APPENDIX I. ENVIRONMENTAL PROTECTION PLAN

New Victoria Community Wind Power Project

Environmental Protection Plan

PREPARED BY

McCallum Environmental Ltd.

July, 2016

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Environmental Protection Plan (EPP)

1.0 INTRODUCTION

This Environmental Protection Plan (EPP) has been prepared to guide the design and installation of the physical components of the New Victoria Community Wind Power project.

The purpose of the EPP is to establish procedures and methods to be used in the construction and operation of the New Victoria Community Wind Power project that reduce impacts on the environment. The EPP applies provincial and, where appropriate, federal regulations & guidelines for construction activities and procedures.

The EPP includes an Emergency Response Plan (ERP) to address environmental emergencies, an Environmental Management Plan which lays out the procedures to be followed during the conduct of the work and a Site Restoration Plan (SRP). This ERP will be harmonized with the contractor's ERP and will be made available to all site personnel.

The EPP incorporates approved design methods for erosion and sediment control, defines setbacks from streams and wetlands and areas of environmental or heritage significance. It provides guidance for appropriate engineering designs for surface water management and stream crossings. The EPP also designates the timeframes for seasonally sensitive activities and establishes prohibitions for the project design and construction activities.

This document may be amended from time to time. Amendments will be issued by the Proponent Celtic Current LP and the project manager will ensure that all copies will receive amendments.

2.0 EMERGENCY RESPONSE

The following provides contact numbers in the case of emergencies involving: worker safety, public safety, and emergency response to address environmental emergencies.

2.1 Emergency Contact List

Organization	Contact Name	Contact Number
Fire Department	-	**911**
Ambulance	-	**911**
RCMP Police	-	**911**
Hospital	Cape Breton Regional Hospital 1482 George St, Sydney, NS	**(902) 567-8000**
Poison Control	-	**1-800-565-8161**
Chief Financial Officer, **Celtic Current LP**	Martha Campbell	**1-902-945-2300**
Project Manager **Celtic Current LP**	Peter Archibald	**1-902-945-2300**
Health and Safety Officer, **Celtic Current LP**	TBA	
Nova Scotia Department of Environment	Emergency Measures Office	**1-800-565-1633**
Nova Scotia Environment Sydney	TBA	**(902) 563-2100**
Nova Scotia **Department of Labour**	Health and Safety - 24 hour Response	**1 -800-952-2687**
NS Department of Natural Resources, Cape Breton County	Terry Power	**(902) 563-3370**
Environment Canada	Environmental Protection Emergency Response	**1-800-426-6200**
Environmental Advisor **Celtic Current LP**	Andy Walter	**(902) 441-2639**
Archaeological Artifacts, **Special Places Coordinator**	Sean Weseloh McKeane	**(902) 424-6475**

2.2 Key Personnel Contact List

Position	Name	Phone Number	Fax Number	Cell Phone Number
Chief Executive Officer, Celtic Current LP	Leonard van Zutphen	(902)	(902)	(902)
Chief Financial Officer, Celtic Current LP.	Martha Campbell	(902)	(902)	(902)
Project Manager	Peter Archibald	(902)	(902)	(902)
Field Inspector, Celtic Current LP	Andy Walter	(902) 446-8252	-	(902) 441-2639
Health and Safety Officer	TBA			
Senior Environmental Advisor	Robert McCallum	902-446-8252		(902) 292-0514
Legal Counsel	TBA			
NS Environment, Sydney Nova Scotia	TBA	(902) 563-2100	(902) 563-2387	-
DNR, Cape Breton County	Terry Power	(902) 563-3370	(902) 567-2535	-
Fisheries and Oceans, (DFO)	TBA	(902) 863-5670		
NS Tourism, Culture and Heritage	Sean Weseloh McKeane	(902) 424-6475	(902) 424-0560	-
Maritime Aboriginal Peoples Council	Roger Hunka	(902) 895-2982	-	-
Union of Nova Scotia Indians	Nancy Paul	(902) 538-4107	-	-
Mi'kmaq Rights Initiative	Eric Christmas	(902) 843-3880	-	-

2.3 Guide Map to Regional Hospital

from New Victoria, NS
to Cape Breton Regional Hospital, 1482 George Street,...

24 min (23.8 km)

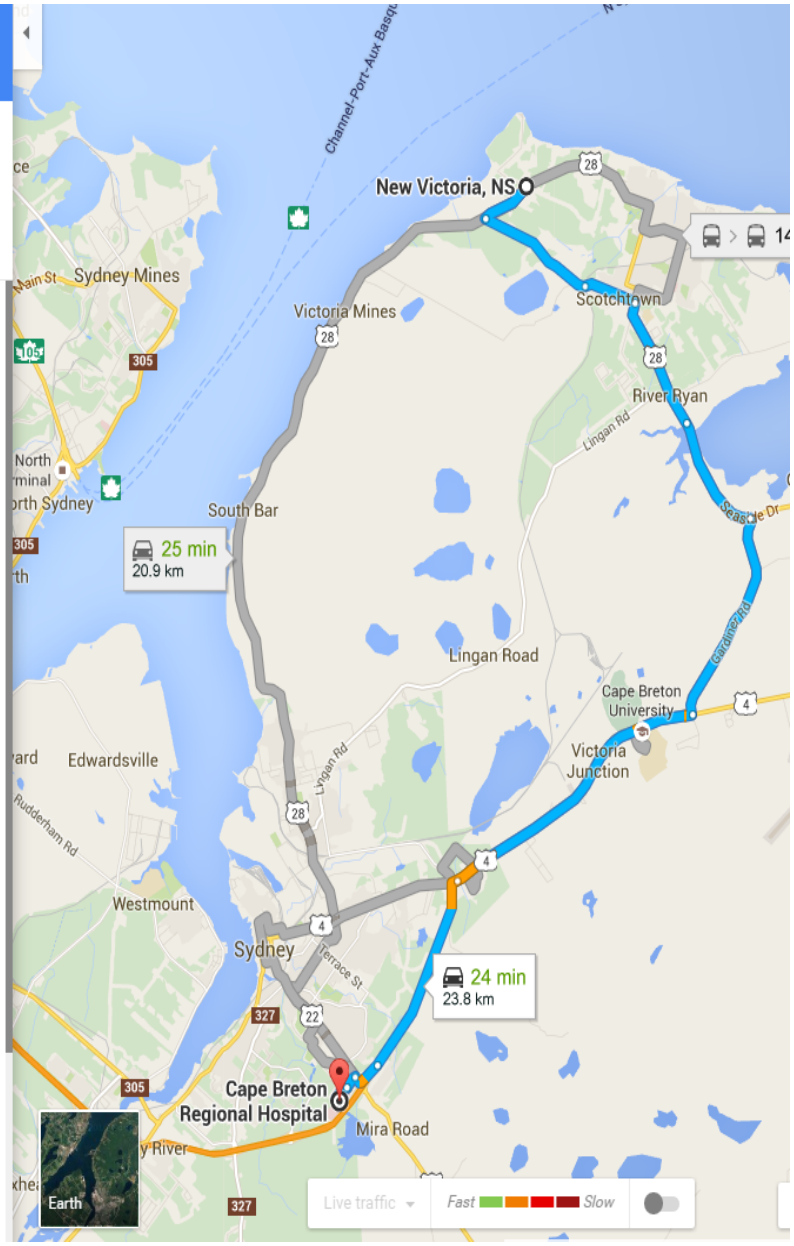
via Grand Lake Rd/NS-4 W

22 min without traffic

New Victoria, NS

- Head southeast on Browns Rd toward New Waterford Hwy/NS-28 E
  2 s (26 m)
- Turn right at the 1st cross street onto New Waterford Hwy/NS-28 W
  1 min (1.0 km)
- Continue on Daley Rd to Scotchtown
  4 min (3.5 km)
- Continue on NS-28 E to Gardiner Mines
  4 min (4.7 km)
- Turn right onto Gardiner Rd (signs for Gardiner Road/Sydney)
  3 min (3.9 km)
- Follow Grand Lake Rd/NS-4 W and NS-125 W to Regional Hospital Blvd in Mira Road
  9 min (10.1 km)
- Drive to Martha Blvd
  1 min (600 m)

Cape Breton Regional Hospital
1482 George Street, Sydney, NS B1P 1P3



3.0 ENVIRONMENTAL MANAGEMENT PLAN GENERAL PROVISIONS

The Environmental Management Plan (EMP) has been developed to guide site specific construction activities and procedures. The purpose of the EMP is:

1. to manage and minimize risks and potential environmental impacts from construction activities;
2. To ensure that Celtic Current's commitments to minimizing environmental effects are met;
3. To ensure development activities meet all provincial, federal and municipal requirements;
4. To provide mitigation of the potential environmental impacts due to construction activities; and,
5. To provide a reference document for planning and/or conducting construction activities that may have an impact on the environment.

This EMP was developed by Celtic Current to describe the protection measures to be followed by Celtic Current personnel and all contractors required for activities associated with development of the New Victoria Community Wind Power Project. Celtic Current's appointed project manager will be responsible for the enforcement of these procedures.

3.1 Construction Environmental Mitigation Measures

A. Design Specifications

1) Construction specifications will be completed to turbine manufacturer's technical specifications for:
    1) Access Roads and Crane Platforms
    2) Civil works, Crane and Road Requirements
    3) Other engineering design specifications pertaining to the New Victoria Community Wind Project as specified by Celtic Current and their project engineers;

    If a conflict arises between technical specifications and regulatory requirements, regulatory requirements shall prevail, unless amendments are approved by the appropriate regulatory body.

B. Work Areas

1) All construction activities will be restricted, as much as practically possible, to approved work spaces, designated access roads and turbine sites;

2) During tower foundation construction, the crane platform areas may also serve as storage areas for material (e.g. reinforced steel) and machinery.

C. Runoff Control and Prevention of Sedimentation

1) When possible, the contractor will avoid grading immediately before or after heavy rain events, which would further loosen the road surface and promote runoff of graded material;

2) Aggregate which is to be used in or near watercourses will be washed quarried material;

3) For construction activities near watercourses, erosion and sediment control measures will be used to minimize erosion and ensure silt containment. The contractor will be responsible for maintaining these erosion and sedimentation control systems to ensure their effectiveness. These measures are outlined in Section 4.4;

4) All silt fences will maintain a minimum setback distance from water courses and wetlands of 10m;

5) Any water which intrudes into excavations that will be removed by pumping will not be discharged directly into any wetland or watercourse. If discharge water from pumping operations contains Total Suspended Solids (TSS) which exceeds 25 mg/l above the background condition of the watercourse at the site, discharge water from excavation will be pumped to a designated area up-gradient and downstream of the excavation. The discharge may be either be allowed to spill onto the ground and return to the watercourse following the natural topography, providing that the discharge is greater than 100 metres from a natural drainage course. Sedimentation bags, or containers with washed gravel will be used to dissipate flow and reduce erosion;

6) Following completion of construction and once vegetation has established, non bio-degradable erosion and sediment barriers will be removed from those areas which may be flooded by watercourses under high flow seasonal conditions to prevent these materials from being entrained in the watercourses;

7) If bridge footing excavations intrude into a watercourse for any reason, the contractor will be responsible to obtain prior environmental approvals and permitting for the watercourse alterations, diversions or temporary barriers as necessary to complete the installation;

8) Material placed in or adjacent to the watercourses for the temporary diversion will be removed as soon as possible by the contractor after the construction of work is completed;

9) Celtic Current will conduct visual assessments, both quarterly and after severe storm events, of the site to ensure the effectiveness of erosion and sedimentation control measures, unless otherwise approved by NSE.

10) Celtic Current and the Contractor will follow the *Nova Scotia Erosion and Sediment Control Manual* and/or follow the erosion and sediment control plan as outlined in this document (Section 4.4);

11) Any loss of containment or release of sediments will be reported immediately to the project manager and to NSE.

D. Bedrock Removal and Blasting

1) Where possible, rock excavation will be performed by ripping rather than blasting. Should blasting be required, no blasting will occur unless otherwise approved by NSE;

E. Pits

1) All aggregate sources will be approved by the project engineer and based on considerations such as the Pit and Quarry Guidelines (NSDOE May 4, 1999);
2) The Contractor will be responsible for obtaining NSE approvals for Pits greater than 2 hectares in size. Quarries of any size require NSE approval;
3) The slopes of all excavation pits will be constructed to a 3:1 slope;
4) If a pit is inconspicuous and poses a perceived safety hazard, the area will be marked with signs and/or fencing, depending on its location;
5) Pits may be backfilled with native material, and seeded with non-invasive, native, herbaceous plant species. Alternatively, pits may sloped to 3:1, stabilized, erosion controlled, and reclaimed to allow water to naturally collect within the pits to provide wetland habitat. In compliance with Section 6 of the Migratory Bird Regulations (MBR), this activity may not be conducted during the breeding season if birds which may use embankments for nesting sites are identified in the pit(s), typically between May 1st and August 31st for most species;
6) If adequate borrow pits and/or disposal sites are not available within the project area, offsite sources of fill will be used.

F. Vehicle and Equipment Operation and Fueling

1) All personnel, vehicles, equipment, etc…will follow all applicable traffic regulations and posted site speed limits and traffic controls;
2) Appropriate dust suppression measures will be used as required. Water will be used for dust suppression. The use of any other substance for dust is to be avoided;
3) Storage of petroleum, oil and lubricants (POL) on site during the construction phase will be in designated areas and will be done in compliance with applicable provincial and federal regulations, codes and guidelines;
4) The contractor will maintain an onsite emergency spill containment kit to adequately control any loss of fuel or lubricant by equipment;

5) Waste petroleum products, oils and lubricants (POL) will be properly contained and not released into the environment. Waste POL and all spent containers will be contained and removed from the site for proper disposal at an approved disposal facility;
6) Vehicles will be fueled at designated sites away from wetlands and watercourses (minimum distance 50 m);
7) The transportation of dangerous goods will be conducted in compliance with the Transportation of Dangerous Goods Act;
8) The construction site will have restricted access signage to prevent trespassing or inadvertent entrance by public vehicles. ''Restricted Access'' signs will be posted at the entrance of primary access roads which leave private property and enter onto public right-of-ways;
9) Equipment and vehicles will yield the right-of-way to wildlife;

G. Construction Waste

1) Construction waste will be removed from the project area and disposed of at an approved location or facility;
2) Disposal of waste materials from construction activity will be in accordance with NSDTC's Standard Specifications (1980 and revisions) for Access Road Construction;
3) Unless otherwise directed by the project manager, limbs and timber will be chipped at the site, in accordance with the Nova Scotia Forest Fire Protection Act. Non-combustible material, overburden and rock will be disposed of where their use as fill material is impractical;
4) Waste disposal areas will be located where they do not negatively impact rivers, wetlands or any watercourse;
5) Portable toilets will be used at the construction site so that no untreated sewage is disposed of in the watercourses or on site.

H. Species of Concern, Rare and Endangered Species, and Historic Artifacts

1) A buffer area of 30 m will be established around rare plants using surveying ribbon and signs to prevent unauthorized intrusion;
2) Should excavation uncover historic artifacts, work at the excavation site will cease and the project engineer will be contacted immediately. The project manager will contact the appropriate authorities from the Department of Tourism, Culture and Heritage and First Nations. Work on site will re-commence work following regulatory clearance.

I. Surface Water, Wetlands, Watercourses

1) No construction will occur within 30 metres of a wetland or watercourse unless otherwise authorized by Nova Scotia Environment (NSE);
2) Culverts will be installed as per the requirements of NSE;
3) The design of all water crossings and culverts will be approved by an individual who has successfully completed Nova Scotia Watercourse Alteration training;
4) Disposal of any agent, either directly or indirectly, will not be permitted into any watercourse or wetland;
5) Prior to construction, watercourses will be inspected at locations upstream, adjacent to, and downstream of the site. The conditions of these areas will be photographed as background information on the riparian zone and stream features at each water crossing.

J. Wildlife Encounters

1) Garbage disposal will occur at designated disposal locations throughout the project for removal;
2) Harassment of any wildlife by site personnel will not be permitted;
3) Wildlife sightings will be reported to the project engineer or designate;
4) Any disruption or injury to wildlife will be reported to the local Provincial Wildlife Officer;
5) In the event of encounters with injured wildlife at the worksite, the project engineer or designate will contact the local Provincial Wildlife Officer. No attempt will be made to move the animal and no person at the worksite will come into direct contact with the animal;
6) Dead animals will be reported, as soon as possible, to the project engineer or designate who will notify the local Provincial Wildlife Officer. The locations of animals will be marked and reported to the project engineer or designate. The project engineer or designate will record the date and time it was found; state of decomposition; injury sustained (if identifiable); and species. This information will be kept on file with Celtic Current for incorporation into the post-construction monitoring program;

K. Fires / Medical Emergencies

1) All site personnel will be responsible for fire prevention and will conduct their work in a safe manner to prevent fires;

2) Flammable waste will not be disposed of on site but will be removed for disposal in an appropriate manner;
3) Smoking will be prohibited within 50 m of flammable products;
4) Some personnel will have taken the training course for dealing with energy industry fires but not for wildland fires. In the event of a wildfire, the workers will follow the Contractor Emergency Response Plan;
5) In the event of a fire on or near the turbine site, onsite personnel will attempt to put out the fire if it is safe to do so, using the onsite firefighting equipment. The fire will be reported immediately to the project engineer or designate. If the fire cannot be contained, the nearest fire department (Barney's River Volunteer Fire Department) will be contacted at 9-1-1.
6) In case of medical emergencies, the Contractor Emergency Response Plan will be adhered to;
7) Celtic Current will provide members of the nearest fire departments and medical rescue personnel with project plans and access road layouts for the project area. GPS coordinates for the road alignments and turbine locations will be provided to emergency responders for their reference;

4.0 ENVIRONMENTAL PROTECTION PLAN

The following are general guidelines that promote environmental protection:

- Plan operations from "cradle to grave";
- Report unsafe acts and/or acts that could result in harm to the environment;
- Address the issues if they are known, do not turn a blind eye;
- Conserve soil;
- Protect water resources;
- Control emissions;
- Prepare emergency response plans;
- Manage waste;
- Do not litter;
- Conduct HSE inspections;
- Regulatory inspections may be conducted at any time and participation and cooperation is required;
- If an incident occurs follow proper procedures;
- Practice good housekeeping at all times;
- Report HSE issues internally and externally as required;
- Maintain records as required;

4.1 Access Road Construction

4.1.1 Clearing and Grubbing

- Any merchantable timber present on the road alignment will be cut, decked and removed for sale or reuse;

- Only the areas required for the road alignment, construction work areas and laydown areas will be cleared and grubbed;
- Burning of cleared and grubbed material is not permitted. Excess brush and cleared materials will be chipped and the chips distributed over the site unless otherwise directed.
- In consultation with the environmental advisor brush piles may be created around cleared areas as wildlife habitat. The locations and size of such brush pile will be determined by the requirements of individual sites and the discretion of the environmental advisor;

4.1.2 Road Specifications

- The specifications for the road characteristics will be provided by the wind turbine provider and the contractor providing the heavy lift crane. However, road side slopes will be designed to achieve a maximum 2:1 slope (horizontal:vertical). Figure 4.2: Typical Access Road Cross Section and Ditch Detail shows the specifications to be followed for the access roads;
- Prior to construction, the final road specifications will be reviewed by the project manager, project engineer (civil) and environmental advisor for compliance with applicable provincial standards and environmental guidelines who will advise the Turbine provider and the contractor on any required amendments.

4.1.3 Construction Methods

- The access road will be logged and all timber skidded to appropriate log decks;
- All stumps will be stripped by bulldozer and piled along the boundary of the cleared right-of-way;
- Surface soils will be stripped to both sides of the access road;
- Subsoils will be stripped to the underlying parent material layer and piled on both sides of the access road, adjacent to surface soil piles;
- Subsoils will be stripped from the ditchline and placed in the middle of the road to build up the road traveling surface;
- During road construction, a trench will be dug with a backhoe, running parallel to the road. The ditch will be filled with stripped non-salvageable materials, and ultimately filled in;
- Previously piled subsoils will be feathered back into the ditchline;
- Previously piled topsoils will be feathered back into the ditchline over the subsoils;
- Where steep hills, small hills or knolls are encountered, the tops of the hills will be cut and pushed down the road to reduce the slopes required for travel;

4.2 Water Crossings

For the sizing of the culverts and bridges, *the Design Flow Formula Map for Nova Scotia for 1:100 Year Storm Event (Permanent Structures)* [updated in 2008] will be consulted.

The drainage area will be delineated using a combination of applied methods (Watercourse Alteration Guidelines) and computer programming. Basically, the area will be mapped with both the 5m contour data as well as recent aerial photographs. The zones of delineation were set out making sure to cross the contour lines at 90 degrees. Instead of overlaying a dot grid and counting, the GIS program is able to give precise calculated area measurements in hectares.

4.3 TURBINE SITE

The preparation and construction of the turbine site will follow the applicable requirements of Section 3.1 *a* through *m*. In addition, the following requirements will apply.

4.3.1 Clearing and Grubbing

- Any merchantable timber present on the turbine site will be cut, decked and removed for sale or reuse.
- Only the areas required for the turbine layout, construction pad and crane will be cleared and grubbed;
- Burning of cleared and grubbed material is not permitted. Excess brush and cleared materials will be chipped and the chips distributed over the site unless otherwise directed;
- In consultation with the environmental advisor, brush piles may be created around cleared areas as wildlife habitat. The locations and size of such brush piles will be determined by the requirements of individual sites on the advice and discretion of NSDNR and the wildlife advisor;
- Two lift stripping of soils may occur if subsoils are suitable to do so;
- Surface soils will be stripped and pushed to the boundary of the cleared site;
- A second stripping of subsoils may occur if possible, and will be pushed to the boundary of the turbine sites;
- Subsoils will be leveled to provide a suitable working surface;

4.4 Project Erosion & Sediment Control Options

Celtic Current would like to emphasize that it recognizes that successful erosion / sedimentation control requires correct installation of controls specific to site conditions, while also recognizing that ongoing maintenance is essential for successful outcome.

The planning strategies and structural components presented in this document are as equally important as the conceptual understanding of the principles of their implementation to ensure good construction performance and protection of the environment.

As such Celtic Current is providing what it perceives to be Best Management Practices for the project. Within the project, at the field level, any of these practices may be installed. Each area within the project will require specific control plans to be developed on-site using the principles and guidelines presented in conjunction with the lead Contractor (TBD).

The difference between erosion and sediment control methods is defined and summarized for the purposes of this document and all related activities on at construction projects as follows:

- Erosion Control is the process whereby the potential for erosion is minimized and is the primary means in preventing the degradation of downstream aquatic resources;
- Sedimentation Control is the process whereby the potential for eroded soil being transported and/or deposited beyond the limits of the construction site is minimized and is, for all intents and purposes, a contingency plan.

Both erosion and sedimentation control measures are dynamic and need to respond to requirements encountered throughout construction. Therefore, both temporary and permanent erosion and sedimentation control measures should be expected to evolve throughout construction to varying degrees based on site conditions and field performance of implemented measures.

Celtic Current will install erosion controls immediately after a disturbance resulting from a project in an erosion prone area. Erosion controls will be properly maintained, reinstalled as necessary and/or replaced until restoration is complete.

Erosion and sedimentation control measures required can be classified into two categories:

1. Temporary Measures: Those measures during the construction phase that may be completely removed to facilitate further construction that has other erosion control measures associated with it; and
2. Permanent Measures: Incorporated into the overall design of the development to address long-term post construction erosion and sedimentation control.

Temporary erosion and sedimentation control measures will be constructed at the start of the construction phase. However, additional measures will likely need to be constructed throughout construction. Permanent erosion and sedimentation control measures can be constructed during or at the end of the construction phase.

Examples of temporary measures include:

- Seeding;
- Slope texturing;
- Synthetic permeable barrier,
- Mulching;
- Hydroseeding;

- Biodegradable coverings;
- Filter fence;
- Fibre rolls and wattles;

Examples of permanent measures include:

- Offtake ditches;
- Energy dissipater;
- Earth dyke
- Gabion;
- Rock check;
- Sediment pond/basin;

Dependent on site conditions, some temporary measures will be retained for a longer duration to render its life span more permanent. With both temporary and permanent measures, the functional longevity of the method to be used will be taken into account prior to implementation.

This is not limited to the duration of the project, but to return to pre-disturbance conditions. The Construction Consultant/Environmental Monitor will consult with construction personnel on the appropriate measures to be taken. The measures outlined in the following tables discuss various erosion and sedimentation control locations of ideal use, advantages and limitations.

Inquiry & Complaint Reporting Procedures

Celtic Current has developed a procedure for receiving, recording, investigating, resolving and reporting public inquiry or non-compliance events which may occur from time to time on the New Victoria Community Wind Power Project. One of the key outcomes of the process is to ensure there are steps taken so that Celtic Current can learn from our experiences and maintain diligence in its ongoing operations.

Celtic Current is implementing a Contact Management Program to:

- Record enquiries, comments and complaints;
- Develop, manage and record responses to enquiries, comments and complaints;
- Support data collection and reporting requirements;
- Support communication, liaison and notification activities;
- Record communication, consultation and liaison activities;
- Assist the project team in managing issues;

Celtic Current will handle all comments and complaints concerning the New Victoria Community Wind Power Project in a timely and prudent fashion.

Procedures

Celtic Current will manage the contact management data with responsibility to:

- Track and report out on enquiries and follow-up actions required; and
- Coordinate responses to enquiries.

Public Complaints

Complaints will be considered either reportable or non-reportable as follows:

- **Reportable** – An expression of concern or inquiry related to a specific topic or event that is related specifically to Celtic Current's operations and requires Celtic Current to take corrective action;
- **Non-Reportable** – An expression of concern or inquiry related to general industry-related activities, and includes non-project specific issues and concerns. These complaints typically will not require action by Celtic Current Responses to Non-Reportable public complaints will be as described in Sections 1, 3, 4, 11, and 12 below.

Recording

1. Public or regulatory concerns and enquiries will be recorded by the person(s) receiving the complaint. Any person witnessing, or involved in, an event shall report it verbally to their supervisor and on an Inquiry/Complaint form.

2. If required by regulations or the terms and conditions of approval the appropriate/designated person(s) shall immediately report the event to appropriate regulatory authorities.

Management

3. Recorded information will be provided to the Celtic Current Chief Operating Officer (COO), or person(s) delegated by the COO to receive such information;
4. The recorded information will be entered into Celtic Current's internal Contact Management Database within 96 hours of occurrence outlining the circumstances as known at that time and indicating what further investigations may be required. Responses will be as indicated below.

Resolution

5. Celtic Current will designate person(s) for ensuring that a Reportable Public Complaint is addressed, as outlined in this document. Celtic Current will acknowledge receipt of Reportable Public Complaints within 5 business days of receiving the complaint back to the complainant or inquirer.
6. Toward resolution, Celtic Current will evaluate the root causes of the complaint, investigate the issue(s) and report the findings back to Celtic Current management.
7. If resolution of the complaint can be handled in the 5 business day time frame (indicated in Step 5) Celtic Current will include information related to the response with the acknowledgement of receipt.
8. Celtic Current will make suitable efforts to resolve complaints and inquiries through thoughtful and timely responses or negotiations with complainants or inquirers.
9. In such a case that Celtic Current commits to implementing a solution, Celtic Current shall inform the complainant of the expected time frame for implementation.
10. An issue is "resolved" where Celtic Current has considered complaints and inquiries in good faith and has formulated and implemented, or committed to implementing, the appropriate solutions in a time frame acceptable to both parties.

Communicating Responses

11. Responses will be coordinated and provided by Celtic Current in a manner appropriate to the type of inquiry, and may include:
    - Meetings in person
    - Telephone calls
    - Emails
    - Letters

Record Keeping

12. Documentation to support recording, management, resolution and communication response standards shall be filed in accordance with the Celtic Current Corporate Records Management Program.

13. Celtic Current will use its Contact Management Database to record Reportable Public Complaints [and Regulator Inquiries], acknowledgements of receipt, and responses to any such complaints. The database will ensure accurate records maintained and will be used to develop required reports.

Self Auditing

14. Within 90 days of a Reportable Public Complaint being entered into the Contact Management Database, Celtic Current shall review the file to verify that the resolution has been achieved.
15. Unless a file in the Contact Management Database is referred to mediation or becomes the subject of a judicial proceeding or an arbitration, any outstanding actions under this process shall be audited every 90 days until the file is resolved.

Mediation

16. If the Self Auditing demonstrates that a Reportable Public Complaint has not been resolved through the resolution process herein, and subject to Sections 17 and 18, below, Celtic Current will engage a mediator who will be responsible for attempting to facilitate an agreement of resolution between Celtic Current and a complainant. Celtic Current will therefore send a notice of mediation to the complainant within 5 business days of having completed the Self Auditing.
17. Engagement of the mediator under Section 16, above, is conditional on the complainant providing agreement in writing to participate in mediation upon receiving notice of mediation from Celtic Current
18. Mediation is not required where, after the first 90-day audit period, the issue has been resolved.
19. The “Mediation Period” is the later of 30 days from the issuance of the notice of mediation or a date to be agreed on in writing by Celtic Current and the complainant in question.

Alternative Dispute Resolution

20. In lieu of mediation or if no agreement is reached through mediation within the Mediation Period, Celtic Current will consider other appropriate forms of alternative dispute resolution. Alternative dispute resolution may include, but is not limited to, arbitration.
21. Where Celtic Current identifies arbitration as an appropriate dispute resolution mechanism, it shall follow the applicable procedural rules set out in the

Arbitration Act, R.S.N.S., c. 19, s. 1, if the complainant agrees to the following terms:

a) All arbitration costs due in advance of a decision from an arbitrator or umpire shall be paid by each party submitting to arbitration in equal parts;

b) Where payment of arbitration costs are specified, billed or estimated prior to the decision from an arbitrator or umpire, but are not due until after a decision is rendered, the complainant's portion shall be submitted and held in trust to the benefit of Celtic Current for the duration of arbitration; and

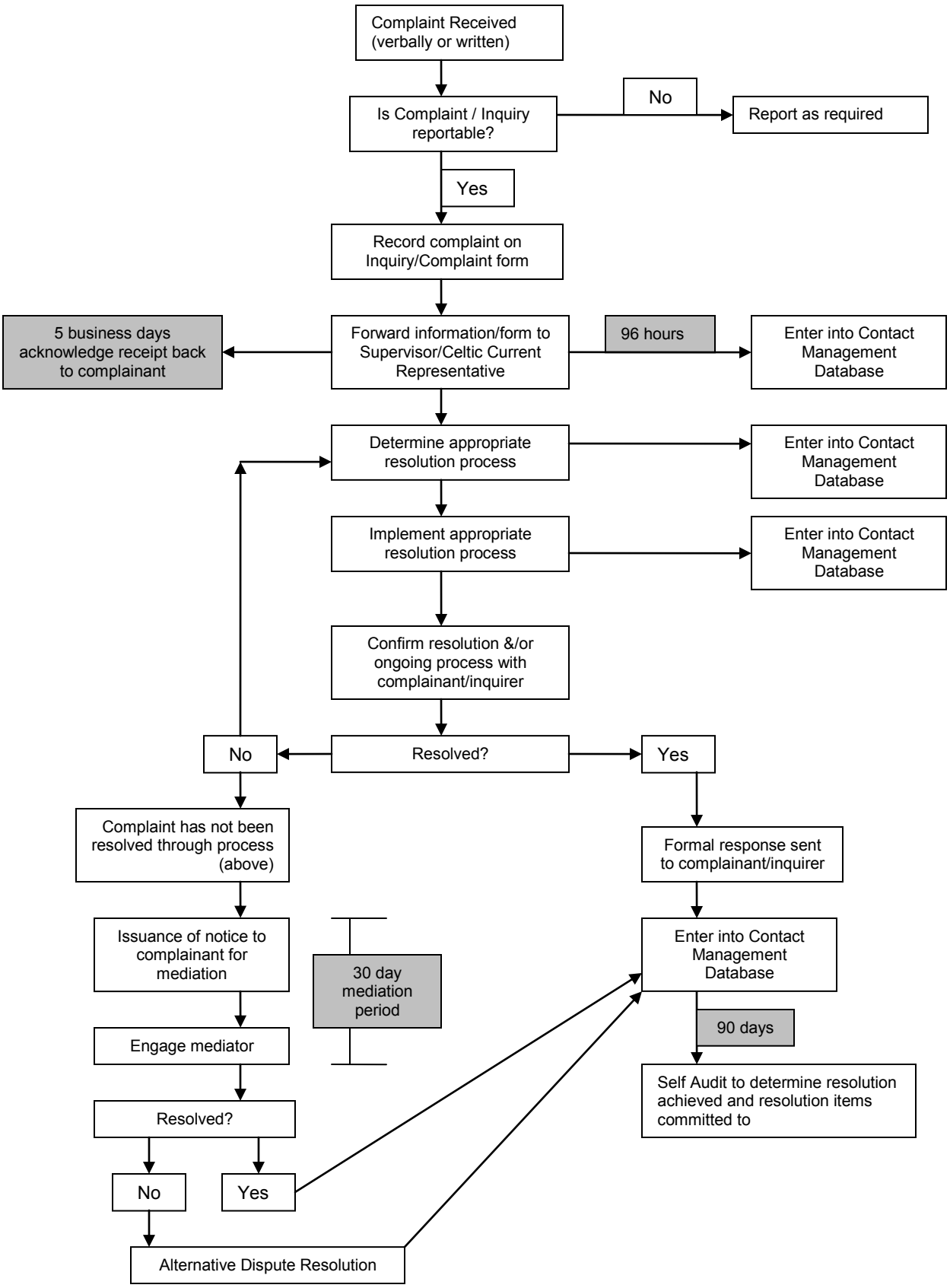
c) If non-binding arbitration is identified as the appropriate alternative dispute resolution mechanism, and unless otherwise agreed to and specified by Celtic Current and the complainant, only the provisions relating to timelines and selection, removal and misconduct of arbitrators, umpires and referees shall apply. To be clear, unless otherwise agreed to and specified by Celtic Current and the complainant, the decision or award made by an arbitrator or umpire shall not be final and binding on the parties and agreement to non-binding arbitration does not constitute "submission" under the *Arbitration Act*, R.S.N.S., c. 19, s. 1.

