

# **APPENDICES**

## **APPENDIX A**

### **ADDITIONAL INFORMATION ON PUBLIC INVOLVEMENT**



## FUNDY ISLES TRANSMISSION POWER LINE PROJECT



The Fundy Isles Submarine Cables provide electricity to Deer Island to Campobello Island, Campobello Island and Grand Manan Island. The original cables were installed in 1978 and are nearing the end of their useful life.

In order to maintain a reliable feed to the Fundy Isles NB Power proposes to install new cables between Deer Island and Campobello Island and between Campobello Island and Grand Manan Island while the existing cables remain in service.

The new cables will be rated higher than the existing to allow for the potential addition of future renewable energy projects.

The existing cables will remain in service for the foreseeable future. No decision with respect to their removal has been taken. We are currently assessing the different options.

[Download project maps](#)

Below is a timeline for the proposed project:

PROJECT ACTIVITIES	TIMELINES
EIA Submission	Fall 2017
EIA Determination	Spring 2018
Cable Manufacture	2018-2019 (6-8 months)
Land Based Work - HDD	2018
Land Based Work - Termination sites	2018 - 2019
Cable Installation	Summer 2019
Cable Terminations	Fall 2019
In-Service Date	Fall 2019

NB power is required to conduct public engagement as part of the permitting process which includes an Environmental Impact Assessment. Therefore, we invite you to attend an open house to learn more about the project including the type of work, easements, environmental impacts and project timelines.

### TWO OPEN HOUSES ARE SCHEDULED:

Thursday, September 7, 2017  
5 pm to 8 pm  
Grand Manan Community Centre  
1021 Route 776  
Grand Manan, NB

### PROJECTS

Fundy Isles Transmission Power Line Project

Kedgwick transmission line upgrade

Mactaquac Life Achievement Project >

Pilot Projects >

PowerShift Atlantic

Woodstock-Houlton International Power Line Project





# ISLAND TIMES



GRAND MANAN ISLAND, N.B. \$4.07 (3.54 + tax) Vol. 22, #5. SEPTEMBER 2017

## ROTARY FESTIVAL 2017 - ANOTHER HIT

What a great festival! I am very proud of it - but it was only possible because of the huge amount of help from Rotarians and non-Rotarians.

The week began on July 29 with the Norman Ingersoll Men's and Elmina Cook Women's golf tournaments. Robbie Russell won the men's, and Holly Cadieux won the women's. Daphne Dykhuizen won the Callaway trophy. The Mini-putt tournament was the following day with Emily Ingersoll, Lanaya Harvey, Mackenzie Russell and Kurtis Waycott taking first place.

Heidi and Deane Griffin had their boat poker run that evening. This was a sell out - not surprisingly - and it was a great evening. The stops included Seal Cove, Ingalls Head and North Head. Michael Linton and Alex Farnham tied for first, with Jana Gatta taking second place. Everyone had a great time.

Tuesday night was our first outdoor



Fishermen's Competition, at Seal Cove wharf. Holding the competition outside was a bit of a gamble, but it paid off. Thanks to the excellent organizing committee of Angie Russell Saunders, Jasenda Miller, Heidi Greene, Lindsay Green Griffin, Bonnie Morse and Tammy Brown! Everything went smoothly. Weather wise, it could not have been a better evening. Mason Ingersoll was our MC, and he did a great job. He was funny, and paid attention to everything, and moved things along.

The kids' competition was first - they baited pockets, painted buoys and hauled traps. Molly Miller and Chloe Budgell won the ages 6 - 8 category, and Rowan Miller and Noah Leonard won the ages 9 - 11 category (photo next page). Next was the women's banding and shelling competition. Terrilynn

Left - Festival Photos from Claus F. Wolter  
Top, Chloe Budgell; Bottom, Molly Miller



**Mike Plume**  
Plume Financial Services  
mplume@nb.sympatico.ca

494 Queen Street  
Fredericton  
N.B. E3B 1B6

Office: 506-462-7260  
Cell: 506-440-6196  
Fax: 506-462-0910

- RRSP's
- TFSA's
- RESP's
- Annuities
- Retirement
- Life Insurance
- Health Insurance
- Disability Insurance,
- Critical Illness Insurance
- Group Benefits

### INSIDE THE SEPTEMBER 2017 ISSUE

Rotary Festival - Another Hit by Susan Ballantyne .....	2
The Buzz from Wayne Sturgeon .....	5
Grand Manan and the Great War by Roger Nason .....	6
Grand Manan Art Gallery .....	16
Phil Ells Memorial Golf Tournament .....	17
AUGUST @ The Library .....	22
Out of the Past.....	24
NB Power - Invitation, Open House.....	26



**Énergie NB Power**

1 866 754-7727

www.nbpower.com



---

## INVITATION – OPEN HOUSES

---

### Fundy Isles Transmission Line Project

NB Power is inviting the public to attend an open house to discuss a potential project to install new cables between Deer Island, Campobello and Grand Manan to keep providing the Fundy Isles with safe and reliable power. The open house will give the community the opportunity to meet with representatives and learn more about the proposed project.

Two open houses will take place on:

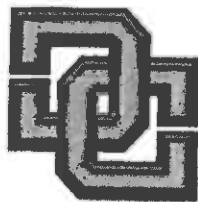
**Thursday, September 7th, 2017**  
5 pm to 8pm  
Grand Manan Community Centre  
1021 Route 776  
Grand Manan, NB

**Wednesday, September 13th, 2017**  
5 pm to 8pm  
Campobello Village Mart  
924 Route 774  
Campobello Island, NB

— AN INVESTMENT IN RELIABILITY —

# DUTCHMEN

CONTRACTING



Excavating  
Bulldozing  
Top Soil  
Septic Systems  
Paving  
Boom Trucking  
Aquaculture / Fisheries  
Construction  
Hydro Seeding

---

Bev Fleet 662-5157

Allen Morse 662-5302

---

Office 662-8194

Fax 662-9187

Email: [dutchmencontracting@hotmail.com](mailto:dutchmencontracting@hotmail.com)



**Énergie NB Power**

1 866 754-7727  
[www.nbpower.com](http://www.nbpower.com)



---

## INVITATION – OPEN HOUSES

---

### Fundy Isles Transmission Line Project

NB Power is inviting the public to attend an open house to discuss a potential project to install new cables between Deer Island, Campobello and Grand Manan to keep providing the Fundy Isles with safe and reliable power. The open house will give the community the opportunity to meet with representatives and learn more about the proposed project.

The open house will take place on:

**Wednesday, September 13th, 2017**

5 pm to 8pm

Campobello Village Mart

924 Route 774

Campobello Island, NB

————— **AN INVESTMENT IN RELIABILITY** —————



## THE PROPOSED PROJECT

The Fundy Isles Submarine Cables form part of the 69 kV Line from Deer Island to Campobello Island (3.4 km) and from Campobello Island to Grand Manan Island (16.4km). The original cables were installed in 1978 and are nearing the end of their useful life.

In order to maintain a reliable feed to the Fundy Isles NB Power proposes to install two new cables between Deer Island and Campobello Island and between Campobello Island and Grand Manan Island while the existing cables remain in service. The new cables will be rated higher than the existing to allow for the potential addition of future renewable energy projects.

The existing cables will remain in service for the foreseeable future. No decision with respect to their removal has been taken. We are currently assessing the different options.

## PROJET PROPOSÉ

Les câbles sous-marins aux îles de Fundy font partie de la ligne de transport de 69 kV, soit de l'île Deer à l'île Campobello (3,4 kilomètres) et de l'île Campobello à l'île Grand Manan (16,4 kilomètres). Les câbles originaux ont été installés en 1978 et approchent la fin de leur vie utile.

Afin de continuer d'alimenter les îles de Fundy de façon fiable, Énergie NB propose l'installation de deux nouveaux câbles entre l'île Deer et l'île Campobello, et entre l'île Campobello et l'île Grand Manan pendant que les câbles existants demeurent en service. Les nouveaux câbles auront une cote supérieure à celle des câbles existants afin de permettre l'addition potentielle pour des futurs projets d'énergie renouvelable.

Les câbles existants resteront en service pour un avenir prévisible. Aucune décision quant à leur enlèvement n'a été prise. Nous évaluons actuellement les différentes options.





## PROJECT INFRASTRUCTURE

The Project would include the following elements:

- One segment of submarine cable from Deer Island to Campobello Island, approximately 3.4 km in length.
- One segment of submarine cable from Campobello Island to Grand Manan Island, approximately 16.4 km in length.
- Continuation of the submarine cables in the intertidal zones to the existing riser stations at Chocolate Cove on Deer Island, Wilsons Beach and Little Whale Cove on Campobello Island, and Long Eddy Point on Grand Manan Island will be accomplished using Horizontal Directional Drilling (HDD) or Open Cut Trenching (OCT).
- New cable riser stations will be installed adjacent to the existing sites. The new cable riser stations will include riser poles, dead end structures and other electrical equipment



## INFRASTRUCTURE DU PROJET

Le projet comprendra les éléments suivants :

- Un segment de câble sous-marin de l'île Deer à l'île Campobello, d'une longueur d'environ 3,4 kilomètres.
- Un segment de câble sous-marin de l'île Campobello à l'île Grand Manan, d'une longueur d'environ 16,4 kilomètres.
- La continuation des câbles sous-marins dans les zones intertidales aux postes de câbles existants de Chocolate Cove sur l'île Deer, de Wilsons Beach et Little Whale Cove sur l'île Campobello, et de Long Eddy Point sur l'île Grand Manan sera effectuée en utilisant le forage directionnel horizontal (FDH) ou des travaux en tranchée à ciel ouvert.
- De nouveaux postes de câbles seront installés adjacents aux sites existants. Les nouveaux postes de câbles comprendront des poteaux, des structures d'arrêt et d'autres équipements électriques.



## CONSULTATION

Public and stakeholders' consultations have been held and will be on-going to assist with the planning process, while seeking feedback on the proposed project. This engagement process included meetings with many different right holders and stakeholders including First Nations, regulatory agencies, local fishers, local residents, provincial government, municipalities, communities and the general public.

## CONSULTATION

Des consultations avec le public et les intervenants ont été organisées et se poursuivront afin d'aider le processus de planification, tout en cherchant des commentaires sur le projet proposé. Ce processus d'engagement comprenait des réunions avec divers détenteurs du droit et intervenants, y compris les Premières Nations, des organismes réglementaires, des pêcheurs locaux, des résidents locaux, le gouvernement provincial, les municipalités, les communautés, et le grand public.



## ABORIGINAL ENGAGEMENT

NB Power is committed to engaging and consulting with Maliseet and Mi'kmaq communities identified by the Crown. Activities will relate to supporting the Environmental Assessment process and the delegated Duty to Consult, which includes participation in community meetings to provide project information and gathering traditional knowledge and traditional land use data.

## PARTICIPATION DES AUTOCHTONES

Énergie NB est déterminée à engager et à consulter les collectivités Malécites et Mi'kmaq identifiées par la Couronne. Les activités de consultation porteront sur l'appui du processus l'étude d'impact sur l'environnement et de l'obligation de consulter, qui comprend la participation à des séances communautaires pour fournir de l'information sur les projets et la collecte de données sur l'utilisation traditionnelle des terres.



## REQUIRED PERMITS AND AUTHORIZATIONS

NB Power must receive Environmental Impact Assessment (EIA) Approval from the New Brunswick Department of Environment and Local Government (NBDELG) under the New Brunswick Clean Environment Act before construction can begin on the Fundy Isles Submarine Cable Replacement Project.

The Project may be subject to the following provincial and federal permits and authorizations:

### Provincial

- Certificate of determination from Minister of NBDELG, under the New Brunswick Clean Environment Act
- License of Occupation from the Department of Energy and Resource Development (DERD) to be finalized with lease agreements upon completion of the project

### Federal

- Approval to proceed under Section 67 of the Canadian Environmental Assessment Act 2012 (CEAA, 2012)
- Authorization under the Federal Fishers Act
- Authorization under the Navigation Protection Act

## PERMIS REQUIS ET AUTORISATIONS

Avant d'entamer le projet de remplacement des câbles sous-marins à îles de Fundy, Énergie NB doit recevoir l'approbation de l'étude d'impact sur l'environnement du ministère de l'Environnement et des Gouvernements locaux du Nouveau-Brunswick, en vertu de la Loi sur l'assainissement de l'environnement du Nouveau-Brunswick.

Le projet peut être sujet aux permis et autorisations fédéraux et provinciaux suivants :

### Permis provinciaux

- Certification de décision du ministère de l'Environnement et gouvernement local du Nouveau-Brunswick, en vertu de la Loi sur l'assainissement de l'environnement du Nouveau-Brunswick
- Permis d'occupation de ministère du Développement de l'énergie et des ressources, qui sera finalisé par des contrats de location au moment de l'achèvement du projet.

### Permis fédéraux

- Approbation en vertu de l'article 67 de Loi canadienne sur l'évaluation environnementale 2012 (LCEE, 2012)
- Autorisation en vertu de la Loi sur les pêches
- Autorisation en vertu de la Loi sur la protection des eaux navigables



## LAND AND PROPERTY

NB Power is committed to building and maintaining open, respectful relationships with landowners, municipalities, communities and all stakeholders engaged in, and affected by its projects.

Land acquisition requirements for the Fundy Isles Project are anticipated to be minimal and limited to the expansion of existing termination sites on Deer Island, Campobello Island and Grand Manan Island. All land acquisitions, or easements required for the project will be coordinated in an equitable and consistent manner that is fair to all parties.

NB Power land agents will initiate land discussions with affected property owners and the related acquisition process in early fall of 2017.

## TERRAINS ET BIENS

Énergie NB s'engage à bâtir et à maintenir de bonnes relations, respectueuses et ouvertes, avec les propriétaires, les municipalités, les communautés, et tous les intervenants qui participent ou qui sont touchés par ce projet.

Les exigences en matière d'acquisition de terrains pour le projet aux îles de Fundy devraient être minimales et limitées à l'expansion des postes de câbles sur les îles Deer, Campobello, et Grand Manan. Toute acquisition de terrain ou servitude nécessaire pour le projet sera coordonnée de façon équitable et constante, et juste pour toutes les parties.

Les agents de terre d'Énergie NB entreprendront les discussions portant sur les questions de terres avec les propriétaires touchés, et les processus d'acquisition associés au début de l'automne 2017.



## PROJECT TIMELINES

Project Activities	Timelines
EIA Submission	Fall 2017
EIA Determination	Spring 2018
Cable Manufacture	2018-2019 (6-8 months)
Land Based Work - HDD	2018
Land Based Work - Termination sites	2018 - 2019
Cable Installation	Summer 2019
Cable Terminations	Fall 2019
In-Service Date	Fall 2019

## CALENDRIER DU PROJET

Activités du projet	Échéanciers
Soumission de l'étude d'impact sur l'environnement	Automne 2017
Détermination de l'étude d'impact sur l'environnement	Printemps 2018
Fabrication des câbles	2018-2019 (6 à 8 mois)
Travaux terrestres — FDH	2018
Travaux terrestres — Postes de câbles	2018 - 2019
Installation de câbles	Été 2019
Raccordement de câbles	Automne 2019
Date de mise en service	Automne 2019



## CABLE SELECTION

- To protect the cable from fishing gear and anchors, the cable will be manufactured with double helical armour.
- The current proposal is to have a 240 mm<sup>2</sup> conductor size with a 50 MW capacity at 69 kV
- High voltage alternating current (HVAC) three-phase cable



## SÉLECTION DE CÂBLES

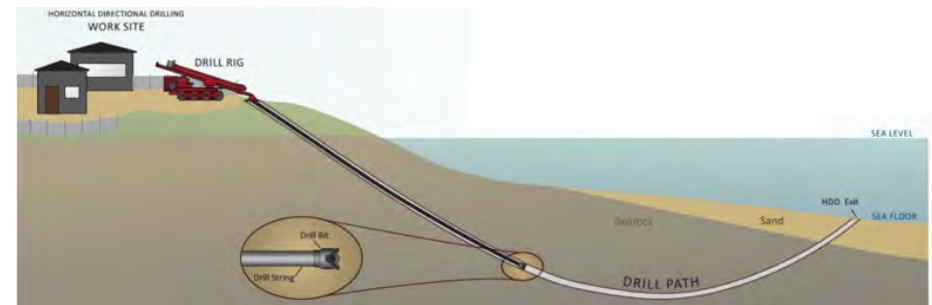
- Le câble sera fabriqué d'une armure hélicoïdale double afin de protéger le câble contre le matériel de pêche et les ancres.
- La proposition actuelle est que la dimension des conducteurs soit de 240 mm<sup>2</sup> avec une capacité de 50 MW à 69 kV
- Câble triphasé à courant alternatif à haute tension



## CABLE PLACEMENT METHOD



## MÉTHODE D'INSTALLATION DE CÂBLE

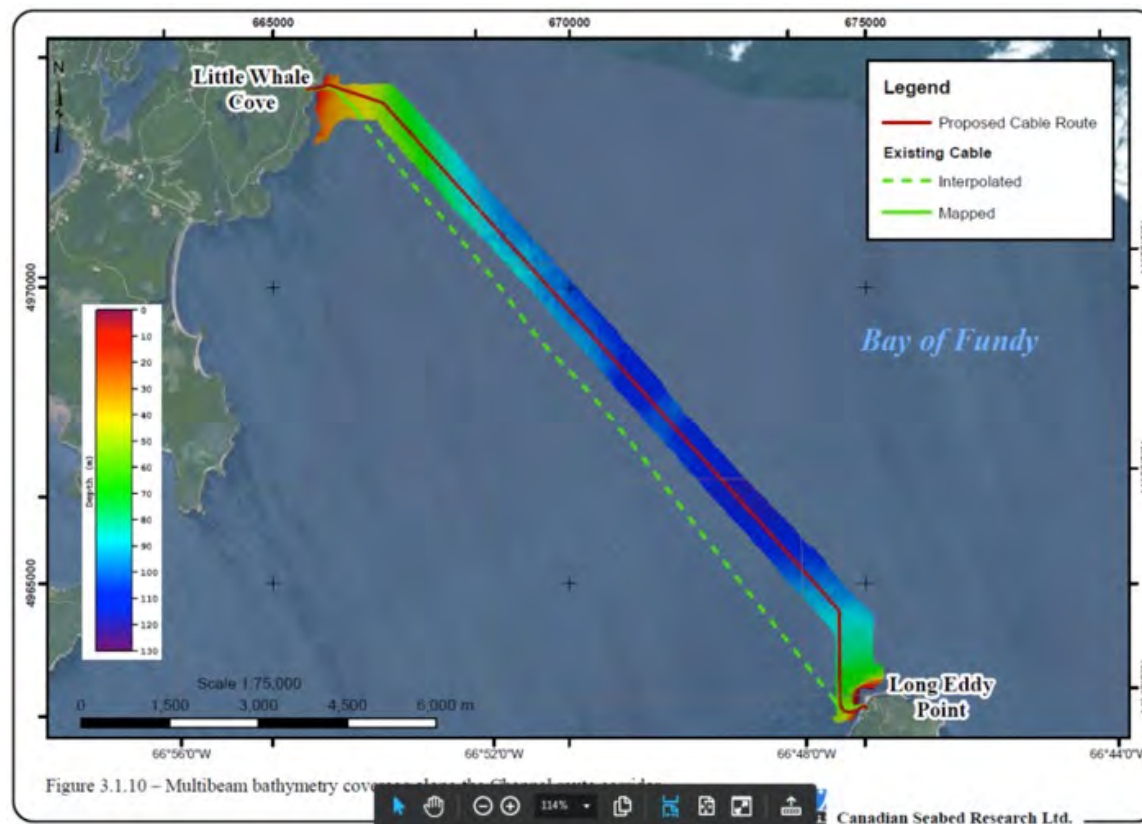






## MAPS OF PROPOSED ROUTE

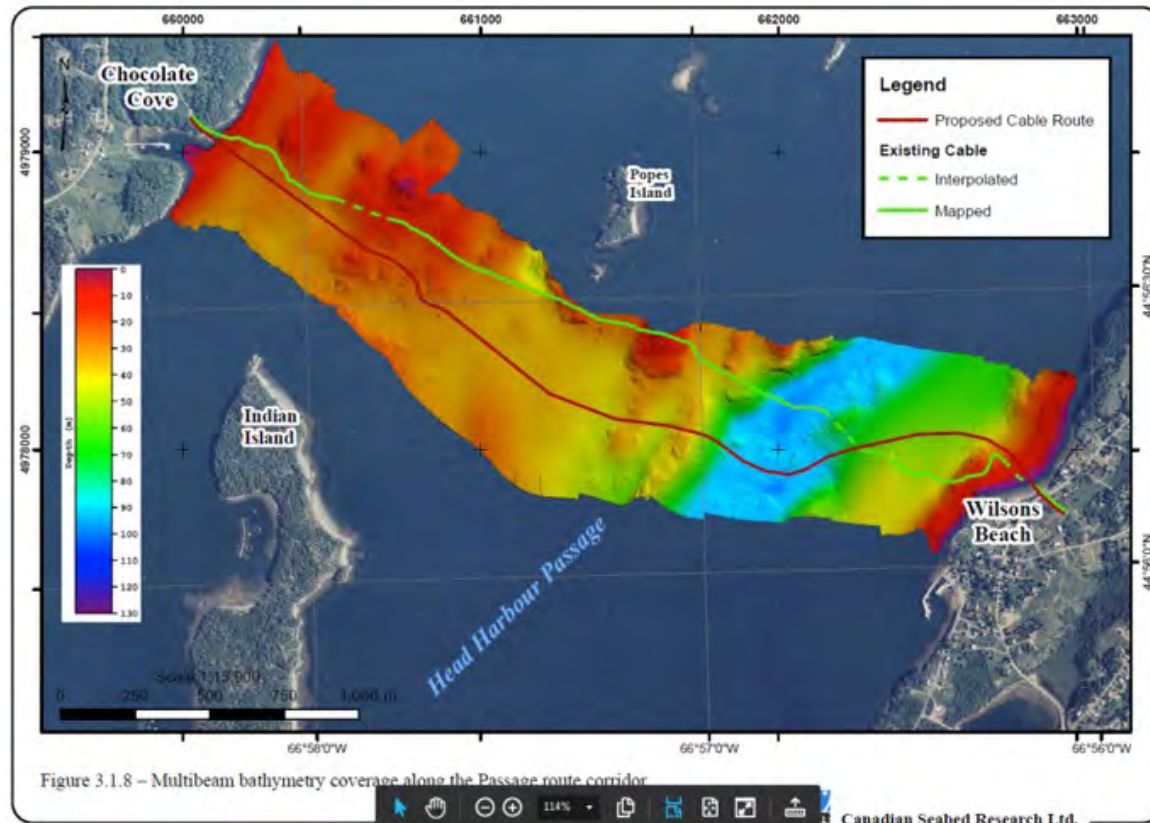
## ITINÉRAIRE PROPOSÉ





## MAPS OF PROPOSED ROUTE

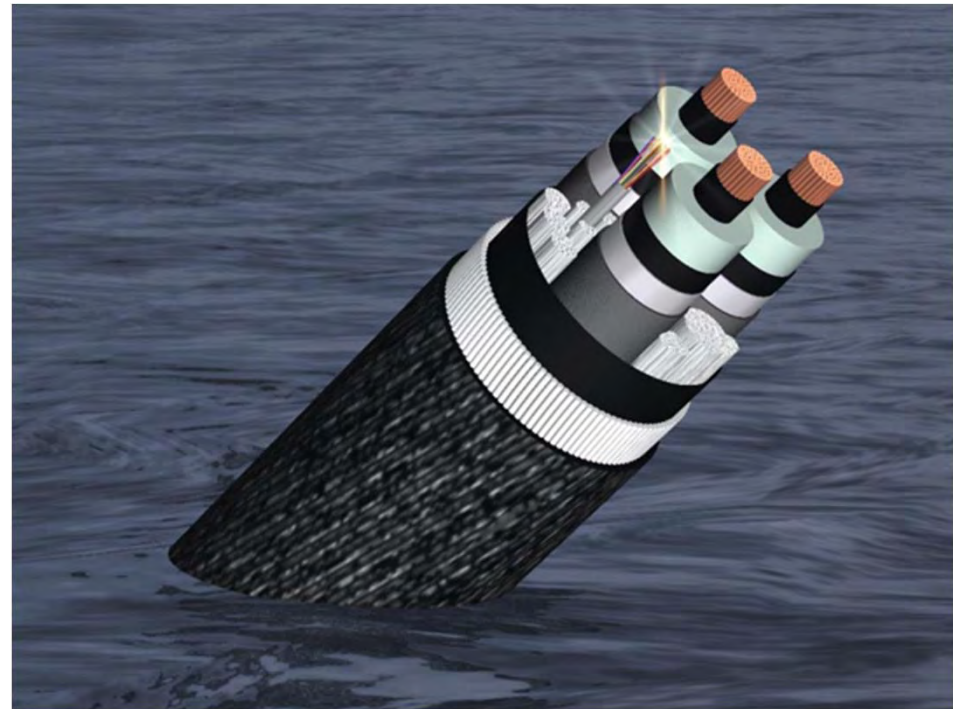
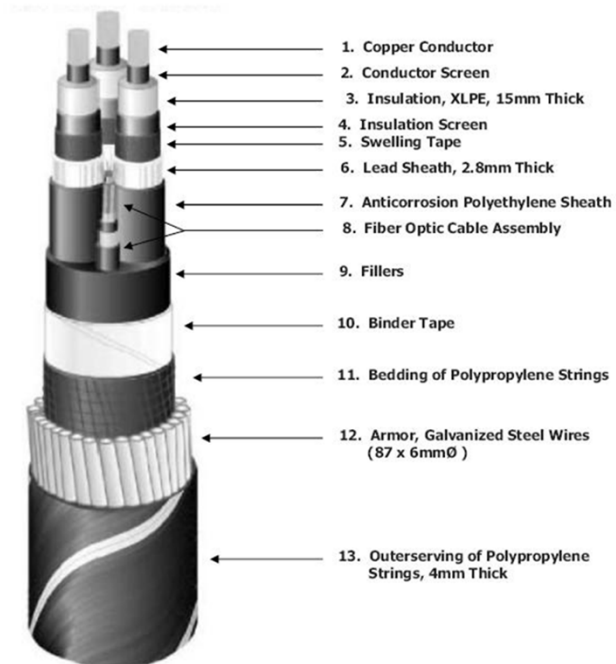
## ITINÉRAIRE PROPOSÉ





