

**Environmental Impact  
Assessment Registration  
McCain Foods (Canada)  
Florenceville-Bristol, NB**

*May 2014*

EIA Registration (WSSA)

Department of Environment and Local  
Government, 20 McGloin Street  
PO Box 6000, Fredericton, NB  
E3B 5H1

14-9361

Malcolm Marston - Project Manager

*Submitted by*

**Dillon Consulting Limited**

May 16, 2014

Department of Environment and Local Government  
20 McGloin Street  
PO Box 6000, Fredericton, NB  
E3B 5H1

Attention: Lee Swanson, B.Sc. M.A.  
Project Manager

***Water Supply Source Assessment Environmental Impact Assessment  
Registration, McCain Foods (Canada), Florenceville - Bristol, NB***

Dear Ms. Swanson:

We are pleased to present a final copy of the Registration Document for the above-noted project. This document is being submitted on behalf of McCain Foods (Canada) (McCain) to the New Brunswick Department of Environment and Local Government for review as part of the initial application for a water supply source assessment.

If you have any questions, please contact the undersigned.

Yours truly,

**DILLON CONSULTING LIMITED**



Malcolm Marston, P.Eng., LEED AP, EP (CEA), EP (EMSLA)  
Project Manager

Our file: 14-9361

## TABLE OF CONTENTS

	<u>Page No.</u>
<b>1.0 THE PROPONENT.....</b>	<b>1</b>
<b>1.1</b> Name of the Proponent .....	1
<b>1.2</b> Project Manager .....	1
<b>1.3</b> Principle Contact Person .....	1
<b>1.4</b> Property Ownership .....	2
<b>2.0 THE UNDERTAKING.....</b>	<b>2</b>
<b>2.1</b> Introduction.....	2
<b>2.2</b> Name of the Undertaking .....	2
<b>2.3</b> Project Overview .....	2
<b>2.4</b> Purpose/Rationale/Need for the Undertaking .....	2
<b>2.5</b> Project Location .....	4
<b>2.6</b> Physical Components of the Project .....	4
2.6.1 Observation Well Construction .....	4
2.6.2 Step-Drawdown Testing .....	6
2.6.3 Hydraulic Testing .....	6
<b>2.7</b> Project Schedule .....	7
<b>3.0 DESCRIPTION OF EXISTING ENVIRONMENT.....</b>	<b>7</b>
<b>3.1</b> Groundwater Environment.....	7
<b>3.2</b> Freshwater Environment.....	8
<b>4.0 ENVIRONMENTAL EFFECTS AND MITIGATION.....</b>	<b>8</b>
<b>4.1</b> Assessment of Environmental Effects .....	8
<b>4.2</b> Proposed Mitigation.....	8
<b>4.3</b> Accidents, Malfunctions and Unplanned Events .....	10
<b>5.0 PUBLIC CONSULTATION.....</b>	<b>10</b>
<b>6.0 REFERENCES.....</b>	<b>10</b>

## TABLE OF FIGURES

Figure 1 – Site Location Plan.....	3
Figure 2 – Site Layout Plan .....	5

## **1.0 THE PROPONENT**

### **1.1 Name of the Proponent**

McCain Foods (Canada) a Division of McCain Foods Limited – Florenceville Facility

### **1.2 Project Manager**

McCain Foods (North America)

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Environmental Engineer  
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### **1.3 Principle Contact Person**

For purposes of the Environmental Impact Assessment the principal contact person is:

Dillon Consulting Limited  
Malcolm Marston, P.Eng., LEED AP,  
EP(CEA), EP(EMSLA)  
Project Manager  
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## **1.4 Property Ownership**

The McCain Prepared Foods Plant (PFP) is located at 107 Main Street in Florenceville-Bristol, New Brunswick. The PFP is located approximately 300 meters from the Saint John River and adjacent to a McCain Foods Fry Plant. The PFP is located on a parcel of land legally identified by Property Identification Numbers (PIDs) 10083558 and 10083400. The water supply well for the PFP is located on the property that is legally identified by PID No. 10083558. The properties are currently owned by McCain Foods Limited.

