APPENDIX B:

Environmental Management Plan
Crandall Engineering Ltd. – September 1, 2017

Town of Sackville

ENVIRONMENTAL MANAGEMENT PLAN

Lorne Street Reconstruction & Storm Water Mitigation - Phase 2

Submitted to:

PROVINCE OF NEW BRUNSWICK
DEPARTMENT OF ENVIRONMENTAND LOCAL GOVERNMENT
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Project No. 16196-1

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SECTION 1 - INTRODUCTION

1.1 Introduction

The Environmental Management Plan (EMP) for Phase 2 of the Lorne Street Reconstruction & Storm Water Mitigation project focuses on the activities related to the enhancement of the existing drainage system, including the construction of new storm water retention ponds, ditching upgrades, culvert installation, aboiteau upgrades, etc. This Environmental Management Plan is divided into the following sections:

Section 1	Introduction
Section 2	Site Work
Section 3	Waste Management
Section 4	Dust Management
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Section 7	Clean-Up and Re-Vegetation
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1.2 Purpose of the EMP

The EMP is an important component of the overall Project in order to protect the environment. This is a working document that is used by the project personnel in the field during construction as well as by employees of the Town of Sackville to ensure that commitments made in the Environmental Impact Assessment (EIA) registration document are implemented and monitored. Specifically, the purpose of this EMP is to:

a) Comply with the conditions and requirements of the "EIA" determination received by the New Brunswick Department of Environment and Local Government (NBDELG);
b) Provide a summary of potential environmental issues and protective/ mitigation measures to be implemented during construction;
c) Outline the Town's commitment to minimize potential project environmental impacts, including those identified during the regulatory review process and the EIA.

1.3 Project Description and Schedules

1.3.1 Project Description

The Town of Sackville has initiated a road re-construction and storm water mitigation project in the Lorne Street area. The project is being carried out in two (2) phases, with Phase 1 being the complete re-construction of Lorne and Saint James Streets including the renewal of aging infrastructure, and Phase 2 consisting of storm water management and mitigation. The storm water mitigation strategies to be implemented in Phase 2 of the project will allow for improved management of surface water in the area, reducing flooding risks.

Phase 1 of this project is required in order to upgrade the existing aging infrastructure in the Lorne Street area, and will proceed regardless of the outcome of Phase 2. Phase 1 construction did not require EIA Registration and is currently underway; therefore, this Document focuses on Phase 2 of the project.

Phase 2 of the project will consist of the construction of two (2) new stormwater retention ponds, as well as re-aligning and enhancing a major ditch from the Lorne Street area to the ponds and ultimately to the Tantramar River. In addition, a new double stacked Aboiteau structure will be installed, to replace the existing undersized and aging Aboiteau on the existing dike separating the Town from the River. In anticipation of possible future plans by NBDTI and NBDAAF to raise the current dike system, the dike over the new Aboiteau will be raised by roughly 1.4m and sloped to tie into the existing dikes, including the installation of a dike service road over the new elevated section.

In order to minimize effects on the River, the new ditch will include a new sediment basin at its lower end, upstream of the new Aboiteau. In addition, silt fencing will be installed as appropriate prior to construction.

1.3.2 Schedule

The stormwater mitigation measures described herein is being proposed for construction with an anticipated start date of early winter 2018. The following main tasks will be performed:

- Mobilization and installation of environmental protection devices;
- Clearing where required;
- Construction of new retention ponds, including service roads;
- Construction of new major ditches, including service roads;
- Installation of new culverts at road crossings and CN Rail crossing;
- Construction of new Aboiteau structure, discharge channel, and raising dike;
- Property restoration and other related activities.

The new retention ponds will be constructed by excavation, and it anticipated that the majority of the excavated material will either be re-used on-site or become the property of the Contractor to be disposed of off-site.

Environmental protection will include the installation of silt fence around each portion of the work prior to the start of any construction activities. This will remain in place and be maintained in good condition until the site is completely restored. In addition, it is expected that environmental impacts will be minimized by carrying out the work primarily during the winter months.

