



## Parks Canada Basic Impact Analysis

Amended September 5, 2019

### 1. PROJECT TITLE & LOCATION

Fuel Oil Storage Tank Replacement- Discovery Centre, Gros Morne National Park

### 2. PROPONENT INFORMATION

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### 3. PROPOSED PROJECT DATES

Planned commencement: 2019-09-03  
Planned completion: 2019-11-30

### 4. INTERNAL PROJECT FILE #

GMNP-2019-013

### 5. PROJECT DESCRIPTION

The Discovery Centre is one of Gros Morne National Park's primary visitor reception and interpretation facilities and also supports operations and administration of the park. However note that the facility is located on federally owned land outside of the national park, so while subject to federal laws and regulations (e.g. for environmental impact assessment and environmental protection) does not fall under the Canada National Parks Act. The existing 5000 liter underground double walled fiberglass reinforced plastic diesel/ fuel oil storage tank and associated system components at the Discovery Centre must be replaced as it is no longer compliant with federal storage tank system regulations (Figure 1). Construction activities to remove the existing structure include cleaning and purging the existing fuel tank of all fuel and vapours using a fully contained vacuum truck, and excavation of a 10 by 5 by 3 meter area around the existing underground structure with a backhoe or excavator to expose the tank and its associated piping and electrical components. Once the existing tank has been removed a soil contamination test must be completed; there are no known leaks for this unit however the potential still exists so soils samples must be assessed. The contractor will also be responsible for removing the day tanks, piping and monitoring equipment in the building's mechanical room (Figure 1). Once the existing tanks and associated components are removed the new materials can be installed, including a new 5000 liter double-walled fiberglass reinforced plastic diesel storage tank that will be placed in the excavated area and all its associated components will be connected. The contractor will have access to the Discovery Centre's basement and will be responsible for maintaining a constant supply of fuel to the boilers and generator. A stamped as-built drawing from a Professional Engineer must be provided prior to filling the system.



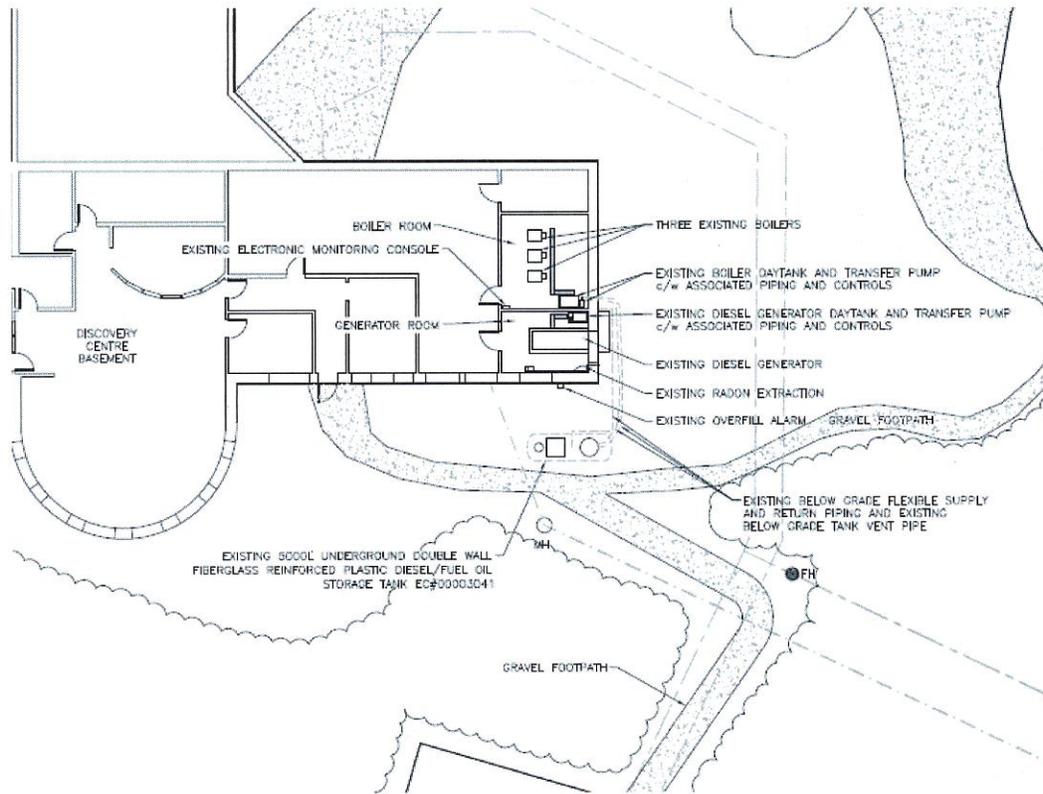


Figure 1. Drawing of the area where the existing underground fuel storage tank and associated components exists in relation to the Discovery Centre.

This Basic Impact Analysis covers the following work activities:

- Replacement of existing 5000 litre underground double-walled fiberglass reinforced plastic diesel storage tank with a new 5000 liter storage tank with the same specifications;
- Replacement of the existing generator fuel oil transfer pump and day tank with a new duplex transfer pump and day tank (Figure 2);
- Underground double-walled flexible product piping will be replaced by a combination of new underground double walled piping and new single wall aboveground steel product piping;
- Demolition and proper disposal of the existing 5000 litre tank, underground vent and fill piping, tank top concrete slab, tank top sump, all associated manholes, covers and equipment, aboveground 455 litre steel boiler day tank, fuel transfer pump, aboveground 200 litre steel generator day tank (Figure 3);
- Excavation for removal of existing tank;
- Preparation of sub-grade for installation of tank and infill of topsoil for restoration.



