



FISHER ENGINEERING LTD.

40 Fairfield Road
Lower Coverdale, New Brunswick E1J 0A2
Phone: 506. 863. 1991

June 30th, 2021

File: DE155

Ms. Crystale Harty
Acting Director
Project Assessment Branch
Department of Environment
20 McGloin Street
PO Box 6000
Fredericton, NB E3B 5H1

Attention: Ms. Harty:

***Re: New Well at Edmond Gagnon Ltd. Seafood Processing Facility and New 19-unit
Apartment Building Grand Barachois, NB***

Enclosed is an electronic copy of the registration document for the above noted undertaking.
Once an EIA file number is assigned, the fee will be paid on line.

If you have any questions or require further details, please do not hesitate to contact the
undersigned.

A handwritten signature in black ink that reads 'Michael Fisher'. The signature is written in a cursive style and is positioned above a horizontal line.

Michael Fisher, P. Eng.

MJF

Enclosures

cc: Mr. Samuel Cormier, Edmond Gagnon Ltd.

**EIA Registration
Edmond Gagnon Ltd.**

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EIA Registration Edmond Gagnon Ltd.

Pursuant to Section 5(2) of
The Environmental Impact Assessment Regulation 87-83
Clean Environment Act

1 The Proponent

Name: Edmond Gagnon Ltd.

Address: 9 Quai Des Robichaud Road, Grand Barachois, NB E4P 8A4

Primary Contact Executive Officer: Samuel Cormier, (506) 532-2445

Principal Contact Person for Purposes of EIA:

Samuel Cormier, (506) 532-2445 and
Michael Fisher, Fisher Engineering Ltd. (506) 863-1991.

Property Ownership: Same as Proponent

2 The Undertaking

Name: Edmond Gagnon Ltd.

Project Overview: There are two components to this project, the first is associated with the drilling of a new production well that was completed in 2019. The current processing facility has an approval to operate that allowed them to have two wells, one main production well and a second well for back up due to the sensitivity of the processing and the inability to be without water. During production in 2019, sand was discovered within the raw water from the main production well and as such it was taken off line and the back up well brought in service. Without a viable back up well in place, the owner retained the services of Eastern Well Drillers to drill a new well to be used for back up. The owner completed this work without notifying the DELG as he thought he was allowed to have two operational wells. On April 1, 2021 the proponent received a letter from the acting director of the EIA branch and it stated:

"It has recently come to the Department of Environment and Local Government's (DELG) attention that a new well was drilled for the Edmond Gagnon Limited seafood processing plant on PID 70636725 in 2019 when the main production well began to have sand in the water. In 2018, DELG reviewed the construction of a new seafood processing plant and the use of two of the existing wells on this property. It was determined at that time that this project would not have to undergo an Environmental Impact Assessment (EIA) review given that it would not be using more water than the existing facility on that property had been using from those wells, which had been drilled prior to the EIA Regulation being in place. However, new wells that are drilled to replace existing wells are

considered by DELG to be new projects, and given that the required water capacity for the facility is above 50 m³/day, the project is considered to be an undertaking under item (s) of Schedule A of the EIA Regulation, meaning it should have been registered for an EIA review prior to proceeding. As a result, the project must now be registered for an EIA review in order to bring the facility into compliance with the EIA Regulation.”

The second component of this project is the proposed construction of a 19unit apartment complex on the subject property. The apartment complex will be serviced by a well and as such the DELG has determined that an EIA review is required.

Purpose/Rationale/Need: The subject property has been the site of a seafood processing facility since 1946. In 2018 a brand new state of the art facility was constructed on the property that replaced the original structure. The original facility used significantly more water in the processing process, which required four fresh water wells being used throughout the life span of the old plant. The new plant consumes less than 1/3 of the fresh water than the previous facility.

Currently the proponent has a large percent of foreign workers at the plant. These workers are housed at the proponent's cost in various locations within 30minutes of the facility with the workers being bused to and from the plant. The second phase of this project is to construct a 19-unit apartment on the subject property. The apartment complex will be for the seasonal workers.

Project Location: The subject property is located at 9 Quai Des Robichaud Road in Grand Barachois, New Brunswick, see attached Figure 1. The subject property is currently made up of five individual parcels that are owned by the proponent. As part of this project those five parcels are being combined into one large parcel. The properties have historically been developed with a fish processing plant and single family dwellings. Service New Brunswick identifies the parcels as PID 70636725, 70623376, 00854588, 00855098, and 70138276 and is located within the Beaubassin-est Rural Community planning area. The subject property covers an approximate area of 3.14ha.

Siting Considerations: The project location was chosen because of the existing facility and to minimize travel/commuting seasonal workers to and from their accommodations to the facility.

The land has two zones, the existing area where the processing plant is located is zoned Port, which allows a seafood processing facility. The area where the proposed apartment building is located was recently rezoned to RM- Medium Density Residential. There where seven conditions applied on the approval of re-zoning by the Beaubassin-est Rural Community

A-before a building permit can be issued for a multi family building, confirmation by environment be received that an EIA is not needed, in the event that it is needed a copy of the certificate of determination is to be send to the regional service commission South-East before a building permit can be issued

B-Before a building permit can be issued for a multi-family building, a access permit is to be obtained from the dept of transportation

C-Before a building permit can be issued for a multi-family building, an approval is to be

received from the health & or safety dept for the installation of an independent waste water system

D-Before a building permit can be issued for a multi-family building, lots in question are to be consolidated.

-In addition to the lots involved with the rezoning, the lot with the seafood processing facility (PID 70636725) will be included in the consolidation. This lot is being included so that one large septic system can be installed that will cover the domestic waste from the processing plant and the proposed apartment.

E-Before a building permit can be issued for a multi-family building, approval from the fire chief is to be received for access to the lot

F-Beaubassin East accepts the front setback to be reduced to 8.97m.

G- Beaubassin East accepts the minimum lot size be 6845m².

-The subject property as previously indicated will be combined with the lot that has the existing processing facility on it so the actual lot size will now be 3.14ha.

A copy of this rezoning is attached (only a French document was provided by Beaubassin-est.)

The site is easily accessible off both Rte 133 and Quai Des Robichaud Road. The proposed apartment complex has one proposed driveway off Rte 133 in close proximity to one of the driveways for the former residential homes.

The proposed development area on the project site does not fall within 30m of a costal marsh or provincially significant wetland, refer to attached GeoNB figures in appendix A. There are no regulated wetlands located within 30m of the proposed project.

Beaubassin-est Rural Community has adapted a new by-law requiring all habitable portions of a structure to be above geodetic elevation of 4.3m. This proposed new apartment building will be required to comply with the minimum 4.3m habitable portion. This will not be an issue as current geodetic elevation across the development area ranges from 7 to 8m.

Physical Components and Dimensions of the Project: The proposed site plan is attached. Currently the development area is flat and occupied by two existing residential structures, driveways and parking areas. A third residential building was removed in 2020. Pictures of the site are attached. There is reportedly a shallow well for one of the existing residential dwellings, and one for the building that was removed in 2020. Both wells will be abandoned and decommissioned as part of the construction work. Prior to be decommissioned they will be monitored as part of the proposed hydrogeological testing.

The existing septic system for the domestic waste from the processing facility is currently located south of the facility just north of the proposed apartment complex. A new modified on-site septic system is being proposed that will include domestic waste from the seafood processing plant and the proposed apartment. Details of the septic system is attached.

Construction Details:

The proponent would like to start construction in the fall of 2021 on the building with the goal to have the building ready for seasonal workers when the plant opens in open in April/May 2022. Site work (excavation, backfilling, parking lot construction) would be completed in 2021 with the remaining time spent on the building envelope.

The potential sources of pollutants generated during the construction are discussed in Section 4.

Operation and Maintenance Details: The proponent's existing facility and the proposed apartment will require a daily groundwater withdrawal rate that exceeds 50m³/day. A hydrogeological evaluation of the existing well that was drilled in 2019 for the processing plant was identified by NBDELG as being required for this project. In addition, a new well for the apartment will be drilled as part of this project.

The hydrogeological program will follow the NBDELG Water Supply Assessment Guideline. The program will consist of performing a 72 hr pump test on both the existing well and the new proposed well. The pumping tests will be completed when the processing facility is in operation so that worst case aquifer usage is being considered, which will allow for determining the long-term sustainability of the aquifer. Pumping test will be conducted as outlined in the guideline and will be performed during August of 2021 when groundwater recharge is minimal.

Based on annual reporting from 2020, the current seafood processing facility used an average of 47.5m³/day. The well driller indicated a well safe yield of 200imp gpm from well drilled in 2019. This well will be pumped using the currently installed submersible pump.

The proposed daily water demand for the proposed apartment building is 42.75m³/day (29.7l/min), which is based on an average of 19, 4-bedroom residential units and each residential unit requiring 2250l/day (5 person @ 450l/day). A WSSA application to complete the hydrogeological assessment for this development is attached is Appendix C.

Project Related Documents: The proponent provided the approval to operate (I-9997) which is valid from March 8, 2018 until March 7th 2023. In addition, the annual reports submitted to DELG as required by the approval were provided. Also provided was the recent approval for the rezoning of the subject parcels to allow for the construction of the apartment building.

3 Description of the Existing Environment

Physical and Natural Features:

- Based on a topographic survey of the site, surface elevation across the site is between 7 and 8 metres above mean sea level.
- The majority of the subject property is located adjacent the intersection of Rte. 133 and Quai Des Robichaud Road. There is a long narrow strip of land that does extend to the Northumberland Strait. Surface water drainage across the site is expected to drain north and westerly toward the Strait.
- Shallow groundwater flow across the property is expected to follow the local topography, which slopes towards the Northumberland Strait. Deeper groundwater likely flows in a similar direction toward the Northumberland Strait. The area to the south and east that could potentially contribute groundwater to the study area is occupied by the single family dwellings and vacant land.
- The regional bedrock geology is mapped as late Carboniferous stratified rock belonging to the Pictou Group, which is a subbasin of the Maritimes Carboniferous Basin. Mapping indicates that within the Pictou Group, the site may fall within the Richibucto Formation, which consists mainly of grey sandstone (Rivard et al. 2003).
- The Richibucto Formation has been described as one of the more productive sandstone formations in the province and has been described as a good aquifer throughout the Moncton basin. The majority of the domestic wells drilled in this formation generally yield 20+ igpm (Carr, 1959).
- Surficial geological mapping indicates that the area is underlain by late Wisconsinan age morainal sediments consisting of blankets and plains of Marine sediments, sand, silt, some gravel and clay generally 0.5m to 3m thick.
- There are no municipal wells, municipal wellfields, or protected watersheds within 500 metres of the subject site. Surrounding properties rely on private wells to supply potable water. Within 500 metres of the subject site there are approximately 125 seasonal/permanent residents.
- There were no regulated wetland identified on the GEONB mapping near the subject property boundary. A copy of the GeoNB mapping is attached (Figure 3).
- Atlantic Canada Conservation Data Centre search results included the following:
 - Within the study area, there were 19 records of 11 vascular flora
 - Of the 11 flora records non were endangered according to the report.
 - Within the study area, there were 168 records of 36 vertebrate, 7 records of 3 invertebrate fauna.
 - Of the 39 fauna records, one was endangered. The piping plover is listed as endangered. There were 29 records within 2.5km of the subject property. Piping plover habitat includes gravel-sandy beaches for nesting. The subject property where the proposed apartment building is proposed does not have the habitat for piping plover nesting.
 - Within the study area, there were 2 managed areas.
 - Petit Barachois ESA

- Ducks Unlimited Canada Conservation Lands. Neither of these managed areas are on the subject property.
- There are two known sensitive species to be located within the study area. These include the Bald Eagle and Peregrine Falcon.

The following are some of the references and personnel that were contacted and used in order to gather information regarding the physical and natural features of the subject and surrounding properties.

1. Atlantic Canada Conservation Centre
2. Environment Canada Species at Risk website - <http://www.sararegistry.gc.ca>
3. Canadian Species at Risk. Committee on the Status of Endangered Wildlife in Canada. Web site: <http://www.cosewic.gc.ca>
4. Canadian Wildlife Service website - <http://www.naturecanada.ca>
5. Department of Environment Government website – designated wellfields - <http://www.gnb.ca/0009/0371/0001/0003.html>, and protected watersheds - <http://www.gnb.ca/0009/0371/0004/0003.html>.

Cultural Features: None observed or reported on the subject site or adjacent properties.

Existing and Historic Land Uses: Historical information was obtained through a review of historical aerial photos (1944, 1953, 1963, 1976, 1982, 2001, 2011, 2020). According to the proponent, the subject property has been developed since 1946. Aerial photos show the existing residential properties along Rte. 133 in the aerial photo from 1944. The original processing plant is visible in the aerial photo from 1953 with the new facility visible in the aerial photo from 2020.

4 Summary of Environmental Impacts

The activities for this project involve the construction of a two storey apartment building complete with surface parking. Potential Environmental Impacts associated with the construction of the apartment building is soil disturbance, heavy equipment being used on the site for site preparation. There could be an accidental release of hazardous materials such as fuels and lubricants during the construction along with sediment laden runoff. There is no work to occur within 400m of the existing shoreline bank along the Northumberland Strait.

5 Summary of Proposed Mitigation

The potential environmental impacts listed in Section 4 are discussed further below along with any proposed mitigation.

1. Accidental release of hazardous materials: In order to minimize the risk of a release of hazardous materials the following best management practices will be employed during the drilling.

- Refuelling of equipment, if required, will take place in designated areas where an impermeable surface will be prepared so that a release of fuel or oil does not enter the surface water. The refuelling areas will be located on level terrain and a minimum of 30 metres from any surface water.
- Any required maintenance work would be performed offsite.

The latest CSA standard for emergency response planning will be reviewed prior to construction. The following standard emergency spill response measures will be followed.

- During construction activities, absorbent material will be kept on-site at all times for immediate response in the event of a spill.
- In the event of a spill, all work will be stopped and a supervisor notified immediately.
- A record of the incident will be taken which will include the personnel and machinery involved, spill containment measures employed, quantity and type of material spilled, date and time of occurrence, and agencies notified.

All necessary actions will be taken to stop the spread of spilled material. Actions may involve ditching, blocking drainage pathways, and using absorbent materials.

Any spills or leaks, such as those from machinery or fuel storage tanks, will be promptly contained and cleaned up. Actions may involve ditching, blocking drainage pathways, and using absorbent materials. In addition, any spills or leaks will be reported to the 24-hour environmental emergencies reporting system (1-800-565-1633) and to the NBDELG Regional Office in Moncton (506-856-2374).

In addition to the above noted mitigation measures, the following standard NBDTI EMM Mitigative measures will be followed throughout the life of the project:

- 5.3 – Clearing
- 5.6 – Dust Control
- 5.7 – Erosion and Sediment Management
 - 5.8.1 – Excavation
- 5.10 – Fire Prevention and Contingency
 - 5.11 – Grubbing
- 5.12 – Spill Management
- 5.13 – Storage & handling of Petroleum Products
- 5.14 - Storage and Handling of other Dangerous Materials
- 5.23 – Working Near Environmentally Sensitive Areas.

The proponent will regularly consult Environment Canada's local forecast at <http://www.weatberoffice.ec.gc.ca/> so that construction-related activities can be scheduled accordingly.

6 Public Involvement

As part the recent rezoning there was a public form made available to the surrounding public. Phil Robichaud from the Planning commission provided details on what was completed and they are outlined below.

How many neighbours were advised of the project both directly (letters) and indirectly (was it put in the newspaper)?

Every neighbour within a 100 meter radius was sent a letter. See attached 100 m buffer map.

Notices for the rezoning were posted in the newspaper (Moniteur Acadien) and on the Municipalities website. (March 3, 2021)

What was the timeline for allowing for response from the public? Where there any responses from the Public?

The public could comment on the request with a written letter from March 3, 2021 to the date of the public hearing (March 29, 2021) or could present themselves to the public hearing and express their comments / concerns. A report was available during those dates outlining the details of the proposal.

Where there any responses from the Public?

One citizen joined the public hearing through zoom. They did not have any objections. No written letters were received.

YouTube link for the recording of the public hearing:

<https://www.youtube.com/watch?v=6rK2sBRrDWw>

The proponent feels that the surrounding properties have been adequately notified of the project and there were no written letters received by the planning commission as stated by Mr. Robichaud. In addition to what has been completed to date, the following additional stakeholders will be contacted directly via a letter in order to obtain input on the project:

- Elected officials and First Nations representatives.

The letter will outline the scope of the project and will include a schematic of the development. Contact information for any comments will also be provided. The public will be given thirty days to provide comments. Once the comments have been received, a report will be prepared regarding the public's input. The report will be submitted within sixty days of project registration.

Route 133 (PID/NID 70623376 / 00854588 / 00855098 / 70138276)

Beaubassin Est/East

Date: 2021-01-25



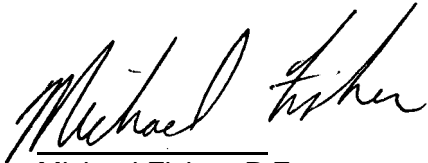
7 Approval of the Undertaking

Approvals will be required from the following authorities: New Brunswick Department of Environment prior to being able to withdrawal more than 50m³/day from the existing onsite well and from a new well yet to be drilled for the apartment building. The proposed onsite septic disposal system for both the apartment building and the seafood processing plant requires approval from the New Brunswick Department of Health.

8 Funding

No applications for a grant or loan of capital funds from a government agency have or will be submitted. Edmond Gagnon Ltd. will be funding the project.

9 Signature



Michael Fisher, P.Eng

June 30th/2021

Date

APPENDIX A

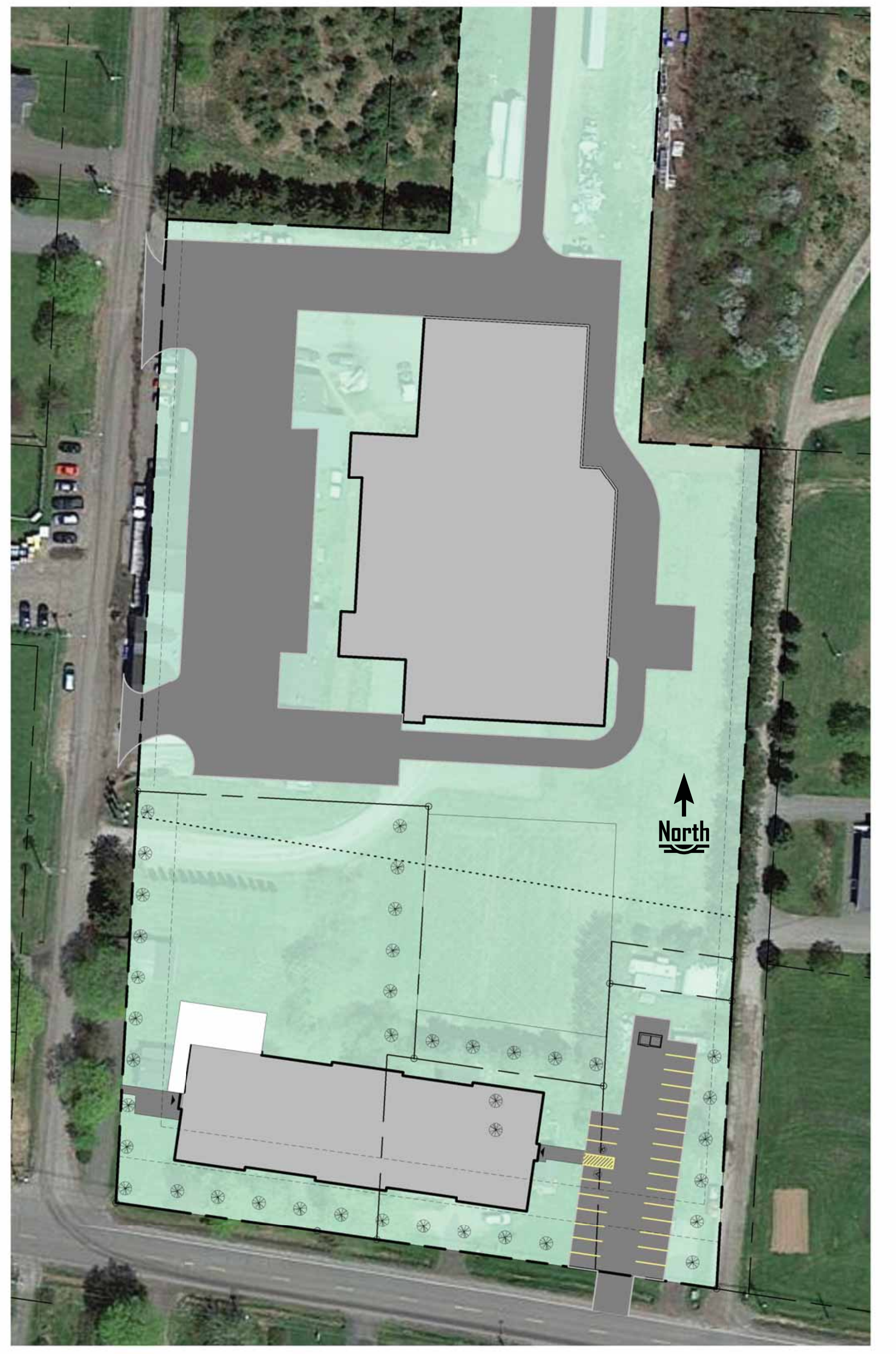
FIGURES

SCHEMATIC SUMMARY	
LOT INFO	
PID	70636725, 00854588, 70138276, 00855098, 70636725
Physical Address	
Lot Area	70,804 sq.ft / 6,578 m ²
Current Zoning	RR
Proposed Zoning	RM
Maximum Lot Coverage	35%
Proposed Lot Coverage	32.7% (building & parking)
Maximum Lot Area	8,050 m ²
Proposed Lot Area	6,578 m ²
PARKING	
Required Parking	24
Required Parking Ratio / Unit	1.25
Required Bicycle Parking	-
Surface Parking	24
Underground Parking	n/a
Barrier Free Parking	2
Total Parking	26
Total Parking Ratio / Unit	1.37
Bicycle Parking	12
Interior Parking Landscape %	0
BUILDING INFO	
Building Footprint	1,410m ² / 15,178 sq.ft
Storeys	2
Building Height	5.5m
Max Allowable Height	15m
Construction	Combustible - Wood
Total Residential Units	19
Total Commercial Units	0
Min. Geodetic Elevation	-
Misc	-
MATERIAL	
Material Requirement 1	-
Material Requirement 2	-
Material Requirement 3	-
REQUIRED VARIANCE	
Variance 1	All lots to be combined, lots where there is residential to have partial zoning to RM, Remainder of lot to remain Portuaire Zoning

Disclaimer: This preliminary schematic site plan is based on site information provided by the client, or found on a public domain. This site plan is a graphical representation which approximates the size, configuration and location of features. This plan is not intended to be used for legal descriptions or to calculate exact dimensions or areas. Several yet unknown factors may affect the functionality of this site plan, including existing topography, service easements, soil conditions, etc.



SITE PLAN - APT
1 : 350



SITE PLAN - MASTER
1" = 50'-0"



**"Not For Construction"
CONCEPTUAL ONLY**

ISSUE	DESCRIPTION	DATE

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THIS DRAWING MAY NOT BE USED IN WHOLE OR IN PART FOR ANY PROJECT OTHER THAN THAT DESIGNATED HEREIN.

ANY CHANGES TO THIS DESIGN, PRIOR TO OR DURING CONSTRUCTION, MUST BE APPROVED BY THE ARCHITECT & ARCHITECTURAL DESIGNER.

ALL CONTRACTORS MUST CONFORM TO ALL REGULATIONS, MUNICIPAL AND PROVINCIAL BY-LAWS AND THE NATIONAL BUILDING CODE OF CANADA.

ALL REQUIRED PERMITS MUST BE OBTAINED PRIOR TO ANY CONSTRUCTION.

Rev. #	Description	Date	Stamp

Architectural Consultant:

Architectural Designer:

spitfire DESIGN CO.
171 Lutz Street, Moncton, NB E1C 5E8
Bus: (506) 855-3777 Cell: (506) 312-2777 eMail: denis@spitfiredesign.ca

Client:

Edmond Gagnon Ltd.

Drawing Title:

SITE PLAN

Project:

Multi-Unit Living Complex
Route 133, Boudreau Est

Date:

December 13th, 2020

Checked by: B.K.O

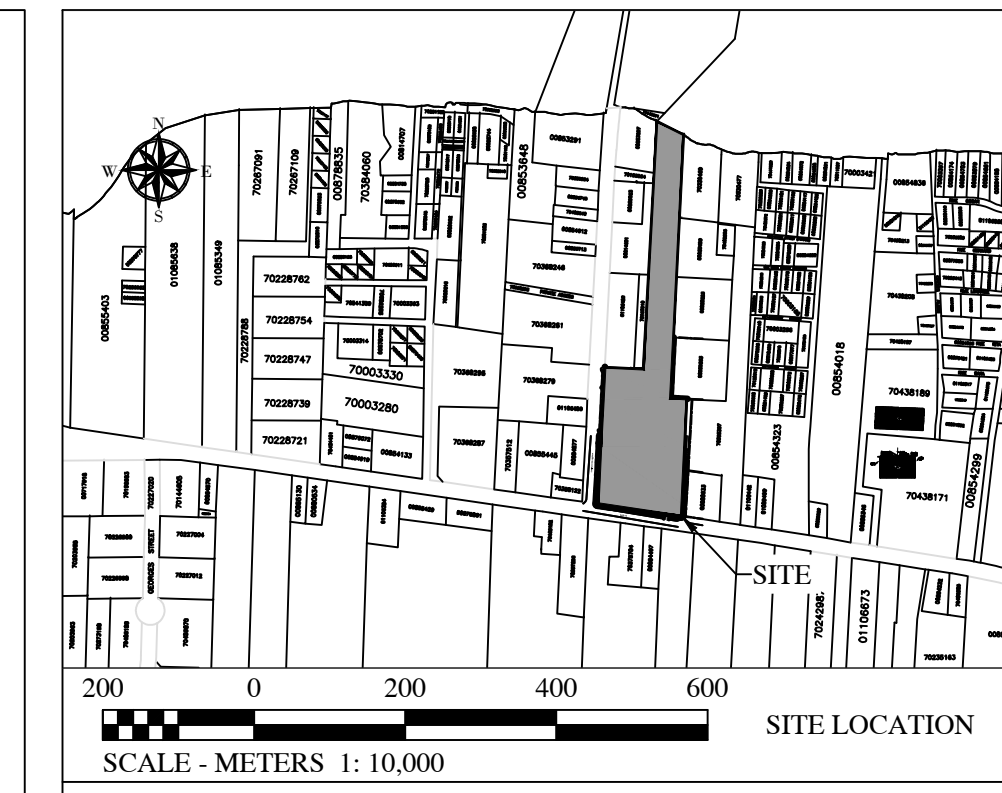
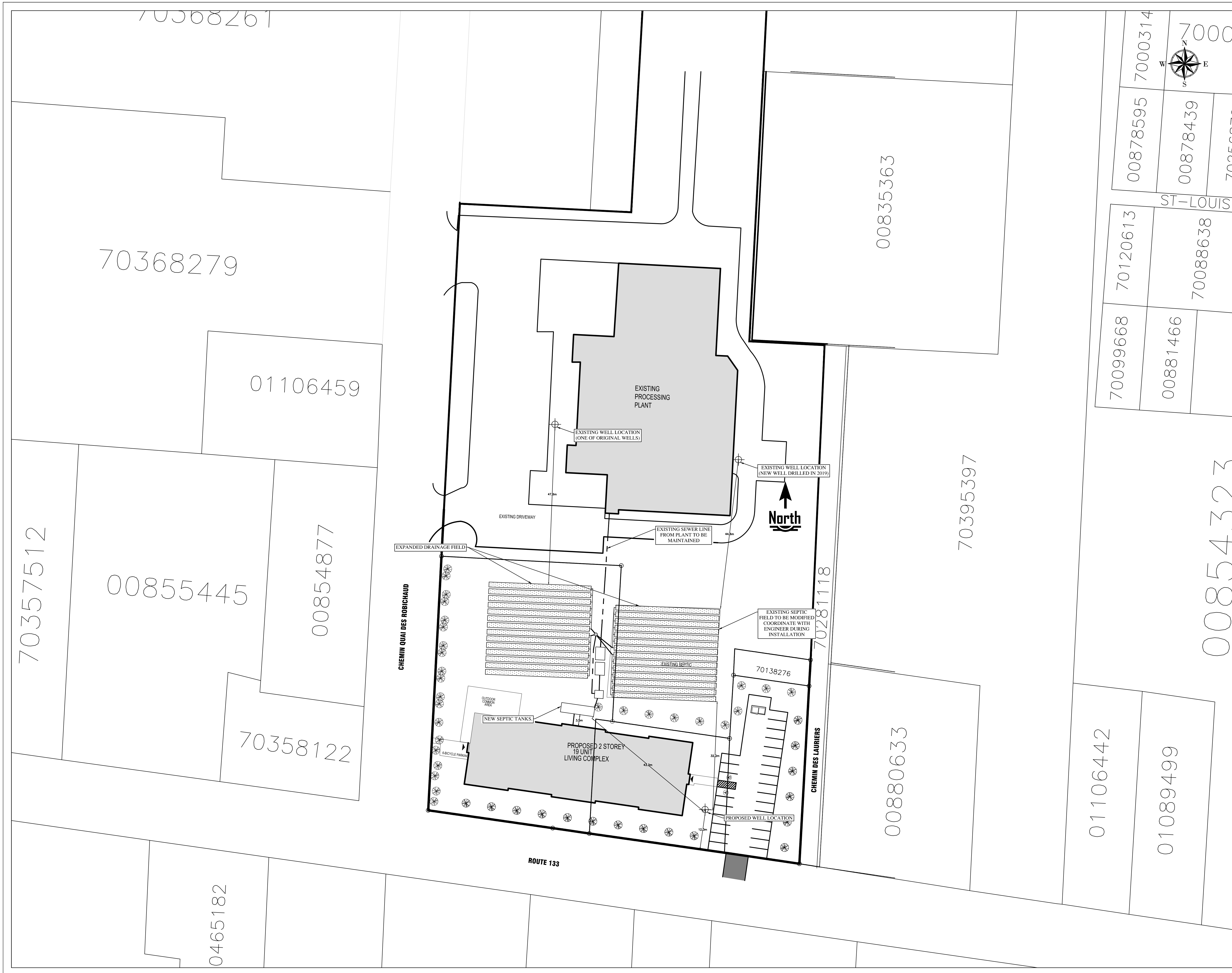
Drawn by: B.K.O

Scale: AS NOTED

Sheet: **A0.2**

Revision:

Flight no: 4337



Notes:
 -Five parcels to be consolidated as part of this work.

No.	Issue	Date
1	EIA REGISTRATION	JUNE 2021
2		
3		

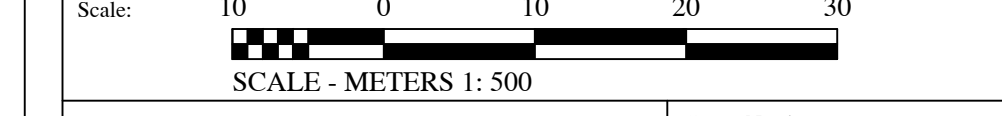


Project Title
APARTMENT BUILDING & PROCESSING PLANT
 1662 RTE 133
 GRAND BARACHOIS, N.B.

Drawing Title
OVERALL SITE PLAN
 SHOWING EXISTING AND PROPOSED WELL LOCATIONS

Project No. **DE155**

Dwg. No. **DE15502**



Const. North

Drawn By: **ACB**
 Designed By: **MJF**
 DWG. Design Ckd. By: **MJF**
 PAGE: **C-1**

Google Maps 1671 NB-133



Image capture: Jun 2019 © 2021 Google

Beaubassin East, New Brunswick

Google Maps 1663 NB-133



Image capture: Jun 2019 © 2021 Google

APPENDIX B

ADDITIONAL DOCUMENTATION



APPROVAL TO OPERATE

I-9997

Pursuant to paragraph 8(1) of the *Water Quality Regulation - Clean Environment Act*, this Approval to Operate is hereby issued to:

Edmond Gagnon Limited
for the operation of the
Fresh Fish Processing Plant in Grand-Barachois

Description of Source: **Fish/Shellfish Processing**

Source Classification: **Fees for Industrial Approvals
Regulation - Clean Water Act** **Class 3**

Parcel Identifier: **70624366, 70624374, 00853895, 00853697**

Mailing Address: **9 Quai des Robichaud Road
Grand-Barachois, NB E4P 8A4**

Conditions of Approval: **See attached Schedule "A" of this Approval**

Supersedes Approval: **I-8293**

Valid From: **March 08, 2018**

Valid To: **March 07, 2023**

Recommended by: _____

A handwritten signature in black ink, appearing to read "Francis Blais", written over a horizontal line.

Issued by: _____

for the Minister of Environment and Local Government

A handwritten signature in blue ink, appearing to read "Matt Daley", written over a horizontal line.

January 9, 2018
Date

SCHEDULE "A"

GENERAL INFORMATION

APPLICABILITY

This standard applies to all Class 3 and 4 fish plants operating in New Brunswick.

