APPENDIX A ENVIRONMENTAL PROTECTION PLAN – TABLE OF CONTENTS

TABLE OF CONTENTS

Page

1.0	IN	TRODUCTION1	I
2.0	E١	NVIRONMENTAL PROTECTION PLAN OVERVIEW1	I
2.1		Scope of the Environmental Protection Plan1	I
_	2.1.1		
-	2.1.2		
2.2		Organization and Use of the Environmental Protection Plan1	
2.3		Maintenance of the Environmental Protection Plan	
3.0		ESPONSIBILITIES & Training1	
3.1		Roles & Responsibilities	
-	3.1.1 3.1.2		
3	3.1.3	3 Environmental Monitor1	1
3	3.1.4		
3.2		Training & Orientation Requirements1	
	3.2.´		
3.3		Complaint Response Protocol1	
4.0		ROTECTIVE MEASURES	
4.1		Air Quality & Dust1	
4.2		Greenhouse Gas Emissions	l
4.3		Blasting1	l
4.4		Geohazards1	l
4.5		Groundwater Wells1	I
4.6		Erosion & Sediment Control1	I
4.7		Surface Water, Wetlands, Fish & Habitat1	I
4.8		Terrestrial Plants & Lichen1	l
4.9		Terrestrial Wildlife & Habitat1	I
4.10	0	Avifauna & Bats1	l
4.1	1	Noise Management1	I
4.1		Traffic Control1	I
4.1	3	Non-Hazardous Solid Waste Disposal1	I
4.14	4	Contaminant Prevention Plan1	I
	1.14		
	1.14	5	
5.0		ONTINGENCY PLANS1	
5.1		Spill Control Plan	
-	5.1.1 5.1.2		



5	.1.3	Clean-up Procedures	2
5.2	Failu	re of Erosion & Sedimentation Controls	2
•	.2.1 .2.2	Prevention	
5.3	Disc	overy of Archaeological, Culture, or Heritage Resources	2
5	.3.1	Response Procedures	2
5.4	Fires	5	2
•	.4.1 .4.2	Prevention	2 2
6.0		IUNICATIONS	2
6.1	Cont	tact List	2
6.2	Incid	lent Reporting	2
7.0		ICATION	
8.0	SITE V	visitors	2
9.0		JRE	
10.0	STATE	EMENT OF QUALIFICATIONS AND LIMITATIONS	2
11.0	REFE	RENCES	2

LIST OF TABLES

To be Determined

LIST OF FIGURES

To be Determined

LIST OF APPENDICES

To be Determined



APPENDIX B ENGAGEMENT

MI'KMAQ ENGAGEMENT

Contact Information for Chiefs and Councils

Chief Deborah Robinson	Chief Gerald (Jerry) Toney
Acadia First Nation	Annapolis Valley First Nation
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Yarmouth, Nova Scotia B5A 5J7	Cambridge Station, Nova Scotia BOP 1G0
Phone: (902) 742-0257	Phone: (902) 538-7149
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Fax: (902) 742-8854	Email: gtoney@avfn.ca
Email: deborahrobinson@acadiaband.ca	
Chief Leroy D.C. Denny	Chief Sidney Peters
Eskasoni First Nation	Glooscap First Nation
P.O. Box 7040	159 Smith Road
63 Mini Mall Drive	Hantsport, Nova Scotia BOP 1P0
Eskasoni, Nova Scotia B1W 1A1	Phone: (902) 684-9788
Phone: (902) 379-2800	Cell: 902790-6168
Cell: 902-578-9190	Fax: (902) 684-9890
Fax: (902) 379-2172	Email: speters@glooscapfirstnation.com
Email: leroy@eskasoni.ca	
Chief Carol Dee Potter	Chief Terrance J. Paul
L'sitkuk (Bear River)	Membertou First Nation
130 Reservation Road	111 Membertou Street
Bear River, Nova Scotia BOS 1BO	Membertou, Nova Scotia B1S 2M9
Phone: (902) 467-3802	Phone: (902) 564-6466
Cell: 902-247-2816	Cell: 902-371-0072
Fax: (902) 467-4143	Fax: (902) 539-6645
Email: carolbrfn@eastlink.ca	Email: terrypaul@membertou.ca
Chief Robert Gloade	Interim Chief Tma Francis
Millbrook First Nation	Paqtnkek Mi'kmaw Nation
P.O. Box 634	7 Dillon Street
Truro, Nova Scotia B2N 5E5	Afton Station, Nova Scotia BOA 1A0
Phone: (902) 897-9199	Phone: (902) 386-2781
Cell: 902-890-8558	Cell: 902-751-0641
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Fax: (902) 893-4785	Email: tma.francis@paqtnkek.ca
Email: bgloade@msn.com	

Chief Wilbert Marshall
Potlotek First Nation
12004 Highway 4, RR# 1
St. Peter's, Nova Scotia BOE 3BO
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Cell: 902-631-8101
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Chief Norman Bernard
Wagmatcook First Nation
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75 Humes Rear Road
Wagmatcook, Nova Scotia BOE 3N0
Phone: (902) 295-2598
Cell: 902-295-0351
Fax: (902) 295-3398
Email: normanbernard321@gmail.com

Contact Information for Mi'kmaw Consultation Representatives

Twila Gaudet, Director of Consultation	KMKNO Consultation Advisors
Assembly of Nova Scotia Mi'kmaw Chiefs	
Kwilmu'kw Maw-klusuaqn Negotiation Office	Craig Hodder, Lands Officer
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Phone: (902) 843-3880	
Cell: (902) 890-9488	Patrick Butler, Mi'kmaq Energy & Mines Advisor
Fax: (902) 843-3882	Energy and Mines Projects
Email: twilagaudet@mikmaqrights.com	Email: pbutler@mikmaqrights.com
KMKNO Admin – to be copied to all electronic	Tamara Young, Jr. Consultation Researcher
correspondence where Twila Gaudet is the	Aquaculture, Species at Risk, National and
recipient of the letter or copied to the letter	Provincial Parks
Mise'l Abram, Administrative Support	Email: tyoung@mikmaqrights.com
Phone: (902) 843-3880	
Email: <u>mabram@mikmaqrights.com</u>	Gerard Francis, Consultation Project Support
	Officer
	Fisheries and Aquaculture Projects
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	Sherilyn Young, Consultation Project Support
	<u>Officer</u>
	Forestry Projects and Biodiversity
	Email: syoung@mikmaqrights.com
	Tanya MacVicar, Mi'kmaw Community Liaison
	Email: tjmacvicar@mikmaqrights.com
	Houston Barnaby, Articled Clerk
	Email: hbarnaby@mikmagrights.com
	Marissa Prosper, Articled Clerk
	Email: mprosper@mikmaqrights.com

SWEB Energy - Renewable Energy Projects

From: Jason Parisé <jason.parise@sweb.energy> Sent: Thursday, January 28, 2021 1:23 PM To: Barry.f@plfn.ca Subject: SWEB Energy - Renewable Energy Projects

Good afternoon Barry:

I am reaching out to Pictou Landing First Nation to inform you and your colleagues about SWEB Energy's (www.swebdevelopment.ca) ongoing development of wind energy projects in the province of Nova Scotia. At present, we are in the early stages of identifying potential wind energy sites with the hope of participating in upcoming renewable energy procurements to be released by Nova Scotia Power and other stakeholders. We have a long history of successful wind energy projects within the province, whereby we have developed and commissioned nearly 40 megawatts of wind energy projects in partnership with various communities. In New Brunswick, we have established a partnership with Woodstock First Nation on an 18 MW wind energy project that reached commercial operation in 2019.

Although our projects are in very early stage development, I wanted to ensure that Pictou Landing First Nation was aware of our interest in engaging with your community and other First Nation communities within the province. Furthermore, we are always interested in potential partnerships with First Nation communities and local stakeholders to collaborate and develop successful wind and solar energy projects.

If you would like to discuss our projects in greater detail or how Pictou Landing First Nation could participate in a renewable energy project, please feel free to contact me via my information below. Please also feel free to forward this e-mail onto your colleagues.

Kind regards,

Jason Parisé Development Manager

jason.parise@swebdevelopment.ca | www.swebdevelopment.ca

Phone: +1 902 431 0564-261 | Mobile: +1 902 329 1494

SWEB Development LP

6080 Young Street, Suite 106, Halifax, NS, B3K5L2 | Canada

Follow us on:

twitter.com/swebrenewables



SWEB Energy 6080 Young Street, Suite 106 Halifax, NS, B3K 5L2 Tel: 1 (902) 329 1494 jason.parise@sweb.energy

April 19th, 2021

Greetings,

I am writing to introduce you to SWEB Energy, a local renewable energy project development team with a focus on community-based renewable energy projects. SWEB Energy is currently working throughout the province of Nova Scotia on transmission-connected wind energy projects with the intent to permit, construct, and operate projects in collaboration with landowners with properties that are suitable for wind energy projects and other local stakeholders. These projects will be developed to participate in the new Green Choice Program (please see: novascotiagcp.com), a program developed by the provincial government in association with Nova Scotia Power Inc. (NSPI) and the Utilities and Review Board (UARB). The program will allow large electricity users such as municipalities, hospitals, schools, and private industries to procure their own renewable electricity to offset the emissions produced from the coal and natural gas thermal generators currently operating in Nova Scotia.

SWEB Energy has been developing, constructing, and operating renewable energy projects throughout eastern Canada and the USA for over a decade. SWEB Energy is part of the W.E.B international group of companies and through W.E.B.'s European involvement, the group has over 25 years of community-based renewable energy project experience and over 500 MW of projects in operation, including 40 MW in many communities across Nova Scotia. SWEB Energy has collaborated with several community groups, First Nation communities, and stakeholders to ensure that the benefits from each of its projects are shared locally.

At present, we have identified several sites throughout the province that are strong candidates for a prospective wind energy project. To this end, we would like to further discuss our projects and the Green Choice Program and welcome questions and feedback from your community. There are many benefits associated with renewable energy projects and we are keen to collaborate with First Nation communities through various forms of engagement, as well as potential project partnerships.

I am originally from New Brunswick and have worked with the SWEB Energy team out of our Halifax office throughout eastern Canada, Maine, New York, and Virginia on renewable energy projects since 2014. I am passionate about working with local stakeholders to bring new renewable energy projects online as part of our shared energy transition. I look forward to hearing from you in the near term and welcome you to contact me via telephone or e-mail as indicated above. For more information about SWEB Energy, please visit: www.swebdevelopment.ca.

Kind regards,

Jason Parisé, Senior Development Manager SWEB Energy



SWEB Development LP 6080 Young Street, Suite 403 Halifax, NS, B3K 5L2 Tel: 1 (902) 329 1494 jason.parise@sweb.energy

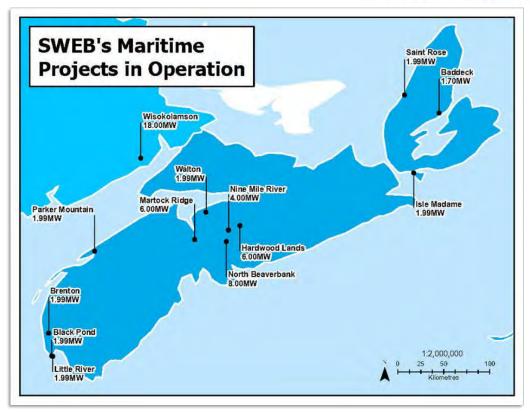
March 21st, 2021

Greetings,

As a follow up to a letter I provided to your community in April of 2021, and subsequent e-mail correspondence thereafter, I am writing to provide an update on SWEB Development LP's (SWEB Energy's) ongoing development of wind energy projects throughout the province of Nova Scotia. SWEB Energy is currently working throughout the province on a portfolio of transmission-connected wind energy projects with the intent to permit, construct, and operate projects in collaboration with local stakeholders and landowners with properties that are suitable for wind energy projects. These proposed projects will be developed to participate in the Nova Scotia Green Choice Program Request for Proposals (https://novascotiagcp.com/), as well as the Nova Scotia Rate-Base Program Request for Proposals (https://novascotiarbp.com/). Both programs are highly competitive renewable energy procurements that have been developed by Customer First Renewables (https://www.customerfirstrenewables.com/) on behalf of the provincial government in association with Nova Scotia To reach its goal of obtaining 80% of its electricity from renewable resources and therefore making the province a leader in the energy transition and reducing our impacts on climate change.

As noted in previous correspondence, SWEB Energy has been developing, constructing, and operating renewable energy projects throughout eastern Canada and the USA for over a decade. SWEB Energy is part of the W.E.B international group of companies and through W.E.B.'s European involvement, the group has over 25 years of community-based renewable energy project experience and over 523 MW of projects in operation, including 40 MW of wind energy projects in many communities across Nova Scotia. SWEB Energy has collaborated with several community groups, First Nation communities, and stakeholders to ensure that the benefits from each of its projects are shared locally. An overview map of SWEB Energy's operational wind energy projects in the Maritime provinces is provided on the following page. Our Wisokolamson Energy Project (shown below) was developed, constructed, and is now operated in partnership with Woodstock First Nation in New Brunswick.





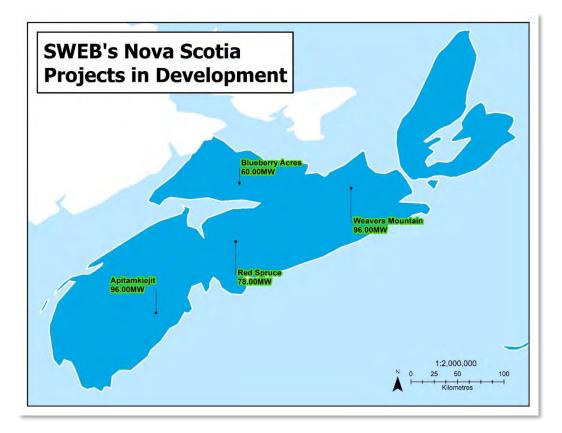
At present, we are proposing four wind energy projects from our portfolio that are strong candidates for the upcoming renewable energy procurements noted above. Below, I have included more details pertaining to each of these projects.

Overview of SWEB Energy's Proposed Projects:

- The proposed Apitamkiejit Wind Energy Project is a 96 MW wind energy project located in Queens County, Nova Scotia. The project will consist of 16-20 wind turbine generators, wind turbine pads and foundations, access roads, buried and overhead electrical conductor, a substation, and electrical switchyard. The project will be located east of Greenfield, Nova Scotia and will be built primarily on privately-held lands and a small portion of Crown land. The project will be interconnected to the NSPI transmission system. It is anticipated that if awarded a contract through one of the two procurements, that the project will commence construction in the fall of 2024 and will reach commercial operation by December of 2025.
- The proposed Blueberry Acres Wind Energy Project is a 60 MW wind energy project located in Cumberland County, Nova Scotia. The project will consist of 10-14 wind turbine generators, wind turbine pads and foundations, access roads, buried and overhead electrical conductor, a substation, and electrical switchyard. The project will be located east of Sid McCully Drive on a combination of privately-held lands and Crown land and will be interconnected to the NSPI transmission system. It is anticipated that if awarded a contract through one of the two procurements, that the project will commence construction in the fall of 2024 and will reach commercial operation by December of 2025.



- The proposed Red Spruce Wind Energy Project is a 78 MW wind energy project located in the Municipality of East Hants, Nova Scotia. The project will consist of 13-17 wind turbine generators, wind turbine pads and foundations, access roads, buried and overhead electrical conductor, a substation, and electrical switchyard. The project will be located southwest of Renfrew, Nova Scotia and will be built on privately-held lands. The project will be interconnected to the NSPI transmission system. It is anticipated that if awarded a contract through one of the two procurements, that the project will commence construction in the fall of 2024 and will reach commercial operation by December of 2025.
- The proposed Weavers Mountain Wind Energy Project (the Project) is a 96 MW wind energy project located in Pictou County and Antigonish County, Nova Scotia. The project will consist of 16-20 wind turbine generators, wind turbine pads and foundations, access roads, buried and overhead electrical conductor, a substation, and electrical switchyard. The project will be located southwest of James River, Nova Scotia and will be built primarily on privately-held lands and a small portion of Crown land. It is anticipated that if awarded a contract through one of the two procurements, that the project will commence construction in the fall of 2024 and will reach commercial operation by December of 2025.



If built, these proposed projects will offset significant greenhouse gas emissions from Nova Scotia's current thermal generating assets (i.e. coal-fired and natural gas-fired electrical generation). The proposed locations of the projects boast high wind speeds which in turn, will result in low and stable long-term electricity prices for Nova Scotians. Further, the selection of these project sites incorporated several



local environmental attributes, industry-specific setbacks and constraints, as well as avoidance of important bird areas. In conjunction with several environmental assessment field studies that have been conducted on each project site since the summer of 2021, SWEB Energy is currently working on the preliminary scoping for a full Mi'kmaq Ecological Knowledge Study for each project site and anticipates that these studies will commence in the summer of 2022.

At the local level, it is anticipated that the projects will contribute to direct and indirect monetary benefits. Where possible, the project will utilize local labor, contracting services, hospitality services, technical services, as well as local materials. At the municipal level, the project will contribute to the local tax base by virtue of Municipal wind turbine or wind project taxation. Lastly, the projects are being structured to provide benefits to underrepresented communities and local organizations to ensure that the projects' benefits remain in Nova Scotia.

In addition to the project overview and anticipated benefits noted above we would like to further discuss our projects and the Green Choice Program and Rate-Base Program and welcome questions and feedback from your community. There are many benefits associated with renewable energy projects and we are keen to collaborate with First Nation communities through various forms of engagement, as well as potential project partnerships. To this end, we would like to host a virtual or in-person meeting with members of your community regarding the potential to participate and partner on our proposed wind energy projects.

I am originally from New Brunswick and have worked with the SWEB Energy team out of our Halifax office throughout eastern Canada, Maine, New York, and Virginia on renewable energy projects since 2014. I am passionate about working with local stakeholders and First Nation communities to bring new renewable energy projects online as part of our shared energy transition. I look forward to hearing from you in the near term and welcome you to contact me via telephone or e-mail as indicated above and below. For more information about SWEB Energy, please visit: www.swebdevelopment.ca.

Kind regards,

Jason Parisé, Senior Development Manager SWEB Development LP E-mail: <u>jason.parise@sweb.energy</u> Telephone: 902 329 1494

PUBLIC & STAKEHOLDER ENGAGEMENT

Community Engagement Session Materials

Session I – Meeting Notice



COMMUNITY ENGAGEMENT SESSION

Proposed Weavers Mountain Wind Energy Project

SWEB Development is hosting a community engagement session on the proposed Weavers Mountain Wind Energy Project. This engagement session will allow stakeholders to meet our development team, learn about the project's benefits, ask questions, and provide feedback to shape the proposed project.

Please note: This meeting was postponed from November 25th, 2021 due to inclement weather conditions.

www.weaversmountainwindenergy.ca



WHEN: THURSDAY DECEMBER 2, 2021

TIME: 4:00 PM -8:00 PM

WHERE: ST. JOSEPH'S LAKESIDE COMMUNITY CENTRE

ADDRESS: 2752 OHIO EAST ROAD, ANTIGONISH

CONTACT INFO: 902-329-1494 WEAVERS@SWEB.ENERGY

SWEB DEVELOPMENT

6080 Young Street, Suite 403 Halifax, NS B3K 5L2

This event is subject to COVID-19 safety protocols.

Session I – Photographs



Welcome to the Proposed Weavers Mountain Wind Energy Project Community Engagement Session

About the Project

The Weavers Mountain Wind Energy Project is a proposed renewable energy facility with a total capacity between 40 MW and 100 MW. The project will be comprised of turbines with a nameplate capacity between 4.5 MW and 6 MW. The facility would be located on private and crown land in Pictou/Antigonish County, south of highway 104. SWEB Development LP (SWEB Energy), a North American subsidiary of W.E.B. Group, is planning to partner with local First Nation communities, municipalities, and other community groups on the project.



About the Rate Base Procurement

The Rate Base Procurement (RBP) is a competitive process to source renewable energy across Nova Scotia. The RBP aims to attract low-cost projects to procure 350 MW of renewable electricity for Nova Scotians. The RBP will support Nova Scotia's goals to fight climate change, as well as encourage local investment and job creation.

Project Benefits

A central focus of the project during development, construction, and operations is to ensure that as much local labour, services, and materials are used as possible. It is anticipated that if the project is built, it will create a number of direct and indirect benefits for various stakeholders and First Nation communities. The project will have a positive impact on local businesses and will result in employment opportunities in addition to tax revenue for municipal, provincial, and federal governments. Further, a share of project revenues will be used to support local community groups and underrepresented communities in the province.

With respect to the environment and climate change, the project is expected to significantly offset carbon dioxide (CO2) emissions from Nova Scotia's current electricity production and will produce enough power for up to 33,000 homes.



SWEB's Approach to Wind Energy

SWEB Energy is a North American subsidiary of W.E.B Group, a community-owned renewable energy developer headquartered in Austria. W.E.B Group has been involved in planning, developing, financing, constructing, and operating renewable energy projects for over 25 years. Currently, W.E.B Group has a total of 523 MW of installed capacity in Austria, Germany, Italy, the Czech Republic, France, Canada, and the United States. The group develops, constructs, and operates, wind, solar, and small-scale hydroelectric projects with wind energy representing the largest proportion of its projects.

By the nature of the community-ownership of SWEB Energy, the company has extensive experience in community engagement and have worked with local stakeholder groups on projects in Nova Scotia, and across Canada and the northeastern United States. Through the involvement of community members throughout Nova Scotia, SWEB has successfully developed and commissioned three phases of community-owned wind energy projects, totaling 12 projects, 20 WTGs and 39.63 MW of installed capacity under the Community Feed-in Tariff (COMFIT) program. SWEB has also commissioned a 9 MW community-owned wind energy project in Maine, with another 20 MW wind project currently in construction. As well, SWEB Energy's Wisokolamson Energy Project, an 18 MW wind energy project located West of Riverside-Albert in New Brunswick was developed and constructed through a partnership with Woodstock First Nation as part of a provincial initiative led by New Brunswick Power.

Contact Us

SWEB Energy 6080 Young St, Suite 403 Halifax, NS B3K 5L2 Canada Local: (902) 431-0564 Toll Free: +1 (844) 468 3134 Project Contact Jason Parisé Development Manager, SWEB Development

Phone: +1 902-431-0564 ext.261 Mobile: +1 902-329-1494 weavers@sweb.energy

Website: www.weaversmountainwindenergy.ca



Session I – Poster Boards



Thank you for attending our

Community Engagement Session

This is part of the public engagement process to inform residents on the status of the

> Weavers Mountain Wind Energy Project





1 5078-00



NS Rate-Base Program

The Rate-Base Program is a competitive procurement put forth by the Province of Nova Scotia to obtain up to 350MW of transmission connected renewable low-impact electricity solutions from Proponents partnering with Mi'kmaq communities, Municipalities, and Underrepresented Groups. Projects must reach COD before December 31, 2025 and have a maximum size of 100 MW.