## CABLE PROTECTION

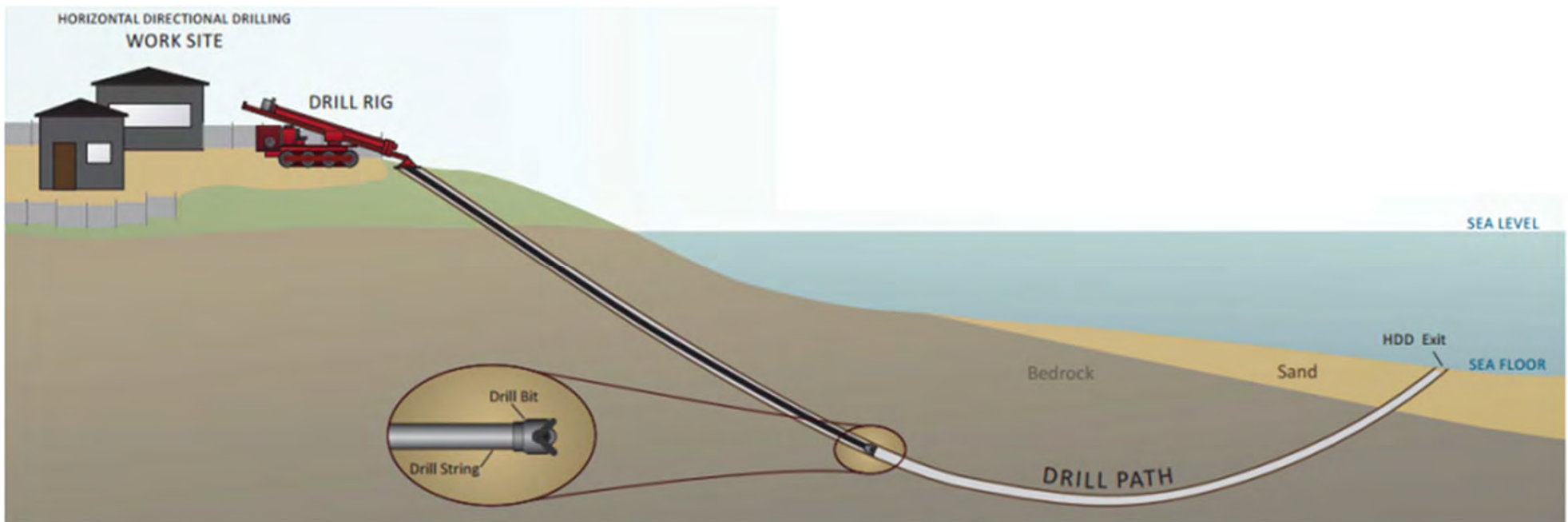
## PROTECTION DES CÂBLES





## CABLE BURIAL METHOD ON LAND

## MÉTHODE D'ENTERREMENT DU CÂBLE SUR LE TERRAIN





## CABLE BURIAL METHOD AT SEA



## MÉTHODE D'ENTERREMENT DES CÂBLES EN MER





## CABLE BURIAL METHOD AT SEA

## MÉTHODE D'ENTERREMENT DES CÂBLES EN MER





## CABLE BURIAL METHOD AT SEA

## MÉTHODE D'ENTERREMENT DES CÂBLES EN MER



INVESTING IN YOUR RELIABILITY

UN INVESTISSEMENT À LA FIABILITÉ



## TERMINATION SITE

## SITE DE RÉSILIATION



— INVESTING IN YOUR RELIABILITY —

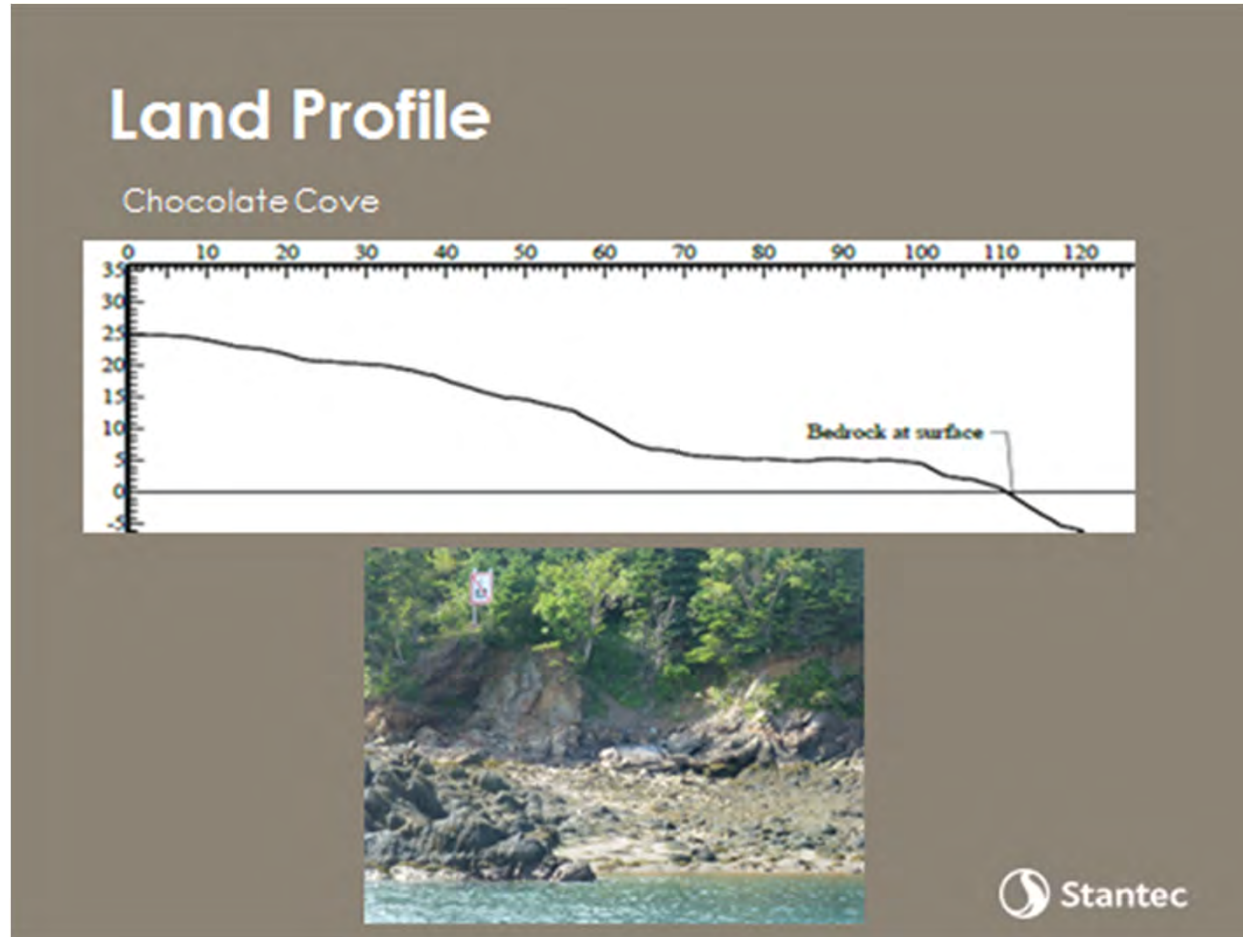
— UN INVESTISSEMENT À LA FIABILITÉ —





## LAND PROFILE

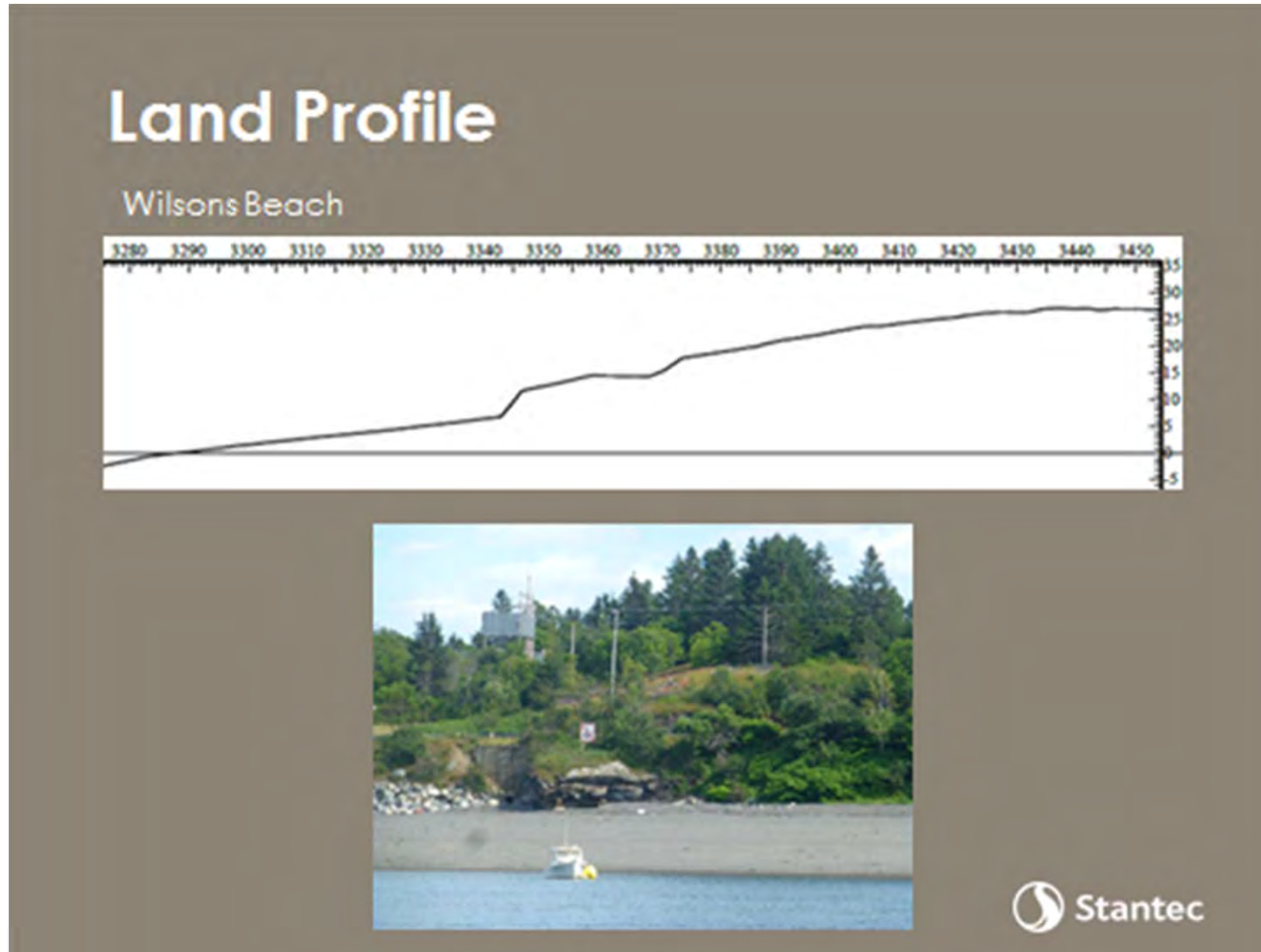
## PROFIL DE LA TERRE





## LAND PROFILE

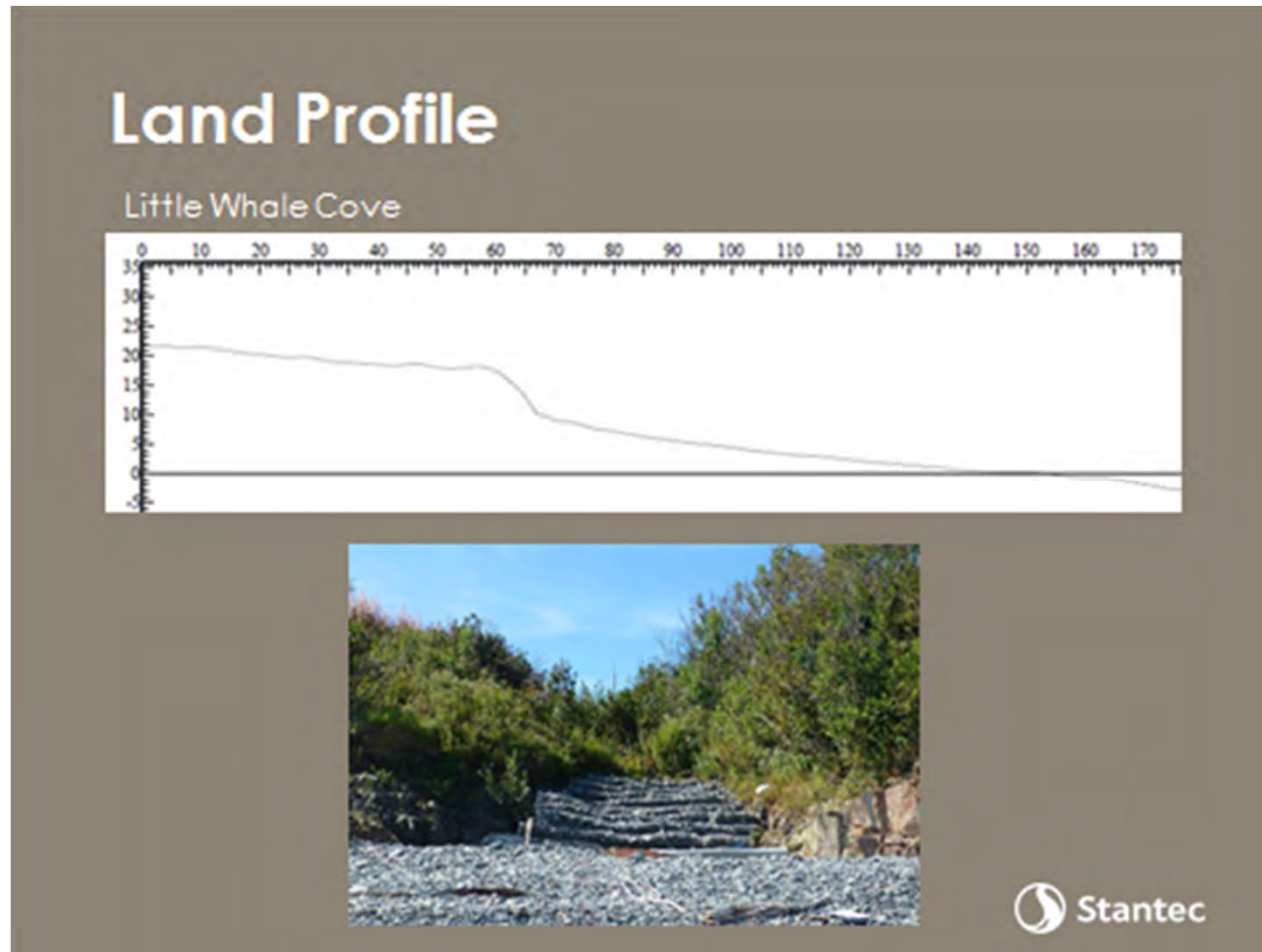
## PROFIL DE LA TERRE





## LAND PROFILE

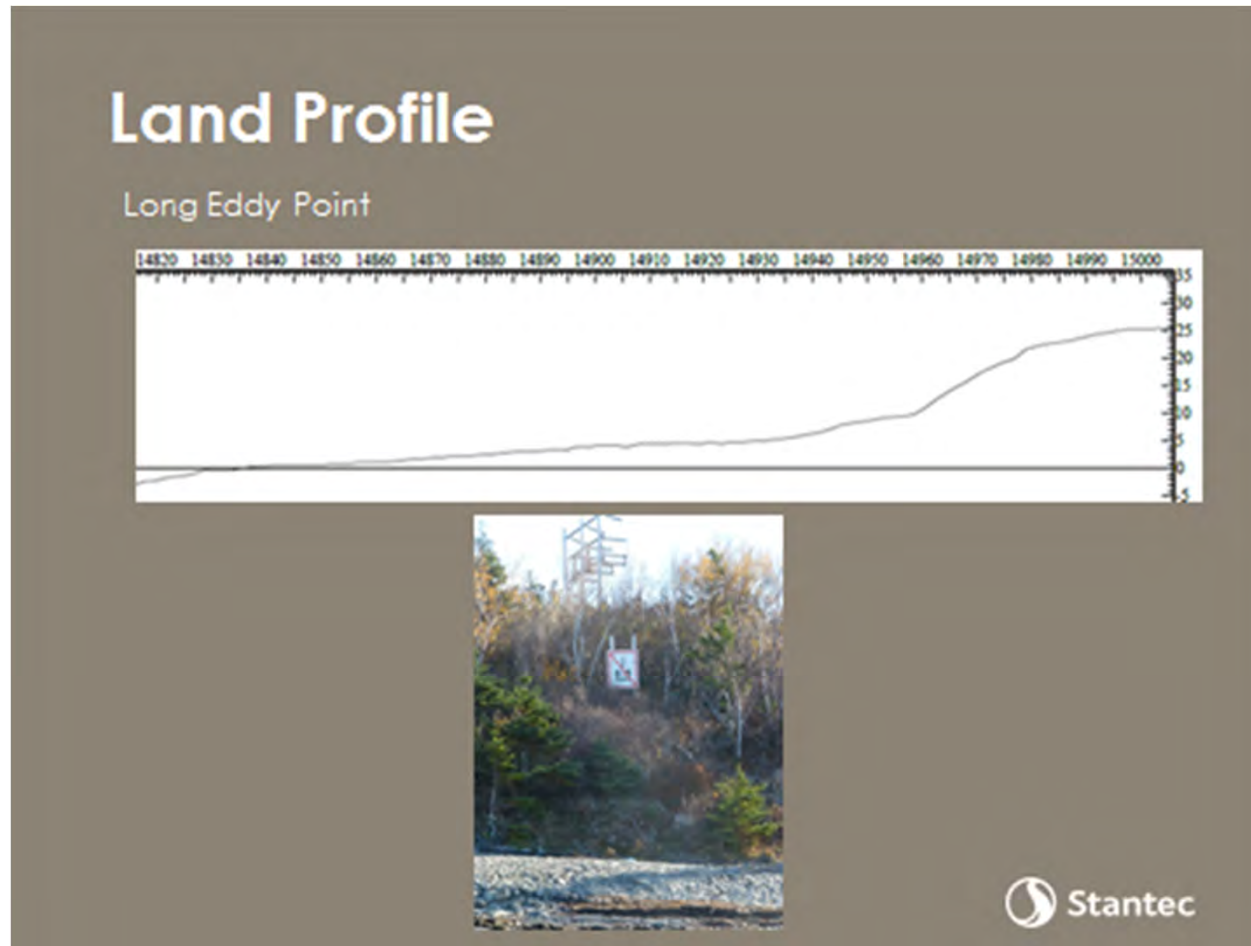
## PROFIL DE LA TERRE





## LAND PROFILE

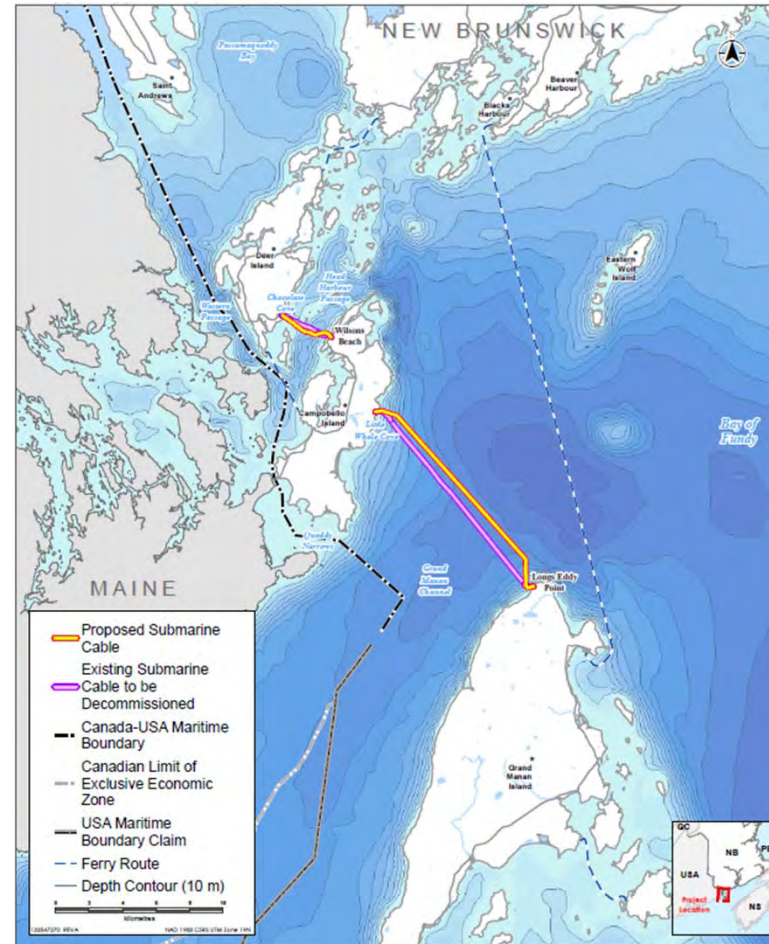
## PROFIL DE LA TERRE





## MAPS OF PROPOSED ROUTE

## ITINÉRAIRE PROPOSÉ



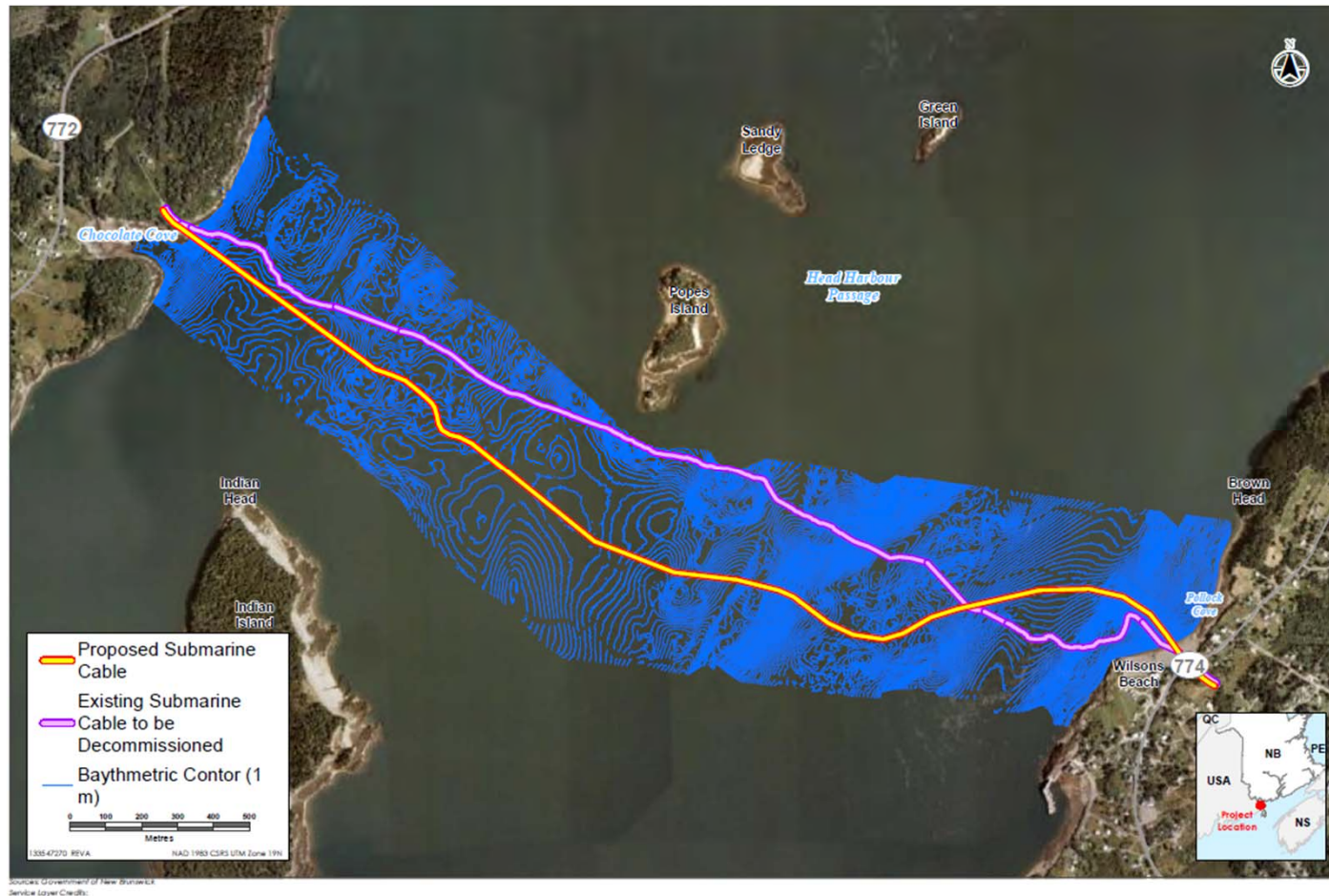
INVESTING IN YOUR RELIABILITY

UN INVESTISSEMENT À LA FIABILITÉ



## MAPS OF PROPOSED ROUTE

## ITINÉRAIRE PROPOSÉ



Submarine Cable from Deer Island to Campobello Island

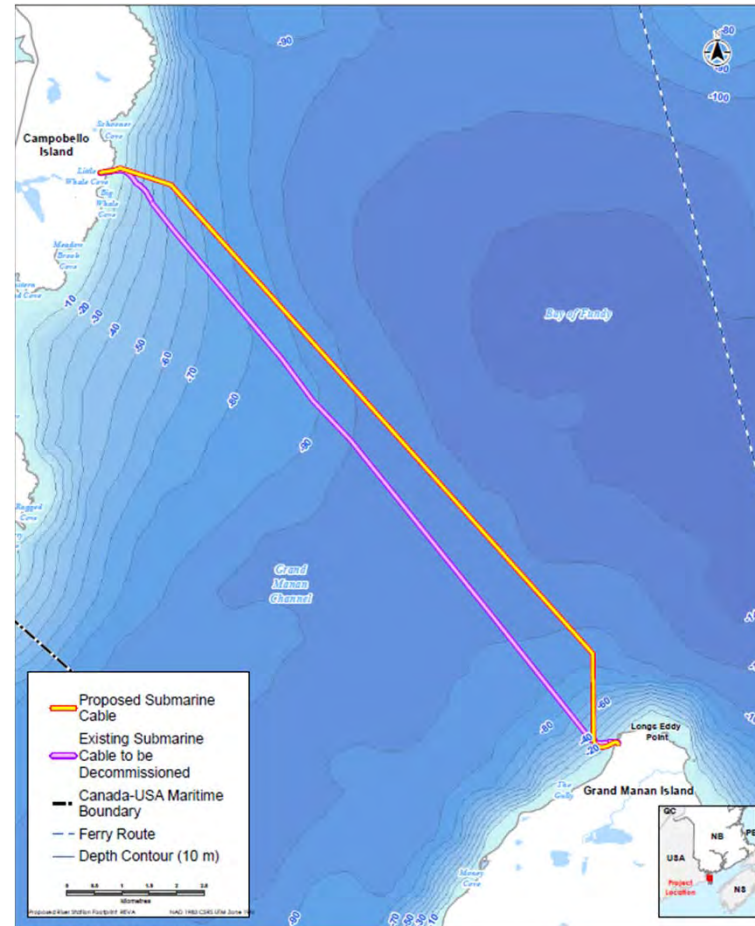
INVESTING IN YOUR RELIABILITY

UN INVESTISSEMENT À LA FIABILITÉ



## MAPS OF PROPOSED ROUTE

## ITINÉRAIRE PROPOSÉ



Submarine Cable from Campobello Island to Grand Manan Island

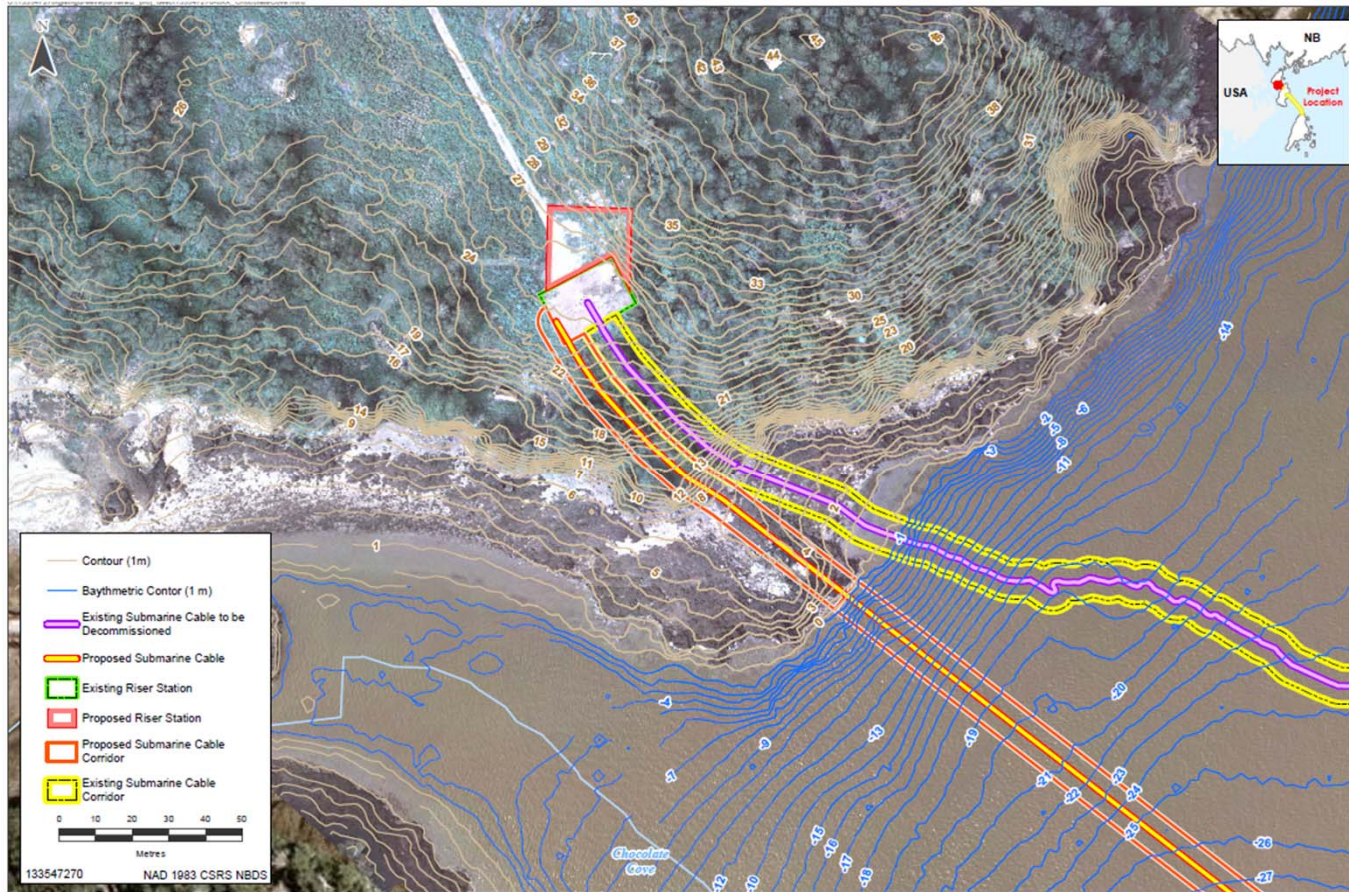
INVESTING IN YOUR RELIABILITY

UN INVESTISSEMENT À LA FIABILITÉ



## MAPS OF PROPOSED ROUTE

## ITINÉRAIRE PROPOSÉ



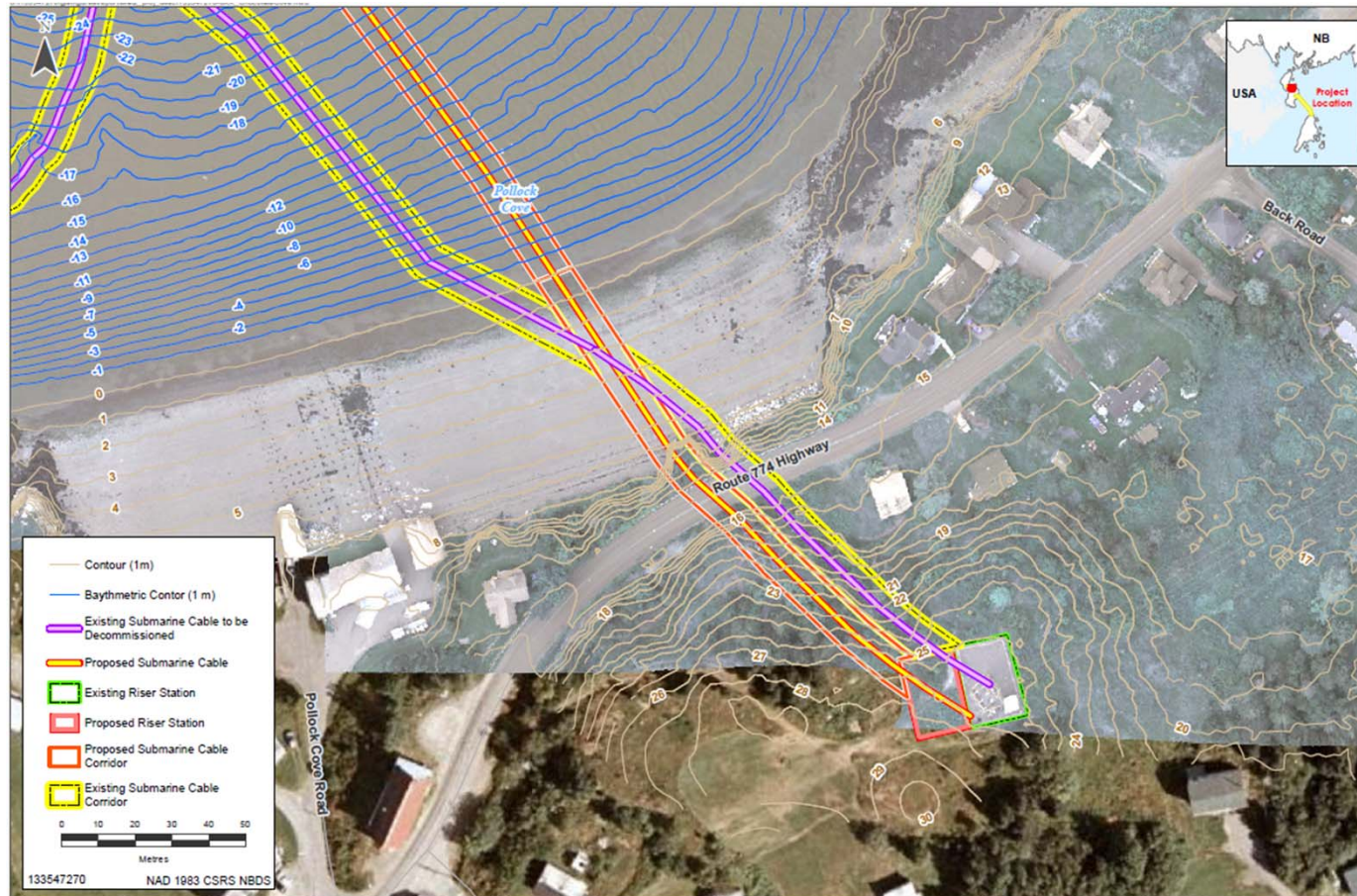
Chocolate Cove Landfall Site





## MAPS OF PROPOSED ROUTE

## ITINÉRAIRE PROPOSÉ



Wilsons Beach Landfall Site

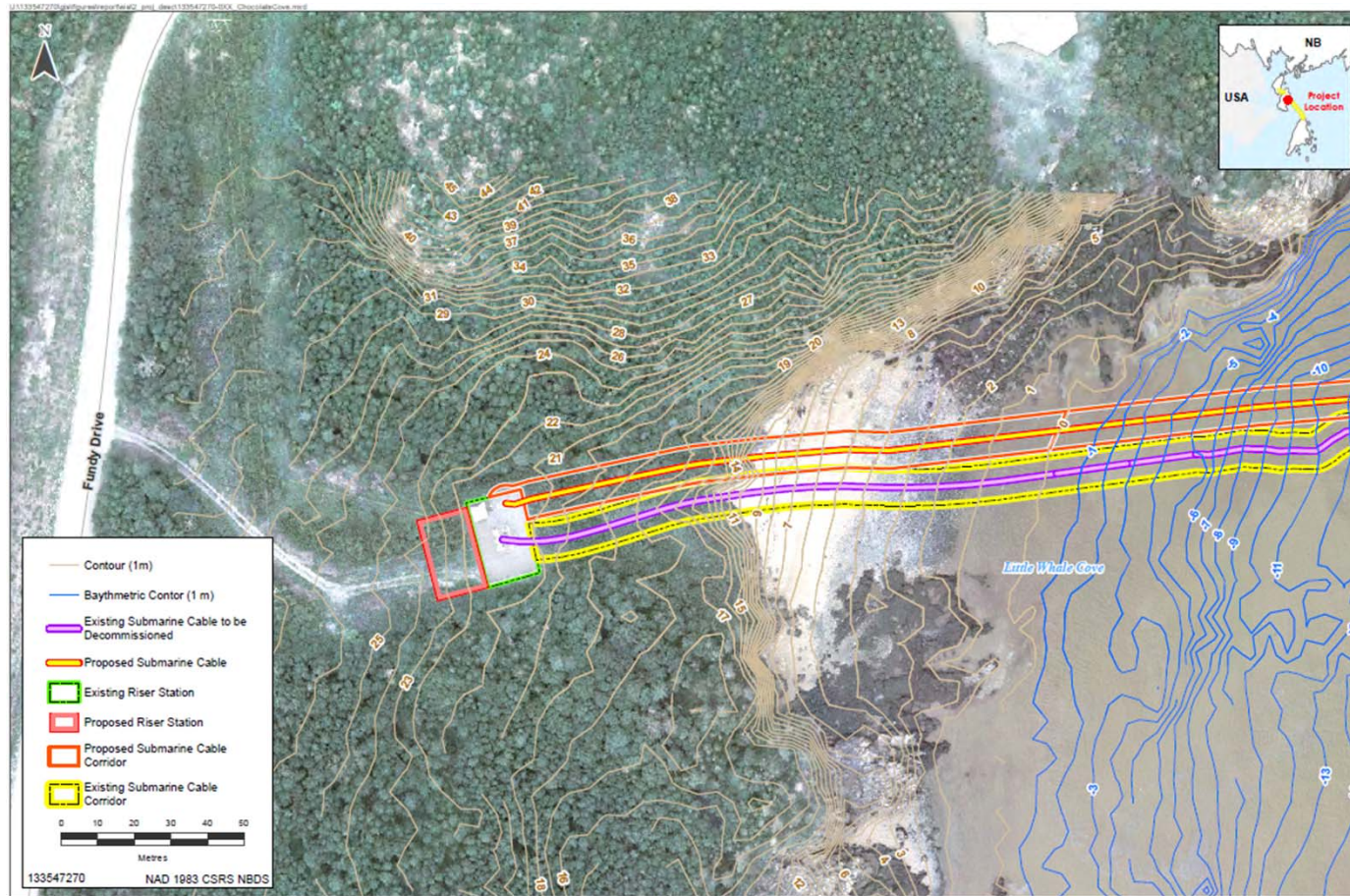
INVESTING IN YOUR RELIABILITY

UN INVESTISSEMENT À LA FIABILITÉ



# MAPS OF PROPOSED ROUTE

# ITINÉRAIRE PROPOSÉ



Little Whale Cove Landfall Site

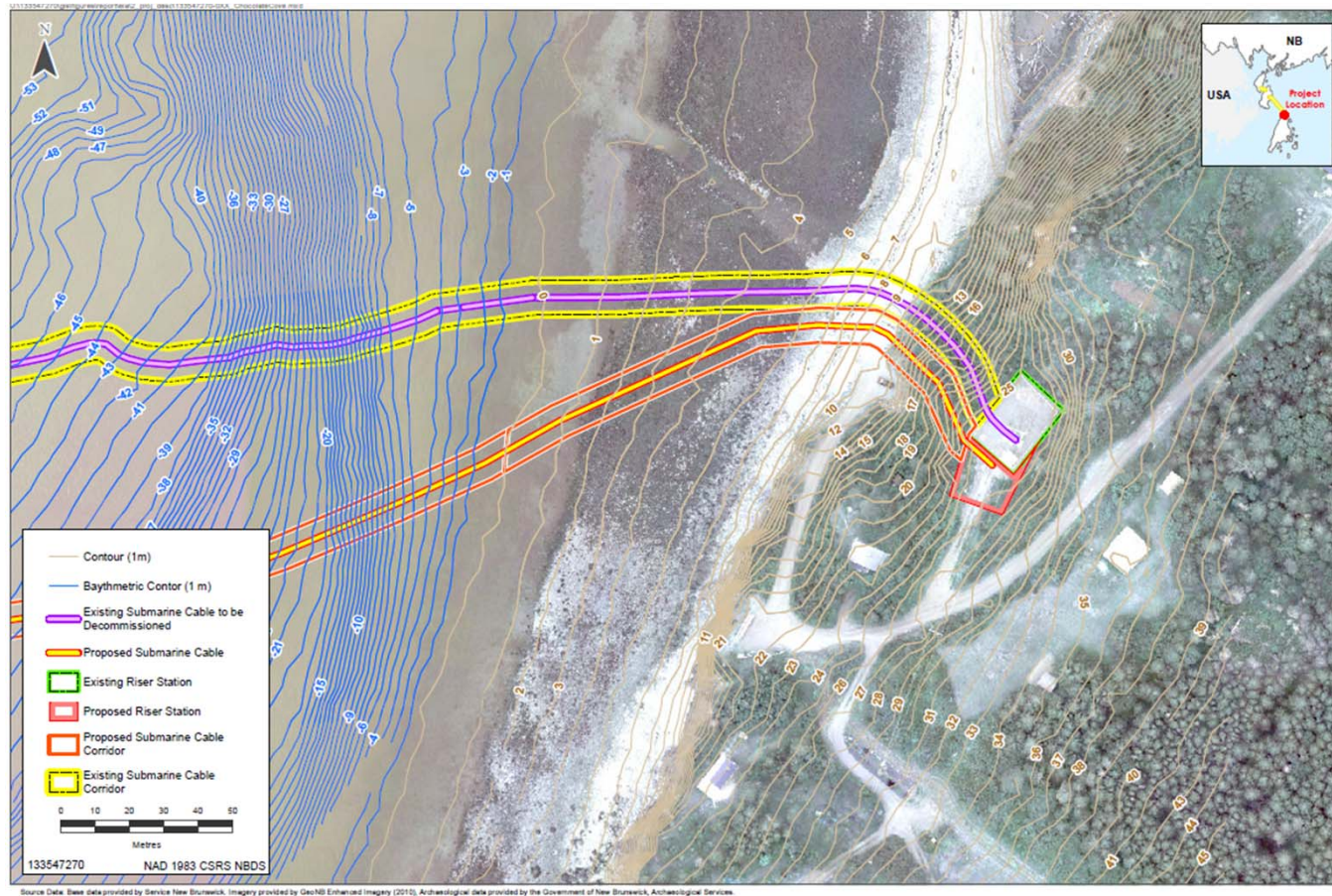
INVESTING IN YOUR RELIABILITY

UN INVESTISSEMENT À LA FIABILITÉ



## MAPS OF PROPOSED ROUTE

## ITINÉRAIRE PROPOSÉ





## Fundy Isles Submarine Cable Replacement Project Open House Exit Survey / Questionnaire de départ

---

1. How did you hear about today's open house? / Où avez-vous entendu parler des séances portes ouvertes?  
 Newspaper / Journaux  
 NB Power Employee / Employé(e) d'Énergie  
 Twitter  
 Radio  
 Word of Mouth / Bouche à oreille  
 Other / Autre
2. How long have you lived in the area? / Depuis combien d'années demeurez-vous dans la région?  
 Less than one year / Moins d'un an  
 6-10 years / années  
 16+ years / années  
 1-5 years / années  
 11-15 years / années
3. Which is your age range? / Quel est votre groupe d'âge ?  
 < 18       19-34       35-54       55+
4. How useful did you find the information presented at this event? / Comment utile était l'information présentée à cet évènement?  
 Very useful / Très utile  
 Somewhat useful / Un peu utile  
 Not very useful / Utile  
 Not usefull at all / Pas du tout utile
5. How satisfied are you with the information that was provided today? / Comment satisfaits êtes-vous de l'information fourni aujourd'hui?  
 Very satisfied / Très satisfait  
 Somewhat satisfied / Un peu satisfait  
 Not very satisfied / Satisfait  
 Not at all satisfied / Pas du tout satisfait

What information would you interested in learning more about? / Quelle autre information aimeriez- vous obtenir?