## **2.0 THE UNDERTAKING**

### **2.1 Introduction**

This document is for work related to the completion of a Water Supply Source Assessment (WSSA) for the current operational McCain PFP water supply in Florenceville-Bristol, New Brunswick.

This project includes the completion of a WSSA for an existing water supply and does not involve the development of a source. Therefore, it is expected that the initial section of the WSSA application would be waived. The proposed testing methods described in this document are intended to satisfy the application requirements.

### **2.2 Name of the Undertaking**

Water supply source assessment for the McCain PFP in Florenceville-Bristol, New Brunswick.

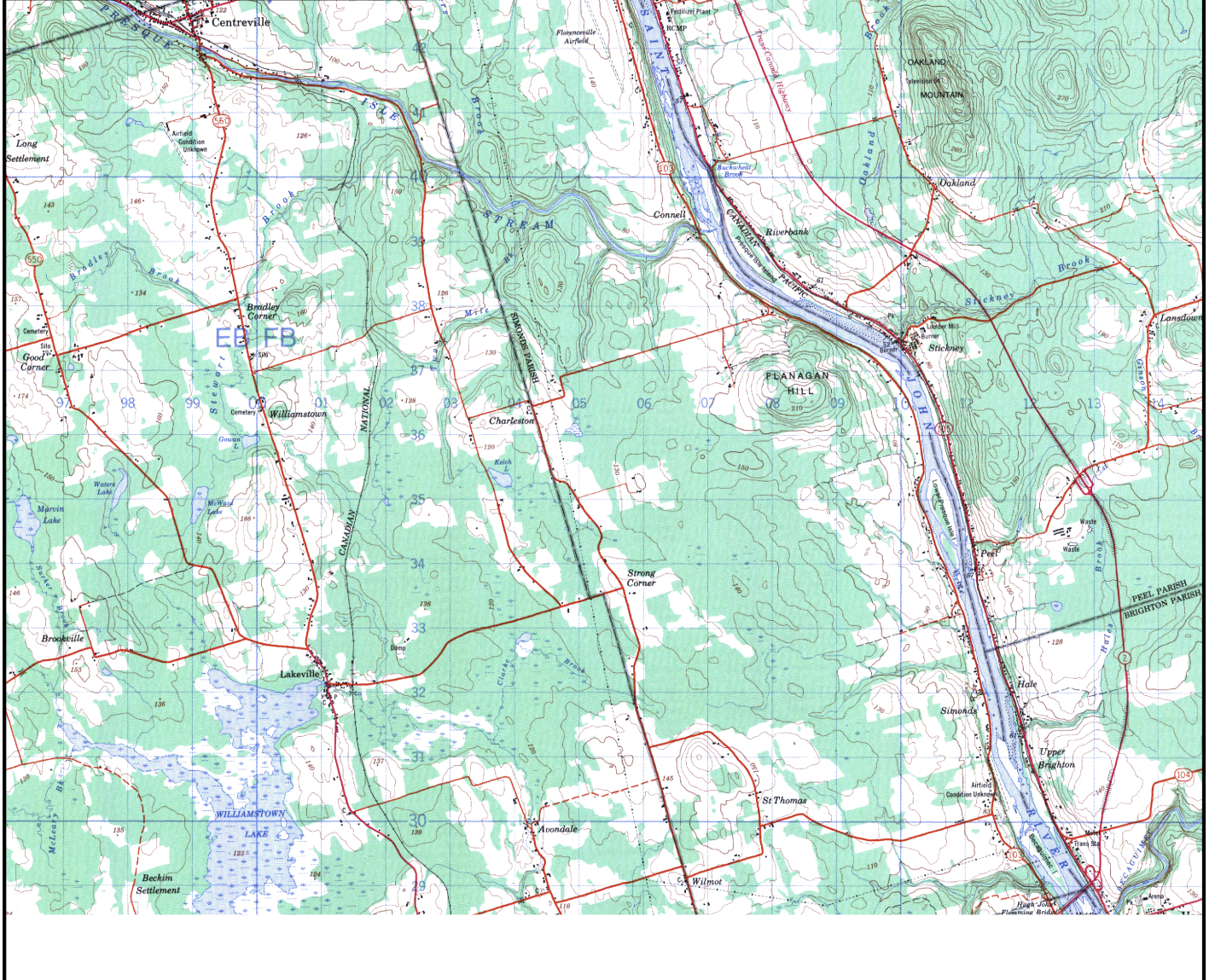
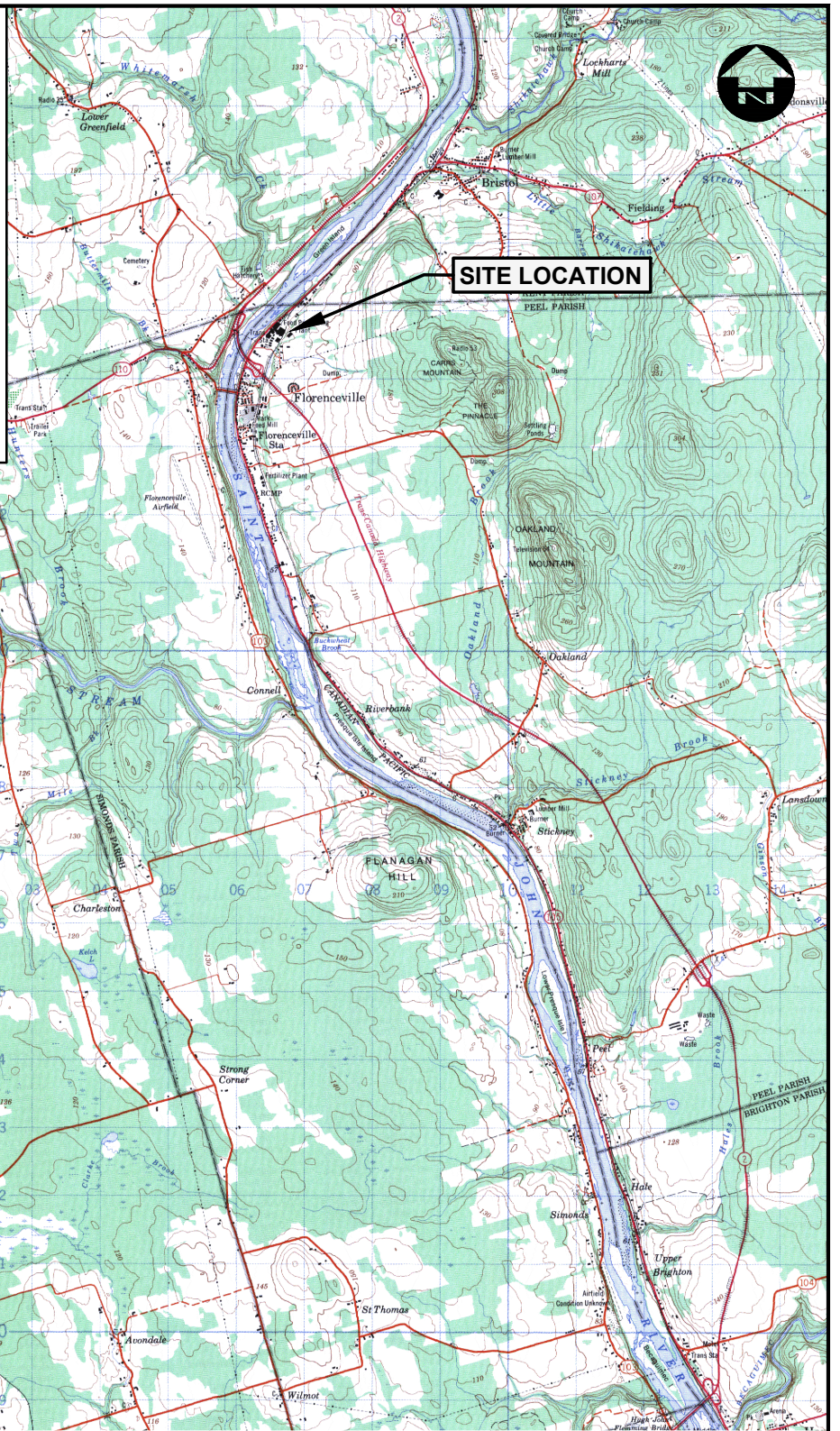
### **2.3 Project Overview**