DEFINITIONS

"Approval Holder" means the person or entity to which this Approval is issued, as named on the certificate page of this Approval.

"Department" means the New Brunswick Department of Environment and Local Government.

"Facility" means the property, buildings and equipment located on the property identified by the Parcel Identifier(s) on the certificate page of this Approval, and all contiguous property in the title and/or control of the Approval Holder at that location.

"process water" means all water used by the Facility that has been in contact with the raw fish/shellfish, processed fish/shellfish, or fish/shellfish waste, and includes water utilized for the off-loading of fish/shellfish from fishing vessels and other means of transportation for use in the processing operation.

"outfall" means the final outlet or release point of the pipe used to discharge the process water.

"statutory holiday" means New Year's Day, Good Friday, Easter Monday, the day fixed by proclamation of the Governor-in-council for the celebration of the birthday of the Sovereign (Victoria Day), Canada Day, New Brunswick Day, Labour Day, the day fixed by proclamation of the Governor-in-council as a general day of Thanksgiving, Remembrance Day, Christmas Day and Boxing Day. If the Statutory Holiday falls on a Sunday, the following day shall be considered as the Statutory Holiday.

"normal business hours" means the hours when the Department's offices are open. These include the period between 8:15 a.m. and 4:30 p.m. from Monday to Friday excluding statutory holidays.

"after hours" means the hours when the Department's offices are closed. These include statutory holidays, weekends, and the hours before 8:15 a.m. and after 4:30 p.m. from Monday to Friday.

"environmental emergency" means a situation where there has been or will be a release, discharge, or deposit of a contaminant or contaminants to the atmosphere, soil, surface water, and/or groundwater environments of such a magnitude or duration that it could cause significant harm to the environment or put the health of the public at risk.

TERMS AND CONDITIONS

The Approval Holder shall operate the Facility in accordance with the following:

EMERGENCY REPORTING

- 1a. Immediately following the discovery of an environmental emergency, the Approval Holder shall notify the Department in the following manner.

During normal business hours, telephone the Department's applicable Regional Office **until personal contact is made** (i.e. no voice mail messages will be accepted) and provide as much information that is known about the environmental emergency. The telephone numbers for the Department's six Regional Offices are provided in the table below.

After hours, and during normal business hours when personal contact is not possible, telephone the Canadian Coast Guard **until personal contact is made** and provide as much information that is known about the environmental emergency. The telephone number for the **Canadian Coast Guard** is **1-800-565-1633**.

- 1b. Within 24-hours of the time of initial notification, a **Preliminary Emergency Report** shall be faxed by the Approval Holder to the Department's applicable Regional Office using the fax numbers provided below. The Preliminary Emergency Report shall clearly communicate as much information that is available at the time about the environmental emergency.

Within five (5) days of the time of initial notification, a **Detailed Emergency Report** shall be faxed by the Approval Holder to the Department's applicable Regional Office using the fax numbers provided below. The Detailed Emergency Report shall include, as minimum, the following: i) a description of the problem that occurred; ii) a description of the impact that occurred; iii) a description of what was done to minimize the impact; and iv) a description of what was done to prevent recurrence of the problem.

Office location	Phone	Fax
Bathurst Regional Office	(506) 547-2092	(506) 547-7655
Fredericton Regional Office	(506) 444-5149	(506) 453-2893
Grand Falls Regional Office	(506) 473-7744	(506) 475-2510
Miramichi Regional Office	(506) 778-6032	(506) 778-6796
Moncton Regional Office	(506) 856-2374	(506) 856-2370
Saint John Regional Office	(506) 658-2558	(506) 658-3046

LIMITS

2. The Approval Holder shall collect and treat all process water in a treatment system that removes all particles larger than 3 mm (1/8 inch) before the process water is discharged.
3. If the Facility's groundwater pumping capacity is or will be greater than 50 m³/day, the Approval Holder shall ensure that all projects that will increase water consumption or pumping capacity is registered with the Environmental Assessment Section of the Department.
4. The Approval Holder shall ensure that odour, dust, noise, or site run-off being released or discharged from the Facility does not cause adverse impacts to any off-site receptor. In the event impacts are suspected by the Department to be adversely impacting any off-site receptor, the Approval Holder may be required to investigate the degree of impact and/or develop, submit, and implement a Prevention and Control Plan in accordance with a timetable established by the Department. The plan shall be submitted in writing to the Department for review and approval prior to implementation.

FACILITY MANAGEMENT

5. Unless written permission from the Department is obtained to do otherwise, the treated process water shall be discharged by means of a pipeline having an outfall located below the low water mark. The pipeline and associated outfall may only be removed in the case of extreme weather conditions, such as storms and/or ice buildup. The pipeline must be reinstalled or repaired as soon as weather conditions permit. The Approval Holder shall notify and report all such occurrences to the Department's applicable Regional Office following the Emergency Reporting Section of this Approval.
6. Unless it is unsafe or the Facility uses a common outfall, the Approval Holder shall inspect the shore around the outfall at noontime and at the end of each day when process water is discharged. The Approval Holder shall collect any solids on the shore which have been deposited from the outfall.
7. The Approval Holder shall ensure that good housekeeping measures are practiced at the Facility to ensure the proper storage of fish/shellfish waste. As a minimum, all containers used to store fish/shellfish waste shall be sealed to reduce odour impacts and seagull nuisance.
8. The Approval Holder shall dispose of all solid fish/shellfish waste at a fishmeal processing plant and/or composting facility approved by the Department, or in another manner approved by the Department.

9. The Approval Holder shall ensure that all chemicals stored at the Facility are located in a dedicated Chemical Storage System. The system shall be set up to ensure that all chemicals are:
- a) secured in sealed and chemically resistant containers;
 - b) away from high traffic areas and protected from vehicle impacts;
 - c) away from electrical panels;
 - d) in a containment area that has secondary containment adequate to contain 110 % of the nominal volume of the largest container in the containment area;
 - e) in a containment area that is designed to prevent contact between incompatible chemicals; and
 - f) in a containment area designed to prevent the release or discharge of chemicals to the environment as a result of a spill.
10. **Within 2 years of the issuance of this approval**, the Approval Holder shall ensure that a cumulative flow meter is installed and in working order on every groundwater well used by the Facility.

TESTING AND MONITORING

11. The Approval Holder shall conduct any testing and monitoring at such times and in such manner as the Department may in writing require.
12. Once the groundwater well flow meters are installed, the Approval Holder shall ensure that the amount of water pumped and the time of the reading at each groundwater well are recorded daily. These records shall be kept at the Facility for a minimum of two (2) years and made available to the Department upon request.

REPORTING

13. In the event of a small spill or leak of liquid materials, the Approval Holder shall act first to contain, and then to clean up the spilled or leaked material and mitigate any resulting impacts as soon as the spill or leak is detected. If the spill or leak results in an "environmental emergency" as defined in this Approval, the Approval Holder shall report the event in accordance with the Emergency Reporting section of this Approval. If the spill or leak is not an "environmental emergency", the Approval Holder shall report this event to the Department's applicable Regional Office by fax, within one business day, identifying the material spilled, the approximate amount of liquid spilled, the location of the spill and the method(s) used to clean up the liquid.
14. **By February 15 of each year**, the Approval Holder shall submit to the Department an Annual Environmental Report containing the following information for the previous calendar year:
- a) the number of processing days per season/specie (including average hours/day);
 - b) the volumetric flow rate of the process water in cubic metres per day (m³/day);

- c) a description of the method used to determine the volumetric flow rate of the process water;
- d) once the well flow meters are installed, a summary of the water pumped from each well;
- e) the solid fish/shellfish waste disposal locations; and
- f) a summary report of all small spill and/or leak events at the Facility, including the date, location, approximate volume, and method of clean-up for each spill and/or leak.

Prepared by:



Francis LeBlanc, P.Eng.
Approvals Engineer
Authorizations Branch



ANNUAL ENVIRONMENTAL REPORT

2019 PRODUCTION

EDMOND GAGNON LTD.

1) Please see attachments for the results of the sampling and testing required (RPC results).

2) Production for the 2019 season:

May: snow crab production; 23 days	Total: 23 days
June: lobster production; 27 days	Total: 27 days
July : lobster production; 3 days	Total: 3 days
August: lobster production; 21 days	Total: 21 days
September; lobster production: 9 days	Total: 9 days
October; lobster production: 18 days	Total: 18 days
Novembre; lobster production: 17 days	Total: 17 days
Decembre; lobster production: 14 days	Total: 14 days

The total processing days is an amount of 132 days with a average of 10 hours per day. This gives a total of 1320 hours of processing.

3) The volumetric flow rate of the Process Water is 28,5 m³/day.

Calculations:

Flow meter annual mesure 995 550,13 us gallons

995 550 divided by 132 days = 7 542 us gallon/day

7 542 us gallon/day = 28,5 m³/day

4) There is no spill to report.

Christophe Ferrand

Edmond Gagnon Ltd. & Fisheries St Paul Ltée

Responsable de l'Assurance Qualité - Quality Assurance Manager

Office: 506-532-2445 - Fax: 506-532-1366 - Cell: 506-312-1119

ANNUAL ENVIRONMENTAL REPORT

2020 PRODUCTION

EDMOND GAGNON LTD.

1) Please see attachments for the results of the sampling and testing required (RPC results).

2) Production for the 2020 season:

April: snow crab production; 2 days	Total: 2 days
May: snow crab production; 21 days	Total: 21 days
June: lobster production; 25 days	Total: 25 days
July : lobster production; 25 days	Total: 25 days
August: lobster production; 18 days	Total: 18 days
September; lobster production: 10 days	Total: 10 days
October; lobster production: 20 days	Total: 20 days
Novembre; lobster production: 19 days	Total: 19 days
Decembre; lobster production: 6 days	Total: 6 days

The total processing days is an amount of 146 days with a average of 10 hours per day. This gives a total of 1460 hours of processing.

Our Crab and Lobster waste are collected and recycled daily by WE ACRES (81 We Acres St. Portage NB E4N2M2 Canada)

3) The volumetric flow rate of the Process Water is 47,5 m³/day.

Calculations:

Flow meter annual mesure 1 835 444 us gallons

1 835 444 divided by 146 days = 12 571 us gallon/day

12 571 us gallon/day = 47,5 m³/day

4) There is no spill to report.

Christophe Ferrand

Edmond Gagnon Ltd. & Fisheries St Paul Ltée

Responsable de l'Assurance Qualité - Quality Assurance Manager

Office: 506-532-2445 - Fax: 506-532-1366 - Cell: 506-312-1119

2021-04-28
14:58:50

ARRÊTÉ 09-1AAA

Établi en vertu de la LOI SUR L'URBANISME

Arrêté modifiant l'arrêté 09-1, intitulé « Plan rural de la Communauté rurale Beaubassin-est »

En vertu des pouvoirs que lui confère l'article 44 de la Loi sur l'urbanisme, le conseil de la Communauté rurale Beaubassin-est, dûment réuni, adopte ce qui suit :

Les Annexes « B-1 » et « B-2 » de l'arrêté 09-1, intitulées « Carte de zonage de la Communauté rurale de Beaubassin-est », sont modifiées par:

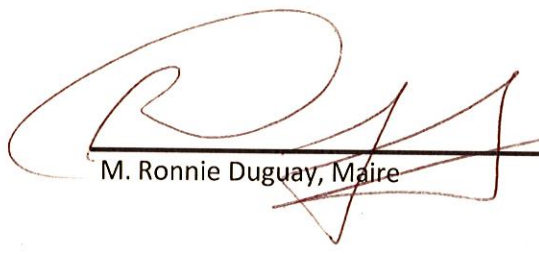
- 1) Rezoner les propriétés situées sur la route 133 et portant les NID 70623376, 00854588, 00855098 et 70138276 de la zone RR – résidentielle rurale à la zone RM – résidentielle à moyenne densité afin de permettre une habitation multifamiliale pour des travailleurs saisonniers

PREMIÈRE LECTURE PAR TITRE : 29 mars 2021
Date

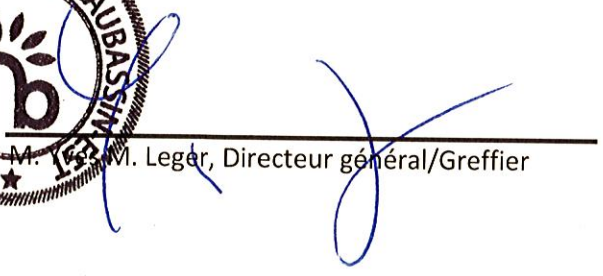
DEUXIÈME LECTURE PAR TITRE : 29 mars 2021
Date

LECTURE INTÉGRALE : 19 avril 2021
Date

TROISIÈME LECTURE PAR TITRE ET ADOPTION : 19 avril 2021
Date


M. Ronnie Duguay, Maire



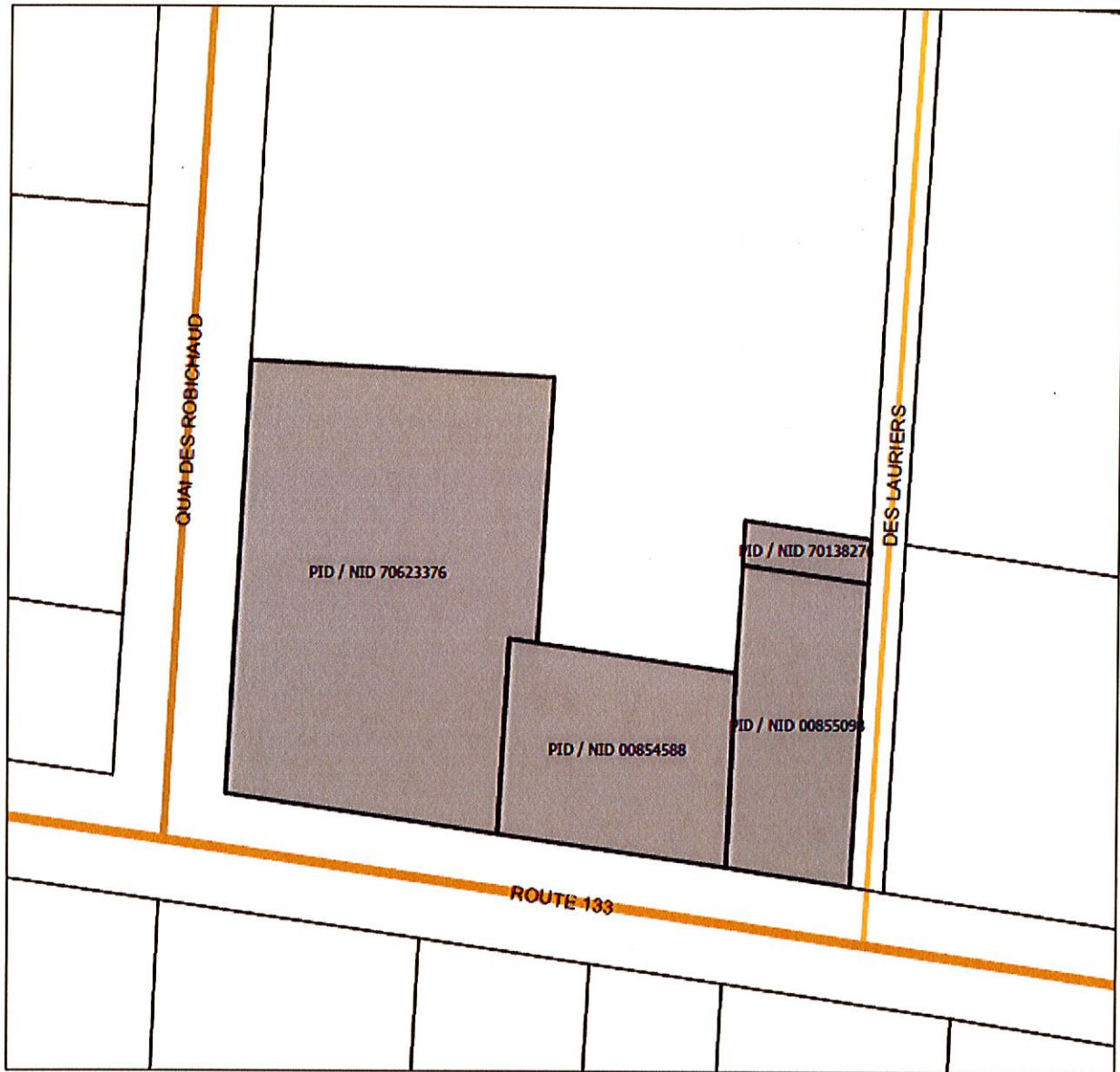

M. Legér, Directeur général/Greffier

Annexe A / Schedule A

Communauté rurale de Beaubassin-est

CARTE DE ZONAGE / ZONING MAP

Date: 2021-01-25

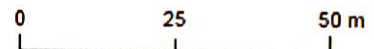


Legend



Rezonage de la zone RR – Résidentielle rurale à la zone RM – Résidentielle moyenne densité afin de permettre une habitation multifamiliale pour des travailleurs saisonniers.

Rezoning from RR zone - Rural Residential to the MR zone – Medium Density Residential in order to permit a multiple unit dwelling for seasonal workers



**RÉSOLUTION DU CONSEIL ÉTABLIE
EN VERTU DE L'ARTICLE 59 DE LA LOI SUR L'URBANISME**

CONSIDÉRANT QUE Edmond Gagnon LTD. a fait une demande de rezonage pour des propriétés situées sur la route 133 et portant les NID 70623376, 00854588, 00855098 et 70138276 de la zone RR – résidentielle rurale à la zone RM – résidentielle à moyenne densité afin de permettre une habitation multifamiliale pour des travailleurs saisonniers

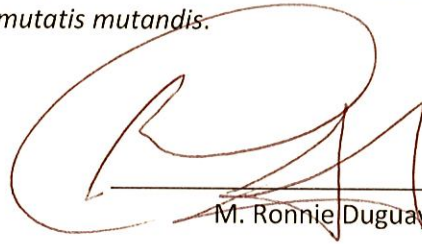
ET CONSIDÉRANT QUE le Conseil a approuvé cette demande sujette à des conditions;

IL EST RÉSOLU QUE :

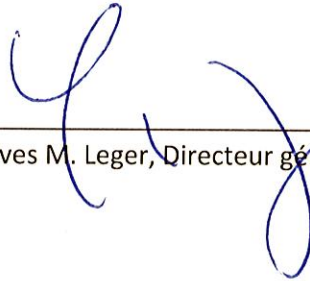
1. Nonobstant toutes autres dispositions au contraire, les terrains, bâtiments et constructions aménagés sur la propriété ci-haut mentionnée sont soumis aux modalités et conditions suivantes :
 - a) Qu'avant l'émission d'un permis de construction et/ou d'aménagement pour une habitation multifamiliale, une confirmation soit soumise par le ministère de l'Environnement qu'aucune étude d'impact sur l'environnement ne soit requis pour le projet. Toutefois, si une étude d'impact sur l'environnement est requise, une copie du certificat de détermination doit être fournie à la Commission de services régionaux Sud-Est avant l'émission d'un permis de construction et/ou d'aménagement;
 - b) Qu'avant l'émission d'un permis de construction et / ou d'aménagement pour une habitation multifamiliale, un permis d'accès soit reçu par le ministère des Transports et de l'Infrastructure pour le changement d'utilisation.
 - c) Qu'avant l'émission d'un permis de construction et / ou d'aménagement pour une habitation multifamiliale, une approbation pour l'installation d'un système autonome d'évacuation et d'épuration des eaux usées sur place soit reçue par le ministère de la Santé et / ou le ministère de la Sécurité publique;
 - d) Qu'avant l'émission d'un permis de construction et/ou d'aménagement pour une habitation multifamiliale, les propriétés portant les NID 70623376, 00854588, 00855098 et 70138276 doivent être consolidées;
 - e) Qu'avant l'émission d'un permis de construction et/ou d'aménagement pour une habitation multifamiliale, une approbation pour l'accès et le stationnement du chef des pompiers local doit être reçue;
 - f) Que nonobstant le paragraphe 10.5 (1) a) i. du Plan rural de la Communauté rurale de Beaubassin-est, le conseil accepte le bâtiment principal à un retrait de 8,97 mètres, et;

g) Que nonobstant le paragraphe 10.2 (5) d) ii. du Plan rural de la Communauté rurale de Beaubassin-est, le conseil accepte la superficie minimale du lot de 6 845 mètres carrés pour une habitation de 19 logements;

2. Sous réserve de l'Article 1 de la présente résolution, les dispositions prévues à la zone RM : Résidentielle moyenne densité du plan rural de la Communauté rurale de Beaubassin-est s'appliquent *mutatis mutandis*.



M. Ronnie Duguay, Maire



M. Yves M. Leger, Directeur général/Greffier



DÉCLARATION SOLENNELLE

Moi, Yves M. Leger, de la Communauté rurale de Beaubassin-est, comté de Westmorland, province de Nouveau-Brunswick, étant directeur général/greffier, déclare solennellement,

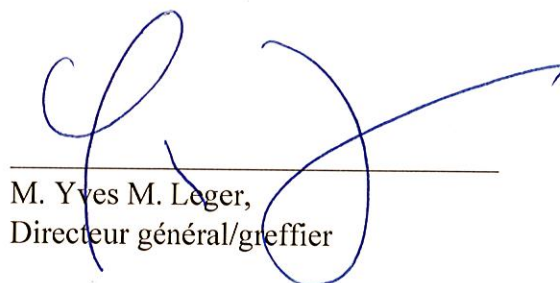
1. Que je suis le directeur général/greffier de la Communauté rurale de Beaubassin-est, **une corporation municipale**, et que je connais personnellement les faits déclarés ci-dessous.
2. Que les dispositions des articles 59, 110, et 111 de la *Loi sur l'urbanisme* furent complétées à l'égard de l'arrêté no **09-1AAA** intitulé « Arrêté modifiant l'arrêté adoptant le Plan rural de la Communauté rurale Beaubassin-est », adopté par le conseil municipal à la réunion ordinaire du 19 avril 2021.

Et je fais cette déclaration solennelle la croyant vraie en toute conscience et sachant qu'elle a la même valeur et les mêmes effets que si elle était sous serment et aux termes de la *Loi sur la preuve*.

Déclaration faite devant moi en la Communauté rurale de Beaubassin-est, du comté de Westmorland, province du Nouveau-Brunswick, le 26 Avril 2021.



André Daigle
Commissaire aux serments
En ma qualité d'avocat



M. Yves M. Leger,
Directeur général/greffier



FISHER ENGINEERING LTD.

40 Fairfield Road
Lower Coverdale, New Brunswick E1J 0A2
Phone: 506.863.1991

March 24th, 2021

File: DE155

Via email: On-Site.SewageDisposal@gnb.ca

Mr. William Fallow, P.Eng
NB Department of Public Safety
460 Two Nations Crossing,
Fredericton, NB

Attention: Mr. Fallow:

***RE: Addendum to On-Site Sewage Treatment Plant Application, Proposed
Apartment Development Edmond Gagnon Grand Barchois***

The following is a design for an onsite sewage treatment disposal system based on the New Brunswick Department of Health Technical Guidelines for On-Site Sewage Disposal Systems Version 6 and the Nova Scotia Department of Environment & Labour On-Site Sewage Disposal Technical Guidelines. Joel Leblanc Excavation is the contracted licensed installer for this project. This addendum is intended to accompany the On-Site Sewage Disposal Application that will be submitted by the licensed installer for the above noted property.

Property information:

Civic Address – 1662 Rte 133, Grand Barchois, NB.
Owner/Contact – Edmond Gagnon Ltd.
PID – 70636725, 70623376, 00854588, 00855098, 70138276
Area – +/- 3.14ha

Current Situation:

The owner of an existing fish processing plant is planning on constructing a 19unit apartment building for housing the seasonal workers. Currently there are five individual parcels that will be combined into one to allow for this development. The properties have historically been developed with a fish processing plant and single family dwellings. Currently there is the processing plant and two dwelling structures currently on site.

To ensure the lot size was adequate for a proposed disposal field, a new combined septic field is being proposed for both the existing processing plant and the proposed apartment. The proposed site development layout along with the on-site septic system is shown on the attached plan. The septic tanks and disposal field locations were chosen based on site elevations to allow for gravity flow into the septic tanks and to allow for connection of the existing infrastructure for the processing plant.

All required setbacks will be met on the proposed lot. The lot is currently developed with two existing single family dwellings and the processing plant.

Disposal Field Design:

Site Conditions:

Daily flow: 19 x 4 bedroom apartments = 25,840L/day (see attached)+ 100 employees industrial building with showers (100L/employee) = 10,000L/day
Q= 35,840L/day (see attached)

The soil characteristics encountered within the test pit included the following:
 H_{SOIL} = Depth of permeable soil (H_{SOIL}) = 0.3m silty sand (Type B).
Bedrock was not encountered within the test pit at 1.6 metres below ground surface.

There was no evidence of water in the test pit to a depth of 1.6m below the ground surface.

Disposal Field Loading Rate:

$$\text{Length of the pipe (L)} = \frac{Q(\text{L/Day})}{L_R \times \text{Trench Width (W)}} = \frac{35,840\text{L/Day}}{28\text{L/Day/m}^2 \times 1.5\text{m}} = 853\text{m of pipe}$$

(L_R = loading rate)

For the pressurized system the trench length I am recommending for this system is 30m off the main header. Therefore, there will be 28 rows of 30.48m (100'). The disposal field will be divided into four zones of 7 rows each. Each zone will be dosed alternatingly using a mechanical distribution valve.

Each trench within each zone is to be cut flat from the toe to the heel.

The entire area beneath all trenches is to be **WELL** scarified to a depth of **100mm**.

Refer to the attached design drawing DE15502 for the disposal field footprint.

Sewage System Materials List:

Below is a list of material. Refer to drawing DE15502 dated Mar. 24/21 for additional details.

[A] Septic Tank:

Tanks to be watertight prefabricated Tank [CAN/CSA-B66-10 (R2015)].

The Septic Tanks are to include, **2 new 3000igal tanks and maintain the existing 1000igal and 2000igal.**

[B] Effluent Filter:

Filter meeting NSF Standard 46 is to be installed at Outlet of last Septic Tank prior to the pump chamber.

[C] Effluent Piping from Pump Chamber to bed:

Watertight 50mm dia. SCH40 PVC, Spec. CAN/CSA B137.3-09

[Down] Slope $\geq 1\%$.

D] Pump Chamber:

Tank to be watertight reinforced Concrete Tank [CAN/CSA-B66-05].

The Pump Chamber is to be **1000gal**.

Install Audible & Visual HIGH LEVEL Alarms, & Level Control Floats. [Separate circuit from Pump].

Access to chamber is to be secured at grade or maximum 150mm below.

[E] Effluent Pump:

The submersible duplex effluent pump specifications are listed on the design drawings.

Pumps are to be cycled twice to ensure distribution to the Dispersal Pipe far end. All

electrical Connections are to comply with Canadian Electrical Code. Pump does is

2240L per zone, with each zone receiving 4 does per day.

[F] Effluent Distribution Pipe in Each Trench:

37.5mm dia. SCH40 PVC

Length = 30.48m/trench. Each trench is end feed through an end manifold as shown on the drawing.

Width of each trench = 1.5m

All joints are to be glued. Ends to be equipped with a threaded end cap cleanout

Perforations: **13mm** diameter holes at bottom center (1m centre/centre). Cover pipe with

50mm Crushed Rock [G] and Geotextile [H].

[G] Crushed Rock:

Clean/approved w/98% (Wt.) **<35mm** Screen & 98%(Wt.) **>12mm** Screen

Depth below 37.5mm diameter dispersal pipe = 300mm.

Depth above dispersal pipe = 50mm.

[H] Imported Filter Sand (below crushed rock trench):

Permeability: 1×10^{-4} m/sec $< K_{\text{Filter Sand}} > 5 \times 10^{-4}$ m/sec.

At water temperature of 20°C, Time $> 2\text{min}$ and $< 8\text{min}$.

600mm layer of **Filter Sand** below the crushed rock trench.

[I] Barrier material:

Non-degradable, non-woven Geotextile w/**Wt** $>50\text{g/m}^2$

Opening size $< 700\text{microns}$. Note $K > 1 \times 10^{-3}\text{m/sec}$.

[J] Topsoil and Seeding:

Minimum of 100mm of topsoil cover over Tanks and entire field. Entire area is to be seeded, which is the responsibility of the Installer/owner to have completed within six months of the disposal field installation.

Sewage Management Program:

In addition to any specifics by the NB Department of Safety, I request that the following become part of the Approval of this Application.

[A] The Effluent Filter as specified, or replacements are to remain part of the Plant for its lifetime.

[B] The number of residential units is never to be expanded beyond the proposed 19 and the average number of workers within the plant does not exceed 100 employees without consultation with the NB Department of Public Safety.

[C] I recommend that a flow meter be installed on the water supply to the apartment building to complement the meter currently installed at the processing plant. Weekly readings (time and flow) should be taken and recorded for future information.

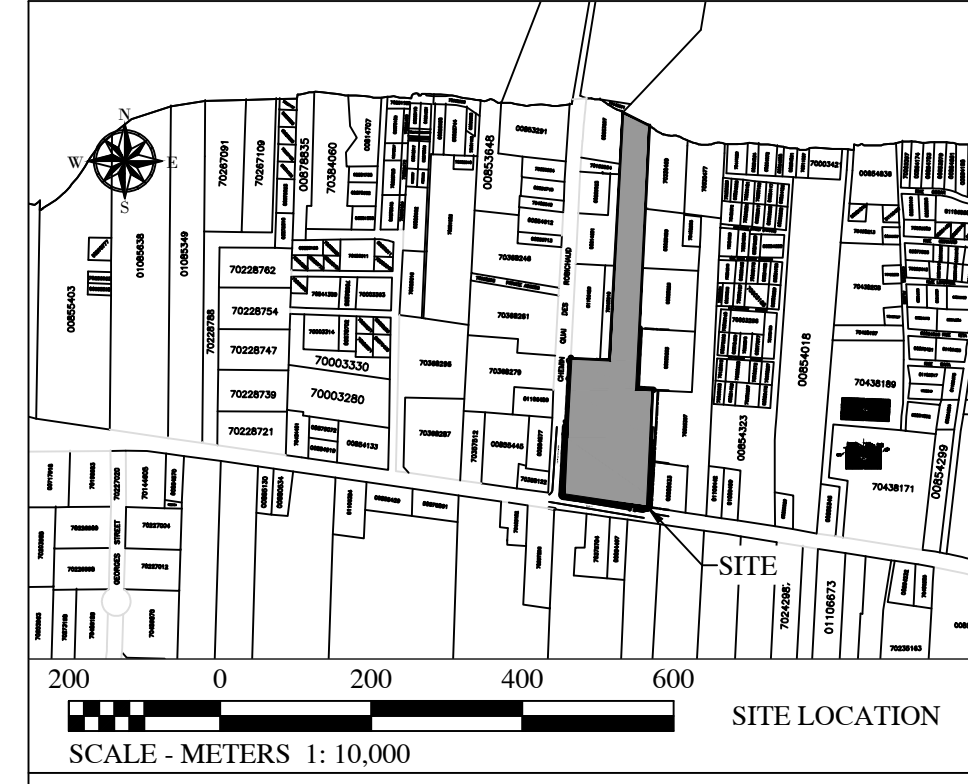
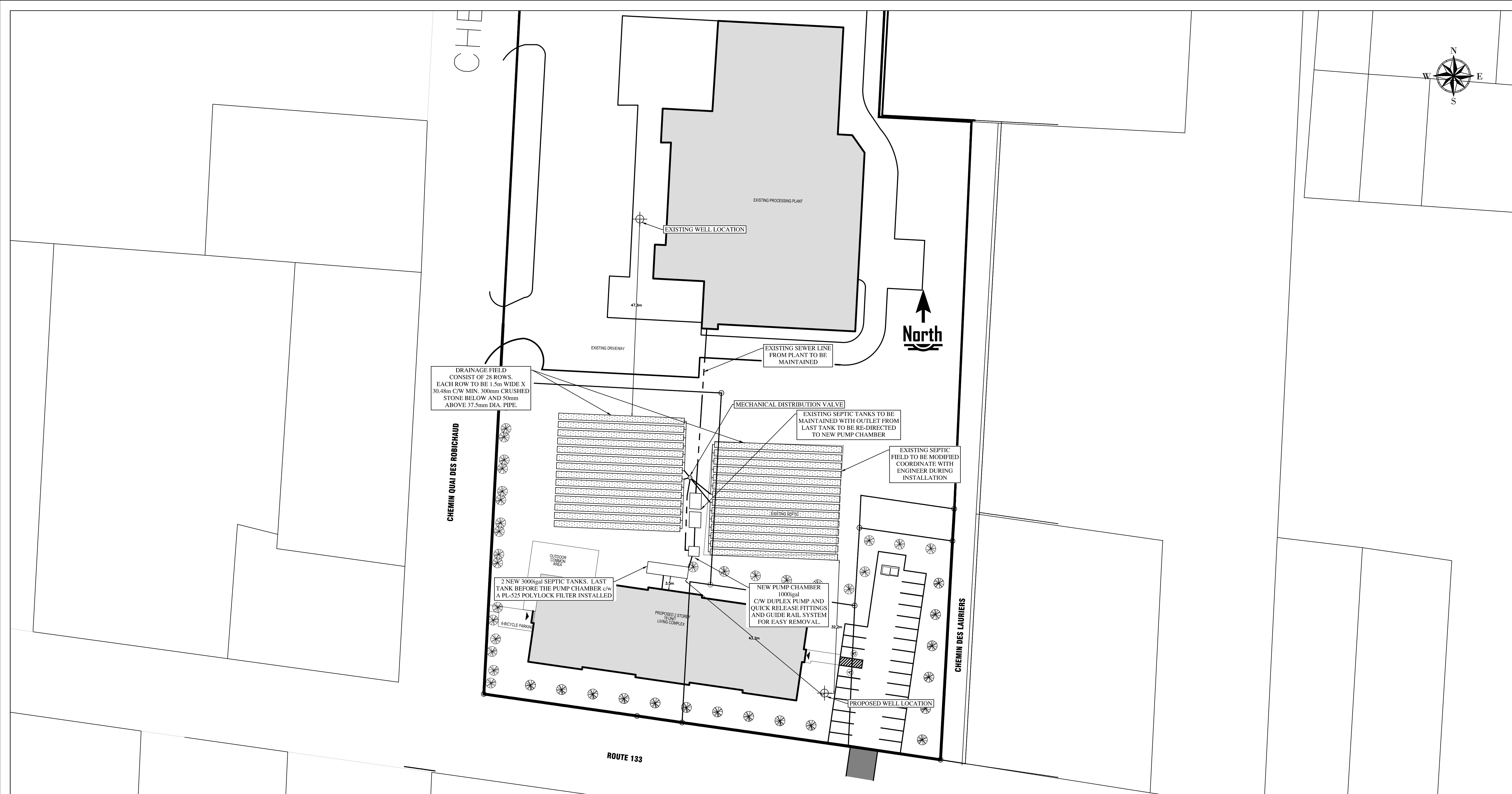
I trust this meets your requirements at this time. The New Brunswick Department of Safety Form A will be completed once the licenced installer has been chosen and the completed form will be sent for acknowledgement by the Inspector and Chief Plumbing Inspector. If you have any questions or require clarification, please contact the undersigned prior to taking any actions.

