

Appendix A

Parks Canada Basic Impact Assessment



Parks Canada Basic Impact Analysis

1. PROJECT TITLE & LOCATION

Water Infrastructure Upgrades
Sable Island National Park Reserve

2. PROPONENT INFORMATION

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3. PROPOSED PROJECT DATES

Planned commencement: 09/01/2018
Planned completion: 03/30/2019

4. INTERNAL PROJECT FILE

MNSFU-04-2018-SI

5. PROJECT DESCRIPTION

The objective of this project is to upgrade the potable water infrastructure for SINPR. This project includes the replacement of water treatment system components and installation of a new floor drain. The pump house and in ground piping will be reused.

The project will include (excerpted from Project Description):

1. *Site preparation/access activities* – A tracked skidsteer will be used to mob/demob and moving new equipment to pump house.
2. *Dimensions of structures, size of excavation, area of disturbance, fill requirements* – Excavation to install new floor drain: 9mx2mx2m deep. Excavation to tie into existing pipe distribution network: 3mx3mx2m deep. Excavation for floor drain distribution field: 0.6mx10mx1m deep. The field product uses its own drainage media, so gravel is not needed for backfilling.
3. *Construction activities will include:* Disconnecting the power to the building. Removing all existing electrical and water treatment equipment in the Pump House. Installing new equipment, and a new pressure vessel in the Visitors Quarters. Ground work will include a) Installing a new floor drain and b) tying into existing distribution network. A small amount of grout will be used inside the building to seal the old drain. Commissioning the new equipment, and removing the old equipment, which will be disposed of off island.
4. *Associated project work (e.g., paving, vegetation removal, excavation, etc.)* –The new treatment equipment will need to be moved by the skidsteer to move it from Main Station to the Pump House.
5. *Changes to utilities, capacity or demand, new lines (i.e. water, electric, natural gas, wastewater)* – Water capacity should remain the same; however, the treatment will improve water quality by using better UV filters, pH balancers and filtration systems. The new pressure tanks will help with water pressure issues currently on the island. The existing water lines will not be changed under this project.





6. *Operational requirements: (materials, maintenance procedures, monitoring, waste & wastewater management requirements):* The water system will be deactivated for some amount of time to complete the work and tied in the new system into the existing piping network. The new system should deliver higher quality water.
7. *Site modifications, structure removals, site reclamation activities:* The existing underground pipe distribution network will not be changed with this project. The Pump House will remain the same, except all of the equipment inside the building will be removed.

6. VALUED COMPONENTS LIKELY TO BE AFFECTED

This project will potentially effect Natural Resources, Cultural Resources and Visitor Experience.

7. EFFECTS ANALYSIS

The objective of this project is to install new water treatment infrastructure in the existing pump station.

Natural Resources

Potential impacts to natural resources from this project include damaging vegetation, erosion as well as fuel spills. The proponent should be able to mitigate potential negative effects.

Cultural Resources

This project may disturb some artefacts through installation of drainage field. The proponent should be able to mitigate these effects.

Visitor Experience

Fence placement will positively impact public safety by improving the treatment system.

8. MITIGATION MEASURES

Natural Resources

1. **Wildlife**
 - a. Work crews will maintain safe distances from all island wildlife and will report any observations or conflicts to PCA staff.
2. **Vegetation and Erosion**
 - a. Skidsteer should remain on existing pathways as much as possible and where not possible be driven preferentially on marram grass. The contractor shall supply swamp mats, mud mats, plywood or similar is required anywhere skidsteer must turn. Lightweight fiberglass or plastic mats are preferred for their ease of transport and longevity.
 - b. The excavation footprint shall be minimized.
 - c. Excavated material should be placed on a tarpouline or geotechnical cloth to avoid smothering vegetation.
 - d. Excavated material should be reused for backfilling.
 - e. Excavated vegetation shall be set aside and replanted over backfilled trench.
 - f. Work should be done in an efficient manner that minimizes the number of tranists required.
3. **Fueling Equipment-** Fuel storage and refuelling will be done in accordance with Best Management Practices developed for Parks Canada as follows:
 - a. Due to the small scale of this project all equipment fueling and maintenance of equipment should occur off site.
 - b. Petroleum product storage shall be off-site in secure areas.





