA File #1225:

- Craig Hydrogeologic Inc. (2009). Water Supply Source Assessment. 72 Hour Pump Test Supply Well. Ocean Surf Campground.
- NATECH. (2009). Environmental Impact Assessment Registration Document. Ocean Surf Ltd. 73 Belliveau Beach Rd.

3 Description of the Existing Environment

3.1 Physical and Natural Features

As noted previously, the proposed drilling locations is located in the developed portion of the site and are not within 30m of any mapped wetland or watercourse or their buffer zones according to GeoNB's wetland and watercourse mapping. In addition, the 2009 Wetland Delineation by B&B Botanical confirmed the wetland and watercourse boundaries and suggested that unmapped wetlands/watercourses are unlikely to be present. The absence of unmapped wetlands/watercourses was confirmed by Englobe during a site visit on May 6, 2022.

The complete description of the geology and hydrogeology of the area is available in the WSSA Initial Application in Appendix A of this document. Additional soil information will be obtained following the preliminary investigations during the test well drilling.

3.1.1 Site Topography and General Surface Drainage Regime

The approximate ground surface elevation (Geodetic Datum CGVD2013 based on Provincial LiDAR mapping) at the proposed well location is +/- 8.4 m.

Based on a review of regional (1:25,000) scale topographic mapping, the ground surface elevation in the project area slopes to the north/east towards the Northumberland Strait at a gradient of 0 to 7%.

An unnamed mapped watercourse is located on the north/east boundary of the subject property. The watercourse flows north which ultimately discharges into the Northumberland Strait.

A review of the New Brunswick Department of Energy and Resource Development (NBDERD) wetlands layer indicates that a provincially significant wetland (i.e. coastal marsh) is located on the north/east portions of the property near the property boundaries and a mapped wetland also exists in the southeastern portion. However, as previously noted, the work area is not expected to be within 30m of any wetlands or watercourse and the associated wetlands and watercourses are estimated to be approximately 150m or more from the proposed drilling locations.

As indicated above, much of the required infrastructure for the proposed well already exists and limited ground disturbances other than the well(s) itself are planned. If the well is successful, a small wellhouse and watermain connections will be constructed, and permanent pumping equipment and controls will be installed. If watermain upgrades are deemed necessary in a future phase or project, it is anticipated that the route would generally follow the alignment of existing roads within the Park.

The well drilling will occur in the developed portion of the subject property in close proximity to campsites and residential homes, which would generally not be expected to represent suitable habitat for mammals and birds. However, as part of this assessment, Englobe requested a 'Data Report' from Atlantic Canada Conservation Data Centre (ACCDC) in order to complete a screening level assessment of the nature and extent of potential ecological receptors within the planned work area. The ACCDC data report contains all reported records of species at risk (SAR) within a 5km radius of the proposed work area on the subject parcel (PID #70086335).

For the purposes of this assessment, SAR are defined as only those species which meet one or more of the following criteria:

- Species listed as 'Endangered', 'Threatened', 'Vulnerable' or 'Special Concern' under the Federal Species at Risk Act (SARA), New Brunswick Species at Risk Act (NBSARA) or by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).
- Species provincially ranked as "S1" (Critically Imperiled) or "S2" (Imperiled).

In addition to the above-mentioned protections, protection for individual and populations of birds and their nests against harm or destruction is also provided under the Migratory Birds Convention Act (MBCA).

The results of the ACCDC data request reported the following SAR within a 5km radius of the subject site:

- Four (4) vascular flora plants including one (1) species listed as 'Threatened' under COSEWIC.
- Thirty-eight (38) vertebrate fauna including eleven (11) species listed as 'Endangered', 'Threatened' or of 'Special Concern' under either SARA, NBSARA, and/or COSEWIC.
- Two (2) invertebrate fauna, both listed as 'Endangered' and/or of 'Special Concern' under either SARA, NBSARA or COSEWIC.
- Two (2) location sensitive species listed as 'Endangered' or of 'Special Concern' under SARA were also identified to be known within the study area.

The planned drilling locations are anticipated to take place in the developed portion of the site in a grass covered area in close proximity to human receptors (campsites and residences) and therefore the SAR reported in the ACCDC report are unlikely to be impacted by the project activities. However, bird species may be present near the project area and therefore mitigation measures will be implemented to ensure that disturbance to any rare bird species and migratory birds does not occur during the project (Refer to Section 5.3).

If deemed necessary, a SAR field survey will be conducted during the appropriate season prior to drilling activities, at which time the site will be visually inspected for unique biophysical and terrestrial features, and evaluations will be conducted for wildlife, vegetation and migratory birds within the project area.

3.1.2 Significant Natural and Managed Areas

There were two Environmentally Sensitive Areas (ESA) identified by ACCDC within 5km of the project area.

- Shediac Island
- Petit-Barachois

Shediac Island is located approximately 1 kilometer (km) offshore in the Shediac Bay, located at the mouth of the Shediac River. The Island is classified as an ESA because it is known to attract migratory birds and supported two Great Blue Heron colonies since at least 1974. The northern colony was comprised of 38 nests in 1981; and the southern colony was comprised of 105 Great Blue Heron nests in 1984. The project activities proposed herein will not impact Shediac Island due to the scope of the project, and the distance of the island from the project area (approximately 5km away).

Petit-Barachois is a beach known to attract birds such as the Piping Plover and is located approximately 4km from the project area. The project activities proposed herein will not impact Petit-Barachois due to the scope and the distance from the project area.

There were two Managed Areas identified by ACCDC within 5km of the project area.

- Parlee Beach Provincial Park
- Ducks Unlimited Canada Conservation Lands

Project activities will take place west of the Parlee Beach Provincial Park managed area, approximately 200 m away and the Ducks Unlimited Canada Conservation Lands are located approximately 5km west of the site; therefore, the project activities will not impact these managed areas. No additional information was reported on the ACCDC report; however, these areas are known to attract birds.

3.1.3 Protected Watersheds and Wellfields

The site is not located within a Watershed or Wellfield Protected Area.

Existing trailers and campsites located within the park receive potable water from the current Ocean Surf RV's potable well. Project activities will be limited to the developed area near the newer sections of the RV park and therefore the work is not anticipated to impact nearby potable water sources.

3.2 Cultural Features

There are no known cultural features at or in the immediate vicinity of the proposed project. The project site is currently developed, and various buildings and expansion constructed has occurred. Surrounding land use are Residential Properties.

3.3 Existing and Historic Land Uses

As noted in the WSSA Initial Application (Appendix A), from the preliminary desktop analyses completed to date, we do not anticipate water quality concerns due to the surrounding land use, but this will be confirmed during the preliminary drilling investigations.

There is no indication that there were previous developments on this site that may have been of cultural or historic interest.

4 Summary of Environmental Impacts

To proceed with the drilling of the new well(s), the following construction activities are anticipated:

- Installation of environmental protection structures (such as silt fences and erosion control measures).
- Drilling of new well(s).
- Hydraulic (pump) testing as required by the WSSA Guidelines.

The well connection and accessories will be done by the Owner following the Department's approval of the new source.

The attached Figure 04 (Appendix C) shows the mapped floodplain for the Pointe-de-Chêne area based on the provincial flood hazard mapping. In the project area, the projected 1 in 100-year flood elevation for the year 2100 is 4.10m (CGVD2013). As noted previously, the site in the area of the proposed test well(s) is at an elevation of 8.4m, above the Coastal Flood level of 4.10 meters.

It is anticipated that the proposed work will have little effect on the surrounding environmental features. As noted in the previous section, the proposed drilling targets are not within 30 m of any mapped wetland according to GeoNB's delineation fabric and the assessment conducted herein.

Existing wells are located within 500m of the proposed new wells. It is proposed to monitor the closest existing well during the pumping tests if the owner is in agreement.

5 Summary of Proposed Mitigation

Different mitigation measures will be used throughout the project to minimize environmental impacts. General mitigation measures for this site are as follows:

- Disturbed areas will be reinstated as soon as is practical, silt fences and other erosion protection measures will also be used until disturbed vegetation is fully re-grown.
- Construction will be limited to the requirements of the drilling equipment.
- A setback of 30 meters from wetlands and watercourses will be respected. A WAWA permit application will be submitted if construction is required within the 30m buffer zone of a wetland or watercourse (not anticipated to be required for this project).
- Well Drilling activities will be done by a Licenced Well Drilling Company and in accordance with the NBDELG Guidelines.
- The Contractors will be responsible to have on-site leak and spill prevention equipment prior to commencement of any work. In the event of a spill, the contaminated soils will be removed from the site and disposed of at an approved decontamination site. Any spills will be reported to the

DELG Local Regional Office during business hours or to the Canadian Coast Guard's 24-hour reporting system after-hours.

- The Contractors will be responsible to provide machinery in good working condition.
- Machinery will be operated on existing access roads, where possible, to prevent unnecessary disturbance of vegetation, tree root zones and soils.

5.1 Air Quality and Noise

Dust: Activities during the project have a small potential for short term reduction in air quality due to dust generated during activities and an increase in emissions from the use of heavy machinery (drilling equipment, trucks, etc.).

Mitigation: The generation of dust during activities is unlikely, however if dust is generated during project activities dust suppression by the application of water will be employed when required. The exact locations where water is to be applied, the amount of water to be applied, and the times at which it shall be applied will be determined on-site based on conditions. Waste oil will not to be used for dust control under any circumstances.

Odours: Activities could generate some short-term odours (i.e. diesel exhaust).

Mitigation: There are RVs and other residential properties located in close proximity to the proposed drilling location but any odours from the drill rig or other equipment exhaust, etc., will be limited to within working hours.

Noise Levels: Project activities will result in noise caused by the use of machinery (drill rig/trucks).

Mitigation: Noise events will be of short duration, and project activities will be scheduled to be done during daytime hours where possible (except pumping tests, which require a continuous duration). All machinery should be well muffled. Contractors should avoid any sharp or loud noises where feasible (e.g., not blow horns or whistles). If necessary, trucks may be required to avoid the use of "hammer" braking along specific sections of the site, while radio communications should replace whistle blasts and horns.

5.2 Biology and Ecology (Aquatic)

Wetland habitat: Mapped wetlands are present on the north/east portions of the property; however, the project is not expected to be within 30m of the mapped wetlands. Although unlikely, spills or leaks from project equipment/machinery and runoff water could enter the wetland habitat without appropriate mitigation measures.

Mitigation: A setback of 30m from wetlands and watercourses will be respected. A WAWA permit application will be submitted if project activities are required within the 30m buffer zone of a wetland or watercourse, however, it is not anticipated to be required for this project.

Appropriate erosion and sediment control devices (silt fences, etc.) will be installed to prevent runoff. Furthermore, the wetland will be visually monitored during the work and will stop if negative impacts are observed.

Weather conditions are to be assessed on a daily basis to determine the potential risk of weather on the project. Work will be scheduled to avoid periods of heavy precipitation.

Machinery will be checked for leakage of lubricants and fuel prior to beginning work each day. Basic petroleum spill clean-up equipment will be kept on site. All spills or leaks will be promptly contained, cleaned up, and reported to the 24-Hour Environmental Emergencies Report System (1-800-565-1633).

Hazardous materials (e.g., fuels, lubricants, hydraulic oil) and wastes (e.g., waste oil) will be managed so as to minimize the risk of chronic and/or accidental releases. A designated storage area for hazardous materials will be identified and will be at least 30m from the mapped watercourse and wetland.

Refueling will occur in a manner to minimize potential impacts to the surrounding environment and spill kits will be kept onsite.

Spawning, feeding and breeding sites: No known spawning, feeding or breeding areas are known within the site boundaries.

Species at Risk and other species of conservation concern: Mainly records of aquatic birds were reported on the ACCDC data report as within 5km of the subject site. Aquatic SAR and migratory birds are not expected to be nesting in the project area due to the limited habitat (grass) and close human receptors (campsites and residential homes). However, mitigation measures will be implemented to ensure no disturbance to any birds are outlined below.

Populations/communities of aquatic species (including flora, fish, birds, marine mammals, etc.):

Project activities are not anticipated to generate significant disturbance to site. Limited vegetation disturbance is expected at the well site from the drilling equipment and related environmental structures. The habitat where the drilling activities will occur is located within the developed area of the Ocean Surf RV Park and appears to be covered with landscaped grass and therefore aquatic species are not expected to be within the project area. However, the mitigative measures below will be implemented regardless of if aquatic species are encountered during project activities.

Mitigation: Where feasible, activities will be limited to the time between dawn and dusk to avoid using artificial lighting which can potentially affect bird and bat use of nearby habitats (Canada, 2017). If construction timing restrictions are not possible, Parks Canada National Best Management Practices for Migratory Birds will be followed.

Cultural fisheries: The waters of the Shediac Bay have been used for traditional fishing, based on Traditional Fisheries Knowledge (TFK 1997).

Mitigation: Disturbed areas will be reinstated as soon as is practical and silt fences and other erosion protection devices will be used when necessary. Therefore, potential impacts to this known traditional fisheries area are unlikely to occur.

5.3 Biology and Ecology (Terrestrial)

Vegetative cover: The existing vegetation within the proposed well locations appears to be landscaped grass. There are no trees located in this area.

Mitigation: Any vegetative cover disturbed during project activities will be replaced as part of the scope of the work.

Migratory Birds: Birds may occasionally be present on or near the site during migratory/bird season. However, are unlikely to be nest, breed and feed near the proposed drilling area due to the limited habitat and close human receptors (campsites and residences).

Species at Risk: The ACCDC data report identified the following SAR within a 5km radius of the subject site; four (4) vascular flora plants including one (1) species listed as 'Threatened' under COSEWIC; thirty-eight (38) vertebrate fauna including eleven (11) species listed as 'Endangered', 'Threatened' or of 'Special Concern' under either SARA, NBSARA, and/or COSEWIC; two (2) invertebrate fauna, both listed as 'Endangered' and/or of 'Special Concern' under either SARA, NBSARA or COSEWIC; and two (2) location sensitive species listed as 'Endangered' or of 'Special Concern' under SARA were identified as known within the study area.

Mitigation: As noted in previous sections, activities are not anticipated to generate significant disturbance to site. Some disturbance of the vegetation is expected at the well site but will be limited vegetation disturbance from the drilling equipment and related environmental structures. The habitat where the drilling activities will occur is located within the developed area of the Ocean Surf RV Park and appears to be covered with landscaped grass and therefore rare flora and fauna are not expected to be within the project area. However, the following mitigation measures will be implemented at the site.

All work is to be conducted in accordance with the Migratory Birds Convention Act, which outlines that no migratory bird nests or eggs will be moved or obstructed during project activities. If bird breeding activity is identified during activities, work will stop immediately.

All machinery should be well muffled. Contractors should avoid any sharp or loud noises (e.g., not blow horns or whistles) where possible. If necessary, trucks may be required to avoid the use of “hammer” braking along specific sections of the site, while radio communications should replace whistle blasts and horns.

Where possible, activities will be limited to the time between dawn and dusk to avoid using artificial lighting which can potentially affect bird and bat use of nearby habitats (Canada, 2017). If construction timing restrictions are not possible, Parks Canada National Best Management Practices for Migratory Birds will be followed.

Waste materials will not to be buried on site. Construction debris will be disposed of in a provincially approved manner.

Wildlife habitat features will be protected by appropriate setback distances (or buffer zones) where required. If encountered, wildlife is not to be handled, touched, fed, or harassed. Wildlife will be provided ample space to vacate the worksite on their own accord. Encounters with wildlife will be documented and reported to the client.

5.4 Groundwater

Groundwater Quality: The project is not anticipated to negatively impact groundwater conditions or quality.

Mitigation: Well Drilling activities will be done by a Licenced Well Drilling Company and in accordance with the NBDELG Guide for Residential Well Drilling to ensure it is done to industry standards.

5.5 Other Considerations

All work will follow the Terms and Conditions of any NBDELG WAWA Approvals (not expected to be required for this project), TRC letters and any other provincial or federal letters of advice.

6 Public and First Nations Involvement Process

The typical steps to involve the Public and First Nations are outlined below. Confirmation from the NBDELG will be required to ensure that the following steps are required for this specific project (or if additional steps are necessary).

The minimum public and First Nations consultation requirements outlined in Appendix C of the Provincial EIA registration guide will be followed (NBDELG, 2018). Stakeholders include the owners of all properties within a 500m radius as shown on the attached figures. A public notice containing the information specified in the registration guide will be delivered to the above noted stakeholders, in addition to the local Member of the Legislative Assembly (MLA), the local service district, and a known environmental group in the area, prior to concluding the EIA process.

Although no First Nation communities are located within the immediate study area, a project notification/information letter will be prepared and submitted to nearby First Nation communities (i.e. Bouctouche First Nation and Fort Folly First Nation) and the Aboriginal Affairs Secretariat in accordance with provincial Duty to Consult requirements.

Following the completion of the consultation process, a summary report on the public and First Nation involvement will be prepared and submitted to NBDELG in accordance with the EIA process requirements.

7 Approval of Undertaking

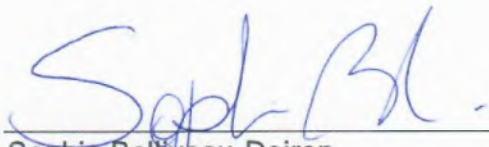
The following technical approvals are anticipated as being required for this project:

- Approval under the EIA Legislation from the NBDELG.
- Approval of the Initial Application and Hydrogeological Study under the NBDELG Water Supply Source Assessment.
- For the construction of the wells, the contractor will be required to obtain the drilling permit from the NBDELG before undertaking the drilling operations.

8 Funding

The development is being completed by the Owner, Ocean Surf RV Park.

9 Signature



Sophie Belliveau-Doiron
General Manager
Ocean Surf RV Park

02-06-2022

Date

Appendix A Water Supply Source Assessment - Initial Application

Including Englobe Corp. Figures 01 to 02



ENGLOBE

Water Supply Source Assessment Initial Application

Please provide the following information:

1. **Name of Proponent:** Ocean Surf RV Park (Sophie Belliveau-Doiron)

2. **Location of drill targets (including property PID) and purpose of the proposed water supply.**

The Proponent (Ocean Surf RV Park) proposes to construct one (1) new water well on PID 70086335. Currently four (4) water wells exist on the property, however an additional water source is necessary to allow the Park to better manage their peak season water demands. During the peak of the tourism season, the existing water system operates near its full capacity. Therefore, a new water source is required to improve the water system's operation and provide a degree of redundancy in the water supply.

At this time the Proponent is proposing to construct one (1) new water well and related infrastructure to connect the well to the water system. If it is not possible to use an existing nearby well for observation (to be confirmed through discussion with well owners), one (1) observation well will also be drilled.

Expansion within the Park is governed by a previous EIA, file #1225, and further expansion beyond the previously approved number of lots is not planned. The purpose of the current EIA is solely for the development of an additional water source to improve the water supply for the Park.

This document outlines the potable water well design and development including the Environmental Impact Assessment (EIA) required for the new well.

3. **Required water quantity (in m³/day) and/or required pumping rate.**

The theoretical required water quantity has been calculated in accordance with the April 2017 Water Supply Source Assessment (WSSA) Guidelines, assuming the Park is filled at 100% capacity. Therefore, for the ultimate Park capacity of 502 sites in the campground and related facilities, the following average daily consumption and peak demand rates have been calculated:

Average Daily Consumption:

- $180 \text{ L/day/site}^1 \times 502 \text{ sites} = 90,360 \text{ L/day}$

Maximum Day Demand:

- $90,360 \text{ L/day} \times 2.5 \text{ (maximum day factor}^2) = 225,900 \text{ L/day}$

Peak Hour Demand:

- $90,360 \text{ L/day} \times 3.75 \text{ (peak hour factor}^2) = 338,850 \text{ L/day (235 L/min)}$

¹ As specific guidelines are not available for water consumption in RV Parks in N.B., theoretical flow estimated as per Atlantic Canada Wastewater Guidelines, March 2020 Draft Version.

² As per Atlantic Canada Water Supply Guidelines, March 2020 Draft Version.

During high-occupancy periods at the Park, the existing wells historically have produced a combined total of around 80,000 L/day when pumped simultaneously. However, the available data does not allow for the accurate estimation of peak flows, as only well M is monitored continuously. Therefore, the theoretical values will be used to estimate the total water requirements for the Park, summarized as follows:

Average Daily Consumption (L/day)	Maximum Day Demand (L/day)	Peak Hour Demand (L/min)
90,400	226,000	235

Since the new well will be used to better manage peak flows and provide redundancy to the current water wells, the desired minimum capacity for the new well would be 40 igpm (182 L/min), which would provide sufficient water to act as a back-up to any one of the existing wells if required.

4. List alternate water supply sources in area (including municipal systems).

The project is in Pointe du Chêne, outside the service area of the municipal water system in the neighboring Town of Shediac. Therefore, the current project is based on drilling a potable water well to improve the Park’s water supply system.

No other locations were chosen as alternate drilling targets as this area is well known to have ample groundwater supplies in the bedrock aquifer beneath. However, the proposed site was selected near the southern end of the park as this will improve the water system’s configuration.

Based on common knowledge of the area, the bedrock aquifer has been developed for private residential wells by many in the general area of the site, as well as commercially for the park previously. Therefore, it is expected that the conditions of the aquifer are suitable for water supply.

5. Outline the proposed hydrogeological testing and work schedule.

It is proposed to drill one (1) Test Well and one (1) Observation Well (if required) for the purpose of establishing the total available yield of this new well. The proposed Test Well location has been established based on the Park’s existing water distribution system (Refer to Figure 01 in Appendix A). If it is not possible to utilize an existing well in the area for observation, a new Observation Well will be drilled within 20m of the Test Well.

Based on our review of available well construction information and hydrogeology of the area, it is expected that the proposed target depth below ground surface for the test well should be approximately 50m.

The drilling program is based on the following work:

- Drilling of one (1) test well.
- If nearby well owner(s) are agreeable, the intent would be to use an existing nearby well as an observation well, if possible. However, if the use of an existing nearby well is not possible, a second well will be drilled for use as an observation well during the pumping tests.

If the planned test well is found to be successful, step drawdown testing and a 72-hour constant rate pumping test will be undertaken, in accordance with the Water Supply Source Assessment Guidelines (April 2017), including required water sampling.

Upon completion of the aquifer testing, a report will be prepared in accordance with the WSSA Guidelines, outlining the methods used, field data, and relevant information used to provide conclusions and recommendations. The drawdown and recovery data will be analyzed using commercially available software.

It is the intent of the Owner to start drilling as soon as possible at the proposed test site to determine the preliminary yield and quality. It is understood that the exploratory drilling may not be started until after approval of the EIA Registration Document and Initial Application has been received from the NBDELG.

In accordance with the WSSA Guidelines, the following preliminary schedule has been developed for the drilling, testing and construction phases of the new well and observation well to establish the ground water profile.

Component	Approx. duration (weeks)	Anticipated completion date
EIA Registration, WSSA Initial Application, and Review	8	August 5, 2022
Preliminary Drilling, Preliminary Well Construction and Pump Testing	5	September 9, 2022
WSSA Hydrogeological Study and NBDELG Reviewing Process	4	October 7, 2022
NBDELG Review Process (WSSA) & Public Consultation	8	December 2, 2022
Final Review and Certificate of Determination	2	December 17, 2022
Final Construction of Well and Related Infrastructure	8	April 18, 2023

6. Identify any existing pollution or contamination hazards within a minimum radius of 500 m from the proposed drill targets. Historical land use that might pose a contamination hazard (i.e. tannery, industrial, waste disposal, etc.) should also be discussed.

Service NB operates the Land Gazette database, which acts as a gateway to notify the public of the existence of regulations, restrictions and other related information that may have an impact on land use.

The Land Gazette database was assessed for all close neighbouring properties. Land Gazette summarizes information that is on file with the *NBDELG Property-Based Environmental Information* and includes information in their database pertaining to registration, installation or removal of petroleum storage tanks, environmental reports or spill incidents, identified contamination, and non-compliance issues. According to the Land Gazette database, information is on file with NBDELG for three (3) properties within a 500-m radius of the proposed drilling area (PIDs. 00860106, 70486022, and 00882449). A request was then made to NBDELG in April 2022 for these properties. Copies of the NBDELG reports can be found in Appendix B. The NBDELG response reported the following:

PID 00860106, Belliveau Grocery, Civic No. 680 Route, 133 Pointe-Du-Chêne

- No records of Ministerial Orders or Remediation Orders were found for the PID number using the current search process.
- Petroleum storage tank information related to the PID number available under the *Petroleum Product Storage and Handling Regulation* was identified as follows:
 - o One, steel, single walled underground storage tank (UST) with a capacity of 13,630L containing gasoline was installed in 1956 and removed on January 16, 1989.
 - o One, steel, single walled UST with a capacity of 9100L containing gasoline was installed in 1956 and removed on January 16, 1989.

- One, fiberglass-reinforced plastic (RFP), single walled UST with a capacity of 22,700L containing gasoline was installed in 1988 and removed on October 20, 1998.
 - One, RFP, single walled UST with a capacity of 13,600L containing gasoline was installed in 1988 and removed on October 20, 1998.
 - One, steel, double walled UST with a capacity of 54,480L containing diesel, regular and supreme gasoline, was installed in 1998 and removed on May 23, 2012.
 - One, RFP, double walled UST with a capacity of 90,000L containing diesel, regular and supreme gasoline, was installed in 2012 and is currently active.
- Records indicate that there has been contamination found at the PID number. The following information was provided:
- A site Remediation Management File (# 6515-3-0076) was opened on November 25, 1986 at the “Belliveau Shell, Civic Address: Hwy 133, Shediac” due to petroleum contamination on the property. The consultant involved was Porter Dillon Limited. The current status of the file is closed with “1992 Generic criteria achieved, no further action necessary”.
 - A site Remediation Management File (# 6515-3-0612) was opened on October 15, 1998 at the “Belliveau Grocery Ltd. (Shell), Civic Address: Hwy 133, Shediac” due to petroleum contamination on the property. The consultant involved was Jacques Whitford Environment Ltd. The current status of the file is closed with “Some remedial action taken - Contamination status has not been confirmed”.
 - A site Remediation Management File (# 6515-3-1454) was opened on May 23, 2012 at the “Belliveau Grocery Ltd., Civic Address: 680 Hwy 133, Point Du Chêne” due to petroleum contamination on the property. The consultant involved was Fisher Engineering Ltd.” The current status of the file is unconditionally closed with “2012 RBCA Tier I Risk Based Screening Level criteria achieved”.
 - A site Remediation Management File (# 6515-3-1628) was opened on July 13, 2017 at the “680 Rte 133, Point Du Chene” due to petroleum contamination on the property. The consultant involved was Fisher Engineering Ltd.” The current status of the file is conditionally closed with “2015 Residential - Conditional Closure” achieved.
- The PID number is not registered with the Department as a PCB Storage site.
- There are no records of landfill sites or former dumpsites located near this PID number.

A record of site condition (ROSC) was provided for the Remediation Management Files listed above (6515-3-1454 and 6515-3-1628). In summary, the ROSC for Remediation File 6515-3-1454 detailed that a Phase II ESA was performed at the following the site as petroleum impacts were discovered in May 2012, during the replacement of a UST. Subsequent remediation was completed which included the removal of 249.5 tonnes of impacted soil and 35,945L of impacted water. The Phase II ESA findings in December 2012 revealed trace levels of petroleum hydrocarbons in the groundwater samples, however, all samples met the applicable Tier I Risk Based Screening Levels for a residential site with coarse-grained soil and a potable water supply. A second round of groundwater samples completed in June 2013 reported no detectable levels of petroleum hydrocarbons in the groundwater samples at the site.

The ROSC for Remediation File 6515-3-1628 detailed that the source property (00860106) had impacted two neighboring properties (PIDs 70486022 and 00882449). The ROSC outlined the areas assessed and where potable wells should not be constructed.

This property is located approximately 200 m west from the proposed well location and based on the assessments completed at the site, contamination related to this property is unlikely to have an impact on the proposed new well.

PID 00882449

- No records of Ministerial Orders or Remediation Orders were found for the PID number using the current search process.
- Records indicate that there are no petroleum storage tanks registered with the Department, under the *Petroleum Storage and Handling Regulation*.
- Records indicate that there has been third-party contamination found at the PID number. The following information was provided:
 - o A third party contamination file was opened at 25 Gould Beach Rd., Point du Chene, related to the site Remediation Management File (# 6515-3-1628). The source file was opened on July 13, 2017 at the “680 Rte 133, Point Du Chene” due to petroleum contamination on the property. The consultant involved was Fisher Engineering Ltd.” The current status of the file is conditionally closed with “2015 Residential - Conditional Closure” achieved.
- The PID number is not registered with the Department as a PCB Storage site.
- There are no records of landfill sites or former dumpsites located near this PID number.

The ROSC for Remediation File 6515-3-1628 detailed the areas assessed and where potable wells should not be constructed. The area of impacts was located over 230m to the west and therefore the risk of migration of contaminants from this property to the proposed new well is considered low.

PID 70486022

- No records of Ministerial Orders or Remediation Orders were found for the PID number using the current search process.
- Records indicate that there are no petroleum storage tanks registered with the Department, under the *Petroleum Storage and Handling Regulation*.
- Records indicate that there has been third-party contamination found at the PID number. The following information was provided:
 - o A third party contamination file was opened at 5 Gould Beach Rd., Point du Chêne, related to the site Remediation Management File (# 6515-3-1628). The source file was opened on July 13, 2017 at the “680 Rte 133, Point Du Chêne” due to petroleum contamination on the property. The consultant involved was Fisher Engineering Ltd.” The current status of the file is conditionally closed with “2015 Residential - Conditional Closure” achieved.
- The PID number is not registered with the Department as a PCB Storage site.
- There are no records of landfill sites or former dumpsites located near this PID number.