Regards,



Michael Fisher, P.Eng.

Enclosures



Notes:

- Five parcels to be consolidated as part of this work.
- All work to follow the New Brunswick Technical Guidelines for On-site Sewage disposal systems Version 6 and Regulation 2009-137 under the Province of New Brunswick Public Health Act.
- Estimated daily Sewage flow is 35,840L/day based on 19 four-bedroom apartments @ 340L/day/unit and 100employees at the plant @ 100L/day/employee.
- Submersible effluent Pumps to be Hydromatic Sheff100, 1hp or approved equivalent. Pumps to alternate doses of 2240L with 12 doses per per day.
- All electrical work to comply with the most recent electrical code and be performed by a licensed electrician.
- Control Panel to be CSA approved, weatherproof, have a high level alarm and be wired separately from the pumps. Control panel to be located adjacent to the pump chamber attached to a 4x4 post above the ground.

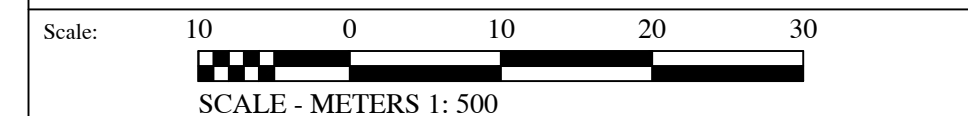
No.	Issue	Date
1	PUBLIC SAFETY APPROVAL	MAR. 2021
2	APPLICATION MODIFIED, ADDITIONAL LOT CONSOLIDATED	MAR. 2021
3		



Project Title
APARTMENT BUILDING & PROCESSING PLANT
 1662 RTE 133
 GRAND BARACHOIS, N.B.

Drawing Title
SEPTIC SYSTEM PLAN

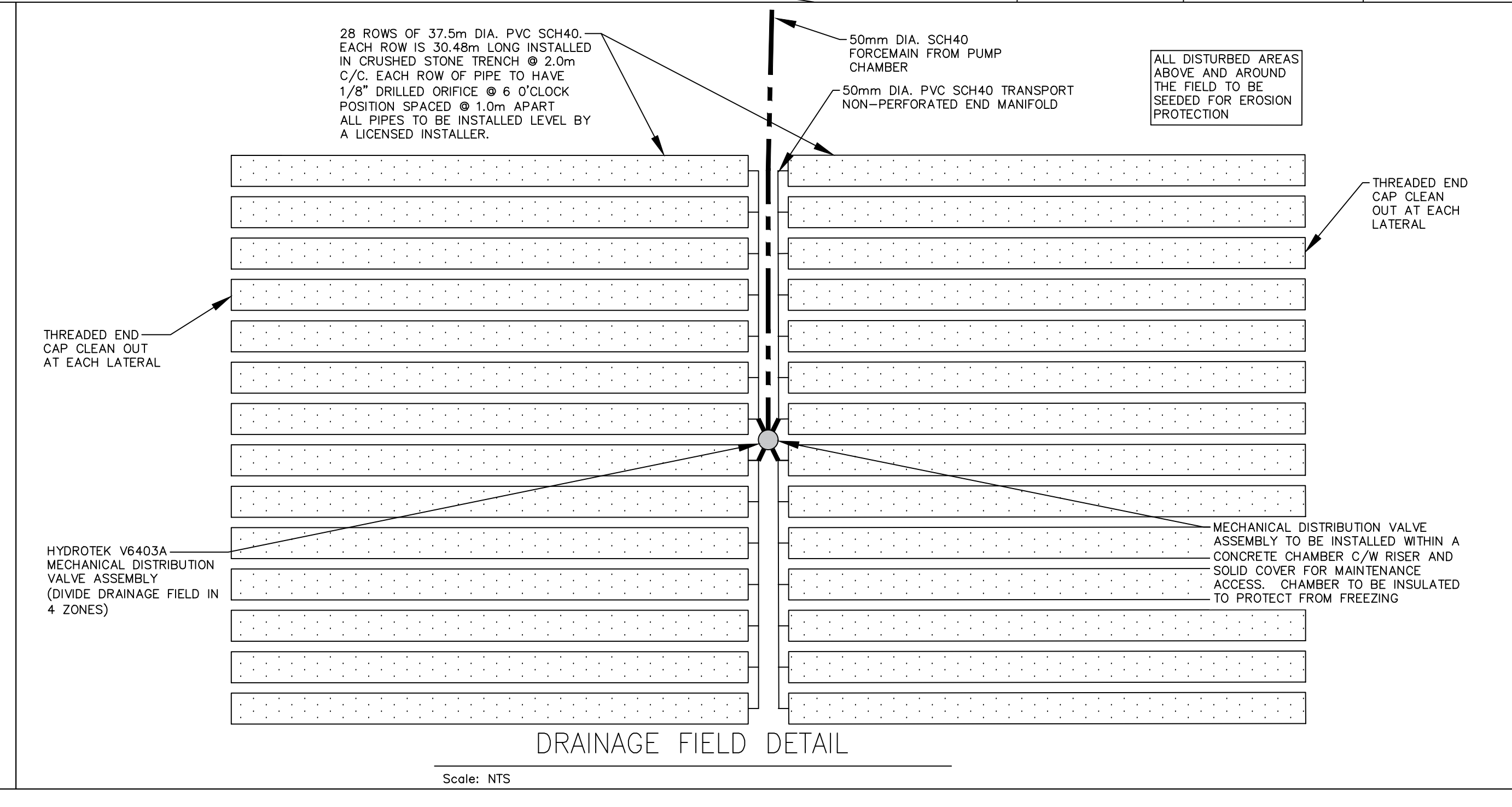
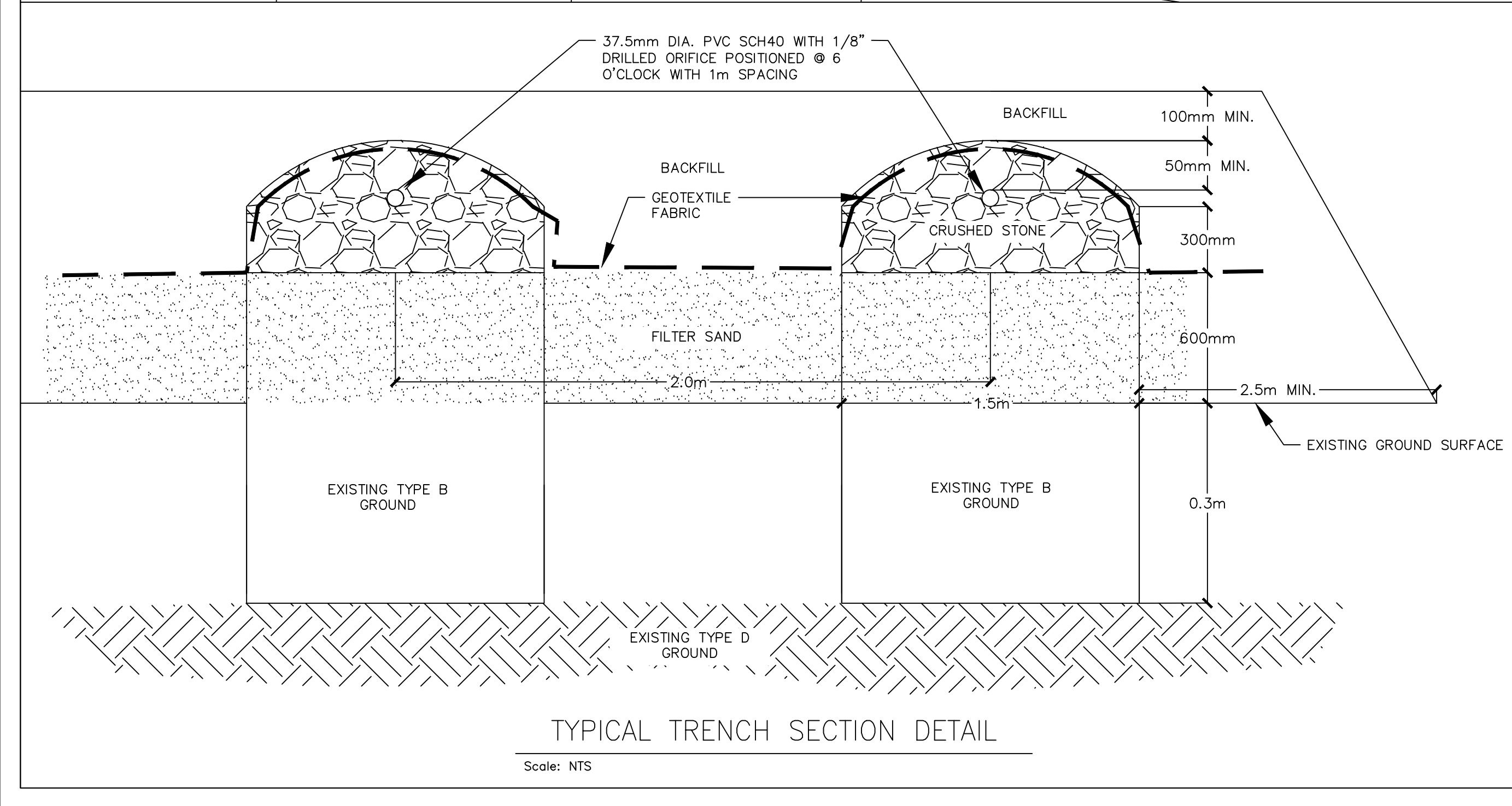
Project No. **DE155**
 Dwg. No. **DE15502**



Scale: 10 0 10 20 30
 SCALE - METERS 1: 500

Const. North

Drawn By: **ACB**
 Designed By: **MJF**
 DWG. Design Ckd. By: **MJF**
 PAGE: **C-1**



SANITARY - Peak Design Flow

Proposed Edmond Gagnon Apartment Development Grand Barachois

Based on Individual Flow Rate - *Atlantic Canada Standards and Guidelines Manual* - Apartment Building

1	Number of Apartment Units	N_{Units}	19	Units
2	Number of Occupants/Unit	$N_{occupants}$	4.0	Occupants/unit
	Flow Allowance - person	Q_{person}	340	L/person/day
	Average Daily Flow	$Q_{average}$	25,840 0.30	L/day L/s
3	Peaking Factor	M	2.0	2.0 minimum
4	Area	A	1.36	ha
5	Peak Extraneous Flow Allowance	i	0.14	L/s/ha
	Peak Extraneous Flow	$Q_{extraneous}$	0.19	L/s
Peak Design Flow		PDF	0.8	L/s

- 1 Enter number of units
- 2 Enter number of occupants/unit
- 3 Enter peaking factor. Assume 2.0 if unknown.
- 4 Enter tributary area
- 5 Enter extraneous flow allowance (0.14 new development / 0.28 infilled development)

$$PDF = Q_{operational} \cdot M + I \cdot A$$

DATA REPORT 6985: Beaubassin East, NB

Prepared 25 June 2021
by C. Robicheau, Data Manager

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1.0 Preface

- 1.1 Data List
- 1.2 Restrictions
- 1.3 Additional Information

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- 2.1 Flora
- 2.2 Fauna

Map 2: Flora and Fauna

3.0 Special Areas

- 3.1 Managed Areas
- 3.2 Significant Areas

Map 3: Special Areas

4.0 Rare Species Lists

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

5.0 Rare Species within 100 km

- 5.1 Source Bibliography



Map 1. A 100 km buffer around the study area

1.0 PREFACE

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

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

1.1 DATA LIST

Included datasets:

<u>Filename</u>	<u>Contents</u>
BeaubassineNB_6985ob.xls	Rare or legally-protected Flora and Fauna in your study area
BeaubassineNB_6985ob100km.xls	A list of Rare and legally protected Flora and Fauna within 100 km of your study area
BeaubassineNB_6985msa.xls	Managed and Biologically Significant Areas in your study area

1.2 RESTRICTIONS

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

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

1.3 ADDITIONAL INFORMATION

The accompanying Data Dictionary provides metadata for the data provided.

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

Plants, Lichens, Ranking Methods, All other Inquiries

Sean Blaney, Senior Scientist, Executive Director

Tel: (506) 364-2658

sean.blaney@accdc.ca

Animals (Fauna)

John Klymko, Zoologist

Tel: (506) 364-2660

john.klymko@accdc.ca

Plant Communities

Sarah Robinson, Community Ecologist

Tel: (506) 364-2664

sarah.robinson@accdc.ca

Data Management, GIS

James Churchill, Data Manager

Tel: (902) 679-6146

james.churchill@accdc.ca

Billing

Jean Breau

Tel: (506) 364-2657

jean.breau@accdc.ca

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

For provincial information about rare taxa and protected areas, or information about game animals, deer yards, old growth forests, archeological sites, fish habitat etc., in New Brunswick, please contact Hubert Askanas, Energy and Resource Development: (506) 453-5873.

For provincial information about rare taxa and protected areas, or information about game animals, deer yards, old growth forests, archeological sites, fish habitat etc., in Nova Scotia, please contact Donna Hurlburt, NS DLF: (902) 679-6886. To determine if location-sensitive species (section 4.3) occur near your study site please contact a NS DLF Regional Biologist:

Western: Emma Vost

(902) 670-8187

Emma.Vost@novascotia.ca

Western: Sarah Spencer

(902) 541-0081

Sarah.Spencer@novascotia.ca

Central: Shavonne Meyer

(902) 893-0816

Shavonne.Meyer@novascotia.ca

Central: Kimberly George

(902) 890-1046

Kimberly.George@novascotia.ca

Eastern: Harrison Moore

(902) 497-4119

Harrison.Moore@novascotia.ca

Eastern: Maureen Cameron-MacMillan

(902) 295-2554

Maureen.Cameron-MacMillan@novascotia.ca

Eastern: Elizabeth Walsh

(902) 563-3370

Elizabeth.Walsh@novascotia.ca

For provincial information about rare taxa and protected areas, or information about game animals, fish habitat etc., in Prince Edward Island, please contact Garry Gregory, PEI Dept. of Communities, Land and Environment: (902) 569-7595.

2.0 RARE AND ENDANGERED SPECIES

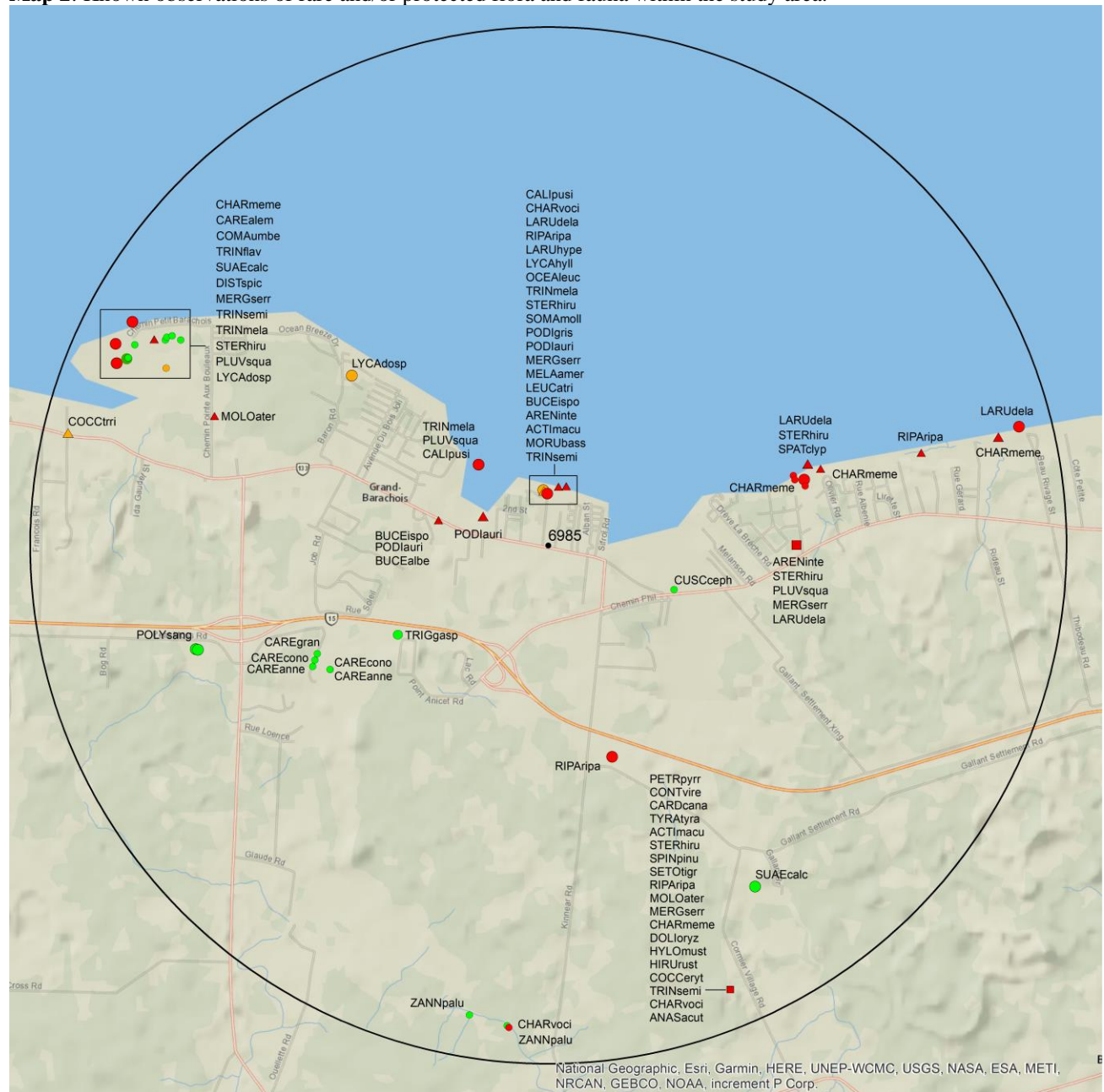
2.1 FLORA

The study area contains 19 records of 11 vascular, no records of nonvascular flora (Map 2 and attached: *ob.xls).

2.2 FAUNA

The study area contains 168 records of 36 vertebrate, 7 records of 3 invertebrate fauna (Map 2 and attached data files - see 1.1 Data List). Please see section 4.3 to determine if 'location-sensitive' species occur near your study site.

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



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

- HIGHER TAXON**
- vertebrate fauna
 - invertebrate fauna
 - vascular flora
 - nonvascular flora

National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

3.0 SPECIAL AREAS

3.1 MANAGED AREAS

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

3.2 SIGNIFICANT AREAS

The GIS scan identified 1 biologically significant site in the vicinity of the study area (Map 3 and attached file: *msa.xls).

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



4.0 RARE SPECIES LISTS

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

4.1 FLORA

	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)
P	<i>Carex annectens</i>	Yellow-Fruited Sedge				S1	2	2.4 \pm 0.0
P	<i>Cuscuta cephalanthi</i>	Buttonbush Dodder				S1S3	1	1.3 \pm 0.0
P	<i>Carex granularis</i>	Limestone Meadow Sedge				S2	1	2.5 \pm 0.0
P	<i>Carex albicans</i> var. <i>emmonsii</i>	White-tinged Sedge				S2	1	4.2 \pm 0.0
P	<i>Polygala sanguinea</i>	Blood Milkwort				S3	2	3.5 \pm 0.0
P	<i>Comandra umbellata</i>	Bastard's Toadflax				S3	4	4.1 \pm 0.0
P	<i>Carex conoidea</i>	Field Sedge				S3	2	2.4 \pm 0.0
P	<i>Zannichellia palustris</i>	Horned Pondweed				S3	2	4.6 \pm 0.0
P	<i>Suaeda calceoliformis</i>	Horned Sea-blite				S3S4	2	3.8 \pm 0.0
P	<i>Triglochin gaspensis</i>	Gasp Arrowgrass				S3S4	1	1.7 \pm 0.0
P	<i>Distichlis spicata</i>	Salt Grass				S3S4	1	4.4 \pm 0.0

4.2 FAUNA

	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)
A	<i>Charadrius melodus melodus</i>	Piping Plover melodus ssp	Endangered	Endangered	Endangered	S1B,S1M	29	2.5 \pm 0.0
A	<i>Hylocichla mustelina</i>	Wood Thrush	Threatened	Threatened	Threatened	S1S2B,S1S2M	1	4.6 \pm 7.0
A	<i>Hirundo rustica</i>	Barn Swallow	Threatened	Threatened	Threatened	S2B,S2M	4	4.6 \pm 7.0
A	<i>Oceanodroma leucorhoa</i>	Leach's Storm-Petrel	Threatened			S2B,SUM	1	0.6 \pm 0.0
A	<i>Riparia riparia</i>	Bank Swallow	Threatened	Threatened		S2S3B,S2S3M	5	0.6 \pm 0.0
A	<i>Dolichonyx oryzivorus</i>	Bobolink	Threatened	Threatened	Threatened	S3B,S3M	2	4.6 \pm 7.0
A	<i>Tringa flavipes</i>	Lesser Yellowlegs	Threatened			S4M	1	4.3 \pm 0.0
A	<i>Bucephala islandica</i> (Eastern pop.)	Barrow's Goldeneye - Eastern pop.	Special Concern	Special Concern	Special Concern	S2M,S2N	11	0.6 \pm 0.0
A	<i>Cardellina canadensis</i>	Canada Warbler	Special Concern	Threatened	Threatened	S3B,S3M	1	4.6 \pm 7.0
A	<i>Contopus virens</i>	Eastern Wood-Pewee	Special Concern	Special Concern	Special Concern	S4B,S4M	1	4.6 \pm 7.0
A	<i>Podiceps auritus</i>	Horned Grebe	Special Concern	Special Concern	Special Concern	S4N,S4M	9	0.6 \pm 0.0
A	<i>Sterna hirundo</i>	Common Tern	Not At Risk			S3B,SUM	21	0.6 \pm 0.0
A	<i>Podiceps grisegena</i>	Red-necked Grebe	Not At Risk			S3M,S2N	2	0.6 \pm 0.0
A	<i>Tringa melanoleuca</i>	Greater Yellowlegs				S1?B,S5M	4	0.6 \pm 0.0
A	<i>Leucophaeus atricilla</i>	Laughing Gull				S1B,S1M	1	0.6 \pm 0.0
A	<i>Larus hyperboreus</i>	Glaucous Gull				S2N,S2M	1	0.6 \pm 0.0
A	<i>Spatula clypeata</i>	Northern Shoveler				S2S3B,S2S3M	1	2.6 \pm 1.0
A	<i>Petrochelidon pyrrhonota</i>	Cliff Swallow				S2S3B,S2S3M	4	4.6 \pm 7.0
A	<i>Spinus pinus</i>	Pine Siskin				S3	2	4.6 \pm 7.0
A	<i>Charadrius vociferus</i>	Killdeer				S3B,S3M	4	0.6 \pm 0.0
A	<i>Tringa semipalmata</i>	Willet				S3B,S3M	14	0.5 \pm 0.0
A	<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo				S3B,S3M	1	4.6 \pm 7.0
A	<i>Molothrus ater</i>	Brown-headed Cowbird				S3B,S3M	5	3.5 \pm 0.0
A	<i>Somateria mollissima</i>	Common Eider				S3B,S4M,S3N	2	0.6 \pm 0.0
A	<i>Setophaga tigrina</i>	Cape May Warbler				S3B,S4S5M	1	4.6 \pm 7.0
A	<i>Anas acuta</i>	Northern Pintail				S3B,S5M	1	4.6 \pm 7.0
A	<i>Mergus serrator</i>	Red-breasted Merganser				S3B,S5M,S4S5N	11	0.6 \pm 0.0
A	<i>Arenaria interpres</i>	Ruddy Turnstone				S3M	2	0.6 \pm 0.0
A	<i>Melanitta americana</i>	Black Scoter				S3M,S1S2N	1	0.6 \pm 0.0
A	<i>Bucephala albeola</i>	Bufflehead				S3M,S2N	1	1.1 \pm 0.0

	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)
A	<i>Tyrannus tyrannus</i>	Eastern Kingbird				S3S4B,S3S4M	1	4.6 ± 7.0
A	<i>Actitis macularia</i>	Spotted Sandpiper				S3S4B,S5M	3	0.6 ± 0.0
A	<i>Larus delawarensis</i>	Ring-billed Gull				S3S4B,S5M	12	0.6 ± 0.0
A	<i>Pluvialis squatarola</i>	Black-bellied Plover				S3S4M	3	1.0 ± 0.0
A	<i>Calidris pusilla</i>	Semipalmated Sandpiper				S3S4M	4	0.6 ± 0.0
A	<i>Morus bassanus</i>	Northern Gannet				SHB,S5M	1	0.6 ± 0.0
I	<i>Coccinella transversoguttata richardsoni</i>	Transverse Lady Beetle	Special Concern			SH	2	4.8 ± 1.0
I	<i>Lycaena hyllus</i>	Bronze Copper				S3	3	0.5 ± 0.0
I	<i>Lycaena dospassosi</i>	Salt Marsh Copper				S3	2	2.5 ± 0.0

4.3 LOCATION SENSITIVE SPECIES

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

New Brunswick

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

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

4.4 SOURCE BIBLIOGRAPHY

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

# recs	CITATION
83	eBird. 2014. eBird Basic Dataset. Version: EBD_relNov-2014. Ithaca, New York. Nov 2014. Cornell Lab of Ornithology, 25036 recs.
30	Lepage, D. 2014. Maritime Breeding Bird Atlas Database. Bird Studies Canada, Sackville NB, 407,838 recs.
12	Amirault, D.L. & Stewart, J. 2007. Piping Plover Database 1894-2006. Canadian Wildlife Service, Sackville, 3344 recs, 1228 new.
11	Blaney, C.S.; Mazerolle, D.M.; Klymko, J.; Spicer, C.D. 2006. Fieldwork 2006. Atlantic Canada Conservation Data Centre. Sackville NB, 8399 recs.
9	iNaturalist. 2020. iNaturalist Data Export 2020. iNaturalist.org and iNaturalist.ca, Web site: 128728 recs.
7	Erskine, A.J. 1992. Maritime Breeding Bird Atlas Database. NS Museum & Nimbus Publ., Halifax, 82,125 recs.
6	MacDonald, E.C. 2018. CWS Piping Plover Census, 2010-2017. Canadian Wildlife Service, 672 recs.
5	Blaney, C.S.; Spicer, C.D.; Mazerolle, D.M. 2005. Fieldwork 2005. Atlantic Canada Conservation Data Centre. Sackville NB, 2333 recs.
5	Nussey, Pat & NCC staff. 2019. AEI tracked species records, 2016-2019. Chapman, C.J. (ed.) Atlantic Canada Conservation Data Centre, 333.
3	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2015. Atlantic Canada Conservation Data Centre Fieldwork 2015. Atlantic Canada Conservation Data Centre, # recs.
3	e-Butterfly. 2016. Export of Maritimes records and photos. Maxim Larrivee, Sambo Zhang (ed.) e-butterfly.org.
3	Klymko, J.J.D. 2016. 2015 field data. Atlantic Canada Conservation Data Centre.
3	MacDonald, E.C. 2018. Piping Plover nest records from 2010-2017. Canadian Wildlife Service.
2	Canadian Wildlife Service, Dartmouth. 2010. Piping Plover censuses 2007-09, 304 recs.
2	Ducks Unlimited Canada (DUC). 2020. DUC owned properties in Atlantic Canada (v. DUC_Lands_Sept2020). DUC.
2	eBird. 2020. eBird Basic Dataset. Version: EBD_relNov-2019. Ithaca, New York. Nov 2019, Cape Breton Bras d'Or Lakes Watershed subset. Cornell Lab of Ornithology.
2	iNaturalist. 2018. iNaturalist Data Export 2018. iNaturalist.org and iNaturalist.ca, Web site: 11700 recs.
2	Majka, C. 2009. Université de Moncton Insect Collection: Carabidae, Cerambycidae, Coccinellidae. Université de Moncton, 540 recs.

# recs	CITATION
2	Mazerolle, D.M. 2005. Bouctouche Irving Eco-Centre rare coastal plant fieldwork results 2004-05. Irving Eco-centre, la Dune du Bouctouche, 174 recs.
1	Amirault, D.L. & McKnight, J. 2003. Piping Plover Database 1991-2003. Canadian Wildlife Service, Sackville, unpublished data. 7 recs.
1	Mills, Elizabeth and Bishop, Gart. 2020. Cuscuta cephalanthi record, Grand-Barachois, NB. Chapman-Lam, Colin J. (ed.) pers. comm., 1.
1	Patrick, Allison. 2021. Animal and plant records from NCC properties from 2019 and 2020. Nature Conservancy Canada.
1	Tims, J. & Craig, N. 1995. Environmentally Significant Areas in New Brunswick (NBESA). NB Dept of Environment & Nature Trust of New Brunswick Inc, 6042 recs. https://doi.org/10.1037/arc0000014 .
1	Webster, R.P. & Edsall, J. 2007. 2005 New Brunswick Rare Butterfly Survey. Environmental Trust Fund, unpublished report, 232 recs.

5.0 RARE SPECIES WITHIN 100 KM

A 100 km buffer around the study area contains 70052 records of 141 vertebrate and 1214 records of 71 invertebrate fauna; 8108 records of 284 vascular and 2153 records of 195 nonvascular flora (attached: *ob100km.xls).

