


APPENDIX A

NOVA SCOTIA REGISTRY OF JOINT STOCKS - GALLANT AGGREGATES LIMITED

Profile [Printer Version](#)[▶ Profile Info](#) [▶ People Info](#) [▶ Activites Info](#) [▶ Related Req's Info](#)**PROFILE** - GALLANT AGGREGATES LIMITED - as of: 2012-10-19 10:40 AM

Business/Organization Name:	GALLANT AGGREGATES LIMITED
Registry ID:	2501176
Type:	N.S. Limited Company
Nature of Business:	
Status:	Active
Jurisdiction:	Nova Scotia
Registered Office:	100 BEDROCK LANE ELMSDALE NS Canada B2S 2B1
Mailing Address:	PO BOX 10 ENFIELD NS Canada B2T 1C6
Previous Name:	2501176 NOVA SCOTIA LIMITED

PEOPLE

Name	Position	Civic Address	Mailing Address
FRED BENERE	Director	318 A. Stewart Road Shortts Lake NS B0N 2J0	
FLORENCE BENERE	SECRETARY	318 A. Stewart Road Shortts Lake NS B0N 2J0	
FRED BENERE	PRESIDENT	318 A. Stewart Road Shortts Lake NS B0N 2J0	
ALAN G. HAYMAN	Recognized Agent	1800 - 1801 HOLLIS STREET HALIFAX NS B3J 3N4	1800 - 1801 HOLLIS STREET HALIFAX NS B3J 3N4

ACTIVITIES

Activity	Date
Annual Statement Filed	2012-10-15
Annual Renewal	2012-10-15
Filed Document	2012-01-24
Annual Renewal	2011-10-26
Filed Document	2011-01-28
Annual Renewal	2010-10-01
Annual Statement Filed	2010-10-01
Filed Document	2010-01-28
Annual Renewal	2009-10-20
Annual Statement Filed	2009-10-20
Filed Document	2009-02-02
Annual Renewal	2008-10-29
Annual Statement Filed	2008-10-29
Filed Document	2008-02-20
Annual Renewal	2007-10-24
Annual Statement Filed	2007-10-24
Filed Document	2007-01-26
Annual Renewal	2006-10-03
Annual Statement Filed	2006-10-03
Annual Statement Filed	2006-10-03
Filed Document	2006-07-24
Special Resolution	2006-07-24
Filed Document	2006-07-24
Filed Document	2006-02-13
Annual Renewal	2005-09-28
Annual Statement Filed	2005-09-27
Special Resolution	2005-07-18
Annual Renewal	2004-10-07
Annual Statement Filed	2004-10-07
Special Resolution	2004-07-09

Change of Directors	2004-01-29
Filed Document	2004-01-29
Annual Renewal	2003-10-02
Annual Statement Filed	2003-10-02
Special Resolution	2003-06-16
Filed Document	2003-01-29
Special Resolution	2002-10-28
Special Resolution	2002-10-28
Filed Document	2002-10-28
Annual Statement Filed	2002-10-08
Annual Renewal	2002-10-03
Annual Renewal	2001-10-11
Annual Statement Filed	2001-10-11
Annual Renewal	2000-10-02
Annual Statement Filed	2000-10-02
Filed Document	2000-08-17
Annual Statement Filed	1999-10-18
Address Change	1999-10-18
Annual Renewal	1999-09-24
Annual Renewal	1998-09-14
Special Resolution	1998-08-04
Annual Statement Filed	1997-11-04
Annual Renewal	1997-10-10
Special Resolution	1997-01-29
Filed Document	1997-01-29
Annual Renewal	1996-10-18
Annual Statement Filed	1996-10-18
Special Resolution	1996-10-10
Special Resolution	1996-10-10
Special Resolution	1996-02-05
Registered Office Change	1996-01-25
Name Change	1996-01-10

	1995-10-23
Registered	1995-10-23
Agent Filed	1995-10-23
Incorporated	1995-10-23

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RELATED REGISTRATIONS

There are no related registrations on file for this company.

APPENDIX B

EXISTING INDUSTRIAL APPROVAL

COPY

APPROVAL

Province of Nova Scotia
Environment Act, S.N.S. 1994-95, c.1

APPROVAL HOLDER: Gallant Aggregates Limited

APPROVAL NO: 2004-042655

EFFECTIVE DATE: November 19, 2004

EXPIRY DATE: November 19, 2014

Pursuant to Part V of the *Environment Act*, S.N.S. 1994-95, c.1 as amended from time to time, approval is granted to the Approval Holder subject to the Terms and Conditions attached to and forming part of this Approval, for the following activity:

Construction, operation and reclamation of a Sand Pit, and associated works, at or near Cooks Brook, Halifax Regional Municipality in the Province of Nova Scotia.

Administrator
Date Signed

Don Feldman
November 29, 2004

TERMS AND CONDITIONS OF APPROVAL

Nova Scotia Department of Environment and Labour

Project: Gallant Aggregates Limited
Sand Pit
Cooks Brook, Halifax Regional Municipality

Approval No: 2004-042655

File No: 92100-30-/BED-042655

Map Series: 11E/3

Grid Reference: E475000 N4985000

PID # : 00552927

Reference Documents:

- Application dated August 31, 2004 and attachments.
- Plan of Survey, Plan No. 6457, Showing Lot 04-1, Lands of Gallant Aggregates Ltd., Application for Environmental Permit for Pit Operation, October 22, 2004.
- Letter of October 26, 2004 from Gallant Aggregates Ltd. to NSEL.

1. Definitions

- a) "Abandonment" means cessation of production of aggregate for a period of twelve (12) months.
- b) "Act" means the *Environment Act* S.N.S. 1994-1995, c.1 and includes all regulations made pursuant to the Act.
- c) "Active Area" means the area required to operate a pit and includes the working face and associated works.
- d) "Associated works" means any building, structure, processing facility, pollution abatement system or stockpiles of aggregate.

- e) "Department" means the Central Region, Bedford Office, of the Nova Scotia Department of Environment and Labour located at the following address:

Nova Scotia Department of Environment and Labour
Environmental Monitoring and Compliance Division
Central Region, Bedford Office,
Suite 224, 1595 Bedford Highway,
Bedford, Nova Scotia, B4A 3Y4.

Phone: (902) 424-7773

Fax: (902) 424-0597

- f) "Disturbed Area" means any area on a pit site that has been stripped of vegetation and is susceptible to erosion.
- g) "Facility" means the Sand Pit and associated works.
- h) "Minister" means the Minister of the Nova Scotia Department of Environment and Labour.
- i) "Rehabilitation" means restorative work performed or to be performed in accordance with the rehabilitation plan.
- j) "Structure" includes but is not limited to a private home, a cottage, an apartment building, a school, a church, a commercial building or a treatment facility associated with the treatment of municipal sewage, industrial or landfill effluent, an industrial building, infrastructure or construction, a hospital, and a nursing home, etc.

2. **Scope of Approval**

- a) This Approval (the "Approval") relates to the Approval Holder and their application and supporting documentation, as listed in the reference documents above, to construct and operate the Facility, situated at or near Cooks Brook, Halifax Regional Municipality (the "Site").
- b) The Facility shall be constructed and operated as outlined in the application for industrial approval dated August 31, 2004 and supporting documentation.
- c) The Site shall not exceed the area as outlined in the application and supporting documentation.

- d) Should the work authorized by this Approval not be commenced within a year, this Approval shall automatically be null and void, unless extended in writing by an Administrator.

3. General Terms and Conditions

- a) The Approval Holder shall construct, operate and reclaim its Facility in accordance with provisions of the:
 - i) *Environment Act* S.N.S. 1994-1995, c.1;
 - ii) Regulations pursuant to the above Act;
 - iii) Any future amendments to the Act and regulations
- b) No authority is granted by this Approval to enable the Approval Holder to construct the Facility on lands which are not in the control or ownership of the Approval Holder. It is the responsibility of the Approval Holder to ensure that such a contravention does not occur. The Approval Holder shall provide, to the Department, proof of such control or ownership upon expiry of any relevant lease or agreement. Failure to retain said authorization will result in this Approval being null and void.
- c) If there is a discrepancy between the reference documents and the terms and conditions of this Approval, the terms and conditions of this Approval shall apply.
- d) The Minister or Administrator may modify, amend or add conditions to this Approval at anytime pursuant to Section 58 of the Act.
- e) This Approval is not transferable without the consent of the Minister or Administrator.
- f) (i) If the Minister or Administrator determines that there has been non-compliance with any or all of the terms and conditions contained in this Approval, the Minister or Administrator may cancel or suspend the Approval pursuant to subsections 58(2)(b) and 58(4) of the Act, until such time as the Minister or Administrator is satisfied that all terms and conditions have been met.
 - (ii) Despite a cancellation or suspension of this Approval, the Approval Holder remains subject to the penalty provisions of the Act and regulations.

- g) The Approval Holder shall notify the Department prior to any proposed extensions or modifications of the Facility, including the active area, process changes or waste disposal practices which are not granted under this Approval. An amendment to this Approval will be required before implementing any change. Extensions or modifications to the Facility may be subject to the Environmental Assessment Regulations.
- h) Pursuant to Section 60 of the Act, the Approval Holder shall submit to the Administrator any new and relevant information respecting any adverse effect that actually results, or may potentially result, from any activity to which the Approval relates and that comes to the attention of the Approval Holder after the issuance of the Approval.
- i) The Approval Holder shall immediately notify the Department of any incidents of non-compliance with this Approval.
- j) The Approval Holder shall bear all expenses incurred in carrying out the environmental monitoring required under the terms and conditions of this Approval.
- k) Unless specified otherwise in this Approval, all samples required to be collected by this Approval shall be collected, preserved and analysed, by qualified personnel, in accordance with recognized industry standards and procedures.
- l) All samples required by this Approval shall be analysed by a laboratory that is:
 - i) Accredited by the Standards Council of Canada; or
 - ii) Accredited by another agency recognized by the Nova Scotia Department of Environment and Labour to be equivalent to the Standards Council of Canada; or
 - iii) Maintaining an acceptable standard in a proficiency testing program conducted by the Canadian Association for Environmental Analytical Laboratories for all parameters being reported; or
 - iv) Maintaining an acceptable standard in a proficiency or performance testing in another program considered acceptable to the Nova Scotia Department of Environment and Labour for all parameters being reported
- m) The Approval Holder shall submit any monitoring results or reports required by this Approval to the Department. Unless specified otherwise in this Approval, All monitoring results shall be submitted within 30 days following the month of monitoring.

- n) The Approval Holder shall ensure that this Approval, or a copy, is kept on Site at all times and that personnel directly involved in the Facility operation are made fully aware of the terms and conditions which pertain to this Approval.
- o) The Approval Holder will be required to register their project under Part IV of the *Environment Act* should the Facility and associated works including access roads exceed an area of four (4) hectares.

4. Construction of Facility

- a) All erosion and sedimentation controls are to be in place prior to construction at this Facility. The Nova Scotia Department of the Environment "Erosion and Sedimentation Control Handbook For Construction Sites" shall serve as the reference document for all erosion control measures. These measures are minimum requirements and additional controls shall be implemented if Site runoff exceeds the discharge limits contained herein.
- b) All erosion and sedimentation controls are to be maintained and remain in place until the disturbed areas are stabilized.
- c) All water leaving the Site during the construction phase shall be in compliance with total suspended solids limits of 50 mg/l grab or 25 mg/l monthly arithmetic mean.
- d) Appropriate signage including the hours of operation, emergency telephone numbers and contacts are to be posted at the entrance to the Facility.
- e) The generation of dust from the Site shall be suppressed by the application of water sprays, or the application of other suitable approved dust suppressants as required.

