

**Septic Treatment Facility  
EIA REGISTRATION DOCUMENT**

Prepared for:



Carter's Septic Tank Service Ltd.  
46299 Homestead Road  
Second North River, NB  
E4J 1Y5

Prepared by:



Crandall, a division of Englobe Corp.  
1077 St. George Blvd., Suite 400  
Moncton, N.B.  
E1E 4C9

June 1, 2020  
Project No. 2000474



June 3, 2020

**Mr. David Maguire**

Manager, Environmental Impact Branch

**NBDELG**

P. O. Box 6000

Fredericton, NB E3B5H1

**Subject:** EIA Registration Document - Septic Treatment Facility

**Carter's Septic Tank Service Ltd.**

O/Ref.: 2000474

Mr. Maguire:

In regard to the above, Crandall, a division of Englobe Corp. is pleased to provide the Department with the enclosed copy of the EIA Registration Document for your review and comments, on behalf of our Client, Carter's Septic Tank Service Ltd..

We trust the enclosed is to your satisfaction. If, however, additional information should be required, please communicate with the undersigned.

Yours very truly,

Laura Leger, P. Eng.  
Project Engineer

c.c. Mr. Bradley Carter, Vice President - Carter's Septic Tank Service Ltd.

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**Carter's Septic Tank Service Ltd.**

**EIA Registration Document**

Submitted to:

PROVINCE OF NEW BRUNSWICK  
DEPARTMENT OF ENVIRONMENT AND LOCAL GOVERNMENT  
P.O. Box 6000  
Fredericton, N.B.  
E3B 5H1

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**REGISTRATION FORM**

**PURSUANT TO SECTION 5 (2) OF  
THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATION 87-83  
CLEAN ENVIRONMENT ACT**

**1.0 THE PROPONENT**

**(i) Name of Proponent:** Carter's Septic Tank Service Ltd.

**(ii) Address:** 46299 Homestead Road  
Second North River, NB  
E4J 1Y5

**(iii) Chief Executive Office:**

Name:	Mr. Wayne Carter	Mr. Bradley Carter
Official Title:	President	Vice President
Telephone:	506-382-7450	
Fax:	506-372-3347	
Email:	carterseptic@hotmail.com	

**(iv) Principal Contact Person for purposes of Environmental Impact Assessment:**

Name:	Laura Leger, P. Eng.
Official Title:	Project Engineer, Crandall, a division of Englobe Corp.
Telephone:	506-857-2777
Fax:	506-857-2773
E-mail	laura.leger@englobecorp.com

**(v) Property Ownership:**

As indicated on the Drawings in Appendix A, the proposed project site is located at 6 Caribou Ct., on PID 70636659 in the Caledonia Industrial Park in Moncton, NB.

Carter's Septic Tank Service Ltd. (Carter's) is in the process of purchasing the property.

**2.0 THE UNDERTAKING**

**(i) Name of the Undertaking:**

Septage Treatment Facility, Carter's Septic Tank Service Ltd.

## **(ii) Project Overview:**

Carter's Septic Tank Service Ltd. has been providing septic tank cleaning services in Moncton and the surrounding areas for more than 50 years. Currently, Carter's disposes of their septage at the Greater Moncton Wastewater Commission's (GMWC's) septage receiving facility. The current volume of septage being handled by Carters is in the order of 2 million US gallons per year.

However, due to current limitations on the quantity of septage that can be discharged at the GMWC's facility, Carter's is planning to construct and operate a septage pre-treatment facility. It is anticipated the facility will initially be exclusively for the use of Carter's Septic Tank Service Ltd.; however, the facility may expand in the future to allow other septage handling companies to use the facility.

The proposed treatment system, the "In the Round" dewatering system, has been selected to reduce the BOD and TSS concentrations in the facility's effluent to levels expected to meet the City of Moncton's by-laws for discharge to the City's wastewater collection system. As indicated on the conceptual site layout (Drawing 2000474-1P-C03) included in Appendix A, the proposed pre-treatment facility will generally consist of the following major components:

- Construction of two (2) new in-ground concrete tanks;
- Construction of a new treatment building to house an "In the Round" system (supplied by In the Round Dewatering Inc., refer to Section 2.0 (vi) 4) for further details), the various pumps and controls for the system, an inlet bar screen, and provide minimal storage for screened solids until they can be trucked away to an approved disposal facility;
- Site works and parking/driveway construction.

Once septage has been pre-treated, the liquid effluent will be discharged to the City's wastewater collection system and the solids disposed of at an appropriate disposal facility.

## **(iii) Purpose / Rationale / Need for the Undertaking:**

Carter's Septic Tank Service Ltd. is currently discharging their trucks at the Greater Moncton Wastewater Commission's (GMWC's) septage receiving facility. However recent upgrades to the GMWC's facility have resulted in restrictions on the volume of septage they can receive. This change results in longer wait times for septic trucks to unload at the treatment plant and significantly reduces efficiency. If the GMWC facility is unable to accept the full volumes generated by Carter's, it may be necessary to haul the septage to another facility in the province. The work proposed herein will permit Carter's to reduce their down time and improve their efficiency, allowing them to improve their availability for various septic services and maintain lower user fees. This will also reduce the loading on the GMWC facility.

A "do-nothing" approach is not preferred in this case as the Greater Moncton Wastewater Commission's (GMWC's) existing septage facility can no longer respond adequately to Carter's septage disposal needs.

#### **(iv) Project Location:**

As identified in Section 1 (v), the proposed work is located on PID 70636659, at 6 Caribou St. in Moncton, NB as shown on Drawings 2000474-1P-C01-C04 (Appendix A). The center of the site is situated at approximately 46.140260, -64.739716 (latitude, longitude), and the site is in the county of Westmorland and the parish of Moncton.

Included in the drawing package is a drawing showing the project location over an existing aerial photograph (Drawing 2000474-1P-C04). A 1:25,000 scale map showing the proposed site in reference to existing features is also included (Drawing 2000474-1P-C01).

#### **(v) Siting Considerations:**

##### GENERAL SITING CONSIDERATIONS

In selecting the site for the new facility, the following factors were considered:

- Disposal of the facility's liquid effluent (discharge to City sewer vs. on-site treatment);
- Proximity to nearby businesses or residents;
- Distance to known features such as mapped wetlands and watercourses;
- Proximity to services such as water, sewer, and electrical;
- Central to majority of Carter's clients to minimize travel time.

The proposed site provides access to the City's wastewater collection system for disposal of the facility's liquid effluent, which is expected to generally meet the City's By-laws for regular strength wastewater based on data from similar sites. However, an agreement will also be in place between Carter's and the City in the event that concentrations exceed the normal limits imposed by the by-laws, to permit Carter's to discharge "high-strength" wastewater under the conditions set out in the agreement.

Being located in a newer section of the Caledonia Industrial Park, the property is in a largely undeveloped area, although based on aerial imagery there is one building within approximately 120-m of the proposed treatment building location. There are no known existing sensitive land uses, such as residential properties, recreational facilities, schools, tourist areas, etc., in the immediate vicinity of the site. Other sites were considered; however, several lots were rejected due to the presence of mapped wetlands, or less than ideal topography.

The Land Gazette status of PID 70636659 was reviewed through the GeoNB application, to verify the potential existence of land-related notices or restrictions (such as petroleum storage, dump sites, etc.) that may have an impact on land use. No records were shown, indicating that there are no known concerns related to the past land use.

There is no GeoNB flood mapping in the area of the proposed development, however, based on the site elevations being in the range of +46 to +48 m, flooding is not expected to be a concern. Furthermore, the 1 in 100 year projected high-water geodetic elevation is currently estimated at 10.25m for the Greater Moncton Area (Amec Foster Wheeler, 2011).