Contact Information Provided to the Public

The Celtic Current corporate website will provide advice on how to contact Celtic Current to register concerns and complaints.

Flow Chart

See following page.


Complaint Received (verbally or written)
Is Complaint / Inquiry reportable?
No
Report as required
Yes
Record complaint on Inquiry/Complaint form
5 business days acknowledge receipt back to complainant
Forward information/form to Supervisor/Celtic Current Representative
96 hours
Enter into Contact Management Database
Determine appropriate resolution process
Enter into Contact Management Database
Implement appropriate resolution process
Enter into Contact Management Database
Confirm resolution &/or ongoing process with complainant/inquirer
No
Resolved?
Yes
Complaint has not been resolved through process (above)
Formal response sent to complainant/inquirer
Issuance of notice to complainant for mediation
30 day mediation period
Enter into Contact Management Database
Engage mediator
90 days
Resolved?
Self Audit to determine resolution achieved and resolution items committed to
No
Yes
Alternative Dispute Resolution

APPENDIX I INQUIRY / COMPLAINT FORM

INQUIRY / COMPLAINT FORM	
Date of Inquiry:	Time:
Name of Person Taking Inquiry:	Title:

Name of Person(s) Making Inquiry/Complaint:
Mailing Address:
Phone Number of Person(s) making Inquiry:
Other Number (specify):
Email Address:

Inquiry or Complaint Details:

Inform the person that Celtic Current will respond within 5 business days.

CHAIN OF CUSTODY:

1. **Person Taking Complaint: _____ Signature**

2. **Person Accepting Complaint form from #1.**

Name	Signature	Date

3. **Person Responsible for Resolution**

Name	Signature	Date

Spill Report Form

AREA _____ LOCATION _____

LANDOWNER _____ PHONE # _____

OCCUPANT _____ PHONE # _____

INCIDENT DATE _____ SPILL TYPE _____

SOURCE OF SPILL _____ REASON FOR SPILL _____

SPILL VOLUME (m^3) _____ VOLUME RECOVERED (m^3) _____

ON-LEASE AREA AFFECTED (m^2) _____

OFF-LEASE AREA AFFECTED (m^2) _____

METHOD OF RECOVERY _____

DISPOSAL LOCATION _____

SPILL REPORT SUBMITTED TO REGULATORY AGENCY: ❑ YES ❑ NO DATE: _____

SPILL LOCATION AND DETAILS:

APPENDIX II. SPECIES PRIORITY LIST

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
			Birds			
Botaurus lentiginosus	American Bittern				S3S4B	Preferred habitats of the American bittern include freshwater wetlands with tall emergent vegetation. In Nova Scotia, it occurs widely in most regions, but is scarce on the Atlantic slope and Cape Breton Island, where marshes are few and relatively infertile.
Picoides dorsalis	American Three-toed Woodpecker				S1S2	The American three-toed woodpecker is the most northerly woodpecker species; it breeds in boreal coniferous forests nearly to the arctic tree-line. Breeding of this species in Nova Scotia is limited to Cape Breton Island.
Icterus galbula	Baltimore Oriole				S2S3B	The Baltimore Oriole is an adaptable species (found breeding in diverse habitats), but typically favors woodland edge (especially riparian) and open areas with scattered trees; strong preference for deciduous over coniferous trees. During spring and fall migration, it is found in variety of habitats, but generally favors open woodlands, woodland margins, hedgerows, and urban parks.
Dendroica castanea	Bay-breasted Warbler				S3S4B	The Bay-breasted is one of the less widespread warblers, breeding in a narrow band across the closed boreal forests from northeast British Columbia to western Newfoundland, and south just into the U.S.A. Although during migrations and while foraging it is often seen in mixed stands, this bird nests only in conifers. reaching highest densities in balsam fir forest infested with spruce budworm.
Picoides arcticus	Black-backed Woodpecker				S3S4	In the Maritimes, the black-backed woodpecker is widely but thinly distributed in conifer forests throughout, becoming more common farther north. The black-backed woodpecker is very local in southwest Nova Scotia. These birds forage on trees damaged by forest insects, especially bark beetles, and their characteristic flaking-off of bark fragments in search of food can be an aid in detecting them. Nests here are often in quite open situations, such as cut-over areas, open jack pine stands, and the edges of woodland gardens.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Dendroica striata	Blackpoll Warbler				S3S4B	In the Maritimes, the blackpoll warbler breeds mainly in cool, damp spruce forests. During spring and fall migration, it uses a variety of habitats, although often partial to spruces, even when they are only a small component of the habitat.
Poecile hudsonica	Boreal Chickadee				S3	The Boreal chickadee prefers conifer, and especially spruce, forests all across the northern regions of Canada. Boreal Chickadees are found in all parts of the Maritimes. Most are residents, but some wander after breeding season.
Aegolius funereus	Boreal Owl		NAR		S1B	The Boreal owl breeds across the boreal forests of North America and Eurasia, and nests in woodpecker holes and other tree cavities. In Nova Scotia, the only breeding records are from Cape Breton island.
Branta bernicla	Brant				S3M	The breeding range of the Branta is in the low arctic, thus it does not breed in Nova Scotia. The most important staging areas for Brant are found in shallow marine waters along indented shorelines, within lagoons, or behind barrier beaches. In addition, most are characterized by the presence of tidal or subtidal eelgrass meadows, the preferred staging habitat for Brant. Isolated bays with high eelgrass abundance support the highest numbers of staging Brant
Toxostoma rufum	Brown Thrasher				S1?B	The brown thrasher frequents shrubbery, thickets, and wood-edges rather than forest. No confirmed reports of breeding exist for Nova Scotia.
Dendroica tigrina	Cape May Warbler				S3?B	In summer, the Cape May warbler is found in northern conifer forests. One of several warbler species that attain high densities during spruce budworm outbreaks, but is more usual in mature spruces than in balsam fir stands. Activity is mostly at the tops of tall spruces. Rarely observed in the southwest of Nova Scotia due to unsuitable habitat.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Bucephala clangula	Common Goldeneye				S2B,S5N	The common goldeneye breeds in the boreal forest. A tree cavity nester, it breeds only in wooded areas, sometimes in nest boxes. No breeding records for mainland Nova Scotia, but breeding has been observed in the valleys of northern Cape Breton Island.
Chordeiles minor	Common Nighthawk	T	T	Threatened	S3B	Common nighthawks nest on sparsely vegetated or bare ground in open "wastelands" such as pine barrens, forest cut-overs, or burns, and secondarily on flat roofs of buildings.
Sialia sialis	Eastern Bluebird		NAR		S3B	The Eastern bluebird nests in woodpecker holes, as well as nest-boxes. They forage in open areas of low vegetation with scattered trees for nesting.
Contopus virens	Eastern Wood-Pewee		SC	Vulnerable	S3S4B	The eastern wood-peewee is a bird of openings and edges more than of closed forest, in the Maritimes, and they readily use well-spaced shade trees in rural and urban settlements. Associated with broad-leafed trees.
Passerella iliaca	Fox Sparrow				S3S4B	The fox sparrow is often associated with dense damp shrubbery of alders and other small broad-leafed trees in its inland range. On Nova Scotia's outer coasts, they will also frequent stunted spruces and shrubby bogs.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Anas strepera	Gadwall				S2B	In Canada, the Gadwall prefers brush habitat dominated by woody vegetation. Seasonal and semi permanent wetlands with vegetation-water ratios near 1:1 are important as habitat for nesting pairs. Stock ponds also may provide nesting habitat when natural wetlands are limited. In areas with intensive agriculture, uses untilled upland habitat almost exclusively. In terms of preferred brood habitat, emergent vegetation provides escape cover, and open water with submerged vegetation provides food for ducklings. During molting, they use large marshes or lakes with heavily vegetated margins, which provide abundant food, dense cover for concealment, resting areas, and isolation from disturbance. During spring and fall migration, they use large and small reservoirs, beaver ponds, farm ponds, and coastal marshes providing abundant food.
Dumetella carolinensis	Gray Catbird				S3B	The gray catbird inhabits shrubbery in both upland and river-edge situations, mostly in areas where tree cover is of broad-leafed species. The Maritimes are at the northeast edge of its range, and catbirds are nearly absent in upland areas of northern New Brunswick, in Prince Edward Island and Cape Breton Island, as well as in regions with extensive conifer forest cover.
Tringa melanoleuca	Greater Yellowlegs				S3B,S5M	During migration, the greater yellowlegs is a familiar sight in salt marshes and around ponds and rivers, but their breeding habitat is very different. Yellowlegs breed in wooded bogs and muskegs access the boreal forest from northern British Columbia and Mackenzie to Labrador, Newfoundland and eastern Nova Scotia.
Asio otus	Long-eared Owl				S2	The long-eared owl frequents woodlands large or small, dense or open, conifer or broad-leafed, at all seasons, but it also forages over open areas.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Puffinus puffinus	Manx Shearwater				S1?B,S4N	The breeding habitat of the Manx shearwater is usually remote, uninhabited, turfy islands and headlands (less commonly inland mountains) that have few mammalian predators, at elevations ranging from sea level to at least 700–1,000 m. During spring and fall migration, they stay away from breeding colonies, and their habitat is entirely aerial/marine.
Accipiter gentilis	Northern Goshawk		NAR		S3S4	Though it is more generally found in the boreal forest region, likely because less often disturbed there, the Northern goshawk is also widespread in more temperate habitats. It nests in most forest types found throughout its geographic range. In eastern deciduous forests, Goshawks prefer nesting in mature, mixed hardwood–hemlock stands of birch (Betula sp.), beech (Fagus sp.), maple (Acer sp.), and eastern hemlock. Found scattered throughout the forests of the Maritimes. Hunts in diverse habitats ranging from open-sage steppes to dense forests, including riparian areas.
Mimus polyglottos	Northern Mockingbird				S3B	The Northern mockingbird uses open habitats with scattered shrubs and small trees. In the East, typical habitats are parkland, cultivated lands, and early successional habitat at low elevations. Throughout its range found in suburban and urban habitats such as gardens and cemeteries, especially favoring mowed lawns adjacent to bare areas (e.g. concrete, asphalt, and sidewalks) with access to shrubs or hedges for cover and nesting. Absent from the interior of all forested habitat but frequents forest edge. Found in the same habitat year-round.
Contopus cooperi	Olive-sided Flycatcher	T	T	Threatened	S3B	The olive-sided flycatcher is found in open woodlands and other places where scattered trees remain after cutting or fire in forested regions. Found throughout the Maritimes, but not abundantly.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Falco peregrinus pop. 1	Peregrine Falcon - anatum/tundrius	SC	SC	Vulnerable	S1B	Peregrine falcons breed from Alaska and the Canadian arctic south locally through the mountainous west, and sparingly in the east. Spends winters on coasts north to British Columbia, along the east coast of the US and along the Gulf Coast. Preferred habitats include tundra, savannas, coasts, mountains, and tall buildings.
Pheucticus ludovicianus	Rose-breasted Grosbeak				S3S4B	Rose-breasted grosbeaks use a wide variety of habitats, including deciduous and mixed wooded uplands and lowlands; often at shrubby ecotones at the edge of woods at streams, ponds, marshes, roads, or pastures. Also commonly uses second-growth woodlands and well-vegetated suburban areas, parks, gardens, and orchards. Exhibits a preference for mesic woodlands, swamp forests, riparian corridors; avoids dry oak (Quercus spp.) woodlands. Uses a wide variety of habitats during spring and fall migration.
Euphagus carolinus	Rusty Blackbird	SC	SC	Endangered	S2S3B	Rusty blackbirds use wet coniferous and mixed forests from northern edge of tundra southward to beginning of deciduous forests and grasslands. Frequents fens, alder (*Alnus*)–willow (*Salix*) bogs, muskegs, beaver ponds, and other openings in the forest such as swampy shores along lakes and streams. Exceptionally, on Cape Breton Island, Nova Scotia, drier sites such as pasture edges are used. During spring and fall migration, it forages in stubble, pasture, plowed fields, and edges of swamps. Fall migrants also frequent wooded areas, particularly for roosting. Occasionally roosts on the ground in open fields.
Asio flammeus	Short-eared Owl	SC	SC		S1S2	In the Maritimes, the short-eared owl has bred in dyked wet meadows and marshes, and in coastal bogs and grasslands. Also known to nest in agricultural areas. They are associated with open country supporting cyclic small mammals (i.e. voles and lemmings).

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Cathartes aura	Turkey Vulture				S2S3B	Preferred habitat of the turkey vulture in eastern North America includes mixed farmland and forest, which provides best opportunity for foraging on both wild and domestic carrion. For nesting, prefers forested or partly forested areas with nest sites (rock outcrops, fallen trees, abandoned buildings) isolated from human and perhaps other mammalian disturbance. For communal roosting, prefers stands of large trees free from human disturbance. Also preferred are hilly areas that provide deflective updrafts for flight, especially in North, where thermals may be weak and unpredictable. Avoids extensive areas of row-crop farmland. The preferred features are best attained in swampy areas or hilly, often unglaciated uplands with low-input agriculture
Empidonax traillii	Willow Flycatcher				S2B	In general, the willow flycatcher prefers moist, shrubby areas, often with standing or running water. During spring and fall migration, it uses areas similar to its breeding habitat.
Wilsonia pusilla	Wilson's Warbler				S3S4B	Western montane, northern, and northeastern populations of Wilson's warbler are restricted to mesic shrub thickets of riparian habitats, edges of beaver ponds, lakes, bogs, and overgrown clear-cuts of montane and boreal zone; may reach into alpine zone. During spring and fall migration, occurs in most deciduous shrub habitats, but primarily riparian shrub understory. Also found in most other woodlands, suburban habitats, agricultural areas, desert scrub, and montane forests.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Hylocichla mustelina	Wood Thrush		T		S1B	The wood thrush breeds in the interior and edges of deciduous and mixed forests, especially well-developed, upland, mesic ones. Key elements of breeding sites include: trees >16 m in height, high variety of deciduous tree species, moderate sub canopy and shrub density, shade, fairly open forest floor, moist soil, and decaying leaf litter. Habitat use during spring and fall migration is poorly documented, in fall probably uses second-growth and forest-edge habitats with fruit. No data for spring transients to suggest deviation from breeding season habitats.
Mammals						
Lynx canadensis	Canadian Lynx	NAR	NAR	Endangered	S1	Prefers old growth boreal forests with dense undercover, but the lynx will live in other habitats where undercover and prey numbers are adequate. They are often found in regenerating forests after a fire - where the snowshoe hare population has increased. When prey is scarce in the forested areas, the lynx will venture on to the tundra for food.
Lasiurus borealis	Eastern Red Bat				S1	The red bat lives in forests, forest edges and hedgerows. It roosts among foliage, usually in deciduous trees, but it will sometimes roost in coniferous trees.
Pekania pennanti	Fisher				S2	Fishers inhabit upland and lowland forests, including coniferous, mixed, and deciduous forests. They occur primarily in dense coniferous or mixed forests, including early successional forest with dense overhead cover. Fishers commonly use hardwood stands in summer but prefer coniferous or mixed forests in winter. They generally avoid areas with little forest cover or significant human disturbance. Cape Breton Population is provincially endangered.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Sorex dispar	Long-tailed Shrew		NAR		S1	Mountainous, forested areas (deciduous or evergreen) with loose talus. Rocky damp areas with deep crevices covered by leaf mold and roots are preferred. May occur along small mountain streams. Will use artificial talus created by road construction and pit mines. Trapping results reported by Richmond and Grimm suggest that Long-tailed Shrews spend most of their time in the labyrinth of spaces between rocks about a foot beneath the surface. Nest sites are usually associated with natural subterranean tunnels among boulder crevices.
Lasiurus cinereus	Hoary Bat				S1	Hoary bats are thought to be rare in Nova Scotia. Insectivorous, migratory. Poorly known. Authorities disagree as to the bat's preference for coniferous versus broadleaf trees. Hoary bats are thought to prefer trees at the edge of clearings, but have been found in trees in heavy forests, open wooded glades, and shade trees along urban streets and in city parks.
Myotis lucifugus	Little Brown Myotis	E	E	Endangered	S1	For Myotis lucifugus, the maternity colonies often exist in warm sites that facilitate pup growth rates, such as attics of buildings and under bridges, in rock crevices, or in cavities of canopy trees in forests. Males roost during daytime in a wide variety of structures, including buildings and bridges (mainly M. lucifugus), rock crevices, behind flaking bark, and within tree cavities, often at many different sites during the summer. Myotis species generally roost in tall, large-diameter snags that are in the early to middle stages of decay and located in open areas within mature-over mature forest. Myotis lucifugus congregates in caves and abandoned mines used for hibernation through the winter. About 16 hibernation sites are known in Nova Scotia.
Myotis septentrionalis	Northern Long-eared Myotis	E	E	Endangered	S1	The Northern Long-eared Bat (Myotis septentrionalis) is found in many regions of Canada. Although there are numerous records of its presence in eastern Canada and the

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
						United States, it has only been recorded sporadically in the west. This particular type of bat has two habitats: a winter hibernation habitat as well as a summer roosting and foraging habitat. The Northern Long-eared Bat hibernates in caves or abandoned mines during the cold winter months. During the summer months the Bats commonly use crevices behind peeling bark or cavities in partially-decayed trees as summer day roosts. Within thick forests, summer activity may be focused along watercourses and small ponds
Microtus chrotorrhinus	Rock Vole				S2	Optimal habitat for the rock vole is ferns/mossy debris near flowing water in coniferous forests. It also occupies deciduous forest/spruce clear-cuts (mainly recent cuts), forest ecotones, grassy balds near forest, and sterile-looking rocky road fills. Occupies shallow burrows and runways. Nests probably are placed under logs or in similar protected sites. They are made of moss with a lining of grass and have multiple entrance tunnels. Breeding season is from March to mid-October.
Lasionycteris noctivagans	Silver-haired Bat				S1	Scarce in eastern Canada. During the summer months, silver-haired bats are found in forested habitats, particularly coniferous woodlands, adjacent to aquatic habitats like ponds, lakes and streams. Both sexes fly south between the middle of August and early October.
Plants						
Vaccinium uliginosum	Alpine Bilberry				S3	Wide tolerance of moisture and fertility, but generally acidic soils in Halifax, Digby & Cape Breton
Elatine americana	American Waterwort				S1	Brackish or salt marshes and flats, lacustrine (in lakes or ponds), riverine (in rivers or streams), shores of rivers or lakes; historical range only.
Salix serissima	Autumn Willow				S1	Fens (calcium-rich wetlands), meadows and fields, swamps

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Comandra umbellata	Bastard's Toadflax				S2	Grows in damp sands, as on headlands, in barrens, dunes and evergreen forests in Antigonish & Cape Breton
Comandra umbellata ssp. umbellata	Bastard's Toadflax				S2	Grows in damp sands, as on headlands, in barrens, dunes and evergreen forests in Antigonish & Cape Breton
Salix uva-ursi	Bearberry Willow				S1	Calcareous ledges; sub-arctic barrens. Known in 2 locations in Northern CB
Iva frutescens	Big-leaved Marsh-elder				S2	Disturbed and elevated areas around saltmarshes - Yarmouth, Kings Co., and Cape Breton
Iva frutescens ssp. oraria	Big-leaved Marsh-elder				S2	Disturbed and elevated areas around saltmarshes - Yarmouth, Kings Co., and Cape Breton
Sanguinaria canadensis	Bloodroot				S3S4	Streamside or on alluvial terraces, in the shade, just above high water. Rare in Kings and Hants counties. Common in Colchester Co.; scattered from Cumberland County to Cape Breton.
Carex tribuloides	Blunt Broom Sedge				S3?	Found in wet forest soils and swales. Collected from Kings and Queens counties to Cape Breton.
Betula pumila var. renifolia	Bog Birch				S1?	Bogs and meadows amongst alders
Betula pumila var. pumila	Bog Birch				S2S3	Bogs and meadows amongst alders
Salix pedicellaris	Bog Willow				S2	Grows in acidic substrate as in bogs; nutrient-rich marshes and in sphagnous lacustrine habitats.
Carex eburnea	Bristle-leaved Sedge				S3	Grows in cliffs and talus, especially in calcareous soils, under conifers. May be locally abundant where found, scattered from Cumberland and Hants counties to Cape Breton.
Cystopteris bulbifera	Bulblet Bladder Fern				S3S4	Fertile or calcareous soils, where it forms dense colonies in forested gypsum sinkholes. Local, Kings and Cumberland counties to eastern Cape Breton.
Juncus bulbosus	Bulbous Rush				S1	Found along the edges of fresh water: ditches, ponds canals, and especially in disturbed alkaline conditions on Sable Island and Eastern CB.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Lilium canadense	Canada Lily				S2	Meadows, floodplains and streamside's. Local; from Kings and Cumberland counties eastward to southern Cape Breton.
Polygonum careyi	Carey's Smartweed				S1	Anthropogenic (man-made or disturbed habitats), meadows and fields, shores of rivers or lakes.
Humulus lupulus var. lupuloides	Common Hop				S1?	Anthropogenic (man-made or disturbed habitats), floodplain (river or stream floodplains), forests, shrub lands or thickets.
Botrychium lunaria	Common Moonwort				S1	Open slopes. Sand or gravel; shores and meadows. Basic soils. Known from Conrad's Beach, Halifax County and from New Campbelton and Indian Brook in northern Cape Breton.
Equisetum hyemale	Common Scouring-rush				S3S4	Grows in sandy, gravelly soil, on banks or in low areas; often in calcareous regions. Scattered, mostly from Digby County, through the Annapolis Valley, northward to Cape Breton.
Equisetum hyemale var. affine	Common Scouring-rush				S3S4	Grows in sandy, gravelly soil, on banks or in low areas; often in calcareous regions. Scattered, mostly from Digby County, through the Annapolis Valley, northward to Cape Breton.
Eleocharis fallax	Creeping Spikerush				S1?	Grows on coastal sites near fresh or brackish waters. Only known from Cape Breton.
Cardamine pratensis var. angustifolia	Cuckoo Flower				S1	Moist soil as in meadows, damp fields and other low ground. Scattered in the province, frequent along the Annapolis River and even spreading into roadsides ditches, north to Cape Breton.
Rudbeckia laciniata	Cut-Leaved Coneflower				S1S2	Floodplain (river or stream floodplains), forests, shores of rivers or lakes, swamps, wetland margins (edges of wetlands).
Rudbeckia laciniata var. gaspereauensis	Cut-Leaved Coneflower				S1S2	Floodplain (river or stream floodplains), forests, shores of rivers or lakes, swamps, wetland margins (edges of wetlands).
Botrychium dissectum	Cut-leaved Moonwort				S3	Generally, in sandy, gravelly, grassy or open soils. Frequent in the southwestern counties, scattered eastward to Cape Breton
Epilobium strictum	Downy Willowherb				S3	Bogs and other peatlands; Scattered throughout Cape Breton, infrequent elsewhere.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Baccharis halimifolia	Eastern Baccharis		T	Threatened	S1	Anthropogenic (man-made or disturbed habitats), brackish or salt marshes and flats, coastal beaches (sea beaches), marshes.
Floerkea proserpinacoides	False Mermaidweed		NAR		S2	Limited to ravine slopes beneath deciduous forests, riparian forests. Known from several Cape Breton localities, such as Glenora Falls. Reported from Coldbrook and Sheffield Mills, Kings Co., Truro and Antigonish Co.
Eleocharis quinqueflora	Few-flowered Spikerush				S2	Grows on alkaline substrates, in bogs and coastal cliffs. Collected from Digby Neck and Central Cape Breton.
Carex alopecoidea	Foxtail Sedge				S1	Anthropogenic (man-made or disturbed habitats), floodplain (river or stream floodplains), forests, marshes.
Ranunculus gmelinii+	Gmelin's Water Buttercup				S3	Riverine (in rivers or streams), swamps.
Zizia aurea	Golden Alexanders				S1	Meadows, shores, thickets and even wooded swamps. Occasionally reported: Pomquet and South River, Antigonish Co., Upper Musquodoboit, Halifax Co.
Cyperus lupulinus	Hop Flatsedge				S1	Anthropogenic (man-made or disturbed habitats), grassland, meadows and fields.
Cyperus lupulinus ssp. macilentus	Hop Flatsedge				S1	Anthropogenic (man-made or disturbed habitats), grassland, meadows and fields.
Galium labradoricum	Labrador Bedstraw				S2	Alkaline soils in wet meadows, bogs. Limited to Cape Breton counties.
Botrychium lanceolatum var. angustisegmentum	Lance-Leaf Grape-Fern				S2S3	Fertile soils on woodland hillsides.
Carex lapponica	Lapland Sedge				S1?	Sphagnum bogs, wet, nutrient-poor areas, mostly lowlands
Botrychium simplex	Least Moonwort				S2S3	Reported from various habitats, usually involving damp or mossy streambanks or lakeshores. Scattered locations from Yarmouth County to Cape Breton: Cedar Lake (Digby-Yarmouth border), West Berlin (Queens Co.), Petpeswick and in Antigonish, Victoria and Inverness counties.
Pyrola minor	Lesser Pyrola				S3	Characteristic of mature coniferous forests. Scattered north from Digby neck to Kentville and east to Cape Breton.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Carex granularis	Limestone Meadow Sedge				S1	Anthropogenic (man-made or disturbed habitats), meadows and fields, shores of rivers or lakes, wetland margins (edges of wetlands).
Liparis loeselii	Loesel's Twayblade				S3S4	Anthropogenic (man-made or disturbed habitats), fens (calcium-rich wetlands), lacustrine (in lakes or ponds), meadows and fields, shores of rivers or lakes.
Asplenium trichomanes ssp. trichomanes	Maidenhair Spleenwort				S3	Frequents damp shady cliffs and talus, especially on acidic rocks such as granite, basalt and sandstone. Rare and local in Cape Breton. Locally abundant at Big Intervale, Margaree. Few mainland NS locations: scattered in the Cobequids and in Annapolis and Kings counties.
Campanula aparinoides	Marsh Bellflower				S3	Rare, known from river banks, meadows and ditches. Northern, from Hants and Cumberland counties to Antigonish, with a single Cape Breton station.
Hordeum brachyantherum	Meadow Barley				S1	Anthropogenic (man-made or disturbed habitats).
Hordeum brachyantherum ssp. brachyantherum	Meadow Barley				S1	Anthropogenic (man-made or disturbed habitats).
Betula michauxii	Michaux's Dwarf Birch				S2	Limited to peat bogs. Scattered localities from Brier Island, Digby Co., east to Guysborough, Cape Breton and Inverness counties.
Juncus stygius	Moor Rush				S2	Bogs, bog pools and wet moss. Limited to Cape Breton localities, where it may be common but local.
Juncus stygius ssp. americanus	Moor Rush				S2	Bogs, bog pools and wet moss. Limited to Cape Breton localities, where it may be common but local.
Juncus caesariensis	New Jersey Rush	SC	SC	Vulnerable	S2	Grows in peatlands, such as bogs and fens along Cape Breton's southeastern coastal plain. Known from Gracieville, Lower L'Ardoise to Fourchu, inland to Loch Lomond, all in Cape Breton.
Betula borealis	Northern Birch				S2	Bogs and wooded swamps.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Vaccinium boreale	Northern Blueberry				S3	Grows on the windswept headlands and barrens. Scattered at several Cape Breton localities, rare on the mainland.
Lycopodium complanatum	Northern Clubmoss				S3S4	Open woodlands, thickets, heathland and rocky slopes;
Geocaulon lividum	Northern Comandra				S3	Damp sands and other sterile soils, especially in acid or peaty sites. Disjunct sites in Halifax, Kings and Cumberland counties; widespread but local in Cape Breton.
Spiraea septentrionalis	Northern Meadowsweet				S1?	open, moist areas
Galium kamtschaticum	Northern Wild Licorice				S3	Fertile deciduous forests and ravines. Associated in the north with fir-birch boreal forest. Known only from Cape Breton.
Vaccinium ovalifolium	Oval-leaved Bilberry				S1	Sterile and dry soils in barrens, thickets and coniferous woods
Torreyochloa pallida var. pallida	Pale False Manna Grass				S1	Lacustrine (in lakes or ponds), riverine (in rivers or streams), swamps.
Platanthera flava var. herbiola	Pale Green Orchid				S2	Anthropogenic (man-made or disturbed habitats), floodplain (river or stream floodplains), forest edges, forests, fresh tidal marshes or flats, grassland, meadows and fields, riverine (in rivers or streams), shrublands or thickets, swamps, wetland margins (edges of wetlands), woodlands.
Rumex persicarioides	Peach-leaved Dock				S2?	Anthropogenic (man-made or disturbed habitats), brackish or salt marshes and flats, coastal beaches (sea beaches), meadows and fields.
Ranunculus pensylvanicus	Pennsylvania Buttercup				S1	Anthropogenic (man-made or disturbed habitats), marshes, shores of rivers or lakes, swamps.
Polygonum pensylvanicum	Pennsylvania Smartweed				S3	Frequently seen in roadside ditches, edges of cultivated fields and along dyked marshes. Generally northern, from Annapolis and Queens to Cape Breton counties.
Carex plantaginea	Plantain-Leaved Sedge				S1	Forests.
Crataegus submollis	Quebec Hawthorn				S1?	edges of fields and thickets, Antigonish and Lunenburg Co. to Cape Breton

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Eleocharis nitida	Quill Spikerush				S3	Moist soils, often associated with basalt. Found along the North Mountain of Kings and Annapolis counties; Cape d'Or and Economy Mountain, Cumberland Co.; Scatarie Island, Cape Breton.
Fraxinus pennsylvanica	Red Ash				S1	Floodplain (river or stream floodplains), forests, shores of rivers or lakes, swamps.
Potamogeton richardsonii	Richardson's Pondweed				S2	Frequents lakes and streams in brackish or alkaline water. Scattered from Kings and Cumberland Cos. to eastern Cape Breton.
Draba glabella	Rock Whitlow-Grass				S1	Limited to rock ledges and crevices, talus slopes. Rare; known from Cape Blomidon and several Cumberland County sites across the Bay. Also in Cape Breton.
Draba glabella var. glabella	Rock Whitlow-Grass				S1	Limited to rock ledges and crevices, talus slopes. Rare; known from Cape Blomidon and several Cumberland County sites across the Bay. Also in Cape Breton.
Antennaria rosea ssp. arida	Rosy Pussytoes				S1	Dry, open places, meadows, and open woods. It has very recently been confirmed at Cape d'Or.
Cypripedium reginae	Showy Lady's-Slipper				S2	bog, swamp. Widely scattered localities in province
Calamagrostis stricta ssp. inexpansa	Slim-stemmed Reed Grass				S1	bog cliff or talus slope, lakeshore wetland. Rare and Local in Cape Breton.
Sparganium natans	Small Burreed				S3	Shallow pools, pond edges and alkaline sink holes. Widely Scattered and infrequently reported from Digby to eastern Cape Breton
Listera australis	Southern Twayblade				S3	Bog, mixed wood forest, swamps. Scattered from Shelburne, to Halifax, to Kings to Cape Breton counties
Schoenoplectus robustus	Sturdy Bulrush				S1?	estuaries, Northern side of Annapolis and Cumberland Co. to Cape Breton
Asclepias incarnata ssp. pulchra	Swamp Milkweed				S3?	Rocky soils along lakeshores, marshes, streamsides or peatland edges. Infrequently found from Yarmouth to Cape Breton.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Arabis hirsuta var. pycnocarpa	Western Hairy Rockcress				S1S2	cliff or talus slope, dry sites and gravels. Rare in Cumberland Co., Colchester Co. and at several Victoria, Inverness and Cape Breton Co. stations.
Potamogeton praelongus	White-stemmed Pondweed				S3?	deep, clear lakes, in up to 6 m of water, Kings Co. to Cape Breton
Carex wiegandii	Wiegand's Sedge				S3	Treed bogs, bogs, conifer and alder thickets. Cape Breton Island, Shelburne Co.