---

---

---

6. How effective were the displays, maps and handouts? / Comment efficaces étaient les placards, cartes et dépliants?

- Very effective / Très efficaces
- Effective / Efficaces

- Somewhat effective / Un peu efficaces
- Not at all effective / Pas du tout efficaces

7. Is there anything you would like to add? / Aimerez-vous ajouter autre chose?

---

---

---

Thank you for taking the time to fill out this questionnaire, your input is greatly appreciated.  
Merci d'avoir pris le temps de remplir ce questionnaire, vos commentaires sont appréciés.

Thank you to everyone who participated in the Open Houses for the Fundy Isles Cable Replacement Project. Your questions and feedback were very helpful. This email is intended to update participants in First Nation commercial fisheries, the FNFA and the GMFA on NB Power's efforts to place the cables in locations that will cause the least disturbance to existing fishing activities in response to questions, concerns and recommendations made during our Open House meetings in St. George, Grand Manan, Campobello and Deer Island in August and September of this year.

During the Open Houses the proposed routing options were reviewed between Deer Island & Campobello Island (Passage) and between Campobello and Grand Manan (Channel). The biggest issues identified were around commercial fishing and potential impacts the proposed routes might have on fishing activities in the Bay. We heard several specific comments from your members regarding the proposed cable routing including the following:

- "If the existing cable is going to remain in place why not put the new cable beside it and don't bury it?"
- "We all know where the cables are. Why put them in a different location?"
- "Why would you move them further apart and take away existing fishing areas?"
- "Doesn't it make more sense to put them beside each other and not bury them, wouldn't that save money?"

In addition to these comments, several members of the Fisherman's Associations helped to identify alternate routes for the cables. Members recommended alternate routes that would minimize impacts on existing fishing activities by avoiding existing fishing grounds and locating the two cables close to one another.

Once the open houses were complete the project team got together and reviewed all the feedback and input from all the participants. We agreed that the questions raised were valid and that the new routing options proposed were potentially viable. In order to prove the new routes additional survey work would need to be completed. The additional survey work would also be needed to support the Environmental Impact Assessment (EIA) submittal. Canadian Seabed Research (CSR) were engaged in September to do the additional surveys to confirm the sub-surface conditions as well as confirm the location of the existing cables. The surveys were completed in October and the results supported the proposed routing recommended by the Fisherman's Associations. The attached files show the existing and "new" proposed cable routing in the Passage and the Channel.

The attached maps for the Passage and the Channel show the following:

- Existing Location – Solid line is confirmed location of the cable and dashed line is interpolated location of the cable
- Proposed location – This is based on input during the open houses and confirmed by CSR
- The new Easements as defined by Department of Environment Resource Development (DERD) will be 3 x the depth of the water. This will allow for repairs if needed in the future. This is based on industry standard for submarine cables. The Easements allow for future access if required to perform a repair. The passage will be 240m wide (3 x 80m) and the channel will be 330m wide (3 x 110m).

The revised proposal for the passage (3.5km) and the channel (16.5km) is as follows:

- Stay a minimum of 30m away from the existing cable. The 30m is the minimum safe distance recommended between cables to allow for a safe repair. Additional distance is required to avoid the outcroppings of rock at Pope's Island for the Passage.
- Relocate the Easement so that it encompasses both cables. The centerline of the new Easement will be a theoretical line drawn in between the two cables.
- Bury the cables on a "best attempt basis" based on the subsurface conditions and safety considerations. Based on safe limits of approach and the fact that we cross cables at Wilson's Beach in the intertidal zone burial will be limited.

The current plan is to submit the EIA to the NBDELG on or before December 22<sup>nd</sup> based on the "new" proposed routing. We currently believe this is the best possible route with respect to all parties concerned as it minimizes the environmental footprint as well as minimizes the impact on the various fisheries in the region.

Please take the time to review and let me know if you have any questions or concerns.

**Wendi Wright P.Eng.**

Project Manager

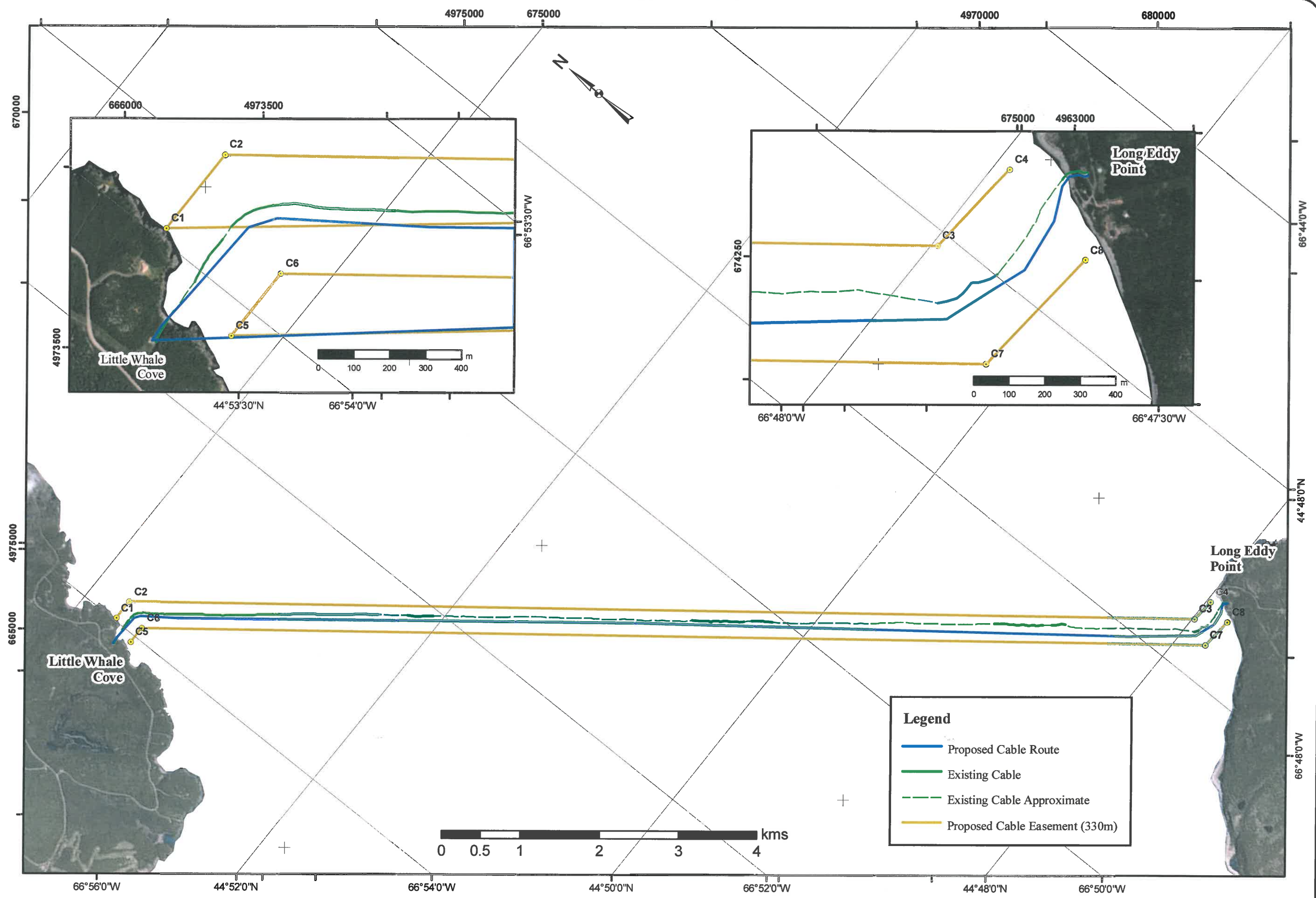
N.B. Power Corporation

(506) 458-4843 (direct)

(506) 461-0411 (cell)

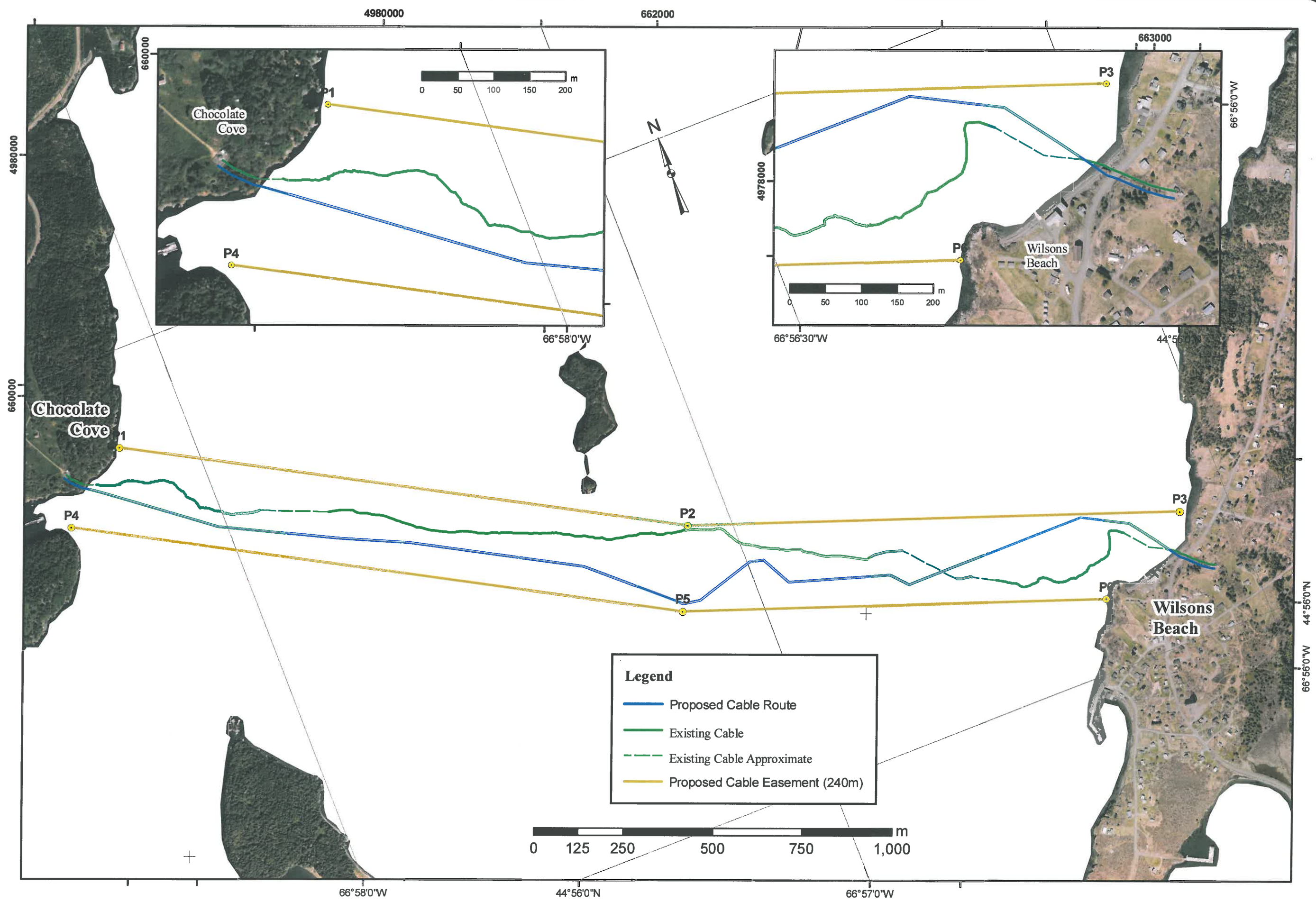
[wwright@nbpower.com](mailto:wwright@nbpower.com)





Proposed 330m Cable Easement within Grand Manan Channel.





Proposed 240m Cable Easement within Head Harbour Passage.

# UPDATE: Project would more than double Fundy Islands' electrical capacity

DERWIN GOWAN Telegraph-Journal  
August 22, 2017

Share this article

Facebook

Twitter

Email



From left, N.B. Power's Bob Garland and Wendi Wright, Darlene Norman-Brown with the Fundy North Fishermen's Association, and consulting engineer Wally MacDonald attended an open house in St. George on Tuesday night on upgrading electrical service to the Fundy Islands.  
Photo: Derwin Gowan/Telegraph-Journal

**ST. GEORGE** • NB Power hopes to more than double its capacity to take electricity to and from Campobello Island and Grand Manan by fall 2019.

Officials from the provincial utility and consulting engineers held an open house in St. George at supertime Tuesday to explain plans to lay 3.4 kilometres of new undersea transmission cable from Deer Island to Campobello Island, and 16.4 kilometres more from Campobello to Grand Manan.

This cable would replace 69KV cable laid in 1978 now nearing the end of its useful life, NB Power says.

The new cables would be rated for 69KV, the same as the old ones but would have wire big enough for 50 MVAs (megawatts) compared to the 20MVA limit now.

"It allows for potential load growth in the region," Wally MacDonald with Marengo Engineering Ltd. consulting firm in Charlottetown said in an interview at the open house in Magaguadavic Place community centre.

"We don't know what the future will bring but we're ready," Matthew Gorman, an environmental specialist with NB Power, said.

NB Power's project manager Wendi Wright put the global cost at \$30 to \$35 million said.

NB Power hosted the open house in St. George as an early step towards registering the Fundy Isles Transmission Power Line Project under New Brunswick's environmental impact assessment legislation, she and Gorman explained.

They plan a similar open house at Grand Manan's North Head Hall on Sept. 7, and one with the date yet to be set for Campobello Island.

Not many members of the public turned out to the three-hour session in St. George but NB Power expects more on Grand Manan and Campobello Island over concerns about digging an undersea trench and laying cable through scallop beds.

MacDonald, with engineering expertise in laying undersea cable, said the contractor will tow a contraption that looks like an inverted V snowplow with a boat to dig the trench, hoping to bury it possibly half a metre so that a scallop drag or fishing boat anchor will not snag it.

NB Power delivers electricity to the Fundy Isles via a 69KV transmission wires carried overhead by towers island-hopping from the mainland to Deer Island. The more expensive undersea cables take it from Deer Island to Campobello Island, and from there to Grand Manan.

The overhead wires from the mainland to Deer Island already have 50MVA capacity, so the upgraded undersea cables would bring the same service to the other islands.

Not only would the new six-inch undersea cables bring electrical power, the bundle would include a fibre optic cable to help NB Power manage its own assets but with enough capacity to open future possibilities.

The extra cost of the fibre optic cable would be negligible, MacDonald said. The fibre optic cable linking the islands would still not connect to the mainland but would be there when that day comes, he said.

"There's a potential there to work with Bell to get fibre to the islands," Wright said but, she stressed, "we do not want to be a telecommunications provider."

The new 50MVA cables open the possibility of developing renewable electrical generation from wind or other sources to feed electricity from the islands into the provincial grid, they said.

"There's been discussion in the area about wind generation," NB Power's director of engineering Bob Garland said in an interview; however, "There has not been enough capacity in the cable to make the investment worthwhile."

Last year's national census counted 797 people on Deer Island, 872 on Campobello Island, 2,360 on Grand Manan and 145 next door on White Head Island.

MacDonald said by way of comparison that Prince Edward Island gets by with about 200MVA service, so 50MVA should meet the needs of the four Fundy Islands for any demand for electricity for the projected 40-year life of the proposed new cables.

The permitting process includes public engagement, so NB Power will hold the open houses to talk about the type of work, easements, environmental impacts and timelines.

NB Power proposes to submit this project for provincial environmental review in October, hoping for a determination next spring.

Cable manufacturing would take six to eight months in 2018-19 with land-based work going on at the same time. The cable would be installed in the summer of 2019 to be in service by the fall, according to the proposed schedules on NB Power's website.

Share this article

Facebook

Twitter

Email

1 Comment

Telegraph Journal

JANET GARLAND

Recommend

Share

Sort by Best



Join the discussion...



ANDREW HOWARTH • 24 minutes ago

\$30 to \$35 million seems s a lot to fork out for 4000 odd people.

Reply • Share

ALSO ON TELEGRAPH JOURNAL

Greater Saint John

1 comment • 13 hours ago

PAM BYRNE — If "that's the way" your "nerves responded", then you need more than a lawyer's help... Perhaps a doctor would be more helpful.

The Daily Gleaner

3 comments • a day ago

VICKI WILLIS — Why was Social Services moved to the outskirts of the city and ServiceNB left in the downtown? Is that what you mean? Aside

Telegraph-Journal

4 comments • a day ago

Jeff McCanna — Depending on what it goes for I believe it could be a viable option. The exterior and interior are in apparently decent shape -

Times & Transcript

1 comment • a day ago

WAYNE MACARTHUR — When a politician thinks of the press in this way ,it makes little difference as he knows they will always be there to help him

Subscribe Add Disqus to your site Add Disqus Add Privacy

**Partnerships may bring fiber optic service  
New cable set for Fundy Isles  
by JD Rule**

Plans by NB Power to replace the subsea cable providing electric power to Campobello and Grand Manan include a special surprise: fiber optic cables that can be used to bring enhanced Internet connectivity to the Fundy Isles.

According to NB Power Project Manager Wendi Wright, the existing cable is currently operating "at about half capacity" but after 40 years is nearing its design lifetime. Wright, who spoke with Campobello residents at an open house at the community center on September 13, stressed that the existing cable is not showing any signs of failure but that it is time to install the replacement. Six representatives were present, including both engineers and environmental experts.

Diagrams provided by NB Power show that the cable, which includes three large conductors to provide three-phase power to the islands, also includes three bundles of fiber optic cables. "We don't really need these," said one of the representatives, "but since it costs very little to put them in it would be shortsighted not to." The cable, according to one engineer, costs "about three to four hundred dollars per meter," but the addition of the fiber lines only adds "about two dollars per meter" and nothing to the burial costs. He cited one case where a utility had not, until prompted, thought to include these lines but now leases them to an Internet provider, helping defray costs of the cable. According to representatives, NB Power will make the fiber optic cables available but restrict its own usage to system communications needs.

Brooke Young of the Deer Island/Campobello Fibre Project Inc. says, "This is a very positive development and absolutely is the pivotal component of achieving our goal of seeing a true physical fibre connection to the World Wide Web, which is an absolute necessity to the survival of our rural communities in today's digital world." The Deer Island/Campobello Fibre Project currently has an application in to the federal government's Connect to Innovate program. The proposal is the first phase of a two-phase plan to improve Internet service on Deer Island and Campobello. Young adds, "The undersea cable was 90% of the cost and the biggest hurdle of the second phase of our project. So now that this undersea cable component is being taken care of by NB Power, there should be absolutely no excuses from Bell [Aliant] or the federal government."

Young points out, during an interview, that the ability to connect to Campobello, Deer Island and Grand Manan will allow Internet service providers to offer service to a much larger population, making a project more economically attractive.

The planned installation will largely follow the existing cable route and utilize existing infrastructure such as the transformer station at Wilson's Beach. Operating at 69 kilovolts and with a capacity of 50 megawatts, the new cables will

"allow for the potential addition of future renewable energy projects," according to handout material.

Interference with fishing operations is not anticipated, said Wright. "The fishermen already know where the cable is. It's been on their charts for years." The cable is protected by "double helical armour" in case of accidental contact by an anchor or dragging gear.

NB Power anticipates completing the project in the fall of 2019. "People won't know when we switch it over," Wright says.

**APPENDIX B**  
**AC CDC DATA REPORT**



## DATA REPORT 5462: Deer Island, NB

Prepared 29 October 2015  
by J. Churchill, Data Manager

### CONTENTS OF REPORT

#### 1.0 Preface

- 1.1 Data List
- 1.2 Restrictions
- 1.3 Additional Information
- Map 1: Buffered Study Area

#### 2.0 Rare and Endangered Species

- 2.1 Flora
- 2.2 Fauna
- Map 2: Flora and Fauna

#### 3.0 Special Areas

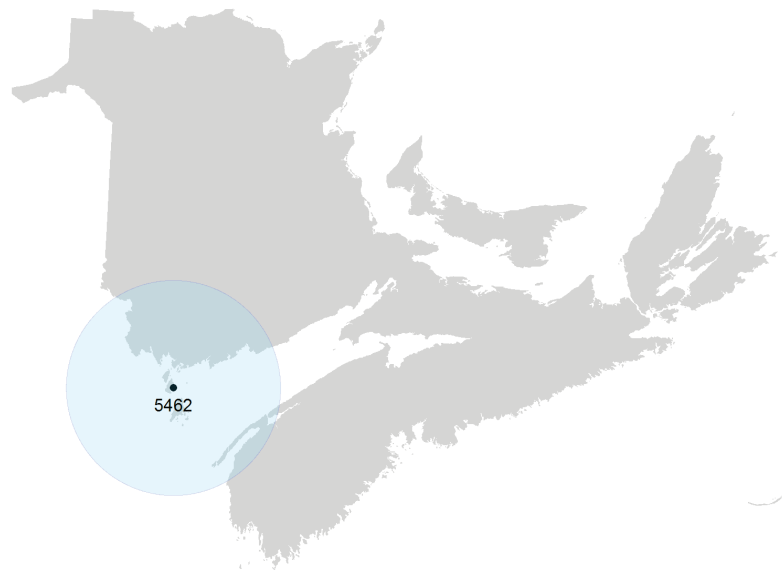
- 3.1 Managed Areas
- 3.2 Significant Areas
- Map 3: Special Areas

#### 4.0 Rare Species Lists

- 4.1 Fauna
- 4.2 Flora
- 4.3 Location Sensitive Species
- 4.4 Source Bibliography

#### 5.0 Rare Species within 100 km

- 5.1 Source Bibliography



Map 1. A 100 km buffer around the study area

## 1.0 PREFACE

The Atlantic Canada Conservation Data Centre (ACCDC) 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 ACCDC 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 ACCDC is supported by 6 federal agencies and 4 provincial governments, as well as through outside grants and data processing fees. URL: [www.ACCDC.com](http://www.ACCDC.com).

Upon request and for a fee, the ACCDC 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 ACCDC includes locations of managed areas with some level of protection, and known sites of ecological interest or sensitivity.

### 1.1 DATA LIST

Included datasets:

Filename	Contents
DeerIsNB_5462ob.xls	All Rare and legally protected <i>Flora and Fauna</i> within 5 km of your study area
DeerIsNB_5462ob100km.xls	A list of Rare and legally protected <i>Flora and Fauna</i> within 100 km of your study area
DeerIsNB_5462ma.xls	All <i>Managed Areas</i> in your study area
DeerIsNB_5462sa.xls	All <i>Significant Natural Areas</i> in your study area
DeerIsNB_5462bp.xls	Rare and common <i>Pelagic Birds</i> in your study area (CWS database)
DeerIsNB_5462wf.xls	Rare and common <i>Waterfowl</i> in your study area (CWS database)
DeerIsNB_5462mm.xls	Rare and common <i>Marine Mammals</i> in your study area
DeerIsNB_5462sf.xls	Rare and common <i>Saltwater Fish</i> in your study area (DFO database)



DeerIsNB_5462bc.xls	Rare and common <i>Colonial Birds</i> in your study area
DeerIsNB_5462bb.xls	Common <i>Breeding Birds</i> in your study area

## 1.2 RESTRICTIONS

The ACCDC 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 ACCDC 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 ACCDC 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) ACCDC 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) ACCDC 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 ACCDC data response.

## 1.3 ADDITIONAL INFORMATION

The attached file DataDictionary 2.1.pdf provides metadata for the data provided.

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

### Plants, Lichens, Ranking Methods, All other Inquiries

Sean Blaney, Senior Scientist, Executive Director

Tel: (506) 364-2658

[sblaney@mta.ca](mailto:sblaney@mta.ca)

### Animals (Fauna)

John Klymko, Zoologist

Tel: (506) 364-2660

[jklymko@mta.ca](mailto:jklymko@mta.ca)

### Plant Communities

Sarah Robinson, Community Ecologist

Tel: (506) 364-2664

[srobinson@mta.ca](mailto:srobinson@mta.ca)

### Data Management, GIS

James Churchill, Data Manager

Tel: (902) 679-6146

[jlchurchill@mta.ca](mailto:jlchurchill@mta.ca)

### Billing

Jean Breau

Tel: (506) 364-2657

[jrbreau@mta.ca](mailto:jrbreau@mta.ca)

Questions on the biology of Federal Species at Risk can be directed to ACCDC: (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 Stewart Lusk, Natural Resources: (506) 453-7110.

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 Sherman Boates, NSDNR: (902) 679-6146. To determine if location-sensitive species (section 4.3) occur near your study site please contact a NSDNR Regional Biologist:

**Western:** Duncan Bayne

(902) 648-3536

[baynedz@gov.ns.ca](mailto:baynedz@gov.ns.ca)

**Western:** Donald Sam

(902) 634-7525

[samdx@gov.ns.ca](mailto:samdx@gov.ns.ca)

**Central:** Shavonne Meyer

(902) 893-6353

[meyersj@gov.ns.ca](mailto:meyersj@gov.ns.ca)

**Central:** Kimberly George

(902) 893-5630

[georgeka@gov.ns.ca](mailto:georgeka@gov.ns.ca)

**Eastern:** Mark Pulsifer

(902) 863-7523

[pulsifmd@gov.ns.ca](mailto:pulsifmd@gov.ns.ca)

**Eastern:** Donald Anderson

(902) 295-3949

[andersdg@gov.ns.ca](mailto:andersdg@gov.ns.ca)

**Eastern:** Terry Power

(902) 563-3370

[powertd@gov.ns.ca](mailto:powertd@gov.ns.ca)

For provincial information about rare taxa and protected areas, or information about game animals, fish habitat etc., in Prince Edward Island, please contact Rosemary Curley, PEI Dept. of Agriculture and Forestry: (902) 368-4807.

## 2.0 RARE AND ENDANGERED SPECIES

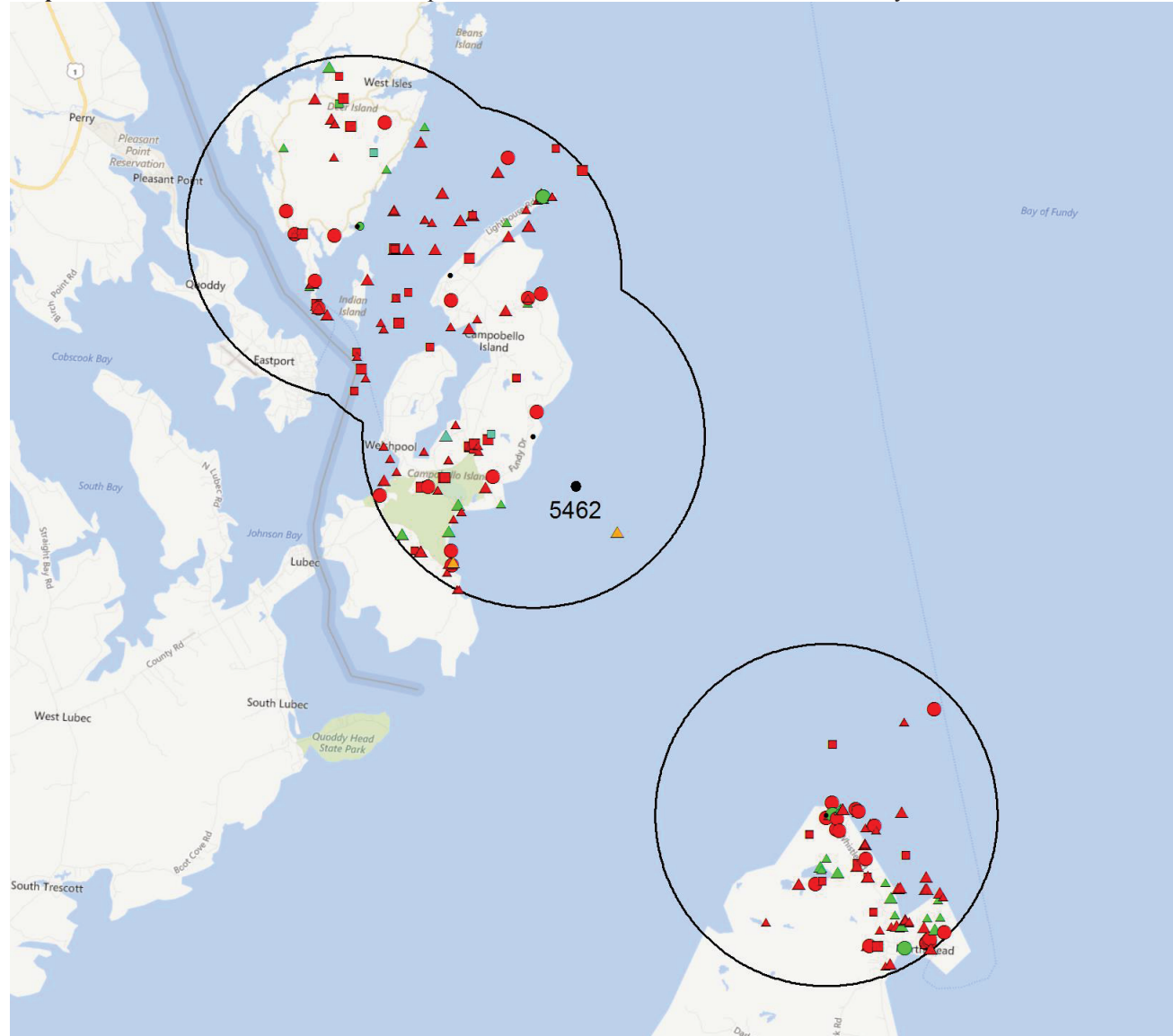
### 2.1 FLORA

A 5 km buffer around the study area contains 40 records of 23 vascular, 3 records of 3 nonvascular flora (Map 2 and attached: \*ob.xls).

### 2.2 FAUNA

A 5 km buffer around the study area contains 904 records of 62 vertebrate, 3 records of 3 invertebrate fauna (Map 2 and attached data files - see 1.1 Data List). 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 5 km of the study area.