## ZONING

The proposed land is zoned as “HI - Heavy Industrial Zone”. The proposed work will not require a rezoning of the land.

## PROXIMITY TO WETLANDS AND WATERCOURSES

As shown on the attached drawings in Appendix A, there are no mapped watercourses or wetlands within 30m of the site based on GeoNB’s delineation. These will be further discussed in Section 3.0.

### **(vi) Physical Components and Dimensions of the Project:**

## LAND REQUIREMENTS

The attached Drawings in Appendix “A” show the overall location of the various components of the proposed work. The area to be developed for the new facility is approximately 0.5 hectares (1.25 acres), including the associated site work. The total area of the property is 1.4 ha (3.4 acres). The proposed treatment process is the “In the Round” system. The processes of the overall system are each described briefly in the following paragraphs:

- 1) Unloading Area: The loaded septic trucks will arrive at the site and discharge through a hose in the new unloading area, expected to be within the Treatment Building. The septage will be directed through a manual bar screen at this stage to remove the larger solids. This screened material will be stored in the interior storage area within the new treatment building, to be disposed of with the dried material from the “In the Round” system at an appropriate site.
- 2) Aerated Holding Tanks: From the bar screen, the septage will be directed into one of the two (2) aerated holding tanks. Based on similar installations and discussions with the supplier, these tanks are expected to have a capacity of approx. 50,000 US gallons and will serve to hold the septage until it is time to process a batch in the “In the Round” system. Aeration will be supplied to this tank to maintain homogeneity and minimize potential odours. Once sufficient volume has accumulated to process a batch in the “In the Round” system, a polymer will be added to the septage to create floc and prepare the septage for dewatering.
- 3) “In the Round” Treatment Building: The construction of a new building will be required and will be used to house the “In the Round” System drum. The new building will be sized to be able to accommodate a second “In the Round” system in the future. Also housed in the treatment building will be the truck unloading area and manual bar screen, an area for short-term storage of the dewatered materials from the “In the Round” system, the polymer injection system, and the facility’s controls. It is anticipated the new treatment building will be approximately 370 m<sup>2</sup> (±4,000 sq. ft.) in size, although the exact size of the building will be determined during the detailed design stage.

The “In the Round” treatment unit generally consists of a stainless-steel drum, 90 inches in diameter by 20 feet long, with a batch capacity of 18,000 to 25,000 USgal depending on the solids contents of the septage and efficiency of flocculation. The flocked septage is pumped to the treatment unit, which once filled, slowly rotates for



a period of +/-12 hours. The liquid seeps through PVC filter tiles into a channel in the stainless steel frame and then into a floor drain below, leaving behind the dried solid materials. The liquid component will be piped through a flow meter to the City's existing sanitary sewer system. Once the dewatering process is complete, the entire "In the Round" drum containing the dewatered solids is loaded onto a truck, which will transport the dewatered material to an appropriate landfill or temporarily unload/stockpile the material in a designated location within the treatment building until it can be trucked away.

- 4) **Siteworks & Piping:** New site piping will be required to bring water service to the new facility and to transport the septage between treatment components as generally shown on the attached Drawing 2000474-1P-C03 of Appendix A. Following the treatment process, sanitary sewer piping will discharge the liquid portion of the septage through a flow meter to the City's existing sanitary sewer system as previously indicated. New storm sewer site piping is also anticipated to manage the site stormwater in accordance with City of Moncton requirements. At this stage, a stormwater retention pond is anticipated to meet the City's requirements, although this approach will be refined during detailed design.
- 5) **Site Facilities and Security:** The access to the site is from Caribou Street. The site will be developed with paved driving and parking services on the front side of the building, and chain-link fencing with a lockable gate for security and safety. Site lighting around the new building will be as required for safety and security at the site.
- 6) **Impervious Surfaces:** The construction of a new driveway and parking lot will be required to allow for truck access to the facility. New impervious surfaces will be limited to the new parking lot (approx. 1,500 m<sup>2</sup>) and rooftops of the new building (approx. 370 m<sup>2</sup>) and two (2) new tanks (approx. 100 m<sup>2</sup> each).

The new facility will be sized to accommodate 2.0 million US gallons per year, or an average of 5,480 USgal/day. Therefore, it is anticipated the system will be operated on average 2-3 times per week, requiring one operator at the facility.

The facility is expected to produce a liquid effluent meeting City of Moncton discharge limits; however, in the event that concentrations exceed the normal limit, an agreement will be in place prior to the beginning of the facility's operation detailing the high strength charges that will be applicable.

Based on the available information, it is anticipated that an average of 600 tonnes of dewatered solids will be produced per year, which will be disposed of at an appropriate facility.

#### **(vii) Construction Details:**

As soon as the EIA Registration Document is approved, the construction will be undertaken.

It is estimated that approximately 15-20 working weeks will be required to complete the construction phase of the project pending receipt of approval to proceed under the EIA Registration. In order to achieve this, the following schedule is proposed (assuming that the comprehensive EIA Study is not required):

**Table 1: Preliminary Project Schedule**

COMPONENT	APPROX. DURATION	ANTICIPATED COMPLETION
1. EIA Registration and Review	10 weeks	August 7, 2020
2. Detailed Design	6 weeks	August 7, 2020
3. Bidding and Construction	15 weeks	November 20, 2020
4. Commissioning of New Facility	1 week	November 27, 2020

The estimated hours of construction will be from Monday to Friday from 7:00 am to 7:00 PM.

The following equipment is anticipated to be used for the construction procedures:

- Earthwork and construction of structures: Excavators, dozers, dump trucks, concrete trucks, compaction equipment.
- Pipe work: Excavators, compaction equipment;
- Structures: Excavators for foundations, concrete trucks, supply trucks for trades, cranes for lifting items such as trusses;
- Landscaping: Trucks importing topsoil, fencing materials;
- Driveway and parking lot construction: dozers to grade the site, trucks to bring in base material and asphalt; compaction equipment.

Potential sources of pollutants during the construction period are anticipated to include:

- Exhaust and other emissions from construction equipment.
- Noise from construction equipment.
- Runoff from disturbed surface areas during wet weather events and silt from disturbed surface areas. This will be minimized by installing silt fences and other erosion protection devices around work area and to reinstate disturbed areas as soon as is practical.
- Petroleum hydrocarbons from possible leaks, spills or accidents from construction equipment and vehicles. This will be minimized by having spill kits on site and to conduct daily inspections of equipment. An Environmental Management Plan (EMP) has been prepared and will be followed during construction. No refueling or maintenance of vehicles will be permitted to occur within 30 m of a watercourse.

All waste generated during construction will be stored in containers and disposed-of off-site.

The following sequence and procedures are recommended during the construction process (to be confirmed during detailed design):

1. Mobilization and installation of environmental protection devices.

2. Clearing and grubbing of the work site, and disposal of materials off-site (remaining portion of the property to remain in current state).
3. Construction of new facility, including:
  - Excavation for new building foundation, in-ground concrete tanks, piping and structures, and stormwater retention pond;
  - Importing structural fill as required to bring the site up to sub-grade level in fill areas to be used for vehicle movement and building construction; this material will be spread in layers and well compacted to minimize settlement;
  - Supply and installation of underground infrastructure including water, sanitary, and stormwater services;
  - New electrical service to the site;
  - Construction of new concrete tanks;
  - Construction of new treatment building;
  - Site grading and drainage;
  - Supply and installation of new security fencing;
  - Construction of new driveway and parking area with asphalt surface;
  - Property restoration with topsoil/hydroseed and/or granular surfaces as appropriate;
4. Start-up and commissioning of equipment.

Imported materials are expected to include the following (where “imported” is interpreted to mean “brought in from off the construction site”). It is noted that granular materials will be sourced from clean, reputable quarries.