[i] Government of Canada. 2015. Species at Risk Public Registry. Accessed online, 11 December 2015. https://www.registrelep-sararegistry.gc.ca/default.asp?lang=En&n=24F7211B-1

[ii] Government of Canada. 2015. Committee on the Status of Endangered Wildlife in Canada. Accessed online, 11 December 2015. http://www.cosewic.gc.ca/eng/sct5/index_e.cfm

[iii] Province of Nova Scotia. 2015. Categorized List of Species at Risk made under Section 12 of the *Endangered Species Act* S.N.S. 1998, c. 11, N.S. Reg. 21/2015 (March 26, 2013). Accessed online, 11 December 2015. https://www.novascotia.ca/just/regulations/regs/eslist.htm

[iv] Atlantic Canada Conservation Data Centre. 2015. Status Ranks. Accessed online, 11 December 2015. http://accdc.com/en/ranks.html

APPENDIX III. ATLANTIC CANADA CONSERVATION DATA CENTER (ACCDC) DOCUMENTED SPECIES OBSERVATIONS

Atlantic Canada Conservation Data Centre
Centre de données sur la conservation du Canada Atlantique

DATA REPORT 5315: New Waterford, NS

Prepared 24 November 2014
by J. Churchill, Data Manager

CONTENTS OF REPORT

Map 1. A 100 km buffer around the study area

1.0 PREFACE

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

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

1.1 DATA LIST

Included datasets:

Filename	Contents
NwWaterfordNS_5315ob.xls	All Rare and legally protected *Flora and Fauna* within 5 km of your study area
NwWaterfordNS_5315ob100km.xls	A list of Rare and legally protected *Flora and Fauna* within 100 km of your study area
NwWaterfordNS_5315ma.xls	All *Managed Areas* in your study area
NwWaterfordNS_5315bp.xls	Rare and common *Pelagic Birds* in your study area (CWS database)

1.2 RESTRICTIONS

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

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

1.3 ADDITIONAL INFORMATION

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

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

Plants, Lichens, Ranking Methods, All other Inquiries
Sean Blaney, Senior Scientist, Executive Director
Tel: (506) 364-2658
sblaney@mta.ca

Animals (Fauna)
John Klymko, Zoologist
Tel: (506) 364-2660
jklymko@mta.ca

Plant Communities
Sarah Robinson , Community Ecologist
Tel: (506) 364-2664
srobinson@mta.ca

Data Management, GIS
James Churchill, Data Manager
Tel: (902) 679-6146
jlchurchill@mta.ca

Billing
Jean Breau
Tel: (506) 364-2659
jrbreau@mta.ca

Questions on the biology of Federal Species at Risk can be directed to ACCDC: (506) 364-2657, with questions on Species at Risk regulations to: Samara Eaton, Canadian Wildlife Service (NB and PE): (506) 364-5060 or Julie McKnight, Canadian Wildlife Service (NS): (902) 426-4196.

For provincial information about rare taxa and protected areas, or information about game animals, deer yards, old growth forests, archeological sites, fish habitat etc., in New Brunswick, please contact Stewart Lusk, Natural Resources: (506) 453-7110.

For provincial information about rare taxa and protected areas, or information about game animals, deer yards, old growth forests, archeological sites, fish habitat etc., in Nova Scotia, please contact Sherman Boates, NSDNR: (902) 679-6146. To determine if location-sensitive species (section 4.3) occur near your study site please contact a NSDNR Regional Biologist:

Western: Duncan Bayne
(902) 648-3536
baynedz@gov.ns.ca

Western: Donald Sam
(902) 634-7525
samdx@gov.ns.ca

Central: Shavonne Meyer
(902) 893-6353
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Central: Kimberly George
(902) 893-5630
georgeka@gov.ns.ca

Eastern: Mark Pulsifer
(902) 863-7523
pulsifmd@gov.ns.ca

Eastern: Donald Anderson
(902) 295-3949
andersdg@gov.ns.ca

Eastern: Terry Power
(902) 563-3370
powertd@gov.ns.ca

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

2.0 RARE AND ENDANGERED SPECIES

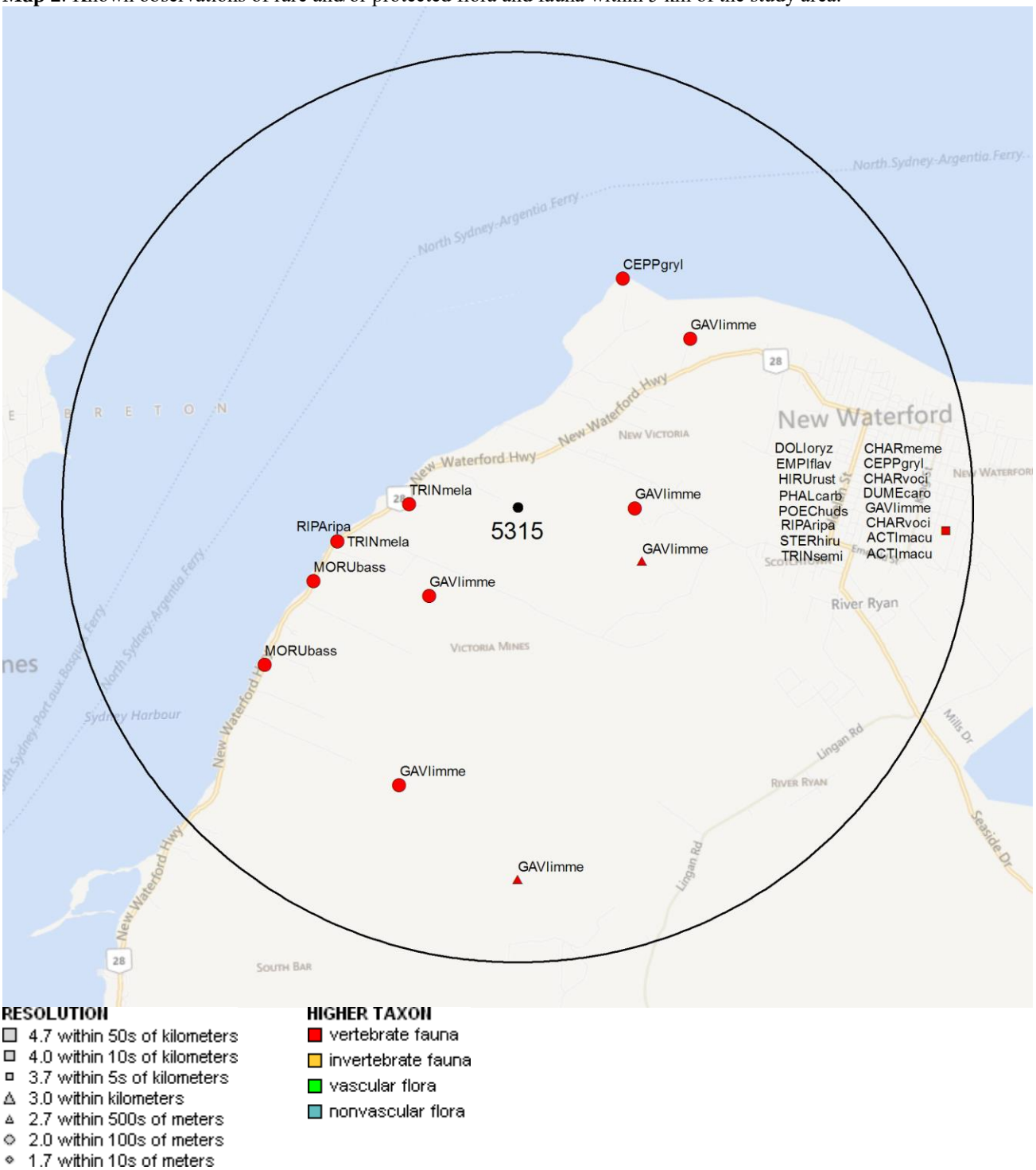
2.1 FLORA

A 5 km buffer around the study area contains no records of vascular, no records of nonvascular flora (Map 2 and attached: *ob.xls).

2.2 FAUNA

A 5 km buffer around the study area contains 42 records of 16 vertebrate, no records of invertebrate fauna (Map 2 and attached data files - see 1.1 Data List). Please see section 4.3 to determine if 'location-sensitive' species occur near your study site.

Map 2: Known observations of rare and/or protected flora and fauna within 5 km of the study area.

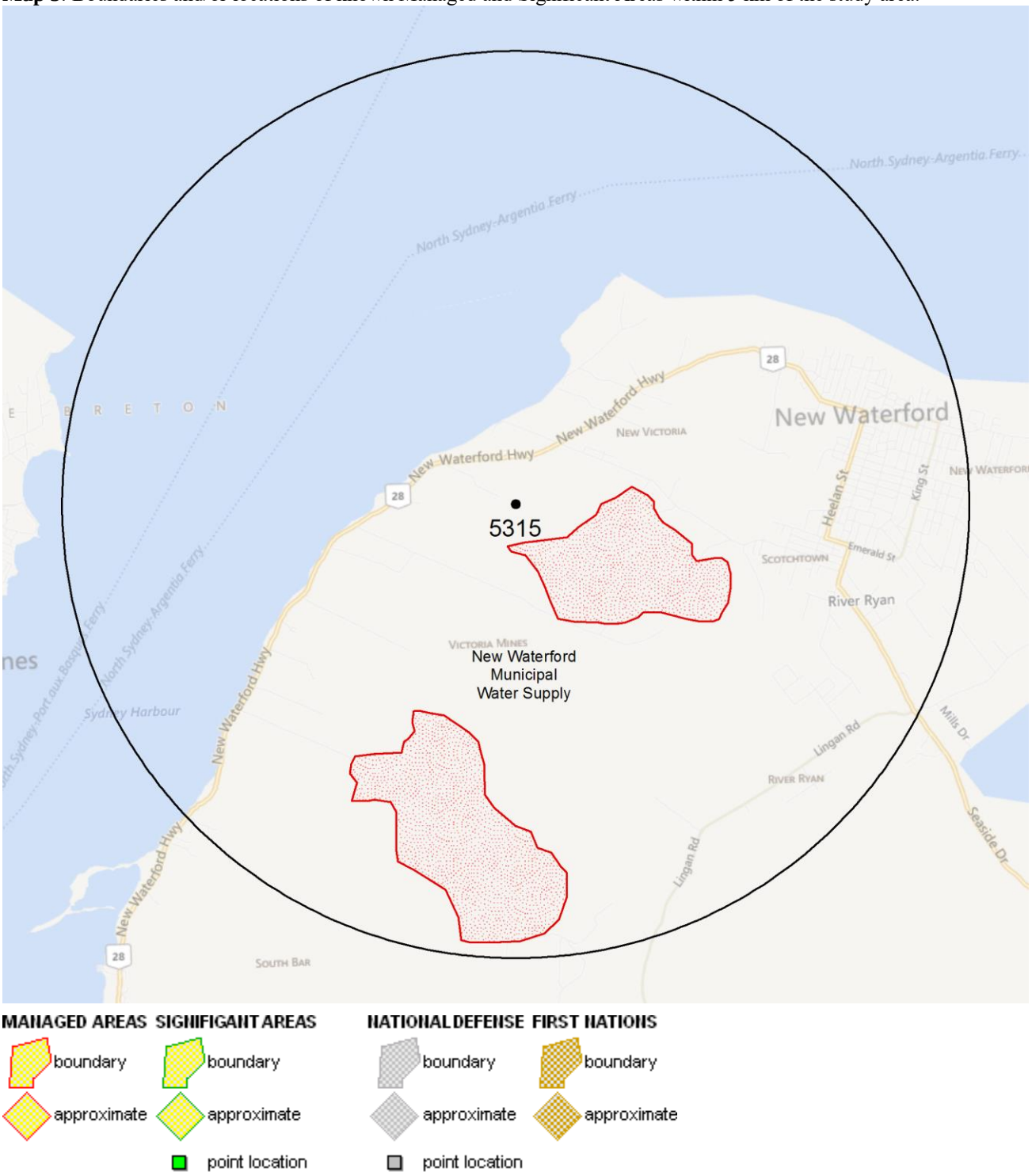


3.0 SPECIAL AREAS

3.1 MANAGED AREAS
The GIS scan identified 1 managed area 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)

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



4.0 RARE SPECIES LISTS

Rare and/or endangered taxa within the 5 km-buffered area listed in order of concern, beginning with legally listed taxa, with the number of observations per taxon and the distance in kilometers from study area centroid to the closest observation. [P] = vascular plant, [N] = nonvascular plant, [A] = vertebrate animal, [I] = invertebrate animal, [C] = community.

4.1 FLORA

Scientific *Name*	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)

4.2 FAUNA

	Scientific *Name*	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	*Charadrius melodus melodus*	Piping Plover melodus ssp	Endangered	Endangered	Endangered	S1B	1 At Risk	2	4.7 ± 7.07
A	*Hirundo rustica*	Barn Swallow	Threatened		Endangered	S3B	1 At Risk	1	4.7 ± 7.07
A	*Riparia riparia*	Bank Swallow	Threatened			S3B	2 May Be At Risk	5	2.0 ± 0.15
A	*Dolichonyx oryzivorus*	Bobolink	Threatened		Vulnerable	S3S4B	3 Sensitive	1	4.7 ± 7.07
A	*Sterna hirundo*	Common Tern	Not At Risk			S3B	3 Sensitive	2	4.7 ± 7.07
A	*Gavia immer*	Common Loon	Not At Risk			S3B,S4N	2 May Be At Risk	7	1.3 ± 0.15
A	*Tringa semipalmata*	Willet				S2S3B	2 May Be At Risk	5	4.7 ± 7.07
A	*Phalacrocorax carbo*	Great Cormorant				S3	3 Sensitive	3	4.7 ± 7.07
A	*Poecile hudsonica*	Boreal Chickadee				S3	3 Sensitive	1	4.7 ± 7.07
A	*Dumetella carolinensis*	Gray Catbird				S3B	2 May Be At Risk	2	4.7 ± 7.07
A	*Tringa melanoleuca*	Greater Yellowlegs				S3B,S5M	3 Sensitive	2	1.2 ± 0.15
A	*Cepphus grylle*	Black Guillemot				S3S4	4 Secure	4	2.8 ± 0.15
A	*Charadrius vociferus*	Killdeer				S3S4B	3 Sensitive	2	4.7 ± 7.07
A	*Actitis macularius*	Spotted Sandpiper				S3S4B	3 Sensitive	2	4.7 ± 7.07
A	*Empidonax flaviventris*	Yellow-bellied Flycatcher				S3S4B	3 Sensitive	1	4.7 ± 7.07
A	*Morus bassanus*	Northern Gannet				SHB,S5M	4 Secure	2	2.4 ± 0.15

4.3 LOCATION SENSITIVE SPECIES

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

Nova Scotia

Scientific *Name*	Common Name	SARA	Prov Legal Prot	Known within 5 km of Study Site?
Fraxinus nigra	Black Ash		Threatened	No
Glyptemys insculpta	Wood Turtle	Threatened	Threatened	No
Emydoidea blandingii	*Blanding's Turtle - Nova Scotia pop.*	Endangered	Vulnerable	No
Falco peregrinus pop. 1	Peregrine Falcon - anatum/tundrius pop.	Special Concern	Vulnerable	No
Bat Hibernaculum			[Endangered][1]	No

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

4.4 SOURCE BIBLIOGRAPHY

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

# recs	CITATION
35	Lepage, D. 2014. Maritime Breeding Bird Atlas Database. Bird Studies Canada, Sackville NB, 407,838 recs.
4	Erskine, A.J. 1992. Maritime Breeding Bird Atlas Database. NS Museum & Nimbus Publ., Halifax, 82,125 recs.
3	Benjamin, L.K. (compiler). 2012. Significant Habitat & Species Database. Nova Scotia Dept Natural Resources, 4965 recs.
1	Canadian Wildlife Service. 2011. Eastern Canada Seabirds at Sea (ECSAS), 3.27 Ed. Environment Canada, 305,783 recs.
1	Staff, DNR 2007. Restricted & Limited Use Land Database (RLUL).

5.0 RARE SPECIES WITHIN 100 KM

A 100 km buffer around the study area contains 9108 records of 103 vertebrate and 434 records of 41 invertebrate fauna; 4161 records of 271 vascular, 242 records of 28 nonvascular flora (attached: *ob100km.xls).

Rare and/or endangered taxa within the 100 km-buffered area listed in order of concern, beginning with legally listed taxa, with the number of observations per taxon and the distance in kilometers from study area centroid to the closest observation.

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	*Morone saxatilis*	Striped Bass	Endangered			S1	2 May Be At Risk	6	42.9 ± 0.5
A	*Myotis lucifugus*	Little Brown Myotis	Endangered		Endangered	S1	1 At Risk	35	12.8 ± 0.5
A	*Charadrius melodus melodus*	Piping Plover melodus ssp	Endangered	Endangered	Endangered	S1B	1 At Risk	165	4.7 ± 7.07
A	*Calidris canutus rufa*	Red Knot rufa ssp	Endangered		Endangered	S2S3M	1 At Risk	130	5.7 ± 0.5
A	*Rangifer tarandus pop. 2*	Woodland Caribou (Atlantic-Gasp ├⌐sie pop.)	Endangered	Endangered	Extirpated	SX	0.1 Extirpated	1	49.3 ± 0.5
A	*Acipenser oxyrinchus*	Atlantic Sturgeon	Threatened			S1?	2 May Be At Risk	1	42.9 ± 0.5
A	*Catharus bicknelli*	Bicknell's Thrush	Threatened	Special Concern	Endangered	S1S2B	1 At Risk	221	20.9 ± 7.07
A	*Glyptemys insculpta*	Wood Turtle	Threatened	Threatened	Threatened	S2	3 Sensitive	43	13.4 ± 0.5
A	*Chaetura pelagica*	Chimney Swift	Threatened	Threatened	Endangered	S2S3B	1 At Risk	29	27.1 ± 7.07
A	*Hirundo rustica*	Barn Swallow	Threatened		Endangered	S3B	1 At Risk	233	4.7 ± 7.07
A	*Wilsonia canadensis*	Canada Warbler	Threatened	Threatened	Endangered	S3B	1 At Risk	82	5.3 ± 7.07
A	*Chordeiles minor*	Common Nighthawk	Threatened	Threatened	Threatened	S3B	1 At Risk	34	11.5 ± 7.07
A	*Contopus cooperi*	Olive-sided Flycatcher	Threatened	Threatened	Threatened	S3B	1 At Risk	277	11.3 ± 7.07
A	*Riparia riparia*	Bank Swallow	Threatened			S3B	2 May Be At Risk	164	2.0 ± 0.15
A	*Dolichonyx oryzivorus*	Bobolink	Threatened		Vulnerable	S3S4B	3 Sensitive	91	4.7 ± 7.07
A	*Anguilla rostrata*	American Eel	Threatened			S5	4 Secure	1	5.7 ± 0.5
A	*Falco peregrinus pop. 1*	Peregrine Falcon - anatum/tundrius	Special Concern	Special Concern	Vulnerable	S1B	3 Sensitive	2	26.7 ± 0.1
A	*Bucephala islandica (Eastern pop.)*	Barrow's Goldeneye - Eastern pop.	Special Concern	Special Concern		S1N	1 At Risk	1	5.9 ± 16.9
A	*Asio flammeus*	Short-eared Owl	Special Concern	Special Concern		S1S2	2 May Be At Risk	5	20.5 ± 7.07
A	*Histrionicus histrionicus pop. 1*	Harlequin Duck - Eastern pop.	Special Concern	Special Concern	Endangered	S2N	1 At Risk	3	26.7 ± 0.1
A	*Euphagus carolinus*	Rusty Blackbird	Special Concern	Special Concern	Endangered	S2S3B	2 May Be At Risk	99	20.5 ± 7.07
A	*Chelydra serpentina*	Snapping Turtle	Special Concern	Special Concern	Vulnerable	S3	3 Sensitive	2	36.3 ± 0.01
A	*Contopus virens*	Eastern Wood-Pewee	Special Concern		Vulnerable	S3S4B	3 Sensitive	76	11.3 ± 7.07
A	*Tryngites subruficollis*	Buff-breasted Sandpiper	Special Concern			SNA	8 Accidental	23	5.7 ± 0.5
A	*Lynx canadensis*	Canadian Lynx	Not At Risk		Endangered	S1	1 At Risk	197	25.6 ± 1.0
A	*Sorex dispar*	Long-tailed Shrew	Not At Risk	Special Concern		S1	3 Sensitive	21	28.0 ± 0.25
A	*Accipiter cooperii*	Cooper's Hawk	Not At Risk			S1?B,SNAN	5 Undetermined	1	20.9 ± 7.07
A	*Aegolius funereus*	Boreal Owl	Not At Risk			S1B	5 Undetermined	14	20.5 ± 7.07
A	*Globicephala melas*	Long-finned Pilot Whale	Not At Risk			S2S3		6	79.9 ± 1.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	*Hemidactylium scutatum*	Four-toed Salamander	Not At Risk			S3	4 Secure	8	39.1 ± 0.1
A	*Sterna hirundo*	Common Tern	Not At Risk			S3B	3 Sensitive	292	4.7 ± 7.07
A	*Sialia sialis*	Eastern Bluebird	Not At Risk			S3B	3 Sensitive	7	61.4 ± 7.07
A	*Gavia immer*	Common Loon	Not At Risk			S3B,S4N	2 May Be At Risk	422	1.3 ± 0.15
A	*Accipiter gentilis*	Northern Goshawk	Not At Risk			S3S4	4 Secure	60	11.5 ± 7.07
A	*Puma concolor pop. 1*	Cougar - Eastern pop.	Data Deficient			SH	5 Undetermined	89	21.2 ± 1.0
A	*Martes americana*	American Marten			Endangered	S1	1 At Risk	32	33.0 ± 0.15
A	*Vireo gilvus*	Warbling Vireo				S1?B	5 Undetermined	5	66.0 ± 7.07
A	*Tringa solitaria*	Solitary Sandpiper				S1?B,S4S5M	4 Secure	3	24.6 ± 0.5
A	*Larus delawarensis*	Ring-billed Gull				S1?B,S5N	4 Secure	10	5.9 ± 16.9
A	*Alca torda*	Razorbill				S1B,S4N	3 Sensitive	52	18.1 ± 7.07
A	*Fratercula arctica*	Atlantic Puffin				S1B,S4S5N	3 Sensitive	35	18.1 ± 7.07
A	*Calidris minutilla*	Least Sandpiper				S1B,S5M	4 Secure	207	5.7 ± 0.5
A	*Picoides dorsalis*	American Three-toed Woodpecker				S1S2	5 Undetermined	6	64.9 ± 7.07
A	*Eremophila alpestris*	Horned Lark				S1S2B,S4N	4 Secure	2	11.3 ± 7.07
A	*Charadrius semipalmatus*	Semipalmated Plover				S1S2B,S5M	4 Secure	272	5.7 ± 0.5
A	*Asio otus*	Long-eared Owl				S2	2 May Be At Risk	7	39.0 ± 0.15
A	*Salmo salar*	Atlantic Salmon				S2	2 May Be At Risk	72	5.7 ± 0.5
A	*Microtus chrotorrhinus*	Rock Vole				S2	4 Secure	26	34.3 ± 0.5
A	*Pekania pennanti*	Fisher				S2	3 Sensitive	1	69.0 ± 0.2
A	*Vireo philadelphicus*	Philadelphia Vireo				S2?B	5 Undetermined	12	32.4 ± 7.07
A	*Anas acuta*	Northern Pintail				S2B	2 May Be At Risk	4	14.6 ± 15.0
A	*Anas clypeata*	Northern Shoveler				S2B	2 May Be At Risk	1	9.1 ± 0.15
A	*Anas strepera*	Gadwall				S2B	2 May Be At Risk	1	8.8 ± 0.15
A	*Rallus limicola*	Virginia Rail				S2B	5 Undetermined	1	75.9 ± 7.07
A	*Empidonax traillii*	Willow Flycatcher				S2B	3 Sensitive	1	45.4 ± 0.15
A	*Piranga olivacea*	Scarlet Tanager				S2B	5 Undetermined	1	76.7 ± 7.07
A	*Rissa tridactyla*	Black-legged Kittiwake				S2B,S4S5N	3 Sensitive	89	15.3 ± 0.15
A	*Bucephala clangula*	Common Goldeneye				S2B,S5N	4 Secure	48	5.9 ± 16.9
A	*Tringa semipalmata*	Willet				S2S3B	2 May Be At Risk	302	4.7 ± 7.07
A	*Pooecetes gramineus*	Vesper Sparrow				S2S3B	2 May Be At Risk	12	36.6 ± 7.07
A	*Molothrus ater*	Brown-headed Cowbird				S2S3B	4 Secure	13	5.3 ± 7.07
A	*Phalaropus lobatus*	Red-necked Phalarope				S2S3M	3 Sensitive	1	24.6 ± 0.5
A	*Phalaropus fulicarius*	Red Phalarope				S2S3M	3 Sensitive	1	5.7 ± 0.5
A	*Phalacrocorax carbo*	Great Cormorant				S3	3 Sensitive	274	4.7 ± 7.07
A	*Poecile hudsonica*	Boreal Chickadee				S3	3 Sensitive	410	4.7 ± 7.07
A	*Coccyzus erythropthalmus*	Black-billed Cuckoo				S3?B	2 May Be At Risk	5	20.9 ± 7.07
A	*Dendroica tigrina*	Cape May Warbler				S3?B	3 Sensitive	40	11.3 ± 7.07
A	*Pinicola enucleator*	Pine Grosbeak				S3?B,S5N	2 May Be At Risk	142	15.3 ± 7.07
A	*Podilymbus podiceps*	Pied-billed Grebe				S3B	3 Sensitive	22	5.3 ± 7.07
A	*Anas discors*	Blue-winged Teal				S3B	2 May Be At Risk	52	5.3 ± 7.07
A	*Sterna paradisaea*	Arctic Tern				S3B	2 May Be At Risk	71	17.5 ± 0.15
A	*Petrochelidon pyrrhonota*	Cliff Swallow				S3B	2 May Be At Risk	86	20.8 ± 7.07
A	*Dumetella carolinensis*	Gray Catbird				S3B	2 May Be At Risk	49	4.7 ± 7.07
A	*Mimus polyglottos*	Northern Mockingbird				S3B	4 Secure	6	11.5 ± 7.07
A	*Tringa melanoleuca*	Greater Yellowlegs				S3B,S5M	3 Sensitive	442	1.2 ± 0.15
A	*Mergus serrator*	Red-breasted Merganser				S3B,S5N	4 Secure	94	5.3 ± 7.07
A	*Pluvialis dominica*	American Golden-Plover				S3M	3 Sensitive	73	5.7 ± 0.5
A	*Numenius phaeopus hudsonicus*	Hudsonian Whimbrel				S3M	3 Sensitive	150	5.7 ± 0.5
A	*Limosa haemastica*	Hudsonian Godwit				S3M	3 Sensitive	92	5.7 ± 0.5
A	*Calidris pusilla*	Semipalmated Sandpiper				S3M	3 Sensitive	240	5.7 ± 0.5
A	*Calidris maritima*	Purple Sandpiper				S3N	3 Sensitive	11	5.7 ± 0.5
A	*Cepphus grylle*	Black Guillemot				S3S4	4 Secure	225	2.8 ± 0.15
A	*Picoides arcticus*	Black-backed Woodpecker				S3S4	3 Sensitive	42	25.4 ± 7.07
A	*Perisoreus canadensis*	Gray Jay				S3S4	3 Sensitive	211	11.3 ± 7.07
A	*Cardinalis cardinalis*	Northern Cardinal				S3S4	4 Secure	1	83.6 ± 7.07

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	*Synaptomys cooperi*	Southern Bog Lemming				S3S4	4 Secure	10	34.3 ± 0.5
A	*Botaurus lentiginosus*	American Bittern				S3S4B	3 Sensitive	39	5.3 ± 7.07
A	*Charadrius vociferus*	Killdeer				S3S4B	3 Sensitive	94	4.7 ± 7.07
A	*Actitis macularius*	Spotted Sandpiper				S3S4B	3 Sensitive	419	4.7 ± 7.07
A	*Gallinago delicata*	Wilson's Snipe				S3S4B	3 Sensitive	266	5.3 ± 7.07
A	*Empidonax flaviventris*	Yellow-bellied Flycatcher				S3S4B	3 Sensitive	433	4.7 ± 7.07
A	*Sayornis phoebe*	Eastern Phoebe				S3S4B	3 Sensitive	8	36.6 ± 7.07
A	*Tyrannus tyrannus*	Eastern Kingbird				S3S4B	3 Sensitive	42	11.3 ± 7.07
A	*Vermivora peregrina*	Tennessee Warbler				S3S4B	3 Sensitive	97	5.3 ± 7.07
A	*Dendroica castanea*	Bay-breasted Warbler				S3S4B	3 Sensitive	94	5.3 ± 7.07
A	*Dendroica striata*	Blackpoll Warbler				S3S4B	3 Sensitive	204	19.9 ± 0.1
A	*Wilsonia pusilla*	Wilson's Warbler				S3S4B	3 Sensitive	65	17.3 ± 7.07
A	*Pheucticus ludovicianus*	Rose-breasted Grosbeak				S3S4B	3 Sensitive	48	11.5 ± 7.07
A	*Passerella iliaca*	Fox Sparrow				S3S4B	4 Secure	269	5.3 ± 7.07
A	*Carduelis pinus*	Pine Siskin				S3S4B,S5N	3 Sensitive	182	11.3 ± 7.07
A	*Leucophaeus atricilla*	Laughing Gull				SHB	4 Secure	1	73.1 ± 0.15
A	*Morus bassanus*	Northern Gannet				SHB,S5M	4 Secure	39	2.4 ± 0.15
A	*Aythya americana*	Redhead				SHB,SNAM	4 Secure	2	14.6 ± 15.0
I	*Lampsilis cariosa*	Yellow Lampmussel	Special Concern	Special Concern	Threatened	S1	1 At Risk	37	21.3 ± 1.45
I	*Danaus plexippus*	Monarch	Special Concern	Special Concern		S2B	3 Sensitive	12	6.5 ± 5.0
I	*Lycaena dorcas*	Dorcas Copper				S1	6 Not Assessed	13	62.9 ± 0.01
I	*Polygonia satyrus*	Satyr Comma				S1	3 Sensitive	1	11.0 ± 1.0
I	*Polygonia gracilis*	Hoary Comma				S1	3 Sensitive	1	49.6 ± 1.0
I	*Oeneis jutta*	Jutta Arctic				S1	2 May Be At Risk	15	57.9 ± 0.01
I	*Ophiogomphus aspersus*	Brook Snaketail				S1	2 May Be At Risk	3	95.5 ± 0.05
I	*Somatochlora albicincta*	Ringed Emerald				S1	2 May Be At Risk	7	50.6 ± 0.05
I	*Somatochlora brevicincta*	Quebec Emerald				S1	2 May Be At Risk	7	75.0 ± 0.05
I	*Somatochlora williamsoni*	Williamson's Emerald				S1	2 May Be At Risk	10	40.9 ± 0.05
I	*Leucorrhinia patricia*	Canada Whiteface				S1	2 May Be At Risk	1	58.2 ± 0.1
I	*Coenagrion interrogatum*	Subarctic Bluet				S1	2 May Be At Risk	2	45.0 ± 0.15
I	*Leptodea ochracea*	Tidewater Mucket				S1	3 Sensitive	17	21.8 ± 0.1
I	*Papilio brevicauda*	Short-tailed Swallowtail				S1S2	3 Sensitive	25	31.7 ± 1.0
I	*Papilio brevicauda bretonensis*	Short-tailed Swallowtail				S1S2	1 At Risk	1	80.6 ± 0.01
I	*Nymphalis l-album*	Compton Tortoiseshell				S1S2	4 Secure	1	79.2 ± 1.0
I	*Thorybes pylades*	Northern Cloudywing				S2	3 Sensitive	1	60.6 ± 0.01
I	*Pieris oleracea*	Mustard White				S2	3 Sensitive	47	35.7 ± 0.01
I	*Strymon melinus*	Grey Hairstreak				S2	4 Secure	1	93.3 ± 0.1
I	*Boloria chariclea*	Arctic Fritillary				S2	3 Sensitive	9	51.6 ± 0.05
I	*Aglais milberti*	Milbert's Tortoiseshell				S2	4 Secure	1	49.6 ± 1.0
I	*Gomphus descriptus*	Harpoon Clubtail				S2	3 Sensitive	12	88.2 ± 0.05
I	*Somatochlora forcipata*	Forcipate Emerald				S2	2 May Be At Risk	9	51.1 ± 1.0
I	*Somatochlora septentrionalis*	Muskeg Emerald				S2	3 Sensitive	28	53.7 ± 1.0
I	*Lampsilis radiata*	Eastern Lampmussel				S2	3 Sensitive	5	22.4 ± 0.1
I	*Pantala hymenaea*	Spot-Winged Glider				S2B	3 Sensitive	3	31.9 ± 0.5
I	*Hesperia comma*	Common Branded Skipper				S3	4 Secure	25	8.9 ± 0.03
I	*Euphydryas phaeton*	Baltimore Checkerspot				S3	4 Secure	6	49.6 ± 1.0
I	*Polygonia faunus*	Green Comma				S3	4 Secure	13	49.0 ± 0.05
I	*Lethe anthedon*	Northern Pearly-Eye				S3	4 Secure	1	94.0 ± 0.05
I	*Lanthus parvulus*	Northern Pygmy Clubtail				S3	4 Secure	16	42.8 ± 0.05
I	*Ophiogomphus carolus*	Riffle Snaketail				S3	4 Secure	40	11.1 ± 1.0
I	*Boyeria grafiana*	Ocellated Darner				S3	3 Sensitive	1	28.8 ± 1.0
I	*Gomphaeschna furcillata*	Harlequin Darner				S3	3 Sensitive	1	88.2 ± 0.05
I	*Somatochlora tenebrosa*	Clamp-Tipped Emerald				S3	4 Secure	2	40.1 ± 0.65
I	*Sympetrum danae*	Black Meadowhawk				S3	3 Sensitive	12	32.5 ± 0.1
I	*Amphiagrion saucium*	Eastern Red Damsel				S3	4 Secure	25	13.0 ± 1.0
I	*Polygonia interrogationis*	Question Mark				S3B	4 Secure	10	35.7 ± 0.01
I	*Callophrys polios*	Hoary Elfin				S3S4	4 Secure	2	9.1 ± 0.5