The Project is expected to be completed by Spring 2018.

1.4 EMP Communication

This Environmental Management Plan was developed for construction of the Project in accordance with all applicable federal and provincial environmental protection legislation and regulations as of the date of its preparation. This document will be included in the tender documents for the construction contract and will become part of the contract between the Town and the Contractors involved.

The Town, through its Consultant, will communicate its commitment to this EMP at the Contract's pre-construction meeting and the status of activities under the EMP will become a standard agenda item at all project meetings. A copy of the EMP will be provided to the Contractor's foreman, the Town's personnel and the Consultant's resident services staff.

SECTION 2 - SITE WORK

All activities relating to site work and the construction of new retention ponds, ditches and all related structures will adhere to all relevant regulatory requirements, including but not limited to, the Environmental Impact Assessment Regulation under the Clean Environmental Act, Migratory Birds Convention Act, Species at Risk Act, and the Canadian Environmental Protection Act.

2.1 General

Appropriate measures will be made to diminish the risk of introducing invasive species to the area. These measures include:

a) Inspecting machinery and cleaning with a pressure water hose if necessary, as well as regular equipment inspection (before, during, and after construction), to ensure that vegetation is not transported from one site to another.
b) All machinery shall be cleaned before being brought on-site.

2.2 Clearing

Clearing involves the removal of trees, shrubs, brush and other vegetative cover. The measures listed below will be undertaken to prevent potential impacts upon valued environmental components. For this project, it is anticipated that only minor, isolated tree clearing may be required.

a) All clearing activities will be conducted when nesting is complete and chicks have naturally migrated from the area. For this project, any necessary clearing will be conducted outside of the regional annual breeding season for migratory birds (April 1 to August 31);
b) Activities will be minimized by establishing vegetated buffer zones around the nests;
c) The removal of shrubs within 30 m of all streams and/or wetlands will be minimized. If work is to be done within 30 m of a wetland and/or watercourse, the work must adhere to the conditions set forth in the WAWA permit;
d) Where possible, cleared materials shall be chipped and re-used on site;

e) Trees and brush shall be cut at ground level, leaving the stumps and root systems intact where possible;
f) Where possible, vegetation must be maintained along the banks of watercourses in sufficient quantity to provide for bank stability and shading;
g) All trees and slash lying on the ground within 15 m of the edge of the bank of a watercourse must be removed and disposed of such that it cannot enter a watercourse during high flow;
h) Any debris generated during the Project must be prevented from washing downstream and must be removed from a watercourse;
i) Organic material, such as topsoil, removed during construction is to be stockpiled and reused when possible, in areas as directed by the Engineer;
j) Prior to starting the clearing activity, erosion control measures must be installed where necessary and adequately maintained to prevent the discharge of sediment to a wetland and/or watercourse. This includes the installation of silt fences and the construction of "sedimentation" ponds (where required);
k) Clearing limits shall be flagged prior to the commencement of clearing by the Engineer.

2.3 Erosion Protection

With respect to erosion protection, the mitigation measures listed below shall be followed:

a) Install sediment fence and erosion control structures as shown on the Contract drawings for all activities potentially resulting in an increased presence of sediment;
b) All erosion and sediment control devices shall be inspected and maintained on a regular basis or after any significant rainfall until the Project site is permanently stabilized;
c) Erodible soils shall be covered with hay mulch if the area is not actively worked for more than one (1) week.

2.4 Dewatering in Work Areas

Work areas may require dewatering during construction. The following measures will be implemented, as required, in order to minimize the impact of dewatering:

a) All pumped water will be directed to a sediment control pond to remove silt from, and reduce turbidity of, water pumped from work areas before discharging to nearby ditches with erosion protection structures;
b) Total suspended solids (TSS) of the pumped water should be monitored throughout the construction process;
c) Where possible, water should be discharged to vegetated work areas in order to further reduce any potential impacts on a wetland and/or watercourse;
d) All discharged water will be encouraged to follow natural surface drainage patterns.