- Imported fill material and topsoil;
- Imported bedding for pipes;
- Imported granular material for structure foundations, driveway/parking area base material, etc.;
- Imported asphalt for driveway and parking surface;
- Imported construction materials for piping installation;
- Imported construction materials for buildings and concrete structures: wood, steel, concrete, etc.; and,
- Imported equipment for “In the Round” System

**(viii) Operation and Maintenance Details:**

The anticipated sequence of operation for the new facility is summarized below. For each item in the sequence, a list of operating and maintenance requirements is included.

**Discharge of septage from septic trucks into the facility:** Septage will be discharged through a hose connection into the facility at a location inside the treatment building. The flow will be directed through a manual bar screen prior to being directed to the holding tank.

Normal operation and maintenance at the truck unloading area will include:

- Cleaning the manual bar screen;
- Overall building cleaning and maintenance.

**Septage flows through holding tanks:** Following the manual bar screen, the septage will flow to either of the concrete holding tanks (tanks are expected to be operated in an alternating fashion) until such a time that a batch is prepared for treatment. At that time, it is anticipated that the polymer will be injected as the septage is pumped toward the “In the Round” system to promote flocculation. The septage will then be pumped into the building for treatment.

Normal operation and maintenance of the tanks and pumping systems will include:

- Monitoring liquid levels in the tanks;
- Pump system operation and maintenance as recommended by the manufacturer;
- Polymer injection system operation and maintenance as recommended by the manufacturer;
- Periodic cleaning and inspection of the tanks as required;
- General site maintenance around tanks such as maintaining grassed areas, fencing, parking lot, etc.

**In the Round system:** Following the holding tanks and polymer addition, the septage will be pumped into the “In the Round” system for treatment. The liquid will drain out and flow to the City’s sewer system, while the solids will be trucked away. It is anticipated that solids will be brought to the Envirem Organics Inc. facility in Fredericton, NB.

Normal operation and maintenance of the “In the Round” system will include:

- Cleaning the “In the Round” drum (rinse with water);
- Cleaning the screened material stockpile area;
- Overall water building cleaning and maintenance.

The facility will be operated and maintained by Carter’s Septic Tank Service Ltd.

**(ix) Future Modification, Extensions, or Abandonment:**

Initially, the facility will consist of two (2) holding tanks, one (1) treatment facility with a single “In the Round” filter, and the associated piping and site work.

The site will be constructed such that a second “In the Round” filter can be added in the future, if necessary.

If the facility ceases its operation in the future, an evaluation will be required to be completed at that time to determine if the re-use of the building, site and parking areas would be possible, or if these should be removed.

**(x) Project-Related Documents**

The following project related documents are appended:

- Crandall, a division of Englobe Corp. Drawings 2000474-1P-C01-C04.
- Englobe Corp. Preliminary Environmental Review (Letter dated May 10, 2020)
- Environmental Management Plan.

### **3.0 DESCRIPTION OF THE EXISTING ENVIRONMENT**

#### **(i) Physical and Natural Features:**

##### Site Topography and General Surface Drainage Regime:

The property elevation ranges from roughly +48-m near the northeast corner to +46-m near the southern edge of the lot, resulting in an average slope of roughly 2 - 3% across the site. The general drainage pattern is towards the southwest. A drainage ditch follows the western and southern property lines as shown on Drawing 2000474-1P-C03 of Appendix A and continues flowing towards the east past the boundary of the property.

##### Watercourses, Wetlands and Species at Risk (SAR):

As noted in the previous Sections, the proposed project site is not within 30 m of a Watercourse or Wetland according to GeoNB's delineation. However, as the guidelines for working around watercourses and wetlands have recently changed, a preliminary environmental review was completed to confirm the site's characteristics (Refer to Appendix B).

This review suggested there is the potential for wetland habitat at the site, although a formal wetland review/delineation, completed during the appropriate field season (June - September), will be necessary to confirm. The environmental review also indicated the potential presence of protected flora, fauna, and migratory birds, which have been historically documented within 10-km of the project site. Again, a field survey will be completed during the appropriate season to confirm the presence or absence of these species and their critical habitat as required to identify construction limitations and restrictions.

In addition, there is an existing drainage ditch along the western and southern property lines as previously noted, which will require a WAWA permit for any work to occur within 30-m of it. This is expected to include a portion of the driveway/parking area, as well as the stormwater retention pond and its outfall.

##### Protected Watersheds and Wellfields:

A review of the GeoNB mapping indicated there are existing wellfield protection zones that have been delineated in the vicinity of the project, resulting in the project site being located within "Zone C" as shown on Drawing 2000474-1P-C01 in Appendix A. Based on correspondence with the NBDELG, it is understood these zones have not been designated to date, and so no associated restrictions on land usage have been identified to date. However, in the event the City chooses to designate these protection zones, land use restrictions would be imposed. An exemption to such restrictions may be permitted as long as certain conditions (to be defined in the future if applicable) could be met.

#### **(ii) Cultural Features:**

There are no known major recreational or tourism activities in the immediate vicinity of the project site, nor any known heritage features. The property was selected in part due to its

location within an existing industrial park, where cultural features would not typically be expected.

### (iii) Existing and Historic Land Uses:

The proposed site is located in a less developed area of Caledonia Industrial Estates. The site is somewhat sparsely wooded, having been cleared at some point between 2013 and 2017 (based on aerial imagery). Prior to that, the lot appears to have been undeveloped forested land.

Drawings 2000474-1P-C01-C02 included in Appendix A note the subject property with a 500-meter radius around it. Also noted in the aerial photograph included in Appendix A (Drawing 2000474-1P-C04), most of the adjacent properties are not heavily developed with the exception of some existing development approximately 120-m to the southwest.

To our knowledge, there are no known previous developments on this site that may have been of cultural or historic interest.

## 4.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

This section will summarize possible impacts of the proposed work, and the measures that will be applied to eliminate or mitigate impacts. As this project is for a septage treatment facility, the Sector Specific Guidelines for wastewater projects have been recognized in preparing this list.

- 4.1 Air Quality - Dust is possible during the construction phase when fill is being placed, when soil is exposed, and when piping/structures are being installed.

Mitigation: Although there are no homes in the immediate surrounding area of the site, water will be applied to control dust when required and local streets will be swept if necessary.

- 4.2 Air Quality - Odours are possible during the operation phase as septic trucks arrive with septage.

Mitigation: Again, there are no residential properties in the immediate area of the site, but the design of the facility will be done to minimize odours where possible. This will include measures such as including aeration in the holding tanks, minimizing the quantity of materials stored on-site and using indoor storage when required, keeping the process contained to within the new treatment building and in-ground tanks.

- 4.3 Vegetative cover: the existing vegetation on the site includes various shrubs and trees, although the site appears to have been cleared several years ago and re-growth established.

Mitigation: Vegetative cover must be removed for the construction of the new facility, but any areas which are not within the new building,

treatment components or parking areas will be seeded to restore growth and prevent soil erosion. Clearing and grubbing will be limited to only the areas required for the current development. A field survey will be conducted in the appropriate field season to confirm presence or absence of potential SAR and their critical habitat prior to construction taking place.

- 4.4 Noise: Noise can be expected during construction due to the requirement for the use of construction vehicles and heavy equipment.

Mitigation: Construction will be limited to typical working hours (7am to 7pm) Monday to Friday.

- 4.5 Soil erosion is possible during construction.

Mitigation: Disturbed areas will be reinstated as soon as is practical, silt fences and other erosion protection devices around disturbed soils, excavations and stockpiles will also be installed and maintained throughout construction and after completion of construction until the vegetation fully grown. There will be no extreme slopes which may result in erosion. (Maximum slopes are 3H:1V.)

- 4.6 Surface drainage: the surface drainage pattern will be modified as required to build the site up and promote positive drainage away from the facility and into the proposed stormwater detention pond.

