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# Stanhope Water and Wastewater System Upgrades

## Basic Impact Analysis

Prince Edward Island National Park of Canada

October 11, 2017



Parks  
Canada

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Canada

Canada



<b>1. PROJECT TITLE</b>	Stanhope Water and Wastewater System Upgrades	
<b>2. PROJECT LOCATION</b>	Stanhope Beach Complex, Stanhope Campground, Stanhope Drainage Field and the Gulf Shore Parkway	
<b>3. PROJECT SITE</b>	Prince Edward Island National Park of Canada, Stanhope, PEI	
<b>4. PROPONENT</b>	Bill Courtney, Assets Manager, Parks Canada	
<b>5. PROPONENT CONTACT INFORMATION</b>	76 Dalvay Crescent Dalvay, PE 902-672-6374 (o) 902-940-3278 (c) <a href="mailto:bill.courtney@pc.gc.ca">bill.courtney@pc.gc.ca</a>	
<b>6. PROJECT DATES</b>	October 31, 2017	April 31, 2018
<b>7. INTERNAL PROJECT FILE #</b>	PEINP17-01	
<b>8. PROJECT DESCRIPTION</b>	<p>The existing pumping stations and related infrastructure for Stanhope Campground and Stanhope Main Beach Complex are at, or near, the end of their useful service life and require replacement. There has been leaking and failure issues with the existing force main in recent years, and this infrastructure also requires replacement.</p> <p>This basic impact assessment (BIA) includes mitigation for Phase 1 of this project - decommissioning the sewage pumping station at the beach complex and installing a gravity system that would direct the sewage to the Stanhope Campground. Phase 1 upgrades also include replacing the existing Stanhope Campground sewage pumping station and septic tank, and replacing the force main to the disposal field. This is a reduction in total sewage pumping stations from two to one, which will reduce operations and maintenance costs going forward. The existing sanitary main is made of asbestos concrete and removal of this sewer will require personnel with asbestos abatement and removal certification. This project requires significant excavation work for the removal, replacement and addition of new underground infrastructure. The following summarizes the upgrades that would be included in this design:</p> <ul style="list-style-type: none"> <li>- Replace Stanhope Campground sewage pumping station with a new concrete wet well, new duplex control panel and two new 3 phase submersible sewage pumps. This new pumping station will be located in the south ditch of the Gulf Shore Parkway, approximately 50m northeast of the existing sewage pumping station location.</li> <li>- Run new underground power supply line from the campground to the new sewage pumping station, for a distance of up to 100m (exact distance to be determined).</li> <li>-The existing buried electrical originating from the electrical building adjacent to the campground's central washroom and going to the old lift station will remain in the ground following the disconnection of the old lift station (see Figure 8 in Appendix 3).</li> <li>- Replace Stanhope Campground valve chamber with a new concrete structure including check valves and isolation valves.</li> <li>- Decommission and remove the existing septic tanks at Stanhope Campground.</li> <li>- Install a new 14,000 lgal septic tank at the new campground sewage pump station location.</li> <li>- Construct a 165 m<sup>2</sup> gravel drive-in/drive-out, pull-off and parking area beside the new sewage pumping station requiring a 45 m culvert (600mm). This is necessary to allow service vehicles a safe area to park and work, for routine and emergency maintenance. The pull-off/parking area requires adequate space for parking two pickup trucks and a sewage pumper truck. This is necessary for the safety of road vehicles, trail users, and staff. It will be gravel surfaced, with bollards and chains to stop visitors from parking there.</li> <li>- Decommission and remove the Stanhope Beach Site sewage pumping station, valve chamber and septic tank and install a 200 mm diameter gravity main (approximately 600m in length) from this site to the Stanhope Campground sewage pumping station</li> <li>- Separate the beach complex shower drains from the rest of the sewer system so that sand in the sewer pipes can be captured in a new manhole outside the building. This sand will be removed, as required, to help prevent plugging of the gravity sewer.</li> <li>- Replace the 63 mm diameter force main from Stanhope Campground to the disposal field with a 75 mm force main (approximately 1000m in length).</li> <li>- Remove the existing 63 mm sewage force main (approximately 100 m in length) from the beach sewage pumping station to the intersection point (intersection of two force mains) on Gulf Shore Parkway East right of way.</li> </ul>	



- Replace the 50 mm water supply and 19 mm water return lines from Stanhope Campground to Stanhope Beach. They are too close to existing gravity sewer line and sewer force main to leave in place. They will be removed during trenching, and then replaced with new lines. Length of supply line, as well as return line, is approximately 600m.
- Connect the existing RV dumping station at the campground to the existing gravity sewer system, to reduce the need to pump out the RV dump station tank.
- Approximately 10-20 trees are to be cleared for this Phase 1 work at new campground sewage pump station site; and 30-40 trees at the beach complex for new alignment of new gravity sewer. Another developed area within PEI National Park will be reclaimed/replanted so that there is no net gain in developed footprint.

Complete design drawings and specifications can be found in the attachments section of this BIA.

This project will be carried out mainly within previously disturbed soils and the majority of work will be within the footprint of existing infrastructure. If any new service lines are to be replaced and/or installed, work will take place within the existing footprint of the existing underground infrastructure, wherever possible. Services may be removed (lift stations, storage tanks) and new services replaced in the same location/site.

The pre-European history of the area was originally tertiary dune slacks with large amounts of migrating dune sands and storm wash overs (sea water pouring in-land over the area due to extreme wave and wind energy). Stands of white spruce would have populated the shoreline inland where Acadian forests began (250-350m). The area would have been very dynamic with the landscape potentially changing from year to year. European settlement saw the beginning of deforestation and agriculture in the area. The sites were heavily influenced by the sea, wind and sand movement. All sites had heavy agricultural influences. Most sites have now been heavily influenced by the construction of park infrastructure, including: Stanhope Campground, Stanhope Main Beach Complex, Stanhope Drainage Field, and the Gulf Shore Parkway. All park infrastructure and the parkway have seen several complete upgrades over the years, with the last parkway upgrade being completed in 2016.

## 9. ENVIRONMENTAL COMPONENTS LIKELY TO BE AFFECTED

**Natural Resources:** Air quality, noise/vibration, soil quality, soil erosion, habitat loss, invasive species, surface/ground waters, flora, and fauna/avifauna

**Visitor Experience:** The proposed work to the Stanhope Campground and Main Beach Complex will take place outside of PEI National Park's operating season and impacts to visitor experience at these sites will be negligible. Visitor inconvenience along the Gulf Shore Parkway and associated multi-use trail will begin in November of 2017, with work being completed by April 31, 2018.

**Cultural Resources:** An Archaeological Impact Assessment is necessary for this project as these areas of the National Park have not been subjected to archaeological tests or surveys and there is a high potential for discovering unknown archaeological resources.

Physical activities that will be undertaken to complete the proposed project have been summarized in Appendix 1: *Effects Identification Matrix*. A consistent, phased approach has been used throughout the assessment to identify the proposed activities and predicted impacts.

There are no indirect effects anticipated resulting from the proposed project.



## 10. IMPORTANT EFFECTS IDENTIFIED

### **Air Quality**

Provincial air quality is excellent. The province is occasionally subject to trans-boundary pollution from the mainland, including smoke from distant forest fires in neighboring provinces. Local air pollutants are restricted to seasonal (May to October) applications of pesticides, herbicides and fertilizers from park managed lands, adjacent farmlands and golf courses. Local air quality will be temporarily and minimally negatively impacted when heavy machinery is operating on-site. Negative air quality impacts will be localized and minimal at any given time during decommissioning or construction activities.

### **Noise Exposure / Vibration**

Noise pollution from demolition and construction operations will be experienced throughout this project. Construction requires the use of heavy equipment which are noisy and create significant vibration during operation. The project site currently experiences a moderate intensity of noise pollution due to vehicle traffic on the adjacent Gulf Shore Parkway.

### **Soil Quality**

Soils during excavations, earth relocation, landscaping, vegetation removal, infrastructure removal and installation may be negatively impacted (compaction, petroleum contamination) from the use of large equipment travelling in and around the work site. This will not be a significant new impact as this will occur only on previously built, disturbed and grassed lands on the project site.