- c. All equipment shall be properly tuned, free of leaks, in good operating order and equipped with standard air emissions control devices.
- d. A Spill Response Plan should be prepared to account for leaks. This plan must detail the containment and storage, security, handling, use and disposal of empty containers, surplus product or waste generated in the application of these products in accordance with all applicable federal and provincial legislation. The plan shall include a list of products and materials to be used or brought to the construction site that are considered or defined as hazardous or toxic to the environment.
 - a. Timely and effective action shall be taken to stop, contain and clean-up all spills.
 - e. Spill kits shall be provided at re-fuelling, lubrication, and repair locations that are capable of dealing with 110 % of the largest potential spill and shall be maintained in good working order. Site staff shall be informed of the location of the spill response kit(s) and be trained in its use.
 - f. Report any spills that occur immediately to Parks Canada and/or the on-site Sable Island Operations Coordinator. Spills may also be reported to the Environment Canada oil spill and pollution (24 hr) reporting line at 1 800.565.1633.

4. Concrete and grout work

- a. Temporary concrete washout facilities shall be located a minimum of 30m from water bodies.
- b. Temporary concrete washout facilities shall be temporary bin, pit or bermed areas constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations.
- c. Sandbag materials can be used to construct temporary containment walls or "barriers".
- d. 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.
- e. The soil base shall be prepared free of rocks or other debris that may cause tears or holes in the plastic lining material.
- f. Wash concrete from mixing containers into approved concrete washout facility or collect in an impermeable bag for disposal.
- g. Once concrete and grout wastes are washed into the designated area and allowed to harden, the concrete shall be broken up, removed, and disposed of as per SINPR disposal guidelines.

5. Waste Disposal

- a. If possible deconstruct rather than demolish. Take all reasonable efforts to salvage and recycle as much material as possible to divert from landfill sites and reduce impact of transporting off island.
- b. All potentially recoverable/reusable materials should be reviewed by operations coordinator to determine if they should remain on island or should be back hauled.
- c. Material deemed undesirable must be packaged and stored according the operations coordinators direction.
- d. Maintain a tidy work site, with clean-up of dust and debris at the end of each day.





Cultural Resources

Cultural resources are unlikely to be impacted by this project – there are no known historic features in this area – but as standard procedure PCA must minimize and document any impact. No archaeological monitoring is required for this project. There will be no mechanical excavation, but rather workers using hand shovels to dig holes for the new floor drain (9m long x 2m wide x 2m deep), connecting that field to existing pipe distribution network (3x3x2), and floor distribution field (0.6x10x1).

Mitigations include:

1. Excavation must be kept to a minimum – generally speaking, and specifically to the size of the holes mentioned above.
2. Contractors or PC staff must be prepared to deal with artifacts. If any artifacts are unearthed, they must be photographed in situ (in place) and collected in plastic bags for analysis at the archaeology lab in Dartmouth by Charles Burke. These should be clear plastic bags that are labelled with permanent ink noting the date and location, using GPS. A short written description of the context in which artifacts are found would also be very helpful.

Operations will halt immediately if any architectural or stratigraphic remains are encountered. The discovery of such historical resources must be reported to the Project Manager immediately. The site must not be disturbed further until there is communication with a PC archaeologist. Again, PC staff and contractors must photograph the area.

Visitor Experience

This projects will improve visitor safety. Effects to visitor experience can be mitigated by replacing water treatment infrastructure when no tourists are present on the island.

9. PUBLIC/STAKEHOLDER ENGAGEMENT & ABORIGINAL CONSULTATION

- 9 a)** Indicate whether public/stakeholder engagement was undertaken in relation to potential adverse effects of the proposed project:
- No
 - Yes (describe the process to involve relevant parties and indicate how comments were taken into consideration).
- 9 b)** Indicate whether Aboriginal consultation was undertaken in relation to potential adverse effects of the proposed project:
- No
 - Yes (describe the process to involve relevant parties and how the results were taken into consideration).

10. SIGNIFICANCE OF RESIDUAL ADVERSE EFFECTS

Potential Negative effects should be suitably mitigated as per the implementation of this BIA. There are no anticipated significant residual adverse effects.

11. SURVEILLANCE

- Surveillance is not required





- Surveillance is required (provide details such as the proposed schedule and the focus of inspections)

Environmental Surveillance Officer, Sable island Operations coordinator or delegate will observe fence installation and ensure that mitigations are adhered to.

12. FOLLOW-UP MONITORING

Follow-up monitoring is:

- not required
- legally required (e.g. under the *Species at Risk Act* or *Fisheries Act*)
- required in accordance with the *Parks Canada Cultural Resource Management Policy*

13. SARA NOTIFICATION

Notification is:

- not required
- required under the *Species at Risk Act* (outline the nature of and response to any notification).