5. Particulate Emissions (Dust)

- a) Particulate emissions shall not exceed the following limits at or beyond the Site property boundaries:

Annual Geometric Mean	70 $\mu\text{g}/\text{m}^3$
Daily Average (24 hr.)	120 $\mu\text{g}/\text{m}^3$
- b) The generation of fugitive dust from the Site will be suppressed by the application of water sprays, or the application of other suitable dust suppressants approved by the Department.

- c) Site access road(s) shall be maintained to minimize dust generation. The use of used oil is not permitted.
- d) Monitoring of particulate emissions shall be conducted at the request of the Department. The location of the monitoring station(s) for particulate will be established by the Administrator and may include point(s) beyond the property boundary of the pit.
- e) When requested, suspended particulate matter shall be measured by the high volume method as described in report No. E.P.S. 1-AP-73-2.

6. Sound Levels

- a) Sound levels measured at the Site property boundaries shall not exceed the following equivalent sound levels (Leq):
 - Leq 65 dBA 0700-1900 hours (Days)
 - 60 dBA 1900-2300 hours (Evenings)
 - 55 dBA 2300-0700 hours (Nights)
- b) Monitoring of sound levels shall be conducted at the request of the Department. The location of the monitoring station(s) for sound will be established by the Administrator and may include point(s) beyond the property boundary of the pit.

7. Surface Water

- a) The Site shall be developed and maintained to prevent siltation of the surface water which is discharged from the property boundaries into the nearest watercourse or beyond the property boundary. The Nova Scotia Department of the Environment "Erosion and Sedimentation Control Handbook For Construction Sites" shall serve as the reference document for all erosion control measures. These measures are minimum requirements and additional controls shall be implemented if Site runoff exceeds the discharge limits contained herein.
- b) No authority is granted by this Approval to enable the Approval Holder to discharge surface water beyond the property boundary and onto adjoining lands without the authorization of the affected landowner(s). It is the responsibility of the Approval Holder to ensure that the authorization of said landowner(s) is current and valid. Failure to maintain said authorization will result in this Approval being null and void. The Approval Holder shall provide, to the Department, proof of the continued authorization of the adjoining landowner(s) when the current agreement has expired.

- c) All erosion and sedimentation control devices shall be installed prior to any excavation of material.
- d) The Approval Holder shall ensure the liquid effluent levels in Table 1 are met and that the effluent is monitoring at the frequency and locations indicated.

Table 1				
Final Effluent Discharge Limits				
Parameters	Maximum in a Grab Sample	Monthly Arithmetic Mean	Monitoring Frequency	Monitoring Station
Total Suspended Solids	50 mg/l	25 mg/l	Monthly/After Rain Event	Discharge from Property
pH	5 - 9	6 - 9	Monthly/After Rain Event	Discharge from Property

- e) If it becomes necessary to drain the Site, the wastewater shall be drained to settling ponds for appropriate treatment to meet the suspended solids limits outlined in Table 1.
- f) All wash water systems shall be arranged in closed circuit.
- g) Additional monitoring stations for liquid effluent may be specified as required by the Department.
- h) A monthly summary of results of monitoring shall be submitted to the Department.

8. Groundwater

- a) The Approval Holder shall replace at their expense any water supply which has been lost or damaged as a result of extracting aggregate.
- b) The Approval Holder shall secure from the Administrator an approval amendment prior to excavating below the watertable.

9. Separation Distances

- a) The Approval Holder shall not locate the Active Area of the pit within:
 - i) 30 m of the boundary of a public or common highway.
 - ii) 30 m from the bank or ordinary high water mark of any watercourse/wetland.
- b) The Approval Holder shall not locate the excavation "Working Face" of the pit within:
 - i) 30 m of the boundary of a public or common highway.
 - ii) 30 m of the bank of any watercourse/wetland or ordinary high water mark.
 - iii) 90 m of the foundation or base of a structure located off site.
 - iv) 15 m of the property boundary when a structure on the abutting property is not involved.

10. Blasting

- a) The Approval Holder shall secure an approval amendment from the Administrator prior to any blasting on this Site.

11. Rehabilitation

- a) The Approval Holder shall post an interim security in a form acceptable to the Department in the amount of \$2,500.00 an acre of disturbed area.
- b) The interim security shall not exceed one (1) year unless otherwise agreed in writing by the Administrator.
- c) The Approval Holder shall submit a rehabilitation plan to the Department for review by January 31, 2005. The rehabilitation plan shall be revised and updated every three year thereafter and submitted for review. The rehabilitation plan shall include the estimated total cost for labour, equipment, supplies and services of a third party contractor to undertake the following activities:
 - i) surface contouring
 - ii) establishing proper drainage
 - iii) revegetation work

- iv) any work necessary to reclaim the pit
- d) Before the expiry of the interim security, the Approval Holder shall post a final security which shall be calculated using the rehabilitation plan and factors in item c) above. The value of the final security shall be revised every three years in accordance with the revised rehabilitation plan.
- e) The Approval Holder shall rehabilitate the Site within twelve (12) months of abandonment and in accordance with the latest rehabilitation plan submitted by the Approval Holder in 11 (c) or other terms as specified by the Department.
- f) The Nova Scotia Department of Environment and Labour shall release the security to the Approval Holder after final rehabilitation of the Site has been completed to the satisfaction of the Minister or Administrator. The Approval Holder shall notify the Department when rehabilitation has been completed.
- g) The Approval Holder shall ensure that any security posted for rehabilitation be kept valid for the term of the Approval.

12. Site Specific Conditions

- a) The boundaries of the Site will be cut out and kept reasonably clear of new growth and the corner boundaries shall be clearly marked with permanent markers no less than four feet high.
- b) All stockpiles of sand, overburden and topsoil shall be relocated within the 15 metre buffer zone surrounding the pit and the zone reclaimed in accordance with an approved rehabilitation plan as specified in Condition 11(c).
- c) The Approval Holder shall submit a plan for the location and design of settling pond(s) within the boundaries of the proposed pit. The plan shall be submitted for approval by January 31, 2004. The Approval Holder shall insure that all necessary authorizations to discharge effluent onto adjoining properties are in place as specified by Condition 7(b).

APPENDIX C

PUBLIC CONSULTATION INFORMATION

PUBLIC OPEN HOUSE

GALLANT AGGREGATES LIMITED is in the process of conducting a provincially regulated Environmental Assessment for an extension to its *Sand & Gravel Operation* at Highway 224, Cooks Brook.

As a part of the assessment process, Gallant Aggregates is conducting a public consultation session to discuss the project and gather public input.

You are cordially invited to attend an open meeting on

Thursday October 11, 2012 – 4 pm to 8 pm

at the

Cooks Brook Fire Hall

Gallant Aggregates Limited

PO Box 70 Enfield NS B2S 2B1

Contact: Jeff Sullivan (902) 883-3020

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**PUBLIC INFORMATION SESSION
GALLANT AGGREGATES LTD
Sand & Gravel Pit Extension
Cooks Brook**

This pamphlet provides an overview of the information provided at this information session. Please feel free to ask questions or make comments.

The purpose of this session is to provide input to the environmental assessment document that is being prepared for the Nova Scotia Environmental Assessment process.

Additional information on the Environmental Assessment process in Nova Scotia can be found at: www.gov.ns.ca/nse/ea/pubs.asp

The currently permitted sand & gravel pit at Cooks Brook is being proposed to be extended to the east onto Lands owned by Gallant Aggregates.

- The project will have 6-7 year lifespan.
- Annual production: 75,000 tonnes
- Extended footprint: 5.7 ha (14.1 acres)
- Mobile plant facility – closed loop wash plant
- “Free Dig” material - No blasting required

WHO IS GALLANT AGGREGATES?

Gallant Aggregates Limited is a local family owned and managed company headquartered in Elmsdale, Nova Scotia. Gallant Aggregates produces a variety of construction aggregates including, but not limited to, asphalt aggregate, concrete aggregate, septic sand and other quarried stone and natural sand products. Gallant Aggregates’ products supply local construction markets throughout East Hants, Halifax Regional Municipality and South Colchester County. Gallant Aggregates supports a number of community sponsored organizations.



THE PROJECT OVERVIEW

Gallant Aggregates Limited is currently permitting an extension of its Cooks Brook Sand and Gravel Pit. The extraction area is in a highly desirable sand and gravel resource that extends for several km from the site. There are no competing land use values to impede permitting. Permits for the extension are expected in Spring 2013.

Information specific to the project is discussed on this panel; for example, the amount of aggregate that is available and will be extracted per year; pit timelines; disturbed footprint and other components of the project.

PROCESSING

Site activities associated with construction, operation, and decommissioning of the sand and gravel pit, are as follows:

- site preparation;
- resource excavation;
- crushing and/or screening, washing and stockpiling;
- transportation/trucking;
- reclamation and closure.

Processing of sand products at the Cooks Brook Pit will consist of

- overburden removal and stockpiling
- excavation of the resource
- material fed into a wet-deck screener to wash, separate and sort the coarser gravel products from the finer sands.
- finer sand product will then be processed through a classifier which will further separate it into various finished products such as septic and concrete sands.
- the products will then be stockpiled on site for shipping to markets via trucking.

ENVIRONMENTAL BASELINE STUDIES

Many studies are required to assess the projects effect on the environment and the environments effect on the project. This panel provides information on the type and timing of studies conducted, including

- Rare Plant Surveys
- Migratory Bird Surveys
- Wetland Survey
- Archaeological Studies

The Pit has been permitted and in operation since 2004.

RECLAMATION

Reclamation is the final phase of the project to return the area to a condition that is consistent with the natural surroundings and community use. Two types of reclamation could be done – progressive (during operations on stable areas) and final reclamation (after the cessation of extraction activity).



If you wish to receive more information on or have other questions about the project, please contact:

Gallant Aggregates Limited

PO Box 70 Enfield NS B2S 2B1

Jeff Sullivan (902) 883-3020

Thank you for attending.

NOTES

NOTES

NOTES

GALLANT AGGREGATES LIMITED

Cooks Brook Sand & Gravel Pit Extension Project

WHO IS...?

Gallant Aggregates

- a Nova Scotia, locally family-owned and managed company.
- headquartered in Elmsdale, Nova Scotia.
- operations are located in Elmsdale, Coldstream, and Cooks Brook.
- produces a variety of construction aggregates including, but not limited to:
 - asphalt aggregate
 - concrete aggregate
 - septic sand
 - other quarried stone
 - natural sand products.
- Gallant's products supply local construction markets throughout East Hants, Halifax Regional Municipality and South Colchester County, and other parts of the province where resource material is available.
- Gallant Aggregates supports a number of community sponsored organizations.



GALLANT AGGREGATES LIMITED

Cooks Brook Sand & Gravel Pit Extension Project

THE PROJECT

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PROJECT OVERVIEW

- Operation of existing pit approved by NS Environment.
- Sand and Gravel production on site since 2004.
- Reserves: 500,000 tonnes of sand and gravel.
- Annual production: 75,000 tonnes (market driven).
- Life span of proposed extension: 7 years + (typically a seasonal production).
- Plant in operation only a few months per year or as market demand requires.
- Footprint: Existing - 3.8 ha (9.4 acres); Proposed Extension - 5.7 ha (14.1 acres); Total 9.5 ha (23.5 acres).
- Mobile plant facilities - closed loop wash plant.
- Material is “free dig” - no blasting required.



GALLANT AGGREGATES LIMITED

Cooks Brook Sand & Gravel Pit Extension Project

PROCESSING

Site activities associated with construction, operation, and decommissioning of the sand and gravel pit, are as follows:

- site preparation;
- resource excavation;
- crushing and/or screening, washing and stockpiling;
- transportation/trucking;
- reclamation and closure.

Processing of sand products at the Cooks Brook Pit will consist of

- overburden removal and stockpiling
 - excavation of the resource
 - material fed into a wet-deck screener to wash, separate and sort the coarser gravel products from the finer sands.
 - finer sand product will then be processed through a classifier which will further separate it into various finished products such as septic and concrete sands.
 - the products will then be stockpiled on site for shipping to markets via trucking.
-
- No blasting required.
 - Wash plant is closed loop (little or no wash water lost to the environment). Make-up water taken from on-site settling ponds.