#### RESOLUTION

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

#### HIGHER TAXON

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

### 3.0 SPECIAL AREAS

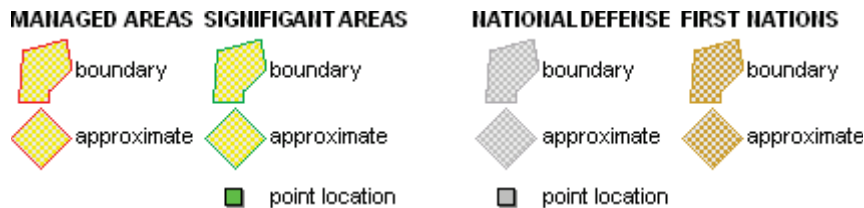
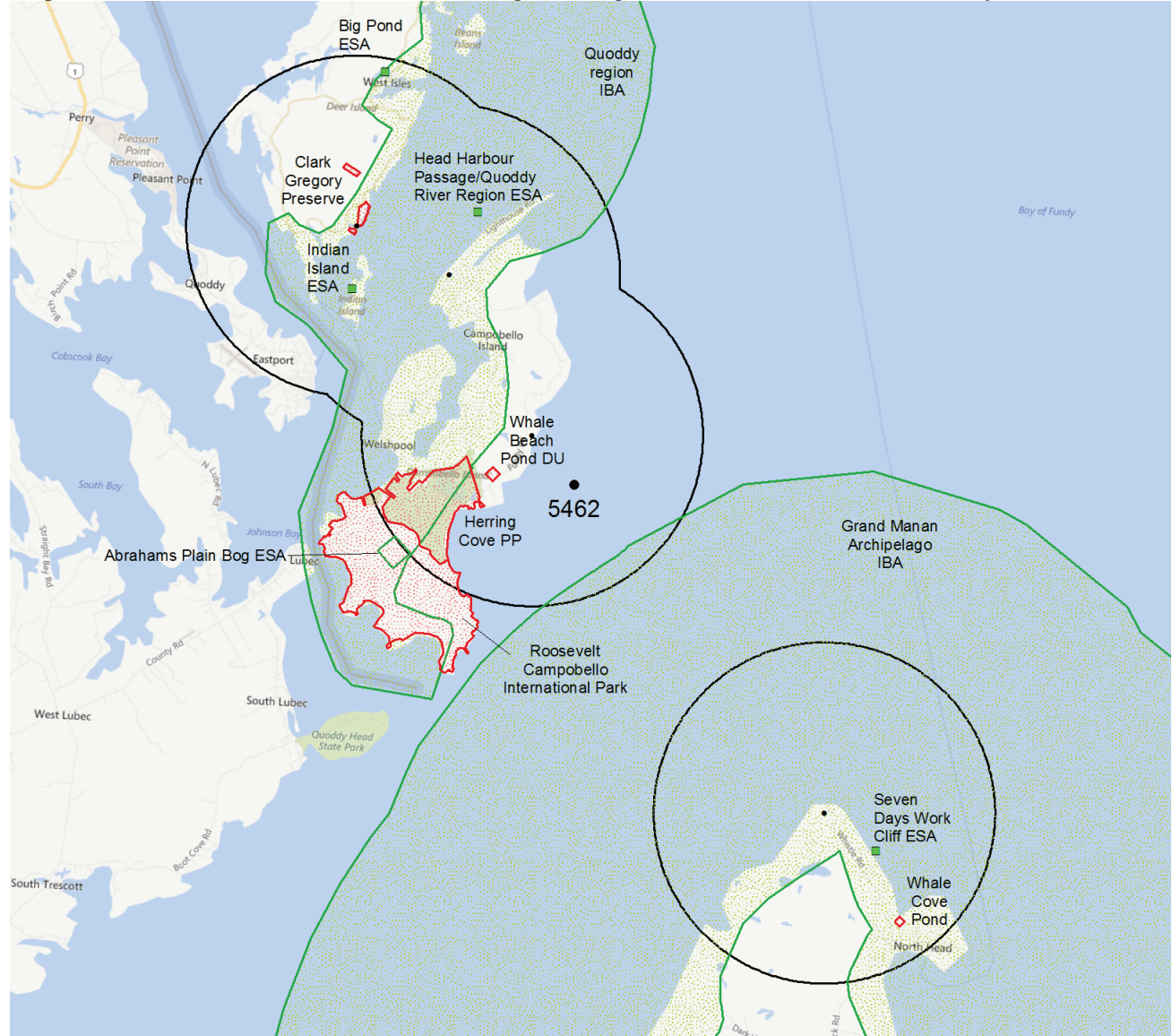
#### 3.1 MANAGED AREAS

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

#### 3.2 SIGNIFICANT AREAS

The GIS scan identified 7 biologically significant sites in the vicinity of the study area (Map 3 and attached file: \*sa\*.xls)

**Map 3:** Boundaries and/or locations of known Managed and Significant Areas within 5 km of the study area.



## 4.0 RARE SPECIES LISTS

Rare and/or endangered taxa (excluding “location-sensitive” species, section 4.3) within the 5 km-buffered 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.

### 4.1 FLORA

Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
<i>Erioderma pedicellatum</i> (Atlantic pop.)	Boreal Felt Lichen - Atlantic pop.	Endangered	Endangered	Endangered	SH	1 At Risk	1	4.1 $\pm$ 1.0
<i>Degelia plumbea</i>	Blue Felt Lichen	Special Concern	Special Concern	Special Concern	S1	2 May Be At Risk	1	2.9 $\pm$ 5.0
<i>Pseudevernia cladonia</i>	Ghost Antler Lichen	Not At Risk			S3	5 Undetermined	1	11.4 $\pm$ 5.0
<i>Cardamine parviflora</i> var. <i>arenicola</i>	Small-flowered Bittercress				S1	2 May Be At Risk	4	16.3 $\pm$ 0.0
<i>Hieracium kalmii</i> var. <i>fasciculatum</i>	Kalm's Hawkweed				S1?	5 Undetermined	2	10.8 $\pm$ 0.0
<i>Sagina nodosa</i>	Knotted Pearlwort				S2	3 Sensitive	3	14.7 $\pm$ 0.0
<i>Hedeoma pulegioides</i>	American False Pennyroyal				S2	4 Secure	2	12.2 $\pm$ 0.0
<i>Orobanchae uniflora</i>	One-Flowered Broomrape				S2	3 Sensitive	1	12.1 $\pm$ 0.0
<i>Agalinis neoscotica</i>	Nova Scotia Agalinis				S2	3 Sensitive	3	13.2 $\pm$ 1.0
<i>Euphrasia randii</i>	Rand's Eyebright				S2	2 May Be At Risk	2	3.5 $\pm$ 1.0
<i>Salix myricoides</i>	Bayberry Willow				S2?	3 Sensitive	1	13.1 $\pm$ 0.0
<i>Rumex pallidus</i>	Seabeach Dock				S2S3	3 Sensitive	2	5.5 $\pm$ 0.0
<i>Ophioglossum pusillum</i>	Northern Adder's-tongue				S2S3	3 Sensitive	2	16.0 $\pm$ 1.0
<i>Rhodiola rosea</i>	Roseroot				S3	4 Secure	4	12.2 $\pm$ 0.0
<i>Epilobium strictum</i>	Downy Willowherb				S3	4 Secure	2	16.1 $\pm$ 0.0
<i>Polygonum punctatum</i> var. <i>confertiflorum</i>	Dotted Smartweed				S3	4 Secure	1	12.2 $\pm$ 1.0
<i>Rosa palustris</i>	Swamp Rose				S3	4 Secure	1	8.0 $\pm$ 0.0
<i>Rubus chamaemorus</i>	Cloudberry				S3	4 Secure	2	5.3 $\pm$ 1.0
<i>Carex haydenii</i>	Hayden's Sedge				S3	4 Secure	1	16.0 $\pm$ 0.0
<i>Carex recta</i>	Estuary Sedge				S3	4 Secure	1	11.4 $\pm$ 0.0
<i>Rhynchospora fusca</i>	Brown Beakrush				S3	4 Secure	1	13.1 $\pm$ 0.0
<i>Botrychium dissectum</i>	Cut-leaved Moonwort				S3	4 Secure	1	13.1 $\pm$ 5.0
<i>Botrychium simplex</i>	Least Moonwort				S3	4 Secure	1	16.0 $\pm$ 0.0
<i>Crataegus submollis</i>	Quebec Hawthorn				S3?	3 Sensitive	1	9.9 $\pm$ 0.0
<i>Rumex maritimus</i>	Sea-Side Dock				S3S4	4 Secure	1	14.2 $\pm$ 1.0
<i>Cladium mariscoides</i>	Smooth Twigrush				S3S4	4 Secure	1	13.3 $\pm$ 0.0

### 4.2 FAUNA

Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
<i>Protonotaria citrea</i>	Pronothary Warbler	Endangered	Endangered		SNA	8 Accidental	2	13.8 $\pm$ 3.0
<i>Hylocichla mustelina</i>	Wood Thrush	Threatened	Threatened	Threatened	S1S2B	2 May Be At Risk	3	10.9 $\pm$ 8.0
<i>Chaetura pelagica</i>	Chimney Swift	Threatened	Threatened	Threatened	S2S3B	1 At Risk	3	17.0 $\pm$ 0.0
<i>Catharus bicknelli</i>	Bicknell's Thrush	Threatened	Special Concern	Threatened	S2S3B	1 At Risk	4	10.7 $\pm$ 7.0
<i>Chordeiles minor</i>	Common Nighthawk	Threatened	Threatened	Threatened	S3B	1 At Risk	1	10.2 $\pm$ 0.0
<i>Hirundo rustica</i>	Barn Swallow	Threatened	Threatened	Threatened	S3B	3 Sensitive	18	10.7 $\pm$ 7.0
<i>Riparia riparia</i>	Bank Swallow	Threatened	Threatened	Threatened	S3B	3 Sensitive	6	10.7 $\pm$ 7.0
<i>Contopus cooperi</i>	Olive-sided Flycatcher	Threatened	Threatened	Threatened	S3S4B	1 At Risk	8	16.0 $\pm$ 0.0
<i>Wilsonia canadensis</i>	Canada Warbler	Threatened	Threatened	Threatened	S3S4B	1 At Risk	12	10.7 $\pm$ 7.0
<i>Dolichonyx oryzivorus</i>	Bobolink	Threatened	Threatened	Threatened	S3S4B	3 Sensitive	5	10.7 $\pm$ 7.0
<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker	Threatened	Threatened	Threatened	SNA	8 Accidental	1	12.3 $\pm$ 1.0
<i>Histrionicus histrionicus</i> pop. 1	Harlequin Duck - Eastern pop.	Special Concern	Special Concern	Endangered	S1B,S1N	1 At Risk	1	3.8 $\pm$ 12.0
<i>Euphagus carolinus</i>	Rusty Blackbird	Special Concern	Special Concern	Special Concern	S3B	2 May Be At Risk	1	15.9 $\pm$ 1.0
<i>Phalaropus lobatus</i>	Red-necked Phalarope	Special Concern	Special Concern	Special Concern	S3M	3 Sensitive	31	11.9 $\pm$ 0.0
<i>Phocoena phocoena</i> (NW Atlantic pop.)	Harbour Porpoise - Northwest Atlantic pop.	Special Concern	Threatened		S4		41	11.0 $\pm$ 1.0

Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A <i>Contopus virens</i>	Eastern Wood-Pewee	Special Concern		Special Concern	S4B	4 Secure	8	10.6 ± 7.0
A <i>Tryngites subruficollis</i>	Buff-breasted Sandpiper	Special Concern			SNA	8 Accidental	2	13.9 ± 0.0
A <i>Falco rusticolus</i>	Gyrfalcon	Not At Risk			S1N	5 Undetermined	4	13.5 ± 0.0
A <i>Buteo lineatus</i>	Red-shouldered Hawk	Not At Risk	Special Concern		S2B	2 May Be At Risk	4	11.7 ± 0.0
A <i>Megaptera novaeangliae</i>	Humpback Whale (NW Atlantic pop.)	Not At Risk	Special Concern		S3		1	2.4 ± 0.0
A <i>Sterna hirundo</i>	Common Tern	Not At Risk			S3B	3 Sensitive	9	12.7 ± 0.0
A <i>Podiceps griseogen</i>	Red-necked Grebe	Not At Risk			S3M, S2N	3 Sensitive	55	12.3 ± 1.0
A <i>Leucophaeus atricilla</i>	Laughing Gull	Not At Risk			S1B	3 Sensitive	25	12.2 ± 0.0
A <i>Sterna paradisaea</i>	Arctic Tern	Not At Risk			S1B	2 May Be At Risk	25	12.3 ± 1.0
A <i>Troglodytes aedon</i>	House Wren	Not At Risk			S1B	5 Undetermined	1	3.6 ± 7.0
A <i>Uria aalge</i>	Common Murre	Not At Risk			S1B, S3N	4 Secure	12	12.3 ± 1.0
A <i>Alca torda</i>	Razorbill	Not At Risk			S1B, S3N	4 Secure	8	12.3 ± 1.0
A <i>Rissa tridactyla</i>	Black-legged Kittiwake	Not At Risk			S1B, S4N	4 Secure	3	12.3 ± 1.0
A <i>Butorides virescens</i>	Green Heron	Not At Risk			S1S2B	3 Sensitive	1	3.6 ± 7.0
A <i>Nycticorax nycticorax</i>	Black-crowned Night-heron	Not At Risk			S1S2B	3 Sensitive	8	13.5 ± 0.0
A <i>Fratercula arctica</i>	Atlantic Puffin	Not At Risk			S1S2B	3 Sensitive	12	11.8 ± 0.0
A <i>Empidonax traillii</i>	Willow Flycatcher	Not At Risk			S1S2B	3 Sensitive	5	10.7 ± 7.0
A <i>Oceanodroma leucorhoa</i>	Leach's Storm-Petrel	Not At Risk			S2B	3 Sensitive	5	12.3 ± 1.0
A <i>Anas strepera</i>	Gadwall	Not At Risk			S2B	4 Secure	1	14.3 ± 1.0
A <i>Toxostoma rufum</i>	Brown Thrasher	Not At Risk			S2B	3 Sensitive	3	16.8 ± 0.0
A <i>Poocetes gramineus</i>	Vesper Sparrow	Not At Risk			S2B	2 May Be At Risk	2	13.8 ± 5.0
A <i>Tringa solitaria</i>	Solitary Sandpiper	Not At Risk			S2B, S5M	4 Secure	21	12.3 ± 1.0
A <i>Chroicocephalus ridibundus</i>	Black-headed Gull	Not At Risk			S2M, S1N	3 Sensitive	15	12.3 ± 1.0
A <i>Somateria spectabilis</i>	King Eider	Not At Risk			S2N	4 Secure	2	12.3 ± 1.0
A <i>Asio otus</i>	Long-eared Owl	Not At Risk			S2S3	5 Undetermined	2	3.6 ± 7.0
A <i>Tringa semipalmata</i>	Willet	Not At Risk			S2S3B	3 Sensitive	2	15.9 ± 0.0
A <i>Pinicola enucleator</i>	Pine Grosbeak	Not At Risk			S2S3B, S4S5N	3 Sensitive	1	13.6 ± 7.0
A <i>Branta bernicla</i>	Brant	Not At Risk			S2S3M, S2S3N	4 Secure	6	12.3 ± 1.0
A <i>Uria lomvia</i>	Thick-billed Murre	Not At Risk			S2S3N	5 Undetermined	16	12.3 ± 1.0
A <i>Cephus grylle</i>	Black Guillemot	Not At Risk			S3	4 Secure	129	10.6 ± 7.0
A <i>Loxia curvirostra</i>	Red Crossbill	Not At Risk			S3	4 Secure	2	10.7 ± 7.0
A <i>Cathartes aura</i>	Turkey Vulture	Not At Risk			S3B	4 Secure	13	12.7 ± 0.0
A <i>Charadrius vociferus</i>	Killdeer	Not At Risk			S3B	3 Sensitive	1	3.6 ± 7.0
A <i>Larus delawarensis</i>	Ring-billed Gull	Not At Risk			S3B	4 Secure	20	12.3 ± 1.0
A <i>Myiarchus crinitus</i>	Great Crested Flycatcher	Not At Risk			S3B	4 Secure	2	3.6 ± 7.0
A <i>Mimus polyglottos</i>	Northern Mockingbird	Not At Risk			S3B	3 Sensitive	5	16.9 ± 0.0
A <i>Molothrus ater</i>	Brown-headed Cowbird	Not At Risk			S3B	2 May Be At Risk	7	10.7 ± 7.0
A <i>Mergus serrator</i>	Red-breasted Merganser	Not At Risk			S3B, S4S5N	4 Secure	17	10.7 ± 7.0
A <i>Pluvialis dominica</i>	American Golden-Plover	Not At Risk			S3M	3 Sensitive	2	3.3 ± 0.0
A <i>Phalaropus fulicarius</i>	Red Phalarope	Not At Risk			S3M	3 Sensitive	1	3.3 ± 19.0
A <i>Melanitta nigra</i>	Black Scoter	Not At Risk			S3M, S2S3N	3 Sensitive	32	12.3 ± 1.0
A <i>Calidris maritima</i>	Purple Sandpiper	Not At Risk			S3M, S3N	4 Secure	3	3.1 ± 0.0
A <i>Bucephala albeola</i>	Bufflehead	Not At Risk			S3N	3 Sensitive	59	11.0 ± 0.0
A <i>Tyrannus tyrannus</i>	Eastern Kingbird	Not At Risk			S3S4B	3 Sensitive	9	10.7 ± 7.0
A <i>Petrochelidon pyrrhonota</i>	Cliff Swallow	Not At Risk			S3S4B	3 Sensitive	8	10.7 ± 7.0
A <i>Podiceps auritus</i>	Horned Grebe	Not At Risk			S4M, S4N	4 Secure	35	12.4 ± 22.0
A <i>Morus bassanus</i>	Northern Gannet	Not At Risk		Special Concern	S3B, S5M, S5N	4 Secure	163	12.1 ± 0.0
I <i>Danaus plexippus</i>	Monarch	Special Concern	Special Concern	Special Concern	S3B	3 Sensitive	1	12.5 ± 0.0
I <i>Ischnura posita</i>	Fragile Forktail	Special Concern	Special Concern	Special Concern	S2	2 May Be At Risk	1	4.2 ± 1.0
I <i>Somatichlora forcipata</i>	Forcipate Emerald	Special Concern	Special Concern	Special Concern	S3	4 Secure	1	1.8 ± 1.0

### 4.3 LOCATION SENSITIVE SPECIES

The Department of Natural Resources in each Maritimes province considers a number of species “location sensitive”. Concern about exploitation of location-sensitive species precludes inclusion of precise coordinates in this report. Those intersecting a 5 km buffer of your study area are indicated below with “YES”.

New Brunswick Scientific Name	Common Name	SARA	Prov Legal Prot	Known within 5 km of Study Site?
<i>Chrysemys picta picta</i>	Eastern Painted Turtle	Special Concern	Special Concern	No
<i>Chelydra serpentina</i>	Snapping Turtle	Threatened	Threatened	No
<i>Glyptemys insculpta</i>	Wood Turtle	Threatened	Threatened	No
<i>Haliaeetus leucocephalus</i>	<b>Bald Eagle</b>	<b>Endangered</b>	<b>Endangered</b>	<b>YES</b>
<i>Falco peregrinus pop. 1</i>	<b>Peregrine Falcon - anatum/tundrius pop.</b>	<b>Special Concern</b>	<b>Endangered</b>	<b>YES</b>
<i>Cicindela marginipennis</i>	Cobblesone Tiger Beetle	Endangered	Endangered	No
<i>Coenonympha nipisiquit</i>	Maritime Ringlet	Endangered	Endangered	No
<i>Bat Hibernaculum</i>		[Endangered] <sup>1</sup>	[Endangered] <sup>1</sup>	No

<sup>1</sup> *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 ACCDC and the data sources listed below in any documents, reports, publications or presentations, in which this dataset makes a significant contribution.

# recs	CITATION
755	eBird. 2014. eBird Basic Dataset. Version: EBD_reINov-2014. Ithaca, New York. Nov 2014. Cornell Lab of Ornithology. 25036 recs.
180	Kenney, R.D. 2001. Marine Mammal Observation Records in Bay of Fundy. North Atlantic Right Whale Consortium, Boston MA. 35,532 recs.
104	Canadian Wildlife Service. 2011. Eastern Canada Seabirds at Sea (ECSAS). 3.27 Ed. Environment Canada. 305,783 recs.
52	Lepage, D. 2014. Maritime Breeding Bird Atlas Database. Bird Studies Canada. Sackville NB. 407,838 recs.
42	Sollows, M.C., 2008. NBM Science Collections databases: mammals. New Brunswick Museum, Saint John NB, download Jan. 2008. 4983 recs.
29	Erskine, A.J. 1992. Maritime Breeding Bird Atlas Database. NS Museum & Nimbus Publ., Halifax. 82, 125 recs.
12	Zwanenberg, K. (compiler). 2001. Trawl database 1970-95. DFO Atlantic Region. 484633 recs.
11	Benedict, B. Connell Herbarium Specimens. University New Brunswick, Fredericton. 2003.
11	Clayden, S.R. 1998. NBM Science Collections databases: vascular plants. New Brunswick Museum, Saint John NB, 19759 recs.
11	Hinds, H.R. 1986. Notes on New Brunswick plant collections. Connell Memorial Herbarium. unpubl. 739 recs.
9	Bateman, M.C. 2001. Coastal Waterfowl Surveys Database, 1965-2001. Canadian Wildlife Service, Sackville, 667 recs.
8	Hicks, Andrew. 2009. Coastal Waterfowl Surveys Database, 2000-08. Canadian Wildlife Service, Sackville, 46488 recs (11149 non-zero).
6	Wilhelm, S.I. et al. 2011. Colonial Waterbird Database.
5	Tims, J. & Craig, N. 1995. Environmentally Significant Areas in New Brunswick (NBESA). NB Dept of Environment & Nature Trust of New Brunswick Inc, 6042 recs.
5	Tims, J. & Craig, N. 1995. Environmentally Significant Areas in New Brunswick (NBESA). NB Dept of Environment & Nature Trust of New Brunswick Inc.
4	Wilhelm, S.I. et al. 2011. Colonial Waterbird Database. Canadian Wildlife Service, Sackville, 2698 sites, 9718 recs (8192 obs).
3	Benedict, B. Connell Herbarium Specimens (Data) . University New Brunswick, Fredericton. 2003.
2	Benedict, B. Connell Herbarium Specimen Database Download 2004. Connell Memorial Herbarium, University of New Brunswick. 2004.
2	Bird Studies Canada & Nature Canada. 2004-10. Important Bird Areas of Canada Database. Bird Studies Canada, Port Rowan ON, 62 objects.
2	Brunelle, P.-M. (compiler). 2009. ADIP/MDDS Odonata Database: data to 2006 inclusive. Atlantic Dragonfly Inventory Program (ADIP), 24200 recs.
2	Sheppard NTNB 2000
1	Atlantic Canada Conservation Area Database (ARCAD)
1	Clayden, S.R. 2003. NS lichen ranks, locations. Pers. comm to C.S. Blaney. 1p, 5 recs.
1	Clayden, S.R. 2005. Confidential supplement to Status Report on Ghost Antler Lichen ( <i>Pseudevernia cladonia</i> ). Committee on the Status of Endangered Wildlife in Canada, 27 recs.
1	Clayden, S.R. 2007. NBM Science Collections databases: vascular plants. New Brunswick Museum, Saint John NB, download Mar. 2007, 6914 recs.
1	Erskine, A.J. 1999. Maritime Nest Records Scheme (MNRS) 1937-1999. Canadian Wildlife Service, Sackville, 313 recs.
1	Klymko, J.J.D. 2012. Maritimes Butterfly Atlas, 2010 and 2011 records. Atlantic Canada Conservation Data Centre, 6318 recs.
1	Maass, W.S.G. & Yeiman, D. 2002. Assessment and status report on the boreal felt lichen ( <i>Erioderma pedicellatum</i> ) in Canada. Committee on the Status of Endangered Wildlife in Canada, 1 rec.
1	NSDNR website
1	NTS Map

## 5.0 RARE SPECIES WITHIN 100 KM

A 100 km buffer around the study area contains 17243 records of 167 vertebrate and 325 records of 58 invertebrate fauna; 5303 records of 311 vascular, 148 records of 80 nonvascular flora (attached: \*ob100km.xls).

Rare and/or endangered taxa within the 100 km-buffered 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).

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	<i>Myotis lucifugus</i>	Little Brown Myotis	Endangered	Endangered	Endangered	S1	1 At Risk	47	44.8 $\pm$ 1.0
A	<i>Myotis septentrionalis</i>	Northern Long-eared Myotis	Endangered	Endangered	Endangered	S1	1 At Risk	11	71.9 $\pm$ 1.0
A	<i>Perimyscus subflavus</i>	Eastern Pipistrelle	Endangered	Endangered	Endangered	S1	1 At Risk	2	74.1 $\pm$ 0.0
A	<i>Eubalaena glacialis</i>	North Atlantic Right Whale	Endangered	Endangered	Endangered	S1		7	16.3 $\pm$ 1.0
A	<i>Morone saxatilis</i> pop. 2	Striped Bass - Bay of Fundy pop.	Endangered	Endangered	Endangered	S1	2 May Be At Risk	1	96.7 $\pm$ 1.0
A	<i>Sterna dougallii</i>	Roseate Tern	Endangered	Endangered	Endangered	S1B	1 At Risk	35	21.0 $\pm$ 0.0
A	<i>Dermochelys coriacea</i> (Atlantic pop.)	Leatherback Sea Turtle - Atlantic pop.	Endangered	Endangered	Endangered	S1S2N	1 At Risk	4	29.1 $\pm$ 0.0
A	<i>Morone saxatilis</i>	Striped Bass	Endangered	Endangered	Endangered	S2	2 May Be At Risk	2	28.1 $\pm$ 1.0
A	<i>Salmo salar</i> pop. 1	Atlantic Salmon - Inner Bay of Fundy pop.	Endangered	Endangered	Endangered	S2	2 May Be At Risk	5	43.3 $\pm$ 0.0
A	<i>Charadrius melodus melodus</i>	Piping Plover melodus ssp	Endangered	Endangered	Endangered	S2B	1 At Risk	23	20.3 $\pm$ 0.0
A	<i>Calidris canutus rufa</i>	Red Knot rufa ssp	Endangered	Endangered	Endangered	S3M	1 At Risk	247	20.3 $\pm$ 0.0
A	<i>Pagophila eburnea</i>	Ivory Gull	Endangered	Endangered	Endangered	SNA	8 Accidental	2	24.4 $\pm$ 14.0
A	<i>Protonotaria citrea</i>	Prothonotary Warbler	Endangered	Endangered	Endangered	SNA	8 Accidental	4	13.8 $\pm$ 3.0
A	<i>Caretta caretta</i>	Loggerhead Sea Turtle	Endangered	Endangered	Endangered	SNA		1	85.5 $\pm$ 0.0
A	<i>Rangifer tarandus</i> pop. 2	Woodland Caribou (Atlantic-Gasp I-sie pop.)	Endangered	Endangered	Extirpated	SX	0.1 Extirpated	3	21.8 $\pm$ 1.0
A	<i>Colinus virginianus</i>	Northern Bobwhite	Endangered	Endangered	Endangered			2	78.7 $\pm$ 7.0
A	<i>Charadrius melodus</i>	Piping Plover	Endangered	Endangered	Endangered			1	35.6 $\pm$ 1.0
A	<i>Ixobrychus exilis</i>	Least Bittern	Threatened	Threatened	Threatened	S1S2B	1 At Risk	11	28.0 $\pm$ 5.0
A	<i>Hylocichla mustelina</i>	Wood Thrush	Threatened	Threatened	Threatened	S1S2B	2 May Be At Risk	106	4.9 $\pm$ 2.0
A	<i>Sturnella magna</i>	Eastern Meadowlark	Threatened	Threatened	Threatened	S1S2B	2 May Be At Risk	13	21.3 $\pm$ 1.0
A	<i>Caprimulgus vociferus</i>	Whip-Poor-Will	Threatened	Threatened	Threatened	S2B	1 At Risk	43	33.1 $\pm$ 7.0
A	<i>Chaetura pelagica</i>	Chimney Swift	Threatened	Threatened	Threatened	S2S3B	1 At Risk	115	3.6 $\pm$ 7.0
A	<i>Catharus bicknelli</i>	Bicknell's Thrush	Threatened	Threatened	Threatened	S2S3B	1 At Risk	21	3.6 $\pm$ 7.0
A	<i>Acipenser oxyrinchus</i>	Atlantic Sturgeon	Threatened	Threatened	Threatened	S3	4 Secure	1	89.5 $\pm$ 1.0
A	<i>Glyptemys insculpta</i>	Wood Turtle	Threatened	Threatened	Threatened	S3	1 At Risk	29	42.1 $\pm$ 1.0
A	<i>Chordeiles minor</i>	Common Nighthawk	Threatened	Threatened	Threatened	S3B	1 At Risk	151	10.2 $\pm$ 0.0
A	<i>Hirundo rustica</i>	Barn Swallow	Threatened	Threatened	Threatened	S3B	3 Sensitive	772	3.6 $\pm$ 7.0
A	<i>Riparia riparia</i>	Bank Swallow	Threatened	Threatened	Threatened	S3B	3 Sensitive	238	3.6 $\pm$ 7.0
A	<i>Contopus cooperi</i>	Olive-sided Flycatcher	Threatened	Threatened	Threatened	S3S4B	1 At Risk	152	9.7 $\pm$ 0.0
A	<i>Wilsonia canadensis</i>	Canada Warbler	Threatened	Threatened	Threatened	S3S4B	1 At Risk	443	7.2 $\pm$ 7.0
A	<i>Dolichonyx oryzivorus</i>	Bobolink	Threatened	Threatened	Threatened	S3S4B	3 Sensitive	225	4.9 $\pm$ 2.0
A	<i>Anguilla rostrata</i>	American Eel	Threatened	Threatened	Threatened	S5	4 Secure	29	28.1 $\pm$ 1.0
A	<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker	Threatened	Threatened	Threatened	SNA	8 Accidental	8	12.3 $\pm$ 1.0
A	<i>Vermivora chrysoptera</i>	Golden-winged Warbler	Threatened	Threatened	Threatened	SNA	8 Accidental	1	34.9 $\pm$ 1.0
A	<i>Wilsonia citrina</i>	Hooded Warbler	Threatened	Threatened	Threatened	SNA	8 Accidental	4	35.6 $\pm$ 1.0
A	<i>Osmerus mordax</i> pop. 2	Lake Utopia Smelt large-bodied pop.	Threatened	Threatened	Threatened			2	32.4 $\pm$ 1.0
A	<i>Falco peregrinus</i> pop. 1	Peregrine Falcon - anatum/tundrus	Special Concern	Special Concern	Endangered	S1B	1 At Risk	129	10.7 $\pm$ 7.0
A	<i>Histrionicus histrionicus</i> pop. 1	Harlequin Duck - Eastern pop.	Special Concern	Special Concern	Endangered	S1B,S1N	1 At Risk	206	3.8 $\pm$ 12.0
A	<i>Acipenser brevirostrum</i>	Shortnose Sturgeon	Special Concern	Special Concern	Special Concern	S2	3 Sensitive	3	74.2 $\pm$ 10.0
A	<i>Bucephala islandica</i> (Eastern pop.)	Barrow's Goldeneye - Eastern	Special Concern	Special Concern	Special Concern	S2N	3 Sensitive	29	17.4 $\pm$ 0.0



Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	<i>Balaenoptera physalus</i>	Fin Whale - Atlantic pop.	Special Concern	Special Concern	Special Concern	S2S3	3 Sensitive	5	22.7 ± 0.0
A	<i>Chelydra serpentina</i>	Snapping Turtle	Special Concern	Special Concern	Special Concern	S3	3 Sensitive	23	30.4 ± 1.0
A	<i>Asio flammeus</i>	Short-eared Owl	Special Concern	Special Concern	Special Concern	S3B	2 May Be At Risk	13	18.8 ± 7.0
A	<i>Euphagus carolinus</i>	Rusty Blackbird	Special Concern	Special Concern	Special Concern	S3B	3 Sensitive	78	13.2 ± 7.0
A	<i>Phalaropus lobatus</i>	Red-necked Phalarope	Special Concern	Special Concern	Special Concern	S3M	3 Sensitive	227	3.3 ± 9.0
A	<i>Phocoena phocoena</i> (NW Atlantic pop.)	Harbour Porpoise - Northwest Atlantic pop.	Special Concern	Threatened		S4		232	2.6 ± 1.0
A	<i>Contopus virens</i>	Eastern Wood-Pewee	Special Concern	Special Concern	Special Concern	S4B	4 Secure	225	3.6 ± 7.0
A	<i>Tryngites subruficollis</i>	Buff-breasted Sandpiper	Special Concern	Special Concern	Special Concern	SNA	8 Accidental	66	4.5 ± 0.0
A	<i>Falco peregrinus</i>	Peregrine Falcon	Special Concern	Special Concern	Special Concern			403	3.3 ± 9.0
A	<i>Lynx canadensis</i>	Canadian Lynx	Not At Risk		Endangered	S1	1 At Risk	7	50.5 ± 50.0
A	<i>Sorex dispar</i>	Long-tailed Shrew	Not At Risk	Special Concern		S1	3 Sensitive	2	85.8 ± 1.0
A	<i>Falco rusticolus</i>	Gyrfalcon	Not At Risk			S1N	5 Undetermined	15	13.5 ± 1.0
A	<i>Accipiter cooperii</i>	Cooper's Hawk	Not At Risk			S1S2B	2 May Be At Risk	7	26.4 ± 1.0
A	<i>Aegolius funereus</i>	Boreal Owl	Not At Risk			S1S2B	2 May Be At Risk	4	20.1 ± 1.0
A	<i>Buteo lineatus</i>	Red-shouldered Hawk	Not At Risk	Special Concern		S2B	2 May Be At Risk	21	9.7 ± 2.0
A	<i>Fulica americana</i>	American Coot	Not At Risk			S2B	3 Sensitive	2	24.4 ± 7.0
A	<i>Chlidonias niger</i>	Black Tern	Not At Risk			S2B	3 Sensitive	7	31.0 ± 4.0
A	<i>Globocephala melas</i>	Long-finned Pilot Whale	Not At Risk			S2S3		2	39.5 ± 1.0
A	<i>Desmognathus fuscus</i> (QC/NB pop.)	Northern Dusky Salamander - QC/NB pop.	Not At Risk			S3	3 Sensitive	40	42.1 ± 1.0
A	<i>Megaptera novaeangliae</i>	Humpback Whale (NW Atlantic pop.)	Not At Risk	Special Concern		S3		4	2.4 ± 0.0
A	<i>Haliaeetus leucocephalus</i>	Bald Eagle	Not At Risk		Endangered	S3B	1 At Risk	1085	2.3 ± 0.0
A	<i>Sterna hirundo</i>	Common Tern	Not At Risk			S3B	3 Sensitive	231	4.9 ± 2.0
A	<i>Sialia sialis</i>	Eastern Bluebird	Not At Risk			S3B	3 Sensitive	11	76.8 ± 6.0
A	<i>Gavia immer</i>	Common Loon	Not At Risk			S3B,S4N	2 May Be At Risk	40	73.8 ± 15.0
A	<i>Podiceps grisegena</i>	Red-necked Grebe	Not At Risk			S3M,S2N	3 Sensitive	671	3.1 ± 0.0
A	<i>Accipiter gentilis</i>	Northern Goshawk	Not At Risk			S3S4	4 Secure	1	82.5 ± 7.0
A	<i>Lagenorhynchus acutus</i>	Atlantic White-sided Dolphin	Not At Risk			S3S4	1	79.8 ± 1.0	
A	<i>Canis lupus</i>	Gray Wolf	Not At Risk		Extirpated	SX	0.1 Extirpated	3	66.8 ± 1.0
A	<i>Lepomis auritus</i>	Rebreast Sunfish	Data Deficient	Special Concern		S3?	4 Secure	23	53.3 ± 10.0
A	<i>Puma concolor</i> pop. 1	Cougar - Eastern pop.	Data Deficient		Endangered	SU,SH	5 Undetermined	32	27.2 ± 1.0
A	<i>Martes americana</i>	American Marten	Data Deficient		Endangered	S1	1 At Risk	10	87.4 ± 0.0
A	<i>Lasionycteris noctivagans</i>	Silver-haired Bat	Not At Risk			S1?	5 Undetermined	1	77.4 ± 1.0
A	<i>Vireo gilvus</i>	Warbling Vireo	Not At Risk			S1?B	5 Undetermined	1	88.7 ± 7.0
A	<i>Bartramia longicauda</i>	Upland Sandpiper	Not At Risk			S1B	3 Sensitive	41	20.3 ± 0.0
A	<i>Phalaropus tricolor</i>	Wilson's Phalarope	Not At Risk			S1B	3 Sensitive	44	6.2 ± 1.0
A	<i>Leucophaeus atricilla</i>	Laughing Gull	Not At Risk			S1B	3 Sensitive	86	3.2 ± 12.0
A	<i>Sterna paradisaea</i>	Arctic Tern	Not At Risk			S1B	2 May Be At Risk	160	3.3 ± 9.0
A	<i>Troglodytes aedon</i>	House Wren	Not At Risk			S1B	5 Undetermined	18	3.6 ± 7.0
A	<i>Aythya marila</i>	Greater Scaup	Not At Risk			S1B,S2N	4 Secure	23	25.1 ± 2.0
A	<i>Uria aalge</i>	Common Murre	Not At Risk			S1B,S3N	4 Secure	145	5.9 ± 4.0
A	<i>Alca torda</i>	Razorbill	Not At Risk			S1B,S3N	4 Secure	181	4.0 ± 0.0
A	<i>Oxyura jamaicensis</i>	Ruddy Duck	Not At Risk			S1B,S4N	4 Secure	42	25.6 ± 1.0
A	<i>Rissa tridactyla</i>	Black-legged Kittiwake	Not At Risk			S1B,S4N	4 Secure	48	7.7 ± 0.0
A	<i>Calidris minutilla</i>	Least Sandpiper	Not At Risk			S1B,S5M	4 Secure	70	79.9 ± 0.0
A	<i>Butorides virescens</i>	Green Heron	Not At Risk			S1S2B	3 Sensitive	14	3.6 ± 7.0
A	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron	Not At Risk			S1S2B	3 Sensitive	62	3.6 ± 7.0
A	<i>Gallinula chloropus</i>	Common Moorhen	Not At Risk			S1S2B	3 Sensitive	10	28.0 ± 5.0
A	<i>Fratercula arctica</i>	Atlantic Puffin	Not At Risk			S1S2B	3 Sensitive	186	6.8 ± 8.0
A	<i>Empidonax traillii</i>	Willow Flycatcher	Not At Risk			S1S2B	3 Sensitive	41	9.7 ± 1.0
A	<i>Progne subis</i>	Purple Martin	Not At Risk			S1S2B	2 May Be At Risk	48	18.8 ± 7.0
A	<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow	Not At Risk			S1S2B	2 May Be At Risk	16	22.3 ± 7.0
A	<i>Charadrius semipalmatus</i>	Semipalmated Plover	Not At Risk			S1S2B,S5M	4 Secure	71	79.9 ± 0.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	<i>Prosopium cylindraceum</i>	Round Whitefish				S2	4 Secure	1	84.5 ± 10.0
A	<i>Salmo salar</i>	Atlantic Salmon				S2	2 May Be At Risk	26	28.1 ± 1.0
A	<i>Episicus fuscus</i>	Big Brown Bat				S2?	3 Sensitive	15	20.4 ± 1.0
A	<i>Lasiurus borealis</i>	Eastern Red Bat				S2?	5 Undetermined	8	25.9 ± 1.0
A	<i>Lasiurus cinereus</i>	Hoary Bat				S2?	5 Undetermined	8	30.7 ± 1.0
A	<i>Vireo philadelphicus</i>	Philadelphia Vireo				S2?B	5 Undetermined	2	88.7 ± 7.0
A	<i>Oceanodroma leucorhoa</i>	Leach's Storm-Petrel				S2B	3 Sensitive	139	4.9 ± 2.0
A	<i>Anas clypeata</i>	Northern Shoveler				S2B	4 Secure	25	24.6 ± 0.0
A	<i>Anas strepera</i>	Gadwall				S2B	4 Secure	76	14.3 ± 1.0
A	<i>Eremophila alpestris</i>	Horned Lark				S2B	2 May Be At Risk	19	20.4 ± 0.0
A	<i>Cistothorus palustris</i>	Marsh Wren				S2B	3 Sensitive	21	55.5 ± 0.0
A	<i>Toxostoma rufum</i>	Brown Thrasher				S2B	3 Sensitive	55	16.8 ± 0.0
A	<i>Poocetes gramineus</i>	Vesper Sparrow				S2B	2 May Be At Risk	49	13.8 ± 5.0
A	<i>Tringa solitaria</i>	Solitary Sandpiper				S2B,S5M	4 Secure	225	3.2 ± 5.0
A	<i>Bucephala clangula</i>	Common Goldeneye				S2B,S5N	4 Secure	16	73.8 ± 15.0
A	<i>Chroicocephalus ridibundus</i>	Black-headed Gull				S2M,S1N	3 Sensitive	38	7.7 ± 0.0
A	<i>Somateria spectabilis</i>	King Eider				S2N	4 Secure	55	8.6 ± 15.0
A	<i>Asio otus</i>	Long-eared Owl				S2S3	5 Undetermined	16	3.6 ± 7.0
A	<i>Tringa semipalmata</i>	Willet				S2S3B	3 Sensitive	225	6.2 ± 1.0
A	<i>Icterus galbula</i>	Baltimore Oriole				S2S3B	2 May Be At Risk	5	76.6 ± 7.0
A	<i>Pinicola enucleator</i>	Pine Grosbeak				S2S3B,S4S5N	3 Sensitive	20	13.6 ± 7.0
A	<i>Branta bernicla</i>	Brant				S2S3M,S2S3N	4 Secure	538	3.9 ± 10.0
A	<i>Uria lomvia</i>	Thick-billed Murre				S2S3N	5 Undetermined	67	3.3 ± 0.0
A	<i>Hyla versicolor</i>	Gray Treefrog				S3	4 Secure	54	42.1 ± 1.0
A	<i>Phalacrocorax carbo</i>	Great Cormorant				S3	3 Sensitive	15	73.8 ± 15.0
A	<i>Cephus grylle</i>	Black Guillemot				S3	4 Secure	785	2.9 ± 10.0
A	<i>Poecile hudsonica</i>	Boreal Chickadee				S3	3 Sensitive	14	74.6 ± 7.0
A	<i>Loxia curvirostra</i>	Red Crossbill				S3	4 Secure	79	6.4 ± 7.0
A	<i>Coregonus clupeaformis</i>	Lake Whitefish				S3	4 Secure	9	53.0 ± 0.0
A	<i>Salvelinus namaycush</i>	Lake Trout				S3	3 Sensitive	4	32.9 ± 0.0
A	<i>Synaptomys cooperi</i>	Southern Bog Lemming				S3	4 Secure	11	87.3 ± 1.0
A	<i>Picoides dorsalis</i>	American Three-toed Woodpecker				S3?	3 Sensitive	5	50.7 ± 7.0
A	<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo				S3?B	2 May Be At Risk	5	87.5 ± 0.0
A	<i>Podilymbus podiceps</i>	Pied-billed Grebe				S3B	3 Sensitive	2	74.7 ± 7.0
A	<i>Anas acuta</i>	Northern Pintail				S3B	3 Sensitive	12	8.8 ± 2.0
A	<i>Anas discors</i>	Blue-winged Teal				S3B	2 May Be At Risk	3	77.1 ± 7.0
A	<i>Anas americana</i>	American Wigeon				S3B	4 Secure	356	16.5 ± 3.0
A	<i>Cathartes aura</i>	Turkey Vulture				S3B	4 Secure	178	3.6 ± 7.0
A	<i>Rallus limicola</i>	Virginia Rail				S3B	3 Sensitive	41	28.1 ± 2.0
A	<i>Charadrius vociferus</i>	Killdeer				S3B	3 Sensitive	564	3.6 ± 7.0
A	<i>Larus delawarensis</i>	Ring-billed Gull				S3B	4 Secure	156	4.4 ± 4.0
A	<i>Myiarchus crinitus</i>	Great Crested Flycatcher				S3B	3 Sensitive	44	3.6 ± 7.0
A	<i>Dumetella carolinensis</i>	Gray Catbird				S3B	2 May Be At Risk	58	68.9 ± 7.0
A	<i>Mimus polyglottos</i>	Northern Mockingbird				S3B	3 Sensitive	109	3.6 ± 7.0
A	<i>Passerina cyanea</i>	Indigo Bunting				S3B	4 Secure	64	18.7 ± 0.0
A	<i>Molothrus ater</i>	Brown-headed Cowbird				S3B	2 May Be At Risk	121	7.2 ± 7.0
A	<i>Mergus serrator</i>	Red-breasted Merganser				S3B,S4S5N	4 Secure	354	3.3 ± 0.0
A	<i>Tringa melanoleuca</i>	Greater Yellowlegs				S3B,S5M	3 Sensitive	66	79.9 ± 0.0
A	<i>Pluvialis dominica</i>	American Golden-Plover				S3M	3 Sensitive	272	3.3 ± 0.0
A	<i>Numenius phaeopus hudsonicus</i>	Hudsonian Whimbrel				S3M	3 Sensitive	22	81.3 ± 0.0
A	<i>Calidris pusilla</i>	Semipalmated Sandpiper				S3M	3 Sensitive	81	79.9 ± 0.0
A	<i>Phalaropus fulicarius</i>	Red Phalarope				S3M	3 Sensitive	128	3.3 ± 19.0
A	<i>Melanitta nigra</i>	Black Scoter				S3M,S2S3N	3 Sensitive	758	3.3 ± 9.0
A	<i>Calidris maritima</i>	Purple Sandpiper				S3M,S3N	4 Secure	270	3.1 ± 0.0
A	<i>Bucephala albeola</i>	Bufflehead				S3N	3 Sensitive	1069	3.3 ± 0.0
A	<i>Perisoreus canadensis</i>	Gray Jay				S3S4	3 Sensitive	5	76.6 ± 7.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	<i>Cardinalis cardinalis</i>	Northern Cardinal				S3S4	4 Secure	33	74.6 ± 7.0
A	<i>Botaurus lentiginosus</i>	American Bittern				S3S4B	3 Sensitive	4	88.7 ± 7.0
A	<i>Actitis macularius</i>	Spotted Sandpiper				S3S4B	3 Sensitive	42	73.0 ± 0.0
A	<i>Gallinago delicata</i>	Wilson's Snipe				S3S4B	3 Sensitive	14	74.7 ± 7.0
A	<i>Empidonax flaviventris</i>	Yellow-bellied Flycatcher				S3S4B	3 Sensitive	17	74.6 ± 7.0
A	<i>Sayornis phoebe</i>	Eastern Phoebe				S3S4B	3 Sensitive	3	82.5 ± 7.0
A	<i>Tyrannus tyrannus</i>	Eastern Kingbird				S3S4B	3 Sensitive	204	3.6 ± 7.0
A	<i>Petrochelidon pyrrhonota</i>	Cliff Swallow				S3S4B	3 Sensitive	299	3.6 ± 7.0
A	<i>Vermivora peregrina</i>	Tennessee Warbler				S3S4B	3 Sensitive	5	82.5 ± 7.0
A	<i>Dendroica castanea</i>	Bay-breasted Warbler				S3S4B	3 Sensitive	7	74.7 ± 7.0
A	<i>Dendroica striata</i>	Blackpoll Warbler				S3S4B	3 Sensitive	15	74.7 ± 7.0
A	<i>Wilsonia pusilla</i>	Wilson's Warbler				S3S4B	3 Sensitive	3	80.0 ± 0.0
A	<i>Piranga olivacea</i>	Scarlet Tanager				S3S4B	4 Secure	65	7.2 ± 7.0
A	<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak				S3S4B	3 Sensitive	18	76.6 ± 7.0
A	<i>Coccothraustes vespertinus</i>	Evening Grosbeak				S3S4B,S4S5N	3 Sensitive	109	17.5 ± 0.0
A	<i>Carduelis pinus</i>	Pine Siskin			Special Concern	S3S4B,S5N	3 Sensitive	14	74.7 ± 7.0
A	<i>Podiceps auritus</i>	Horned Grebe				S4M,S4N	4 Secure	265	2.5 ± 0.0
A	<i>Morus bassanus</i>	Northern Gannet				S4M,S5M,S5N	4 Secure	835	3.2 ± 12.0
A	<i>Lanius ludovicianus</i>	Loggerhead Shrike				SXB,SNAN	1 At Risk	1	26.4 ± 1.0
I	<i>Ophiocephalus aspersus</i>	Pygmy Snaketail			Special Concern	S1	2 May Be At Risk	3	38.7 ± 0.0
I	<i>Alasmidonta varicosa</i>	Brook Floater			Special Concern	S1S2	3 Sensitive	1	88.7 ± 0.0
I	<i>Lampsilis cariosa</i>	Yellow Lamprussel			Special Concern	S2	3 Sensitive	3	91.3 ± 0.0
I	<i>Danaus plexippus</i>	Monarch			Special Concern	S3B	3 Sensitive	55	12.5 ± 0.0
I	<i>Lyogyrus granum</i>	Squat Dusksnail			Special Concern	S2	5 Undetermined	5	73.9 ± 0.0
I	<i>Erynnis juvenalis</i>	Juvenal's Duskywing				S1	5 Undetermined	1	76.8 ± 1.0
I	<i>Erora laeta</i>	Early Hairstreak				S1	2 May Be At Risk	1	92.3 ± 1.0
I	<i>Ophiocephalus aspersus</i>	Brook Snaketail				S1	2 May Be At Risk	1	96.3 ± 0.0
I	<i>Ceithemis martha</i>	Martha's Pennant				S1	5 Undetermined	1	67.3 ± 0.0
I	<i>Pachydiplax longipennis</i>	Blue Dasher				S1	5 Undetermined	1	41.0 ± 1.0
I	<i>Coccinella transversoguttata richardsoni</i>	Transverse Lady Beetle				S1S2	2 May Be At Risk	2	73.2 ± 0.0
I	<i>Ophiocephalus colubrinus</i>	Boreal Snaketail				S1S2	2 May Be At Risk	3	44.6 ± 1.0
I	<i>Callophrys henrici</i>	Henry's Elfin				S2	4 Secure	2	92.3 ± 1.0
I	<i>Strymon melinus</i>	Grey Hairstreak				S2	4 Secure	4	55.0 ± 1.0
I	<i>Cupido comyntas</i>	Eastern Tailed Blue				S2	4 Secure	4	17.2 ± 0.0
I	<i>Polygonia comma</i>	Eastern Comma				S2	1 At Risk	1	93.5 ± 1.0
I	<i>Aesrnia clepsydra</i>	Mottled Darner				S2	3 Sensitive	6	73.6 ± 1.0
I	<i>Somatochlora tenebrosa</i>	Clamp-Tipped Emerald				S2	5 Undetermined	2	54.6 ± 1.0
I	<i>Ladona exusta</i>	White Corporal				S2	5 Undetermined	7	35.5 ± 0.0
I	<i>Hetaerina americana</i>	American Rubyspot				S2	3 Sensitive	2	88.7 ± 0.0
I	<i>Enallagma vesperum</i>	Vesper Bluet				S2	5 Undetermined	3	36.2 ± 1.0
I	<i>Ischnura posita</i>	Fragile Forktail				S2	2 May Be At Risk	4	4.2 ± 1.0
I	<i>Alasmidonta undulata</i>	Triangle Floater				S2	3 Sensitive	8	39.9 ± 1.0
I	<i>Anatis labiculata</i>	Fifteen-spotted Lady Beetle				S2S3	3 Sensitive	1	73.4 ± 0.0
I	<i>Gomphus abbreviatus</i>	Spine-crowned Clubtail				S2S3	4 Secure	13	65.9 ± 1.0
I	<i>Lestes vigilax</i>	Swamp Spreadingwing				S2S3	3 Sensitive	29	31.1 ± 0.0
I	<i>Hesperia comma</i>	Common Branded Skipper				S3	4 Secure	1	81.2 ± 2.0
I	<i>Hesperia sassacus</i>	Indian Skipper				S3	4 Secure	1	72.0 ± 0.0
I	<i>Euphyes bimaculata</i>	Two-spotted Skipper				S3	3 Sensitive	7	33.3 ± 1.0
I	<i>Lycaena hylilus</i>	Bronze Copper				S3	3 Sensitive	1	55.2 ± 1.0
I	<i>Satyrus acadica</i>	Acadian Hairstreak				S3	4 Secure	4	56.8 ± 0.0
I	<i>Callophrys polios</i>	Hoary Elfin				S3	4 Secure	6	78.9 ± 1.0
I	<i>Plebejus idas</i>	Northern Blue				S3	4 Secure	6	48.3 ± 0.0
I	<i>Plebejus idas empetri</i>	Crowberry Blue				S3	4 Secure	8	39.5 ± 1.0
I	<i>Plebejus saepiolus</i>	Greenish Blue				S3	4 Secure	1	43.1 ± 0.0
I	<i>Speyeria aphrodite</i>	Aphrodite Fritillary				S3	4 Secure	6	33.5 ± 0.0
I	<i>Boloria belona</i>	Meadow Fritillary				S3	4 Secure	5	42.7 ± 1.0
I	<i>Chlosyne nycteis</i>	Silvery Checkerspot				S3	4 Secure	4	66.6 ± 1.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
N	<i>Polygonia satyrus</i>	Satyr Comma				S3	4 Secure	6	66.2 ± 1.0
N	<i>Polygonia faunus</i>	Green Comma				S3	4 Secure	5	88.8 ± 10.0
N	<i>Nymphalis l-album</i>	Compton Tortoiseshell				S3	4 Secure	15	25.7 ± 0.0
N	<i>Lethes antheodon</i>	Northern Pearly-Eye				S3	4 Secure	1	86.5 ± 1.0
N	<i>Oeneis jutta</i>	Jutta Arctic				S3	4 Secure	10	26.2 ± 10.0
N	<i>Aeshna constricta</i>	Lance-Tipped Darner				S3	4 Secure	1	85.3 ± 0.0
N	<i>Gomphaeschna furcillata</i>	Harlequin Darner				S3	5 Undetermined	5	54.6 ± 1.0
N	<i>Dorocordulia lepida</i>	Petite Emerald				S3	4 Secure	12	53.9 ± 0.0
N	<i>Somatochlora cingulata</i>	Lake Emerald				S3	4 Secure	6	25.7 ± 1.0
N	<i>Somatochlora forcipata</i>	Forcipate Emerald				S3	4 Secure	6	56.8 ± 1.0
N	<i>Williamsonia fletcheri</i>	Ebony Boghaunter				S3	4 Secure	12	1.8 ± 1.0
N	<i>Lestes eurinus</i>	Amber-Winged Spreadwing				S3	4 Secure	6	62.0 ± 1.0
N	<i>Enallagma geminatum</i>	Skimming Bluet				S3	5 Undetermined	5	57.0 ± 1.0
N	<i>Enallagma signatum</i>	Orange Bluet				S3	4 Secure	3	57.0 ± 1.0
N	<i>Stylurus scudder</i>	Zebra Clubtail				S3	4 Secure	2	46.6 ± 1.0
N	<i>Leptodea ochracea</i>	Tidewater Mucket				S3	4 Secure	4	74.7 ± 1.0
N	<i>Polygonia interrogatoris</i>	Question Mark				S3B	4 Secure	2	76.7 ± 0.0
N	<i>Pantala hymenaea</i>	Spot-Winged Glider				S3B	4 Secure	5	23.8 ± 1.0
N	<i>Feniseca tarquinus</i>	Harvester				S3S4	4 Secure	1	93.5 ± 1.0
N	<i>Polygonia progne</i>	Grey Comma				S3S4	4 Secure	5	90.1 ± 1.0
N	<i>Erioderma pedicellatum</i> (Atlantic pop.)	Boreal Felt Lichen - Atlantic pop.	Endangered	Endangered	Endangered	SH	1 At Risk	1	4.1 ± 1.0
N	<i>Degelia plumbea</i>	Blue Felt Lichen	Special Concern	Special Concern	Special Concern	S1	2 May Be At Risk	2	2.9 ± 5.0
N	<i>Pseudevernia cladonia</i>	Ghost Antler Lichen	Special Concern	Special Concern	Special Concern	S3	5 Undetermined	17	11.4 ± 5.0
N	<i>Anomodon viticulosus</i>	a Moss	Not At Risk			S1	2 May Be At Risk	3	75.4 ± 1.0
N	<i>Bryum muehlenbeckii</i>	Muehlenbeck's Bryum Moss				S1	2 May Be At Risk	1	75.8 ± 1.0
N	<i>Calliergon trifarium</i>	Three-ranked Moss				S1	2 May Be At Risk	1	68.0 ± 0.0
N	<i>Dichelyma falcatum</i>	a Moss				S1	2 May Be At Risk	1	77.5 ± 1.0
N	<i>Plagiothecium latebricola</i>	Alder Silk Moss				S1	2 May Be At Risk	1	71.1 ± 0.0
N	<i>Racomitrium ericoides</i>	a Moss				S1	2 May Be At Risk	1	88.3 ± 3.0
N	<i>Rhytidiadelphus loreus</i>	Lanky Moss				S1	2 May Be At Risk	1	34.7 ± 10.0
N	<i>Sphagnum macrophyllum</i>	Sphagnum				S1	2 May Be At Risk	2	62.2 ± 0.0
N	<i>Sphagnum subulvum</i>	a Peatmoss				S1	2 May Be At Risk	4	47.5 ± 1.0
N	<i>Tomentypnum falcatifolium</i>	Sickle-leaved Golden Moss				S1	2 May Be At Risk	1	47.5 ± 1.0
N	<i>Coscinodon cribrosus</i>	Sieve-Toothed Moss				S1	2 May Be At Risk	1	75.9 ± 0.0
N	<i>Peitigera collina</i>	Tree Felt Lichen				S1	2 May Be At Risk	1	20.7 ± 10.0
N	<i>Sphagnum platyphyllum</i>	Flat-leaved Peat Moss				S1?	5 Undetermined	1	66.9 ± 0.0
N	<i>Platylomella lescurei</i>	a Moss				S1?	5 Undetermined	1	47.3 ± 1.0
N	<i>Andreaea rothii</i>	a Moss				S1S2	3 Sensitive	1	94.6 ± 0.0
N	<i>Bryum pallescens</i>	Pale Bryum Moss				S1S2	5 Undetermined	2	72.3 ± 1.0
N	<i>Cynodontium strumiferum</i>	Strumose Dogtooth Moss				S1S2	3 Sensitive	1	38.6 ± 8.0
N	<i>Dicranum spurium</i>	Spurred Broom Moss				S1S2	3 Sensitive	1	32.4 ± 0.0
N	<i>Didymodon ferrugineus</i>	a Moss				S1S2	3 Sensitive	1	100.0 ± 1.0
N	<i>Anomodon tristis</i>	a Moss				S1S2	2 May Be At Risk	1	84.2 ± 1.0
N	<i>Sphagnum argerianicum</i>	a Peatmoss				S1S2	3 Sensitive	2	49.7 ± 10.0
N	<i>Tortula mucronifolia</i>	Mucronate Screw Moss				S1S2	3 Sensitive	1	75.8 ± 0.0
N	<i>Cephalozella elachista</i>	Spurred Threadwort				S1S3	6 Not Assessed	1	67.8 ± 5.0
N	<i>Jungermannia obovata</i>	Egg Flapwort				S1S3	6 Not Assessed	1	89.3 ± 0.0
N	<i>Porella pinnata</i>	Pinnate Scalewort				S1S3	6 Not Assessed	1	74.0 ± 1.0
N	<i>Reboulia hemisphaerica</i>	Purple-margined Liverwort				S1S3	6 Not Assessed	1	34.1 ± 1.0
N	<i>Amphidium mougeotii</i>	a Moss				S2	3 Sensitive	1	38.6 ± 8.0
N	<i>Bryum uliginosum</i>	a Moss				S2	3 Sensitive	1	98.1 ± 4.0
N	<i>Buxbaumia apophylla</i>	Brown Shield Moss				S2	3 Sensitive	2	38.6 ± 8.0
N	<i>Campylopus polygamum</i>	a Moss				S2	3 Sensitive	1	91.8 ± 1.0
N	<i>Cynodontium tenellum</i>	Delicate Dogtooth Moss				S2	3 Sensitive	1	39.4 ± 1.0
N	<i>Hypnum pratense</i>	Meadow Platt Moss				S2	3 Sensitive	1	71.1 ± 0.0
N	<i>Orthotrichum speciosum</i>	Showy Bristle Moss				S2	4 Secure	1	37.8 ± 2.0