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

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
A	<i>Myotis lucifugus</i>	Little Brown Myotis	Endangered	Endangered	Endangered	S1	68	33.8 \pm 0.0	NB
A	<i>Myotis septentrionalis</i>	Northern Long-eared Myotis	Endangered	Endangered	Endangered	S1	60	37.8 \pm 1.0	NB
A	<i>Perimyotis subflavus</i>	Eastern Pipistrelle	Endangered	Endangered	Endangered	S1	12	42.3 \pm 0.0	NB
A	<i>Charadrius melodus melodus</i>	Piping Plover melodus ssp	Endangered	Endangered	Endangered	S1B,S1M	3118	2.5 \pm 0.0	NB
A	<i>Dermochelys coriacea</i> (Atlantic pop.)	Leatherback Sea Turtle - Atlantic pop.	Endangered	Endangered	Endangered	S1S2N	5	16.8 \pm 1.0	NB
A	<i>Salmo salar pop. 1</i>	Atlantic Salmon - Inner Bay of Fundy pop.	Endangered	Endangered	Endangered	S2	637	36.9 \pm 1.0	NB
A	<i>Salmo salar pop. 7</i>	Atlantic Salmon - Outer Bay of Fundy pop.	Endangered		Endangered	SNR	395	50.3 \pm 0.0	NB
A	<i>Rangifer tarandus pop. 2</i>	Woodland Caribou (Atlantic-Gasp -rsie pop.)	Endangered	Endangered	Extirpated	SX	2	52.7 \pm 1.0	NB
A	<i>Lanius ludovicianus</i>	Loggerhead Shrike	Endangered	Endangered		SXB,SXM	1	34.8 \pm 0.0	NB
A	<i>Sturnella magna</i>	Eastern Meadowlark	Threatened	Threatened	Threatened	S1B,S1M	33	29.4 \pm 1.0	NB
A	<i>Ixobrychus exilis</i>	Least Bittern	Threatened	Threatened	Threatened	S1S2B,S1S2M	18	26.6 \pm 0.0	NB
A	<i>Hylocichla mustelina</i>	Wood Thrush	Threatened	Threatened	Threatened	S1S2B,S1S2M	63	4.6 \pm 7.0	NB
A	<i>Antrostomus vociferus</i>	Eastern Whip-Poor-Will	Threatened	Threatened	Threatened	S2B,S2M	18	30.8 \pm 7.0	NB
A	<i>Hirundo rustica</i>	Barn Swallow	Threatened	Threatened	Threatened	S2B,S2M	1499	4.6 \pm 7.0	NB
A	<i>Catharus bicknelli</i>	Bicknell's Thrush	Threatened	Threatened	Threatened	S2B,S2M	8	29.8 \pm 2.0	NB
A	<i>Oceanodroma leucorhoa</i>	Leach's Storm-Petrel	Threatened			S2B,SUM	1	0.6 \pm 0.0	NB
A	<i>Glyptemys insculpta</i>	Wood Turtle	Threatened	Threatened	Threatened	S2S3	623	17.1 \pm 0.0	NB
A	<i>Chaetura pelagica</i>	Chimney Swift	Threatened	Threatened	Threatened	S2S3B,S2M	163	14.4 \pm 7.0	NB
A	<i>Riparia riparia</i>	Bank Swallow	Threatened	Threatened		S2S3B,S2S3M	3287	0.6 \pm 0.0	NB
A	<i>Acipenser oxyrinchus</i>	Atlantic Sturgeon	Threatened		Threatened	S3	1	53.7 \pm 1.0	NB
A	<i>Dolichonyx oryzivorus</i>	Bobolink	Threatened	Threatened	Threatened	S3B,S3M	2034	4.6 \pm 7.0	NB
A	<i>Limosa haemastica</i>	Hudsonian Godwit	Threatened			S3S4M	869	6.1 \pm 0.0	NB
A	<i>Anguilla rostrata</i>	American Eel	Threatened		Threatened	S4	6970	34.7 \pm 0.0	NB
A	<i>Tringa flavipes</i>	Lesser Yellowlegs	Threatened			S4M	2761	4.3 \pm 0.0	NB
A	<i>Coturnicops noveboracensis</i>	Yellow Rail	Special Concern	Special Concern	Special Concern	S1?B,SUM	5	29.0 \pm 0.0	NB
A	<i>Histrionicus histrionicus pop. 1</i>	Harlequin Duck - Eastern pop.	Special Concern	Special Concern	Endangered	S1B,S1S2N,S2M	7	31.9 \pm 0.0	NB
A	<i>Asio flammeus</i>	Short-eared Owl	Special Concern	Special Concern	Special Concern	S2B,S2M	57	29.4 \pm 64.0	NB
A	<i>Bucephala islandica</i> (Eastern pop.)	Barrow's Goldeneye - Eastern pop.	Special Concern	Special Concern	Special Concern	S2M,S2N	118	0.6 \pm 0.0	NB
A	<i>Salmo salar pop. 12</i>	Atlantic Salmon - Gaspé - Southern Gulf of St Lawrence pop.	Special Concern		Special Concern	S2S3	17	38.4 \pm 1.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
A	<i>Balaenoptera physalus</i>	Fin Whale	Special Concern	Special Concern		S2S3	1	74.2 ± 1.0	NB
A	<i>Chelydra serpentina</i>	Snapping Turtle	Special Concern	Special Concern	Special Concern	S3	5	22.7 ± 1.0	NB
A	<i>Euphagus carolinus</i>	Rusty Blackbird	Special Concern	Special Concern	Special Concern	S3B,S3M	112	12.4 ± 0.0	NB
A	<i>Contopus cooperi</i>	Olive-sided Flycatcher	Special Concern	Threatened	Threatened	S3B,S3M	561	9.3 ± 7.0	NB
A	<i>Cardellina canadensis</i>	Canada Warbler	Special Concern	Threatened	Threatened	S3B,S3M	605	4.6 ± 7.0	NB
A	<i>Coccothraustes vespertinus</i>	Evening Grosbeak	Special Concern	Special Concern		S3B,S3S4N,SU M	333	16.5 ± 7.0	NB
A	<i>Chordeiles minor</i>	Common Nighthawk	Special Concern	Threatened	Threatened	S3B,S4M	197	13.8 ± 0.0	NB
A	<i>Phalaropus lobatus</i>	Red-necked Phalarope	Special Concern	Special Concern		S3M	28	8.6 ± 0.0	NB
A	<i>Phocoena phocoena</i>	Harbour Porpoise	Special Concern		Spec.Concern	S4	4	46.3 ± 0.0	NB
A	<i>Chrysemys picta picta</i>	Eastern Painted Turtle	Special Concern			S4	20	37.2 ± 0.0	NB
A	<i>Contopus virens</i>	Eastern Wood-Pewee	Special Concern	Special Concern	Special Concern	S4B,S4M	796	4.6 ± 7.0	NB
A	<i>Podiceps auritus</i>	Horned Grebe	Special Concern	Special Concern	Special Concern	S4N,S4M	53	0.6 ± 0.0	NB
A	<i>Hemidactylium scutatum</i>	Four-toed Salamander	Not At Risk			S1?	5	78.2 ± 0.0	NS
A	<i>Falco peregrinus pop. 1</i>	Peregrine Falcon - anatum/tundrius	Not At Risk	Special Concern	Endangered	S1B,S3M	297	0.6 ± 0.0	NB
A	<i>Bubo scandiacus</i>	Snowy Owl	Not At Risk			S1N,S2S3M	54	6.1 ± 1.0	NB
A	<i>Accipiter cooperii</i>	Cooper's Hawk	Not At Risk			S1S2B,S1S2M	5	21.5 ± 5.0	NB
A	<i>Fulica americana</i>	American Coot	Not At Risk			S1S2B,S1S2M	62	20.6 ± 7.0	NB
A	<i>Aegolius funereus</i>	Boreal Owl	Not At Risk			S1S2B,SUM	13	26.2 ± 0.0	NB
A	<i>Sorex dispar</i>	Long-tailed Shrew	Not At Risk			S2	5	55.2 ± 1.0	NB
A	<i>Buteo lineatus</i>	Red-shouldered Hawk	Not At Risk			S2B,S2M	13	28.0 ± 0.0	NB
A	<i>Chlidonias niger</i>	Black Tern	Not At Risk			S2B,S2M	187	18.8 ± 1.0	NB
A	<i>Lynx canadensis</i>	Canadian Lynx	Not At Risk		Endangered	S3	19	43.4 ± 10.0	NB
A	<i>Desmognathus fuscus - Quebec / New Brunswick population</i>	Northern Dusky Salamander - Quebec / New Brunswick population	Not At Risk			S3	1	84.7 ± 0.0	
A	<i>Sterna hirundo</i>	Common Tern	Not At Risk			S3B,SUM	827	0.6 ± 0.0	NB
A	<i>Podiceps grisegena</i>	Red-necked Grebe	Not At Risk			S3M,S2N	51	0.6 ± 0.0	NB
A	<i>Lagenorhynchus acutus</i>	Atlantic White-sided Dolphin	Not At Risk			S3S4	4	42.9 ± 1.0	NB
A	<i>Haliaeetus leucocephalus</i>	Bald Eagle	Not At Risk		Endangered	S4	1417	0.6 ± 0.0	NB
A	<i>Canis lupus</i>	Gray Wolf	Not At Risk		Extirpated	SX	1	81.5 ± 100.0	NB
A	<i>Puma concolor pop. 1</i>	Eastern Cougar	Data Deficient		Endangered	SNA	113	20.5 ± 1.0	NB
A	<i>Calidris canutus rufa</i>	Red Knot rufa subspecies	E,SC	Endangered	Endangered	S2M	1233	6.1 ± 0.0	NB
A	<i>Morone saxatilis</i>	Striped Bass	E,SC			S3	8640	53.7 ± 0.0	NB
A	<i>Thryothorus ludovicianus</i>	Carolina Wren				S1	13	15.1 ± 0.0	NB
A	<i>Salvelinus alpinus</i>	Arctic Char				S1	3	98.5 ± 1.0	NB
A	<i>Vireo flavifrons</i>	Yellow-throated Vireo				S1?B,S1?M	4	36.6 ± 0.0	NB
A	<i>Tringa melanoleuca</i>	Greater Yellowlegs				S1?B,S5M	4425	0.6 ± 0.0	NB
A	<i>Aythya americana</i>	Redhead				S1B,S1M	10	30.4 ± 7.0	NB
A	<i>Gallinula galeata</i>	Common Gallinule				S1B,S1M	55	33.4 ± 0.0	NB
A	<i>Antigone canadensis</i>	Sandhill Crane				S1B,S1M	20	10.0 ± 7.0	NB
A	<i>Bartramia longicauda</i>	Upland Sandpiper				S1B,S1M	58	23.2 ± 7.0	NB
A	<i>Phalaropus tricolor</i>	Wilson's Phalarope				S1B,S1M	65	18.2 ± 0.0	NB
A	<i>Leucophaeus atricilla</i>	Laughing Gull				S1B,S1M	9	0.6 ± 0.0	NB
A	<i>Progne subis</i>	Purple Martin				S1B,S1M	78	8.2 ± 7.0	NB
A	<i>Oxyura jamaicensis</i>	Ruddy Duck				S1B,S2S3M	110	7.7 ± 0.0	NB
A	<i>Aythya affinis</i>	Lesser Scaup				S1B,S4M	174	7.7 ± 0.0	NB
A	<i>Aythya marila</i>	Greater Scaup				S1B,S4M,S2N	19	7.8 ± 1.0	NB
A	<i>Eremophila alpestris</i>	Horned Lark				S1B,S4N,S5M	68	18.8 ± 1.0	NB
A	<i>Sterna paradisaea</i>	Arctic Tern				S1B,SUM	44	19.1 ± 7.0	NB
A	<i>Fratercula arctica</i>	Atlantic Puffin				S1B,SUN,SUM	3	53.1 ± 0.0	NB
A	<i>Chroicocephalus ridibundus</i>	Black-headed Gull				S1N,S2M	16	7.8 ± 1.0	NB
A	<i>Branta bernicla</i>	Brant				S1N,S2S3M	36	11.5 ± 1.0	NB
A	<i>Butorides virescens</i>	Green Heron				S1S2B,S1S2M	8	35.1 ± 0.0	NB
A	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron				S1S2B,S1S2M	5	10.7 ± 0.0	NB
A	<i>Empidonax traillii</i>	Willow Flycatcher				S1S2B,S1S2M	70	24.3 ± 0.0	NB
A	<i>Stelgidopteryx serripennis</i>	Northern Rough-winged				S1S2B,S1S2M	6	30.5 ± 0.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
A	<i>Troglodytes aedon</i>	Swallow House Wren				S1S2B,S1S2M	12	19.1 ± 7.0	NB
A	<i>Rissa tridactyla</i>	Black-legged Kittiwake				S1S2B,S4N,S5M	2	28.2 ± 0.0	NB
A	<i>Calidris bairdii</i>	Baird's Sandpiper				S1S2M	116	6.1 ± 0.0	NB
A	<i>Cistothorus palustris</i>	Marsh Wren				S2B,S2M	82	22.8 ± 1.0	NB
A	<i>Mimus polyglottos</i>	Northern Mockingbird				S2B,S2M	138	9.1 ± 7.0	NB
A	<i>Toxostoma rufum</i>	Brown Thrasher				S2B,S2M	29	16.5 ± 7.0	NB
A	<i>Poocetes gramineus</i>	Vesper Sparrow				S2B,S2M	129	15.8 ± 0.0	NB
A	<i>Mareca strepera</i>	Gadwall				S2B,S3M	433	7.8 ± 1.0	NB
A	<i>Pinicola enucleator</i>	Pine Grosbeak				S2B,S4S5N,S4S5M	46	19.1 ± 7.0	NB
A	<i>Tringa solitaria</i>	Solitary Sandpiper				S2B,S5M	202	6.1 ± 0.0	NB
A	<i>Anser caerulescens</i>	Snow Goose				S2M	24	7.8 ± 1.0	NB
A	<i>Phalacrocorax carbo</i>	Great Cormorant				S2N,S2M	165	11.5 ± 1.0	NB
A	<i>Somateria spectabilis</i>	King Eider				S2N,S2M	4	6.1 ± 1.0	NB
A	<i>Larus hyperboreus</i>	Glaucous Gull				S2N,S2M	94	0.6 ± 0.0	NB
A	<i>Asio otus</i>	Long-eared Owl				S2S3	29	28.5 ± 0.0	NB
A	<i>Picoides dorsalis</i>	American Three-toed Woodpecker				S2S3	19	51.8 ± 0.0	PE
A	<i>Spatula clypeata</i>	Northern Shoveler				S2S3B,S2S3M	472	2.6 ± 1.0	NB
A	<i>Myiarchus crinitus</i>	Great Crested Flycatcher				S2S3B,S2S3M	34	9.3 ± 7.0	NB
A	<i>Petrochelidon pyrrhonota</i>	Cliff Swallow				S2S3B,S2S3M	530	4.6 ± 7.0	NB
A	<i>Pluvialis dominica</i>	American Golden-Plover				S2S3M	375	6.1 ± 0.0	NB
A	<i>Calcarius lapponicus</i>	Lapland Longspur				S2S3N,SUM	43	6.1 ± 1.0	NB
A	<i>Cephus grylle</i>	Black Guillemot				S3	60	26.8 ± 7.0	PE
A	<i>Loxia curvirostra</i>	Red Crossbill				S3	140	9.3 ± 7.0	NB
A	<i>Spinus pinus</i>	Pine Siskin				S3	406	4.6 ± 7.0	NB
A	<i>Salvelinus namaycush</i>	Lake Trout				S3	1	49.6 ± 0.0	NB
A	<i>Sorex maritimensis</i>	Maritime Shrew				S3	142	34.2 ± 1.0	NB
A	<i>Eptesicus fuscus</i>	Big Brown Bat				S3	10	33.5 ± 1.0	NB
A	<i>Cathartes aura</i>	Turkey Vulture				S3B,S3M	149	11.5 ± 1.0	NB
A	<i>Rallus limicola</i>	Virginia Rail				S3B,S3M	344	12.5 ± 0.0	NB
A	<i>Charadrius vociferus</i>	Killdeer				S3B,S3M	1126	0.6 ± 0.0	NB
A	<i>Tringa semipalmata</i>	Willet				S3B,S3M	2258	0.5 ± 0.0	NB
A	<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo				S3B,S3M	152	4.6 ± 7.0	NB
A	<i>Vireo gilvus</i>	Warbling Vireo				S3B,S3M	73	5.8 ± 0.0	NB
A	<i>Piranga olivacea</i>	Scarlet Tanager				S3B,S3M	43	27.8 ± 0.0	NB
A	<i>Passerina cyanea</i>	Indigo Bunting				S3B,S3M	41	38.5 ± 7.0	NB
A	<i>Molothrus ater</i>	Brown-headed Cowbird				S3B,S3M	300	3.5 ± 0.0	NB
A	<i>Icterus galbula</i>	Baltimore Oriole				S3B,S3M	104	11.5 ± 1.0	NB
A	<i>Somateria mollissima</i>	Common Eider				S3B,S4M,S3N	224	0.6 ± 0.0	NB
A	<i>Setophaga tigrina</i>	Cape May Warbler				S3B,S4S5M	322	4.6 ± 7.0	NB
A	<i>Anas acuta</i>	Northern Pintail				S3B,S5M	171	4.6 ± 7.0	NB
A	<i>Mergus serrator</i>	Red-breasted Merganser				S3B,S5M,S4S5N	325	0.6 ± 0.0	NB
A	<i>Arenaria interpres</i>	Ruddy Turnstone				S3M	1890	0.6 ± 0.0	NB
A	<i>Phalaropus fulicarius</i>	Red Phalarope				S3M	6	48.1 ± 0.0	NB
A	<i>Melanitta americana</i>	Black Scoter				S3M,S1S2N	280	0.6 ± 0.0	NB
A	<i>Bucephala albeola</i>	Bufflehead				S3M,S2N	125	1.1 ± 0.0	NB
A	<i>Calidris maritima</i>	Purple Sandpiper				S3M,S3N	106	5.6 ± 1.0	NB
A	<i>Uria lomvia</i>	Thick-billed Murre				S3N,S3M	1	92.3 ± 0.0	NS
A	<i>Synaptomys cooperi</i>	Southern Bog Lemming				S3S4	27	61.9 ± 1.0	NB
A	<i>Tyrannus tyrannus</i>	Eastern Kingbird				S3S4B,S3S4M	576	4.6 ± 7.0	NB
A	<i>Actitis macularius</i>	Spotted Sandpiper				S3S4B,S5M	1124	0.6 ± 0.0	NB
A	<i>Gallinago delicata</i>	Wilson's Snipe				S3S4B,S5M	1167	5.6 ± 0.0	NB
A	<i>Larus delawarensis</i>	Ring-billed Gull				S3S4B,S5M	444	0.6 ± 0.0	NB
A	<i>Setophaga striata</i>	Blackpoll Warbler				S3S4B,S5M	72	9.3 ± 7.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
A	<i>Pluvialis squatarola</i>	Black-bellied Plover				S3S4M	3850	1.0 ± 0.0	NB
A	<i>Calidris pusilla</i>	Semipalmated Sandpiper				S3S4M	3980	0.6 ± 0.0	NB
A	<i>Calidris melanotos</i>	Pectoral Sandpiper				S3S4M	602	6.1 ± 0.0	NB
A	<i>Calidris alba</i>	Sanderling				S3S4M,S1N	2410	5.6 ± 1.0	NB
A	<i>Morus bassanus</i>	Northern Gannet				SHB,S5M	212	0.6 ± 0.0	NB
I	<i>Bombus (Psithyrus) bohemicus</i>	Gypsy Cuckoo Bumble Bee	Endangered	Endangered		S1	16	23.3 ± 5.0	NB
I	<i>Gomphus ventricosus</i>	Skillet Clubtail	Endangered	Endangered	Endangered	S1S2	1	91.0 ± 0.0	NB
I	<i>Danaus plexippus</i>	Monarch	Endangered	Special Concern	Special Concern	S3B,S3M	216	7.9 ± 1.0	NB
I	<i>Alasmodonta varicosa</i>	Brook Floater	Special Concern	Special Concern	Special Concern	S2	38	40.8 ± 1.0	NB
I	<i>Bombus terricola</i>	Yellow-banded Bumblebee	Special Concern	Special Concern		S3?	172	26.2 ± 0.0	NB
I	<i>Coccinella transversoguttata richardsoni</i>	Transverse Lady Beetle	Special Concern			SH	30	4.8 ± 1.0	NB
I	<i>Erora laeta</i>	Early Hairstreak				S1	2	36.2 ± 1.0	NB
I	<i>Leucorrhinia patricia</i>	Canada Whiteface				S1	10	77.8 ± 1.0	NB
I	<i>Plebejus saepiolus</i>	Greenish Blue				S1S2	2	63.1 ± 7.0	NB
I	<i>Satyrrium calanus falacer</i>	Banded Hairstreak				S2	1	97.9 ± 0.0	PE
I	<i>Strymon melinus</i>	Grey Hairstreak				S2	1	45.2 ± 2.0	NB
I	<i>Somatochlora brevicincta</i>	Quebec Emerald				S2	2	45.5 ± 0.0	NB
I	<i>Somatochlora tenebrosa</i>	Clamp-Tipped Emerald				S2	8	17.8 ± 1.0	NB
I	<i>Ladona exusta</i>	White Corporal				S2	2	64.3 ± 0.0	NB
I	<i>Coenagrion interrogatum</i>	Subarctic Bluet				S2	3	94.2 ± 1.0	NB
I	<i>Ischnura posita</i>	Fragile Forktail				S2	5	17.1 ± 0.0	NB
I	<i>Chrysops delicatulus</i>	a Horse Fly				S2S3	1	94.4 ± 1.0	NB
I	<i>Callophrys henrici</i>	Henry's Elfin				S2S3	10	8.8 ± 0.0	NB
I	<i>Psyrassa unicolor</i>	a Longhorned Beetle				S3	1	26.2 ± 0.0	NB
I	<i>Elaphrus americanus</i>	a Ground Beetle				S3	1	64.2 ± 0.0	NB
I	<i>Agonum crenistriatum</i>	a Ground Beetle				S3	1	32.7 ± 1.0	NB
I	<i>Agonum consimile</i>	a Ground Beetle				S3	1	32.7 ± 1.0	NB
I	<i>Lachnocepis parallela</i>	a Ground Beetle				S3	1	58.6 ± 0.0	NB
I	<i>Dyschirius setosus</i>	a Ground Beetle				S3	3	58.6 ± 0.0	NB
I	<i>Harpalus fulvilabris</i>	a Ground Beetle				S3	1	63.4 ± 0.0	NB
I	<i>Olisthopus parmatus</i>	a Ground Beetle				S3	1	6.1 ± 0.0	NB
I	<i>Amara pallipes</i>	a Ground Beetle				S3	2	32.7 ± 1.0	NB
I	<i>Carabus maeander</i>	a Ground Beetle				S3	1	32.7 ± 1.0	NB
I	<i>Carabus serratus</i>	a Ground Beetle				S3	1	37.4 ± 1.0	NB
I	<i>Hippodamia parenthesis</i>	Parenthesis Lady Beetle				S3	14	32.7 ± 1.0	NB
I	<i>Xylotrechus undulatus</i>	a Longhorned Beetle				S3	2	26.4 ± 1.0	NB
I	<i>Calathus gregarius</i>	a Ground Beetle				S3	1	84.1 ± 1.0	NB
I	<i>Gonioctena americana</i>	a Leaf Beetle				S3	1	59.4 ± 0.0	NB
I	<i>Naemia seriata</i>	a Ladybird beetle				S3	9	47.2 ± 0.0	NB
I	<i>Beckerus appressus</i>	A Click Beetle				S3	1	86.3 ± 0.0	NB
I	<i>Saperda lateralis</i>	a Longhorned Beetle				S3	1	43.8 ± 0.0	NS
I	<i>Trachysida aspera</i>	a Longhorned Beetle				S3	1	69.7 ± 0.0	NB
I	<i>Dicerca caudata</i>	Tailed Jewel Borer				S3	1	18.9 ± 0.0	NB
I	<i>Enoclerus muttkowskii</i>	a Checkered Beetle				S3	2	37.3 ± 0.0	NB
I	<i>Hesperia sassacus</i>	Indian Skipper				S3	4	76.0 ± 7.0	NB
I	<i>Euphyes bimacula</i>	Two-spotted Skipper				S3	16	16.7 ± 0.0	NB
I	<i>Papilio brevicauda bretonensis</i>	Short-tailed Swallowtail				S3	14	34.3 ± 0.0	NB
I	<i>Lycaena hyllus</i>	Bronze Copper				S3	167	0.5 ± 1.0	NB
I	<i>Lycaena dospassosi</i>	Salt Marsh Copper				S3	145	2.5 ± 0.0	NB
I	<i>Satyrrium acadica</i>	Acadian Hairstreak				S3	16	9.3 ± 7.0	NB
I	<i>Callophrys polios</i>	Hoary Elfin				S3	8	8.9 ± 0.0	NB
I	<i>Plebejus idas</i>	Northern Blue				S3	6	90.2 ± 0.0	NS
I	<i>Plebejus idas empetri</i>	Crowberry Blue				S3	30	34.3 ± 0.0	NB
I	<i>Speyeria aphrodite</i>	Aphrodite Fritillary				S3	17	34.0 ± 0.0	NB
I	<i>Boloria chariclea</i>	Arctic Fritillary				S3	9	35.3 ± 7.0	NB