Mitigation: There will be no isolated low areas created by the site development, and surface runoff will continue to be directed to its present receiving watercourse to the southwest.

- 4.7 Wetlands and watercourses: a drainage ditch is present along the boundary of the property, and there is the potential for wetland habitat at the site.

Mitigation: It is proposed to maintain a 15-m buffer between the developed portion of the site and the ditch, to allow the eastern side of the site to remain in its current undeveloped state. Only a stormwater detention pond and a portion of the driveway/parking area are proposed in the 15-m to 30-m buffer zone of the ditch as shown on Drawing 2000474-1P-C03 of Appendix A. A WAWA permit application will be submitted for any work within the 30-m buffer area. A field survey will be conducted during the field season (June to September) to confirm if wetlands are present (and delineate, if found) and to identify if further mitigation for wetlands is required.

4.8 Presence of Species at Risk may be possible.

Mitigation: If encountered, wildlife is not to be handled, touched, or harassed. Wildlife will be provided ample space to vacate the work site on their own accord.

Only trees and vegetation within the construction limits will be removed. Tree clearing is expected to be conducted outside of the general nesting period in NB (April 1<sup>st</sup> to September 15<sup>th</sup>); if clearing is required during breeding season, a non-intrusive bird survey will be conducted.

A field survey will be conducted prior to construction, to confirm the presence or absence of potential SAR and their critical habitat.

4.9 Spills from Construction Equipment or Septic Trucks may be possible.

Mitigation: leak and spill prevention equipment will be on-site prior to commencement of any construction work. In the event of a spill, the contaminated soils will be removed from the site and disposed of at an approved decontamination site. Any spills will be reported to the NBDELG Moncton Regional Office during business hours or to the Canadian Coast Guard's 24-hour reporting system after-hours.

Power failure is not considered to be a cause for significant potential environmental impacts, as the "In the Round" system can be stopped during a power outage and re-started once power has been restored. The system runs only intermittently, and its inlet is based on the facility operator preparing a batch. Additionally, there are large holding tanks on-site.

An EMP has been prepared for this project and will be followed during construction.

## 5.0 PUBLIC INVOLVEMENT

Based on the requirements outlined in Appendix "C" of the NBDELG's "A Guide to Environmental Impact Assessment in New Brunswick", the proposed public involvement strategy is proposed:

1. Carter's will notify the owners of the neighbouring properties (within a 500m radius of the site), local environmental groups, MLA, mayor, etc. A letter summarizing the required information (as per Step 2 of Appendix C of the Guide) will be sent to the identified stakeholders. This will also be sent to potentially affected First Nations if required by the Department;
2. A copy of the EIA document and subsequent correspondence with the Technical Review Committee will be submitted to the NBDELG's Moncton Branch for review by the public. If public health conditions do not allow for in-person review of the document, an on-line directory will be set up for public viewing of the document;



3. A report summarizing the public consultation process and any comments received will be submitted to the technical review committee following the completion of the public involvement process.

## 6.0 APPROVAL OF THE UNDERTAKING

The following technical approvals are anticipated as being required for this project:

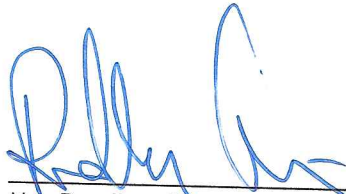
- Approval under the EIA Legislation from the NBDELG.
- Building permit for the new treatment building.
- WAWA Permit from the NBDELG for the work within 30 m of any unmapped wetlands or watercourses (no GeoNB mapped wetlands or watercourses are present).

## 7.0 FUNDING

Carter's Septic Tank Service Ltd. will be responsible for financing the project.

## 8.0 SIGNATURE

June 3/20  
Date

  
\_\_\_\_\_  
Mr. Bradley Carter  
Vice President  
Carter's Septic Tank Service Ltd.

## **APPENDIX A:**

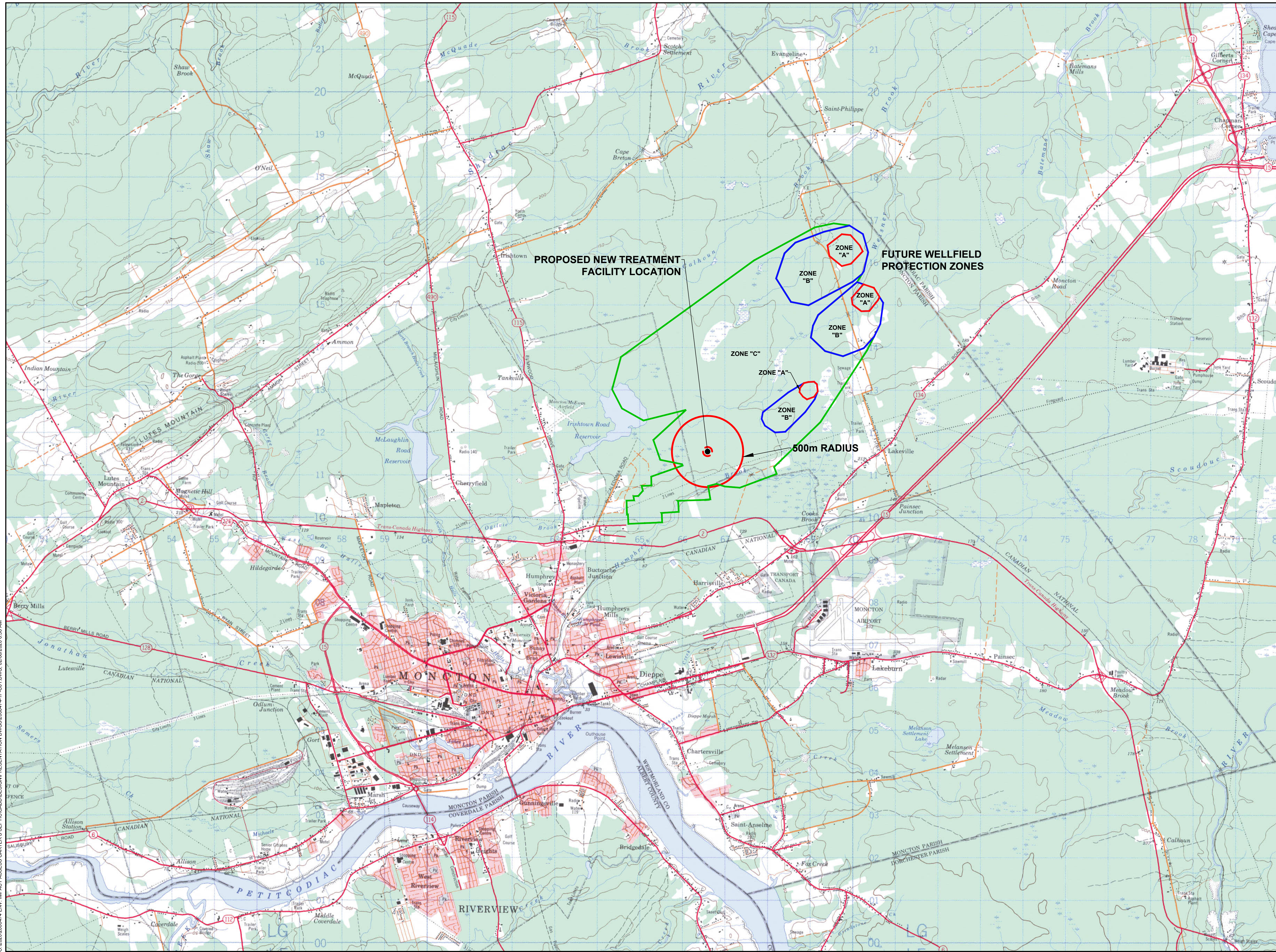
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(Crandall, a division of Englobe Corp. Drawing 2000474-1P-C02)