2.5 Pumps and Generators

A variety of equipment such as water pumps, hoses and generators are used during construction activities as well as accompanying support and supply

facilities. Environmental concerns associated with the operation and use of such equipment include accidental spills of fuel or lubricating oil and chronic leaks, which may contaminate local water bodies and surface soils.

The following measures will be implemented in order to prevent or minimize potential impacts related to issues or equipment use and maintenance.

a) Fuel shall not be stored near generators or located within 30 m of a watercourse or wetland;
b) Drip pans shall be placed underneath pumps and generators located near watercourses and wetlands where practical;
c) Hoses and connections on all equipment shall be inspected daily for leaks and drips;
d) All leaks shall be reported immediately to the on-site supervisor, and shall be addressed to remediate the problem, as well as remediate the affected areas as discussed in Section 9: Emergency Response Plan;
e) Refueling and maintenance of equipment must take place in designated areas, on level terrain, a minimum of 30 m from any surface water bodies, wetlands, and potable water supply wells, with a collection system to contain oil, gasoline and hydraulic fluids.

2.6 Stripping & Grading

Stripping and grading activities are some of the most critical with regard to the control of erosion and sediment transport. Stripping consists of the removal of topsoil, and grading involves the shaping of new access roads and the overall site as well as drainage control.

a) All construction activities, including clearing and stockpiling of materials will take place outside of the 30 meter buffer from watercourses and wetlands as identified on the contract drawings, except where specifically required by the work;
b) Stripping of the organic vegetation mat and/or the upper soil horizons will be minimized and, where possible, they will be left in place;
c) The stripped organic vegetation mat and upper soil horizon material will be used, where practicable, to cover exposed areas and promote re-vegetation;
d) Stripping activities near watercourses and wetlands, particularly areas with steep slopes, should be avoided if possible and shall be minimized where specifically required for the work;
e) Where work is to occur within 30 m of a watercourse or wetland, the work must adhere to the conditions set forth in the NBDELG's WAWA permit;
f) The length of time that stripped areas are left exposed to the elements will be minimized to prevent unnecessary erosion. Refer to Section 2.3: Erosion Protection for further detail;
g) Stripped material may be temporarily stored in adjacent areas of the Project, but shall be stored outside the 30 m buffer of any watercourses or wetlands and within the silt fence perimeter shown on the drawings. Appropriate surface water and sedimentation control measures will be implemented as needed for stockpile locations.

SECTION 3 – WASTE MANAGEMENT

All waste generated during this project will be managed in accordance with all relevant regulatory requirements.

3.1 Descriptions of Effects of Wastes

Solid waste (*e.g.*, domestic waste, paper, cardboard, wood and other construction debris), if not properly controlled and disposed of, will be unsightly and may cause human safety and health concerns and could result in a conflict with wildlife.

The release of untreated sewage is a concern to human health, drinking water quality, and aquatic ecosystems. No untreated sewage will be discharged during the construction activities.

There will be fuels and hazardous materials used in association with equipment operation and maintenance activities, which occur during construction activities. The major concern regarding the use of hazardous substances is their uncontrolled release into the environment through spillage, and the subsequent adverse effects on the terrestrial, and aquatic habitat, species, soil, groundwater quality and human health and safety.

It is noted that biodegradable alternatives to petroleum-based hydraulic fluids for heavy machinery are commonly available. The use of these biodegradable hydraulic fluids is encouraged, where possible.

3.2 Handling, Storage and Disposal

3.2.1 Solid Waste

The following measures will be implemented in order to mitigate potential impacts related to solid waste disposal:

a) All domestic solid waste will be collected, properly stored, removed, and disposed of at an appropriate site;
b) The site and working area will be kept clear of all scraps and garbage;
c) Materials such as paper, cardboard, wood, scrap steel and metal, and tires will be collected and offered for recycling where practical. All materials not able to be recycled will be disposed of in an approved facility;
d) Waste accumulated on site prior to disposal shall be placed in a secured location, so as to not pose a threat or concern to human health and safety, or wildlife.