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
I	*Speyeria aphrodite*	Aphrodite Fritillary				S3S4	4 Secure	2	59.5 ± 0.3
I	*Polygonia progne*	Grey Comma				S3S4	4 Secure	9	29.7 ± 0.01
N	*Erioderma pedicellatum (Atlantic pop.)*	Boreal Felt Lichen - Atlantic pop.	Endangered	Endangered	Endangered	S1S2	1 At Risk	181	48.5 ± 0.01
N	*Peltigera hydrothyria*	Eastern Waterfan	Threatened			S1S2	2 May Be At Risk	1	80.1 ± 2.5
N	*Sclerophora peronella (Nova Scotia pop.)*	Frosted Glass-whiskers Lichen - Nova Scotia pop.	Special Concern	Special Concern		S1?		4	63.3 ± 0.5
N	*Degelia plumbea*	Blue Felt Lichen	Special Concern	Special Concern	Vulnerable	S2	4 Secure	19	56.7 ± 0.01
N	*Seligeria diversifolia*	a Moss				S1		1	66.0 ± 50.0
N	*Anomobryum filiforme*	a moss				S1		1	66.0 ± 50.0
N	*Sanionia orthothecioides*	Coastal Hook Moss				S1	5 Undetermined	1	40.9 ± 0.5
N	*Massalongia carnosa*	Rockmoss Rosette Lichen				S1?	2 May Be At Risk	1	80.1 ± 2.5
N	*Parmeliella parvula*	Poor-man's Shingles Lichen				S1?	2 May Be At Risk	6	65.5 ± 0.01
N	*Nephroma arcticum*	Arctic Kidney Lichen				S1S2	2 May Be At Risk	1	63.1 ± 0.5
N	*Cavernularia hultenii*	Powdered Honeycomb Lichen				S1S2	2 May Be At Risk	1	41.3 ± 1.5
N	*Conardia compacta*	Coast Creeping Moss				S2?	3 Sensitive	2	73.8 ± 5.0
N	*Paludella squarrosa*	Tufted Fen Moss				S2?	3 Sensitive	1	51.9 ± 5.0
N	*Scorpidium scorpioides*	Hooked Scorpion Moss				S2?	3 Sensitive	5	68.9 ± 0.05
N	*Timmia megapolitana*	Metropolitan Timmia Moss				S2?	3 Sensitive	1	88.2 ± 0.1
N	*Syntrichia ruralis*	a Moss				S2?	3 Sensitive	1	35.7 ± 1.0
N	*Calliergon giganteum*	Giant Spear Moss				S2S3	3 Sensitive	1	68.9 ± 0.01
N	*Leucodon andrewsianus*	a Moss				S2S3	3 Sensitive	1	65.9 ± 0.01
N	*Tortella fragilis*	Fragile Twisted Moss				S2S3	3 Sensitive	2	43.1 ± 0.01
N	*Limprichtia revolvens*	a Moss				S2S3	3 Sensitive	1	89.7 ± 0.01
N	*Hylocomiastrum pyrenaicum*	a Feather Moss				S2S3	3 Sensitive	1	78.2 ± 3.0
N	*Flavocetraria nivalis*	Crinkled Snow Lichen				S2S3	3 Sensitive	1	66.4 ± 0.5
N	*Usnea mutabilis*	Bloody Beard Lichen				S2S3	3 Sensitive	1	94.0 ± 0.5
N	*Peltigera collina*	Tree Pelt Lichen				S2S3	3 Sensitive	2	56.9 ± 0.01
N	*Cladonia pocillum*	Rosette Pixie-cup Lichen				S2S3	3 Sensitive	1	76.7 ± 1.0
N	*Sticta fuliginosa*	Peppered Moon Lichen				S3?	3 Sensitive	2	67.1 ± 0.01
N	*Nephroma bellum*	Naked Kidney Lichen				S3?	3 Sensitive	1	63.1 ± 0.5
N	*Collema furfuraceum*	Blistered Tarpaper Lichen				S3?	3 Sensitive	1	63.1 ± 0.5
P	*Juncus caesariensis*	New Jersey Rush	Special Concern	Special Concern	Vulnerable	S2	3 Sensitive	239	45.4 ± 0.01
P	*Isoetes prototypus*	Prototype Quillwort	Special Concern	Special Concern	Vulnerable	S2	3 Sensitive	13	10.7 ± 0.05
P	*Floerkea proserpinacoides*	False Mermaidweed	Not At Risk			S2	3 Sensitive	13	65.0 ± 0.1
P	*Salix candida*	Sage Willow			Endangered	S1	2 May Be At Risk	34	87.6 ± 0.1
P	*Thuja occidentalis*	Eastern White Cedar			Vulnerable	S1	At Risk	2	23.5 ± 5.0
P	*Acer saccharinum*	Silver Maple				S1	Undetermined	1	12.6 ± 0.75
P	*Osmorhiza depauperata*	Blunt Sweet Cicely				S1	2 May Be At Risk	3	84.9 ± 0.8
P	*Sanicula odorata*	Clustered Sanicle				S1	2 May Be At Risk	6	51.9 ± 1.0
P	*Arnica lonchophylla*	Northern Arnica				S1	2 May Be At Risk	11	69.4 ± 7.07
P	*Artemisia campestris var. borealis*	Field Wormwood				S1	2 May Be At Risk	1	84.7 ± 0.01
P	*Artemisia campestris ssp. borealis*	Field Wormwood				S1	2 May Be At Risk	7	84.4 ± 0.01
P	*Bidens hyperborea*	Estuary Beggarticks				S1	2 May Be At Risk	2	74.8 ± 1.5
P	*Prenanthes racemosa*	Glaucous Rattlesnakeroot				S1	2 May Be At Risk	1	6.2 ± 3.0
P	*Betula glandulosa*	Glandular Birch				S1	2 May Be At Risk	5	53.2 ± 7.07
P	*Cardamine pratensis var. angustifolia*	Cuckoo Flower				S1	2 May Be At Risk	4	66.3 ± 2.5
P	*Draba glabella*	Rock Whitlow-Grass				S1	2 May Be At Risk	4	78.5 ± 0.2
P	*Draba norvegica var. clivicola*	Norwegian Whitlow-Grass				S1	2 May Be At Risk	9	64.9 ± 2.5
P	*Draba pycnosperma*	Dense Whitlow-grass				S1	2 May Be At Risk	1	84.9 ± 1.6
P	*Stellaria crassifolia*	Fleshy Stitchwort				S1	2 May Be At Risk	1	83.1 ± 2.0
P	*Suaeda maritima ssp. richii*	White Sea-blite				S1	5 Undetermined	1	76.5 ± 0.1
P	*Diapensia lapponica*	Diapensia				S1	2 May Be At Risk	10	64.1 ± 0.2
P	*Phyllodoce caerulea*	Blue Mountain Heather				S1	2 May Be At Risk	4	84.9 ± 1.6
P	*Rhododendron lapponicum*	Lapland Rosebay				S1	2 May Be At Risk	2	78.5 ± 1.0
P	*Vaccinium ovalifolium*	Oval-leaved Bilberry				S1	2 May Be At Risk	14	72.6 ± 0.1
P	*Oxytropis campestris var. johannensis*	Field Locoweed				S1	2 May Be At Risk	6	74.4 ± 7.07

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P	*Gentianella amarella*	Northern Gentian				S1	2 May Be At Risk	1	91.5 ± 1.0
P	*Gentianella amarella ssp. acuta*	Northern Gentian				S1	2 May Be At Risk	2	92.5 ± 1.5
P	*Pinguicula vulgaris*	Common Butterwort				S1	2 May Be At Risk	7	64.1 ± 0.2
P	*Utricularia ochroleuca*	Yellowish-white Bladderwort				S1	5 Undetermined	1	48.4 ± 1.0
P	*Oxyria digyna*	Mountain Sorrel				S1	2 May Be At Risk	8	70.5 ± 0.01
P	*Polygonum viviparum*	Alpine Bistort				S1	2 May Be At Risk	2	85.9 ± 0.01
P	*Anemone multifida*	Cut-leaved Anemone				S1	2 May Be At Risk	5	77.7 ± 1.0
P	*Anemone parviflora*	Small-flowered Anemone				S1	2 May Be At Risk	3	76.9 ± 0.5
P	*Potentilla pensylvanica var. litoralis*	Pennsylvania Cinquefoil				S1	0.1 Extirpated	4	80.3 ± 1.0
P	*Salix uva-ursi*	Bearberry Willow				S1	2 May Be At Risk	2	78.6 ± 0.2
P	*Saxifraga aizoides*	Yellow Mountain Saxifrage				S1	2 May Be At Risk	9	68.4 ± 3.0
P	*Saxifraga cernua*	Nodding Saxifrage				S1	2 May Be At Risk	2	84.9 ± 0.2
P	*Saxifraga oppositifolia*	Purple Mountain Saxifrage				S1	2 May Be At Risk	2	78.5 ± 1.0
P	*Pedicularis palustris*	Marsh Lousewort				S1	2 May Be At Risk	9	41.1 ± 0.1
P	*Rhinanthus minor ssp. groenlandicus*	Little Yellow Rattle				S1	May Be At Risk	1	87.8 ± 1.6
P	*Scrophularia lanceolata*	Lance-leaved Figwort				S1	Undetermined	1	44.9 ± 1.5
P	*Carex granularis*	Limestone Meadow Sedge				S1	May Be At Risk	18	69.1 ± 0.01
P	*Carex gynocrates*	Northern Bog Sedge				S1	2 May Be At Risk	2	87.6 ± 0.1
P	*Carex livida var. radicaulis*	Livid Sedge				S1	2 May Be At Risk	27	38.1 ± 5.0
P	*Carex rariflora*	Loose-flowered Alpine Sedge				S1	2 May Be At Risk	14	38.3 ± 5.0
P	*Carex saxatilis*	Russet Sedge				S1	2 May Be At Risk	7	54.5 ± 1.0
P	*Carex tenuiflora*	Sparse-Flowered Sedge				S1	2 May Be At Risk	2	86.1 ± 0.1
P	*Carex viridula var. elatior*	Greenish Sedge				S1	2 May Be At Risk	15	88.2 ± 0.01
P	*Eleocharis erythropoda*	Red-stemmed Spikerush				S1	May Be At Risk	2	66.2 ± 25.0
P	*Rhynchospora capillacea*	Slender Beakrush				S1	2 May Be At Risk	6	51.6 ± 1.0
P	*Blysmus rufus*	Red Bulrush				S1	2 May Be At Risk	6	76.5 ± 0.1
P	*Iris prismatica*	Slender Blue Flag				S1	2 May Be At Risk	2	51.4 ± 0.5
P	*Juncus bulbosus*	Bulbous Rush				S1	5 Undetermined	12	7.0 ± 0.01
P	*Luzula spicata*	Spiked Woodrush				S1	2 May Be At Risk	13	84.7 ± 0.03
P	*Triantha glutinosa*	Sticky False-Asphodel				S1	2 May Be At Risk	11	77.5 ± 1.5
P	*Calamagrostis stricta ssp. inexpansa*	Slim-stemmed Reed Grass				S1	3 Sensitive	1	84.9 ± 5.0
P	*Elymus wiegandii*	Wiegand's Wild Rye				S1	2 May Be At Risk	7	10.7 ± 1.0
P	*Elymus hystrix var. bigeloviana*	Spreading Wild Rye				S1	2 May Be At Risk	1	25.9 ± 4.0
P	*Festuca altaica*	Northern Rough Fescue				S1	May Be At Risk	3	85.9 ± 0.01
P	*Festuca subverticillata*	Nodding Fescue				S1	2 May Be At Risk	72	81.5 ± 0.01
P	*Hordeum brachyantherum*	Meadow Barley				S1	May Be At Risk	1	63.5 ± 0.01
P	*Hordeum brachyantherum ssp. brachyantherum*	Meadow Barley				S1	May Be At Risk	1	84.7 ± 0.01
P	*Phleum alpinum*	Alpine Timothy				S1	2 May Be At Risk	6	63.1 ± 0.01
P	*Torreyochloa pallida var. pallida*	Pale False Manna Grass				S1	0.1 Extirpated	2	57.9 ± 1.5
P	*Trisetum melicoides*	Purple False Oats				S1	2 May Be At Risk	4	33.6 ± 4.8
P	*Adiantum pedatum*	Northern Maidenhair Fern				S1	2 May Be At Risk	2	79.7 ± 0.3
P	*Cystopteris laurentiana*	Laurentian Bladder Fern				S1	2 May Be At Risk	26	48.3 ± 5.0
P	*Botrychium lunaria*	Common Moonwort				S1	2 May Be At Risk	3	33.1 ± 1.0
P	*Halenia deflexa ssp. brentoniana*	Spurred Gentian				S1?	5 Undetermined	5	41.2 ± 0.5
P	*Epilobium lactiflorum*	White-flowered Willowherb				S1?	May Be At Risk	1	71.1 ± 5.0
P	*Crataegus submollis*	Quebec Hawthorn				S1?	5 Undetermined	3	74.2 ± 7.07
P	*Rubus flagellaris*	Northern Dewberry				S1?	5 Undetermined	2	25.9 ± 3.0
P	*Spiraea septentrionalis*	Northern Meadowsweet				S1?	May Be At Risk	4	57.2 ± 0.5
P	*Schoenoplectus robustus*	Sturdy Bulrush				S1?	5 Undetermined	2	49.9 ± 5.0
P	*Dichanthelium acuminatum var. lindheimeri*	Woolly Panic Grass				S1?	5 Undetermined	1	59.8 ± 1.0
P	*Huperzia selago*	Northern Firmoss				S1?	May Be At Risk	7	33.1 ± 4.8
P	*Fraxinus nigra*	Black Ash			Threatened	S1S2	At Risk	27	19.5 ± 0.01
P	*Betula minor*	Dwarf White Birch				S1S2	3 Sensitive	1	88.8 ± 1.0
P	*Arabis hirsuta var. pycnocarpa*	Western Hairy Rockcress				S1S2	2 May Be At Risk	11	17.1 ± 0.1
P	*Chenopodium rubrum*	Red Pigweed				S1S2	May Be At Risk	3	26.7 ± 7.07
P	*Cornus suecica*	Swedish Bunchberry				S1S2	3 Sensitive	25	37.7 ± 0.03

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P	*Anemone virginiana var. alba*	Virginia Anemone				S1S2	3 Sensitive	11	33.6 ± 0.1
P	*Ranunculus sceleratus*	Cursed Buttercup				S1S2	2 May Be At Risk	6	36.1 ± 0.6
P	*Parnassia palustris var. parviflora*	Marsh Grass-of-Parnassus				S1S2	May Be At Risk	5	25.3 ± 7.07
P	*Juncus alpinoarticulatus ssp. nodulosus*	Richardson's Rush				S1S2	2 May Be At Risk	6	77.8 ± 5.0
P	*Calamagrostis stricta*	Slim-stemmed Reed Grass				S1S2	3 Sensitive	1	85.6 ± 0.01
P	*Calamagrostis stricta ssp. stricta*	Slim-stemmed Reed Grass				S1S2	3 Sensitive	1	51.6 ± 1.0
P	*Festuca prolifera*	Proliferous Fescue				S1S2	3 Sensitive	7	68.3 ± 1.5
P	*Sparganium hyperboreum*	Northern Burreed				S1S2	3 Sensitive	14	38.3 ± 0.1
P	*Cryptogramma stelleri*	Steller's Rockbrake				S1S2	May Be At Risk	17	81.1 ± 0.01
P	*Woodsia alpina*	Alpine Cliff Fern				S1S2	May Be At Risk	11	34.4 ± 2.0
P	*Selaginella selaginoides*	Low Spikemoss				S1S2	May Be At Risk	6	74.1 ± 0.5
P	*Conioselinum chinense*	Chinese Hemlock-parsley				S2	3 Sensitive	1	82.3 ± 2.0
P	*Osmorhiza berteroi*	Mountain Sweet Cicely				S2	May Be At Risk	1	79.6 ± 0.1
P	*Osmorhiza longistylis*	Smooth Sweet Cicely				S2	May Be At Risk	18	65.6 ± 3.0
P	*Erigeron philadelphicus*	Philadelphia Fleabane				S2	3 Sensitive	7	15.4 ± 1.0
P	*Hieracium robinsonii*	Robinson's Hawkweed				S2	3 Sensitive	42	35.2 ± 5.0
P	*Iva frutescens ssp. oraria*	Big-leaved Marsh-elder				S2	Sensitive	1	16.5 ± 4.0
P	*Senecio pseudoarnica*	Seabeach Ragwort				S2	3 Sensitive	9	18.1 ± 7.07
P	*Solidago multiradiata*	Multi-rayed Goldenrod				S2	May Be At Risk	11	41.1 ± 0.75
P	*Symphyotrichum ciliolatum*	Fringed Blue Aster				S2	Sensitive	1	68.2 ± 7.07
P	*Impatiens pallida*	Pale Jewelweed				S2	3 Sensitive	7	49.6 ± 7.07
P	*Caulophyllum thalictroides*	Blue Cohosh				S2	2 May Be At Risk	8	65.4 ± 0.01
P	*Betula borealis*	Northern Birch				S2	3 Sensitive	13	34.4 ± 1.5
P	*Betula michauxii*	Michaux's Dwarf Birch				S2	3 Sensitive	11	39.1 ± 7.07
P	*Arabis drummondii*	Drummond's Rockcress				S2	3 Sensitive	11	22.0 ± 1.0
P	*Cardamine parviflora var. arenicola*	Small-flowered Bittercress				S2	3 Sensitive	10	23.6 ± 1.0
P	*Draba arabisans*	Rock Whitlow-Grass				S2	3 Sensitive	23	33.6 ± 4.8
P	*Lobelia kalmii*	Brook Lobelia				S2	May Be At Risk	20	23.5 ± 1.2
P	*Stellaria humifusa*	Saltmarsh Starwort				S2	3 Sensitive	5	35.8 ± 0.5
P	*Hudsonia ericoides*	Pinebarren Golden Heather				S2	3 Sensitive	3	80.3 ± 1.0
P	*Hypericum majus*	Large St John's-wort				S2	Sensitive	2	51.8 ± 0.1
P	*Crassula aquatica*	Water Pygmyweed				S2	3 Sensitive	7	31.2 ± 0.1
P	*Myriophyllum verticillatum*	Whorled Water Milfoil				S2	3 Sensitive	2	32.1 ± 7.07
P	*Utricularia resupinata*	Inverted Bladderwort				S2	Sensitive	1	69.2 ± 0.8
P	*Oenothera fruticosa ssp. glauca*	Narrow-leaved Evening Primrose				S2	5 Undetermined	1	77.5 ± 1.5
P	*Rumex salicifolius var. mexicanus*	Triangular-valve Dock				S2	3 Sensitive	10	11.5 ± 7.07
P	*Primula mistassinica*	Mistassini Primrose				S2	3 Sensitive	18	62.6 ± 1.0
P	*Anemone canadensis*	Canada Anemone				S2	2 May Be At Risk	12	77.5 ± 0.5
P	*Anemone quinquefolia*	Wood Anemone				S2	3 Sensitive	5	60.4 ± 0.5
P	*Anemone virginiana*	Virginia Anemone				S2	3 Sensitive	4	85.6 ± 0.01
P	*Caltha palustris*	Yellow Marsh Marigold				S2	3 Sensitive	32	44.9 ± 2.5
P	*Galium labradoricum*	Labrador Bedstraw				S2	3 Sensitive	41	23.2 ± 1.5
P	*Salix pedicellaris*	Bog Willow				S2	3 Sensitive	12	88.3 ± 0.01
P	*Comandra umbellata*	Bastard's Toadflax				S2	2 May Be At Risk	22	6.2 ± 3.0
P	*Saxifraga paniculata ssp. neogaea*	White Mountain Saxifrage				S2	3 Sensitive	25	33.6 ± 4.8
P	*Viola nephrophylla*	Northern Bog Violet				S2	3 Sensitive	6	65.0 ± 0.1
P	*Carex atratiformis*	Scabrous Black Sedge				S2	3 Sensitive	20	33.6 ± 1.0
P	*Carex bebbii*	Bebb's Sedge				S2	Sensitive	19	18.5 ± 0.5
P	*Carex capillaris*	Hairlike Sedge				S2	3 Sensitive	22	68.4 ± 0.01
P	*Carex castanea*	Chestnut Sedge				S2	2 May Be At Risk	10	36.6 ± 7.07
P	*Carex comosa*	Bearded Sedge				S2	3 Sensitive	1	86.9 ± 1.5
P	*Carex hystericina*	Porcupine Sedge				S2	2 May Be At Risk	8	32.5 ± 0.5
P	*Carex scirpoidea*	Scirpuslike Sedge				S2	3 Sensitive	19	16.5 ± 10.0
P	*Eleocharis quinqueflora*	Few-flowered Spikerush				S2	Sensitive	24	24.7 ± 1.2
P	*Eriophorum gracile*	Slender Cottongrass				S2	3 Sensitive	2	76.2 ± 0.01
P	*Vallisneria americana*	Wild Celery				S2	2 May Be At Risk	2	12.0 ± 10.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	*Juncus stygius ssp. americanus*	Moor Rush				S2	Sensitive	39	38.9 ± 5.0
P	*Allium schoenoprasum*	Wild Chives				S2	2 May Be At Risk	1	12.6 ± 0.3
P	*Allium schoenoprasum var. sibiricum*	Wild Chives				S2	2 May Be At Risk	7	10.7 ± 7.07
P	*Lilium canadense*	Canada Lily				S2	May Be At Risk	9	61.0 ± 1.5
P	*Cypripedium parviflorum var. pubescens*	Yellow Lady's-slipper				S2	3 Sensitive	2	39.8 ± 0.01
P	*Cypripedium parviflorum var. makasin*	Small Yellow Lady's-Slipper				S2	3 Sensitive	5	15.3 ± 7.07
P	*Cypripedium reginae*	Showy Lady's-Slipper				S2	2 May Be At Risk	182	16.4 ± 1.5
P	*Platanthera macrophylla*	Large Round-Leaved Orchid				S2	3 Sensitive	1	73.2 ± 0.1
P	*Spiranthes lucida*	Shining Ladies'-Tresses				S2	May Be At Risk	4	64.7 ± 5.0
P	*Piptatherum canadense*	Canada Rice Grass				S2	3 Sensitive	1	57.5 ± 0.1
P	*Piptatherum pungens*	Slender Rice Grass				S2	3 Sensitive	1	28.0 ± 10.0
P	*Potamogeton friesii*	Fries' Pondweed				S2	2 May Be At Risk	2	89.5 ± 0.01
P	*Potamogeton richardsonii*	Richardson's Pondweed				S2	May Be At Risk	6	25.2 ± 7.07
P	*Asplenium trichomanes-ramosum*	Green Spleenwort				S2	3 Sensitive	33	23.8 ± 5.0
P	*Dryopteris fragrans var. remotiuscula*	Fragrant Wood Fern				S2	3 Sensitive	11	32.1 ± 7.07
P	*Polystichum lonchitis*	Northern Holly Fern				S2	3 Sensitive	41	38.1 ± 1.5
P	*Woodsia glabella*	Smooth Cliff Fern				S2	3 Sensitive	25	34.1 ± 1.6
P	*Symphyotrichum boreale*	Boreal Aster				S2?	3 Sensitive	8	31.1 ± 0.15
P	*Amelanchier fernaldii*	Fernald's Serviceberry				S2?	5 Undetermined	4	30.6 ± 7.07
P	*Eleocharis ovata*	Ovate Spikerush				S2?	3 Sensitive	1	12.8 ± 0.4
P	*Betula pumila*	Bog Birch				S2S3	3 Sensitive	51	48.4 ± 2.5
P	*Betula pumila var. pumila*	Bog Birch				S2S3	3 Sensitive	5	60.8 ± 1.5
P	*Hypericum dissimulatum*	Disguised St John's-wort				S2S3	3 Sensitive	1	32.7 ± 2.5
P	*Triosteum aurantiacum*	Orange-fruited Tinker's Weed				S2S3	Sensitive	49	61.2 ± 0.05
P	*Shepherdia canadensis*	Soapberry				S2S3	Sensitive	66	33.3 ± 2.0
P	*Empetrum eamesii ssp. atropurpureum*	Pink Crowberry				S2S3	3 Sensitive	11	54.2 ± 7.07
P	*Empetrum eamesii ssp. eamesii*	Pink Crowberry				S2S3	3 Sensitive	8	54.2 ± 7.07
P	*Chamaesyce polygonifolia*	Seaside Spurge				S2S3	Sensitive	3	36.0 ± 0.8
P	*Halenia deflexa*	Spurred Gentian				S2S3	3 Sensitive	25	26.1 ± 0.5
P	*Hedeoma pulegioides*	American False Pennyroyal				S2S3	3 Sensitive	1	13.3 ± 1.0
P	*Polygala sanguinea*	Blood Milkwort				S2S3	3 Sensitive	1	40.4 ± 7.07
P	*Polygonum buxiforme*	Small's Knotweed				S2S3	5 Undetermined	1	77.8 ± 7.07
P	*Polygonum raii*	Sharp-fruited Knotweed				S2S3	5 Undetermined	11	13.3 ± 1.0
P	*Plantago rugelii*	Rugel's Plantain				S2S3	Secure	2	83.2 ± 0.01
P	*Potentilla canadensis*	Canada Cinquefoil				S2S3	Sensitive	1	24.2 ± 0.75
P	*Galium aparine*	Common Bedstraw				S2S3	Sensitive	8	84.6 ± 0.01
P	*Salix pellita*	Satiny Willow				S2S3	Sensitive	7	18.2 ± 7.07
P	*Veronica serpyllifolia ssp. humifusa*	Thyme-Leaved Speedwell				S2S3	Sensitive	23	12.6 ± 0.75
P	*Carex adusta*	Lesser Brown Sedge				S2S3	3 Sensitive	7	55.1 ± 5.0
P	*Carex hirtifolia*	Pubescent Sedge				S2S3	Sensitive	2	62.2 ± 0.01
P	*Elodea canadensis*	Canada Waterweed				S2S3	Secure	4	76.7 ± 0.01
P	*Juncus trifidus*	Highland Rush				S2S3	Sensitive	37	52.6 ± 0.2
P	*Coeloglossum viride var. virescens*	Long-bracted Frog Orchid				S2S3	2 May Be At Risk	34	71.2 ± 1.0
P	*Cypripedium parviflorum*	Yellow Lady's-slipper				S2S3	3 Sensitive	38	18.4 ± 7.07
P	*Poa glauca*	Glaucous Blue Grass				S2S3	3 Sensitive	33	31.2 ± 1.5
P	*Stuckenia filiformis ssp. alpina*	Thread-leaved Pondweed				S2S3	Sensitive	32	36.8 ± 7.07
P	*Potamogeton zosteriformis*	Flat-stemmed Pondweed				S2S3	Sensitive	12	22.9 ± 0.5
P	*Botrychium lanceolatum var. angustisegmentum*	Lance-Leaf Grape-Fern				S2S3	3 Sensitive	13	33.6 ± 1.0
P	*Botrychium simplex*	Least Moonwort				S2S3	3 Sensitive	9	34.4 ± 1.0
P	*Ophioglossum pusillum*	Northern Adder's-tongue				S2S3	3 Sensitive	1	22.2 ± 5.0
P	*Angelica atropurpurea*	Purple-stemmed Angelica				S3	Secure	27	9.0 ± 0.01
P	*Angelica sylvestris*	Woodland Angelica				S3	Secure	1	85.3 ± 1.5
P	*Erigeron hyssopifolius*	Hyssop-leaved Fleabane				S3	3 Sensitive	71	32.1 ± 7.07
P	*Megalodonta beckii*	Water Beggarticks				S3	Secure	6	23.5 ± 1.0
P	*Packera paupercula*	Balsam Groundsel				S3	4 Secure	25	37.7 ± 4.8
P	*Campanula aparinoides*	Marsh Bellflower				S3	3 Sensitive	2	81.5 ± 5.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	*Minuartia groenlandica*	Greenland Stitchwort				S3	Sensitive	1	78.6 ± 0.2
P	*Viburnum edule*	Squashberry				S3	3 Sensitive	68	63.1 ± 0.01
P	*Empetrum eamesii*	Pink Crowberry				S3	3 Sensitive	27	48.8 ± 0.2
P	*Vaccinium boreale*	Northern Blueberry				S3	Sensitive	71	40.0 ± 2.0
P	*Vaccinium caespitosum*	Dwarf Bilberry				S3	Secure	20	33.6 ± 1.0
P	*Vaccinium uliginosum*	Alpine Bilberry				S3	Sensitive	50	39.1 ± 0.03
P	*Bartonia virginica*	Yellow Bartonia				S3	4 Secure	1	86.2 ± 0.1
P	*Proserpinaca palustris*	Marsh Mermaidweed				S3	4 Secure	6	18.2 ± 0.25
P	*Proserpinaca palustris var. crebra*	Marsh Mermaidweed				S3	4 Secure	12	68.2 ± 0.01
P	*Teucrium canadense*	Canada Germander				S3	3 Sensitive	1	59.2 ± 0.03
P	*Decodon verticillatus*	Swamp Loosestrife				S3	Secure	3	76.8 ± 0.01
P	*Epilobium hornemannii*	Hornemann's Willowherb				S3	Secure	82	43.3 ± 2.3
P	*Epilobium strictum*	Downy Willowherb				S3	3 Sensitive	10	41.5 ± 1.5
P	*Polygonum pensylvanicum*	Pennsylvania Smartweed				S3	4 Secure	3	54.3 ± 0.5
P	*Primula laurentiana*	Laurentian Primrose				S3	4 Secure	1	56.2 ± 7.07
P	*Samolus valerandi ssp. parviflorus*	Seaside Brookweed				S3	Sensitive	1	62.8 ± 0.25
P	*Pyrola asarifolia*	Pink Pyrola				S3	4 Secure	90	39.8 ± 0.01
P	*Pyrola minor*	Lesser Pyrola				S3	Sensitive	28	9.6 ± 0.01
P	*Ranunculus gmelinii*	Gmelin's Water Buttercup				S3	4 Secure	31	11.6 ± 0.5
P	*Rhamnus alnifolia*	Alder-leaved Buckthorn				S3	Secure	61	32.4 ± 0.01
P	*Agrimonia gryposepala*	Hooked Agrimony				S3	4 Secure	76	19.7 ± 5.0
P	*Galium kamtschaticum*	Northern Wild Licorice				S3	4 Secure	94	50.2 ± 5.0
P	*Salix petiolaris*	Meadow Willow				S3	4 Secure	8	13.9 ± 0.01
P	*Geocaulon lividum*	Northern Comandra				S3	Secure	27	22.5 ± 0.01
P	*Limosella australis*	Southern Mudwort				S3	Secure	7	12.2 ± 5.0
P	*Laportea canadensis*	Canada Wood Nettle				S3	3 Sensitive	9	66.4 ± 0.01
P	*Verbena hastata*	Blue Vervain				S3	Secure	1	82.1 ± 0.1
P	*Carex eburnea*	Bristle-leaved Sedge				S3	3 Sensitive	54	39.8 ± 0.01
P	*Carex rosea*	Rosy Sedge				S3	4 Secure	5	53.9 ± 5.0
P	*Carex wiegandii*	Wiegand's Sedge				S3	Sensitive	61	10.7 ± 0.01
P	*Eleocharis nitida*	Quill Spikerush				S3	4 Secure	2	41.2 ± 0.5
P	*Juncus subcaudatus var. planisepalus*	Woods-Rush				S3	3 Sensitive	6	16.9 ± 0.01
P	*Juncus dudleyi*	Dudley's Rush				S3	Secure	11	68.9 ± 0.01
P	*Goodyera oblongifolia*	Menzies' Rattlesnake-plantain				S3	3 Sensitive	45	36.6 ± 7.07
P	*Goodyera repens*	Lesser Rattlesnake-plantain				S3	3 Sensitive	17	23.9 ± 1.0
P	*Listera australis*	Southern Twayblade				S3	Secure	18	22.0 ± 0.01
P	*Platanthera grandiflora*	Large Purple Fringed Orchid				S3	4 Secure	3	31.2 ± 1.0
P	*Platanthera hookeri*	Hooker's Orchid				S3	4 Secure	5	73.0 ± 1.0
P	*Platanthera orbiculata*	Small Round-leaved Orchid				S3	4 Secure	17	9.6 ± 0.01
P	*Spiranthes ochroleuca*	Yellow Ladies'-tresses				S3	Secure	1	48.0 ± 0.0
P	*Alopecurus aequalis*	Short-awned Foxtail				S3	Secure	13	36.6 ± 1.5
P	*Potamogeton obtusifolius*	Blunt-leaved Pondweed				S3	Secure	14	76.0 ± 7.07
P	*Sparganium natans*	Small Burreed				S3	4 Secure	9	31.0 ± 0.35
P	*Asplenium trichomanes*	Maidenhair Spleenwort				S3	Secure	42	22.0 ± 2.0
P	*Equisetum pratense*	Meadow Horsetail				S3	Sensitive	48	62.5 ± 0.01
P	*Equisetum variegatum*	Variegated Horsetail				S3	4 Secure	12	13.9 ± 2.0
P	*Isoetes acadiensis*	Acadian Quillwort				S3	3 Sensitive	9	11.5 ± 5.0
P	*Huperzia appalachiana*	Appalachian Fir-Clubmoss				S3	Sensitive	25	53.8 ± 5.0
P	*Botrychium dissectum*	Cut-leaved Moonwort				S3	4 Secure	3	22.2 ± 5.0
P	*Schizaea pusilla*	Little Curlygrass Fern				S3	4 Secure	30	38.7 ± 1.0
P	*Asclepias incarnata ssp. pulchra*	Swamp Milkweed				S3?	Undetermined	6	70.9 ± 2.0
P	*Amelanchier stolonifera*	Running Serviceberry				S3?	4 Secure	5	18.1 ± 1.0
P	*Carex cryptolepis*	Hidden-scaled Sedge				S3?	4 Secure	8	68.4 ± 0.01
P	*Carex tribuloides*	Blunt Broom Sedge				S3?	4 Secure	1	11.6 ± 0.1
P	*Carex foenea*	Fernald's Hay Sedge				S3?	4 Secure	7	18.8 ± 0.01
P	*Triglochin gaspensis*	Gasp├⌐ Arrowgrass				S3?	Undetermined	2	82.4 ± 100.0
P	*Potamogeton praelongus*	White-stemmed Pondweed				S3?	3 Sensitive	11	22.2 ± 0.5