Typical Project Timeline

1. Land acquisition

2. Preliminary Site Analysis & Design

- 3. Environmental Assessment Field Surveys & Reporting
- 4. PPA Award & Ongoing Interconnection Studies
- 5. Environmental Assessment & Other Permitting
- 6. Project Design Completed
- 7. WTGs Ordered
- 8. Construction Start (civil and electrical)
- 9. WTG Delivery

10. Construction Completion

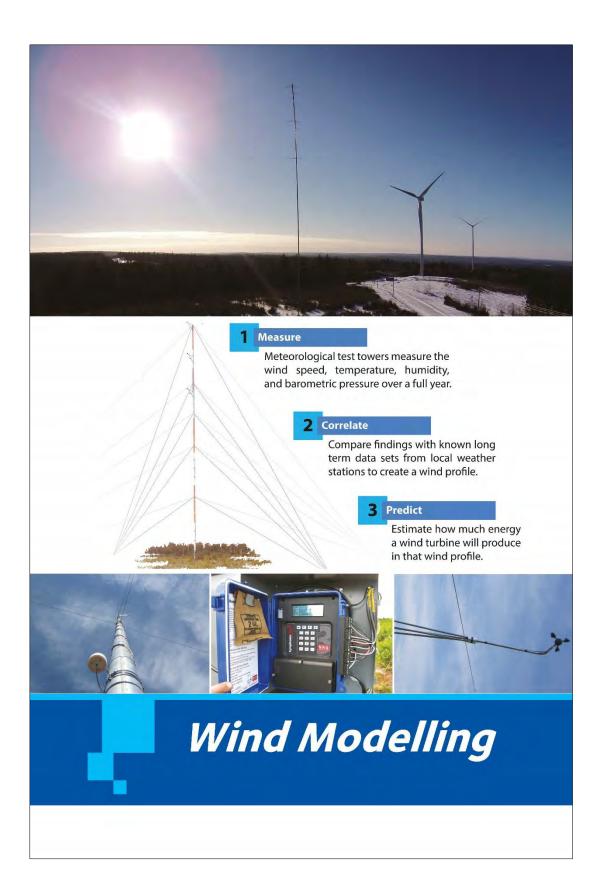
11. Operations (25+ years)

Project Development (2020 – 2022)

Project Construction (2023 – 2024)

Project Operations (2024 Onward)

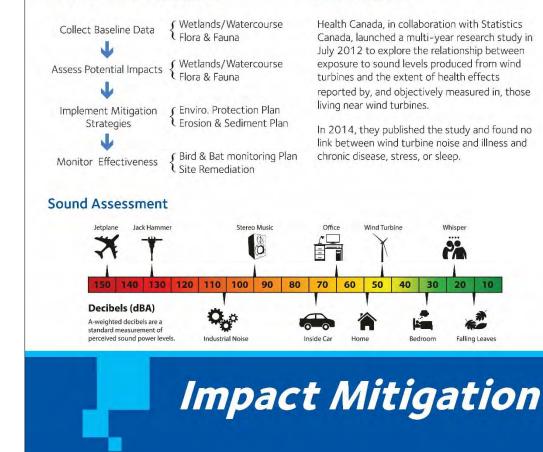
Rate-Base Program



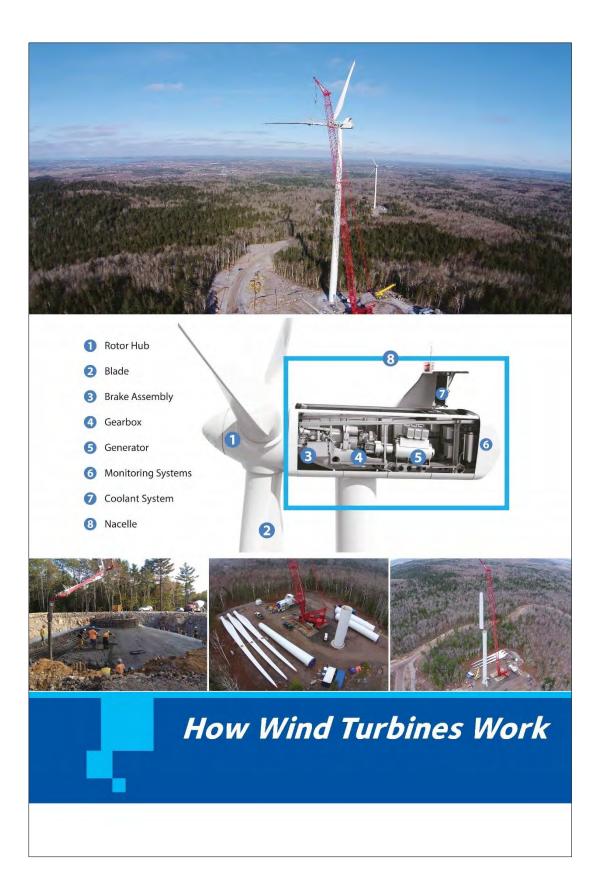


Health Canada

Environmental Assessment







Session II – Presentation (Virtual Engagement Session)





Today we will be talking about our proposed Weavers Mountain Wind Energy Project which is in unceded and surrendered Mi'kma'ki, the traditional territory of the Mi'kmaq people.

W.E.B

W.E.B

We are all treaty people.

Today's Events

Time	Event
6:30 - 6:40	Participant sign on, rules of engagement & acknowledgement
6:40 - 6:45	Introduction to key team members
6:45 - 7:15	Presentation
7:15 - 8:00	Question & Answer Period

Team Members

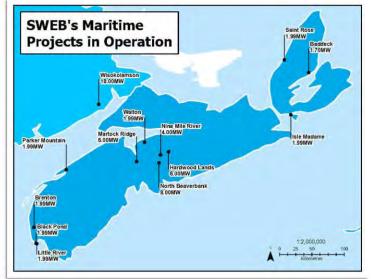


Team Member	Position / Role	Location	
Sarah Rosenblat	Development Manager / Moderator	Halifax, NS	
Jason Parisé	Senior Development Manager / Presenter	Halifax, NS	
Mason Baker	Technical Manager / Presenter	Halifax, NS	
Michael Carey	Development Manager / Q&A Support	Halifax, NS	
Stefan Karkulik	CAO / Q&A Support	Montreal, QC	
Billy Hanifen	GIS Technician / Q&A Support	Halifax, NS	
Kate Munroe	Communications and Administrative Coordinator / Q&A Support	Halifax NS	



Operational Projects in the Maritimes W.E.B

- Participated in COMFIT program with largest proportion of COMFIT wind projects in the province
- Participated in NB Power's LORESS program with projects throughout New Brunswick and three different community partners
- Continued development of wind and solar energy projects throughout the region



Nova Scotia COMFIT Projects

- 20 wind turbines throughout the Province
- Partnership with local partners:
 - o Scotian Wind, Inc.
 - Scotian Windfields Inc.
- Community benefit program for local communities





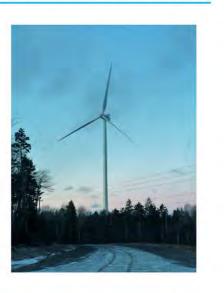
Rooted in Nova Scotia

Sponsor of the "Halifax Hawks Atom A Hockey Team"

- SWEB contributes community funds to:
 - Walton and Area Development Association
 - Baddeck Lions Club
 - Hardwood Lands Community Centre
 - Sipekne'katik First Nation (Indian Brook)
 - Yarmouth and Area Community Fund
 - Parker Mountain Wind Turbine Society
 - Municipality of the County of Inverness
 - Harbour Hall Community Fund
 - West Hants Community Fund
 - Beaver Bank Community Awareness Association
 - Le fonds "La picasse" (Community Foundation)
 - Nine Mile River Community Hall
 - L'Association du Musee de Wedgeport

The Nova Scotia Rate Base Procurement

- Competitive procurement for up to 350 MW of transmission connected renewable low-impact electricity solutions
- Proponents partnering with Mi'kmaq communities
- Projects must reach COD before December 31, 2025 and have a maximum size limitation of 100 MW
- Why this project is being proposed



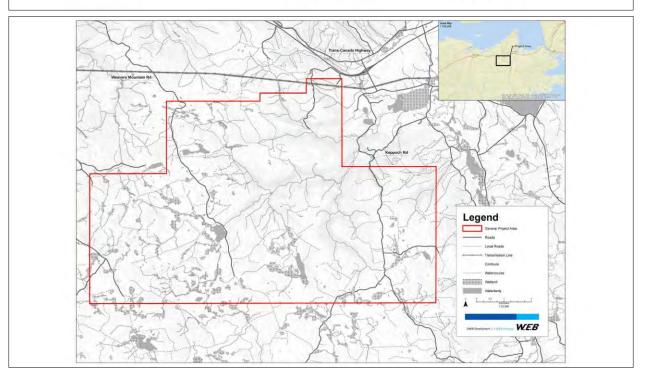
W.E.B

The Proposed Project





- Between 40 MW to 100 MW, between 7 to 22 turbines
- Turbine nameplate capacities between 4.5 MW and 6 MW
 - Turbine type has not been selected yet
- Located on Private and Crown land
- Pictou/Antigonish County, south of HWY 104
- Site selection based number of factors
 - Proximity to NSPI electrical transmission system
 - Wind resource
 - Minimal receptors in the area
 - Existing infrastructure (such as roads)



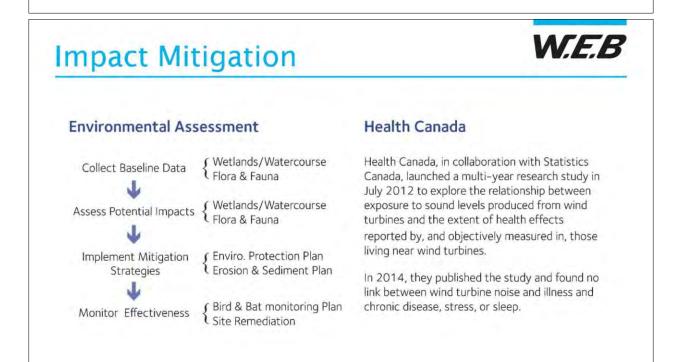
Work Completed to Date

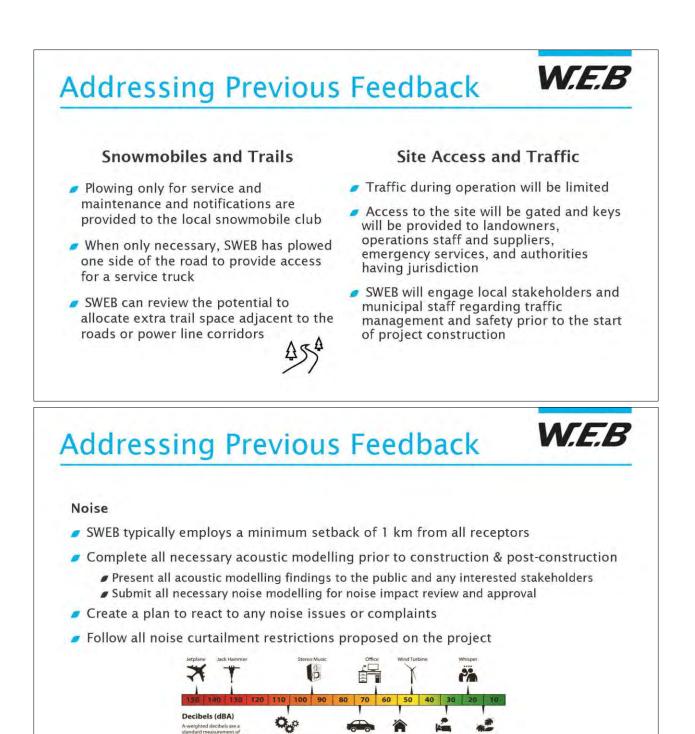


Environmental assessment field surveys commenced in the summer of 2021 and will continue throughout 2022

W.E.B

- Stakeholder engagement began in 2021 and will continue throughout project development, construction, and operation
- First Nation engagement began in 2021 and will continue throughout project development, construction, and operation
- Project design and layout optimization underway





Addressing Previous Feedback

Light Pollution & Aeronautical Lighting Systems

- Complete all necessary light modelling, including modelling shadow flicker, prior to construction
 - Present all findings to the public and any interested stakeholders & submit all necessary lighting permits and plans
- SWEB will install lighting as per Transport Canada requirements based on the project size, final wind turbine height and dimensions (lighting systems are synchronized)
- SWEB will create a plan in consultation with the community to address any lighting issues or complaints



W.E.B

W.E.B

Addressing Previous Feedback



Decommissioning

- SWEB will be obliged by its contractual relationship with NSPI to decommission the turbines
 - The plan will outline the process in which equipment and materials will be removed from the site in the event that Proponent is no longer able to construct or operate the project
 - NSPI will hold \$20,000 per MW in security (up to \$1.92 million)
 - The plan will be set prior to construction commencement and will establish key project contacts for both the proponent and NSPI

Project Benefits

- Project-specific benefits are direct and indirect
- Local labour, services, and materials
- Benefits will be spread to various stakeholders and First Nations communities
- Positive impact on local businesses that will result in employment opportunities in addition to tax revenue for municipal, provincial, and federal governments
- A share of project revenues will be used to support local community groups and underrepresented communities in the province
- Significantly offset carbon dioxide (CO₂) emissions from Nova Scotia's current electricity production
- Produce enough clean power for up to 20,000 homes



- 9. WTG Delivery
- 10. Construction Completion

11. Operations (25+ years)

Project Construction (2023 – 2024)

Project Operations (2024/2025 Onward)



Question & Answer Period





Continuing Discussions

W.E.B

Project Contact Information

Jason Parisé Senior Development Manager

Office: +1 902-431-0564 ext.261 Mobile: +1 902-329-1494

weavers@sweb.energy

www.weaversmountainwindenergy.ca

SWEB Contact Information

SWEB Development LP 6080 Young St, Suite 403 Halifax, NS B3K 5L2

Office: (902) 431-0564 Toll Free: +1 (844) 468 3134

contact@sweb.energy

www.sweb.energy

All project information is available for review in our Halifax office at 6080 Young Street, Suite 403 and can be mailed upon request







VIRTUAL COMMUNITY ENGAGEMENT SESSION

Proposed Weavers Mountain Wind Energy Project

SWEB Development is hosting a second community engagement session on the proposed Weavers Mountain Wind Energy Project. This engagement session will be held online and allow stakeholders to meet our development team, learn about the project's benefits, ask questions, and provide feedback to shape the proposed project. Please join using the link to the event in the banner to the right.

www.weaversmountainwindenergy.ca





6080 Young Street, Suite 403 Halifax, NS B3K 5L2

This event is subject to COVID-19 safety protocols.

Session II – Questions & Answers (Virtual Engagement Session) Weavers Mountain Wind Energy Project Virtual Community Engagement Session Question & Answer Transcript

The Virtual Community Engagement Session for the proposed Weavers Mountain Wind Energy Project was held on March 17th, 2022 from 6:30 – 8:00pm. The below transcript is a record of the questions and answers raised during the session.

Did I understand the project will be on the *West* side of the Keppoch Road? How much will be in Antigonish County and how much in Pictou County?

We have a sizeable portion of land signed up that span both Pictou and Antigonish Counties. Currently, its tough to provide exact percentages as to how much of the project will fall into which county without doing the final environmental studies to really determine if there is anything on the ground that we need to be aware of when placing turbines. The final turbine placement will come at a later date but right now the plan is for at least some infrastructure in both counties.

Will there be a Mi'kmaq Ecological Survey?

We have been engaging Membertou Geomatics for about 2-3 months about setting up some scoping for a Mi'kmaq Ecological Knowledge Study. This group is fairly busy at the moment, but we anticipate that this whole process will start in the early summer and take some time to finish up in terms of the interviews and site visits. This process is in place for all of our projects in our portfolio.

Where are you in terms of the development agreement process with the municipality(s)?

We have been in contact with Pictou and Antigonish Counties independently on this project since the summer of 2021. We have reviewed the local requirements. We would typically apply for these types of permit agreements once the projects get more progressed and the layout has been "crystallized". This will be something that occurs over the next couple of months. We will look to establish those permit applications and submissions within the summer months.

Your website speaks a lot about community partners... who are they?

There are two types of community partners. The first type of community partners is those who have a share in the project. They will own the project with us. We have previously worked heavily with Municipalities on this type of agreement. Unfortunately, this Municipality ownership structure was taken from us by the Program Administrator and the Government of Nova Scotia for the Rate Based Program. However, we are currently in negotiations with First Nations groups who have shown interest in owning a stake in the project. We are not able to disclose details on this agreement at this point in time. However, we will share details as soon as the ink is dry.

The second type of community partner is those groups who represented the underrepresented. These underrepresented groups would receive a share of revenue. The project will give funds to certain nonprofit organizations who will put them to good use. We are currently working with three of these partners – a First Nation group, an advocacy group for women in renewable energy and an advocacy group for the African Nova Scotian community. We will post details on these partners as soon as they are known. In addition, we are working with other groups from the local project community who could also use funds from our projects. We would like to support groups who are directly neighbouring our project.

I saw on the RBP timeline that March 14 was the date for submitting an Intent to Bid. Would it be fair to assume that you've submitted an Intent to Bid?

Yes, we have submitted an Intent to Bid for this project. However, the Intent to Bid is non-binding in that the details of the project can change between now until the submission deadline in early May. The Intent to Bid is for the Program Administrator to get a sense of the number of bids that will be received but does not lock project details.

What will be the responsibility or liability of project partners? For example, if there were accidents, forest fires, etc.?

The Project will be liable for anything that is not done correctly or has a negative impact on the environment. It depends on what exactly happens and how, however we will be held responsible and will be liable. Furthermore, we will have insurance in place. All large projects have millions of dollars in insurance coverage should something happen. All projects are contractually required to have insurance to cover an array of incidents. If there is concern that the project owner or Proponent is unwilling or unable to pay for remediation, then the insurance surety will take over.

If SWEB went out of business before decommissioning, would any of the partners be liable for costs?

Great question. This question has come up before throughout Nova Scotia in connection with other developers' projects. We will have an agreement with NSPI and it does contractually require that we decommission the turbines after their useful life. This means we are contractually obliged to have some form of security in place with NSPI (Letter of Credit, Bank Guarantee, etc.). If we want the surety returned, then we must fulfill the obligations of the PPA with NSPI which includes decommissioning. Essentially, the owner of the project would be liable and responsible for everything. We hope that with the security in place, the community can rest assured that we will decommission the turbines. However, we appreciate and understand that this has been an issue in other parts of the province in the past. It should be noted that we have our North American headquarters in Halifax – so our employees are around. Please call us if there are any questions or concerns issue.

Additionally, the raw materials of the turbines have a significant value. We have decommissioned turbines in Europe where we received money to have someone pick up our turbines and decommission them for us. Ultimately, there is an advantage in decommissioning.

Back on the local non profit organizations getting some benefit from the Project profits topic - Is there a way to apply to get these funds as a community non profit that will be affected?

We are currently in discussions with the Keppoch Society. We have an interest in working with that local community group because a lot of us use Keppoch ourselves and one of our team members is from the area. More information will come on this when known.

We invite the community to tell us if you have any ideas of where we can put funds into good use, please reach out. We have worked with numerous Community Liaison Committees (CLCs) who have received funds from our projects in the past. These CLCs have supported some incredible community benefits.

Will the turbines selected be (preferably) made in Canada?

Generally speaking, there are different tiers of turbine suppliers. Typically, we would use a tier 1 supplier. There are only a few turbine manufacturers that belong to the tier 1 group. Unfortunately, there are limited ways to oblige our supplier to source certain components within Canada. Those suppliers are international companies who have factories across the world. Furthermore, the suppliers would only know about a year or year and a half before the project begins where the components come from. One important thing to note is that as part of the RFP, we are obligated to meet certain standards and criteria with the equipment used. Very few turbine suppliers can meet those criteria; they are very high standards. The manufacturers that meet said criteria do have manufacturing plans typically in the midwest US. While some components of the turbines will come out of Europe. Steel towers will often come from China or other similar locations. Its unfortunately out of SWEB's control to select which materials would come directly from Canada. However, something that does come from Canada for these projects is rebar and concrete. We use a significant amount of rebar and concrete. The concrete would come from a local company here in Nova Scotia. The rebar could come form a rebar supplier in the maritime region. Although, there are not a lot of rebar suppliers in Eastern Canada specifically. Proponents are asked to show their plans of how they will provide benefits to the local economy in the *RFP.* We hope that SWEB will be able to show the benefits to Nova Scotia. We are based here in the province, and we work heavily with those also based here. The turbines themselves apart, we are confident this project will provide a significant benefit to the local economy.

Your two projects in Massachusetts have very interesting environmental aspects (pollinator attractive grasses and grazing of sheep). Anything like this planned for Weavers Mountain?

The pollinator element is more common for solar PV projects because a typical wind project, specifically turbine bases, may only use 5% of the total project area. Each turbine would take about a hectare of land after construction. We would have to keep this hector quite clear because we need access to the turbine. Everything around the footprint we leave to regenerate naturally. Sometimes if its Crown land, the Crown will request a natural regeneration. We don't normally add additional pollination aspects in a wind project, especially given the existing land cover is normally forested.

Same with grazing of sheep. This is more common when were using farmland for solar PV. Again, the Weavers Mountain project has a forested land cover. There is active forestry practice on the site right now.

I noticed your North American projects are very small compared to what's proposed here. Have you ever completed a project of this size?

Yes, the projects we have built and are currently operating in North America are smaller. However, we have a number of projects in development in the US of significant size. Additionally, our parent company based in Europe has projects of significant size. Within Canada, we have developed sites that are as large, or larger. We have a site called the Black Spruce Wind Energy Project that was co-developed with Black & Macdonald and was one of the projects selected as part of a larger procurement to send wind energy down to the US. As such, we do have experience with larger projects.

Furthermore, every year the capacity of the turbines increases. This means the capacity of a 100 MW project may be larger than the average total MW capacity size of our operating projects, but the number of turbines required is similar. Its not too different to jump from a seven 2MW turbine project to a twelve

5MW turbine project. The key difference here is in the construction timeline.

As a company we are tracking the change in the market. The market is trending towards larger projects to decrease the cost of energy.

Lastly, in any given year, across our broader team, we've commissioned 90 – 110 MW as a group. It is a much more complex beast to finance and commission a number of projects across numerous jurisdictions.

When do you suspect you will have a better idea of the number of turbines as well as location of them?

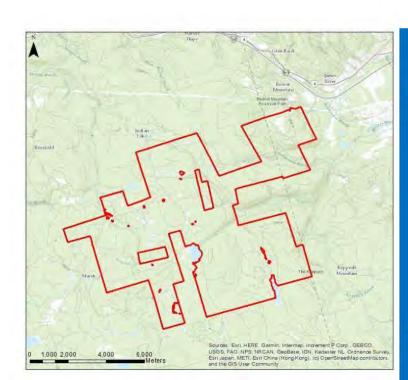
We plan to follow the timeline of the RFP. We anticipate a strong plan of record layout by end of April. This layout will be carried through the environmental assessment process. All the layout information will be published both through our website as well as through the NS Environment website.