GALLANT AGGREGATES LIMITED

Cooks Brook Sand & Gravel Pit Extension Project

ENVIRONMENT

The project area has been the subject of forest harvesting and previous resource extraction activity.

Rare Plant Surveys

- Survey conducted in Spring and Summer 2012
- One Yellow-listed species: *carex houghtoniana* (sedge) was identified on the project site. Mitigation has been recommended and approved.

Migratory Bird Surveys

- Breeding bird and Owl surveys were conducted in Spring 2012.
- No at risk species were identified on the project site.

Wetland Survey

- Wetland surveys were conducted in 2012.
- No wetlands were identified on the project site.

Archaeological & Cultural Heritage Studies

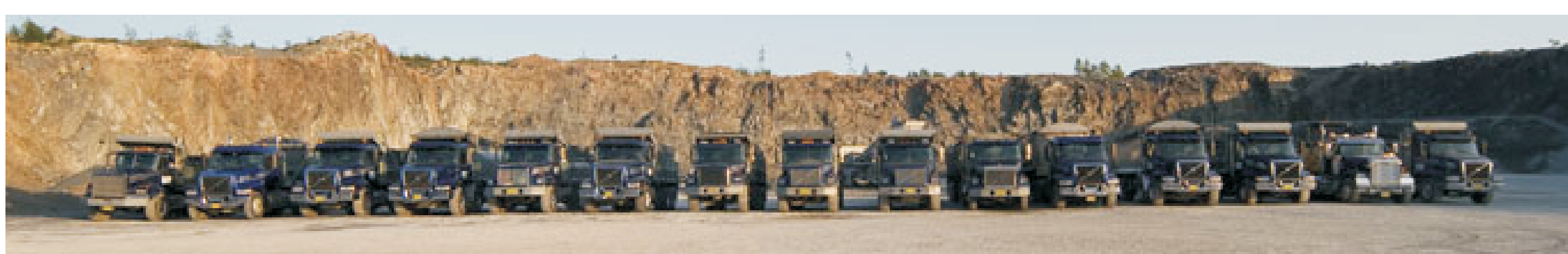
- Site screening was conducted and shovel-testing of high potential areas undertaken in 2012. It was recommended to and accepted by the Heritage Division, that the area be cleared of any future archaeological investigation.

Current Approvals:

- Industrial Approval Permit to Operate will require an amendment.

RECLAMATION

- creation of a gentle side hill and field.
- site shaped to blend into the natural rolling topography surrounding the site.
- slopes graded to a minimum 1:1 (45 degrees) slope along the main hill and then transition to a 3:1 slope or flatter to create a field as the property approaches the lake and wetland to the south.
- topsoil from saved during the pit development will be placed on the slopes and vegetated.
- drainage channels and shallow ponds will be left in place to allow drainage of the property.





LEGEND

Pit

- Extension Pit
- Permitted Pit
- Property
- Lakes
- Wetlands (topo)
- Streams
- Streams (Intermittent)

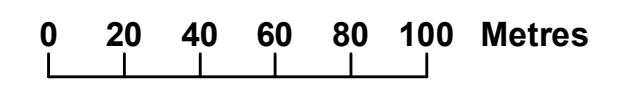
Roads

- Local Paved
- Local Unpaved
- Driveway
- Track / Trail

GALLANT AGGREGATES LTD
COOKS BROOK, NS
 SAND & GRAVEL PIT EXTENSION

FIGURE 1
SITE PLAN

OPEN HOUSE
OCTOBER 11, 2012



PUBLIC OPEN HOUSE SIGN-IN
Gallant Aggregates Limited
Cooks Brook Sand & Gravel Pit Extension Project
Cooks Brook, Nova Scotia

Name	Address	Telephone No.	Email
Brant V. Hull Ivan Hull	27 Hill Rd. Chasewood "		
Jim DeBeaver	154 Coldstream Rd.		
ORANTA LEONARD	1537 LAKE EGMONT RD	758-1363	
Eric Macdonald	15387 Hwy 224 Cooks Brook	758-2499	
Dawn Godin	23 Corbett Rd. Cooks Brook		
MARY DEXTER	15614 HWY 224 COOKS RIVER	758-2886	
Tracy Ashley	15087 Hwy 224 Cooks Brook	758-3241	
Shanta McMichael	15079 Hwy 224 Cooks Brook	758-3669	
10 Jim McMichael	" " " "	758-3669	
Kaitlan Reiter	15614 Hwy 224 Camp River	758-2886	



P.O. Box 10
Enfield, Nova Scotia
B2T 1C6
Office: (902) 883-3020
Scalehouse: (902) 883-9259
Fax: (902) 883-8881
www.basin-gallant.com

October 19, 2012

Chief Jerry Sack
Indian Brook First Nation
522 Church Street, General Delivery
Micmac Post Office, Hants Co.
Indian Brook, Nova Scotia
B0N 1W0

Dear Chief Sack;

We wish to inform you of our intent to file an Environmental Assessment Registration Document to extend an existing sand and gravel operation in Cooks Brook, Nova Scotia. The site has been in operation by Gallant Aggregates Limited since 2004. The current pit is 3.8 ha and the extension is 5.7 ha for a total footprint of 9.5 ha. The expected life of the pit is approximately 7 years yielding an average of 75,000 tonnes of total sand and gravel products per year. I have enclosed a site plan of the project area.

The extraction area is in a highly desirable sand and gravel resource that extends for several km from the site. There are no competing land use values to impede operating approvals. Operating approvals for the extension are expected to be finalized in Spring 2013.

Gallant Aggregates Limited is a local, family owned and managed company headquartered in Elmsdale, Nova Scotia. Gallant Aggregates produces a variety of construction aggregates including, but not limited to, asphalt aggregate, concrete aggregate, septic sand and other quarried stone and natural sand products. Gallant Aggregates' products supply local construction markets throughout East Hants, Halifax Regional Municipality and South Colchester County.

Site activities associated with construction, operation, and decommissioning of the sand and gravel pit, will consist of site preparation; resource excavation; crushing and/or screening, washing and stockpiling; transportation/trucking; and, reclamation and closure.

The material at the Cooks Brook Pit will be fed into a wet-deck screener to wash, separate and sort the coarser gravel products from the finer sands. The finer sand product will then be processed through a classifier which will further separate it into various finished products such as septic and concrete sands. The products will then be stockpiled on site for shipping to markets via trucking.

As part of our project we have conducted several environmental baseline studies on the extension property that will be reported in our environmental assessment document. These studies consisted of a Rare Plant; Migratory and Breeding Bird; Wetland and Archaeological Surveys.

The Rare Plant Survey was conducted on two occasions in May and July 2012. A yellow-listed species, Houghton's sedge (*Carex houghtoniana*), was identified. The plant is not formally protected but is considered a priority listed species. The seeds were collected and put on deposit at the Acadia Herbarium for future use and test plotting if a suitable area is identified.

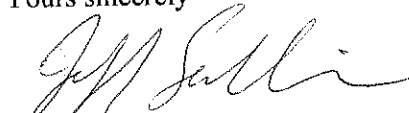
The Migratory and Breeding Bird Surveys did not identify any species on the site, but several transient species were noted flying past the site or accessing a nearby lake.

No streams or wetlands were identified on the project site. A large wetland complex bordering Cooks Brook is located southeast of the site and a minimum of 30 m buffer will be maintained along the project length. The survey redefined the edge of wetland and the project boundary was adjusted accordingly.

Preliminary archaeological investigations identified four High Priority areas. These areas were further investigated through a shovel-test program. No artifacts were found and the site has been recommended to be cleared of any further archaeological investigation.

Gallant Aggregates would be pleased to discuss the project with you further, and to accept any input that you may have . We look forward to your response.

Yours sincerely



Jeff Sullivan

APPENDIX D

ACCDC and NS MUSEUM SCREENING REPORTS



DATA REPORT 4748: Cooks Brook, NS

Prepared 16 March, 2012
by S.H. Gerriets



CONTENTS OF REPORT

1.0 Preface

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1.0 PREFACE

The Atlantic Canada Conservation Data Centre (ACCDC) is part of a network of circa 85 NatureServe data centres and heritage programs in 50 states, 10 provinces and 1 territory, 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, Newfoundland and Labrador. Although a non-governmental agency, the ACCDC is supported by 6 federal agencies, plus 4 provincial governments, outside grants and data processing fees. URL: www.ACCDC.com.

Upon request and for a fee, the ACCDC reports known observations of rare and endangered flora and fauna, in and near a specified study area. As a supplement to that data, the ACCDC includes locations of managed areas with some level of protection, and also known sites of ecological interest. Data summarised in each report is attached as DBF files which may be opened from within data software (Excel, Access) or mapped in GIS (ArcView, MapInfo, AutoCAD).

1.1 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 receiving ACCDC data, recipients assent to the following limits of use:

- a.) Data is restricted to use by trained personnel who are sensitive to its potential threat to rare and endangered taxa.
- 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.
- d.) ACCDC data responses are restricted to that data in our Data System at the time of the data request.
- e.) Data is qualified as to location (Precision) and time (SurveyDate); cf Data Dictionary for details.
- f.) ACCDC data reports are not to be construed as exhaustive inventories of taxa in an area.
- g.) The non-occurrence of a taxon cannot be inferred by its absence in an ACCDC data report.

1.2 ADDITIONAL INFORMATION

Please direct biological questions about ACCDC data to: Sean Blaney, ACCDC: (506) 364-2658, and technical data queries to: Stefen Gerriets, ACCDC: (506) 364-2657.

For provincial information on rare taxa and protected areas, or information on game animals, deer yards, old growth forest, archeological sites, fish habitat etc, please contact Sherman Boates, NSDNR: (902) 679-6146.

2.0 RARE AND ENDANGERED TAXA

A 100km buffer around the study area contains 7193 records of 477 taxa from 95 sources, a relatively moderate density of records (quintile 3): 0.23 rec/km².