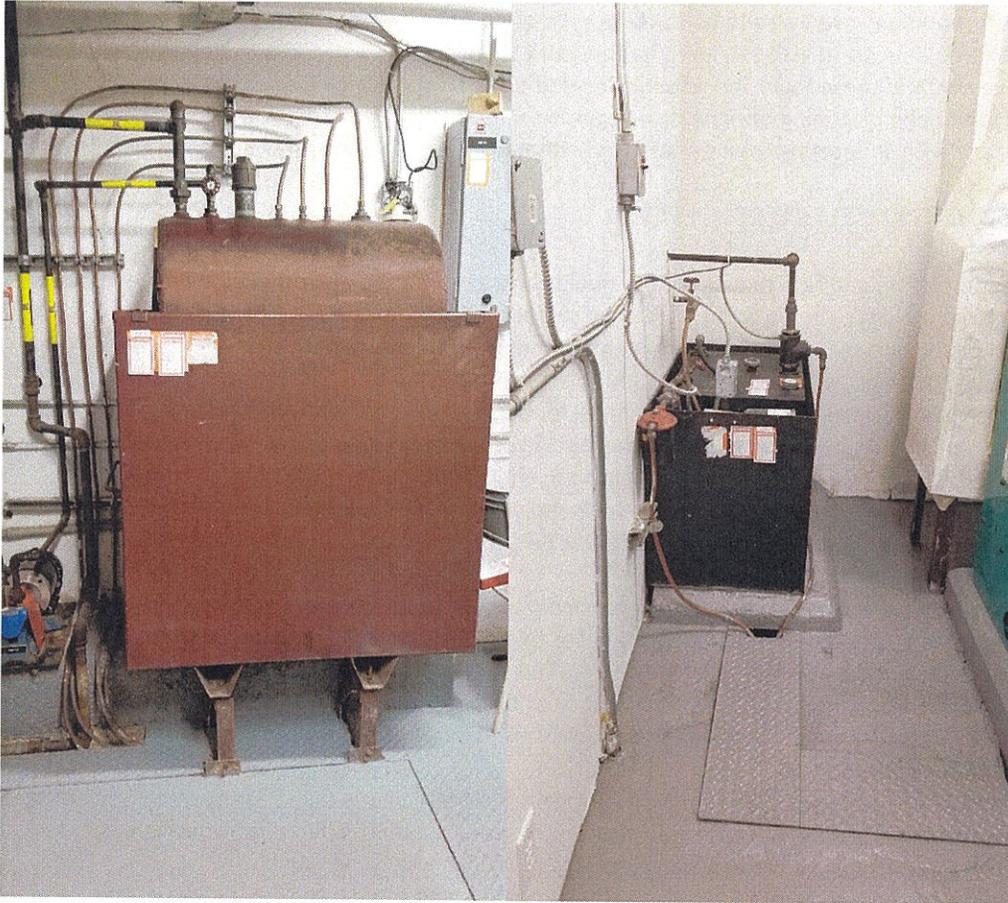


Figure 2. Day tanks located in the basement of the Discovery Centre to be replaced as a part of this project. (Left) Day tank; (Right) Day tank and generator fuel transfer pump.



Figure 3. Existing fuel transfer station (left) and entrance/ manhole (right) to underground fuel storage tank that will be demolished and replaced.

Zoning: Parks Canada uses a zoning system to classify land and water areas according to protection needs and the opportunities they offer park visitors. These zones ensure a range of visitor opportunities is provided in areas best suited for those activities, while protecting the attributes essential to a memorable visitor experience. Typically a





visitor reception facility would be given a Zone IV (outdoor recreation; ~1% of GMNP) while a park administration and operations facility would be given a Zone V designation (park services; <0.1% of GMNP). However while the Discovery Centre serves both of these roles, it is actually located on federal lands outside of the national park so has not been given a national park zoning designation. Regardless, the fuel system upgrades being undertaken here would be consistent with supporting the operations of either a Zone IV or Zone V facility.

## 6. VALUED COMPONENTS LIKELY TO BE AFFECTED

### Natural Resources

- Air quality and noise: In addition to ambient air quality and existing noise levels (e.g., from wind, highway traffic, and visitor activity), the project area will be subject to temporary emissions (e.g., vapours from fuel tank and piping line, exhaust from equipment) and noise from equipment that will clean the fuel system, remove concrete and excavation around the existing fuel tank.
- Soil and Landforms: The project will have a minimal footprint associated with the replacement of the underground tank. Work will occur primarily or entirely within the existing footprint of the side access to the basement portion of the building, where soils and landform have been previously disturbed and altered by site development (e.g., existing fuel tank and visitor centre). However, some undisturbed soils may be affected by excavation equipment or if the project footprint extends into undeveloped areas next to the existing site footprint.
- Surface water: This site is greater than 100 meters from brooks that drain the surrounding area. The Discovery Centre is upslope from the ocean, however this distance is greater than 300 meters away.
- Flora: The area is typified by scrub woodland/ boreal forest vegetation and riparian boreal forest vegetation, with alders, black spruce, eastern larch, and balsam fir comprising most of the surrounding forest/ scrub woodland. Riparian vegetation is characterised by alders and other woody shrubs as well as the aforementioned tree species.
- Fauna: Various terrestrial fauna typical of Newfoundland's boreal forests may be in the area, including land birds (e.g., Canada Jay, Black-capped Chickadee, Boreal Chickadee, Golden-crowned Kinglets, and various woodpeckers), and such mammals as moose, caribou, coyotes, and mink.
- Species at risk: None known in project area or in the immediate vicinity of the Discovery Centre.