Continuing Discussions – please reach out to us if you have any further questions or feedback

Jason Parisé	SWEB Development LP
Senior Development Manager	6080 Young St, Suite 403
	Halifax, NS
	B3K 5L2
<i>Office: +1 902-431-0564 ext.261</i>	
Mobile: +1 902-329-1494	
weavers@sweb.energy	Office: (902) 431-0564
www.weaversmountainwindenergy.ca	Toll Free: +1 (844) 468 3134
	contact@sweb.energy
www.sweb.energy	

All project information is available for review in our Halifax office at 6080 Young Street, Suite 403 and can be mailed upon request. In addition, we are working with other groups from the local project community who could also use funds from our projects. We would like to support groups who are directly neighbouring our project.

Session III – Meeting Notice



COMMUNITY ENGAGEMENT SESSION

Proposed Weavers Mountain Wind Energy Project

WEB Weavers Mountain Wind LP, a partnership between Glooscap First Nation and SWEB Development, is hosting a community engagement session on the proposed Weavers Mountain Wind Energy Project. This engagement session will allow stakeholders to meet our development team, learn about the project's benefits, ask questions, and provide feedback to shape the proposed project.

www.weaversmountainwindenergy.ca



WHEN: TUESDAY NOVEMBER 15, 2022

TIME: 4:00 PM - 8:00 PM

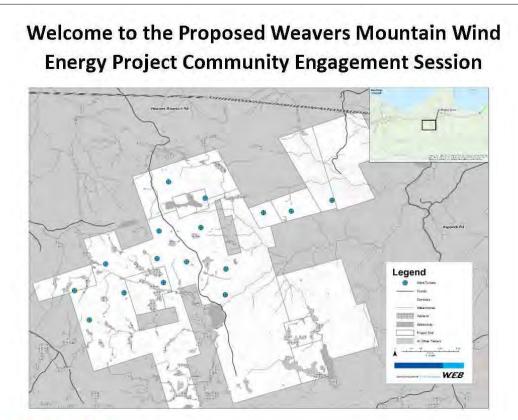
WHERE: ST. JOSEPH'S LAKESIDE COMMUNITY CENTRE

ADDRESS: 2752 OHIO EAST ROAD, ANTIGONISH

CONTACT INFO: 902-329-1494 WEAVERS@SWEB.ENERGY

WEB WEAVERS MOUNTAIN WIND LP C/O SWEB DEVELOPMENT

6080 Young Street, Suite 403 Halifax, NS B3K 5L2



About the Project

The Weavers Mountain Wind Energy Project is a proposed renewable energy facility with a total capacity of up to 96 MW. The project will be comprised of turbines with a nameplate capacity between 4.5 MW and 6 MW. The facility would be located on private land in Pictou/Antigonish County, south of highway 104. The project is being developed by WEB Weavers Mountain Wind LP, a partnership of Glooscap First Nation and SWEB Development LP (SWEB Energy), a North American subsidiary of W.E.B. Group.

About the Rate Base Procurement

The Rate-Base Program was a competitive procurement proposed by the Province of Nova Scotia and managed by the procurement administrator, Customer First Renewables, to obtain up to 350 MW of transmission connected renewable low-impact electricity solutions from Proponents partnering with Mi'kmaq communities and Underrepresented Groups. As part of this procurement, five projects were awarded a power purchase agreement for a total portfolio award of 372 MW in August of 2022. These Projects must reach their commercial operation dates (CODs) on or before December 31, 2025 and have a maximum size of 100 MW.

SWEB Energy

6080 Young St, Suite 403, Halifax, NS B3K 5L2 Local: (902) 431-0564 Toll Free: +1 (844) 468 3134



Project Benefits

A central focus of the project during development, construction, and operations is to ensure that as much local labour, services, and materials are used as possible. It is anticipated that if the project is built, it will create a number of direct and indirect benefits for various stakeholders and First Nation communities. The project will have a positive impact on local businesses and will result in employment opportunities in addition to tax revenue for municipal, provincial, and federal governments. Further, a share of project revenues will be used to support local community groups and underrepresented communities in the province.

With respect to the environment and climate change, the project is expected to significantly offset carbon dioxide (CO2) emissions from Nova Scotia's current electricity production and will produce enough power for up to 33,000 homes.

SWEB's Approach to Wind Energy

SWEB Energy is a North American subsidiary of W.E.B Group, a community-owned renewable energy developer headquartered in Austria. W.E.B Group has been involved in planning, developing, financing, constructing, and operating renewable energy projects for over 25 years. Currently, W.E.B Group has a total of 523 MW of installed capacity in Austria, Germany, Italy, the Czech Republic, France, Canada, and the United States. The group develops, constructs, and operates, wind, solar, and small-scale hydroelectric projects with wind energy representing the largest proportion of its projects.

By the nature of the community-ownership of SWEB Energy, the company has extensive experience in community engagement and have worked with local stakeholder groups on projects in Nova Scotia, and across Canada and the northeastern United States. Through the involvement of community members throughout Nova Scotia, SWEB has successfully developed and commissioned three phases of community-owned wind energy projects, totaling 12 projects, 20 WTGs and 39.63 MW of installed capacity under the Community Feed-in Tariff (COMFIT) program. SWEB has also commissioned a 9 MW community-owned wind energy project in Maine, with another 20 MW wind project currently in construction. As well, SWEB Energy's Wisokolamson Energy Project, an 18 MW wind energy project located West of Riverside-Albert in New Brunswick was developed and constructed through a partnership with Woodstock First Nation as part of a provincial initiative led by New Brunswick Power.

Project Contact

Jason Parisé, Senior Development Manager Phone : +1 902-431-0564 ext.261 Mobile : +1 902-329-1494 Email : <u>weavers@sweb.energy</u> Website : <u>www.weaversmountainwindenergy.ca</u>

SWEB Energy 6080 Young St, Suite 403, Halifax, NS B3K 5L2 Local: (902) 431-0564 Toll Free: +1 (844) 468 3134



Session III – Photographs



Session III – Poster Boards



Thank you for attending our

Community Engagement Session

This is part of the public engagement process to inform residents on the status of the

Weavers Mountain Wind Energy Project





NS Rate-Base Program

The Rate-Base Program was a competitive procurement proposed by the Province of Nova Scotia and managed by the procurement administrator, Customer First Renewables, to obtain up to 350 MW of transmissionconnected renewable low-impact electricity solutions from Proponents partnering with Mi'kmaq communities and Underrepresented Groups. As part of this procurement, five projects were awarded a power purchase agreement for a total portfolio award of 372 MW in August of 2022. These Projects must reach their commercial operation dates (CODs) on or before December 31, 2025 and have a maximum size of 100 MW.

Typical Project Timeline

- 1. Land acquisition
- 2. Preliminary Site Analysis & Design
- 3. Environmental Assessment Field Surveys & Reporting
- 4. PPA Award & Ongoing Interconnection Studies
- 5. Environmental Assessment & Other Permitting
- 6. Project Design Completed
- 7. WTGs Ordered
- 8. Construction Start (civil and electrical)
- 9. WTG Delivery
- 10. Construction Completion
- 11. Operations (25+ years)

Project Development (2022 - 2023)

Project Construction (2024 - 2025)

Project Operations (2025 onwards)

Rate-Base Program

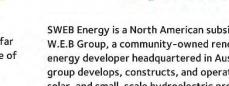


Project Proponent

The Proponent for the Weavers Mountain Wind Energy Project is WEB Weavers Mountain Wind LP, a partnership between Glooscap First Nation and SWEB Development LP (SWEB Energy)

Project Partners





SWEB Development

Glooscap First Nation ("GFN") is located halfway between the towns of Wolfville and Windsor, not far from Blomidon Provincial Park, the ancestral home of Glooscap. The mission of GFN is to maintain a sustainable community through its people, for its people.

The vision of GFN is to strive towards a wellbalanced community living according to the seven sacred teachings, committed to the next generations as we work in unity to become a forward thinking, self-sustaining community. The members of GFN honor our past and look towards our future. GFN is a proud First Nation community that strives to make connections with the world around us. GFN holds a majority in the wind energy project.

SWEB Energy is a North American subsidiary of W.E.B Group, a community-owned renewable energy developer headquartered in Austria. The group develops, constructs, and operates, wind, solar, and small-scale hydroelectric projects with wind energy representing the largest proportion of its projects

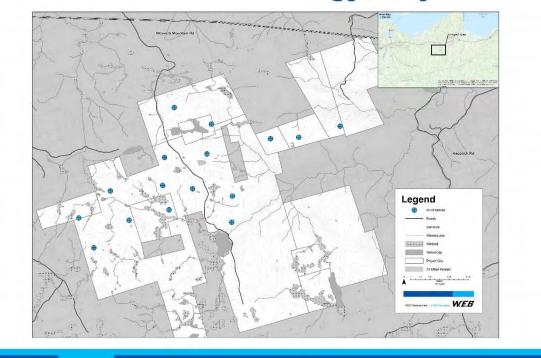
WEB

By the nature of the community-ownership of SWEB Energy, the company has extensive experience in community engagement and have worked with local stakeholder groups on projects in Nova Scotia, and across Canada and the northeastern United States. SWEB hold a minority in the wind energy project.

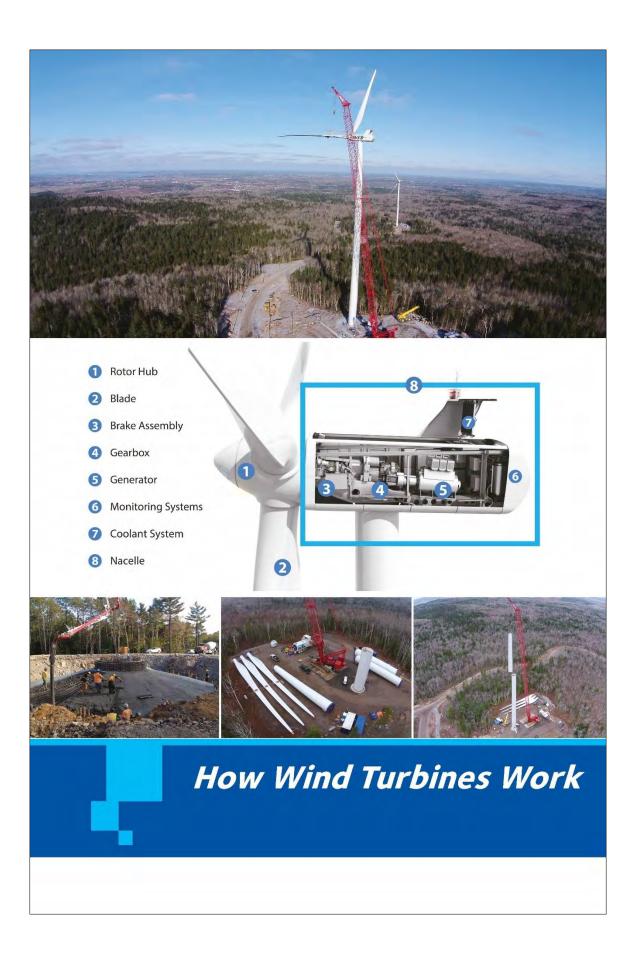
The Proponent

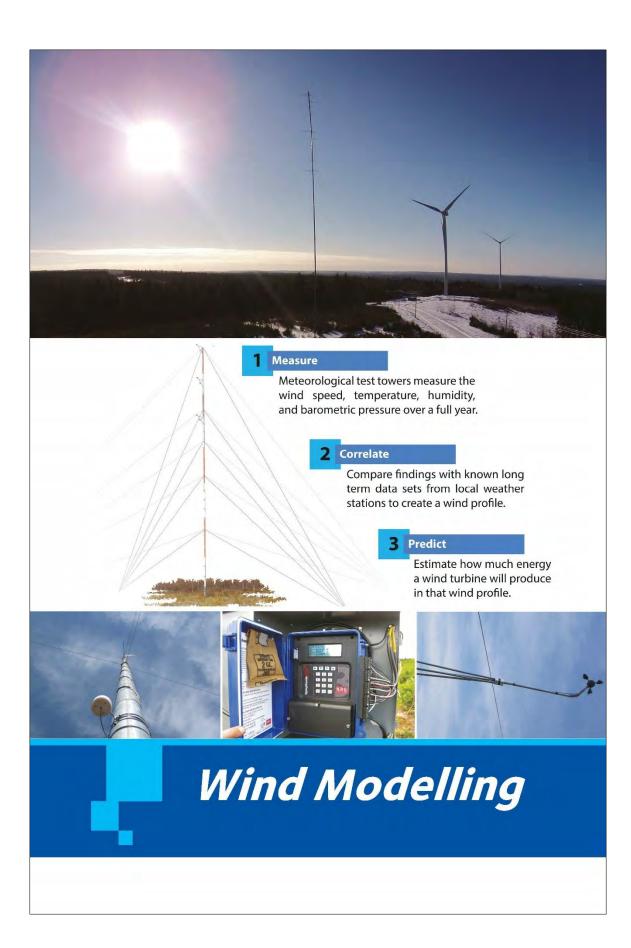


Weavers Mountain Energy Project Area



Proposed Project Area





Environmental Assessment

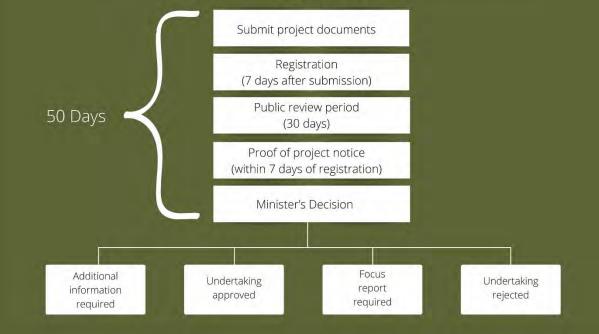
The project is submitting to Nova Scotia's Environmental Assessment process, which includes a comprehensive analysis of the potential environmental impacts of the Project.

Strum Consulting is leading this process and conducting a series of detailed studies including:

- Sound and Visual Assessments
- Electromagnetic Assessments
- Archaeological Assessments
- Telecommunication Assessments
- Wetlands and Watercourses Surveys
- Vegetation and Habitat Surveys
- Bird and Bat Surveys
- Moose Surveys



Environmental Assessment Timeline





In Progress

- Trail Camera Wildlife Assessments
- Ultrasonic Bat Monitoring
- Avian Point Count & Hawk Watch Surveys
- Avian Radar Assessment
- Acoustic Bird Monitoring

Complete

- Winter Track Surveys
- Spring Pellet Group Inventory
- Fish and Fish Habitat Assessments
- · Lichens and Rare Flora Surveys
- Herpetofauna Surveys
- Watercourse Surveys
- · Wetland Surveys







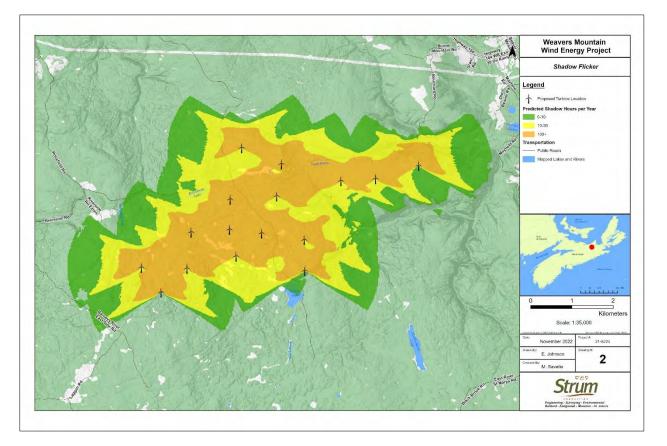


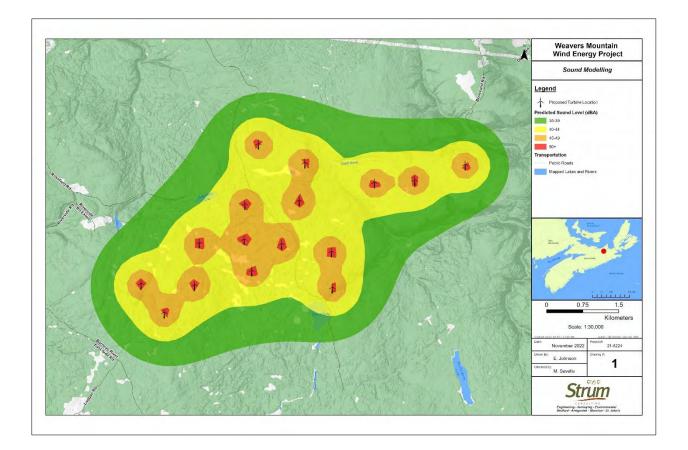












Letters of Support for Project



Beaver Bank Community Awareness Association 1901 Beaver Bank Rd. Beaver Bank NS B4G 1C9

The Province of Nova Scotia Department of Natural Resources and Renewables c/o Procurement Administrator 1690 Hollis Street. P.O. Box 2664 Halifax, NS B3J 3P7

April 19, 2022

Re: Letter of Support for the proponent of the Blueberry Acres Wind Energy Project, the Weavers Mountain Wind Energy Project, the Red Spruce Wind Energy Project, and the Apitamkiejit Wind Energy Project

To whom it may concern,

Please accept this letter in support of the above-mentioned wind energy projects.

I am Victor Cobb, chair of BBCAA. Our group has received significant funds deriving from an operating COMFIT wind energy project of proponent.

It has been brought to my attention that 4 additional projects throughout the province are currently being developed by the same proponent.

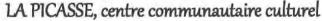
Having been in contact with the company over several years now, I would like to attest to the commitment of the proponent to these new wind energy developments, their future relationships with the operating projects' host communities, and to the company's reliability.

Without the financial support received from the operating wind energy project, our group would have not been able to conduct the work for our community the way we have over the last years.

To conclude, I kindly ask you to accept this letter in support of the above-mentioned wind energy project .

Kind regards,

1000-9-11



3435, Route 206 C.P. 70, Petit-de-Grat, N.-É. BOE 2L0 Tél. : 902-226-0149 / Téléc. : 902-226-0549 Courriel : <u>lapicasse@lapicasse.ca</u> Site Web : www.lapicasse.ca

The Province of Nova Scotia Department of Natural Resources and Renewables c/o Procurement Administrator 1690 Hollis Street. P.O. Box 2664 Halifax, NS B3J 3P7

April 20, 2022

Re: Letter of Support

a Picasse

To Whom It May Concern,

It has been brought to my attention that four (4) additional wind energy projects throughout the province are currently being developed. Please accept this letter in support of the following: *Blueberry Acres Wind Energy Project, the Weavers Mountain Wind Energy Project, the Red Spruce Wind Energy Project, and the Apitamkiejit Wind Energy Project.*

For several years, LA PICASSE, centre communautaire culturel has received significant funds deriving from an operating COMFIT wind energy project of proponent. Without the financial support received from the operating wind energy project, our group would have not been able to conduct the work for our community the way we have been – especially during this pandemic.

Having been in contact with the company over several years now, I would like to attest to their commitment to these new wind energy developments, their future relationships with the operating projects' host communities, and to the company's reliability.

I can confirm this type of assistance really makes a difference in our communities. I kindly ask you to accept this letter in support of all four (4) wind energy projects.

Kind regards,

harcle

Josette Marchand Executive Director LA PICASSE Name Wedgeport Tuna Museum Address 57 Tuna Wharf Road, Lower Wedgeport

The Province of Nova Scotia Department of Natural Resources and Renewables c/o Procurement Administrator 1690 Hollis Street. P.O. Box 2664 Halifax, NS B3J 3P7

22 April , 2022

Re: Letter of Support for the proponent of the Blueberry Acres Wind Energy Project, the Weavers Mountain Wind Energy Project, the Red Spruce Wind Energy Project, and the Apitamkiejit Wind Energy Project

To whom it may concern,

Please accept this letter in support of the above-mentioned wind energy projects.

I am a member of ______. Our group has received significant funds deriving from an operating COMFIT wind energy project of proponent.

It has been brought to my attention that 4 additional projects throughout the province are currently being developed by the same proponent.

Having been in contact with the company over several years now, I would like to attest to the commitment of the proponent to these new wind energy developments, their future relationships with the operating projects' host communities, and to the company's reliability.

Without the financial support received from the operating wind energy project, our group would have not been able to conduct the work for our community the way we have over the last years.

To conclude, I kindly ask you to accept this letter in support of the above-mentioned wind energy project .

Kind regards,

NAME Franklin Cottreau

Manager Wedgeport Tuna Museum



Pictou County Regional Enterprise Network 112 Provost St. New Glasgow B2H 5C4

The Province of Nova Scotia Department of Natural Resources and Renewables c/o Procurement Administrator 1690 Hollis Street. P.O. Box 2664 Halifax, NS B3J 3P7

May 5, 2022

Re: Letter of Support for the Weavers Mountain Wind Energy Project

To whom it may concern,

On behalf of the Pictou County Regional Enterprise Network (PCREN), I am pleased to provide this letter expressing our support for the above-mentioned wind energy project.

The PCREN is the leading economic development organization for the Pictou County region, funded through a partnership with the Province of Nova Scotia, Pictou Landing First Nation, the Municipality of Pictou County, and the towns of Pictou, New Glasgow, Stellarton, Trenton, and Westville. The PCREN initiates, leads, and contributes to sustainable economic growth by fostering a culture of collaboration, navigating organizations to the resources they need, and engaging in meaningful economic development.

With this letter our organization would like to voice its support of the project. We are confident that the project will lead to significant investments, substantial tax payments, and create a multitude of well-paying and sustainable jobs in the area and throughout the province.

Renewable energy has proven to be competitive over the last few decades and we are confident that this project will help keep electricity in the province affordable – which is of utmost importance to our community. Beyond that, the realization of this project will help reduce Nova Scotia's greenhouse gas emissions, an important task for our community and province.

The proponent of this project and its staff have reached out to present their project and receive our organization's input. The proponent has invited the PCREN to co-host information sessions allowing local companies to explore business opportunities for them following the procurement. These business opportunities are necessary to obtain certain goods and services for the development, construction, and operation of the project. Additionally, these information sessions provided the proponent with the chance to address any concerns or feedback local businesses might have with respect to the project.

I kindly ask you to accept these lines in support of the project.

Best regards,

the

Scott Ferguson CEO, Pictou County Regional Enterprise Network



Wagner Forest NS Ltd. c/o Wagner Forest Management, Ltd., 150 Orford Road, Lyme, New Hampshire 03768

The Province of Nova Scotia Department of Natural Resources and Renewables c/o Procurement Administrator 1690 Hollis Street. P.O. Box 2664 Halifax, NS B3J 3P7

March 9, 2022

Re: Letter of Support for the Weavers Mountain Wind Energy Project

To whom it may concern,

Please accept this letter in support of the above-mentioned Wind Energy Project.