The ROSC for Remediation File 6515-3-1628 detailed the areas assessed and where potable wells should not be constructed. The area of impacts was located over 230 m to the west and therefore the risk of migration of contaminants from this property to the proposed new well is considered low.

Although impacts are not expected to extend to the current site, as part of the water analysis to be conducted during the pumping tests described herein, samples will be analyzed for petroleum and petroleum by-products as confirmation.

7. Identify any groundwater use problems (quantity or quality) that have occurred in the area.

There are no known groundwater problems in the immediate area, except for elevated manganese in some nearby wells which is common in the region.

The provincial map of surficial geology of indicates that the site is underlain by marine shallow water deposits, with glacial till located to the south of the site. The area of the Ocean Surf Campground is located within the Late Carboniferous Pictou Group. The bedrock below the site is mapped as the Richibucto formation is typically composed of grey sandstone with interstratified red mudrock dominated sequences. These rocks are generally poorly consolidated. A combination of the bedding heterogeneity and primary porosity make this formation a highly water bearing unit (Rivard et al, 2008).

The Shediac region is supplied by wells that are located within the bedrock of the Maritimes basin, specifically the Richibucto formation. The municipal wells in Shediac have mean capacities of 158 to 428 US gpm (10 to 27 L/s) (Rivard et al., 2008). The report on the regional hydrogeology characterization of the south central part of the Maritimes (Rivard et al, 2008) indicates that there are K values in the range 1×10^{-6} to 5×10^{-5} m/s. The packer tests conducted within the sandstone in Shediac indicated that the sandstone on the site has highly variable hydraulic conductivities (10⁻⁷ to 10⁻⁵ m/s).

Local well records indicate that wells are located within the sandstone unit and have under two meters of overburden (Online Well Log System). The nearest wells to the planned well site are drilled to depths that vary from 20 to 60 m depth and able to supply in the range of (26 to 47 US gpm (100-180 lpm)).

8. Identify any watercourse(s) (stream, brook, river, wetland, etc.) within 60 m of the proposed drill targets.

Development:

Figure 01 (Appendix A) shows two (2) watercourses within 500 m of the immediate vicinity of the proposed well, both un-named tributaries to the Northumberland Strait.

In 2009, a Wetland Delineation Report was completed as part of an EIA prepared by Natech Environmental Services Inc. (EIA file #1225) for the development of the Park's previous expansion on PID #70086335. The 2009 wetland delineation identified a coastal marsh wetland and a watercourse located on the north/east borders of the parcel, approximately 150m or more from the proposed drilling sites. Based on the current project scope, the wetland and watercourses are unlikely to be impacted by the project. No other wetlands were identified on the subject parcel.

After the background review was completed, field verification was completed on May 6, 2022 by Ms. Taylor McGregor, a certified wetland delineator in the province of NB, to verify the presence/absence of any wetlands or watercourses. It was confirmed that no wetlands or watercourses were identified within 60 m of the proposed drilling targets. Results of the field assessment are present in the Preliminary Wetland Identification Data Sheet form provided in Appendix C and photos of the proposed drilling site are included in Appendix D.

9. Identify site supervisory personnel involved in the source development (municipal officials, consultants and drillers).

Englobe Corp.:

Project Manager - Laura Leger, P.Eng.

Senior Hydrogeologist - Marc Patenaude, M.Sc.A, géo, P.Geo.

Well Drillers: Eastern Well Drillers

Jacques LeBlanc

10. Attach a 1:10 000 map and/or recent air photo clearly identifying the following:

- Proposed location of drill targets and property PID.
- Domestic or production wells within a 500 m radius from the drill target(s).
- Any potential hazards identified in question 7.

The attached Figure 01 (Appendix A) includes a recent aerial surface overlain with available property information. The proposed drill target areas are clearly identified; The 500 m buffer zone around the drill target, adjacent brooks, and existing wells within a 500 m radius of the drill target are shown on the drawing (location of existing wells are approximate but collected from the DELG database).

Existing well sites recorded on the NB Online Well Log System have been shown for reference. There were 8 wells located around the proposed drilling location (within a 500 m radius of the site). The estimated safe yields of these wells varied from 46 to 318 L/min (10 to 70 l/gpm).

11. Attach a land use/zoning map of the area (if any). Superimpose drill targets on this map.

The project is in the “General Commercial” Zone of the LSD. The property is already an established campground and the land use is not being changed as a result of the project. Therefore, there are no concerns with the Zoning for this project. Refer to Figure 02, in Appendix A where proposed drilling target for the Well has been identified.

12. Contingency plan for open loop earth energy systems.

N/A.

Submit WSSA Initial Application:

c/o Manager
Department of Environment and Local Government
Environmental Assessment Section
Tel: (506) 444-5382
Fax: (506) 453-2627

Mailing Address:

P.O. Box 6000
Fredericton, New Brunswick
E3B 5H1

Physical Address:

20 McGloin Street, Marysville Place
Fredericton, New Brunswick
E3A 5T8

References:

- NATECH. (2009). Environmental Impact Assessment Registration Document. Ocean Surf Ltd. 73 Belliveau Beach Rd.
- New Brunswick Department of Natural Resources. (2008). Bedrock Geology of New Brunswick, Minerals, Policy and Planning division. Map NR-1 (2008 Edition). Scale 1:500 000 (Revised. December 2008)
- New Brunswick Department of Natural Resources. (1974). Surficial Geology and Granular Resources of Moncton East, Plate 74-124, Scale 1:50 000.
- New Brunswick Department of Natural Resources. (1974). Surficial Geology and Granular Resources of Moncton East, Plate 74-125, Scale 1:50 000.
- New Brunswick Department of Environment, Online Well Log System, <https://www.elgegl.gnb.ca/0375-0001/>, Accessed on 22/04/2022
- Rivard, C., Michaud, Y., Deblonde, C., Boisvert, V., Carrier, C., Morin, R. H., ... & Parent, M. (2008). Canadian Groundwater Inventory: Regional hydrogeological characterization of the south-central part of the Maritimes Basin. Bulletin of the Geological Survey of Canada, (589), 1-96.
- St Peter, C. J., & Johnson, S. C. (2009). Stratigraphy and structural history of the late Paleozoic Maritimes Basin in southeastern New Brunswick, Canada. New Brunswick Department of Natural Resources; Minerals. Policy and Planning Division, Memoir, 3, 348.

Appendices:

- Appendix A WSSA Figures 01 and 02
- Appendix B NBDELG Property Based Environmental Information Letters
- Appendix C Preliminary Wetland Identification Data Sheet
- Appendix D Photos of Proposed Drilling Site

Appendix A

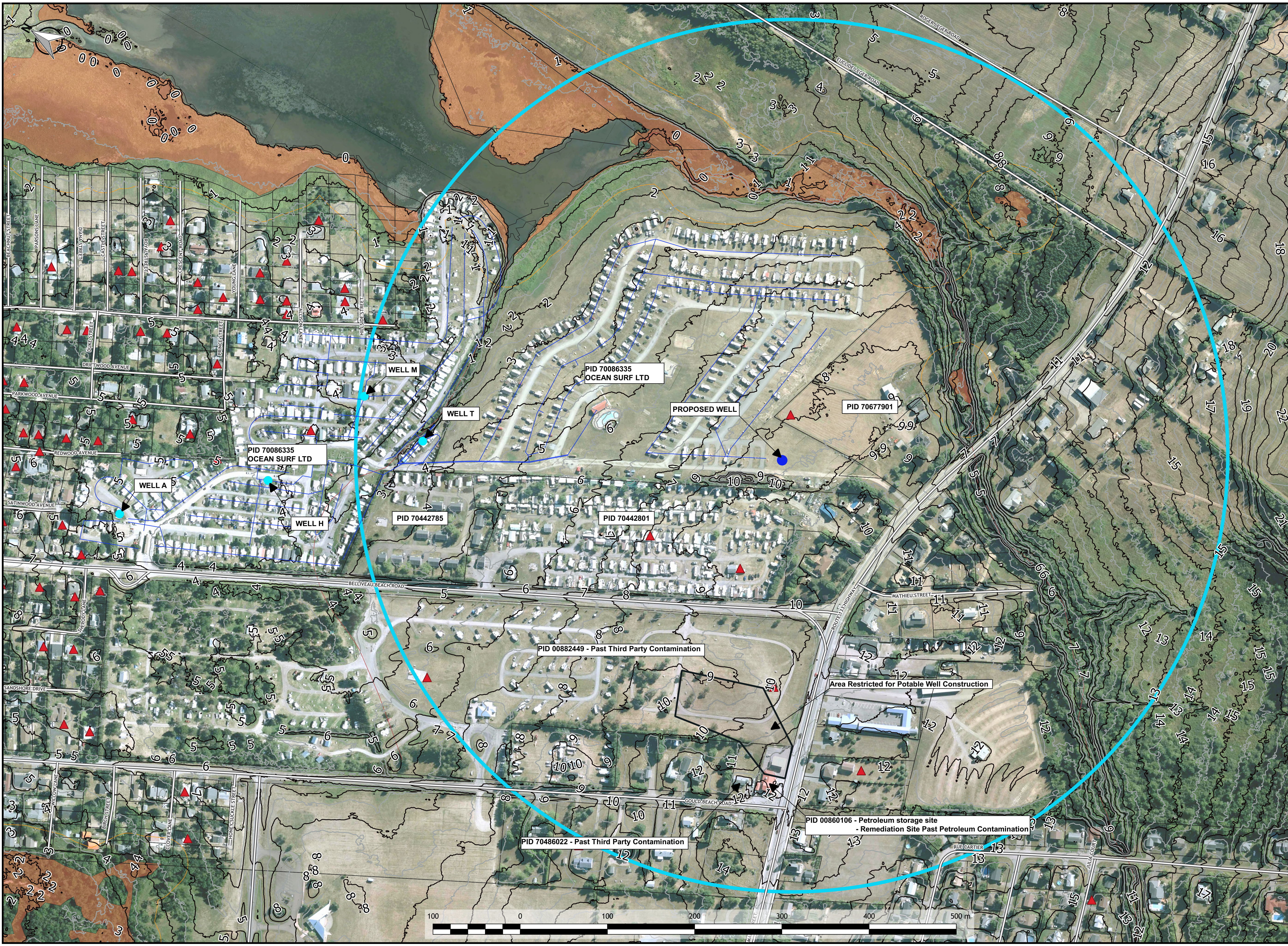
WSSA Figures 01 and 02

Figure 01 - Proposed Well Location and Nearby Existing Wells

Figure 02 - Zoning Map



eNGLOBE



Legend / Notes

- 500m Radius Circle
- PSW
- Westmorland Wetlands
- ▲ Existing Wells
- Proposed Wells
- Existing wells
- Existing Water Lines
- Area Restricted for Potable Well Construction

Project Location:
POINTE-DU-CHÊNE, NB

Project Title:
OCEAN SURF WATER SYSTEM

Map Title:
PROPOSED WELL LOCATION AND NEARBY EXISTING WELLS

Map ID:
MAP No: FIG 01
PAGE No: 1 of 1
SCALE: 1:2000

Revision:
DATE : 14/04/22 BY: DB
PROJ No: 2002425.001 APPR: LEL
REV: A - ISSUED FOR REVIEW



Legend / Notes

- 500m Radius Circle
- Provincially Significant Wetland
- Regulated Wetland
- ▲ Existing Wells (Approximate)
- Proposed Well
- Existing Ocean Surf Wells
- Existing Watermain

Zoning

- General Commercial
- Pointe-du-Chêne Residential
- Residential
- Rural Area
- Environmental Risk

Project Location:
POINTE-DU-CHÊNE, NB

Project Title:
OCEAN SURF WATER SYSTEM

Map Title:
ZONING MAP

Map ID:
MAP No: FIG 02
PAGE No: 1 of 1
SCALE: 1:2500

Revision:
DATE : 14/04/22 BY: DB
PROJ No: 2002425.001 APPR: LEL
REV: A - ISSUED FOR REVIEW



Project CRS: NAD83(CRS) / New Brunswick Stereographic, EPSG:2953
 LiDAR dataset: Contains information licensed under the GeoNB Open Data Licence.
 Layout Name: 2002425 - Fig02 - Zoning Map
 Project Path: O:\2020\2002425.001 Ocean Surf New Well\CADD\GIS\2002425 Ocean Surf Water System.qgz



Appendix B NBDELG Property Based Environmental Information Letters



eNGLOBE

April 22, 2022
File No.: 100-05-R3

Crandall Engineering
1077 St. George Blvd.
Moncton, NB E1E 4C9
Attention: Laura Leger

Your Ref.: 2002425.001

RE: PID#: 00882449

In response to your request for property-based environmental information regarding the above noted property, please be advised that a search of related departmental electronic databases has been conducted *with the information provided*, and the following information was found.

There is no record of Ministerial Orders or Remediation Orders related to this PID number, using our current search process.

Our records indicate that there are no petroleum storage tanks registered with the Department, under the Petroleum Product Storage and Handling Regulation, for this PID number.

Our records indicate that there has been 3rd party contamination found at **25 Gould Beach Rd., Pointe du Chene, NB Economic Development and Tourism (PID# 00882449)**. See attached information report.

This PID number is not registered with the Department as a PCB Storage site.

We have no records of landfill sites or former dumpsites located near this PID number.

The absence of departmental records in this search does not necessarily indicate that the sites have not been subject to environmental incidents. The information is accurate in that it provides a factual reflection of what is contained in departmental databases. The files themselves may or may not be complete.

As an example, in the case of underground petroleum storage tanks, the files accurately reflect all those that were registered with the program; there may be underground storage tanks that were not registered and of which the Department has no knowledge.

Likewise, there may be incidents of spills of which the Department was not informed or which pre-date Departmental records. "Remediation Site Management System" was established in the early 2000's and does not contain a complete history of past spills or remediation efforts. Furthermore, if the properties have been recently altered, the PID#'s provided may not correspond with those contained in departmental files and thus on the databases.

Any persons intending to purchase or occupy the property should make their own independent determination of the environmental condition of the property and the extent of responsibility and liability, if any, that may arise from taking ownership or occupancy.

Authorizations Branch

Enclosures: 2

/lr

**Remediation Management
(PID 00882449)**

FILE **6515-3-1628**
PID 00882449
SITENAME NB Economic Development and Tourism
CIVIC ADDRESS 25 Gould Beach Rd., Pointe du Chene
RESULT TYPE Third Party (Source: 00860106 – see below)

**Remediation Management
(PID 00860106)**

FILE **6515-3-1628**
PID 00860106
SITENAME Belliveau's Grocery Ltd.
CIVIC ADDRESS 680 Rte 133, Pointe du Chene
FILE OPENED 7/13/2017
FILE STATUS Closed
 2015 Residential - Conditional Closure
CONTAMINATION TYPE Petroleum
PARTY RESPONSIBLE Property Owner
CONSULTANT Fisher Engineering Ltd.
ORDERS ISSUED No
RESULT TYPE Source PID

April 26, 2022
File No.: 100-05-R3

Crandall Engineering
1077 St. George Blvd.
Moncton, NB E1E 4C9
Attention: Laura Leger

Your Ref.: 2002425.001

RE: PID#: 00860106

In response to your request for property-based environmental information regarding the above noted property, please be advised that a search of related departmental electronic databases has been conducted *with the information provided*, and the following information was found.

There is no record of Ministerial Orders or Remediation Orders related to this PID number, using our current search process.

Petroleum storage tank information related to **PID# 00860106** is attached. These tanks have been registered with the Department, under the Petroleum Product Storage and Handling Regulation.

Our records indicate that there has been contamination found at:

- 1.) **Hwy 133, Shediac, Belliveau Shell (PID# 00860106)**. See attached information report.
- 2.) **Hwy 133, Shediac, Belliveau Grocery Ltd. (Shell) (PID# 00860106)**. See attached information report.
- 3.) **680 Route 133, Point Du Chene, Belliveau's Grocery Ltd. (PID# 00860106)**. See attached information report, and Record of Site Condition.
- 4.) **680 Rte 133, Point du Chene, Belliveau's Grocery Ltd. (PID# 00860106)**. See attached information report, and Record of Site Condition.

This PID number is not registered with the Department as a PCB Storage site.

We have no records of landfill sites or former dumpsites located near this PID number.

The absence of departmental records in this search does not necessarily indicate that the sites have not been subject to environmental incidents. The information is accurate in that it provides a factual reflection of what is contained in departmental databases. The files themselves may or may not be complete.

As an example, in the case of underground petroleum storage tanks, the files accurately reflect all those that were registered with the program; there may be underground storage tanks that were not registered and of which the Department has no knowledge. Likewise, there may be incidents of spills of which the Department was not informed or which pre-date Departmental records. "Remediation Site Management System" was established in the early 2000's and does not contain a complete history of past spills or remediation efforts. Furthermore, if the properties have been recently altered, the PID#'s provided may not correspond with those contained in departmental files and thus on the databases.

Any persons intending to purchase or occupy the property should make their own independent determination of the environmental condition of the property and the extent of responsibility and liability, if any, that may arise from taking ownership or occupancy.

Authorizations Branch

Enclosures: 7

/lr

Petroleum Storage (PID 00860106)

PID #: 860106

Site #: 1396

Address:

BELLIVEAU GROCERY
680 ROUTE 133
POINTE-DU-CHENE

Tank Information

Current Status Removed
Date Out of Service 1989-01-16
Installation Date 1956
Tank Size 13630 L
Location Under Ground
Constructed Of Single Wall Steel
Substance Stored Gasoline

Current Status Removed
Date Out of Service 1989-01-16
Installation Date 1956
Tank Size 9100 L
Location Under Ground
Constructed Of Single Wall Steel
Substance Stored Gasoline

Current Status Removed
Date Out of Service 1998-10-20
Installation Date 1988
Tank Size 22700 L
Location Under Ground
Constructed Of Single Wall FRP
Substance Stored Gasoline

Current Status Removed
Date Out of Service 1998-10-20
Installation Date 1988
Tank Size 13600 L
Location Under Ground
Constructed Of Single Wall FRP
Substance Stored Gasoline

Current Status Removed
Date Out of Service 2012-05-23
Installation Date 1998
Tank Size 54480 L
Location Under Ground
Constructed Of Double Wall Steel
Substance Stored Diesel, Regular, Supreme

Current Status Active
Date Out of Service
Installation Date 2012
Tank Size 90000 L
Location Under Ground
Constructed Of Double Wall FRP
Substance Stored Diesel, Regular, Supreme

**Remediation Management
(PID 00860106)**

FILE	6515-3-0076
PID	00860106
SITENAME	Belliveau Shell
CIVIC ADDRESS	Hwy 133, Shediac
FILE OPENED	11/25/1986
FILE STATUS	Closed 1992 Generic criteria achieved, no further action necessary.
CONTAMINATION TYPE	Petroleum
PARTY RESPONSIBLE	Shell Canada Products Limited
CONSULTANT	Porter Dillon Limited
ORDERS ISSUED	No
RESULT TYPE	Source PID

**Remediation Management
(PID 00860106)**

FILE	6515-3-0612
PID	00860106
SITENAME	Belliveau Grocery Ltd. (Shell)
CIVIC ADDRESS	Hwy 133, Shediac
FILE OPENED	10/15/1998
FILE STATUS	Closed Some remedial action taken - Contamination status has not been confirmed.
CONTAMINATION TYPE	Petroleum
PARTY RESPONSIBLE	Shell Canada Products Limited
CONSULTANT	Jacques Whitford Environment Ltd
ORDERS ISSUED	No
RESULT TYPE	Source PID

Remediation Management (PID 00860106)

FILE	6515-3-1454
PID	00860106
SITENAME	Belliveau's Grocery Ltd.
CIVIC ADDRESS	680 Route 133, Point Du Chene
FILE OPENED	5/23/2012
FILE STATUS	Closed 2012 RBCA Tier I Risk Based Screening Level criteria achieved unconditional closure
CONTAMINATION TYPE	Petroleum
PARTY RESPONSIBLE	Belliveau's Grocery Ltd.
CONSULTANT	Fisher Engineering Ltd.
ORDERS ISSUED	No
RESULT TYPE	Source PID

**Remediation Management
(PID 00860106)**

FILE	6515-3-1628
PID	00860106
SITENAME	Belliveau's Grocery Ltd.
CIVIC ADDRESS	680 Rte 133, Pointe du Chene
FILE OPENED	7/13/2017
FILE STATUS	Closed 2015 Residential - Conditional Closure
CONTAMINATION TYPE	Petroleum
PARTY RESPONSIBLE	Property Owner
CONSULTANT	Fisher Engineering Ltd.
ORDERS ISSUED	No
RESULT TYPE	Source PID

April 26, 2022
File No.: 100-05-R3

Crandall Engineering
1077 St. George Blvd.
Moncton, NB E1E 4C9
Attention: Laura Leger

Your Ref.: 2002425.001

RE: PID#: 70486022

In response to your request for property-based environmental information regarding the above noted property, please be advised that a search of related departmental electronic databases has been conducted *with the information provided*, and the following information was found.

There is no record of Ministerial Orders or Remediation Orders related to this PID number, using our current search process.

Petroleum storage tank information related to **PID# 00860106** is attached. These tanks have been registered with the Department, under the Petroleum Product Storage and Handling Regulation.

Our records indicate that there has been 3rd party contamination found at **5 Gould Beach Road, Pointe du Chene, [REDACTED] (PID# 70486022)**. See attached information report, and Record of Site Condition.

This PID number is not registered with the Department as a PCB Storage site.

We have no records of landfill sites or former dumpsites located near this PID number.

The absence of departmental records in this search does not necessarily indicate that the sites have not been subject to environmental incidents. The information is accurate in that it provides a factual reflection of what is contained in departmental databases. The files themselves may or may not be complete.

As an example, in the case of underground petroleum storage tanks, the files accurately reflect all those that were registered with the program; there may be underground storage tanks that were not registered and of which the Department has no knowledge.

Likewise, there may be incidents of spills of which the Department was not informed or which pre-date Departmental records. "Remediation Site Management System" was established in the early 2000's and does not contain a complete history of past spills or remediation efforts. Furthermore, if the properties have been recently altered, the PID#'s provided may not correspond with those contained in departmental files and thus on the databases.

Any persons intending to purchase or occupy the property should make their own independent determination of the environmental condition of the property and the extent of responsibility and liability, if any, that may arise from taking ownership or occupancy.

Authorizations Branch

Enclosures: 2

/lr

**Remediation Management
(PID 70486022)**

FILE **6515-3-1628**
PID 70486022
SITENAME ██
CIVIC ADDRESS 5 Gould Beach Road, Pointe du Chene
RESULT TYPE Third Party (Source: 00860106 – see below)

**Remediation Management
(PID 00860106)**

FILE **6515-3-1628**
PID 00860106
SITENAME Belliveau's Grocery Ltd.
CIVIC ADDRESS 680 Rte 133, Pointe du Chene
FILE OPENED 7/13/2017
FILE STATUS Closed
 2015 Residential - Conditional Closure
CONTAMINATION TYPE Petroleum
PARTY RESPONSIBLE Property Owner
CONSULTANT Fisher Engineering Ltd.
ORDERS ISSUED No
RESULT TYPE Source PID

RECORD OF SITE CONDITION

File: 6515 - - 1628

Site Information

Site Address: 680 Route 133, Point Du Chene

Source Area PID(s):	00860106	GPS Coordinates of center:	Lat. 46 ° 13 ' 36.4 " Long. -64 ° 30 ' 07.8 "
		(deg/min/sec)	
3rd Party PID(s):	70486022	GPS Coordinates of center:	Lat. 46 ° 13 ' 37.3 " Long. -64 ° 30 ' 08.4 "
	00882449	(deg/min/sec)	46 ° 13 ' 42.7 " Long. -64 ° 30 ' 06.4 "

Check box for additional PIDs and complete Page 2 of the form

Site Plan

Check the appropriate boxes and attach a site plan* (8 1/2" x 11") showing:

- the entire site (any property that has been assessed for the purposes of site closure)
- the portion of the site (any portion of any property that has been assessed for the purposes of site closure)
- the limits of any required controls for conditional site closure

* Refer to "Instructions for completing the Record of Site Condition (RSC) Version 3.0"

Closure Documentation

The following Closure Report pertaining to the site referenced above has been prepared by and/or overseen by the Site Professional:

Title: Closure Report

Company Name: Fisher Engineering Ltd.

Date: 29/12/2019

(dd/mm/yyyy)

Land Use

Based on the results of the site assessment, the following properties (or portions thereof) are suitable for the following current or reasonably foreseeable future site activities:

Source PID(s)	Land Use:		If site closure is conditional, check box and describe site specific engineered or institutional controls
860106	Residential	<input checked="" type="checkbox"/>	Limits on New Potable Well construction
	- Select One -	<input type="checkbox"/>	
	- Select One -	<input type="checkbox"/>	
3rd Party PID(s)			
70486022	Residential	<input checked="" type="checkbox"/>	Limits on New Potable Well construction
00882449	Commercial	<input checked="" type="checkbox"/>	Limits on New Potable Well construction
	- Select One -	<input type="checkbox"/>	
	- Select One -	<input type="checkbox"/>	

Summary Statement of Site Professional

By signing, dating, and affixing a Professional Seal, I certify that the site as described in this Record of Site Condition and the referenced Closure Report was managed in accordance with the current version of the New Brunswick Department of Environment and Local Government Guideline for the Management of Contaminated Sites, and that the level of impacts remaining on the site will not adversely affect human health or the environment.

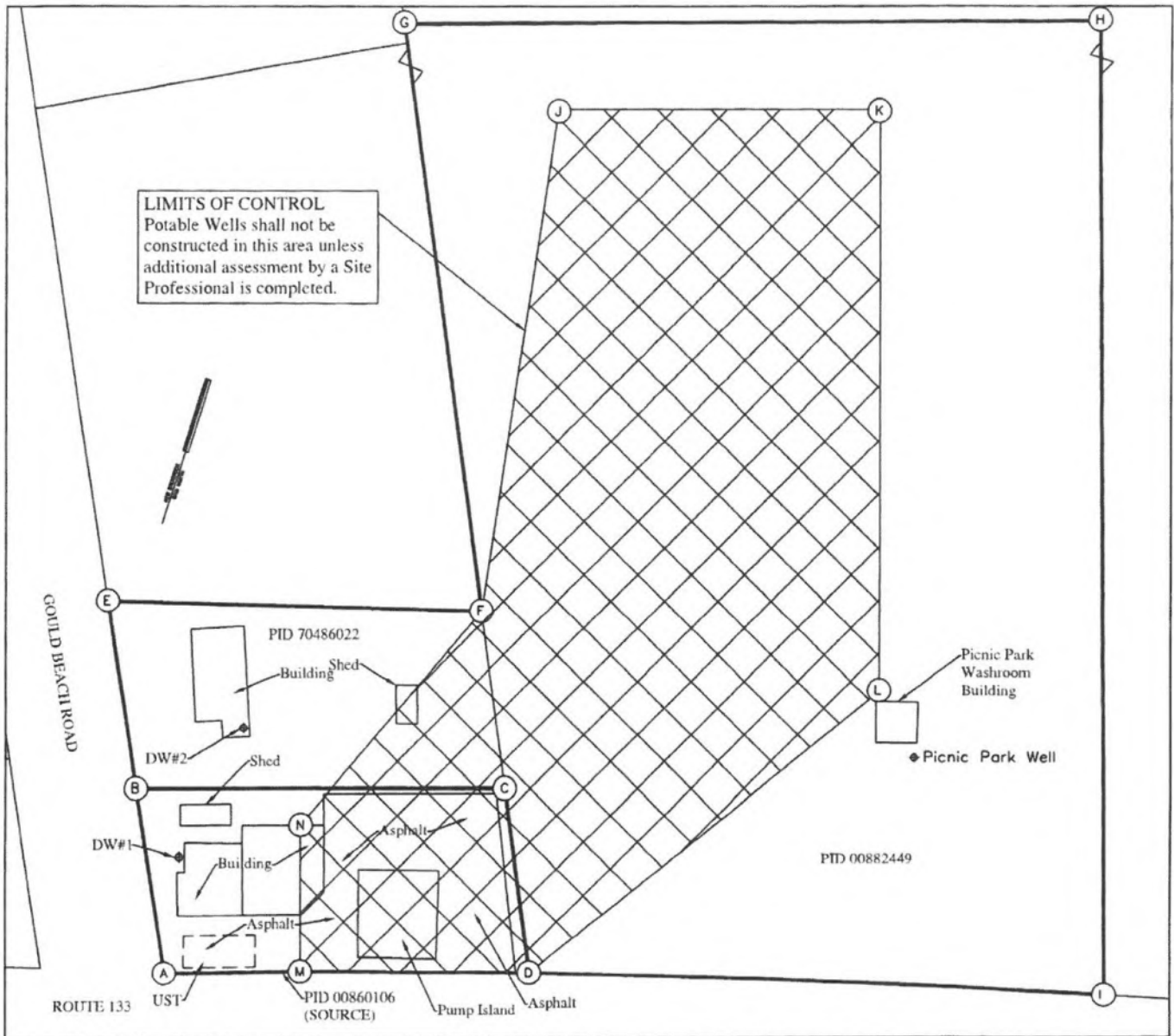
Company: Fisher Engineering Ltd.