3.2.2 Sewage

The following measures will be implemented in order to mitigate potential impacts related to sewage disposal.

a) Sanitary waste from construction activities will be handled using portable restrooms. These will be self contained units, and will not require additional water;
b) The portable restrooms located at the site will conform to the Canada *Occupational Health and Safety Act* and any city ordinances;
c) All septic waste will be collected by a licensed waste disposal operator and transported off site for disposal at a proper handling facility.

3.2.3 Fuel

The highest protocols will be implemented in association with the handling and storage of hazardous materials and hydrocarbons as mentioned in Section 9: Emergency Response Plan. These will include:

a) Transportation, storage and use of fuels will be conducted in compliance with government laws and regulations, including New Brunswick Regulation 87-97 Petroleum Product Storage and Handling under the *Clean Environment Act* and the *Transportation of Dangerous Goods Act*;
b) Machinery will be checked on a daily basis for leakage of lubricants or fuel and must be in good working order;
c) Refueling and maintenance of equipment will take place in designated areas, on level terrain, a minimum of 30 m from any surface water or wetland, with a collection system to contain oil, gasoline and hydraulic fluid. In addition to the condition stated above, equipment maintenance (greasing, refueling, and oiling operations) shall not be performed within ditches;
d) Ensure crews are aware of contingency plans in advance of the start of construction work;
e) All spills or leaks will be promptly contained, cleaned up and reported to the 24 hour environmental emergencies reporting system;
f) To ensure preparedness in the case of a hazardous spill, resources (skimmer, absorbent pads and overpack drums – refer to 9.3) required will be obtained and kept on site;
g) Greasy or oily rags or contaminated materials will be disposed of in an appropriate fire resistant receptacle. The contractor will be responsible to send the contaminated materials to the appropriate waste disposal site;
h) Waste oils and lubricants will be retained in a tank or closed container and be disposed of in an approved manner as directed by NBDELG.

SECTION 4 - DUST MANAGEMENT

Excavated and work areas may produce dust in the time prior to the re-vegetation of the disturbed areas. The environmental concerns related to dust include human health effects and potential impacts on aquatic ecosystems and vegetation. Dust management will be conducted in accordance to the Air Quality Regulation-*Clean Air Act*. The

measures provided below will be taken in order to mitigate potential impacts associated with dust management.

a) Cover truck loads of materials which could generate dust as necessary;
b) Dust from construction activities will be controlled where possible by using frequent applications of water or calcium chloride. Waste oil will not be permitted to be used for dust control;
c) Applications of calcium chloride shall be in accordance with the Guidelines available from Environment Canada.

SECTION 5 – WETLAND AND WATERCOURSE GENERAL MEASURES

5.1 Mitigation Measures

Mitigation measures identified within the EIA have been included within this section, along with additional mitigation means:

a) Prior to construction within the 30 m buffer of wetlands and/or a watercourse, install sedimentation control along each side of the buffer zone wherever necessary. These devices shall be placed as shown on the drawings unless otherwise specified by the NBDELG and shall be maintained until the area has been stabilized and as approved by the Engineer;
b) Refueling of equipment shall take place outside of the 30 m setback buffer from any wetland and/or watercourse, with the exception of pumps used to dewater the site;
c) Work near wetlands and/or watercourses will be performed in a way such that deleterious substances including, but not limited to, sediment, fuel and oil do not enter a watercourse or wetland;
d) Machinery must be checked for leakage of lubricants of fuel and must be in good working order. Equipment maintenance must take place in designated areas, on level terrain, a minimum of 30 m from any surface water or wetland, with a collection system to contain oil, gasoline, and hydraulic fluids;
e) Basic petroleum spill clean-up equipment shall be kept onsite during construction;
f) Erosion control structures are to be used as shown on the drawings and where required as a result of the construction work;
g) All erosion and sedimentation control measures will be inspected and maintained prior to the end of each workday;
h) Construction debris and excavated material generated during the Project must be prevented from washing downstream, removed from the wetland and/or watercourse and Project area and disposed of in the proper manner;
i) Visual monitoring of all wetlands near the work area will take place prior to the end of each week, and during and after significant rain events, and any work necessary to ensure the effects are minimized will be undertaken;
j) There shall be no lay-down areas, grubbing and waste disposal piles, equipment/machinery storage, material/rock/fill storage, bullpens, yarding, etc. located outside the area fenced in with silt fencing as shown on the drawings;
k) Disturbed areas will be reinstated as soon as is practical, silt fences and other erosion protection devices around excavations and stockpiles will also be used. All hydroseeded areas will also be hay mulched;