Our company is active in Nova Scotia and owns lands that would potentially host parts of the above-mentioned project.

Apart from the intrinsic economic interest deriving from the successful construction of the project, our company highly supports the project as it will encourage investment and create a significant number of jobs in the area.

Further, the realization of the project will help reduce Nova Scotia's greenhouse gas emissions significantly while keeping electricity affordable.

The proponent of this project and its staff has been very supportive and easily accessible, especially given its office location in Halifax. We particularly appreciate the fact that the Proponent and its employees are based in Nova Scotia, thus creating jobs in the province throughout the life of the project, not just during the construction phase. Additionally, this geographic proximity allows for direct and speedy communication – face to face if necessary. The proponent's staff embraces open dialog, and welcomes, addressed, and acts upon comments and feedback in relation to the project.

Best regards

Jan Johnstone General Manager Wagner Forest NS Ltd

Women in Renewable Energy (WiRE) 35 Bastion St. Unit 1604, Toronto, Ontario, MSV 0C2

The Province of Nova Scotia Department of Natural Resources and Renewables c/o Procurement Administrator 1690 Hollis Street. P.O. Box 2664 Halifax, NS B3J 3P7

April 22, 2022

Re: Letter of Support for the Proponents of the Blueberry Acres Wind Energy Project, the Weavers Mountain Wind Energy Project, the Red Spruce Wind Energy Project, and the Apitamkiejit Wind Energy Project

To whom it may concern,

Please accept this letter in support of the above-mentioned wind energy projects.

I am the President and CEO of Women in Renewable Energy (WiRE). Our organization forges partnership with government agencies and a spectrum of renewable energy industry associations, other related networking groups for professional women from across the energy sector, and academic providers. WiRE's mission is to advance the role and recognition of women working in the energy sector.

With this letter our organization would like to illustrate its support of the projects above.

The Proponents of these projects and their staff have been reaching out to present their projects to our organization and receive our organization's input.

Among other things, said input was sought on Proponents' **ED&I Plan** as shared with WiRE. The Proponents and WiRE have agreed to continue discussions on how to develop, improve and keep up to date the ED&I Plan, its objectives, and the activities deriving therefrom.

WiRE has entered into a legally **binding benefits agreement** with each of the Proponents of the above-mentioned wind energy projects. Said benefit agreements ensure the provision of certain community funds that will be administered by WiRE and used

- (a) in support of WiRE's (Social Program Partner) Mission;
- (b) through capacity building projects;
- (c) on a non-for-profit basis;
- (d) for the benefit of women (the "Underrepresented Group").

The **capacity building plans** will, among other goals, ensure that women as a group that is susceptible to suffer adverse impacts from the above-mentioned projects, may it be as abutter or otherwise, are able to participate in the benefits of the resource development deriving from the projects.

Said participation should be ensured through

- (e) Bursaries for women in order to:
 - participate in/travel to conferences or other events in the renewable energy industry within Nova Scotia;
 - participate in/travel to conferences or other events in the renewable energy industry departing from Nova Scotia.
- (f) Specific bursaries for job training/studies/continuing education for the current or future students enrolled in a program at a Nova Scotian college or University, covering all or a part of the student fees in the field of:
 - (i) Renewable energy or any field related to it.
- (g) other capacity building initiatives such as peer-to-peer networking programs, mentoring, apprenticeships taking place in Nova Scotia as agreed to between the Parties.

WiRE highly supports the above-mentioned projects for its **positive effects on ED&I and capacity building – each for the benefit of women as an underrepresented group** in our society. Further, the projects will encourage investment and create a significant number of opportunities for women to advance in the renewable energy field in the area.

Consequently, on behalf of our organization I hope that this letter will be accepted as an expression of our organizations support of the projects.

Kind regards,

End She

Joanna Osawe President and CEO Women in Renewable Energy

Scotia Winds of Change Foundation 50 Grandhaven Blvd., Apt. 1007, Halifax NS B3S 0H5, Canada

The Province of Nova Scotia Department of Natural Resources and Renewables c/o Procurement Administrator 1690 Hollis Street. P.O. Box 2664 Halifax, NS B3J 3P7

April 28, 2022

Re: Letter of Support for the Proponents of the Blueberry Acres Wind Energy Project, the Weavers Mountain Wind Energy Project, the Red Spruce Wind Energy Project, and the Apitamkiejit Wind Energy Project

To whom it may concern,

Please accept this letter in support of the above-mentioned wind energy projects.

We are the Directors of Scotia Winds of Change Foundation ("WoC"). Our foundation was formed with the goal to assist People of African Ancestry living in Nova Scotia in different areas of their lives which have been affected by racism, underrepresentation and lack of opportunity, including in areas such as health, housing, education, income and employment, and justice and to do all such other acts and things as are necessary, ancillary, incidental or beneficial to the attainment of the foregoing purposes.

The Scotia Winds of Change Foundation was born in furtherance of the values and activities lived and put in place by the Nova Scotia Brotherhood Initiative ("NSBI") and by some of its major advocates. NSBI is a free program for Black men to access health care in the community to improve overall health and wellbeing. A team of health care professionals provide culturally appropriate primary medical care plus health and wellness services for men of African descent across Halifax Regional Municipality.

In discussions with the Proponents of the above-mentioned wind energy projects, the idea was born to join forces to ensure that People of African Ancestry living in Nova Scotia as a group that is susceptible to suffer adverse impacts from the above-mentioned projects are able to participate in the benefits of the resource development deriving from the projects.

Consequently, the Scotia Winds of Change Foundation was formed and WoC has entered into a legally **binding benefits agreement** with each of the Proponents of the above-mentioned wind energy projects. Said benefit agreements ensure the provision of certain community funds that will be administered by WoC and used

- (a) in support of WoC's Mission;
- (b) through capacity building projects;
- (c) on a non-for-profit basis;

(d)	for the benefit of People of African Ancestry living in Nova Scotia (the
1.0	"Underrepresented Group").

The **capacity building plans** will, among other goals, ensure that People of African Ancestry living in Nova Scotia are able to participate in the benefits of the resource development deriving from the projects. Said participation should be ensured through

- (e) Bursaries for People of African Ancestry living in Nova Scotia in order to:
 - participate in/travel to conferences or other events in the renewable energy industry within Nova Scotia;
 - participate in/travel to conferences or other events in the renewable energy industry departing from Nova Scotia.
- (f) Specific bursaries for job training/studies/continuing education for the current or future students enrolled in a program at a Nova Scotian college or University, covering all or a part of the student fees in the field of:
 - (i) Renewable energy or any field related to it.
- (g) other capacity building initiatives such as peer-to-peer networking programs, mentoring, apprenticeships taking place in Nova Scotia as agreed to between the Parties.

As part of the discussions with WoC the Proponents of the above-mentioned wind energy projects have sought the input and feedback of WoC on Proponents' **ED&I Plan** as shared with WoC. The Proponents and WoC have agreed to continue discussions on how to develop, improve and keep up to date the ED&I Plan, its objectives, and the activities deriving therefrom.

WoC is confident that the above-mentioned wind energy projects will have **positive effects on** ED&I and capacity building – each for the benefit of People of African Ancestry living in Nova Scotia as an underrepresented group in our society.

Further, the projects will encourage investment and create a significant number of opportunities – not just for People of African Ancestry living in Nova Scotia. The Proponents have shown its clear commitment in this regard and already provided WoC with a job posting for a position that was created in view of the further development of the above-mentioned wind energy projects.

Consequently, on behalf of our organization I hope that this letter will be accepted as an expression of our organizations support of the projects.

Kind regards,

Mario Rolle

Director

Dr. Ronald Milne

Director

Scotia Winds of Change Foundation

APPENDIX C CO₂ CALCULATIONS

Table 1: Baseline GHG Quantification - Weavers Mountain Wind Energy Project

Project #21-8224

Power Generation via Coal							
Parameter/Variable	Value	Unit	Comments				
Quantity of Power Generated via Coal	158,028,998 kWh/year		Based on 49% of electricity generated by NSPI in 2021				
Emission Factors							
Parameter/Variable	Value	Unit	Comments				
Coal Generated Electricity	1.0251 k	g CO ₂ e/kWh	[Source: USEIA, 2022]				
Conversion Factor	0.001 t CO ₂ e/kWh		1 kg = 0.001 Tonnes				
Emissions			B5*B8*B9				
Power Generation via Oil							
Parameter/Variable	Value	Unit	Comments				
Quantity of Power Generated via Oil	35,475,898 k ¹	Wh/year	Based on 11% of electricity generated by NSPI in 2021				
Emission Factors							
Parameter/Variable	Value	Unit	Comments				
Oil Generated Electricity	1.1068 kg CO ₂ e/kWh		[Source: USEIA, 2022]				
Conversion Factor	0.001 t	CO ₂ e/kWh	1 kg = 0.001 Tonnes				
Emissions	39,263.48 t CO ₂ e/year		B14*B17*B18				
Power Generation via Natural Gas							
Parameter/Variable	Value	Unit	Comments				
Quantity of Power Generated via Natrual Gas	35,475,898 kWh/year		Based on 11% of electricity generated by NSPI in 2021				
Emission Factors							
Parameter/Variable	Value	Unit	Comments				
Natural Gas Generated Electricity	0.4400 kg CO ₂ e/kWh		[Source: USEIA, 2022]				
Conversion Factor	0.001 t	CO ₂ e/kWh	1 kg = 0.001 Tonnes				
Emissions	15,608.85 t	CO ₂ e/year	B23*B26*B27				
Power Generation via Wind							
Parameter/Variable	Value	Unit	Comments				
Quantity of Power Generated via Wind	93,527,366 k	Wh/year	Based on 29% of electricity generated by NSPI in 2021				
Emission Factors							
Parameter/Variable	Value	Unit	Comments				
Wind Generated Electricity	0 t	CO ₂ e/kWh					
Emissions	0 t	CO ₂ e/year	B32*B35				

User input data Compiled data



Table 2: Construction Phase GHG Quantification - Weavers Mountain Wind Energy Project

Project #21-8224

Turbine Fabrication		
Parameter/Variable	Value Unit	Comments
Turbine Steel	708,000 kg/Turbine	Based on weights provided in NREL's 2015 Report [NREL, 2017]
	708.00 tonne/Turbine	1 kg = 0.001 Tonnes
Emission Factors		
Parameter/Variable	Value Unit	Comments
General Steel	1.5 kg CO ₂ e/kg	Estimated from the UK's mixture of steel types, excluding stainless steel (Inventory of Carbon & Energy (ICE), Version 2.0).
Conversion Factor	0.001 t CO ₂ e/kg	1 kg = 0.001 Tonnes
Emissions	16,992.00 t CO ₂ e	B5*B9*B10*16(WT)
Turbine Transportation		
Parameter/Variable	Value Unit	Comments
Transportation Vehicule	Value Offic	Genmento
Heavy Duty Truck (Diesel)	1 ea	
		From Jonesboro, AR to Norfolk, VA and Port of Sheet Harbour, NS to WT Laydowns (includes all the wind turbine components for all
Distance Travelled	336,071.10 km	WT).
Freight Weight	59.00 tonne	Estimate of each component; 708 tonnes/12 components.
Marine Cargo and Containers (Diesel)	1 ea	
Distance Travelled	24,000 km	From Norfolk, VA to Port of Sheet Harbour, NS (includes 16 WT). Cell B6
Freight Weight Emission Factors	708.00 tonne	
Parameter/Variable	Value Unit	Comments
Parameter/variable		Freight emissions for calculating GHGs from freight (materials delivery, shipment of product to market, etc.) [Source: GHGenius
Heavy Duty Truck	135 g CO₂e/tonne∙km	v5.0d]
Conversion Factor	0.000001 t CO ₂ e/tonne·km	1 g = 0.000001 Tonnes
Emissions	2,676.81 t CO ₂ e/year	B16"B17"B18"B24"B25
Marine Cargo and Containers (Diesel)	15.1 g CO₂e/tonne⋅km	Freight emissions for calculating GHGs from freight (materials delivery, shipment of product to market, etc.) [Source: GHGenius v5.0d]
Conversion Factor	0.000001 t CO ₂ e/tonne·km	1 g = 0.000001 Tonnes
Emissions	256.58 t CO ₂ e/year	B20*B21*B27*B28
Total WT Transportation Emissions	2,933.39 t CO ₂ e/year	826+829
Concrete Tower Foundation and Pedestal		
Parameter/Variable	Value Unit	Comments
Concrete Production Quantity	2,500,000 kg	Based on a volume of 1,000 m ³ (per Wind Turbine Pad) and density of 2,500 kg/m ³
,	2,500 tonne	1 kg = 0.001 Tonnes
	18 tonne/truck	B35/B38
Concrete Transportation		
Concrete Truck	140 ea	[Source: Kenter, 2017]
Distance Travelled (freight)	373.93 km	Based on one-way trip from Concrete Supplier to each Wind Turbine Pad Based on one-way trip from each Wind Turbine Pad to Concrete Supplier
Distance Travelled (no freight) Emission Factors	373.93 km	based on one-way the non-each while rubble rad to concrete Supplier
Parameter/Variable	Value Unit	Comments
Concrete Production	300 g CO ₂ e/kg	0.3 kg CO ₂ e/kg [Source: GHGenius v5.0d].
	500 g CO ₂ e/kg	0.3 kg CO ₂ e/kg [Source: GHGenius V5.00]. Freight emissions for calculating GHGs from freight (materials delivery, shipment of product to market, etc.) [Source: GHGenius
Concrete Truck (freight)	135 g CO₂e/tonne⋅km	v5.0d].
(0 ,	U	Emissions for calculating GHGs where the volume of fuel consumed is unknown but the distance travelled is known [Source:
Concrete Truck (no freight)	1,106 g CO ₂ e/km	GHGenius v5.0d].
Conversion Factor	0.000001 t CO ₂ e/tonne·km	1 g = 0.000001 Tonnes
Concrete Production Emissions	12,000.00 t CO ₂ e/year	B34*B43*B46*16(WT)
Concrete Truck (freight) Emissions	126.20 t CO ₂ e/year	B36*B38*B39*B44*B46
Concrete Truck (no freight) Emissions	57.90 t CO ₂ e/year	B38*B40*B45*B46
Total Concrete Tower Foundation and Pedestel	12,184.10 t CO ₂ e/year	B47+B48+B49
Total Emissions (Construction Phase)	32.109.49 t CO ₂ e	P44.020.050
Total Emissions (Construction Phase)	32,109.49 1 CO2e	B11+B30+B50

User input data Compiled data



Table 3: Operations Phase GHG Quantification - Weavers Mountain Wind Energy Project

Project #21-8224

Wind Energy											
Parameter/Variable	Value	Unit	Comments 5.9MW 365days 24hours 1000kW								
Qantity of Power Generation via Wind	322,508,160 kW	/h/year	See Equation $kWh = 16Turbines \times - \times - \times - \times - \times - \times - \times 0.39 \times - \times - \times - \times 0.39 \times - \times $								
Emission Factors			Turbine year day MW 2322,000,100,100,100,100,100,100,100,100,1								
Parameter/Variable	Value	Unit	Comments								
Wind Generated Electricity	0 t C	O ₂ e/kWh									
Emissions	0 t C	O ₂ e/year	B5*B8								
Maintenance											
Parameter/Variable	Value	Unit	Comments								
Nacelle Components Replacement	10,200 kg/	Turbine	15% of Nacelle [Source: Padey et al., 2012], Based on Vestas V90, Nacelle weight = 68,000 kg [National Wind Watch, u.d.]								
Blade Replacement	12,700 kg/	Turbine	[Source: Padey et al., 2012] Based on Gamesa G87, Blade assembly weight = 38,100 kg [National Wind Watch, u.d.]								
Emission Factors											
Parameter/Variable	Value	Unit	Comments								
General Steel	1.5 kg CO ₂ e/kg		Estimated from the UK's mixture of steel types, excluding stainless steel (Inventory of Carbon & Energy (ICE), Version 2.0).								
Conversion Factor	0.001 t C	O ₂ e/kg	1 kg = 0.001 Tonnes								
Emissions	34.35 t C	O2e/turbine	(B13+B14)*B17*B18								
Total Emissions	549.6 t C	O ₂ e	(B9+B19)*16(WT)								

User input data Compiled data



APPENDIX D GROUNDWATER WELLS

Groundwater Wells within 2 km of the Study Area - Weavers Mountain Wind Energy Project

Project #21-8224

Well Number	Address	Community	County	Date Inserted	Well Depth (m)	Casing Depth (m)	Bedrock Depth (m)	Static (m)	Yield (Lpm)	Elevation (m)	Well Type	Water Use	Easting	Northing
584		James River	Antigonish	2000-09-28	36.54	12.18	4.57		68.10	89	Drilled	Domestic	567500	5046500
585		James River	Antigonish	2000-09-28	54.81	12.18	4.57		18.16	89	Drilled	Domestic	567500	5046500
20491		James River	Antigonish	2002-08-01	73.08	12.18	3.04		5.45	89	Drilled	Domestic	567500	5046500
32462		James River	Antigonish	2003-06-30	86.78	12.18	5.48		3.40	89	Drilled	Domestic	567500	5046500
42588	Old Beaver Road	Beaver Meadow	Antigonish	2004-08-05	42.63	24.36	4.87	3.04	40.86	73	Drilled	Domestic	567640	5045302
51729		James River	Antigonish	2005-11-07	22.84	19.79		2.13	45.40	89	Drilled	Domestic	567500	5046500
60085	James River	James River	Antigonish	2006-02-23	36.54	35.02		7.61	136.20	89	Drilled	Domestic	567500	5046500
60842	33 Grant Road	James River	Antigonish	2006-09-21	38.06	9.74	5.79	1.52	45.40	94	Drilled	Domestic	567051	5045985
91243	Highway #4	James River	Antigonish	2009-10-29	54.81	30.45	21.01		22.70	79	Drilled	Domestic	567778	5046495
111661	Mayfield Road, James River (Keppoch Mountain)	Beaver Meadow	Antigonish	2011-06-10	38.06	24.36	18.27	5.48	36.32	62	Drilled	Domestic	568125	5044251
670035	· · ·	James River	Antigonish	1967-11-01	35.02	9.74	9.14		13.62	89	Drilled	Domestic	567500	5046500
680073	Beaver Mountain Park		Antigonish	1968-02-06	144.64	4.26	0.91		6.81	214	Drilled		564516	5045605
780385		Kings Head	Pictou	1978-12-31	41.72	11.57	9.14	-0.03	36.32	258	Drilled	Domestic	559387	5041092
780394		Eureka	Pictou	1978-12-31	30.45	13.40	11.57	6.39	18.16	212	Drilled	Domestic	562657	5039581
871370	RR#1 Antigonish	James River	Antigonish	1987-10-26	48.72	27.40	25.88	9.14	13.62	110	Drilled	Domestic	566500	5046500
891335	RR#1 Antigonish	James River	Antigonish	1989-08-28	51.76	28.93	12.18	3.04	45.40	89	Drilled		567500	5046500
910987		James River	Antigonish	1991-10-09	23.75	24.06		16.75	22.70	71	Drilled	Domestic	567500	5045500
912259		James River	Antigonish	1991-12-30	7.92	8.68				77	Dug		567500	5044500
920908		James River	Antigonish	1992-08-12	13.70	12.79		3.96	22.70	59	Drilled	Domestic	568500	5045500
931291	RR#1	James River	Antigonish	1993-11-02	85.26	25.88	23.75	12.18	3.18	128	Drilled	Domestic	566500	5045500
940914		Marshy Hope	Pictou	1994-05-12	73.08	16.44	11.57	15.22	3.18	192	Drilled	Domestic	562500	5044500
942481		Glen Bard	Antigonish	1994-12-29	3.65	3.81	0.91		136.20	112	Dug		565500	5047500
942583		James River	Antigonish	1994-11-16	33.50	14.92	11.57	4.26	22.70	89	Drilled	Domestic	567500	5046500
960935		James River	Antigonish	1996-06-17	30.45		10.66		0.00	59	Drilled		568500	5045500
970614		James River	Antigonish	1997-08-05	48.72	38.37		4.57	45.40	89	Drilled	Domestic	567500	5046500
970624		James River	Antigonish	1997-08-22	36.54	33.50	2.44	6.09	54.48	89	Drilled	Domestic	567500	5046500
970950		James River	Antigonish	1997-09-17	6.85	6.85	6.09	4.57	681.00	59	Dug	Domestic	568500	5045500
981179	Rossfield	Laggan	Pictou	1998-11-17	54.81	10.66		9.14	6.81	228	Drilled	Domestic	558500	5042500
982497		James River	Antigonish	1998-07-22	45.68	22.84	20.10			71	Drilled		567500	5045500
991247		James River	Antigonish	1999-08-31	42.63	18.27	7.92	4.57	34.05	89	Drilled	Domestic	567500	5046500
992648	Upper Brookfield	James River	Antigonish	1999-08-30	37.45	17.66	6.09		22.70	89	Drilled	Domestic	567500	5046500
993014		James River	Antigonish	1999-03-07	3.04	3.04			113.50	89	Dug	Domestic	567500	5046500
993245	Barneys River	Marshy Hope	Pictou	1999-12-06	62.42	21.32	20.71	4.57	27.24	207	Drilled	Domestic	556500	5040500
			Minimum	1967-11-01	3.04	3.04	0.91	-0.03	0.00	59.00				
	Statistics			2011-06-10	144.64	38.37	25.88	16.75	681.00	258.00				
				n/a	43.82	17.71	10.33	6.21	56.51	109.42				