### **Soil Erosion**

Excavation and construction at this project site will result in removal of a certain amount of grass, natural vegetation and topsoil thereby giving opportunity for soil erosion to occur which can have negative effects on water quality due to siltation.

### **Habitat Loss**

This project will mainly impact previously disturbed areas. Approximately 40-60 trees will require removal to accommodate new infrastructure installments. This area will no longer be available for use by mammals, rodents, avians and invertebrates as habitat. Where possible, these areas will be replanted with trees and/or shrubs. Some underground infrastructure precludes vegetating the area with trees and shrubs, trees will need to be planted in another area of the National Park, as directed by Resource Conservation.

### **Invasive Plant Species**

All demolition, construction and landscaping activities will be carried out on the already disturbed footprint of the current site. There may be a requirement for additional soils to be brought in for this project. If such a need is realized, there lies the risk of introducing invasive species into the National Park where efforts are already underway to control and eradicate invasive plants. Construction activities such as those taking place on this project have, in the past, introduced invasive species into the National Park.

### **Surface / Ground Waters**

Spills of any kind of petroleum products (oils, gasoline, diesel, hydraulic fluids) are serious and must be responded to immediately. A spill's proximity to water increases the seriousness of the event drastically as does the amount of material released. Organisms are immediately affected and may not recover from exposure, contact, or ingestion of the substance. Bio-accumulation can then become a concern for other species of prey. Spills can also seep deep into the ground reaching subsurface aqueducts, which supply PEI with all of its drinking water. Spills are a real and serious hazard when working with large machinery during construction projects. The Gulf of St. Lawrence is adjacent to the construction site. It is anticipated that any impacts will be minimal to none on this adjacent water body barring any material spills. Soil erosion is another concern with regards to impacts on water quality. This effect has previously been identified above.

### **Flora**

Flora bordering the project site may be impacted by vegetation removal, excavation, trampling or crushed by heavy equipment. This negative impact, however, is expected to be minimal. Approximately 40-60 trees will require removal to accommodate new infrastructure installments. Where possible, these areas will be replanted with trees and/or shrubs. Some underground



infrastructure precludes vegetating the area with trees and shrubs, trees will need to be planted in another area of the National Park, as directed by Resource Conservation.

#### **Fauna / Avifauna**

Project activities will require heavy equipment for excavating earth, hoisting, pouring concrete or delivering materials on the project site thereby disturbing nearby fauna / avifauna. This disturbance will occur approximately 6 to 8 hours per day during the late fall, winter and early spring and will likely result in temporary behavioral changes for fauna present in the immediate vicinity. Once project works have been completed, the localized disturbances from construction equipment will have ceased. It is expected that these impacts are minimal to species already adapted to anthropogenic impacts / disturbances. Resident fauna includes avian species such as: blue jay, black-capped chickadee, red-breasted nuthatch, golden-crowned kinglet and various woodpecker species. Red squirrels and red fox are common throughout the area.

Given the time of year for the proposed project, the majority of migratory avian species will be on southern wintering sites. There may be some disturbance to resident avian species. Most fauna will avoid the area during project activity.

### **11. MITIGATION MEASURES**

#### **1. Preparation / Pre-construction**

- The conditions presented in this basic impact assessment (BIA) will be considered part of the project. Failure to comply may result in work being suspended pending rectification of problem(s).
- The contractor is not to limit his/her environmental responsibilities to this screening report and will be responsible to adhere to Federal (including National Park / National Historic) and Municipal regulations.
- Proper safety procedures must be followed during the duration of the project as per applicable municipal, provincial (Occupational Health and Safety Act & Regs.) and federal regulations.
- The Project Manager is responsible to take all necessary precautions to ensure there is no safety concerns related to visitors of the Park.
- Any and all hazardous material must be disposed of in accordance with all federal and provincial requirements. The Environmental Protection Officer (EPO) must be notified as to when transfer and disposal of hazardous materials is to occur, as well as, which waste disposal facility is to be used.
- The contractor shall determine the exact location of all existing buried utilities before commencing work.
- All construction equipment must be fitted with standard and well-maintained noise suppression devices.
- Construction activities must respect appropriate time restrictions and use smaller, less disturbing equipment where and when possible (i.e. one hour after sun up to sundown).
- The contractor must comply with the requirements of the Workplace Hazardous Materials Information System {WHMIS} regarding use, handling, storage and disposal of hazardous materials.
- Littering is strictly prohibited within National Parks and National Historic Sites. This includes discarding wastes or garbage into trenches or excavations to later be covered.
- Feeding of wildlife is strictly prohibited within National Parks and National Historic Sites.
- Open fires and burning of waste are strictly prohibited within National Parks and National Historic Sites.

#### **2. Work Site Conditions/Staging/Laydown**

- All employees must attend a briefing with an Environmental Protection Officer before beginning work at the site to review and understand mitigative measures that are conditions of the project's approval.
- Minimize vegetation-clearing activities and ground disturbance by staging on existing hardened areas wherever possible. All staging area sites, if required, will be approved by the EPO before use.
- Avoid or terminate activities on site that attract or disturb wildlife.
- Control materials that might attract wildlife (e.g. petroleum products, human food and garbage) and properly dispose of in animal proof containers.



- Notify the EPO immediately about dens, litters, nests, carcasses (road kills), wildlife activity or encounters on or around the site. Other wildlife-related encounters are to be reported to the EPO as well within 24 hours. If wildlife is observed during work, give animals the opportunity to escape the work area to the surrounding forest or elsewhere to seek new shelter.
- Delineate the work zone; clearly mark the limits to active construction and all access and egress locations and seek EPO review and approval.
- When work involves the disturbance of soils or the use of erodible materials (e.g. sands, topsoil), prevent the transport of sediment by water by the installing of appropriate erosion and sediment controls.
- Equipment movements and workers' private vehicles shall be restricted to the 'footprint' of the construction area (i.e. asphalt parking lot).
- All construction materials must be clean and non-toxic (free of fuel, oil, grease, and/or any contaminants or invasive species).

### **3. Timing of Work**

- Works are preferably undertaken during periods of dry weather as this allows easier control of contaminated runoff and sediment. Work during large rain events should be avoided.
- If the work schedule requires working in the rain, the area of work must be isolated and appropriate sediment controls must be installed to prevent the release of sediment-laden water or any other deleterious substances into surface waters, particularly for surface repair works requiring the application of patching and sealing compounds, tar, asphalt, and chemical surface sealants.
- Minimize application of seal coats in wet conditions. Attempt to apply only to dry surfaces and not prior to (within 24 hours) or during rainfall. If unforeseen rain arrives, ensure runoff from recently seal coated surfaces are prevented from entering surface waters.

### **4. Equipment Operations**

- Ensure machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species, noxious weeds and soils from off-site.
- There will be no fording of equipment across any stream or wetlands.

### **5. Fuel Storage and Refuelling / Emergency Plans**

- 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.
- The refueling, parking of equipment, and/or storage of hazardous or toxic products, if required, shall be at a location pre-approved by the Project Manager and EPO and will not take place within 100m of a waterway
- 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-lined fuel tanks can prevent spills into the environment.
- Timely and effective action shall be taken to stop, contain and clean-up all spills as long as the site is safe to do so. The EPO shall be notified immediately of any spills. In the event of a major spill, all other work shall be stopped and all personnel devoted to spill containment and clean-up.
- In the event of a spill, Parks Canada EPO 902-393-8098 must be contacted immediately and the spill must be reported to both Environmental Emergency (1-800-565-1633) and Parks Canada Dispatch (1-877-852-3100).



- The control, clean up, disposal of contaminants and site remediation to pre-spill conditions, shall be the responsibility of the contractor. The site will be inspected to ensure completion to the expected standard and to the satisfaction of Parks Canada.