l) Work within the wetland is to be carried out during the winter months, to limit the disturbance in the wetland. Any heavy equipment required for work within the wetland and its 30 m buffer must travel over heavy mats to further minimize impacts on the wetland.

5.2 Culvert Installation

Watercourse crossings are structures at locations where an access route meets and traverses a wetland and/or watercourse, or a drainage route to same. In this project, this refers to culverts. Culvert installation will be required at each roadway crossing:

a) The culvert is to be installed so as to avoid ponding at the entrance which may cause property damage, accumulation of floating debris, culvert clogging, saturation of fills, or detrimental upstream deposits of debris and alteration of the fish habitat;
b) The outlet is designed to resist undermining and washout;
c) The site selected for the culvert crossing shall have a uniform gradient;
d) The culvert installation shall be done in accordance with the Contract drawings and specifications, and to any conditions required;
e) The invert of the culvert structure must be set a minimum of 150 mm below the channel bottom level at both the upstream and downstream ends to ensure that the water depth inside the culvert will be at least equal to that in the watercourse during low flow conditions;
f) Any excavation required for the culvert installation must be done with a backhoe or an excavator;
g) Prior to the onset of culvert installation, sediment control works should be installed to prevent sedimentation of the wetland and/or watercourse and be maintained until a vegetative cover is established;
h) The culvert must be installed on firm ground. A soft foundation should be replaced with clean, granular material to prevent sagging;
i) The culvert must extend a minimum of 0.3 meters beyond the upstream and downstream toe of the fill placed around the structure;
j) All exposed erodible material resulting from cut and fill operations within 30 m of a watercourse must be stabilized to prevent siltation;
k) To prevent erosion, outlets and inlets shall be rip-rapped at both ends;
l) Backfilling material should be used which is of a texture that shall support the culvert and limit seepage and subsequent washing out;
m) Fill and construction debris shall be removed from the culvert area to a location above the peak flow level to prevent its entry into the stream;
n) No machinery may be stationed in the wetted portion of the channel; machinery operating from the shore may reach into the water with an extension;
o) Sediment barriers, such as silt fences or hay bales, must be placed along the toe of the slope of the fill material used to construct the approaches to the structures;
p) All exposed erodible material resulting from cut and fill operations within 30 m of the wetland and/or watercourse must be immediately stabilized to prevent siltation;
q) All erosion and sedimentation control measures will be inspected and maintained prior to the end of each workday;

r) Weather forecasts will be monitored and mitigation measures will be maintained or modified appropriately if heavy precipitation is anticipated.

SECTION 6 - NOISE MANAGEMENT

A variety of noises associated with heavy construction activity can cause negative effects on wildlife resources in terms of their distribution and abundance. Noises associated with heavy equipment are temporary in nature.

Best management practices shall be implemented, wherever possible, to minimize potential impacts arising from a variety of noise sources. Mitigative measures taken will include the following:

a) All vehicles and generators will have exhaust systems in good condition without leaks and be inspected regularly; mufflers will be operating properly;
b) Noisy activities shall be scheduled to be done during normal daylight hours on workdays;
c) Proper functioning and monitoring of noise abatement equipment.