A WSSA is being completed to assess the capacity of the McCain Florenceville PFP well. This will involve a step-drawdown test and a 72 hour hydraulic pumping test. As part of the WSSA, an observation well will be also be constructed to assist the completion of the hydraulic testing. The observation well will be constructed on the property identified by PID No. 10083400.

### **2.4 Purpose/Rationale/Need for the Undertaking**

The McCain PFP in Florenceville-Bristol, New Brunswick requires potable water in the manufacturing of commercial cake and pizza food products.






SCALE 1:50000

MAP SOURCE - NTS MAPSHEET 21J/05

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 <p><b>DILLON CONSULTING</b></p>	<p>PROJECT</p> <p><b>EIA REGISTRATION FLORENCEVILLE, CARLETON CO., NB McCAIN FOOD CANADA</b></p>	<p>PROJECT NO.</p> <p><b>14-9361</b></p>
	<p>TITLE</p> <p><b>SITE LOCATION MAP</b></p>	<p>FIGURE NO.</p> <p><b>1</b></p>
<p>DATE</p> <p><b>MAY 2014</b></p>		



## 2.5 Project Location

The McCain PFP well is located on the northwest side of the manufacturing facility, located approximately 300 meters from the Saint John River. See Figure 1 for project location.

## 2.6 Physical Components of the Project

The McCain PFP is located approximately 300 meters from the Saint John River. This facility uses potable water from groundwater supply wells in food manufacturing, sanitation, and auxiliary processes. Water used as part of daily operations is obtained from a bedrock aquifer likely hydraulically connected to a sand and gravel deposit within the Saint John River valley. One main production well is used to supply the facility (PFP Well). Water pumped from the well enters the building above ground and undergoes chlorination, UV disinfection, filtration treatment prior to being discharged to a storage tank and subsequently used.

### 2.6.1 Observation Well Construction

The construction of the observation well, as per the New Brunswick "Clean Water Act" will be carried out by a licensed New Brunswick Water Well Contractor and licensed well driller. The observation well will be constructed in a manner, which will comply with the minimum well construction, location, safe yield and reporting requirements as specified in the "Water Well Regulation". The observation well construction will take place prior to June 20, 2014, during a period when the PFP supply well is not in operation. See Figure 2 for location of proposed observation well.

The following describes the work that is to be completed for drilling the PFP observation well:







- 1) Meet with McCain personnel to position the observation well and complete underground clearances prior to commencing any drilling activities.
- 2) Install and maintain sediment and erosion control structures (e.g. checkdams, silt fences, etc.) over the course of observation well construction and development.
- 3) Construct the observation well using standard drilling methods (air rotary) to an approximate depth of 225 feet below ground surface (fbgs) with six inch steel casing and drive shoe installed into competent bedrock at a depth of approximately 40 fbgs and completed with six inch steel casing and associated drive shoe.
- 4) Develop the observation well using standard procedures by air lifting to remove sediments caused by drilling activities over a two hour period.
- 5) Determine safe yield after well development is complete.
- 6) Install a vermin proof cap to seal the well;
- 7) Install a visual aid to identify the well (i.e. painted casing, sign, etc.).