#### **6. Site Clean Up/Waste Disposal**

- Clean tools and equipment off-site (outside of National Park) to prevent the release of wash water that may contain deleterious substances.
- Construction, trade, hazardous waste and domestic waste materials shall not be burned, buried or discarded at the construction site or elsewhere in Parks Canada protected heritage places. Any construction, soils or demolition debris will be disposed of in a provincially approved manner (either a permit or receipts for costs must be submitted to PWGSC by the contractor to verify that the material was disposed of in a provincially approved manner) and not within National Parks or National Historic Sites. Construction waste storage containers, shall be emptied when 90% full. Waste containers will have lids, be wildlife proof if there attractants and waste loads shall be covered while being transported.
- Sanitary facilities, such as a portable container toilet, shall be provided and maintained in a clean condition.
- Used oil, filters, grease cartridges, oil cans and other waste products will be collected and disposed of at the nearest industrial waste facility.
- For any material removed outside the park to an approved facility, a detailed receipt will be provided to the EPO.

#### **7. Asbestos Abatement and Removal**

- All work shall be conducted in accordance with a certified asbestos abatement contractor's company work procedures but shall also be subject to adhering to all pertinent aspects of the Canada Labour Code: Part II, the Canada Occupational Safety and Health Regulations and Treasury Board Guidelines for Hazardous Substances.
- All asbestos containing material shall be disposed outside of the National Park of at an asbestos-certified disposal site.
- The contractor must be aware of all safety precautions with handling and using asbestos removal surfactant; i.e., disposal and environmental concerns (see MSDS attached).

#### **8. Gravel Crushing and Washing**

- Where possible within engineering constraints, asphalt materials should be recycled to reduce the need for new gravel.
- Gravel will be obtained from an approved operational borrow pit only.
- Gravel will not be crushed nor cleaned within the National Park. It must arrive on site already crushed and washed.

#### **9. Concrete Handling**

- Washout of concrete mixer trucks shall be performed only back at the concrete yard or contractor's facility. No concrete washout shall occur within the National Park or at roadside.
- Pump excess concrete in concrete pump bin back into concrete mixer truck.

#### **10. Pavement Marking**

- Minimize changes to the surface that could affect infiltration and runoff characteristics and maintain effective surface drainage to limit direct runoff into surface water. Pavement marking shall be undertaken pursuant to standard methods applied in National Parks for control of paint products, both in transport and handling. The Contractor shall present a description of methods to be employed for transporting and controlling paint and hazardous products,



application of paint, cleaning of equipment, containment and disposal of waste paint and cleaning products, etc. to the satisfaction of the Parks Canada Representative.

### **11. Vegetation Removal**

- There should be minimal vegetation removal to reduce erosion and project impacts. Only vegetation identified by EPO shall be removed.
- Retain 30 metre vegetated buffer around water bodies, where disturbance is necessary and unavoidable restoration is required.
- Only bio-degradable chain oil is to be used.
- All cut woody vegetation to be removed from the site will be deposited in the Dalvay Long-Term Storage Facility for future chipping.
- All cutting of designated woody vegetation must be completed prior to May 1, 2017.

### **12. Excavation**

- Where possible, trenches occupied with existing infrastructure will be used to remove old, and install new, infrastructure and utilities.
- Prior to excavation, the topmost organic layer of vegetation including as much root mass as possible will be stripped and stored adjacent to the length of the trench. After pipe removal, and the excavated material is placed back into the trench, the strips of vegetation will be placed back over the exposed area as the first step in stabilization and restoration.
- Materials shall be placed at storage sites or on the grade without spillage outside the working limits. Any material inadvertently falling outside the work limits is to be removed promptly in a manner that does not damage trees or vegetation.
- All sediment control measures must be in place before starting to prevent siltation from reaching any waterways.
- Minimize changes to the ground surface that affects its infiltration and runoff characteristics and maintain/re-establish effective surface drainage on completion of the project
- Backfill and compact excavations as soon as possible. Optimize degree of compaction to minimize erosion and allow for re-vegetation.
- All trenches or ditches left unattended overnight must be fenced or covered to prevent wildlife and/or visitor entrapment/injury/death.

### **13. Vegetation Restoration and Topsoil Replacement**

- Implement restoration plan for the disturbed area immediately following completion of construction. Restoration plans will be the responsibility of the Projects staff with collaboration with Resource Conservation staff.
- Where insufficient topsoil is available, imported soil may be used as a last resort. Imported topsoil must be certified completely free of non-native seeds and compost developed from sewage treatment plants. Site restoration using locally sourced, weed and contaminant free materials are preferred. **Soil sources must be pre-inspected by Parks Canada EPO prior to arriving at the project site within the National Park/National Historic Site.**
- Where remaining soils are unstable due to steepness or soil characteristics, immediate installation of sod or erosion control blanket is required.
- Some underground infrastructure precludes replanting some of the area that requires tree removal (i.e. near the new campground sewage pump station). This area will no longer be available for use by mammals, rodents, avians and invertebrates as habitat. Trees will need to be planted in another area of the National Park, as directed by Resource Conservation, to compensate for this loss.



#### **14. Seed, Seedbed Preparation and Seeding**

- Use Parks Canada approved seed mix (60% creeping red fescue, 20% hard fescue, 10% perennial ryegrass, 10% Alsike clover)
- Seed and stabilize (e.g. mulch/tackifier) bare areas as soon as possible after disturbance, preferably as soon as a significant area is graded and finished and before the next rain event. If there is a risk of seedling mortality as a result of fall frost, stabilize until appropriate growing conditions exist.
- Use sod in high traffic areas or places that need extra erosion control. Source sod grown from native species (often called fescue sod) and ensure adequate anchoring and watering is in place.
- Do not exceed 30 kg/ha for the broadcast method, ensure seed is integrated with the soil by light rake or harrow. Broadcast method seeding rate is 25 kg/ha (2.5g/m<sup>2</sup>) (e.g., 1x25 kg bag will cover 10,000m<sup>2</sup> or 1 hectare).
- If using hydro-seeding, do not exceed 75 kg/ha with light mulch rates (500 kg/ha- of mulch with hydro-seeding) and 150 kg/ha with heavy mulch rates (1500 kg/ha of mulch with hydro-seeding).
- Monitor temporary erosion control measures to prevent seed loss.
- Any required re-planting for landscape purposes must utilize native species (i.e. wild rose, bayberry) approved by Resource Conservation staff.

#### **14. Cultural Artefacts**

- If materials of potential historical or cultural interest are encountered, work will cease at that location, the EPO will be alerted, and Parks Canada cultural resource professionals will be immediately contacted for an evaluation assessment.

### **12. IMPACT SIGNIFICANCE**

The Canada National Parks Act, October 2000 defines ecological integrity with respect to a National Park as,

*"A condition that is determined to be characteristic of its natural region and likely to persist, including abiotic components and the composition and abundance of native species and biological communities, rates of change and supporting processes".*

It is anticipated that this project will have no or minimal impact on the existing ecological integrity of the site, the National Park and National Historic Site.

It is anticipated that this project will have no or minimal impact on commemorative integrity. Work will be completed outside of the operating season and visitor experience objectives will not be impacted.

Effect on SARA Listed Species: There are no listed species within the proposed project sites. As a result, this project will have no impact.

The proposed project will not disrupt any wetlands. No heritage sites, or other sensitive elements have been identified that would be adversely affected by the project. There are no negative cumulative effects anticipated as the result of this project.

A Cultural Resources Impact Assessment has been completed (see attachment). An Archaeological Overview Assessment has been completed (see attachments) and an Archaeological Impact Assessment is necessary for this project as these areas of the National Park have not been subjected to archaeological tests or surveys and there is a high potential for discovering unknown archaeological resources. A Statement of Work was prepared for a qualified archaeologist to examine this work area and the



archaeologist will be on site throughout the construction process (see attachments). A proposal has been prepared for archeological work to be carried out by Boreas Heritage Consulting Inc., with whom Parks Canada has a standing offer agreement (see attachments).