**Conceptual Site Layout**  
(Crandall, a division of Englobe Corp. Drawing 2000474-1P-C03)

**Overall Site Plan (Aerial Image)**  
(Crandall, a division of Englobe Corp. Drawing 2000474-1P-C04)





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01	APR 22/20	REISSUED FOR CLIENT REVIEW	DRP	LEL
00	APR 3/20	ISSUED FOR EIA REGISTRATION	DRP	LEL



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PROJECT TITLE  
**SEPTIC TREATMENT FACILITY**

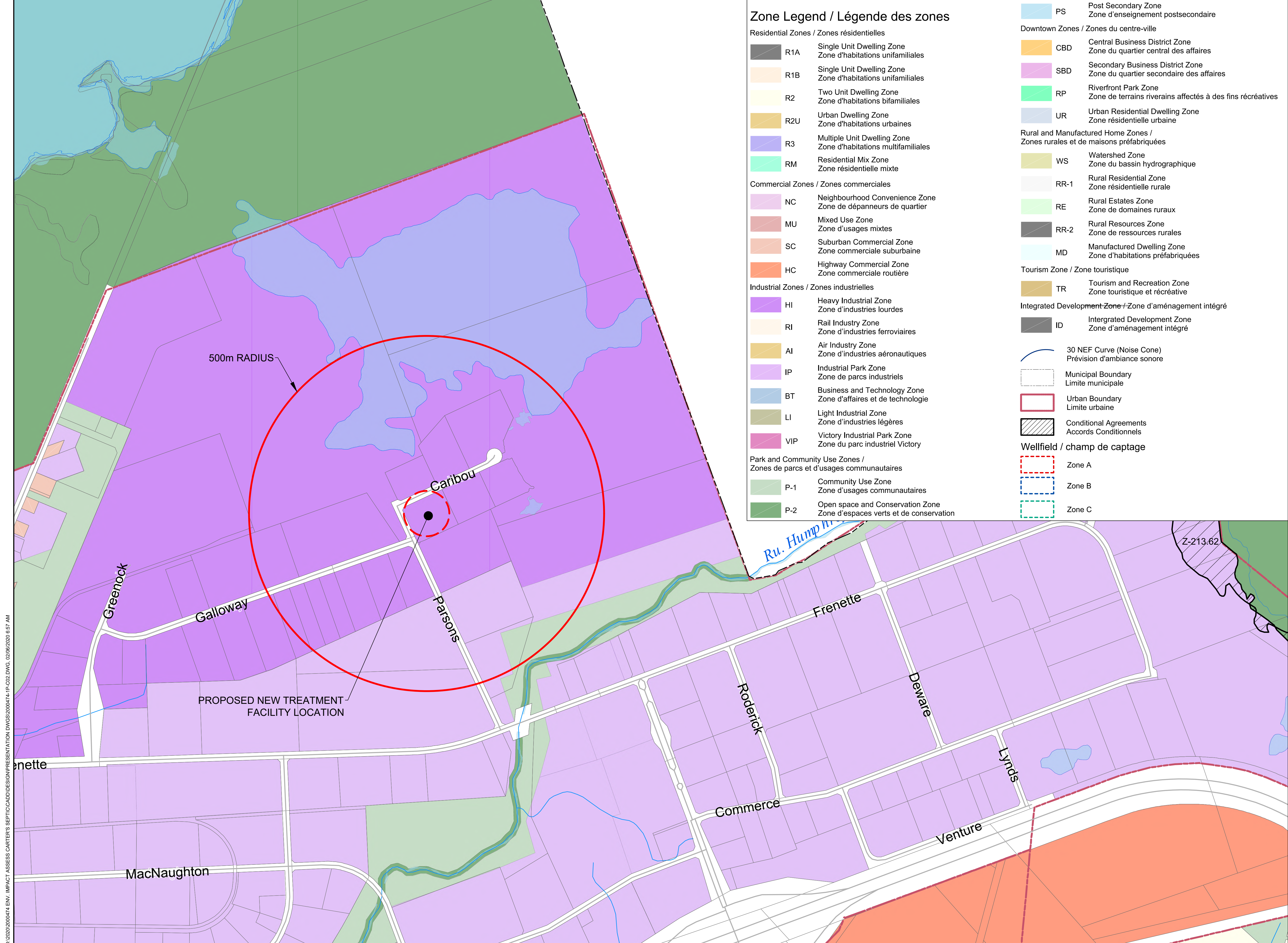
MONCTON N.B.  
 DRAWING TITLE  
**OVERALL LOCATION PLAN**

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	Sheet 01 of 04	

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Drawing No.  
2000474-1P-C01





**Zone Legend / Légende des zones**

- Residential Zones / Zones résidentielles**
  - R1A Single Unit Dwelling Zone / Zone d'habitations unifamiliales
  - R1B Single Unit Dwelling Zone / Zone d'habitations unifamiliales
  - R2 Two Unit Dwelling Zone / Zone d'habitations bifamiliales
  - R2U Urban Dwelling Zone / Zone d'habitations urbaines
  - R3 Multiple Unit Dwelling Zone / Zone d'habitations multifamiliales
  - RM Residential Mix Zone / Zone résidentielle mixte
- Commercial Zones / Zones commerciales**
  - NC Neighbourhood Convenience Zone / Zone de dépanneurs de quartier
  - MU Mixed Use Zone / Zone d'usages mixtes
  - SC Suburban Commercial Zone / Zone commerciale suburbaine
  - HC Highway Commercial Zone / Zone commerciale routière
- Industrial Zones / Zones industrielles**
  - HI Heavy Industrial Zone / Zone d'industries lourdes
  - RI Rail Industry Zone / Zone d'industries ferroviaires
  - AI Air Industry Zone / Zone d'industries aéronautiques
  - IP Industrial Park Zone / Zone de parcs industriels
  - BT Business and Technology Zone / Zone d'affaires et de technologie
  - LI Light Industrial Zone / Zone d'industries légères
  - VIP Victory Industrial Park Zone / Zone du parc industriel Victory
- Park and Community Use Zones / Zones de parcs et d'usages communautaires**
  - P-1 Community Use Zone / Zone d'usages communautaires
  - P-2 Open space and Conservation Zone / Zone d'espaces verts et de conservation
- Downtown Zones / Zones du centre-ville**
  - CBD Central Business District Zone / Zone du quartier central des affaires
  - SBD Secondary Business District Zone / Zone du quartier secondaire des affaires
  - RP Riverfront Park Zone / Zone de terrains riverains affectés à des fins récréatives
  - UR Urban Residential Dwelling Zone / Zone résidentielle urbaine
- Rural and Manufactured Home Zones / Zones rurales et de maisons préfabriquées**
  - WS Watershed Zone / Zone du bassin hydrographique
  - RR-1 Rural Residential Zone / Zone résidentielle rurale
  - RE Rural Estates Zone / Zone de domaines ruraux
  - RR-2 Rural Resources Zone / Zone de ressources rurales
  - MD Manufactured Dwelling Zone / Zone d'habitations préfabriquées
- Tourism Zone / Zone touristique**
  - TR Tourism and Recreation Zone / Zone touristique et récréative
- Integrated Development Zone / Zone d'aménagement intégré**
  - ID Integrated Development Zone / Zone d'aménagement intégré
- Other Symbols**
  - 30 NEF Curve (Noise Cone) / Prévion d'ambiance sonore
  - Municipal Boundary / Limite municipale
  - Urban Boundary / Limite urbaine
  - Conditional Agreements / Accords Conditionnels
  - Wellfield / champ de captage**
    - Zone A
    - Zone B
    - Zone C