APPENDIX E WATERBODIES AND WATERCOURSES

Watercourse ID	Watercourse Type	Watercourse Measurments (m)	Substrate (%)	Substrate Notes	Drainage Direction	Aquatic Habitat	In Stream Cover/ Vegetation*	Dominant Riparian Habitat	Bank Characteristics	Bank Notes	Fish Bearing Potential	Evidence of Alteration	Other Observations
		incusurmente (in)		110100	Direction			Tabitat					
			Bedrock = 0				Boulders = N						
		Channel depth = 0.22	Boulder (>25 cm) = 0	Very muddy,		5.00	Overhanging vegetation = T			Muddy banks vegetated			
WC1	Intermittent	Water depth = 0.08 Bankful width = 0.66	Rubble (14-25 cm) = 0 Cobble (3-13 cm) = 20	some exposed roots amd	East	Riffle; Run;	Large woody debris = N Small woody debris = T	Softwood	Undercut;	with 100% sphagmum	Low	None observed.	Bisected by old trail. Braided channel
WCI	mermillem	Wetted width = 0.53	Gravel (2 mm-3 cm) = 10	debris in	EdSt	Flat	Deep pools = N	Sollwood	Vegetated; Muddy	cover. Some area are	LOW	None observed.	turning into wetland or becoming subterranean at parts.
		Pool depth = 0.23	Sand (0.06-2 mm) = 0	channel		T I III	Undercut banks = T		Maday	undercut.			Subtonanoun at parto.
		•	Fines (<0.06 mm) = 70				Instream vegetation = N						
			Bedrock = 0	.			Boulders = T						
		Channel depth = 0.11 Water depth = 0.04	Boulder (>25 cm) = 0 Rubble (14-25 cm) = 20	Primarily gravel, clearly washes			Overhanging vegetation = T Large woody debris = T			Banks are poorly defined,			
WC2	Small Permanent	Bankful width = 0.04	Cobble $(3-13 \text{ cm}) = 20$	out at times of	West	Riffle;	Small woody debris = M	Softwood	Eroded	clear that water over takes	Moderate	None observed.	Loose substrate has created lack of
		Wetted width = 0.01	Gravel (2 mm-3 cm) = 50	high		Run	Deep pools = N			them during periods of			channel definition. Flow is braided.
		Pool depth = 0.17	Sand (0.06-2 mm) = 5	precipitation			Undercut banks = T			high flow.			
			Fines (<0.06 mm) = 5				Instream vegetation = T						
			Bedrock = 0	Substrate is		Riffle;	Boulders = N						
		Channel depth = 0.45	Boulder (>25 cm) = 5	sandy at bends		Meander;	Overhanging vegetation = M		Eroded;	Banks are vegetated with			
WC3	Large Permanent	Water depth = 0.22 Bankful width = 4.6	Rubble (14-25 cm) = 15 Cobble (3-13 cm) = 40	but primarily	South	Flat;	Large woody debris = A Small woody debris = T	Graminoids	Undercut;	some undercutting and erosion present. Sloped	High - Fish observed	None observed.	Large watercourse within steep ravine
WC3	Large Fernanent	Wetted width = 2.7	Gravel (2 mm-3 cm) = 30	cobble gravel	South	Run;	Deep pools = T	Granninoids	Vegetated;	on one side where the	r light - r ish observed	None observed.	Wide and well defined.
		Pool depth = 34	Sand (0.06-2 mm) = 5	mix everywhere		Pool;	Undercut banks = M		Sloped	ravine drops off.			
			Fines (<0.06 mm) = 5	else.		Rapids	Instream vegetation = T						
			Bedrock = 0				Boulders = M						
		Channel depth = 0.32	Boulder (>25 cm) = 25				Overhanging vegetation = N						
14/04		Water depth = 0.05	Rubble (14-25 cm) = 25	Almost no	East	Cascades;	Large woody debris = M	L la nativa a al	Eroded;	Gravel channel has been	1	Name abase of	Very steep ravine with rapidly sloping
WC4	Small Permanent	Bankful width = 1.48 Wetted width = 1.15	Cobble (3-13 cm) = 25 Gravel (2 mm-3 cm) = 25	detritus	East	Meande; Riffle	Small woody debris = A Deep pools = N	Hardwood	Good condition; Sloped	carved into the ravine.	Low	None observed.	stream. Some small waterfalls present.
		Pool depth = 0.14	Sand (0.06-2 mm) = 0			Rine	Undercut banks = N		Cloped				
		•	Fines (<0.06 mm) = 0				Instream vegetation = N						
		Channel denth = 0.56	Bedrock = 60				Boulders = N		Undersuit				
		Channel depth = 0.56 Water depth = 0.04	Boulder (>25 cm) = 5 Rubble (14-25 cm) = 10				Overhanging vegetation = T Large woody debris = M		Undercut; Vegetated;	Undercut in places.			
WC5	Small Permanent	Bankful width = 1.34	Cobble (3-13 cm) = 10	Primarily	East	Watercourse dry at time	Small woody debris = M	Hardwood	Well defined;	Watercourse within steep	High - Fish observed	None observed.	Narrow but well defined.
		Wetted width = 0.85	Gravel (2 mm-3 cm) = 15	bedrock		of observation.	Deep pools = N		Good condition;	ravine.	Ū		
		Pool depth = 0.10	Sand (0.06-2 mm) = 0				Undercut banks = T		Sloped				
			Fines (<0.06 mm) = 0 Bedrock = 0				Instream vegetation = N Boulders = N						
		Channel depth = 0.18	Boulder (>25 cm) = 5				Overhanging vegetation = T						
		Water depth = Dry	Rubble (14-25 cm) = 10			Watercourse dry at time	Large woody debris = M		Vegetated;	Banks are slightly			Completely dry in most places, small
WC6	Ephemeral	Bankful width = 1.1	Cobble (3-13 cm) = 30	None	South	of observation.	Small woody debris = M	Hardwood	Sloped;	undercut.	Low	None observed.	puddle in one spot.
		Wetted width = Dry	Gravel $(2 \text{ mm}-3 \text{ cm}) = 30$				Deep pools = N		Undercut				F
		Pool depth = Dry	Sand (0.06-2 mm) = 10 Fines (<0.06 mm) = 15				Undercut banks = N Instream vegetation = N						
			Bedrock = 50				Boulders = N						
		Channel depth = 0.67	Boulder (>25 cm) = 10				Overhanging vegetation = T						
WC7	Small Permanent	Water depth = 0.08 Bankful width = 2.7	Rubble $(14-25 \text{ cm}) = 5$	Very little fines	East	Riffle;	Large woody debris = M	Hardwood	Well defined;	Danka ara maathudru	Moderate	None observed.	Channel carved into bedrock. Plenty of
WC7		Wetted width = 0.89	Cobble (3-13 cm) = 10 Gravel (2 mm-3 cm) = 25	and muck	EdSt	Cascades	Small woody debris = M Deep pools = N	Haluwoou	Sloped; Good condition	Banks are mostly dry.	Moderale	None observed.	woody debris.
		Pool depth = 0.09	Sand (0.06-2 mm) = 0				Undercut banks = N						
			Fines (<0.06 mm) = 0				Instream vegetation = N						
		Channel depth = 0.36	Bedrock = 0 Boulder (>25 cm) = 10	Lots of muck covering the			Boulders = N Overhanging vegetation = T						
		Water depth = 0.15	Rubble (14-25 cm) = 20	substrate, along		Pool;	Large woody debris = M			Banks are eroded and			
WC8	Small Permanent	Bankful width = 2.2	Cobble (3-13 cm) = 15	with	East	Flat;	Small woody debris = M	Hardwood	Muddy; Erodod	quite muddy, somewhat	Moderate	None observed.	Not well defined. Plenty of leaf litter and debris within channel.
		Wetted width = 1.4	Gravel (2 mm-3 cm) = 20	waterlogged		Run	Deep pools = N		Eroded	sloped on north side.			
		Pool depth = 0.18	Sand (0.06-2 mm) = 0	small woody			Undercut banks = N						
			Fines (<0.06 mm) = 35 Bedrock = 0	debris.			Instream vegetation = N Boulders = A						
		Channel depth = 0.75	Boulder (>25 cm) = 50				Overhanging vegetation = M		Undercut;				
		Water depth = 0.35	Rubble (14-25 cm) = 15	Primarily			Large woody debris = T		Vegetated;				Fringe wetland observed. Historic beave
WC9	Large Permanent	Bankful width = 7.0	Cobble (3-13 cm) = 5	boulders.	South	Flat	Small woody debris = T	Graminoids	Well defined;	Well vegetated.	Moderate	None observed.	activity present.
		Wetted width = 7.5 Pool depth = 0.45	Gravel (2 mm-3 cm) = 25 Sand (0.06-2 mm) = 0				Deep pools = M Undercut banks = A		Good condition				
		1 001 deput = 0.40	Fines (<0.06 mm) = 5				Instream vegetation = A						
			Bedrock = 0				Boulders = N						
		Channel depth = 0.67	Boulder (>25 cm) = 0	Dathan			Overhanging vegetation = M		Manufit	Dealer a 1 1			
WC10	Large Permanent	Water depth = 0.34 Bankful width = 6.2	Rubble (14-25 cm) = 60 Cobble (3-13 cm) = 20	Rather muddy, lots of organic	North	Pool;	Large woody debris = T Small woody debris = M	Graminoids	Vegetated; Well defined;	Banks are heavily vegetated with grasses	Moderate	Yes, culvert installation for	Watercourse is well defined, wide and
*****	Larger cillancill	Wetted width = 4.8	Gravel (2 mm-3 cm) = 10	matter present.	NOTUT	Flat	Deep pools = T	Graninolus	Good condition	and deciduous shrubs.	moderate	road crossing.	slow-flowing. Evidence of beaver activity
		Pool depth = 0.42	Sand (0.06-2 mm) = 5				Undercut banks = T						
			Fines (<0.06 mm) = 5	1 1		1	Instream vegetation = T	1	1	1	1	1	1



Table 1: Watercourse Characteristics - Weavers Mountain Wind Energy Project

Watercourse ID	Watercourse Type	Watercourse Measurments (m)	Substrate (%)	Substrate Notes	Drainage Direction	Aquatic Habitat	In Stream Cover/ Vegetation*	Dominant Riparian Habitat	Bank Characteristics	Bank Notes	Fish Bearing Potential	Evidence of Alteration	Other Observations
WC11	Small Permanent	Channel depth = 0.55 Water depth = 0.15 Bankful width = 0.75 Wetted width = 0.35 Pool depth = 0.17	Bedrock = 0 Boulder (>25 cm) = 50 Rubble (14-25 cm) = 5 Cobble (3-13 cm) = 10 Gravel (2 mm-3 cm) = 10 Sand (0.06-2 mm) = 5 Fines (<0.06 mm) = 20	Primarily boulders.	South	Riffle	Boulders = N Overhanging vegetation = M Large woody debris = N Small woody debris = M Deep pools = N Undercut banks = N Instream vegetation = T	Softwood	Sloped; Well defined	Banks are defined by large boulders and sloping, moss-covered shoulders.	Moderate	None observed.	Flows through softwood dominant forest. Well shaded.
WC12	Large Permanent	Channel depth = 0.4 Water depth = 0.45 Bankful width = 2.5 Wetted width = 2.5 Pool depth = 0.5	Bedrock = 0 Boulder (>25 cm) = 0 Rubble (14-25 cm) = 0 Cobble (3-13 cm) = 0 Gravel (2 mm-3 cm) = 0 Sand (0.06-2 mm) = 0 Fines (<0.06 mm) = 100	Primarily muck.	South	Flat; Riffle; Pool	Boulders = N Overhanging vegetation = N Large woody debris = A Small woody debris = M Deep pools = T Undercut banks = N Instream vegetation = A	Graminoids	Eroded; Muddy	Banks not well defined, muddy and saturated.	Moderate	None observed.	Beaver dam present but not completely blocking flow. Opens up into wide pond with extensive fringe wetland (fowl manna grass, blue joint red grass, <i>Juncus</i> sp.)
WC13	Small Permanent	Channel depth = 0.32 Water depth = 0.16 Bankful width = 3.6 Wetted width = 3.5 Pool depth = 0.46	Bedrock = 0 Boulder (>25 cm) = 15 Rubble (14-25 cm) = 15 Cobble (3-13 cm) = 20 Gravel (2 mm-3 cm) = 20 Sand (0.06-2 mm) = 15 Fines (<0.06 mm) = 15	Primarily organic, most likely due to low flow.	West	Run; Meander; Pool	Boulders = N Overhanging vegetation = M Large woody debris = N Small woody debris = T Deep pools = N Undercut banks = T Instream vegetation = T	Graminoids	Vegetated; Well defined; Good condition	Banks are well vegetated, sphagnum abundant.	Moderate	Yes, culvert installation for road crossing.	Watercourse has a section of fringe wetland. Transitions from open water to shaded by alders and other trees.
WC14	Ephemeral	Channel depth = 0.09 Water depth = Dry Bankful width = 5.1 Wetted width = Dry Pool depth = Dry	Bedrock = 0 Boulder (>25 cm) = 0 Rubble (14-25 cm) = 0 Cobble (3-13 cm) = 0 Gravel (2 mm-3 cm) = 0 Sand (0.06-2 mm) = 100	Substrate as well as water are covered in green and white substance.	North	Flat	Boulders = N Overhanging vegetation = N Large woody debris = T Small woody debris = T Deep pools = N Undercut banks = N Instream vegetation = N	Hardwood	Muddy	The banks are sloped and muddy.	Low	Yes, culvert installation for road crossing.	Green and white substance on surface of stagnant water may be algae, or decomposition of some kind. Garbage present downstream.
WC15	Small Permanent	Channel depth = 0.6 Water depth = 0.04 Bankful width = 4.2 Wetted width = 3.5 Pool depth = 0.04	Bedrock = 0 Boulder (>25 cm) = 60 Rubble (14-25 cm) = 15 Cobble (3-13 cm) = 15 Gravel (2 mm-3 cm) = 5 Sand (0.06-2 mm) = 5 Fines (<0.06 mm) = 0	Primarily rubble covered in moss.	North	Riffle; Meander	Boulders = T Overhanging vegetation = A Large woody debris = T Small woody debris = M Deep pools = N Undercut banks = N Instream vegetation = T	Hardwood	Vegetated	Sparsely vegetated, covered in leaf litter. Not well defined.	Low	None observed.	No clear channel, instead water braids across the land as it flows down slope. Plenty of moss, likely only ever a slow trickle of water.
WC16	Ephemeral	Channel depth = 0.12 Water depth = 0.09 Bankful width = 2.36 Wetted width = 1.6 Pool depth = 0.1	Bedrock = 0 Boulder (>25 cm) = 15 Rubble (14-25 cm) = 35 Cobble (3-13 cm) = 15 Gravel (2 mm-3 cm) = 0 Sand (0.06-2 mm) = 0 Fines (<0.06 mm) = 35	Mucky with lots of detritus and mud between larger rocks.	South	Very slow trickle.	Boulders = T Overhanging vegetation = T Large woody debris = M Small woody debris = M Deep pools = N Undercut banks = N Instream vegetation = N	Hardwood	Vegetated; Muddy	Barely defined.	Low	Yes, culvert installation for road crossing.	Water levels very low.
WC17	Large Permanent	Channel depth = 0.09 Water depth = 0.08 Bankful width = 2.5 Wetted width = 2.44 Pool depth = 0.07	Bedrock = 0 Boulder (>25 cm) = 15 Rubble (14-25 cm) = 10 Cobble (3-13 cm) = 5 Gravel (2 mm-3 cm) = 15 Sand (0.06-2 mm) = 50 Fines (<0.06 mm) = 15	Good mix of substrates, on both up and down stream portions of watercourse.	East	Riffle; Run; Flat; Cascades	Boulders = M Overhanging vegetation = M Large woody debris = M Small woody debris = T Deep pools = N Undercut banks = T Instream vegetation = A	Graminoids	Vegetated; Undercut	Banks are vegetated, but undercut along the downstream portion. The upstream banks are a bit more stable.	Moderate	Yes, open-bottom bridge structure for road crossing.	Sandy substrate with gentle flow, high potential for turtle habitat.

*N= None, T=Trace, M=Moderate, A=Abundant















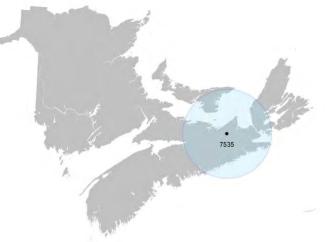
APPENDIX F ACCDC REPORT

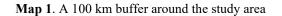


DATA REPORT 7535: Addington Forks, NS

Prepared 3 January 2023 by C. Robicheau, Conservation Data Analyst

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	





1.0 PREFACE

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

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

1.1 DATA LIST Included datasets: Filename Contents AddingtonForNS_7535ob.xls Rare or legally-protected Flora and Fauna in your study area AddingtonForNS_7535ob100km.xls A list of Rare and legally protected Flora and Fauna within 100 km of your study area AddingtonForNS_7535msa.xls Managed and Biologically Significant Areas in your study area

1.2 RESTRICTIONS

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

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

1.3 ADDITIONAL INFORMATION

The accompanying Data Dictionary provides metadata for the data provided.

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

Plants, Lichens, Ranking Methods, All other Inquiries	Sean Blaney	Senior Scientist / Executive Director	(506) 364-2658	sean.blaney@accdc.ca
Animals (Fauna)	John Klymko	Zoologist	(506) 364-2660	john.klymko@accdc.ca
Data Management, GIS	James Churchill	Conservation Data Analyst / Field Biologist		james.churchill@accdc.ca
Billing	Jean Breau	Financial Manager / Executive Assistant	(506) 364-2657	jean.breau@accdc.ca

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

New Brunswick. For information about rare taxa, protected areas, game animals, deer yards, old growth forests, archeological sites, fish habitat etc., or to determine if location-sensitive species (section 4.3) occur near your study site, please contact Hubert Askanas, Energy and Resource Development: (506) 453-5873.

Nova Scotia. For information about Species at Risk or general questions about Nova Scotia location-sensitive species please contact the Biodiversity Program at <u>biodiversity@novascotia.ca</u>. For questions about protected areas, game animals, deer yards, old growth forests, archeological sites, fish habitat etc., or to determine if location-sensitive species (section 4.3) occur near your study site please contact a Regional Biologist:

DIGB, ANNA, KING	Emma Vost	(902) 670-8187	Emma.Vost@novascotia.ca
SHEL, YARM	Sian Wilson	(902) 930-2978	Sian.Wilson@novascotia.ca
QUEE, LUNE	Peter Kydd	(902) 523-0969	Peter.Kydd@novascotia.ca
HALI, HANT	Shavonne Meyer	(902) 893-0816	Shavonne.Meyer@novascotia.ca
Central Region	Jolene Laverty	(902) 324-8953	Jolene.Laverty@novascotia.ca
COLC, CUMB	Kimberly George	(902) 890-1046	Kimberly.George@novascotia.ca
ANTI, GUYS	Harrison Moore	(902) 497-4119	Harrison.Moore@novascotia.ca
INVE, VICT	Maureen Cameron-MacMillan	(902) 295-2554	Maureen.Cameron-MacMillan@novascotia.ca
CAPE, RICH, PICT	Elizabeth Walsh	(902) 563-3370	Elizabeth.Walsh@novascotia.ca

Prince Edward Island. For information about rare taxa, protected areas, game animals, fish habitat etc., please contact Garry Gregory, PEI Department of Environment, Energy and Climate Action: (902) 569-7595.

2.0 RARE AND ENDANGERED SPECIES

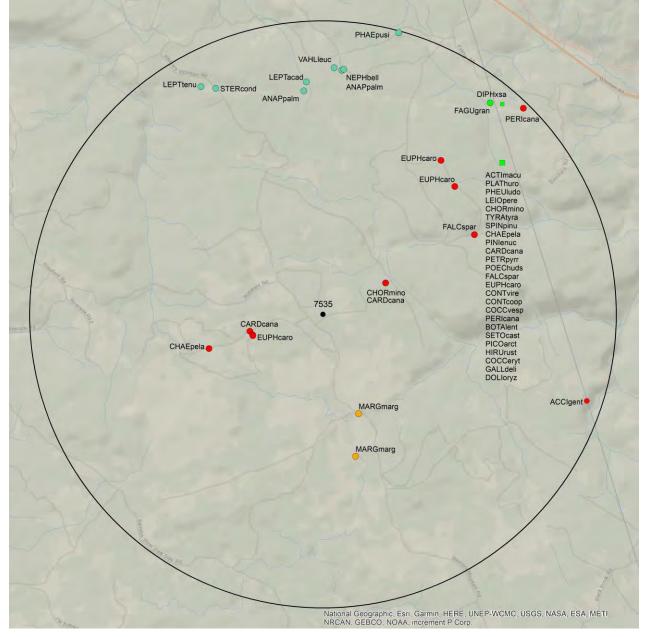
2.1 FLORA

The study area contains 3 records of 3 vascular and 8 records of 7 nonvascular flora (Map 2 and attached: *ob.xls), excluding 'location-sensitive' species.

2.2 FAUNA

The study area contains 55 records of 25 vertebrate and 2 records of 1 invertebrate fauna (Map 2 and attached data files - see 1.1 Data List), excluding 'location-sensitive species'. Please see section 4.3 to determine if 'location-sensitive' species occur near your study site.