### Visitor Experience

- Viewscape for visitors at the Discovery Centre and highway traffic travelling on Route 431.
- Public may be prohibited from using this area for the duration of the work.

### Cultural Resources

- Due to the minimal to non-existent potential for cultural or archaeological resources at this previously disturbed site, it is doubtful that this location has intact undisturbed cultural material (see Appendix 2).

### Outstanding Universal Value (OUV)

- Gros Morne National Park (GMNP) was inscribed on the World Heritage List under natural World Heritage criteria (vii) and (viii) in 1987. Sites that are included on the World Heritage List are considered to be cultural and natural heritage places that are of outstanding interest on a global scale and therefore need to be conserved as part of the heritage of humanity as a whole. Note that while the Discovery Centre is not actually located within the boundaries of Gros Morne it forms part of the viewshed of the park and is an important reception and interpretation facility for visitors. As a result it is appropriate to ensure that activities and development at the Discovery Centre are compatible and consistent with the OUVs of the park.
- GMNP Criterion vii – *Gros Morne National Park, an outstanding wilderness environment of spectacular landlocked, freshwater fjords and glacier-scoured headlands in an ocean setting, is an area of exceptional natural beauty.* The interpreted OUV components resulting from designation under Criterion VII are scenic value, linked to landlocked freshwater fjords and glacier-scoured headlands, as well as the wilderness environment.





- GMNP Criterion viii - *The rocks of GMNP collectively present an internationally significant illustration of the process of continental drift along the eastern coast of North America and contribute greatly to the body of knowledge and understanding of plate tectonics and the geological evolution of ancient mountain belts. In glacier-scoured highlands and spectacular fjords, glaciation has made visible the park's many geological features.* The interpreted OUV components resulting from designation under Criterion VIII are geological elements in GMNP, and the processes illustrated by the elements.

## 7. EFFECTS ANALYSIS

### Natural Resources:

#### Air quality and noise:

- Construction activities could lead to an increase in noise, dust and vehicle emissions above baseline (i.e., daily traffic volume), and a decrease in ambient air quality.
- Dust may come from disturbance of exposed soils by machinery, vehicles and wind, as well as construction such as excavation and transport of aggregate material. However the amount of dust being generated from disturbed soils is limited by the small work area.

#### Soil and Landforms:

- Removal of vegetation, top organic layer and soil disturbance due to excavation could destabilise soils, increase the risk of erosion, and cause unnatural soil compaction and soil permeability.
- Soil and aggregate compaction around the underground storage tank area could cause unnatural drainage patterns.
- Construction activities can lead to unnatural ground surface contours (e.g. rutting).
- Accidental spills and leaks from equipment and construction materials (including decommissioned fuel system components) can impact soils.
- Travel outside of the designated work area and existing parking area can disturb organic material, expose soils, and damage vegetation making the area vulnerable to erosion and establishment of invasive species.
- Repeated travel within the work area by heavy equipment can result in soil compaction (an alteration of soil structure affecting the substrate's water holding capacity, levels of aeration and overall productivity). Compacted soils are at risk to water erosion and the associated vegetation is also vulnerable to direct trampling by equipment.

#### Surface Waters:

- Toxic spills or leaks from machinery, equipment and construction materials (including decommissioned fuel system components) could impact water quality.

#### Flora:

- Forest vegetation (primarily trees and other woody plants) may be cut or removed which can affect soil/ground stabilization, water storage capacity, light penetration (etc.). However, most of the work will fall within an existing disturbed area and infrastructure footprint, which will reduce the amount of vegetation, if any, required to be cleared.
- Soiled machinery may transfer and spread invasive plant species to the park.
- Accidental fuel or oil spills from construction equipment or decommissioned fuel system components could contaminate soils and groundwater, with adverse consequences for vegetation.
- Soil disturbance in construction and staging areas may create habitat conducive to the establishment of invasive plant species that would displace or compete with native vegetation.
- Travel outside of the work area by heavy equipment can result in direct loss of vegetation by damaging roots and branches. It also indirectly affects vegetation by disturbing the soil.





Fauna:

- If vegetation clearing is required removal of vegetation could lead to loss of nests, eggs, dens, food sources and habitat for terrestrial fauna such as migratory birds. The current work plan is for the project to be completed this fall (2019), therefore it is unlikely to impact wildlife during their breeding season. However, there could be unforeseen changes or delays to the work plan that lead the work to be finished at a time that might be more sensitive to wildlife breeding season.
- Construction noise and activities may cause temporary avoidance behaviours, and also disrupt feeding and breeding activity of wildlife in the area.
- Improperly stored construction materials, garbage, and food may act as wildlife attractants, increasing risk of human-wildlife conflict and roadway mortality.
- Accidental fuel or oil spills from construction equipment or decommissioned fuel system components may negatively affect wildlife and habitat quality through contamination of vegetation or water sources used by wildlife.

Visitor Experience:

- Temporary traffic delays are likely to result from construction activities, specifically during the delivery of equipment and fuel tank.
- Temporary, localized loss of natural aesthetic appeal and disturbance due to construction noise in the area are likely to result from construction activities.
- Equipment, materials, and construction site could pose a safety risk if the proper signs and storage techniques are not in place.