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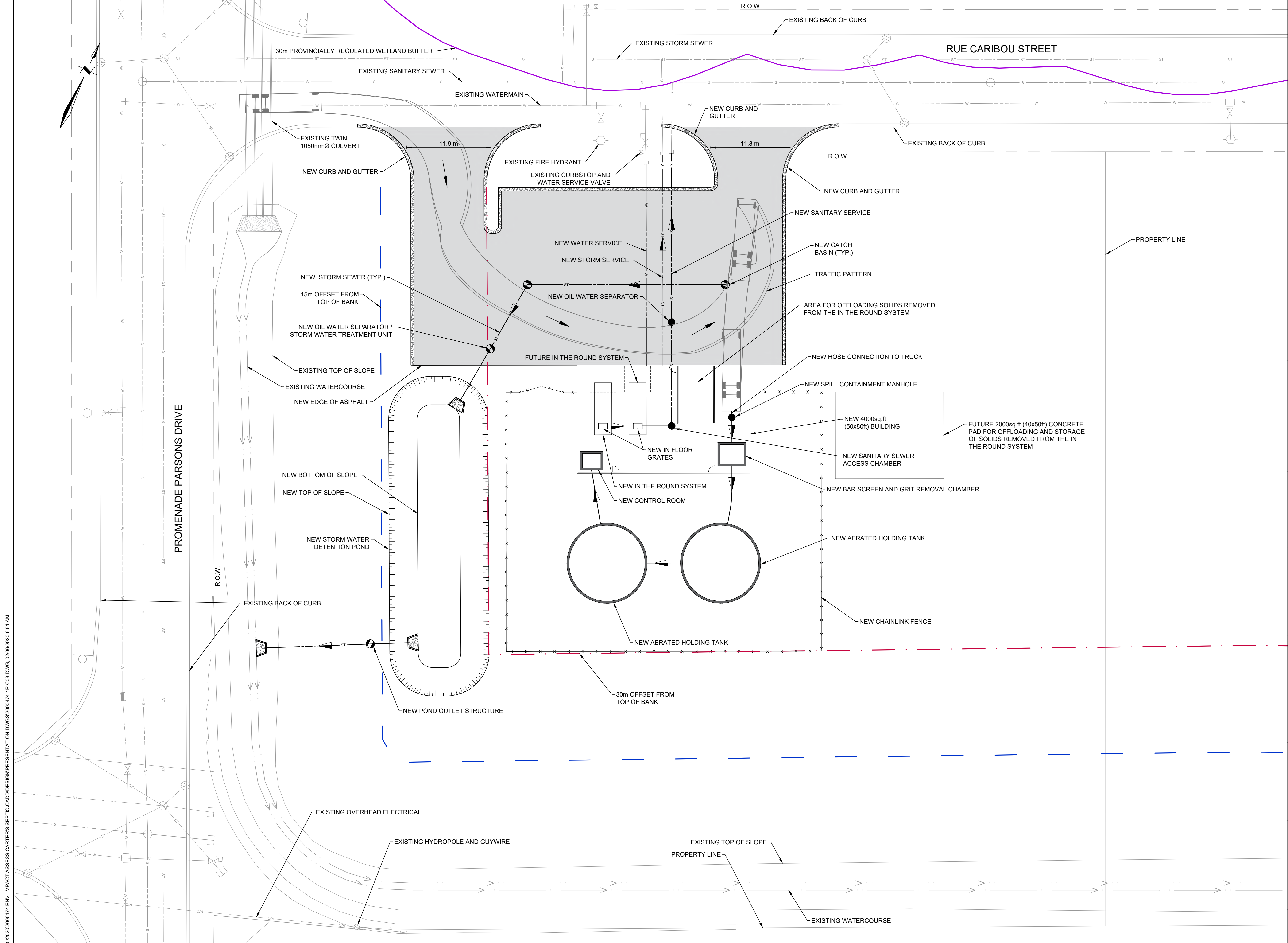
**OVERALL SITE PLAN & ZONING**

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SEPTIC TREATMENT FACILITY

MONCTON N.B.

DRAWING TITLE

CONCEPTUAL SITE LAYOUT

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SEPTIC TREATMENT FACILITY

MONCTON N.B.

DRAWING TITLE

OVERALL SITE PLAN

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Drawing No. 2000474-1P-C04



**APPENDIX B:**

**Englobe Corp. Preliminary Environmental Review**  
(Letter dated May 10, 2020)

May 10, 2020

**Laura Leger, P.Eng**

Project Engineer

Crandall, a division of Englobe Corp.

1077 boul. St. George Blvd., Suite 400

Moncton (NB) E1E 4C9

**Subject:** **Preliminary Environmental Review**  
Proposed Septic Treatment Facility – PID No. 70636659, Moncton NB  
Our ref.: 2000474

## 1 INTRODUCTION

Englobe Corp. was retained to conduct a preliminary environmental review in support of an Environmental Impact Assessment (EIA) registration for the development of a proposed septic treatment facility at PID No. 70636659 at the intersection of Parsons Drive and Caribou Street in Moncton, NB.

The goal of the preliminary review is to identify potential environmental constraints at the site that may require further assessment and/or mitigation prior to development.

## 2 SCOPE OF WORK

The scope of work included a desktop study and preliminary field visit.

The desktop study included review of:

- Historic aerial photographs;
- Wetland and Watercourse mapping, available online through GeoNB;
- Federal *Species at Risk Act* (SARA), including the online Federal Public Registry of Species at Risk;
- New Brunswick *Species at Risk Act*, including the online Provincial Public Registry of Species at Risk; and
- Atlantic Canada Conservation Data Centre (ACDC) reports outlining historical occurrences of Species at Risk (SAR) and species of conservation concern, and identified sensitive habitats within the study area;

The field visit was conducted on May 6, 2020 and included a walkthrough of the site to confirm the findings of the desktop review and to document existing conditions.

Please note that the scope of the preliminary environment review was designed to identify potential environmental considerations for future development. The assessment did not include detailed delineation of potential wetlands/watercourses, or an exhaustive count of individual protected species. Based on the time of year, seasonal limitations to the field assessment (i.e. identification of vegetation and species) were encountered.



## 3 RESULTS

### 3.1 SITE DESCRIPTION AND HABITAT

The subject site is a 3.4-acre, tree-covered lot identified as PID No. 70636659 in the Caledonia Industrial Park in Moncton, NB. The property is bound by Caribou Road to the north, vacant undeveloped land to the east and south, and Parsons Drive to the west.

Based on aerial photography, some deforestation occurred at the site between 2013 and 2017 during the construction of Caribou street. Currently, the site is covered with secondary forest composed mainly of red maple, white birch and fir, and the shrub strata is dominated by tree saplings, leatherleaf and alders. Some unidentifiable herbs and ferns were observed among sparse patches of mosses and sedges, and a small pond with cattails is located in the northeast portion of the property.

The areas of the site adjacent Caribou Street and Parsons Drive have been tree cleared, likely during construction of Caribou Street.

### 3.2 WETLANDS AND WATERCOURSES

Review of the GeoNB indicates mapped wetlands are not present at the subject site; however, a large mapped wetland is located on the adjacent property to the north and its 30-meter buffer zone extends into Caribou Street, just a few meters from the subject property. The local topography and historical aerial photography suggest the wetland footprint may have extended onto the subject property prior to the construction Caribou Street.

A small patch of cattails on the northeast portion of the subject property, and sedges and other wetland indicator species observed throughout during the current site visit suggest the potential for wetland habitat at the site. Vernal pools are also present throughout and are likely the result of tree clearing activities around 2013-14.

Mapped watercourses are not present at the site, but a small unmapped watercourse runs along the western and southern boundaries of the property, and eventually discharges to Humphrey's Brook, approximately 200m to the east of the site.