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



RESOLUTION

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

HIGHER TAXON
 vertebrate fauna
 invertebrate fauna

- 📃 vascular flora
- 🔲 nonvascular flora

3.0 SPECIAL AREAS

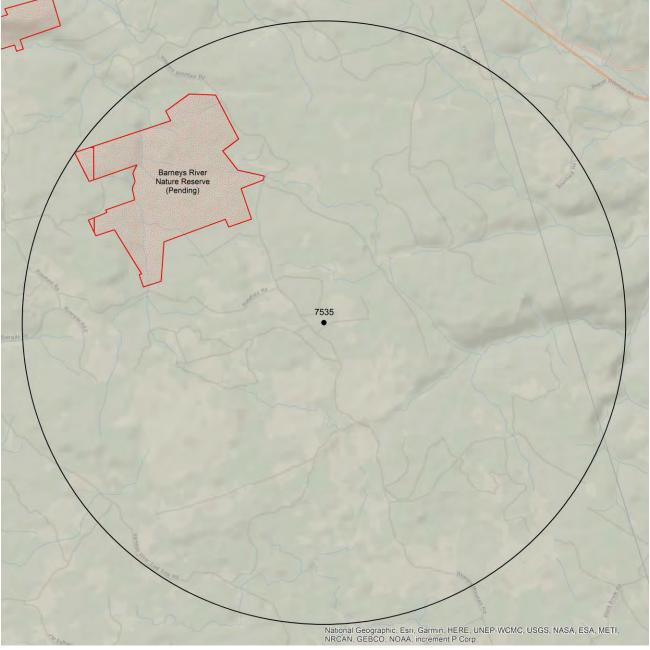
3.1 MANAGED AREAS

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

3.2 SIGNIFICANT AREAS

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

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



🔝 Managed Area 🔝 Significant Area

4.0 RARE SPECIES LISTS

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

4.1 FLORA

	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)
Ν	Scytinium tenuissimum	Birdnest Jellyskin Lichen				S2S3	1	4.4 ± 0.0
N	Stereocaulon condensatum	Granular Soil Foam Lichen				S2S3	1	4.3 ± 0.0
N	Nephroma bellum	Naked Kidney Lichen				S3	1	4.2 ± 0.0
Ν	Phaeophyscia pusilloides	Pompom-tipped Shadow Lichen				S3	1	5.0 ± 0.0
Ν	Leptogium acadiense	Acadian Jellyskin Lichen				S3S4	1	4.0 ± 0.0
Ν	Vahliella leucophaea	Shelter Shingle Lichen				S3S4	1	4.2 ± 0.0
Ν	Anaptychia palmulata	Shaggy Fringed Lichen				S3S4	2	3.8 ± 0.0
Р	Platanthera huronensis	Fragrant Green Orchid				S1S2	1	4.0 ± 10.0
Р	Diphasiastrum x sabinifolium	Savin-leaved Ground-cedar				S3?	1	4.7 ± 5.0
Ρ	Fagus grandifolia	American Beech				S3S4	1	4.6 ± 0.0
4.2	2 FAUNA							
	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)
Α	Chaetura pelagica	Chimney Swift	Threatened	Threatened	Endangered	S2S3B,S1M	2	2.0 ± 0.0
Α	Euphagus carolinus	Rusty Blackbird	Special Concern	Special Concern	Endangered	S2B	7	1.2 ± 0.0
Α	Hirundo rustica	Barn Swallow	Special Concern	Threatened	Endangered	S3B	1	4.0 ± 7.0
Α	Cardellina canadensis	Canada Warbler	Special Concern	Threatened	Endangered	S3B	4	1.2 ± 0.0
Α	Chordeiles minor	Common Nighthawk	Special Concern	Threatened	Threatened	S3B	3	1.2 ± 0.0
Α	Contopus cooperi	Olive-sided Flycatcher	Special Concern	Threatened	Threatened	S3B	2	4.0 ± 7.0
Α	Dolichonyx oryzivorus	Bobolink	Special Concern	Threatened	Vulnerable	S3B	3	4.0 ± 7.0
Α	Coccothraustes vespertinus	Evening Grosbeak	Special Concern	Special Concern	Vulnerable	S3B,S3N,S3M	3	4.0 ± 7.0
Α	Contopus virens	Eastern Wood-Pewee	Special Concern	Special Concern	Vulnerable	S3S4B	2	4.0 ± 7.0
Α	Accipiter gentilis	Northern Goshawk	Not At Risk			S3S4	1	4.7 ± 0.0
Α	Petrochelidon pyrrhonota	Cliff Swallow				S2S3B	2	4.0 ± 7.0
Α	Perisoreus canadensis	Canada Jay				S3	3	4.0 ± 7.0
Α	Poecile hudsonicus	Boreal Chickadee				S3	4	4.0 ± 7.0
Α	Spinus pinus	Pine Siskin				S3	1	4.0 ± 7.0
Α	Coccyzus erythropthalmus	Black-billed Cuckoo				S3B	1	4.0 ± 7.0
Α	Tyrannus tyrannus	Eastern Kingbird				S3B	1	4.0 ± 7.0
Α	Pheucticus Iudovicianus	Rose-breasted Grosbeak				S3B	2	4.0 ± 7.0
Α	Falco sparverius	American Kestrel				S3B,S4S5M	2	2.9 ± 0.0
Α	Gallinago delicata	Wilson's Snipe				S3B,S5M	3	4.0 ± 7.0
Α	Pinicola enucleator	Pine Grosbeak				S3B,S5N,S5M	1	4.0 ± 7.0
Α	Picoides arcticus	Black-backed Woodpecker				S3S4	1	4.0 ± 7.0
Α	Botaurus lentiginosus	American Bittern				S3S4B,S4S5M	1	4.0 ± 7.0
Α	Setophaga castanea	Bay-breasted Warbler				S3S4B,S4S5M	1	4.0 ± 7.0
Α	Actitis macularius	Spotted Sandpiper				S3S4B,S5M	3	4.0 ± 7.0
Α	Leiothlypis peregrina	Tennessee Warbler				S3S4B,S5M	1	4.0 ± 7.0
Ι	Margaritifera margaritifera	Eastern Pearlshell				S2	2	1.8 ± 0.0

4.3 LOCATION SENSITIVE SPECIES

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

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

4.4 SOURCE BIBLIOGRAPHY

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

recs CITATION

- 44 Lepage, D. 2014. Maritime Breeding Bird Atlas Database. Bird Studies Canada, Sackville NB, 407,838 recs.
- 10 iNaturalist. 2020. iNaturalist Data Export 2020. iNaturalist.org and iNaturalist.ca, Web site: 128728 recs.
- 9 Erskine, A.J. 1992. Maritime Breeding Bird Atlas Database. NS Museum & Nimbus Publ., Halifax, 82,125 recs.
- 2 Newell, R.E. 2000. E.C. Smith Herbarium Database. Acadia University, Wolfville NS, 7139 recs.
- 2 Nova Scotia Department of Lands and Forestry. 2020. NS Lands Proposed or Pending Protection. NSDLF, 231 features. Received via email.
- 1 Archibald, D.R. 2003. NS Freshwater Mussel Fieldwork. Nova Scotia Dept Natural Resources, 213 recs.
- 1 Cameron-MacMillan, Maureen. 2020. Northern Goshawk Nests in Eastern Nova Scotia, as of November, 2020. Nova Scotia Department of Lands and Forestry.
- 1 Pulsifer, M.D. 2002. NS Freshwater Mussel Fieldwork. Nova Scotia Dept Natural Resources, 369 recs.

5.0 RARE SPECIES WITHIN 100 KM

A 100 km buffer around the study area contains 27797 records of 132 vertebrate and 697 records of 51 invertebrate fauna; 4873 records of 247 vascular and 2867 records of 122 nonvascular flora (attached: *ob100km.xls).

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

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
A	Myotis lucifugus	Little Brown Myotis	Endangered	Endangered	Endangered	S1	59	11.0 ± 0.0	NS
А	Myotis septentrionalis	Northern Myotis	Endangered	Endangered	Endangered	S1	36	62.5 ± 1.0	PE
А	Salmo salar pop. 1	Atlantic Salmon - Inner Bay of Fundy population	Endangered	Endangered		S1	8	52.4 ± 0.0	NS
А	Salmo salar pop. 4	Atlantic Salmon - Eastern Cape Breton population	Endangered			S1	5	74.9 ± 0.0	NS
А	Salmo salar pop. 6	Atlantic Salmon - Nova Scotia Southern Upland population	Endangered			S1	39	15.7 ± 0.0	NS
А	Charadrius melodus melodus	Piping Plover melodus subspecies	Endangered	Endangered	Endangered	S1B	1445	19.5 ± 0.0	NS
А	Sterna dougallii	Roseate Tern	Endangered	Endangered	Endangered	S1B	76	62.6 ± 0.0	NS
A	Dermochelys coriacea pop. 2	Leatherback Sea Turtle - Atlantic population	Endangered	Endangered		S1S2N	2	62.2 ± 0.0	NS
A A A	Asio flammeus Glyptemys insculpta Riparia riparia	Short-eared Owl Wood Turtle Bank Swallow	Threatened Threatened Threatened	Special Concern Threatened Threatened	Threatened Endangered	S1B S2 S2B	8 4353 1080	21.1 ± 7.0 5.6 ± 0.0 7.1 ± 0.0	NS NS NS
А	Chaetura pelagica	Chimney Swift	Threatened	Threatened	Endangered	S2S3B,S1	627	2.0 ± 0.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank M	# recs	Distance (km)	Prov
Ą	Limosa haemastica	Hudsonian Godwit	Threatened			M S2S3M	5	20.1 ± 0.0	NS
- 		Leach's Storm-Petrel	Threatened			S3B	66	62.0 ± 0.0	NS
	Hydrobates leucorhous								
A	Tringa flavipes	Lesser Yellowlegs	Threatened			S3M	273	19.7 ± 0.0	NS
4	Anguilla rostrata	American Eel	Threatened			S3N	30	67.7 ± 0.0	NS
A Contraction of the second se	Sturnella magna	Eastern Meadowlark	Threatened	Threatened		SHB	2	75.3 ± 0.0	NS
Ą	Hylocichla mustelina	Wood Thrush Atlantic Salmon - Gaspe -	Threatened	Threatened		SUB	27	18.1 ± 7.0	NS NS
Ą	Salmo salar pop. 12	Southern Gulf of St. Lawrence population	Special Concern			S1	35	5.8 ± 1.0	
4	Antrostomus vociferus Passerculus sandwichensis	Eastern Whip-Poor-Will	Special Concern	Threatened	Threatened	S1?B	4	18.1 ± 7.0	NS NS
A	princeps	Ipswich Sparrow	Special Concern	Special Concern		S1B	2 7	57.8 ± 7.0 34.9 ± 0.0	NS
4	Bucephala islandica	Barrow's Goldeneye	Special Concern	Special Concern	En den nene d	S1N,SUM	-		
4	Euphagus carolinus	Rusty Blackbird	Special Concern	Special Concern	Endangered	S2B	233	1.2 ± 0.0	NS
A	Morone saxatilis pop. 1	Striped Bass - Southern Gulf of St. Lawrence population	Special Concern			S2S3N	1	25.1 ± 1.0	NS
A	Histrionicus histrionicus pop. 1	Harlequin Duck - Eastern population	Special Concern	Special Concern	Endangered	S2S3N,SU M	36	57.1 ± 0.0	PE
Ą	Chelydra serpentina	Snapping Turtle	Special Concern	Special Concern	Vulnerable	S3	51	10.2 ± 10.0	NS
4	Hirundo rustica	Barn Swallow	Special Concern	Threatened	Endangered	S3B	1150	4.0 ± 7.0	NS
Ą	Cardellina canadensis	Canada Warbler	Special Concern	Threatened	Endangered	S3B	914	1.2 ± 0.0	NS
4	Chordeiles minor	Common Nighthawk	Special Concern	Threatened	Threatened	S3B	319	1.2 ± 0.0	NS
Å	Contopus cooperi	Olive-sided Flycatcher	Special Concern	Threatened	Threatened	S3B	1137	4.0 ± 7.0	NS
	Dolichonyx oryzivorus	Bobolink	Special Concern	Threatened	Vulnerable	S3B S3B,S3N,S	827	4.0 ± 7.0	NS NS
L .	Coccothraustes vespertinus	Evening Grosbeak	Special Concern	Special Concern	Vulnerable	3M	615	4.0 ± 7.0	
L L	Podiceps auritus	Horned Grebe	Special Concern	Special Concern		S3N,SUM	2	30.6 ± 0.0	NS
۱	Contopus virens	Eastern Wood-Pewee	Special Concern	Special Concern	Vulnerable	S3S4B	739	4.0 ± 7.0	NS
۱	Phocoena phocoena	Harbour Porpoise	Special Concern			S4	2	62.2 ± 0.0	NS
۱.	Chrysemys picta picta	Eastern Painted Turtle	Special Concern	Special Concern		S4 S1?B,SUN,	13	13.2 ± 1.0	NS NS
\	Accipiter cooperii Fulica americana	Cooper's Hawk American Coot	Not At Risk Not At Risk			SUM S1B	2 9	45.2 ± 0.0 58.7 ± 7.0	NS
λ λ	Chlidonias niger	Black Tern	Not At Risk			S1B S1B	9 3	37.4 ± 0.0	NS
۱.	Falco peregrinus pop. 1	Peregrine Falcon - anatum/tundrius	Not At Risk	Special Concern	Vulnerable	S1B,SUM	3	61.2 ± 0.0	NS
	Aegolius funereus	Boreal Owl	Not At Risk			S2?B,SUM	11	30.2 ± 0.0	NS
\	Lynx canadensis	Canada Lynx	Not At Risk		Endangered	S2S3	6	79.0 ± 1.0	NS
4	Globicephala melas	Long-finned Pilot Whale	Not At Risk		0	S2S3	1	85.9 ± 100.0	NS
	Hemidactylium scutatum	Four-toed Salamander	Not At Risk			S3	15	56.5 ± 0.0	NS
\	Megaptera novaeangliae	Humpback Whale	Not At Risk			S3	2	62.1 ± 0.0	NS
, ,	Sterna hirundo	Common Tern	Not At Risk			S3B	442	18.1 ± 7.0	NS
									NS
L Contraction of the second seco	Sialia sialis	Eastern Bluebird	Not At Risk			S3B	30	13.3 ± 0.0	
1	Buteo lagopus	Rough-legged Hawk	Not At Risk			S3N	8	51.1 ± 4.0	NS
1	Accipiter gentilis	Northern Goshawk	Not At Risk			S3S4	102	4.7 ± 0.0	NS
1	Lagenorhynchus acutus	Atlantic White-sided Dolphin	Not At Risk			S3S4	4	62.7 ± 0.0	NS
۱.	Ammospiza nelsoni	Nelson's Sparrow	Not At Risk			S3S4B	127	14.4 ± 7.0	NS
۱.	Calidris canutus rufa	Red Knot rufa subspecies	E,SC	Endangered	Endangered	S2M S2S3B,S2S	23	20.1 ± 0.0	NS NS
N	Morone saxatilis	Striped Bass	E,SC		Endengered	3N S1	2 131	30.0 ± 0.0	NS
A A	Alces alces americana Picoides dorsalis	Moose American Three-toed			Endangered	S1 S1?	131 4	12.6 ± 0.0 36.6 ± 0.0	NS NS
~ А	Passerina cyanea	Woodpecker Indigo Bunting				S1?B,SUM	4 10	30.0 ± 0.0 33.2 ± 7.0	NS
л А	Nycticorax nycticorax	Black-crowned Night-heron				S1B	1	32.3 ± 7.0	NS
4	Oxyura jamaicensis	Ruddy Duck				S1B	2	32.3 ± 7.0 13.3 ± 7.0	NS
4 4	Gallinula galeata	Common Gallinule				S1B S1B	2 6	13.3 ± 7.0 68.1 ± 7.0	NS
						STR	6	681 + (1)	

laxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Pro
	Myiarchus crinitus	Great Crested Flycatcher				S1B	4	47.0 ± 7.0	NS
	Mimus polyglottos	Northern Mockingbird				S1B	22	18.1 ± 7.0	NS
	Toxostoma rufum	Brown Thrasher				S1B	8	26.1 ± 7.0	NS
	Charadrius semipalmatus	Semipalmated Plover				S1B.S4M	366	19.7 ± 0.0	NS
	Calidris minutilla	Least Sandpiper				S1B,S4M	198	19.7 ± 0.0	NS
	Anas acuta	Northern Pintail				S1B.SUM	21	28.7 ± 1.0	NS
						, -			NS
	Vireo gilvus	Warbling Vireo				S1B,SUM	16	18.1 ± 7.0	
	Vespertilionidae sp.	bat species				S1S2 S1S2B,SU	69	9.3 ± 0.0	NS NS
	Pooecetes gramineus	Vesper Sparrow				M	24	18.1 ± 7.0	
	Vireo philadelphicus	Philadelphia Vireo				S2?B,SUM	44	18.1 ± 7.0	NS
	Fratercula arctica	Atlantic Puffin				S2B	4	67.8 ± 7.0	NS
	Empidonax traillii	Willow Flycatcher				S2B	8	18.1 ± 7.0	NS
	Molothrus ater	Brown-headed Cowbird				S2B	94	8.5 ± 0.0	NS
	Spatula clypeata	Northern Shoveler				S2B.SUM	3	92.6 ± 7.0	PE
	Mareca strepera	Gadwall				S2B.SUM	13	30.7 ± 0.0	NS
	Piranga olivacea	Scarlet Tanager				S2B.SUM	12	5.8 ± 0.0	NS
	Calidris alba	Sanderling				S2D,S0M S2N,S3M	168	20.1 ± 0.0	NS
						S2N,S3M S2S3			NS
	Asio otus	Long-eared Owl					32	18.7 ± 7.0	
	Rallus limicola	Virginia Rail				S2S3B	34	13.3 ± 7.0	NS
	Rissa tridactyla	Black-legged Kittiwake				S2S3B	3	65.8 ± 3.0	NS
	Petrochelidon pyrrhonota	Cliff Swallow				S2S3B	183	4.0 ± 7.0	NS
	D () ()					S2S3B,S2S	070	004.00	NS
	Phalacrocorax carbo	Great Cormorant				3N	273	20.1 ± 0.0	NO
	Cathartes aura	Turkey Vulture				S2S3B,S4S 5M	1	98.9 ± 0.0	NS
	Setophaga pinus	Pine Warbler				S2S3B,S4S 5M	13	34.8 ± 0.0	NS
ι.	Bucephala clangula	Common Goldeneye				S2S3B,S5N ,S5M	175	12.9 ± 7.0	NS
\	Icterus galbula	Baltimore Oriole				S2S3B,SU M	39	10.7 ± 0.0	NS
	Pluvialis dominica	American Golden-Plover				S2S3M	23	20.1 ± 0.0	NS
L	Numenius phaeopus	Whimbrel				S2S3M	70	20.1 ± 0.0	NS
	hudsonicus								
	Perisoreus canadensis	Canada Jay				S3	505	4.0 ± 7.0	NS
	Poecile hudsonicus	Boreal Chickadee				S3	1022	4.0 ± 7.0	NS
	Spinus pinus	Pine Siskin				S3	462	4.0 ± 7.0	NS
	Salvelinus fontinalis	Brook Trout				S3	59	11.3 ± 0.0	NS
	Salvelinus namaycush	Lake Trout				S3	1	51.7 ± 0.0	NS
	Pekania pennanti	Fisher				S3	6	15.7 ± 0.0	NS
	Calcarius Iapponicus	Lapland Longspur				S3?N,SUM	2	30.6 ± 0.0	NS
						S3B	172		NS
	Spatula discors	Blue-winged Teal				S3B S3B		13.3 ± 7.0	
	Charadrius vociferus	Killdeer					387	7.4 ± 7.0	NS
ι.	Tringa semipalmata	Willet				S3B	744	14.4 ± 7.0	NS
	Sterna paradisaea	Arctic Tern				S3B	94	20.9 ± 7.0	NS
	Coccyzus erythropthalmus	Black-billed Cuckoo				S3B	84	4.0 ± 7.0	NS
	Tyrannus tyrannus	Eastern Kingbird				S3B	199	4.0 ± 7.0	NS
	Pheucticus Iudovicianus	Rose-breasted Grosbeak				S3B	528	4.0 ± 7.0	NS
	Alosa pseudoharengus	Alewife				S3B	21	13.5 ± 0.0	NS
	Somateria mollissima	Common Eider				S3B,S3M,S	542	21.1 ± 7.0	NS
	Tringa melanoleuca	Greater Yellowlegs				3N S3B,S4M	413	13.9 ± 0.0	NS
\	Falco sparverius	American Kestrel				S3B,S4S5	380	2.9 ± 0.0	NS
						M			
	Gallinado delicata	Wilson's Snine				S3B S5M	808	40+70	NS
	Gallinago delicata Setophaga striata	Wilson's Snipe Blackpoll Warbler				S3B,S5M S3B,S5M	808 132	4.0 ± 7.0 21.7 ± 0.0	NS NS

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A	Pinicola enucleator	Pine Grosbeak				S3B,S5N,S 5M	104	4.0 ± 7.0	NS
A	Setophaga tigrina	Cape May Warbler				S3B,SUM	271	7.4 ± 7.0	NS
A	Branta bernicla	Brant				S3M	1	76.7 ± 16.0	NS
A	Pluvialis squatarola	Black-bellied Plover				S3M	268	19.7 ± 0.0	NS
A	Arenaria interpres	Ruddy Turnstone				S3M	127	20.1 ± 0.0	NS
A	Calidris pusilla	Semipalmated Sandpiper				S3M	275	19.7 ± 0.0	NS
A	Calidris melanotos	Pectoral Sandpiper				S3M	29	20.1 ± 0.0	NS
A	Limnodromus griseus	Short-billed Dowitcher				S3M	146	19.6 ± 0.0	NS
A	Chroicocephalus ridibundus	Black-headed Gull				S3N	11	20.4 ± 0.0	NS
A	Picoides arcticus	Black-backed Woodpecker				S3S4	148	4.0 ± 7.0	NS
A	Loxia curvirostra	Red Crossbill				S3S4	129	13.2 ± 0.0	NS
A	Sorex palustris	American Water Shrew				S3S4	3	69.4 ± 0.0	PE
A	Botaurus lentiginosus	American Bittern				S3S4B,S4S	338	4.0 ± 7.0	NS
A	Setophaga castanea	Bay-breasted Warbler				5M S3S4B,S4S	551	4.0 ± 7.0	NS
		-				5M S3S4B,S5			NS
A	Actitis macularius	Spotted Sandpiper				M	720	4.0 ± 7.0	
A	Leiothlypis peregrina	Tennessee Warbler				S3S4B,S5 M	551	4.0 ± 7.0	NS
A	Passerella iliaca	Fox Sparrow				S3S4B,S5 M	121	18.1 ± 7.0	NS
A	Mergus serrator	Red-breasted Merganser				S3S4B,S5 M,S5N	132	14.4 ± 7.0	NS
A	Calidris maritima	Purple Sandpiper				S3S4N	26	20.1 ± 0.0	NS
A	Lanius borealis	Northern Shrike				S3S4N	2	89.8 ± 0.0	PE
A	Morus bassanus	Northern Gannet				SHB	49	26.7 ± 0.0	NS
A	Leucophaeus atricilla	Laughing Gull				SHB	3	70.3 ± 0.0	NS
A	Progne subis	Purple Martin				SHB	4	58.6 ± 0.0	NS
A	Eremophila alpestris	Horned Lark				SHB,S4S5 N,S5M	2	78.2 ± 7.0	PE
1	Bombus bohemicus	Ashton Cuckoo Bumble Bee	Endangered	Endangered	Endangered	S1	15	19.9 ± 5.0	NS
1	Danaus plexippus	Monarch	Endangered	Special Concern	Endangered	S2?B,S3M	101	18.7 ± 0.0	NS
1	Danaus piexippus	Suckley's Cuckoo Bumble	Liluariyereu	Special Concern	Lindangered	32 ! D,3310	101	10.7 ± 0.0	NS
I	Bombus suckleyi	Bee	Threatened			SH	1	86.0 ± 5.0	
I	Alasmidonta varicosa	Brook Floater	Special Concern	Special Concern	Threatened	S3	8	15.6 ± 0.0	NS
I	Bombus terricola	Yellow-banded Bumble Bee	Special Concern	Special Concern	Vulnerable	S3	47	21.3 ± 0.0	NS
1	Coccinella transversoguttata	Transverse Lady Beetle	Special Concern		Endangered	SH	7	48.1 ± 2.0	NS
	richardsoni	-			Lindanigoroa				
1	Polygonia satyrus	Satyr Comma				S1?	10	77.5 ± 1.0	PE
1	Euphyes bimacula	Two-spotted Skipper				S1S2	2	30.2 ± 0.0	NS
1	Boloria chariclea	Arctic Fritillary				S1S2	1	88.3 ± 2.0	NS
1	Tharsalea dorcas	Dorcas Copper				S2	21	89.9 ± 0.0	NS
I	Tharsalea dospassosi	Maritime Copper				S2	16	48.1 ± 0.0	NS
I	Satyrium acadica	Acadian Hairstreak				S2	11	43.3 ± 2.0	NS
I	Neurocordulia michaeli	Broad-tailed Shadowdragon				S2	26	29.5 ± 0.0	NS
I	Coenagrion resolutum	Taiga Bluet				S2	21	60.1 ± 1.0	PE
I	Margaritifera margaritifera	Eastern Pearlshell				S2	114	1.8 ± 0.0	NS
I	Pantala hymenaea	Spot-Winged Glider				S2?B	1	38.5 ± 1.0	NS
I	Nymphalis I-album	Compton Tortoiseshell				S2S3	4	36.0 ± 2.0	NS
I	Aglais milberti	Milbert's Tortoiseshell				S2S3	7	36.0 ± 2.0	NS
I	Lanthus vernalis	Southern Pygmy Clubtail				S2S3	8	23.8 ± 0.0	NS
I	Somatochlora kennedyi	Kennedy's Emerald				S2S3	1	93.8 ± 1.0	PE
I	Alasmidonta undulata	Triangle Floater				S2S3	10	22.4 ± 0.0	NS
I	Naemia seriata	Seaside Lady Beetle				S3	1	19.2 ± 0.0	NS
1	lphthiminus opacus	Cloudy Darkling Beetle				S3	1	89.8 ± 0.0	NS
1									