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	*Lycopodium sabinifolium*	Ground-Fir				S3?	4 Secure	8	47.0 ± 5.0
P	*Lycopodium sitchense*	Sitka Clubmoss				S3?	4 Secure	11	22.0 ± 1.0
P	*Polypodium appalachianum*	Appalachian Polypody				S3?	5 Undetermined	1	79.6 ± 0.01
P	*Atriplex franktonii*	Frankton's Saltbush				S3S4	4 Secure	8	12.6 ± 0.75
P	*Suaeda calceoliformis*	Horned Sea-blite				S3S4	Secure	5	25.9 ± 3.0
P	*Myriophyllum sibiricum*	Siberian Water Milfoil				S3S4	4 Secure	8	36.4 ± 1.5
P	*Sanguinaria canadensis*	Bloodroot				S3S4	4 Secure	79	7.7 ± 0.01
P	*Fragaria vesca ssp. americana*	Woodland Strawberry				S3S4	Secure	39	39.6 ± 0.01
P	*Carex argyrantha*	Silvery-flowered Sedge				S3S4	4 Secure	3	8.0 ± 0.01
P	*Eriophorum chamissonis*	Russet Cotton-Grass				S3S4	4 Secure	1	57.6 ± 1.2
P	*Juncus acuminatus*	Sharp-Fruit Rush				S3S4	Secure	4	70.8 ± 4.0
P	*Luzula parviflora*	Small-flowered Woodrush				S3S4	4 Secure	88	15.2 ± 1.5
P	*Liparis loeselii*	Loesel's Twayblade				S3S4	4 Secure	12	22.2 ± 0.5
P	*Trisetum spicatum*	Narrow False Oats				S3S4	4 Secure	35	31.8 ± 5.0
P	*Cystopteris bulbifera*	Bulblet Bladder Fern				S3S4	4 Secure	82	18.0 ± 1.0
P	*Equisetum hyemale var. affine*	Common Scouring-rush				S3S4	4 Secure	29	15.4 ± 1.0
P	*Equisetum scirpoides*	Dwarf Scouring-Rush				S3S4	4 Secure	21	39.7 ± 0.01
P	*Lycopodium complanatum*	Northern Clubmoss				S3S4	4 Secure	8	9.5 ± 0.01
P	*Viola canadensis*	Canada Violet				SH	Extirpated	1	94.4 ± 0.25
P	*Poa alpina*	Alpine Blue Grass				SH	0.1 Extirpated	2	24.9 ± 0.5
P	*Botrychium minganense*	Mingan Moonwort				SH	0.1 Extirpated	1	23.6 ± 1.5

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

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APPENDIX IV. NEW WATERFORD MUNICIPALITY WATER SUPPLY REVIEW REPORT

McCallum Environmental Ltd.

June 17, 2016

Dan Fraser
New Waterford Source Water Protection Committee
Anthony Mazzocca
Public Water Supply Coordinator
Cape Breton Regional Municipality

Attention: **Dan Fraser and Anthony Mazzocca**
Re: **New Victoria Community Wind Project, New Victoria, Nova Scotia**

INTRODUCTION

Celtic Current LP (Celtic Current) intends to construct and operate a community wind power project with 2.3 MW of total capacity, located on a privately owner parcel of land [PID 15262371] near the community of New Victoria, Cape Breton County, Nova Scotia.

The project lands are located approximately 1.5 km from the community of New Victoria, located 25 km northeast of Sydney in Cape Breton County, Cape Breton Island, Nova Scotia (Figure 1). The Project lands are located on PID 15262371 located off of the New Waterford Highway. The approximate centre of the Project lands is located at 720552 m E and 5125150 m N.(UTM NAD83)

Celtic Current held an Open House on June 09, 2016 to provide project information and outline the forthcoming Environmental Assessment (EA) process to the public and residents of New Victoria and surrounding areas. Subsequent to the meeting, questions have been raised regarding the New Waterford Municipal Water Supply Area which extends approximately 540m into the eastern extent of the subject property, and its potential interaction with the proposed project and associated activities.

The purpose of this document is to review the proposed activity, explore potential interactions with the New Waterford Municipal Water Supply Area (NWMWSA) and discuss protective measures, and mitigation measures should they be necessary.

BACKGROUND

<u>New Waterford Municipal Water Supply Area</u>
The NWMWSA extends over predominantly undeveloped land surrounding Waterford Lake. The boundary of the NWMWSA is indicated on Image 1 in green. The NWMWSA boundary corresponds with the location of the secondary watershed boundary indicated on Image 1 by a red line. A watershed booundary is typically a ridge of higher land that separates two water flow directions. In this case, water flows from the top of the watershed northeast toward the coastline, and from the top of the watershed to the southeast into Waterford Lake. Topographical conditions observed during field evaluations within the Project Area confirm that land slopes from the approximate location of the watershed boundary down gradient toward the proposed

Turbine Options 1 and 2, and from the watershed boundary down gradient toward Waterford Lake. Surface water flow (*i.e.* sheet flow, drainage channels and water within wetland habitats identified within the Project Area) mirror this trend, and are indicated in Image 1 with a blue directional arrow.

Image 1: Proposed Turbine Options, NWMWSA and Secondary Watershed Boundary Locations.

Turbine Location

One turbine is planned for the project, although two turbine siting locations are being considered. Both turbine options will be included as part of the EA process and their locations are identified in Figure 1 (attached) and Image 1. Turbine Option 1 is proposed to be located approximately 1000 meters into the property, and approximately 1,440 meters from the New Waterford Highway (southeast). Turbine Option 2 is located approximately 180 meters further southeast from Turbine Option 1.

Turbine Option 1 (which is the proponent's preferred location) lies approximately 238m west of the NWMWSA boundary, and Turbine Option 2 lies approximately 76m from the NWMWSA boundary. As is indicated on Figure 1 (attached) and Image 1, both turbine options exist to the north of the secondary watershed boundary in a location where surficial water flow is in a north-westerly direction.

Aquatic Features

Multiple wetlands have been identified within the Project Area boundary, including one wetland which extends from the shoreline of Waterford Lake. All other wetlands exist to the west of the NWMWSA as indicated on Image 2, and therefore do not source water toward the protected water area or Waterford Lake directly. The wetlands in central portions of the Project Area source water to a larger complex of wetland habitat off site to the north (identified by a red directional arrow), and the wetlands at the western extent of the site drain water off-site to the

south west (indicated by an orange directional arrow). One watercourse was identified draining through the wetland which exists adjacent to Waterford Lake in the eastern extent of the Project Area. Water is sourced to the watercourse from the wetland, as well as surface water runoff from surrounding higher land and therefore exists as a first order stream.

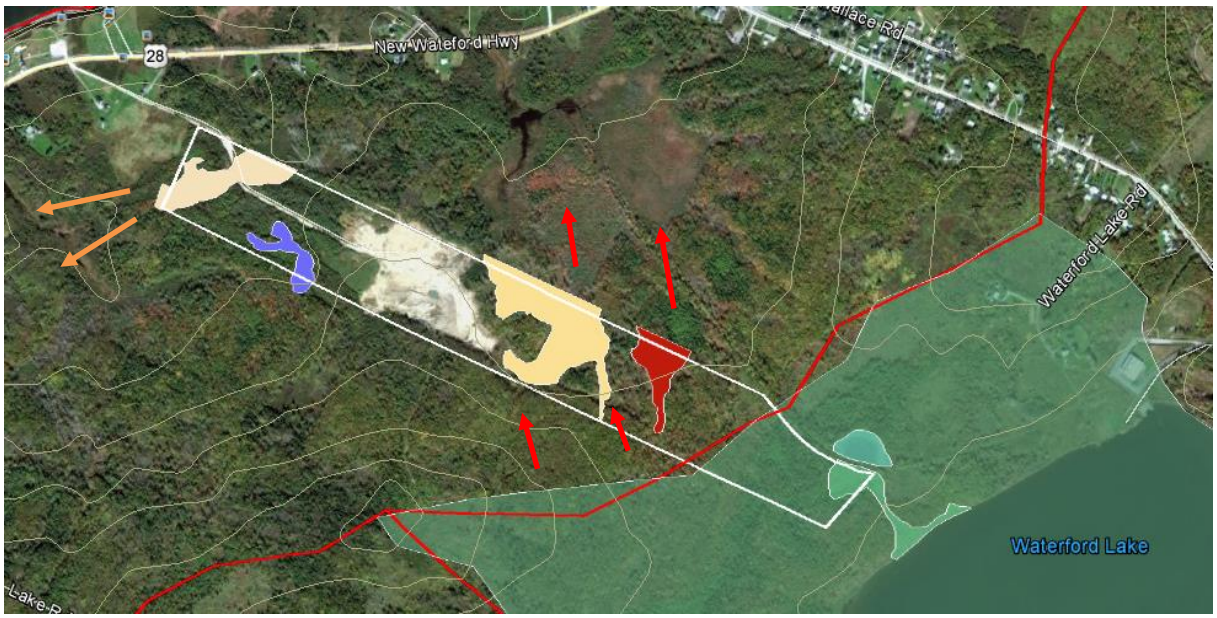

Image 2: Wetland Locations and Water Flow Direction

POTENTIAL INTERACTIONS WITH WATER SUPPLY AND QUALITY

Surface Water

As is typical of any development, the construction phase of a project is more likely to interact with water supply and quality than other phases. Ground disturbance, vegetation clearing at project infrastructure locations, and access road and turbine pad construction present the opportunity for exposed earth to wash into surface water systems (*i.e.* wetlands and watercourses). Additionally, the construction phase involves the use of equipment and machinery which present the potential for accidental leaks or spills to occur, which in turn can contaminate surface water systems.

Since surface water flow at the proposed turbine option locations is away from the NWMWSA, none of these potential impacts are expected within the boundaries of the protected water supply area. Surface water systems that are located down gradient from proposed turbine locations however will also be protected by site specific mitigation methods and best management practices to ensure that water quality is not compromised. These include:

- Drainage and erosion control features at access road and turbine pad locations;
- Soil stabilization and sediment control methods *i.e.* silt fences, hay mulching;
- Refuelling of machinery and equipment will not occur within 30m of wetlands or watercourses and will likely occur in western portions of the Project Area closer to the existing gravel quarry (*i.e.* extending distance from the NWMWSA).

- Temporary storage of waste materials will not occur within 30m of wetlands and watercourses, and will likely occur in western portions of the Project Area closer to the existing gravel quarry (*i.e.* extending distance from the NWMWSA).
- An environmental monitor will be on site to ensure environmental protection methods are implemented (*i.e.* safe use of fuels and lubricants, spill kits are on site in case of accidental spill, and sediment and erosion measures are in place). In addition, the turbine will be subject to regular maintenance and checks to ensure leaks and malfunctions do not contaminate surface or groundwater resources.

One of the functions that wetlands perform is contributing to the water balance and drinking water supply by storing and releasing surface water and recharging groundwater reservoirs (NSE, 2011). Project infrastructure (turbine and access roads) have been designed to avoid disturbance to wetlands. However small areas of the two wetlands in central portions of the Project Area will require alteration as a result of access road construction. Potential impacts to downstream aquatic systems is not expected as a result of this activity, and mitigation options will be administered as part of the provincial wetland alteration permitting process. As previously discussed, the wetlands being altered do not drain toward the NWMWSA, therefore no impacts to water supply or quality within the protected watershed area are expected as part of access road construction.

Vegetation acts as a natural filter of water. It retards and can absorb surface water flows, and can act as a filter of unwanted toxins and chemicals. Vegetation clearing will occur along the proposed access road and turbine location. Since surface water inputs act as a source of water to groundwater, the potential interactions are discussed in Table 1 (groundwater section).

<u>Groundwater</u>
Development of the turbine pad or access roads will not require blasting or significant excavation. In addition, no water withdrawals from the surficial bedrock or aquifer are required during construction activities or the lifetime of the Project.

In a study completed by the Northern Ireland Environmental Agency in 2015 entitled *"Wind farms and groundwater impacts A guide to EIA and Planning considerations"* multiple potential impacts to groundwater were identified as a result of wind power project, many of which mirror those described in the surface water discussion. Table 1 indicates these for each project phase, and provides site specific commentary in relation to the proposed New Victoria project:

Table 1: Potential Groundwater Impacts

Groundwater Characteristic	Phase	Potential Impacts	Site Specific Commentary
Groundwater Flow and Regime	C and D	Reduction in groundwater table should dewatering be required during turbine pad construction.	- Excavation will reach relatively shallow depths. Turbine pad and access road construction is not expected to disturb the aquifer. - Blasting will not be required during the construction process. - Disturbance is limited due to only one turbine being constructed.
	O	Physical presence of turbine and tracks (disturbance) which may interact with surface water features, and as a result reduce groundwater recharge potential.	- No surface water features present at proposed turbine option locations. - Wetlands on access road approach to turbines will be intersected by the road, however provincial wetland permitting process will ensure hydrologic connectivity is maintained, and downstream aquatic receptors are unaffected. - Disturbance is limited due to only one turbine being constructed.
		Reduction in forested/vegetated areas which could alter surface runoff patterns and influence groundwater flow and distribution.	- Vegetation clearing is limited to the new access road footprint (~650 m to Turbine Option 1 and approximately 830m to Turbine Option 2), and 0.8 hectares at the proposed turbine location. - A buffer of natural vegetation (~ 190m from Turbine Option 1 and ~ 20m from Turbine Option 2) would remain. - Surface water flow is away from the NWMWSA, therefore potential impacts within protected water supply area associated with forest and vegetation clearing is not expected. - Disturbance is limited due to only one turbine being constructed.
Groundwater Quality	C	Contamination of groundwater from spills, leaks and waste materials.	- As discussed in Surface Water section, an environmental monitor will be on site to ensure environmental protection methods are and to complete regular maintenance and checks to ensure leaks and malfunctions do not contaminate surface or groundwater resources. - Surface water flow is away from the NWMWSA, therefore potential impacts within the NWMWSA are not expected. - Disturbance is limited due to only one turbine being constructed.
	O	Pollution from spills, leaks, fuel, oil.	
	D	Pollution from spills, leaks, fuel, oil associated with equipment and machinery.	

C: Construction Phase
O: Operation Phase
D: Decommissioning Phase

SUMMARY

Based on a review of the proposed turbine option locations, the location of the NWMWSA, and the proposed project activities, impacts to water supply and quality within the NWMWSA are not expected. Protective measures, mitigation measures and best management practices will be implemented during the construction, operational and decommission phases of the project to ensure potential adverse effects to water quality and quantity across the project footprint does not occur.

There are approved and constructed wind power projects which are located within protected watershed areas in Nova Scotia include the Martock Ridge Community Wind Project and the Chebucto-Pockwock Community Wind Project. Both sites were commissioned in 2014 and comprise three and five wind turbines respectively. No instances of adverse effect to water quality and supply were identified in the EA process associated with either project.

Celtic Current is currently preparing the EA registration document for submission to Nova Scotia Environment in July 2016. Baseline environmental and engineering work has been on-going at the project since January 2015.

Environmental assessment activities completed include:

1. Avian baseline surveys
2. Wildlife surveys
3. Wetland and watercourse surveys
4. Fish habitat surveys
5. Shadow flicker analysis
6. Archaeological assessment (Phase I and II)
7. Socio-economic analysis
8. Sound impact assessment
9. Visual assessment (photomontages)
10. Electro-magnetic interference assessment
11. Bat Monitoring

The EA registration document for the New Victoria Wind Project will describe the biophysical, social, and economic environment, as well as outline other considerations considered important for wind power projects. All Valued Ecosystem Components (VECs) will then be identified, and the potential for interaction between individual VECs and project activities will be determined. Methods to minimize and mitigate environmental effects resulting from the project will be provided.

Through an evaluation of the VECs, should project environmental effects be identified that post-mitigation measures cannot address, the potential for a residual effect on the environment and significance of these residual effects will be determined and evaluated.

We appreciate your attention to this project and are pleased to initiate a dialogue with the New Waterford Source Water Protection Committee

We invite your comments and input, and would be happy to meet with you and discuss any questions you might have.

Respectfully submitted,

Andy Walter
Senior Project Manager
McCallum Environmental Ltd.

CC. Peter Archibald. Project Manager at Celtic Current.

REFERENCES

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Prepared For:

CELTIC CURRENT
COMMUNITY WIND DEVELOPMENT

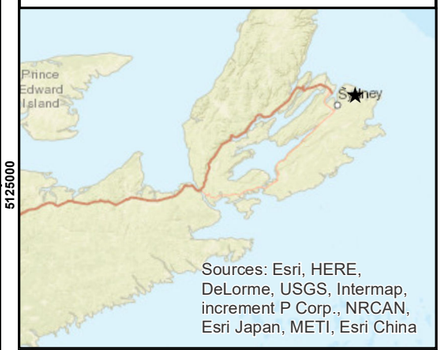
New Victoria Community Wind Power Project

PID 15262371

New Victoria, Cape Breton, Nova Scotia

Figure 1

- Proposed Turbine Locations
- MET Tower
- Watercourses
- New Waterford Municipal Water Supply
- Wetlands
- Study Area (PID 15262371)



Coordinate System: NAD 1983 UTM Zone 20N
Projection: Transverse Mercator
Datum: North American 1983
Units: Meter

0 125 250 500 m

1:10,000 Scale when printed @ 11" x 17"

Drawn By: MMD Date: 5/27/2016

McCallum Environmental Ltd.

Document Name: 160528_NV_Consultation Fig

Option 1
Option 2

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

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5126500 5126000 5125500 5125000 5124500 5124000

APPENDIX V. AVIAN TABLES

Detailed breeding bird results from dedicated 10-minute point count surveys, New Victoria Community Wind Project

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
19-Jun-15	1	20	719858	5125491	0	5	5	None	5:25	American Robin	1	0-50	N
19-Jun-15	1	20	719858	5125491	0	5	5	None	5:25	White-throated Sparrow	2	0-50	N
19-Jun-15	1	20	719858	5125491	0	5	5	None	5:25	Red-eyed Vireo	1	0-50	N
19-Jun-15	1	20	719858	5125491	0	5	5	None	5:25	Alder Flycatcher	3	0-50	N
19-Jun-15	1	20	719858	5125491	0	5	5	None	5:25	Yellow Warbler	1	0-50	N
19-Jun-15	1	20	719858	5125491	0	5	5	None	5:25	Common Yellowthroat	1	0-50	N
19-Jun-15	1	20	719858	5125491	0	5	5	None	5:25	Ovenbird	1	50-100	N
19-Jun-15	1	20	719858	5125491	0	5	5	None	5:25	Alder Flycatcher	1	0-50	N
19-Jun-15	1	20	719858	5125491	0	5	5	None	5:25	Ovenbird	1	50-100	N
19-Jun-15	1	20	719858	5125491	0	5	5	None	5:25	White-throated Sparrow	2	0-50	N
19-Jun-15	1	20	719858	5125491	0	5	5	None	5:25	Alder Flycatcher	1	0-50	N
19-Jun-15	1	20	719858	5125491	0	5	5	None	5:25	Black-capped Chickadee	1	50-100	N
19-Jun-15	1	20	719858	5125491	0	5	5	None	5:25	Common Yellowthroat	2	50-100	N
19-Jun-15	1	20	719858	5125491	0	5	5	None	5:25	Yellow Warbler	3	0-50	N
19-Jun-15	1	20	719858	5125491	0	5	5	None	5:25	American Black Duck	1	0-50	N
19-Jun-15	2	20	720095	5125357	0	5	5	None	5:40	White-throated Sparrow	1	50-100	N
19-Jun-15	2	20	720095	5125357	0	5	5	None	5:40	Alder Flycatcher	1	0-50	N
19-Jun-15	2	20	720095	5125357	0	5	5	None	5:40	Black-and-white Warbler	1	0-50	N
19-Jun-15	2	20	720095	5125357	0	5	5	None	5:40	Ovenbird	1	50-100	N
19-Jun-15	2	20	720095	5125357	0	5	5	None	5:40	Red-eyed Vireo	2	50-100	N
19-Jun-15	2	20	720095	5125357	0	5	5	None	5:40	Ovenbird	1	0-50	N
19-Jun-15	2	20	720095	5125357	0	5	5	None	5:40	American Robin	1	50-100	N
19-Jun-15	3	20	720371	5125237	0	5	5	None	5:52	Merlin	1	50-100	N
19-Jun-15	3	20	720371	5125237	0	5	5	None	5:52	American Crow	1	0-50	N
19-Jun-15	3	20	720371	5125237	0	5	5	None	5:52	Alder Flycatcher	2	0-50	N
19-Jun-15	3	20	720371	5125237	0	5	5	None	5:52	Alder Flycatcher	1	50-100	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
19-Jun-15	3	20	720371	5125237	0	5	5	None	5:52	Red-eyed Vireo	2	0-50	N
19-Jun-15	3	20	720371	5125237	0	5	5	None	5:52	Yellow Warbler	1	0-50	N
19-Jun-15	3	20	720371	5125237	0	5	5	None	5:52	American Robin	2	0-50	N
19-Jun-15	3	20	720371	5125237	0	5	5	None	5:52	White-throated Sparrow	1	>100	Y
19-Jun-15	4	20	720640	5125125	0	5	5	None	6:20	Black-throated Green Warbler	1	50-100	N
19-Jun-15	4	20	720640	5125125	0	5	5	None	6:20	White-throated Sparrow	2	50-100	N
19-Jun-15	4	20	720640	5125125	0	5	5	None	6:20	Red-eyed Vireo	1	0-50	N
19-Jun-15	4	20	720640	5125125	0	5	5	None	6:20	White-throated Sparrow	1	0-50	N
19-Jun-15	4	20	720640	5125125	0	5	5	None	6:20	Alder Flycatcher	2	0-50	N
19-Jun-15	4	20	720640	5125125	0	5	5	None	6:20	Ovenbird	1	50-100	N
19-Jun-15	4	20	720640	5125125	0	5	5	None	6:20	Black-throated Green Warbler	2	0-50	N
19-Jun-15	5	20	720891	5125026	0	5	5	None	6:44	Red-eyed Vireo	3	0-50	N
19-Jun-15	5	20	720891	5125026	0	5	5	None	6:44	Black-throated Green Warbler	1	0-50	N
19-Jun-15	5	20	720891	5125026	0	5	5	None	6:44	Ovenbird	4	0-50	N
19-Jun-15	5	20	720891	5125026	0	5	5	None	6:44	American Crow	1	50-100	N
19-Jun-15	6	20	721172	5124959	0	5	5	None	7:03	Northern Parula	2	0-50	N
19-Jun-15	6	20	721172	5124959	0	5	5	None	7:03	Common Yellowthroat	3	0-50	N
19-Jun-15	6	20	721172	5124959	0	5	5	None	7:03	White-throated Sparrow	4	0-50	N
19-Jun-15	6	20	721172	5124959	0	5	5	None	7:03	Black-throated Green Warbler	2	50-100	N
19-Jun-15	6	20	721172	5124959	0	5	5	None	7:03	Yellow Warbler	1	0-50	N
19-Jun-15	6	20	721172	5124959	0	5	5	None	7:03	American Robin	2	50-100	N
19-Jun-15	7	20	721330	5124753	0	5	5	None	7:30	American Crow	1	50-100	N
19-Jun-15	7	20	721330	5124753	0	5	5	None	7:30	Northern Parula	1	0-50	N
19-Jun-15	7	20	721330	5124753	0	5	5	None	7:30	Red-eyed Vireo	3	0-50	N
19-Jun-15	7	20	721330	5124753	0	5	5	None	7:30	Chestnut-sided Warbler	1	0-50	N
19-Jun-15	7	20	721330	5124753	0	5	5	None	7:30	Black-throated Green Warbler	2	0-50	N
19-Jun-15	7	20	721330	5124753	0	5	5	None	7:30	Song Sparrow	1	0-50	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
04-Jul-15	1	20	719858	5125491	2	15	20	None	4:59	Alder Flycatcher	1	50-100	N
04-Jul-15	1	20	719858	5125491	2	15	20	None	4:59	Black-and-white Warbler	2	0-50	N
04-Jul-15	1	20	719858	5125491	2	15	20	None	4:59	Common Yellowthroat	1	0-50	N
04-Jul-15	1	20	719858	5125491	2	15	20	None	4:59	White-throated Sparrow	1	50-100	N
04-Jul-15	1	20	719858	5125491	2	15	20	None	4:59	Common Yellowthroat	1	50-100	N
04-Jul-15	1	20	719858	5125491	2	15	20	None	4:59	Black-and-white Warbler	1	50-100	N
04-Jul-15	1	20	719858	5125491	2	15	20	None	4:59	Yellow Warbler	1	0-50	N
04-Jul-15	1	20	719858	5125491	2	15	20	None	4:59	Dark-eyed Junco	2	0-50	N
04-Jul-15	1	20	719858	5125491	2	15	20	None	4:59	Common Raven	1	50-100	N
04-Jul-15	1	20	719858	5125491	2	15	20	None	4:59	Yellow Warbler	2	0-50	N
04-Jul-15	2	20	720095	5125357	2	15	20	None	5:12	Alder Flycatcher	1	50-100	N
04-Jul-15	2	20	720095	5125357	2	15	20	None	5:12	American Crow	1	50-100	N
04-Jul-15	2	20	720095	5125357	2	15	20	None	5:12	American Robin	1	0-50	N
04-Jul-15	2	20	720095	5125357	2	15	20	None	5:12	Black-and-white Warbler	1	50-100	N
04-Jul-15	2	20	720095	5125357	2	15	20	None	5:12	Red-eyed Vireo	1	0-50	N
04-Jul-15	2	20	720095	5125357	2	15	20	None	5:12	Savannah Sparrow	1	50-100	N
04-Jul-15	2	20	720095	5125357	2	15	20	None	5:12	Ovenbird	1	0-50	N
04-Jul-15	2	20	720095	5125357	2	15	20	None	5:12	Song Sparrow	1	0-50	N
04-Jul-15	2	20	720095	5125357	2	15	20	None	5:12	Common Loon	1	300	Y
04-Jul-15	3	20	720371	5125237	2	15	20	None	5:29	Ovenbird	1	0-50	N
04-Jul-15	3	20	720371	5125237	2	15	20	None	5:29	White-throated Sparrow	1	50-100	N
04-Jul-15	3	20	720371	5125237	2	15	20	None	5:29	Alder Flycatcher	1	0-50	N
04-Jul-15	3	20	720371	5125237	2	15	20	None	5:29	Red-eyed Vireo	2	0-50	N
04-Jul-15	3	20	720371	5125237	2	15	20	None	5:29	Black-and-white Warbler	1	0-50	N
04-Jul-15	3	20	720371	5125237	2	15	20	None	5:29	Black-and-white Warbler	2	50-100	N
04-Jul-15	3	20	720371	5125237	2	15	20	None	5:29	Yellow Warbler	1	0-50	N
04-Jul-15	3	20	720371	5125237	2	15	20	None	5:29	Magnolia Warbler	1	50-100	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
04-Jul-15	3	20	720371	5125237	2	15	20	None	5:29	Song Sparrow	1	50-100	N
04-Jul-15	4	20	720640	5125125	2	15	20	None	5:52	White-throated Sparrow	1	0-50	N
04-Jul-15	4	20	720640	5125125	2	15	20	None	5:52	Red-eyed Vireo	2	0-50	N
04-Jul-15	4	20	720640	5125125	2	15	20	None	5:52	Ovenbird	1	50-100	N
04-Jul-15	4	20	720640	5125125	2	15	20	None	5:52	Red-eyed Vireo	1	50-100	N
04-Jul-15	4	20	720640	5125125	2	15	20	None	5:52	Hermit Thrush	1	50-100	N
04-Jul-15	4	20	720640	5125125	2	15	20	None	5:52	Black-throated Green Warbler	1	0-50	N
04-Jul-15	4	20	720640	5125125	2	15	20	None	5:52	White-throated Sparrow	1	0-50	N
04-Jul-15	4	20	720640	5125125	2	15	20	None	5:52	American Goldfinch	1	0-50	N
04-Jul-15	4	20	720640	5125125	2	15	20	None	5:52	Alder Flycatcher	1	50-100	N
04-Jul-15	4	20	720640	5125125	2	15	20	None	5:52	Dark-eyed Junco	1	0-50	N
04-Jul-15	5	20	720891	5125026	2	15	20	None	6:11	Red-eyed Vireo	1	0-50	N
04-Jul-15	5	20	720891	5125026	2	15	20	None	6:11	Mourning Dove	1	0-50	N
04-Jul-15	5	20	720891	5125026	2	15	20	None	6:11	Ovenbird	2	0-50	N
04-Jul-15	5	20	720891	5125026	2	15	20	None	6:11	White-throated Sparrow	1	0-50	N
04-Jul-15	5	20	720891	5125026	2	15	20	None	6:11	Black-capped Chickadee	1	0-50	N
04-Jul-15	6	20	721172	5124959	2	15	20	None	6:28	Magnolia Warbler	1	0-50	N
04-Jul-15	6	20	721172	5124959	2	15	20	None	6:28	American Crow	1	0-50	N
04-Jul-15	6	20	721172	5124959	2	15	20	None	6:28	Black-and-white Warbler	1	0-50	N
04-Jul-15	6	20	721172	5124959	2	15	20	None	6:28	Yellow-rumped Warbler	1	0-50	N
04-Jul-15	6	20	721172	5124959	2	15	20	None	6:28	White-throated Sparrow	1	50-100	N
04-Jul-15	6	20	721172	5124959	2	15	20	None	6:28	Common Yellowthroat	1	0-50	N
04-Jul-15	6	20	721172	5124959	2	15	20	None	6:28	Red-eyed Vireo	1	0-50	N
04-Jul-15	6	20	721172	5124959	2	15	20	None	6:28	Blue-headed Vireo	1	50-100	N
04-Jul-15	6	20	721172	5124959	2	15	20	None	6:28	Black-throated Green Warbler	1	50-100	N
04-Jul-15	6	20	721172	5124959	2	15	20	None	6:28	Northern Parula	1	0-50	N
04-Jul-15	6	20	721172	5124959	2	15	20	None	6:28	Ruby-crowned Kinglet	1	50-100	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
04-Jul-15	6	20	721172	5124959	2	15	20	None	6:28	Common Loon	1	500	Y
04-Jul-15	7	20	721330	5124753	2	15	20	None	6:47	Common Yellowthroat	1	0-50	N
04-Jul-15	7	20	721330	5124753	2	15	20	None	6:47	White-throated Sparrow	1	50-100	N
04-Jul-15	7	20	721330	5124753	2	15	20	None	6:47	Common Tern	1	50-100	N
04-Jul-15	7	20	721330	5124753	2	15	20	None	6:47	Northern Parula	1	50-100	N
04-Jul-15	7	20	721330	5124753	2	15	20	None	6:47	Woodpecker sp.	1	50-100	N
04-Jul-15	7	20	721330	5124753	2	15	20	None	6:47	Black-throated Green Warbler	1	0-50	N
04-Jul-15	7	20	721330	5124753	2	15	20	None	6:47	Common Loon	1	50	N
04-Jul-15	7	20	721330	5124753	2	15	20	None	6:47	Black-and-white Warbler	1	0-50	N
04-Jul-15	7	20	721330	5124753	2	15	20	None	6:47	Ovenbird	1	50-100	N
04-Jul-15	7	20	721330	5124753	2	15	20	None	6:47	Song Sparrow	1	0-50	N
04-Jul-15	7	20	721330	5124753	2	15	20	None	6:47	Black-capped Chickadee	2	50-100	N
04-Jul-15	7	20	721330	5124753	2	15	20	None	6:47	Common Loon	1	75	Y
04-Jul-15	7	20	721330	5124753	2	15	20	None	6:47	Common Grackle	1	20	Y
04-Jul-15	7	20	721330	5124753	2	15	20	None	6:47	Wilson's Snipe	1	50	Y
04-Jul-15	001'	20	721320	5124883	2	15	20	None	.	Black-throated Blue Warbler	1	0-50	Y
04-Jul-15	002'	20	721202	5124936	2	15	20	None	.	Lesser Scaup	4	0-50	Y
04-Jul-15	002'	20	721202	5124936	2	15	20	None	.	American Black Duck	13	0-50	Y
04-Jul-15	003'	20	721103	5124979	2	15	20	None	.	Blue Jay	1	50-100	Y
04-Jul-15	004'	20	720904	5124982	2	15	20	None	.	Grouse sp.	1	0-50	Y