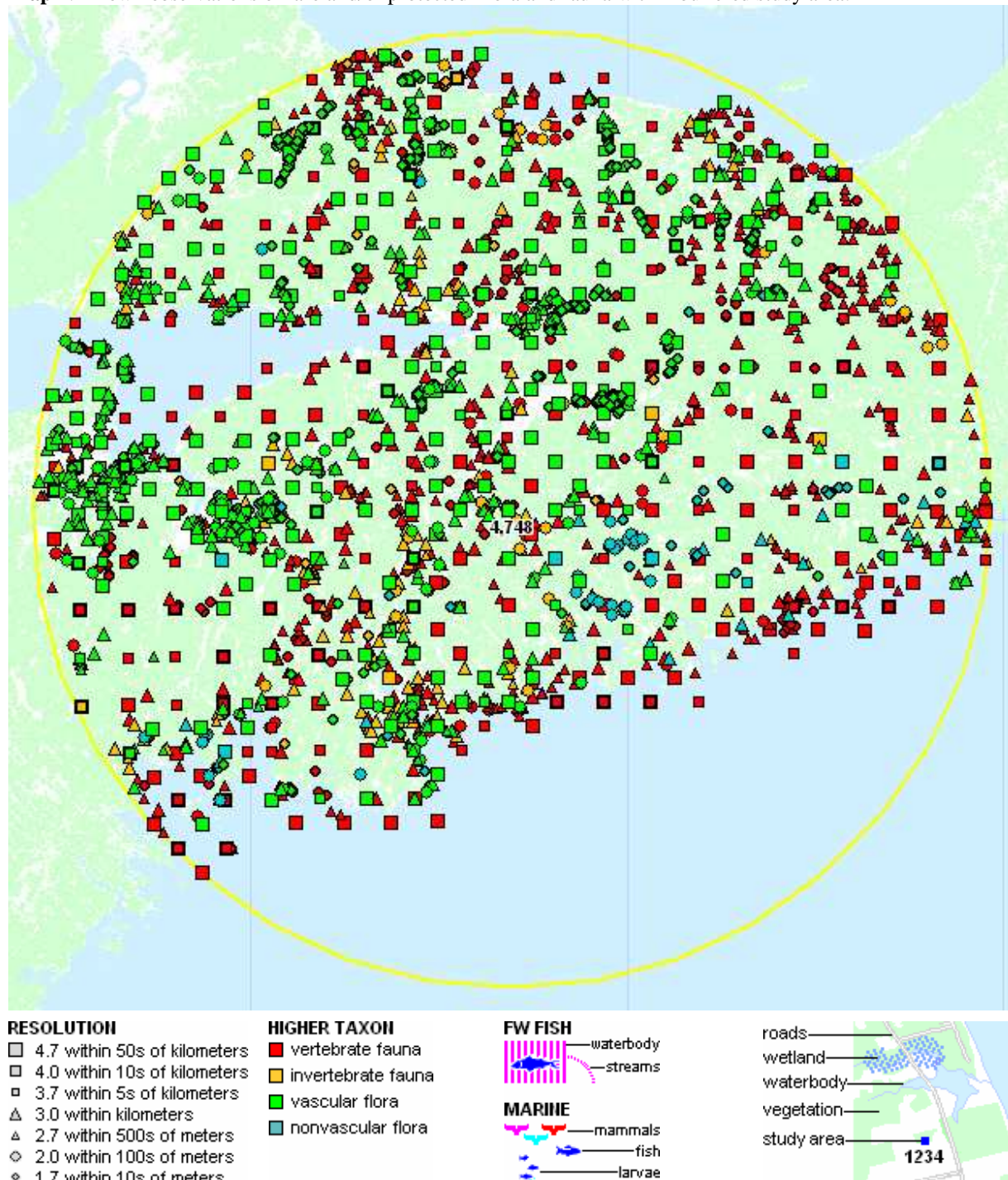
2.1 FLORA

A 100km buffer around the study area contains 1513 records of 276 vascular, 123 records of 25 nonvascular flora (see attached *ob.dbf).

2.2 FAUNA

A 100km buffer around the study area contains 5166 records of 112 vertebrate, 391 records of 64 invertebrate fauna (cf attached *ob.dbf). Sensitive data: Wood Turtles are PRESENT in the study area (cf attached WOTU.rtf).

Map 1: Known observations of rare and/or protected flora and fauna within buffered study area.



3.0 SPECIAL AREAS

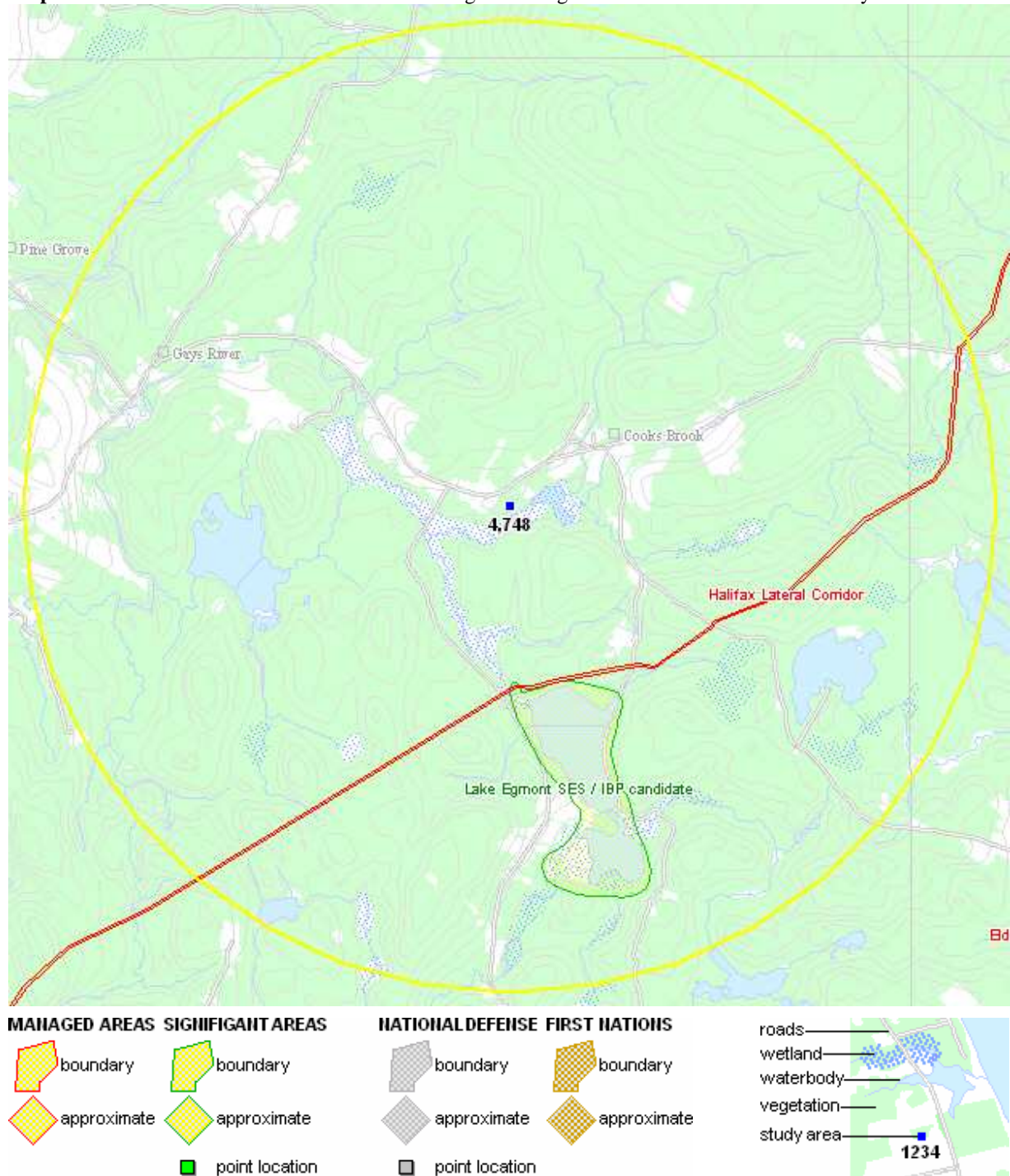
3.1 MANAGED AREAS

The GIS scan identified 1 Managed Area with some degree of protected status, in the vicinity of the study area (see attached *ma.dbf).

3.2 SIGNIFICANT AREAS

The GIS scan also identified 1 biologically significant site in the vicinity of the study area; such sites are known for exceptional biotic richness but may or may not have legal status (see attached *sa.dbf).

Map 2: Boundaries and/or locations of known Managed and Significant Areas within 5km of study area.



4.0 TAXON LISTS

Rare and/or endangered taxa within the 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	prov. rarity	prov. status	COSEWIC	obs	dist.km
n Erioderma pedicellatum (Atlantic pop.)	Boreal Felt Lichen - Atlantic pop.	S1S2	Endangered	E	44	14 ±10
n Erioderma mollissimum	Vole Ears	S1S2		E	5	20 ±0.1
p Juglans cinerea	Butternut	SNA		E	1	49 ±0
p Bartonia paniculata ssp. paniculata	Branched Bartonia	SNA		T	1	51 ±10
p Liatris spicata	Dense Blazing Star			T	1	48 ±0.1
p Clethra alnifolia	Sweet Pepperbush	S1	Vulnerable	SC	1	49 ±0.1
p Isoetes prototypus	Prototype Quillwort	S2	Vulnerable	SC	3	63 ±0.1
p Lilaepsis chinensis	Eastern Lilaepsis	S2	Vulnerable	SC	1	92 ±0
n Degelia plumbea	Blue Felt Lichen	S2		SC	15	23 ±0
p Floerkea proserpinacoides	False Mermaidweed	S2		NAR	2	47 ±10
n Pseudevernia cladonia	Ghost Antler Lichen	S2S3		NAR	7	25 ±0
p Cypripedium arietinum	Ram's-Head Lady's-Slipper	S1	Endangered		12	55 ±0.5
p Helianthemum canadense	Rockrose	S1	Endangered		1	56 ±1
p Thuja occidentalis	Eastern White Cedar	S1S2	Vulnerable		13	35 ±1
n Solorina saccata	Common Chocolate-chip Lichen	S1			1	61 ±0.1
n Aloina rigida	Aloe-Like Rigid Screw Moss	S1			2	62 ±10
p Selaginella rupestris	Rock Spikemoss	S1			1	58 ±0
p Botrychium lunaria	Common Moonwort	S1			1	41 ±5
p Equisetum palustre	Marsh Horsetail	S1			1	96 ±5
p Cryptogramma stelleri	Steller's Rockbrake	S1			3	44 ±0
p Adiantum pedatum	Northern Maidenhair Fern	S1			7	40 ±1
p Puccinellia fasciculata	Saltmarsh Alkali Grass	S1			3	80 ±1
p Festuca subverticillata	Nodding Fescue	S1			8	33 ±1
p Elymus hystrix var. bigeloviana	Spreading Wild Rye	S1			5	10 ±10
p Elymus hystrix	Spreading Wild Rye	S1			1	54 ±0.1
p Elymus wiegandii	Wiegand's Wild Rye	S1			12	30 ±0
p Cinna arundinacea	Sweet Wood Reed Grass	S1			3	27 ±0
p Bromus latiglumis	Broad-Glumed Brome	S1			6	26 ±0
p Spiranthes casei var. casei	Case's Ladies'-Tresses	S1			1	89 ±0.1
p Malaxis brachypoda	White Adder's-Mouth	S1			4	71 ±10
p Trillium grandiflorum	White Trillium	S1			1	98 ±1
p Allium tricoccum	Wild Leek	S1			6	53 ±10
p Juncus vaseyi	Vasey's Rush	S1			2	45 ±0
p Scirpus pedicellatus	Stalked Bulrush	S1			2	9 ±1
p Cyperus lupulinus ssp. macilentus	Hop Flatsedge	S1			1	85 ±10
p Carex wiegandii	Wiegand's Sedge	S1			1	29 ±0
p Carex tuckermanii	Tuckerman's Sedge	S1			6	51 ±0
p Carex prairea	Prairie Sedge	S1			1	98 ±1
p Carex plantaginea	Plantain-Leaved Sedge	S1			3	41 ±0.1
p Carex livida var. radicaulis	Livid Sedge	S1			1	66 ±10
p Carex laxiflora var. laxiflora	Loose-Flowered Sedge	S1			1	87 ±1
p Carex pellita	Woolly Sedge	S1			5	37 ±10
p Carex haydenii	Hayden's Sedge	S1			2	40 ±1
p Carex garberi	Garber's Sedge	S1			3	44 ±0
p Viola canadensis	Canada Violet	S1			2	47 ±10
p Pilea pumila	Dwarf Clearweed	S1			3	28 ±0
p Dirca palustris	Eastern Leatherwood	S1			12	11 ±10
p Galium aparine	Catchweed Bedstraw	S1			3	37 ±0
p Amelanchier nantucketensis	Nantucket Serviceberry	S1			1	90 ±1
p Ranunculus pensylvanicus	Pennsylvania Buttercup	S1			3	75 ±0
p Montia fontana	Water Blinks	S1			1	49 ±1
p Polygala polygama	Racemed Milkwort	S1			1	47 ±1
p Fraxinus pennsylvanica	Red Ash	S1			3	44 ±0.5
p Ribes americanum	Wild Black Currant	S1			3	30 ±1
p Desmodium glutinosum	Large Tick-Trefoil	S1			8	51 ±0
p Desmodium canadense	Canada Tick-trefoil	S1			8	40 ±5
p Cuscuta pentagona	Five-angled Dodder	S1			1	84 ±1
p Cuscuta cephalanthi	Buttonbush Dodder	S1			2	71 ±0.1
p Hypericum majus	Large St John's-wort	S1			4	39 ±10
p Hudsonia tomentosa	Woolly Beach-heath	S1			1	98 ±10
p Lobelia spicata	Pale-Spiked Lobelia	S1			7	47 ±10
p Draba glabella	Rock Whitlow-Grass	S1			2	86 ±0.1
p Cochlearia tridactylites	Limestone Scurvy-grass	S1			4	90 ±10
p Cardamine maxima	Large Toothwort	S1			1	96 ±0
p Cardamine pratensis	Cuckoo Flower	S1			4	42 ±0.1
p Cynoglossum virginianum var. boreale	Wild Comfrey	S1			2	59 ±1
p Bidens hyperborea	Estuary Beggarticks	S1			1	92 ±0
p Antennaria parlinii	Parlin's Pussytoes	S1			8	30 ±10
p Zizia aurea	Golden Alexanders	S1			7	31 ±1
p Sanicula odorata	Clustered Sanicle	S1			6	29 ±10
p Osmorhiza depauperata	Blunt Sweet Cicely	S1			1	86 ±5
n Parmeliella parvula	a lichen	S1?			1	86 ±0.1
p Dichanthelium acuminatum var. lindheimeri	Woolly Panic Grass	S1?			1	82 ±0.1
p Schoenoplectus robustus	Sturdy Bulrush	S1?			2	91 ±5
p Crataegus submollis	Quebec Hawthorn	S1?			6	16 ±10
p Crataegus robinsonii	Robinson's Hawthorn	S1?			2	40 ±5