SECTION 7 – CLEAN-UP AND RE-VEGETATION

The following will be performed in order to mitigate impacts which might result from construction activities:

a) As soon as possible following the construction activities, identify areas requiring planting or seeding for re-vegetation purposes. These will include:
    - Areas adjacent to a watercourse where erodible soil is exposed and where mechanical stabilization techniques are not deemed to be sufficient to guarantee stability or prevent uncontrolled introduction of sediment to a watercourse.
    - Any other areas deemed by the Engineer and as required by NBDELG to require quick re-vegetation.
b) Restoration of lands disturbed during construction will commence as soon as possible after construction activity has ceased. Although seasonal weather conditions may delay seeding, it should be commenced as soon as conditions permit. Restoration of this site will also include the placement of topsoil and Hydroseeding of affected areas;
c) Should seed mixes for herbaceous native species for the area not be available, it should be ensured that plants used in re-vegetation efforts are not known to be invasive;
d) The areas subject to restoration activities will be visually inspected periodically to ensure adequate results. Additional restoration activities will be performed as deemed appropriate;
e) Necessary interim measures will be implemented to prevent erosion prior to re-establishment of vegetation;
f) Silt fences and erosion control structures will remain in place until vegetation and resurfacing has matured to the point where erosion carried into watercourses is no longer a concern.

SECTION 8 - HISTORICAL RESOURCE PROTECTION

If evidence of past activity or objects of an archaeological nature are discovered, the following mitigative measures shall be implemented:

a) All personnel will be informed of the historic resources potential of the area, of their responsibility to report any unusual findings, and to leave such findings undisturbed;
b) In the event of historic or prehistoric artifact discovery or archaeological site, the following list of procedures will apply:
   - Under the *Historic Sites Protection Act*, all archaeological sites and artifacts are considered property of the Crown, and must not be disturbed. The proponents or the contractor will take all reasonable precautions to prevent employees or other persons from removing or damaging any such articles or sites as they may be held liable for prosecution for all contraventions. Personnel working in the vicinity will be advised of the find. The site area will be flagged for protection and avoidance.
   - All work will cease in the immediate discovery area until authorities are advised of the discovery and, in consultation with a Resource Archaeologist, authorizes a return to work. If required, a full assessment will be conducted of the site and immediate area.
   - Archaeological materials encountered will be reported initially to the on-site supervisor, and immediately thereafter to Resource Archaeologist with the following information:
     i. Nature of activity;
     ii. Nature of the material discovered;
     iii. Precise location of the find.

SECTION 9 – EMERGENCY RESPONSE PLAN

Contingency plans to deal with accidental spills have been developed and are presented in this Section. They will be modified as required during the execution of the Project. They are as follows:

9.1 Introduction

The transfer of fuel from tanker trucks to storage tanks or machinery, vehicle accidents involving heavy equipment, and leaks from fuel storage tanks and associated lines all offer the potential for fuel oil spills. Other hazardous liquid products associated with operations, such as hydraulic fluids, lubricating oil, and solvents will be used in relatively small quantities.

9.2 Action Plan

In the event of fuel or hazardous material spill, refer to the following procedures outlined below:

a) The individual who discovers a leak or spill shall immediately call for help and then attempt to stop and contain the leak or spill if safe to do so;
b) Any spill or leak on land or water (regardless of size) should first be reported immediately to the Contractor's foreman and the Engineer, upon implementation of (a) above.

The Contractor's foreman shall halt work in the immediate area if necessary and report the spill to the project manager. In case of an environmental emergency, all calls should be directed to the 24-hour environmental reporting system (Maritime Provinces: 1-800-565-1633).

If the spill occurs near or in the water, the Canadian Coast Guard will be notified and specific action will be taken.

The on-site supervisor will have the full authority to take appropriate action without unnecessary delay. The following information shall be provided:

i. Name of person reporting the spill and phone number;
ii. Time of spill or leak;
iii. Time of detection of spill or leak;
iv. Type of product spilled or leaked;
v. Amount of product spilled or leaked;
vi. Location of spill or leak;
vii. Source of spill or leak;
viii. Type of accident – collision, rupture, overflow;
ix. Owner of product and phone number;
x. If the spill or leak is still occurring;
xi. If the spill or leaked product is contained, and if not, where it is flowing;
xii. Cleanup efforts already underway;
xiii. Wind velocity and direction;
xiv. Temperature;
xv. Proximity to water bodies, wells, water intakes, and buildings;
xvi. Snow cover and depth, terrain, and soil conditions.