Detailed fall bird migration results from dedicated 10-minute point count surveys, New Victoria Community Wind Project

Date	Point count #	UTM NAD83			Conditions				Start time	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
26-Aug-15	1	20	719858	5125491	1	16	100	None	6:15:00 AM	Blue Jay	1	100+	Y
26-Aug-15	1	20	719858	5125491	1	16	100	None	6:15:00 AM	American Crow	2	100+	Y
26-Aug-15	1	20	719858	5125491	1	16	100	None	6:15:00 AM	American Goldfinch	1	0-50	N
26-Aug-15	1	20	719858	5125491	1	16	100	None	6:15:00 AM	American Goldfinch	2	0-50	N
26-Aug-15	1	20	719858	5125491	1	16	100	None	6:15:00 AM	Common Yellowthroat	2	0-50	N
26-Aug-15	1	20	719858	5125491	1	16	100	None	6:15:00 AM	Black-capped Chickadee	1	100+	Y
26-Aug-15	1	20	719858	5125491	1	16	100	None	6:15:00 AM	Woodpecker sp.	1	100+	Y
26-Aug-15	2	20	720095	5125357	1	16	100	None	6:33:00 AM	American Goldfinch	1	50-100	N
26-Aug-15	2	20	720095	5125357	1	16	100	None	6:33:00 AM	American Crow	1	100+	Y
26-Aug-15	2	20	720095	5125357	1	16	100	None	6:33:00 AM	American Goldfinch	1	0-50	N
26-Aug-15	2	20	720095	5125357	1	16	100	None	6:33:00 AM	Downy Woodpecker	1	100+	Y
26-Aug-15	2	20	720095	5125357	1	16	100	None	6:33:00 AM	Common Yellowthroat	2	0-50	N
26-Aug-15	2	20	720095	5125357	1	16	100	None	6:33:00 AM	Red-eyed Vireo	1	50-100	N
26-Aug-15	2	20	720095	5125357	1	16	100	None	6:33:00 AM	Song Sparrow	2	0-50	N
26-Aug-15	2	20	720095	5125357	1	16	100	None	6:33:00 AM	Blue Jay	2	50-100	N
26-Aug-15	2	20	720095	5125357	1	16	100	None	6:33:00 AM	Common Raven	1	100+	Y
26-Aug-15	2	20	720095	5125357	1	16	100	None	6:33:00 AM	Common Yellowthroat	3	0-50	N
26-Aug-15	2	20	720095	5125357	1	16	100	None	6:33:00 AM	Northern Flicker	1	50-100	N
26-Aug-15	3	20	720371	5125237	1	16	100	None	6:57:00 AM	Red-eyed Vireo	3	50-100	N
26-Aug-15	3	20	720371	5125237	1	16	100	None	6:57:00 AM	American Goldfinch	1	50-100	N
26-Aug-15	3	20	720371	5125237	1	16	100	None	6:57:00 AM	Black-capped Chickadee	1	50-100	N
26-Aug-15	3	20	720371	5125237	1	16	100	None	6:57:00 AM	Blue Jay	2	50-100	N
26-Aug-15	3	20	720371	5125237	1	16	100	None	6:57:00 AM	Northern Flicker	1	50-100	N
26-Aug-15	3	20	720371	5125237	1	16	100	None	6:57:00 AM	Northern Flicker	2	50-100	N
26-Aug-15	3	20	720371	5125237	1	16	100	None	6:57:00 AM	Downy Woodpecker	1	50-100	N
26-Aug-15	3	20	720371	5125237	1	16	100	None	6:57:00 AM	Ruby-throated Hummingbird	2	50-100	N

Date	Point count #	UTM NAD83			Conditions				Start time	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
26-Aug-15	3	20	720371	5125237	1	16	100	None	6:57:00 AM	Common Yellowthroat	2	50-100	N
26-Aug-15	3	20	720371	5125237	1	16	100	None	6:57:00 AM	Black-capped Chickadee	1	50-100	N
26-Aug-15	3	20	720371	5125237	1	16	100	None	6:57:00 AM	Black-and-white Warbler	1	50-100	N
26-Aug-15	001'	20	720417	5125162	1	16	100	None	.	Cedar Waxwing	5	50-100	Y
26-Aug-15	001'	20	720417	5125162	1	16	100	None	.	Common Loon	1	50-100	Y
26-Aug-15	002'	20	720467	5125136	1	16	100	None	.	White-throated Sparrow	3	0-50	Y
26-Aug-15	4	20	720640	5125125	1	16	100	None	7:46:00 AM	Red-eyed Vireo	1	50-100	N
26-Aug-15	4	20	720640	5125125	1	16	100	None	7:46:00 AM	Red-eyed Vireo	1	100+	Y
26-Aug-15	4	20	720640	5125125	1	16	100	None	7:46:00 AM	Red-eyed Vireo	1	0-50	N
26-Aug-15	4	20	720640	5125125	1	16	100	None	7:46:00 AM	Common Yellowthroat	1	0-50	N
26-Aug-15	4	20	720640	5125125	1	16	100	None	7:46:00 AM	White-throated Sparrow	1	0-50	N
26-Aug-15	4	20	720640	5125125	1	16	100	None	7:46:00 AM	Black-capped Chickadee	1	100+	Y
26-Aug-15	4	20	720640	5125125	1	16	100	None	7:46:00 AM	American Goldfinch	1	0-50	N
26-Aug-15	4	20	720640	5125125	1	16	100	None	7:46:00 AM	Northern Flicker	1	50-100	N
26-Aug-15	003'	20	720723	5125090	1	16	100	None	.	Ovenbird	1	0-50	Y
26-Aug-15	5	20	720891	5125026	1	16	100	None	8:12:00 AM	Red-eyed Vireo	1	0-50	N
26-Aug-15	5	20	720891	5125026	1	16	100	None	8:12:00 AM	Bird sp.	1	0-50	N
26-Aug-15	6	20	721172	5124959	1	16	100	None	8:34:00 AM	Black-capped Chickadee	6	0-50	N
26-Aug-15	6	20	721172	5124959	1	16	100	None	8:34:00 AM	Black-and-white Warbler	1	0-50	N
26-Aug-15	6	20	721172	5124959	1	16	100	None	8:34:00 AM	Belted Kingfisher	2	0-50	N
26-Aug-15	6	20	721172	5124959	1	16	100	None	8:34:00 AM	Song Sparrow	1	0-50	N
26-Aug-15	6	20	721172	5124959	1	16	100	None	8:34:00 AM	Magnolia Warbler	1	0-50	N
26-Aug-15	6	20	721172	5124959	1	16	100	None	8:34:00 AM	Common Yellowthroat	1	50-100	N
26-Aug-15	7	20	721330	5124753	1	16	100	None	9:03:00 AM	Red-eyed Vireo	1	0-50	N
26-Aug-15	7	20	721330	5124753	1	16	100	None	9:03:00 AM	Northern Flicker	1	50-100	N
02-Sep-15	1	20	719858	5125491	4	13	80	None	5:52:00 AM	Song Sparrow	1	0-50	N
02-Sep-15	1	20	719858	5125491	4	13	80	None	5:52:00 AM	Common Yellowthroat	1	0-50	N

Date	Point count #	UTM NAD83			Conditions				Start time	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
02-Sep-15	1	20	719858	5125491	4	13	80	None	5:52:00 AM	White-throated Sparrow	1	50-100	N
02-Sep-15	1	20	719858	5125491	4	13	80	None	5:52:00 AM	Blue Jay	1	50-100	N
02-Sep-15	3	20	720371	5125237	4	13	80	None	6:16:00 AM	American Crow	1	100+	Y
02-Sep-15	3	20	720371	5125237	4	13	80	None	6:16:00 AM	Northern Flicker	1	50-100	N
02-Sep-15	3	20	720371	5125237	4	13	80	None	6:16:00 AM	American Crow	2	100+	Y
02-Sep-15	3	20	720371	5125237	4	13	80	None	6:16:00 AM	White-throated Sparrow	2	50-100	N
02-Sep-15	3	20	720371	5125237	4	13	80	None	6:16:00 AM	Common Yellowthroat	1	50-100	N
02-Sep-15	78	20	.	.	4	13	80	None	.	Blackburnian Warbler	1	0-50	Y
02-Sep-15	4	20	720640	5125125	4	13	80	None	6:40:00 AM	American Goldfinch	1	0-50	N
02-Sep-15	4	20	720640	5125125	4	13	80	None	6:40:00 AM	White-throated Sparrow	1	0-50	N
02-Sep-15	4	20	720640	5125125	4	13	80	None	6:40:00 AM	Black-and-white Warbler	1	50-100	N
02-Sep-15	4	20	720640	5125125	4	13	80	None	6:40:00 AM	Downy Woodpecker	1	50-100	N
02-Sep-15	4	20	720640	5125125	4	13	80	None	6:40:00 AM	Common Yellowthroat	1	0-50	N
02-Sep-15	5	20	720891	5125026	4	13	80	None	7:00:00 AM	American Crow	1	100+	Y
02-Sep-15	5	20	720891	5125026	4	13	80	None	7:00:00 AM	Red-eyed Vireo	2	50-100	N
02-Sep-15	5	20	720891	5125026	4	13	80	None	7:00:00 AM	Hermit Thrush	1	0-50	N
02-Sep-15	6	20	721172	5124959	4	13	80	None	7:16:00 AM	Common Yellowthroat	1	0-50	N
02-Sep-15	6	20	721172	5124959	4	13	80	None	7:16:00 AM	Black-capped Chickadee	6	0-50	N
02-Sep-15	6	20	721172	5124959	4	13	80	None	7:16:00 AM	Red-eyed Vireo	1	0-50	N
02-Sep-15	6	20	721172	5124959	4	13	80	None	7:16:00 AM	Duck sp.	1	0-50	N
02-Sep-15	6	20	721172	5124959	4	13	80	None	7:16:00 AM	Common Raven	1	100+	Y
02-Sep-15	6	20	721172	5124959	4	13	80	None	7:16:00 AM	White-throated Sparrow	1	50-100	N
02-Sep-15	6	20	721172	5124959	4	13	80	None	7:16:00 AM	Black-capped Chickadee	3	50-100	N
02-Sep-15	7	20	721330	5124753	4	13	80	None	7:35:00 AM	Common Loon	1	50-100	Y
02-Sep-15	7	20	721330	5124753	4	13	80	None	7:35:00 AM	Double-crested Cormorant	2	100+	Y
02-Sep-15	7	20	721330	5124753	4	13	80	None	7:35:00 AM	Double-crested Cormorant	1	0-50	N
10-Sep-15	1	20	719858	5125491	2	17	75	None	7:30:00 AM	American Goldfinch	6	0-50	N

Date	Point count #	UTM NAD83			Conditions				Start time	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
10-Sep-15	1	20	719858	5125491	2	17	75	None	7:30:00 AM	Red-eyed Vireo	1	0-50	Y
10-Sep-15	2	20	720095	5125357	2	17	75	None	7:41:00 AM	American Crow	1	100+	Y
10-Sep-15	2	20	720095	5125357	2	17	75	None	7:41:00 AM	American Crow	1	50-100	N
10-Sep-15	2	20	720095	5125357	2	17	75	None	7:41:00 AM	White-throated Sparrow	1	0-50	N
10-Sep-15	2	20	720095	5125357	2	17	75	None	7:41:00 AM	White-throated Sparrow	2	0-50	N
10-Sep-15	2	20	720095	5125357	2	17	75	None	7:41:00 AM	American Goldfinch	1	0-50	N
10-Sep-15	2	20	720095	5125357	2	17	75	None	7:41:00 AM	Blue Jay	1	50-100	N
10-Sep-15	2	20	720095	5125357	2	17	75	None	7:41:00 AM	Blue Jay	1	100+	Y
10-Sep-15	3	20	720371	5125237	2	17	75	None	7:53:00 AM	American Goldfinch	2	50-100	N
10-Sep-15	3	20	720371	5125237	2	17	75	None	7:53:00 AM	White-throated Sparrow	1	0-50	N
10-Sep-15	3	20	720371	5125237	2	17	75	None	7:53:00 AM	Blue Jay	1	0-50	N
10-Sep-15	3	20	720371	5125237	2	17	75	None	7:53:00 AM	Double-crested Cormorant	1	50-100	N
10-Sep-15	3	20	720371	5125237	2	17	75	None	7:53:00 AM	American Goldfinch	7	0-50	N
10-Sep-15	3	20	720371	5125237	2	17	75	None	7:53:00 AM	Greater Yellowlegs	1	50-1005	N
10-Sep-15	85	20	720527	5125114	2	17	75	None	8:28:00 AM	Purple Finch	20	0-50	Y
10-Sep-15	85	20	720527	5125114	2	17	75	None	8:28:00 AM	Cedar Waxwing	10	0-50	Y
10-Sep-15	85	20	720527	5125114	2	17	75	None	8:28:00 AM	Black-capped Chickadee	2	0-50	Y
10-Sep-15	85	20	720527	5125114	2	17	75	None	8:28:00 AM	American Goldfinch	1	0-50	Y
10-Sep-15	85	20	720527	5125114	2	17	75	None	8:28:00 AM	Song Sparrow	2	0-50	Y
10-Sep-15	85	20	720527	5125114	2	17	75	None	8:28:00 AM	Common Yellowthroat	5	0-50	Y
10-Sep-15	86	20	720551	5125121	2	17	75	None	8:30:00 AM	Common Loon	1	100+	Y
10-Sep-15	4	20	720640	5125125	2	17	75	None	8:36:00 AM	Cedar Waxwing	2	50-100	N
10-Sep-15	4	20	720640	5125125	2	17	75	None	8:36:00 AM	Black-capped Chickadee	1	50-100	N
10-Sep-15	4	20	720640	5125125	2	17	75	None	8:36:00 AM	Black-capped Chickadee	1	0-50	N
10-Sep-15	4	20	720640	5125125	2	17	75	None	8:36:00 AM	Cedar Waxwing	4	50-100	N
10-Sep-15	4	20	720640	5125125	2	17	75	None	8:36:00 AM	Purple Finch	3	50-100	N
10-Sep-15	4	20	720640	5125125	2	17	75	None	8:36:00 AM	Cedar Waxwing	4	50-100	N

Date	Point count #	UTM NAD83			Conditions				Start time	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
10-Sep-15	6	20	721172	5124959	2	17	75	None	9:26:00 AM	American Goldfinch	1	0-50	N
10-Sep-15	6	20	721172	5124959	2	17	75	None	9:26:00 AM	Downy Woodpecker	1	50-100	N
10-Sep-15	87	20	721142	5124966	2	17	75	None	10:49:00 AM	Magnolia Warbler	1	0-50	Y
10-Sep-15	87	20	721142	5124966	2	17	75	None	10:49:00 AM	Black-and-white Warbler	2	0-50	Y
10-Sep-15	87	20	721142	5124966	2	17	75	None	10:49:00 AM	Black-capped Chickadee	6	0-50	Y
18-Sep-15	1	20	719858	5125491	2	17	10	None	7:10:00 AM	Cedar Waxwing	1	0-50	N
18-Sep-15	1	20	719858	5125491	2	17	10	None	7:10:00 AM	American Crow	1	100+	Y
18-Sep-15	1	20	719858	5125491	2	17	10	None	7:10:00 AM	American Black Duck	3	0-50	N
18-Sep-15	1	20	719858	5125491	2	17	10	None	7:10:00 AM	Blue Jay	1	100+	Y
18-Sep-15	1	20	719858	5125491	2	17	10	None	7:10:00 AM	American Crow	1	0-50	N
18-Sep-15	2	20	720095	5125357	2	17	10	None	7:23:00 AM	American Crow	2	50-100	N
18-Sep-15	2	20	720095	5125357	2	17	10	None	7:23:00 AM	American Goldfinch	2	50-100	N
18-Sep-15	2	20	720095	5125357	2	17	10	None	7:23:00 AM	Song Sparrow	4	50-100	N
18-Sep-15	3	20	720371	5125237	2	17	10	None	7:36:00 AM	American Goldfinch	2	0-50	N
18-Sep-15	3	20	720371	5125237	2	17	10	None	7:36:00 AM	Black-capped Chickadee	2	50-100	N
18-Sep-15	3	20	720371	5125237	2	17	10	None	7:36:00 AM	Northern Flicker	1	50-100	N
18-Sep-15	3	20	720371	5125237	2	17	10	None	7:36:00 AM	Song Sparrow	1	0-50	N
18-Sep-15	4	20	720640	5125125	2	17	10	None	8:00:00 AM	American Goldfinch	1	50-100	N
18-Sep-15	4	20	720640	5125125	2	17	10	None	8:00:00 AM	American Crow	1	50-100	N
18-Sep-15	4	20	720640	5125125	2	17	10	None	8:00:00 AM	White-throated Sparrow	1	0-50	N
18-Sep-15	6	20	721172	5124959	2	17	10	None	8:46:00 AM	White-throated Sparrow	1	0-50	N
18-Sep-15	6	20	721172	5124959	2	17	10	None	8:46:00 AM	Blue Jay	1	50-100	N
18-Sep-15	6	20	721172	5124959	2	17	10	None	8:46:00 AM	Common Yellowthroat	2	50-100	N
18-Sep-15	6	20	721172	5124959	2	17	10	None	8:46:00 AM	Yellow-rumped Warbler	4	50-100	N
25-Sep-15	1	20	719858	5125441	2	11	10	None	7:37:00 AM	Song Sparrow	1	0-50	N
25-Sep-15	1	20	719858	5125441	2	11	10	None	7:37:00 AM	American Goldfinch	1	0-50	N

Date	Point count #	UTM NAD83			Conditions				Start time	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
25-Sep-15	1	20	719858	5125441	2	11	10	None	7:37:00 AM	Blue Jay	1	50-100	N
25-Sep-15	1	20	719858	5125441	2	11	10	None	7:37:00 AM	Bird sp.	1	50-100	N
25-Sep-15	2	20	720095	5125357	2	11	10	None	7:48:00 AM	American Goldfinch	1	50-100	N
25-Sep-15	2	20	720095	5125357	2	11	10	None	7:48:00 AM	White-throated Sparrow	1	0-50	N
25-Sep-15	2	20	720095	5125357	2	11	10	None	7:48:00 AM	Black-capped Chickadee	2	0-50	N
25-Sep-15	2	20	720095	5125357	2	11	10	None	7:48:00 AM	American Goldfinch	1	0-50	N
25-Sep-15	2	20	720095	5125357	2	11	10	None	7:48:00 AM	Bird sp.	2	0-50	N
25-Sep-15	3	20	720371	5125237	2	11	10	None	8:00:00 AM	Northern Flicker	1	0-50	N
25-Sep-15	3	20	720371	5125237	2	11	10	None	8:00:00 AM	American Goldfinch	1	50-100	N
25-Sep-15	4	20	720640	5125125	2	11	10	None	8:21:00 AM	Canada Goose	7	100+	Y
25-Sep-15	4	20	720640	5125125	2	11	10	None	8:21:00 AM	Cedar Waxwing	8	100+	Y
25-Sep-15	4	20	720640	5125125	2	11	10	None	8:21:00 AM	American Crow	1	50-100	N
25-Sep-15	4	20	720640	5125125	2	11	10	None	8:21:00 AM	Bird sp.	1	0-50	N
25-Sep-15	4	20	720640	5125125	2	11	10	None	8:21:00 AM	Hairy Woodpecker	1	0-50	N
25-Sep-15	4	20	720640	5125125	2	11	10	None	8:21:00 AM	Northern Flicker	1	0-50	N
25-Sep-15	4	20	720640	5125125	2	11	10	None	8:21:00 AM	American Crow	1	0-50	N
25-Sep-15	5	20	720891	5125026	2	11	10	None	8:40:00 AM	Bird sp.	1	0-50	N
25-Sep-15	6	20	721172	5124959	2	11	10	None	9:02:00 AM	Yellow-rumped Warbler	8	0-50	N
25-Sep-15	6	20	721172	5124959	2	11	10	None	9:02:00 AM	Greater Yellowlegs	1	100+	Y
25-Sep-15	6	20	721172	5124959	2	11	10	None	9:02:00 AM	Black-capped Chickadee	2	0-50	N
25-Sep-15	7	20	721330	5124753	2	11	10	None	9:22:00 AM	American Crow	1	50-100	N
25-Sep-15	7	20	721330	5124753	2	11	10	None	9:22:00 AM	American Crow	1	50-100	N
25-Sep-15	7	20	721330	5124753	2	11	10	None	9:22:00 AM	Woodpecker sp.	1	50-100	N
25-Sep-15	7	20	721330	5124753	2	11	10	None	9:22:00 AM	American Goldfinch	1	50-100	N
25-Sep-15	7	20	721330	5124753	2	11	10	None	9:22:00 AM	Black-capped Chickadee	1	0-50	N
29-Sep-15	1	20	719858	5125491	2	16	50	None	7:36:00 AM	American Goldfinch	3	50-100	N
29-Sep-15	1	20	719858	5125491	2	16	50	None	7:36:00 AM	Red-breasted Nuthatch	1	50-100	N

Date	Point count #	UTM NAD83			Conditions				Start time	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
29-Sep-15	1	20	719858	5125491	2	16	50	None	7:36:00 AM	White-throated Sparrow	3	0-50	N
29-Sep-15	1	20	719858	5125491	2	16	50	None	7:36:00 AM	American Crow	4	0-50	N
29-Sep-15	1	20	719858	5125491	2	16	50	None	7:36:00 AM	American Goldfinch	3	0-50	N
29-Sep-15	2	20	720095	5125357	2	16	50	None	7:48:00 AM	Song Sparrow	6	0-50	N
29-Sep-15	2	20	720095	5125357	2	16	50	None	7:48:00 AM	Herring Gull	1	50-100	N
29-Sep-15	3	20	720371	5125237	2	16	50	None	8:01:00 AM	American Robin	1	0-50	N
29-Sep-15	3	20	720371	5125237	2	16	50	None	8:01:00 AM	Greater Yellowlegs	2	50-100	N
29-Sep-15	3	20	720371	5125237	2	16	50	None	8:01:00 AM	Blue Jay	4	0-50	N
29-Sep-15	4	20	720640	5125125	2	16	50	None	8:29:00 AM	Black-capped Chickadee	2	50-100	N
29-Sep-15	4	20	720640	5125125	2	16	50	None	8:29:00 AM	Black-capped Chickadee	2	0-50	N
29-Sep-15	4	20	720640	5125125	2	16	50	None	8:29:00 AM	Blue Jay	3	50-100	N
29-Sep-15	4	20	720640	5125125	2	16	50	None	8:29:00 AM	Northern Flicker	1	50-100	Y
29-Sep-15	4	20	720640	5125125	2	16	50	None	8:29:00 AM	Cedar Waxwing	10	100+	Y
29-Sep-15	4	20	720640	5125125	2	16	50	None	8:29:00 AM	Downy Woodpecker	1	50-100	Y
29-Sep-15	6	20	721172	5124959	2	16	50	None	9:20:00 AM	Song Sparrow	2	0-50	N
29-Sep-15	6	20	721172	5124959	2	16	50	None	9:20:00 AM	Yellow-rumped Warbler	1	0-50	N
29-Sep-15	6	20	721172	5124959	2	16	50	None	9:20:00 AM	Yellow-rumped Warbler	8	50-100	N
29-Sep-15	7	20	721330	5124753	2	16	50	None	9:39:00 AM	Double-crested Cormorant	3	50-100	N
29-Sep-15	7	20	721330	5124753	2	16	50	None	9:39:00 AM	Northern Flicker	1	50-100	N
29-Sep-15	7	20	721330	5124753	2	16	50	None	9:39:00 AM	Bird sp.	1	50-100	N
09-Oct-15	1	20	719858	5125441	0	5	100	None	7:42:00 AM	American Crow	2	>100	Y
09-Oct-15	1	20	719858	5125441	0	5	100	None	7:42:00 AM	Unknown Sparrow	2	50-100	N
09-Oct-15	1	20	719858	5125441	0	5	100	None	7:42:00 AM	American Goldfinch	1	0-50	N
09-Oct-15	1	20	719858	5125441	0	5	100	None	7:42:00 AM	American goldfinch	4	50-100	N
09-Oct-15	1	20	719858	5125441	0	5	100	None	7:42:00 AM	American Robin	1	50-100	N
09-Oct-15	2	20	720095	5125357	0	5	100	None	8:05:00 AM	Song sparrow	5	0-50	N
09-Oct-15	2	20	720095	5125357	0	5	100	None	8:05:00 AM	Pine warbler	3	0-50	N

Date	Point count #	UTM NAD83			Conditions				Start time	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
09-Oct-15	2	20	720095	5125357	0	5	100	None	8:05:00 AM	White-throated sparrow	1	0-50	N
09-Oct-15	2	20	720095	5125357	0	5	100	None	8:05:00 AM	American goldfinch	25	0-50	N
09-Oct-15	2	20	720095	5125357	0	5	100	None	8:05:00 AM	Mallard	1	0-50	N
09-Oct-15	2	20	720095	5125357	0	5	100	None	8:05:00 AM	American crow	1	0-50	N
09-Oct-15	2	20	720095	5125357	0	5	100	None	8:05:00 AM	American crow	1	0-50	N
09-Oct-15	2	20	720095	5125357	0	5	100	None	8:05:00 AM	American crow	3	0-50	N
09-Oct-15	2	20	720095	5125357	0	5	100	None	8:05:00 AM	Unknown Bird	10	0-50	N
09-Oct-15	2	20	720095	5125357	0	5	100	None	8:05:00 AM	Blue jay	1	0-50	N
09-Oct-15	3	20	720371	5125237	0	5	100	None	8:23:00 AM	American goldfinch	7	0-50	N
09-Oct-15	3	20	720371	5125237	0	5	100	None	8:23:00 AM	Black-capped chickadee	1	50-100	N
09-Oct-15	3	20	720371	5125237	0	5	100	None	8:23:00 AM	American goldfinch	3	0-50	N
09-Oct-15	3	20	720371	5125237	0	5	100	None	8:23:00 AM	American goldfinch	3	0-50	N
09-Oct-15	3	20	720371	5125237	0	5	100	None	8:23:00 AM	American crow	1	50-100	N
09-Oct-15	4	20	720640	5125125	0	5	100	None	8:41:00 AM	Black-capped chickadee	2	0-50	N
09-Oct-15	4	20	720640	5125125	0	5	100	None	8:41:00 AM	Northern flicker	2	0-50	N
09-Oct-15	4	20	720640	5125125	0	5	100	None	8:41:00 AM	American crow	2	50-100	N
09-Oct-15	5	20	720891	5125026	0	5	100	None	9:02:00 AM	Northern flicker	1	0-50	N
09-Oct-15	5	20	720891	5125026	0	5	100	None	9:02:00 AM	White-throated sparrow	1	0-50	N
09-Oct-15	5	20	720891	5125026	0	5	100	None	9:02:00 AM	Blue jay	1	50-100	N
09-Oct-15	6	20	721172	5124959	0	5	100	None	9:21:00 AM	Dark-eyed junco	1	50-100	N
09-Oct-15	6	20	721172	5124959	0	5	100	None	9:21:00 AM	American goldfinch	1	0-50	N
09-Oct-15	6	20	721172	5124959	0	5	100	None	9:21:00 AM	Unknown bird	2	50-100	N
09-Oct-15	6	20	721172	5124959	0	5	100	None	9:21:00 AM	Black-capped chickadee	2	50-100	N
09-Oct-15	6	20	721172	5124959	0	5	100	None	9:21:00 AM	White-throated sparrow	2	0-50	N
09-Oct-15	7	20	721330	5124753	0	5	100	None	9:38:00 AM	Unknown duck	1	300	N
09-Oct-15	7	20	721330	5124753	0	5	100	None	9:38:00 AM	American goldfinch	1	50-100	N
09-Oct-15	7	20	721330	5124753	0	5	100	None	9:38:00 AM	Blue jay	2	>100	Y

Date	Point count #	UTM NAD83			Conditions				Start time	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
20-Oct-15	1	20	719858	5125491	1	3	100	None	8:10:00 AM	Common raven	1	>100	Y
20-Oct-15	1	20	719858	5125491	1	3	100	None	8:10:00 AM	American crow	1	0-50	N
20-Oct-15	1	20	719858	5125491	1	3	100	None	8:10:00 AM	American goldfinch	5	0-50	N
20-Oct-15	1	20	719858	5125491	1	3	100	None	8:10:00 AM	Unknown Bird	2	0-50	N
20-Oct-15	1	20	719858	5125491	1	3	100	None	8:10:00 AM	American crow	1	0-50	N
20-Oct-15	1	20	719858	5125491	1	3	100	None	8:10:00 AM	Black-capped chickadee	2	0-50	N
20-Oct-15	2	20	720095	5125357	1	3	100	None	8:22:00 AM	American crow	1	50-100	N
20-Oct-15	2	20	720095	5125357	1	3	100	None	8:22:00 AM	American crow	1	50-100	N
20-Oct-15	2	20	720095	5125357	1	3	100	None	8:22:00 AM	American crow	1	50-100	N
20-Oct-15	2	20	720095	5125357	1	3	100	None	8:22:00 AM	American goldfinch	6	50-100	N
20-Oct-15	3	20	720371	5125237	1	3	100	None	8:34:00 AM	American robin	1	50-100	N
20-Oct-15	6	20	721172	5124959	1	3	100	None	9:29:00 AM	Black-capped chickadee	2	50-100	N
20-Oct-15	6	20	721172	5124959	1	3	100	None	9:29:00 AM	American crow	1	0-50	N
20-Oct-15	7	20	721330	5124753	1	3	100	None	9:42:00 AM	Blue jay	1	>100	Y
20-Oct-15	7	20	721330	5124753	1	3	100	None	9:42:00 AM	Unknown duck	1	>100	Y

