Environmental Impact Assessment Registration McCain Foods (Canada) Grand Falls, NB

May 2014

EIA Registration (WSSA)

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

13-8434-3000

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), Grand Falls, 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

Page No.

TABLE OF FIGURES

1.0 THE PROPONENT

1.1 Name of the Proponent

McCain Foods (Canada) a Division of McCain Foods Limited – Grand Falls Facility

1.2 Project Manager

McCain Foods (North America)

Peter Cormier, P.Eng.
Environmental Engineer
795 Route 108
Grand Falls, NB
E3Z 4A5
Phone: 920-997-7277
Fax: 920-997-2754
peter.cormier@mccain.com

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
1149 Smythe Street Suite 200
Fredericton, New Brunswick, E3B 3H4
Phone: 506-444-9717 ext. 5125
Fax: 506-444-8821
mmarston@dillon.ca

1.4 Property Ownership

The McCain Foods water supply wells and associated well house is located on property PID # 35264571 owned by New Brunswick Power Corporation. The well house property abuts with an easement owned by the New Brunswick Railway Company PID 35108034. An agreement exists between McCain Foods and parties to allow the occupation and operation of their water supply infrastructure.

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 water supply system at the McCain Foods facility in Grand Falls, New Brunswick.

This project includes the completion of a WSSA for an existing water source and does not involve exploration nor 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 Foods Facility in Grand Falls, New Brunswick.

2.3 Project Overview

A WSSA is being completed to assess the capacity of the Grand Falls water supply wells. This will involve well maintenance, step-draw down testing, and a hydraulic pump testing.

2.4 Purpose/Rationale/Need for the Undertaking

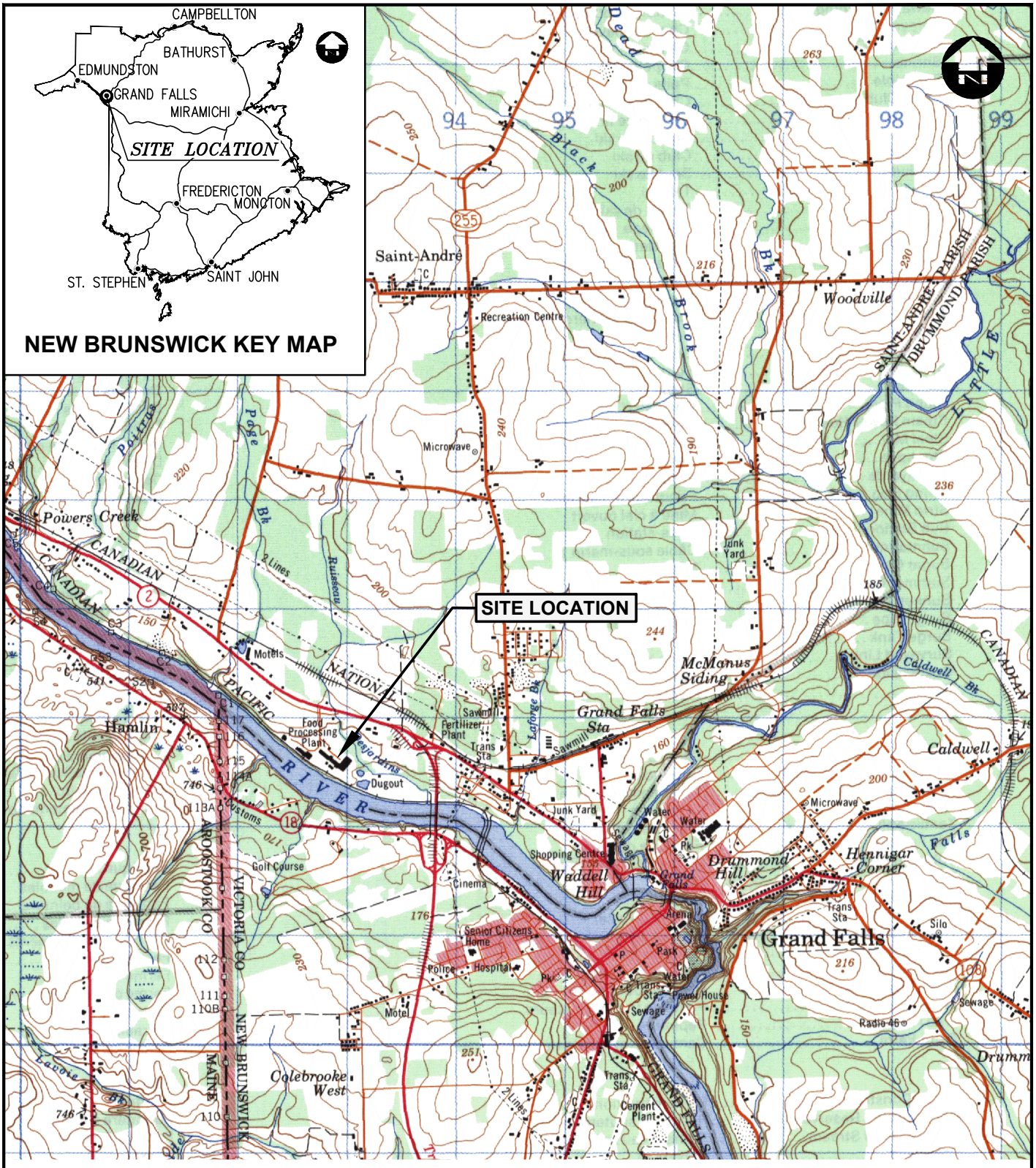
The McCain Foods facility in Grand Falls, New Brunswick requires potable water in the manufacturing of commercial French fry, potato, and pizza food products. This assessment is being completed to ensure sustainable water supply for facility operations.