### 13. CONSIDERATION OF THE NEED FOR PUBLIC PARTICIPATION & ABORIGINAL CONSULTATION

Indicate whether opportunity for public participation should be offered:

No                       Yes

**12 b)** Indicate whether there is a requirement for Aboriginal Consultation in relation to project impacts:

No                       Yes

The Mi'kmaq Confederacy of Prince Edward Island was given a letter outlining the proposed project and soliciting comments and input. A letter, dated August 23rd, 2017, was received from the Mi'kmaq Confederacy stating "Our research has uncovered Traditional Mi'kmaq use of the area including: the gathering of stones, clay and seashells; and medicinal plant gathering. However, provided **the proposed activity will not interfere with these traditional rights-based activities, the Mi'kmaq do not object.** (See Figure 9 in Appendix 3)

### 14. SITE INSPECTION

Document whether a site inspection program will be required while the project is underway.

- Site inspections required. Bi-weekly site Inspections (minimal) will be required throughout the entire duration of this project and will be conducted by the project environmental protection officer (EPO). Site inspections during excavation works are required to ensuring mitigation measures are properly followed. The project EPO will also attend project meetings and briefings, evaluate the effectiveness of the measures put in place and will consult with staff and work crews during work activities.
- Inspection records and photos will be completed and maintained. A surveillance report will also be generated and filed.

### 15. SPECIES AT RISK MONITORING

- Not Required

### 16. SARA NOTIFICATION

- Not Required. There are no known provincially or federally ranked species at risk (SAR) within the proposed project site.

### 17. EXPERTS CONSULTED

Department/Agency/Institution	Archaeology and History Branch Indigenous Affairs and Cultural Heritage Directorate Parks Canada
Contact Information	Andre Miller Federal Infrastructure Investments Archaeologist Archaeology and History Branch Indigenous Affairs and Cultural Heritage Directorate Parks Canada, Government of Canada 30 Victoria street, 3rd floor, room 146, Gatineau QC J8X 0B3 andre.miller@pc.gc.ca / Tel. : 819-420-5030 / Tel. cell. : 819-635-8683



Date of Request	August 8, 2017
Expertise Requested	Archaeological Overview Assessment (AOA)
Response	These areas of the NP has not been subjected to archaeological tests or survey. With a high potential for the discovery of unknown archaeological resources, the proposed work activity will require an Archaeological Impact Assessment (AIA) to assess the potential for archaeological resources within the zones of projects 1 and 2. This should be undertaken by a qualified archaeologist who will examine the work areas to determine if undisturbed areas of archaeological potential exist. If found, these areas must be tested and depending on the result, may require additional excavation or mitigation work.
Department/Agency/Institution	Parks Canada Agency – Prince Edward Island Field Unit – Resource Conservation
Contact Information	Paul Giroux, Park Ecologist PEI National Park <a href="mailto:paul.giroux@pc.gc.ca">paul.giroux@pc.gc.ca</a> 902 672-6383
Date of Request	October 11, 2017
Expertise Requested	BIA Document Review
Response	Edits Required and Actioned
Department/Agency/Institution	Parks Canada Agency – Prince Edward Island Field Unit
Contact Information	Bill Courtney – Assets Manager
Date of Request	September 2017
Expertise Requested	Detailed project works specifications, time lines, and clarifications.
Response	October 2017– completely satisfied all questions related to project works.
<b>DECISION</b>	
<b>Taking into account implementation of mitigation measures outlined in the analysis, the project is...</b>	
<i>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 that the project CANNOT go ahead.</i>	
<input checked="" type="checkbox"/>	<b>Not likely to cause significant adverse environmental effects.</b>
<input type="checkbox"/>	Likely to cause significant adverse environmental effects.



SIGNATURES AND APPROVALS		
<b>EA Author</b>		
Name: Kim Gamble	Title: Environmental Assessment Specialist	
Signature: <i>KGamble</i>		Date: Oct 11, 2017
<b>Proponent / Project Manager</b> (Signing acknowledges the receipt, review and understanding of this document's contents.)		
Name: Bill Courtney <i>A/GREG SHAW</i>	Title: Assets Manager	
Signature: <i>Greg Shaw</i>		Date: Oct 11/17
<b>Resource Conservation Manager</b>		
Name: Brad Romaniuk <i>ACTING / PAUL GIBSON</i>	Title: Resource Conservation Manager - PEINP	
Signature: <i>Paul Gibson</i>		Date: Oct 11/17
<b>DECISION APPROVAL</b>		
Name: Karen Jans	Title: Field Unit Superintendent – PEINP	
Signature: <i>KJans</i>		Date: Oct 11/17
<b>18. REFERENCE LIST</b>		
<ul style="list-style-type: none"> <li>• Parks Canada, 2007. Prince Edward Island National Park of Canada and Dalvay-by-the-Sea National Historic Site of Canada Management Plan. 71 pp.</li> <li>• Parks Canada, May, 2015. Parks Canada National Best Management Practices – Roadway, Highway, Parkway and Related Infrastructure. 36 pp.</li> <li>• Environmental Assessment PEINP2014-07 Water and Wastewater Upgrades for the Dalvay Complex</li> <li>• Environmental Assessment PEINP17-08 Green Gables Heritage Place Redevelopment Phase II: Visitor Centre and Parking Lot</li> <li>• Environmental Assessment PEINP2013-03 Non-Friable Asbestos Transite Pipe Removal Stanhope Campground Beach</li> </ul>		
<b>19. ATTACHMENTS LIST</b>		
Appendix 1: Effects Identification Matrix Appendix 2: SARA-Compliant Authorization Decision Tool Appendix 3: Images and Site Details Figure 1. Satellite image of Stanhope, Prince Edward Island National Park. Figure 2. Satellite image of Stanhope Campground off of the Gulf Shore Parkway. Figure 3. Satellite image of Stanhope Main Beach Complex off of the Gulf Shore Parkway. Figure 4. Satellite image of Stanhope Drainage Field off of Stanhope Lane. Figure 5. Aerial photograph of Stanhope Main Beach Complex and Stanhope Campground (2013). Figure 6. Aerial photograph of Stanhope Main Beach Complex and Stanhope Drainage Field (2013). Figure 7. Historical aerial photos of project site Figure 8. Schematic of existing buried electrical to remain in place following disconnection. Figure 9. Reply from Mi'kmaq Confederacy of Prince Edward Island confirming that there is no objection to the proposed project.		



Attachments



CRIA - Stanhope  
Water & Wastewater



AOA Stanhope  
Water & Wastewater



100% Design  
Drawing



100% Design Specs



Surfactant MSDS



AIA Statement of  
Work



Boreas AIA  
Proposal

**20. AUTHORIZATION / DISTRIBUTION CHECKLIST**

<u>Position</u>	<u>Signed</u>	<u>Copied</u>	<u>Initialed</u>
Superintendent	<input type="checkbox"/>		<input type="text"/>
Resource Conservation Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Environmental Assessment Author	<input type="checkbox"/>		<input type="text"/>
Project Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Park Warden		<input type="checkbox"/>	<input type="text"/>
Central Records		<input type="checkbox"/>	<input type="text"/>



## 21. PERMITTED AUTHORITIES GRANTED BY SUPERINTENDANT FOR THIS PROJECT WORKS.

**Crown Lands** – This assessment constitutes the authorization for work on crown lands owned by Parks Canada and forms the permit for restricted activities indicated below. It shall be presented when requested for verification of authorization.

**Gazetted Lands** – This assessment is for work on Parks Canada gazetted lands. Separate permits may be issued for restricted activities identified below.

### General Regulations

**Restricted and Prohibited Activities, Uses and Travel [ Sec. 7 (5)(a) & Sect. 7 (5)(b) ]**

The superintendent may, on application to him by any person, in respect of any activity or use restricted or prohibited pursuant to subsection (1) or any entry and travel in an area that has been restricted or prohibited, pursuant to that subsection, issue to that person a permit to (a) engage in that activity or use, or (b) enter and travel in that area on such terms and conditions as the superintendent may prescribe in the permit.

**Authorization [ Sec. 7 (1)(5)(a), Sec. 7 (1)(5)(b), Sec. 7 (1)(5)(c) ]**

The superintendent may, on request, issue an authorization and may prescribe terms and conditions in any such authorization, taking into account (a) the natural and cultural resources of the park; (b) the safety, health and enjoyment of persons visiting or residing in the park; and (c) the preservation, control and management of the park.