Taxonomic Group	Scientific Name	Common Name	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
N	<i>Racomitrium fasciculare</i>	a Moss			S2	3 Sensitive	1	34.4 ± 0.0
N	<i>Scorpium scorpioides</i>	Hooked Scorpion Moss			S2	3 Sensitive	4	68.0 ± 0.0
N	<i>Sphagnum centrale</i>	Central Peat Moss			S2	3 Sensitive	1	65.6 ± 0.0
N	<i>Sphagnum lindbergii</i>	Lindberg's Peat Moss			S2	3 Sensitive	5	44.3 ± 1.0
N	<i>Taxiphyllum deplanatum</i>	Imbricate Yew-leaved Moss			S2	3 Sensitive	1	39.4 ± 1.0
N	<i>Tetraplodon minioides</i>	Entire-leaved Nitrogen Moss			S2	3 Sensitive	3	39.4 ± 1.0
N	<i>Uloa phyllantha</i>	a Moss			S2	3 Sensitive	1	39.4 ± 1.0
N	<i>Zygodon viridissimus</i>	a Moss			S2	2 May Be At Risk	1	25.4 ± 3.0
N	<i>Schistidium agassizii</i>	Elf Bloom Moss			S2	3 Sensitive	2	37.8 ± 2.0
N	<i>Nephroma laevigatum</i>	Mustard Kidney Lichen			S2	2 May Be At Risk	1	20.7 ± 10.0
N	<i>Atrichum angustatum</i>	Lesser Smoothcap Moss			S2?	3 Sensitive	1	92.0 ± 3.0
N	<i>Bryum algovicum</i>	a Moss			S2?	3 Sensitive	2	96.8 ± 0.0
N	<i>Fissidens bushii</i>	Bush's Pocket Moss			S2?	3 Sensitive	1	92.0 ± 3.0
N	<i>Physcomitrium collenchymatum</i>	a Moss			S2?	3 Sensitive	6	77.1 ± 6.0
N	<i>Thelia hirtella</i>	a Moss			S2?	3 Sensitive	1	92.0 ± 3.0
N	<i>Anomodon rugelii</i>	Rugel's Anomodon Moss			S2S3	3 Sensitive	1	92.0 ± 3.0
N	<i>Calliergonella cuspidata</i>	Common Large Wetland Moss			S2S3	3 Sensitive	4	14.6 ± 10.0
N	<i>Cephalozella divaricata</i>	Common Threadwort			S2S4	6 Not Assessed	1	34.1 ± 1.0
N	<i>Aulacomnium androgynum</i>	Little Groove Moss			S3	4 Secure	2	41.3 ± 5.0
N	<i>Dicranella cerviculata</i>	a Moss			S3	4 Secure	3	24.5 ± 6.0
N	<i>Dicranum majus</i>	Greater Broom Moss			S3	4 Secure	4	20.8 ± 13.0
N	<i>Heterocladium dimorphum</i>	Dimorphous Tangle Moss			S3	4 Secure	1	37.8 ± 2.0
N	<i>Hypnum curvifolium</i>	Curved-leaved Plait Moss			S3	3 Sensitive	1	41.3 ± 5.0
N	<i>Pogonatum dentatum</i>	Mountain Hair Moss			S3	4 Secure	1	39.4 ± 1.0
N	<i>Sphagnum torreyanum</i>	a Peatmoss			S3	4 Secure	4	62.0 ± 0.0
N	<i>Sphagnum austrii</i>	Austin's Peat Moss			S3	4 Secure	1	62.5 ± 1.0
N	<i>Splachnum rubrum</i>	Red Collar Moss			S3	4 Secure	1	100.0 ± 1.0
N	<i>Tetraphis geniculata</i>	Geniculate Four-tooth Moss			S3	4 Secure	4	39.4 ± 1.0
N	<i>Trichostomum tenuirostre</i>	Acid-Soil Moss			S3	4 Secure	2	39.0 ± 0.0
N	<i>Schistidium maritimum</i>	a Moss			S3	4 Secure	1	39.4 ± 1.0
N	<i>Sphagnum contortum</i>	Twisted Peat Moss			S3?	4 Secure	1	87.1 ± 0.0
N	<i>Sphagnum lescurii</i>	a Peatmoss			S3?	5 Undetermined	2	64.9 ± 1.0
N	<i>Atrichum tenellum</i>	Slender Smoothcap Moss			S3S4	4 Secure	1	24.5 ± 6.0
N	<i>Brachythecium velutinum</i>	Velvet Ragged Moss			S3S4	4 Secure	2	39.0 ± 0.0
N	<i>Distichium capillaceum</i>	Erect-fruited Iris Moss			S3S4	4 Secure	1	72.6 ± 0.0
N	<i>Hypnum fauriei</i>	a Moss			S3S4	4 Secure	3	39.4 ± 1.0
N	<i>Isoterygiopsis muelleriana</i>	a Moss			S3S4	4 Secure	4	39.0 ± 0.0
N	<i>Myurella julacea</i>	Small Mouse-tail Moss			S3S4	4 Secure	1	38.6 ± 8.0
N	<i>Pohlia annotina</i>	a Moss			S3S4	4 Secure	1	37.8 ± 2.0
N	<i>Racomitrium microcarpon</i>	a Moss			S3S4	4 Secure	1	39.0 ± 0.0
N	<i>Sphagnum majus</i>	Olive Peat Moss			S3S4	4 Secure	1	84.2 ± 5.0
N	<i>Tetraplodon angustatus</i>	Toothed-leaved Nitrogen Moss			S3S4	4 Secure	1	39.4 ± 1.0
N	<i>Grimmia anodon</i>	Toothless Grimmia Moss			S3S4	5 Undetermined	2	78.1 ± 10.0
N	<i>Leucodon brachypus</i>	a Moss			SH	2 May Be At Risk	2	25.4 ± 3.0
P	<i>Juglans cinerea</i>	Butternut	Endangered	Endangered	S1	1 At Risk	2	88.0 ± 1.0
P	<i>Geum peckii</i>	Eastern Mountain Avens	Endangered	Endangered	S1	1 At Risk	1670	77.4 ± 0.0
P	<i>Polemonium vanbruntiae</i>	Van Brunt's Jacob's-ladder	Threatened	Threatened	S1	1 At Risk	72	30.0 ± 0.0
P	<i>Symphytichium anticostense</i>	Anticosti Aster	Threatened	Endangered	S1S3	1 At Risk	1	72.6 ± 0.0
P	<i>Symphytichium praealtum</i>	Willow-leaved Aster	Threatened	Threatened	SNA	7 Exotic	1	26.9 ± 1.0
P	<i>Clethra alnifolia</i>	Coast Pepper-Bush	Special Concern	Vulnerable	S1	1 At Risk	21	90.2 ± 0.0
P	<i>Isoetes prototypus</i>	Prototype Quillwort	Special Concern	Endangered	S2	1 At Risk	23	81.4 ± 0.0
P	<i>Lophiola aurea</i>	Goldcrest	Special Concern	Vulnerable	S2	1 At Risk	43	76.7 ± 1.0
P	<i>Smilax rotundifolia (Atlantic pop.)</i>	Round-leaved Greenbrier	Threatened	Vulnerable	S3	4 Secure	6	90.4 ± 0.0
P	<i>Thuja occidentalis</i>	Eastern White Cedar	Not At Risk	Vulnerable	S1	At Risk	2	84.3 ± 0.0
P	<i>Antennaria parlinii</i>	a Pussytoes			S1	2 May Be At Risk	2	59.9 ± 0.0
P	<i>Antennaria howellii ssp. petaloidea</i>	Pussy-Toes			S1	2 May Be At Risk	4	29.7 ± 1.0
P	<i>Hieracium kalmii</i>	Kalm's Hawkweed			S1	2 May Be At Risk	3	19.1 ± 0.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	<i>Hieracium kalmii</i> var. <i>kalmii</i>	Kalm's Hawkweed			S1		2 May Be At Risk	5	15.9 ± 10.0
P	<i>Senecio pseudoamica</i>	Seabeach Ragwort			S1		2 May Be At Risk	14	25.6 ± 0.0
P	<i>Cardamine parviflora</i> var. <i>arenicola</i>	Small-flowered Bittercress			S1		2 May Be At Risk	10	9.9 ± 0.0
P	<i>Draba arabisans</i>	Rock Whitlow-Grass			S1		2 May Be At Risk	6	6.8 ± 0.0
P	<i>Draba glabella</i>	Rock Whitlow-Grass			S1		2 May Be At Risk	7	76.6 ± 1.0
P	<i>Minuartia groenlandica</i>	Greenland Stitchwort			S1		2 May Be At Risk	4	65.9 ± 0.0
P	<i>Chenopodium capitatum</i>	Strawberry-billie			S1		2 May Be At Risk	1	78.6 ± 1.0
P	<i>Chenopodium simplex</i>	Maple-leaved Goosefoot			S1		2 May Be At Risk	3	29.6 ± 1.0
P	<i>Callitriche terrestris</i>	Terrestrial Water-Stanwort			S1		5 Undetermined	1	65.7 ± 0.0
P	<i>Triadenum virginicum</i>	Virginia St John's-wort			S1		2 May Be At Risk	2	81.3 ± 0.0
P	<i>Viburnum acerifolium</i>	Maple-leaved Viburnum			S1		2 May Be At Risk	10	47.3 ± 0.0
P	<i>Corema conradii</i>	Broom Crowberry			S1		2 May Be At Risk	1	76.2 ± 10.0
P	<i>Vaccinium boreale</i>	Northern Blueberry			S1		2 May Be At Risk	1	48.9 ± 0.0
P	<i>Vaccinium corymbosum</i>	Highbush Blueberry			S1		3 Sensitive	12	53.6 ± 5.0
P	<i>Chamaesyce polygonifolia</i>	Seaside Spurge			S1		2 May Be At Risk	10	24.2 ± 0.0
P	<i>Desmodium glutinosum</i>	Large Tick-Trefoil			S1		2 May Be At Risk	1	51.1 ± 1.0
P	<i>Gentiana rubricaulis</i>	Purple-stemmed Gentian			S1		2 May Be At Risk	14	42.5 ± 1.0
P	<i>Lomatogonium rotatum</i>	Marsh Felwort			S1		2 May Be At Risk	2	13.6 ± 0.0
P	<i>Proserpinaca pectinata</i>	Comb-leaved Mermalaideed			S1		2 May Be At Risk	2	45.1 ± 0.0
P	<i>Polygala polygama</i>	Racemed Milkwort			S1		5 Undetermined	1	99.8 ± 0.0
P	<i>Lysimachia hybrida</i>	Lowland Yellow Loosestrife			S1		2 May Be At Risk	15	44.8 ± 0.0
P	<i>Lysimachia quadrifolia</i>	Whorled Yellow Loosestrife			S1		2 May Be At Risk	10	22.6 ± 1.0
P	<i>Ranunculus sceleratus</i>	Cursed Buttercup			S1		2 May Be At Risk	4	45.6 ± 1.0
P	<i>Crataegus jonesiae</i>	Jones' Hawthorn			S1		2 May Be At Risk	2	25.8 ± 0.0
P	<i>Galium brevipes</i>	Limestone Swamp Bedstraw			S1		2 May Be At Risk	3	70.1 ± 5.0
P	<i>Saxifraga paniculata</i> ssp. <i>neogaea</i>	White Mountain Saxifrage			S1		2 May Be At Risk	7	89.1 ± 10.0
P	<i>Agalinis paupercula</i> var. <i>borealis</i>	Small-flowered Agalinis			S1		2 May Be At Risk	2	98.9 ± 1.0
P	<i>Gratiola aurea</i>	Golden Hedge-Hyssop			S1		3 Sensitive	2	60.7 ± 5.0
P	<i>Pedicularis canadensis</i>	Canada Lousewort			S1		2 May Be At Risk	18	49.0 ± 0.0
P	<i>Viola sagittata</i> var. <i>ovata</i>	Arrow-Leaved Violet			S1		2 May Be At Risk	13	19.1 ± 0.0
P	<i>Alisma subcordatum</i>	Southern Water Plantain			S1		5 Undetermined	3	86.3 ± 5.0
P	<i>Carex merriitt-fernaldii</i>	Merritt Fernald's Sedge			S1		2 May Be At Risk	2	31.2 ± 0.0
P	<i>Carex prairea</i>	Prairie Sedge			S1		2 May Be At Risk	1	78.2 ± 5.0
P	<i>Carex saxatilis</i>	Russet Sedge			S1		2 May Be At Risk	13	76.3 ± 10.0
P	<i>Carex viridula</i> var. <i>saxillifloralis</i>	Greenish Sedge			S1		May Be At Risk	2	81.0 ± 0.0
P	<i>Eleocharis olivacea</i>	Yellow Spikerush			S1		2 May Be At Risk	4	51.3 ± 0.0
P	<i>Sisyrinchium angustifolium</i>	Narrow-leaved Blue-eyed-grass			S1		2 May Be At Risk	1	76.7 ± 1.0
P	<i>Sisyrinchium fuscatum</i>	Coastal Plain Blue-eyed-grass			S1		2 May Be At Risk	1	95.0 ± 0.0
P	<i>Juncus Greenei</i>	Greene's Rush			S1		2 May Be At Risk	1	31.8 ± 0.0
P	<i>Allium tricoccum</i>	Wild Leek			S1		2 May Be At Risk	3	92.3 ± 0.0
P	<i>Malaxis brachypoda</i>	White Adder's-Mouth			S1		2 May Be At Risk	3	21.0 ± 10.0
P	<i>Platanthera flava</i> var. <i>herbiola</i>	Pale Green Orchid			S1		2 May Be At Risk	10	56.1 ± 0.0
P	<i>Spiranthes casei</i> var. <i>casei</i>	Case's Ladies'-Tresses			S1		2 May Be At Risk	1	83.4 ± 5.0
P	<i>Spiranthes ochroleuca</i>	Yellow Ladies'-tresses			S1		2 May Be At Risk	10	22.0 ± 0.0
P	<i>Cinna arundinacea</i>	Sweet Wood Reed Grass			S1		2 May Be At Risk	17	43.9 ± 0.0
P	<i>Dichanthelium dichotomum</i>	Forked Panic Grass			S1		2 May Be At Risk	19	46.1 ± 0.0
P	<i>Elymus wiegandii</i>	Wiegand's Wild Rye			S1		2 May Be At Risk	1	75.9 ± 0.0
P	<i>Glyceria obtusa</i>	Atlantic Manna Grass			S1		2 May Be At Risk	6	25.9 ± 5.0
P	<i>Potamogeton friesii</i>	Fries' Pondweed			S1		2 May Be At Risk	4	73.3 ± 5.0
P	<i>Potamogeton strictifolius</i>	Straight-leaved Pondweed			S1		2 May Be At Risk	1	95.4 ± 0.0
P	<i>Xyris difformis</i>	Bog Yellow-eyed-grass			S1		5 Undetermined	3	81.3 ± 0.0
P	<i>Asplenium ruta-muraria</i> var. <i>cryptolepis</i>	Wallrue Spleenwort			S1		2 May Be At Risk	3	88.5 ± 0.0
P	<i>Botrychium oneidense</i>	Blunt-lobed Moonwort			S1		2 May Be At Risk	1	90.3 ± 0.0
P	<i>Botrychium rugulosum</i>	Rugulose Moonwort			S1		2 May Be At Risk	1	67.1 ± 1.0
P	<i>Schizaea pusilla</i>	Little Curlygrass Fern			S1		2 May Be At Risk	21	49.5 ± 0.0
P	<i>Selaginella rupestris</i>	Rock Spikemoss			S1		2 May Be At Risk	12	76.8 ± 0.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	<i>Hieracium kalmii</i> var. <i>fasciculatum</i>	Kalm's Hawkweed			S1?	5	Undetermined	5	10.8 ± 0.0
P	<i>Solidago hispida</i>	Hairy Goldenrod			S1?	2	May Be At Risk	2	75.5 ± 1.0
P	<i>Cuscuta cephalanthi</i>	Buttobush Dodder			S1?	2	May Be At Risk	2	75.2 ± 1.0
P	<i>Drosera rotundifolia</i> var. <i>comosa</i>	Round-leaved Sundew			S1?	5	Undetermined	5	17.5 ± 1.0
P	<i>Huperzia selago</i>	Northern Firmoss			S1?	3	May Be At Risk	3	83.4 ± 5.0
P	<i>Fraxinus nigra</i>	Black Ash		Threatened	S1S2	2	At Risk	2	87.5 ± 1.0
P	<i>Carex rostrata</i>	Narrow-leaved Beaked Sedge			S1S2	1	May Be At Risk	1	14.9 ± 0.0
P	<i>Potamogeton bicupulatus</i>	Snailseed Pondweed		Endangered	S1S2	5	May Be At Risk	5	52.4 ± 0.0
P	<i>Listera australis</i>	Southern Twayblade			S2	11	At Risk	11	97.4 ± 0.0
P	<i>Conioselinum chinense</i>	Chinese Hemlock-parsley			S2	9	Sensitive	9	75.1 ± 1.0
P	<i>Pseudognaphalium macounii</i>	Macoun's Cudweed			S2	4	Sensitive	4	68.9 ± 0.0
P	<i>Solidago altissima</i>	Tall Goldenrod			S2	2	Secure	2	86.0 ± 0.0
P	<i>Symphoricarpon racemosum</i>	Small White Aster			S2	2	Sensitive	2	91.6 ± 1.0
P	<i>Symphoricarpon ciliolatum</i>	Fringed Blue Aster			S2	2	Sensitive	2	80.3 ± 0.0
P	<i>Alnus serrulata</i>	Smooth Alder			S2	26	Sensitive	26	44.9 ± 0.0
P	<i>Betula michauxii</i>	Michaux's Dwarf Birch			S2	11	Sensitive	11	81.9 ± 0.0
P	<i>Arabis drummondii</i>	Drummond's Rockcress			S2	3	Sensitive	3	75.9 ± 1.0
P	<i>Sagina nodosa</i>	Knotted Pearlwort			S2	22	Sensitive	22	3.9 ± 1.0
P	<i>Sagina nodosa</i> ssp. <i>borealis</i>	Knotted Pearlwort			S2	2	Sensitive	2	58.0 ± 0.0
P	<i>Stellaria longifolia</i>	Long-leaved Starwort			S2	2	Sensitive	2	76.4 ± 10.0
P	<i>Atriplex franktonii</i>	Frankton's Saltbush			S2	1	Secure	1	26.9 ± 1.0
P	<i>Chenopodium rubrum</i>	Red Pigweed			S2	4	Sensitive	4	75.0 ± 0.0
P	<i>Callitriche hermaphroditica</i>	Northern Water-starwort			S2	2	Secure	2	50.2 ± 0.0
P	<i>Hypericum dissimilatum</i>	Disguised St John's-wort			S2	5	Sensitive	5	23.7 ± 1.0
P	<i>Lonicera oblongifolia</i>	Swamp Fly Honeysuckle			S2	12	Sensitive	12	60.3 ± 0.0
P	<i>Viburnum lentago</i>	Nannyberry			S2	89	Secure	89	43.9 ± 0.0
P	<i>Viburnum recognitum</i>	Northern Arrow-Wood			S2	4	Secure	4	28.4 ± 0.0
P	<i>Astragalus eucoisus</i>	Elegant Milk-wetch			S2	3	May Be At Risk	3	100.0 ± 0.0
P	<i>Oxytropis campestris</i> var. <i>johannensis</i>	Field Locoweed			S2	1	Sensitive	1	88.1 ± 50.0
P	<i>Quercus macrocarpa</i>	Bur Oak			S2	2	May Be At Risk	2	26.6 ± 1.0
P	<i>Myriophyllum humile</i>	Low Water Milfoil			S2	3	Sensitive	3	86.5 ± 0.0
P	<i>Hedeoma pulegioides</i>	American False Pennyroyal			S2	56	Secure	56	12.2 ± 0.0
P	<i>Nuphar lutea</i> ssp. <i>rubrodisca</i>	Red-disked Yellow Pond-lily			S2	5	Sensitive	5	50.5 ± 0.0
P	<i>Oenothera fruticosa</i> ssp. <i>glauca</i>	Narrow-leaved Evening Primrose			S2	17	Undetermined	17	81.5 ± 0.0
P	<i>Orobanchë uniflora</i>	One-Flowered Broomrape			S2	12	Sensitive	12	12.1 ± 0.0
P	<i>Polygala paucifolia</i>	Fringed Milkwort			S2	5	Sensitive	5	33.3 ± 1.0
P	<i>Polygonum amphibium</i> var. <i>emersum</i>	Water Smartweed			S2	4	Sensitive	4	25.8 ± 0.0
P	<i>Polygonum careyi</i>	Carey's Smartweed			S2	6	Sensitive	6	34.9 ± 0.0
P	<i>Podosternum ceratophyllum</i>	Horn-leaved Rivenweed			S2	22	Sensitive	22	44.3 ± 0.0
P	<i>Hepatica nobilis</i> var. <i>obtusata</i>	Round-lobed Hepatica			S2	6	Sensitive	6	47.6 ± 0.0
P	<i>Ranunculus flabellaris</i>	Yellow Water Buttercup			S2	3	Secure	3	49.8 ± 0.0
P	<i>Ranunculus longirostris</i>	Eastern White Water-Crowfoot			S2	2	Undetermined	2	32.5 ± 1.0
P	<i>Crataegus scabrata</i>	Rough Hawthorn			S2	2	Sensitive	2	88.5 ± 0.0
P	<i>Cephalanthus occidentalis</i>	Common Buttonbush			S2	26	Sensitive	26	44.1 ± 0.0
P	<i>Salix sencea</i>	Silky Willow			S2	1	May Be At Risk	1	83.4 ± 5.0
P	<i>Agalinis neoscotica</i>	Nova Scotia Agalinis			S2	41	Sensitive	41	13.2 ± 1.0
P	<i>Euphrasia randii</i>	Rand's Eyebright			S2	23	May Be At Risk	23	3.5 ± 1.0
P	<i>Scrophularia lanceolata</i>	Lance-leaved Figwort			S2	1	Sensitive	1	96.7 ± 5.0
P	<i>Viola novae-angliae</i>	New England Violet			S2	2	Sensitive	2	31.6 ± 1.0
P	<i>Symplocarpus foetidus</i>	Eastern Skunk Cabbage			S2	68	Sensitive	68	25.6 ± 0.0
P	<i>Carex granularis</i>	Limestone Meadow Sedge			S2	1	Sensitive	1	31.1 ± 0.0
P	<i>Carex gynocrates</i>	Northern Bog Sedge			S2	4	Sensitive	4	65.8 ± 0.0
P	<i>Carex livida</i> var. <i>radicaulis</i>	Livid Sedge			S2	1	Sensitive	1	75.9 ± 2.0
P	<i>Carex salina</i>	Saltmarsh Sedge			S2	2	Sensitive	2	74.3 ± 1.0
P	<i>Carex tenuiflora</i>	Sparse-Flowered Sedge			S2	5	May Be At Risk	5	25.7 ± 1.0
P	<i>Carex albicans</i> var. <i>emmonsii</i>	White-tinged Sedge			S2	1	Sensitive	1	81.1 ± 0.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	<i>Carex vacillans</i>	Estuarine Sedge			S2	S2	3 Sensitive	4	13.7 ± 1.0
P	<i>Eleocharis quinqueflora</i>	Few-flowered Spikerush			S2	S2	Sensitive	4	75.6 ± 0.0
P	<i>Blysmus rufus</i>	Red Burrush			S2	S2	3 Sensitive	3	20.8 ± 0.0
P	<i>Elodea nuttallii</i>	Nuttall's Waterweed			S2	S2	3 Sensitive	3	45.0 ± 0.0
P	<i>Lemna trisulca</i>	Star Duckweed			S2	S2	4 Secure	3	90.0 ± 1.0
P	<i>Allium schoenoprasum</i>	Wild Chives			S2	S2	2 May Be At Risk	1	79.0 ± 1.0
P	<i>Allium schoenoprasum</i> var. <i>sibiricum</i>	Wild Chives			S2	S2	2 May Be At Risk	2	79.5 ± 0.0
P	<i>Najas gracillima</i>	Thread-Like Naiad			S2	S2	3 Sensitive	8	37.0 ± 0.0
P	<i>Calypso bulbosa</i> var. <i>americana</i>	Calypso			S2	S2	2 May Be At Risk	2	83.9 ± 0.0
P	<i>Cyrtopodium panviflorum</i> var. <i>makasin</i>	Small Yellow Lady's-Slipper			S2	S2	2 May Be At Risk	4	63.3 ± 1.0
P	<i>Spiranthes casei</i> var. <i>novaescotiae</i>	Case's Ladies'-Tresses			S2	S2	3 Sensitive	1	83.4 ± 10.0
P	<i>Spiranthes lucida</i>	Nodding Ladies'-Tresses			S2	S2	3 Sensitive	9	22.3 ± 0.0
P	<i>Dichantheilium linearifolium</i>	Shining Ladies'-Tresses			S2	S2	3 Sensitive	7	79.6 ± 1.0
P	<i>Piptatherum canadense</i>	Narrow-leaved Panic Grass			S2	S2	3 Sensitive	5	47.5 ± 0.0
P	<i>Puccinellia phryganodes</i>	Canada Rice Grass			S2	S2	3 Sensitive	5	78.3 ± 0.0
P	<i>Schizachyrium scoparium</i>	Creeping Alkali Grass			S2	S2	3 Sensitive	15	13.7 ± 0.0
P	<i>Stuckenia filiformis</i> ssp. <i>alpina</i>	Little Bluestem			S2	S2	3 Sensitive	4	99.1 ± 0.0
P	<i>Potamogeton richardsonii</i>	Thread-leaved Pondweed			S2	S2	3 Sensitive	6	75.9 ± 0.0
P	<i>Potamogeton vaseyi</i>	Richardson's Pondweed			S2	S2	3 Sensitive	2	75.9 ± 1.0
P	<i>Asplenium trichomanes</i>	Vasey's Pondweed			S2	S2	3 Sensitive	4	72.7 ± 0.0
P	<i>Woodwardia virginica</i>	Maidenhair Spleenwort			S2	S2	3 Sensitive	4	75.0 ± 0.0
P	<i>Woodsia alpina</i>	Virginia Chain Fern			S2	S2	3 Sensitive	6	85.0 ± 1.0
P	<i>Selaginella selaginoides</i>	Alpine Cliff Fern			S2	S2	3 Sensitive	5	89.1 ± 0.0
P	<i>Toxicodendron radicans</i>	Low Spikemoss			S2	S2	3 Sensitive	6	47.8 ± 0.0
P	<i>Osmorhiza longistylis</i>	Poison Ivy			S2?	S2?	3 Sensitive	1	97.3 ± 0.0
P	<i>Symphoricarichum novi-belgii</i> var. <i>crenifolium</i>	Smooth Sweet Cicely			S2?	S2?	3 Sensitive	1	26.8 ± 0.0
P	<i>Proserpinaca palustris</i> var. <i>crebra</i>	New York Aster			S2?	S2?	5 Undetermined	8	13.7 ± 0.0
P	<i>Epilobium coloratum</i>	Marsh Mermaidweed			S2?	S2?	3 Sensitive	21	30.0 ± 0.0
P	<i>Rumex maritimus</i> var. <i>persicarioides</i>	Purple-veined Willowherb			S2?	S2?	3 Sensitive	6	25.9 ± 1.0
P	<i>Rubus pensilvanicus</i>	Peach-leaved Dock			S2?	S2?	2 May Be At Risk	1	82.2 ± 0.0
P	<i>Rubus recurvicaulis</i>	Pennsylvania Blackberry			S2?	S2?	4 Secure	6	27.5 ± 3.0
P	<i>Salix myricoides</i>	Arching Dewberry			S2?	S2?	4 Secure	2	79.8 ± 1.0
P	<i>Eleocharis ovata</i>	Bayberry Willow			S2?	S2?	3 Sensitive	1	13.1 ± 0.0
P	<i>Scirpus pedicellatus</i>	Ovate Spikerush			S2?	S2?	3 Sensitive	3	75.5 ± 1.0
P	<i>Platanthera huronensis</i>	Stalked Burrush			S2?	S2?	Sensitive	1	90.6 ± 5.0
P	<i>Eragrostis pectinacea</i>	Fragrant Green Orchid			S2?	S2?	5 Undetermined	2	67.4 ± 0.0
P	<i>Potamogeton pulcherr</i>	Tufted Love Grass			S2?	S2?	4 Secure	3	24.4 ± 0.0
P	<i>Ceratophyllum echinatum</i>	Spotted Pondweed			S2S3	S2S3	Sensitive	1	91.5 ± 0.0
P	<i>Elatine americana</i>	Prickly Hornwort			S2S3	S2S3	3 Sensitive	5	25.7 ± 1.0
P	<i>Bartonia paniculata</i>	American Waterwort			S2S3	S2S3	3 Sensitive	3	66.5 ± 0.0
P	<i>Bartonia paniculata</i> ssp. <i>iodandra</i>	Branched Bartonia			S2S3	S2S3	3 Sensitive	4	49.9 ± 0.0
P	<i>Geranium robertianum</i>	Branched Bartonia			S2S3	S2S3	3 Sensitive	14	20.0 ± 10.0
P	<i>Myriophyllum quitense</i>	Herb Robert			S2S3	S2S3	4 Secure	10	26.0 ± 5.0
P	<i>Polygonum buxiforme</i>	Andean Water Milfoil			S2S3	S2S3	4 Secure	40	73.6 ± 0.0
P	<i>Polygonum rail</i>	Small's Knotweed			S2S3	S2S3	5 Undetermined	1	83.4 ± 7.0
P	<i>Rumex pallidus</i>	Sharp-fruited Knotweed			S2S3	S2S3	5 Undetermined	1	80.9 ± 5.0
P	<i>Galium labradoricum</i>	Seabeach Dock			S2S3	S2S3	3 Sensitive	5	5.5 ± 0.0
P	<i>Valeriana uliginosa</i>	Labrador Bedstraw			S2S3	S2S3	3 Sensitive	3	17.9 ± 1.0
P	<i>Carex adusta</i>	Swamp Valerian			S2S3	S2S3	3 Sensitive	1	47.5 ± 1.0
P	<i>Corallorhiza maculata</i> var. <i>occidentalis</i>	Lesser Brown Sedge			S2S3	S2S3	4 Secure	2	75.5 ± 1.0
P	<i>Listera auriculata</i>	Spotted Coralroot			S2S3	S2S3	3 Sensitive	2	31.2 ± 0.0
P	<i>Potamogeton praelongus</i>	Auricled Twayblade			S2S3	S2S3	3 Sensitive	2	71.1 ± 1.0
P	<i>Isoetes acadensis</i>	White-stemmed Pondweed			S2S3	S2S3	4 Secure	8	60.4 ± 0.0
P	<i>Ophioglossum pusillum</i>	Acadian Quillwort			S2S3	S2S3	3 Sensitive	6	33.0 ± 1.0
P	<i>Panax trifolius</i>	Northern Adder's-tongue			S2S3	S2S3	3 Sensitive	6	16.0 ± 1.0
P		Dwarf Ginseng			S3	S3	3 Sensitive	1	76.9 ± 0.0

Vulnerable



Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	<i>Artemisia campestris</i> ssp. <i>caudata</i>	Field Wormwood			S3		4 Secure	1	24.5 ± 0.0
P	<i>Erigeron hyssopifolius</i>	Hyssop-leaved Fleabane			S3		4 Secure	4	75.4 ± 0.0
P	<i>Hieracium paniculatum</i>	Panicled Hawkweed			S3		4 Secure	1	81.4 ± 0.0
P	<i>Megalodonta beckii</i>	Water Beggaricks			S3		Secure	1	95.6 ± 0.0
P	<i>Prenanthes racemosa</i>	Glaucous Rattlesnakeroot			S3		4 Secure	30	73.5 ± 0.0
P	<i>Tanacetum bipinnatum</i> ssp. <i>huronense</i>	Lake Huron Tansy			S3		4 Secure	1	85.7 ± 1.0
P	<i>Symphoricaricium boreale</i>	Boreal Aster			S3		3 Sensitive	9	26.6 ± 1.0
P	<i>Betula pumila</i>	Bog Birch			S3		4 Secure	6	31.4 ± 1.0
P	<i>Arabis hirsuta</i> var. <i>pycnocarpa</i>	Western Hairy Rockcress			S3		4 Secure	5	75.9 ± 0.0
P	<i>Cardamine maxima</i>	Large Toothwort			S3		4 Secure	4	80.7 ± 0.0
P	<i>Subularia aquatica</i> var. <i>americana</i>	Water Awlwort			S3		4 Secure	12	33.3 ± 0.0
P	<i>Lobelia cardinalis</i>	Cardinal Flower			S3		4 Secure	360	31.9 ± 0.0
P	<i>Stellaria humifusa</i>	Saltmarsh Starwort			S3		4 Secure	6	25.6 ± 5.0
P	<i>Hudsonia tomentosa</i>	Woolly Beach-heath			S3		4 Secure	3	60.5 ± 0.0
P	<i>Cornus amomum</i> ssp. <i>obliqua</i>	Pale Dogwood			S3		3 Sensitive	164	43.9 ± 0.0
P	<i>Crassula aquatica</i>	Water Pygmyweed			S3		4 Secure	7	25.6 ± 1.0
P	<i>Rhodiola rosea</i>	Roseroot			S3		4 Secure	37	2.2 ± 0.0
P	<i>Penthorum sedoides</i>	Ditch Stonecrop			S3		4 Secure	17	31.9 ± 0.0
P	<i>Elatine minima</i>	Small Waterwort			S3		4 Secure	27	25.7 ± 0.0
P	<i>Vaccinium uliginosum</i>	Alpine Bilberry			S3		Sensitive	3	82.0 ± 0.0
P	<i>Gentianella amarella</i> ssp. <i>acuta</i>	Northern Gentian			S3		4 Secure	3	75.9 ± 0.0
P	<i>Geranium bicknellii</i>	Bicknell's Crane's-bill			S3		4 Secure	4	26.3 ± 1.0
P	<i>Myriophyllum farwellii</i>	Fanwell's Water Milfoil			S3		4 Secure	19	38.2 ± 0.0
P	<i>Myriophyllum heterophyllum</i>	Variable-leaved Water Milfoil			S3		4 Secure	6	73.9 ± 0.0
P	<i>Myriophyllum verticillatum</i>	Whorled Water Milfoil			S3		4 Secure	6	30.1 ± 0.0
P	<i>Myriophyllum sibiricum</i>	Siberian Water Milfoil			S3		4 Secure	11	38.9 ± 1.0
P	<i>Proserpinaca palustris</i>	Marsh Mermaidweed			S3		4 Secure	1	77.1 ± 0.0
P	<i>Teucrium canadense</i>	Canada Germander			S3		3 Sensitive	2	25.3 ± 0.0
P	<i>Utricularia radiata</i>	Little Floating Bladderwort			S3		4 Secure	36	37.1 ± 0.0
P	<i>Nuphar lutea</i> ssp. <i>pumila</i>	Small Yellow Pond-lily			S3		4 Secure	2	75.9 ± 0.0
P	<i>Epilobium hornemannii</i>	Hornemann's Willowherb			S3		4 Secure	3	46.2 ± 0.0
P	<i>Epilobium strictum</i>	Downy Willowherb			S3		4 Secure	12	16.1 ± 0.0
P	<i>Polygonum arifolium</i>	Halberd-leaved Tearthumb			S3		4 Secure	2	51.4 ± 0.0
P	<i>Polygonum punctatum</i> var. <i>confertiflorum</i>	Dotted Smartweed			S3		4 Secure	12	12.2 ± 1.0
P	<i>Polygonum scandens</i>	Climbing False Buckwheat			S3		4 Secure	6	43.2 ± 0.0
P	<i>Littorella uniflora</i>	American Shoreweed			S3		4 Secure	20	32.5 ± 1.0
P	<i>Primula mistassinica</i>	Mistassini Primrose			S3		4 Secure	9	70.6 ± 1.0
P	<i>Primula laurentiana</i>	Laurentian Primrose			S3		4 Secure	9	75.1 ± 1.0
P	<i>Pyrola minor</i>	Lesser Pyrola			S3		4 Secure	2	42.5 ± 0.0
P	<i>Clematis occidentalis</i>	Purple Clematis			S3		4 Secure	7	47.7 ± 0.0
P	<i>Thalictrum venulosum</i>	Northern Meadow-rue			S3		4 Secure	11	35.1 ± 0.0
P	<i>Rhamnus alnifolia</i>	Alder-leaved Buckthorn			S3		Secure	1	84.1 ± 0.0
P	<i>Agrimonia gryposepala</i>	Hooked Agrimony			S3		4 Secure	12	47.9 ± 0.0
P	<i>Amelanchier canadensis</i>	Canada Serviceberry			S3		4 Secure	7	31.8 ± 1.0
P	<i>Rosa palustris</i>	Swamp Rose			S3		4 Secure	29	8.0 ± 0.0
P	<i>Rubus chamaemorus</i>	Cloudberry			S3		4 Secure	52	5.3 ± 1.0
P	<i>Rubus occidentalis</i>	Black Raspberry			S3		4 Secure	2	86.8 ± 0.0
P	<i>Salix nigra</i>	Black Willow			S3		3 Sensitive	5	73.7 ± 1.0
P	<i>Salix pedicularis</i>	Bog Willow			S3		4 Secure	12	17.9 ± 1.0
P	<i>Salix petolaris</i>	Meadow Willow			S3		4 Secure	1	76.4 ± 0.0
P	<i>Geocaulon lividum</i>	Northern Comandra			S3		4 Secure	9	17.9 ± 0.0
P	<i>Limosella australis</i>	Southern Mudwort			S3		4 Secure	10	22.2 ± 0.0
P	<i>Boehmeria cylindrica</i>	Small-spike False-nettle			S3		3 Sensitive	123	39.4 ± 0.0
P	<i>Viola adunca</i>	Hooked Violet			S3		4 Secure	3	17.6 ± 1.0
P	<i>Viola nephrophylla</i>	Northern Bog Violet			S3		4 Secure	2	73.9 ± 0.0
P	<i>Carex arctica</i>	Northern Clustered Sedge			S3		4 Secure	8	67.8 ± 0.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	<i>Carex atratifloris</i>	Scabrous Black Sedge			S3	4 Secure	4 Secure	1	75.9±0.0
P	<i>Carex capillaris</i>	Hairlike Sedge			S3	4 Secure	4 Secure	2	75.9±2.0
P	<i>Carex chordorrhiza</i>	Creeping Sedge			S3	4 Secure	4 Secure	2	60.5±1.0
P	<i>Carex conoidea</i>	Field Sedge			S3	4 Secure	4 Secure	14	26.3±1.0
P	<i>Carex exilis</i>	Coastal Sedge			S3	4 Secure	4 Secure	80	39.9±0.0
P	<i>Carex garberi</i>	Garber's Sedge			S3	3 Sensitive	3 Sensitive	2	79.6±1.0
P	<i>Carex haydenii</i>	Hayden's Sedge			S3	4 Secure	4 Secure	8	16.0±0.0
P	<i>Carex lupulina</i>	Hop Sedge			S3	4 Secure	4 Secure	41	43.9±0.0
P	<i>Carex michauxiana</i>	Michaux's Sedge			S3	4 Secure	4 Secure	54	34.8±0.0
P	<i>Carex ormostachya</i>	Necklace Spike Sedge			S3	4 Secure	4 Secure	3	68.9±0.0
P	<i>Carex rosea</i>	Rosy Sedge			S3	4 Secure	4 Secure	2	99.2±0.0
P	<i>Carex tenera</i>	Tender Sedge			S3	4 Secure	4 Secure	9	26.9±1.0
P	<i>Carex tuckermanii</i>	Tuckerman's Sedge			S3	4 Secure	4 Secure	12	44.0±0.0
P	<i>Carex vaginata</i>	Sheathed Sedge			S3	3 Sensitive	3 Sensitive	9	51.8±6.0
P	<i>Carex wiegandii</i>	Wiegand's Sedge			S3	4 Secure	4 Secure	31	5.6±0.0
P	<i>Carex recta</i>	Estuary Sedge			S3	4 Secure	4 Secure	6	11.4±0.0
P	<i>Cyperus dentatus</i>	Toothed Flatsedge			S3	4 Secure	4 Secure	29	26.7±0.0
P	<i>Eleocharis intermedia</i>	Matted Spikerush			S3	4 Secure	4 Secure	1	64.4±0.0
P	<i>Eriophorum charmissonis</i>	Russet Cotton-Grass			S3	4 Secure	4 Secure	1	66.2±1.0
P	<i>Rhynchospora capitellata</i>	Small-headed Beakrush			S3	4 Secure	4 Secure	7	80.6±0.0
P	<i>Rhynchospora fusca</i>	Brown Beakrush			S3	4 Secure	4 Secure	30	13.1±0.0
P	<i>Trichophorum cintonii</i>	Clinton's Clubrush			S3	4 Secure	4 Secure	6	33.3±5.0
P	<i>Schoenoplectus fluviatilis</i>	River Bulrush			S3	3 Sensitive	3 Sensitive	11	74.3±0.0
P	<i>Schoenoplectus torreyi</i>	Torrey's Bulrush			S3	4 Secure	4 Secure	19	43.0±0.0
P	<i>Triglochin gaspensis</i>	Gasp   Arrowgrass			S3	4 Secure	4 Secure	16	13.7±1.0
P	<i>Juncus marginatus</i>	Grassleaf Rush			S3	3 Sensitive	3 Sensitive	1	99.8±1.0
P	<i>Juncus subcaudatus</i> var. <i>planisepalus</i>	Woods-Rush			S3	3 Sensitive	3 Sensitive	2	81.0±1.0
P	<i>Juncus dudleyi</i>	Dudley's Rush			S3	Secure	Secure	2	92.6±2.0
P	<i>Triantha glutinosa</i>	Sticky False-Asphodel			S3	4 Secure	4 Secure	3	99.5±0.0
P	<i>Cyrtopodium reginae</i>	Showy Lady's-Slipper			S3	3 Sensitive	3 Sensitive	17	63.8±1.0
P	<i>Liparis loeselii</i>	Loesel's Twayblade			S3	4 Secure	4 Secure	14	26.6±0.0
P	<i>Platanthera blephariglossis</i>	White Fringed Orchid			S3	4 Secure	4 Secure	4	56.5±1.0
P	<i>Platanthera grandiflora</i>	Large Purple Fringed Orchid			S3	3 Sensitive	3 Sensitive	30	25.8±0.0
P	<i>Bromus latiglumis</i>	Broad-Glumed Brome			S3	3 Sensitive	3 Sensitive	1	84.1±0.0
P	<i>Calamagrostis pickeringii</i>	Pickering's Reed Grass			S3	4 Secure	4 Secure	103	39.2±0.0
P	<i>Dichanthelium clandestinum</i>	Deer-tongue Panic Grass			S3	4 Secure	4 Secure	2	80.6±0.0
P	<i>Dichanthelium depauperatum</i>	Starved Panic Grass			S3	4 Secure	4 Secure	2	84.3±0.0
P	<i>Heteranthera dubia</i>	Water Stargrass			S3	4 Secure	4 Secure	18	76.4±0.0
P	<i>Potamogeton obtusifolius</i>	Blunt-leaved Pondweed			S3	4 Secure	4 Secure	6	45.7±0.0
P	<i>Sparganium natans</i>	Small Burreed			S3	4 Secure	4 Secure	2	75.9±1.0
P	<i>Xyris montana</i>	Northern Yellow-Eyed-Grass			S3	4 Secure	4 Secure	24	46.9±0.0
P	<i>Zannichellia palustris</i>	Horned Pondweed			S3	4 Secure	4 Secure	5	72.9±0.0
P	<i>Adiantum pedatum</i>	Northern Maidenhair Fern			S3	4 Secure	4 Secure	1	72.4±1.0
P	<i>Cryptogramma stelleri</i>	Steller's Rockbrake			S3	4 Secure	4 Secure	1	97.2±1.0
P	<i>Asplenium trichomanes-ramosum</i>	Green Splenwort			S3	4 Secure	4 Secure	15	70.7±1.0
P	<i>Dryopteris fragrans</i> var. <i>remotiuscula</i>	Fragrant Wood Fern			S3	4 Secure	4 Secure	2	75.1±0.0
P	<i>Isoetes tuckermanii</i>	Tuckerman's Quillwort			S3	4 Secure	4 Secure	16	32.5±1.0
P	<i>Lycopodium sabinifolium</i>	Ground-Fir			S3	4 Secure	4 Secure	5	61.2±1.0
P	<i>Huperzia appalachiana</i>	Appalachian Fir-Clubmoss			S3	3 Sensitive	3 Sensitive	2	78.9±1.0
P	<i>Bostrychium dissectum</i>	Cut-leaved Moonwort			S3	4 Secure	4 Secure	9	13.1±5.0
P	<i>Bostrychium lanceolatum</i> var. <i>angustisegmentum</i>	Lance-Leaf Grape-Fern			S3	3 Sensitive	3 Sensitive	2	74.4±0.0
P	<i>Bostrychium simplex</i>	Least Moonwort			S3	4 Secure	4 Secure	5	16.0±0.0
P	<i>Polypodium appalachianum</i>	Appalachian Polypody			S3	4 Secure	4 Secure	4	13.2±0.0
P	<i>Utricularia resupinata</i>	Inverted Bladderwort			S3?	4 Secure	4 Secure	19	51.0±0.0
P	<i>Armelanchier stolonifera</i>	Running Serviceberry			S3?	4 Secure	4 Secure	1	83.4±5.0
P	<i>Crataegus submollis</i>	Quebec Hawthorn			S3?	3 Sensitive	3 Sensitive	8	9.9±0.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	<i>Solidago latissimifolia</i>	Elliott's Goldenrod				S3S4	Secure	1	85.1 ± 0.0
P	<i>Lobelia kalmii</i>	Brook Lobelia				S3S4	4 Secure	8	25.6 ± 0.0
P	<i>Suaeda calceoliformis</i>	Horned Sea-blite				S3S4	4 Secure	4	25.7 ± 0.0
P	<i>Utricularia gibba</i>	Humped Bladderwort				S3S4	4 Secure	30	22.4 ± 0.0
P	<i>Rumex maritimus</i>	Sea-Side Dock				S3S4	4 Secure	2	14.2 ± 1.0
P	<i>Potentilla arguta</i>	Tall Cinquefoil				S3S4	4 Secure	3	17.5 ± 1.0
P	<i>Spirodola polyrrhiza</i>	Smooth Twigrush				S3S4	4 Secure	32	13.3 ± 0.0
P	<i>Corallorhiza maculata</i>	Great Duckweed				S3S4	4 Secure	3	44.4 ± 0.0
P	<i>Potamogeton oakesianus</i>	Spotted Coralroot				S3S4	3 Sensitive	3	30.2 ± 0.0
P	<i>Stuckenia pectinata</i>	Oakes' Pondweed				S3S4	4 Secure	37	20.9 ± 0.0
P	<i>Equisetum hyemale var. affine</i>	Sago Pondweed				S3S4	4 Secure	58	34.2 ± 0.0
P	<i>Equisetum scirpoides</i>	Common Scouring-rush				S3S4	4 Secure	4	76.6 ± 0.0
P	<i>Solidago simplex var. randii</i>	Dwarf Scouring-Rush				S3S4	4 Secure	1	87.4 ± 1.0
P	<i>Montia fontana</i>	Water Blinks				SH	0.1 Extirpated	1	81.4 ± 1.0
P	<i>Dichanthelium meridionale</i>	Matting Witchgrass				SH	2 May Be At Risk	4	16.4 ± 1.0
P	<i>Solidago caesia</i>	Blue-stemmed Goldenrod				SH	0.1 Extirpated	1	97.4 ± 10.0
P	<i>Carex swanii</i>	Swan's Sedge				SX	0.1 Extirpated	2	78.6 ± 1.0
P						SX	0.1 Extirpated	46	26.5 ± 1.0