Cultural Resources

- Unlikely that the area around the Discovery Centre has intact undisturbed cultural material. However, there is always some chance that previously unknown cultural resources may be found during construction activities.

Outstanding Universal Value

- GMNP Criterion vii (exceptional natural beauty): No impacts to the intactness of the fjord and alpine / headland elements will result from the replacement of the fuel oil storage tank at the Discovery Centre, which is out of view of any such zones or habitat. The wilderness environment is assured by appropriate zoning: the majority of the park is designated Zone 1 (Special Preservation; 6% of GMNP) plus Zone II (Wilderness; 60% of GMNP) and will be unaffected by this project. The new underground fuel oil storage tank will be out of view and will be compliant with federal standards for fuel tank.
- GMNP Criterion viii (internationally significant geological features): The new fuel oil storage tank will not impact geological features as it will be replacing an existing tank of the same dimensions. However it will cause short term localised modifications of surficial features (i.e., drainage and permeability, etc.), but the disturbance will occur outside of the park and regardless this localized activity would not affect the collective of geological elements which comprise the OUV of the World Heritage Site.

## 8. MITIGATION MEASURES

### General Mitigations

1. The contractor will prepare an Environmental Protection Plan (EPP), this document will describe how the contractor will comply with the mitigations listed in the Basic Impact Analysis. The EPP must be sent to Parks Canada for approval at least 5 business days prior to work starting. The EPP should include the names of persons responsible for ensuring adherence to environmental mitigations, their emergency spill response plan for hazardous fluids and materials, and a waste management plan, for both hazardous and non-hazardous waste.





2. Prior to starting work all personnel working on site will be required to attend an on-site environmental briefing conducted by Parks Canada's Environmental Protection Officer (EPO) to review the mitigation measures required by Parks Canada and highlighted within this BIA. Contacts for Parks Canada include: **Courtney King**, Environmental Protection Officer, Parks Canada, Rocky Harbour, NL. Email: [courtney.king@canada.ca](mailto:courtney.king@canada.ca) Phone: 709-280-2383  
**Darroch Whitaker**, Ecologist, Parks Canada, Rocky Harbour, NL. Email: [darroch.whitaker@canada.ca](mailto:darroch.whitaker@canada.ca) Office: 709-458-3464; Cell: 709-458-7293
3. Inform Parks Canada's Environmental Protection Officer of any changes to the project plan and/or scheduling.
4. Work will be conducted in a manner that minimizes impacts to existing landscaped and natural areas. Keep disturbance footprint as small as possible (area of impact to be approved by Parks Canada EPO). Removal of trees must be avoided wherever possible. If tree removal is necessary, potential tree(s) to be removed must be flagged and approved by Parks Canada EPO. Roots shall be left undisturbed where possible.
5. A Parks Canada representative must be present during the first filling of the replacement tank. Contact Ryan Decker, Technical Services Officer (Ph: 709-458-3565; Email [ryan.decker@canada.ca](mailto:ryan.decker@canada.ca)) or Parks Canada's EPO. They will provide guidance on inspection, spill containment requirements, and certification requirements prior to the initial filling of the tank.
6. This region is subject to extreme weather events with high winds and heavy precipitation. If operations pose an environmental risk in the event of extreme wind or rain events (i.e., posted weather warnings for the region on Environment Canada) the Project Manager, in consultation with the Environmental Protection Officer, has authority to stop or delay work activities. If water does enter the excavated area and must be pumped out then the contractor will be responsible for pumping the water into a contained area and manage it as waste water.
7. The contractor is responsible for maintaining a temporary fuel storage system for the duration of their work. This temporary fuel storage tank and its associated hose connections must meet the Canadian Standard Association code for fuel storage. It shall be placed in a location that does not put the tank at risk of damage from construction activities.

#### Equipment

8. Prior to arrival on site equipment must be properly tuned, cleaned and free of contaminants, in good operating order, free of leaks (e.g., fuel, hydraulic fluid, coolant, oil or grease), and fitted with standard air emission control devices, spill pans, and spark arrestors. Equipment must also be free of invasive species, plant seeds (e.g., noxious weeds), and soils. Equipment that arrives on site soiled will be directed to be remove the piece of equipment from the Park until it is cleaned and/ or maintained.
9. Project staff must inspect equipment daily for fuel, hydraulic fluid, and other leaks, and for structural integrity, and inspections will be recorded. This documentation is required to be kept open to site audit. Detected leaks will be addressed immediately.
10. Equipment maintenance (e.g., oil changes) is not permitted on Parks Canada's property.
11. Equipment operators must be fully trained and experienced.
12. Fuelling heavy equipment should not occur within 100 meters of open water, and shall be carried out on a level impermeable roadside surface or at a staging area with spill catchment countermeasures in place. If a buffer of 100 meters cannot be met due to the work site location, all efforts should be made to fuel at the furthest appropriate area meeting the criteria of road surface and spill catchment. Fuelling sites should not drain towards water bodies or wetlands. Fueling of larger operating equipment (e.g., dump trucks and backhoe) shall occur at the Discovery Centre's overflow parking lot, unless otherwise communicated by Park Canada's EPO.
13. Fuelling of small engines (e.g., generators, chainsaws) will not be permitted within 30 meters of open water and portable containment pads must be used to prevent ground contact by accidental fuel spills.
14. Generators shall be placed in a containment pan during operation.
15. Storage and movements of heavy equipment and workers' private vehicles shall be restricted to the 'footprint' of the construction and staging area only. This shall be the area in front of the staff entrance to the basement of the Discovery Centre.