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	Satyrium calanus	Banded Hairstreak				S3	2	34.8 ± 2.0	NS
	Callophrys lanoraieensis	Bog Elfin				S3	5	50.0 ± 1.0	NS
	Strymon melinus	Gray Hairstreak				S3	2	97.8 ± 1.0	NS
	Phanogomphus descriptus	Harpoon Clubtail				S3	16	74.2 ± 0.0	NS
	Ophiogomphus aspersus	Brook Snaketail				S3	5	74.2 ± 0.0	NS
	Ophiogomphus mainensis	Maine Snaketail				S3	14	6.4 ± 0.0	NS
	Ophiogomphus rupinsulensis	Rusty Snaketail				S3	36	29.2 ± 0.0	NS
	Somatochlora forcipata	Forcipate Emerald				S3	3	86.2 ± 0.0	PE
	Enallagma vernale	Vernal Bluet				S3	5	67.2 ± 0.0	NS
	Polygonia interrogationis	Question Mark				S3B	38	12.2 ± 0.0	NS
	Cecropterus pylades	Northern Cloudywing				S3S4	28	11.4 ± 0.0	NS
	Amblyscirtes hegon	Pepper and Salt Skipper				S3S4	11	13.5 ± 0.0	NS
	Cupido comyntas	Eastern Tailed Blue				S3S4	3	52.2 ± 0.0	NS
	Argynnis aphrodite	Aphrodite Fritillary				S3S4	20	16.2 ± 100.0	NS
	Polygonia faunus	Green Comma				S3S4	11	5.8 ± 0.0	NS
	Oeneis jutta	Jutta Arctic				S3S4	9	20.4 ± 0.0	NS
	Aeshna clepsydra	Mottled Darner				S3S4	3	59.3 ± 1.0	NS
						S3S4 S3S4	10		NS
	Aeshna constricta	Lance-Tipped Darner Ocellated Darner				S3S4 S3S4	9	42.8 ± 1.0 29.2 ± 0.0	NS NS
	Boyeria grafiana								
	Gomphaeschna furcillata	Harlequin Darner				S3S4	4	67.5 ± 0.0	NS
	Somatochlora franklini	Delicate Emerald				S3S4	3	80.1 ± 1.0	PE
	Nannothemis bella	Elfin Skimmer				S3S4	3	67.5 ± 0.0	NS
	Sympetrum danae	Black Meadowhawk				S3S4	9	22.8 ± 1.0	NS
	Amphiagrion saucium	Eastern Red Damsel				S3S4	6	65.5 ± 0.0	NS
	Sphaerophoria pyrrhina	Violaceous Globetail				SH	1	85.3 ± 5.0	NS
	Icaricia saepiolus	Greenish Blue				SH	3	35.0 ± 2.0	NS
	Polygonia gracilis	Hoary Comma				SH	2	36.0 ± 2.0	NS
N	Erioderma mollissimum	Graceful Felt Lichen	Endangered	Endangered	Endangered	S1	22	47.5 ± 0.0	NS
N	Erioderma pedicellatum	Boreal Felt Lichen - Atlantic	Endangered	Endangered	Endangered	S1	495	33.6 ± 0.0	NS
	(Atlantic pop.)	pop.	Liluangereu	Lindangered	Lindangered				
١	Peltigera hydrothyria	Eastern Waterfan	Threatened	Threatened	Threatened	S1	16	45.5 ± 0.0	NS
N	Pannaria lurida	Wrinkled Shingle Lichen	Threatened	Threatened	Threatened	S2S3	9	91.9 ± 0.0	NS
١	Anzia colpodes	Black-foam Lichen	Threatened	Threatened	Threatened	S3	23	13.2 ± 1.0	NS
		White-rimmed Shingle	Threatened			00	6	F70.00	NS
N	Fuscopannaria leucosticta	Lichen	Inreatened			S3	6	57.0 ± 0.0	
N	Heterodermia squamulosa	Scaly Fringe Lichen	Threatened			S3	8	55.0 ± 0.0	NS
N	Pectenia plumbea	Blue Felt Lichen	Special Concern	Special Concern	Vulnerable	S3	539	8.2 ± 0.0	NS
	Sclerophora peronella	Frosted Glass-whiskers	•	•					NS
1	(Atlantic pop.)	(Atlantic population)	Special Concern	Special Concern		S3S4	24	35.6 ± 0.0	
1	Pseudevernia cladonia	Ghost Antler Lichen	Not At Risk			S2S3	7	40.9 ± 0.0	NS
1	Fissidens exilis	Pygmy Pocket Moss	Not At Risk			S3	7	18.0 ± 0.0	NS
1	Chaenotheca servitii	Flexuous Golden Stubble	Data Deficient			S1	1	52.2 ± 1.0	NS
1	Erioderma pedicellatum	Boreal Felt Lichen	E,SC		Endangered	S1	1	77.5 ± 0.0	NS
N			E,30		Endangered	S1	2	93.5 ± 0.0	NS
	Cinclidium stygium	Sooty Cupola Moss				S1	2		
N	Cyrto-hypnum minutulum	Tiny Cedar Moss						52.2 ± 0.0	NS
N	Lichina confinis	Marine Seaweed Lichen				S1	2	87.2 ± 2.0	NS NS
N	Polychidium muscicola	Eyed Mossthorns				S1	2	67.7 ± 0.0	NS
N	Sticta limbata	Woollybear Lichen				S1	2	97.6 ± 2.0	NS
		Powdered Moon Lichen							
N	Peltigera lepidophora	Scaly Pelt Lichen				S1	1	69.3 ± 0.0	PE
N	Hypogymnia hultenii	Powdered Honeycomb Lichen				S1	11	60.3 ± 0.0	NS
N	Conardia compacta	Coast Creeping Moss				S1?	1	91.1 ± 2.0	NS
1	Tortula obtusifolia	a Moss				S1?	3	72.6 ± 0.0	NS
N	Enchylium limosum	Lime-loving Tarpaper Lichen				S1?	1	87.9 ± 0.0	PE
N	Scytinium intermedium	Forty-five Jellyskin Lichen				S1?	1	28.5 ± 4.0	NS
	ooyaniuni interneuluni								
	Peltinera malacea	Veinless Pelt Lichen				S12	1	84 1 + 0 0	
N N	Peltigera malacea Pseudotaxiphyllum	Veinless Pelt Lichen a Moss				S1? S1S2	1 1	84.1 ± 0.0 99.7 ± 0.0	NS NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Pro
N	distichaceum Hamatocaulis vernicosus	a Moss				S1S2	1	92.5 ± 0.0	NS
1	Placidium squamulosum	Limy Soil Stipplescale Lichen				S1S2	1	73.7 ± 6.0	NS
I	Cladonia labradorica	Labrador Lichen				S1S2	1	47.9 ± 0.0	NS
	Peltigera ponojensis	Pale-bellied Pelt Lichen				S1S2	1	43.9 ± 0.0	NS
l	Parmeliella parvula	Poor-man's Shingles Lichen				S1S2	19	56.6 ± 0.0	NS
	Peltigera neckeri	Black-saddle Pelt Lichen				S1S3	3	17.9 ± 0.0	NS
	Anacamptodon splachnoides	a Moss				S2	1	57.8 ± 0.0	NS
	Scorpidium scorpioides	Hooked Scorpion Moss				S2	4	88.0 ± 0.0	NS
	, ,	Flat-leaved Peat Moss				S2	2	94.1 ± 0.0	NS
	Sphagnum platyphyllum					S2 S2	2 5		
	Scorpidium cossonii	CossonFÇÖs Hook Moss						92.5 ± 0.0	NS
	Scytinium imbricatum	Scaly Jellyskin Lichen				S2	1	93.9 ± 0.0	NS
	Nephroma resupinatum	a lichen				S2	1	32.7 ± 0.0	NS
	Riccardia multifida	Delicate Germanderwort				S2?	2	53.4 ± 0.0	NS
	Anomodon viticulosus	a Moss				S2?	2	89.4 ± 1.0	NS
	Atrichum angustatum	Lesser Smoothcap Moss				S2?	2	19.0 ± 3.0	NS
	Drepanocladus polygamus	Polygamous Hook Moss				S2?	1	64.1 ± 0.0	NS
	Pseudocampylium radicale	Long-stalked Fine Wet Moss				S2?	1	88.1 ± 0.0	NS
	Dicranum condensatum	Condensed Broom Moss				S2?	2	94.6 ± 0.0	PE
		a Moss				S2?	2	94.6 ± 0.0 73.3 ± 0.0	PE
	Ditrichum rhynchostegium								
	Philonotis marchica	a Moss				S2?	2	76.3 ± 0.0	N
I	Platydictya jungermannioides	False Willow Moss				S2?	5	28.5 ± 0.0	NS
	Saelania glaucescens	Blue Dew Moss				S2?	1	82.3 ± 0.0	NS
	Cyrtomnium hymenophylloides	Short-pointed Lantern Moss				S2?	1	82.3 ± 0.0	NS
	Oxyrrhynchium hians	Light Beaked Moss				S2S3	1	97.2 ± 25.0	NS
	Scorpidium revolvens	Limprichtia Moss				S2S3	6	92.5 ± 0.0	N
	Scorpialum revolvens	Blue-gray Moss Shingle							NS
	Moelleropsis nebulosa	Lichen				S2S3	57	37.9 ± 0.0	
	Moelleropsis nebulosa ssp. frullaniae	Blue-gray Moss Shingle Lichen				S2S3	3	49.9 ± 0.0	NS
1	Ramalina thrausta	Angelhair Ramalina Lichen				S2S3	16	13.1 ± 0.0	NS
	Collema leptaleum	Crumpled Bat's Wing Lichen				S2S3	74	10.7 ± 0.0	NS
	Usnea rubicunda	Red Beard Lichen				S2S3	3	53.4 ± 0.0	NS
	Ahtiana aurescens	Eastern Candlewax Lichen				S2S3	6	19.1 ± 6.0	NS
	Usnocetraria oakesiana	Yellow Band Lichen				S2S3	1	98.8 ± 0.0	PE
	Cetraria muricata	Spiny Heath Lichen				S2S3	1	61.7 ± 1.0	NS
	Cladonia incrassata	Powder-foot British Soldiers				S2S3	1	45.5 ± 0.0	NS
	Scytinium tenuissimum	Lichen Birdnest Jellyskin Lichen				S2S3	15	4.4 ± 0.0	NS
	Melanohalea septentrionalis	Northern Camouflage Lichen				S2S3	1	90.0 ± 0.0	PE
	Myelochroa aurulenta	Powdery Axil-bristle Lichen				S2S3	1	84.5 ± 0.0	NS
		Fordery Axil-bristie Lichen				S2S3	7		NS
	Parmelia fertilis							46.0 ± 0.0	
	Parmeliopsis ambigua	Green Starburst Lichen				S2S3	5	41.7 ± 0.0	NS
	Usnea mutabilis	Bloody Beard Lichen				S2S3	1	84.8 ± 0.0	NS
	Fuscopannaria sorediata	a Lichen				S2S3	12	43.5 ± 0.0	NS
	Stereocaulon condensatum	Granular Soil Foam Lichen				S2S3	8	4.3 ± 0.0	NS
	Cladonia coccifera	Eastern Boreal Pixie-cup Lichen				S2S3	2	52.5 ± 1.0	NS
	Cladonia deformis	Lesser Sulphur-cup Lichen				S2S3	1	94.2 ± 0.0	PE
	Ephemerum serratum	a Moss				S3	2	59.7 ± 3.0	NS
	Fissidens taxifolius	Yew-leaved Pocket Moss				S3	5	47.1 ± 0.0	NS
	Anomodon tristis	a Moss				S3	1	55.7 ± 0.0	NS
	Sphagnum contortum	Twisted Peat Moss				S3	6	87.4 ± 0.0	N
	ophagnum contontum	Toothed-leaved Nitrogen						01. 4 ± 0.0	NS
	Tetraplodon angustatus	i oouleu-leaveu Milloyell				S3	3	46.8 ± 0.0	110

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Pro
N	Tetraplodon mnioides	Entire-leaved Nitrogen Moss	COSEMIC	JANA	110V Legarition	S3	1	97.2 ± 0.0	NS
N	Rostania occultata	Crusted Tarpaper Lichen				S3	4	30.7 ± 0.0	NS
N	Collema nigrescens	Blistered Tarpaper Lichen				S3	7	53.6 ± 0.0	NS
N	Solorina saccata	Woodland Owl Lichen				S3	6	11.9 ± 0.0	NS
N						S3	-		NS
N	Fuscopannaria ahlneri	Corrugated Shingles Lichen				S3	93	31.3 ± 0.0	NS
-	Scytinium lichenoides	Tattered Jellyskin Lichen					13	11.9 ± 0.0	
N	Leptogium milligranum	Stretched Jellyskin Lichen				S3	1	83.4 ± 0.0	NS
N	Nephroma bellum	Naked Kidney Lichen				S3	6	4.2 ± 0.0	NS
N	Placynthium nigrum	Common Ink Lichen				S3	4	45.5 ± 10.0	NS
N	Platismatia norvegica	Oldgrowth Rag Lichen				S3	3	47.1 ± 0.0	NS
N	Ephebe lanata	Waterside Rockshag Lichen Powder-tipped Shadow				S3	2	61.5 ± 0.0	NS PE
N	Phaeophyscia adiastola	Lichen				S3	4	63.3 ± 0.0	. –
N	Phaeophyscia pusilloides	Pompom-tipped Shadow Lichen				S3	8	5.0 ± 0.0	NS
N	Peltigera collina	Tree Pelt Lichen Lesser Bird's-claw Beard				S3	65	34.1 ± 0.0	NS PE
N	Barbula convoluta	Moss				S3?	1	66.3 ± 0.0	
N	Calliergon giganteum	Giant Spear Moss				S3?	1	91.7 ± 2.0	PE
N	Elodium blandowii	Blandow's Bog Moss				S3?	2	61.4 ± 3.0	NS
N	Sphagnum lindbergii	Lindberg's Peat Moss				S3?	4	85.8 ± 0.0	NS
N	Sphagnum riparium	Streamside Peat Moss				S3?	1	80.9 ± 0.0	NS
N	Cladonia stygia	Black-footed Reindeer Lichen				S3?	5	59.6 ± 0.0	NS
J	Dicranum leioneuron	a Dicranum Moss				S3S4	1	90.2 ± 0.0	NS
N N	Encalypta ciliata	Fringed Extinguisher Moss				S3S4	1	60.1 ± 2.0	NS
1						S3S4 S3S4	4		NS
	Encalypta procera	Slender Extinguisher Moss					4	26.1 ± 0.0	
1	Myurella julacea	Small Mouse-tail Moss				S3S4		82.3 ± 0.0	NS
N	Splachnum ampullaceum	Cruet Dung Moss				S3S4	1	54.7 ± 0.0	NS
N	Tomentypnum nitens	Golden Fuzzy Fen Moss				S3S4	1	90.2 ± 0.0	PE
1	Schistidium agassizii	Elf Bloom Moss				S3S4	2	46.4 ± 3.0	NS
1	Bryoria pseudofuscescens	Mountain Horsehair Lichen				S3S4	12	73.9 ± 0.0	PE
1	Enchylium tenax	Soil Tarpaper Lichen				S3S4	3	11.9 ± 0.0	NS
١	Sticta fuliginosa	Peppered Moon Lichen				S3S4	35	43.7 ± 0.0	NS
N	Arctoparmelia incurva	Finger Ring Lichen				S3S4	14	39.5 ± 0.0	NS
1	Scytinium teretiusculum	Curly Jellyskin Lichen				S3S4	9	6.9 ± 0.0	NS
1	Leptogium acadiense	Acadian Jellyskin Lichen				S3S4	28	4.0 ± 0.0	NS
1	Scytinium subtile	Appressed Jellyskin Lichen				S3S4 S3S4	20	7.5 ± 0.0	NS
		Shelter Shingle Lichen				S3S4 S3S4	4	4.2 ± 0.0	NS
N N	Vahliella leucophaea								
	Heterodermia speciosa	Powdered Fringe Lichen				S3S4	18	35.0 ± 0.0	NS
1	Leptogium corticola	Blistered Jellyskin Lichen				S3S4	31	44.6 ± 0.0	NS
1	Melanohalea olivacea	Spotted Camouflage Lichen				S3S4	3	17.9 ± 0.0	NS
1	Parmeliopsis hyperopta	Gray Starburst Lichen				S3S4	7	57.7 ± 1.0	NS
1	Parmotrema perlatum	Powdered Ruffle Lichen				S3S4	1	55.4 ± 0.0	NS
1	Peltigera hymenina	Cloudy Pelt Lichen				S3S4	3	78.2 ± 1.0	NS
1	Sphaerophorus fragilis	Fragile Coral Lichen				S3S4	1	99.1 ± 0.0	NS
1	Coccocarpia palmicola	Salted Shell Lichen				S3S4	778	27.4 ± 0.0	NS
١	Physcia tenella	Fringed Rosette Lichen				S3S4	5	62.2 ± 3.0	NS
1	Anaptychia palmulata	Shaggy Fringed Lichen				S3S4	78	3.8 ± 0.0	NS
l I	Evernia prunastri	Valley Oakmoss Lichen				S3S4	16	22.4 ± 0.0	NS
i i	Heterodermia neglecta	Fringe Lichen				S3S4	72	35.0 ± 0.0	NS
	Fraxinus nigra	Black Ash	Threatened		Threatened	S1S2	197	7.6 ± 1.0	NS
5	Bartonia paniculata ssp.	Branched Bartonia	Threatened	Threatened	Inteateneu	STS2 SNA	197	7.0 ± 1.0 60.0 ± 10.0	NS
)	paniculata Floerkea proserpinacoides	False Mermaidweed	Not At Risk	Incatened		SINA S2S3	20	25.0 ± 1.0	NS
			NUL AL RISK		Friday garad				
	Salix candida	Sage Willow			Endangered	S1	42	97.2 ± 0.0	NS
5	Arnica lonchophylla	Northern Arnica				S1	1	93.9 ± 7.0	NS
>	Betula minor	Dwarf White Birch				S1	1	56.2 ± 0.0	NS

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P	Cardamine dentata	Toothed Bittercress	COOLING	UAINA	110V Legar 110t	S1	1	89.3 ± 0.0	NS
P	Cochlearia tridactylites	Limestone Scurvy-grass				S1	12	70.4 ± 0.0	NS
P	Stellaria crassifolia	Fleshy Stitchwort				S1	2	93.0 ± 1.0	PE
P	Hudsonia tomentosa	Woolly Beach-heath				S1	13	20.2 ± 2.0	NS
P	Ribes americanum	Wild Black Currant				S1	1	86.1 ± 5.0	NS
P	Fraxinus pennsylvanica	Red Ash				S1	1	76.3 ± 0.0	PE
P	Persicaria careyi	Carey's Smartweed				S1	1	88.7 ± 3.0	NS
P	Montia fontana	Water Blinks				S1	2	66.9 ± 3.0	NS
P						S1			NS
P P	Salix myrtillifolia	Blueberry Willow					1	96.6 ± 0.0	
-	Salix serissima	Autumn Willow				S1	2	96.5 ± 0.0	NS
P	Scrophularia lanceolata	Lance-leaved Figwort				S1	1	56.2 ± 1.0	NS
P	Carex alopecoidea	Foxtail Sedge				S1	2	34.8 ± 0.0	NS
Р	Carex garberi	Garber's Sedge				S1	4	67.7 ± 0.0	NS
Р	Carex granularis	Limestone Meadow Sedge				S1	1	89.8 ± 0.0	NS
Р	Carex plantaginea	Plantain-Leaved Sedge				S1	4	57.3 ± 0.0	NS
Р	Carex tenuiflora	Sparse-Flowered Sedge				S1	1	76.4 ± 1.0	NS
Р	Carex tincta	Tinged Sedge				S1	1	34.8 ± 1.0	NS
Р	Carex viridula var.	Greenish Sedge				S1	4	89.3 ± 0.0	NS
P	saxilittoralis	Greenish Sedge				51	4	69.5 ± 0.0	
Р	Carex viridula var. elatior	Greenish Sedge				S1	42	88.2 ± 0.0	NS
Р	0	Inflated Narrow-leaved				04	0	04.0.00	NS
Р	Carex grisea	Sedge				S1	6	24.0 ± 0.0	
Р	Cyperus lupulinus ssp. macilentus	Hop Flatsedge				S1	15	18.1 ± 10.0	NS
Р	Rhynchospora capillacea	Slender Beakrush				S1	4	92.5 ± 1.0	NS
P	Scirpus atrovirens	Dark-green Bulrush				S1	1	98.9 ± 0.0	NS
P	Iris prismatica	Slender Blue Flag				S1	2	26.6 ± 1.0	NS
P	Juncus vaseyi	Vasey Rush				S1	1	72.5 ± 0.0	NS
P	Triantha glutinosa	Sticky False-Asphodel				S1	13	97.2 ± 0.0	NS
-	Malaxis monophyllos var.	North American White					15	97.2 ± 0.0	NS
Р	brachypoda	Adder's-mouth				S1	1	53.1 ± 7.0	
Р	Calamagrostis stricta ssp. inexpansa	Slim-stemmed Reed Grass				S1	1	84.9 ± 0.0	NS
Р	Elymus hystrix	Spreading Wild Rye				S1	1	32.2 ± 1.0	NS
Р	Potamogeton nodosus	Long-leaved Pondweed				S1	1	61.4 ± 5.0	NS
Р	Sparganium androcladum	Branching Bur-Reed				S1	1	96.7 ± 1.0	NS
Р	Adiantum pedatum	Northern Maidenhair Fern				S1	1	87.7 ± 1.0	NS
Р	Equisetum palustre	Marsh Horsetail				S1	8	81.7 ± 0.0	NS
Р	Solidago hispida	Hairy Goldenrod				S1?	1	46.1 ± 7.0	NS
Р	Carex pensylvanica	Pennsylvania Sedge				S1?	1	94.0 ± 3.0	NS
Р	Carex rostrata	Narrow-leaved Beaked Sedge				S1?	1	98.0 ± 5.0	PE
Р	Allium schoenoprasum	Wild Chives				S1?	3	43.3 ± 3.0	NS
Р	Allium schoenoprasum var. sibiricum	Wild Chives				S1?	2	88.7 ± 7.0	NS
Р	Sanicula odorata	Clustered Sanicle				S1S2	5	42.7 ± 0.0	NS
Р	Ageratina altissima	White Snakeroot				S1S2	2	26.3 ± 7.0	NS
Р	Cornus suecica	Swedish Bunchberry				S1S2	2	97.5 ± 0.0	NS
Р	Anemone virginiana var. alba	Virginia Anemone				S1S2	9	77.0 ± 5.0	NS
Р	Parnassia parviflora	Small-flowered Grass-of- Parnassus				S1S2	10	25.6 ± 1.0	NS
Р	Carex havdenii					S1S2	5	6.2 ± 5.0	NS
P	Carex haydenii	Hayden's Sedge							
٢	Platanthera huronensis	Fragrant Green Orchid				S1S2	3	4.0 ± 10.0	NS
Р	Calamagrostis stricta ssp. stricta	Slim-stemmed Reed Grass				S1S2	2	93.3 ± 0.0	PE
							0		
P P	Carex vacillans Zizia aurea	Estuarine Sedge Golden Alexanders				S1S3 S2	3 41	34.8 ± 0.0 24.3 ± 1.0	NS NS