p	<i>Suaeda rolandii</i>	Roland's Sea-Blite	S1?	1	67 ±10
p	<i>Chenopodium rubrum</i>	Red Pigweed	S1?	1	92 ±10
p	<i>Atriplex acadensis</i>	Maritime Saltbush	S1?	1	64 ±10
p	<i>Solidago hispida</i>	Hairy Goldenrod	S1?	2	39 ±10
p	<i>Hieracium kalmii</i> var. <i>fasciculatum</i>	Kalm's Hawkweed	S1?	1	48 ±5
n	<i>Peltigera lepidophora</i>	a lichen	S1S2	1	62 ±0.1
n	<i>Sticta limbata</i>	a lichen	S1S2	2	81 ±0.1
n	<i>Leptogium lichenoides</i>	a lichen	S1S2	2	61 ±0.1
n	<i>Fuscopannaria leucosticta</i>	a lichen	S1S2	3	26 ±0.1
n	<i>Everniastrum catawbiense</i>	a Lichen	S1S2	1	79 ±10
p	<i>Potamogeton pulcher</i>	Spotted Pondweed	S1S2	1	31 ±5
p	<i>Calamagrostis stricta</i> var. <i>stricta</i>	Slim-stemmed Reed Grass	S1S2	1	92 ±10
p	<i>Platanthera flava</i> var. <i>herbiola</i>	Tuberclad Orchid	S1S2	3	79 ±0
p	<i>Najas gracillima</i>	Thread-Like Naiad	S1S2	1	50 ±0.1
p	<i>Juncus Greenei</i>	Greene's Rush	S1S2	3	52 ±10
p	<i>Carex tenera</i>	Tender Sedge	S1S2	7	31 ±0
p	<i>Carex pensylvanica</i>	Pennsylvania Sedge	S1S2	2	24 ±0.1
p	<i>Carex bebbii</i>	Bebb's Sedge	S1S2	6	44 ±0
p	<i>Gratiola neglecta</i>	Clammy Hedge-Hyssop	S1S2	2	26 ±0.1
p	<i>Ranunculus sceleratus</i>	Cursed Buttercup	S1S2	4	48 ±1
p	<i>Hepatica nobilis</i> var. <i>obtusata</i>	Round-lobed Hepatica	S1S2	20	1 ±10
p	<i>Hepatica nobilis</i>	Round-Lobe Hepatica	S1S2	2	59 ±0.1
p	<i>Anemone virginiana</i> var. <i>alba</i>	Virginia Anemone	S1S2	3	41 ±5
p	<i>Conopholis americana</i>	American Cancer-root	S1S2	3	92 ±1
p	<i>Arabis hirsuta</i> var. <i>pycnocarpa</i>	Western Hairy Rockcress	S1S2	1	73 ±0.1
n	<i>Leptogium subtile</i>	a Lichen	S1S3	2	79 ±0.1
p	<i>Huperzia selago</i>	Northern Firmoss	S1S3	14	38 ±10
p	<i>Equisetum pratense</i>	Meadow Horsetail	S2	10	28 ±0
p	<i>Woodsia glabella</i>	Smooth Cliff Fern	S2	2	54 ±10
p	<i>Dryopteris fragrans</i> var. <i>remotiuscula</i>	Fragrant Wood Fern	S2	9	55 ±10
p	<i>Asplenium trichomanes-ramosum</i>	Green Spleenwort	S2	5	70 ±10
p	<i>Asplenium trichomanes</i>	Maidenhair Spleenwort	S2	7	80 ±0.1
p	<i>Potamogeton friesii</i>	Fries' Pondweed	S2	4	35 ±10
p	<i>Piptatherum canadense</i>	Canada Rice Grass	S2	4	23 ±1
p	<i>Spiranthes lucida</i>	Shining Ladies'-Tresses	S2	12	10 ±1
p	<i>Platanthera macrophylla</i>	Large Round-Leaved Orchid	S2	6	51 ±1
p	<i>Platanthera flava</i> var. <i>flava</i>	Tuberclad Orchid	S2	1	77 ±10
p	<i>Platanthera flava</i>	Tuberclad Orchid	S2	3	53 ±10
p	<i>Listera australis</i>	Southern Twayblade	S2	6	25 ±0.1
p	<i>Goodyera pubescens</i>	Downy Rattlesnake-Plantain	S2	5	5 ±1
p	<i>Cypripedium reginae</i>	Showy Lady's-Slipper	S2	10	9 ±10
p	<i>Cypripedium parviflorum</i> var. <i>makasin</i>	Yellow Lady's-slipper	S2	2	61 ±0.1
p	<i>Cypripedium parviflorum</i> var. <i>pubescens</i>	Yellow Lady's-slipper	S2	9	30 ±10
p	<i>Allium schoenoprasum</i> var. <i>sibiricum</i>	Wild Chives	S2	1	45 ±10
p	<i>Vallisneria americana</i>	Wild Celery	S2	3	16 ±1
p	<i>Eriophorum gracile</i>	Slender Cottongrass	S2	7	35 ±10
p	<i>Carex hystericina</i>	Porcupine Sedge	S2	6	28 ±0.1
p	<i>Carex comosa</i>	Bearded Sedge	S2	4	42 ±0.1
p	<i>Carex castanea</i>	Chestnut Sedge	S2	1	52 ±0
p	<i>Carex atratifomis</i>	Scabrous Black Sedge	S2	1	87 ±1
p	<i>Carex atlantica</i> ssp. <i>capillacea</i>	Atlantic Sedge	S2	2	24 ±0
p	<i>Viola nephrophylla</i>	Northern Bog Violet	S2	9	29 ±10
p	<i>Tiarella cordifolia</i>	Heart-leaved Foamflower	S2	11	10 ±10
p	<i>Saxifraga paniculata</i> ssp. <i>neogaea</i>	White Mountain Saxifrage	S2	3	80 ±10
p	<i>Salix sericea</i>	Silky Willow	S2	1	23 ±1
p	<i>Salix pedicellaris</i>	Bog Willow	S2	4	29 ±0.1
p	<i>Galium labradoricum</i>	Labrador Bedstraw	S2	3	28 ±0
p	<i>Galium boreale</i>	Northern Bedstraw	S2	6	63 ±1
p	<i>Ranunculus flammula</i> var. <i>flammula</i>	Lesser Spearwort	S2	4	21 ±0.1
p	<i>Caltha palustris</i>	Yellow Marsh Marigold	S2	1	97 ±0.1
p	<i>Anemone virginiana</i> var. <i>virginiana</i>	Virginia Anemone	S2	2	35 ±10
p	<i>Anemone virginiana</i>	Virginia Anemone	S2	8	35 ±10
p	<i>Anemone quinquefolia</i>	Wood Anemone	S2	7	10 ±5
p	<i>Anemone canadensis</i>	Canada Anemone	S2	4	46 ±10
p	<i>Pyrola minor</i>	Lesser Pyrola	S2	1	97 ±10
p	<i>Samolus valerandi</i> ssp. <i>parviflorus</i>	Seaside Brookweed	S2	2	87 ±0
p	<i>Primula mistassinica</i>	Mistassini Primrose	S2	5	33 ±1
p	<i>Plantago rugelii</i>	Rugel's Plantain	S2	8	28 ±0.1
p	<i>Rumex salicifolius</i> var. <i>mexicanus</i>	Triangular-valve Dock	S2	6	59 ±1
p	<i>Polygonum arifolium</i>	Halberd-leaved Tearthumb	S2	4	82 ±0.1
p	<i>Oenothera fruticosa</i> ssp. <i>glaucata</i>	Narrow-leaved Evening Primrose	S2	5	45 ±10
p	<i>Myriophyllum verticillatum</i>	Whorled Water Milfoil	S2	2	32 ±0
p	<i>Myriophyllum farwellii</i>	Farwell's Water Milfoil	S2	7	15 ±10
p	<i>Vaccinium uliginosum</i>	Alpine Bilberry	S2	2	48 ±10
p	<i>Vaccinium caespitosum</i>	Dwarf Bilberry	S2	11	40 ±1
p	<i>Vaccinium boreale</i>	Northern Blueberry	S2	4	42 ±10
p	<i>Shepherdia canadensis</i>	Soapberry	S2	9	46 ±10
p	<i>Crassula aquatica</i>	Water Pygmyweed	S2	1	76 ±0.1
p	<i>Triosteum aurantiacum</i>	Orange-fruited Tinker's Weed	S2	21	44 ±0.1
p	<i>Hudsonia ericoides</i>	Pinebarren Golden Heather	S2	7	39 ±10
p	<i>Stellaria humifusa</i>	Saltmarsh Starwort	S2	5	40 ±0.1
p	<i>Minuartia groenlandica</i>	Greenland Stitchwort	S2	14	15 ±0.1
p	<i>Draba arabisans</i>	Rock Whitlow-Grass	S2	3	86 ±0.1
p	<i>Cardamine parviflora</i> var. <i>arenicola</i>	Small-flowered Bittercress	S2	3	76 ±10
p	<i>Arabis drummondii</i>	Drummond's Rockcress	S2	8	43 ±0
p	<i>Betula michauxii</i>	Newfoundland Dwarf Birch	S2	13	23 ±10