**Preservation of Property [ Sec. 11 (1) & Sec. 11 (2) ]**

The superintendent may, on application, issue a permit authorizing the permit holder to take flora or natural objects for scientific purposes from a park, or for the removal and use of natural objects for construction purposes within a park, if the applicant demonstrates in writing that the performance of those activities will not: (a) have a significant adverse environmental impact on the park and its natural resources; (b) jeopardize any cultural, historical and archaeological resources; and (c) pose a danger to public health or public safety.

**Preservation of Property [ Sec. 12 (1) & Sec. 12 (2) ]**

The superintendent may issue a permit to any person authorizing the person to remove, deface, damage or destroy any flora or natural objects in a Park for purposes of Park management.

**Preservation of Property [ Sec. 14 (2) ]**

A superintendent may issue a permit to any person authorizing that person to remove specimens of prehistoric or historic artifacts or structures from a park for the purpose of public display in a museum.

**Use of Water Resources [ Sec. 18 (1) ]**

A superintendent may issue a permit to any person for a period not exceeding 10 years authorizing the person to take water for domestic, business or railway water supply purposes within a park from (a) any watercourse; (b) any Park well; or (c) any Park water supply system other than a waterworks system for a town site or subdivision.

### Fire Protection Regulations

**Prevention of Fires [ Sec. 3 ]**

The superintendent may issue a permit to a person to start and maintain a fire in a park and such permit shall be subject to any terms and conditions stated thereon by the superintendent.



# Appendix 1: Effects Identification Matrix

## Section A: Direct Effects of the Project

EFFECTS IDENTIFICATION MATRIX														
		Components of Environment and Mandate Elements Affected by Environmental Change												
		Natural Resources					Cultural Resources		Visitor Experience					
		Air	Soil	Water	Flora	Fauna	Historic Value	Character defining elements	View scope	Visitor appreciation & access	Recreational /other opportunities	Public Safety	Unique character & connection to place	
Phases	Associated Activities													
Project Components	Construction/Preparation	Supply and storage of materials	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Burning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
		Clearing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		Demolition	<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"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		Disposal of waste	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		Blasting/ Drilling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
		Dredging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
		Drainage	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		Excavation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
		Grading	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
		Backfilling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
		Use of machinery	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
		Transport of materials/ equipment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		Building of fire breaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
		Use of Chemicals	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Set up of temporary facilities	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Other...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	Operation / Implementation & Decommissioning	Waste disposal	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Wastewater disposal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
		Maintenance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
		Use	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Use/Removal of temporary facilities	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Use of Chemicals	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Active fire stage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
		Prescribed burn cleanup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
		Planting	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Culling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Vehicle Traffic	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Other...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			



**Section B: Potential Indirect Effects**

<b>B. Indirect Effects (all phases)</b>				
		<b>Impacts as a result of changes to the environment</b>		
		<b>With respect to non-Aboriginal peoples:</b>	<b>With respect to Aboriginal peoples:</b>	
		<b>Health and socio-economic conditions</b>	<b>Health &amp; socio-economic conditions</b>	<b>Current use of lands and resources for traditional purposes</b>
<b>Phase</b>	<b>Natural resource components affected by the project</b>			
<b>All phases: Preparation /construction operation/implementation/decommissioning</b>	Could impacts to <u>air</u> lead to adverse effects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Could impacts to <u>soils and landforms</u> lead to adverse effects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Could impacts to <u>water</u> (e.g. surface, ground water and water crossings) lead to adverse effects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Could impacts to <u>flora</u> (including SAR) lead to adverse effects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Could impacts to <u>fauna</u> (including SAR) lead to adverse effects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Other...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



## Appendix 2: SARA-Compliant Authorization Decision Tool

Date this document was completed:	Where this activity will occur: (i.e., PCA site)	SAR implicated by this activity:	Title of proposed activity (e.g., Trail development in Blue Meadow):	Author of this Document:	*Collaborators involved in drafting this document:
October, 2017	Stanhope Campground, Stanhope Beach Complex, Stanhope Drainage Field and the Gulf Shore Parkway, PEI Nat'l Park, Cavendish	None	Stanhope Water and Wastewater System Upgrades	Kim Gamble	Paul Giroux

\*Identify at the outset who might have to be involved in this document from a cross-functional collaboration/review perspective.

Part A – Is a SARA authorization required?	
<b>1. Will the activity affect a listed endangered (En), threatened (Th) or extirpated (Ex) species at risk, its residence or critical habitat?</b>	
Affect = kill, harm, harass, capture, or take individuals; possess, collect, buy, sell or trade individuals or parts of individuals; damage or destroy residence; destroy any part of critical habitat, or carry out an activity that is prohibited under a protection order. Note that indirect and direct effects of the activity on the species, residence, critical habitat, etc. must be considered.	
<input checked="" type="checkbox"/> No	<p>The activity will not affect a listed species (En, Th, or Ex), its residence, or its critical habitat AND the activity is not prohibited in a protection order. A SARA authorization is NOT required.</p> <ul style="list-style-type: none"> <li>There are no known provincially or federally ranked species at risk (SAR) within the proposed project site.</li> </ul>
	Describe the activity and explain why there is no expected effect, including an explanation of mitigation measures taken to <u>prevent</u> potential effects on species at risk, their residence or their critical habitat. If an impact assessment is being conducted, refer to the mitigations in the impact assessment.
<input type="checkbox"/> Yes	<ul style="list-style-type: none"> <li>If you checked YES, <u>use this box</u> to describe the activity and its effects on the species and continue to <b>Question 2</b>.</li> </ul> <p>Note – if you are contemplating an activity that may destroy critical habitat or is an activity prohibited in a protection order, it must be discussed with VPs and the CEO. If possible, find alternatives and mitigation measures to <u>prevent</u> destruction of critical habitat or non-compliance with an order prohibition (i.e., to avoid an effect on the critical habitat/prohibited activity and the requirement for an authorization).</p>
<b>2. Is the activity already authorized in a final recovery document or required for public safety, health, or national security AND authorized by or under another Act of Parliament?</b>	
<input type="checkbox"/> Yes	<p><b>SARA authorization is NOT required.</b></p> <ul style="list-style-type: none"> <li>If you checked YES, <u>use this box</u> to explain why the activity is exempt and STOP – you have completed the Tool.</li> </ul>
	<ul style="list-style-type: none"> <li>Explain why the activity is needed for public safety, health or national security and make a reference to the Act of Parliament under which the activity is authorized.</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>If the activity is authorized in a final recovery document, refer to the published recovery and explain why the activity is exempt under section 83 of SARA).</li> </ul> <p>Note - An activity that is exempt for public safety, health, or national security should be an activity that is imperative or an emergency-type situation pertaining to health and safety of the general public, and cannot be delayed for the normal SARA permitting process (e.g., wildfire control measures).</p>
<input type="checkbox"/> No	<p><b>SARA authorization is required.</b></p> <ul style="list-style-type: none"> <li>If you checked NO, continue to <b>Part B</b>.</li> </ul>