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oroup	Antennaria parlinii ssp. fallax	Parlin's Pussytoes	SUSEWIC	JANA	FION LEYAL FIOL	S2	# recs	63.7 ± 0.0	NS
	Rudbeckia laciniata	Cut-Leaved Coneflower				S2 S2	10	25.9 ± 0.0	NS
	Hudsonia ericoides	Pinebarren Golden Heather				S2 S2	10	23.9 ± 0.0 93.0 ± 0.0	PE
)	Desmodium canadense	Canada Tick-trefoil				S2	20	35.6 ± 0.0	NS
	Anemonastrum canadense	Canada Anemone				S2	3	52.8 ± 1.0	NS
)	Hepatica americana	Round-lobed Hepatica				S2	7	58.9 ± 0.0	NS
	Comandra umbellata	Bastard's Toadflax				S2	31	31.5 ± 5.0	NS
)	Gratiola neglecta	Clammy Hedge-Hyssop				S2	4	80.3 ± 0.0	NS
•	Carex gynocrates	Northern Bog Sedge				S2	7	88.3 ± 0.0	NS
,	Carex pellita	Woolly Sedge				S2	10	35.5 ± 0.0	NS
, ,	Carex livida	Livid Sedge				S2	12	26.7 ± 0.0	NS
		Greene's Rush				S2	1	33.5 ± 1.0	NS
	Juncus greenei	Gleenes Rusii				32	1	55.5 ± 1.0	
)	Juncus alpinoarticulatus ssp.	Northern Green Rush				S2	9	78.5 ± 0.0	NS
	americanus								
)	Luzula spicata	Spiked Woodrush				S2	1	24.0 ± 0.0	NS
•	Allium tricoccum	Wild Leek				S2	8	67.6 ± 0.0	NS
)	Lilium canadense	Canada Lily				S2	87	6.2 ± 1.0	NS
	Cypripedium parviflorum var.	•							NS
)	pubescens	Yellow Lady's-slipper				S2	28	23.7 ± 0.0	
	Cypripedium parviflorum var.								NS
)		Small Yellow Lady's-Slipper				S2	2	56.2 ± 0.0	NO.
	makasin								
)	Cypripedium reginae	Showy Lady's-Slipper				S2	226	50.4 ± 0.0	NS
, ,	Platanthera flava var.	Pale Green Orchid				S2	9	55.9 ± 1.0	NS
	herbiola	Tale Oreen Oreniu					5	55.5 ± 1.0	
	Platanthera macrophylla	Large Round-Leaved Orchid				S2	9	64.1 ± 5.0	NS
	Bromus latiglumis	Broad-Glumed Brome				S2	39	60.4 ± 0.0	NS
	Cinna arundinacea	Sweet Wood Reed Grass				S2	43	72.9 ± 0.0	NS
	Elymus wiegandii	Wiegand's Wild Rye				S2	15	32.7 ± 0.0	NS
•									
	Sparganium hyperboreum	Northern Burreed				S2	3	61.6 ± 0.0	NS
)	Cryptogramma stelleri	Steller's Rockbrake				S2	17	89.0 ± 0.0	NS
	Cuscuta cephalanthi	Buttonbush Dodder				S2?	7	21.2 ± 0.0	NS
)	Crataegus submollis	Quebec Hawthorn				S2?	3	12.9 ± 7.0	NS
)	Carex peckii	White-Tinged Sedge				S2?	1	83.9 ± 0.0	NS
)	Thuja occidentalis	Eastern White Cedar			Vulnerable	S2S3	3	35.5 ± 0.0	NS
b	Osmorhiza longistylis	Smooth Sweet Cicely			Valiorabio	S2S3	22	21.4 ± 0.0	NS
						S2S3	1	26.2 ± 1.0	NS
	Bidens hyperborea	Estuary Beggarticks					-		
	Erigeron philadelphicus	Philadelphia Fleabane				S2S3	4	18.1 ± 7.0	NS
	Impatiens pallida	Pale Jewelweed				S2S3	11	28.9 ± 7.0	NS
	Caulophyllum thalictroides	Blue Cohosh				S2S3	46	21.4 ± 0.0	NS
•	Draba arabisans	Rock Whitlow-Grass				S2S3	3	95.5 ± 1.0	NS
)	Boechera stricta	Drummond's Rockcress				S2S3	6	73.7 ± 0.0	NS
	Stellaria humifusa	Saltmarsh Starwort				S2S3	8	58.2 ± 0.0	NS
		Red Goosefoot				S2S3	6	32.3 ± 7.0	NS
	Oxybasis rubra								
	Hypericum majus	Large St John's-wort				S2S3	1	98.7 ± 0.0	PE
	Hypericum x dissimulatum	Disguised St. John's-wort				S2S3	1	57.9 ± 1.0	NS
	Empetrum atropurpureum	Purple Crowberry				S2S3	2	96.8 ± 5.0	PE
	Euphorbia polygonifolia	Seaside Spurge				S2S3	12	20.2 ± 2.0	NS
	Myriophyllum farwellii	Farwell's Water Milfoil				S2S3	9	9.2 ± 1.0	NS
	Hedeoma pulegioides	American False Pennyroyal				S2S3	4	29.6 ± 5.0	NS
	Oenothera fruticosa ssp.	Narrow-leaved Evening					-	20.0 1 0.0	NS
						S2S3	3	43.3 ± 7.0	N3
	tetragona	Primrose							
	Polygonum aviculare ssp.	Box Knotweed				S2S3	2	34.8 ± 0.0	NS
	buxiforme	DOX MIDIWEED				0200	2	0	
	Polygonum oxyspermum	Davida Kristina I				0000	-	50 4 1 4 0	NS
)	ssp. raii	Ray's Knotweed				S2S3	5	59.4 ± 1.0	
	Rumex triangulivalvis	Triangular-valve Dock				S2S3	4	76.5 ± 10.0	NS
)	Primula mistassinica	Mistassini Primrose				S2S3	16	63.2 ± 7.0	NS
	Anemone quinquefolia	Wood Anemone				S2S3	17	34.9 ± 0.0	NS

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0	Caltha palustris	Yellow Marsh Marigold				S2S3	36	15.1 ± 0.0	NS
0	Amelanchier fernaldii	Fernald's Serviceberry				S2S3	3	73.8 ± 1.0	NS
0	Potentilla canadensis	Canada Cinquefoil				S2S3	1	81.0 ± 2.0	NS
0	Salix pellita	Satiny Willow				S2S3	4	65.3 ± 1.0	NS
)	Tiarella cordifolia	Heart-leaved Foamflower				S2S3	222	40.8 ± 7.0	NS
	Agalinis purpurea var.	Small-flowered Purple False							NS
)	parviflora	Foxglove				S2S3	3	40.5 ± 0.0	
b	Carex adusta					S2S3	4	58.3 ± 5.0	NS
))		Lesser Brown Sedge							
	Carex comosa	Bearded Sedge				S2S3	5	75.2 ± 0.0	PE
•	Carex houghtoniana	Houghton's Sedge				S2S3	1	93.9 ± 1.0	NS
D	Carex hystericina	Porcupine Sedge				S2S3	33	34.9 ± 0.0	NS
)	Eleocharis ovata	Ovate Spikerush				S2S3	4	46.6 ± 0.0	NS
0	Scirpus pedicellatus	Stalked Bulrush				S2S3	6	74.7 ± 0.0	NS
0	Vallisneria americana	Wild Celery				S2S3	1	93.6 ± 1.0	NS
	Spiranthes casei var.	Wild Celery				0200	I.	35.0 ± 1.0	PE
0	novaescotiae	Case's Ladies'-Tresses				S2S3	2	95.4 ± 0.0	. –
)	Spiranthes lucida	Shining Ladies'-Tresses				S2S3	45	35.3 ± 1.0	NS
)	Calamagrostis stricta	Slim-stemmed Reed Grass				S2S3	2	89.3 ± 0.0	PE
)	Potamogeton friesii	Fries' Pondweed				S2S3	18	63.6 ± 0.0	PE
0	Cystopteris laurentiana	Laurentian Bladder Fern				S2S3	5	95.6 ± 1.0	NS
5	Woodsia glabella	Smooth Cliff Fern				S2S3	2	95.6 ± 0.0	NS
		Shiouti Cilli Felli				3233	2	95.0 ± 0.0	
2	Botrychium lanceolatum ssp.	Narrow Triangle Moonwort				S2S3	13	26.6 ± 0.0	NS
	angustisegmentum	Ū.							
)	Botrychium simplex	Least Moonwort				S2S3	3	26.6 ± 0.0	NS
)	Ophioglossum pusillum	Northern Adder's-tongue				S2S3	1	67.1 ± 0.0	NS
)	Potamogeton pulcher	Spotted Pondweed			Vulnerable	S3	3	73.6 ± 2.0	NS
, ,	Angelica atropurpurea	Purple-stemmed Angelica			Valiorabio	S3	29	60.1 ± 1.0	PE
b	Conioselinum chinense	Chinese Hemlock-parsley				S3	1	54.1 ± 5.0	NS
5									
	Hieracium robinsonii	Robinson's Hawkweed				S3	3	66.7 ± 7.0	NS
2	Senecio pseudoarnica	Seabeach Ragwort				S3	19	65.6 ± 1.0	NS
2	Symphyotrichum boreale	Boreal Aster				S3	82	88.1 ± 0.0	NS
2	Symphyotrichum ciliolatum	Fringed Blue Aster				S3	17	21.8 ± 7.0	NS
2	Betula pumila var. pumila	Bog Birch				S3	1	96.2 ± 7.0	NS
D	Betula michauxii	Michaux's Dwarf Birch				S3	27	52.8 ± 5.0	NS
5	Betula pumila	Bog Birch				S3	33	78.1 ± 0.0	PE
2									
	Cardamine parviflora	Small-flowered Bittercress				S3	4	92.6 ± 0.0	NS
0	Palustricodon aparinoides	Marsh Bellflower				S3	30	6.2 ± 1.0	NS
0	Lobelia kalmii	Brook Lobelia				S3	83	78.5 ± 0.0	NS
2	Sagina nodosa	Knotted Pearlwort				S3	8	58.8 ± 1.0	NS
2	Sagina nodosa ssp. borealis	Knotted Pearlwort				S3	5	87.6 ± 0.0	NS
2	Stellaria longifolia	Long-leaved Starwort				S3	12	67.7 ± 0.0	NS
5	Ceratophyllum echinatum	Prickly Hornwort				S3	4	74.5 ± 0.0	NS
-	Ceratophynum echinalum	,				33	4	14.0 ± 0.0	
D	Triosteum aurantiacum	Orange-fruited Tinker's Weed				S3	167	9.1 ± 0.0	NS
c	Viburnum edule	Squashberry				S3	3	59.5 ± 0.0	NS
2	Empetrum eamesii	Pink Crowberry				S3	2	93.0 ± 0.0	PE
0	Halenia deflexa	Spurred Gentian				S3	23	45.9 ± 1.0	NS
5		Whorled Water Milfoil				S3	23	43.9 ± 1.0 72.6 ± 0.0	NS
	Myriophyllum verticillatum								
)	Epilobium strictum	Downy Willowherb				S3	43	41.9 ± 0.0	NS
0	Polygala sanguinea	Blood Milkwort				S3	10	35.0 ± 1.0	NS
D C	Persicaria arifolia	Halberd-leaved Tearthumb				S3	16	9.1 ± 0.0	NS
2	Plantago rugelii	Rugel's Plantain				S3	3	41.8 ± 0.0	NS
2	Samolus parviflorus	Seaside Brookweed				S3	11	20.6 ± 1.0	NS
5	Pyrola minor	Lesser Pyrola				S3	3	67.3 ± 0.0	NS
2									
	Anemone virginiana	Virginia Anemone				S3	35	23.7 ± 0.0	NS
	Galium kamtschaticum	Northern Wild Licorice				S3	8	90.6 ± 1.0	NS
2	Galium labradoricum	Labrador Bedstraw				S3	167	71.7 ± 0.0	NS
		Bog Willow				S3	57	43.3 ± 7.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Pro
D	Saxifraga paniculata ssp. laestadii	Laestadius' Saxifrage				S3	1	90.0 ± 7.0	NS
)	Lindernia dubia	Yellow-seeded False Pimperel				S3	21	10.2 ± 0.0	NS
•	Laportea canadensis	Canada Wood Nettle				S3	30	10.6 ± 0.0	NS
	Pilea pumila	Dwarf Clearweed				S3	7	18.3 ± 6.0	NS
	Viola nephrophylla	Northern Bog Violet				S3	15	36.2 ± 0.0	NS
•	Carex bebbii	Bebb's Sedge				S3	19	23.2 ± 7.0	NS
, ,	Carex castanea	Chestnut Sedge				S3	40	88.1 ± 0.0	NS
, ,	Carex cryptolepis	Hidden-scaled Sedge				S3	11	48.0 ± 1.0	NS
)	, , , , , , , , , , , , , , , , , , ,					S3			
))	Carex eburnea	Bristle-leaved Sedge					26	12.0 ± 0.0	NS
	Carex hirtifolia	Pubescent Sedge				S3	36	21.3 ± 0.0	NS
0	Carex lupulina	Hop Sedge				S3	17	6.3 ± 0.0	NS
0	Carex rosea	Rosy Sedge				S3	12	21.3 ± 0.0	NS
b	Carex tenera	Tender Sedge				S3	5	51.1 ± 1.0	NS
b	Carex tribuloides	Blunt Broom Sedge				S3	15	9.1 ± 0.0	NS
b	Carex tuckermanii	Tuckerman's Sedge				S3	1	48.4 ± 0.0	NS
)	Carex atratiformis	Scabrous Black Sedge				S3	2	95.9 ± 1.0	NS
5	Eleocharis flavescens var. olivacea	Bright-green Spikerush				S3	5	17.6 ± 0.0	NS
`		Fact flatter of California b				00	40	70.0.0.0	NIC
	Eleocharis quinqueflora	Few-flowered Spikerush				S3	16	78.8 ± 0.0	NS
P	Eriophorum gracile	Slender Cottongrass				S3	11	64.5 ± 1.0	NS
2	Schoenoplectus americanus	Olney's Bulrush				S3	1	24.0 ± 0.0	NS
	Cypripedium parviflorum	Yellow Lady's-slipper Menzies' Rattlesnake-				S3	57	12.0 ± 0.0	NS PE
	Goodyera oblongifolia	plantain				S3	5	99.8 ± 0.0	
	Neottia bifolia	Southern Twayblade				S3	57	36.3 ± 0.0	NS
D	Platanthera grandiflora	Large Purple Fringed Orchid				S3	124	8.3 ± 0.0	NS
0	Platanthera hookeri	Hooker's Orchid				S3	2	23.3 ± 0.0	NS
C	Dichanthelium linearifolium	Narrow-leaved Panic Grass				S3	4	37.0 ± 7.0	NS
5	Piptatheropsis canadensis	Canada Ricegrass				S3	5	88.7 ± 3.0	NS
c	Poa glauca	Glaucous Blue Grass				S3	8	95.5 ± 1.0	NS
b	Stuckenia filiformis	Thread-leaved Pondweed				S3	12	76.8 ± 0.0	NS
5	Potamogeton praelongus	White-stemmed Pondweed				S3	24	70.0 ± 0.0 7.2 ± 1.0	NS
- D						S3			
	Potamogeton richardsonii	Richardson's Pondweed					6	31.3 ± 1.0	NS
5	Potamogeton zosteriformis	Flat-stemmed Pondweed				S3	6	74.5 ± 0.0	NS
2	Asplenium viride	Green Spleenwort				S3	19	66.9 ± 0.0	NS
0	Dryopteris fragrans	Fragrant Wood Fern				S3	6	34.0 ± 0.0	NS
P	Polystichum lonchitis	Northern Holly Fern				S3	3	82.3 ± 100.0	NS
P	Sceptridium dissectum	Dissected Moonwort				S3	4	11.1 ± 1.0	NS
5	Polypodium appalachianum Persicaria amphibia var.	Appalachian Polypody				S3	9	41.1 ± 0.0	NS NS
	emersa	Long-root Smartweed				S3?	1	10.2 ± 0.0	
	Spiranthes ochroleuca	Yellow Ladies'-tresses				S3?	15	59.7 ± 0.0	PE
0	Diphasiastrum x sabinifolium	Savin-leaved Ground-cedar				S3?	9	4.7 ± 5.0	NS
0	Bidens vulgata	Tall Beggarticks				S3S4	5	33.0 ± 0.0	NS
0	Erigeron hyssopifolius	Hyssop-leaved Fleabane				S3S4	18	9.6 ± 0.0	NS
)	Hieracium paniculatum	Panicled Hawkweed				S3S4	6	62.7 ± 0.0	NS
b	Bidens beckii	Water Beggarticks				S3S4	9	9.3 ± 0.0	NS
b	Packera paupercula	Balsam Groundsel				S3S4	75	11.9 ± 0.0	NS
þ	Atriplex glabriuscula var.	Frankton's Saltbush				S3S4	3	67.1 ± 0.0	NS
`	franktonii Shanhardia canadanaia	Seenherry (0004	40	77 4 . 0 0	NIC
	Shepherdia canadensis	Soapberry				S3S4	40	77.1 ± 0.0	NS
	Vaccinium boreale	Northern Blueberry				S3S4	5	62.0 ± 1.0	NS
2	Vaccinium cespitosum	Dwarf Bilberry				S3S4	54	30.8 ± 0.0	NS
P	Fagus grandifolia	American Beech				S3S4	146	4.6 ± 0.0	NS
P	Proserpinaca pectinata	Comb-leaved Mermaidweed				S3S4	2	53.6 ± 1.0	NS
Þ	Decodon verticillatus	Swamp Loosestrife				S3S4	1	95.2 ± 7.0	NS

Taxonomic						Prov Rarity			
Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Rank	# recs	Distance (km)	Prov
Р	Nuphar microphylla	Small Yellow Pond-lily				S3S4	1	42.7 ± 2.0	NS
Р	Persicaria pensylvanica	Pennsylvania Smartweed				S3S4	21	24.0 ± 0.0	NS
Р	Fallopia scandens	Climbing False Buckwheat				S3S4	36	21.6 ± 0.0	NS
Р	Rumex pallidus	Seabeach Dock				S3S4	1	25.8 ± 0.0	NS
Р	Pyrola asarifolia	Pink Pyrola				S3S4	11	69.7 ± 0.0	NS
Р	Endotropis alnifolia	alder-leaved buckthorn				S3S4	577	9.4 ± 0.0	NS
Р	Amelanchier spicata	Running Serviceberry				S3S4	8	41.6 ± 5.0	NS
Р	Fragaria vesca ssp. americana	Woodland Strawberry				S3S4	25	11.9 ± 0.0	NS
Р	Fragaria vesca	Woodland Strawberry				S3S4	1	98.9 ± 0.0	NS
Р	Galium aparine	Common Bedstraw				S3S4	16	22.1 ± 4.0	NS
Р	Geocaulon lividum	Northern Comandra				S3S4	76	54.2 ± 0.0	NS
Р	Limosella australis	Southern Mudwort				S3S4	6	62.5 ± 0.0	PE
Р	Ulmus americana	White Elm				S3S4	57	9.1 ± 0.0	NS
Р	Verbena hastata	Blue Vervain				S3S4	81	9.7 ± 0.0	NS
Р	Viola selkirkii	Great-Spurred Violet				S3S4	1	63.3 ± 1.0	NS
Р	Carex argyrantha	Silvery-flowered Sedge				S3S4	1	66.8 ± 5.0	PE
Р	Triglochin gaspensis	Gasp				S3S4	25	77.5 ± 0.0	NS
Р	Juncus acuminatus	Sharp-Fruit Rush				S3S4	3	9.4 ± 0.0	NS
Р	Juncus subcaudatus	Woods-Rush				S3S4	13	27.2 ± 5.0	NS
Р	Luzula parviflora ssp. melanocarpa	Black-fruited Woodrush				S3S4	3	30.0 ± 0.0	NS
Р	Goodyera repens	Lesser Rattlesnake-plantain				S3S4	9	66.1 ± 1.0	PE
Р	Liparis loeselii	Loesel's Twayblade				S3S4	15	63.0 ± 0.0	NS
Р	Platanthera obtusata	Blunt-leaved Orchid				S3S4	10	30.4 ± 10.0	NS
Р	Platanthera orbiculata	Small Round-leaved Orchid				S3S4	31	47.2 ± 0.0	NS
Р	Alopecurus aequalis	Short-awned Foxtail				S3S4	7	8.3 ± 1.0	NS
Р	Dichanthelium clandestinum	Deer-tongue Panic Grass				S3S4	87	29.1 ± 0.0	NS
Р	Panicum philadelphicum	Philadelphia Panicgrass				S3S4	1	90.1 ± 0.0	NS
Р	Koeleria spicata	Narrow False Oats				S3S4	8	36.6 ± 0.0	NS
Р	Asplenium trichomanes	Maidenhair Spleenwort				S3S4	4	63.8 ± 0.0	NS
Р	Equisetum pratense	Meadow Horsetail				S3S4	23	77.2 ± 0.0	NS
Р	Diphasiastrum complanatum	Northern Ground-cedar				S3S4	5	58.1 ± 0.0	NS
Р	Diphasiastrum sitchense	Sitka Ground-cedar				S3S4	20	31.9 ± 1.0	NS
Р	Huperzia appressa	Mountain Firmoss				S3S4	3	82.4 ± 5.0	NS
Р	Sceptridium multifidum	Leathery Moonwort				S3S4	8	35.1 ± 10.0	NS
Р	Botrychium matricariifolium	Daisy-leaved Moonwort				S3S4	6	16.4 ± 0.0	NS
Р	Viola canadensis	Canada Violet				SH	2	78.9 ± 7.0	NS

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

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