Address: 40 Fairfield Road

Date: 29/12/2019

Version 3.02 August 2016





POINT	LAT	LONG
A	46,13, 35.652	-64,30, 8.887
B	46,13, 35.664	-64,30, 9.531
C	46,13, 37.120	-64,30, 6.747
D	46,13, 36.206	-64,30, 6.164
E	46,13, 37.481	-64,30, 10.113
F	46,13, 37.994	-64,30, 7.308
G	46,13, 33.060	-61,30, 10.864
H	46, 13, 43.835	-64, 30, 5.0380
I	46,13,36.951	-64,30, 1.865
J	46,13, 21.239	-64, 30 8.5200
K	46,13, 41.149	-64,30 5.442
L	46,13, 38.185	-64,30,4.188
M	46,13 35.866	-64,30, 7.875
N	46,13, 36.623	-64,30, 8.189



FISHER ENGINEERING LTD.
 40 Fairfield Road
 Lower Coverdale, N.B.
 E1J 0A2

Project:
SITE PLAN
680 ROUTE 133
POINT DU CHENE, N.B

RECORD OF SITE
CONDITION
FILE #6515-3-1628

Project No.: LS019	
Drawing No.: LS019RSC01	Revision No.: 0
Scale: 1:1000	
Drawn By: ACB	Checked By: MJF
Date: 12/29/19	



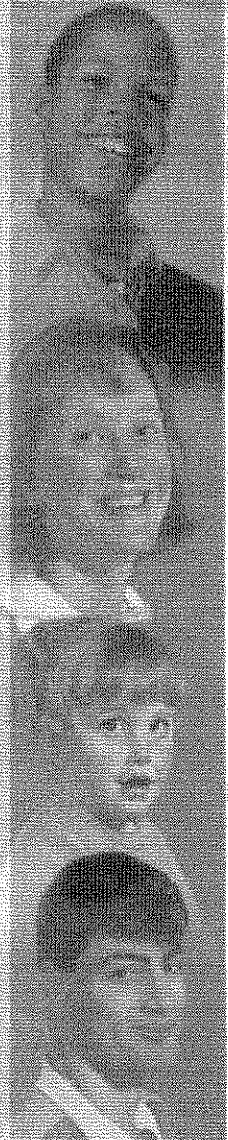
OCT 7 2013



Record of Site Condition

Version 2.1

July 2006



Site Address:	680 Route 133, Point du Chene, NB
Site PID:	0000860106
DENV File Number:	6515-3-1454
Date:	August 2013

Department of Environment



ATLANTIC HARMONIZATION

Record of Site Condition Form

New Brunswick Department of Environment

This form is provided by the New Brunswick Department of Environment (ENV) to facilitate the preparation of the Record of Site Condition in the final stages of remediation of a contaminated site, as presented in the *Guidelines for the Management of Contaminated Sites* (ENV, November 2003).

- This form contains macros. The security level in Word should be set to enable macros to execute. In the **Tools/Options** dialogue box, choose the **Security** tab, click on the **Macros Security** button and choose **Medium**. Following this, you will be invited to activate macros in this and other documents. If your security level is already set to enable macros, you may not see any message.
- Each part of the form, including the cover, contains shaded boxes where information can be entered. The shaded boxes expand as information is added, to a maximum of one page of information. Get help filling out any of the information entry boxes by clicking on the box and then pressing the F1 key.
- You can navigate through the form using the Tab key.
- The **Site Address** or **Project Name** (*entered on a single line with no returns*), the principal project **PID** (Property Identification) number, the **ENV File Number** and the final **Date** of your report, should be entered in the shaded box in Part 1 of the report. This information will appear in the header at the top of each page. The page headers update automatically when new information is entered in the shaded box in Part 1. The same information should be entered on the cover of this report.
- More information about how to fill out any of the Parts of the form can be obtained in the ENV *Instructions for Completing the Record of Site Condition* found on the Atlantic RBCA website www.atlanticrbca.com

If you would like to re-use this form, it is advised that you save your work with a new filename before exiting.

This form can be downloaded from the Atlantic RBCA web site at:
www.atlanticrbca.com.

Hard copies of this form are available by mail from:

Remediation Branch - Environmental Management Division
NB Department of Environment
P.O. Box 6000,
Fredericton N.B.
E3B 5H1

or phone:

(506) 444-5119.

Part 3 of 7: Tier I-III Environmental Criteria: Source Property

Products/contaminants

(e.g. gasoline, lead, waste oil, etc.) that have been identified at the Source Property:

- Gasoline Diesel #2 #6 Oil Other (Specify)

Current land use:

- Residential Commercial Other (Specify)

Drinking water use:

- On-site potable water Within a wellfield or watershed protected area Non-potable water

Affected soil composition:

- Coarse-grained Fine-grained Bedrock (Specify) Fractured Sandstone

Site closure criteria (Check all that apply):

- Tier I Risk Based Screening Level Criteria
 Tier II Site Specific Target Level Criteria
 Tier III Site Specific Target Level Criteria

Description of methodology and comments:

Phase II ESA was performed following petroleum impacts and subsequent remediation undertaken in May 2012 during the replacement of an UST. Exposure pathways considered included indoor and outdoor air and direct ingestion.

Part 3 of 7 (continued): Tier I-III Environmental Criteria: Source Property

Tier I-II Criteria						
Chemicals of Concern (COC)	Tier I-II Criteria Applied for Soil	Units	* Reference	Tier I-II Criteria Applied for Groundwater	Units	* Reference
Benzene	0.042	mg/kg	Tier I RBCA V.3.0	0.005	mg/L	Tier I RBCA V.3.0
Toluene	0.35	mg/kg	Tier I RBCA V.3.0	0.024	mg/L	Tier I RBCA V.3.0
Ethylbenzene	0.065	mg/kg	Tier I RBCA V.3.0	0.0024	mg/L	Tier I RBCA V.3.0
Xylenes	8.8	mg/kg	Tier I RBCA V.3.0	0.3	mg/L	Tier I RBCA V.3.0
Modified TPH	74	mg/kg	Tier I RBSL V.3.0	4.4	mg/L	Tier I RBSL V.3.0
MTBE				0.015	mg/L	CDWQG
Other Chemicals evaluated with criteria for Tiers I and II :						

* Provide reference for Screening Level criteria and/or Tier I-II Site Specific Target Level criteria developed using Atlantic RBCA v. 2.1.

Tier III Criteria				
Chemicals of concern (COC)	Medium to which criteria apply	Tier III criteria applied	Units	* Reference
Other Chemicals evaluated with criteria for Tiers III :				

* Provide reference for Tier III criteria (when using criteria other than Risk-Based Screening Level criteria or Tier II Atlantic RBCA V.2.1 Site Specific Target Level criteria.)

Part 4 of 7: Tier I-III Environmental Criteria - Third Party Property(s)

Based on the work completed, the following Third Party properties (identified by PID number) were identified as being affected at any concentration by the products/contaminants of the Source Property:

PID Number	Chemicals of Concern (COC)	Land use	Potable or Non-potable	Affected soil type
Other Third Party properties :				

Site closure criteria (check all that apply)

- Tier I Risk Based Screening Level Criteria
- Tier II Site Specific Target Level Criteria
- Tier III Site Specific Target Level Criteria

Description of methodology and comments
 There where no third party impacts associated with this site.

Part 4 of 7 (continued): Tier I-III Environmental Criteria - Third Party Property(s)

Summary of Clean-up Criteria

PID of Third Party Property(s)

List all PID numbers :

Tier I-II Criteria						
Chemicals of Concern (COC)	Tier I-II Criteria Applied for Soil	Units	* Reference	Tier I-II Criteria Applied for Groundwater	Units	* Reference
Other Chemicals evaluated with criteria for Tiers I and II :						

* Provide reference for Screening Level criteria and/or Tier I-II Site Specific Target Level criteria developed using Atlantic RBCA v. 2.1.

Tier III Criteria

Chemicals of concern (COC)	Medium to which criteria apply	Tier III criteria applied	Units	* Reference
Other Chemicals evaluated with criteria for Tier III :				

* Provide reference for Tier III criteria (when using criteria other than Risk-Based Screening Level criteria or Tier II Atlantic RBCA V.2.1 Site Specific Target Level criteria.)

Part 5 of 7: Corrective Actions

SOURCE PROPERTY

Describe the remedial objectives and the basic corrective actions of the Remedial Action Plan employed for the Source Property.

In May of 2012, under the supervisoin of CBCL personnel, 249.5 tonnes of impacted soil was removed from the site and disposed of at Envirem Organics in Memramcook. In addition, 35,945 Litres of water was taken to caledonia Waste oil for disposal. Phase II ESA findings in December 2012 reveled trace levels of petorelum hydrocarbons in the groundwater samples, all results meet the applicable Tier I RBSLs for a residential property. A second set of sampling in June 2013 showed no detectable levels of petorleum hydrocarbons in the groundwater samples on site,

Describe the current use of the Source Property (buildings, operations, etc.).

Currently gasoline service station/grocery store with residnetial apartments on second floor.

Other comments

Based on the work completed, the Source Property (cited in Part 1) is suitable for the following current, or reasonably foreseeable future, site activity(s).

Residential

Commercial

Conditional closure

If site closure is **conditional**, list site-specific engineered or institutional controls that apply to the Source Property complete with a description of the objectives of each control. Attach written agreements to the control(s) from all affected stakeholders and a site plan indicating the limits of the control(s).

Part 5 of 7 (continued): Corrective Actions

THIRD PARTY PROPERTIES

Describe the remedial objectives and the basic corrective actions of the Remedial Action Plan employed for each of the Third Party Properties.
N/A

Other comments

Describe the current use of the Third Party Property(s) (buildings, operations, etc.)
Residential land use north. Parkland to east, public roads to south and west with residential homes located further south and west

Based on the work completed, the **Third Party properties** (cited in Part 4) are suitable for the following current or reasonably foreseeable future site activity(s).

- Residential (list PID numbers)
- Commercial (list PID numbers)

Conditional Closure
If site closure is **conditional**, list site-specific engineered or institutional controls that apply to the Third Party Property(s) complete with description of the purpose of each control. Attach written agreements to the control(s) from all affected stakeholders and a site plan indicating the limits of the control(s).

Part 6 of 7: Summary Statement of Site Professional

The Minister considers the pre-checked statements below to be mandatory for acknowledging receipt of the Record of Site Condition. The signature of the Site Professional on this form indicates the fulfillment of these mandatory requirements as well as the requirements of all other checked statements.

Please check appropriate statements:

Mandatory Statements

- 1. All work on which this Record of Site Condition is based was prepared, overseen and/or reviewed by the Site Professional.
- 2. The site was managed in accordance with the current version of the New Brunswick Department of Environment *Guideline for the Management of Contaminated Sites*.
- 3. This Record of Site Condition form is identical to the one provided by the ENV and the content of the form has not been altered.

LRA Statement (if LRA process used)

- 4. The Limited Remedial Action Process was applicable for this site as per the current version of the Limited Remedial Action Reference Documentation for Site Professionals.

Source Property Statements

- 5. Based on the results of the environmental site assessment, the applicable Tier I Risk Based Screening Level criteria or Tier II/Tier III Site Specific Target Level criteria were not exceeded on the Source Property (as described in Part I) and therefore, remedial action and/or site-specific engineered or institutional controls are not required for the current or reasonably foreseeable future site activities (as cited in Part 5).
- 6. The Source Property (as described in Part I) has been remediated to an acceptable level for the current or reasonably foreseeable future site activities (as cited in Part 5) and therefore, *unconditional closure* is recommended.
- 7. The Source Property (as described in Part I) requires site-specific engineered or institutional controls to satisfy the current or reasonably foreseeable future site activities (as cited in Part 5) and therefore, *conditional closure* is recommended.

Third-Party Property Statements

- 8. Based on the results of the environmental site assessment, the applicable Tier I Risk Based Screening Level criteria or Tier II/Tier III Site Specific Target Level criteria were not exceeded on the Third Party properties (as cited in Part 4) and therefore, remedial action and/or site-specific engineered or institutional controls are not required for the current or reasonably foreseeable future site activities (as cited in Part 5).
- 9. Third Party properties (as cited in Part 4) affected by the contamination of the Source Property (as described in Part I) have been remediated to an acceptable level for the current or reasonably foreseeable future site activities (as cited in Part 5) and therefore, *unconditional closure* is recommended.
- 10. Third Party properties (as cited in Part 4) affected by the contamination of the Source Property (as described in Part I) require site-specific engineered or institutional controls to satisfy the current or reasonably foreseeable future site activities (as cited in Part 5) and therefore, *conditional closure* is recommended.

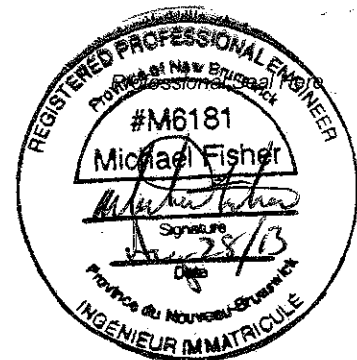
Company: Fisher Engineering Ltd.

Address: P.O. Box 2663 Moncton, NB

Tel: 506-863-1991

Fax: 506-862-1180

E-mail: michael.fisher@nb.aibn.com



Part 7 of 7: New Brunswick Department of the Environment - Acknowledgement of Receipt

The Minister acknowledges receipt of this Record of Site Condition. The Minister has processed the report(s) cited in Part 2 of this Record of Site Condition for the purpose of ensuring the site has been managed in accordance with the current version of the New Brunswick Department of the Environment *Guideline for the Management of Contaminated Sites*.

Based upon the reports cited in Part 2 and conclusions of the Site Professional stated in Part 6 of this Record of Site Condition, the Site Professional is of the opinion that the stated level of contamination remaining on the property will not adversely affect the quality of the environment. Notwithstanding this, the Minister reserves the right to evaluate the site should site activities change, or should circumstances change, which result in an increase in contamination or changes in site conditions which may pose a risk to the quality of the environment.

The Minister has not supervised the work undertaken at the site and does not assume any responsibility or liability for this work, or for notifying future owners, or present or future occupants of the property, of the work completed. Any persons intending to purchase or occupy the property should make their own independent determination of the environmental condition of the property and the extent of responsibility and liability, if any, which may arise from taking ownership or occupancy.

Unconditional Closure

Handwritten: m.p. 8/20/14 It is understood from the information provided that the site has been managed in accordance with the current version of the New Brunswick Department of Environment *Guideline for the Management of Contaminated Sites* and that **further remedial action and/or site-specific engineered or institutional controls are not required** to ensure compatibility with the current or reasonably foreseeable future site activities (as cited in Part 5).

Conditional Closure

It is understood from the information provided that the site has been managed in accordance with the current version of the New Brunswick Department of Environment *Guideline for the Management of Contaminated Sites* and that **site-specific engineered or institutional controls are required** to ensure compatibility with the current or reasonably foreseeable future site activities (as cited in Part 5).

Handwritten signature
Minister of Environment

Handwritten: Mon 21/14
Date

Appendix C

Preliminary Wetland Identification Data Sheet



eNGLOBE

To the south residential homes and Route 133 exists.

There is forested wetland located over 300m from the site to the east and a coastal wetland located approximately 350m to the north.

Additional Information to provide with data sheet: See Appendix D for photos of site.

Appendix D

Photos of Proposed Drilling Site



eNGLOBE



Photo 1: General view (taken facing north) of the proposed drilling site at Ocean Surf RV Park (May6, 2022).



Photo 2: Another view of surroundings of proposed drilling site at the Ocean Surf RV Park (May 6, 2022).

Appendix B
Englobe Corp. Figure 03 -
1:25,000 Scale Map - Overall
Location Plan



ENGLOBE



Legend / Notes:	
	500m Radius Circle
	Provincially Significant Wetland
	Regulated Wetland
	Proposed Well
LEGEND	
Project Location: POINTE-DU-CHÊNE, NB	
Project Title: OCEAN SURF WATER SYSTEM	
Map Title: OVERALL LOCATION PLAN	
Map ID: MAP No: FIG 03 PAGE No: 1 of 1 SCALE: 1:25000	
Revision: DATE : 14/04/22 BY: DB PROJ No: 2002425.001 APPR: LEL REV: A - ISSUED FOR REVIEW	
ENGLOBE	

Project CRS: NAD83(CRS) / New Brunswick Stereographic, EPSG:2953
 LIDAR dataset: Contains information licensed under the GeoNB Open Data Licence.
 Layout Name: 2002425 - Fig03 - Overall Site Plan
 Project Path: O:\2020\2002425.001 Ocean Surf New Well\CADD\GIS\2002425 Ocean Surf Water System.qgz



Appendix C Englobe Corp. Figure 04 - Proposed New Well Location and Coastal Flooding



ENGLOBE



PROPOSED WELL	EXISTING WELL
DISTANCE TO EXISTING WELL	
761m	WELL A
590m	WELL H
485m	WELL M
410m	WELL T
53m	EXISTING WELL #1
133m	EXISTING WELL #2
260m	EXISTING WELL #3

Legend / Notes

LEGEND

- 500m Radius Circle
- Provincially Significant Wetland
- Regulated Wetland
- Coastal Flooding Elevation 4.1m (CGVD13) (1:100yr Storm in year 2100)
- Limit of Coastal Flooding Elevation 4.1m
- ▲ Existing Wells
- Proposed Well
- Existing Watermain
- Existing Ocean Surf Wells

Project Location: **POINTE-DU-CHÊNE, NB**

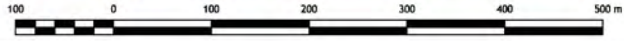
Project Title: **OCEAN SURF WATER SYSTEM**

Map Title: **PROPOSED NEW WELL LOCATION AND COASTAL FLOODING**

Map ID: **MAP No: FIG 04
PAGE No: 1 of 1
SCALE: 1:2500**

Revision: **DATE: 14/04/22 BY: DB
PROJ No: 2002425.001 APPR: LEL
REV : A - ISSUED FOR REVIEW**

Project CRE: NAM31CRS / New Brunswick Stereographic, EPSG:2983
 LIDAR dataset: Contains information licensed under the GeNB Open Data Licence.
 Project Name: 2002425 - FIG 04 - Proposed Well Location and Flooding Scenario
 Project Path: D:\2022\2002425_001 Ocean Surf New Well\2002425_001 Ocean Surf Water System.dwg



Appendix D Atlantic Canada Conservation Data Centre (ACCDC) Report - April 14, 2022



ENGLOBE

DATA REPORT 7238: Shediac, NB

Prepared 14 April 2022
by J. Pender, Data Manager

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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

ShediacNB_7238ob.xls
ShediacNB_7238ob100km.xls
ShediacNB_7238msa.xls

Contents

Rare or legally-protected Flora and Fauna in your study area
A list of Rare and legally protected Flora and Fauna within 100 km of your study area
Managed and Biologically Significant Areas in your study area

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

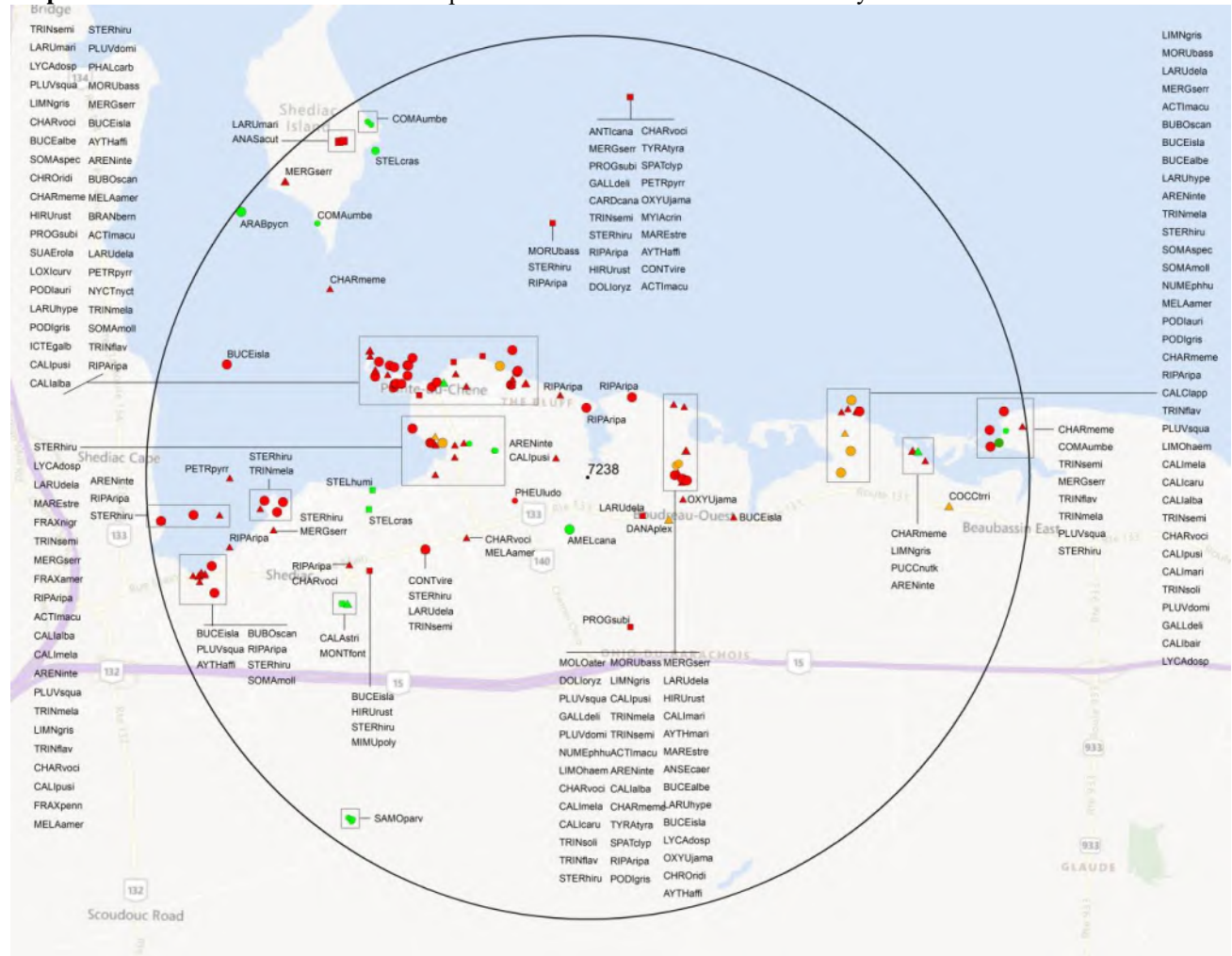
2.1 FLORA

The study area contains 22 records of 13 vascular, no records of nonvascular flora (Map 2 and attached: *ob.xls), excluding 'location-sensitive' species.

2.2 FAUNA

The study area contains 1419 records of 61 vertebrate, 15 records of 3 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 TAXONII

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

3.0 SPECIAL AREAS

3.1 MANAGED AREAS

The GIS scan identified 2 managed areas in the vicinity of the study area (Map 3 and attached file: *msa.xls).

3.2 SIGNIFICANT AREAS

The GIS scan identified 2 biologically significant sites in the vicinity of the study area (Map 3 and attached file: *msa.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 (\pm the precision, in km, of the record). [P] = vascular plant, [N] = nonvascular plant, [A] = vertebrate animal, [I] = invertebrate animal, [C] = community. Note: records are from attached files *ob.xls/*ob.shp only.

4.1 FLORA

	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)
P	<i>Fraxinus nigra</i>	Black Ash	Threatened			S3S4	2	1.1 \pm 0.0
P	<i>Stellaria crassifolia</i>	Fleshy Stitchwort				S1	2	2.5 \pm 5.0
P	<i>Suaeda rolandii</i>	Roland's Sea-Blite				S1	2	2.0 \pm 0.0
P	<i>Puccinellia nutkaensis</i>	Alaska Alkaligrass				S2	1	3.8 \pm 1.0
P	<i>Arabis pycnocarpa</i>	Cream-flowered Rockcress				S3	1	4.9 \pm 0.0
P	<i>Stellaria humifusa</i>	Saltmarsh Starwort				S3	1	2.4 \pm 5.0
P	<i>Fraxinus pennsylvanica</i>	Red Ash				S3	1	1.4 \pm 0.0
P	<i>Amelanchier canadensis</i>	Canada Serviceberry				S3	1	0.6 \pm 0.0
P	<i>Comandra umbellata</i>	Bastard's Toadflax				S3	4	4.2 \pm 0.0
P	<i>Fraxinus americana</i>	White Ash				S3S4	1	1.1 \pm 0.0
P	<i>Samolus parviflorus</i>	Seaside Brookweed				S3S4	4	4.7 \pm 0.0
P	<i>Calamagrostis stricta</i>	Slim-stemmed Reed Grass				S3S4	1	3.1 \pm 2.0
P	<i>Montia fontana</i>	Water Blinks				SH	1	3.1 \pm 1.0

4.2 FAUNA

	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)
A	<i>Charadrius melodus melodus</i>	Piping Plover melodus subspecies	Endangered	Endangered	Endangered	S1B	29	1.3 \pm 0.0
A	<i>Riparia riparia</i>	Bank Swallow	Threatened	Threatened		S2B	41	0.8 \pm 0.0
A	<i>Dolichonyx oryzivorus</i>	Bobolink	Threatened	Threatened	Threatened	S3B	5	1.2 \pm 1.0
A	<i>Tringa flavipes</i>	Lesser Yellowlegs	Threatened			S3M	65	1.3 \pm 0.0
A	<i>Limosa haemastica</i>	Hudsonian Godwit	Threatened			S3M	28	1.3 \pm 0.0
A	<i>Hirundo rustica</i>	Barn Swallow	Special Concern	Threatened	Threatened	S2B	6	1.2 \pm 1.0
A	<i>Bucephala islandica</i>	Barrow's Goldeneye	Special Concern	Special Concern	Special Concern	S2S3N,S3M	44	1.1 \pm 0.0
A	<i>Contopus virens</i>	Eastern Wood-Pewee	Special Concern	Special Concern	Special Concern	S3B	3	2.0 \pm 0.0
A	<i>Podiceps auritus</i>	Horned Grebe	Special Concern	Special Concern	Special Concern	S3N	21	1.7 \pm 0.0
A	<i>Cardellina canadensis</i>	Canada Warbler	Special Concern	Threatened	Threatened	S3S4B	1	4.3 \pm 7.0
A	<i>Bubo scandiacus</i>	Snowy Owl	Not At Risk			S1N,S2S3M	12	1.7 \pm 0.0
A	<i>Podiceps grisegena</i>	Red-necked Grebe	Not At Risk			S2N,S3M	24	1.2 \pm 1.0
A	<i>Sterna hirundo</i>	Common Tern	Not At Risk			S3B,SUM	70	1.2 \pm 1.0
A	<i>Calidris canutus rufa</i>	Red Knot rufa subspecies - Tierra del Fuego / Patagonia wintering population	E,SC	Endangered	Endangered	S2M	2	1.3 \pm 0.0
A	<i>Tringa melanoleuca</i>	Greater Yellowlegs				S1?B,S4S5M	99	1.2 \pm 1.0
A	<i>Grus canadensis</i>	Sandhill Crane				S1B	1	4.3 \pm 7.0
A	<i>Progne subis</i>	Purple Martin				S1B	6	1.8 \pm 7.0
A	<i>Aythya marila</i>	Greater Scaup				S1B,S2N,S4M	2	1.2 \pm 1.0
A	<i>Oxyura jamaicensis</i>	Ruddy Duck				S1B,S2S3M	16	1.1 \pm 0.0
A	<i>Aythya affinis</i>	Lesser Scaup				S1B,S4M	52	1.1 \pm 0.0
A	<i>Chroicocephalus ridibundus</i>	Black-headed Gull				S1N,S2M	3	1.0 \pm 0.0
A	<i>Branta bernicla</i>	Brant				S1N,S2S3M	3	2.9 \pm 1.0
A	<i>Calidris alba</i>	Sanderling				S1N,S3S4M	51	1.2 \pm 1.0
A	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron				S1S2B	1	2.0 \pm 0.0
A	<i>Calidris bairdii</i>	Baird's Sandpiper				S1S2M	1	3.1 \pm 0.0
A	<i>Melanitta americana</i>	American Scoter				S1S2N,S3M	70	1.5 \pm 0.0
A	<i>Petrochelidon pyrrhonota</i>	Cliff Swallow				S2B	4	2.0 \pm 0.0
A	<i>Mimus polyglottos</i>	Northern Mockingbird				S2B	1	2.7 \pm 5.0

	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)
A	<i>Mareca strepera</i>	Gadwall				S2B,S3M	4	1.2 ± 1.0
A	<i>Tringa solitaria</i>	Solitary Sandpiper				S2B,S4S5M	5	1.2 ± 1.0
A	<i>Phalacrocorax carbo</i>	Great Cormorant				S2N	1	2.9 ± 1.0
A	<i>Somateria spectabilis</i>	King Eider				S2N	2	2.0 ± 0.0
A	<i>Larus hyperboreus</i>	Glaucous Gull				S2N	5	1.0 ± 0.0
A	<i>Icterus galbula</i>	Baltimore Oriole				S2S3B	1	2.9 ± 1.0
A	<i>Somateria mollissima</i>	Common Eider				S2S3B,S2S3N,S4M	11	2.0 ± 0.0
A	<i>Larus delawarensis</i>	Ring-billed Gull				S2S3B,S4N,S5M	63	0.8 ± 3.0
A	<i>Pluvialis dominica</i>	American Golden-Plover				S2S3M	18	1.2 ± 1.0
A	<i>Calcarius lapponicus</i>	Lapland Longspur				S2S3N,SUM	1	3.1 ± 1.0
A	<i>Larus marinus</i>	Great Black-backed Gull				S3	4	2.4 ± 0.0
A	<i>Loxia curvirostra</i>	Red Crossbill				S3	1	1.4 ± 0.0
A	<i>Spatula clypeata</i>	Northern Shoveler				S3B	4	1.2 ± 1.0
A	<i>Charadrius vociferus</i>	Killdeer				S3B	28	1.2 ± 1.0
A	<i>Tringa semipalmata</i>	Willet				S3B	145	1.2 ± 1.0
A	<i>Myiarchus crinitus</i>	Great Crested Flycatcher				S3B	1	4.3 ± 7.0
A	<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak				S3B	1	0.9 ± 0.0
A	<i>Molothrus ater</i>	Brown-headed Cowbird				S3B	1	1.2 ± 1.0
A	<i>Mergus serrator</i>	Red-breasted Merganser				S3B,S4S5N,S5M	19	1.2 ± 1.0
A	<i>Anas acuta</i>	Northern Pintail				S3B,S5M	1	4.7 ± 10.0
A	<i>Anser caerulescens</i>	Snow Goose				S3M	2	1.2 ± 1.0
A	<i>Numenius phaeopus hudsonicus</i>	Whimbrel				S3M	12	1.2 ± 1.0
A	<i>Arenaria interpres</i>	Ruddy Turnstone				S3M	56	0.4 ± 0.0
A	<i>Calidris pusilla</i>	Semipalmated Sandpiper				S3M	86	0.4 ± 0.0
A	<i>Calidris melanotos</i>	Pectoral Sandpiper				S3M	19	1.2 ± 1.0
A	<i>Limnodromus griseus</i>	Short-billed Dowitcher				S3M	46	1.3 ± 0.0
A	<i>Bucephala albeola</i>	Bufflehead				S3N	21	1.1 ± 0.0
A	<i>Calidris maritima</i>	Purple Sandpiper				S3N	7	1.2 ± 1.0
A	<i>Tyrannus tyrannus</i>	Eastern Kingbird				S3S4B	5	1.2 ± 1.0
A	<i>Actitis macularius</i>	Spotted Sandpiper				S3S4B,S4M	63	1.2 ± 1.0
A	<i>Gallinago delicata</i>	Wilson's Snipe				S3S4B,S5M	8	1.3 ± 0.0
A	<i>Pluvialis squatarola</i>	Black-bellied Plover				S3S4M	85	1.3 ± 0.0
A	<i>Morus bassanus</i>	Northern Gannet				SHB	32	1.2 ± 1.0
I	<i>Danaus plexippus</i>	Monarch	Endangered	Special Concern	Special Concern	S2S3?B	1	1.0 ± 1.0
I	<i>Coccinella transversoguttata richardsoni</i>	Transverse Lady Beetle	Special Concern			SH	2	4.1 ± 1.0
I	<i>Tharsalea dospassosi</i>	Maritime Copper				S3	12	1.0 ± 0.0

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”.