2.5 Project Location

The McCain Foods water supply wells, well house and associated infrastructure are located to the west of the facility within a well house on the North bank of the Saint John River. See Figure 1 for project location.

2.6 Physical Components of the Project

The McCain Foods facility is located on McCain Road adjacent to the Saint John River in Northwestern New Brunswick. This facility uses water supplied from groundwater wells in food manufacturing, sanitation, and auxiliary processes. Potable water used as part of daily operations is obtained from a confined gravel aquifer from two wells (Well C and Well D) located adjacent to the Saint John River.



MAP SOURCE - NTS MAPSHEET 21O/04

DILLON CONSULTING	PROJECT: EIA REGISTRATION GRAND FALLS, VICTORIA CO., NB McCAIN FOOD CANADA	PROJECT NO.: 13-8434
DATE: MAY 2014	TITLE: SITE LOCATION MAP	FIGURE NO.: 1

FileName:g:\cad\138434\05-environmental\03-reports\138434-05-03-fig 1.dwg

Currently McCain Foods is extracting a daily volume of water approximately 4500 m^3/day to meet the demands of its operations. The groundwater source from which this water is obtained has not been assessed. Based upon the requirements of the New Brunswick legislation indicating that all waterworks requiring greater than >50m^3/day undergo a WSSA and review through an Environmental Impact Assessment Registration (EIA), the following work is being proposed.

Currently there are two operational production wells (Well C and Well D) located northwest of the manufacturing facilities. Each well is constructed to a depth of 175 feet below ground surface (fbgs) and consists of approximately 130 feet of 10 inch steel casing and 45 feet of no. 40 screen. Each production well has an estimated safe yield of between 2500 and 3200 liters per minute (lpm). See Figure 2 for site layout and well locations.

Each of the well heads are located approximately 10 meters from the edge of the Saint John River within a permanent structure (well house) containing an associated pressure tank, chlorination equipment and pipe network. A single water supply line from the pressure tank exits the well house subgrade to connect to the facility water distribution network. Wellheads C and D are also connected to pipework which have a bypass option to discharge to the Saint John River. Access hatches are located above each of the well heads to enable access to the infrastructure.

2.6.1 Well Maintenance

The productions wells (Well C and Well D) have been in operation for more than 25 years. Given the age of the wells and the potential decrease in their productivity it is vital that well maintenance is professionally completed prior to completing any hydraulic testing.

The Grand Falls facility includes two separate production facilities, French fry and Pizza, that rarely shutdown production simultaneously; therefore, it is critical that the work be completed during the scheduled shutdown periods. If the work is not completed during the planned shutdown periods the WSSA could be delayed up to a year.

Well maintenance activities and step-drawdown testing will be completed over a five day period (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 the well maintenance activities must be coordinated with sufficient time to replace infrastructure and have water supply functioning before June 28, 2014.