### Appendix 3: Images and Site Details



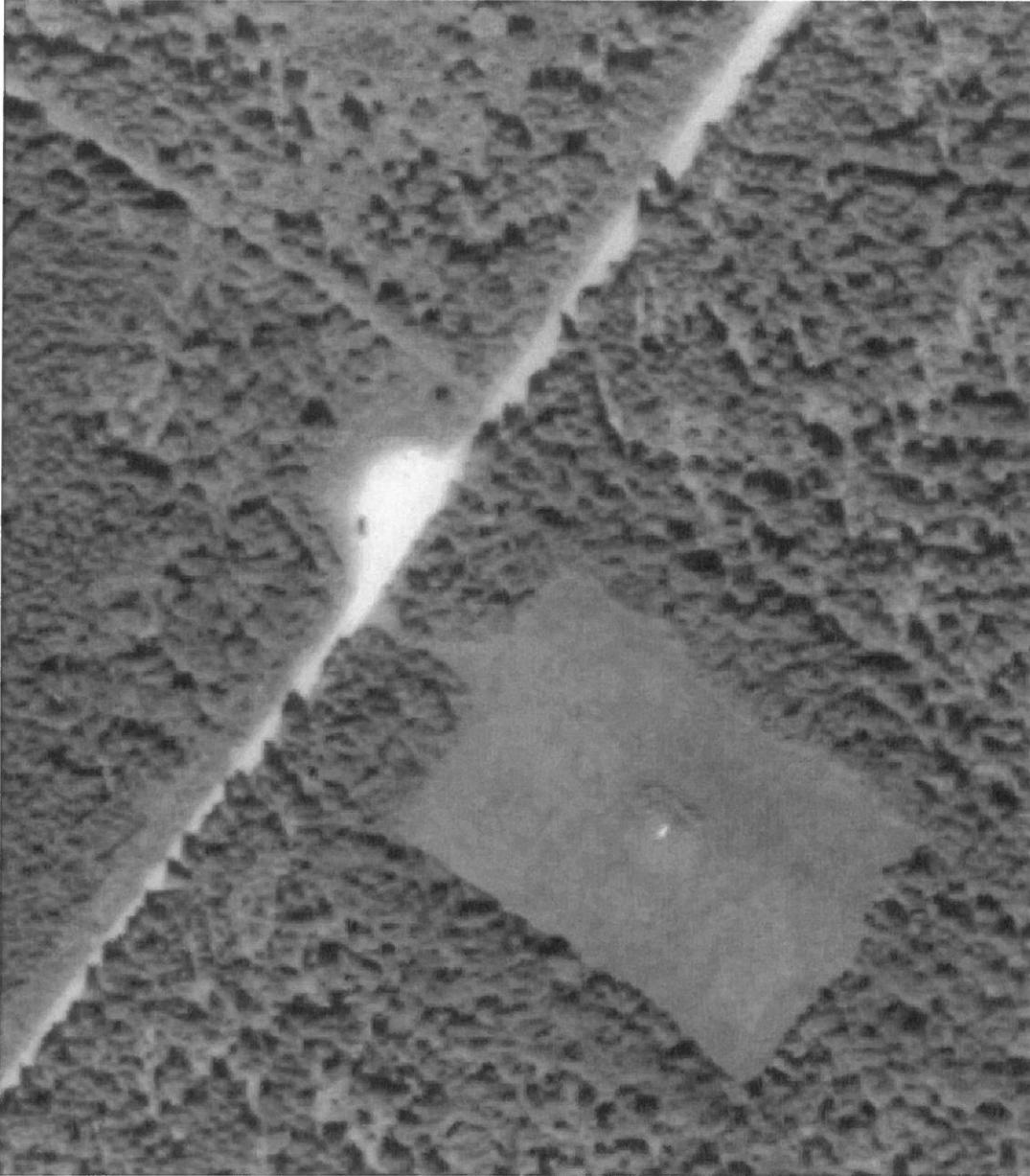
**Figure 1.** Satellite image of Stanhope, Prince Edward Island National Park. Stanhope Campground, Stanhope Main Beach Complex and Stanhope Drainage Field are indicated by red circles. The Gulf Shore Parkway and Stanhope Lane, connecting the three sites, will also be included in the work site.



**Figure 2.** Satellite image of Stanhope Campground off of the Gulf Shore Parkway.



**Figure 3.** Satellite image of Stanhope Main Beach Complex off of the Gulf Shore Parkway.



**Figure 4.** Satellite image of Stanhope Drainage Field off of Stanhope Lane.



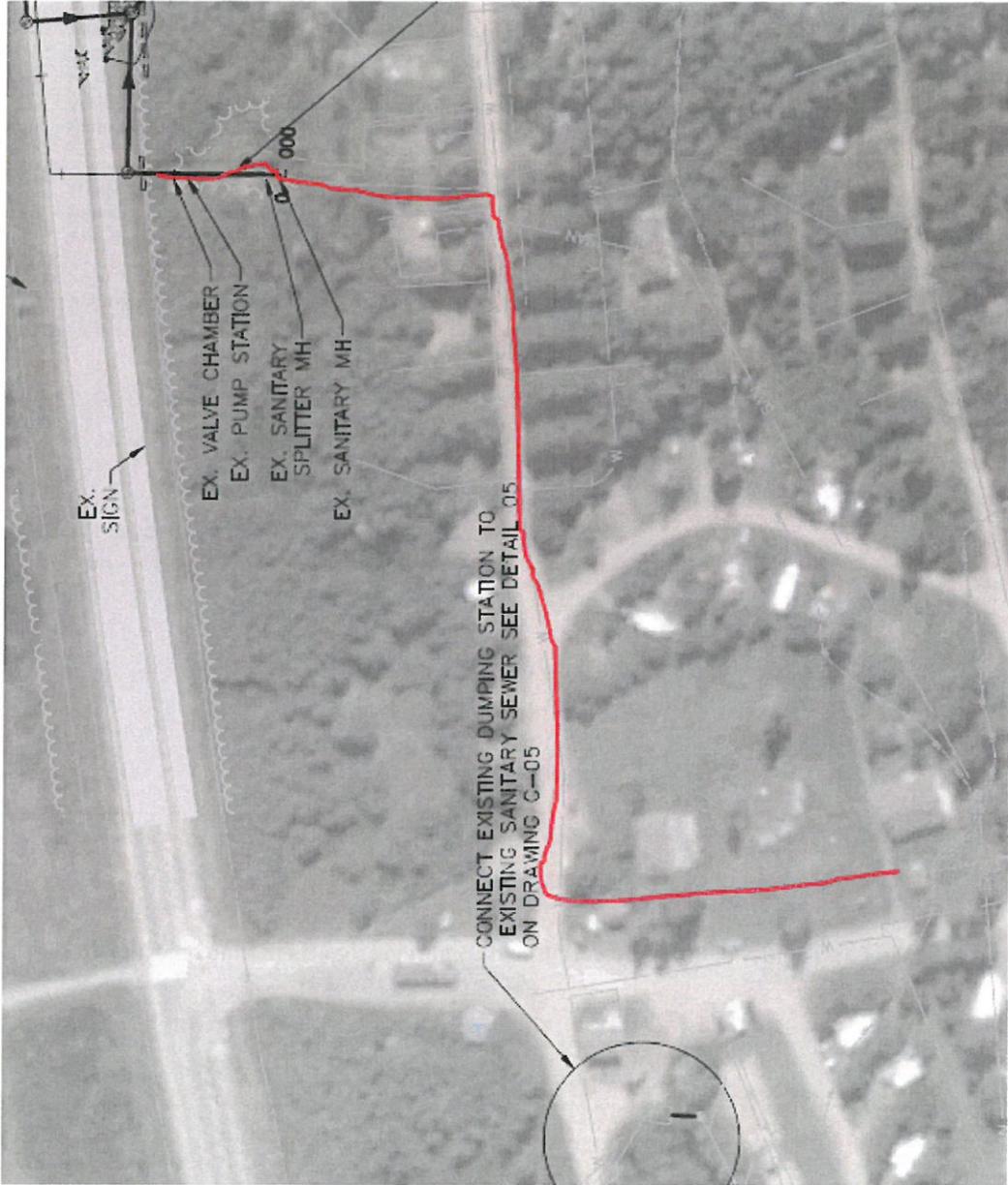
**Figure 5.** Aerial photograph of Stanhope Main Beach Complex and Stanhope Campground (2013).



Figure 6. Aerial photograph of Stanhope Main Beach Complex and Stanhope Drainage Field (2013).



**Figure 7.** Historical aerial photos of project site. Images are from 1935, 1958, 1974 (top row, right to left) and 1990, 2000, and the most recent Google Earth image (bottom row from right to left).



**Figure 8.** Schematic of existing buried electrical to remain in place following disconnection. The existing electrical pathway is from the campground central washroom electrical building to the old lift station.