New Brunswick

Scientific Name	Common Name	SARA	Prov Legal Prot	Known within the Study Site?
<i>Chrysemys picta picta</i>	Eastern Painted Turtle	Special Concern		No
<i>Chelydra serpentina</i>	Snapping Turtle	Special Concern	Special Concern	No
<i>Glyptemys insculpta</i>	Wood Turtle	Threatened	Threatened	No
<i>Haliaeetus leucocephalus</i>	Bald Eagle		Endangered	YES
<i>Falco peregrinus pop. 1</i>	Peregrine Falcon - anatum/tundrius pop.	Special Concern	Endangered	YES
<i>Cicindela marginipennis</i>	Cobblestone Tiger Beetle	Endangered	Endangered	No
<i>Coenonympha nipisiquit</i>	Maritime Ringlet	Endangered	Endangered	No
<i>Bat hibernaculum</i> or bat species occurrence		[Endangered] ¹	[Endangered] ¹	No

¹ *Myotis lucifugus* (Little Brown Myotis), *Myotis septentrionalis* (Long-eared Myotis), and *Perimyotis subflavus* (Tri-colored Bat or Eastern Pipistrelle) are all Endangered under the Federal Species at Risk Act and the NB Species at Risk 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
574	eBird. 2014. eBird Basic Dataset. Version: EBD_relNov-2014. Ithaca, New York. Nov 2014. Cornell Lab of Ornithology, 25036 recs.
526	Morrison, Guy. 2011. Maritime Shorebird Survey (MSS) database. Canadian Wildlife Service, Ottawa, 15939 surveys. 86171 recs.
141	Paquet, Julie. 2018. Atlantic Canada Shorebird Survey (ACSS) database 2012-2018. Environment Canada, Canadian Wildlife Service.
39	Lepage, D. 2014. Maritime Breeding Bird Atlas Database. Bird Studies Canada, Sackville NB, 407,838 recs.
30	iNaturalist. 2020. iNaturalist Data Export 2020. iNaturalist.org and iNaturalist.ca, Web site: 128728 recs.
26	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.
20	Erskine, A.J. 1992. Maritime Breeding Bird Atlas Database. NS Museum & Nimbus Publ., Halifax, 82,125 recs.
19	Amirault, D.L. & Stewart, J. 2007. Piping Plover Database 1894-2006. Canadian Wildlife Service, Sackville, 3344 recs, 1228 new.
10	Berrigan, L. 2019. Maritimes Marsh Monitoring Project 2013, 2014, 2016, 2017, and 2018 data. Bird Studies Canada, Sackville, NB.
6	Paquet, Julie. 2019. Atlantic Canada Shorebird Survey ACSS database for 2019. Environment Canada, Canadian Wildlife Service.
5	Blaney, C.S. 2017. Atlantic Canada Conservation Data Centre Fieldwork 2017. Atlantic Canada Conservation Data Centre.
5	Nussey, Pat & NCC staff. 2019. AEI tracked species records, 2016-2019. Chapman, C.J. (ed.) Atlantic Canada Conservation Data Centre, 333.
5	Wilhelm, S.I. et al. 2011. Colonial Waterbird Database. Canadian Wildlife Service, Sackville, 2698 sites, 9718 recs (8192 obs).
4	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2015. Atlantic Canada Conservation Data Centre Fieldwork 2015. Atlantic Canada Conservation Data Centre, # recs.
4	Blaney, C.S.; Mazerolle, D.M.; Klymko, J.; Spicer, C.D. 2006. Fieldwork 2006. Atlantic Canada Conservation Data Centre. Sackville NB, 8399 recs.
4	Tingley, S. (compiler). 2001. Butterflies of New Brunswick. , Web site: www.geocities.com/Yosemite/8425/buttrfly. 142 recs.
3	Benedict, B. Connell Herbarium Specimens. University New Brunswick, Fredericton. 2003.
3	Clayden, S.R. 1998. NBM Science Collections databases: vascular plants. New Brunswick Museum, Saint John NB, 19759 recs.
3	Mazerolle, D.M. 2005. Bouctouche Irving Eco-Centre rare coastal plant fieldwork results 2004-05. Irving Eco-centre, la Dune du Bouctouche, 174 recs.
3	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 .
2	Basset, I.J. & Crompton, C.W. 1978. The Genus Suaeda (Chenopodiaceae) in Canada. Canadian Journal of Botany, 56: 581-591.
2	Canadian Wildlife Service, Dartmouth. 2010. Piping Plover censuses 2007-09, 304 recs.
2	Edsall, J. 2001. Lepidopteran records in New Brunswick, 1997-99. , Pers. comm. to K.A. Bredin. 91 recs.
2	MacDonald, E.C. 2018. CWS Piping Plover Census, 2010-2017. Canadian Wildlife Service, 672 recs.
2	Majka, C. 2009. Université de Moncton Insect Collection: Carabidae, Cerambycidae, Coccinellidae. Université de Moncton, 540 recs.
2	Wilhelm, S.I. et al. 2019. Colonial Waterbird Database. Canadian Wildlife Service.
1	Amirault, D.L. & McKnight, J. 2003. Piping Plover Database 1991-2003. Canadian Wildlife Service, Sackville, unpublished data. 7 recs.
1	Bateman, M.C. 2001. Coastal Waterfowl Surveys Database, 1965-2001. Canadian Wildlife Service, Sackville, 667 recs.
1	Blaney, C.S. 2020. Sean Blaney 2020 field data. Atlantic Canada Conservation Data Centre, 4407 records.
1	Boyne, A.W. 2000. Tern Surveys. Canadian Wildlife Service, Sackville, unpublished data. 168 recs.
1	Clayden, S.R. 2007. NBM Science Collections databases: vascular plants. New Brunswick Museum, Saint John NB, download Mar. 2007, 6914 recs.

# recs	CITATION
1	Daury, R.W. & Bateman, M.C. 1996. The Barrow's Goldeneye (<i>Bucephala islandica</i>) in the Atlantic Provinces and Maine. Canadian Wildlife Service, Sackville, 47pp.
1	Doucet, D.A. 2007. Lepidopteran Records, 1988-2006. Doucet, 700 recs.
1	Ducks Unlimited Canada (DUC). 2020. DUC owned properties in Atlantic Canada (v. DUC_Lands_Sept2020). DUC.
1	e-Butterfly. 2016. Export of Maritimes records and photos. Maxim Larrivee, Sambo Zhang (ed.) e-butterfly.org.
1	e-Butterfly. 2019. Export of Maritimes records and photos. McFarland, K. (ed.) e-butterfly.org.
1	Erskine, A.J. 1999. Maritime Nest Records Scheme (MNRS) 1937-1999. Canadian Wildlife Service, Sackville, 313 recs.
1	Government of New Brunswick. 2020. Provincial Parks Dataset (Retrieved: 21 September, 2020 from http://www.snb.ca/geonb1/e/DC/catalogue-E.asp). GNB.
1	Hicks, Andrew. 2009. Coastal Waterfowl Surveys Database, 2000-08. Canadian Wildlife Service, Sackville, 46488 recs (11149 non-zero).
1	Klymko, J. 2018. Maritimes Butterfly Atlas database. Atlantic Canada Conservation Data Centre.
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	NatureServe Canada. 2018. iNaturalist Butterfly Data Export . iNaturalist.org and iNaturalist.ca.
1	Patrick, Allison. 2021. Animal and plant records from NCC properties from 2019 and 2020. Nature Conservancy Canada.
1	Pike, E., Tingley, S. & Christie, D.S. 2000. Nature NB Listserve. University of New Brunswick, listserv.unb.ca/archives/naturenb. 68 recs.

5.0 RARE SPECIES WITHIN 100 KM

A 100 km buffer around the study area contains 65374 records of 150 vertebrate and 885 records of 57 invertebrate fauna; 9107 records of 270 vascular, 1944 records of 196 nonvascular flora (attached: *ob100km.xls).

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

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
A	<i>Myotis lucifugus</i>	Little Brown Myotis	Endangered	Endangered	Endangered	S1	62	34.1 \pm 0.0	NB
A	<i>Myotis septentrionalis</i>	Northern Myotis	Endangered	Endangered	Endangered	S1	57	35.0 \pm 1.0	NB
A	<i>Perimyotis subflavus</i>	Tricolored Bat	Endangered	Endangered	Endangered	S1	12	39.4 \pm 0.0	NB
A	<i>Charadrius melodus melodus</i>	Piping Plover melodus subspecies	Endangered	Endangered	Endangered	S1B	2831	1.3 \pm 0.0	NB
A	<i>Dermochelys coriacea</i> pop. 2	Leatherback Sea Turtle - Atlantic population	Endangered	Endangered	Endangered	S1S2N	5	25.7 \pm 1.0	NB
A	<i>Salmo salar</i> pop. 1	Atlantic Salmon - Inner Bay of Fundy population	Endangered	Endangered	Endangered	S2	636	29.1 \pm 1.0	NB
A	<i>Salmo salar</i> pop. 7	Atlantic Salmon - Outer Bay of Fundy population	Endangered		Endangered	SNR	395	43.3 \pm 0.0	NB
A	<i>Rangifer tarandus</i> pop. 2	Caribou - Atlantic-Gasp /rsie population	Endangered	Endangered	Extirpated	SX	2	43.9 \pm 1.0	NB
A	<i>Lanius ludovicianus</i>	Loggerhead Shrike	Endangered	Endangered		SXB	1	27.0 \pm 0.0	NB
A	<i>Sturnella magna</i>	Eastern Meadowlark	Threatened	Threatened	Threatened	S1B	33	26.0 \pm 0.0	NB
A	<i>Asio flammeus</i>	Short-eared Owl	Threatened	Special Concern	Special Concern	S1S2B	54	23.2 \pm 64.0	NB
A	<i>Ixobrychus exilis</i>	Least Bittern	Threatened	Threatened	Threatened	S1S2B	18	20.7 \pm 0.0	NB
A	<i>Hyllocichla mustelina</i>	Wood Thrush	Threatened	Threatened	Threatened	S1S2B	68	11.9 \pm 7.0	NB
A	<i>Hydrobates leucorhous</i>	Leach's Storm-Petrel	Threatened			S1S2B	1	8.9 \pm 0.0	NB
A	<i>Antrostomus vociferus</i>	Eastern Whip-Poor-Will	Threatened	Threatened	Threatened	S2B	21	23.8 \pm 7.0	NB
A	<i>Catharus bicknelli</i>	Bicknell's Thrush	Threatened	Threatened	Threatened	S2B	8	21.8 \pm 2.0	NB
A	<i>Riparia riparia</i>	Bank Swallow	Threatened	Threatened		S2B	3106	0.8 \pm 1.0	NB
A	<i>Glyptemys insculpta</i>	Wood Turtle	Threatened	Threatened	Threatened	S2S3	671	14.0 \pm 0.0	NB
A	<i>Chaetura pelagica</i>	Chimney Swift	Threatened	Threatened	Threatened	S2S3B,S2M	176	18.9 \pm 7.0	NB
A	<i>Dolichonyx oryzivorus</i>	Bobolink	Threatened	Threatened	Threatened	S3B	2016	1.2 \pm 1.0	NB
A	<i>Acipenser oxyrinchus</i>	Atlantic Sturgeon	Threatened		Threatened	S3B,S3N	1	46.4 \pm 1.0	NB
A	<i>Tringa flavipes</i>	Lesser Yellowlegs	Threatened			S3M	1856	1.3 \pm 0.0	NB
A	<i>Limosa haemastica</i>	Hudsonian Godwit	Threatened			S3M	586	1.3 \pm 0.0	NB
A	<i>Anguilla rostrata</i>	American Eel	Threatened		Threatened	S4N	6970	29.1 \pm 1.0	NB
A	<i>Coturnicops noveboracensis</i>	Yellow Rail	Special Concern	Special Concern	Special Concern	S1?B,SUM	5	32.8 \pm 0.0	NB
A	<i>Histrionicus histrionicus</i> pop. 1	Harlequin Duck - Eastern population	Special Concern	Special Concern	Endangered	S1B,S1S2N,S2M	6	26.3 \pm 0.0	NB
A	<i>Hirundo rustica</i>	Barn Swallow	Special Concern	Threatened	Threatened	S2B	1488	1.2 \pm 1.0	NB
A	<i>Salmo salar</i> pop. 12	Atlantic Salmon - Gaspe - Southern Gulf of St. Lawrence population	Special Concern		Special Concern	S2S3	16	35.6 \pm 50.0	NB
A	<i>Balaenoptera physalus</i>	Fin Whale	Special Concern	Special Concern		S2S3	1	72.0 \pm 1.0	NB
A	<i>Euphagus carolinus</i>	Rusty Blackbird	Special Concern	Special Concern	Special Concern	S2S3B,S3M	118	11.1 \pm 0.0	NB
A	<i>Bucephala islandica</i>	Barrow's Goldeneye	Special Concern	Special Concern	Special Concern	S2S3N,S3M	117	1.1 \pm 0.0	NB
A	<i>Chelydra serpentina</i>	Snapping Turtle	Special Concern	Special Concern	Special Concern	S3	4	18.9 \pm 1.0	NB
A	<i>Contopus virens</i>	Eastern Wood-Pewee	Special Concern	Special Concern	Special Concern	S3B	759	2.0 \pm 0.0	NB
A	<i>Contopus cooperi</i>	Olive-sided Flycatcher	Special Concern	Threatened	Threatened	S3B	562	5.7 \pm 7.0	NB
A	<i>Coccothraustes vespertinus</i>	Evening Grosbeak	Special Concern	Special Concern		S3B,S3S4N,SUM	321	11.1 \pm 7.0	NB
A	<i>Chordeiles minor</i>	Common Nighthawk	Special Concern	Threatened	Threatened	S3B,S4M	203	12.8 \pm 0.0	NB
A	<i>Phalaropus lobatus</i>	Red-necked Phalarope	Special Concern	Special Concern		S3M	24	17.4 \pm 0.0	NB
A	<i>Podiceps auritus</i>	Horned Grebe	Special Concern	Special Concern	Special Concern	S3N	53	1.7 \pm 0.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
A	<i>Cardellina canadensis</i>	Canada Warbler	Special Concern	Threatened	Threatened	S3S4B	617	4.3 ± 7.0	NB
A	<i>Phocoena phocoena</i>	Harbour Porpoise	Special Concern		Spec.Concern	S4	4	45.6 ± 0.0	NB
A	<i>Chrysemys picta picta</i>	Eastern Painted Turtle	Special Concern	Special Concern		S4	20	29.0 ± 0.0	NB
A	<i>Hemidactylium scutatum</i>	Four-toed Salamander	Not At Risk			S1?	5	85.2 ± 0.0	NS
A	<i>Fulica americana</i>	American Coot	Not At Risk			S1B	62	24.9 ± 0.0	NB
A	<i>Falco peregrinus pop. 1</i>	Peregrine Falcon - anatum/tundrius	Not At Risk	Special Concern	Endangered	S1B,S3M	306	1.2 ± 1.0	NB
A	<i>Falco peregrinus</i>	Peregrine Falcon	Not At Risk	Special Concern		S1B,S3M	1	67.3 ± 0.0	NB
A	<i>Bubo scandiacus</i>	Snowy Owl	Not At Risk			S1N,S2S3M	53	1.7 ± 0.0	NB
A	<i>Accipiter cooperii</i>	Cooper's Hawk	Not At Risk			S1S2B	6	14.3 ± 5.0	NB
A	<i>Buteo lineatus</i>	Red-shouldered Hawk	Not At Risk			S1S2B	13	27.0 ± 0.0	NB
A	<i>Aegolius funereus</i>	Boreal Owl	Not At Risk			S1S2B,SUM	11	30.7 ± 0.0	NB
A	<i>Sorex dispar</i>	Long-tailed Shrew	Not At Risk			S2	3	52.1 ± 1.0	NB
A	<i>Chlidonias niger</i>	Black Tern	Not At Risk			S2B	187	27.6 ± 1.0	NB
A	<i>Podiceps grisegena</i>	Red-necked Grebe	Not At Risk			S2N,S3M	51	1.2 ± 1.0	NB
A	<i>Desmognathus fuscus pop. 2</i>	Northern Dusky Salamander - Quebec / New Brunswick population	Not At Risk			S3	1	81.2 ± 0.0	
A	<i>Sterna hirundo</i>	Common Tern	Not At Risk			S3B,SUM	764	1.2 ± 1.0	NB
A	<i>Lagenorhynchus acutus</i>	Atlantic White-sided Dolphin	Not At Risk			S3S4	3	42.4 ± 1.0	NB
A	<i>Haliaeetus leucocephalus</i>	Bald Eagle	Not At Risk		Endangered	S4	1393	1.2 ± 1.0	NB
A	<i>Lynx canadensis</i>	Canada Lynx	Not At Risk		Endangered	S4	21	41.2 ± 10.0	NB
A	<i>Canis lupus</i>	Grey Wolf	Not At Risk		Extirpated	SX	2	73.9 ± 100.0	NB
A	<i>Puma concolor pop. 1</i>	Cougar - Eastern population	Data Deficient		Endangered	SU	114	15.4 ± 1.0	NB
A	<i>Calidris canutus rufa</i>	Red Knot rufa subspecies - Tierra del Fuego / Patagonia wintering population	E,SC	Endangered	Endangered	S2M	828	1.3 ± 0.0	
A	<i>Morone saxatilis</i>	Striped Bass	E,SC			S3S4B,S3S4N	8640	46.4 ± 0.0	NB
A	<i>Thryothorus ludovicianus</i>	Carolina Wren				S1	13	8.3 ± 0.0	NB
A	<i>Salvelinus alpinus</i>	Arctic Char				S1	3	93.2 ± 1.0	NB
A	<i>Vireo flavifrons</i>	Yellow-throated Vireo				S1?B	4	29.5 ± 0.0	NB
A	<i>Tringa melanoleuca</i>	Greater Yellowlegs				S1?B,S4S5M	2763	1.2 ± 1.0	NB
A	<i>Aythya americana</i>	Redhead				S1B	10	27.4 ± 7.0	NB
A	<i>Gallinula galeata</i>	Common Gallinule				S1B	53	32.5 ± 0.0	NB
A	<i>Grus canadensis</i>	Sandhill Crane				S1B	25	4.3 ± 7.0	NB
A	<i>Bartramia longicauda</i>	Upland Sandpiper				S1B	53	18.4 ± 7.0	NB
A	<i>Phalaropus tricolor</i>	Wilson's Phalarope				S1B	33	27.0 ± 0.0	NB
A	<i>Leucophaeus atricilla</i>	Laughing Gull				S1B	9	8.9 ± 0.0	NB
A	<i>Rissa tridactyla</i>	Black-legged Kittiwake				S1B	2	22.4 ± 0.0	NB
A	<i>Fratercula arctica</i>	Atlantic Puffin				S1B	3	61.9 ± 0.0	NB
A	<i>Progne subis</i>	Purple Martin				S1B	80	1.8 ± 7.0	NB
A	<i>Aythya marila</i>	Greater Scaup				S1B,S2N,S4M	17	1.2 ± 1.0	NB
A	<i>Oxyura jamaicensis</i>	Ruddy Duck				S1B,S2S3M	110	1.1 ± 0.0	NB
A	<i>Aythya affinis</i>	Lesser Scaup				S1B,S4M	175	1.1 ± 0.0	NB
A	<i>Eremophila alpestris</i>	Horned Lark				S1B,S4N,S5M	68	23.8 ± 7.0	NB
A	<i>Sterna paradisaea</i>	Arctic Tern				S1B,SUM	33	10.4 ± 7.0	NB
A	<i>Chroicocephalus ridibundus</i>	Black-headed Gull				S1N,S2M	15	1.0 ± 0.0	NB
A	<i>Branta bernicla</i>	Brant				S1N,S2S3M	36	2.9 ± 1.0	NB
A	<i>Calidris alba</i>	Sanderling				S1N,S3S4M	1998	1.2 ± 1.0	NB
A	<i>Butorides virescens</i>	Green Heron				S1S2B	8	33.4 ± 7.0	NB
A	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron				S1S2B	5	2.0 ± 0.0	NB
A	<i>Empidonax traillii</i>	Willow Flycatcher				S1S2B	72	23.3 ± 2.0	NB
A	<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow				S1S2B	6	24.5 ± 0.0	NB
A	<i>Troglodytes aedon</i>	House Wren				S1S2B	12	10.4 ± 7.0	NB
A	<i>Calidris bairdii</i>	Baird's Sandpiper				S1S2M	53	3.1 ± 0.0	NB
A	<i>Melanitta americana</i>	American Scoter				S1S2N,S3M	285	1.5 ± 0.0	NB
A	<i>Petrochelidon pyrrhonota</i>	Cliff Swallow				S2B	527	2.0 ± 0.0	NB