p	<i>Caulophyllum thalictroides</i>	Blue Cohosh	S2	21	11 ±10
p	<i>Impatiens pallida</i>	Pale Jewelweed	S2	2	85 ±1
p	<i>Symphytotrichum undulatum</i>	Wavy-leaved Aster	S2	5	36 ±10
p	<i>Senecio pseudoarnica</i>	Seabeach Ragwort	S2	7	40 ±10
p	<i>Rudbeckia laciniata</i> var. <i>gaspereauensis</i>	Cut-Leaved Coneflower	S2	5	48 ±10
p	<i>Rudbeckia laciniata</i>	Cut-Leaved Coneflower	S2	1	48 ±0
p	<i>Lactuca hirsuta</i> var. <i>sanguinea</i>	Hairy Lettuce	S2	3	26 ±10
p	<i>Iva frutescens</i> ssp. <i>oraria</i>	Big-leaved Marsh-elder	S2	7	75 ±1
p	<i>Iva frutescens</i>	Big-leaved Marsh-elder	S2	3	76 ±0
p	<i>Hieracium robinsonii</i>	Robinson's Hawkweed	S2	2	37 ±1
p	<i>Erigeron philadelphicus</i>	Philadelphia Fleabane	S2	2	31 ±1
p	<i>Osmorhiza longistylis</i>	Smooth Sweet Cicely	S2	14	51 ±10
p	<i>Conioselinum chinense</i>	Chinese Hemlock-parsley	S2	2	38 ±0.1
n	<i>Timmia megapolitana</i>	a Moss	S2?	1	71 ±1
n	<i>Paludella squarrosa</i>	a Moss	S2?	1	51 ±10
p	<i>Dichanthelium linearifolium</i>	Narrow-leaved Panic Grass	S2?	6	44 ±0
p	<i>Juncus dudleyi</i>	Dudley's Rush	S2?	7	28 ±1
p	<i>Eleocharis ovata</i>	Ovate Spikerush	S2?	4	61 ±0.5
p	<i>Carex peckii</i>	Peck's Sedge	S2?	2	30 ±0.5
p	<i>Carex houghtoniana</i>	Houghton's Sedge	S2?	2	20 ±5
p	<i>Amelanchier fernaldii</i>	Fernald's Serviceberry	S2?	1	99 ±5
p	<i>Epilobium coloratum</i>	Purple-veined Willowherb	S2?	3	39 ±0.1
p	<i>Ceratophyllum echinatum</i>	Prickly Hornwort	S2?	4	30 ±0
p	<i>Symphytotrichum boreale</i>	Boreal Aster	S2?	3	45 ±10
p	<i>Hieracium kalmii</i> var. <i>kalmii</i>	Kalm's Hawkweed	S2?	5	45 ±5
p	<i>Hieracium kalmii</i>	Kalm's Hawkweed	S2?	3	47 ±5
n	<i>Peltigera collina</i>	a lichen	S2S3	1	22 ±0.1
n	<i>Physconia deterosa</i>	a Lichen	S2S3	1	34 ±0
n	<i>Leptogium corticola</i>	a lichen	S2S3	9	21 ±0.1
n	<i>Leptogium teretiusculum</i>	a lichen	S2S3	3	24 ±0
n	<i>Collema nigrescens</i>	a lichen	S2S3	5	23 ±0.1
n	<i>Sphagnum wulfianum</i>	a Peatmoss	S2S3	2	19 ±0.1
p	<i>Ophioglossum pusillum</i>	Northern Adder's-tongue	S2S3	4	30 ±10
p	<i>Botrychium simplex</i>	Least Moonwort	S2S3	5	39 ±0.1
p	<i>Botrychium lanceolatum</i> var. <i>angustisegmentum</i>	Triangle Moonwort	S2S3	6	68 ±1
p	<i>Potamogeton zosteriformis</i>	Flat-stemmed Pondweed	S2S3	7	4 ±1
p	<i>Potamogeton richardsonii</i>	Richardson's Pondweed	S2S3	2	87 ±5
p	<i>Potamogeton obtusifolius</i>	Blunt-leaved Pondweed	S2S3	1	85 ±0
p	<i>Poa glauca</i>	Glaucous Blue Grass	S2S3	4	51 ±1
p	<i>Panicum tuckermanii</i>	Tuckerman's Panic Grass	S2S3	7	50 ±0
p	<i>Alopecurus aequalis</i>	Short-awned Foxtail	S2S3	13	22 ±5
p	<i>Spiranthes ochroleuca</i>	Yellow Ladies'-tresses	S2S3	6	38 ±1
p	<i>Cypripedium parviflorum</i>	Yellow Lady's-slipper	S2S3	20	50 ±0.1
p	<i>Coeloglossum viride</i> var. <i>virescens</i>	Long-bracted Frog Orchid	S2S3	2	59 ±0.1
p	<i>Lilium canadense</i>	Canada Lily	S2S3	54	1 ±10
p	<i>Eleocharis olivacea</i>	Yellow Spikerush	S2S3	2	30 ±0
p	<i>Carex hirtifolia</i>	Pubescent Sedge	S2S3	23	7 ±10
p	<i>Carex adusta</i>	Lesser Brown Sedge	S2S3	8	28 ±10
p	<i>Polygonum raii</i>	Sharp-fruited Knotweed	S2S3	1	85 ±1
p	<i>Polygonum buxiforme</i>	Small's Knotweed	S2S3	6	45 ±10
p	<i>Polygala sanguinea</i>	Blood Milkwort	S2S3	12	31 ±5
p	<i>Fraxinus nigra</i>	Black Ash	S2S3	32	9 ±10
p	<i>Hedeoma pulegioides</i>	American False Pennyroyal	S2S3	12	24 ±5
p	<i>Empetrum eamesii</i> ssp. <i>eamesii</i>	Pink Crowberry	S2S3	1	56 ±0.5
p	<i>Empetrum eamesii</i> ssp. <i>atropurpureum</i>	Pink Crowberry	S2S3	1	56 ±0.5
p	<i>Hypericum dissimulatum</i>	Disguised St John's-wort	S2S3	2	36 ±0.5
p	<i>Suaeda calceoliformis</i>	Horned Sea-blite	S2S3	5	39 ±10
p	<i>Symphytotrichum ciliolatum</i>	Fringed Blue Aster	S2S3	8	12 ±1
p	<i>Asclepias incarnata</i> ssp. <i>pulchra</i>	Swamp Milkweed	S2S3	5	13 ±1
p	<i>Schizaea pusilla</i>	Little Curlygrass Fern	S3	5	32 ±1
p	<i>Botrychium dissectum</i>	Cut-leaved Moonwort	S3	6	65 ±1
p	<i>Isoetes acadensis</i>	Acadian Quillwort	S3	4	48 ±10
p	<i>Equisetum variegatum</i>	Variiegated Horsetail	S3	6	19 ±0.1
p	<i>Sparganium natans</i>	Small Burreed	S3	8	13 ±1
p	<i>Dichanthelium clandestinum</i>	Deer-tongue Panic Grass	S3	5	4 ±0
p	<i>Platanthera orbiculata</i>	Small Round-leaved Orchid	S3	9	45 ±10
p	<i>Platanthera hookeri</i>	Hooker's Orchid	S3	8	59 ±1
p	<i>Platanthera grandiflora</i>	Large Purple Fringed Orchid	S3	18	30 ±1
p	<i>Goodyera repens</i>	Lesser Rattlesnake-plantain	S3	3	73 ±0.1
p	<i>Corallorhiza trifida</i>	Early Coralroot	S3	14	32 ±5
p	<i>Juncus subcaudatus</i>	Woodland Rush	S3	5	31 ±10
p	<i>Juncus marginatus</i>	Grass-leaved Rush	S3	1	51 ±10
p	<i>Eleocharis nitida</i>	Quill Spikerush	S3	7	41 ±5
p	<i>Carex rosea</i>	Rosy Sedge	S3	14	26 ±0
p	<i>Carex lupulina</i>	Hop Sedge	S3	5	29 ±0
p	<i>Carex eburnea</i>	Bristle-leaved Sedge	S3	2	29 ±0.1
p	<i>Verbena hastata</i>	Blue Vervain	S3	41	28 ±0
p	<i>Laportea canadensis</i>	Canada Wood Nettle	S3	13	1 ±10
p	<i>Limosella australis</i>	Southern Mudwort	S3	9	35 ±5
p	<i>Agalinis neoscotica</i>	Nova Scotia Agalinis	S3	1	58 ±0
p	<i>Geocaulon lividum</i>	Northern Comandra	S3	4	66 ±0.1
p	<i>Salix petiolaris</i>	Meadow Willow	S3	11	28 ±0
p	<i>Rosa palustris</i>	Swamp Rose	S3	2	31 ±0
p	<i>Agrimonia gryposepala</i>	Hooked Agrimony	S3	15	31 ±0
p	<i>Rhamnus alnifolia</i>	Alder-leaved Buckthorn	S3	7	6 ±1
p	<i>Ranunculus gmelinii</i>	Gmelin's Water Buttercup	S3	2	30 ±0.5

p	<i>Pyrola asarifolia</i>	Pink Pyrola	S3		7	22 ±0
p	<i>Primula laurentiana</i>	Laurentian Primrose	S3		2	87 ±10
p	<i>Polygonum scandens</i>	Climbing False Buckwheat	S3		20	29 ±0
p	<i>Polygonum pensylvanicum</i>	Pennsylvania Smartweed	S3		16	16 ±10
p	<i>Epilobium strictum</i>	Downy Willowherb	S3		1	78 ±1
p	<i>Utricularia radiata</i>	Little Floating Bladderwort	S3		5	74 ±1
p	<i>Teucrium canadense</i>	Canada Germander	S3		3	30 ±5
p	<i>Proserpinaca pectinata</i>	Comb-leaved Mermaidweed	S3		2	50 ±1
p	<i>Proserpinaca palustris</i> var. <i>crebra</i>	Marsh Mermaidweed	S3		4	14 ±5
p	<i>Proserpinaca palustris</i>	Marsh Mermaidweed	S3		2	29 ±0
p	<i>Geranium bicknellii</i>	Bicknell's Crane's-bill	S3		2	90 ±0
p	<i>Bartonia virginica</i>	Yellow Bartonia	S3		3	17 ±10
p	<i>Empetrum eamesii</i>	Pink Crowberry	S3		7	39 ±10
p	<i>Viburnum edule</i>	Squashberry	S3		1	67 ±0
p	<i>Stellaria longifolia</i>	Long-leaved Starwort	S3		8	12 ±0.1
p	<i>Campanula aparinoides</i>	Marsh Bellflower	S3		27	30 ±0
p	<i>Packera paupercula</i>	Balsam Groundsel	S3		10	30 ±1
p	<i>Megalodonta beckii</i>	Water Beggarticks	S3		5	4 ±0.5
p	<i>Hieracium paniculatum</i>	Panicled Hawkweed	S3		1	92 ±0.1
p	<i>Erigeron hyssopifolius</i>	Hyssop-leaved Fleabane	S3		4	30 ±0.5
p	<i>Asclepias incarnata</i> ssp. <i>incarnata</i>	Swamp Milkweed	S3		1	94 ±0.1
p	<i>Asclepias incarnata</i>	Swamp Milkweed	S3		14	1 ±10
n	<i>Collema furfuraceum</i>	a lichen	S3?		2	31 ±0.1
n	<i>Nephroma bellum</i>	a lichen	S3?		1	47 ±0
n	<i>Sticta fuliginosa</i>	a lichen	S3?		9	32 ±0.1
n	<i>Anzia colpodes</i>	a Lichen	S3?		2	25 ±0.1
p	<i>Polypodium appalachianum</i>	Appalachian Polypody	S3?		4	38 ±0
p	<i>Lycopodium sitchense</i>	Sitka Clubmoss	S3?		2	45 ±5
p	<i>Lycopodium sabinifolium</i>	Ground-Fir	S3?		2	43 ±0.1
p	<i>Potamogeton praelongus</i>	White-stemmed Pondweed	S3?		7	34 ±5
p	<i>Elodea canadensis</i>	Canada Waterweed	S3?		1	90 ±0
p	<i>Carex tribuloides</i>	Blunt Broom Sedge	S3?		3	29 ±0
p	<i>Carex cryptolepis</i>	Hidden-scaled Sedge	S3?		2	32 ±0
p	<i>Carex foenea</i>	Fernald's Hay Sedge	S3?		6	24 ±0
p	<i>Lycopodiella appressa</i>	Southern Bog Clubmoss	S3S4		3	23 ±5
p	<i>Lycopodium complanatum</i>	Northern Clubmoss	S3S4		5	48 ±0
p	<i>Equisetum scirpoides</i>	Dwarf Scouring-Rush	S3S4		18	11 ±0
p	<i>Equisetum hyemale</i> var. <i>affine</i>	Common Scouring-rush	S3S4		11	29 ±10
p	<i>Equisetum hyemale</i>	Common Scouring-rush	S3S4		3	30 ±1
p	<i>Cystopteris bulbifera</i>	Bulblet Bladder Fern	S3S4		10	28 ±0.1
p	<i>Trisetum spicatum</i>	Narrow False Oats	S3S4		7	43 ±0
p	<i>Liparis loeselii</i>	Loesel's Twayblade	S3S4		4	29 ±5
p	<i>Luzula parviflora</i>	Small-flowered Woodrush	S3S4		2	63 ±0
p	<i>Sisyrinchium angustifolium</i>	Narrow-leaved Blue-eyed-grass	S3S4		4	30 ±0
p	<i>Carex argyrantha</i>	Silvery-flowered Sedge	S3S4		1	85 ±0.1
p	<i>Viola sagittata</i> var. <i>ovata</i>	Arrow-Leaved Violet	S3S4		1	55 ±0
p	<i>Lindernia dubia</i>	Yellow-seeded False Pimperel	S3S4		17	50 ±0
p	<i>Polygonum robustius</i>	Stout Smartweed	S3S4		2	29 ±0
p	<i>Sanguinaria canadensis</i>	Bloodroot	S3S4		19	16 ±0
p	<i>Utricularia gibba</i>	Humped Bladderwort	S3S4		3	9 ±10
p	<i>Myriophyllum sibiricum</i>	Siberian Water Milfoil	S3S4		1	31 ±0
p	<i>Atriplex franktonii</i>	Frankton's Saltbush	S3S4		1	87 ±1
p	<i>Angelica atropurpurea</i>	Purple-stemmed Angelica	S3S4		1	29 ±0