200 Read Drive  
Summerside, PE  
C1N 5N7  
Tel: (902) 436-5101  
Fax: (902) 436-5655

Polyclinic  
Professional Centre  
Suite 501  
199 Grafton Street  
Charlottetown, PE  
C1A 1L2  
Tel: (902) 626-2882  
Fax: (902) 367-3779

Abegweit  
First Nation

Lennox  
Island  
First Nation

www.mcpei.ca

23 August 2017

Karen Jans  
Field Unit Superintendent  
Parks Canada  
2 Palmers Lane  
Charlottetown, PEI  
C1A 5V6

**Dear Ms Jans,**

**Re: Assessment and Rehabilitation of Water and Wastewater systems – Stanhope, Queens County, PE**

Further to your letter of August 3, 2017, I am writing in relation to Parks Canada proposed assessment and rehabilitation of water and wastewater systems in Stanhope campground and beach complex area.

Our research has uncovered Traditional Mi'kmaq use of the area including: the gathering of stones, clay and seashells; and medicinal plant gathering. However, provided the proposed activity will not interfere with these traditional rights-based activities, the Mi'kmaq do not object.

It must be remembered that the MCPEI database is, to date, a partial inventory of existing knowledge. As such, it does not mean that the subject area was not used (or used for additional purposes), rather that evidence of use, if it exists, has not yet been collected. Therefore, if anything of cultural significance should happen to come to light during the proposed activity, it is assumed that all activities will be halted until proper care and consideration can be undertaken. It is imperative to ensure proper consultation protocols are followed with the PEI Mi'kmaq, who have asserted Aboriginal title to all lands and waters of Prince Edward Island, including adjacent areas and offshore islands.

The response provided herein is specific to the particular activity (ies) in the specific areas/property locations outlined in the information provided by you. If there is any additional activity, or change in activity, or the activity will involve areas other than the specified locations, further consultation will be required.

I trust the foregoing to be satisfactory, but please do not hesitate to contact me if you have any questions.

Yours truly,

A handwritten signature in blue ink, appearing to read "Donald K. MacKenzie".

Donald K. MacKenzie  
Executive Director and Legal Counsel  
Mi'kmaq Confederacy of PEI

cc. Tammy MacDonald  
Randy Angus  
Jesse Francis  
Bill Courtney  
Lennox Island FN  
Abegweit FN

**Figure 9.** Reply from Mi'kmaq Confederacy of Prince Edward Island confirming that there is no objection to the proposed project.

**MATERIAL SAFETY DATA SHEET**

REVISION DATE: 08-16-2012

SUPERSEDES: 08-25-2009

**SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION****COMPANY INFORMATION**

H.B. Fuller Construction Products Inc.  
1105 S. Frontenac Street  
Aurora, IL 60504  
Phone: 1-800-552-6225

Medical Emergency Phone Number (24 Hours): 1-888-853-1758  
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

**PRODUCT INFORMATION**

PRODUCT NUMBER: FOSTER 32-90  
PRODUCT NAME: FOSTER 32-90  
PRODUCT DESCRIPTION: Surfactant  
PRODUCT IDENTIFIER: 802296PM

**SECTION 2: HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW**

PHYSICAL STATE: Liquid  
COLOR: Amber  
ODOR: Solvent

**POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY**

EYE: No irritation hazard in normal industrial use.

SKIN: No irritation hazard in normal industrial use.

INHALATION: No irritation hazard in normal industrial use.

INGESTION: Ingestion is not an anticipated route of exposure. No hazard in normal industrial use.

**LONG-TERM (CHRONIC) HEALTH EFFECTS**

TARGET ORGAN(S): No organs known to be damaged from exposure to this product.

**REGULATED CARCINOGEN STATUS:**

Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.

EXISTING HEALTH CONDITIONS AFFECTED BY EXPOSURE: No medical conditions affected by exposure.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS #	PERCENT
---------------	-------	---------

Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for exposure limit guidelines.

**SECTION 4: FIRST AID MEASURES**

IF IN EYES: None expected to be needed, however, use an eye wash to remove a chemical from your eye regardless of the level of hazard.

IF ON SKIN: Wash with soap and water.

IF VAPORS INHALED: Remove individual to fresh air after an airborne exposure if any symptoms develop, as a precautionary measure.

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**MATERIAL SAFETY DATA SHEET**

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IF SWALLOWED: Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this MSDS. Induced vomiting may lead to aspiration of the material into the lungs potentially causing chemical pneumonitis that may be fatal.

---

**SECTION 5: FIRE FIGHTING MEASURES**

---

FLASH POINT: Non flammable  
AUTOIGNITION TEMPERATURE: Not established  
LOWER EXPLOSIVE LIMIT (% in air): Not established  
UPPER EXPLOSIVE LIMIT (% in air): Not established  
EXTINGUISHING MEDIA: Use water spray, foam, dry chemical or carbon dioxide.  
UNUSUAL FIRE AND EXPLOSION HAZARDS: There is a possibility of pressure buildup in closed containers when heated. Water spray may be used to cool the containers.  
SPECIAL FIRE FIGHTING INSTRUCTIONS: Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.  
HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide, Carbon monoxide

---

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

---

SPECIAL PROTECTION: No adverse health effects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this MSDS.  
CLEAN-UP: Dike if necessary, contain spill with inert absorbent and transfer to containers for disposal. Keep spilled product out of sewers, watersheds, or water systems.

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

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**SECTION 7: HANDLING AND STORAGE**

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Handling: No special handling instructions due to toxicity.

Storage: Store in a cool, dry place.  
Consult the Technical Data Sheet for specific storage instructions.

---

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

---

EYE PROTECTION: Wear safety glasses when handling this product.  
SKIN PROTECTION: Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.  
GLOVES: Not normally required. Use nitrile gloves if conditions warrant.  
RESPIRATORY PROTECTION: No respiratory protection required under normal conditions of use. Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).  
VENTILATION: No exposure limits exist for the constituents of this product. No engineering controls are likely to be required to maintain operator comfort under normal conditions of use.

**EXPOSURE LIMITS:**

Chemical Name	ACGIH EXPOSURE LIMITS	OSHA PEL
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**MATERIAL SAFETY DATA SHEET****SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL STATE:	Liquid
COLOR:	Amber
ODOR:	Solvent
ODOR THRESHOLD:	Not established
WEIGHT PER GALLON (lbs.):	8.27
SPECIFIC GRAVITY:	0.990
SOLIDS (% by weight):	3.3
pH:	Not established
FLASH POINT:	Non flammable
BOILING POINT (deg. C):	Not established
FREEZING/MELTING POINT (deg. C):	Not established
VAPOR PRESSURE (mm Hg):	Not established
VAPOR DENSITY:	Not established
EVAPORATION RATE:	Not established
OCTANOL/WATER COEFFICIENT:	Not established
VOC, weight percent	1.40
VOC, EPA Method 24 (theoretically determined)	13g/liter of material
VOC, EPA Method 24, less water and exempt solvents (theoretically determined)	420g/liter of material

**SECTION 10: STABILITY AND REACTIVITY**

STABILITY:	Stable under normal conditions.
CHEMICAL INCOMPATIBILITY:	Not established
HAZARDOUS POLYMERIZATION:	Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon monoxide, carbon dioxide

**SECTION 11: TOXICOLOGICAL INFORMATION**

COMPONENT	LD50/LC50
TOXICOLOGY SUMMARY:	No additional health information available.

**SECTION 12: ECOLOGICAL INFORMATION**

OVERVIEW: No ecological information available

**SECTION 13: DISPOSAL CONSIDERATIONS**

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Solidify and dispose of in an approved landfill. Consult state, local or provincial authorities for more restrictive requirements.

**SECTION 14: TRANSPORTATION INFORMATION**

Consult Bill of Lading for transportation information.  
DOT: NOT REGULATED  
IATA: NOT REGULATED

**SECTION 15: REGULATORY INFORMATION****INVENTORY STATUS**

U.S. EPA TSCA:	This product is in compliance with the Toxic Substances Control Act's Inventory requirements.
CANADIAN CEPA DSL:	The components of this product are included on the DSL or are exempt from DSL requirements.
EUROPEAN EINECS:	As a result of the introduction of REACH into Europe, this product cannot be

**MATERIAL SAFETY DATA SHEET**

JAPAN ENCS: imported into Europe unless the REACH requirements are met.  
This product is in compliance with the Japanese Existing and New Chemical Substances requirements.