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A	<i>Cistothorus palustris</i>	Marsh Wren				S2B	82	21.2 ± 0.0	NB
A	<i>Mimus polyglottos</i>	Northern Mockingbird				S2B	140	2.7 ± 5.0	NB
A	<i>Pooecetes gramineus</i>	Vesper Sparrow				S2B	128	12.4 ± 0.0	NB
A	<i>Mareca strepera</i>	Gadwall				S2B,S3M	412	1.2 ± 1.0	NB
A	<i>Tringa solitaria</i>	Solitary Sandpiper				S2B,S4S5M	189	1.2 ± 1.0	NB
A	<i>Pinicola enucleator</i>	Pine Grosbeak				S2B,S4S5N,S4S5M	44	10.4 ± 7.0	NB
A	<i>Phalacrocorax carbo</i>	Great Cormorant				S2N	163	2.9 ± 1.0	NB
A	<i>Somateria spectabilis</i>	King Eider				S2N	4	2.0 ± 0.0	NB
A	<i>Larus hyperboreus</i>	Glaucous Gull				S2N	94	1.0 ± 0.0	NB
A	<i>Melanitta perspicillata</i>	Surf Scoter				S2N,S4M	33	44.3 ± 9.0	NB
A	<i>Melanitta deglandi</i>	White-winged Scoter				S2N,S4M	27	40.8 ± 1.0	NB
A	<i>Asio otus</i>	Long-eared Owl				S2S3	29	23.4 ± 0.0	NB
A	<i>Picoides dorsalis</i>	American Three-toed Woodpecker				S2S3	19	51.9 ± 7.0	NB
A	<i>Toxostoma rufum</i>	Brown Thrasher				S2S3B	28	15.7 ± 7.0	NB
A	<i>Icterus galbula</i>	Baltimore Oriole				S2S3B	106	2.9 ± 1.0	NB
A	<i>Somateria mollissima</i>	Common Eider				S2S3B,S2S3N,S4M	214	2.0 ± 0.0	NB
A	<i>Larus delawarensis</i>	Ring-billed Gull				S2S3B,S4N,S5M	461	0.8 ± 3.0	NB
A	<i>Pluvialis dominica</i>	American Golden-Plover				S2S3M	253	1.2 ± 1.0	NB
A	<i>Calcarius lapponicus</i>	Lapland Longspur				S2S3N,SUM	43	3.1 ± 1.0	NB
A	<i>Larus marinus</i>	Great Black-backed Gull				S3	566	2.4 ± 0.0	NB
A	<i>Picoides arcticus</i>	Black-backed Woodpecker				S3	73	11.1 ± 7.0	NB
A	<i>Loxia curvirostra</i>	Red Crossbill				S3	139	1.4 ± 0.0	NB
A	<i>Spinus pinus</i>	Pine Siskin				S3	405	10.4 ± 7.0	NB
A	<i>Salvelinus namaycush</i>	Lake Trout				S3	1	45.9 ± 0.0	NB
A	<i>Sorex maritimensis</i>	Maritime Shrew				S3	144	38.0 ± 1.0	NB
A	<i>Spatula clypeata</i>	Northern Shoveler				S3B	469	1.2 ± 1.0	NB
A	<i>Charadrius vociferus</i>	Killdeer				S3B	1008	1.2 ± 1.0	NB
A	<i>Tringa semipalmata</i>	Willet				S3B	1263	1.2 ± 1.0	NB
A	<i>Cephus grylle</i>	Black Guillemot				S3B	60	33.7 ± 7.0	PE
A	<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo				S3B	164	10.4 ± 7.0	NB
A	<i>Myiarchus crinitus</i>	Great Crested Flycatcher				S3B	35	4.3 ± 7.0	NB
A	<i>Piranga olivacea</i>	Scarlet Tanager				S3B	42	25.0 ± 7.0	NB
A	<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak				S3B	675	0.9 ± 0.0	NB
A	<i>Passerina cyanea</i>	Indigo Bunting				S3B	43	30.1 ± 7.0	NB
A	<i>Molothrus ater</i>	Brown-headed Cowbird				S3B	294	1.2 ± 1.0	NB
A	<i>Setophaga tigrina</i>	Cape May Warbler				S3B,S4S5M	321	5.7 ± 7.0	NB
A	<i>Mergus serrator</i>	Red-breasted Merganser				S3B,S4S5N,S5M	331	1.2 ± 1.0	NB
A	<i>Anas acuta</i>	Northern Pintail				S3B,S5M	169	4.7 ± 10.0	NB
A	<i>Anser caerulescens</i>	Snow Goose				S3M	24	1.2 ± 1.0	NB
A	<i>Numenius phaeopus hudsonicus</i>	Whimbrel				S3M	390	1.2 ± 1.0	NB
A	<i>Arenaria interpres</i>	Ruddy Turnstone				S3M	1309	0.4 ± 0.0	NB
A	<i>Calidris pusilla</i>	Semipalmated Sandpiper				S3M	2922	0.4 ± 0.0	NB
A	<i>Calidris melanotos</i>	Pectoral Sandpiper				S3M	487	1.2 ± 1.0	NB
A	<i>Limnodromus griseus</i>	Short-billed Dowitcher				S3M	1506	1.3 ± 0.0	NB
A	<i>Phalaropus fulicarius</i>	Red Phalarope				S3M	6	42.8 ± 0.0	NB
A	<i>Bucephala albeola</i>	Bufflehead				S3N	123	1.1 ± 0.0	NB
A	<i>Calidris maritima</i>	Purple Sandpiper				S3N	104	1.2 ± 1.0	NB
A	<i>Uria lomvia</i>	Thick-billed Murre				S3N,S3M	1	90.2 ± 0.0	NS
A	<i>Perisoreus canadensis</i>	Canada Jay				S3S4	504	5.7 ± 7.0	NB
A	<i>Poecile hudsonicus</i>	Boreal Chickadee				S3S4	459	5.7 ± 7.0	NB
A	<i>Eptesicus fuscus</i>	Big Brown Bat				S3S4	11	26.4 ± 1.0	NB
A	<i>Synaptomys cooperi</i>	Southern Bog Lemming				S3S4	89	56.7 ± 0.0	NB
A	<i>Tyrannus tyrannus</i>	Eastern Kingbird				S3S4B	566	1.2 ± 1.0	NB
A	<i>Vireo gilvus</i>	Warbling Vireo				S3S4B	72	11.2 ± 0.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
A	<i>Actitis macularius</i>	Spotted Sandpiper				S3S4B,S4M	1022	1.2 ± 1.0	NB
A	<i>Melospiza lincolnii</i>	Lincoln's Sparrow				S3S4B,S4M	366	5.7 ± 7.0	NB
A	<i>Gallinago delicata</i>	Wilson's Snipe				S3S4B,S5M	1136	1.3 ± 0.0	NB
A	<i>Setophaga striata</i>	Blackpoll Warbler				S3S4B,S5M	72	5.7 ± 7.0	NB
A	<i>Pluvialis squatarola</i>	Black-bellied Plover				S3S4M	2473	1.3 ± 0.0	NB
A	<i>Morus bassanus</i>	Northern Gannet				SHB	222	1.2 ± 1.0	NB
I	<i>Bombus bohemicus</i>	Ashton Cuckoo Bumble Bee	Endangered	Endangered		S1	12	17.8 ± 5.0	NB
I	<i>Gomphurus ventricosus</i>	Skillet Clubtail	Endangered	Endangered	Endangered	S2	1	82.7 ± 0.0	NB
I	<i>Danaus plexippus</i>	Monarch	Endangered	Special Concern	Special Concern	S2S3?B	212	1.0 ± 1.0	NB
I	<i>Alasmidonta varicosa</i>	Brook Floater	Special Concern	Special Concern	Special Concern	S3	38	32.3 ± 0.0	NB
I	<i>Lampsilis cariosa</i>	Yellow Lampmussel	Special Concern	Special Concern	Special Concern	S3	4	93.5 ± 0.0	NB
I	<i>Bombus terricola</i>	Yellow-banded Bumble Bee	Special Concern	Special Concern		S4	154	20.0 ± 0.0	NB
I	<i>Coccinella transversoguttata richardsoni</i>	Transverse Lady Beetle	Special Concern			SH	30	4.1 ± 1.0	NB
I	<i>Erora laeta</i>	Early Hairstreak				S1	2	27.9 ± 1.0	NB
I	<i>Leucorrhinia patricia</i>	Canada Whiteface				S1	10	72.2 ± 1.0	NB
I	<i>Icaricia saepiolus</i>	Greenish Blue				S1S2	2	55.8 ± 7.0	NB
I	<i>Cicindela ancocisconensis</i>	Appalachian Tiger Beetle				S2	1	95.8 ± 0.0	NB
I	<i>Strymon melinus</i>	Gray Hairstreak				S2	1	36.5 ± 2.0	NB
I	<i>Somatochlora brevicincta</i>	Quebec Emerald				S2	2	36.8 ± 0.0	NB
I	<i>Chrysops delicatulus</i>	Delicate Deer Fly				S2S3	1	88.5 ± 1.0	NB
I	<i>Psyrassa unicolor</i>	Unicoloured Long-horned Beetle				S3	1	20.0 ± 0.0	NB
I	<i>Elaphrus americanus</i>	Boreal Elaphrus Beetle				S3	1	61.8 ± 0.0	NB
I	<i>Agonum crenistriatum</i>	Scalloped Harp Ground Beetle				S3	1	25.6 ± 1.0	NB
I	<i>Agonum consimile</i>	Consimile Ground Beetle				S3	1	25.6 ± 1.0	NB
I	<i>Lachnocrepis parallela</i>	Swamp Harp Ground Beetle				S3	1	57.1 ± 0.0	NB
I	<i>Dyschirius setosus</i>	Bristly Pedunculate Ground Beetle				S3	3	57.1 ± 0.0	NB
I	<i>Harpalus fulvilabris</i>	Fulvia Harpaline Beetle				S3	1	61.1 ± 0.0	NB
I	<i>Olisthopus parmatus</i>	Tawny-bordered Harp Ground Beetle				S3	1	14.7 ± 0.0	NB
I	<i>Amara pallipes</i>	Pale-footed Sun Beetle				S3	2	25.6 ± 1.0	NB
I	<i>Carabus maeander</i>	Meander Ground Beetle				S3	1	25.6 ± 1.0	NB
I	<i>Carabus serratus</i>	Serrated Ground Beetle				S3	1	30.9 ± 1.0	NB
I	<i>Hippodamia parenthesis</i>	Parenthesis Lady Beetle				S3	14	25.6 ± 1.0	NB
I	<i>Xylotrechus undulatus</i>	Spruce Zebra Beetle				S3	2	24.7 ± 1.0	NB
I	<i>Calathus gregarius</i>	Gregarious Harp Ground Beetle				S3	1	80.2 ± 1.0	NB
I	<i>Gonioctena americana</i>	American Aspen Beetle				S3	1	57.8 ± 0.0	NB
I	<i>Naemia seriata</i>	Seaside Lady Beetle				S3	9	46.4 ± 0.0	NB
I	<i>Beckerus appressus</i>	Compressed Click Beetle				S3	1	81.8 ± 0.0	NB
I	<i>Saperda lateralis</i>	Red-edged Long-horned Beetle				S3	1	49.9 ± 0.0	NS
I	<i>Trachysida aspera</i>	Rough Flower Longhorn Beetle				S3	1	67.1 ± 0.0	NB
I	<i>Dicerca caudata</i>	Tailed Jewel Borer				S3	1	27.7 ± 0.0	NB
I	<i>Enoclerus muttkowskii</i>	Muttkowski's Checkered Beetle				S3	2	29.1 ± 0.0	NB
I	<i>Epargyreus clarus</i>	Silver-spotted Skipper				S3	1	15.0 ± 0.0	NB
I	<i>Hesperia sassacus</i>	Indian Skipper				S3	4	70.3 ± 0.0	NB
I	<i>Euphyes bimaculata</i>	Two-spotted Skipper				S3	16	21.9 ± 1.0	NB
I	<i>Papilio brevicauda bretonensis</i>	Short-tailed Swallowtail				S3	17	29.2 ± 0.0	NB
I	<i>Tharsalea dospassosi</i>	Maritime Copper				S3	139	1.0 ± 0.0	NB
I	<i>Satyrium acadica</i>	Acadian Hairstreak				S3	19	5.7 ± 7.0	NB
I	<i>Plebejus idas</i>	Northern Blue				S3	10	88.4 ± 0.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
I	<i>Plebejus idas empetri</i>	Crowberry Blue				S3	33	38.7 ± 0.0	NB
I	<i>Argynnis aphrodite</i>	Aphrodite Fritillary				S3	17	26.6 ± 0.0	NB
I	<i>Boloria chariclea</i>	Arctic Fritillary				S3	9	35.7 ± 7.0	NB
I	<i>Nymphalis l-album</i>	Compton Tortoiseshell				S3	11	26.7 ± 10.0	NB
I	<i>Ladona exusta</i>	White Corporal				S3	2	58.6 ± 0.0	NB
I	<i>Alasmidonta undulata</i>	Triangle Floater				S3	29	46.7 ± 1.0	NB
I	<i>Atlanticoncha ochracea</i>	Tidewater Mucket				S3	29	29.0 ± 1.0	NB
I	<i>Pantala hymenaea</i>	Spot-Winged Glider				S3B	6	14.2 ± 0.0	NB
I	<i>Collops vittatus</i>	Banded Soft-winged Flower Beetle				S3S4	1	34.0 ± 3.0	NB
I	<i>Hemicrepidius memnonius</i>	Memnon's Click Beetle				S3S4	3	20.0 ± 0.0	NB
I	<i>Bolitophagus corticola</i>	Corticolous Darkling Beetle				S3S4	1	20.0 ± 0.0	NB
I	<i>Bombus griseocollis</i>	Brown-belted Bumble Bee				S3S4	4	13.0 ± 13.0	NB
I	<i>Lanthus vernalis</i>	Southern Pygmy Clubtail				S3S4	1	74.7 ± 0.0	NB
I	<i>Somatochlora forcipata</i>	Forcipate Emerald				S3S4	8	29.8 ± 0.0	NB
I	<i>Somatochlora tenebrosa</i>	Clamp-Tipped Emerald				S3S4	8	9.3 ± 1.0	NB
N	<i>Erioderma mollissimum</i>	Graceful Felt Lichen	Endangered	Endangered	Endangered	SH	1	88.5 ± 1.0	NB
N	<i>Erioderma pedicellatum</i> (Atlantic pop.)	Boreal Felt Lichen - Atlantic pop.	Endangered	Endangered	Endangered	SH	2	99.6 ± 0.0	NS
N	<i>Pannaria lurida</i>	Wrinkled Shingle Lichen	Threatened	Threatened		S1?	6	16.8 ± 1.0	NB
N	<i>Anzia colpodes</i>	Black-foam Lichen	Threatened	Threatened		S1S2	16	31.5 ± 0.0	NB
N	<i>Fuscopannaria leucosticta</i>	White-rimmed Shingle Lichen	Threatened			S2	51	51.5 ± 0.0	PE
N	<i>Peltigera hydrothyria</i>	Eastern Waterfan	Threatened	Threatened		S2S3	789	45.9 ± 0.0	NB
N	<i>Pectenaria plumbea</i>	Blue Felt Lichen	Special Concern	Special Concern	Special Concern	S1	6	51.4 ± 0.0	PE
N	<i>Pseudevernia cladonia</i>	Ghost Antler Lichen	Not At Risk			S2S3	4	79.9 ± 0.0	NB
N	<i>Aloina rigida</i>	Aloe-Like Rigid Screw Moss				S1	2	53.4 ± 0.0	NB
N	<i>Arrhenopterum heterostichum</i>	One-sided Groove Moss				S1	1	76.7 ± 0.0	NB
N	<i>Campylostelium saxicola</i>	a Moss				S1	3	78.9 ± 0.0	NB
N	<i>Dicranoweisia crispula</i>	Mountain Thatch Moss				S1	1	78.6 ± 0.0	NB
N	<i>Didymodon rigidulus</i> var. <i>gracilis</i>	a moss				S1	1	86.0 ± 1.0	NB
N	<i>Zygodon viridissimus</i> var. <i>viridissimus</i>	a Moss				S1	1	78.2 ± 0.0	NB
N	<i>Syntrichia ruralis</i>	a Moss				S1	1	94.0 ± 0.0	NB
N	<i>Sticta fuliginosa</i>	Peppered Moon Lichen				S1	3	93.4 ± 0.0	NS
N	<i>Cladonia straminea</i>	Reptilian Pixie-cup Lichen				S1	5	72.4 ± 1.0	NB
N	<i>Coccocarpia palmicola</i>	Salted Shell Lichen				S1	1	72.4 ± 1.0	NB
N	<i>Peltigera malacea</i>	Veinless Pelt Lichen				S1	2	67.8 ± 0.0	PE
N	<i>Bryoria bicolor</i>	Electrified Horsehair Lichen				S1	1	85.0 ± 1.0	NB
N	<i>Hygrobriella laxifolia</i>	Lax Notchwort				S1?	1	86.4 ± 1.0	NB
N	<i>Bartramia ithyphylla</i>	Straight-leaved Apple Moss				S1?	2	79.5 ± 1.0	NB
N	<i>Dicranum bonjeanii</i>	Bonjean's Broom Moss				S1?	1	96.4 ± 1.0	NB
N	<i>Dicranum condensatum</i>	Condensed Broom Moss				S1?	3	68.5 ± 0.0	PE
N	<i>Entodon brevisetus</i>	a Moss				S1?	1	83.7 ± 10.0	NB
N	<i>Oxyrrhynchium hians</i>	Light Beaked Moss				S1?	1	96.8 ± 0.0	NB
N	<i>Homomallium adnatum</i>	Adnate Hairy-gray Moss				S1?	4	60.8 ± 1.0	NB
N	<i>Plagiothecium latebricola</i>	Alder Silk Moss				S1?	3	71.3 ± 0.0	NB
N	<i>Rhytidium rugosum</i>	Wrinkle-leaved Moss				S1?	2	85.9 ± 1.0	NB
N	<i>Timmia megapolitana</i>	Metropolitan Timmia Moss				S1?	1	97.9 ± 1.0	NS
N	<i>Rhizomnium pseudopunctatum</i>	Felted Leafy Moss				S1?	1	74.2 ± 0.0	NB
N	<i>Enchylium tenax</i>	Soil Tarpaper Lichen				S1?	1	54.7 ± 0.0	PE
N	<i>Heterodermia squamulosa</i>	Scaly Fringe Lichen				S1?	20	99.5 ± 1.0	NS
N	<i>Pertusaria propinqua</i>	a Lichen				S1?	2	85.0 ± 1.0	NB
N	<i>Rhizocarpon umbilicatum</i>	a Lichen				S1?	2	72.9 ± 1.0	NB
N	<i>Cephaloziella spinigera</i>	Spiny Threadwort				S1S2	2	75.1 ± 0.0	NB

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N	<i>Odontoschisma francisci</i>	Holt's Notchwort				S1S2	4	70.0 ± 0.0	NB
N	<i>Harpanthus flotovianus</i>	Great Mountain Flapwort				S1S2	2	73.2 ± 1.0	NB
N	<i>Odontoschisma sphagni</i>	Bog-Moss Flapwort				S1S2	1	84.4 ± 0.0	NB
N	<i>Pallavicinia lyellii</i>	Lyell's Ribbonwort				S1S2	1	83.7 ± 1.0	NB
N	<i>Radula tenax</i>	Tenacious Scalewort				S1S2	1	80.5 ± 0.0	NB
N	<i>Reboulia hemisphaerica</i>	Purple-margined Liverwort				S1S2	1	86.1 ± 0.0	NB
N	<i>Solenostoma obovatum</i>	Egg Flapwort				S1S2	1	80.5 ± 0.0	NB
N	<i>Brachythecium acuminatum</i>	Acuminate Ragged Moss				S1S2	2	81.5 ± 2.0	NB
N	<i>Ptychostomum salinum</i>	Saltmarsh Bryum				S1S2	1	85.3 ± 1.0	NB
N	<i>Distichium inclinatum</i>	Inclined Iris Moss				S1S2	5	86.0 ± 1.0	NB
N	<i>Ditrichum pallidum</i>	Pale Cow-hair Moss				S1S2	1	83.8 ± 1.0	NB
N	<i>Drummondia prorepens</i>	a Moss				S1S2	1	78.8 ± 0.0	NB
N	<i>Timmia norvegica</i>	a moss				S1S2	2	86.2 ± 0.0	NB
N	<i>Timmia norvegica</i> var. <i>excurrens</i>	a moss				S1S2	1	86.2 ± 0.0	NB
N	<i>Tortella humilis</i>	Small Crisp Moss				S1S2	7	80.7 ± 1.0	NB
N	<i>Pseudotaxiphyllum distichaceum</i>	a Moss				S1S2	2	27.2 ± 1.0	NB
N	<i>Umbilicaria vellea</i>	Grizzled Rocktripe Lichen				S1S2	1	85.6 ± 1.0	NB
N	<i>Pilophorus cereolus</i>	Powdered Matchstick Lichen				S1S2	1	52.6 ± 5.0	NB
N	<i>Peltigera scabrosa</i>	Greater Toad Pelt Lichen				S1S2	4	70.8 ± 1.0	NB
N	<i>Tritomaria scitula</i>	Mountain Notchwort				S1S3	1	76.6 ± 1.0	NB
N	<i>Amphidium mougeotii</i>	a Moss				S2	11	76.2 ± 0.0	NB
N	<i>Anomodon viticulosus</i>	a Moss				S2	3	68.2 ± 10.0	NB
N	<i>Cirriphyllum piliferum</i>	Hair-pointed Moss				S2	4	65.5 ± 1.0	NB
N	<i>Dicranella palustris</i>	Drooping-Leaved Fork Moss				S2	7	73.2 ± 1.0	NB
N	<i>Didymodon ferrugineus</i>	Rusty Beard Moss				S2	1	85.8 ± 0.0	NB
N	<i>Anomodon tristis</i>	a Moss				S2	4	80.0 ± 10.0	NB
N	<i>Hygrohypnum bestii</i>	Best's Brook Moss				S2	5	78.3 ± 1.0	NB
N	<i>Hypnum pratense</i>	Meadow Plait Moss				S2	1	59.5 ± 0.0	PE
N	<i>Platydictya jungermannioides</i>	False Willow Moss				S2	4	54.5 ± 15.0	NB
N	<i>Pohlia elongata</i>	Long-necked Nodding Moss				S2	14	76.7 ± 0.0	NB
N	<i>Seligeria calcarea</i>	Chalk Brittle Moss				S2	2	73.3 ± 0.0	NB
N	<i>Seligeria recurvata</i>	a Moss				S2	3	54.5 ± 15.0	NB
N	<i>Seligeria brevifolia</i>	a Moss				S2	4	77.9 ± 0.0	NB
N	<i>Sphagnum flexuosum</i>	Flexuous Peatmoss				S2	3	59.4 ± 10.0	NB
N	<i>Tayloria serrata</i>	Serrate Trumpet Moss				S2	7	56.1 ± 100.0	NB
N	<i>Tetradontium brownianum</i>	Little Georgia				S2	13	54.9 ± 0.0	NS
N	<i>Thamnobryum alleghaniense</i>	a Moss				S2	24	43.8 ± 0.0	NB
N	<i>Ulota phyllantha</i>	a Moss				S2	4	86.1 ± 0.0	NB
N	<i>Anomobryum julaceum</i>	Slender Silver Moss				S2	3	86.0 ± 1.0	NB
N	<i>Cladonia macrophylla</i>	Fig-leaved Lichen				S2	3	78.5 ± 1.0	NB
N	<i>Leptogium milligranum</i>	Stretched Jellyskin Lichen				S2	23	14.5 ± 0.0	NB
N	<i>Nephroma laevigatum</i>	Mustard Kidney Lichen				S2	28	49.4 ± 0.0	PE
N	<i>Anacamptodon splachnoides</i>	a Moss				S2?	3	56.7 ± 1.0	NB
N	<i>Andreaea rothii</i>	Dusky Rock Moss				S2?	5	76.2 ± 1.0	NB
N	<i>Anomodon minor</i>	Blunt-leaved Anomodon Moss				S2?	1	67.5 ± 1.0	NB
N	<i>Ptychostomum pallescens</i>	Tall Clustered Bryum				S2?	1	70.6 ± 100.0	NB
N	<i>Dichelyma capillaceum</i>	Hairlike Dichelyma Moss				S2?	1	83.5 ± 3.0	NB
N	<i>Dicranum spurium</i>	Spurred Broom Moss				S2?	1	89.9 ± 0.0	PE
N	<i>Hygrohypnum montanum</i>	a Moss				S2?	1	76.6 ± 1.0	NB
N	<i>Sphagnum angermanicum</i>	a Peatmoss				S2?	2	80.9 ± 0.0	NB
N	<i>Trichodon cylindricus</i>	Cylindric Hairy-teeth Moss				S2?	2	54.5 ± 15.0	NB
N	<i>Plagiomnium rostratum</i>	Long-beaked Leafy Moss				S2?	4	85.5 ± 0.0	NB
N	<i>Ramalina labiosorediata</i>	Chalky Ramalina Lichen				S2?	1	82.7 ± 1.0	NB
N	<i>Collema leptaleum</i>	Crumpled Bat's Wing Lichen				S2?	13	51.0 ± 0.0	PE

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N	<i>Imshaugia placodioides</i>	Eyed Starburst Lichen				S2?	1	54.2 ± 0.0	PE
N	<i>Nephroma arcticum</i>	Arctic Kidney Lichen				S2?	2	83.4 ± 1.0	NB
N	<i>Ptychostomum cernuum</i>	Swamp Bryum				S2S3	1	86.1 ± 0.0	NB
N	<i>Buxbaumia aphylla</i>	Brown Shield Moss				S2S3	3	72.4 ± 0.0	NB
N	<i>Calliergonella cuspidata</i>	Common Large Wetland Moss				S2S3	2	55.3 ± 0.0	PE
N	<i>Drepanocladus polygamus</i>	Polygamous Hook Moss				S2S3	3	58.3 ± 0.0	PE
N	<i>Palustriella falcata</i>	Curled Hook Moss				S2S3	2	85.7 ± 0.0	NB
N	<i>Didymodon rigidulus</i>	Rigid Screw Moss				S2S3	8	81.5 ± 2.0	NB
N	<i>Ephemerum serratum</i>	a Moss				S2S3	3	53.0 ± 0.0	PE
N	<i>Isopterygiopsis pulchella</i>	Neat Silk Moss				S2S3	7	77.4 ± 1.0	NB
N	<i>Orthotrichum elegans</i>	Showy Bristle Moss				S2S3	3	54.6 ± 0.0	PE
N	<i>Pohlia prolifera</i>	Cottony Nodding Moss				S2S3	13	54.5 ± 15.0	NB
N	<i>Codriophorus fascicularis</i>	Clustered Rock Moss				S2S3	3	78.6 ± 0.0	NB
N	<i>Bucklandiella affinis</i>	Lesser Rock Moss				S2S3	11	70.3 ± 0.0	NB
N	<i>Saelania glaucescens</i>	Blue Dew Moss				S2S3	2	78.6 ± 0.0	NB
N	<i>Sphagnum centrale</i>	Central Peat Moss				S2S3	7	55.1 ± 0.0	PE
N	<i>Sphagnum subfulvum</i>	a Peatmoss				S2S3	3	59.0 ± 0.0	PE
N	<i>Taxiphyllum deplanatum</i>	Imbricate Yew-leaved Moss				S2S3	2	80.7 ± 1.0	NB
N	<i>Zygodon viridissimus</i>	a Moss				S2S3	3	52.2 ± 0.0	PE
N	<i>Schistidium agassizii</i>	Elf Bloom Moss				S2S3	3	74.3 ± 1.0	NB
N	<i>Loeskeobryum brevirostre</i>	a Moss				S2S3	10	76.2 ± 0.0	NB
N	<i>Cyrtomnium hymenophylloides</i>	Short-pointed Lantern Moss				S2S3	7	73.4 ± 0.0	NB
N	<i>Sphaerophorus globosus</i>	Northern Coral Lichen				S2S3	9	71.6 ± 0.0	NB
N	<i>Cetrariella delisei</i>	Snowbed Icelandmoss Lichen				S2S3	2	66.2 ± 0.0	NB
N	<i>Cladonia acuminata</i>	Scantly Clad Pixie Lichen				S2S3	2	85.6 ± 1.0	NB
N	<i>Cladonia ramulosa</i>	Bran Lichen				S2S3	4	80.8 ± 1.0	NB
N	<i>Cladonia sulphurina</i>	Greater Sulphur-cup Lichen				S2S3	5	70.2 ± 1.0	NB
N	<i>Dendricocaulon umhausense</i>	a lichen				S2S3	1	79.3 ± 0.0	NB
N	<i>Parmeliopsis ambigua</i>	Green Starburst Lichen				S2S3	1	89.8 ± 1.0	NB
N	<i>Polychidium muscicola</i>	Eyed Mossstorns Woollybear Lichen				S2S3	4	63.1 ± 0.0	NB
N	<i>Hypnum curvifolium</i>	Curved-leaved Plait Moss				S3	8	52.9 ± 0.0	PE
N	<i>Tortella fragilis</i>	Fragile Twisted Moss				S3	1	86.2 ± 0.0	NB
N	<i>Schistidium maritimum</i>	a Moss				S3	6	74.2 ± 0.0	NB
N	<i>Hymenostylium recurvirostrum</i>	Curve-beak Beardless Moss				S3	6	79.4 ± 0.0	NS
N	<i>Collema nigrescens</i>	Blistered Tarpaper Lichen				S3	6	58.4 ± 0.0	PE
N	<i>Solorina saccata</i>	Woodland Owl Lichen				S3	6	85.6 ± 1.0	NB
N	<i>Ahtiana aurescens</i>	Eastern Candlewax Lichen				S3	4	51.7 ± 0.0	PE
N	<i>Normandina pulchella</i>	Rimmed Elf-ear Lichen				S3	10	80.8 ± 1.0	NB
N	<i>Cladonia farinacea</i>	Farinose Pixie Lichen				S3	6	78.3 ± 1.0	NB
N	<i>Hypotrachyna catawbiensis</i>	Powder-tipped Antler Lichen				S3	6	85.6 ± 0.0	NB
N	<i>Scytinium lichenoides</i>	Tattered Jellyskin Lichen				S3	6	85.6 ± 1.0	NB
N	<i>Nephroma bellum</i>	Naked Kidney Lichen				S3	6	77.8 ± 1.0	NB
N	<i>Peltigera degenii</i>	Lustrous Pelt Lichen				S3	3	81.4 ± 1.0	NB
N	<i>Leptogium laceroides</i>	Short-bearded Jellyskin Lichen				S3	11	51.2 ± 0.0	PE
N	<i>Peltigera membranacea</i>	Membranous Pelt Lichen				S3	24	29.3 ± 0.0	NB
N	<i>Cladonia botrytes</i>	Wooden Soldiers Lichen				S3	3	52.7 ± 0.0	PE
N	<i>Cladonia carneola</i>	Crowned Pixie-cup Lichen				S3	2	79.4 ± 0.0	NB
N	<i>Cladonia deformis</i>	Lesser Sulphur-cup Lichen				S3	8	78.5 ± 1.0	NB
N	<i>Aulacomnium androgynum</i>	Little Groove Moss				S3?	10	54.5 ± 15.0	NB
N	<i>Ptychostomum inclinatum</i>	Blunt-tooth Thread Moss				S3?	2	76.5 ± 0.0	NB
N	<i>Dicranella rufescens</i>	Red Forklet Moss				S3?	1	86.2 ± 0.0	NB