### 3.3 SPECIES AT RISK

The ACCDC report prepared for the project area was reviewed, as were federal and provincial Species at Risk registries. The results of the desktop review revealed the potential presence of various protected flora and fauna, including migratory birds, in the study area.

These species were not observed during the site visit which may be due to the time of year when the survey was conducted. However, these species have been historically documented within 10km of the project area, and potential habitat for these species was observed during the field survey.

Conditions during the site visit were not optimal (time of year, poor vegetation growth) to accurately assess for Species at Risk.

The ACCDC report also identified no managed or biologically significant sites within the vicinity of the project area

## 4 CONCLUSION AND RECOMMENDATIONS

Background review and field confirmation has identified the following potential environmental features at the subject property that will require consideration and potentially mitigation prior to development:

- Unmapped wetlands and watercourses;

- Species at Risk and their habitat; and
- Habitat for migratory birds;

The current field program was conducted in early spring outside the typical field season and was limited by seasonal conditions. As such, the following additional work is recommended prior to undertaking any development activities.

Potential wetlands and watercourses should be delineated during the field season (June to September) to ensure they are accurately identified and quantified. All project work must comply with the provincial Wetland and Watercourse Regulations.

Additional field survey(s) should be conducted in the appropriate field season to confirm presence or absence of potential SAR and their critical habitat prior to any development taking place. All project work must comply with federal and provincial Species at Risk Acts and Regulations.

Any tree clearing activities should take place outside bird breeding season, typically between April 1<sup>st</sup> and September 15<sup>th</sup> in NB. If clearing is to take place during breeding season, a bird survey should be conducted to ensure nesting birds are not disturbed during their critical period and all birds have fledged. All project work must comply with the *Migratory Bird Convention Act*.

We trust this is to your satisfaction. If you require additional information, please do not hesitate to contact the undersigned.

Regards,  
**Englobe Corp.**



Scott Fisher, P.Eng.  
Team Leader  
Geotechnical, Materials and Environmental Engineering

## **APPENDIX C:**

### **Appendix C: Environmental Management Plan**

Carter's Septic Tank Service Ltd.

**ENVIRONMENTAL MANAGEMENT PLAN**

**Septage Treatment Facility**

Submitted to:

PROVINCE OF NEW BRUNSWICK  
DEPARTMENT OF ENVIRONMENT AND LOCAL GOVERNMENT  
P.O. Box 6000  
Fredericton, N.B.  
E3B 5H1

Prepared by:



Crandall, a division of Englobe Corp.  
1077 St. George Blvd., Suite 400  
Moncton, N.B.  
E1E 4C9

May 26, 2020  
Project No. 2000474

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Appendix EMP-A:     “*Birds and Oil - CWS Response Plan Guidance*”, Canadian Wildlife Service

## **SECTION 1 - INTRODUCTION**

### **1.1 Introduction**

The Environmental Management Plan (EMP) for the Septage Treatment Facility project focuses on the activities related to the construction of a new septage treatment building, in-ground concrete tanks, site works & security fencing, and associated work. 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
Section 5	Wetland and Watercourse General Measures
Section 6	Noise Management
Section 7	Clean-Up and Re-Vegetation
Section 8	Heritage and Archeological Resources
Section 9	Emergency Response Plan
Section 10	Environmental Effects Monitoring Plan
Section 11	Emergency Contacts

### **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 Carter's Septic Tank Service Ltd. 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 Carter'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 Carter's Septic Tank Service Ltd. is proposing to construct a septage treatment facility to allow them to pre-treat their septage prior to discharging the liquid component to the City of Moncton's sewer system. Dewatered solids will be trucked away to an appropriate disposal facility, such as the Envirem Organics Inc. facility in Fredericton, NB.

The proposed treatment system, the "In the Round" dewatering system, has been selected, and the proposed pre-treatment facility will generally consist of the following major components:

- Construction of two (2) new in-ground concrete tanks; a new aerated holding tank and a batch tank;
- Construction of a new treatment building, to house an "In the Round" system, the various pumps and controls for the system, an inlet bar screen, and provide minimal storage for screened solids until they can be trucked away to an approved disposal facility;
- Site works and parking/driveway construction.

### 1.3.2 Schedule

The septage treatment facility construction described herein is being proposed for construction with an anticipated start date of late Summer 2020. The following main tasks will be performed:

- Mobilization and installation of environmental protection devices.
- Clearing and grubbing of the work site, and disposal of materials off-site (remaining portion of the property to remain in current state).
- Construction of new facility, including:
  - Excavation for new building foundation, in-ground concrete tanks, piping and structures, and stormwater retention pond;
  - Importing structural fill as required to bring the site up to sub-grade level in fill areas to be used for vehicle movement and building construction; this material will be spread in layers and well compacted to minimize settlement;
  - Supply and installation of underground infrastructure including water, sanitary, and stormwater services;
  - New electrical service to the site;
  - Construction of new concrete tanks;
  - Construction of new treatment building;
  - Site grading and drainage;
  - Supply and installation of new security fencing;
  - Construction of new driveway and parking area with asphalt surface;
  - Property restoration with topsoil/hydroseed and/or granular surfaces as appropriate;
- Start-up and commissioning of equipment.

The new site will be constructed by importing borrow material (if required to achieve the required grades) and granular material, and any excess or unsuitable excavated material that is not re-used on-site will be disposed of off-site.

Environmental protection will include the installation of silt fence around the work zone prior to the start of any construction activities, as well as erosion protection structures as appropriate. These will remain in place and be maintained in good condition until the site is completely restored.

The Project is expected to be completed by late Fall 2020.

#### **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 become part of the contract between Carter's and any contractors involved.

Carter's will communicate its commitment to this EMP to any staff or other contractors involved in the work prior to construction commencing.

### **SECTION 2 - SITE WORK**

All activities relating to site work will adhere to all relevant regulatory requirements, including but not limited to, the Environmental Impact Assessment Regulation under the Clean Environment 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 should be cleaned before being brought on-site.

If encountered, wildlife is not to be handled, touched, or harassed. Wildlife will be provided ample space to vacate the work site on their own accord.

#### **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.

- 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<sup>st</sup> to September 15<sup>th</sup>). If clearing is required during breeding season, a non-intrusive bird survey will be conducted;
- b) Activities will be minimized by establishing vegetated buffer zones around any nests;
- c) The removal of shrubs within 30 m of all streams and/or wetlands will be minimized where possible. 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, vegetation must be maintained along the banks of watercourses in sufficient quantity to provide for bank stability and shading;
- e) 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;
- f) Any debris generated during the Project must be prevented from washing downstream and must be removed from a watercourse;
- g) Organic material, such as topsoil, removed during construction should be stockpiled and reused when possible;
- h) Prior to starting the stripping & 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 if required;
- i) Clearing limits shall be flagged prior to the commencement of clearing.

### **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 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 driveways 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 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 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 (Carter's) and transported off site for disposal at a proper handling facility until such a time that the proposed septage treatment facility has been commissioned and is fully operational.

### 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. Contaminated materials are to be sent 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;
- 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 (if required);
- 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.

## 5.2 Culvert Installation (General Information, if Applicable)

Watercourse crossings are structures at locations where an access route meets and traverses a wetland and/or watercourse, or a drainage route to same. This also includes culverts.

- 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 (Supporting structure to be confirmed);
- 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 to require quick re-vegetation, and as required by NBDELG.
- 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;
- c) Should seed mixes for herbaceous native species for the area be required and 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 - HERITAGE AND ARCHEOLOGICAL RESOURCES**

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 pre-contact artifact discovery or archaeological site, the following list of procedures will apply:
- Cease all work in the vicinity of the find and the Archaeology and Heritage Branch, Department of Tourism, Heritage and Culture must be contacted immediately at (506) 453-2738.
  - Under the *Historic Conservation Act*, all archaeological sites and artifacts are considered property of the Crown, and must not be disturbed. Carter's or the contractor on-site 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.
  - 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.
  - Work may only resume once approval has been received from the Archaeology and Heritage Branch.