c) The Contractor's foreman shall assume overall responsibility of coordinating a cleanup and maintaining this contingency plan up-to-date. Any spills that occur should be remediated to meet or exceed regulatory requirements. The Contractor's foreman will, in consultation with the regulatory authorities:

i. Assess site conditions and environmental impact of various cleanup procedures;
ii. Assess potential for fuel recovery versus burning;
iii. Deploy on-site personnel to mobilize pumps and empty appropriate storage drums to the spill site;
iv. Deploy on-site personnel to build containment dikes and commence dumping contaminant in drums or if drainage system is involved, leakage will be isolated by digging a sump, deploying a pollution boom around area or a combination of both;
v. Apply absorbents or utilize skimmers as necessary to prevent the spill from spreading;
vi. Dispose of all contaminated debris, cleaning materials, and absorbents by placing in appropriate containers and label for disposing;
vii. Take all necessary precautions to ensure that the incident does not recur.

d) The continuing monitoring of the site of the accidental release, and damage reporting will be the responsibility of the contractors.

9.3 Resource List

During construction, the following resources will be available at appropriate locations and distance from the Project site to readily mitigate accidental releases of stored fuels and/or hazardous materials.

a) Skimmer (for spills on water);
b) Suitable quantities of absorbent pads;
c) Overpack drums containing sorbent pads, sorbent booms, splash suits, shovels, rakes, tool kit, sledgehammer, buckets and stakes and flagging tape;
d) Emergency numbers and contingency procedures.

Small spill response kits and equipment will be strategically located in construction areas where materials handling or equipment activity presents and increased risk of spill (*i.e.*, refueling locations and hazardous waste storage areas). These kits shall be checked on a regular basis for content, and items shall be replaced immediately after their use.

SECTION 10 – ENVIRONMENTAL EFFECTS MONITORING PLAN

In the event that an environmental effect should occur on site certain measures will be taken in order to monitor and verify the effectiveness of the mitigation steps implemented on this project.

a) If the presence of sediment within the water is visible or questionable, a sample will be collected upstream of the construction zone, at the construction site and downstream of the construction site which shall be analyzed for total suspended solids (TSS);
b) Hoses and connections on all equipment shall be inspected daily for leaks and drips, with special attention to those located near wetlands and/or watercourses;
c) Visual monitoring of all wetlands will take place prior to the end of each week and any work necessary to ensure the effects are minimized will be undertaken;
d) All vehicles/generators will have exhaust systems inspected regularly and mufflers will be operating properly to better manage noise on the site;
e) The areas subject to reclamation activities will be visually inspected periodically to ensure adequate results. Additional reclamation activities will be performed as deemed appropriate;
f) The continuing monitoring of the site of the accidental release of a leak and damage reporting will be the responsibility of the contractor;
g) The TSS as well as the 5-day carbonaceous biological oxygen demand ($CBOD_5$) entering a receiving stream will be carefully monitored at the beginning of construction by the Contractor.

SECTION 11 – EMERGENCY CONTACTS

In the event that an emergency should occur on site the following is a list of key contacts for each part of the project:

- Ambulance/Fire/Police: 911
- Canadian Coast Guard: 1-800-565-1633
- Contractor: To be determined
- Crandall Engineering (Nathan LeBlanc, P. Eng.): 506-693-5893 (Office)
  506-961-2221 (Direct)
- Southeast District - RCMP 506-387-2222 or 911
- Enbridge Gas Pipeline: 1-866-763-5427
- NBDELG – Region 3 - Moncton: 506-856-2374
- NB Power: 1-800-663-6272
- Town Engineer - (Dwayne Acton, P.Eng.) 506-364-4965

The complete project address is as follows (accessible from the Trans Canada Highway 2 and local streets):

Lorne Street Reconstruction & Storm Water Mitigation - Phase 2
Various Locations Between Lorne Street and The Tantramar River
Sackville, N.B.
E4L 3Z7 to E4L 3V3

Furthermore, a complete and up to date list of contacts (including the superintendent, foreman and inspector) will be given to the successful Contractor at the start of the project as par