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N	<i>Rhytidiadelphus loreus</i>	Lanky Moss				S3?	3	84.8 ± 0.0	NS
N	<i>Sphagnum lescurii</i>	a Peatmoss				S3?	7	40.1 ± 0.0	NS
N	<i>Rostania occultata</i>	Crusted Tarpaper Lichen				S3?	4	54.9 ± 0.0	PE
N	<i>Scytinium subtile</i>	Appressed Jellyskin Lichen				S3?	15	37.2 ± 0.0	PE
N	<i>Peltigera neckeri</i>	Black-saddle Pelt Lichen				S3?	1	84.2 ± 5.0	NB
N	<i>Stereocaulon subcoralloides</i>	Coralloid Foam Lichen				S3?	1	82.7 ± 1.0	NB
N	<i>Barbula convoluta</i>	Lesser Bird's-claw Beard Moss				S3S4	1	69.8 ± 15.0	NB
N	<i>Brachytheciastrum velutinum</i>	Velvet Ragged Moss				S3S4	3	54.5 ± 0.0	PE
N	<i>Calliergon giganteum</i>	Giant Spear Moss				S3S4	1	55.1 ± 0.0	PE
N	<i>Dicranella cerviculata</i>	a Moss				S3S4	3	73.7 ± 0.0	NS
N	<i>Dicranella varia</i>	a Moss				S3S4	2	47.2 ± 0.0	PE
N	<i>Dicranum majus</i>	Greater Broom Moss				S3S4	23	71.1 ± 0.0	NB
N	<i>Dicranum leioneuron</i>	a Dicranum Moss				S3S4	3	8.5 ± 0.0	NB
N	<i>Encalypta ciliata</i>	Fringed Extinguisher Moss				S3S4	1	85.8 ± 0.0	NB
N	<i>Fissidens bryoides</i>	Lesser Pocket Moss				S3S4	5	50.3 ± 0.0	PE
N	<i>Elodium blandowii</i>	Blandow's Bog Moss				S3S4	1	52.7 ± 0.0	PE
N	<i>Heterocladium dimorphum</i>	Dimorphous Tangle Moss				S3S4	7	62.5 ± 0.0	NB
N	<i>Isopterygiopsis muelleriana</i>	a Moss				S3S4	17	51.6 ± 0.0	PE
N	<i>Myurella julacea</i>	Small Mouse-tail Moss				S3S4	2	86.2 ± 0.0	NB
N	<i>Orthotrichum speciosum</i>	Showy Bristle Moss				S3S4	7	52.1 ± 0.0	PE
N	<i>Physcomitrium pyriforme</i>	Pear-shaped Urn Moss				S3S4	3	37.4 ± 0.0	NB
N	<i>Pogonatum dentatum</i>	Mountain Hair Moss				S3S4	4	73.7 ± 0.0	NS
N	<i>Sphagnum compactum</i>	Compact Peat Moss				S3S4	6	36.9 ± 0.0	NB
N	<i>Sphagnum torreyanum</i>	a Peatmoss				S3S4	1	54.1 ± 0.0	NB
N	<i>Sphagnum austinii</i>	Austin's Peat Moss				S3S4	1	40.1 ± 0.0	NS
N	<i>Sphagnum contortum</i>	Twisted Peat Moss				S3S4	1	54.1 ± 0.0	NB
N	<i>Sphagnum quinquefarium</i>	Five-ranked Peat Moss				S3S4	2	62.5 ± 0.0	NB
N	<i>Tetraphis geniculata</i>	Geniculate Four-tooth Moss				S3S4	14	50.5 ± 0.0	PE
N	<i>Tetraplodon angustatus</i>	Toothed-leaved Nitrogen Moss				S3S4	2	76.7 ± 0.0	NB
N	<i>Weissia controversa</i>	Green-Cushioned Weissia				S3S4	1	86.6 ± 1.0	NB
N	<i>Abietinella abietina</i>	Wiry Fern Moss				S3S4	1	86.2 ± 0.0	NB
N	<i>Trichostomum tenuirostre</i>	Acid-Soil Moss				S3S4	3	78.6 ± 0.0	NB
N	<i>Raiiella scita</i>	Smaller Fern Moss				S3S4	1	73.1 ± 0.0	NB
N	<i>Pannaria rubiginosa</i>	Brown-eyed Shingle Lichen				S3S4	18	51.3 ± 0.0	PE
N	<i>Pseudocyphellaria holarctica</i>	Yellow Specklebelly Lichen				S3S4	83	11.2 ± 0.0	NB
N	<i>Ramalina thrausta</i>	Angelhair Ramalina Lichen				S3S4	13	65.6 ± 0.0	NS
N	<i>Hypogymnia vittata</i>	Slender Monk's Hood Lichen				S3S4	25	70.8 ± 1.0	NB
N	<i>Scytinium teretiusculum</i>	Curly Jellyskin Lichen				S3S4	13	50.0 ± 0.0	PE
N	<i>Montanelia panniformis</i>	Shingled Camouflage Lichen				S3S4	5	73.0 ± 1.0	NB
N	<i>Cladonia floerkeana</i>	Gritty British Soldiers Lichen				S3S4	4	82.6 ± 1.0	NB
N	<i>Xylopsora friesii</i>	a Lichen				S3S4	1	85.6 ± 1.0	NB
N	<i>Nephroma parile</i>	Powdery Kidney Lichen				S3S4	16	50.0 ± 0.0	NB
N	<i>Protopannaria pezizoides</i>	Brown-gray Moss-shingle Lichen				S3S4	26	48.3 ± 0.0	NB
N	<i>Usnea strigosa</i>	Bushy Beard Lichen				S3S4	36	11.1 ± 0.0	NB
N	<i>Stereocaulon condensatum</i>	Granular Soil Foam Lichen				S3S4	9	44.8 ± 0.0	NB
N	<i>Stereocaulon paschale</i>	Easter Foam Lichen				S3S4	1	33.6 ± 1.0	NB
N	<i>Pannaria conoplea</i>	Mealy-rimmed Shingle Lichen				S3S4	34	46.7 ± 0.0	NB
N	<i>Physcia tenella</i>	Fringed Rosette Lichen				S3S4	7	44.2 ± 0.0	PE
N	<i>Anaptychia palmulata</i>	Shaggy Fringed Lichen				S3S4	24	54.2 ± 0.0	PE
N	<i>Peltigera neopolydactyla</i>	Undulating Pelt Lichen				S3S4	9	53.4 ± 0.0	PE
N	<i>Cladonia cariosa</i>	Lesser Ribbed Pixie Lichen				S3S4	4	36.8 ± 0.0	NB
N	<i>Hypocenomyce scalaris</i>	Common Clam Lichen				S3S4	1	82.7 ± 1.0	NB
N	<i>Leucodon brachypus</i>	a Moss				SH	12	69.9 ± 0.0	NB
N	<i>Splachnum luteum</i>	Yellow Collar Moss				SH	1	70.6 ± 100.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
N	<i>Cyrto-hypnum minutulum</i>	Tiny Cedar Moss				SH	3	89.1 ± 10.0	NB
P	<i>Juglans cinerea</i>	Butternut	Endangered	Endangered	Endangered	S1	42	58.0 ± 0.0	PE
P	<i>Symphotrichum laurentianum</i>	Gulf of St Lawrence Aster	Threatened	Threatened	Endangered	S1	53	67.7 ± 0.0	NB
P	<i>Fraxinus nigra</i>	Black Ash	Threatened			S3S4	516	1.1 ± 0.0	NB
P	<i>Isoetes prototypus</i>	Prototype Quillwort	Special Concern	Special Concern	Endangered	S1	7	89.9 ± 0.0	NS
P	<i>Lechea maritima</i> var. <i>subcylindrica</i>	Beach Pinweed	Special Concern	Special Concern	Special Concern	S2	2675	27.2 ± 0.0	NB
P	<i>Symphotrichum subulatum</i> (Bathurst pop)	Bathurst Aster - Bathurst pop.	Not At Risk		Endangered	S2	59	52.9 ± 0.0	NB
P	<i>Cryptotaenia canadensis</i>	Canada Honewort				S1	1	96.6 ± 1.0	NB
P	<i>Antennaria howellii</i> ssp. <i>petaloidea</i>	Pussy-Toes				S1	4	72.9 ± 5.0	PE
P	<i>Pseudognaphalium obtusifolium</i>	Eastern Cudweed				S1	28	35.4 ± 5.0	NB
P	<i>Solidago multiradiata</i>	Multi-rayed Goldenrod				S1	19	43.0 ± 0.0	NB
P	<i>Symphotrichum subulatum</i> (non-Bathurst pop)	Annual Saltmarsh Aster				S1	12	52.1 ± 0.0	NB
P	<i>Betula michauxii</i>	Michaux's Dwarf Birch				S1	3	90.3 ± 0.0	NB
P	<i>Draba arabisans</i>	Rock Whitlow-Grass				S1	15	73.4 ± 0.0	NB
P	<i>Draba glabella</i>	Rock Whitlow-Grass				S1	3	85.9 ± 0.0	NB
P	<i>Draba incana</i>	Twisted Whitlow-grass				S1	4	98.2 ± 0.0	PE
P	<i>Stellaria crassifolia</i>	Fleshy Stitchwort				S1	3	2.5 ± 5.0	NB
P	<i>Chenopodium simplex</i>	Maple-leaved Goosefoot				S1	6	61.5 ± 1.0	NB
P	<i>Suaeda rolandii</i>	Roland's Sea-Blite				S1	19	2.0 ± 0.0	NB
P	<i>Hypericum virginicum</i>	Virginia St. John's-wort				S1	1	41.5 ± 0.0	NS
P	<i>Corema conradii</i>	Broom Crowberry				S1	23	67.5 ± 0.0	PE
P	<i>Vaccinium boreale</i>	Northern Blueberry				S1	5	25.7 ± 1.0	NB
P	<i>Vaccinium corymbosum</i>	Highbush Blueberry				S1	1	49.7 ± 0.0	NS
P	<i>Vaccinium uliginosum</i>	Alpine Bilberry				S1	1	83.3 ± 1.0	PE
P	<i>Euphorbia polygonifolia</i>	Seaside Spurge				S1	28	48.9 ± 0.0	NB
P	<i>Bartonia virginica</i>	Yellow Bartonia				S1	3	96.3 ± 0.0	NB
P	<i>Proserpinaca pectinata</i>	Comb-leaved Mermaidweed				S1	2	80.5 ± 5.0	NS
P	<i>Polygonum douglasii</i>	Douglas Knotweed				S1	1	93.8 ± 0.0	NB
P	<i>Primula laurentiana</i>	Laurentian Primrose				S1	14	80.6 ± 3.0	NB
P	<i>Amelanchier fernaldii</i>	Fernald's Serviceberry				S1	3	45.0 ± 1.0	NB
P	<i>Crataegus jonesiae</i>	Jones' Hawthorn				S1	1	94.4 ± 1.0	NB
P	<i>Dryas integrifolia</i>	Entire-leaved Mountain Avens				S1	15	41.7 ± 3.0	NB
P	<i>Rubus flagellaris</i>	Northern Dewberry				S1	4	41.4 ± 1.0	NB
P	<i>Salix myrtilifolia</i>	Blueberry Willow				S1	25	42.4 ± 0.0	NB
P	<i>Saxifraga paniculata</i> ssp. <i>laestadii</i>	Laestadius' Saxifrage				S1	30	85.3 ± 0.0	NB
P	<i>Carex annectens</i>	Yellow-Fruited Sedge				S1	3	6.9 ± 0.0	NB
P	<i>Carex atlantica</i> ssp. <i>atlantica</i>	Atlantic Sedge				S1	8	27.6 ± 0.0	NB
P	<i>Carex backii</i>	Rocky Mountain Sedge				S1	3	60.9 ± 0.0	NB
P	<i>Carex merritt-feraldii</i>	Merritt Fernald's Sedge				S1	1	61.4 ± 0.0	NB
P	<i>Carex rariflora</i>	Loose-flowered Alpine Sedge				S1	1	98.1 ± 0.0	PE
P	<i>Carex scirpoidea</i>	Scirpuslike Sedge				S1	6	97.3 ± 0.0	NB
P	<i>Carex sterilis</i>	Sterile Sedge				S1	1	66.9 ± 2.0	NB
P	<i>Carex grisea</i>	Inflated Narrow-leaved Sedge				S1	1	97.7 ± 5.0	NB
P	<i>Scirpus pendulus</i>	Hanging Bulrush				S1	8	39.2 ± 0.0	NS
P	<i>Sisyrinchium angustifolium</i>	Narrow-leaved Blue-eyed-grass				S1	2	59.6 ± 5.0	NS
P	<i>Juncus greenii</i>	Greene's Rush				S1	11	43.5 ± 0.0	NB
P	<i>Juncus stygius</i> ssp.	Moor Rush				S1	17	40.0 ± 5.0	NB

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P	<i>americanus</i> <i>Goodyera pubescens</i>	Downy Rattlesnake-Plantain				S1	12	59.8 ± 0.0	NB
P	<i>Malaxis monophyllos</i> var. <i>brachypoda</i>	North American White Adder's-mouth				S1	5	56.3 ± 0.0	PE
P	<i>Platanthera flava</i> var. <i>herbiola</i>	Pale Green Orchid				S1	1	59.1 ± 0.0	NB
P	<i>Platanthera macrophylla</i>	Large Round-Leaved Orchid				S1	6	29.0 ± 0.0	NB
P	<i>Bromus pubescens</i>	Hairy Wood Brome Grass				S1	1	72.1 ± 0.0	NB
P	<i>Calamagrostis stricta</i> ssp. <i>inexpansa</i>	Slim-stemmed Reed Grass				S1	3	35.5 ± 1.0	NB
P	<i>Catabrosa aquatica</i>	Water Whorl Grass				S1	3	82.2 ± 5.0	PE
P	<i>Danthonia compressa</i>	Flattened Oat Grass				S1	19	31.9 ± 0.0	NB
P	<i>Potamogeton friesii</i>	Fries' Pondweed				S1	13	38.0 ± 0.0	NB
P	<i>Cystopteris laurentiana</i>	Laurentian Bladder Fern				S1	1	95.7 ± 1.0	NB
P	<i>Dryopteris filix-mas</i> ssp. <i>brittonii</i>	Britton's Male Fern				S1	2	50.1 ± 1.0	NB
P	<i>Selaginella rupestris</i>	Rock Spikemoss				S1	9	89.2 ± 1.0	NB
P	<i>Polygonum aviculare</i> ssp. <i>neglectum</i>	Narrow-leaved Knotweed				S1?	4	13.8 ± 0.0	NB
P	<i>Spiranthes ochroleuca</i>	Yellow Ladies'-tresses				S1S2	17	27.7 ± 0.0	NB
P	<i>Eriophorum russeolum</i> ssp. <i>albidum</i>	Smooth-fruited Russet Cottongrass				S1S3	11	35.4 ± 1.0	NB
P	<i>Spiranthes cernua</i>	Nodding Ladies'-Tresses				S1S3	20	28.3 ± 0.0	NB
P	<i>Spiranthes arcisepala</i>	Appalachian Ladies'-tresses				S1S3	7	36.8 ± 0.0	NB
P	<i>Spiranthes incurva</i>	Sphinx Ladies'-tresses				S1S3	1	37.3 ± 0.0	NB
P	<i>Neottia bifolia</i>	Southern Twayblade			Endangered	S2	36	8.1 ± 0.0	NB
P	<i>Hieracium robinsonii</i>	Robinson's Hawkweed				S2	12	73.2 ± 0.0	NB
P	<i>Atriplex glabriuscula</i> var. <i>franktonii</i>	Frankton's Saltbush				S2	7	12.4 ± 0.0	NB
P	<i>Hypericum x dissimulatum</i>	Disguised St. John's-wort				S2	4	56.3 ± 0.0	PE
P	<i>Viburnum dentatum</i>	Southern Arrow-Wood				S2	2	37.3 ± 0.0	NB
P	<i>Viburnum dentatum</i> var. <i>lucidum</i>	Northern Arrow-Wood				S2	2	30.9 ± 0.0	NB
P	<i>Quercus macrocarpa</i>	Bur Oak				S2	1	96.8 ± 0.0	NB
P	<i>Nuphar x rubrodiscalis</i>	Red-disk Yellow Pond-lily				S2	20	22.8 ± 0.0	NB
P	<i>Polygaloides paucifolia</i>	Fringed Milkwort				S2	6	90.4 ± 1.0	NB
P	<i>Anemone parviflora</i>	Small-flowered Anemone				S2	9	42.6 ± 0.0	NB
P	<i>Geum fragarioides</i>	Barren Strawberry				S2	1	42.5 ± 1.0	NB
P	<i>Scrophularia lanceolata</i>	Lance-leaved Figwort				S2	2	93.9 ± 1.0	NB
P	<i>Carex albicans</i> var. <i>emmonsii</i>	White-tinged Sedge				S2	13	5.1 ± 0.0	NB
P	<i>Galearis rotundifolia</i>	Small Round-leaved Orchid				S2	3	77.9 ± 0.0	NB
P	<i>Calypso bulbosa</i> var. <i>americana</i>	Calypso				S2	3	61.9 ± 5.0	NB
P	<i>Coeloglossum viride</i>	Long-bracted Frog Orchid				S2	5	48.1 ± 10.0	NB
P	<i>Cypripedium parviflorum</i> var. <i>makasin</i>	Small Yellow Lady's-Slipper				S2	2	49.2 ± 0.0	NB
P	<i>Platanthera huronensis</i>	Fragrant Green Orchid				S2	3	81.8 ± 0.0	NB
P	<i>Festuca subverticillata</i>	Nodding Fescue				S2	7	90.4 ± 0.0	NS
P	<i>Puccinellia nutkaensis</i>	Alaska Alkaligrass				S2	2	3.8 ± 1.0	NB
P	<i>Diphasiastrum sitchense</i>	Sitka Ground-cedar				S2	4	32.8 ± 0.0	NB
P	<i>Schizaea pusilla</i>	Little Curlygrass Fern				S2	1	80.7 ± 0.0	NB
P	<i>Coryphopteris simulata</i>	Bog Fern				S2	8	64.4 ± 0.0	NB
P	<i>Toxicodendron radicans</i> var. <i>radicans</i>	Eastern Poison Ivy				S2?	7	27.8 ± 0.0	NB
P	<i>Symphyotrichum novi-belgii</i> var. <i>crenifolium</i>	New York Aster				S2?	5	38.9 ± 0.0	NB
P	<i>Humulus lupulus</i> var.	Common Hop				S2?	1	57.2 ± 5.0	NB

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P	<i>lupuloides</i>								
P	<i>Crataegus macrosperma</i>	Big-Fruit Hawthorn			S2?		3	24.3 ± 0.0	NB
P	<i>Rubus x recurvicaulis</i>	arching dewberry			S2?		3	11.9 ± 0.0	NB
P	<i>Osmorhiza longistylis</i>	Smooth Sweet Cicely			S2S3		7	74.1 ± 1.0	NS
P	<i>Bidens heterodoxa</i>	Connecticut Beggar-Ticks			S2S3		10	75.7 ± 0.0	PE
P	<i>Cuscuta cephalanthi</i>	Buttonbush Dodder			S2S3		8	5.6 ± 0.0	NB
P	<i>Gentiana linearis</i>	Narrow-Leaved Gentian			S2S3		1	57.9 ± 50.0	NB
P	<i>Hedeoma pulegioides</i>	American False Pennyroyal			S2S3		4	70.8 ± 1.0	NS
P	<i>Aphyllon uniflorum</i>	One-flowered Broomrape			S2S3		3	93.1 ± 0.0	PE
P	<i>Persicaria careyi</i>	Carey's Smartweed			S2S3		2	18.6 ± 2.0	NB
P	<i>Hepatica americana</i>	Round-lobed Hepatica			S2S3		3	95.0 ± 0.0	NS
P	<i>Ranunculus sceleratus</i>	Cursed Buttercup			S2S3		1	85.6 ± 100.0	NB
P	<i>Galium obtusum</i>	Blunt-leaved Bedstraw			S2S3		7	33.0 ± 10.0	NB
P	<i>Euphrasia randii</i>	Rand's Eyebright			S2S3		6	49.8 ± 0.0	PE
P	<i>Dirca palustris</i>	Eastern Leatherwood			S2S3		1	33.6 ± 1.0	NB
P	<i>Carex comosa</i>	Bearded Sedge			S2S3		5	34.5 ± 0.0	NB
P	<i>Carex rostrata</i>	Narrow-leaved Beaked Sedge			S2S3		2	58.2 ± 5.0	NB
P	<i>Carex vacillans</i>	Estuarine Sedge			S2S3		4	26.0 ± 0.0	NB
P	<i>Scirpus atrovirens</i>	Dark-green Bulrush			S2S3		2	43.5 ± 0.0	PE
P	<i>Juncus ranarius</i>	Seaside Rush			S2S3		6	67.3 ± 0.0	PE
P	<i>Allium tricoccum</i>	Wild Leek			S2S3		15	57.3 ± 0.0	NB
P	<i>Corallorhiza maculata var. occidentalis</i>	Spotted Coralroot			S2S3		14	27.9 ± 10.0	NB
P	<i>Corallorhiza maculata var. maculata</i>	Spotted Coralroot			S2S3		3	81.7 ± 0.0	NS
P	<i>Elymus canadensis</i>	Canada Wild Rye			S2S3		1	35.4 ± 1.0	NB
P	<i>Piptatheropsis canadensis</i>	Canada Ricegrass			S2S3		4	38.8 ± 10.0	NB
P	<i>Puccinellia phryganodes ssp. neoarctica</i>	Creeping Alkali Grass			S2S3		2	15.5 ± 1.0	NB
P	<i>Poa glauca</i>	Glaucous Blue Grass			S2S3		11	82.5 ± 0.0	NB
P	<i>Piptatheropsis pungens</i>	Slender Ricegrass			S2S3		5	56.9 ± 5.0	NB
P	<i>Potamogeton vaseyi</i>	Vasey's Pondweed			S2S3		1	41.7 ± 0.0	PE
P	<i>Panax trifolius</i>	Dwarf Ginseng			S3		34	24.3 ± 0.0	NB
P	<i>Artemisia campestris ssp. caudata</i>	Tall Wormwood			S3		13	68.6 ± 0.0	PE
P	<i>Artemisia campestris</i>	Field Wormwood			S3		4	88.0 ± 0.0	NB
P	<i>Nabalus racemosus</i>	Glaucous Rattlesnakeroot			S3		2	90.3 ± 0.0	PE
P	<i>Ionactis linariifolia</i>	Flax-leaved Aster			S3		1	66.6 ± 5.0	NB
P	<i>Symphotrichum subulatum</i>	Annual Saltmarsh Aster			S3		48	97.9 ± 0.0	NB
P	<i>Pseudognaphalium macounii</i>	Macoun's Cudweed			S3		41	46.1 ± 0.0	PE
P	<i>Impatiens pallida</i>	Pale Jewelweed			S3		3	93.9 ± 0.0	PE
P	<i>Boechera stricta</i>	Drummond's Rockcress			S3		11	60.6 ± 0.0	NB
P	<i>Turritis glabra</i>	Tower Mustard			S3		1	98.2 ± 0.0	NB
P	<i>Arabis pycnocarpa</i>	Cream-flowered Rockcress			S3		12	4.9 ± 0.0	NB
P	<i>Cardamine maxima</i>	Large Toothwort			S3		4	69.3 ± 0.0	PE
P	<i>Sagina nodosa</i>	Knotted Pearlwort			S3		2	68.8 ± 0.0	PE
P	<i>Sagina nodosa ssp. borealis</i>	Knotted Pearlwort			S3		3	67.9 ± 0.0	PE
P	<i>Stellaria humifusa</i>	Saltmarsh Starwort			S3		17	2.4 ± 5.0	NB
P	<i>Stellaria longifolia</i>	Long-leaved Starwort			S3		7	18.6 ± 2.0	NB
P	<i>Oxybasis rubra</i>	Red Goosefoot			S3		15	8.6 ± 0.0	NB
P	<i>Hudsonia tomentosa</i>	Woolly Beach-heath			S3		563	15.0 ± 0.0	NB
P	<i>Cornus obliqua</i>	Silky Dogwood			S3		2	78.8 ± 0.0	NB
P	<i>Triosteum aurantiacum</i>	Orange-fruited Tinker's Weed			S3		7	53.9 ± 0.0	NB
P	<i>Viburnum lentago</i>	Nannyberry			S3		1	80.3 ± 0.0	NB
P	<i>Rhodiola rosea</i>	Roseroot			S3		70	72.8 ± 0.0	NB
P	<i>Shepherdia canadensis</i>	Soapberry			S3		42	38.5 ± 0.0	NB

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P	<i>Bartonia paniculata</i>	Branched Bartonia				S3	1	64.1 ± 0.0	NS
P	<i>Bartonia paniculata</i> ssp. <i>iodandra</i>	Branched Bartonia				S3	8	77.6 ± 0.0	NB
P	<i>Geranium bicknellii</i>	Bicknell's Crane's-bill				S3	19	21.8 ± 0.0	NB
P	<i>Myriophyllum farwellii</i>	Farwell's Water Milfoil				S3	9	37.2 ± 1.0	NB
P	<i>Myriophyllum humile</i>	Low Water Milfoil				S3	1	79.2 ± 1.0	NB
P	<i>Proserpinaca palustris</i>	Marsh Mermaidweed				S3	2	93.2 ± 1.0	NS
P	<i>Fraxinus pennsylvanica</i>	Red Ash				S3	12	1.4 ± 0.0	NB
P	<i>Rumex pallidus</i>	Seabeach Dock				S3	7	43.3 ± 0.0	PE
P	<i>Pyrola minor</i>	Lesser Pyrola				S3	6	43.0 ± 0.0	NS
P	<i>Clematis occidentalis</i>	Purple Clematis				S3	15	52.4 ± 0.0	NS
P	<i>Ranunculus flabellaris</i>	Yellow Water Buttercup				S3	1	51.4 ± 0.0	NB
P	<i>Amelanchier canadensis</i>	Canada Serviceberry				S3	36	0.6 ± 0.0	NB
P	<i>Crataegus scabrida</i>	Rough Hawthorn				S3	4	20.6 ± 1.0	NB
P	<i>Rubus occidentalis</i>	Black Raspberry				S3	1	46.4 ± 0.0	NB
P	<i>Salix candida</i>	Sage Willow				S3	6	85.8 ± 0.0	PE
P	<i>Salix myricoides</i>	Bayberry Willow				S3	1	42.4 ± 1.0	NB
P	<i>Salix nigra</i>	Black Willow				S3	1	94.5 ± 0.0	NB
P	<i>Salix interior</i>	Sandbar Willow				S3	1	42.6 ± 1.0	NB
P	<i>Comandra umbellata</i>	Bastard's Toadflax				S3	61	4.2 ± 0.0	NB
P	<i>Agalinis purpurea</i> var. <i>parviflora</i>	Small-flowered Purple False Foxglove				S3	59	9.3 ± 0.0	NB
P	<i>Viola adunca</i>	Hooked Violet				S3	5	61.3 ± 0.0	NB
P	<i>Sagittaria montevidensis</i> ssp. <i>spongiosa</i>	Spongy Arrowhead				S3	89	46.5 ± 0.0	NB
P	<i>Symlocarpus foetidus</i>	Eastern Skunk Cabbage				S3	128	28.0 ± 18.0	NB
P	<i>Carex adusta</i>	Lesser Brown Sedge				S3	8	21.8 ± 0.0	NB
P	<i>Carex arcta</i>	Northern Clustered Sedge				S3	3	58.2 ± 20.0	NB
P	<i>Carex conoidea</i>	Field Sedge				S3	6	6.9 ± 0.0	NB
P	<i>Carex garberi</i>	Garber's Sedge				S3	1	8.3 ± 0.0	NB
P	<i>Carex granularis</i>	Limestone Meadow Sedge				S3	11	6.9 ± 0.0	NB
P	<i>Carex gynocrates</i>	Northern Bog Sedge				S3	2	93.1 ± 0.0	PE
P	<i>Carex hirtifolia</i>	Pubescent Sedge				S3	12	54.0 ± 0.0	NB
P	<i>Carex livida</i>	Livid Sedge				S3	9	39.0 ± 0.0	NS
P	<i>Carex ormostachya</i>	Necklace Spike Sedge				S3	4	52.4 ± 1.0	NB
P	<i>Carex plantaginea</i>	Plantain-Leaved Sedge				S3	3	87.4 ± 0.0	NB
P	<i>Carex rosea</i>	Rosy Sedge				S3	11	90.3 ± 1.0	NS
P	<i>Carex tenuiflora</i>	Sparse-Flowered Sedge				S3	10	42.6 ± 0.0	NS
P	<i>Cyperus esculentus</i> var. <i>leptostachyus</i>	Perennial Yellow Nutsedge				S3	1	72.1 ± 0.0	NB
P	<i>Eriophorum gracile</i>	Slender Cottongrass				S3	52	10.2 ± 0.0	NB
P	<i>Blysmopsis rufa</i>	Red Bulrush				S3	34	49.5 ± 0.0	PE
P	<i>Juncus vaseyi</i>	Vasey Rush				S3	12	25.3 ± 0.0	NB
P	<i>Cypripedium reginae</i>	Showy Lady's-Slipper				S3	39	7.2 ± 0.0	NB
P	<i>Goodyera oblongifolia</i>	Menzies' Rattlesnake-plantain				S3	2	55.6 ± 0.0	PE
P	<i>Neottia auriculata</i>	Auricled Twayblade				S3	8	85.6 ± 0.0	NB
P	<i>Platanthera grandiflora</i>	Large Purple Fringed Orchid				S3	39	21.4 ± 0.0	NB
P	<i>Platanthera orbiculata</i>	Small Round-leaved Orchid				S3	25	15.2 ± 0.0	NB
P	<i>Spiranthes lucida</i>	Shining Ladies'-Tresses				S3	2	62.1 ± 1.0	NB
P	<i>Bromus latiglumis</i>	Broad-Glumed Brome				S3	26	48.3 ± 0.0	NB
P	<i>Zizania aquatica</i> var. <i>aquatica</i>	Eastern Wild Rice				S3	4	57.9 ± 0.0	NB
P	<i>Asplenium trichomanes</i>	Maidenhair Spleenwort				S3	9	61.1 ± 1.0	NB
P	<i>Anchistea virginica</i>	Virginia chain fern				S3	30	42.6 ± 0.0	NS
P	<i>Woodsia alpina</i>	Alpine Cliff Fern				S3	4	73.6 ± 0.0	NB
P	<i>Woodsia glabella</i>	Smooth Cliff Fern				S3	64	72.0 ± 0.0	NB
P	<i>Isoetes tuckermanii</i> ssp.	Tuckerman's Quillwort				S3	2	77.6 ± 0.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
P	<i>tuckermanii</i>								
P	<i>Diphasiastrum x sabinifolium</i>	Savin-leaved Ground-cedar			S3		18	31.3 ± 0.0	NB
P	<i>Huperzia appressa</i>	Mountain Firmoss			S3		17	85.6 ± 0.0	NB
P	<i>Sceptridium dissectum</i>	Dissected Moonwort			S3		8	18.3 ± 2.0	NB
P	<i>Botrychium lanceolatum</i> ssp. <i>angustisegmentum</i>	Narrow Triangle Moonwort			S3		18	30.4 ± 0.0	NB
P	<i>Botrychium simplex</i>	Least Moonwort			S3		8	35.7 ± 0.0	NB
P	<i>Ophioglossum pusillum</i>	Northern Adder's-tongue			S3		7	49.8 ± 50.0	NS
P	<i>Selaginella selaginoides</i>	Low Spikemoss			S3		8	82.6 ± 0.0	NB
P	<i>Crataegus submollis</i>	Quebec Hawthorn			S3?		1	99.5 ± 7.0	NS
P	<i>Crataegus succulenta</i>	Fleshy Hawthorn			S3?		2	47.0 ± 0.0	PE
P	<i>Platanthera hookeri</i>	Hooker's Orchid			S3?		46	10.7 ± 0.0	NB
P	<i>Bidens hyperborea</i>	Estuary Beggarticks			S3S4		45	32.9 ± 0.0	NB
P	<i>Solidago altissima</i>	Tall Goldenrod			S3S4		3	38.9 ± 0.0	NB
P	<i>Symphotrichum boreale</i>	Boreal Aster			S3S4		18	50.1 ± 0.0	PE
P	<i>Betula pumila</i>	Bog Birch			S3S4		175	41.1 ± 0.0	NB
P	<i>Mertensia maritima</i>	Sea Lungwort			S3S4		7	53.5 ± 0.0	NB
P	<i>Subularia aquatica</i> ssp. <i>americana</i>	American Water Awlwort			S3S4		2	80.4 ± 0.0	NB
P	<i>Callitriche hermaphroditica</i>	Northern Water-starwort			S3S4		9	44.9 ± 0.0	NB
P	<i>Viburnum edule</i>	Squashberry			S3S4		14	70.0 ± 0.0	NB
P	<i>Crassula aquatica</i>	Water Pygmyweed			S3S4		5	56.9 ± 0.0	NB
P	<i>Penthorum sedoides</i>	Ditch Stonecrop			S3S4		25	50.9 ± 0.0	NB
P	<i>Elatine americana</i>	American Waterwort			S3S4		6	35.5 ± 0.0	NB
P	<i>Fagus grandifolia</i>	American Beech			S3S4		252	8.2 ± 0.0	NB
P	<i>Geranium robertianum</i>	Herb Robert			S3S4		84	48.2 ± 0.0	PE
P	<i>Teucrium canadense</i>	Canada Germander			S3S4		153	6.1 ± 0.0	NB
P	<i>Utricularia gibba</i>	Humped Bladderwort			S3S4		5	21.5 ± 0.0	NB
P	<i>Fraxinus americana</i>	White Ash			S3S4		249	1.1 ± 0.0	NB
P	<i>Epilobium strictum</i>	Downy Willowherb			S3S4		30	7.1 ± 0.0	NB
P	<i>Fallopia scandens</i>	Climbing False Buckwheat			S3S4		76	18.6 ± 2.0	NB
P	<i>Rumex persicarioides</i>	Peach-leaved Dock			S3S4		53	30.6 ± 1.0	NB
P	<i>Samolus parviflorus</i>	Seaside Brookweed			S3S4		168	4.7 ± 0.0	NB
P	<i>Thalictrum confine</i>	Northern Meadow-rue			S3S4		1	82.8 ± 1.0	PE
P	<i>Rosa palustris</i>	Swamp Rose			S3S4		5	34.7 ± 0.0	NB
P	<i>Rubus pensilvanicus</i>	Pennsylvania Blackberry			S3S4		38	37.9 ± 0.0	NB
P	<i>Sanguisorba canadensis</i>	Canada Burnet			S3S4		17	78.5 ± 0.0	NB
P	<i>Galium boreale</i>	Northern Bedstraw			S3S4		7	52.7 ± 5.0	NS
P	<i>Galium labradoricum</i>	Labrador Bedstraw			S3S4		26	49.8 ± 0.0	PE
P	<i>Salix pedicellaris</i>	Bog Willow			S3S4		66	8.4 ± 0.0	NB
P	<i>Geocaulon lividum</i>	Northern Comandra			S3S4		46	18.6 ± 2.0	NB
P	<i>Agalinis neoscotica</i>	Nova Scotia Agalinis			S3S4		1	43.6 ± 0.0	NS
P	<i>Limosella australis</i>	Southern Mudwort			S3S4		98	8.3 ± 1.0	NB
P	<i>Ulmus americana</i>	White Elm			S3S4		318	11.2 ± 0.0	NB
P	<i>Juniperus horizontalis</i>	Creeping Juniper			S3S4		32	44.1 ± 0.0	PE
P	<i>Carex capillaris</i>	Hairlike Sedge			S3S4		11	60.0 ± 0.0	NS
P	<i>Carex eburnea</i>	Bristle-leaved Sedge			S3S4		17	56.1 ± 100.0	NB
P	<i>Carex exilis</i>	Coastal Sedge			S3S4		1	76.1 ± 0.0	NS
P	<i>Carex haydenii</i>	Hayden's Sedge			S3S4		4	11.2 ± 0.0	NB
P	<i>Carex lupulina</i>	Hop Sedge			S3S4		6	49.2 ± 1.0	NB
P	<i>Carex tenera</i>	Tender Sedge			S3S4		13	21.4 ± 0.0	NB
P	<i>Carex wiegandii</i>	Wiegand's Sedge			S3S4		144	9.7 ± 0.0	NB
P	<i>Carex recta</i>	Estuary Sedge			S3S4		20	19.3 ± 0.0	NB
P	<i>Carex atratifomis</i>	Scabrous Black Sedge			S3S4		3	90.3 ± 0.0	NS
P	<i>Cladium mariscoides</i>	Smooth Twigrush			S3S4		7	22.0 ± 1.0	NB
P	<i>Cyperus dentatus</i>	Toothed Flatsedge			S3S4		1	47.4 ± 1.0	NB
P	<i>Eleocharis quinqueflora</i>	Few-flowered Spikerush			S3S4		1	91.9 ± 0.0	PE
P	<i>Rhynchospora capitellata</i>	Small-headed Beakrush			S3S4		1	99.1 ± 1.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
P	<i>Trichophorum clintonii</i>	Clinton's Clubrush				S3S4	25	84.2 ± 0.0	NB
P	<i>Bolboschoenus fluviatilis</i>	River Bulrush				S3S4	4	27.1 ± 1.0	NB
P	<i>Triglochin gaspensis</i>	Gasp Arrowgrass				S3S4	78	7.6 ± 0.0	NB
P	<i>Lilium canadense</i>	Canada Lily				S3S4	36	12.6 ± 3.0	NB
P	<i>Corallorhiza maculata</i>	Spotted Coralroot				S3S4	26	32.3 ± 5.0	NB
P	<i>Liparis loeselii</i>	Loesel's Twayblade				S3S4	65	8.4 ± 0.0	NB
P	<i>Neottia cordata</i>	Heart-leaved Twayblade				S3S4	16	27.9 ± 10.0	NB
P	<i>Platanthera obtusata</i>	Blunt-leaved Orchid				S3S4	19	42.5 ± 0.0	NS
P	<i>Calamagrostis pickeringii</i>	Pickering's Reed Grass				S3S4	31	41.9 ± 0.0	NB
P	<i>Calamagrostis stricta</i>	Slim-stemmed Reed Grass				S3S4	42	3.1 ± 2.0	NB
P	<i>Calamagrostis stricta ssp. stricta</i>	Slim-stemmed Reed Grass				S3S4	19	41.1 ± 0.0	NS
P	<i>Eragrostis pectinacea</i>	Tufted Love Grass				S3S4	6	25.5 ± 0.0	NB
P	<i>Stuckenia filiformis</i>	Thread-leaved Pondweed				S3S4	4	9.2 ± 1.0	NB
P	<i>Potamogeton praelongus</i>	White-stemmed Pondweed				S3S4	23	40.7 ± 0.0	NS
P	<i>Xyris montana</i>	Northern Yellow-Eyed-Grass				S3S4	270	9.4 ± 0.0	NB
P	<i>Asplenium viride</i>	Green Spleenwort				S3S4	17	61.0 ± 1.0	NB
P	<i>Dryopteris fragrans</i>	Fragrant Wood Fern				S3S4	63	71.6 ± 0.0	NB
P	<i>Polypodium appalachianum</i>	Appalachian Polypody				S3S4	28	46.3 ± 1.0	NB
P	<i>Polygonum oxyspermum ssp. raii</i>	Ray's Knotweed				SH	1	99.9 ± 20.0	PE
P	<i>Montia fontana</i>	Water Blinks				SH	2	3.1 ± 1.0	NB
P	<i>Brachyelytrum erectum</i>	Bearded Shorthusk				SH	2	18.6 ± 2.0	NB
P	<i>Agalinis maritima</i>	Saltmarsh Agalinis				SX	2	63.1 ± 50.0	NB