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LEGEND

-  SUBJECT PROPERTY
-  PROPERTY LINE
-  WATERCOURSE
-  WELL LOCATION
-  ADJACENT WATER USER
-  OBSERVATION WELL



**DILLON**  
CONSULTING

DATE **MAY 2014**

PROJECT	<b>EIA REGISTRATION FLORENCEVILLE, CARLETON CO., NB McCain Food Canada</b>	PROJECT NO. <b>14-9361</b>
TITLE	<b>SITE PLAN</b>	FIGURE NO. <b>2</b>



- 1) Collect water samples from the observation well using a bailer and sample bottles specified by the NBDELG and following development submit them on behalf of McCain Foods with a well water testing voucher to the NBDELG laboratory in Fredericton, NB for analysis.
- 2) Apply a well identification tag to the observation well by welding it onto the steel casing.
- 3) Complete the Well Driller's Report and submit it to the NBDELG.

### **2.6.2 Step-Drawdown Testing**

Step-drawdown testing and hydraulic testing will be completed over a five day period during a planned shutdown (not including set-up and tear down) from June 23-27, 2014 so as to not interfere with factory operations. This scheduled shutdown cannot be changed, or extended therefore hydraulic testing activities must be coordinated with sufficient time to have the water supply functioning before June 28, 2014.

The following describes the work that is to be completed for step-drawdown testing the PFP Well:

- 1) Conduct minor plumbing modification to disconnect the well from the PFP water supply at the wellhead and connect to a temporary line for discharge.
- 2) Connect temporary water lines to the wellhead to discharge pumped water to the drainage ditch (un-mapped) approximately 50 meters northwest of the wellhead.
- 3) Install a 1.25 - 1.5 inch PVC conduit in the PFP well for use in recording water levels throughout the testing period.
- 4) Complete step-drawdown on PFP well using testing using existing pumping infrastructure.

The following pumping rates are proposed for each of the three 60 minute steps. Pumping is proposed to be completed with the facility's pumping infrastructure.

Step 1 – 20% of pump capacity

Step 2 – 50% of pump capacity

Step 3 – 100% of pump capacity

### **2.6.3 Hydraulic Testing**

Constant rate pumping test of the PFP Well will be completed over the same five day shutdown period as the step testing. The flow rate at which the testing is completed will be determined by Dillon based on the results of the step-drawdown testing. The water from the pumping well will be discharged to a drainage ditch (un-mapped) approximately 50 meters northwest of the wellhead.

The following describes the work that is to be completed for hydraulic testing of the PFP Well:

1. Conduct a 72 hour constant rate pumping test on the PFP well using the currently in-place infrastructure (pump, piping and electrical) to conduct the testing;
2. Observe the pumping test including monitoring the flow rates and measurement of manual water levels at appropriate intervals in the production and observation wells;
3. Provide monitoring of water levels in the production and observation wells during the recovery phase following the pumping test using the on-site infrastructure and observation conduit. The recovery period should be observed for approximately 24 hours or until 90% of recovery to static water elevation is reached. During this phase, replacement of the well infrastructure at the wellhead can be completed as long as it does not disrupt groundwater elevation recovery.

## **2.7 Project Schedule**

The project is anticipated to start before June 20th, with the construction of the observation well, and end on June 27, 2014. June 27 is the latest date that work will be conducted, as this is the final day of the planned shutdown period at the facility.

## **3.0 DESCRIPTION OF EXISTING ENVIRONMENT**

The project site is industrial and developed, and the surrounding land uses are mostly rural and undeveloped. All of the required infrastructure for the proposed well testing activities currently exist. No additional disturbances with the exception of the installation of a new observation well as shown on Figure 2 will be required. The observation well will require a disturbance area limited to approximately 10 m<sup>2</sup> on a manicured lawn and adjacent an existing access road as noted in Photo 1 below.