Detailed fall bird migration results from dedicated 20-minute watch count survey, New Victoria Community Wind Project

Order	Date	Watch count #	UTM NAD83			Conditions				Start time	Common name	#	Distance (m)	Incidental
			Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
1	26-Aug-15	1	20	721337	5124765	2	18	60	None	9:16	Common Loon	1	300	N
2	26-Aug-15	1	20	721337	5124765	2	18	60	None	9:16	Common Loon	1	350	N
3	26-Aug-15	1	20	721337	5124765	2	18	60	None	9:16	Gull sp.	1	350	N
4	26-Aug-15	1	20	721337	5124765	2	18	60	None	9:16	Gull sp.	1	600	N
5	26-Aug-15	1	20	721337	5124765	2	18	60	None	9:16	Red-tailed Hawk	1	100	Y
6	26-Aug-15	2	20	719568	5125839	2	18	60	None	11:15	American Black Duck	3	150	N
7	26-Aug-15	2	20	719568	5125839	2	18	60	None	11:15	Herring Gull	29	300	N
8	26-Aug-15	2	20	719568	5125839	2	18	60	None	11:15	Herring Gull	18	475	N
9	26-Aug-15	2	20	719568	5125839	2	18	60	None	11:15	Double-crested Cormorant	16	475	N
10	26-Aug-15	2	20	719568	5125839	2	18	60	None	11:15	Duck sp.	6	475	N
11	26-Aug-15	2	20	719568	5125839	2	18	60	None	11:15	Double-crested Cormorant	1	200	N
12	26-Aug-15	2	20	719568	5125839	2	18	60	None	11:15	Double-crested Cormorant	1	500	N
13	26-Aug-15	2	20	719568	5125839	2	18	60	None	11:15	Double-crested Cormorant	2	150	N
14	26-Aug-15	2	20	719568	5125839	2	18	60	None	11:15	Double-crested Cormorant	1	250	N
15	02-Sep-15	1	20	721337	5124765	1	14	50	None	7:46	Common Loon	1	200	N
16	02-Sep-15	1	20	721337	5124765	1	14	50	None	7:46	Double-crested Cormorant	1	100	N
17	02-Sep-15	1	20	721337	5124765	1	14	50	None	7:46	American Black Duck	1	200	N
18	02-Sep-15	1	20	721337	5124765	1	14	50	None	7:46	Double-crested Cormorant	2	350	N
19	02-Sep-15	1	20	721337	5124765	1	14	50	None	7:46	Double-crested Cormorant	1	250	N
20	02-Sep-15	1	20	721337	5124765	1	14	50	None	7:46	Belted Kingfisher	1	500	Y

Order	Date	Watch count #	UTM NAD83			Conditions				Start time	Common name	#	Distance (m)	Incidental
			Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
21	02-Sep-15	1	20	721337	5124765	1	14	50	None	7:46	Common Loon	1	200	N
22	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	Ring-billed Gull	3	50	N
23	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	American Crow	1	50	N
24	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	Herring Gull	9	150	N
25	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	Herring Gull	7	150	N
26	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	American Black Duck	6	150	N
27	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	Herring Gull	2	50	N
28	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	Herring Gull	20	400	N
29	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	Double-crested Cormorant	20	475	N
30	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	Great Black-backed Gull	2	400	N
31	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	Herring Gull	2	30	N
32	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	Herring Gull	2	30	N
33	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	Gull sp.	50	475	N
34	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	Northern Gannet	1	200	N
35	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	Ring-billed Gull	1	10	N
36	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	Duck sp.	18	200	N
37	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	American Black Duck	3	75	N
38	02-Sep-15	2	20	719568	5125839	1	14	50	None	9:35	Great Black-backed Gull	1	200	N
39	10-Sep-15	1	20	721337	5124765	2	22	100	None	10:00	Pileated Woodpecker	1	3	Y
40	10-Sep-15	1	20	721337	5124765	2	22	100	None	10:00	Double-crested Cormorant	1	75	N
41	10-Sep-15	1	20	721337	5124765	2	22	100	None	10:00	Ring-billed Gull	1	200	N

Order	Date	Watch count #	UTM NAD83			Conditions				Start time	Common name	#	Distance (m)	Incidental
			Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
42	10-Sep-15	1	20	721337	5124765	2	22	100	None	10:00	Herring Gull	2	200	N
43	10-Sep-15	1	20	719568	5125839	2	22	100	None	12:25	American Black Duck	2	60	N
44	10-Sep-15	1	20	719568	5125839	2	22	100	None	12:25	Double-crested Cormorant	28	475	N
45	10-Sep-15	1	20	719568	5125839	2	22	100	None	12:25	American Black Duck	3	450	N
46	10-Sep-15	1	20	719568	5125839	2	22	100	None	12:25	Gull sp.	1	475	N
47	10-Sep-15	1	20	719568	5125839	2	22	100	None	12:25	Herring Gull	1	75	N
48	10-Sep-15	1	20	719568	5125839	2	22	100	None	12:25	Double-crested Cormorant	1	150	N
49	10-Sep-15	1	20	719568	5125839	2	22	100	None	12:25	Herring Gull	1	50	N
50	10-Sep-15	1	20	719568	5125839	2	22	100	None	12:25	Herring Gull	1	20	N
51	18-Sep-15	2	20	719568	5125834	1	21	10	None	11:39	Herring Gull	1	75	N
52	18-Sep-15	2	20	719568	5125834	1	21	10	None	11:39	Double-crested Cormorant	30	475	N
53	18-Sep-15	2	20	719568	5125834	1	21	10	None	11:39	Herring Gull	6	475	N
54	18-Sep-15	2	20	719568	5125834	1	21	10	None	11:39	Double-crested Cormorant	1	250	N
55	18-Sep-15	2	20	719568	5125834	1	21	10	None	11:39	Semipalmated Plover	8	20	N
56	18-Sep-15	2	20	719568	5125834	1	21	10	None	11:39	Least Sandpiper	1	20	N
57	25-Sep-15	1	20	721337	5124765	2	12	20	None	9:35	Common Loon	1	250	N
58	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Double-crested Cormorant	2	475	N
59	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Gull sp.	20	475	N
60	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Great Black-backed Gull	2	250	N
61	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Great Black-backed Gull	2	100	N
62	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Herring Gull	1	250	N

Order	Date	Watch count #	UTM NAD83			Conditions				Start time	Common name	#	Distance (m)	Incidental
			Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
63	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Herring Gull	1	300	N
64	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Herring Gull	2	100	N
65	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Great Black-backed Gull	1	20	N
66	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Herring Gull	1	10	N
67	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Herring Gull	1	200	N
68	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Great Black-backed Gull	1	25	N
69	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Double-crested Cormorant	1	300	N
70	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Double-crested Cormorant	1	50	N
71	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Gull sp.	1	1000	N
72	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Herring Gull	1	75	N
73	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Great Black-backed Gull	1	500	N
74	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Herring Gull	1	50	N
75	25-Sep-15	2	20	719568	5125839	2	12	20	None	11:15	Ring-billed Gull	1	0	N
76	29-Sep-15	1	20	721337	5124765	2	18	80	None	9:52	Herring Gull	1	350	N
77	29-Sep-15	1	20	721337	5124765	2	18	80	None	9:52	Double-crested Cormorant	2	350	N
78	29-Sep-15	2	20	719568	5125839	2	18	80	None	11:05	Great Black-backed Gull	1	475	N
79	29-Sep-15	2	20	719568	5125839	2	18	80	None	11:05	Herring Gull	3	475	N
80	29-Sep-15	2	20	719568	5125839	2	18	80	None	11:05	Herring Gull	1	60	N
81	29-Sep-15	2	20	719568	5125839	2	18	80	None	11:05	Ring-billed Gull	1	20	N
82	29-Sep-15	2	20	719568	5125839	2	18	80	None	11:05	Double-crested Cormorant	1	350	N
83	29-Sep-15	2	20	719568	5125839	2	18	80	None	11:05	Double-crested Cormorant	1	400	N

Order	Date	Watch count #	UTM NAD83			Conditions				Start time	Common name	#	Distance (m)	Incidental
			Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
84	29-Sep-15	2	20	719568	5125839	2	18	80	None	11:05	Double-crested Cormorant	2	350	N
85	29-Sep-15	2	20	719568	5125839	2	18	80	None	11:05	Herring Gull	1	300	N
86	29-Sep-15	2	20	719568	5125839	2	18	80	None	11:05	Double-crested Cormorant	1	300	N
87	09-Oct-15	1	20	721337	5124765	1	8	100	None	9:50	Duck sp.	1	300	N
88	09-Oct-15	1	20	721337	5124765	1	8	100	None	9:50	Gull sp.	1	300	N
89	09-Oct-15	1	20	721337	5124765	1	8	100	None	9:50	Double-crested Cormorant	3	300	N
90	09-Oct-15	2	20	719568	5125839	1	8	100	None	11:00	Double-crested Cormorant	1	300	N
91	09-Oct-15	2	20	719568	5125839	1	8	100	None	11:00	Double-crested Cormorant	13	475	N
92	09-Oct-15	2	20	719568	5125839	1	8	100	None	11:00	Gull sp.	8	465	N
93	09-Oct-15	2	20	719568	5125839	1	8	100	None	11:00	Great Black-backed Gull	1	400	N
94	09-Oct-15	2	20	719568	5125839	1	8	100	None	11:00	Double-crested Cormorant	1	250	N
95	09-Oct-15	2	20	719568	5125839	1	8	100	None	11:00	Great Black-backed Gull	1	250	N
96	09-Oct-15	2	20	719568	5125839	1	8	100	None	11:00	Herring Gull	1	19	N
97	09-Oct-15	2	20	719568	5125839	1	8	100	None	11:00	Double-crested Cormorant	1	500	N
98	09-Oct-15	2	20	719568	5125839	1	8	100	None	11:00	Duck sp.	3	400	N
99	20-Oct-15	1	20	721337	5124765	2	4	100	None	9:52	Duck sp.	3	350	N
100	20-Oct-15	1	20	721337	5124765	2	4	100	None	9:52	Gull sp.	1	350	N
101	20-Oct-15	2	20	719568	5125839	2	4	100	None	10:53	Herring Gull	1	40	N
102	20-Oct-15	2	20	719568	5125839	2	4	100	None	10:53	Double-crested Cormorant	20	475	N
103	20-Oct-15	2	20	719568	5125839	2	4	100	None	10:53	Duck sp.	6	425	N
104	20-Oct-15	2	20	719568	5125839	2	4	100	None	10:53	Gull sp.	5	425	N

Order	Date	Watch count #	UTM NAD83			Conditions				Start time	Common name	#	Distance (m)	Incidental
			Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
105	20-Oct-15	2	20	719568	5125839	2	4	100	None	10:53	Herring Gull	1	400	N
106	20-Oct-15	2	20	719568	5125839	2	4	100	None	10:53	Herring Gull	3	200	N
107	20-Oct-15	2	20	719568	5125839	2	4	100	None	10:53	Double-crested Cormorant	1	475	N
108	20-Oct-15	2	20	719568	5125839	2	4	100	None	10:53	Double-crested Cormorant	1	300	N
109	20-Oct-15	2	20	719568	5125839	2	4	100	None	10:53	Double-crested Cormorant	1	350	N

Detailed spring bird migration results from dedicated 10-minute point count surveys, New Victoria Community Wind Project

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
07-Apr-16	1	20	719858	5125491	3	-3	20	None	7:37	Black-capped Chickadee	2	0-50	Y
07-Apr-16	1	20	719858	5125491	3	-3	20	None	5:44	Black-capped Chickadee	4	0-50	N
07-Apr-16	1	20	719858	5125491	3	-3	20	None	7:37	Black-capped Chickadee	1	0-50	N
07-Apr-16	1	20	719858	5125491	3	-3	20	None	7:37	American Crow	1	>100	Y
07-Apr-16	1	20	719858	5125491	3	-3	20	None	7:37	Song Sparrow	1	50-100	N
07-Apr-16	1	20	719858	5125491	3	-3	20	None	7:37	Northern Flicker	1	50-100	N
07-Apr-16	1	20	719858	5125491	3	-3	20	None	7:37	Black-capped Chickadee	2	50-100	N
07-Apr-16	2	20	720095	5125357	3	-3	20	None	7:50	Song Sparrow	2	0-50	N
07-Apr-16	2	20	720095	5125357	3	-3	20	None	7:50	American Crow	1	50-100	N
07-Apr-16	2	20	720095	5125357	3	-3	20	None	7:50	American Robin	1	>100	N
07-Apr-16	2	20	720095	5125357	3	-3	20	None	7:50	Song Sparrow	1	>100	N
07-Apr-16	2	20	720095	5125357	3	-3	20	None	7:50	American Robin	1	0-50	N
07-Apr-16	2	20	720095	5125357	3	-3	20	None	7:50	American Robin	1	0-50	N
07-Apr-16	2	20	720095	5125357	3	-3	20	None	7:50	American Crow	1	0-50	N
07-Apr-16	2	20	720095	5125357	3	-3	20	None	7:50	American Robin	12	0-50	N
07-Apr-16	2	20	720095	5125357	3	-3	20	None	7:50	American Crow	5	50-100	N
07-Apr-16	2	20	720095	5125357	3	-3	20	None	7:50	Blue Jay	1	>100	Y
07-Apr-16	2	20	720095	5125357	3	-3	20	None	7:50	Fox Sparrow	1	0-50	N
07-Apr-16	2	20	720095	5125357	3	-3	20	None	7:50	Fox Sparrow	1	>100	Y
07-Apr-16	2	20	720095	5125357	3	-3	20	None	7:50	Woodpecker sp.	1	>100	Y
07-Apr-16	2	20	720095	5125357	3	-3	20	None	7:50	American Robin	10	0-50	N
07-Apr-16	3	20	720371	5125237	3	-3	20	None	8:03	American Robin	1	>100	Y
07-Apr-16	3	20	720371	5125237	3	-3	20	None	8:03	American Robin	1	0-50	N
07-Apr-16	3	20	720371	5125237	3	-3	20	None	8:03	Herring Gull	3	>100	Y
07-Apr-16	3	20	720371	5125237	3	-3	20	None	8:03	American Crow	1	>100	Y
07-Apr-16	3	20	720371	5125237	3	-3	20	None	8:03	Song Sparrow	1	>100	Y

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
07-Apr-16	3	20	720371	5125237	3	-3	20	None	8:03	American Robin	5	0-50	N
07-Apr-16	3	20	720371	5125237	3	-3	20	None	8:03	Song Sparrow	1	0-50	N
07-Apr-16	3	20	720371	5125237	3	-3	20	None	8:03	Blue Jay	1	>100	Y
07-Apr-16	3	20	720371	5125237	3	-3	20	None	8:03	Dark-eyed Junco	1	50-100	Y
07-Apr-16	4	20	720640	5125125	3	-3	20	None	8:30	Black-capped Chickadee	1	0-50	N
07-Apr-16	4	20	720640	5125125	3	-3	20	None	8:30	Northern Flicker	1	>100	Y
07-Apr-16	4	20	720640	5125125	3	-3	20	None	8:30	Black-capped Chickadee	2	50-100	N
07-Apr-16	4	20	720640	5125125	3	-3	20	None	8:30	American Robin	1	>100	Y
07-Apr-16	5	20	720891	5125026	3	-3	20	None	8:52	American Robin	1	0-50	N
07-Apr-16	5	20	720891	5125026	3	-3	20	None	8:52	American Robin	1	0-50	N
07-Apr-16	5	20	720891	5125026	3	-3	20	None	8:52	American Robin	1	0-50	N
07-Apr-16	6	20	721172	5124959	3	-3	20	None	9:10	Blue Jay	2	0-50	N
07-Apr-16	6	20	721172	5124959	3	-3	20	None	9:10	Dark-eyed Junco	3	0-50	N
07-Apr-16	6	20	721172	5124959	3	-3	20	None	9:10	American Robin	1	0-50	N
07-Apr-16	6	20	721172	5124959	3	-3	20	None	9:10	Black-capped Chickadee	2	50-100	N
07-Apr-16	7	20	721330	5124753	3	-3	20	None	9:28	American Black Duck	5	50-100	N
07-Apr-16	7	20	721330	5124753	3	-3	20	None	9:28	American Black Duck	2	0-50	N
07-Apr-16	7	20	721330	5124753	3	-3	20	None	9:28	Herring Gull	1	>100	Y
07-Apr-16	7	20	721330	5124753	3	-3	20	None	9:28	American Crow	1	>100	Y
17-Apr-16	1	20	719858	5125491	1	2	100	None	8:37	Mourning Dove	1	50-100	N
17-Apr-16	1	20	719858	5125491	1	2	100	None	8:37	American Robin	1	50-100	N
17-Apr-16	1	20	719858	5125491	1	2	100	None	8:37	Dark-eyed Junco	3	50-100	N
17-Apr-16	1	20	719858	5125491	1	2	100	None	8:37	American Crow	1	>100	N
17-Apr-16	1	20	719858	5125491	1	2	100	None	8:37	Northern Flicker	1	50-100	N
17-Apr-16	1	20	719858	5125491	1	2	100	None	8:37	Common Raven	1	50-100	N
17-Apr-16	1	20	719858	5125491	1	2	100	None	8:37	Ruffed Grouse	3	50-100	N
17-Apr-16	1	20	719858	5125491	1	2	100	None	8:37	American Goldfinch	1	50-100	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
17-Apr-16	1	20	719858	5125491	1	2	100	None	8:37	Woodpecker sp.	1	>100	N
17-Apr-16	1	20	719858	5125491	1	2	100	None	8:37	Woodpecker sp.	1	>100	N
17-Apr-16	1	20	719858	5125491	1	2	100	None	8:37	Shorebird sp.	1	50-100	N
17-Apr-16	1	20	719858	5125491	1	2	100	None	8:37	American Black Duck	3	0-50	N
17-Apr-16	1	20	719858	5125491	1	2	100	None	8:37	Black-capped Chickadee	1	50-100	N
17-Apr-16	2	20	720095	5125357	1	2	100	None	8:53	Northern Flicker	1	50-100	N
17-Apr-16	2	20	720095	5125357	1	2	100	None	8:53	Song Sparrow	1	0-50	N
17-Apr-16	2	20	720095	5125357	1	2	100	None	8:53	American Goldfinch	1	0-50	N
17-Apr-16	2	20	720095	5125357	1	2	100	None	8:53	Blue Jay	1	>100	N
17-Apr-16	2	20	720095	5125357	1	2	100	None	8:53	Blue Jay	1	0-50	N
17-Apr-16	2	20	720095	5125357	1	2	100	None	8:53	Song Sparrow	1	0-50	N
17-Apr-16	2	20	720095	5125357	1	2	100	None	8:53	Song Sparrow	1	0-50	N
17-Apr-16	2	20	720095	5125357	1	2	100	None	8:53	American Crow	1	50-100	N
17-Apr-16	3	20	720371	5125237	1	2	100	None	9:09	Blue Jay	2	50-100	N
17-Apr-16	3	20	720371	5125237	1	2	100	None	9:09	Mourning Dove	1	50-100	N
17-Apr-16	3	20	720371	5125237	1	2	100	None	9:09	Song Sparrow	1	50-100	N
17-Apr-16	3	20	720371	5125237	1	2	100	None	9:09	Song Sparrow	1	50-100	N
17-Apr-16	3	20	720371	5125237	1	2	100	None	9:09	American Robin	1	50-100	N
17-Apr-16	3	20	720371	5125237	1	2	100	None	9:09	American Robin	1	50-100	N
17-Apr-16	3	20	720371	5125237	1	2	100	None	9:09	Black-capped Chickadee	1	50-100	N
17-Apr-16	3	20	721172	5124959	1	2	100	None	9:09	American Robin	1	50-100	N
17-Apr-16	3	20	721172	5124959	1	2	100	None	9:09	Ruffed Grouse	1	50-100	N
17-Apr-16	3	20	721172	5124959	1	2	100	None	9:09	Greater Yellowlegs	1	50-100	Y
17-Apr-16	3	20	721172	5124959	1	2	100	None	9:09	Common Raven	1	50-100	N
17-Apr-16	3	20	721172	5124959	1	2	100	None	9:09	Northern Flicker	1	>100	N
17-Apr-16	3	20	721172	5124959	1	2	100	None	9:09	Blue Jay	1	50-100	N
17-Apr-16	3	20	721172	5124959	1	2	100	None	9:09	American Crow	1	50-100	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
17-Apr-16	3	20	721172	5124959	1	2	100	None	9:09	American Crow	1	50-100	N
17-Apr-16	4	20	720640	5125125	1	2	100	None	9:30	Mourning Dove	1	50-100	N
17-Apr-16	4	20	720640	5125125	1	2	100	None	9:30	Dark-eyed Junco	1	50-100	N
17-Apr-16	4	20	720640	5125125	1	2	100	None	9:30	American Crow	1	0-50	N
17-Apr-16	4	20	720640	5125125	1	2	100	None	9:30	Black-capped Chickadee	1	50-100	N
17-Apr-16	4	20	720640	5125125	1	2	100	None	9:30	Black-capped Chickadee	2	0-50	N
17-Apr-16	4	20	720640	5125125	1	2	100	None	9:30	American Goldfinch	1	0-50	N
17-Apr-16	4	20	720640	5125125	1	2	100	None	9:30	Blue Jay	1	50-100	N
17-Apr-16	4	20	720640	5125125	1	2	100	None	9:30	Blue Jay	1	50-100	N
17-Apr-16	4	20	720640	5125125	1	2	100	None	9:30	Black-capped Chickadee	2	50-100	N
17-Apr-16	4	20	720640	5125125	1	2	100	None	9:30	American Robin	1	50-100	N
17-Apr-16	5	20	720891	5125026	1	2	100	None	9:45	Dark-eyed Junco	1	50-100	N
17-Apr-16	5	20	720891	5125026	1	2	100	None	9:45	American Crow	1	50-100	N
17-Apr-16	5	20	720891	5125026	1	2	100	None	9:45	Black-capped Chickadee	3	0-50	N
17-Apr-16	5	20	720891	5125026	1	2	100	None	9:45	Black-capped Chickadee	1	50-100	N
17-Apr-16	5	20	720891	5125026	1	2	100	None	9:45	Woodpecker sp.	1	50-100	N
17-Apr-16	5	20	720891	5125026	1	2	100	None	9:45	Blue Jay	1	50-100	N
17-Apr-16	5	20	720891	5125026	1	2	100	None	9:45	Ruffed Grouse	1	50-100	N
17-Apr-16	5	20	720891	5125026	1	2	100	None	9:45	American Crow	1	50-100	N
17-Apr-16	5	20	720891	5125026	1	2	100	None	9:45	Blue Jay	1	0-50	N
17-Apr-16	6	20	721172	5124959	1	2	100	None	10:06	American Robin	1	50-100	N
17-Apr-16	6	20	721172	5124959	1	2	100	None	10:06	American Crow	1	50-100	N
17-Apr-16	6	20	721172	5124959	1	2	100	None	10:06	Dark-eyed Junco	1	50-100	N
17-Apr-16	6	20	721172	5124959	1	2	100	None	10:06	Northern Flicker	1	50-100	N
17-Apr-16	6	20	721172	5124959	1	2	100	None	10:06	American Goldfinch	3	50-100	N
17-Apr-16	6	20	721172	5124959	1	2	100	None	10:06	American Crow	1	0-50	N
17-Apr-16	6	20	721172	5124959	1	2	100	None	10:06	Ruffed Grouse	1	50-100	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
17-Apr-16	6	20	721172	5124959	1	2	100	None	10:06	Common Grackle	4	50-100	N
17-Apr-16	6	20	721172	5124959	1	2	100	None	10:06	Blue Jay	1	0-50	N
17-Apr-16	6	20	721172	5124959	1	2	100	None	10:06	American Goldfinch	1	50-100	N
17-Apr-16	6	20	721172	5124959	1	2	100	None	10:06	American Robin	1	0-50	N
17-Apr-16	6	20	721172	5124959	1	2	100	None	10:06	Dark-eyed Junco	1	0-50	N
17-Apr-16	7	20	721330	5124753	1	2	100	None	10:20	Bald Eagle	1	>100	N
17-Apr-16	7	20	721330	5124753	1	2	100	None	10:20	Common Loon	2	0-50	N
17-Apr-16	7	20	721330	5124753	1	2	100	None	10:20	Mallard	1	50-100	N
17-Apr-16	7	20	721330	5124753	1	2	100	None	10:20	Ruffed Grouse	1	50-100	N
17-Apr-16	7	20	721330	5124753	1	2	100	None	10:20	Mallard	2	>100	N
17-Apr-16	7	20	721330	5124753	1	2	100	None	10:20	Northern Flicker	1	0-50	N
22-Apr-16	1	20	719858	5125491	1	3	70	None	7:18	Black-capped Chickadee	3	0-50	N
22-Apr-16	1	20	719858	5125491	1	3	70	None	7:18	Dark-eyed Junco	1	0-50	N
22-Apr-16	1	20	719858	5125491	1	3	70	None	7:18	Herring Gull	4	50-100	N
22-Apr-16	1	20	719858	5125491	1	3	70	None	7:18	Dark-eyed Junco	2	50-100	N
22-Apr-16	1	20	719858	5125491	1	3	70	None	7:18	Mallard	1	0-50	N
22-Apr-16	1	20	719858	5125491	1	3	70	None	7:18	American Robin	1	0-50	N
22-Apr-16	1	20	719858	5125491	1	3	70	None	7:18	Black-capped Chickadee	2	0-50	N
22-Apr-16	1	20	719858	5125491	1	3	70	None	7:18	American Robin	1	0-50	N
22-Apr-16	1	20	719858	5125491	1	3	70	None	7:18	American Crow	1	50-100	N
22-Apr-16	1	20	719858	5125491	1	3	70	None	7:18	American Robin	1	50-100	N
22-Apr-16	1	20	719858	5125491	1	3	70	None	7:18	American Goldfinch	1	50-100	N
22-Apr-16	2	20	720095	5125357	1	3	70	None	7:32	Song Sparrow	2	0-50	N
22-Apr-16	2	20	720095	5125357	1	3	70	None	7:32	Song Sparrow	1	50-100	N
22-Apr-16	2	20	720095	5125357	1	3	70	None	7:32	American Robin	1	50-100	N
22-Apr-16	2	20	720095	5125357	1	3	70	None	7:32	Song Sparrow	4	0-50	N
22-Apr-16	2	20	720095	5125357	1	3	70	None	7:32	Black-capped Chickadee	1	50-100	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
22-Apr-16	2	20	720095	5125357	1	3	70	None	7:32	American Crow	1	0-50	N
22-Apr-16	2	20	720095	5125357	1	3	70	None	7:32	American Robin	1	0-50	N
22-Apr-16	2	20	720095	5125357	1	3	70	None	7:32	Ruffed Grouse	1	0-50	N
22-Apr-16	2	20	720095	5125357	1	3	70	None	7:32	Black-capped Chickadee	2	0-50	N
22-Apr-16	3	20	720371	5125237	1	3	70	None	7:45	Song Sparrow	1	0-50	N
22-Apr-16	3	20	720371	5125237	1	3	70	None	7:45	Greater Yellowlegs	1	>100	Y
22-Apr-16	3	20	720371	5125237	1	3	70	None	7:45	American Crow	1	50-100	N
22-Apr-16	3	20	720371	5125237	1	3	70	None	7:45	American Goldfinch	2	50-100	N
22-Apr-16	3	20	720371	5125237	1	3	70	None	7:45	Ring-billed Gull	1	50-100	N
22-Apr-16	3	20	720371	5125237	1	3	70	None	7:45	American Crow	1	50-100	N
22-Apr-16	4	20	720640	5125026	1	3	70	None	8:06	Black-capped Chickadee	2	0-50	N
22-Apr-16	4	20	720640	5125026	1	3	70	None	8:06	American Robin	1	0-50	N
22-Apr-16	4	20	720640	5125026	1	3	70	None	8:06	Northern Flicker	1	50-100	N
22-Apr-16	4	20	720640	5125026	1	3	70	None	8:06	Dark-eyed Junco	1	50-100	N
22-Apr-16	4	20	720640	5125026	1	3	70	None	8:06	Hairy Woodpecker	1	50-100	N
22-Apr-16	4	20	720640	5125026	1	3	70	None	8:06	Common Raven	1	>100	Y
22-Apr-16	4	20	720640	5125026	1	3	70	None	8:06	American Goldfinch	1	50-100	N
22-Apr-16	5	20	720891	5125026	1	3	70	None	8:24	Black-capped Chickadee	1	50-100	N
22-Apr-16	5	20	720891	5125026	1	3	70	None	8:24	American Crow	1	50-100	N
22-Apr-16	5	20	720891	5125026	1	3	70	None	8:24	Black-capped Chickadee	2	0-50	N
22-Apr-16	5	20	720891	5125026	1	3	70	None	8:24	American Crow	1	0-50	N
22-Apr-16	5	20	720891	5125026	1	3	70	None	8:24	Ruffed Grouse	1	50-100	N
22-Apr-16	5	20	720891	5125026	1	3	70	None	8:24	Hairy Woodpecker	2	0-50	N
22-Apr-16	5	20	720891	5125026	1	3	70	None	8:24	American Crow	1	0-50	N
22-Apr-16	5	20	720891	5125026	1	3	70	None	8:24	Blue Jay	2	50-100	N
22-Apr-16	6	20	721172	5124959	1	3	70	None	8:41	Mourning Dove	1	50-100	N
22-Apr-16	6	20	721172	5124959	1	3	70	None	8:41	Pine Grosbeak	2	50-100	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
22-Apr-16	6	20	721172	5124959	1	3	70	None	8:41	Black-capped Chickadee	2	50-100	N
22-Apr-16	7	20	721330	5124753	1	3	70	None	9:05	Greater Yellowlegs	1	~750m	Y
22-Apr-16	7	20	721172	5124959	1	3	70	None	9:05	American Goldfinch	3	0-50	N
22-Apr-16	7	20	721172	5124959	1	3	70	None	9:05	Blue Jay	1	50-100	N
22-Apr-16	WP79	20	720398	5125170	1	3	70	None	9:05	Shorebird sp.	2	0-50	Y
22-Apr-16	WP79	20	720398	5125170	1	3	70	None	9:05	Cooper's Hawk	1	0-50	Y
29-Apr-16	1	20	719858	5125491	2	-4	30	None	6:53	Blue Jay	3	0-50	N
29-Apr-16	1	20	719858	5125491	2	-4	30	None	6:53	American Goldfinch	1	0-50	N
29-Apr-16	1	20	719858	5125491	2	-4	30	None	6:53	Northern Flicker	1	50-100	N
29-Apr-16	1	20	719858	5125491	2	-4	30	None	6:53	Black-capped Chickadee	1	50-100	N
29-Apr-16	1	20	719858	5125491	2	-4	30	None	6:53	American Robin	1	0-50	N
29-Apr-16	1	20	719858	5125491	2	-4	30	None	6:53	White-throated Sparrow	1	50-100	N
29-Apr-16	1	20	719858	5125491	2	-4	30	None	6:53	Ruby-crowned Kinglet	1	0-50	N
29-Apr-16	1	20	719858	5125491	2	-4	30	None	6:53	Black-capped Chickadee	1	0-50	N
29-Apr-16	1	20	719858	5125491	2	-4	30	None	6:53	American Robin	1	0-50	N
29-Apr-16	1	20	719858	5125491	2	-4	30	None	6:53	White-throated Sparrow	1	50-100	N
29-Apr-16	1	20	719858	5125491	2	-4	30	None	6:53	Black-capped Chickadee	1	50-100	N
29-Apr-16	1	20	719858	5125491	2	-4	30	None	6:53	American Goldfinch	1	50-100	N
29-Apr-16	1	20	719858	5125491	2	-4	30	None	6:53	American Crow	1	50-100	N
29-Apr-16	1	20	719858	5125491	2	-4	30	None	6:53	Ruffed Grouse	1	>100	Y
29-Apr-16	1	20	719858	5125491	2	-4	30	None	6:53	Dark-eyed Junco	1	50-100	N
29-Apr-16	2	20	720095	5125357	2	-4	30	None	7:05	Song Sparrow	1	50-100	N
29-Apr-16	2	20	720095	5125357	2	-4	30	None	7:05	White-throated Sparrow	1	50-100	N
29-Apr-16	2	20	720095	5125357	2	-4	30	None	7:05	Ruffed Grouse	1	50-100	N
29-Apr-16	2	20	720095	5125357	2	-4	30	None	7:05	American Robin	1	0-50	N
29-Apr-16	2	20	720095	5125357	2	-4	30	None	7:05	Song Sparrow	2	0-50	N
29-Apr-16	2	20	720095	5125357	2	-4	30	None	7:05	Song Sparrow	1	0-50	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
29-Apr-16	2	20	720095	5125357	2	-4	30	None	7:05	American Goldfinch	2	0-50	N
29-Apr-16	2	20	720095	5125357	2	-4	30	None	7:05	American Robin	1	50-100	N
29-Apr-16	2	20	720095	5125357	2	-4	30	None	7:05	Northern Flicker	2	0-50	N
29-Apr-16	3	20	720371	5125237	2	-4	30	None	7:22	White-throated Sparrow	1	50-100	N
29-Apr-16	3	20	720371	5125237	2	-4	30	None	7:22	Song Sparrow	1	50-100	N
29-Apr-16	3	20	720371	5125237	2	-4	30	None	7:22	American Goldfinch	2	50-100	N
29-Apr-16	3	20	720371	5125237	2	-4	30	None	7:22	Blue Jay	1	50-100	N
29-Apr-16	3	20	720371	5125237	2	-4	30	None	7:22	Song Sparrow	1	50-100	N
29-Apr-16	3	20	720371	5125237	2	-4	30	None	7:22	Black-capped Chickadee	7	50-100	N
29-Apr-16	3	20	720371	5125237	2	-4	30	None	7:22	Herring Gull	2	50-100	N
29-Apr-16	3	20	720371	5125237	2	-4	30	None	8:22	Blue Jay	1	50-100	N
29-Apr-16	3	20	720371	5125237	2	-4	30	None	9:22	American Goldfinch	1	0-50	N
29-Apr-16	WP95	20	720392	5125174	2	-4	30	None	7:22	American Black Duck	2	0-50	N
29-Apr-16	4	20	720640	5125125	2	-4	30	None	7:44	White-throated Sparrow	2	0-50	N
29-Apr-16	4	20	720640	5125125	2	-4	30	None	7:44	White-throated Sparrow	1	50-100	N
29-Apr-16	4	20	720640	5125125	2	-4	30	None	7:44	American Robin	1	50-100	N
29-Apr-16	4	20	720640	5125125	2	-4	30	None	7:44	American Crow	2	50-100	N
29-Apr-16	4	20	720640	5125125	2	-4	30	None	7:44	Black-capped Chickadee	1	50-100	N
29-Apr-16	4	20	720640	5125125	2	-4	30	None	7:44	American Robin	1	0-50	N
29-Apr-16	4	20	720640	5125125	2	-4	30	None	7:44	American Goldfinch	1	50-100	N
29-Apr-16	4	20	720640	5125125	2	-4	30	None	7:44	Northern Flicker	3	50-100	N
29-Apr-16	4	20	720640	5125125	2	-4	30	None	7:44	Common Raven	1	50-100	N
29-Apr-16	5	20	720891	5125026	2	-4	30	None	8:04	Mourning Dove	1	0-50	N
29-Apr-16	5	20	720891	5125026	2	-4	30	None	8:04	White-throated Sparrow	1	0-50	N
29-Apr-16	5	20	720891	5125026	2	-4	30	None	8:04	American Crow	1	0-50	N
29-Apr-16	5	20	720891	5125026	2	-4	30	None	8:04	Black-capped Chickadee	1	0-50	N
29-Apr-16	5	20	720891	5125026	2	-4	30	None	8:04	Hermit Thrush	1	>100	Y