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
16411	Epworth, W. 2016. Species at Risk records, 2014-2016. Fort Folly Habitat Recovery Program, 38 recs.
15261	Morrison, Guy. 2011. Maritime Shorebird Survey (MSS) database. Canadian Wildlife Service, Ottawa, 15939 surveys. 86171 recs.
6771	Lepage, D. 2014. Maritime Breeding Bird Atlas Database. Bird Studies Canada, Sackville NB, 407,838 recs.
6125	eBird. 2014. eBird Basic Dataset. Version: EBD_relNov-2014. Ithaca, New York. Nov 2014. Cornell Lab of Ornithology, 25036 recs.
3632	Erskine, A.J. 1992. Maritime Breeding Bird Atlas Database. NS Museum & Nimbus Publ., Halifax, 82,125 recs.
3360	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
2220	Paquet, Julie. 2018. Atlantic Canada Shorebird Survey (ACSS) database 2012-2018. Environment Canada, Canadian Wildlife Service.
2182	Mazerolle, David. 2021. Botanical fieldwork 2019-20200. Parks Canada.
1842	iNaturalist. 2020. iNaturalist Data Export 2020. iNaturalist.org and iNaturalist.ca, Web site: 128728 recs.
1646	Berrigan, L. 2019. Maritimes Marsh Monitoring Project 2013, 2014, 2016, 2017, and 2018 data. Bird Studies Canada, Sackville, NB.
1059	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.
1049	Parks Canada. 2021. PEI National Park Bank swallow nest records from 2010-2019. Parks Canada, 1535 records.
740	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2015. Atlantic Canada Conservation Data Centre Fieldwork 2015. Atlantic Canada Conservation Data Centre, # recs.
697	Amirault, D.L. & Stewart, J. 2007. Piping Plover Database 1894-2006. Canadian Wildlife Service, Sackville, 3344 recs, 1228 new.
652	Chapman, C.J. 2019. Atlantic Canada Conservation Data Centre 2019 botanical fieldwork. Atlantic Canada Conservation Data Centre, 11729 recs.
566	Chapman-Lam, C.J. 2021. Atlantic Canada Conservation Data Centre 2020 botanical fieldwork. Atlantic Canada Conservation Data Centre, 17309 recs.
544	Blaney, C.S.; Mazerolle, D.M. 2012. Fieldwork 2012. Atlantic Canada Conservation Data Centre, 13,278 recs.
450	Gravel, Mireille. 2010. Coordonnées GPS et suivi des tortues marquées, 2005-07. Kouchibouguac National Park, 480 recs.
435	Beaudet, A. 2007. Piping Plover Records in Kouchibouguac NP, 1982-2005. Kouchibouguac National Park, 435 recs.
374	Mazerolle, D.M. 2021. South Richibucto Dune Beach pinweed observations from 2019. Parks Canada, 387 records.
357	Blaney, C.S. 2020. Sean Blaney 2020 field data. Atlantic Canada Conservation Data Centre, 4407 records.
299	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2013. Atlantic Canada Conservation Data Centre Fieldwork 2013. Atlantic Canada Conservation Data Centre, 9000+ recs.
275	MacDonald, E.C. 2018. Piping Plover nest records from 2010-2017. Canadian Wildlife Service.
273	Tranquilla, L. 2015. Maritimes Marsh Monitoring Project 2015 data. Bird Studies Canada, Sackville NB, 5062 recs.

# recs	CITATION
268	Belland, R.J. Maritimes moss records from various herbarium databases. 2014.
268	Wilhelm, S.I. et al. 2011. Colonial Waterbird Database. Canadian Wildlife Service, Sackville, 2698 sites, 9718 recs (8192 obs).
251	Benedict, B. Connell Herbarium Specimens. University New Brunswick, Fredericton. 2003.
227	Blaney, C.S. 2017. Atlantic Canada Conservation Data Centre Fieldwork 2017. Atlantic Canada Conservation Data Centre.
216	Blaney, C.S.; Spicer, C.D.; Mazerolle, D.M. 2005. Fieldwork 2005. Atlantic Canada Conservation Data Centre. Sackville NB, 2333 recs.
210	Paquet, Julie. 2019. Atlantic Canada Shorebird Survey ACSS database for 2019. Environment Canada, Canadian Wildlife Service.
203	Mazerolle, D.M. 2017. Atlantic Canada Conservation Data Centre Fieldwork 2017. Atlantic Canada Conservation Data Centre.
179	Hicks, Andrew. 2009. Coastal Waterfowl Surveys Database, 2000-08. Canadian Wildlife Service, Sackville, 46488 recs (11149 non-zero).
176	Amirault, D.L. & McKnight, J. 2003. Piping Plover Database 1991-2003. Canadian Wildlife Service, Sackville, unpublished data. 7 recs.
168	Belliveau, A.G. 2018. Atlantic Canada Conservation Data Centre Fieldwork 2017. Atlantic Canada Conservation Data Centre.
168	Mazerolle, D.M. 2016. Atlantic Canada Conservation Data Centre Fieldwork 2017. Atlantic Canada Conservation Data Centre.
165	Belliveau, A.G. 2020. E.C. Smith Herbarium and Atlantic Canada Conservation Data Centre Fieldwork 2019, 2020. E.C. Smith Herbarium.
165	Parks Canada. 2010. Specimens in or near National Parks in Atlantic Canada. Canadian National Museum, 3925 recs.
162	Epworth, W. 2012. Species at Risk records, 2009-11. Fort Folly Habitat Recovery Program, 162 recs.
162	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 .
159	Blaney, C.S. 2016. Atlantic Canada Conservation Data Centre Fieldwork 2016. Atlantic Canada Conservation Data Centre, 6719 recs.
157	Blaney, C.S.; Mazerolle, D.M. 2010. Fieldwork 2010. Atlantic Canada Conservation Data Centre. Sackville NB, 15508 recs.
154	Benjamin, L.K. (compiler). 2012. Significant Habitat & Species Database. Nova Scotia Dept Natural Resources, 4965 recs.
149	Patrick, A.; Horne, D.; Noseworthy, J. et. al. 2017. Field data for Nova Scotia and New Brunswick, 2015 and 2017. Nature Conservancy of Canada.
139	Island Nature Trust. 2016. Farmland birds project. Mader, Shannon (ed.) .
137	Blaney, C.S. 2018. Atlantic Canada Conservation Data Centre Fieldwork 2018. Atlantic Canada Conservation Data Centre.
135	Churchill, J.L.; Klymko, J.D. 2015. Chignecto and Tintamarre National Wildlife Area Bird Surveys 2015. Atlantic Canada Conservation Data Centre, 2238 recs.
134	iNaturalist. 2018. iNaturalist Data Export 2018. iNaturalist.org and iNaturalist.ca, Web site: 11700 recs.
129	MacDonald, E.C. 2018. CWS Piping Plover Census, 2010-2017. Canadian Wildlife Service, 672 recs.
127	Porter, Caitlin. 2021. Field data for 2020 in various locations across the Maritimes. Atlantic Canada Conservation Data Centre, 3977 records.
123	Blaney, C.S.; Mazerolle, D.M.; Klymko, J.; Spicer, C.D. 2006. Fieldwork 2006. Atlantic Canada Conservation Data Centre. Sackville NB, 8399 recs.
120	Belliveau, A.G. 2016. Atlantic Canada Conservation Data Centre Fieldwork 2016. Atlantic Canada Conservation Data Centre, 10695 recs.
120	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.
117	McAlpine, D.F. 1998. NBM Science Collections databases to 1998. New Brunswick Museum, Saint John NB, 241 recs.
111	Blaney, C.S.; Mazerolle, D.M. 2008. Fieldwork 2008. Atlantic Canada Conservation Data Centre. Sackville NB, 13343 recs.
111	Clayden, S.R. 1998. NBM Science Collections databases: vascular plants. New Brunswick Museum, Saint John NB, 19759 recs.
110	Klymko, J. 2018. Maritimes Butterfly Atlas database. Atlantic Canada Conservation Data Centre.
107	Bagnell, B.A. 2001. New Brunswick Bryophyte Occurrences. B&B Botanical, Sussex, 478 recs.
106	Glen, W. 1991. 1991 Prince Edward Island Forest Biomass Inventory Data. PEI Dept of Energy and Forestry, 10059 recs.
102	Stewart, J.I. 2010. Peregrine Falcon Surveys in New Brunswick, 2002-09. Canadian Wildlife Service, Sackville, 58 recs.
98	Benedict, B. Connell Herbarium Specimens (Data) . University New Brunswick, Fredericton. 2003.
97	Sharkie, R., MacQuarrie, K., Fraser, M. 2003. A Floral Inventory of the Western Section of Prince Edward Island National Park and adjacent Crown lands. Parks Canada Agency, v + 106 pp.
96	Sollows, M.C., 2008. NBM Science Collections databases: mammals. New Brunswick Museum, Saint John NB, download Jan. 2008, 4983 recs.
94	Tremblay, E. 2006. Kouchibouguac National Park Digital Database. Parks Canada, 105 recs.
89	Catling, P.M., Erskine, D.S. & MacLaren, R.B. 1985. The Plants of Prince Edward Island with new records, nomenclatural changes & corrections & deletions, 1st Ed. Research Branch, Agriculture Canada, Ottawa, Publication 1798. 22pp.
85	Burns, L. 2013. Personal communication concerning bat occurrence on PEI. Winter 2013. Pers. comm.
82	Mazerolle, David. 2020. Botanical fieldwork 2020. Parks Canada.
77	Mazerolle, D.M. 2005. Bouctouche Irving Eco-Centre rare coastal plant fieldwork results 2004-05. Irving Eco-centre, la Dune du Bouctouche, 174 recs.
73	Blaney, C.S.; Mazerolle, D.M.; Oberndorfer, E. 2007. Fieldwork 2007. Atlantic Canada Conservation Data Centre. Sackville NB, 13770 recs.
73	Scott, Fred W. 1998. Updated Status Report on the Cougar (Puma Concolor cougar) [Eastern population]. Committee on the Status of Endangered Wildlife in Canada, 298 recs.
72	Blaney, C.S.; Mazerolle, D.M. 2011. Fieldwork 2011. Atlantic Canada Conservation Data Centre. Sackville NB.
71	Churchill, J.L.; Walker, J. 2017. Species at Risk Surveys at Correctional Services Canada Properties in Nova Scotia and New Brunswick. Atlantic Canada Conservation Data Centre.
71	Neily, T.H. 2017. Maritimes Lichen and Bryophyte records. Atlantic Canada Conservation Data Centre, 1015 recs.
66	Canadian Wildlife Service, Dartmouth. 2010. Piping Plover censuses 2007-09, 304 recs.
66	Richardson, Leif. 2018. Maritimes Bombus records from various sources. Richardson, Leif.
64	Arsenault, M. 2019. Cormorant colony nest counts. PE Department of Communities, Land, and Environment.
61	Blaney, C.S. 2000. Fieldwork 2000. Atlantic Canada Conservation Data Centre. Sackville NB, 1265 recs.
61	Clayden, S. Digitization of Wolfgang Maass Nova Scotia forest lichen collections, 1964-2004. New Brunswick Museum. 2018.
60	Benjamin, L.K. (compiler). 2007. Significant Habitat & Species Database. Nova Scotia Dept Natural Resources, 8439 recs.
58	MacDonald, M. 2008. PEI Power Corridor Floral Surveys, 2004-08. Jacques Whitford Ltd, 2238 recs (979 rare).
56	Ayles, P. 2006. Prince Edward Island National Park Digital Database. Parks Canada, 179 recs.
55	Neily, Tom. 2020. Lichen surveys for PEI Forested Landscapes Priority Place. Chapman, C.J. (ed.) Atlantic Canada Conservation Data Centre, 158 records.
53	Churchill, J.L. 2018. Atlantic Canada Conservation Data Centre Fieldwork 2018. Atlantic Canada Conservation Data Centre, 907 recs.

# recs	CITATION
53	Spicer, C.D. & Harries, H. 2001. Mount Allison Herbarium Specimens. Mount Allison University, 128 recs.
51	Honeyman, K. 2019. Unique Areas Database, 2018. J.D. Irving Ltd.
51	Newell, R.E. 2000. E.C. Smith Herbarium Database. Acadia University, Wolfville NS, 7139 recs.
50	PEI National Park. 2019. SAR and Bombus records from PEI NP from the 2019 field season. Moody, Allison (ed.) PEI National Park, 158 recs.
49	Hinds, H.R. 1986. Notes on New Brunswick plant collections. Connell Memorial Herbarium, unpubl, 739 recs.
49	Nussey, Pat & NCC staff. 2019. AEI tracked species records, 2016-2019. Chapman, C.J. (ed.) Atlantic Canada Conservation Data Centre, 333.
48	NatureServe Canada. 2019. iNaturalist Maritimes Butterfly Records. iNaturalist.org and iNaturalist.ca.
47	e-Butterfly. 2016. Export of Maritimes records and photos. Maxim Larrivee, Sambo Zhang (ed.) e-butterfly.org.
47	Klymko, J. 2016. Atlantic Canada Conservation Data Centre Fieldwork 2016. Atlantic Canada Conservation Data Centre.
45	Haughian, S.R. 2018. Description of Fuscopannaria leucosticta field work in 2017. New Brunswick Museum, 314 recs.
43	Blaney, C.S. 2003. Fieldwork 2003. Atlantic Canada Conservation Data Centre. Sackville NB, 1042 recs.
42	Klymko, J.J.D. 2016. 2015 field data. Atlantic Canada Conservation Data Centre.
42	Mazerolle, D.M. 2020. Atlantic Canada Conservation Data Centre botanical fieldwork 2019. Atlantic Canada Conservation Data Centre.
41	Erskine, A.J. 1999. Maritime Nest Records Scheme (MNRS) 1937-1999. Canadian Wildlife Service, Sackville, 313 recs.
41	iNaturalist. 2020. iNaturalist butterfly records selected for the Maritimes Butterfly Atlas. iNaturalist.
41	Wissink, R. 2006. Fundy National Park Digital Database. Parks Canada, 41 recs.
39	Majka, C. 2009. Université de Moncton Insect Collection: Carabidae, Cerambycidae, Coccinellidae. Université de Moncton, 540 recs.
38	Thomas, P. 2018. CSC Dorchester Bobolink Survey. Environment Canada, Canadian Wildlife Service.
37	Wallace, S. 2020. Stewardship Department species occurrence data on NTNB preserves. Nature Trust of New Brunswick.
35	Blaney, C.S. & Spicer, C.D.; Popma, T.M.; Basquill, S.P. 2003. Vascular Plant Surveys of Northumberland Strait Rivers & Amherst Area Peatlands. Nova Scotia Museum Research Grant, 501 recs.
35	Robinson, S.L. 2010. Fieldwork 2009 (dune ecology). Atlantic Canada Conservation Data Centre. Sackville NB, 408 recs.
35	Scott, F.W. 2002. Nova Scotia Herpetofauna Atlas Database. Acadia University, Wolfville NS, 8856 recs.
34	Erskine, D. 1960. The plants of Prince Edward Island. 1st Ed. Research Branch, Agriculture Canada, Ottawa., Publication 1088. 1238 recs.
33	Benedict, B. Connell Herbarium Specimen Database Download 2004. Connell Memorial Herbarium, University of New Brunswick. 2004.
33	Sollows, M.C., 2009. NBM Science Collections databases: molluscs. New Brunswick Museum, Saint John NB, download Jan. 2009, 6951 recs (2957 in Atlantic Canada).
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.
30	Cowie, F. 2007. Electrofishing Population Estimates 1979-98. Canadian Rivers Institute, 2698 recs.
29	Blaney, C.S.; Spicer, C.D.; Rothfels, C. 2004. Fieldwork 2004. Atlantic Canada Conservation Data Centre. Sackville NB, 1343 recs.
29	Churchill, J.L., Klymko, J.D.D. 2016. Atlantic Canada Conservation Data Centre Fieldwork 2016. Atlantic Canada Conservation Data Centre.
28	Askanas, H. 2016. New Brunswick Wood Turtle Database. New Brunswick Department of Energy and Resource Development.
28	Mazerolle, D.M. 2018. Atlantic Canada Conservation Data Centre botanical fieldwork 2018. Atlantic Canada Conservation Data Centre, 13515 recs.
27	Klymko, J. 2021. Atlantic Canada Conservation Data Centre zoological fieldwork 2020. Atlantic Canada Conservation Data Centre.
26	Blaney, C.S.; Mazerolle, D.M. 2009. Fieldwork 2009. Atlantic Canada Conservation Data Centre. Sackville NB, 13395 recs.
26	Chapman, C.J. 2018. Atlantic Canada Conservation Data Centre botanical fieldwork 2018. Atlantic Canada Conservation Data Centre, 11171 recs.
26	Doucet, D.A. 2007. Lepidopteran Records, 1988-2006. Doucet, 700 recs.
26	Goltz, J.P. 2012. Field Notes, 1989-2005. , 1091 recs.
25	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2014. Atlantic Canada Conservation Data Centre Fieldwork 2014. Atlantic Canada Conservation Data Centre, # recs.
25	Blaney, C.S.; Spicer, C.D. 2001. Fieldwork 2001. Atlantic Canada Conservation Data Centre. Sackville NB, 981 recs.
25	Munro, Marian K. Nova Scotia Provincial Museum of Natural History Herbarium Database. Nova Scotia Provincial Museum of Natural History, Halifax, Nova Scotia. 2013.
24	Bateman, M.C. 2001. Coastal Waterfowl Surveys Database, 1965-2001. Canadian Wildlife Service, Sackville, 667 recs.
24	Blaney, C.S.; Spicer, C.D.; Popma, T.M.; Hanel, C. 2002. Fieldwork 2002. Atlantic Canada Conservation Data Centre. Sackville NB, 2252 recs.
24	Clayden, S.R. 2007. NBM Science Collections databases: vascular plants. New Brunswick Museum, Saint John NB, download Mar. 2007, 6914 recs.
24	Coursol, F. 2005. Dataset from New Brunswick fieldwork for Eriocaulon parkeri COSEWIC report. Coursol, Pers. comm. to C.S. Blaney, Aug 26. 110 recs.
24	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.
23	Brunelle, P.-M. (compiler). 2009. ADIP/MDDS Odonata Database: data to 2006 inclusive. Atlantic Dragonfly Inventory Program (ADIP), 24200 recs.
23	Donell, R. 2008. Rare plant records from rare coastal plant project. Bouctouche Dune Irving Eco-centre. Pers. comm. to D.M. Mazerolle, 50 recs.
23	Epworth, W. 2013. Species at Risk records, 2013. Fort Folly Habitat Recovery Program, 27 recs.
22	Chiasson, R. 2018. Breeding bird observations from NBWTF project. pers. comm. to S. Blaney.
21	Mazerolle, M.J., Drolet, B., & Desrochers, A. 2001. Small Mammal Responses to Peat Mining of Southeastern Canadian Bogs. Can. J. Zool., 79:296-302. 21 recs.
20	Beardmore, T. 2017. 2017 Butternut observations. Natural Resources Canada.
20	Curley, F.R. 2005. PEF&W Collection 2003-04. PEI Fish & Wildlife Div., 716 recs.
20	Hinds, H.R. 1999. Connell Herbarium Database. University New Brunswick, Fredericton, 131 recs.
20	Kouchibouguac National Park, Natural Resource Conservation Sec. 1988. The Resources of Kouchibouguac National Park. Beach, H. (ed.) , 90 recs.
20	Patrick, Allison. 2021. Animal and plant records from NCC properties from 2019 and 2020. Nature Conservancy Canada.
20	Pike, E., Tingley, S. & Christie, D.S. 2000. Nature NB Listserve. University of New Brunswick, listserv.unb.ca/archives/naturenb. 68 recs.
20	Plissner, J.H. & Haig, S.M. 1997. 1996 International piping plover census. US Geological Survey, Corvallis OR, 231 pp.
20	Tingley, S. (compiler). 2001. Butterflies of New Brunswick. , Web site: www.geocities.com/Yosemite/8425/butrflly . 142 recs.
19	Canadian Wildlife Service, Atlantic Region. 2010. Piping Plover censuses 2006-09. , 35 recs.
19	Godbout, V. 2002. SAR Inventory: Birds in Fort Beauséjour NHS. Parks Canada, Atlantic, SARINV02-01. 202 recs.

# recs	CITATION
19	McMullin, R.T. 2015. Prince Edward Island's lichen biodiversity and proposed conservation status in a report prepared for the province of PEI. Biodiversity Institute of Ontario Herbarium, University of Guelph, 776 records.
18	Mazerolle, D. 2003. Assessment of Seaside Pinweed (<i>Lechea maritima</i> var. <i>subcylindrica</i>) in Southeastern New Brunswick. Irving Eco-centre, la Dune du Bouctouche, 18 recs.
17	Klymko, J.J.D.; Robinson, S.L. 2014. 2013 field data. Atlantic Canada Conservation Data Centre.
17	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.
17	Walker, J. 2017. Bird inventories at French River, NS, and Memramcook, NB, for Nature Conservancy of Canada. Pers. comm. to AC CDC.
17	Wilhelm, S.I. et al. 2019. Colonial Waterbird Database. Canadian Wildlife Service.
16	Gagnon, J. 2004. Specimen data from 2002 visit to Prince Edward Island. , 104 recs.
16	Manthorne, A. 2019. Incidental aerial insectivore observations. Birds Canada.
15	Belland, R.J. 1992. The Bryophytes of Kouchibouguac National Park. Parks Canada, Kouchibouguac NP, 101 pp. + map.
15	Caissie, A. Herbarium Records. Fundy National Park, Alma NB. 1961-1993.
15	Roland, A.E. & Smith, E.C. 1969. The Flora of Nova Scotia, 1st Ed. Nova Scotia Museum, Halifax, 743pp.
14	Blaney, C.S. 2019. Sean Blaney 2019 field data. Atlantic Canada Conservation Data Centre, 4407 records.
14	McAlpine, D.F. 1998. NBM Science Collections: Wood Turtle records. New Brunswick Museum, Saint John NB, 329 recs.
14	Morton, L.D. & Savoie, M. 1983. The Mammals of Kouchibouguac National Park. Parks Canada Report prep. by Canadian Wildlife Service, Sackville, NB, Vols 1-4. 14 recs.
13	Belland, R.J. 2012. PEI moss records from Devonian Botanical Garden. DBG Cryptogam Database, Web site: https://secure.devonian.ualberta.ca/bryo_search.php 748 recs.
13	Eaton, S. 2014. Nova Scotia Wood Turtle Database. Environment and Climate Change Canada, 4843 recs.
13	Thomas, A.W. 1996. A preliminary atlas of the butterflies of New Brunswick. New Brunswick Museum.
12	Hall, R.A. 2003. NS Freshwater Mussel Fieldwork. Nova Scotia Dept Natural Resources, 189 recs.
12	Manthorne, A. 2014. MaritimesSwiftwatch Project database 2013-2014. Bird Studies Canada, Sackville NB, 326 recs.
11	Edsall, J. 2001. Lepidopteran records in New Brunswick, 1997-99. , Pers. comm. to K.A. Bredin. 91 recs.
11	Holder, M.L.; Kingsley, A.L. 2000. Kinglsey and Holder observations from 2000 field work.
11	Klymko, J. Dataset of butterfly records at the New Brunswick Museum not yet accessioned by the museum. Atlantic Canada Conservation Data Centre. 2016.
11	McAlpine, D.F. 1983. Status & Conservation of Solution Caves in New Brunswick. New Brunswick Museum, Publications in Natural Science, no. 1, 28pp.
11	Richardson, D., Anderson, F., Cameron, R, McMullin, T., Clayden, S. 2014. Field Work Report on Black Foam Lichen (<i>Anzia colpodes</i>). COSEWIC.
11	Wissink, R. 2000. Rare Plants of Fundy: maps. Parks Canada, 20 recs.
11	Zinck, M. & Roland, A.E. 1998. Roland's Flora of Nova Scotia. Nova Scotia Museum, 3rd ed., rev. M. Zinck; 2 Vol., 1297 pp.
10	Amirault, D.L. 2000. Piping Plover Surveys, 1983-2000. Canadian Wildlife Service, Sackville, unpublished data. 70 recs.
10	Bateman, M.C. 2000. Waterfowl Brood Surveys Database, 1990-2000 . Canadian Wildlife Service, Sackville, unpublished data. 149 recs.
10	Hall, R.A. 2001. S. NS Freshwater Mussel Fieldwork. Nova Scotia Dept Natural Resources, 178 recs.
10	Hinds, H.R. 1997. Vascular Plants of Cocagne Island. Connell Herbarium, UNB.
10	Klymko, J.J.D. 2018. 2017 field data. Atlantic Canada Conservation Data Centre.
10	Tremblay, E. 2001. Kouchibouguacis River Freshwater Mussel Data. Parks Canada, Kouchibouguac NP, 45 recs.
9	Klymko, J. 2019. Atlantic Canada Conservation Data Centre zoological fieldwork 2018. Atlantic Canada Conservation Data Centre.
9	Mawhinney, K. & Seutin, G. 2001. Lepidoptera Survey of the Salt Marshes of of Kouchibouguac National Park. Parks Canada Unpublished Report, 5p. 9 recs.
9	NatureServe Canada. 2018. iNaturalist Butterfly Data Export . iNaturalist.org and iNaturalist.ca.
9	Robinson, S.L. 2015. 2014 field data.
9	Shortt, R. UNB specimen data for various tracked species formerly considered secure. Connell Memorial Herbarium, UNB, Fredericton NB. 2019.
9	Speers, L. 2008. Butterflies of Canada database: New Brunswick 1897-1999. Agriculture & Agri-Food Canada, Biological Resources Program, Ottawa, 2048 recs.
9	Webster, R.P. 2004. Lepidopteran Records for National Wildlife Areas in New Brunswick. Webster, 1101 recs.
9	Westwood, A., Staicer, C. 2016. Nova Scotia landbird Species at Risk observations. Dalhousie University.
8	Bredin, K.A. 2001. WTF Project: Freshwater Mussel Fieldwork in Freshwater Species data. Atlantic Canada Conservation Data Center, 101 recs.
8	eBird. 2021. eBird Basic Dataset. Version: EBD_relOct-2020. Ithaca, New York. Oct 2020, Prince Edward Island Bird SAR subset. Cornell Lab of Ornithology.
8	Harris, P. 2004. Plant records from 1997-2003. Island Nature Trust, Charlottetown PE, 71 recs.
8	Klymko, J.J.D. 2016. 2014 field data. Atlantic Canada Conservation Data Centre.
8	Native Council of Prince Edward Island. 2019. Bat species and Bank Swallow observations at St. Chrysostome Wildlife Management Area, PEI. Native Council of Prince Edward Island.
8	Staicer, C. & Bliss, S.; Achenbach, L. 2017. Occurrences of tracked breeding birds in forested wetlands. , 303 records.
7	Blaney, C.S. Miscellaneous specimens received by ACCDC (botany). Various persons. 2001-08.
7	Curley, F.R. 2007. PEF&W Collection. PEI Fish & Wildlife Div., 199 recs.
7	Doucet, D.A. 2009. Census of Globally Rare, Endemic Butterflies of Nova Scotia Gulf of St Lawrence Salt Marshes. Nova Scotia Dept of Natural Resources, Species at Risk, 155 recs.
7	Downes, C. 1998-2000. Breeding Bird Survey Data. Canadian Wildlife Service, Ottawa, 111 recs.
7	Hinds, H.R. 1992. Rare Vascular Plants of Fundy National Park. , 10 recs.
7	Kennedy, Joseph. 2010. New Brunswick Peregrine records, 2009. New Brunswick Dept Natural Resources, 19 recs (14 active).
7	LaPaix, R.W.; Crowell, M.J.; MacDonald, M.; Neily, T.D.; Quinn, G. 2017. Stantec Nova Scotia rare plant records, 2012-2016. Stantec Consulting.
7	McNeil, J.A. 2016. Blandings Turtle (<i>Emydoidea blandingii</i>), Eastern Ribbonsnake (<i>Thamnophis sauritus</i>), Wood Turtle (<i>Glyptemys insculpta</i>), and Snapping Turtle (<i>Chelydra serpentina</i>) sightings, 2016. Mersey Tobeatic Research Institute, 774 records.
6	Benedict, B. Connell Herbarium Specimens, Digital photos. University New Brunswick, Fredericton. 2005.
6	Daury, R.W. & Bateman, M.C. 1996. The Barrow's Goldeneye (<i>Bucephala islandica</i>) in the Atlantic Provinces and Maine. Canadian Wildlife Service, Sackville, 47pp.