16. To prevent materials (e.g., soil, rock, construction material, etc.) from escaping dump trucks, loads must not exceed the safe transport capacity specified by the Department of Transportation. Dump trucks must use appropriate covers when necessary.
17. Ensure careful machine operation to prevent damage to surrounding vegetation and soil disturbance. To prevent this, equipment must remain on existing right of ways wherever possible and, where this is not possible make use of rig mats or swamp mats wherever warranted.

#### Hazardous materials and contaminants

18. Handle and store hazardous materials as per applicable federal legislation/regulations. The project lead must have all relevant and current Material Safety Data Sheets available onsite.
19. Hazardous or toxic products (e.g., fuels, lubricants, paint, sealants, etc.) must be (i) securely stored (i.e., in a containment pan), (ii) shall be stored 100 meters from water bodies, and (iii) shall not be disposed of on Parks Canada's property.
20. Fuels, gases, or other deleterious substances will be contained within the appropriate and approved containers, and tanks, hoses and connections will be inspected prior to use.
21. Secondary containment and spill kits must be available on site during all periods of work. These must be able to handle 125% of the largest potential spill, and workers must be trained in their use and aware of their location. Spill containment may require a cover or lid or be regularly checked for accumulated water, as the region is prone to high precipitation which could reduce the 125% capture capacity if the container collects water.
22. Following the cleanup of any spill larger than 5 liters the spill site will be inspected to ensure there is complete containment and disposal to the satisfaction of Parks Canada Environmental Protection Officer.
23. If potentially hazardous materials (e.g. cement-based products, sealants or paints) are used on site ensure raw material, mixed compounds and wash water are not released to any watercourse or soils. Measures such as collection/drip trays and berms lined with occlusive material such as plastic and a layer of sand, and double-walled fuel tanks can prevent spills into the environment.
24. Each piece of operating equipment (e.g., excavator, dump truck, work trucks, etc.,) shall have a portable spill kit on board. This includes a clearly labelled "Spill Kit" bag that contains multiple yellow heavy duty disposable bags for waste material, 2 or more spill booms (i.e., absorbant socks), and 5 or more spill pads. Spill kit material shall be replenished immediately if used. This spill kit should have an absorbant capacity of at least 23 litres or 5 U.S. gallons.
25. The worksite shall have a stationary spill kit on site at all times. This spill kit shall be a clearly labeled 45 gallon drum (polyethylene or steel), with 10 or more absorbant socks (4 inches diameter by 4 feet), shock resistant shovel, at least 30 spill pads, at least 5 heavy duty disposal bags that are clearly marked as hazardous waste material.
26. The fuel system being installed must be compliant with the Canadian Environmental Protection Act, 1999 (S.C. 1999, c.33), federal Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (SOR/2008-197).

#### Waste

27. Clean tools and equipment off-site to prevent the release of wash water that may contain deleterious substances.
28. Burning of any vegetation or worksite materials is prohibited on Parks Canada's property.
29. To prevent habituation of wildlife, human wildlife conflict, and risk of wildlife being struck by vehicles, garbage that includes food waste or other wildlife attractants must be securely stored so that it is not accessible to wildlife, and should be disposed of daily.
30. All construction waste shall be secured (e.g. to prevent loss during the high winds that frequently occur in the project area) and then disposed of outside of the park at the appropriate waste management facility on a regular basis (i.e. daily).
31. The water used to clean the fuel system shall be fully contained within the vacuum truck and fuel system. After the vapour test confirms less than 10% occurrence of toxins, the vacuum truck must transport the contaminated fluid off of Parks Canada's property and to the appropriate disposal facility.





32. All components of the fuel system that are removed (i.e. underground storage tank, piping line, day tanks) shall be transported off of Parks Canada's property and disposed of at the appropriate facility.
33. Any concrete that needs to be removed shall be broken up and transported out of the park to the appropriate waste facility.
34. Soil and subsurface material with environmentally unacceptable concentrations of hydrocarbon shall be excavated and transported off of Parks Canada's property to the appropriate disposal facility.

#### Erosion and Sediment Control

35. Excavated material and debris must be stored in a stable area, far enough away from open water to prevent runoff of sediment or potential contaminants from entering nearby wetlands. Protect excavated material from dispersing (e.g., place on tarps, cover with erosion blankets or tarps, contain with sediment fencing or sandbags).
36. Schedule work to avoid wet, windy and rainy periods that may increase erosion and sedimentation. As previously stated, in the event of extreme weather events the Environmental Protection Officer has authority to postpone work activity.
37. All surplus excavated and/ or spoil material must be removed regularly and disposed of at an approved location and in an approved manner.
38. Appropriate erosion and sedimentation controls must be installed prior to earthworks activities commencing. Regularly inspect and maintain erosion and sediment control structures during all phases of the project and modify or enhance measures as necessary. Acceptable materials in this location include locally sourced rock/ gravel for rock check dams, biodegradable erosion control blankets or sediment fencing.
39. In the event of erosion and sediment control measure malfunction, work must be stopped until measures are adjusted to address the problem.
40. Erosion and sediment control materials will be readily available on-site.
41. Minimize the length of time soils are exposed and complete work in one area before commencing work in another area.
42. A grace period is required following completion of work prior to the removal of sediment and erosion control measures to allow suspended sediments to settle and disturbed surfaces to stabilize. Remove accumulated sediments prior to removing erosion control products. Timing of removal shall be approved by Parks Canada's Environmental Protection Officer.
43. Excavation of soil and subsurface material around the existing fuel tank and piping line is required. Backfilling with locally sourced rock material is required to stabilize the subsurface and grading or topping with locally sourced soil, seed and/ or sod mats is required to blend with the existing natural landscape.