### **3.1 Groundwater Environment**

The project site is not located in a wellfield protection area under the New Brunswick Wellfield Protection Program or a designated watershed under the New Brunswick Watershed Protection Program.

There are no protected natural areas or provincially significant habitats located in the area of the project activities.

## **3.2 Freshwater Environment**

There are no watercourses at the project site; however, the Saint John River is located approximately 300 m northwest of project site. An un-named tributary is also located approximately 250 m southwest of the project site

Based on the GeoNB Map layer, there are no regulated or provincially significant wetlands located within the vicinity of the property.

## **4.0 ENVIRONMENTAL EFFECTS AND MITIGATION**

### **4.1 Assessment of Environmental Effects**

Given the industrial nature of the McCain site, and since the well testing activities will be carried out largely using existing structures or on other areas of the site that are currently fully developed (i.e., landscaped or paved areas), interaction with the environment will be minimal.

Discharge water during the hydraulic testing will be of higher quality than the typical discharge as it will not be processed in anyway prior to being released to the environment. Because the well testing activities will be discharging clean water to a drainage ditch which drains to an un-named mapped watercourse approximately 250 meters away, there are no potential environmental effects with the exception of potential minor short-term sedimentation. Interactions with the Aquatic Environment are not expected to cause adverse environmental effects during the well testing activities.

### **4.2 Proposed Mitigation**

Specific mitigation and best management practices will be observed during the well testing activities, specifically to remain in compliance with the New Brunswick Clean Water Act, MBCA, the SARA and the NBSARA to ensure that adverse environmental effects do not occur. The following mitigation measures will be applied to this project.

#### *Drilling Equipment and other Machinery Use:*

- The Project site will be equipped with spill kit (at least one clean-up kit, containing absorbent pads and booms for petroleum spills).
- Equipment shall be in good working order and free of leaks.
- Vehicle fuelling and maintenance must occur at least 30 m away from any watercourse.



- All erosion and sediment control structures should follow specifications as outlined in the Watercourse and Wetland Alteration Technical guidelines (Site and Surface Water Management p.19- 21).
- Siltation prevention measures (i.e., silt fence) shall be installed at the onset of the construction activities and added wherever necessary. Sediment control structures shall be monitored and maintained on a regular basis.

*Temporary Discharge to Drainage Ditch:*

- Best management practises should be used to limit and reduce erosion and sedimentation prior to discharging into the mapped un-named watercourse (i.e., silt fence, hay bales, rip-rap, etc. ).



Photo 1. Approximate location of proposed observation well.

### **4.3 Accidents, Malfunctions and Unplanned Events**

McCain has contingency and an emergency response plan as part of its standard operating procedures to address potential accidents malfunctions and unplanned events. In this project, these events relate specifically to the water testing activities of the project. McCain currently has a facility-specific Health and Safety Program for their operations. An on-site job safety plan and environmental assessment will be facilitated prior to the commencement of work to fulfil the obligations of the facility's Safety Program and Environmental Management System (ISO14001).

## **5.0 PUBLIC CONSULTATION**

Project information letters will be distributed to landowners within approximately 1.0 km of the proposed activities. The purpose of the letter will be to advise local residents and businesses close to the proposed Project site (i.e., those who are potentially most affected) and provide them with opportunity to comment on the proposed undertaking.

Information letters will also be sent to the Town of Florenceville-Bristol.

The notification letters and any potential concerns or responses from the public will be provided to NBDELG.

## **6.0 REFERENCES**

GeoNB Map Viewer. Accessed 2014. <http://www.snb.ca/geonb1/e/index-E.asp>

New Brunswick Department of Environment and Local Government. 1987. New Brunswick Regulation 87-97 Under the Clean Environment Act. Available: <http://www.gNew Brunswick.ca/0062/pdf-regs/87-97.pdf>