The following describes the work that is to be completed for well maintenance of Wells C and D:

1) Remove the pump and infrastructure within each well
2) Conduct video inspection of each well to confirm the well condition prior to maintenance
3) Conduct maintenance of each well and re-establishing well system

4) Install 1.25 – 1.5 inch diameter PVC conduit for water level measurements/data logger installation
5) Conduct follow-up video inspection of each well to confirm post- maintenance conditions of each well
6) Replace pump and infrastructure within each well

2.6.2 Step-Drawdown Testing

Step-drawdown testing will be completed over the same five day period as the well maintenance task.

The following describes the proposed work that is to be completed for step-drawdown testing of Wells C and D:

1) Install flow meters
2) Install sampling ports for each well
3) Utilize existing pumping infrastructure in tandem with newly installed valves and flow meters to complete a step-drawdown test on each well

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 - Well C – 100% of pump capacity
Step 2 - Well D – 100% of pump capacity
Step 3 - Well C and Well D – 50% of each pump capacity
Step 4 - Well C and Well D – 100% of each pump capacity

2.6.3 Hydraulic Testing

Hydraulic testing will be required for both production wells, Well C and Well D, during the planned shut-down. Constant rate pumping tests on each well will be completed during the same 72 hour period to be consistent with the current operating conditions at the site. The testing of both wells simultaneously will represent the most conservative approach to meeting the production demands of the facility.

The following describes the proposed hydraulic testing methods for Wells C and D:

1) Conduct a 72 hour constant rate pumping test on both wells simultaneously using the currently in-place infrastructure (pump, piping and electrical) at the desired flow rate as determined by the step-drawdown testing
2) Provide continuous monitoring of water levels with the use of pressure transducers and 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

2.6.4 Well Head Repair

Following the completion of hydraulic testing of Wells C and D repairs will be made to the wellheads to provide a sufficient seal in accordance with the New Brunswick Clean Water Act (90-79) Section 16 (1 and 4).

2.6.5 Abandonment of Retired Wells

There are two retired inactive wells located to the southeast of the facility approximately 900 meters from Well C and D. Wells A and B are proposed to be decommissioned consistent with an approved method outlined in the New Brunswick Guidelines for Decommissioning (abandonment) of Water Wells.

The following describes the proposed methods for the decommissioning Well A and Well B;

1) Remove existing pumping infrastructure from Well A and Well B
2) Conduct well abandonment according to Approved Method 1 of the *New Brunswick Guidelines for Decommissioning (abandonment) of Water Wells.* (The well casing is not to be cut-off below grade and the top of the well is to be capped with concrete as the building and foundations will remain in place)