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I	<i>Polygonia satyrus</i>	Satyr Comma				S3	6	40.9 ± 0.0	NS
I	<i>Polygonia gracilis</i>	Hoary Comma				S3	2	75.8 ± 2.0	NB
I	<i>Nymphalis l-album</i>	Compton Tortoiseshell				S3	11	34.2 ± 10.0	NB
I	<i>Gomphaeschna furcillata</i>	Harlequin Darner				S3	6	30.3 ± 0.0	NB
I	<i>Dorocordulia lepida</i>	Petite Emerald				S3	3	76.4 ± 1.0	PE
I	<i>Somatochlora cingulata</i>	Lake Emerald				S3	4	81.1 ± 1.0	NB
I	<i>Somatochlora forcipata</i>	Forcinate Emerald				S3	8	37.6 ± 0.0	NB
I	<i>Williamsonia fletcheri</i>	Ebony Boghaunter				S3	21	26.9 ± 0.0	NB
I	<i>Lestes eurinus</i>	Amber-Winged Spreadwing				S3	33	45.2 ± 1.0	NB
I	<i>Lestes vigilax</i>	Swamp Spreadwing				S3	1	85.7 ± 0.0	NS
I	<i>Enallagma signatum</i>	Orange Bluet				S3	2	31.6 ± 0.0	NB
I	<i>Stylurus scudderi</i>	Zebra Clubtail				S3	7	34.0 ± 0.0	NB
I	<i>Alasmidonta undulata</i>	Triangle Floater				S3	25	53.9 ± 1.0	NB
I	<i>Leptodea ochracea</i>	Tidewater Mucket				S3	29	24.8 ± 1.0	NB
I	<i>Pantala hymenaea</i>	Spot-Winged Glider				S3B,S3M	6	22.1 ± 0.0	NB
I	<i>Collops vittatus</i>	Banded Soft-winged Flower Beetle				S3S4	1	42.8 ± 3.0	NB
I	<i>Hemicrepidius memnonius</i>	a Click Beetle				S3S4	3	26.2 ± 0.0	NB
I	<i>Bolitophagus corticola</i>	a Darkling Beetle				S3S4	1	26.2 ± 0.0	NB
I	<i>Satyrium liparops</i>	Striped Hairstreak				S3S4	39	16.2 ± 0.0	NB
I	<i>Satyrium liparops strigosum</i>	Striped Hairstreak				S3S4	4	34.2 ± 0.0	NB
I	<i>Cupido comyntas</i>	Eastern Tailed Blue				S3S4	3	60.7 ± 0.0	NB
N	<i>Erioderma mollissimum</i>	Graceful Felt Lichen	Endangered	Endangered	Endangered	SH	1	92.1 ± 1.0	NB
N	<i>Peltigera hydrothyria</i>	Eastern Waterfan	Threatened	Threatened		S1	791	49.6 ± 0.0	NB
N	<i>Pannaria lurida</i>	Wrinkled Shingle Lichen	Threatened	Threatened		S1?	5	15.0 ± 1.0	NB
N	<i>Anzia colpodes</i>	Black-foam Lichen	Threatened	Threatened		S1S2	16	30.9 ± 0.0	NB
N	<i>Fuscopannaria leucosticta</i>	White-rimmed Shingle Lichen	Threatened			S2	27	44.8 ± 0.0	PE
N	<i>Pectenia plumbea</i>	Blue Felt Lichen	Special Concern	Special Concern	Special Concern	S1	4	44.5 ± 0.0	PE
N	<i>Pseudevernia cladonia</i>	Ghost Antler Lichen	Not At Risk			S2S3	2	83.6 ± 0.0	NB
N	<i>Aloina rigida</i>	Aloe-Like Rigid Screw Moss				S1	2	53.1 ± 0.0	NB
N	<i>Arrhenopterum heterostichum</i>	One-sided Groove Moss				S1	2	82.3 ± 0.0	NB
N	<i>Campylostelium saxicola</i>	a Moss				S1	3	81.1 ± 0.0	PE
N	<i>Dicranoweisia crispula</i>	Mountain Thatch Moss				S1	1	82.1 ± 0.0	NB
N	<i>Didymodon rigidulus var. gracilis</i>	a moss				S1	1	89.4 ± 1.0	NB
N	<i>Zygodon viridissimus var. viridissimus</i>	a Moss				S1	1	83.9 ± 0.0	NB
N	<i>Enchylimum tenax</i>	Soil Tarpaper Lichen				S1	1	51.7 ± 0.0	PE
N	<i>Sticta fuliginosa</i>	Peppered Moon Lichen				S1	2	85.6 ± 0.0	NS
N	<i>Cladonia straminea</i>	Reptilian Pixie-cup Lichen				S1	5	76.2 ± 1.0	NB
N	<i>Coccocarpia palmicola</i>	Salted Shell Lichen				S1	1	76.2 ± 1.0	NB
N	<i>Peltigera malacea</i>	Veinless Pelt Lichen				S1	2	62.6 ± 0.0	PE
N	<i>Bryoria bicolor</i>	Electrified Horsehair Lichen				S1	1	89.1 ± 1.0	NB
N	<i>Hygrobriella laxifolia</i>	Lax Notchwort				S1?	1	90.6 ± 1.0	NB
N	<i>Atrichum angustatum</i>	Lesser Smoothcap Moss				S1?	1	97.3 ± 5.0	NS
N	<i>Bartramia ithyphylla</i>	Straight-leaved Apple Moss				S1?	2	83.0 ± 1.0	NB
N	<i>Dicranum bonjeanii</i>	Bonjean's Broom Moss				S1?	3	93.4 ± 4.0	PE
N	<i>Dicranum condensatum</i>	Condensed Broom Moss				S1?	3	63.0 ± 0.0	PE
N	<i>Entodon brevisetus</i>	a Moss				S1?	1	92.0 ± 10.0	NB
N	<i>Homomallium adnatum</i>	Adnate Hairy-gray Moss				S1?	4	68.9 ± 1.0	NB
N	<i>Plagiothecium latebricola</i>	Alder Silk Moss				S1?	3	76.6 ± 0.0	NB
N	<i>Rhytidium rugosum</i>	Wrinkle-leaved Moss				S1?	1	89.3 ± 1.0	NB
N	<i>Seligeria recurvata</i>	a Moss				S1?	3	63.0 ± 15.0	NB
N	<i>Timmia megapolitana</i>	Metropolitan Timmia Moss				S1?	3	93.7 ± 1.0	NS
N	<i>Rhizomnium pseudopunctatum</i>	Felted Leafy Moss				S1?	1	79.7 ± 0.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
N	<i>Heterodermia squamulosa</i>	Scaly Fringe Lichen				S1?	70	98.9 ± 0.0	NS
N	<i>Cephaloziella spinigera</i>	Spiny Threadwort				S1S2	2	83.9 ± 0.0	NB
N	<i>Odontoschisma francisci</i>	Holt's Notchwort				S1S2	4	73.8 ± 0.0	NB
N	<i>Harpanthus flotovianus</i>	Great Mountain Flapwort				S1S2	2	77.4 ± 1.0	NB
N	<i>Jungermannia obovata</i>	Egg Flapwort				S1S2	1	83.8 ± 0.0	NB
N	<i>Odontoschisma sphagni</i>	Bog-Moss Flapwort				S1S2	1	89.2 ± 0.0	NB
N	<i>Pallavicinia lyellii</i>	Lyell's Ribbonwort				S1S2	1	92.0 ± 1.0	NB
N	<i>Radula tenax</i>	Tenacious Scalewort				S1S2	1	83.8 ± 0.0	NB
N	<i>Reboulia hemisphaerica</i>	Purple-margined Liverwort				S1S2	1	89.5 ± 0.0	NB
N	<i>Brachythecium acuminatum</i>	Acuminate Ragged Moss				S1S2	2	85.0 ± 2.0	NB
N	<i>Ptychostomum salinum</i>	Saltmarsh Bryum				S1S2	1	88.7 ± 1.0	NB
N	<i>Distichium inclinatum</i>	Inclined Iris Moss				S1S2	5	89.4 ± 1.0	NB
N	<i>Ditrichum pallidum</i>	Pale Cow-hair Moss				S1S2	1	91.1 ± 1.0	NB
N	<i>Drummondia prorepens</i>	a Moss				S1S2	1	84.3 ± 0.0	NB
N	<i>Hygrohypnum bestii</i>	Best's Brook Moss				S1S2	5	81.5 ± 1.0	NB
N	<i>Seligeria brevifolia</i>	a Moss				S1S2	4	83.7 ± 0.0	NB
N	<i>Timmia norvegica</i>	a moss				S1S2	2	89.6 ± 0.0	NB
N	<i>Timmia norvegica var. excurrens</i>	a moss				S1S2	1	89.6 ± 0.0	NB
N	<i>Tortella humilis</i>	Small Crisp Moss				S1S2	7	84.0 ± 1.0	NB
N	<i>Pseudotaxiphyllum distichaceum</i>	a Moss				S1S2	2	27.6 ± 1.0	NB
N	<i>Umbilicaria vellea</i>	Grizzled Rocktripe Lichen				S1S2	1	89.1 ± 1.0	NB
N	<i>Pilophorus cereolus</i>	Powdered Matchstick Lichen				S1S2	2	55.8 ± 5.0	NB
N	<i>Peltigera scabrosa</i>	Greater Toad Pelt Lichen				S1S2	4	74.7 ± 1.0	NB
N	<i>Anaptychia crinalis</i>	Hanging Fringed Lichen				S1S2	2	93.4 ± 4.0	PE
N	<i>Tritomania scitula</i>	Mountain Notchwort				S1S3	1	80.0 ± 1.0	NB
N	<i>Amphidium mougeotii</i>	a Moss				S2	11	80.0 ± 0.0	NB
N	<i>Anomodon viticulosus</i>	a Moss				S2	2	76.0 ± 10.0	NB
N	<i>Cirriphyllum piliferum</i>	Hair-pointed Moss				S2	4	72.2 ± 1.0	NB
N	<i>Dicranella palustris</i>	Drooping-Leaved Fork Moss				S2	7	77.4 ± 1.0	NB
N	<i>Didymodon ferrugineus</i>	Rusty Beard Moss				S2	1	89.2 ± 0.0	NB
N	<i>Anomodon tristis</i>	a Moss				S2	8	84.0 ± 10.0	NB
N	<i>Hypnum pratense</i>	Meadow Plait Moss				S2	1	56.3 ± 0.0	PE
N	<i>Isopterygiopsis pulchella</i>	Neat Silk Moss				S2	7	81.3 ± 1.0	NB
N	<i>Isothecium myosuroides</i>	Slender Mouse-tail Moss				S2	1	99.6 ± 3.0	NS
N	<i>Orthotrichum speciosum</i>	Showy Bristle Moss				S2	7	44.8 ± 0.0	PE
N	<i>Platydictya jungermannioides</i>	False Willow Moss				S2	4	63.0 ± 15.0	NB
N	<i>Pohlia elongata</i>	Long-necked Nodding Moss				S2	14	82.3 ± 0.0	NB
N	<i>Pohlia sphagnicola</i>	a moss				S2	1	78.5 ± 0.0	NB
N	<i>Seligeria calcarea</i>	Chalk Brittle Moss				S2	2	77.4 ± 0.0	NB
N	<i>Sphagnum centrale</i>	Central Peat Moss				S2	8	51.0 ± 0.0	PE
N	<i>Sphagnum flexuosum</i>	Flexuous Peatmoss				S2	3	67.2 ± 10.0	NB
N	<i>Tayloria serrata</i>	Serrate Trumpet Moss				S2	7	60.4 ± 100.0	NB
N	<i>Tetradontium brownianum</i>	Little Georgia				S2	13	49.8 ± 0.0	NS
N	<i>Thamnobryum alleghaniense</i>	a Moss				S2	23	47.3 ± 0.0	NB
N	<i>Ulota phyllantha</i>	a Moss				S2	4	89.6 ± 0.0	NB
N	<i>Anomobryum julaceum</i>	Slender Silver Moss				S2	3	89.4 ± 1.0	NB
N	<i>Cladonia macrophylla</i>	Fig-leaved Lichen				S2	3	82.2 ± 1.0	NB
N	<i>Leptogium milligranum</i>	Stretched Jellyskin Lichen				S2	23	13.8 ± 0.0	NB
N	<i>Nephroma laevigatum</i>	Mustard Kidney Lichen				S2	27	44.3 ± 0.0	PE
N	<i>Anacamptodon splachnoides</i>	a Moss				S2?	3	63.3 ± 1.0	NB
N	<i>Andreaea rothii</i>	a Moss				S2?	5	79.9 ± 1.0	NB
N	<i>Anomodon minor</i>	Blunt-leaved Anomodon Moss				S2?	1	75.4 ± 1.0	NB
N	<i>Ptychostomum pallescens</i>	Tall Clustered Bryum				S2?	1	78.0 ± 100.0	NB
N	<i>Dichelyma capillaceum</i>	Hairlike Dichelyma Moss				S2?	1	91.8 ± 3.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
N	<i>Dicranum spurium</i>	Spurred Broom Moss				S2?	1	81.1 ± 0.0	PE
N	<i>Hygrohypnum montanum</i>	a Moss				S2?	1	80.8 ± 1.0	NB
N	<i>Sphagnum angermanicum</i>	a Peatmoss				S2?	2	86.1 ± 0.0	NB
N	<i>Trichodon cylindricus</i>	Cylindric Hairy-teeth Moss				S2?	2	63.0 ± 15.0	NB
N	<i>Plagiomnium rostratum</i>	Long-beaked Leafy Moss				S2?	4	88.9 ± 0.0	NB
N	<i>Ramalina labiosorediata</i>	Chalky Ramalina Lichen				S2?	1	86.1 ± 1.0	NB
N	<i>Collema leptaleum</i>	Crumpled Bat's Wing Lichen				S2?	10	44.4 ± 0.0	PE
N	<i>Imshaugia placorodia</i>	Eyed Starburst Lichen				S2?	1	50.5 ± 0.0	PE
N	<i>Nephroma arcticum</i>	Arctic Kidney Lichen				S2?	2	85.5 ± 0.0	NS
N	<i>Ptychostomum cernuum</i>	Swamp Bryum				S2S3	1	89.6 ± 0.0	NB
N	<i>Buxbaumia aphylla</i>	Brown Shield Moss				S2S3	2	81.1 ± 0.0	PE
N	<i>Calliergonella cuspidata</i>	Common Large Wetland Moss				S2S3	3	48.0 ± 0.0	PE
N	<i>Drepanocladus polygamus</i>	Polygamous Hook Moss				S2S3	3	53.9 ± 0.0	PE
N	<i>Palustriella falcata</i>	a Moss				S2S3	2	89.9 ± 0.0	NB
N	<i>Didymodon rigidulus</i>	Rigid Screw Moss				S2S3	8	85.0 ± 2.0	NB
N	<i>Ephemerum serratum</i>	a Moss				S2S3	2	45.7 ± 0.0	PE
N	<i>Orthotrichum elegans</i>	Showy Bristle Moss				S2S3	3	50.0 ± 0.0	PE
N	<i>Pohlia prolifera</i>	Cottony Nodding Moss				S2S3	14	63.0 ± 15.0	NB
N	<i>Codriophorus fascicularis</i>	Clustered Rock Moss				S2S3	3	82.1 ± 0.0	NB
N	<i>Racomitrium affine</i>	a Moss				S2S3	1	78.4 ± 1.0	NB
N	<i>Saelania glaucescens</i>	Blue Dew Moss				S2S3	2	82.1 ± 0.0	NB
N	<i>Sphagnum subfulvum</i>	a Peatmoss				S2S3	3	54.5 ± 0.0	PE
N	<i>Taxiphyllum deplanatum</i>	Imbricate Yew-leaved Moss				S2S3	2	84.0 ± 1.0	NB
N	<i>Zygodon viridissimus</i>	a Moss				S2S3	3	44.9 ± 0.0	PE
N	<i>Schistidium agassizii</i>	Elf Bloom Moss				S2S3	3	78.4 ± 1.0	NB
N	<i>Loeskeobryum brevirostre</i>	a Moss				S2S3	12	80.0 ± 0.0	NB
N	<i>Cyrtomnium hymenophylloides</i>	Short-pointed Lantern Moss				S2S3	6	77.6 ± 0.0	NB
N	<i>Cetrariella delisei</i>	Snowbed Icelandmoss Lichen				S2S3	2	74.9 ± 0.0	NB
N	<i>Cladonia acuminata</i>	Scantly Clad Pixie Lichen				S2S3	2	89.1 ± 1.0	NB
N	<i>Cladonia ramulosa</i>	Bran Lichen				S2S3	4	84.5 ± 1.0	NB
N	<i>Cladonia sulphurina</i>	Greater Sulphur-cup Lichen				S2S3	5	73.9 ± 1.0	NB
N	<i>Dendrococaulon umhausense</i>	a lichen				S2S3	1	84.8 ± 0.0	NB
N	<i>Parmeliopsis ambigua</i>	Green Starburst Lichen				S2S3	2	93.4 ± 4.0	PE
N	<i>Sphaerophorus globosus</i>	Northern Coral Lichen				S2S3	8	75.4 ± 0.0	NB
N	<i>Hypnum curvifolium</i>	Curved-leaved Plait Moss				S3	9	46.1 ± 0.0	PE
N	<i>Tortella fragilis</i>	Fragile Twisted Moss				S3	1	89.6 ± 0.0	NB
N	<i>Schistidium maritimum</i>	a Moss				S3	6	79.7 ± 0.0	NB
N	<i>Hymenostylium recurvirostre</i>	Hymenostylium Moss				S3	7	75.6 ± 0.0	NS
N	<i>Collema nigrescens</i>	Blistered Tarpaper Lichen				S3	5	53.9 ± 0.0	PE
N	<i>Solorina saccata</i>	Woodland Owl Lichen				S3	6	89.1 ± 1.0	NB
N	<i>Ahtiana aurescens</i>	Eastern Candlewax Lichen				S3	3	45.1 ± 0.0	PE
N	<i>Normandina pulchella</i>	Rimmed Elf-ear Lichen				S3	12	84.5 ± 1.0	NB
N	<i>Cladonia farinacea</i>	Farinose Pixie Lichen				S3	6	78.4 ± 0.0	PE
N	<i>Hypotrachyna catawbiensis</i>	Powder-tipped Antler Lichen				S3	4	89.1 ± 0.0	NB
N	<i>Scytinium lichenoides</i>	Tattered Jellyskin Lichen				S3	6	89.1 ± 1.0	NB
N	<i>Nephroma bellum</i>	Naked Kidney Lichen				S3	6	79.4 ± 0.0	NS
N	<i>Peltigera degenii</i>	Lustrous Pelt Lichen				S3	3	85.2 ± 1.0	NB
N	<i>Usnea strigosa</i>	Bushy Beard Lichen				S3	36	11.5 ± 0.0	NB
N	<i>Stereocaulon condensatum</i>	Granular Soil Foam Lichen				S3	8	65.7 ± 0.0	NB
N	<i>Leptogium laceroides</i>	Short-bearded Jellyskin Lichen				S3	11	44.3 ± 0.0	PE
N	<i>Peltigera membranacea</i>	Membranous Pelt Lichen				S3	24	28.0 ± 0.0	NB
N	<i>Cladonia botrytes</i>	Wooden Soldiers Lichen				S3	4	48.9 ± 0.0	PE
N	<i>Cladonia carneola</i>	Crowned Pixie-cup Lichen				S3	2	83.0 ± 0.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
N	<i>Cladonia deformis</i>	Lesser Sulphur-cup Lichen				S3	9	82.2 ± 1.0	NB
N	<i>Aulacomnium androgynum</i>	Little Groove Moss				S3?	10	55.5 ± 0.0	PE
N	<i>Ptychostomum inclinatum</i>	Blunt-tooth Thread Moss				S3?	2	92.1 ± 0.0	PE
N	<i>Dicranella rufescens</i>	Red Forklet Moss				S3?	1	89.6 ± 0.0	NB
N	<i>Rhytidiadelphus loreus</i>	Lanky Moss				S3?	3	83.0 ± 0.0	NS
N	<i>Sphagnum lescurii</i>	a Peatmoss				S3?	7	33.9 ± 0.0	NS
N	<i>Scytinium subtile</i>	Appressed Jellyskin Lichen				S3?	16	31.1 ± 0.0	PE
N	<i>Rostania occultata</i>	Crusted Tarpaper Lichen				S3?	4	50.8 ± 0.0	PE
N	<i>Stereocaulon subcoralloides</i>	Coralloid Foam Lichen				S3?	1	86.1 ± 1.0	NB
N	<i>Barbula convoluta</i>	Lesser Bird's-claw Beard Moss				S3S4	1	78.6 ± 15.0	NB
N	<i>Brachytheciastrum velutinum</i>	Velvet Ragged Moss				S3S4	3	50.3 ± 0.0	PE
N	<i>Calliergon giganteum</i>	Giant Spear Moss				S3S4	1	51.0 ± 0.0	PE
N	<i>Dicranella cerviculata</i>	a Moss				S3S4	4	74.5 ± 0.0	NS
N	<i>Dicranella varia</i>	a Moss				S3S4	2	42.7 ± 0.0	PE
N	<i>Dicranum majus</i>	Greater Broom Moss				S3S4	25	76.4 ± 0.0	NB
N	<i>Dicranum leioneuron</i>	a Dicranum Moss				S3S4	2	9.5 ± 0.0	NB
N	<i>Encalypta ciliata</i>	Fringed Extinguisher Moss				S3S4	2	89.2 ± 0.0	NB
N	<i>Fissidens bryoides</i>	Lesser Pocket Moss				S3S4	6	49.0 ± 0.0	PE
N	<i>Elodium blandowii</i>	Blandow's Bog Moss				S3S4	1	45.9 ± 0.0	PE
N	<i>Heterocladium dimorphum</i>	Dimorphous Tangle Moss				S3S4	7	68.1 ± 0.0	NB
N	<i>Isopterygiopsis muelleriana</i>	a Moss				S3S4	19	50.1 ± 0.0	PE
N	<i>Myurella julacea</i>	Small Mouse-tail Moss				S3S4	2	89.6 ± 0.0	NB
N	<i>Physcomitrium pyriforme</i>	Pear-shaped Urn Moss				S3S4	2	35.4 ± 0.0	NB
N	<i>Pogonatum dentatum</i>	Mountain Hair Moss				S3S4	5	74.5 ± 0.0	NS
N	<i>Sphagnum compactum</i>	Compact Peat Moss				S3S4	7	35.5 ± 0.0	NB
N	<i>Sphagnum quinquefarium</i>	Five-ranked Peat Moss				S3S4	2	68.1 ± 0.0	NB
N	<i>Sphagnum torreyanum</i>	a Peatmoss				S3S4	1	58.8 ± 0.0	NB
N	<i>Sphagnum austinii</i>	Austin's Peat Moss				S3S4	1	33.9 ± 0.0	NS
N	<i>Sphagnum contortum</i>	Twisted Peat Moss				S3S4	1	58.8 ± 0.0	NB
N	<i>Tetraphis geniculata</i>	Geniculate Four-tooth Moss				S3S4	15	49.1 ± 0.0	PE
N	<i>Tetraplodon angustatus</i>	Toothed-leaved Nitrogen Moss				S3S4	2	82.3 ± 0.0	NB
N	<i>Weissia controversa</i>	Green-Cushioned Weissia				S3S4	2	90.0 ± 1.0	NB
N	<i>Abietinella abietina</i>	Wiry Fern Moss				S3S4	2	89.6 ± 0.0	NB
N	<i>Trichostomum tenuirostre</i>	Acid-Soil Moss				S3S4	4	82.1 ± 0.0	NB
N	<i>Raiiella scita</i>	Smaller Fern Moss				S3S4	1	79.1 ± 0.0	NB
N	<i>Pannaria rubiginosa</i>	Brown-eyed Shingle Lichen				S3S4	16	44.5 ± 0.0	PE
N	<i>Pseudocyphellaria holarctica</i>	Yellow Specklebelly Lichen				S3S4	84	13.7 ± 0.0	NB
N	<i>Ramalina thrausta</i>	Angelhair Ramalina Lichen				S3S4	12	58.4 ± 0.0	NS
N	<i>Hypogymnia vittata</i>	Slender Monk's Hood Lichen				S3S4	25	74.7 ± 1.0	NB
N	<i>Scytinium teretiusculum</i>	Curly Jellyskin Lichen				S3S4	12	44.2 ± 0.0	PE
N	<i>Montanelia panniformis</i>	Shingled Camouflage Lichen				S3S4	5	76.9 ± 1.0	NB
N	<i>Cladonia floerkeana</i>	Gritty British Soldiers Lichen				S3S4	4	87.2 ± 1.0	NB
N	<i>Vahlia leucophaea</i>	Shelter Shingle Lichen				S3S4	18	47.5 ± 0.0	NB
N	<i>Xylopsora friesii</i>	a Lichen				S3S4	1	89.1 ± 1.0	NB
N	<i>Nephroma parile</i>	Powdery Kidney Lichen				S3S4	16	57.8 ± 0.0	NB
N	<i>Protopannaria pezizoides</i>	Brown-gray Moss-shingle Lichen				S3S4	26	44.5 ± 0.0	PE
N	<i>Stereocaulon paschale</i>	Easter Foam Lichen				S3S4	1	30.1 ± 1.0	NB
N	<i>Pannaria conoplea</i>	Mealy-rimmed Shingle Lichen				S3S4	33	44.6 ± 0.0	PE
N	<i>Physcia tenella</i>	Fringed Rosette Lichen				S3S4	7	43.2 ± 0.0	PE
N	<i>Anaptychia palmulata</i>	Shaggy Fringed Lichen				S3S4	68	50.4 ± 0.0	PE
N	<i>Peltigera neopolydactyla</i>	Undulating Pelt Lichen				S3S4	9	49.7 ± 0.0	PE
N	<i>Cladonia cariosa</i>	Lesser Ribbed Pixie Lichen				S3S4	4	34.3 ± 0.0	NB
N	<i>Hypocenomyce scalaris</i>	Common Clam Lichen				S3S4	1	86.1 ± 1.0	NB
N	<i>Dermatocarpon luridum</i>	Brookside Stippleback				S3S4	128	35.5 ± 0.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
N	<i>Leucodon brachypus</i>	Lichen				SH	13	75.7 ± 0.0	NB
N	<i>Splachnum luteum</i>	a Moss				SH	1	78.0 ± 100.0	NB
N	<i>Cyрто-hypnum minutulum</i>	Tiny Cedar Moss				SH	3	97.4 ± 10.0	NB
P	<i>Juglans cinerea</i>	Butternut	Endangered	Endangered	Endangered	S1	32	55.8 ± 0.0	PE
P	<i>Symphyotrichum laurentianum</i>	Gulf of St Lawrence Aster	Threatened	Threatened	Endangered	S1	65	73.2 ± 0.0	NB
P	<i>Fraxinus nigra</i>	Black Ash	Threatened			S4S5	503	5.6 ± 0.0	NB
P	<i>Isoetes prototypus</i>	Prototype Quillwort	Special Concern	Special Concern	Endangered	S2	13	84.8 ± 0.0	NS
P	<i>Lechea maritima var. subcylindrica</i>	Beach Pinweed	Special Concern	Special Concern	Special Concern	S2	946	32.1 ± 0.0	NB
P	<i>Symphyotrichum subulatum (Bathurst pop)</i>	Bathurst Aster - Bathurst pop.	Not At Risk		Endangered	S2	20	59.1 ± 0.0	NB
P	<i>Antennaria howellii ssp. petaloidea</i>	Pussy-Toes				S1	7	65.7 ± 5.0	PE
P	<i>Pseudognaphalium obtusifolium</i>	Eastern Cudweed				S1	29	40.6 ± 5.0	NB
P	<i>Hieracium robinsonii</i>	Robinson's Hawkweed				S1	12	77.0 ± 0.0	NB
P	<i>Solidago multiradiata</i>	Multi-rayed Goldenrod				S1	19	45.4 ± 0.0	NB
P	<i>Symphyotrichum subulatum (non-Bathurst pop)</i>	Annual Saltmarsh Aster				S1	12	43.3 ± 0.0	NB
P	<i>Betula michauxii</i>	Michaux's Dwarf Birch				S1	3	94.9 ± 0.0	NB
P	<i>Draba arabisans</i>	Rock Whitlow-Grass				S1	11	75.3 ± 0.0	NB
P	<i>Draba glabella</i>	Rock Whitlow-Grass				S1	3	89.4 ± 0.0	NB
P	<i>Draba incana</i>	Twisted Whitlow-grass				S1	4	96.4 ± 0.0	PE
P	<i>Stellaria crassifolia</i>	Fleshy Stitchwort				S1	3	11.2 ± 5.0	NB
P	<i>Chenopodium simplex</i>	Maple-leaved Goosefoot				S1	6	66.6 ± 1.0	NB
P	<i>Suaeda rolandii</i>	Roland's Sea-Blite				S1	14	10.6 ± 0.0	NB
P	<i>Hypericum virginicum</i>	Virginia St. John's-wort				S1	2	34.6 ± 0.0	NS
P	<i>Corema conradii</i>	Broom Crowberry				S1	23	62.5 ± 0.0	PE
P	<i>Vaccinium boreale</i>	Northern Blueberry				S1	5	22.1 ± 1.0	NB
P	<i>Vaccinium corymbosum</i>	Highbush Blueberry				S1	1	45.1 ± 0.0	NS
P	<i>Vaccinium uliginosum</i>	Alpine Bilberry				S1	1	82.1 ± 1.0	PE
P	<i>Euphorbia polygonifolia</i>	Seaside Spurge				S1	29	40.4 ± 0.0	NB
P	<i>Bartonia virginica</i>	Yellow Bartonia				S1	3	99.9 ± 1.0	NB
P	<i>Proserpinaca pectinata</i>	Comb-leaved Mermaidweed				S1	2	78.3 ± 5.0	NS
P	<i>Primula laurentiana</i>	Laurentian Primrose				S1	14	84.6 ± 3.0	NB
P	<i>Ranunculus sceleratus</i>	Cursed Buttercup				S1	1	87.3 ± 100.0	NB
P	<i>Amelanchier fernaldii</i>	Fernald's Serviceberry				S1	3	49.2 ± 1.0	NB
P	<i>Dryas integrifolia</i>	Entire-leaved Mountain Avens				S1	15	44.2 ± 3.0	NB
P	<i>Rubus flagellaris</i>	Northern Dewberry				S1	3	47.5 ± 1.0	NB
P	<i>Geum fragarioides</i>	Barren Strawberry				S1	1	40.1 ± 1.0	NB
P	<i>Salix myrtilifolia</i>	Blueberry Willow				S1	25	44.8 ± 0.0	NB
P	<i>Saxifraga paniculata ssp. laestadii</i>	Laestadius' Saxifrage				S1	16	88.7 ± 0.0	NB
P	<i>Agalinis purpurea var. parviflora</i>	Small-flowered Purple False Foxglove				S1	59	11.5 ± 0.0	NB
P	<i>Viola sagittata var. ovata</i>	Arrow-Leaved Violet				S1	2	94.6 ± 1.0	PE
P	<i>Carex annectens</i>	Yellow-Fruited Sedge				S1	3	2.4 ± 0.0	NB
P	<i>Carex atlantica ssp. atlantica</i>	Atlantic Sedge				S1	7	19.7 ± 0.0	NB
P	<i>Carex backii</i>	Rocky Mountain Sedge				S1	2	66.0 ± 0.0	NB
P	<i>Carex merritt-feraldii</i>	Merritt Fernald's Sedge				S1	1	66.5 ± 0.0	NB
P	<i>Carex rariflora</i>	Loose-flowered Alpine Sedge				S1	1	96.3 ± 0.0	PE
P	<i>Carex sterilis</i>	Sterile Sedge				S1	1	74.9 ± 2.0	NB
P	<i>Scirpus pendulus</i>	Hanging Bulrush				S1	8	32.6 ± 0.0	NS
P	<i>Sisyrinchium angustifolium</i>	Narrow-leaved Blue-eyed-				S1	3	54.5 ± 5.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
P	<i>Juncus greenii</i>	grass Greene's Rush				S1	11	39.2 ± 5.0	PE
P	<i>Juncus stygius</i> ssp. <i>americanus</i>	Moor Rush				S1	16	34.4 ± 5.0	NB
P	<i>Goodyera pubescens</i>	Downy Rattlesnake-Plantain				S1	12	65.5 ± 0.0	NB
P	<i>Malaxis monophyllos</i> var. <i>brachypoda</i>	North American White Adder's-mouth				S1	6	52.0 ± 0.0	PE
P	<i>Malaxis monophyllos</i>	White Adder's-mouth				S1	1	67.5 ± 0.0	NB
P	<i>Platanthera flava</i>	Southern Rein-Orchid				S1	1	67.5 ± 0.0	NB
P	<i>Platanthera macrophylla</i>	Large Round-Leaved Orchid				S1	6	28.4 ± 0.0	NB
P	<i>Bromus pubescens</i>	Hairy Wood Brome Grass				S1	1	77.6 ± 0.0	NB
P	<i>Calamagrostis stricta</i> ssp. <i>inexpansa</i>	Slim-stemmed Reed Grass				S1	3	30.4 ± 1.0	NB
P	<i>Catabrosa aquatica</i>	Water Whorl Grass				S1	4	81.1 ± 5.0	PE
P	<i>Danthonia compressa</i>	Flattened Oat Grass				S1	20	30.6 ± 0.0	NB
P	<i>Festuca subverticillata</i>	Nodding Fescue				S1	7	87.9 ± 0.0	NS
P	<i>Potamogeton friesii</i>	Fries' Pondweed				S1	15	35.6 ± 0.0	NB
P	<i>Dryopteris filix-mas</i> ssp. <i>brittonii</i>	Britton's Male Fern				S1	2	54.7 ± 1.0	NB
P	<i>Schizaea pusilla</i>	Little Curlygrass Fern				S1	1	84.8 ± 0.0	NB
P	<i>Bidens heterodoxa</i>	Connecticut Beggar-Ticks				S1?	12	68.9 ± 0.0	PE
P	<i>Polygonum aviculare</i> ssp. <i>neglectum</i>	Narrow-leaved Knotweed				S1?	4	11.8 ± 1.0	NB
P	<i>Selaginella rupestris</i>	Rock Spikemoss				S1S2	1	94.9 ± 1.0	NB
P	<i>Coryphopteris simulata</i>	Bog Fern				S1S2	8	73.0 ± 0.0	NB
P	<i>Cuscuta cephalanthi</i>	Buttonbush Dodder				S1S3	8	1.3 ± 0.0	NB
P	<i>Eriophorum russeolum</i> ssp. <i>albidum</i>	Smooth-fruited Russet Cottongrass				S1S3	11	30.6 ± 1.0	NB
P	<i>Spiranthes arcisepala</i>	Appalachian Ladies'-tresses				S1S3	7	34.5 ± 0.0	NB
P	<i>Spiranthes incurva</i>	Sphinx Ladies'-tresses				S1S3	1	44.6 ± 0.0	NB
P	<i>Neottia bifolia</i>	Southern Twayblade			Endangered	S2	32	8.9 ± 0.0	NB
P	<i>Osmorhiza longistylis</i>	Smooth Sweet Cicely				S2	7	71.0 ± 1.0	NS
P	<i>Ionactis linariifolia</i>	Flax-leaved Aster				S2	1	72.3 ± 5.0	NB
P	<i>Pseudognaphalium macounii</i>	Macoun's Cudweed				S2	41	46.4 ± 0.0	PE
P	<i>Impatiens pallida</i>	Pale Jewelweed				S2	2	86.0 ± 0.0	PE
P	<i>Boechera stricta</i>	Drummond's Rockcress				S2	8	65.7 ± 0.0	NB
P	<i>Sagina nodosa</i>	Knotted Pearlwort				S2	2	65.5 ± 0.0	PE
P	<i>Sagina nodosa</i> ssp. <i>borealis</i>	Knotted Pearlwort				S2	3	64.1 ± 0.0	PE
P	<i>Stellaria longifolia</i>	Long-leaved Starwort				S2	8	24.4 ± 2.0	NB
P	<i>Atriplex glabriuscula</i> var. <i>franktonii</i>	Frankton's Saltbush				S2	7	17.4 ± 0.0	NB
P	<i>Oxybasis rubra</i>	Red Goosefoot				S2	13	14.5 ± 0.0	NB
P	<i>Hypericum x dissimulatum</i>	Disguised St. John's-wort				S2	4	52.2 ± 0.0	PE
P	<i>Triosteum aurantiacum</i>	Orange-fruited Tinker's Weed				S2	7	61.2 ± 0.0	NB
P	<i>Viburnum lentago</i>	Nannyberry				S2	1	84.5 ± 0.0	NB
P	<i>Viburnum recognitum</i>	Northern Arrow-Wood				S2	2	29.8 ± 0.0	NB
P	<i>Shepherdia canadensis</i>	Soapberry				S2	42	41.4 ± 0.0	NB
P	<i>Gentiana linearis</i>	Narrow-Leaved Gentian				S2	1	66.0 ± 50.0	NB
P	<i>Myriophyllum humile</i>	Low Water Milfoil				S2	1	83.9 ± 1.0	NB
P	<i>Proserpinaca palustris</i>	Marsh Mermaidweed				S2	2	85.4 ± 1.0	NS
P	<i>Hedeoma pulegioides</i>	American False Pennyroyal				S2	3	65.4 ± 1.0	NS
P	<i>Nuphar x rubrodiscalis</i>	Red-disk Yellow Pond-lily				S2	20	21.2 ± 1.0	NB
P	<i>Aphyllon uniflorum</i>	One-flowered Broomrape				S2	4	85.4 ± 0.0	PE
P	<i>Polygaloides paucifolia</i>	Fringed Milkwort				S2	1	98.5 ± 1.0	NB
P	<i>Persicaria careyi</i>	Carey's Smartweed				S2	2	24.4 ± 2.0	NB
P	<i>Anemone parviflora</i>	Small-flowered Anemone				S2	9	44.9 ± 0.0	NB
P	<i>Hepatica americana</i>	Round-lobed Hepatica				S2	3	87.2 ± 0.0	NS

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P	<i>Ranunculus flabellaris</i>	Yellow Water Buttercup				S2	1	59.2 ± 0.0	NB
P	<i>Crataegus scabrada</i>	Rough Hawthorn				S2	4	11.9 ± 1.0	NB
P	<i>Crataegus succulenta</i>	Fleshy Hawthorn				S2	5	40.9 ± 0.0	PE
P	<i>Salix candida</i>	Sage Willow				S2	6	83.4 ± 0.0	PE
P	<i>Agalinis neoscotica</i>	Nova Scotia Agalinis				S2	1	38.5 ± 0.0	NS
P	<i>Euphrasia randii</i>	Rand's Eyebright				S2	4	42.9 ± 0.0	PE
P	<i>Dirca palustris</i>	Eastern Leatherwood				S2	1	37.2 ± 1.0	NB
P	<i>Sagittaria montevidensis</i> <i>ssp. spongiosa</i>	Spongy Arrowhead				S2	67	53.6 ± 0.0	NB
P	<i>Symplocarpus foetidus</i>	Eastern Skunk Cabbage				S2	128	19.4 ± 18.0	NB
P	<i>Carex comosa</i>	Bearded Sedge				S2	5	29.2 ± 0.0	NB
P	<i>Carex granularis</i>	Limestone Meadow Sedge				S2	10	2.5 ± 0.0	NB
P	<i>Carex gynocrates</i>	Northern Bog Sedge				S2	1	91.4 ± 0.0	PE
P	<i>Carex hirtifolia</i>	Pubescent Sedge				S2	12	61.3 ± 0.0	NB
P	<i>Carex livida</i>	Livid Sedge				S2	9	32.5 ± 0.0	NS
P	<i>Carex plantaginea</i>	Plantain-Leaved Sedge				S2	3	90.9 ± 0.0	NB
P	<i>Carex rostrata</i>	Narrow-leaved Beaked Sedge				S2	2	64.4 ± 5.0	NB
P	<i>Carex tenuiflora</i>	Sparse-Flowered Sedge				S2	10	36.3 ± 0.0	NS
P	<i>Carex albicans</i> var. <i>emmonsii</i>	White-tinged Sedge				S2	19	4.2 ± 0.0	NB
P	<i>Eriophorum gracile</i>	Slender Cottongrass				S2	52	10.3 ± 0.0	NB
P	<i>Blysmopsis rufa</i>	Red Bulrush				S2	35	42.4 ± 0.0	PE
P	<i>Juncus vaseyi</i>	Vasey Rush				S2	12	32.4 ± 0.0	NB
P	<i>Allium tricoccum</i>	Wild Leek				S2	6	64.5 ± 0.0	NB
P	<i>Galearis rotundifolia</i>	Small Round-leaved Orchid				S2	3	86.7 ± 0.0	NB
P	<i>Calypso bulbosa</i> var. <i>americana</i>	Calypso				S2	3	68.9 ± 5.0	NB
P	<i>Coeloglossum viride</i>	Long-bracted Frog Orchid				S2	6	53.0 ± 10.0	NB
P	<i>Cypripedium parviflorum</i> var. <i>makasin</i>	Small Yellow Lady's-Slipper				S2	2	58.0 ± 0.0	NB
P	<i>Goodyera oblongifolia</i>	Menzies' Rattlesnake-plantain				S2	2	51.5 ± 0.0	PE
P	<i>Spiranthes lucida</i>	Shining Ladies'-Tresses				S2	1	69.1 ± 1.0	NB
P	<i>Spiranthes ochroleuca</i>	Yellow Ladies'-tresses				S2	17	23.2 ± 0.0	NB
P	<i>Elymus canadensis</i>	Canada Wild Rye				S2	1	43.2 ± 1.0	NB
P	<i>Piptatheropsis canadensis</i>	Canada Ricegrass				S2	4	47.5 ± 10.0	NB
P	<i>Puccinellia phryganodes</i> <i>ssp. neoarctica</i>	Creeping Alkali Grass				S2	2	6.9 ± 1.0	NB
P	<i>Poa glauca</i>	Glaucous Blue Grass				S2	13	86.3 ± 0.0	NB
P	<i>Puccinellia nutkaensis</i>	Alaska Alkaligrass				S2	2	5.3 ± 1.0	NB
P	<i>Zizania aquatica</i> var. <i>aquatica</i>	Eastern Wild Rice				S2	4	66.1 ± 0.0	NB
P	<i>Piptatheropsis pungens</i>	Slender Ricegrass				S2	5	62.4 ± 5.0	NB
P	<i>Potamogeton vaseyi</i>	Vasey's Pondweed				S2	1	36.6 ± 0.0	PE
P	<i>Asplenium trichomanes</i>	Maidenhair Spleenwort				S2	8	64.1 ± 0.0	NB
P	<i>Anchistea virginica</i>	Virginia chain fern				S2	30	36.2 ± 0.0	NS
P	<i>Woodsia alpina</i>	Alpine Cliff Fern				S2	4	77.5 ± 0.0	NB
P	<i>Diphasiastrum sitchense</i>	Sitka Ground-cedar				S2	4	32.3 ± 0.0	NB
P	<i>Selaginella selaginoides</i>	Low Spikemoss				S2	8	86.3 ± 0.0	NB
P	<i>Toxicodendron radicans</i> var. <i>radicans</i>	Eastern Poison Ivy				S2?	7	32.7 ± 0.0	NB
P	<i>Symphyotrichum novi-belgii</i> var. <i>crenifolium</i>	New York Aster				S2?	5	31.2 ± 0.0	NB
P	<i>Humulus lupulus</i> var. <i>lupuloides</i>	Common Hop				S2?	1	64.7 ± 5.0	NB
P	<i>Crataegus macrosperma</i>	Big-Fruit Hawthorn				S2?	3	30.1 ± 0.0	NB
P	<i>Rubus x recurvicaulis</i>	arching dewberry				S2?	5	19.5 ± 0.0	NB