## 5.1 SOURCE BIBLIOGRAPHY (100 km)

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

# recs	CITATION
9460	eBird. 2014. eBird Basic Dataset. Version: EBD_reINov-2014. Ithaca, New York. Nov 2014. Cornell Lab of Ornithology. 25036 recs.
2002	Lepage, D. 2014. Maritime Breeding Bird Atlas Database. Bird Studies Canada. Sackville NB. 407 838 recs.
1602	Erskine, A.J. 1982. Maritime Breeding Bird Atlas Database. NS Museum & Nimbus Publ., Halifax, 82, 125 recs.
1553	Morrison, Guy. 2011. Maritime Shorebird Survey (MSS) database. Canadian Wildlife Service, Ottawa, 15939 surveys. 86171 recs.
10710	Blaney, C.S. & Mazerolle, D.M. 2011. NB WTF Fieldwork on Magaguadavic & Lower St Croix Rivers. Atlantic Canada Conservation Data Centre, 4585 recs.
783	Toms, B. & Belliveau, A.; LaRue, D.; EMA Recovery Team. 2014. 2013-14 Geum peckii observations. Mersey Tobaccat Research Institute, 783 records.
594	Toms, B. & Belliveau, A.; LaRue, D.; EMA Recovery Team. 2012. 2012 Geum peckii observations. Mersey Tobaccat Research Institute, 594 records.
388	Hicks, Andrew. 2009. Coastal Waterfowl Surveys Database, 2000-08. Canadian Wildlife Service, Sackville, 46488 recs (11149 non-zero).
381	Pardeck, K.L. & Ziolkowski Jr., D.J.; Hudson, M.-A.R. 2014. North American Breeding Bird Survey Dataset 1966 - 2013. U.S. Geological Survey, Patuxent Wildlife Research Center < <a href="http://www.pwrc.usgs.gov/BBS/RawData/">www.pwrc.usgs.gov/BBS/RawData/</a> >
332	Sollows, M.C., 2008. NBM Science Collections databases: mammals. New Brunswick Museum, Saint John NB, download Jan. 2008, 4983 recs.
320	Benedict, B. Connell Herbarium Specimens. University New Brunswick, Fredericton. 2003.
265	Clayden, S.R. 1998. NBM Science Collections databases: vascular plants. New Brunswick Museum, Saint John NB, 19759 recs.
239	Blaney, C.S.; Mazerolle, D.M. 2012. Fieldwork 2012. Atlantic Canada Conservation Data Centre, 13,278 recs.
221	Tims, J. & Craig, N. 1995. Environmentally Significant Areas in New Brunswick (NBESA), NB Dept of Environment & Nature Trust of New Brunswick Inc, 6042 recs.
210	Blaney, C.S.; Mazerolle, D.M.; Klymko, J.; Spicer, C.D. 2006. Fieldwork 2006. Atlantic Canada Conservation Data Centre. Sackville NB, 8399 recs.
184	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.
162	Benedict, B. Connell Herbarium Specimens (Data) . University New Brunswick, Fredericton. 2003.
149	Boyne, A.W., 2000. Tern Surveys. Canadian Wildlife Service, Sackville, unpublished data. 168 recs.
145	Hinds, H.R. 1986. Notes on New Brunswick plant collections. Connell Memorial Herbarium, unpubl, 739 recs.
137	Bateman, M.C. 2001. Coastal Waterfowl Surveys Database, 1965-2001. Canadian Wildlife Service, Sackville, 667 recs.
137	Clayden, S.R. 2007. NBM Science Collections databases: vascular plants. New Brunswick Museum, Saint John NB, download Mar. 2007, 6914 recs.
130	Wilhelm, S.I. et al. 2011. Colonial Waterbird Database. Canadian Wildlife Service, Sackville, 2698 sites, 9718 recs (8192 obs).
120	Brunelle, P.-M. (compiler). 2009. ADIP/MDDS Odonata Database: data to 2006 inclusive. Atlantic Dragonfly Inventory Program (ADIP), 24200 recs.
104	Benjamin, L.K. 2009. NSDNR Fieldwork & Consultants Reports. Nova Scotia Dept Natural Resources, 143 recs.
97	Sollows, M.C. 2008. NBM Science Collections databases: herpetiles. New Brunswick Museum, Saint John NB, download Jan. 2008, 8636 recs.
88	Goltz, J.P. 2012. Field Notes, 1989-2005. , 1091 recs
86	Blaney, C.S.; Mazerolle, D.M. 2008. Fieldwork 2008. Atlantic Canada Conservation Data Centre. Sackville NB, 13343 recs.
78	Blaney, C.S.; Mazerolle, D.M. 2009. Fieldwork 2009. Atlantic Canada Conservation Data Centre. Sackville NB, 13395 recs.
74	Blaney, C.S.; Spicer, C.D.; Mazerolle, D.M. 2005. Fieldwork 2005. Atlantic Canada Conservation Data Centre. Sackville NB, 2333 recs.
72	Belland, R.J. Maritime moss records from various herbarium databases. 2014.

#	recs	CITATION
68		Newell, R.E. 2000. E.C. Smith Herbarium Database. Acadia University, Wolfville NS, 7139 recs.
69		Benjamin, L.K. 2009. Boreal Felt Lichen, Mountain Aves, Orchid and other recent records. Nova Scotia Dept Natural Resources, 105 recs.
63		Benjamin, L.K. 2012. NSDNR fieldwork & consultant reports 2008-2012. Nova Scotia Dept Natural Resources, 196 recs.
63		Erskine, A.J. 1999. Maritime Nest Records Scheme (MNRS) 1937-1999. Canadian Wildlife Service, Sackville, 313 recs.
54		Benedict, B. Connell Herbarium Specimen Database Download 2004. Connell Memorial Herbarium, University of New Brunswick. 2004.
53		Blaney, C.S.; Spicer, C.D.; Popma, T.M.; Hanel, C. 2002. Fieldwork 2002. Atlantic Canada Conservation Data Centre. Sackville NB, 2252 recs.
49		Bagnell, B.A. 2001. New Brunswick Bryophyte Occurrences. B&B Botanical, Sussex, 478 recs.
46		Stewart, J.I. 2010. Peregrine Falcon Surveys in New Brunswick. 2002-09. Canadian Wildlife Service, Sackville, 58 recs.
44		Cowie, Faye. 2007. Surveyed Lakes in New Brunswick. Canadian Rivers Institute, 781 recs.
43		Newell, R. E. C. Smith Digital Herbarium. E.C. Smith Herbarium, Irving Biodiversity Collection, Acadia University, 2013.
41		Blaney, C.S.; Spicer, C.D. 2001. Fieldwork 2001. Atlantic Canada Conservation Data Centre. Sackville NB, 981 recs.
35		Benjamin, L.K. (compiler). 2007. Significant Habitat & Species Database. Nova Scotia Dept Natural Resources, 8439 recs.
34		Clayden, S.R. 2012. NBM Science Collections databases: vascular plants. New Brunswick Museum, Saint John NB, 57 recs.
32		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.
30		Layberry, R.A. & Hall, P.W., LaFontaine, J.D. 1998. The Butterflies of Canada. University of Toronto Press. 280 pp+plates.
29		Benjamin, L.K. (compiler). 2012. Significant Habitat & Species Database. Nova Scotia Dept Natural Resources, 4965 recs.
29		Klymko, J.J.D. 2014. Maritimes Butterfly Atlas, 2012 submissions. Atlantic Canada Conservation Data Centre, 8552 records.
29		McAlpine, D.F. 1998. NBM Science Collections databases to 1998. New Brunswick Museum, Saint John NB, 241 recs.
29		Munro, Marian K. Nova Scotia Provincial Museum of Natural History Herbarium Database. Nova Scotia Provincial Museum of Natural History, Halifax, Nova Scotia. 2013.
29		Nature Conservancy Canada. 2008. Geum peckii on Brier Island. Nature Conservancy Canada, 29 recs.
28		Kennedy, Joseph. 2010. New Brunswick Peregrine records, 2009. New Brunswick Dept Natural Resources, 19 recs (14 active).
26		Pronych, G. & Wilson, A. 1993. Atlas of Rare Vascular Plants in Nova Scotia. Nova Scotia Museum, Halifax NS, 1:1-168, II:169-331, 1446 recs.
25		Speers, L. 2008. Butterflies of Canada database: New Brunswick 1897-1999. Agriculture & Agri-Food Canada, Biological Resources Program, Ottawa, 2048 recs.
22		Belliveau, A. 2012. 2012 Atlantic Coastal Plain Flora Observations. Mersey Tobecoatic Research Institute, 1543.
21		Pike, E., Tingley, S. & Christie, D.S. 2000. Nature NB Listserve. University of New Brunswick, listserv.unb.ca/archives/naturenb. 68 recs.
20		Newell, R.E. 2005. E.C. Smith Digital Herbarium. E.C. Smith Herbarium, Irving Biodiversity Collection, Acadia University, Web site: <a href="http://luxor.acadiau.ca/library/Herbarium/project/">http://luxor.acadiau.ca/library/Herbarium/project/</a> . 582 recs.
20		Tingley, S. (compiler). 2001. Butterflies of New Brunswick. Web site: <a href="http://www.geocities.com/Yosemite/8425/buttrfly">www.geocities.com/Yosemite/8425/buttrfly</a> . 142 recs.
19		Benjamin, L.K. (compiler). 2002. Significant Habitat & Species Database. Nova Scotia Dept of Natural Resources, 32 spp, 683 recs.
18		Belliveau, A.G. 2014. Plant Records from Southern and Central Nova Scotia. Atlantic Canada Conservation Data Centre, 919 recs.
17		Hinds, H.R. 1999. Connell Herbarium Database. University New Brunswick, Fredericton, 131 recs.
17		McAlpine, D.F., Fletcher, T.J., Gorham, S.W. & Gorham, I.T. 1991. Distribution & habitat of the Tetraploid Gray Treefrog, <i>Hyla versicolor</i> , in New Brunswick & Eastern Maine. Can. Field-Nat., 105 (4): 526-529. 17 recs.
16		Cronin, P. & Ayer, C.; Dube, B.; Hooper, W.C.; LeBlanc, E.; Madden, T.; Seymour, P. 1998. Fish Species Management Plans (draft). NB DNRE Internal Report. Fredericton, 164pp.
16		Klymko, J.J.D. 2012. Maritimes Butterfly Atlas, 2010 and 2011 records. Atlantic Canada Conservation Data Centre. 6318 recs.
16		Sollows, M.C. 2009. NBM Science Collections databases: molluscs. New Brunswick Museum, Saint John NB, download Jan. 2009, 6951 recs (2957 in Atlantic Canada).
14		Clayden, S.R. 2005. Confidential supplement to Status Report on Ghost Antler Lichen ( <i>Pseudevernia cladonia</i> ). Committee on the Status of Endangered Wildlife in Canada, 27 recs.
14		Edsall, J. 2001. Lepidopteran records in New Brunswick. 1997-99. Pers. comm. to K.A. Bredin. 91 recs.
14		Roland, A.E. & Smith, E.C. 1969. The Flora of Nova Scotia, 1st Ed. Nova Scotia Museum, Halifax, 743pp.
14		Spicer, C.D. 2001. Powerline Corridor Botanical Surveys, Charlotte & Saint John Counties. A M E C International, 1269 recs.
13		Robinson, S.L. 2014. 2013 Field Data. Atlantic Canada Conservation Data Centre.
12		Benedict, B. Connell Herbarium Specimens. Digital photos. University New Brunswick, Fredericton. 2005.
12		Blaney, C.S.; Mazerolle, D.M. 2010. Fieldwork 2010. Atlantic Canada Conservation Data Centre. Sackville NB, 15508 recs.
12		Houston, J.J. 1990. Status of the Redbreast Sunfish ( <i>Lepomis auritus</i> ) in Canada. Can. Field-Nat., 104:64-68. 15 recs.
12		McAlpine, D.F. 1998. NBM Science Collections: Wood Turtle records. New Brunswick Museum, Saint John NB, 329 recs.
10		Bateman, M.C. 2000. Waterfowl Brood Surveys Database, 1990-2000. Canadian Wildlife Service, Sackville, unpublished data. 149 recs.
10		Noseworthy, J. 2013. Van Brunt's Jacob's-ladder observations along tributary of Dipper Harbour Ck. Nature Conservancy of Canada, 10 recs.
9		Christie, D.S. 2000. Christmas Bird Count Data, 1997-2000. Nature NB, 54 recs.
9		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.
8		Edsall, J. 2007. Personal Butterfly Collection: specimens collected in the Canadian Maritimes, 1961-2007. J. Edsall, unpubl. report, 137 recs.
8		Kennedy, Joseph. 2010. New Brunswick Peregrine records, 2010. New Brunswick Dept Natural Resources, 16 recs (11 active).
8		Speers, L. 2001. Butterflies of Canada database. Agriculture & Agri-Food Canada, Biological Resources Program, Ottawa, 190 recs.
7		Whitlam, R.M. 1999. Status Report on the Roseate Tern (update) in Canada. Committee on the Status of Endangered Wildlife in Canada, 36 recs.
7		Doucet, D.A. 2007. Lepidopteran Records, 1988-2006. Doucet, 700 recs.
6		Brunelle, P.-M. (compiler). 2010. ADIP/MDDS Odonata Database: NB, NS Update 1900-09. Atlantic Dragonfly Inventory Program (ADIP), 935 recs.
6		Doucet, D.A. 2008. Fieldwork 2008: Odonata. ACCDC Staff, 625 recs.
6		McAlpine, D.F. 1983. Status & Conservation of Solution Caves in New Brunswick. New Brunswick Museum, Publications in Natural Science, no. 1, 28pp.
6		Munro, Marian K. Nova Scotia Provincial Museum of Natural History Herbarium Database. Nova Scotia Provincial Museum of Natural History, Halifax, Nova Scotia. 2014.
5		Boyer, A.W. 2000. Harlequin Duck Surveys. Canadian Wildlife Service, Sackville, unpublished data. 5 recs.

# recs	CITATION
5	Keddy, C. 1986. Status report on the eastern mountain avens, <i>Geum peckii</i> , in Canada Ottawa, Ontario, Canada: Committee on the Status of Endangered Wildlife in Canada (COSEWIC).
4	Clayden, S.R. 2003. NS lichen ranks, locations. Pers. comm. to C.S. Blaney. 1p, 5 recs, 5 recs.
4	Marx, M. & Kenney, R.D. 2001. North Atlantic Right Whale Database. University of Rhode Island, 4 recs.
4	Newell, R.E. 2006. Rare plant observations in Digby Neck. Pers. comm. to S. Blaney, 6 recs.
4	Oldham, M.J. 2000. Oldham database records from Maritime provinces. Oldham, M.J.: ONHIC, 487 recs.
4	Zinck, M. & Roland, A.E. 1998. Roland's Flora of Nova Scotia. Nova Scotia Museum, 3rd ed., rev. M. Zinck; 2 Vol., 1297 pp.
3	Bishop, G., Bagnell, B.A. 2004. Site Assessment of Musquash Harbour, Nature Conservancy of Canada Property - Preliminary Botanical Survey, B&B Botanical, 12pp.
3	Blaney, C.S.; Mazerolle, D.M. 2011. Fieldwork 2011. Atlantic Canada Conservation Data Centre Fieldwork 2011. Sackville NB.
3	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2014. Atlantic Canada Conservation Data Centre Fieldwork 2014. Atlantic Canada Conservation Data Centre, # recs.
3	Blaney, C.S.; Mazerolle, D.M.; Oberndorfer, E. 2007. Fieldwork 2007. Atlantic Canada Conservation Data Centre. Sackville NB, 13770 recs.
3	Clayden, S.R. 2006. <i>Pseudevernia</i> diadonia records. NB Museum. Pers. comm. to S. Blaney, Dec. 4 recs.
3	Marshall, L. 1998. Atlantic Salmon: Southwest New Brunswick outer-Fundy SFA 23. Dept. of Fisheries & Oceans, Atlantic Region, Science. Stock Status Report D3-13. 6 recs.
3	Sabine, D.L. 2005. 2001 Freshwater Mussel Surveys. New Brunswick Dept of Natural Resources & Energy, 590 recs.
3	Sollows, M.C., 2009. NBM Science Collections databases: Coccinellid & Cerambycid Beetles. New Brunswick Museum, Saint John NB, download Feb. 2009, 569 recs.
2	Amirault, D.L. & Stewart, J. 2007. Piping Plover Database 1984-2006. Canadian Wildlife Service, Sackville, 3344 recs, 1228 new.
2	Bishop, G. 2012. Field data from September 2012. Anticosti Aster collection trip. , 135 rec.
2	Blaney, C.S. 2003. Fieldwork 2003. Atlantic Canada Conservation Data Centre. Sackville NB, 1042 recs.
2	Blaney, C.S. 2002. Atlantic Salmon: Maritime Provinces Overview for 2001. Dept. of Fisheries & Oceans, Atlantic Region, Science Stock Status Report D3-14. 39 recs.
2	Chaput, G. 2002. Atlantic Salmon: Maritime Provinces Overview for 1979-98. Canadian Rivers Institute, 2698 recs.
2	Cowie, F. 2007. Electrofishing Population Estimates 1979-98. Canadian Rivers Institute, 2698 recs.
2	Doucet, D.A. & Edsall, J.; Brunelle, P.-M. 2007. Miramichi Watershed Rare Odonata Survey. New Brunswick ETF & WTF Report, 1211 recs.
2	Downes, C. 1998-2000. Breeding Bird Survey Data. Canadian Wildlife Service, Ottawa, 111 recs.
2	Elderkin M.F. 2007. <i>Seleginella rupestris</i> , <i>Iris prismatica</i> & <i>Lophiola aurea</i> records in NS. NS Dept of Natural Resources, Wildlife Div. Pers. comm. to C.S. Blaney, 3 recs.
2	Goltz, J.P. 2002. Botany Ramblings April 29-June 30, 2001. N.B. Naturalist, 28 (2): 51-2. 8 recs.
2	Hinds, H.R. 1999. A Vascular Plant Survey of the Musquash Estuary in New Brunswick. , 12pp.
2	Klymko, J.J.D. 2012. Odonata specimens & observations. 2010. Atlantic Canada Conservation Data Centre, 425 recs.
2	Holder, M. & Kingsley, A.L. 2000. Peatland Insects in NB & NS: Results of surveys in 10 bogs during summer 2000. Atlantic Canada Conservation Data Centre, 425 recs.
2	Litvak, M.K. 2001. Shortnose Sturgeon records in four NB rivers. UNB Saint John NB. Pers. comm. to K. Bredin, 6 recs.
2	McAlpine, D.F. 2001. <i>Lepomis auritus</i> , 2 sites in Saint John County. New Brunswick Museum, Pers. comm. to K.A. Bredin. 2 recs.
2	Mills, E. Connell Herbarium Specimens, 1957-2009. University New Brunswick, Fredericton. 2012.
2	Proulx, V.D. 2002. <i>Seleginella rupestris</i> sight record at Centreville, Nova Scotia. Virginia D. Proulx collection, 2 recs.
1	Amirault, D.L. 1997-2000. Unpublished files. Canadian Wildlife Service, Sackville, 470 recs.
1	Bayne, D.Z. 2014. 2014 rare species observations from southwest Nova Scotia. Nova Scotia Department of Natural Resources, 46 recs.
1	Belliveau, A. 2013. Rare species records from Nova Scotia. Mersey Tobetic Research Institute, 296 records, 296 recs.
1	Benedict, B. 2006. <i>Argus</i> annotation: <i>Salix pedicularis</i> . Pers. comm. to C.S. Blaney, June 21, 1 rec.
1	Benedict, B. <i>Agalinis neoscotica</i> specimen from Grand Manan. 2009.
1	Blaney, C.S. 2000. Fieldwork 2000. Atlantic Canada Conservation Data Centre. Sackville NB, 1265 recs.
1	Brunelle, P.-M. 2005. Wood Turtle observations. Pers. comm. to S.H. Gerrits, 21 Sep. 3 recs, 3 recs.
1	Brunelle, P.-M. 2009. NS Power odonata records for Mersey, Tusket & Sissiboo systems. Nova Scotia Power, 218 recs.
1	Brunton, D. F. & McIntosh, K. L. <i>Agalinis neoscotica</i> herbarium record from D. F. Brunton Herbarium. D.F. Brunton Herbarium, Ottawa. 2005.
1	Cameron, R.P. 2013. 2013 rare species field data. Nova Scotia Department of Environment, 71 recs.
1	Clayden, S.R. 2007. NBM Science Collections. Pers. comm. to D. Mazerolle, 1 rec.
1	Dadswell, M.J. 1979. Status Report on Shortnose Sturgeon ( <i>Acipenser brevirostrum</i> ) in Canada. Committee on the Status of Endangered Wildlife in Canada, 15 pp.
1	Dept of Fisheries & Oceans. 1999. Status of Wild Striped Bass, & Interaction between Wild & Cultured Striped Bass in the Maritime Provinces. , Science Stock Status Report D3-22. 13 recs.
1	Edsall, J. 1992. Summer 1992 Report. New Brunswick Bird Info Line, 2 recs.
1	Edsall, J. 1993. Spring 1993 Report. New Brunswick Bird Info Line, 3 recs.
1	Hicklin, P.W. 1990. Shorebird Concentration Sites (unpubl. data). Canadian Wildlife Service, Sackville, 296 sites, 30 spp.
1	Hicklin, P.W. 1999. The Maritime Shorebird Survey Newsletter. Calidris, No. 7. 6 recs.
1	Hinds, H.R. 2000. Flora of New Brunswick (2nd Ed.). University New Brunswick, 694 pp.
1	Jessop, B. 2004. <i>Acipenser oxyrinchus</i> locations. Dept of Fisheries & Oceans, Atlantic Region, Pers. comm. to K. Bredin. 1 rec.
1	Klymko, J.J.D. 2012. Insect fieldwork & submissions, 2011. Atlantic Canada Conservation Data Centre, Sackville NB, 760 recs.
1	LaPaix, R.W.; Crowell, M.J.; MacDonald, M. 2011. Stantec rare plant records, 2010-11. Stantec Consulting, 334 recs.
1	Maass, W.S.G. & Yelman, D. 2002. Assessment and status report on the boreal felt lichen ( <i>Erioderma pedicellatum</i> ) in Canada. Committee on the Status of Endangered Wildlife in Canada, 1 rec.
1	McAlpine, D.F. & Cox, S.L., McCabe, D.A., Schmare, J.-L., 2004. Occurrence of the Long-tailed Shrew ( <i>Sorex dispar</i> ) in the Nerepis Hills NB. Northeastern Naturalist, vol 11 (4) 383-386. 1 rec.
1	Newell, R. & Neily, T.; Toms, B.; Proulx, G. et al. 2011. NCC Properties Fieldwork in NS: August-September 2010. Nature Conservancy Canada, 106 recs.
1	Newell, R.E. 2000. Assessment and update status report on the Eastern Mountain Avens

# recs	CITATION
1	(Geum peckii) in Canada. Committee on the Status of Endangered Wildlife in Canada, 1 rec.
1	Proulx, V. 2008. Geum peckii observation. Pers. comm. to D. Mazerolle, 1 rec.
1	Sabine, D.L. & Goltz, J.P. 2006. Discovery of Utricularia resupinata at Little Otter Lake, CFB Gagetown. Pers. comm. to D.M. Mazerolle, 1 rec.
1	Sabine, D.L. 2012. Bronze Copper records, 2003-06. New Brunswick Dept of Natural Resources, 5 recs.
1	Sabine, D.L. 2013. Dwayne Sabine butterfly records, 2009 and earlier.
1	Scott, F.W. 2002. Nova Scotia Herpetofauna Atlas Database. Acadia University, Wolfville NS, 8856 recs.
1	Taylor, Eric B. 1997. Status of the Sympatric Smelt (genus Osmerus) Populations of Lake Utopia. New Brunswick. Committee on the Status of Endangered Wildlife in Canada, 1 rec.
1	Toner, M. 2001. Lynx Records 1973-2000. NB Dept of Natural Resources, 29 recs.
1	Toner, M. 2011. Wood Turtle sighting. NB Dept of Natural Resources. Pers. com. to S. Gerriets, Sep 2, photo, 1 rec.
1	Torenvliet, Ed. 2010. Wood Turtle roadkill. NB Dept of Transport. Pers. com. to R. Lautenschlager, Aug. 20, photos, 1 rec.
1	Zinck, M. 2008. Nova Scotia Museum. Pers. comm. to D.M. Mazerolle, 1 rec.