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
29-Apr-16	5	20	720891	5125026	2	-4	30	None	8:04	Pine Grosbeak	1	0-50	N
29-Apr-16	5	20	720891	5125026	2	-4	30	None	8:04	White-throated Sparrow	1	50-100	N
29-Apr-16	WP96	20	720950	5125025	2	-4	30	None	8:04	Common Loon	1	400	Y
29-Apr-16	6	20	721172	5124959	2	-4	30	None	8:23	Canada Goose	2	0-50	N
29-Apr-16	6	20	721172	5124959	2	-4	30	None	8:23	Ruby-crowned Kinglet	1	0-50	N
29-Apr-16	6	20	721172	5124959	2	-4	30	None	8:23	American Goldfinch	1	0-50	N
29-Apr-16	6	20	721172	5124959	2	-4	30	None	8:23	Hermit Thrush	1	0-50	N
29-Apr-16	6	20	721172	5124959	2	-4	30	None	8:23	Duck sp.	6	50-100	N
29-Apr-16	6	20	721172	5124959	2	-4	30	None	8:23	Yellow-rumped Warbler	1	0-50	N
29-Apr-16	6	20	721172	5124959	2	-4	30	None	8:23	Northern Flicker	1	50-100	N
29-Apr-16	6	20	721172	5124959	2	-4	30	None	8:23	Ruby-crowned Kinglet	1	50-100	N
29-Apr-16	6	20	721172	5124959	2	-4	30	None	8:23	Mallard	1	0-50	N
29-Apr-16	6	20	721172	5124959	2	-4	30	None	8:23	American Crow	2	0-50	N
29-Apr-16	7	20	721330	5124753	2	-4	30	None	8:23	Ruffed Grouse	1	50-100	N
29-Apr-16	7	20	721330	5124753	2	-4	30	None	8:46	Mallard	4	>100	N
29-Apr-16	7	20	721330	5124753	2	-4	30	None	8:46	Belted Kingfisher	2	>100	Y
29-Apr-16	7	20	721330	5124753	2	-4	30	None	8:46	American Crow	1	0-50	N
29-Apr-16	7	20	721330	5124753	2	-4	30	None	8:46	Common Loon	1	0-50	N
29-Apr-16	95	20	721330	5124753	2	-4	30	None	8:46	Downy Woodpecker	1	0-50	Y
04-May-16	1	20	719858	5125491	1	2	100	None	6:40	American Robin	1	0-50	N
04-May-16	1	20	719858	5125491	1	2	100	None	6:40	Common Grackle	2	0-50	N
04-May-16	1	20	719858	5125491	1	2	100	None	6:40	White-throated Sparrow	1	50-100	N
04-May-16	1	20	719858	5125491	1	2	100	None	6:40	American Goldfinch	1	50-100	N
04-May-16	1	20	719858	5125491	1	2	100	None	6:40	Ruby-crowned Kinglet	1	50-100	N
04-May-16	1	20	719858	5125491	1	2	100	None	6:40	Northern Flicker	1	0-50	N
04-May-16	1	20	719858	5125491	1	2	100	None	6:40	Purple Finch	1	0-50	N
04-May-16	1	20	719858	5125491	1	2	100	None	6:40	Dark-eyed Junco	1	0-50	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
04-May-16	1	20	719858	5125491	1	2	100	None	6:40	American Robin	1	50-100	N
04-May-16	1	20	719858	5125491	1	2	100	None	6:40	Black-capped Chickadee	1	50-100	N
04-May-16	1	20	719858	5125491	1	2	100	None	6:40	American Robin	2	0-50	N
04-May-16	1	20	719858	5125491	1	2	100	None	6:40	Black-capped Chickadee	4	0-50	N
04-May-16	2	20	720095	5125357	1	2	100	None	6:55	Red-tailed Hawk	1	0-50	N
04-May-16	2	20	720095	5125357	1	2	100	None	6:55	Blue Jay	2	50-100	N
04-May-16	2	20	720095	5125357	1	2	100	None	6:55	Song Sparrow	5	0-50	N
04-May-16	2	20	720095	5125357	1	2	100	None	6:55	American Crow	1	50-100	N
04-May-16	2	20	720095	5125357	1	2	100	None	6:55	American Robin	1	50-100	N
04-May-16	2	20	720095	5125357	1	2	100	None	6:55	White-throated Sparrow	1	0-50	N
04-May-16	2	20	720095	5125357	1	2	100	None	6:55	White-throated Sparrow	1	50-100	N
04-May-16	2	20	720095	5125357	1	2	100	None	6:55	American Goldfinch	1	0-50	N
04-May-16	2	20	720095	5125357	1	2	100	None	6:55	American Crow	2	50-100	N
04-May-16	3	20	720371	5125237	1	2	100	None	7:08	Bald Eagle	1	50-100	N
04-May-16	3	20	720371	5125237	1	2	100	None	7:08	Herring Gull	2	50-100	N
04-May-16	3	20	720371	5125237	1	2	100	None	7:08	Song Sparrow	1	0-50	N
04-May-16	3	20	720371	5125237	1	2	100	None	7:08	American Robin	1	50-100	N
04-May-16	3	20	720371	5125237	1	2	100	None	7:08	Black-capped Chickadee	1	50-100	N
04-May-16	3	20	720371	5125237	1	2	100	None	7:08	White-throated Sparrow	1	50-100	N
04-May-16	3	20	720371	5125237	1	2	100	None	7:08	Ruby-crowned Kinglet	1	50-100	N
04-May-16	4	20	720640	5125125	1	2	100	None	7:28	White-throated Sparrow	2	0-50	N
04-May-16	4	20	720640	5125125	1	2	100	None	7:28	American Robin	1	50-100	N
04-May-16	4	20	720640	5125125	1	2	100	None	7:28	American Robin	1	0-50	N
04-May-16	4	20	720640	5125125	1	2	100	None	7:28	American Robin	1	50-100	N
04-May-16	4	20	720640	5125125	1	2	100	None	7:28	Great Black-backed Gull	2	0-50	N
04-May-16	4	20	720640	5125125	1	2	100	None	7:28	Herring Gull	3	0-50	N
04-May-16	4	20	720640	5125125	1	2	100	None	7:28	Black-capped Chickadee	1	50-100	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
04-May-16	4	20	720640	5125125	1	2	100	None	7:28	White-throated Sparrow	1	0-50	N
04-May-16	4	20	720640	5125125	1	2	100	None	7:28	Herring Gull	1	50-100	N
04-May-16	4	20	720640	5125125	1	2	100	None	7:28	Hermit Thrush	1	>100	Y
04-May-16	4	20	720640	5125125	1	2	100	None	7:28	Greater Yellowlegs	6	>100	N
04-May-16	5	20	720891	5125026	1	2	100	None	7:48	White-throated Sparrow	1	0-50	N
04-May-16	5	20	720891	5125026	1	2	100	None	7:48	White-throated Sparrow	1	50-100	N
04-May-16	5	20	720891	5125026	1	2	100	None	7:48	Ruffed Grouse	1	0-50	N
04-May-16	5	20	720891	5125026	1	2	100	None	7:48	Purple Finch	1	0-50	N
04-May-16	5	20	720891	5125026	1	2	100	None	7:48	Black-capped Chickadee	1	0-50	N
04-May-16	5	20	720891	5125026	1	2	100	None	7:48	Purple Finch	1	50-100	N
04-May-16	6	20	721172	5124959	1	2	100	None	8:04	Hermit Thrush	1	0-50	N
04-May-16	6	20	721172	5124959	1	2	100	None	8:04	American Robin	1	50-100	N
04-May-16	6	20	721172	5124959	1	2	100	None	8:04	White-throated Sparrow	1	50-100	N
04-May-16	6	20	721172	5124959	1	2	100	None	8:04	Hermit Thrush	1	50-100	N
04-May-16	6	20	721172	5124959	1	2	100	None	8:04	Ruby-crowned Kinglet	1	50-100	N
04-May-16	6	20	721172	5124959	1	2	100	None	8:04	Yellow-rumped Warbler	1	50-100	N
04-May-16	6	20	721172	5124959	1	2	100	None	8:04	Northern Flicker	1	50-100	N
04-May-16	6	20	721172	5124959	1	2	100	None	8:04	Black-capped Chickadee	1	0-50	N
04-May-16	6	20	721172	5124959	1	2	100	None	8:04	Mallard	1	50-100	N
04-May-16	6	20	721172	5124959	1	2	100	None	8:04	Ruffed Grouse	1	50-100	N
04-May-16	7	20	721330	5124753	1	2	100	None	8:20	Common Loon	2	75	N
04-May-16	7	20	721330	5124753	1	2	100	None	8:20	American Black Duck	1	50-100	N
04-May-16	7	20	721330	5124753	1	2	100	None	8:20	White-throated Sparrow	1	0-50	N
04-May-16	7	20	721330	5124753	1	2	100	None	8:20	American Robin	1	0-50	N
04-May-16	7	20	721330	5124753	1	2	100	None	8:20	Belted Kingfisher	1	0-50	N
11-May-16	1	20	719858	5125491	2	3	15	None	6:15	Common Grackle	3	0-50	N
11-May-16	1	20	719858	5125491	2	3	15	None	6:15	American Goldfinch	4	0-50	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
11-May-16	1	20	719858	5125491	2	3	15	None	6:15	White-throated Sparrow	3	0-50	N
11-May-16	1	20	719858	5125491	2	3	15	None	6:15	Black-capped Chickadee	6	0-50	N
11-May-16	1	20	719858	5125491	2	3	15	None	6:15	Red-winged Blackbird	4	50-100	N
11-May-16	1	20	719858	5125491	2	3	15	None	6:15	American Robin	2	50-100	N
11-May-16	1	20	719858	5125491	2	3	15	None	6:15	Swainson's Thrush	1	50-100	N
11-May-16	1	20	719858	5125491	2	3	15	None	6:15	Winter Wren	1	>100	N
11-May-16	1	20	719858	5125491	2	3	15	None	6:15	Common Raven	3	>100	N
11-May-16	1	20	719858	5125491	2	3	15	None	6:15	Wilson's Snipe	1	50-100	N
11-May-16	1	20	719858	5125491	2	3	15	None	6:15	American Crow	1	>100	N
11-May-16	1	20	719858	5125491	2	3	15	None	6:15	Palm Warbler	2	50-100	N
11-May-16	2	20	720095	5125357	2	3	15	None	6:42	American Crow	2	>100	N
11-May-16	2	20	720095	5125357	2	3	15	None	6:42	American Goldfinch	3	50-100	N
11-May-16	2	20	720095	5125357	2	3	15	None	6:42	White-throated Sparrow	4	50-100	N
11-May-16	2	20	720095	5125357	2	3	15	None	6:42	American Robin	2	0-50	N
11-May-16	2	20	720095	5125357	2	3	15	None	6:42	Purple Finch	2	50-100	N
11-May-16	2	20	720095	5125357	2	3	15	None	6:42	Black-capped Chickadee	4	50-100	N
11-May-16	2	20	720095	5125357	2	3	15	None	6:42	Spotted Sandpiper	1	>100	N
11-May-16	2	20	720095	5125357	2	3	15	None	6:42	Song Sparrow	2	50-100	N
11-May-16	3	20	720371	5125237	2	3	15	None	6:55	White-throated Sparrow	10	0-50	N
11-May-16	3	20	720371	5125237	2	3	15	None	6:55	Wilson's Snipe	1	>100	N
11-May-16	3	20	720371	5125237	2	3	15	None	6:55	Dark-eyed Junco	4	0-50	N
11-May-16	3	20	720371	5125237	2	3	15	None	6:55	American Crow	3	>100	N
11-May-16	3	20	720371	5125237	2	3	15	None	6:55	Yellow-rumped Warbler	1	0-50	N
11-May-16	3	20	720371	5125237	2	3	15	None	6:55	Blue Jay	2	>100	N
11-May-16	3	20	720371	5125237	2	3	15	None	6:55	Swainson's Thrush	2	0-50	N
11-May-16	3	20	720371	5125237	2	3	15	None	6:55	Barred Owl	1	>100	N
11-May-16	3	20	720371	5125237	2	3	15	None	6:55	Black-capped Chickadee	5	0-50	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
11-May-16	3	20	720371	5125237	2	3	15	None	6:55	Hermit Thrush	3	0-50	N
11-May-16	3	20	720371	5125237	2	3	15	None	6:55	Mallard	2	0-50	N
11-May-16	4	20	720640	5125125	2	3	15	None	7:45	American Crow	3	50-100	N
11-May-16	4	20	720640	5125125	2	3	15	None	7:45	Mourning Dove	1	0-50	N
11-May-16	4	20	720640	5125125	2	3	15	None	7:45	White-throated Sparrow	8	0-50	N
11-May-16	4	20	720640	5125125	2	3	15	None	7:45	Winter Wren	1	50-100	N
11-May-16	4	20	720640	5125125	2	3	15	None	7:45	Wilson's Snipe	1	>100	N
11-May-16	4	20	720640	5125125	2	3	15	None	7:45	Mallard	2	50-100	N
11-May-16	4	20	720640	5125125	2	3	15	None	7:45	Swainson's Thrush	1	50-100	N
11-May-16	4	20	720640	5125125	2	3	15	None	7:45	Blue Jay	2	>100	N
11-May-16	4	20	720640	5125125	2	3	15	None	7:45	Black-capped Chickadee	3	50-100	N
11-May-16	4	20	720640	5125125	2	3	15	None	7:45	Common Raven	2	50-100	N
11-May-16	5	20	720891	5125026	2	3	15	None	8:05	Winter Wren	1	0-50	N
11-May-16	5	20	720891	5125026	2	3	15	None	8:05	White-throated Sparrow	3	0-50	N
11-May-16	5	20	720891	5125026	2	3	15	None	8:05	Ruby-crowned Kinglet	2	0-50	N
11-May-16	5	20	720891	5125026	2	3	15	None	8:05	Hermit Thrush	1	50-100	N
11-May-16	5	20	720891	5125026	2	3	15	None	8:05	Blue Jay	1	>100	N
11-May-16	6	20	721172	5124959	2	3	15	None	8:30	Mallard	2	0-50	N
11-May-16	6	20	721172	5124959	2	3	15	None	8:30	Ring-necked Duck	6	0-50	N
11-May-16	6	20	721172	5124959	2	3	15	None	8:30	Red-eyed Vireo	2	50-100	N
11-May-16	6	20	721172	5124959	2	3	15	None	8:30	White-throated Sparrow	4	0-50	N
11-May-16	6	20	721172	5124959	2	3	15	None	8:30	Purple Finch	2	50-100	N
11-May-16	6	20	721172	5124959	2	3	15	None	8:30	American Robin	3	0-50	N
11-May-16	6	20	721172	5124959	2	3	15	None	8:30	Yellow-rumped Warbler	1	0-50	N
11-May-16	6	20	721172	5124959	2	3	15	None	8:30	Northern Flicker	1	0-50	N
11-May-16	6	20	721172	5124959	2	3	15	None	8:30	Black-capped Chickadee	3	0-50	N
11-May-16	7	20	721330	5124753	2	3	15	None	8:50	American Robin	2	0-50	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
11-May-16	7	20	721330	5124753	2	3	15	None	8:50	Downy Woodpecker	1	50-100	N
11-May-16	7	20	721330	5124753	2	3	15	None	8:50	White-throated Sparrow	8	0-50	N
11-May-16	7	20	721330	5124753	2	3	15	None	8:50	Red-eyed Vireo	1	0-50	N
11-May-16	7	20	721330	5124753	2	3	15	None	8:50	Dark-eyed Junco	2	0-50	N
11-May-16	7	20	721330	5124753	2	3	15	None	8:50	Common Loon	4	>100	N
11-May-16	7	20	721330	5124753	2	3	15	None	8:50	American Crow	3	50-100	N
11-May-16	7	20	721330	5124753	2	3	15	None	8:50	Blue Jay	3	>100	N
18-May-16	1	20	719858	5125491	2	6	20	None	5:10	White-throated Sparrow	8	50-100	N
18-May-16	1	20	719858	5125491	2	6	20	None	5:10	Black-capped Chickadee	2	50-100	N
18-May-16	1	20	719858	5125491	2	6	20	None	5:10	Dark-eyed Junco	2	0-50	N
18-May-16	1	20	719858	5125491	2	6	20	None	5:10	Chestnut-sided Warbler	1	50-100	N
18-May-16	1	20	719858	5125491	2	6	20	None	5:10	Common Yellowthroat	2	50-100	N
18-May-16	1	20	719858	5125491	2	6	20	None	5:10	American Crow	1	>100	N
18-May-16	1	20	719858	5125491	2	6	20	None	5:10	Red-winged Blackbird	1	50-100	N
18-May-16	2	20	720095	5125357	2	6	20	None	5:30	Ovenbird	2	0-50	N
18-May-16	2	20	720095	5125357	2	6	20	None	5:30	Song Sparrow	2	50-100	N
18-May-16	2	20	720095	5125357	2	6	20	None	5:30	White-throated Sparrow	5	0-50	N
18-May-16	2	20	720095	5125357	2	6	20	None	5:30	Magnolia Warbler	2	0-50	N
18-May-16	2	20	720095	5125357	2	6	20	None	5:30	Black-capped Chickadee	5	0-50	N
18-May-16	2	20	720095	5125357	2	6	20	None	5:30	Chestnut-sided Warbler	2	0-50	N
18-May-16	2	20	720095	5125357	2	6	20	None	5:30	Common Yellowthroat	1	50-100	N
18-May-16	3	20	720371	5125237	2	6	20	None	5:50	Northern Flicker	1	50-100	N
18-May-16	3	20	720371	5125237	2	6	20	None	5:50	Herring Gull	1	0-50	N
18-May-16	3	20	720371	5125237	2	6	20	None	5:50	Ovenbird	4	0-50	N
18-May-16	3	20	720371	5125237	2	6	20	None	5:50	Black-capped Chickadee	8	50-100	N
18-May-16	3	20	720371	5125237	2	6	20	None	5:50	Chestnut-sided Warbler	2	50-100	N
18-May-16	3	20	720371	5125237	2	6	20	None	5:50	Yellow Warbler	2	50-100	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
18-May-16	3	20	720371	5125237	2	6	20	None	5:50	Magnolia Warbler	1	50-100	N
18-May-16	3	20	720371	5125237	2	6	20	None	5:50	Black-throated Green Warbler	2	0-50	N
18-May-16	3	20	720371	5125237	2	6	20	None	5:50	Common Yellowthroat	2	50-100	N
18-May-16	3	20	720371	5125237	2	6	20	None	5:50	Downy Woodpecker	1	0-50	N
18-May-16	3	20	720371	5125237	2	6	20	None	5:50	American Crow	3	>100	N
18-May-16	3	20	720371	5125237	2	6	20	None	5:50	American Robin	1	0-50	N
18-May-16	3	20	720371	5125237	2	6	20	None	5:50	White-throated Sparrow	10	0-50	N
18-May-16	3	20	720371	5125237	2	6	20	None	5:50	American Goldfinch	2	0-50	N
18-May-16	4	20	720640	5125125	2	6	20	None	6:20	White-throated Sparrow	3	0-50	N
18-May-16	4	20	720640	5125125	2	6	20	None	6:20	Black-capped Chickadee	2	0-50	N
18-May-16	4	20	720640	5125125	2	6	20	None	6:20	American Robin	2	50-100	N
18-May-16	4	20	720640	5125125	2	6	20	None	6:20	Black-throated Green Warbler	2	0-50	N
18-May-16	4	20	720640	5125125	2	6	20	None	6:20	Ovenbird	4	0-50	N
18-May-16	4	20	720640	5125125	2	6	20	None	6:20	Northern Parula	1	0-50	N
18-May-16	4	20	720640	5125125	2	6	20	None	6:20	Northern Flicker	2	0-50	N
18-May-16	4	20	720640	5125125	2	6	20	None	6:20	Black-and-white Warbler	2	0-50	N
18-May-16	4	20	720640	5125125	2	6	20	None	6:20	Downy Woodpecker	2	50-100	N
18-May-16	5	20	720891	5125026	2	6	20	None	7:30	Black-throated Green Warbler	5	0-50	N
18-May-16	5	20	720891	5125026	2	6	20	None	7:30	Ovenbird	4	0-50	N
18-May-16	5	20	720891	5125026	2	6	20	None	7:30	White-throated Sparrow	5	0-50	N
18-May-16	5	20	720891	5125026	2	6	20	None	7:30	Ruby-crowned Kinglet	1	50-100	N
18-May-16	5	20	720891	5125026	2	6	20	None	7:30	Palm Warbler	2	50-100	N
18-May-16	5	20	720891	5125026	2	6	20	None	7:30	American Robin	2	50-100	N
18-May-16	5	20	720891	5125026	2	6	20	None	7:30	Hermit Thrush	3	>100	N
18-May-16	5	20	720891	5125026	2	6	20	None	7:30	American Goldfinch	2	50-100	N
18-May-16	5	20	720891	5125026	2	6	20	None	7:30	Blue Jay	1	0-50	N
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	Red-eyed Vireo	1	0-50	N

Date	Point count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	Dark-eyed Junco	2	0-50	N
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	Alder Flycatcher	1	0-50	N
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	Ring-necked Duck	12	0-50	N
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	Mallard	4	0-50	N
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	White-throated Sparrow	2	0-50	N
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	American Robin	4	50-100	N
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	American Crow	2	50-100	N
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	Northern Parula	1	50-100	N
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	American Goldfinch	2	0-50	N
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	Common Yellowthroat	1	50-100	N
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	Northern Flicker	1	0-50	N
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	Red-winged Blackbird	2	0-50	N
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	Ovenbird	1	50-100	N
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	Belted Kingfisher	1	0-50	Y
18-May-16	6	20	721172	5124959	2	6	20	None	8:00	Northern Harrier	1	>100	Y
18-May-16	7	20	721330	5124753	2	6	20	None	8:30	White-throated Sparrow	4	50-100	N
18-May-16	7	20	721330	5124753	2	6	20	None	8:30	Black-throated Green Warbler	3	0-50	N
18-May-16	7	20	721330	5124753	2	6	20	None	8:30	Ovenbird	2	0-50	N
18-May-16	7	20	721330	5124753	2	6	20	None	8:30	Red-eyed Vireo	2	50-100	N
18-May-16	7	20	721330	5124753	2	6	20	None	8:30	Common Loon	1	50-100	N
18-May-16	7	20	721330	5124753	2	6	20	None	8:30	Mallard	2	50-100	N
18-May-16	7	20	721330	5124753	2	6	20	None	8:30	Magnolia Warbler	1	0-50	N

Detailed spring bird migration results from dedicated 20-minute watch count survey, New Victoria Community Wind Project

Date	Watch count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (°C)	Cloud (%)	Precipitation					
07-Apr-16	2	20	721337	5124765	3	0	100	None	10:30	Herring Gull	2	75	N
07-Apr-16	2	20	721337	5124765	3	0	100	None	10:30	Herring Gull	2	400	N
07-Apr-16	2	20	721337	5124765	3	0	100	None	10:30	Herring Gull	1	400	N
07-Apr-16	2	20	721337	5124765	3	0	100	None	10:30	Herring Gull	12	400	N
07-Apr-16	2	20	721337	5124765	3	0	100	None	10:30	Black-legged Kittiwake	1	75	N
07-Apr-16	2	20	721337	5124765	3	0	100	None	10:30	Great Black-backed Gull	2	75	N
07-Apr-16	2	20	721337	5124765	3	0	100	None	10:30	Duck sp.	1	400	N
07-Apr-16	2	20	721337	5124765	3	0	100	None	10:30	Bonaparte's Gull	2	75	N
17-Apr-16	1	20	721336	5124760	1	2	100	None	10:30	Common Loon	2	30	N
17-Apr-16	1	20	721336	5124760	1	2	100	None	10:30	Mallard	3	250	N
17-Apr-16	1	20	721336	5124760	1	2	100	None	10:30	Bald Eagle	1	300	N
17-Apr-16	1	20	721336	5124760	1	2	100	None	10:30	Savannah Sparrow	1	>100	Y
17-Apr-16	2	20	721337	5124765	1	2	100	None	10:30	Great Black-backed Gull	2	200	N
17-Apr-16	1	20	721336	5124760	1	2	100	None	10:30	Red-breasted Merganser	2	350	N
17-Apr-16	1	20	721336	5124760	1	2	100	None	10:30	Herring Gull	1	340	N
17-Apr-16	1	20	721336	5124760	1	2	100	None	10:30	Ring-billed Gull	1	50	N
17-Apr-16	1	20	721336	5124760	1	2	100	None	10:30	Ring-billed Gull	2	150	N
17-Apr-16	1	20	721336	5124760	1	2	100	None	10:30	Ring-billed Gull	1	75	N
17-Apr-16	1	20	721336	5124760	1	2	100	None	10:30	Great Black-backed Gull	2	50	N
17-Apr-16	1	20	721336	5124760	1	2	100	None	10:30	Gull sp.	7	400	N
17-Apr-16	1	20	721336	5124760	1	2	100	None	10:30	American Black Duck	2	100	N
22-Apr-16	1	20	721336	5124760	2	5	70	None	9:15	American Black Duck	1	200	N
22-Apr-16	2	20	721337	5124765	2	5	70	None	9:15	Herring Gull	6	450	N
22-Apr-16	2	20	721337	5124765	2	5	70	None	10:30	Great Black-backed Gull	1	450	N
22-Apr-16	2	20	721337	5124765	2	5	70	None	10:30	Duck sp.	2	450	N
22-Apr-16	2	20	721337	5124765	2	5	70	None	10:30	Common Merganser	6	300	N

Date	Watch count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
22-Apr-16	2	20	721337	5124765	2	5	70	None	10:30	Duck sp.	2	350	N
22-Apr-16	2	20	721337	5124765	2	5	70	None	10:30	Herring Gull	1	10	N
22-Apr-16	2	20	721337	5124765	2	5	70	None	10:30	Herring Gull	2	10	N
22-Apr-16	2	20	721337	5124765	2	5	70	None	10:30	Great Black-backed Gull	2	10	N
22-Apr-16	2	20	721337	5124765	2	5	70	None	10:30	Herring Gull	3	10	N
22-Apr-16	2	20	721337	5124765	2	5	70	None	10:30	Herring Gull	2	10	N
29-Apr-16	1	20	721336	5124760	1	-4	10	None	8:56	Mallard	4	300	N
29-Apr-16	1	20	721336	5124760	1	-4	10	None	10:30	Common Loon	1	100	N
29-Apr-16	2	20	721337	5124765	1	-4	10	None	10:30	Great Black-backed Gull	1	20	N
29-Apr-16	2	20	721337	5124765	1	-4	10	None	10:30	Herring Gull	1	20	N
29-Apr-16	2	20	721337	5124765	1	-4	10	None	10:30	Herring Gull	1	30	N
29-Apr-16	2	20	721337	5124765	1	-4	10	None	10:30	Duck sp.	3	450	N
29-Apr-16	2	20	721337	5124765	1	-4	10	None	10:30	Double-crested Cormorant	2	450	N
29-Apr-16	2	20	721337	5124765	1	-4	10	None	10:30	Great Black-backed Gull	1	10	N
29-Apr-16	2	20	721337	5124765	1	-4	10	None	10:30	Herring Gull	1	50	N
29-Apr-16	2	20	721337	5124765	1	-4	10	None	10:30	Herring Gull	1	60	N
29-Apr-16	2	20	721337	5124765	1	-4	10	None	10:30	Herring Gull	1	10	N
29-Apr-16	2	20	721337	5124765	1	-4	10	None	10:30	Herring Gull	1	40	N
04-May-16	1	20	721336	5124760	1	4	100	None	8:30	Common Loon	2	50	N
04-May-16	1	20	721336	5124760	1	4	100	None	8:30	American Black Duck	1	100	N
04-May-16	2	20	721337	5124765	1	4	100	None	10:20	Gull sp.	7	400	N
04-May-16	2	20	721337	5124765	1	4	100	None	10:20	Herring Gull	1	20	N
04-May-16	2	20	721337	5124765	1	4	100	None	10:20	Herring Gull	1	20	N
04-May-16	2	20	721337	5124765	1	4	100	None	10:20	Iceland Gull	1	350	N
04-May-16	2	20	721337	5124765	1	4	100	None	10:20	Herring Gull	1	20	N
04-May-16	2	20	721337	5124765	1	4	100	None	10:20	Iceland Gull	1	20	N
11-May-16	1	20	721336	5124760	2	3	15	None	10:20	Common Loon	4	300	N

Date	Watch count #	UTM NAD83			Conditions				Survey start	Common name	Number observed	Distance (m)	Incidental
		Zone	Easting	Northing	Wind*	Temperature (ºC)	Cloud (%)	Precipitation					
11-May-16	1	20	721336	5124760	2	3	15	None	10:20	Solitary Sandpiper	1	50	N
11-May-16	2	20	721337	5124765	2	3	15	None	11:30	Herring Gull	8	400	N
11-May-16	2	20	721337	5124765	2	3	15	None	11:30	Double-crested Cormorant	6	350	N
11-May-16	2	20	721337	5124765	2	3	15	None	11:30	Gull sp.	2	350	N
18-May-16	1	20	721336	5124760	2	6	20	None	8:40	Belted Kingfisher	2	100	N
18-May-16	1	20	721336	5124760	2	6	20	None	8:40	Common Loon	1	250	N
18-May-16	1	20	721336	5124760	2	6	20	None	8:40	Common Raven	1	200	N
18-May-16	2	20	721337	5124765	2	6	20	None	12:30	Herring Gull	24	300	N
18-May-16	2	20	721337	5124765	2	6	20	None	12:30	Gull sp.	6	250	N
18-May-16	2	20	721337	5124765	2	6	20	None	12:30	Double-crested Cormorant	10	250	N