14. EXPERTS CONSULTED

Include Parks Canada experts. Add as many entries as necessary for the project.

Department/Agency/Institution: Parks Canada	Date of Request: 28/05/2018
Expert's Name & Contact Information: Keith Mercer	Title: Cultural Resource Manager
Expertise Requested: Protection of cultural resources while excavating and installing fence posts	
Response: Provided mitigations for cultural resources	
Department/Agency/Institution: Parks Canada	Date of Request: 18/06/2018
Expert's Name & Contact Information: Dan Kehler	Title: A/Park Ecologist, Sable Island National Park Reserve
Expertise Requested: SARA Authorization Considerations/general ecological context and risks	
Response: The most impacting component of this project is likely to be skid steer use causing damage to vegetation and erosion. There are no anticipated impacts to SAR.	

15. 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.

NOTE: If the project is identified as likely to cause significant adverse effects, CEAA 2012 prohibits approval of the project unless the Governor in Council (Cabinet) determines that the effects are justified







in the circumstances. A finding of significant effects therefore means the project CANNOT go ahead as proposed.

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

16. RECOMMENDATION AND APPROVAL

(Add additional blocks as required)

Prepared by: EIA author: Troy Pretzlaw Resource Management Officer- Impact Assessment, MNSFU, Parks Canada	Date: 18/06/2018
Recommended by: Functional manager of the project: Alannah Phillips Park Manager, SINPR	Date: 06/07/2018
Approved by: Julie Tompa, Mainland Nova Scotia Field Unit Superintendent	Date:
Signature:  	

17. APPENDICES

Appendix 1. Setting and Schematics

18. NATIONAL IMPACT ASSESSMENT TRACKING SYSTEM

- 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.*)





Appendix 1. Setting and Fencing Schematics



Figure 1: Location of the pump house relative to main station infrastructure.





PLAN— EXISTING PUMP HOUSE

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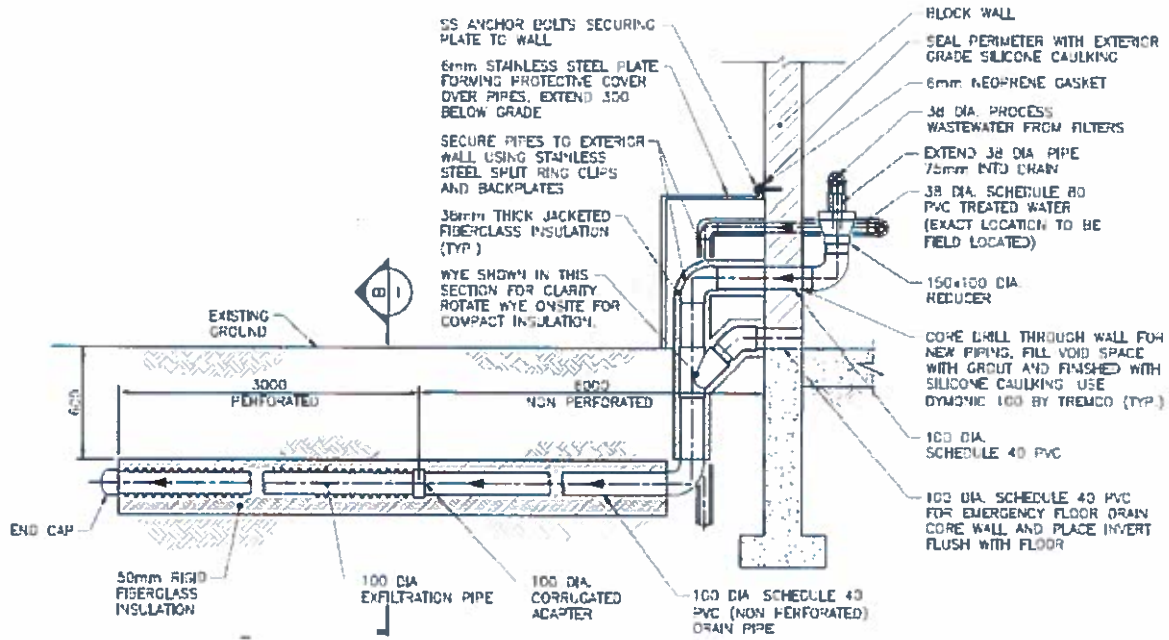


Figure 2: Exfiltration floor drain schematic