2.7 Project Schedule

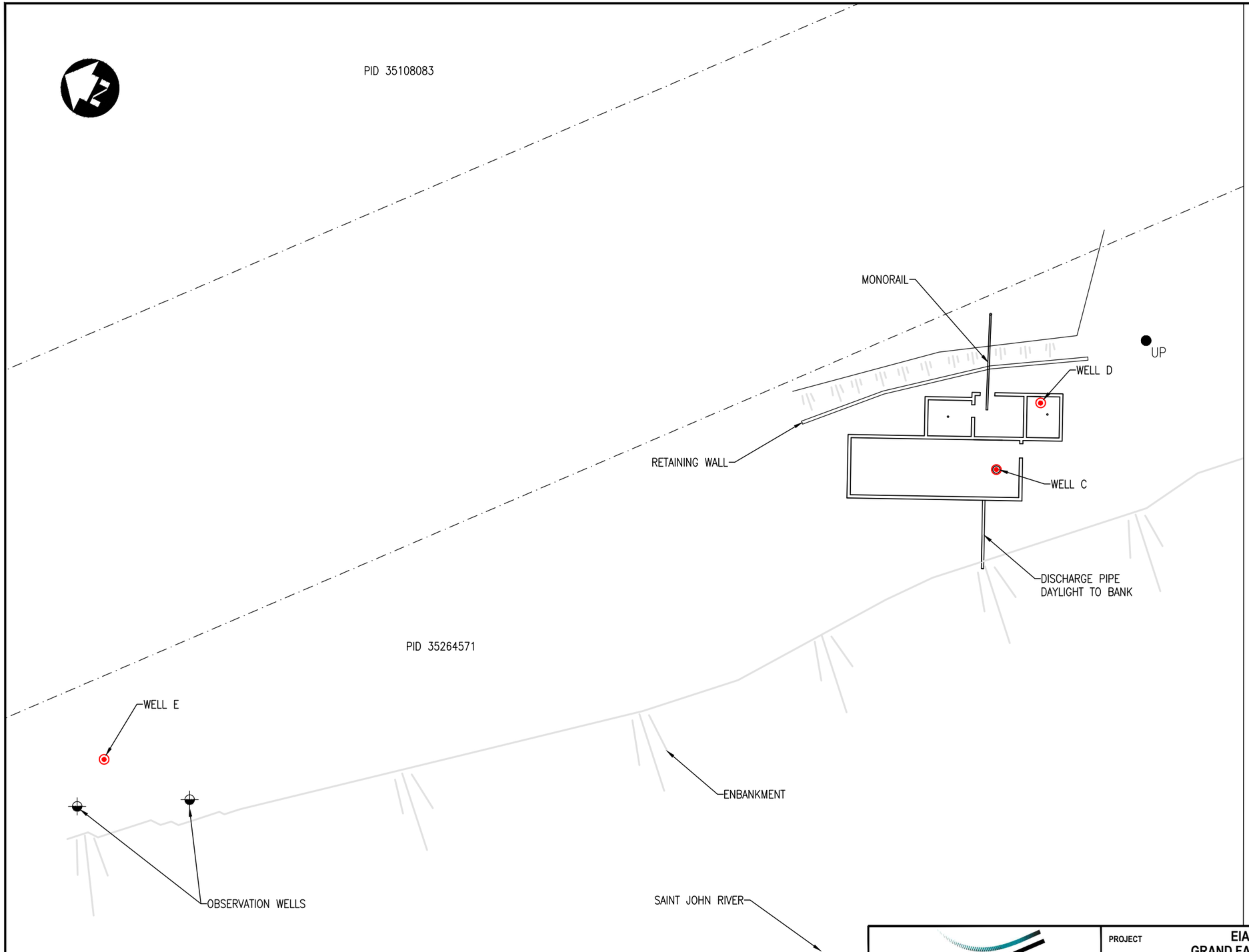
The work will need to be completed during specific timeframes (planned shut-downs) as the water supply is critical to the operation of McCain's major industrial operation.

Shutdown #1 – June 23rd to 27th, 2014

- Well maintenance
- Step-drawdown testing

Shutdown #2 – Mid to late August 2014 (Specific dates to be determined)

- Hydraulic testing
- Well head repairs
- Abandonment of retired wells



LEGEND

- SUBJECT PROPERTY
- PROPERTY LINE
- WELL LOCATION
- OBSERVATION WELL

NOTES:

1. PROPERTY LINES ARE BASED SERVICE NEW BRUNSWICK RECORDS; AND MAY NOT BE EXACT. THIS IS NOT A LEGAL SURVEY.
2. INFRASTRUCTURE LOCATIONS ARE APPROXIMATE ONLY AND SHOULD BE FIELD VERIFIED.

0 5 10 15m

SCALE 1:250

DILLON CONSULTING

DATE MAY 2014

PROJECT EIA REGISTRATION
GRAND FALLS, VICTORIA CO., NB
McCAIN FOOD CANADA

PROJECT NO. 13-8434

TITLE SITE PLAN

FIGURE NO. 2

FileName:g:\cad\13843\05-environmental\03-reports\138434-05-03-fig 2.dwg

3.0 DESCRIPTION OF EXISTING ENVIRONMENT

The project site is industrial and developed, and the surrounding land uses are mostly rural and undeveloped. The infrastructure required to complete the proposed well testing activities are currently in place and any additional disturbance associated with the project will be minimal and limited to the areas of the well house and the bank of the Saint John River. Based upon the limited project footprint required for this project the description of the existing environment has been focused on the Saint John River (Aquatic Environment) and the Terrestrial Environment and more specifically the vegetated area along the bank of the Saint John River. See Figure 3 for site plan with aerial imagery.

3.1 Terrestrial Environment

3.1.1 Flora

Within the area of the well house, the site is fully developed with little to no natural vegetation. Although no vegetation communities are found within the well area, the vegetation communities which exists along the banks of the Saint John River and adjacent the site consists of immature intolerant hardwood species dominated by trembling aspen (Populus tremuloides), white birch (Betula papyrifera) with red maple (Acer rubrum). The understory consists of herbaceous and woody vegetation which provide stability to the banks of the Saint John River.

3.1.2 Fauna

Due to the absence of available habitat within the McCain Foods facility boundary, the presence of wildlife on-site is very limited. In particular, it is highly unlikely that any species at risk may exist in the area.