## **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 site foreman, upon implementation of (a) above. Carter's or the Contractor on-site will be responsible for notifying the proper authorities.

The site 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 by the foreman 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 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 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 dykes 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 all contractors on-site.

### 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.

### 9.4 Birds and Oil

In the event of a spill, Carter's or the Contractor on-site is responsible to respond as required to protect bird species in the impacted areas. Measures could include:

- a) Hazing;
- b) Disperse oil;
- c) Bird Collection;
- d) Wildlife monitoring;
- e) Beached bird surveys;
- f) Drift blocks;
- g) Live oiled bird response.

The measures employed in response shall be coordinated with the relevant authority having jurisdiction. Please refer to "*Birds and Oil - CWS Response Plan Guidance*", prepared by Environment and Climate Change Canada's (ECCC) Canadian Wildlife Service (CWS) for more information.

## 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 all contractors on-site.

## **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
- Crandall, a division of Englobe Corp.  
(Laura Leger, P. Eng.): 506-857-2777 (Office)  
extension 178047
- Codiac Regional - RCMP: 506-857-2400 or 911
- Enbridge Gas Pipeline: 1-866-763-5427
- NBDELG - Region 3 - Moncton: 506-856-2374
- NB Power: 1-800-663-6272
- Carter's Septic Tank Service Ltd.  
(Bradley Carter) 506-382-7450

The complete project address is as follows (accessible from local streets):

Septage Treatment Facility  
6 Caribou St.  
Moncton, N.B.  
E1H 2J4

## Appendix EMP-A

### *“Birds and Oil - CWS Response Plan Guidance”* Canadian Wildlife Service

## Birds and Oil - CWS Response Plan Guidance

In all circumstances where a polluter is identified the burden of cleanup and response lies with the polluter. However, responsibility for government overview of a response to an oil spill depends on the source of the spill. The identified **lead agency** has responsibility to monitor an oil spill response and to take control if an appropriate response is not undertaken by a polluter or their agent.

Lead agency responsibilities lie with:

- **Environment Canada**
  - For spills and incidents on federal lands and from federal vessels
  - Potentially for land-based incidents in waters frequented by fish
  - May take lead if environment is not being protected by other leads, Cabinet Directive 1973
- **Canadian Coast Guard**
  - For spills from ships
  - All spills of unknown sources in marine environment
- **Provincial Department of Environment**
  - For spills from land-based sources
- **Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) and Canada-Nova Scotia Offshore Petroleum Board (C-NSOPB)**
  - For spills related to offshore oil and gas exploration and production
- **Transport Canada**
  - To investigate ship source and mystery spills in the marine environment

The Canadian Wildlife Service has the responsibility for licensing activities which involve the handling or disturbance of birds, and of providing advice and often direction to other agencies, responders and the polluter during oil spill incidents.

### 1. Hazing<sup>1</sup>

*Purpose:* Prevent birds from coming in contact with oil

*Options:*

- Hazing by helicopter
- Hazing by FRC or other watercraft
- Release of scare devices (e.g. Breco Buoys, Phoenix Wailer)
- Use of hazing sound makers: propane cannons, whizzers, bangers, pyrotechnic devices etc.

Scare devices have a limited range of influence and likely are not a viable option with a large slick. Use of Breco Buoys and Phoenix Wailers can be used but we consider them to be largely ineffective in the situation of a large slick. Logistically, helicopter hazing would be difficult unless it was possible for a helicopter to remain on a platform offshore overnight. Hazing by FRC or other vessels would be ideal.

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<sup>1</sup> There are several scare techniques which may be effective and do not require a permit, however a permit under the Migratory Bird Regulations **is required** for the use of aircraft or firearms (defined as capable of emitting at projectile at more than 495 feet per second). Propane cannons, blank pistols or pyrotechnical pistols firing crackers shells with **less than 495fps are legal without a permit**. Most scare tactics are relatively short lived in terms of effectiveness as birds acclimatize to the disturbance so scare techniques should be alternated to be effective.

Short-term focused hazing by the most expedient means should be attempted to move the birds away from the slick, if logistical conditions permit. Vessels at the site should have the ability to use sound makers (propane canons, pyrotechnic devices) to disperse birds in local areas. Such equipment should be deployed immediately to these ships with trained personnel to operate them. The vessels on site should be tasked to actively search and monitor for congregations of birds which could be vulnerable to oiling. If such groups are found then attempts should be made to disperse the birds away from the oil.

## 2. Disperse oil

*Purpose:* Prevent birds from contacting oil by getting oil off the surface of the water as soon as possible.

*Options:*

- Dispersants
- Mechanical dispersal with FRCs or other vessels
- Natural dispersal by environmental conditions

For small spills, mechanical dispersal would be the preferred method.

## 3. Bird Collection<sup>2</sup>

*Purpose:* Implement a humane response to oiled birds as required by Environment Canada's National Policy on Oiled Birds and Oiled Species At Risk (<http://www.ec.gc.ca/ee-ue/default.asp?lang=En&n=A4DD63E4-1>)

*Options:*

- The only option would be a ship-based effort to detect and collect dead and live oiled birds, both within the slick and adjacent to it.

All vessels in or near the slick should understand the need to collect birds. All vessels should have dip-nets, large plastic collecting bags to hold dead birds, and cloth bags or cardboard boxes in which to hold live oiled birds. Efforts should be made to retrieve live oiled birds to ensure they are dealt with humanely.

## 4. Wildlife monitoring

*Purpose:* Determine potential impact of spill

*Options:*

- Ship-based surveys for oiled and unoiled wildlife
- Aerial surveys for oiled and unoiled wildlife. Will require structured surveys (e.g. strip or transect surveys of spill area)
- Placement of CWS staff on vessels and aircraft

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<sup>2</sup> Only those individuals authorized to do so (nominee on an existing federal salvage permit) can be involved with the collection of migratory birds.

Dedicated ship-based bird surveys should be initiated immediately. Ideally arrangements should be made to have a CWS observer on vessels or flights. In addition trained seabird observers need to be placed on all vessels monitoring a slick. This should continue until the slick is dispersed.

## 5. Beached Bird Surveys

*Purpose:* Determine impact of spill on wildlife and retrieve any live oiled wildlife on beaches.

*Options:*

- Conduct daily beached bird surveys during the incident and until one week after slick has been removed or dissipated.

CWS or other government officials (CCG, Enforcement Officers) will oversee the collection of dead and live oiled birds<sup>3</sup> as instructed in CWS' protocol for collecting birds during an oil spill response. This would only be required in circumstances where a large number of birds are potentially oiled or if the spill occurs in a sensitive area.

## 6. Drift Blocks

*Purpose:* Drift blocks may be deployed in slick to provide an estimate of bird mortality.

*Options:*

- Release from vessel
- Release from aircraft

The deployment of drift blocks would only be expected if there was a large spill and blocks should be released as soon as possible after a spill (CWS should be consulted to determine protocol for drift block deployment and tracking). The polluter or their agent would be expected to ensure drift blocks are tracked and collected as appropriate.

## 7. Live oiled bird response

*Purpose:* Implement a humane response to oiled birds as required by Environment Canada's National Policy On Oiled Birds And Oiled Species At Risk

*Options:*

- Rehabilitation
- Euthanization

CWS will be consulted to determine the appropriate response and treatment strategies which may include cleaning and rehabilitation or euthanization. CWS policy specifically requires that species at risk or other species of concern be rehabilitated.

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<sup>3</sup> Only those individuals authorized to do so (nominee on an existing federal salvage permit) can be involved with the collection of migratory birds.