## **APPENDIX C**

### **TERRESTRIAL ENVIRONMENT DATA**

Table C.1 Land Use Data in the PDA and LAA by Location

Land Use	PDA								LAA							
	Chocolate Cove		Wilson's Beach		Little Whale Cove		Long Eddy Point		Chocolate Cove		Wilson's Beach		Little Whale Cove		Long Eddy Point	
	(ha)	(%)	(ha)	(%)	(ha)	(%)	(ha)	(%)	(ha)	(%)	(ha)	(%)	(ha)	(%)	(ha)	(%)
Anthropogenic	0.06	14.85	0.31	70.08	0	0	0.23	77.29	18.79	32.80	39.20	61.28	3.48	5.97	6.26	13.45
Transmission Line	0.13	32.12	0	0	0.22	79.15	0	0	1.37	2.40	0.91	1.42	2.46	4.23	1.62	3.48
Barren	0	0	0	0	0	0	0	0	0	0	0	0	1.67	2.87	0.28	0.61
Coastal	0.10	24.00	0.13	29.92	0.05	18.78	0.07	22.71	5.03	8.78	5.20	8.13	1.23	2.12	4.77	10.26
Regenerating - Sapling Hardwood	0	0	0	0	0	0	0	0	3.72	6.50	4.10	6.41	14.77	25.32	2.65	5.69
Regenerating - Sapling Mixedwood	0	0	0	0	0	0	0	0	0.65	1.13	2.87	4.49	0	0	1.55	3.33
Regenerating - Sapling Softwood	0	0	0	0	0	0	0	0	1.25	2.18	0	0	0	0	0	0
Young - Immature Hardwood	0	0	0	0	0.01	2.08	0	0	0	0	0	0	16.95	29.06	0	0
Young - Immature Mixedwood	0	0	0	0	0	0	0	0	4.34	7.58	0	0	1.18	2.02	0	0
Young - Immature Softwood	0	0	0	0	0	0	0	0	0	0	1.41	2.20	3.60	6.17	2.64	5.68
Mature - Overmature Hardwood	0	0	0	0	0	0	0	0	1.48	2.59	0	0	0	0	0	0
Mature - Overmature Mixedwood	0.12	29.03	0	0	0	0	0	0	8.23	14.36	0.10	0.16	8.45	14.49	3.73	8.03
Mature - Overmature Softwood	0	0	0	0	0	0	0	0	11.69	20.41	4.80	7.50	4.52	7.74	23.01	49.47
Shrub Swamp	0	0	0	0	0	0	0	0	0.72	1.26	2.01	3.14	0	0	0	0
Treed Swamp	0	0	0	0	0	0	0	0	0	0	3.37	5.27	0	0	0	0
<b>Total</b>	0.41	100.00	0.44	100	0.28	100	0.29	100	57.28	100	63.97	100	58.32	100	46.51	100



**Table C.2 Vascular Plants Observed within the LAA**

Scientific Name	Common Name	S Rank <sup>1</sup>
<i>Abies balsamea</i>	balsam fir	S5
<i>Acer platanoides</i>	Norway maple	SNA
<i>Achillea millefolium</i>	common yarrow	S5
<i>Agrostis capillaris</i>	colonial bent grass	SNA
<i>Agrostis gigantea</i>	redtop	SNA
<i>Agrostis perennans</i>	upland bent grass	S5
<i>Agrostis scabra</i>	rough bent grass	S5
<i>Alnus viridis</i>	green alder	S5
<i>Alopecurus pratensis</i>	meadow foxtail	SNA
<i>Amelanchier sp.</i>	a serviceberry	-
<i>Anthoxanthum odoratum</i>	large sweet vernal grass	SNA
<i>Aquilegia vulgaris</i>	European columbine	SNA
<i>Aralia hispida</i>	bristly sarsaparilla	S5
<i>Aralia nudicaulis</i>	wild sarsaparilla	S5
<i>Arctium minus</i>	common burdock	SNA
<i>Arctium sp.</i>	burdock	-
<i>Artemisia absinthium</i>	absinth wormwood	SNA
<i>Berberis thunbergii</i>	Japanese barberry	SNA
<i>Betula papyrifera</i>	paper birch	S5
<i>Betula papyrifera var. cordifolia</i>	heart-leaved birch	S5
<i>Cakile edentula</i>	American sea-rocket	S5
<i>Calamagrostis canadensis</i>	bluejoint reed grass	S5
<i>Calystegia sepium</i>	hedge false bindweed	S5
<i>Campanula rotundifolia</i>	common harebell	S5
<i>Carex crawfordii</i>	Crawford's sedge	S5
<i>Carex nigra</i>	smooth black sedge	S4S5

**Table C.2 Vascular Plants Observed within the LAA**

Scientific Name	Common Name	S Rank <sup>1</sup>
<i>Carex scoparia</i>	broom sedge	S5
<i>Carex viridula</i>	greenish sedge	S4
<i>Centaurea nigra</i>	black knapweed	SNA
<i>Chamerion angustifolium</i>	fireweed	S5
<i>Cirsium arvense</i>	Canada thistle	SNA
<i>Cirsium muticum</i>	swamp thistle	S5
<i>Cirsium vulgare</i>	bull thistle	SNA
<i>Conyza canadensis</i>	Canada horseweed	S5
<i>Cornus canadensis</i>	bunchberry	S5
<i>Cornus sericea</i>	red osier dogwood	S5
<i>Danthonia spicata</i>	poverty oat grass	S5
<i>Daucus carota</i>	Queen Anne's lace	SNA
<i>Deschampsia flexuosa</i>	wavy hair grass	S5
<i>Diervilla lonicera</i>	northern bush honeysuckle	S5
<i>Digitaria ischaemum</i>	smooth crab grass	SNA
<i>Doellingeria umbellata</i>	hairy flat-top white aster	S5
<i>Dryopteris campyloptera</i>	mountain wood fern	S5
<i>Dryopteris carthusiana</i>	spinulose wood fern	S5
<i>Elymus repens</i>	quack grass	SNA
<i>Epilobium ciliatum</i>	northern willowherb	S5
<i>Epipactis helleborine</i>	helleborine	SNA
<i>Equisetum arvense</i>	field horsetail	S5
<i>Erechtites hieraciifolia</i>	eastern burnweed	S5
<i>Euphrasia nemorosa</i>	common eyebright	SNA
<i>Euphrasia stricta</i>	stiff eyebright	SNA
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	S5

**Table C.2 Vascular Plants Observed within the LAA**

Scientific Name	Common Name	S Rank <sup>1</sup>
<i>Festuca filiformis</i>	hair fescue	SNA
<i>Festuca rubra</i>	red fescue	S5
<i>Fragaria virginiana</i>	wild strawberry	S5
<i>Galeopsis tetrahit</i>	common hemp-nettle	SNA
<i>Gnaphalium uliginosum</i>	marsh cudweed	SNA
<i>Heracleum maximum</i>	common cow parsnip	S5
<i>Hieracium aurantiacum</i>	orange hawkweed	SNA
<i>Hieracium caespitosum</i>	field hawkweed	SNA
<i>Hieracium kalmii</i>	<u>Kalm's hawkweed</u>	<u>S1</u>
<i>Hieracium pilosella</i>	mouse-ear hawkweed	SNA
<i>Hypericum perforatum</i>	common St. John's-wort	SNA
<i>Impatiens capensis</i>	spotted jewelweed	S5
<i>Impatiens glandulifera</i>	purple jewelweed	SNA
<i>Juncus brevicaudatus</i>	short-tailed rush	S5
<i>Juncus effusus</i>	soft rush	S5
<i>Juncus tenuis</i>	path rush	S5
<i>Juniperus communis</i>	common juniper	S5
<i>Leontodon autumnalis</i>	fall dandelion	SNA
<i>Leucanthemum vulgare</i>	oxeye daisy	SNA
<i>Lobelia kalmii</i>	brook lobelia	S3S4
<i>Lolium pratense</i>	meadow fescue	SNA
<i>Lotus corniculatus</i>	garden bird's-foot trefoil	SNA
<i>Lupinus polyphyllus</i>	large-leaved lupine	SNA
<i>Luzula multiflora</i>	common woodrush	S5
<i>Maianthemum canadense</i>	wild lily-of-the-valley	S5
<i>Malus pumila</i>	common apple	SNA

**Table C.2 Vascular Plants Observed within the LAA**

Scientific Name	Common Name	S Rank <sup>1</sup>
<i>Matricaria discoidea</i>	pineapple weed	SNA
<i>Nuttallanthus canadensis</i>	Canada toadflax	SNA
<i>Oclemena acuminata</i>	whorled wood aster	S5
<i>Oenothera biennis</i>	common evening primrose	S5
<i>Onoclea sensibilis</i>	sensitive fern	S5
<i>Oxalis stricta</i>	European wood sorrel	S5
<i>Panicum capillare</i>	common witch grass	S5
<i>Phalaris arundinacea</i>	reed canary grass	S5
<i>Phegopteris connectilis</i>	northern beech fern	S5
<i>Phleum pratense</i>	common timothy	SNA
<i>Photinia pyrifolia</i>	red chokeberry	SNA
<i>Picea glauca</i>	white spruce	S5
<i>Picea rubens</i>	red spruce	S5
<i>Plantago major</i>	common plantain	SNA
<i>Poa compressa</i>	Canada blue grass	SNA
<i>Poa palustris</i>	fowl blue grass	S5
<i>Polygonum cuspidatum</i>	Japanese knotweed	SNA
<i>Polygonum sagittatum</i>	arrow-leaved smartweed	S5
<i>Populus tremuloides</i>	trembling aspen	S5
<i>Potentilla recta</i>	sulphur cinquefoil	SNA
<i>Potentilla simplex</i>	old field cinquefoil	S5
<i>Prunella vulgaris</i>	common self-heal	S5
<i>Prunus pensylvanica</i>	pin cherry	S5
<i>Prunus virginiana</i>	chokecherry	S5
<i>Ranunculus repens</i>	creeping buttercup	SNA
<i>Raphanus raphanistrum</i>	wild radish	SNA

**Table C.2 Vascular Plants Observed within the LAA**

Scientific Name	Common Name	S Rank <sup>1</sup>
<i>Rhinanthus minor</i>	little yellow rattle	SNA
<i>Rhodiola rosea</i>	roseroot	S3
<i>Rhus typhina</i>	staghorn sumac	S5
<i>Ribes glandulosum</i>	skunk currant	S5
<i>Ribes hirtellum</i>	smooth gooseberry	S5
<i>Rosa virginiana</i>	Virginia rose	S5
<i>Rubus allegheniensis</i>	Allegheny blackberry	S5
<i>Rubus canadensis</i>	smooth blackberry	S5
<i>Rubus idaeus</i>	red raspberry	S5
<i>Rubus pubescens</i>	dwarf red raspberry	S5
<i>Rumex acetosella</i>	sheep sorrel	SNA
<i>Rumex crispus</i>	curled dock	SNA
<i>Salix bebbiana</i>	Bebb's willow	S5
<i>Salix discolor</i>	pussy willow	S5
<i>Salix humilis</i>	upland willow	S5
<i>Sambucus racemosa</i>	red elderberry	S5
<i>Scirpus cyperinus</i>	common woolly bulrush	S5
<i>Senecio viscosus</i>	sticky ragwort	SNA
<i>Solanum dulcamara</i>	bittersweet nightshade	SNA
<i>Solidago bicolor</i>	white goldenrod	S5
<i>Solidago canadensis</i>	Canada goldenrod	S5
<i>Solidago juncea</i>	early goldenrod	S5
<i>Solidago puberula</i>	downy goldenrod	S5
<i>Solidago rugosa</i>	rough-stemmed goldenrod	S5
<i>Sonchus arvensis</i>	field sow thistle	SNA
<i>Sorbus americana</i>	American mountain ash	S5

**Table C.2 Vascular Plants Observed within the LAA**

Scientific Name	Common Name	S Rank <sup>1</sup>
<i>Sorbus decora</i>	showy mountain ash	S4S5
<i>Spergularia salina</i>	saltmarsh sandspurrey	S5
<i>Spiraea alba</i>	white meadowsweet	S5
<i>Symphotrichum novi-belgii</i>	New York aster	S5
<i>Taraxacum officinale</i>	common dandelion	SNA
<i>Thalictrum pubescens</i>	tall meadow-rue	S5
<i>Trientalis borealis</i>	northern starflower	S5
<i>Trifolium arvense</i>	rabbit's-foot clover	SNA
<i>Trifolium campestre</i>	low hop clover	SNA
<i>Trifolium pratense</i>	red clover	SNA
<i>Trifolium repens</i>	white clover	SNA
<i>Tussilago farfara</i>	coltsfoot	SNA
<i>Vaccinium angustifolium</i>	late lowbush blueberry	S5
<i>Vaccinium myrtilloides</i>	velvet-leaved blueberry	S5
<i>Vaccinium vitis-idaea</i>	mountain cranberry	S4S5
<i>Verbascum thapsus</i>	common mullein	SNA
<i>Veronica officinalis</i>	common speedwell	S5
<i>Viburnum nudum</i>	northern wild raisin	S5
<i>Vicia cracca</i>	tufted vetch	SNA
<i>Vicia sepium</i>	bush vetch	SNA
NOTE: SOCC are presented in <u>underlined text</u> .		
<sup>1</sup> S1 = critically imperiled, S2 = imperiled, S3 = vulnerable, S4 = apparently secure, S5 = secure, SNA = not applicable (typically exotic species), S#S# = a numeric range rank indicates any range of uncertainty about the status of the species (AC CDC 2017).		

**Table C.3 Avian SAR and SOCC Historically Recorded near the LAA**

Common Name	Scientific Name	SARA Status	COSEWIC Status	NB SARA Status	AC CDC S-rank <sup>1</sup>	Combined Data Source
brant	<i>Branta bernicla</i>				S1N, S2S3M	AC CDC, CBC
gadwall	<i>Anas strepera</i>				S2B, S3M	AC CDC
king eider	<i>Somateria spectabilis</i>				S2N, S2M	AC CDC
common eider	<i>Somateria mollissima</i>				S3B, S4M, S3N	AC CDC, BBS, CBC, MBBA, Stantec
harlequin duck	<i>Histrionicus histrionicus</i>	Schedule 1, special concern	special concern	endangered	S1B, S1S2N, S2M	AC CDC, CBC
black scoter	<i>Melanitta americana</i>				S3M, S1S2N	AC CDC, CBC
bufflehead	<i>Bucephala albeola</i>				S3M, S2N	AC CDC, CBC
barrow's goldeneye	<i>Bucephala islandica</i>	Schedule 1, special concern	special concern	special concern	S2M, S2N	CBC
red-breasted merganser	<i>Mergus serrator</i>				S3B, S5M, S4S5N	AC CDC, BBS, CBC
horned grebe	<i>Podiceps auritus</i>	Schedule 1, special concern	special concern	special concern	S4N, S4M	AC CDC, CBC
red-necked grebe	<i>Podiceps grisegena</i>		not at risk		S3M, S2N	AC CDC, CBC
black-billed cuckoo	<i>Coccyzus erythrophthalmus</i>				S3B, S3M	AC CDC, BBS
common nighthawk	<i>Chordeiles minor</i>	Schedule 1, threatened	threatened	threatened	S3B, S4M	AC CDC, BBS
chimney swift	<i>Chaetura pelagica</i>	Schedule 1, threatened	threatened	threatened	S2S3B, S2M	AC CDC, BBS
American golden-plover	<i>Pluvialis dominica</i>				S2S3M	AC CDC

**Table C.3 Avian SAR and SOCC Historically Recorded near the LAA**

Common Name	Scientific Name	SARA Status	COSEWIC Status	NB SARA Status	AC CDC S-rank <sup>1</sup>	Combined Data Source
killdeer	<i>Charadrius vociferus</i>				S3B,S3M	AC CDC, BBS
ruddy turnstone	<i>Arenaria interpres</i>				S3M	AC CDC
<b>red knot</b>	<b><i>Calidris canutus</i></b>	<b>endangered</b>	<b>endangered</b>	<b>endangered</b>	<b>S2M</b>	<b>AC CDC</b>
purple sandpiper	<i>Calidris maritima</i>				S3M,S3N	AC CDC, CBC
<b>buff-breasted sandpiper</b>	<b><i>Calidris subruficollis</i></b>	<b>Schedule 1, special concern</b>	<b>special concern</b>		<b>SNA</b>	<b>AC CDC</b>
solitary sandpiper	<i>Tringa solitaria</i>				S2B,S5M	AC CDC
willet	<i>Tringa semipalmata</i>				S3B,S3M	AC CDC, BBS
<b>red-necked phalarope</b>	<b><i>Phalaropus lobatus</i></b>	<b>No Schedule, no status</b>	<b>special concern</b>		<b>S3M</b>	<b>AC CDC</b>
red phalarope	<i>Phalaropus fulicarius</i>				S3M	AC CDC
common murre	<i>Uria aalge</i>				S1B,S3N,S3M	AC CDC, MBBA
thick-billed murre	<i>Uria lomvia</i>				S3N,S3M	AC CDC, CBC
razorbill	<i>Alca torda</i>				S2B,S3N,S3M	AC CDC, CBC, MBBA
black guillemot	<i>Cepphus grylle</i>				S3	AC CDC, BBS, CBC, MBBA, Stantec
Atlantic puffin	<i>Fratercula arctica</i>				S1B,SUN,SUM	AC CDC, MBBA
black-legged kittiwake	<i>Rissa tridactyla</i>				S1S2B,S4N,S5M	AC CDC, CBC



**Table C.3 Avian SAR and SOCC Historically Recorded near the LAA**

Common Name	Scientific Name	SARA Status	COSEWIC Status	NB SARA Status	AC CDC S-rank <sup>1</sup>	Combined Data Source
black-headed gull	<i>Chroicocephalus ridibundus</i>				S1N,S2M	AC CDC
laughing gull	<i>Leucophaeus atricilla</i>				S1B,S1M	AC CDC
glaucous gull	<i>Larus hyperboreus</i>				S2N,S2M	AC CDC, CBC
common tern	<i>Sterna hirundo</i>		not at risk		S3B,SUM	AC CDC
arctic tern	<i>Sterna paradisaea</i>				S1B,SUM	AC CDC
Leach's storm-petrel	<i>Oceanodroma leucorhoa</i>				S2B,SUM	AC CDC
great cormorant	<i>Phalacrocorax carbo</i>				S2N,S2M	AC CDC, CBC
green heron	<i>Butorides virescens</i>				S1S2B,S1S2M	AC CDC, MBBA
black-crowned night-heron	<i>Nycticorax nycticorax</i>				S1S2B,S1S2M	AC CDC, BBS, MBBA
turkey vulture	<i>Cathartes aura</i>				S3B,S3M	AC CDC, MBBA
<b>bald eagle</b>	<b><i>Haliaeetus leucocephalus</i></b>		not at risk	endangered	<b>S4</b>	<b>AC CDC, BBS, CBC, MBBA</b>
red-shouldered hawk	<i>Buteo lineatus</i>		not at risk		S2B,S2M	AC CDC
snowy owl	<i>Bubo scandiacus</i>		not at risk		S1N,S2S3M	AC CDC
long-eared owl	<i>Asio otus</i>				S2S3	AC CDC, MBBA
<b>red-headed woodpecker</b>	<b><i>Melanerpes erythrocephalus</i></b>	Schedule 1, threatened	threatened		<b>SNA</b>	<b>AC CDC</b>
<b>peregrine falcon</b>	<b><i>Falco peregrinus</i></b>	Schedule 1, special concern	special concern	endangered	<b>S1B,S3M</b>	<b>AC CDC, MBBA</b>
<b>olive-sided flycatcher</b>	<b><i>Contopus cooperi</i></b>	Schedule 1, threatened	threatened	threatened	<b>S3B,S3M</b>	<b>AC CDC, BBS</b>

**Table C.3 Avian SAR and SOCC Historically Recorded near the LAA**

Common Name	Scientific Name	SARA Status	COSEWIC Status	NB SARA Status	AC CDC S-rank <sup>1</sup>	Combined Data Source
eastern wood-pewee	<i>Contopus virens</i>	No Schedule, no status	<i>special concern</i>	<i>special concern</i>	<b>S4B,S4M</b>	AC CDC, BBS, MBBA
willow flycatcher	<i>Empidonax traillii</i>				S1S2B,S1S2M	AC CDC, MBBA
great crested flycatcher	<i>Myiarchus crinitus</i>				S2S3B,S2S3M	AC CDC, BBS, MBBA
warbling vireo	<i>Vireo gilvus</i>				S3B,S3M	BBS
bank swallow	<i>Riparia riparia</i>	No Schedule, no status	<i>threatened</i>		<b>S2S3B,S2S3M</b>	AC CDC, BBS, MBBA
cliff swallow	<i>Petrochelidon pyrrhonota</i>				S2S3B,S2S3M	AC CDC, BBS, MBBA
barn swallow	<i>Hirundo rustica</i>	No Schedule, no status	<i>threatened</i>	<i>threatened</i>	<b>S2B,S2M</b>	AC CDC, BBS, MBBA
house wren	<i>Troglodytes aedon</i>				S1S2B,S1S2M	AC CDC, BBS, MBBA
Carolina wren	<i>Thryothorus ludovicianus</i>				S1B,S1M	AC CDC
<b>Bicknell's thrush</b>	<b><i>Catharus bicknelli</i></b>	Schedule 1, <i>threatened</i>	<i>threatened</i>	<i>threatened</i>	<b>S2B,S2M</b>	AC CDC
wood thrush	<i>Hylocichla mustelina</i>	No Schedule, no status	<i>threatened</i>	<i>threatened</i>	<b>S1S2B,S1S2M</b>	AC CDC
brown thrasher	<i>Toxostoma rufum</i>				S2B,S2M	AC CDC, BBS
northern mockingbird	<i>Mimus polyglottos</i>				S2B,S2M	AC CDC, BBS
pine grosbeak	<i>Pinicola enucleator</i>				S2B,S4S5N,S4S5M	AC CDC, BBS
red crossbill	<i>Loxia curvirostra</i>				S3	AC CDC, BBS, CBC, MBBA

**Table C.3 Avian SAR and SOCC Historically Recorded near the LAA**

Common Name	Scientific Name	SARA Status	COSEWIC Status	NB SARA Status	AC CDC S-rank <sup>1</sup>	Combined Data Source
pine siskin	<i>Spinus pinus</i>				S3	AC CDC, BBS, MBBA
evening grosbeak	<i>Coccothraustes vespertinus</i>				S3B,S3S4N,SUM	BBS
<b>prothonotary warbler</b>	<b><i>Protonotaria citrea</i></b>	<b>Schedule 1, endangered</b>	<b>endangered</b>		<b>SNA</b>	<b>AC CDC</b>
Cape May warbler	<i>Setophaga tigrina</i>				S3B,S4S5M	AC CDC, BBS, MBBA
<b>Canada warbler</b>	<b><i>Cardellina canadensis</i></b>	<b>Schedule 1, threatened</b>	<b>threatened</b>	<b>threatened</b>	<b>S3B,S3M</b>	<b>AC CDC, BBS, MBBA</b>
vesper sparrow	<i>Pooecetes gramineus</i>				S2B,S2M	AC CDC, BBS
scarlet tanager	<i>Piranga olivacea</i>				S3B,S3M	MBBA
<b>bobolink</b>	<b><i>Dolichonyx oryzivorus</i></b>	<b>No Schedule, no status</b>	<b>threatened</b>	<b>threatened</b>	<b>S3B,S3M</b>	<b>AC CDC, BBS, MBBA</b>
<b>rusty blackbird</b>	<b><i>Euphagus carolinus</i></b>	<b>Schedule 1, special concern</b>	<b>special concern</b>	<b>special concern</b>	<b>S3B,S3M</b>	<b>AC CDC, BBS</b>
brown-headed cowbird	<i>Molothrus ater</i>				S3B,S3M	AC CDC, BBS, CBC, MBBA
Baltimore oriole	<i>Icterus galbula</i>				S3B,S3M	AC CDC, MBBA

Note: SAR are presented in **bold** text.

<sup>1</sup> S1 = critically imperiled, S2 = imperiled, S3 = vulnerable, S4 = apparently secure, S5 = secure, SNA = not applicable (typically exotic species), S#S# = a numeric range rank indicates any range of uncertainty about the status of the species or community. B= Breeding, N = Nonbreeding, M = Migrant (AC CDC 2017a).

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REPORT: FUNDY ISLES SUBMARINE CABLES REPLACEMENT PROJECT, NEW BRUNSWICK

**Table C.4 Area Search Bird Survey Results by Location**

Common Name	Chocolate Cove	Wilson's Beach	Little Whale Cove	Long Eddy Point	Total
common eider	-	-	-	1	1
ruffed grouse	1	-	-	-	1
mourning dove	1	-	-	-	1
ruby-throated hummingbird	-	-	1	-	1
black guillemot	2	1		2	5
ring-billed gull	--	-	-	1	1
herring gull	-	1	1	3	5
great black-backed gull	-	-	-	1	1
double-crested cormorant	2	1	-	-	3
osprey	-	-	-	1	1
belted kingfisher	1	-	-	-	1
alder flycatcher	-	2	4	1	7
blue-headed vireo	-	-	1	-	1
American crow	1	4	-	3	8
common raven	--		1	1	2
black-capped chickadee	1	-	-	-	1
red-breasted nuthatch	-	1	-	-	1
golden-crowned kinglet	-	-	1	-	1
hermit thrush	-	-	1	-	1
American robin	-	1	2	-	3
gray catbird	-	-	-	1	1
European starling	-	4	-	-	4
cedar waxwing	-	1	-	2	3
purple finch	-	1	-	-	1
American goldfinch	-	1	1	2	4

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REPORT: FUNDY ISLES SUBMARINE CABLES REPLACEMENT PROJECT, NEW BRUNSWICK

Table C.4 Area Search Bird Survey Results by Location

Common Name	Chocolate Cove	Wilson's Beach	Little Whale Cove	Long Eddy Point	Total
ovenbird	-	-	1	-	1
black-and-white warbler	-	-	1	-	1
common yellowthroat	1	2	-	1	4
American redstart	-	1	1	-	2
northern parula	2	2	1	-	5
Magnolia warbler	-	2	1	2	5
yellow warbler	-	1	-	2	3
chestnut-sided warbler	1	-	-	-	1
black-throated green warbler	2	-	2	-	4
song sparrow	1	1	-	2	4
white-throated sparrow	1	1	2	1	5
dark-eyed junco	1	-	-	-	1
<b>Grand Total</b>	18	28	22	27	95

**ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REPORT: FUNDY ISLES SUBMARINE CABLES REPLACEMENT PROJECT, NEW BRUNSWICK**

**Table C.5 Bird Data from Area Searches**

<b>Record Date/Time</b>	<b>Common Name</b>	<b>Number Observed</b>	<b>Age</b>	<b>Sex</b>	<b>Easting UTM Zone20</b>	<b>Northing UTM Zone20</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Site</b>
6/10/2016 6:55	alder flycatcher	1	Adult	Unknown	200478	4967476	44.7979	-66.7870	Long Eddy Point
6/10/2016 6:55	common raven	1	Adult	Unknown	200478	4967476	44.7979	-66.7870	Long Eddy Point
6/10/2016 6:55	gray catbird	1	Adult	Male	200478	4967476	44.7979	-66.7870	Long Eddy Point
6/10/2016 6:55	magnolia warbler	1	Adult	Male	200478	4967476	44.7979	-66.7870	Long Eddy Point
6/10/2016 6:55	song sparrow	2	Adult	Male	200478	4967476	44.7979	-66.7870	Long Eddy Point
6/10/2016 6:55	yellow warbler	1	Adult	Male	200478	4967476	44.7979	-66.7870	Long Eddy Point
6/10/2016 7:07	American goldfinch	2	Adult	Both	200505	4967518	44.7983	-66.7867	Long Eddy Point
6/10/2016 7:07	magnolia warbler	1	Adult	Male	200505	4967518	44.7983	-66.7867	Long Eddy Point
6/10/2016 7:07	yellow warbler	1	Adult	Male	200505	4967518	44.7983	-66.7867	Long Eddy Point
6/10/2016 7:17	white-throated sparrow	1	Adult	Male	200495	4967486	44.7980	-66.7868	Long Eddy Point
6/10/2016 7:42	cedar waxwing	1	Adult	Unknown	200476	4967482	44.7979	-66.7870	Long Eddy Point
6/10/2016 7:44	cedar waxwing	1	Adult	Unknown	200477	4967482	44.7979	-66.7870	Long Eddy Point
6/10/2016 7:44	red squirrel	1	Adult	Unknown	200477	4967482	44.7979	-66.7870	Long Eddy Point
6/10/2016 8:01	black guillemot	1	Adult	Unknown	200450	4967524	44.7983	-66.7874	Long Eddy Point
6/10/2016 8:01	common eider	1	Adult	Female	200450	4967524	44.7983	-66.7874	Long Eddy Point
6/10/2016 8:01	ring-billed gull	1	Adult	Unknown	200450	4967524	44.7983	-66.7874	Long Eddy Point
6/10/2016 8:04	black guillemot	1	Adult	Unknown	200450	4967524	44.7983	-66.7874	Long Eddy Point
6/10/2016 8:07	great black-backed gull	1	Adult	Unknown	200449	4967553	44.7985	-66.7874	Long Eddy Point
6/10/2016 8:07	herring gull	1	Adult	Unknown	200449	4967553	44.7985	-66.7874	Long Eddy Point
6/10/2016 8:09	American crow	3	Adult	Unknown	200459	4967550	44.7985	-66.7873	Long Eddy Point
6/10/2016 8:19	herring gull	2	Juvenile	Unknown	200468	4967550	44.7985	-66.7872	Long Eddy Point
6/10/2016 8:30	common yellowthroat	1	Adult	Male	200448	4967504	44.7981	-66.7874	Long Eddy Point
6/10/2016 8:31	osprey	1	Adult	Unknown	200475	4967482	44.7979	-66.7870	Long Eddy Point
6/28/2016 4:43	alder flycatcher	1	Adult	Male	191747	4978609	44.8942	-66.9039	Campobello East
6/28/2016 4:43	alder flycatcher	1	Adult	Unknown	191747	4978645	44.8945	-66.9039	Little Whale Cove

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REPORT: FUNDY ISLES SUBMARINE CABLES REPLACEMENT PROJECT, NEW BRUNSWICK

Table C.5 Bird Data from Area Searches

Record Date/Time	Common Name	Number Observed	Age	Sex	Easting UTM Zone20	Northing UTM Zone20	Latitude	Longitude	Site
6/28/2016 4:43	blue-headed vireo	1	Adult	Male	191788	4978514	44.8933	-66.9033	Little Whale Cove
6/28/2016 4:43	black-throated green warbler	1	Adult	Male	191818	4978552	44.8937	-66.9029	Little Whale Cove
6/28/2016 4:43	hermit thrush	1	Adult	Male	191740	4978522	44.8934	-66.9039	Little Whale Cove
6/28/2016 4:43	northern parula	1	Adult	Male	191804	4978658	44.8946	-66.9032	Little Whale Cove
6/28/2016 4:43	ruby-throated hummingbird	1	Adult	Unknown	191718	4978572	44.8938	-66.9042	Little Whale Cove
6/28/2016 4:43	white-throated sparrow	1	Adult	Male	191764	4978602	44.8941	-66.9037	Little Whale Cove
6/28/2016 5:02	herring gull	1	Adult	Unknown	191888	4978599	44.8941	-66.9021	Little Whale Cove
6/28/2016 5:53	alder flycatcher	1	Adult	Male	191822	4978585	44.8940	-66.9029	Little Whale Cove
6/28/2016 5:53	alder flycatcher	1	Adult	Unknown	191854	4978564	44.8938	-66.9025	Little Whale Cove
6/28/2016 5:53	American robin	1	Adult	Male	191901	4978677	44.8948	-66.9020	Little Whale Cove
6/28/2016 5:53	white-throated sparrow	1	Adult	Male	191814	4978614	44.8942	-66.9030	Little Whale Cove
6/28/2016 6:09	common raven	1	Adult	Unknown	191874	4978611	44.8942	-66.9023	Little Whale Cove
6/28/2016 6:12	magnolia warbler	1	Adult	Male	191801	4978591	44.8940	-66.9032	Little Whale Cove
6/28/2016 6:15	American goldfinch	1	Adult	Female	191762	4978581	44.8939	-66.9037	Little Whale Cove
6/28/2016 6:15	American redstart	1	Adult	Male	191762	4978581	44.8939	-66.9037	Little Whale Cove
6/28/2016 6:15	American robin	1	Adult	Male	191762	4978581	44.8939	-66.9037	Little Whale Cove
6/28/2016 6:15	black-and-white warbler	1	Adult	Male	191762	4978581	44.8939	-66.9037	Little Whale Cove
6/28/2016 6:15	black-throated green warbler	1	Adult	Male	191762	4978581	44.8939	-66.9037	Little Whale Cove
6/28/2016 6:15	golden-crowned kinglet	1	Adult	Male	191762	4978581	44.8939	-66.9037	Little Whale Cove
6/28/2016 6:15	ovenbird	1	Adult	Male	191762	4978581	44.8939	-66.9037	Little Whale Cove
6/28/2016 6:32	American robin	1	Adult	Female	189332	4983283	44.9351	-66.9373	Wilson's Beach
6/28/2016 6:32	European starling	4	Juvenile	Unknown	189332	4983283	44.9351	-66.9373	Wilson's Beach
6/28/2016 6:52	alder flycatcher	1	Adult	Unknown	189491	4983284	44.9352	-66.9352	Wilson's Beach
6/28/2016 6:52	American goldfinch	1	Adult	Male	189498	4983245	44.9348	-66.9351	Wilson's Beach

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REPORT: FUNDY ISLES SUBMARINE CABLES REPLACEMENT PROJECT, NEW BRUNSWICK

Table C.5 Bird Data from Area Searches

Record Date/Time	Common Name	Number Observed	Age	Sex	Easting UTM Zone20	Northing UTM Zone20	Latitude	Longitude	Site
6/28/2016 6:52	common yellowthroat	1	Adult	Male	189488	4983230	44.9347	-66.9353	Wilson's Beach
6/28/2016 6:52	common yellowthroat	1	Adult	Male	189555	4983252	44.9349	-66.9344	Wilson's Beach
6/28/2016 6:52	magnolia warbler	1	Adult	Male	189528	4983204	44.9345	-66.9347	Wilson's Beach
6/28/2016 6:52	magnolia warbler	1	Adult	Male	189502	4983286	44.9352	-66.9351	Wilson's Beach
6/28/2016 6:52	northern parula	1	Adult	Male	189547	4983235	44.9347	-66.9345	Wilson's Beach
6/28/2016 6:52	purple finch	1	Adult	Male	189520	4983274	44.9351	-66.9349	Wilson's Beach
6/28/2016 6:52	song sparrow	1	Adult	Male	189492	4983212	44.9345	-66.9352	Wilson's Beach
6/28/2016 6:52	white-throated sparrow	1	Adult	Male	189454	4983260	44.9349	-66.9357	Wilson's Beach
6/28/2016 6:52	yellow warbler	1	Adult	Male	189570	4983290	44.9352	-66.9343	Wilson's Beach
6/28/2016 6:59	alder flycatcher	1	Adult	Unknown	189546	4983276	44.9351	-66.9346	Wilson's Beach
6/28/2016 6:59	American crow	1	Adult	Unknown	189546	4983276	44.9351	-66.9346	Wilson's Beach
6/28/2016 6:59	American redstart	1	Adult	Male	189546	4983276	44.9351	-66.9346	Wilson's Beach
6/28/2016 6:59	red-breasted nuthatch	1	Adult	Unknown	189546	4983276	44.9351	-66.9346	Wilson's Beach
6/28/2016 6:59	northern parula	1	Adult	Male	189544	4983279	44.9351	-66.9346	Wilson's Beach
6/28/2016 7:16	American crow	3	Adult	Unknown	189528	4983243	44.9348	-66.9348	Wilson's Beach
6/28/2016 7:16	cedar waxwing	1	Adult	Unknown	189528	4983243	44.9348	-66.9348	Wilson's Beach
6/28/2016 7:16	herring gull	1	Juvenile	Unknown	189528	4983243	44.9348	-66.9348	Wilson's Beach
6/28/2016 7:43	black guillemot	1	Adult	Unknown	189427	4983396	44.9361	-66.9361	Wilson's Beach
6/28/2016 7:52	double-crested cormorant	1	Adult	Unknown	189332	4983383	44.9360	-66.9373	Wilson's Beach
6/28/2016 8:48	American crow	1	Adult	Unknown	186673	4984769	44.9473	-66.9718	Chocolate Cove
6/28/2016 8:48	black-throated green warbler	1	Adult	Male	186747	4984824	44.9478	-66.9709	Chocolate Cove
6/28/2016 8:48	common yellowthroat	1	Adult	Unknown	186706	4984829	44.9478	-66.9714	Chocolate Cove
6/28/2016 8:48	chestnut-sided warbler	1	Adult	Male	186652	4984815	44.9477	-66.9721	Chocolate Cove
6/28/2016 8:48	northern parula	1	Adult	Male	186651	4984844	44.9479	-66.9721	Chocolate Cove



ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REPORT: FUNDY ISLES SUBMARINE CABLES REPLACEMENT PROJECT, NEW BRUNSWICK

Table C.5 Bird Data from Area Searches

Record Date/Time	Common Name	Number Observed	Age	Sex	Easting UTM Zone20	Northing UTM Zone20	Latitude	Longitude	Site
6/28/2016 8:48	northern parula	1	Adult	Male	186725	4984858	44.9481	-66.9712	Chocolate Cove
6/28/2016 8:48	song sparrow	1	Adult	Male	186703	4984881	44.9483	-66.9715	Chocolate Cove
6/28/2016 8:48	white-throated sparrow	1	Adult	Male	186704	4984796	44.9475	-66.9714	Chocolate Cove
6/28/2016 8:55	black-capped chickadee	1	Adult	Male	186704	4984784	44.9474	-66.9714	Chocolate Cove
6/28/2016 8:55	black-throated green warbler	1	Adult	Male	186704	4984784	44.9474	-66.9714	Chocolate Cove
6/28/2016 8:55	mourning dove	1	Adult	Unknown	186704	4984784	44.9474	-66.9714	Chocolate Cove
6/28/2016 9:00	ruffed grouse	1	Adult	Unknown	186727	4984773	44.9473	-66.9711	Chocolate Cove
6/28/2016 9:03	black guillemot	2	Adult	Unknown	186913	4984644	44.9462	-66.9687	Chocolate Cove
6/28/2016 9:15	dark-eyed junco	1	Adult	Male	186741	4984742	44.9470	-66.9709	Chocolate Cove
6/28/2016 9:19	belted kingfisher	1	Adult	Unknown	186671	4984556	44.9453	-66.9717	Chocolate Cove
6/28/2016 9:19	double-crested cormorant	2	Adult	Unknown	186671	4984556	44.9453	-66.9717	Chocolate Cove