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P	<i>Galium obtusum</i>	Blunt-leaved Bedstraw				S2?	7	41.4 ± 10.0	NB
P	<i>Salix myricoides</i>	Bayberry Willow				S2?	1	44.8 ± 1.0	NB
P	<i>Carex vacillans</i>	Estuarine Sedge				S2?	4	17.3 ± 0.0	NB
P	<i>Platanthera huronensis</i>	Fragrant Green Orchid				S2?	3	85.9 ± 0.0	NB
P	<i>Solidago altissima</i>	Tall Goldenrod				S2S3	3	36.3 ± 0.0	NB
P	<i>Callitriche hermaphroditica</i>	Northern Water-starwort				S2S3	9	43.8 ± 0.0	NB
P	<i>Elatine americana</i>	American Waterwort				S2S3	6	30.5 ± 0.0	NB
P	<i>Bartonia paniculata</i>	Branched Bartonia				S2S3	1	62.0 ± 0.0	NS
P	<i>Bartonia paniculata</i> ssp. <i>iodandra</i>	Branched Bartonia				S2S3	4	82.0 ± 0.0	NB
P	<i>Geranium robertianum</i>	Herb Robert				S2S3	88	48.8 ± 0.0	PE
P	<i>Epilobium coloratum</i>	Purple-veined Willowherb				S2S3	31	15.6 ± 1.0	NB
P	<i>Rumex persicarioides</i>	Peach-leaved Dock				S2S3	36	37.4 ± 1.0	NB
P	<i>Rumex pallidus</i>	Seabeach Dock				S2S3	7	38.9 ± 0.0	PE
P	<i>Rubus pensilvanicus</i>	Pennsylvania Blackberry				S2S3	38	34.7 ± 0.0	NS
P	<i>Galium labradoricum</i>	Labrador Bedstraw				S2S3	26	42.6 ± 0.0	PE
P	<i>Carex adusta</i>	Lesser Brown Sedge				S2S3	8	29.5 ± 0.0	NB
P	<i>Scirpus atrovirens</i>	Dark-green Bulrush				S2S3	2	39.0 ± 0.0	PE
P	<i>Corallorhiza maculata</i> var. <i>occidentalis</i>	Spotted Coralroot				S2S3	14	36.6 ± 10.0	NB
P	<i>Corallorhiza maculata</i> var. <i>maculata</i>	Spotted Coralroot				S2S3	4	79.3 ± 0.0	NS
P	<i>Neottia auriculata</i>	Auricled Twayblade				S2S3	7	89.8 ± 0.0	NB
P	<i>Spiranthes cernua</i>	Nodding Ladies'-Tresses				S2S3	20	20.9 ± 0.0	NB
P	<i>Eragrostis pectinacea</i>	Tufted Love Grass				S2S3	6	32.8 ± 0.0	NB
P	<i>Stuckenia filiformis</i>	Thread-leaved Pondweed				S2S3	5	14.3 ± 1.0	NB
P	<i>Potamogeton praelongus</i>	White-stemmed Pondweed				S2S3	24	35.0 ± 0.0	NS
P	<i>Isoetes tuckermanii</i> ssp. <i>acadiensis</i>	Acadian Quillwort				S2S3	1	99.4 ± 1.0	NS
P	<i>Ophioglossum pusillum</i>	Northern Adder's-tongue				S2S3	8	45.3 ± 50.0	NS
P	<i>Panax trifolius</i>	Dwarf Ginseng				S3	41	21.0 ± 0.0	NB
P	<i>Artemisia campestris</i> ssp. <i>caudata</i>	Tall Wormwood				S3	10	65.1 ± 0.0	PE
P	<i>Artemisia campestris</i>	Field Wormwood				S3	4	91.5 ± 0.0	NB
P	<i>Bidens hyperborea</i>	Estuary Beggarticks				S3	33	41.3 ± 0.0	NB
P	<i>Erigeron hyssopifolius</i>	Hyssop-leaved Fleabane				S3	98	42.4 ± 1.0	NB
P	<i>Nabalus racemosus</i>	Glaucous Rattlesnakeroot				S3	2	82.5 ± 0.0	PE
P	<i>Symphotrichum boreale</i>	Boreal Aster				S3	19	42.9 ± 0.0	PE
P	<i>Betula pumila</i>	Bog Birch				S3	142	42.6 ± 0.0	PE
P	<i>Arabis pycnocarpa</i>	Cream-flowered Rockcress				S3	9	13.4 ± 0.0	NB
P	<i>Cardamine maxima</i>	Large Toothwort				S3	4	63.3 ± 0.0	PE
P	<i>Subularia aquatica</i> ssp. <i>americana</i>	American Water Awlwort				S3	2	85.2 ± 0.0	NB
P	<i>Stellaria humifusa</i>	Saltmarsh Starwort				S3	17	11.2 ± 5.0	NB
P	<i>Ceratophyllum echinatum</i>	Prickly Hornwort				S3	36	13.7 ± 1.0	NB
P	<i>Hudsonia tomentosa</i>	Woolly Beach-heath				S3	421	6.4 ± 0.0	NB
P	<i>Cornus obliqua</i>	Silky Dogwood				S3	2	82.3 ± 0.0	NB
P	<i>Crassula aquatica</i>	Water Pygmyweed				S3	5	65.0 ± 0.0	NB
P	<i>Rhodiola rosea</i>	Roseroot				S3	71	74.7 ± 0.0	NB
P	<i>Penthorum sedoides</i>	Ditch Stonecrop				S3	25	58.2 ± 0.0	NB
P	<i>Elatine minima</i>	Small Waterwort				S3	1	85.6 ± 0.0	NB
P	<i>Geranium bicknellii</i>	Bicknell's Crane's-bill				S3	17	29.5 ± 0.0	NB
P	<i>Myriophyllum farwellii</i>	Farwell's Water Milfoil				S3	9	32.1 ± 1.0	NB
P	<i>Myriophyllum verticillatum</i>	Whorled Water Milfoil				S3	14	31.6 ± 1.0	NB
P	<i>Teucrium canadense</i>	Canada Germander				S3	128	13.6 ± 0.0	NB
P	<i>Nuphar microphylla</i>	Small Yellow Pond-lily				S3	7	31.5 ± 5.0	NB
P	<i>Epilobium hornemannii</i>	Hornemann's Willowherb				S3	4	88.5 ± 1.0	NB
P	<i>Epilobium hornemannii</i> ssp.	Hornemann's Willowherb				S3	1	88.7 ± 0.0	NB

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P	<i>hornemannii</i>								
P	<i>Epilobium strictum</i>	Downy Willowherb				S3	31	7.7 ± 0.0	NB
P	<i>Polygala sanguinea</i>	Blood Milkwort				S3	20	3.5 ± 0.0	NB
P	<i>Persicaria arifolia</i>	Halberd-leaved Tearthumb				S3	143	14.4 ± 0.0	NB
P	<i>Persicaria punctata</i>	Dotted Smartweed				S3	26	32.4 ± 0.0	NS
P	<i>Fallopia scandens</i>	Climbing False Buckwheat				S3	72	24.4 ± 2.0	NB
P	<i>Samolus parviflorus</i>	Seaside Brookweed				S3	120	11.6 ± 0.0	NB
P	<i>Pyrola minor</i>	Lesser Pyrola				S3	6	36.8 ± 0.0	NS
P	<i>Clematis occidentalis</i>	Purple Clematis				S3	15	48.6 ± 0.0	NS
P	<i>Ranunculus gmelinii</i>	Gmelin's Water Buttercup				S3	50	28.6 ± 0.0	NB
P	<i>Thalictrum confine</i>	Northern Meadow-rue				S3	1	75.0 ± 1.0	PE
P	<i>Amelanchier canadensis</i>	Canada Serviceberry				S3	36	9.0 ± 0.0	NB
P	<i>Rosa palustris</i>	Swamp Rose				S3	4	29.5 ± 0.0	NB
P	<i>Rubus occidentalis</i>	Black Raspberry				S3	1	47.2 ± 0.0	NB
P	<i>Sanguisorba canadensis</i>	Canada Burnet				S3	17	81.9 ± 0.0	NB
P	<i>Galium boreale</i>	Northern Bedstraw				S3	8	46.6 ± 5.0	NS
P	<i>Salix pedicellaris</i>	Bog Willow				S3	66	10.3 ± 0.0	NB
P	<i>Salix interior</i>	Sandbar Willow				S3	1	46.5 ± 1.0	NB
P	<i>Comandra umbellata</i>	Bastard's Toadflax				S3	65	4.1 ± 0.0	NB
P	<i>Limosella australis</i>	Southern Mudwort				S3	79	16.8 ± 1.0	NB
P	<i>Pilea pumila</i>	Dwarf Clearweed				S3	68	31.1 ± 0.0	PE
P	<i>Viola adunca</i>	Hooked Violet				S3	3	66.4 ± 0.0	NB
P	<i>Viola nephrophylla</i>	Northern Bog Violet				S3	7	51.0 ± 0.0	PE
P	<i>Carex arcta</i>	Northern Clustered Sedge				S3	3	63.0 ± 20.0	NB
P	<i>Carex capillaris</i>	Hairlike Sedge				S3	11	56.5 ± 0.0	NS
P	<i>Carex chordorrhiza</i>	Creeping Sedge				S3	68	29.1 ± 0.0	NB
P	<i>Carex conoidea</i>	Field Sedge				S3	6	2.4 ± 0.0	NB
P	<i>Carex eburnea</i>	Bristle-leaved Sedge				S3	17	60.4 ± 100.0	NB
P	<i>Carex exilis</i>	Coastal Sedge				S3	1	76.4 ± 0.0	NS
P	<i>Carex garberi</i>	Garber's Sedge				S3	1	14.4 ± 0.0	NB
P	<i>Carex haydenii</i>	Hayden's Sedge				S3	4	16.0 ± 0.0	NB
P	<i>Carex lupulina</i>	Hop Sedge				S3	6	56.5 ± 1.0	NB
P	<i>Carex michauxiana</i>	Michaux's Sedge				S3	14	32.8 ± 0.0	NS
P	<i>Carex ormostachya</i>	Necklace Spike Sedge				S3	4	43.7 ± 1.0	NB
P	<i>Carex rosea</i>	Rosy Sedge				S3	9	87.8 ± 1.0	NS
P	<i>Carex tenera</i>	Tender Sedge				S3	13	23.9 ± 0.0	NB
P	<i>Carex tuckermanii</i>	Tuckerman's Sedge				S3	26	48.1 ± 0.0	NS
P	<i>Carex wiegandii</i>	Wiegand's Sedge				S3	144	9.2 ± 0.0	NB
P	<i>Carex recta</i>	Estuary Sedge				S3	19	27.7 ± 0.0	NB
P	<i>Carex atratiformis</i>	Scabrous Black Sedge				S3	3	87.7 ± 0.0	NS
P	<i>Cyperus dentatus</i>	Toothed Flatsedge				S3	1	53.3 ± 1.0	NB
P	<i>Cyperus esculentus var. leptostachyus</i>	Perennial Yellow Nutsedge				S3	1	79.3 ± 0.0	NB
P	<i>Eleocharis intermedia</i>	Matted Spikerush				S3	1	88.3 ± 0.0	NB
P	<i>Eleocharis quinqueflora</i>	Few-flowered Spikerush				S3	1	90.2 ± 0.0	PE
P	<i>Rhynchospora fusca</i>	Brown Beakrush				S3	9	32.9 ± 0.0	NS
P	<i>Trichophorum clintonii</i>	Clinton's Clubrush				S3	25	87.8 ± 0.0	NB
P	<i>Bolboschoenus fluviatilis</i>	River Bulrush				S3	4	28.4 ± 1.0	NB
P	<i>Schoenoplectus torreyi</i>	Torrey's Bulrush				S3	1	29.2 ± 0.0	NB
P	<i>Lemna trisulca</i>	Star Duckweed				S3	30	30.5 ± 1.0	NB
P	<i>Cypripedium reginae</i>	Showy Lady's-Slipper				S3	40	11.0 ± 0.0	NB
P	<i>Liparis loeselii</i>	Loesel's Twayblade				S3	67	14.5 ± 0.0	NB
P	<i>Platanthera blephariglottis</i>	White Fringed Orchid				S3	510	8.9 ± 0.0	NB
P	<i>Platanthera grandiflora</i>	Large Purple Fringed Orchid				S3	60	16.3 ± 0.0	NB
P	<i>Bromus latiglumis</i>	Broad-Glumed Brome				S3	25	55.6 ± 0.0	NB
P	<i>Calamagrostis pickeringii</i>	Pickering's Reed Grass				S3	31	50.7 ± 0.0	NB
P	<i>Dichanthelium depauperatum</i>	Starved Panic Grass				S3	7	52.4 ± 0.0	NB

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	# recs	Distance (km)	Prov
P	<i>Potamogeton obtusifolius</i>	Blunt-leaved Pondweed				S3	37	28.1 ± 0.0	NB
P	<i>Xyris montana</i>	Northern Yellow-Eyed-Grass				S3	245	9.0 ± 0.0	NB
P	<i>Zannichellia palustris</i>	Horned Pondweed				S3	49	4.6 ± 0.0	NB
P	<i>Cryptogramma stelleri</i>	Steller's Rockbrake				S3	1	96.1 ± 0.0	NS
P	<i>Asplenium viride</i>	Green Spleenwort				S3	18	66.1 ± 1.0	NB
P	<i>Dryopteris fragrans</i>	Fragrant Wood Fern				S3	63	75.4 ± 0.0	NB
P	<i>Woodsia glabella</i>	Smooth Cliff Fern				S3	64	75.8 ± 0.0	NB
P	<i>Isoetes tuckermanii</i> ssp. <i>tuckermanii</i>	Tuckerman's Quillwort				S3	2	82.0 ± 0.0	NB
P	<i>Diphasiastrum x sabinifolium</i>	Savin-leaved Ground-cedar				S3	18	31.0 ± 0.0	NB
P	<i>Huperzia appressa</i>	Mountain Firmoss				S3	25	83.4 ± 1.0	NS
P	<i>Sceptridium dissectum</i>	Dissected Moonwort				S3	9	24.1 ± 2.0	NB
P	<i>Botrychium lanceolatum</i> ssp. <i>angustisegmentum</i>	Narrow Triangle Moonwort				S3	17	29.3 ± 0.0	NB
P	<i>Botrychium simplex</i>	Least Moonwort				S3	7	32.8 ± 0.0	NB
P	<i>Polypodium appalachianum</i>	Appalachian Polypody				S3	28	49.3 ± 1.0	NB
P	<i>Crataegus submollis</i>	Quebec Hawthorn				S3?	2	94.1 ± 7.0	NS
P	<i>Mertensia maritima</i>	Sea Lungwort				S3S4	7	53.3 ± 0.0	NB
P	<i>Suaeda calceoliformis</i>	Horned Sea-blite				S3S4	46	3.8 ± 0.0	NB
P	<i>Myriophyllum sibiricum</i>	Siberian Water Milfoil				S3S4	21	48.7 ± 0.0	NS
P	<i>Utricularia gibba</i>	Humped Bladderwort				S3S4	5	13.7 ± 0.0	NB
P	<i>Rumex fueginus</i>	Tierra del Fuego Dock				S3S4	144	5.7 ± 0.0	NB
P	<i>Rubus chamaemorus</i>	Cloudberry				S3S4	181	32.7 ± 1.0	NB
P	<i>Geocaulon lividum</i>	Northern Comandra				S3S4	41	24.4 ± 2.0	NB
P	<i>Juniperus horizontalis</i>	Creeping Juniper				S3S4	45	44.5 ± 0.0	PE
P	<i>Cladium mariscoides</i>	Smooth Twigrush				S3S4	7	13.7 ± 1.0	NB
P	<i>Eriophorum russeolum</i>	Russet Cottongrass				S3S4	330	6.8 ± 0.0	NB
P	<i>Eriophorum russeolum</i> ssp. <i>russeolum</i>	Russet Cottongrass				S3S4	47	20.7 ± 0.0	NB
P	<i>Triglochin gaspensis</i>	Gasp Arrowgrass				S3S4	75	1.7 ± 0.0	NB
P	<i>Spirodela polyrhiza</i>	Great Duckweed				S3S4	19	30.9 ± 0.0	NB
P	<i>Corallorhiza maculata</i>	Spotted Coralroot				S3S4	31	30.6 ± 5.0	NB
P	<i>Calamagrostis stricta</i>	Slim-stemmed Reed Grass				S3S4	39	11.5 ± 2.0	NB
P	<i>Calamagrostis stricta</i> ssp. <i>stricta</i>	Slim-stemmed Reed Grass				S3S4	23	35.2 ± 0.0	NS
P	<i>Distichlis spicata</i>	Salt Grass				S3S4	108	4.4 ± 0.0	NB
P	<i>Potamogeton oakesianus</i>	Oakes' Pondweed				S3S4	8	13.7 ± 0.0	NB
P	<i>Polygonum oxyspermum</i> ssp. <i>raii</i>	Ray's Knotweed				SH	3	91.7 ± 20.0	PE
P	<i>Montia fontana</i>	Water Blinks				SH	2	11.4 ± 1.0	NB
P	<i>Brachyelytrum erectum</i>	Bearded Shorthusk				SH	2	24.4 ± 2.0	NB
P	<i>Agalinis maritima</i>	Saltmarsh Agalinis				SX	2	68.8 ± 50.0	NB

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

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20	Kouchibouguac National Park, Natural Resource Conservation Sec. 1988. The Resources of Kouchibouguac National Park. Beach, H. (ed.) , 90 recs.
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17	Mazerolle, D. 2003. Assessment of Seaside Pinweed (<i>Lechea maritima</i> var. <i>subcylindrica</i>) in Southeastern New Brunswick. Irving Eco-centre, la Dune du Boutouche, 18 recs.
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13	Eaton, S. 2014. Nova Scotia Wood Turtle Database. Environment and Climate Change Canada, 4843 recs.
13	Wissink, R. 2000. Rare Plants of Fundy: maps. Parks Canada, 20 recs.
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12	Hall, R.A. 2003. NS Freshwater Mussel Fieldwork. Nova Scotia Dept Natural Resources, 189 recs.
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9	Godbout, V. 2002. SAR Inventory: Birds in Fort Beauséjour NHS. Parks Canada, Atlantic, SARINV02-01. 202 recs.
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6	Daury, R.W. & Bateman, M.C. 1996. The Barrow's Goldeneye (<i>Bucephala islandica</i>) in the Atlantic Provinces and Maine. Canadian Wildlife Service, Sackville, 47pp.
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6	Harris, P. 2004. Plant records from 1997-2003. Island Nature Trust, Charlottetown PE, 71 recs.
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6	Neily, T.H. 2019. Tom Neily NS Bryophyte records (2009-2013). T.H. Neily, Atlantic Canada Conservation Data Centre, 1029 specimen records.
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6	Shortt, R. Connell Herbarium Black Ash specimens. University New Brunswick, Fredericton. 2019.
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5	Bastien, D. 2017. Rare Peatland plant observations. Pers. comm. to H. Askanas, New Brunswick Department of Energy and Resource Development.
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5	Cowie, Faye. 2007. Surveyed Lakes in New Brunswick. Canadian Rivers Institute, 781 recs.
5	Dibblee, R.L. 1999. PEI Cormorant Survey. Prince Edward Island Fisheries, Aquaculture & Environment, 1p. 21 recs.
5	Doucet, D.A. & Edsall, J.; Brunelle, P.-M. 2007. Miramichi Watershed Rare Odonata Survey. New Brunswick ETF & WTF Report, 1211 recs.
5	Kennedy, Joseph. 2010. New Brunswick Peregrine records, 2009. New Brunswick Dept Natural Resources, 19 recs (14 active).
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4	Godbout, V. 2000. Recherche de l'Aster du St-Laurent (<i>Aster laurentianus</i>) et du Satyre des Maritimes (<i>Coenonympha nepisiquit</i>) au Parc national Kouchibouguac et a Dune du Bouctouche, N-B. Irving Eco-centre, 23 pp.
4	Gravel, Mireille. 2010. Coordonnées des tortues des bois Salmon River Road, 2005. Kouchibouguac National Park, 4 recs.

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4	Phillips, B. 2017. Emails to John Klymko regarding Eastern Waterfan (<i>Peltigera hydrothyria</i>) occurrences in Fundy National Park. Fundy Biosphere Reserve, 3 recs.
4	Popma, K. 2001. Phalarope & other bird observations in Westmorland Co. , Pers. comm. to K.A. Bredin. 5 recs.
4	Sabine, D.L. 2012. Bronze Copper records, 2003-06. New Brunswick Dept of Natural Resources, 5 recs.
3	Belliveau, A.G. 2014. Plant Records from Southern and Central Nova Scotia. Atlantic Canada Conservation Data Centre, 919 recs.
3	Benjamin, L.K. 2009. Boreal Felt Lichen, Mountain Avens, Orchid and other recent records. Nova Scotia Dept Natural Resources, 105 recs.
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3	Boyne, A.W. & Grecian, V.D. 1999. Tern Surveys. Canadian Wildlife Service, Sackville, unpublished data. 23 recs.
3	Chaput, G. 2002. Atlantic Salmon: Maritime Provinces Overview for 2001. Dept of Fisheries & Oceans, Atlantic Region, Science Stock Status Report D3-14. 39 recs.
3	Ferguson, D.C. 1954. The Lepidoptera of Nova Scotia. Part I, macrolepidoptera. Proceedings of the Nova Scotian Institute of Science, 23(3), 161-375.
3	Gagnon, E. Herbarium from 2017 Plant Systematics class. Université de Moncton. 2017.
3	Gautreau-Daigle, H. 2007. Rare plant records from peatland surveys. Coastal Zones Research Institute, Shippagan NB. Pers. comm. to D.M. Mazerolle, 39 recs.
3	Gautreau, R. 2005. <i>Betula michauxii</i> occurrence on Bog 324, near Baie-Ste-Anne, NB. Pers. comm. to C.S. Blaney, 3 recs.
3	Gauvin, J.M. 1979. Etude de la vegetation des marais sales du parc national Kouchibouguac, N-B. M.Sc. Thesis, Université de Moncton, 248 pp.
3	Godbout, Valérié. 2010. Étude de l'Aster du Saint-Laurent dans le parc national Kouchibouguac, 2000-04. Parks Canada, 3 recs.
3	Golder Associates. 2018. Dorchester wind turbine bat detections. Owens, Luke, Firman, Mitch, Melcher, Heather (ed.) Golder Associates Ltd.
3	Grondin, P. & Blouin, J.-L., Bouchard, D.; et al. 1981. Description et cartographie de la vegetation du cordon littoral. Parc National de Kouchibouguac. Le Groupe Dryade, 57 pp.
3	Holder, M. & Kingsley, A.L. 2000. Peatland Insects in NB & NS: Results of surveys in 10 bogs during summer 2000. Atlantic Canada Conservation Data Centre, Sackville, 118 recs.
3	Kennedy, Joseph. 2010. New Brunswick Peregrine records, 2010. New Brunswick Dept Natural Resources, 16 recs (11 active).
3	Klymko, J. Université de Moncton insect collection butterfly record dataset. Atlantic Canada Conservation Data Centre. 2017.
3	Klymko, J.J.D. 2011. Insect fieldwork & submissions, 2010. Atlantic Canada Conservation Data Centre. Sackville NB, 742 recs.
3	Klymko, J.J.D. 2012. Insect field work & submissions. Atlantic Canada Conservation Data Centre, 852 recs.
3	MacQuarrie, K. 1991-1999. Site survey files, maps. Island Nature Trust, Charlottetown PE, 60 recs.
3	Majka, C.G. 2008. Lepidoptera at St Patricks, 1993-2007. Pers. comm. to R. Curley, 8 Jan. 29 recs, 29 recs.
3	McLelland, Don. 2020. Orchid observations at Enmore River, PEI. Don McLelland. Pers. comm. to C.S. Blaney.
3	Neily, T.H. & Pepper, C.; Toms, B. 2020. Nova Scotia lichen database [as of 2020-03-18]. Mersey Tobeatic Research Institute.
3	Neily, T.H. Tom Neily NS Sphagnum records (2009-2014). T.H. Neily, Atlantic Canada Conservation Data Centre. 2019.
3	Nye, T. 2002. Wood Turtle observations in Westmorland, Queens Cos. , Pers. com. to S.H. Gerriets, Dec. 3. 3 recs.
3	Parker, M. 2016. Wood turtle (<i>Glyptemys insculpta</i>) Visual Surveys at Black, Wallace, Musquodbit and Sackville Rivers, Nova Scotia. East Coast Aquatics Inc., 3 records.
3	Prince Edward Island National Park. 2014. Prince Edward Island National Park Herbarium. Parks Canada Agency, PEINP, 39 recs.
3	Richardson, D., Anderson, F., Cameron, R, Pepper, C., Clayden, S. 2015. Field Work Report on the Wrinkled Shingle lichen (<i>Pannaria lurida</i>). COSEWIC.
3	Sabine, M. 2016. Black Ash records from NB DNR permanent forest sampling Plots. New Brunswick Department of Natural Resources, 39 recs.
3	Thompson, R. 2018. Williamsdale Quarry Expansion Project, NS, Environmental Assessment rare plants. Dexter Construction Company Limited.
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3	Zahavich, J. 2018. Canada Warbler and Olive-sided Flycatcher records 2018. Island Nature Trust, 14 recs.
2	Adams, J. & Herman, T.B. 1998. Thesis, Unpublished map of <i>C. insculpta</i> sightings. Acadia University, Wolfville NS, 88 recs.
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2	Amirault, D.L. 2003. 2003 Peregrine Falcon Survey. Canadian Wildlife Service, Sackville, unpublished data. 7 recs.
2	Basquill, S.P., Porter, C. 2019. Bryophyte and lichen specimens submitted to the E.C. Smith Herbarium. NS Department of Lands and Forestry.
2	Boyne, A.W. 2000. Tern Surveys. Canadian Wildlife Service, Sackville, unpublished data. 168 recs.
2	Cameron, R.P. 2009. Cyanolichen database. Nova Scotia Environment & Labour, 1724 recs.
2	Clayden, S.R. 2020. Email to Sean Blaney regarding <i>Pilophorus cereus</i> and <i>P. fibula</i> at Fidele Lake area, Charlotte County, NB. pers. comm., 2 records.
2	COSEWIC (Committee on the Status of Wildlife in Canada). 2013. COSEWIC Assessment and Status Report on the Eastern Waterfan <i>Peltigera hydrothyria</i> in Canada. COSEWIC, 46 pp.
2	Donelle, R. 2007. Bouctouche Dune Rare Coastal Plant Data. Irving Eco-centre, la Dune du Bouctouche, 2 recs.
2	Fernald, M.L. 1914. Some annual halophytic asters of the maritime provinces. <i>Rhodora</i> , 16:57-61. 2 recs.
2	Freudenstein, John V. 1997. A Monograph of <i>Corallorhiza</i> (Orchidaceae). Harvard Papers in Botany, 1:5-51.
2	Gagnon, J. 2003. Prince Edward Island plant records. Societe de la faune et des parcs Quebec, 13 recs.
2	Gilhen, J. 1984. Amphibians & Reptiles of Nova Scotia, 1st Ed. Nova Scotia Museum, 164pp.
2	Godbout, V. 2001. Recherche de l'Aster du St-Laurent (<i>Symphotrichum laurentianum</i>) dans les marais sales du sud-est du Nouveau-Brunswick. Irving Eco-centre, la Dune du Bouctouche, 23 pp.
2	Guignion, M; Ristau, C.; Lemon, D. 1995. The distribution & abundance of the Gulf of St. Lawrence Aster, <i>Aster laurentianus</i> in Prince Edward Island National Park. <i>Can. Field-Nat</i> , 109:462-464. 10 recs.
2	Harding, R.W. 2008. Harding Personal Insect Collection 1999-2007. R.W. Harding, 309 recs.
2	Houle, F. & Haber, E. 1990. Status of the Gulf of St. Lawrence Aster, <i>Aster laurentianus</i> (Asteraceae) in Canada. <i>Canadian Field-Naturalist</i> , 104:455-459. 2 recs.
2	Houle, F; Haber, E. 1990. Status of the Gulf of St. Lawrence Aster, <i>Aster laurentianus</i> (Asteraceae) in Canada. <i>Can. Field-Nat</i> , 104:455-459. 3 recs.
2	Kelly, G. 2005. <i>Fraxinus nigra</i> . Dept of Agriculture, Fisheries, Aquaculture & Forestry. Pers. comm. to C.S. Blaney, Mar. 2, 11 recs.
2	Klymko, J. Partial database of the Agriculture Canada Charlottetown Research Station Insect Collection butterfly specimens. Atlantic Canada Conservation Data Centre. 2016.
2	Macaulay, M. Notes on newly discovered <i>Hepatica nobilis</i> var. <i>obtusata</i> population in Cumberland Co. NS. Pers. comm. to S. Blaney, 1 rec.
2	MacQuarrie, K. and R. Sharkie. 2004. Plant lists for selected areas at Brackley and Dalvay, Prince Edward Island National Park. Island Nature Trust, 168 recs.
2	Mazerolle, D. 2003. Assessment and Rehabilitation of the Gulf of St Lawrence Aster (<i>Symphotrichum laurentianum</i>) in Southeastern New Brunswick. Irving Eco-centre, la Dune du Bouctouche, 13 recs.
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2	Olsen, R. Herbarium Specimens. Nova Scotia Agricultural College, Truro. 2003.
2	Phinney, Lori; Toms, Brad; et. al. 2016. Bank Swallows (Riparia riparia) in Nova Scotia: inventory and assessment of colonies. Merset Tobeiatc Research Institute, 25 recs.
2	Sabine, M. 2016. Black Ash records from the NB DNR Forest Development Survey. New Brunswick Department of Natural Resources.
2	Sabine, M. 2016. NB DNR staff incidental Black Ash observations. New Brunswick Department of Natural Resources.
2	Smith, M.E.M. 2008. AgCan Collection. Agriculture Canada, Charlottetown PE, 44 recs.
2	Speers, L. 2001. Butterflies of Canada database. Agriculture & Agri-Food Canada, Biological Resources Program, Ottawa, 190 recs.
2	Stevens, C. 1999. Cam Stevens field data from PEI vegetation plots. Sent along with specimens to C.S. Blaney. UNB masters research project, 732 recs.
2	Webster, R.P. Database of R.P. Webster butterfly collection. 2017.
1	Amirault, D.L. 2005. 2005 Peregrine Falcon Survey. Canadian Wildlife Service, Sackville, unpublished data. 27 recs.
1	Barney, T. 2020. Text message to Sean Blaney from Ted Barney with photograph of large Snapping Turtle at White Birch Impoundment, Westmorland Co., NB. pers. comm., 1 record.
1	Belliveau, A.G. 2018. E.C. Smith Herbarium and Atlantic Canada Conservation Data Centre Fieldwork 2018. E.C. Smith Herbarium, 6226 recs.
1	Belliveau, A.G. E.C. Smith Herbarium Specimen Database 2019. E.C. Smith Herbarium, Acadia University. 2019.
1	Benjamin, L.K. (compiler). 2001. Significant Habitat & Species Database. Nova Scotia Dept of Natural Resources, 15 spp, 224 recs.
1	Blaney, C.S. 1999. Fieldwork 1999. Atlantic Canada Conservation Data Centre. Sackville NB, 292 recs.
1	Blaney, C.S. 2014. 2014 Bank Swallow colony observation, Westcock, NB. Atlantic Canada Conservation Data Centre.
1	Blaney, C.S. 2019. Atlantic Canada Conservation Data Centre Fieldwork 2019. Atlantic Canada Conservation Data Centre.
1	Bouchard, A. Herbar Marie-Victorin. Universite de Montreal, Montreal QC. 1999.
1	Bredin, K.A. 2000. NB & NS Bog Project, fieldwork. Atlantic Canada Conservation Data Centre, Sackville, 1 rec.
1	Bredin, K.A. 2002. NB Freshwater Mussel Fieldwork. Atlantic Canada Conservation Data Centre, 30 recs.
1	Chapman, C.N. (Cody). 2020. Nova Scotia Black Ash (Fraxinus nigra) field observations by Confederacy of Mainland Mi'kmaq. Forestry Program, Confederacy of Mainland Mi'kmaq.
1	Chaput, G. 1999. Atlantic Salmon: Miramichi & SFA 16 Rivers. Dept of Fisheries & Oceans, Atlantic Region, Science Stock Status Report D3-05. 6 recs.
1	Christie, D.S. 2000. Christmas Bird Count Data, 1997-2000. Nature NB, 54 recs.
1	Clavette, A., and others. 2013. Peregrine Falcon nesting information from NatureNB listserv. NatureNB.
1	Clayden, S.R. 2005. Confidential supplement to Status Report on Ghost Antler Lichen (Pseudevernia cladonia). Committee on the Status of Endangered Wildlife in Canada, 27 recs.
1	Clayden, S.R. 2012. NBM Science Collections databases: vascular plants. New Brunswick Museum, Saint John NB, 57 recs.
1	Cormier, R. 2019. Wood Turtle observation. pers. comm. to J.L. Churchill.
1	Cronin, P. & Ayer, C.; Dube, B.; Hooper, W.C.; LeBlanc, E.; Pettigrew, T.; Seymour, P. 1998. Fish Species Management Plans (draft). NB DNRE Internal Report. Fredericton, 164pp.
1	Curley, F.R. Two rare aquatic plant specimens collected by F.R. Curley in PEI and given to D.M. Mazerolle. retired provincial biologist. 2015.
1	Desilets-Starrak, J. 2015. Wood Turtle record. Pers. comm. to E. Tremblay, Parks Canada.
1	Doucet, D.A. 2007. Fieldwork 2007: Insects (minus Odonata). ACCDC Staff, 1 rec.
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APPENDIX C

WASA APPLICATION

**Water Supply Source Assessment
Step One Application
Edmond Gagnon Ltd.,
Grand-Barachois NB**

**Pursuant to Section 3(5) of
The Water Quality Regulation 82-126
Clean Environment Act**

Please answer the following questions:

1) Name of proponent: Edmond Gagnon Ltd.