4.2 FAUNA

	scientific name	common name	prov. rarity	prov. status	COSEWIC	obs	dist.km
a	<i>Sterna dougallii</i>	Roseate Tern	S1B	Endangered	E	20	39 ±0.5
a	<i>Charadrius melodus melodus</i>	Piping Plover melodus ssp	S1B	Endangered	E	55	37 ±0.5
a	<i>Calidris canutus rufa</i>	Red Knot rufa ssp	S2S3M	Endangered	E	25	35 ±0.5
i	<i>Gomphus ventricosus</i>	Skilllet Clubtail	S1		E	2	20 ±0.5
a	<i>Dermodochelys coriacea</i>	Leatherback Sea Turtle	S1S2N		E	2	69 ±5
a	<i>Colinus virginianus</i>	Northern Bobwhite			E	2	1 ±0.1
a	<i>Chaetura pelagica</i>	Chimney Swift	S2S3B	Endangered	T	60	10 ±0.1
a	<i>Chordeiles minor</i>	Common Nighthawk	S3B	Threatened	T	100	1 ±0.1
a	<i>Glyptemys insculpta</i>	Wood Turtle	S3	Vulnerable	T	66	1 ±10
a	<i>Morone saxatilis</i>	Striped Bass	S1		T	4	11 ±10
a	<i>Acipenser oxyrinchus</i>	Atlantic Sturgeon	S1?		T	4	11 ±10
a	<i>Caprimulgus vociferus</i>	Whip-Poor-Will	S1?B		T	5	9 ±5
a	<i>Sturnella magna</i>	Eastern Meadowlark	S1B		T	2	71 ±5
a	<i>Wilsonia canadensis</i>	Canada Warbler	S3B		T	136	1 ±5
a	<i>Hirundo rustica</i>	Barn Swallow	S3B		T	227	1 ±0.5
a	<i>Contopus cooperi</i>	Olive-sided Flycatcher	S3B		T	150	6 ±0.5
a	<i>Dolichonyx oryzivorus</i>	Bobolink	S3S4B		T	148	1 ±5
a	<i>Histrionicus histrionicus</i> pop. 1	Harlequin Duck - Eastern pop.	S2N	Endangered	SC	9	74 ±10
a	<i>Falco peregrinus</i> pop. 1	Peregrine Falcon - anatum/tundrius	S1B	Vulnerable	SC	3	69 ±0.1
a	<i>Passerculus sandwichensis princeps</i>	Savannah Sparrow princeps ssp	S1B		SC	1	63 ±0.1
a	<i>Bucephala islandica</i> (Eastern pop.)	Barrow's Goldeneye - Eastern pop.	S1N		SC	2	93 ±0.1
a	<i>Asio flammeus</i>	Short-eared Owl	S1S2		SC	5	81 ±5
i	<i>Alasmidonta varicosa</i>	Brook Floater	S1S2		SC	5	7 ±0.1
i	<i>Danaus plexippus</i>	Monarch	S2B		SC	13	18 ±0
a	<i>Euphagus carolinus</i>	Rusty Blackbird	S2S3B		SC	88	5 ±0.1
a	<i>Phocoena phocoena</i> (NW Atlantic)	Harbour Porpoise - Northwest Atlantic pop.	S4		SC	2	86 ±1
a	<i>Chelydra serpentina</i>	Snapping Turtle	S5		SC	47	6 ±10
a	<i>Anguilla rostrata</i>	American Eel	S5		SC	5	11 ±10
a	<i>Puma concolor</i> pop. 1	Cougar - Eastern pop.	SH		DD	77	6 ±1
a	<i>Sorex dispar</i>	Long-tailed Shrew	S1		NAR	2	58 ±10

a	<i>Aegolius funereus</i>	Boreal Owl	S1B	NAR	2	29 ±5
a	<i>Fulica americana</i>	American Coot	S1B	NAR	2	29 ±5
a	<i>Glaucomys volans</i>	Southern Flying Squirrel	S2S3	n-a	5	77 ±10
a	<i>Hemidactylium scutatum</i>	Four-toed Salamander	S3	NAR	25	11 ±10
a	<i>Sialia sialis</i>	Eastern Bluebird	S3B	NAR	17	10 ±0.1
a	<i>Sterna hirundo</i>	Common Tern	S3B	NAR	86	10 ±5
a	<i>Gavia immer</i>	Common Loon	S3B,S4N	NAR	223	1 ±5
a	<i>Lagenorhynchus acutus</i>	Atlantic White-sided Dolphin	S3S4	NAR	1	77 ±1
a	<i>Accipiter gentilis</i>	Northern Goshawk	S3S4	NAR	50	9 ±5
a	<i>Alces americanus</i>	Moose	S1	Endangered	15	44 ±10
i	<i>Strophitus undulatus</i>	Creepers	S1		2	90 ±0.1
i	<i>Leptodea ochracea</i>	Tidewater Mucket	S1		1	99 ±0.1
i	<i>Enallagma signatum</i>	Orange Bluet	S1		2	30 ±0.1
i	<i>Coenagrion resolutum</i>	Taiga Bluet	S1		2	33 ±1
i	<i>Williamsonia fletcheri</i>	Ebony Boghaunter	S1		1	81 ±0.5
i	<i>Somatochlora franklini</i>	Delicate Emerald	S1		2	46 ±1
i	<i>Somatochlora brevicincta</i>	Quebec Emerald	S1		1	33 ±0.1
i	<i>Ophiogomphus aspersus</i>	Brook Snaketail	S1		4	57 ±0.1
i	<i>Oeneis jutta</i>	Jutta Arctic	S1		2	46 ±1
i	<i>Polygonia gracilis</i>	Hoary Comma	S1		2	39 ±1
i	<i>Polygonia satyrus</i>	Satyr Comma	S1		2	50 ±1
i	<i>Plebejus saepiolus</i>	Greenish Blue	S1		1	49 ±1
i	<i>Satyrium acadica</i>	Acadian Hairstreak	S1		2	87 ±1
i	<i>Lycaena hyllus</i>	Bronze Copper	S1		3	25 ±1
a	<i>Perimyotis subflavus</i>	Eastern Pipitrelle	S1?		5	11 ±10
a	<i>Vireo gilvus</i>	Warbling Vireo	S1?B		7	28 ±5
a	<i>Toxostoma rufum</i>	Brown Thrasher	S1?B		5	45 ±5
a	<i>Tringa solitaria</i>	Solitary Sandpiper	S1?B,S4S5M		7	37 ±0.5
a	<i>Larus delawarensis</i>	Ring-billed Gull	S1?B,S5N		3	10 ±5
a	<i>Hylocichla mustelina</i>	Wood Thrush	S1B		11	30 ±0.1
a	<i>Progne subis</i>	Purple Martin	S1B		4	78 ±5
a	<i>Gallinula chloropus</i>	Common Moorhen	S1B		6	61 ±5
a	<i>Alca torda</i>	Razorbill	S1B,S4N		2	92 ±0.1
a	<i>Fratercula arctica</i>	Atlantic Puffin	S1B,S4S5N		3	92 ±0.1
a	<i>Calidris minutilla</i>	Least Sandpiper	S1B,S5M		45	10 ±5
a	<i>Picoides dorsalis</i>	American Three-toed Woodpecker	S1S2		1	99 ±5
i	<i>Stylurus scudderi</i>	Zebra Clubtail	S1S2		3	9 ±0.5
i	<i>Somatochlora kennedyi</i>	Kennedy's Emerald	S1S2		2	46 ±1
i	<i>Ophiogomphus rupinsulensis</i>	Rusty Snaketail	S1S2		3	9 ±0.5
i	<i>Nymphalis vaualbum j-album</i>	Compton Tortoiseshell	S1S2		5	33 ±1
i	<i>Nymphalis l-album</i>	Compton Tortoiseshell	S1S2		1	50 ±0
i	<i>Callophrys lanoraieensis</i>	Bog Elfin	S1S2		9	28 ±1
a	<i>Eremophila alpestris</i>	Horned Lark	S1S2B,S4N		4	15 ±5
a	<i>Charadrius semipalmatus</i>	Semipalmated Plover	S1S2B,S5M		55	35 ±0.5
a	<i>Martes pennanti</i>	Fisher	S2		2	99 ±10
a	<i>Myotis septentrionalis</i>	Northern Long-eared Bat	S2		5	11 ±10
a	<i>Salmo salar</i>	Atlantic Salmon	S2		37	19 ±10
a	<i>Asio otus</i>	Long-eared Owl	S2		9	44 ±0.1
i	<i>Lampsilis radiata</i>	Eastern Lampmussel	S2		23	3 ±0.1
i	<i>Somatochlora forcipata</i>	Forcinate Emerald	S2		3	46 ±1
i	<i>Epitheca princeps</i>	Prince Baskettail	S2		5	33 ±0.1
i	<i>Gomphus descriptus</i>	Harpoon Clubtail	S2		2	78 ±1
i	<i>Nymphalis milberti</i>	Milbert's Tortoiseshell	S2		6	35 ±1
i	<i>Polygonia comma</i>	Eastern Comma	S2		4	48 ±1
i	<i>Boloria chariclea</i>	Arctic Fritillary	S2		4	47 ±1
i	<i>Strymon melinus</i>	Gray Hairstreak	S2		2	96 ±0.5
i	<i>Callophrys niphon</i>	Eastern Pine Elfin	S2		10	33 ±1
i	<i>Callophrys henrici</i>	Henry's Elfin	S2		8	33 ±1
i	<i>Satyrium calanus falacer</i>	Banded Hairstreak	S2		1	50 ±0.5
i	<i>Satyrium calanus</i>	Banded Hairstreak	S2		5	44 ±10
i	<i>Lycaena dospassosi</i>	Salt Marsh Copper	S2		7	79 ±0.1
i	<i>Pieris oleracea</i>	Mustard White	S2		12	3 ±1
i	<i>Amblyscirtes vialis</i>	Common Roadside-Skipper	S2		4	24 ±1
i	<i>Amblyscirtes hegon</i>	Salt and Pepper Skipper	S2		8	19 ±1
i	<i>Thorybes pylades</i>	Northern Cloudywing	S2		3	49 ±1
a	<i>Lasiurus cinereus</i>	Hoary Bat	S2?		2	20 ±10
a	<i>Vireo philadelphicus</i>	Philadelphia Vireo	S2?B		7	22 ±5
a	<i>Piranga olivacea</i>	Scarlet Tanager	S2B		11	28 ±5
a	<i>Myiarchus crinitus</i>	Great Crested Flycatcher	S2B		11	22 ±5
a	<i>Empidonax traillii</i>	Willow Flycatcher	S2B		2	40 ±5
a	<i>Rallus limicola</i>	Virginia Rail	S2B		14	15 ±5
a	<i>Anas strepera</i>	Gadwall	S2B		3	42 ±0.1
a	<i>Anas clypeata</i>	Northern Shoveler	S2B		5	10 ±5
a	<i>Anas acuta</i>	Northern Pintail	S2B		11	15 ±5
i	<i>Pantala hymenaea</i>	Spot-Winged Glider	S2B		4	46 ±1
a	<i>Rissa tridactyla</i>	Black-legged Kittiwake	S2B,S4S5N		1	92 ±0.1
a	<i>Bucephala clangula</i>	Common Goldeneye	S2B,S5N		45	36 ±10
i	<i>Alasmidonta undulata</i>	Triangle Floater	S2S3		15	1 ±10
i	<i>Erynnis juvenalis</i>	Juvenal's Duskywing	S2S3		11	33 ±1
a	<i>Icterus galbula</i>	Baltimore Oriole	S2S3B		30	11 ±5
a	<i>Molothrus ater</i>	Brown-headed Cowbird	S2S3B		73	1 ±5
a	<i>Poocetes gramineus</i>	Vesper Sparrow	S2S3B		17	21 ±5
a	<i>Tringa semipalmata</i>	Willet	S2S3B		94	10 ±5
a	<i>Cathartes aura</i>	Turkey Vulture	S2S3B		5	1 ±0.1
a	<i>Phalaropus fulicaria</i>	Red Phalarope	S2S3M		1	49 ±0.5
a	<i>Phalaropus lobatus</i>	Red-necked Phalarope	S2S3M		3	42 ±0.5