#### Additional environmental mitigations

Note that the mitigations listed above will address many potential impacts on valued components of the environment, visitor experience and cultural resources. The following additional mitigations are required to further protect specific elements of these resources.

#### Air quality and noise

44. All equipment, vehicles and stationary emission sources will be well maintained and used at optimal loads for minimal noise and air emissions.
45. Minimize idling of engines, contingent on operating instructions and temperature considerations.

#### Concrete Handling

46. Ensure safe transport of concrete mixture from mixing location to application site. This may include reducing the amount of mixture carried at one time or having additional spill pans available.
47. Ensure raw material, mixed compounds, and contaminated wash water are not released to any watercourse or soils. Fluids and mix shall be contained and removed from the site to an approved disposal facility. Straw bales or sandbags lined with plastic can be used for temporary containment areas to capture the contaminated fluid and prevent spills into the environment.





48. Maintain complete isolation of all cast-in-place concrete and grouting from fish-bearing waters for a minimum of 48 hours if ambient air temperature is above 0 °C and for a minimum of 72 hours if ambient air temperature is below 0 °C or until significantly cured to allow the pH to reach neutral levels.
49. Excess mixed cement should be disposed of off of Parks Canada's property and where there is no potential for contact with any wetlands or open water. However, small amounts of excess concrete, for the purpose of testing, may be temporarily dumped in designated structures such as onsite pits, berm areas or portable waste bins, located a minimum of 30 m from watercourses, wetlands and any drainages. Straw bales, wood stakes, and sandbag materials can be used to construct temporary containment walls or "barriers", and these must be sufficient in size to contain all liquid and concrete waste with a minimum of 10 cm (4 inches) freeboard. Plastic lining material shall be a minimum of 10-mil polyethylene sheeting and shall be free of holes, tears or other defects that compromise the impermeability of the material. Collected wastewater must then be removed from the site and hardened concrete shall be broken up, removed, and disposed of off of Parks Canada's property at an approved landfill or equivalent facility.

#### Surface water

*(Note that many mitigations listed elsewhere will also mitigate impacts on surface water, especially those for erosion and sediment control and hazardous materials. The location of this work area is greater than 100 meters from a waterbody.)*

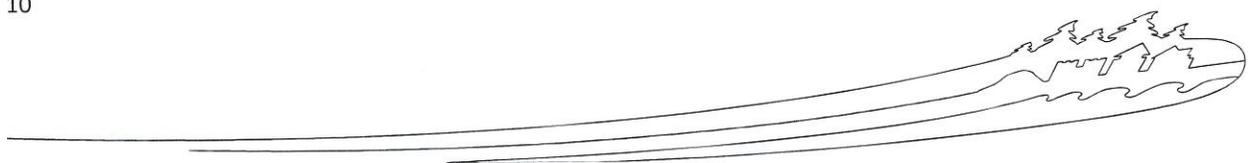
50. Construction equipment is not permitted to operate in water.
51. Waterway beds are not to be used for borrow material.
52. All construction materials must be securely contained at the work site and kept from entering waterbodies.
53. Do not clean or drain equipment in waterways. All equipment cleaning and maintenance shall occur off of Parks Canada's property.

Vegetation *(Note that many mitigations listed elsewhere will also mitigate impacts on vegetation, especially those for erosion and sediment control)*

54. Vegetation cutting will be limited to the necessary work as determined by Parks Canada Environmental Protection Officer. . The work area will be flagged and vegetation cutting is only permitted as communicated by Parks Canada Environmental Protection Officer.
55. Vegetation clearing must be minimized and wherever possible roots shall be left in the ground during vegetation clearing in order to protect soils and prevent erosion and sedimentation.
56. Cleared vegetation (i.e., brush, limbs etc.) shall be removed from the worksite and disposed of off of Parks Canada's property at the end of the day that it was cut.

#### Fauna

57. Vehicles associated with this project and travelling on public roads must respect posted speed limits and yield to wildlife.
58. Project staff must immediately report to Park's Environmental Protection Officer any wildlife discovered nesting, roosting, or denning on or near the worksite. If an active wildlife nest, roost, or den is found, the vegetated area will be left intact and a suitable sized buffer of shrubs/trees around it will be clearly marked until the nest, roost, or den is no longer in use. The appropriate size of buffer is species dependent, and will be determined in consultation with Parks Canada's Environmental Protection Officer.
59. To prevent incidental destruction of bird nests and nestlings, all vegetation cutting and grubbing must be completed either before or after the primary songbird nesting season. Therefore, this work must not occur between June 1 and after August 15. If based on the project's timeline and scope of work requires to clear vegetation between June 1 and after August 15 they must request permission to do so from Parks Canada's Environmental Protection Officer, who will make a decision whether or not the clearing can proceed based on urgency, consultation with subject area experts, and inspection of the area to be cleared.
60. To prevent habituation of wildlife, human-wildlife conflict, and risk of wildlife being struck by vehicles, feeding of wildlife is strictly prohibited and all potential wildlife attractants, including gasoline, garbage, and food, must be securely stored so that they are not accessible to wildlife. Particular vigilance is required when





workers are leaving at the end of the work day so that attractants are not accessible outside working hours and during days of rest.