If you need more information about the inventory status of this product call 651-236-5858.

This product may contain chemical substances that are regulated for export by various government agencies (such as the Environmental Protection Agency, the Bureau of Industry and Security, or the Drug Enforcement Administration, among others). Before exporting this product from the USA or Canada, we recommend you contact us at 651-236-5858 (USA) or 450-655-1306 x227 (Canada) to request an export review.

**FEDERAL REPORTING**

EPA SARA Title III Section 313

Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

Chemical Name	CAS#	%
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WHMIS STATUS: Unless listed below, this product is not controlled under the Canadian Workplace Hazardous Materials Information System.

**STATE REPORTING**

Proposition 65, The Safe Drinking Water and Toxic Enforcement Act of 1986:

Unless listed below, this product does not contain known levels of any chemical known to the State of California to cause cancer or reproductive harm.

Chemical Name/List	CAS	Percent
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**SECTION 16: ADDITIONAL INFORMATION**

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

HMIS RATING: HEALTH -- 0 FLAMMABILITY -- 0 REACTIVITY -- 0

See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

Prepared by: The Global Regulatory Department

Phone: 651-236-5842

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**Archaeological Overview Assessment (AOA):**  
**Stanhope Sewage Collection & Disposal Field Replacement – FII 2369**  
**PEI National Park**

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Prepared by André Miller, Federal Infrastructure Investments - Archaeologist  
Archaeology and History Branch  
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August 2017

**Reason for Assessment**

This project will result in an updated Water and Wastewater Assessment for PEI FU and any urgent repairs to the water and wastewater system based on the assessment (Figure 1). Based on the initial investigations, it is apparent that the existing pumping stations and related infrastructure at the Stanhope Campground and Beach sites are at, or near, the end of its useful service life and should be replaced (Figure 2). It is understood that there have been leaking and failure issues with the existing force main, so this infrastructure is recommended for replacement as well. 3 Project Sites: 1-Stanhope Campground, 2-Stanhope Main Beach Complex, 3-Stanhope Disposal Field.

Phase 1 Project Elements planned for construction in fall of 2017 will include:

- i. Stanhope Campground Sewage Lift Station rehabilitation or replacement as required;
- ii. Stanhope Campground Sewage Force main Replacement;
- iii. Stanhope Main Beach Duplex Sewage Lift Station Rehabilitation or replacement as required
- iv. Stanhope Lane Disposal Field assessment and rehabilitation as required.

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Four (4) options were investigated for upgrading and/or replacing the existing sewage collection and disposal system for the Stanhope Campground and Beach Site. Note that for all options, the pumping station wet well diameter & depth, pump sizes, and gravity main & force main diameters will be confirmed during the detailed design stage. Concept sketches are included for each of the four options. \* Referred to Stanhope sewage collection & disposal field replacement for archaeological and CRIA review document for more details (July, 19th 2017)\*

- Option 1 includes replacing the existing pumping stations while maintaining the same method of sewage collection and disposal.
- Option 2 includes decommissioning the pumping station at the Beach Site and installing a gravity system that would direct the sewage to the Stanhope Campground Site. Upgrades would also include replacing the existing Stanhope Campground pumping station system and septic tanks, replacing the force main to the disposal field and installing a new pressurized disposal field.
- Option 3 includes decommissioning the pumping station at the Beach Site and installing a gravity system that would direct the sewage to the Stanhope Campground Site, and installing a combined septic tank and dosing chamber at the disposal field site. Upgrades would also include replacing the existing Stanhope Campground pumping station, replacing the force main to the disposal field, and installing a new pressurized disposal field.
- Option 4 includes replacing the complete collection and disposal system.

This assessment evaluates the archaeological potential of the work area, based on information provided by the NP and determines if these activities require an archaeological impact assessment (AIA).

## **Background**

Prince Edward Island National Park, located along the north coast of the island, protects a landscape of sand dunes, barrier islands and cliffs backed by wetland and forest. The area has been home to Mi'kmaq for thousands of years and more recently to Acadian and British settlers. The PEI NP Archaeological Site Inventory identifies 17 known archaeological sites. These include aboriginal campsites, shell middens and burials, and both Acadian and British farm sites. The earliest recorded inhabitants of PEI were Mi'kmaq who named the island 'Epekwitk' meaning "Resting on the Waves". While it is believed that First Nations occupation extended back into the Palaeoindian period, no official confirmation of such a site exists, though one site on the north shore of St Peters Bay has been suggested. The oldest radiocarbon dates come from the bottom deposits of the Rustico Island shell midden site dating to the middle Woodland period. The accidental discoveries of an iron axe, a slate object with incised lines, quartz flakes, and animal bone along Cavendish Beach attest to the presence of one or more archaeological sites with both Aboriginal and historic European components. There are no identified archaeological resources in either project area.

## **Previous Disturbance**

This project will be carried out entirely within existing disturbed soils and the majority will be within constructed road beds. No previously undisturbed lands will have new infrastructure installed or replaced because of this project. If any new service lines are to be replaced and/or installed, they will be done within the existing footprint of the existing lines. Services may be removed (lift stations, storage tanks) and new services replaced at the same location / site.

However the option choose will have potential impact on archaeological resources. Option 1 is the less intrusive, options 2-3-4 will have a possible impact on potential undisturbed archaeological resources.

## **Project 1 – Stanhope Campground**

Our assessment of this work identifies the following concerns:

- Pumping stations and related infrastructure (septic tanks) excavation will have an impact on below grade archaeological resources if they are present,
- Activities associated with the demolition and construction of a new assets may have an impact on below grade archaeological resources if they are present,
- These impacts will be significant if the archaeological potential is high.

## **Project 2 – Stanhope Main Beach Complex**

Our assessment of this work identifies the following concerns:

- Pumping stations and related infrastructure excavation will have an impact on below grade archaeological resources if they are present,
- Activities associated with the demolition and construction of a new assets may have an impact on below grade archaeological resources if they are present,
- These impacts will be significant if the archaeological potential is high.

## **Project 3 – Stanhope Disposal Field**

This project will occur within the footprint of the existing disposal field and will have no impact on buried archaeological resources.

## **Potential for Archaeological Resources**

The combination of known archaeological resources in the area with the attractive environmental context for habitation or use by people in the past indicates that the project areas has potential for archaeological resources. The proximity of the project areas to the coastline increases the potential for Aboriginal resources.

### **Recommendation**

These areas of the NP has not been subjected to archaeological tests or survey. With a high potential for the discovery of unknown archaeological resources, the proposed work activity will require an Archaeological Impact Assessment (AIA) to assess the potential for archaeological resources within the zones of projects 1 and 2. This should be undertaken by a qualified archaeologist who will examine the work areas to determine if undisturbed areas of archaeological potential exist. If found, these areas must be tested and depending on the result, may require additional excavation or mitigation work.

This assessment is based on a review of the PEI NP Archaeological Database, relevant archaeological documentation in Parks Canada, and information provided PEI Field Unit.

### **Supplemental Archaeological Mitigation Measures**

Impacts to archaeological resources from construction activities, have also a potential to be very significant unless the following mitigation measures are employed for the Project:

1. Forward all additional information and construction drawings for the Project to Parks Canada's Terrestrial Archaeology sections for further review.
2. Vehicular access routes and staging areas will be restricted to present-day roadways, parking lots, exposed bedrock areas and significantly disturbed areas. If this is not possible, the use of protective covering such as geotextile protective mats with a wood chip lift or granular "A" gravel is required. All protective measures employed must be removed following construction and the area restored to a pre-construction state. Excavation is not permitted during installation or removal of protective covering.
3. If significant features (i.e., structural remains and/or high artifact concentrations) are encountered during construction activities, excavation should cease in the immediate area, and the Parks Canada project manager will be informed. The project manager should then contact Parks Canada's Terrestrial Archaeology section for advice and assessment of significance, which will in turn determine the requirements to mitigate the find.



Figure 1 - Satellite image of three main sites in the Stanhope sector of PEINP.



Figure 2 - Satellite image of three main sites in the Stanhope sector of PEINP