a	Poecile hudsonica	Boreal Chickadee	S3	173	1 ±5
a	Phalacrocorax carbo	Great Cormorant	S3	25	48 ±10
i	Amphiagrion saucium	Eastern Red Damsel	S3	1	39 ±1
i	Nannothemis bella	Elfin Skimmer	S3	9	37 ±0.5
i	Somatochlora tenebrosa	Clamp-Tipped Emerald	S3	7	33 ±0.1
i	Gomphaeschna furcillata	Harlequin Darner	S3	5	35 ±1
i	Boyeria grafiana	Ocellated Darner	S3	4	52 ±1
i	Aeshna constricta	Lance-Tipped Darner	S3	14	10 ±1
i	Aeshna clepsydra	Mottled Darner	S3	8	10 ±1
i	Ophiogomphus carolus	Riffle Snaketail	S3	20	8 ±0.1
i	Lanthus parvulus	Northern Pygmy Clubtail	S3	4	40 ±5
i	Enodia anthedon	Northern Pearly-Eye	S3	13	18 ±0
i	Polygonia faunus	Green Comma	S3	7	33 ±1
i	Euphydryas phaeton	Baltimore Checkerspot	S3	11	33 ±1
i	Satyrium liparops strigosum	Striped Hairstreak	S3	1	50 ±0.5
i	Satyrium liparops	Striped Hairstreak	S3	3	33 ±1
i	Hesperia comma laurentina	Laurentian Skipper	S3	11	19 ±1
i	Hesperia comma	Common Branded Skipper	S3	2	29 ±1
a	Dendroica tigrina	Cape May Warbler	S3?B	59	20 ±5
a	Coccyzus erythrophthalmus	Black-billed Cuckoo	S3?B	29	11 ±5
a	Pinicola enucleator	Pine Grosbeak	S3?B,S5N	78	15 ±5
a	Mimus polyglottos	Northern Mockingbird	S3B	22	40 ±5
a	Dumetella carolinensis	Gray Catbird	S3B	136	6 ±0.5
a	Petrochelidon pyrrhonota	Cliff Swallow	S3B	101	10 ±5
a	Riparia riparia	Bank Swallow	S3B	136	1 ±5
a	Sterna paradisaea	Arctic Tern	S3B	29	40 ±5
a	Anas discors	Blue-winged Teal	S3B	41	1 ±5
a	Podilymbus podiceps	Pied-billed Grebe	S3B	40	1 ±5
i	Polygonia interrogatoris	Question Mark	S3B	14	39 ±1
a	Tringa melanoleuca	Greater Yellowlegs	S3B,S5M	61	10 ±5
a	Mergus serrator	Red-breasted Merganser	S3B,S5N	43	29 ±5
a	Calidris pusilla	Semipalmated Sandpiper	S3M	47	34 ±0.5
a	Limosa haemastica	Hudsonian Godwit	S3M	14	35 ±0.5
a	Pluvialis dominica	American Golden-Plover	S3M	21	36 ±0.5
a	Branta bernicla	Brant	S3M	1	71 ±10
a	Calidris maritima	Purple Sandpiper	S3N	19	28 ±0.5
a	Cardinalis cardinalis	Northern Cardinal	S3S4	15	32 ±5
a	Perisoreus canadensis	Gray Jay	S3S4	156	1 ±5
a	Picoides arcticus	Black-backed Woodpecker	S3S4	73	10 ±5
a	Cephus grylle	Black Guillemot	S3S4	21	41 ±5
i	Polygonia progne	Gray Comma	S3S4	12	18 ±0
i	Speyeria aphrodite	Aphrodite Fritillary	S3S4	12	21 ±5
i	Callophrys polios	Hoary Elf	S3S4	13	28 ±1
i	Feniseca tarquinius	Harvester	S3S4	13	10 ±1
a	Passerella iliaca	Fox Sparrow	S3S4B	25	36 ±5
a	Pheucticus ludovicianus	Rose-breasted Grosbeak	S3S4B	125	1 ±5
a	Wilsonia pusilla	Wilson's Warbler	S3S4B	46	19 ±5
a	Dendroica striata	Blackpoll Warbler	S3S4B	42	10 ±5
a	Dendroica castanea	Bay-breasted Warbler	S3S4B	140	1 ±5
a	Vermivora peregrina	Tennessee Warbler	S3S4B	150	11 ±5
a	Tyrannus tyrannus	Eastern Kingbird	S3S4B	82	1 ±5
a	Sayornis phoebe	Eastern Phoebe	S3S4B	47	1 ±5
a	Empidonax flaviventris	Yellow-bellied Flycatcher	S3S4B	161	9 ±5
a	Contopus virens	Eastern Wood-Pewee	S3S4B	165	1 ±5
a	Gallinago delicata	Wilson's Snipe	S3S4B	71	15 ±5
a	Actitis macularius	Spotted Sandpiper	S3S4B	172	1 ±5
a	Charadrius vociferus	Killdeer	S3S4B	165	1 ±0.5
a	Botaurus lentiginosus	American Bittern	S3S4B	74	1 ±5
a	Carduelis pinus	Pine Siskin	S3S4B,S5N	141	1 ±5
a	Morus bassanus	Northern Gannet	SHB,S5M	1	67 ±10

4.3 RANGE MAPS

The legally protected taxa listed below are linked to the study area by predictive range maps based upon expert estimates of distribution. Taxa listed here but not in the observation data above, are unknown within the study area but perhaps present. Ranges of rank 1 indicate possible occurrence, those of rank 2 and 3 increasingly less probable.

scientific name	common name	prov. rarity	prov. status	COSEWIC	range
a	Glyptemys insculpta	S3	Vulnerable	T	1
p	Listera australis	S2			1
p	Isoetes prototypus	S2	Vulnerable	SC	1
i	Danaus plexippus	S2B		SC	1
a	Salmo salar pop. 1	S2		E	1
n	Erioderma pedicellatum	S1S2	Endangered	E	2

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Sept 7, 2012

Amanda Facey
Conestoga-Rovers & Associates
45 Akerley Boulevard
Dartmouth, NS B3B 1J7

Dear Ms. Facey:

**RE: Environment Screening 12-02-28
Cooks Brook Quarry Expansion
Consetoga-Rovers & Associates**

Further to your request of February 28, 2012, staff of the Department of Communities, Culture and Heritage have reviewed their files for reference to the presence of heritage resources in the study area. Please be aware that our information is not comprehensive, in that it is incomplete and of varying degrees of accuracy with respect to the precise location and condition of heritage resources.

Archaeological and Historical Site Remains

There are no recorded archaeological sites on file for the study area. There are two recorded sites on file to the west of the study area and one recorded site to the south of the study area. Potential for First Nation archaeological resources can be considered low to moderate. Potential for historic archaeological resources can be considered moderate to high. Historic maps do indicate settlement.

It is recommended that an assessment for archaeological resources take place.

Botany

Staff have reviewed the records for plant species-at-risk in our database and report that the following species-at-risk are found or may be expected within the footprint as outlined in the request.

Anenome quinquefolia (provincially Yellow-listed)*
Carex hirtifolia (provincially Yellow-listed)
Cypripedium reginae (provincially Red-listed)

Dirca palustris (provincially Red-listed)
Hepatica americana (provincially Red-listed)
Laportea canadensis (provincially Yellow-listed)
Lilium canadense (provincially Yellow-listed)
Listera australis (provincially Yellow-listed)
Megalodonta beckii (provincially Yellow-listed)
Potamogeton zosteriformis (provincially Yellow-listed)
Rhamnus alnifolia (provincially Yellow-listed)
Spiranthes lucida (provincially Yellow-listed)
Spiranthes ochroleuca (provincially Yellow-listed)
Stellaria longifolia (provincially Yellow-listed)
Utricularia gibba (provincially Yellow-listed)

The presence/absence of these species should be determined during field assessment and reported in any submission. Staff recommends that field assessment be conducted during the growing season or when the identity can be determined to species or variety.

Zoology

There are current nesting bird records for the following species within the immediate area.

Osprey, *Pandion haliaetus* (Provincial Bird)
Common Nighthawk, *Chordeiles minor* (provincially Yellow-listed)
Olive-sided Flycatcher, *Contopus borealis* (provincially Yellow-listed)
Barn Swallow, *Hirundo rustica* (provincially Yellow-listed)
Gray Jay, *Perisoreus canadensis* (provincially Yellow-listed)
Bobolink, *Dolichonyx oryzivorus* (provincially yellow-listed)

It should be noted that although there are no specific survey data for the nearby standing water, the waters and immediate surrounding area of Lake Egmont support one of the highest diversities of freshwater fish species and Mollusc Fauna (terrestrial and aquatic) in the province. It is not clear whether this is carried on through some of the nearby lakes (eg McGeorge).

The watersheds are noted to support a population of Wood Turtles (*Glyptemys insculpta*) which are also provincially Yellow-listed and Mink Frogs (*Lithobates septentrionalis*) which is in decline in the province. .

It should also be noted that the receiving waters (downstream from this site) support additional species of concern (Shubenacadie River) including fish species with highlighted Conservation concern such as Inner Bay of Fundy Salmon (Endangered), Striped Bass (COSEWIC - Threatened) and . Shortnose Sturgeon (COSEWIC - special Concern)

A. Facey
Sept 7, 2012
page 2

Palaeontology

This project disrupts rocks of the Lower Windsor Group. The Lower Windsor Group contains known marine fossils such as crinoids, brachiopods, corals, etc. There has been a recent report of a Carboniferous fish (?)/vertebrate (ie possible amphibian) from the Lower Windsor Group. Very few vertebrate specimens have been discovered from the Lower Windsor Group. If such specimens are found, they need to be reported to the NSM

I have attached an invoice for the staff time spent reviewing our records and compiling this response. If you have any questions, please contact me at 424-6475.

Sincerely,



Laura Bennett,
Coordinator, Special Places