61. Project staff must immediately report to Park's Environmental Protection Officer any instances of potential problem wildlife (e.g., foxes, coyotes, bears) becoming habituated to people in the vicinity of the worksite. A written record of any problem wildlife encounter must be submitted to the Parks Canada Environmental Protection Officer within 24 hours of the incident.
62. If wildlife is observed during work, give animals the opportunity to leave the work area and go into the surrounding forest or elsewhere to seek new shelter, etc.

#### Restoration

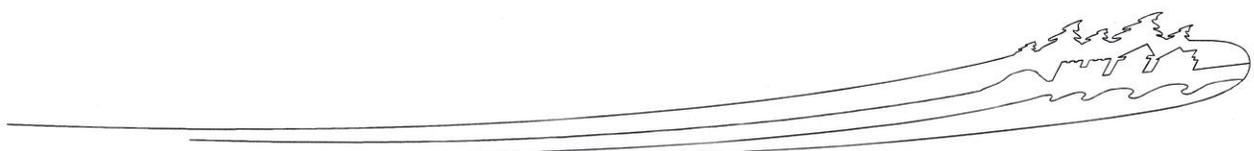
63. To stabilize exposed soils and prevent sediment runoff, site rehabilitation will be required to restore vegetation cover once the work is complete. Areas having no vegetation cover should be seeded; these areas should first be cultivated to a depth of 100 mm, and salvaged topsoil should be spread in areas lacking sufficient soil; topsoil should be spread evenly and should not be compacted. A seed mixture of 60% annual rye and 40% creeping red fescue should be applied as soon as possible and, if work is completed during the growing season, should be applied not later than 2 weeks after completion of site preparation. If the work is not completed before September 30 then seeding shall be delayed until the following spring.

#### Visitor Experience

64. Maintain the project area in as tidy a condition as is practical for the duration of work.
65. Equipment operation and excavated areas may present a hazard to visitors and staff at the Discovery Centre. Temporary fencing or some other form of barrier should be erected for the duration of work to exclude members of the public from the project area.
66. Appropriate signage warning the public of work in the area should be in place around the immediate work area.
67. Human wildlife interaction must be promptly reported to Park's Environmental Protection Officer. Workers are prohibited from feeding or disturbing wildlife.
68. Any onsite stockpiling area for construction materials must be barricaded from public access.

#### Cultural Resources

69. Use a Geo-textile matting underneath the area where the excavated fill will be placed during the excavation work.
70. Allowing a heavy machineries in to undisturbed areas might destroy unknown archaeological resources; Use the Parking lot east of the project area as a staging area since it is already established to be used by heavy machinery.
71. Although the work will occur in an area that has already been disturbed, there is a chance that cultural features and/or artifact concentrations may be encountered. If features (e.g., structural remains and/or artifact concentrations) are encountered, work should stop in this area, photographs should be taken, and the Parks Canada project manager informed. The project manager should then contact Parks Canada's Terrestrial Archaeology section for advice. An assessment of significance will determine what will be required to mitigate the chance find.
72. All work must occur within the project area as originally designed and outlined in the drawing design attached to this email (Project # R.080258.014, approved in March 2018, and registered in 07/09/2018). If the footprint of the project area changes inform the Parks Canada project manager prior to any excavation in order to arrange for additional assessment.





**9. OTHER Considerations**

Check all that apply

- Public/stakeholder engagement
- Aboriginal engagement or consultation
- Surveillance
- Follow-up monitoring, required to evaluate effectiveness of mitigation measures and/or assess restoration success
- Follow-up monitoring, required by legislation or policy (indicate basis of requirement e.g. required by the *Species at Risk Act*)
- SARA Notification

Work activity associated with this project will be monitored to ensure mitigations are in place and that hazardous materials and residual contaminants are properly handled. Particular attention will be required during the use of the vacuum truck and underground tank removal for the proper disposal of hazardous materials. Follow-up monitoring of the excavated area that was backfilled and restored with native soil and vegetation is also required.

**10. SIGNIFICANCE OF RESIDUAL ADVERSE EFFECTS**

Natural Resources: Given the magnitude of effects, the phasing of project activities, and application of mitigation measures, the project is unlikely to result in significant residual adverse effects to natural resources. Replacing the existing underground system should have a net positive effect on the environment. The tank and surrounding area will be excavated to remove any contaminated material, backfilled with locally sourced rock and soil material, and shaped to the existing landscape. This work will occur within a pre-existing footprint of the fuel storage tank.

Visitor Experience: Given the magnitude of effects, the fact that the work will occur during the end of the visitation season, and application of mitigation measures, the project is unlikely to result in significant residual adverse effects to visitor experience.

Cultural Resources: Given the magnitude of effects, the low potential for archaeological resources, and application of the mitigation measures the project is unlikely to result in significant residual adverse effects to cultural resources.

**11. EXPERTS CONSULTED**

Department/Agency/Institution: Environmental Services Public Works and Government Services Canada	Date of Request: 2019-09-04
Expert's Name & Contact Information: John White 902-221-1823 PO Box 2247 Halifax, NS B3J 3C9	Title: Senior Environmental Specialist
Expertise Requested: Fuel tank replacement.	
Response: John White provided input on federal storage fuel tank specifications, regulations and requirements. He also provided guidance on dealing with potential, but not probable, scenarios of contamination from the existing fuel tank.	