2) The proposed water supply is to be used for what purpose?

Two parts:

a) new production well that was drilled in 2019 following the discovery of sand in one of two production wells. As part of the approval to operate, proponent requires assessment of that well.

b) A new well is required for a proposed new 19-unit apartment building that will house plant workers.

3) Required water quantity (in m³/day):

Based on annual reporting from 2020, the current seafood processing facility used an average of 47.5m³/day. The well driller indicated a well safe yield of 200imp gpm from the well drilled in 2019. This well will be pumped using the currently installed submersible pump.

The proposed daily water demand for the proposed apartment building is 42.75m³/day (29.7l/min), which is based on an average of 19, 4-bedroom residential units and each residential unit requiring 2250l/day (5 person @ 450l/day).

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

The surrounding areas rely on individual wells to provide groundwater for their potable water supply. The nearest municipal system (Town of Shediac) infrastructure ends approximately 8km from the site. There are no plans to extend the infrastructure to the area.

5) Outline proposed work schedule:

The proposed well for the apartment building will be drilled in July 2021. If conditions permit (i.e. minimal recharge conditions) two 72 hr pump tests will be performed in the late summer of 2021. The first will be on the existing production well at the plant and the second will be on the new well for the apartment. The intent is to pump the existing production well while full production is on going within the plant (water being withdrawn from the other original production well. Surrounding wells including the proposed new well

for the apartment will be monitored. The proposed pumping rate for the first 72 hr test will be 100igpm. The proposed pumping rate for the new well will depend on the results of the drilling; however, at a minimum 40igpm will be used as this will meet the required peak flow for the apartment building. Reporting will be completed once the pumping test is performed.

A map showing the existing well locations is attached.

6) Discuss area hydrogeology as it relates to the project requirements:

The regional bedrock geology is mapped as late Carboniferous stratified rock belonging to the Pictou Group, which is a subbasin of the Maritimes Carboniferous Basin. Mapping indicates that within the Pictou Group, the site falls within the Richibucto Formation, which consists mainly of grey multistoried sandstone interstratified with red-mudrock dominated sequences (Rivard et al. 2003).

The Richibucto Formation has been described as one of the more productive sandstone formations in the province and is the best aquifer within Moncton Map-Area (Carr, 1959). The majority of the domestic wells drilled in this formation generally yield 20+ igpm (Carr, 1959).

Available domestic well logs received from the NBDELG database within a 500m radius of the site are summarized in the attached Table 1. Well yields range from 908 to 22.7 L/min with a median yield of 113.5 l/min. Well depths range from 91.4 to 9.1m.

Details of the production well drilled in 2019 was provided via the well drillers report. The well is 91.4m deep with an estimated safe yield of 908 l/min.

Mr. Jacques Leblanc from Eastern Well Drillers stated that they have drilled numerous wells in the Grand Barachois area with wells typically 120-140' range, especially in an around the subject property are high yielding wells (20igpm +). Mr. Leblanc was also involved with the drilling of the production well involved with this application and he will be the one involved with the drilling of the new production well for the apartment once approval for the drilling has been received.

7) Identify any existing pollution or contamination hazards within a (minimum) 500 m radius of the proposed drill targets. If groundwater use problems (quantity or quality) have occurred in the past, then these should be identified. Historical land use that might pose a contamination hazard (i.e. tannery, industrial, disposal, etc.) should also be flagged:

Approximately 125 residential properties (mixed seasonal/permanent) are located within a 500 m radius of the subject property. These properties are all located within 500m of the existing well for the processing plant and proposed apartment development. Besides the activities at the seafood processing plant there were no identified hazards on the neighbouring properties.

Water quality in the area overall is generally good. Elevated levels of iron, manganese and Turbidity have been encountered at concentrations above their Health Canada drinking water guidelines in groundwater wells within 500m of the subject property. Two wells have elevated sodium and chloride indicting potential salt water intrusion. Groundwater samples

will be collected during the pumping test and analyzed for the potable water package as recommended in the WSSA guideline.

The potential for salt water intrusion and reduction of freshwater head will be evaluated as part of the hydraulic testing.

8) Identify any watercourse(s) (stream, brook, river, wetland, etc.) within 30 m of the proposed drill targets.

There are no watercourses or mapped wetlands within 30 m of the existing well location and of the proposed well location. GeoNB mapping was used to assist in locating any potential wetlands.

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

The source development consultant is FISHER ENGINEERING LTD.

10) Attach a 1:10000 map and/or recent air photo clearly identifying the following:

- **proposed drill targets (existing well)**
- **domestic or production wells within a 500 m radius from the existing well to be tested.**
- **any potential hazards identified in question 7**

Refer to the attached Figure.

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

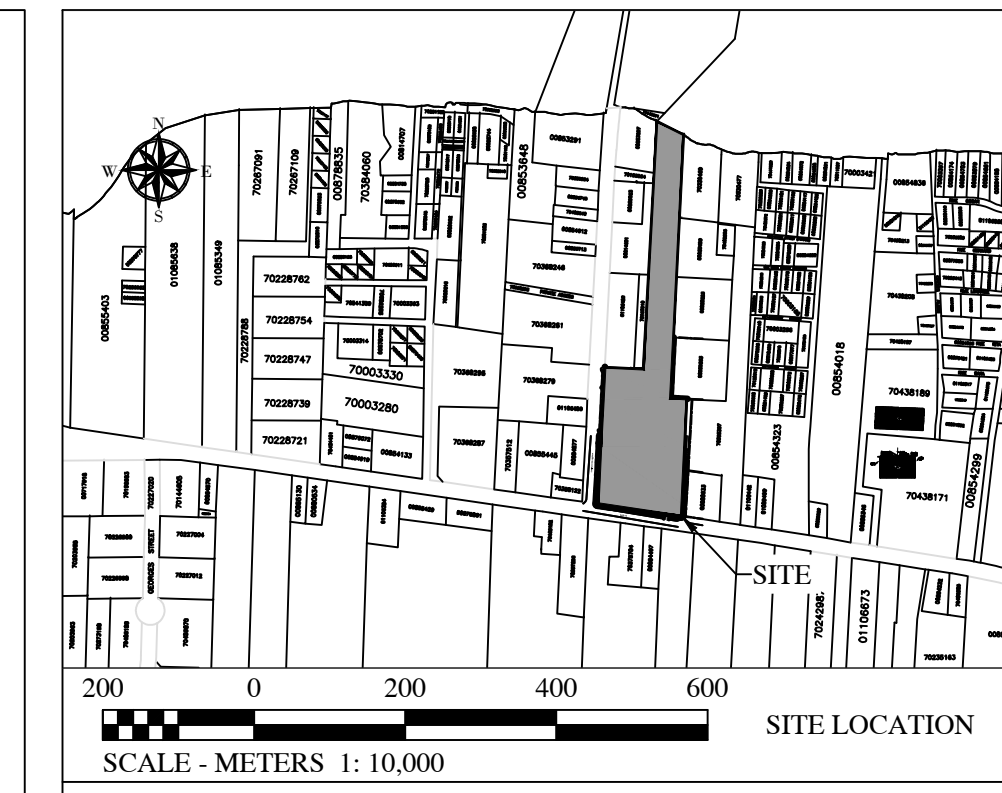
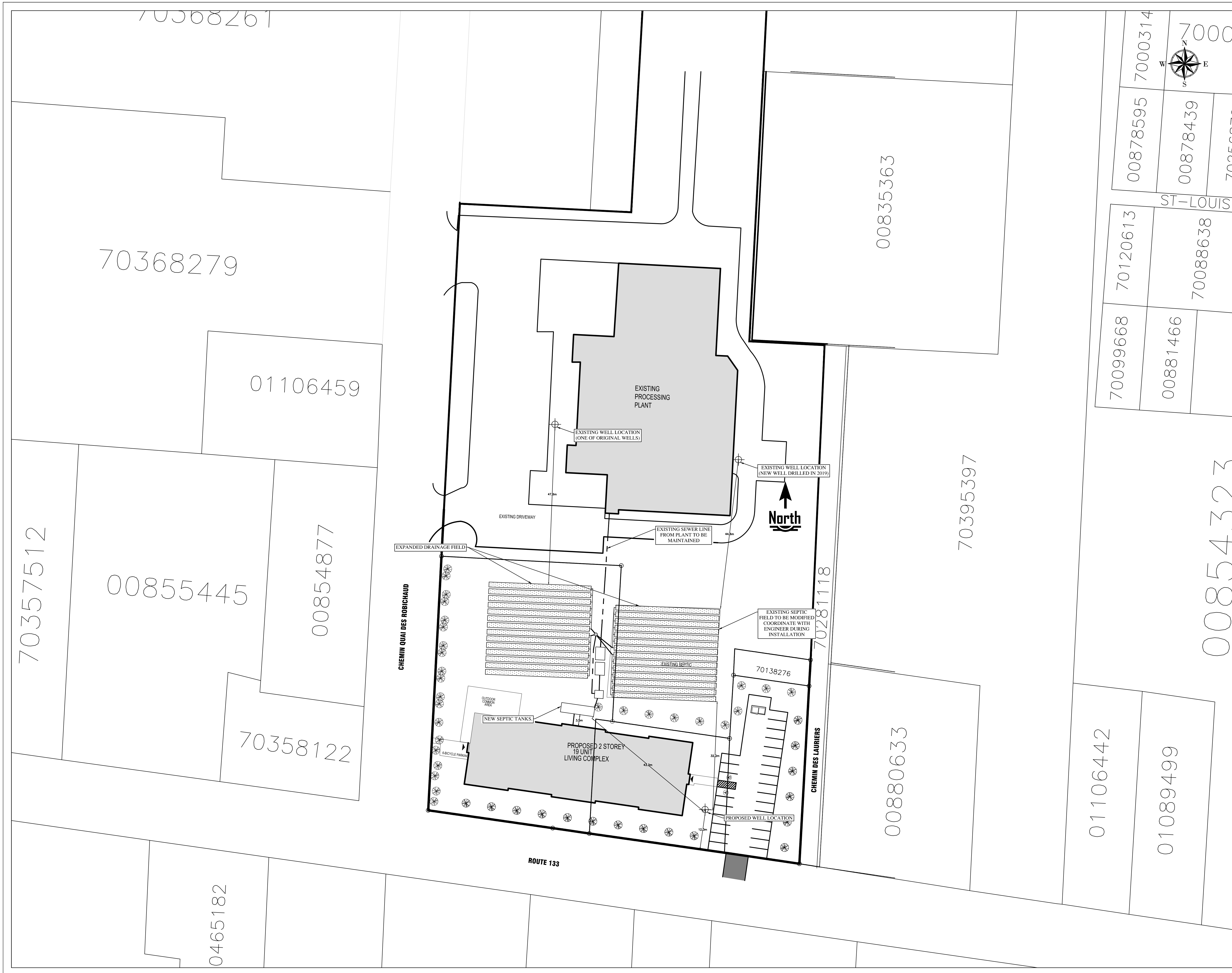
The proposed development falls within the Beaubassin West Planning Area within the Southeast Regional Service Commission Planning Area. The land has two zones, the existing area where the processing plant is located is zoned Port, which allows a seafood processing facility. The area where the proposed apartment building is located was recently rezoned to RM- Medium Density Residential. The RM zone allows for the proposed medium density apartment.

12) Contingency plan for open loop earth energy systems

No open loop earth energy systems are proposed for this development, not applicable.

Enclosures

DE155/Water Supply Source Assessment Application.doc



Notes:
 -Five parcels to be consolidated as part of this work.

No.	Issue	Date
1	EIA REGISTRATION	JUNE 2021
2		
3		

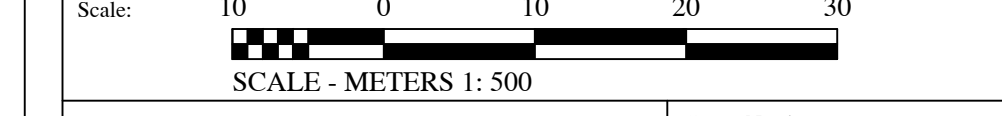


Project Title
APARTMENT BUILDING & PROCESSING PLANT
 1662 RTE 133
 GRAND BARACHOIS, N.B.

Drawing Title
OVERALL SITE PLAN
 SHOWING EXISTING AND PROPOSED WELL LOCATIONS

Project No. **DE155**

Dwg. No. **DE15502**



Const. North


Drawn By: **ACB**
 Designed By: **MJF**
 DWG. Design Ckd. By: **MJF**
 PAGE: **C-1**

GeoNB Map Viewer



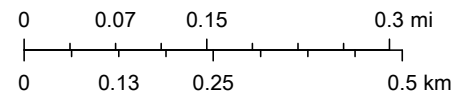
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 parcels

 Large Scale / Grande échelle

Property Assessment

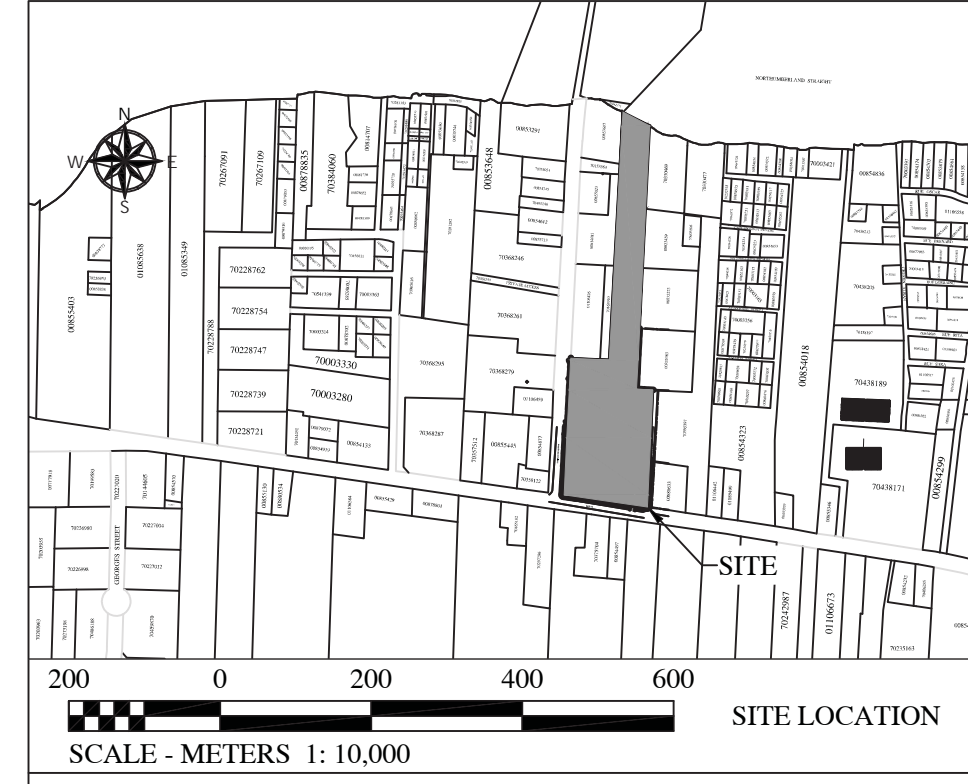
1:10,000



Department of Environment and Local Government/Ministère de

GeoNB

This map is a graphical representation which approximates the size, configuration and location of features. This map is not intended to be used for legal descriptions or to calculate exact dimensions or area.



Notes:
 -Five parcels to be consolidated as part of this work.

No.	Issue	Date
1	WSSA APPLICATION	JUNE 2021
2		
3		

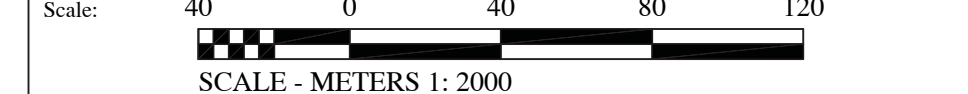


Project Title
APARTMENT BUILDING & PROCESSING PLANT
 1662 RTE 133
 GRAND BARACHOIS, N.B.

Drawing Title
OVERALL SITE PLAN
 SHOWING WELL LOCATIONS &
 500m RADIUS

Project No. **DE155**

Dwg. No. **DE15504**



Scale: 40 0 40 80 120
 SCALE - METERS 1: 2000

Const. North

Drawn By: **ACB**
 Designed By: **MJF**
 DWG. Design Ckd. By: **MJF**
 PAGE:

CARTE / MAP B-2

**Carte de zonage
de la Communauté
rurale de Beaubassin-est /
Baubassin East Rural
Community Zoning Map**

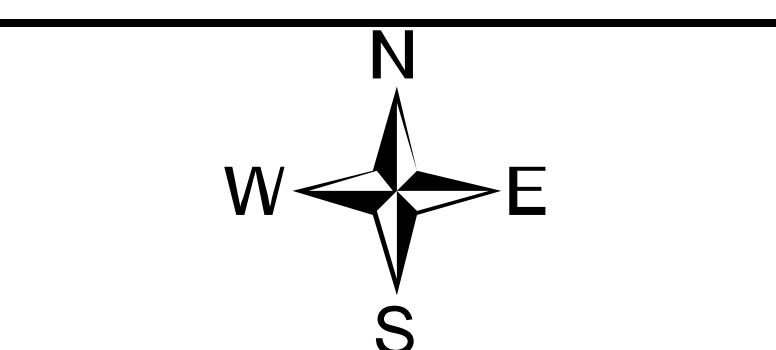
ZONES


-  RR-Résidentielle rurale /
RR-Rural Residential
-  RC-Résidentielle côtière /
CR-Coastal Residential
-  CG-Commerce général /
GC-General Commercial
-  CC-Centre communautaire /
CC-Community Centre
-  I-Industrie / I-Industry
-  E-Préservation de l'environnement /
E-Environment Conservation
-  DR-Développement des ressources /
RD-Resource Development
-  EIR-Exploitation intensive des ressources /
IRE-Intensive Ressource Exploitation Zone
-  AI-Aménagement intégré /
ID-Integrated Development Zone
-  P-Portuaire / P-Harbour
-  RM-Résidentielle à moyenne densité /
MR-Medium Density Residential

30m: Buffer
30ft: -
Marsais / Marsh
Secteur assujéti au Règlement sur la modification
des cours d'eau et des terres humides
Lot sur l'assainissement de l'eau, 2003-16
Area subject to the Watercourse and
Wetland Alteration Regulation-Clean Water Act, 2003-16

C Rezonage Soumis avec Conditions /
Subject Rezoning with Conditions

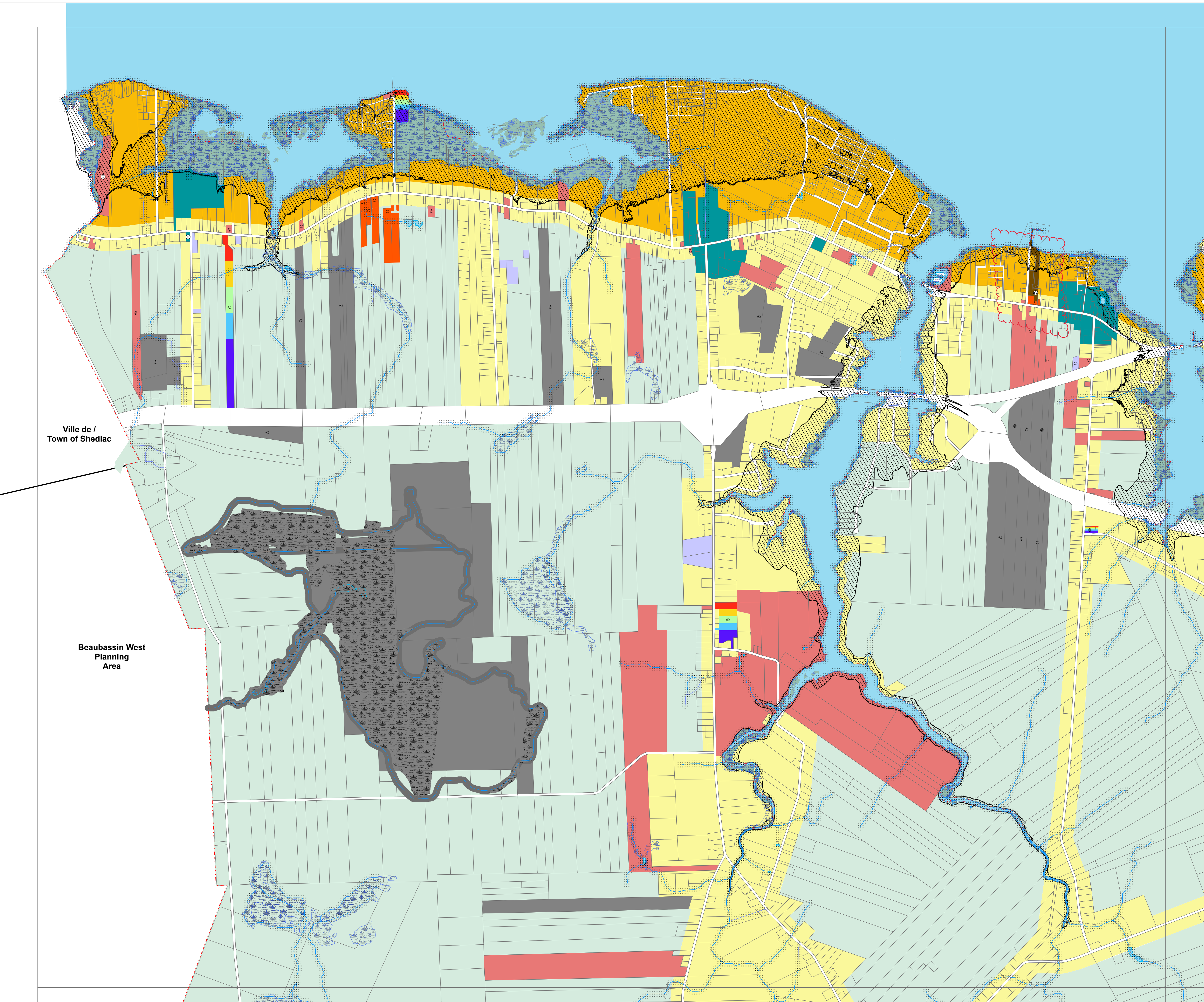
 ENM - Élévation du niveau de la mer
SLR - Sea Level Rise



Carte préparée par:  SOUTHEAST Regional Services Commission de SUD-EST

J. Couturier.
Date: janvier 2011 / January, 2011
Print le: 04 avril 2013 / April 04, 2013
Update: mai 2021 / May 2021

1:15,000
mètre / metre



Ville de /
Town of Shediac

Baubassin West
Planning
Area

Carte préparée par: J. Couturier / Date: Le 13 octobre 2007 / October 13, 2007
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Revision: 11 janvier 2021
(FORMAT26534) Echelle / Scale: 1:15000

Table 1 Well Log Summary 500m Radius PID 70636725

Report #	Well	Casing	Rock	Yield	Rock Type
	Depths (m)			l/min	
6781	18.6	6.1	1.5	227	Sandstone
7463	21.9	9.1	0.6	118	Sandstone
7473	14.6	7.3	0.6	64	Sandstone
8029	24.4	18.3	17.7	182	Sandstone
8109	27.4	21.0	0.6	227	Sandstone
9387	21.3	9.1	1.2	45	Sandstone
9418	29.0	24.4	0.9	218	Sandstone
9422	13.7	6.1	0.6	91	Sandstone
9425	21.3	11.0	0.6	114	Sandstone
13345	20.1	6.1	0.0	68	Sandstone
14338	30.5	24.4	0.6	318	Sandstone
14951	26.8	6.1	3.7	23	Sandstone
16722	41.1	8.5	8.2	227	Sandstone
17974	36.6	24.4	4.6	114	Sandstone
18293	24.4	12.2	4.0	27	Conglomerate and Sandstone
24088	30.5	21.3	0.9	182	Sandstone
24089	24.4	14.6	7.0	136	Sandstone
25713	27.4	12.2	10.7	54	Sandstone
27631	30.5	19.5	0.9		Sandstone
27661	24.4	12.2	1.2	227	Sandstone
28241	24.4	8.8	5.5	159	Sandstone
30704	25.9	18.0	0.0	68	Sandstone
32350	24.4	12.2	0.0	68	Sandstone
32974	24.4	12.2	2.4	91	Sandstone
35380	18.3	8.5	2.1	68	Sandstone
35425	24.4	12.2	0.0	91	Sandstone
35461	36.6	12.2	11.6	227	Sandstone
35806	24.4	12.2	0.0	136	Sandstone
36503	24.4	12.2	0.0	136	Sandstone
36511	24.4	12.2	0.0	91	Sandstone
36601	24.4	8.5	0.6	91	Sandstone
36821	24.4	6.7	0.6	54	Sandstone
37019	30.5	15.2	0.0	136	Sandstone
37048	91.4	25.6	3.0	908	Sandstone
37197	42.7	21.3	0.0	136	Sandstone
41066	24.4	12.2	1.2	114	Sandstone and Shale
41124	39.6	29.0	0.6	91	Sandstone
42419	24.4	17.7	1.2	45	Sandstone
90165400	15.8	9.8	9.8	68	Sandstone
90166700	18.3	8.2	3.0	123	Sandstone
90167400	9.1	6.7	1.5	114	Sandstone
90387800	30.5	18.3	17.4	114	Sandstone
90530900	19.8	12.2	2.1	182	Sandstone
90660800	21.3	14.6	12.5	91	Sandstone
90953900	19.8	6.1	4.3	68	Sandstone
91408400	31.1	20.1	0.0	91	Sandstone
91588900	15.2	10.7	0.6		Sandstone
91730500	24.4	18.3	5.5	227	Sandstone
91743300	21.6	6.1	0.0	322	Sandstone
91751701	26.8	8.5	5.5		Sandstone
91752600	16.8	12.2	4.6	54	Sandstone
92009900	18.3	6.1	0.0	27	Sandstone
92011000	18.3	6.1	0.6	91	Sandstone

Max	91.4	29.0	17.7	908.0
Min	9.1	6.1	0.0	22.7
Average	25.8	13.1	3.1	138.8
Median	24.4	12.2	1.2	113.5

Well Driller's Report

Date printed 6/28/2021

Drilled by	Work Type	Drill Method	Work Completed
Well Use	New Well	Rotary	06/16/2003
Drinking Water, Domestic			

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
6781	Steel	6 inch	0ft	20ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	0ft	50 igpm	1hr	10ft	50 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting	Drilling Fluids Used	Disinfectant	Pump Installed
There is no Grout information.	None	N/A	N/A
		Qty 0 ig	Intake Setting (BTC)
			0ft

Driller's Log					Overall Well Depth
Well Log	From	End	Colour	Rock Type	
6781	0ft	5ft	None	Overburden	61ft
6781	5ft	61ft	Grey	Sandstone	Bedrock Level 5ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
6781	20ft	20 igpm
6781	40ft	10 igpm
6781	50ft	30 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	08/08/2003

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
7463	Steel	6 inch	0ft	30ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	0ft	0 igpm	0hr	0ft	0 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	N/A	Jet
	Qty 12.0 ig	Intake Setting (BTC) 35ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
7463	0ft	2ft	Brown	Fill
7463	2ft	8ft	Brown	Fine Sandstone
7463	8ft	70ft	Grey	Medium Sandstone
7463	70ft	72ft	Red	Clay

Overall Well Depth
72ft
Bedrock Level
2ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
7463	60ft	8 igpm
7463	70ft	18 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Work Type	Drill Method	Work Completed
Well Use	New Well		09/25/2003
Drinking Water, Domestic			

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
7473	Steel	6 inch	0ft	24ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	0ft	0 igpm	0hr	0ft	0 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	N/A	Jet
	Qty 12.0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
7473	0ft	2ft	Brown	Fill
7473	2ft	23ft	Brown	Sand
7473	23ft	48ft	Brown	Sandstone

Overall Well Depth
48ft
Bedrock Level
2ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
7473	32ft	4 igpm
7473	48ft	10 igpm

Setbacks		
Well Log	Distance	Setback From
7473	50ft	Septic Tank

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	09/08/2003

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
8029	Steel	6 inch	0ft	60ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	0ft	40 igpm	1hr	9ft	40 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine Pucks	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
8029	0ft	2ft	EMPTY VALUE	Overburden
8029	2ft	11ft	Brown and red	Clay
8029	11ft	58ft	Grey	Sand and Sandstone
8029	58ft	80ft	Dark grey	Sandstone

Overall Well Depth
80ft
Bedrock Level
58ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
8029	58ft	10 igpm
8029	71ft	25 igpm

Setbacks		
Well Log	Distance	Setback From
8029	75ft	Septic Tank
8029	80ft	Leach Field
8029	150ft	Right of any Public Way Road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	05/14/2004

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
8109	Steel	6 inch	0ft	69ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	0ft	50 igpm	1hr	0ft	50 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine Pucks	Submersible
	Qty 0 ig	Intake Setting (BTC)
		80ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
8109	16ft	52ft	Grey	Sandstone
8109	0ft	2ft	EMPTY VALUE	Overburden
8109	2ft	14ft	Grey	Sandstone
8109	14ft	16ft	Brown	Clay and Shale
8109	52ft	68ft	Brown	Clay and Shale
8109	68ft	90ft	Grey	Sandstone

Overall Well Depth
90ft
Bedrock Level
2ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
8109	44ft	3 igpm
8109	75ft	50 igpm

Setbacks		
Well Log	Distance	Setback From
8109	50ft	Septic Tank
8109	75ft	Right of any Public Way Road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	06/28/2005

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
9387	Steel	6 inch	0ft	30ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	35ft	20 igpm	0hr 30min	35ft	10 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine Pucks	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
9387	0ft	4ft	Brown	Fill
9387	4ft	29ft	Brown	Sand
9387	29ft	50ft	Brown	Fine Sandstone
9387	50ft	70ft	Grey	Medium Sandstone

Overall Well Depth
70ft
Bedrock Level
4ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
9387	65ft	20 igpm

Setbacks		
Well Log	Distance	Setback From
9387	100ft	Septic Tank

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Cable Tool	07/28/2004

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
9418	Steel	6 inch	0ft	80ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	12ft	65 igpm	1hr	12ft	0 igpm	No	0 igpm
<i>(BTC - Below top of casina)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Other	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
9418	40ft	75ft	Grey	Medium Sandstone
9418	0ft	3ft	Brown	Topsoil
9418	3ft	40ft	Brown	Fine Sandstone
9418	75ft	95ft	Brown	Medium Sandstone

Overall Well Depth
95ft
Bedrock Level
3ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
9418	40ft	4 igpm
9418	65ft	4 igpm
9418	92ft	40 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Cable Tool	08/25/2004

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
9422	Steel	6 inch	0ft	20ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	8ft	20 igpm	1hr	8ft	0 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Other	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
9422	0ft	2ft	Brown	Topsoil
9422	2ft	45ft	Grey	Medium Sandstone

Overall Well Depth
45ft
Bedrock Level
2ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
9422	42ft	20 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Cable Tool	09/22/2004

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
9425	Steel	6 inch	0ft	36ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	25ft	25 igpm	1hr 25min	0ft	0 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
9425	0ft	2ft	Brown	Topsoil
9425	2ft	15ft	Red	Sand
9425	15ft	36ft	Brown	Sand
9425	36ft	70ft	Grey	Medium Sandstone