Based on visual observation around the well house area and the limited available habitat at the project site, it is unlikely that nesting bird species would occur in this area.

3.1.3 Protected Areas

According to the NBDNR, there are no identified protected areas or environmentally significant areas located within the boundaries of the project activities.

3.2 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.

LEGEND

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

NOTES:

1. PROPERTY LINES ARE BASED SERVICE NEW BRUNSWICK RECORDS; AND MAY NOT BE EXACT. THIS IS NOT A LEGAL SURVEY.
2. IMAGERY SOURCE GEONB MAPVIEWER.
3. INFRASTRUCTURE LOCATIONS ARE APPROXIMATE ONLY AND SHOULD BE FIELD VERIFIED.

0 50 100 200m

SCALE 1: 4000

DILLON CONSULTING

DATE MAY 2014

PROJECT EIA REGISTRATION
GRAND FALLS, VICTORIA CO., NB
McCAIN FOOD CANADA

PROJECT NO. 13-8434

TITLE SITE PLAN W AERIAL IMAGERY

FIGURE NO. 3

FileName: g:\cad\13843405-environmental\03-reports\138434-05-03-fig 3.dwg

3.3 Freshwater Environment

There are no watercourses at the project site; however, the Saint John River runs parallel to the northwestern boundary of the property and is located approximately 25 m from project site. The top of the steep bank to the river is located approximately 5 m from the project site and consists of immature hardwood, shrubs and grass. The portion of the river adjacent the subject property is regulated by NB Power; the Grand Falls hydroelectric dam located approximately 4 km downstream of the project site. A subsurface pipe approximately 15 cm diameter discharges non-routine water effluent from the well house to the Saint John River as noted on Figure 2. The purpose of the discharge pipe is for the activity of hydraulic testing of the water supply system.

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 using existing infrastructure or on other areas of the site that are fully developed (i.e., landscaped or paved areas), interaction with the terrestrial environment (including vegetation, wildlife and wildlife habitat) will be minimal. The site is not known to support wildlife or important species of vegetation, and similarly, it is highly unlikely to support important migratory bird habitat. The Project will take place on previously disturbed land at the McCain Facility, and very limited disturbance of the surrounding land on the site will be required to accommodate the well maintenance and hydraulic testing activities.

Because the well testing activities will be discharging clean water to the Saint John River, 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.

All work conducted within 30 m of the Saint John River shall adhered to the conditions outlined in the Watercourse and Wetland Alteration (WAWA) permit issued by the DELG. Additional mitigation measures are outlined as follows:

Drilling Equipment and other Machinery Use:

- No material is to be deposited in or removed from the watercourse.
- The Project site will be equipped with spill kit (at least one clean-up kit, containing absorbent pads and booms for petroleum spills).
- All necessary precautions will be taken to prevent the discharge or loss of any harmful material or substance into the Saint John River; including but not limited to hydrocarbons.
- Equipment shall be in good working order and free of leaks.
- Vehicle fueling 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.

Clearing Activities:

If clearing is necessary the following mitigation measures will be followed:

- A pre-clearing nesting bird survey will be conducted by a biologist. If nests are observed, further consultation with Environment Canada will be conducted to identify appropriate protection measures.
- No one shall disturb, move or destroy migratory bird nests. If a nest or young birds are encountered, the contractor shall cease work in the immediate area of the nest and contact the site supervisor. A 20 m buffer zone will be flagged around identified active nests and work in the area may be delayed until after the birds have fledged. The site supervisor will also contact Environment Canada for further mitigation measures.
- Clearing activities will consist of removing trees for the purposes of the discharge pipe area and will not exceed 5 m in width.
- Trees harvested within 15 m of a watercourse will be completed by hand and winched out by machinery stationed outside the 15 m buffer zone.
- Trees must be felled away from the Saint John River
- All stockpiled trees and brush will be kept outside of the 30 m buffer.
- Equipment fuelling and maintenance must occur at least 30 m away from any watercourse.

- Hazardous waste, in particular, any spent grease cartridges and/or rags contaminated with oil/fuel/hydraulic fluid should be stored in a water tight container and removed from work site daily. These materials must be disposed of at an appropriate waste disposal facility

Rip Rap Construction

- Fill material shall be clean and coarse with less than 10% fines to minimize the generation of sediment and to promote drainage.

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 Grand Falls.

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