**12. DECISION**

Taking into account implementation of mitigation measures outlined in the analysis, the project is:

- not likely to cause significant adverse environmental effects.
- likely to cause significant adverse environmental effects.

FOR SARA REQUIREMENTS:

- There are no residual adverse effects to species at risk and therefore the SARA-Compliant Authorization Decision Tool was not required*

**OR**, the SARA-Compliant Authorization Decision Tool ([Appendix 2](#)) was used and determined:

- There is no contravention of SARA prohibitions*
- Project activities contravene a SARA prohibition and CAN be authorized under SARA*
- Project activities contravene a SARA prohibition and CANNOT be authorized*

**13. RECOMMENDATION AND APPROVAL**

<p><b>Prepared by:</b> Courtney King Environmental Protection Officer Gros Morne National Park</p>	<p>Date: <i>Sept 5, 2019</i> <i>Courtney King</i></p>
<p><b>Recommended by:</b> Shawn Gerrow A/ Resource Conservation Manager Gros Morne National Park</p>	<p>Date: <i>[Signature]</i> <i>Sept 6, 2019</i></p>
<p><b>Approval Signature:</b> Geoffrey Hancock Field Unit Superintendent Western Newfoundland and Labrador Field Unit</p>	<p>Date: <i>Sept 5/19</i> <i>[Signature]</i></p>





## 14. ATTACHMENTS

### 14.1. BMPs

Parks Canada Agency. 2014. Petroleum storage tank system guideline. Parks Canada Agency.

Parks Canada Agency. 2015. National best management practices for petroleum storage tank systems. Parks Canada Agency.

### 14.2. Other

Appendix 1. Effects Identification Matrix.

Appendix 2. Response from Cultural Resource Management on the Cultural Resource Impact Analysis.

## 15. NATIONAL IMPACT ASSESSMENT TRACKING SYSTEM

The project must be registered in the [Parks Canada National Impact Assessment Tracking System](#) within the fiscal year the project took place. If the project is on hold, was cancelled, or was determined to be likely to cause significant adverse effects and did not go ahead, please indicate this information in the tracking system (see selections in the *Assessment Status/Decision* field).

- Project registered in tracking system
- Not yet registered (*CEAA 2012 requires PCA submit a report to Parliament annually. EIAs must be entered in the tracking system **by the end of April** to enable reporting.*)

**\*\*\*Ensure that all required mitigation measures and conditions (e.g. follow-up monitoring requirements) are included in project permits and authorizations\*\*\***





## Appendix 1: Effects Identification Matrix

A. Direct Effects									
		Valued components potentially directly affected by the proposed project							
		Natural Resources					Cultural Resources		
		Air	Soil & landforms	Water (surface, ground, crossings, etc.)	Flora	Fauna			
Phase	Examples of Associated Activities								
Project Components	Preparation / Construction / Operation / Decommissioning	Supply and storage of materials	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Clearing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Disposal of waste	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Excavation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Grading	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Backfilling	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Use of machinery	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Transport of materials/ equipment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Use of Chemicals	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





**Appendix 2.** Response from Cultural Resource Management on the Cultural Resource Impact Analysis.

Project : Fuel Oil Storage Tank System Replacement in the Discovery Centre, Woody Point, Gros Morne National Park

The work covered under this project consists of the furnishing of all plant, labour and materials to replace the fuel oil storage tank system at the Discovery Centre in Gros Morne National Park, NL. The construction work of this project will completely remove the existing fuel storage system at the Discovery Centre, including an underground storage tank and replace it with a new system that meets current federal regulations. The new underground tank and associated piping will be placed in the same location as the old system. The area of excavation has already been disturbed.

**Review of CRIA request:**

This Archaeological Overview Assessment (AOA) is based on a review of documents provided, maps of the area of the project. There is no archaeological concern with the Fuel Oil Storage Tank System Replacement at Discovery Centre Woody Point. As such, there is minimal to none impact on potential archaeological resources. The area around the Discovery Centre has minimal to low probability of exposing or disturbing cultural artifacts. An Archaeological Impact Assessment (AIA) is not recommended for this project.

**Additional Archaeological Mitigation Measures:**

Impacts from construction activities are deemed to be significant to adversely impact potential archaeological resources unless the following mitigation measures are employed for this Project:

1. Use a Geo-textile matting underneath the area where the excavated fill will be placed during the excavation work;
2. Use the Parking lot east of the project area as a staging area since its already established to be used by heavy machinery since allowing a heavy machineries in to undisturbed areas might destroy unknown archaeological resources;
3. Although the work will occur in an area that has already been disturbed, there is a chance that cultural features and/or artifact concentrations may be encountered. If features (e.g., structural remains and/or artifact concentrations) are encountered, work should stop in this area, photographs should be taken, and the Parks Canada project manager informed. The project manager should then contact Parks Canada's Terrestrial Archaeology section for advice. An assessment of significance will determine what will be required to mitigate the chance find;
4. All work must occur within the project area as originally designed and outlined in the drawing design attached to this email (Project # R.080258.014, approved in March 2018, and registered in 07/09/2018). If the footprint of the project area changes inform the Parks Canada project manager prior to any excavation in order to arrange for additional assessment.

Also attached the request for CRIA for the upcoming project. The impacted area by the project has been previously disturbed and consists of backfill material. Also attached the projects drawing and specification.

Please contact me if you require more information and to confirm that this request has been received.

Cordialement / Regards

André Miller