Overall Well Depth
70ft
Bedrock Level
2ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
9425	70ft	25 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Cable Tool	05/18/2005

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
13345	Steel	6 inch	0ft	20ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	10ft	15 igpm	1hr	10ft	15 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
13345	0ft	6ft	Brown	Sand
13345	6ft	66ft	Grey	Sandstone

Overall Well Depth
66ft
Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
13345	60ft	15 igpm

Setbacks		
Well Log	Distance	Setback From
13345	55ft	Septic Tank
13345	75ft	Leach Field
13345	40ft	Right of any Public Way Road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	05/30/2008

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
14338	Steel	6 inch	0ft	80ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	12ft	70 igpm	1hr	12ft	70 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting			
Well Log	Grout Type	From	End
14338	Other	0ft	80ft

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine Pucks	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
14338	27ft	38ft	Grey	Conglomerate
14338	0ft	2ft	Brown	Overburden
14338	2ft	27ft	Light grey	Sandstone
14338	38ft	64ft	Grey	Sandstone
14338	64ft	75ft	Brown	Clay and Shale
14338	75ft	78ft	Grey	Sandstone
14338	78ft	79ft	Brown	Clay and Shale
14338	79ft	100ft	Grey	Sandstone

Overall Well Depth
100ft
Bedrock Level
2ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
14338	30ft	3 igpm
14338	48ft	20 igpm
14338	85ft	10 igpm
14338	90ft	60 igpm

Setbacks		
Well Log	Distance	Setback From
14338	30ft	Septic Tank
14338	35ft	Leach Field
14338	15ft	Right of any Public Way Road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	04/24/2006

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
14951	Steel	6 inch	0ft	20ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	7ft	15 igpm	1hr	7ft	5 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	12% NaOCI	Submersible
	Qty 0 ig	Intake Setting (BTC)
		50ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
14951	30ft	55ft	Grey	Medium Sandstone
14951	0ft	3ft	Brown	Topsoil
14951	3ft	12ft	Brown	Fill
14951	12ft	30ft	Brown	Fine Sandstone
14951	55ft	88ft	Brown	Sandstone

Overall Well Depth
88ft
Bedrock Level
12ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
14951	55ft	2 igpm
14951	84ft	13 igpm

Setbacks		
Well Log	Distance	Setback From
14951	200ft	Right of any Public Way Road
14951	90ft	Septic Tank
14951	100ft	Leach Field

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	12/15/2006

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
16722	Steel	8 inch	0ft	28ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	10ft	100 igpm	1hr	10ft	50 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting	Drilling Fluids Used	Disinfectant	Pump Installed
There is no Grout information.	None	12% NaOCl	N/A
		Qty 0 ig	Intake Setting (BTC) 0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
16722	15ft	27ft	Red	Sand
16722	0ft	2ft	Brown	Fill
16722	2ft	7ft	Brown	Topsoil
16722	7ft	15ft	Brown	Fine Sandstone
16722	27ft	75ft	Brown	Fine Sandstone
16722	75ft	90ft	Red	Hard Clay
16722	90ft	120ft	Grey	Medium Sandstone
16722	120ft	135ft	Red	Soft Clay

Overall Well Depth
135ft
Bedrock Level
27ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
16722	45ft	30 igpm
16722	115ft	70 igpm

Setbacks		
Well Log	Distance	Setback From
16722	80ft	Septic Tank
16722	80ft	Leach Field
16722	200ft	Right of any Public Way Road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	10/24/2006

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
17974	Steel	6 inch	0ft	80ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	1ft	25 igpm	1hr	1ft	25 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting			
Well Log	Grout Type	From	End
17974	Bentonite	0ft	80ft

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine Pucks	Submersible Intake Setting (BTC)
	Qty 0 ig	65ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
17974	15ft	38ft	Grey	Sandstone
17974	0ft	2ft	Unknown Rock Colour	Fill
17974	2ft	5ft	Unknown Rock Colour	Overburden
17974	5ft	15ft	Grey	Soft Sandstone
17974	38ft	61ft	Grey	Conglomerate and Sandstone
17974	61ft	64ft	Grey	Sandstone
17974	64ft	78ft	Brown	Clay and Shale
17974	78ft	82ft	Grey	Sandstone and Shale
17974	82ft	120ft	Grey	Coarse Sandstone

Overall Well Depth
120ft
Bedrock Level
15ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
17974	84ft	25 igpm

Setbacks		
Well Log	Distance	Setback From
17974	70ft	Right of any Public Way Road
17974	75ft	Septic Tank
17974	80ft	Leach Field

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	11/26/2007

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
18293	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	35ft	6 igpm	1hr	35ft	6 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine Pucks	Submersible
	Qty 0 ig	Intake Setting (BTC)
		65ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
18293	26ft	48ft	Grey	Sandstone
18293	0ft	13ft	Brown	Clay and Shale
18293	13ft	18ft	Soft grey	Sandstone
18293	18ft	26ft	Grey	Sandstone
18293	48ft	75ft	Grey	Conglomerate and Sandstone
18293	75ft	80ft	Brown	Clay and Shale

Overall Well Depth
80ft
Bedrock Level
13ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
18293	50ft	6 igpm

Setbacks		
Well Log	Distance	Setback From
18293	60ft	Septic Tank
18293	75ft	Leach Field
18293	255ft	Right of any Public Way Road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	04/26/2010

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
24088	Steel	6 inch	0ft	70ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	15ft	40 igpm	1hr	15ft	40 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine Pucks	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
24088	58ft	64ft	Brown	Clay and Shale
24088	0ft	3ft	Brown	Overburden
24088	3ft	55ft	Grey	Sandstone
24088	55ft	58ft	Grey	Soapstone
24088	64ft	100ft	Grey	Sandstone

Overall Well Depth
100ft
Bedrock Level
3ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
24088	42ft	6 igpm
24088	83ft	20 igpm
24088	95ft	20 igpm

Setbacks		
Well Log	Distance	Setback From
24088	190ft	Right of any Public Way Road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	04/27/2010

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
24089	Steel	6 inch	0ft	48ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	12ft	30 igpm	1hr	12ft	30 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine Pucks	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
24089	0ft	17ft	Brown	Clay and Shale
24089	17ft	23ft	Grey	Broken Sandstone
24089	23ft	75ft	Grey	Sandstone
24089	75ft	80ft	Brown	Clay and Shale

Overall Well Depth
80ft
Bedrock Level
23ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
24089	57ft	15 igpm
24089	21ft	6 igpm
24089	38ft	3 igpm
24089	65ft	15 igpm

Setbacks		
Well Log	Distance	Setback From
24089	75ft	Leach Field
24089	70ft	Septic Tank
24089	85ft	Right of any Public Way Road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	10/04/2010

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
25713	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	20ft	12 igpm	1hr	20ft	12 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting	Drilling Fluids Used	Disinfectant	Pump Installed
There is no Grout information.	None	Other	N/A
		Qty 0 ig	Intake Setting (BTC) 0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
25713	35ft	65ft	Brown	Sandstone
25713	0ft	4ft	Brown	Overburden
25713	4ft	22ft	Brown	Sandstone
25713	22ft	35ft	Brown	Clay and Shale
25713	65ft	85ft	Grey	Sandstone
25713	85ft	90ft	Brown	Clay and Shale

Overall Well Depth
90ft
Bedrock Level
35ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
25713	53ft	5 igpm
25713	72ft	7 igpm

Setbacks		
Well Log	Distance	Setback From
25713	80ft	Septic Tank
25713	90ft	Leach Field
25713	200ft	Right of any Public Way Road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	08/02/2011

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
27631	Steel	6 inch	0ft	64ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	18ft	20 igpm	1hr	18ft	20 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine Pucks	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
27631	25ft	52ft	Grey	Sandstone
27631	0ft	3ft	Brown	Overburden
27631	3ft	17ft	Grey	Sandstone
27631	17ft	25ft	Light grey	Sandstone
27631	52ft	63ft	Brown	Clay and Shale
27631	63ft	100ft	Grey	Sandstone

Overall Well Depth
100ft
Bedrock Level
3ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
27631	70ft	10 igpm
27631	83ft	8 igpm
27631	94ft	2 igpm

Setbacks		
Well Log	Distance	Setback From
27631	65ft	Septic Tank
27631	1000ft	Right of any Public Way Road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	09/19/2011

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
27661	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	10ft	50 igpm	1hr	10ft	50 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine Pucks	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
27661	30ft	47ft	Light grey	Sandstone
27661	0ft	4ft	Brown	Overburden
27661	4ft	27ft	Light grey	Sandstone
27661	27ft	30ft	Grey	Sandstone
27661	47ft	80ft	Grey	Sandstone

Overall Well Depth
80ft
Bedrock Level
4ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
27661	71ft	20 igpm
27661	31ft	6 igpm
27661	57ft	30 igpm

Setbacks		
Well Log	Distance	Setback From
27661	60ft	Septic Tank

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	07/02/2009

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
28241	Steel	6 inch	0ft	29ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	20ft	35 igpm	1hr	20ft	35 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine Pucks	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
28241	41ft	44ft	Grey	Soapstone
28241	0ft	2ft	Brown	Overburden
28241	2ft	18ft	Brown	Clay and Shale
28241	18ft	41ft	Light grey	Sandstone
28241	44ft	56ft	Brown	Clay and Shale
28241	56ft	80ft	Grey	Sandstone

Overall Well Depth
80ft
Bedrock Level
18ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
28241	31ft	35 igpm

Setbacks		
Well Log	Distance	Setback From
28241	70ft	Septic Tank
28241	75ft	Leach Field
28241	45ft	Right of any Public Way Road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Cable Tool	07/24/2013

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
30704	Steel	6 inch	0ft	59ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	15ft	15 igpm	1hr	28ft	15 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
30704	0ft	4ft	Brown	Sand
30704	4ft	18ft	Brown	Sandstone
30704	18ft	47ft	Grey	Sandstone
30704	47ft	58ft	Red	Clay
30704	58ft	85ft	Grey	Sandstone

Overall Well Depth
85ft
Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
30704	85ft	15 igpm

Setbacks		
Well Log	Distance	Setback From
30704	66ft	Center of road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Abandoned	New Well	Rotary	05/14/2013

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
32350	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	5ft	15 igpm	1hr	5ft	15 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine Pucks	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
32350	36ft	76ft	Grey	Coarse Sandstone
32350	76ft	77ft	Grey	Soapstone
32350	77ft	80ft	Brown	Clay and Shale
32350	0ft	17ft	Grey	Sandstone
32350	17ft	23ft	Grey	Broken Sandstone
32350	23ft	36ft	Light grey	Sandstone

Overall Well Depth
80ft
Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
32350	50ft	15 igpm

Setbacks		
Well Log	Distance	Setback From
32350	50ft	Septic Tank

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	10/15/2012

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
32974	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	7ft	20 igpm	1hr	7ft	20 igpm	No	0 igpm
<i>(BTC - Below top of casina)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
32974	71ft	75ft	Grey	Soapstone
32974	0ft	8ft	Brown	Clay and Shale
32974	8ft	48ft	Light grey	Sandstone
32974	48ft	71ft	Grey	Sandstone
32974	75ft	80ft	Brown	Clay and Shale

Overall Well Depth
80ft
Bedrock Level
8ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
32974	21ft	2 igpm
32974	48ft	10 igpm
32974	59ft	10 igpm

Setbacks		
Well Log	Distance	Setback From
32974	50ft	Septic Tank

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	11/28/2017

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
35380	Steel	6 inch	0ft	28ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	18ft	15 igpm	1hr	18ft	15 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
35380	50ft	60ft	Brown	Shale
35380	0ft	7ft	Brown	Overburden
35380	7ft	25ft	Grey	Sandstone
35380	25ft	50ft	Grey	Sandstone

Overall Well Depth
60ft
Bedrock Level
7ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
35380	39ft	13 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	11/17/2017

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
35425	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	13ft	20 igpm	1hr	13ft	20 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
35425	0ft	77ft	Grey	Sandstone
35425	77ft	80ft	Grey	Shale

Overall Well Depth
80ft
Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
35425	27ft	17.5 igpm
35425	33ft	17.5 igpm
35425	57ft	11 igpm

Setbacks		
Well Log	Distance	Setback From
35425	60ft	Septic Tank
35425	75ft	Leach Field

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	05/16/2017

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
35461	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	50ft	50 igpm	1hr	50ft	50 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	Submersible Intake Setting (BTC)
	Qty 0 ig	100ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
35461	90ft	120ft	Grey	Sandstone
35461	0ft	2ft	Brown	Topsoil
35461	2ft	38ft	Brown	Clay
35461	38ft	90ft	Brown	Sandstone

Overall Well Depth
120ft
Bedrock Level
38ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
35461	110ft	50 igpm

Setbacks		
Well Log	Distance	Setback From
35461	75ft	Septic Tank
35461	90ft	Leach Field
35461	220ft	Right of any Public Way Road
35461	250ft	Center of road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	05/22/2018

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
35806	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	18ft	30 igpm	1hr	18ft	30 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
35806	0ft	3ft	Brown	Shale
35806	3ft	80ft	Grey	Sandstone

Overall Well Depth
80ft
Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
35806	62ft	23.5 igpm

Setbacks		
Well Log	Distance	Setback From
35806	75ft	Septic Tank
35806	80ft	Leach Field

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	05/18/2017

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
36509	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	8ft	30 igpm	1hr	8ft	30 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
36509	19ft	22ft	Grey	Broken Sandstone
36509	0ft	10ft	Brown	Shale
36509	10ft	15ft	Grey	Sandstone
36509	15ft	19ft	Grey	Clay and Sandstone
36509	22ft	80ft	Grey	Sandstone

Overall Well Depth
80ft
Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
36509	20ft	3.5 igpm
36509	56ft	17.5 igpm

Setbacks		
Well Log	Distance	Setback From
36509	65ft	Septic Tank
36509	75ft	Leach Field

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	05/24/2017

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
36511	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	7ft	20 igpm	1hr	7ft	20 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
36511	0ft	15ft	Brown	Shale
36511	15ft	80ft	Grey	Sandstone

Overall Well Depth
80ft
Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
36511	20ft	11 igpm
36511	58ft	17.5 igpm

Setbacks		
Well Log	Distance	Setback From
36511	60ft	Septic Tank

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	07/21/2017

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
36601	Steel	6 inch	0ft	28ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	9ft	20 igpm	1hr	9ft	20 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
36601	63ft	69ft	Brown	Soapstone
36601	0ft	2ft	Brown	Overburden
36601	2ft	53ft	Grey	Sandstone
36601	53ft	63ft	Brown	Shale
36601	69ft	70ft	Brown	Sandstone
36601	70ft	72ft	Brown	Soapstone
36601	72ft	78ft	Grey	Sandstone
36601	78ft	80ft	Brown	Shale

Overall Well Depth
80ft
Bedrock Level
2ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
36601	22ft	1 igpm
36601	31ft	3 igpm
36601	40ft	5 igpm
36601	69ft	8 igpm

Setbacks		
Well Log	Distance	Setback From
36601	75ft	Septic Tank
36601	80ft	Leach Field

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	Deepened	Rotary	09/13/2018

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
36821	Steel	6 inch	0ft	22ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	19ft	12 igpm	1hr	19ft	12 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	N/A
	Qty 0 ig	Intake Setting (BTC) 0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
36821	74ft	80ft	Grey	Sandstone
36821	0ft	2ft	Brown	Overburden
36821	2ft	65ft	Grey	Sandstone
36821	65ft	74ft	Brown	Shale

Overall Well Depth
80ft
Bedrock Level
2ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
36821	24ft	7.5 igpm
36821	61ft	3.5 igpm

Setbacks		
Well Log	Distance	Setback From
36821	70ft	Septic Tank
36821	78ft	Leach Field

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	11/08/2018

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
37019	Steel	6 inch	0ft	50ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	18ft	30 igpm	1hr	18ft	30 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
37019	25ft	46ft	Brown	Shale
37019	0ft	6ft	Brown	Shale
37019	6ft	16ft	Grey	Sandstone
37019	16ft	25ft	Grey	Broken Sandstone
37019	46ft	87ft	Grey	Sandstone
37019	87ft	100ft	Brown	Shale

Overall Well Depth
100ft
Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
37019	23ft	27.5 igpm
37019	53ft	9 igpm
37019	72ft	17.5 igpm

Setbacks		
Well Log	Distance	Setback From
37019	300ft	Right of any Public Way Road
37019	340ft	Center of road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	05/30/2019

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
37048	Steel	8 inch	0ft	84ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	24ft	200 igpm	1hr	25ft	200 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
37048	288ft	300ft	Grey	Sandstone
37048	206ft	221ft	Brown	Sandstone
37048	221ft	230ft	Brown	Shale
37048	230ft	245ft	Grey	Sandstone
37048	245ft	267ft	Brown	Shale
37048	267ft	288ft	Brown	Shale
37048	26ft	29ft	Brown	Clay and Sandstone
37048	0ft	10ft	Brown	Overburden
37048	10ft	19ft	Brown	Shale
37048	19ft	26ft	Brown	Sandstone
37048	29ft	43ft	Grey	Broken Sandstone
37048	43ft	62ft	Grey	Sandstone
37048	62ft	66ft	Grey	Shale
37048	66ft	74ft	Brown	Shale
37048	74ft	86ft	Grey	Soapstone
37048	86ft	88ft	Grey	Sandstone
37048	88ft	93ft	Grey	Shale
37048	93ft	127ft	Grey	Sandstone
37048	127ft	144ft	Brown	Shale
37048	144ft	148ft	Brown	Soapstone
37048	148ft	156ft	Brown	Shale
37048	156ft	170ft	Brown	Soapstone
37048	170ft	178ft	Grey	Soapstone
37048	178ft	199ft	Grey	Sandstone
37048	199ft	206ft	Brown	Shale

Overall Well Depth
300ft
Bedrock Level
10ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
37048	220ft	50 igpm
37048	98ft	100 igpm
37048	178ft	50 igpm

Setbacks		
Well Log	Distance	Setback From
37048	300ft	Right of any Public Way Road
37048	180ft	Septic Tank
37048	200ft	Leach Field
37048	320ft	Center of road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	11/08/2018

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
37197	Steel	6 inch	0ft	70ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	40ft	30 igpm	1hr	40ft	30 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	Submersible
	Qty 0 ig	Intake Setting (BTC)
		80ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
37197	120ft	140ft	Brown	Clay
37197	0ft	18ft	Grey	Sandstone
37197	18ft	65ft	Brown	Clay
37197	65ft	120ft	Grey	Sandstone

Overall Well Depth
140ft
Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
37197	120ft	30 igpm

Setbacks		
Well Log	Distance	Setback From
37197	80ft	Center of road
37197	60ft	Septic Tank
37197	80ft	Leach Field
37197	75ft	Right of any Public Way Road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Work Type	Drill Method	Work Completed
Well Use	New Well	Rotary	11/27/2019
Drinking Water, Domestic			

Casing Information	Casing above ground	Drive Shoe Used?
There is no casing information.		

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	0ft <i>(BTC - Below top of casina)</i>	0 igpm	0hr	0ft	20 igpm	No	0 igpm

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log
There is no rock layer information.

Overall Well Depth
0ft
Bedrock Level
0ft

Water Bearing Fracture Zone
There is no water bearing fracture zone information.

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	05/20/2020

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
41066	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	9ft	25 igpm	1hr	9ft	25 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
41066	0ft	4ft	Other	Overburden
41066	4ft	77ft	Grey	Sandstone and Shale
41066	77ft	80ft	Grey	Shale

Overall Well Depth
80ft
Bedrock Level
4ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
41066	54ft	22.5 igpm

Setbacks		
Well Log	Distance	Setback From
41066	65ft	Septic Tank
41066	75ft	Leach Field

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	07/02/2020

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
41124	Steel	6 inch	0ft	95ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	21ft	20 igpm	1hr	21ft	20 igpm	No	0 igpm
<i>(BTC - Below top of casina)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
41124	70ft	94ft	Brown	Shale
41124	0ft	2ft	Other	Overburden
41124	2ft	70ft	Grey	Sandstone
41124	94ft	123ft	Grey	Sandstone
41124	123ft	130ft	Brown	Shale

Overall Well Depth
130ft
Bedrock Level
2ft

Water Bearing Fracture Zone
There is no water bearing fracture zone information.

Setbacks		
Well Log	Distance	Setback From
41124	75ft	Leach Field
41124	55ft	Septic Tank

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	07/09/2019

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
42419	Steel	6 inch	0ft	58ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	22ft	10 igpm	1hr	22ft	10 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Chlorine pellets	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
42419	0ft	4ft	Brown	Overburden
42419	4ft	14ft	Brown	Sand
42419	14ft	17ft	Brown	Sandstone and Shale
42419	17ft	21ft	Grey	Sandstone
42419	21ft	40ft	Grey	Sandstone
42419	40ft	44ft	Grey	Shale
42419	44ft	54ft	Brown	Shale
42419	54ft	80ft	Grey	Sandstone

Overall Well Depth
80ft
Bedrock Level
4ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
42419	22ft	3.5 igpm
42419	35ft	4.5 igpm
42419	59ft	9 igpm

Setbacks		
Well Log	Distance	Setback From
42419	60ft	Septic Tank
42419	75ft	Leach Field
42419	40ft	Right of any Public Way Road
42419	70ft	Center of road

Well Driller's Report

Date printed 6/28/2021

Drilled by	Work Type	Drill Method	Work Completed
Well Use	New Well		01/01/2001
Drinking Water, Domestic			

Casing Information	Casing above ground	Drive Shoe Used?
There is no casing information.		

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
	0ft	0 igpm	0hr	0ft	0 igpm	No	0 igpm
<i>(BTC - Below top of casina)</i>							

Well Grouting	Drilling Fluids Used	Disinfectant	Pump Installed
There is no Grout information.	None	N/A	N/A
		Qty 0 ig	Intake Setting (BTC)
			0ft

Driller's Log	Overall Well Depth
There is no rock layer information.	0ft
	Bedrock Level
	0ft

Water Bearing Fracture Zone
There is no water bearing fracture zone information.

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Work Type	Drill Method	Work Completed
Well Use	New Well (NEW WELL)	Rotary (ROTARY)	12/02/1994
Drinking Water, Domestic			

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
90165400	Unknown	6 inch	0ft	32ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	0ft	12 igpm	0hr 30min	23ft	15 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
Matex Oil	Bleach (Javex)	Jet
	Qty 1.0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
90165400	32ft	52ft	Grey	Medium Sandstone
90165400	0ft	10ft	Brown	Topsoil
90165400	10ft	25ft	Brown	Fine Sandstone
90165400	25ft	32ft	Red	Clay and Gravel and Rock

Overall Well Depth
52ft
Bedrock Level
32ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
90165400	36ft	7 igpm
90165400	50ft	12 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Work Type	Drill Method	Work Completed
Well Use	New Well (NEW WELL)	Rotary (ROTARY)	04/28/1995
Drinking Water, Domestic			

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
90166700	Steel	6 inch	0ft	27ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	0ft	20 igpm	0hr 30min	7ft	27 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting	Drilling Fluids Used	Disinfectant	Pump Installed
There is no Grout information.	None	N/A	Submersible
		Qty 0 ig	Intake Setting (BTC)
			0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
90166700	0ft	10ft	Brown	Topsoil
90166700	10ft	25ft	Grey	Medium Sandstone
90166700	25ft	60ft	Brown	Medium Sandstone

Overall Well Depth
60ft
Bedrock Level
10ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
90166700	45ft	7 igpm
90166700	60ft	20 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Work Type	Drill Method	Work Completed
Well Use	New Well (NEW WELL)	Rotary (ROTARY)	05/18/1995
Drinking Water, Domestic			

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
90167400	Steel	6 inch	0ft	22ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	0ft	0 igpm	0hr	0ft	25 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting	Drilling Fluids Used	Disinfectant	Pump Installed
There is no Grout information.	None	N/A	Submersible
		Qty 0 ig	Intake Setting (BTC)
			0ft

Driller's Log					Overall Well Depth
Well Log	From	End	Colour	Rock Type	
90167400	0ft	5ft	Brown	Fine Sandstone	30ft
90167400	5ft	30ft	Grey	Medium Sandstone	Bedrock Level
					5ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
90167400	40ft	5 igpm
90167400	65ft	20 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Work Type	Drill Method	Work Completed
Well Use	New Well (NEW WELL)	Rotary (ROTARY)	10/02/1995
Drinking Water, Domestic			

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
90387800	Steel	6 inch	0ft	60ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	0ft	25 igpm	1hr	25ft	25 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	N/A	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
90387800	30ft	35ft	Grey	Sandstone
90387800	0ft	7ft	Brown	Overburden
90387800	7ft	30ft	Brown	Sandstone
90387800	35ft	37ft	Grey	Other
90387800	37ft	57ft	Brown	Clay and Shale
90387800	57ft	98ft	Grey	Sandstone
90387800	98ft	100ft	Brown	Clay and Shale

Overall Well Depth
100ft
Bedrock Level
57ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
90387800	65ft	10 igpm
90387800	70ft	15 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Work Type	Drill Method	Work Completed
Well Use	New Well (NEW WELL)	Rotary (ROTARY)	05/16/1996
Drinking Water, Domestic			

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
90530900	Steel	6 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	0ft	40 igpm	1hr	6ft	40 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting	Drilling Fluids Used	Disinfectant	Pump Installed
There is no Grout information.	None	N/A	N/A
		Qty 0 ig	Intake Setting (BTC)
			0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
90530900	0ft	7ft	Brown	Topsoil
90530900	7ft	38ft	Brown	Fine Sandstone
90530900	38ft	65ft	Grey	Medium Sandstone

Overall Well Depth
65ft
Bedrock Level
7ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
90530900	51ft	40 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Work Type	Drill Method	Work Completed
Well Use	New Well (NEW WELL)	Rotary (ROTARY)	07/18/1996
Drinking Water, Domestic			

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
90660800	Steel	6 inch	0ft	48ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	0ft	20 igpm	1hr	12ft	20 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting	Drilling Fluids Used	Disinfectant	Pump Installed
There is no Grout information.	None	N/A	N/A
		Qty 0 ig	Intake Setting (BTC)
			0ft

Driller's Log					Overall Well Depth
Well Log	From	End	Colour	Rock Type	70ft
90660800	41ft	70ft	Grey	Sandstone	
90660800	0ft	5ft	Brown	Overburden	Bedrock Level
90660800	5ft	41ft	Brown	Soft Sandstone	41ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
90660800	61ft	20 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Work Type	Drill Method	Work Completed
Well Use	New Well (NEW WELL)	Rotary (ROTARY)	08/06/1997
Drinking Water, Domestic			

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
90953900	Steel	6 inch	0ft	20ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	0ft	15 igpm	1hr	14ft	15 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	N/A	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
90953900	51ft	65ft	Brown	Sandstone
90953900	0ft	14ft	Brown	Broken Sandstone
90953900	14ft	42ft	Brown	Sandstone
90953900	42ft	51ft	Grey	Sandstone

Overall Well Depth
65ft
Bedrock Level
14ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
90953900	33ft	7 igpm
90953900	51ft	8 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Work Type	Drill Method	Work Completed
Well Use	New Well (NEW WELL)	Rotary (ROTARY)	10/07/1998
Drinking Water, Domestic			

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
91408400	Steel	6 inch	0ft	66ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	22ft	20 igpm	1hr	0ft	20 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	N/A	N/A
	Qty 0 ig	Intake Setting (BTC)
		75ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
91408400	56ft	64ft	Brown	Clay
91408400	0ft	9ft	Brown	Sand
91408400	9ft	17ft	Brown	Sandstone
91408400	17ft	26ft	Brown	Sand and Gravel
91408400	26ft	42ft	Brown	Sandstone
91408400	42ft	56ft	Grey	Rock
91408400	64ft	86ft	Brown	Hard Clay
91408400	86ft	102ft	Grey	Sandstone

Overall Well Depth
102ft
Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
91408400	92ft	20 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Cable Tool	07/31/2001

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
91588900	Steel	6 inch	0ft	35ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	20ft	5 igpm	1hr 30min	20ft	0 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	N/A
	Qty 3.0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
91588900	0ft	2ft	Brown	Fill
91588900	2ft	35ft	Grey	Sandstone
91588900	35ft	50ft	Red	Sandstone

Overall Well Depth
50ft
Bedrock Level
2ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
91588900	30ft	3 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well (NEW WELL)	Rotary (ROTARY)	08/26/1999

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
91730500	Steel	6 inch	0ft	60ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	0ft	50 igpm	1hr	10ft	50 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting	Drilling Fluids Used	Disinfectant	Pump Installed
There is no Grout information.	None	N/A	Submersible
		Qty 0 ig	Intake Setting (BTC)
			0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
91730500	18ft	49ft	Grey	Sandstone
91730500	0ft	9ft	EMPTY VALUE	Overburden
91730500	9ft	18ft	Brown	Soft Sandstone
91730500	49ft	55ft	Brown	Shale
91730500	55ft	80ft	Brown	Sandstone

Overall Well Depth
80ft
Bedrock Level
18ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
91730500	70ft	50 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Work Type	Drill Method	Work Completed
Well Use	New Well (NEW WELL)	Rotary (ROTARY)	06/02/2000
Drinking Water, Domestic			

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
91743300	Steel	6 inch	0ft	20ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	0ft	10 igpm	1hr	10ft	10 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting	Drilling Fluids Used	Disinfectant	Pump Installed
There is no Grout information.	None	N/A	N/A
		Qty 0 ig	Intake Setting (BTC) 0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
91743300	27ft	69ft	Grey	Sandstone
91743300	0ft	7ft	Brown	Sand
91743300	7ft	14ft	Brown	Broken Sandstone
91743300	14ft	27ft	Brown	Sandstone
91743300	69ft	71ft	Brown	Clay and Shale

Overall Well Depth
71ft
Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
91743300	33ft	10 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well (NEW WELL)	Cable Tool (CABLE TOOL)	09/29/2000

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
91751701	Steel	6 inch	0ft	28ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	18ft	12 igpm	1hr 30min	18ft	0 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting	Drilling Fluids Used	Disinfectant	Pump Installed
There is no Grout information.	None	Bleach (Javex)	N/A
		Qty 1.0 ig	Intake Setting (BTC) 0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
91751701	80ft	85ft	Red	Clay
91751701	0ft	4ft	Red	Topsoil
91751701	4ft	18ft	Red	Clay
91751701	18ft	80ft	Brown	Sandstone
91751701	85ft	88ft	Grey	Sandstone

Overall Well Depth
88ft
Bedrock Level
18ft

Water Bearing Fracture Zone
There is no water bearing fracture zone information.

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well (NEW WELL)	Cable Tool (CABLE TOOL)	11/02/2000

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
91752600	Unknown	5 inch	0ft	40ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Bailer	11ft	12 igpm	0hr	11ft	12 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	Bleach (Javex)	N/A
	Qty 1.0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
91752600	40ft	55ft	Grey	Sandstone
91752600	0ft	3ft	Red	Topsoil
91752600	3ft	15ft	Red	Clay
91752600	15ft	40ft	Brown	Sandstone

Overall Well Depth
55ft
Bedrock Level
15ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
91752600	55ft	12 igpm
91752600	30ft	4 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	08/10/2000

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
92009900	Steel	6 inch	0ft	20ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	0ft	6 igpm	1hr	10ft	6 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting
There is no Grout information.

Drilling Fluids Used	Disinfectant	Pump Installed
None	N/A	N/A
	Qty 0 ig	Intake Setting (BTC)
		0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
92009900	58ft	60ft	Brown	Clay and Shale
92009900	0ft	1ft	Brown	Sandstone
92009900	1ft	38ft	Brown	Sandstone
92009900	38ft	58ft	Grey	Sandstone

Overall Well Depth
60ft
Bedrock Level
0ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
92009900	22ft	6 igpm

Setbacks
There is no Setback information.

Well Driller's Report

Date printed 6/28/2021

Drilled by	Well Use	Work Type	Drill Method	Work Completed
	Drinking Water, Domestic	New Well	Rotary	08/10/2000

Casing Information		Casing above ground			Drive Shoe Used?
Well Log	Casing Type	Diameter	From	End	Slotted?
92011000	Steel	6 inch	0ft	20ft	

Aquifer Test/Yield							
Method	Initial Water Level (BTC)	Pumping Rate	Duration	Final Water Level (BTC)	Estimated Safe Yield	Flowing Well?	Rate
Air	0ft	20 igpm	1hr	10ft	20 igpm	No	0 igpm
<i>(BTC - Below top of casing)</i>							

Well Grouting	Drilling Fluids Used	Disinfectant	Pump Installed
There is no Grout information.	None	N/A	N/A
		Qty 0 ig	Intake Setting (BTC) 0ft

Driller's Log				
Well Log	From	End	Colour	Rock Type
92011000	12ft	28ft	Brown	Sandstone
92011000	0ft	2ft	Brown	Overburden
92011000	2ft	6ft	Brown	Sandstone
92011000	6ft	12ft	Brown	Sandstone
92011000	28ft	60ft	Grey	Sandstone

Overall Well Depth
60ft
Bedrock Level
2ft

Water Bearing Fracture Zone		
Well Log	Depth	Rate
92011000	23ft	20 igpm

Setbacks
There is no Setback information.