# recs	CITATION
6	Elward, D. 2017. 2015-2016 Freshwater Mussel Inventories in the Bouctouche Watershed. Southeastern Anglers Association, 6 recs.
6	Goltz, J.P. & Bishop, G. 2005. Confidential supplement to Status Report on Prototype Quillwort (<i>Isoetes prototypus</i>). Committee on the Status of Endangered Wildlife in Canada, 111 recs.
6	Gowan, S. 1980. The Lichens of Kouchibouguac National Park, Parts I (Macrolichens) & II (Microlichens). National Museum of Natural Sciences. Ottawa, ON, 7 recs.
6	Nature Trust of New Brunswick. 2021. Nature Trust of New Brunswick site inventory data submitted in April 2021. Nature Trust of New Brunswick, 2189 records.
6	Neily, T.H. & Pepper, C.; Toms, B. 2018. Nova Scotia lichen database [as of 2018-03]. Mersey Tobeatic Research Institute.
6	Neily, T.H. 2019. Tom Neily NS Bryophyte records (2009-2013). T.H. Neily, Atlantic Canada Conservation Data Centre, 1029 specimen records.
6	NS DNR. 2017. Black Ash records from NS DNR Permanent Sample Plots (PSPs), 1965-2016. NS Dept of Natural Resources.
6	Parks Canada. 2021. PEI National Park 2020 Species at Risk records. Parks Canada, 40 records.
6	Shortt, R. Connell Herbarium Black Ash specimens. University New Brunswick, Fredericton. 2019.
6	Webster, R.P. & Edsall, J. 2007. 2005 New Brunswick Rare Butterfly Survey. Environmental Trust Fund, unpublished report, 232 recs.
5	Basquill, S.P. 2003. Fieldwork 2003. Atlantic Canada Conservation Data Centre, Sackville NB, 69 recs.
5	Basset, I.J. & Crompton, C.W. 1978. The Genus <i>Suaeda</i> (Chenopodiaceae) in Canada. Canadian Journal of Botany, 56: 581-591.
5	Bastien, D. 2017. Rare Peatland plant observations. Pers. comm. to H. Askanas, New Brunswick Department of Energy and Resource Development.
5	Cowie, Faye. 2007. Surveyed Lakes in New Brunswick. Canadian Rivers Institute, 781 recs.
5	Dibblee, R.L. 1999. PEI Cormorant Survey. Prince Edward Island Fisheries, Aquaculture & Environment, 1p. 21 recs.
5	Layberry, R.A. & Hall, P.W., LaFontaine, J.D. 1998. The Butterflies of Canada. University of Toronto Press. 280 pp+plates.
5	McLelland, Don. 2020. Orchid observations at Enmore River, PEI. Don McLelland. Pers. comm. to C.S. Blaney.
5	Morrison, Annie. 2010. NCC Properties Fieldwork: June-August 2010. Nature Conservancy Canada, 508 recs.
5	Munro, Marian K. Nova Scotia Provincial Museum of Natural History Herbarium Database. Nova Scotia Provincial Museum of Natural History, Halifax, Nova Scotia. 2014.
5	Munro, Marian K. Tracked lichen specimens, Nova Scotia Provincial Museum of Natural History Herbarium. Atlantic Canada Conservation Data Centre. 2019.
5	Ogden, K. Nova Scotia Museum butterfly specimen database. Nova Scotia Museum. 2017.
5	Oldham, M.J. 2000. Oldham database records from Maritime provinces. Oldham, M.J.; ONHIC, 487 recs.
5	Sabine, D.L. 2013. Dwaine Sabine butterfly records, 2009 and earlier.
5	Sollows, M.C. 2008. NBM Science Collections databases: herpetiles. New Brunswick Museum, Saint John NB, download Jan. 2008, 8636 recs.
5	Zahavich, J.L. 2020. Canada Warbler, Olive-sided Flycatcher and Eastern Wood-Pewee observations, Prince Edward Island, 2017-2019. Island Nature Trust.
4	Benedict, B. Connell Herbarium Specimens. University New Brunswick, Fredericton. 2000.
4	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.
4	Gravel, Mireille. 2010. Coordonnées des tortues des bois Salmon River Road, 2005. Kouchibouguac National Park, 4 recs.
4	Hicklin, P.W. 1995. The Maritime Shorebird Survey Newsletter. Calidris, No. 3. 6 recs.
4	Klymko, J.J.D. 2012. Insect fieldwork & submissions, 2011. Atlantic Canada Conservation Data Centre. Sackville NB, 760 recs.
4	Phillips, B. 2017. Emails to John Klymko regarding Eastern Waterfan (<i>Peltigera hydrothyrta</i>) occurrences in Fundy National Park. Fundy Biosphere Reserve, 3 recs.
4	Popma, K. 2001. Phalarope & other bird observations in Westmorland Co. , Pers. comm. to K.A. Bredin. 5 recs.
4	Powell, B.C. 1967. Female sexual cycles of <i>Chrysemya picta</i> & <i>Clemmys insculpta</i> in Nova Scotia. Can. Field-Nat., 81:134-139. 26 recs.
4	Speers, L. 2001. Butterflies of Canada database. Agriculture & Agri-Food Canada, Biological Resources Program, Ottawa, 190 recs.
3	Benjamin, L.K. 2009. Boreal Felt Lichen, Mountain Avens, Orchid and other recent records. Nova Scotia Dept Natural Resources, 105 recs.
3	Benjamin, L.K. 2012. NSDNR fieldwork & consultant reports 2008-2012. Nova Scotia Dept Natural Resources, 196 recs.
3	Cameron, R.P. 2014. 2013-14 rare species field data. Nova Scotia Department of Environment, 35 recs.
3	Chaput, G. 2002. Atlantic Salmon: Maritime Provinces Overview for 2001. Dept of Fisheries & Oceans, Atlantic Region, Science Stock Status Report D3-14. 39 recs.
3	e-Butterfly. 2019. Export of Maritimes records and photos. McFarland, K. (ed.) e-butterfly.org.
3	Ferguson, D.C. 1954. The Lepidoptera of Nova Scotia. Part I, macrolepidoptera. Proceedings of the Nova Scotian Institute of Science, 23(3), 161-375.
3	Gautreau, R. 2005. <i>Betula michauxii</i> occurrence on Bog 324, near Baie-Ste-Anne, NB. Pers. comm. to C.S. Blaney, 3 recs.
3	Godbout, Valérié. 2010. Étude de l'Aster du Saint-Laurent dans le parc national Kouchibouguac, 2000-04. Parks Canada, 3 recs.
3	Golder Associates. 2018. Dorchester wind turbine bat detections. Owens, Luke, Firman, Mitch, Melcher, Heather (ed.) Golder Associates Ltd.
3	Grondin, P. & Blouin, J.-L., Bouchard, D.; et al. 1981. Description et cartographie de la végétation du cordon littoral. Parc National de Kouchibouguac. Le Groupe Dryade, 57 pp.
3	Kennedy, Joseph. 2010. New Brunswick Peregrine records, 2010. New Brunswick Dept Natural Resources, 16 recs (11 active).
3	Klymko, J.J.D. 2011. Insect fieldwork & submissions, 2010. Atlantic Canada Conservation Data Centre. Sackville NB, 742 recs.
3	Klymko, J.J.D. 2012. Insect field work & submissions. Atlantic Canada Conservation Data Centre, 852 recs.
3	Neily, T.H. Tom Neily NS Sphagnum records (2009-2014). T.H. Neily, Atlantic Canada Conservation Data Centre. 2019.
3	Nye, T. 2002. Wood Turtle observations in Westmorland, Queens Cos. , Pers. com. to S.H. Gerriets, Dec. 3. 3 recs.
3	Ogden, J. NS DNR Butterfly Collection Dataset. Nova Scotia Department of Natural Resources. 2014.
3	Parker, M. 2016. Wood turtle (<i>Glyptemys insculpta</i>) Visual Surveys at Black, Wallace, Musquodobit and Sackville Rivers, Nova Scotia. East Coast Aquatics Inc., 3 records.
3	Richardson, D., Anderson, F., Cameron, R., Pepper, C., Clayden, S. 2015. Field Work Report on the Wrinkled Shingle lichen (<i>Pannaria lurida</i>). COSEWIC.
3	Sabine, D.L. 2005. 2001 Freshwater Mussel Surveys. New Brunswick Dept of Natural Resources & Energy, 590 recs.
3	Sabine, M. 2016. Black Ash records from NB DNR permanent forest sampling Plots. New Brunswick Department of Natural Resources, 39 recs.
3	Sabine, M. 2016. Black Ash records from the NB DNR Forest Development Survey. New Brunswick Department of Natural Resources.
3	Toms, B. 2018. Bat Species data from www.batconservation.ca for Nova Scotia. Mersey Tobeatic Research Institute, 547 Records.
3	Toner, M. 2001. Lynx Records 1973-2000. NB Dept of Natural Resources, 29 recs.
3	Zahavich, J. 2018. Canada Warbler and Olive-sided Flycatcher records 2018. Island Nature Trust, 14 recs.
2	Adams, J. & Herman, T.B. 1998. Thesis, Unpublished map of <i>C. insculpta</i> sightings. Acadia University, Wolfville NS, 88 recs.

# recs	CITATION
2	Allen, K. 2012. Rare plant spatial data from Pleasant Ridge cranberry farm. NB Department of Environment, Environmental Assessment Section, 39 recs.
2	Amirault, D.L. 1997-2000. Unpublished files. Canadian Wildlife Service, Sackville, 470 recs.
2	Amirault, D.L. 2003. 2003 Peregrine Falcon Survey. Canadian Wildlife Service, Sackville, unpublished data. 7 recs.
2	Basquill, S.P., Porter, C. 2019. Bryophyte and lichen specimens submitted to the E.C. Smith Herbarium. NS Department of Lands and Forestry.
2	Belliveau, A.G. E.C. Smith Herbarium Specimen Database 2019. E.C. Smith Herbarium, Acadia University. 2019.
2	Boyne, A.W. & Grecian, V.D. 1999. Tern Surveys. Canadian Wildlife Service, Sackville, unpublished data. 23 recs.
2	Boyne, A.W. 2000. Tern Surveys. Canadian Wildlife Service, Sackville, unpublished data. 168 recs.
2	Cameron, R.P. 2009. Cyanolichen database. Nova Scotia Environment & Labour, 1724 recs.
2	Clayden, S.R.; Goltz, J.P. 2018. Emails to Sean Blaney on occurrence of Polygonum douglasii at Big Bluff, Kings Co., New Brunswick. pers. comm., 1 record.
2	Donelle, R. 2007. Bouctouche Dune Rare Coastal Plant Data. Irving Eco-centre, la Dune du Bouctouche, 2 recs.
2	Gagnon, E. Herbarium from 2017 Plant Systematics class. Université de Moncton. 2017.
2	Gagnon, J. 2003. Prince Edward Island plant records. Societe de la faune et des parcs Quebec, 13 recs.
2	Gilhen, J. 1984. Amphibians & Reptiles of Nova Scotia, 1st Ed. Nova Scotia Museum, 164pp.
2	Godbout, V. 2000. Recherche de l'Aster du St-Laurent (Aster laurentianus) et du Satyre des Maritimes (Coenonympha nepisiquit) au Parc national Kouchibouguac et a Dune du Bouctouche, N-B. Irving Eco-centre, 23 pp.
2	Goltz, J.P. 2002. Botany Ramblings: 1 July to 30 September, 2002. N.B. Naturalist, 29 (3):84-92. 7 recs.
2	Kelly, G. 2005. Fraxinus nigra. Dept of Agriculture, Fisheries, Aquaculture & Forestry. Pers. comm. to C.S. Blaney, Mar. 2, 11 recs.
2	Macaulay, M. Notes on newly discovered Hepatica nobilis var. obtusa population in Cumberland Co. NS. Pers. comm. to S. Blaney, 1 rec.
2	MacQuarrie, K. 1991-1999. Site survey files, maps. Island Nature Trust, Charlottetown PE, 60 recs.
2	Majka, C.G. 2008. Lepidoptera at St Patricks, 1993-2007. Pers. comm. to R. Curley, 8 Jan. 29 recs, 29 recs.
2	Mazerolle, D. 2003. Assessment and Rehabilitation of the Gulf of St Lawrence Aster (Symphyotrichum laurentianum) in Southeastern New Brunswick. Irving Eco-centre, la Dune du Bouctouche, 13 recs.
2	NatureServe Canada. 2018. iNaturalist Maritimes Butterfly Records. iNaturalist.org and iNaturalist.ca.
2	Neily, T.H. & Pepper, C.; Toms, B. 2020. Nova Scotia lichen database [as of 2020-03-18]. Mersey Tobeatic Research Institute.
2	O'Neil, S. 1998. Atlantic Salmon: Northumberland Strait Nova Scotia part of SFA 18. Dept of Fisheries & Oceans, Atlantic Region, Science. Stock Status Report D3-08. 9 recs.
2	Olsen, R. Herbarium Specimens. Nova Scotia Agricultural College, Truro. 2003.
2	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.
2	Prince Edward Island National Park. 2014. Prince Edward Island National Park Herbarium. Parks Canada Agency, PEINP, 39 recs.
2	Sabine, M. 2016. NB DNR staff incidental Black Ash observations. New Brunswick Department of Natural Resources.
2	Thompson, R. 2018. Williamsdale Quarry Expansion Project, NS, Environmental Assessment rare plants. Dexter Construction Company Limited.
1	Amirault, D.L. 2005. 2005 Peregrine Falcon Survey. Canadian Wildlife Service, Sackville, unpublished data. 27 recs.
1	Bagnell, B.A. 2003. Update to New Brunswick Rare Bryophyte Occurrences. B&B Botanical, Sussex, 5 recs.
1	Barney, T. 2020. Text message to Sean Blaney from Ted Barney with photograph of large Snapping Turtle at White Birch Impoundment, Westmorland Co., NB. pers. comm., 1 record.
1	Belland, R.J. 2012. PEI moss records from New York Botanical Garden. NYBG Virtual Herbarium, Web site: http://sciweb.nybg.org/science2/vii2.asp 135 recs.
1	Belliveau, A.G. 2014. Plant Records from Southern and Central Nova Scotia. Atlantic Canada Conservation Data Centre, 919 recs.
1	Belliveau, A.G. 2018. E.C. Smith Herbarium and Atlantic Canada Conservation Data Centre Fieldwork 2018. E.C. Smith Herbarium, 6226 recs.
1	Blaney, C.S. 1999. Fieldwork 1999. Atlantic Canada Conservation Data Centre. Sackville NB, 292 recs.
1	Blaney, C.S. 2014. 2014 Bank Swallow colony observation, Westcock, NB. Atlantic Canada Conservation Data Centre.
1	Blaney, C.S. 2019. Atlantic Canada Conservation Data Centre Fieldwork 2019. Atlantic Canada Conservation Data Centre.
1	Bouchard, A. Herbar Marie-Victorin. Universite de Montreal, Montreal QC. 1999.
1	Bredin, K.A. 2000. NB & NS Bog Project, fieldwork. Atlantic Canada Conservation Data Centre, Sackville, 1 rec.
1	Bredin, K.A. 2002. NB Freshwater Mussel Fieldwork. Atlantic Canada Conservation Data Centre, 30 recs.
1	Cameron, R.P. 2009. Erioderma pedicellatum database, 1979-2008. Dept Environment & Labour, 103 recs.
1	Cameron, R.P. 2012. Rob Cameron 2012 vascular plant data. NS Department of Environment, 30 recs.
1	Chapman, C.N. (Cody). 2020. Nova Scotia Black Ash (Fraxinus nigra) field observations by Confederacy of Mainland Mi'kmaq. Forestry Program, Confederacy of Mainland Mi'kmaq.
1	Chaput, G. 1999. Atlantic Salmon: Miramichi & SFA 16 Rivers. Dept of Fisheries & Oceans, Atlantic Region, Science Stock Status Report D3-05. 6 recs.
1	Christie, D.S. 2000. Christmas Bird Count Data, 1997-2000. Nature NB, 54 recs.
1	Clark, R. 2021. Email to S. Blaney, re: Wood Turtle observation from near Hunters Home, Queens Co., NB., May 20 2021. Rosemarie Clark <rsmr_clrk.luvsfam@hotmail.ca>, 1 record.
1	Clavette, A., and others. 2013. Peregrine Falcon nesting information from NatureNB listserv. NatureNB.
1	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.
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	Cormier, R. 2019. Wood Turtle observation. pers. comm. to J.L. Churchill.
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	Cronin, P. & Ayer, C.; Dube, 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	Desilets-Starrak, J. 2015. Wood Turtle record. Pers. comm. to E. Tremblay, Parks Canada.
1	Doucet, D.A. & Edsall, J.; Brunelle, P.-M. 2007. Miramichi Watershed Rare Odonata Survey. New Brunswick ETF & WTF Report, 1211 recs.
1	Doucet, D.A. 2007. Fieldwork 2007: Insects (minus Odonata). ACCDC Staff, 1 rec.
1	Doucet, D.A. 2008. Wood Turtle Records 2002-07. Pers. comm. to S. Gerriets, 7 recs, 7 recs.
1	Duffy, L.-A. 2002. Prince Edward Island National Park Butterfly Survey. Heritage Protection, Prince Edward Island National Park.
1	Edsall, J. 2007. Personal Butterfly Collection: specimens collected in the Canadian Maritimes, 1961-2007. J. Edsall, unpubl. report, 137 recs.

# recs	CITATION
1	Elizabeth Spence. 2020. Email from Elizabeth Spence to John Klymko about the occurrence of a Wood Turtle in Westmorland County, New Brunswick. Pers. comm.
1	Freudenstein, John V. 1997. A Monograph of Corallorhiza (Orchidaceae). Harvard Papers in Botany, 1:5-51.
1	Gautreau-Daigle, H. 2007. Rare plant records from peatland surveys. Coastal Zones Research Institute, Shippagan NB. Pers. comm. to D.M. Mazerolle, 39 recs.
1	Giberson, D. 2008. UPEI Insect Collection. University of Prince Edward Island, 157 recs.
1	Giroux, P. 2013. Personal communication concerning species at risk in and around PEI NP, PE. Winter 2013. Pers. comm.
1	Godbout, V. 2001. Recherche de l'Aster du St-Laurent (Symphyotrichum laurentianum) dans les marais sales du sud-est du Nouveau-Brunswick. Irving Eco-centre, la Dune du Bouctouche, 23 pp.
1	Goltz, J.P. 2007. Field Notes: <i>Listera australis</i> at Kouchibouguac National Park. , 7 recs.
1	Harding, R.W. 2008. Harding Personal Insect Collection 1999-2007. R.W. Harding, 309 recs.
1	Haughian, S. 2019. <i>Pannaria lurida</i> observations in Nova Scotia and New Brunswick. Nova Scotia Museum.
1	Hill, N.M. 1994. Status report on the Long's bulrush <i>Scirpus longii</i> in Canada. Committee on the Status of Endangered Wildlife in Canada, 7 recs.
1	Hinds, H.R. 2000. Rare plants of Fundy in Rare Plants of Fundy: maps. Wissink, R. (ed.) Parks Canada, 2 recs.
1	Houle, F.; Haber, E. 1990. Status of the Gulf of St. Lawrence Aster, <i>Aster laurentianus</i> (Asteraceae) in Canada. <i>Can. Field-Nat.</i> , 104:455-459. 3 recs.
1	Kelly, Glen 2004. Botanical records from 2004 PEI Forestry fieldwork. Dept of Environment, Energy & Forestry, 71 recs.
1	Kirkland, G.L. Jr. & Schmidt, D.F. 1982. Abundance, habitat, reproduction & morphology of forest-dwelling small mammals of NS & south-eastern NB. <i>Can. Field-Nat.</i> , 96(2): 156-162. 1 rec.
1	Kirkland, G.L. Jr., Schmidt, D.F. & Kirkland, C.J. 1979. First record of the long-tailed shrew (<i>Sorex dispar</i>) in New Brunswick. <i>Can. Field-Nat.</i> , 93: 195-198. 1 rec.
1	Klymko, J. Partial database of the Agriculture Canada Charlottetown Research Station Insect Collection butterfly specimens. Atlantic Canada Conservation Data Centre. 2016.
1	Klymko, J. Univeriste de Moncton insect collection butterfly record dataset. Atlantic Canada Conservation Data Centre. 2017.
1	Klymko, J.J.D. 2010. Miscellaneous observations reported to ACCDC (zoology). Pers. comm. from various persons, 3 recs.
1	LaFlamme, C. 2008. Discovery of <i>Goodyera pubescens</i> at Springdale, NB. Amec Earth and Environmental. Pers. comm. to D.M. Mazerolle, 1 rec.
1	Lajeunesse, D. et al. 2002. PEINP Collection. Parks Canada, PEI National Park, 9 recs.
1	Lantz, Joan; Lantz, Keith . 2015. eBird record of Sandhill Crane from Chapman Settlement, NS. eBird.org.
1	Loo, J. & MacDougall, A. 1994. GAP analysis: Summary Report. Fundy Model Forest, 2 recs.
1	MacAuley, M. 2020. Email to Sean Blaney regarding <i>Agalinis paupercula</i> var. <i>parviflora</i> at Malagash Station, NS. pers. comm., 2 records.
1	MacPhail, V. Bee and syrphid specimens from MSc research. Pers. comm., J. Klymko. 2006.
1	Madden, A. 1998. Wood Turtle records in northern NB. New Brunswick Dept of Natural Resources & Energy, Campbellton, Pers. comm. to S.H. Gerriets. 16 recs.
1	Martin, Alyssa. 2021. Email to Sean Blaney regarding Wood Turtle sighting, NB. pers. comm.
1	McAlpine, D.F. & Collingwood, L. 1989. Rare Salamander Survey in Fundy National Park. Fundy National Park, Internal Documents, 1 rec.
1	McAlpine, D.F. 1983. Species Record Cards. Fundy National Park, Library, 1 rec.
1	McLellan, N. 2013. Discovery of extensive <i>Nuphar lutea</i> ssp. <i>rubrodisca</i> population at Tyne Valley. Ducks Unlimited, 1 record.
1	Miller, D.G. 2013. Peregrine Falcon nesting information from birdingnewbrunswick.ca. birdingnewbrunswick.ca.
1	Mills, E. Connell Herbarium Specimens, 1957-2009. University New Brunswick, Fredericton. 2012.
1	Mills, Elizabeth and Bishop, Gart. 2020. <i>Cuscuta cephalanthi</i> record, Grand-Barachois, NB. Chapman-Lam, Colin J. (ed.) pers. comm., 1.
1	Neily, T.H. & Pepper, C.; Toms, B. 2013. Nova Scotia lichen location database. Mersey Tobeatic Research Institute, 1301 records.
1	Novak, Pam. 2017. Email to John Klymko regarding <i>Chelydra serpentina</i> record.
1	Parker, M. 2018. East Coast Aquatics ACCDC 2018 Report. East Coast Aquatics, 12 records.
1	Porter, C.J.M. 2014. Field work data 2007-2014. Nova Scotia Nature Trust, 96 recs.
1	Rankin, Andrew. 2017. Second-ever N.S. sighting: Big brown bat turns up in Oxford. The Chronicle Herald online edition (Herald News).
1	Simpson, D. Collection sites for Black Ash seed lots preserved at the National Tree Seed Centre in Fredericton NB. National Tree Seed Centre, Canadian Forest Service. 2016.
1	Smith, M. 2013. Email to Sean Blaney regarding <i>Schizaea pusilla</i> at Caribou Plain Bog, Fundy NP. pers. comm., 1 rec.
1	Smith, M.E.M. 2008. AgCan Collection. Agriculture Canada, Charlottetown PE, 44 recs.
1	Sollows, M.C., 2009. NBM Science Collections databases: Coccinellid & Cerambycid Beetles. New Brunswick Museum, Saint John NB, download Feb. 2009, 569 recs.
1	Spicer, C.D. 2004. Specimens from CWS Herbarium, Mount Allison Herbarium Database. Mount Allison University, 5939 recs.
1	Standley, L.A. 2002. <i>Carex haydenii</i> in Nova Scotia. , Pers. comm. to C.S. Blaney. 4 recs.
1	Steeves, R. 2004. <i>Goodyera pubescens</i> occurrence from Colpitts Brook, Albert Co. , Pers. comm. to C.S. Blaney. 1 rec.
1	Stevens, C. 1999. Cam Stevens field data from PEI vegetation plots. Sent along with specimens to C.S. Blaney. UNB masters research project, 732 recs.
1	Toner, M. 2005. Lynx Records 1996-2005. NB Dept of Natural Resources, 48 recs.
1	Trajkovic, V.K. 2017. Wood turtles inventory miramichi watershed 2017. Miramichi River Environmental Action Committee, 22 records.
1	Tremblay, E., Craik, S.R., Titman, R.D., Rousseau, A. & Richardson, M.J. 2006. First Report of Black Terns Breeding on a Coastal Barrier Island. <i>Wilson Journal of Ornithology</i> , 118(1):104-106. 1 rec.
1	Vinson, Neil. 2018. Record of <i>Saxifraga paniculata</i> from Fundy NP, emailed to S. Blaney 19 July 2018. Pers. comm.
1	Vinson, N. 2018. Email to S. Blaney regarding new occurrence of <i>Saxifraga paniculata</i> on Point Wolfe River. Parks Canada, 1 record.
1	Vinson, N. 2019. Eastern Waterfan record from Long Reach Brook, Fundy National Park, June 12, 2019. Parks Canada Agency, Fundy National Park, 1 record.
1	Vinson, Neil. 2016. Emails to Sean Blaney regarding yellow flower (<i>Primula veris</i>) and coastal habitat leaf rosettes (<i>Primula laurentiana</i>) in Fundy National Park. pers. comm., 2 rec.
1	White, S. 2019. Notable species sightings, 2018. East Coast Aquatics.
1	Wissink, R. 2000. Four-toed Salamander Survey results, 2000. Fundy National Park, Internal Documents, 1 rec.
1	Young, A.D., Titman, R.D. 1986. Costs and benefits to Red-breasted Mergansers nesting in tern and gull colonies. <i>Can. J. Zool.</i> , 64: 2339-2343.
1	Zahavich, J. 2017. Canada Warbler and Olive-sided Flycatcher records 2017. Island Nature Trust, 14 recs.
1	Zahavich, J.L. 2017. Locations of Round-leaved Orchid (<i>Platanthera orbiculata</i>) at Townshend Woodlot and Bird Island. Island Nature Trust, 2 records.