16.0 SUMMARY OF MITIGATION

Mitigation proposed for the Project in each of the VCs is summarized in Table 16.1 below.

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
1.	Project Description	Construction activities will be managed by NB Power in accordance with a Project-Specific Environmental Protection Plan (PSEPP), to be developed prior to construction.	2.3.1
2.	Project Description	In areas where soil disturbance due to construction may cause erosion, measures will be taken to stabilize the affected area. Such measures may include trimming and back blading, mulching, seeding, and fabric placement.	2.3.1.2
3.	Project Description	Erosion control used during construction will be maintained until such time as the disturbed ground has been adequately stabilized.	2.3.1.2
4.	Project Description	Project-related vessels will transit Head Harbour Passage and Grand Manan Channel and will abide by the guidance from the Fundy Marine Traffic.	2.3.1.3
5.	Project Description	NB Power will be responsible for maintaining suitable access to the riser structures during emergencies, and for regularly scheduled inspections and maintenance.	2.3.2.1
6.	Project Description	To avoid interruptions to electrical service caused by overgrown or fallen vegetation at landfall sites, NB Power will restrict the growth of trees and brush along the landfall sites in accordance with their vegetation management program.	2.3.2.1
7.	Project Description	Noise sources will be mitigated through the use of mufflers, and noise barriers.	2.4.2
8.	Project Description	Surface runoff mitigation measures (e.g., erosion and sedimentation control measures) will be employed during construction, and ground disturbance will be held to a minimum outside the required construction zones. Management of site runoff will employ best practices such as containment ditches and silt fences to avoid or mitigate potential adverse environmental effects to watercourses.	2.4.3
9.	Project Description	Construction wastes will be disposed of at approved construction and demolition disposal sites.	2.4.5
10.	Project Description	All merchantable timber from site clearing would be removed by the contractor, and remaining brush would be stockpiled.	2.4.5
11.	Project Description	No burning of waste will be carried out during construction.	2.4.5

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
12.	Project Description	Soil and overburden will be stockpiled for future use in reclamation activities.	2.4.5
13.	Project Description	NB Power, or its contractors, will reuse or recycle waste materials where possible, and dispose of other wastes at approved facilities.	2.4.5
14.	Project Description	Any liquid hazardous materials (e.g., waste oils and lubricants) generated by contractors on-site will be collected and disposed of using approved hazardous materials collectors.	2.4.5
15.	Project Description	Operational wastes will be disposed of at approved disposal sites. No burning of waste will be carried out during operation. NB Power, or its contractors, will reuse	2.4.5
16.	Atmospheric Environment	Manage vehicle and equipment emissions by conducting regular maintenance on all machinery and equipment (both construction and operation).	5.7.1.3
17.	Atmospheric Environment	Control construction-related fugitive road dust, through measures such as speed limits on Project-controlled gravel roads and road watering on an as-needed basis	5.7.1.3
18.	Atmospheric Environment	Prohibit the burning of waste materials.	5.7.1.3
19.	Atmospheric Environment	Reduce haul distances to disposal sites.	5.7.1.3, 5.7.2.3
20.	Atmospheric Environment	Using construction equipment that is well maintained with appropriate mufflers.	5.7.2.3, 5.7.3.3
21.	Atmospheric Environment	Implementing an idling awareness program to reduce unnecessary idling	5.7.2.3
22.	Atmospheric Environment	Timing activities to avoid undue nuisance to off-site receptors (e.g., limiting construction activities to between 7:00 am and 7:00 pm).	5.7.3.3
23.	Atmospheric Environment	Use of acoustical barriers (e.g., engineered materials or stockpiled overburden) near loud sources during construction.	5.7.3.3
24.	Atmospheric Environment	Sizing of construction equipment to the smallest needed to perform the work.	5.7.3.3
25.	Atmospheric Environment	Establishing a noise complaint and response system	5.7.3.3
26.	Atmospheric Environment	Notifying nearby residents prior to construction to reduce the likelihood of annoyance.	5.7.3.3
27.	Terrestrial Environment	Known locations of individuals of SOCC will be flagged and avoided during construction and vegetation maintenance, when possible.	6.7.2.2
28.	Terrestrial Environment	A Project-specific Environmental Management Plan (PSEMP) will be developed for this Project.	6.7.2.2

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
29.	Terrestrial Environment	Erosion and sediment control measures will be included in the PSEMP for works around sensitive areas, such as shorelines or areas with SOCC, such as Wilson's Beach.	6.7.2.2
30.	Terrestrial Environment	Construction and clearing activities will be limited to the minimum required area, and construction equipment and vehicles will be operated on previously disturbed ground, whenever possible.	6.7.2.2
31.	Terrestrial Environment	Construction equipment will operate at low speeds, to reduce potential wildlife mortality resulting from collisions.	6.7.2.2
32.	Terrestrial Environment	Construction equipment will arrive on site clean and free of soil or vegetative debris.	6.7.2.2
33.	Terrestrial Environment	Clearing activities will be avoided when possible during the normal breeding season for migratory birds (April through August). According to the "General nesting periods of migratory birds in Canada" (ECCC 2017c), approximately 95% of migratory birds in Zone C3 (which extends over the southern 2/3 of New Brunswick, all of Prince Edward Island, the northern half of Nova Scotia, and parts of Ontario) breed between approximately April 12 to August 17.	6.7.2.2
34.	Terrestrial Environment	If completion of clearing outside the breeding season is not possible, work will be conducted according to an avian management plan to be developed in such a circumstance. The avian management plan which will include breeding bird surveys to determine if any nesting activity is occurring at that time. If active nests are observed in the area to be cleared, additional mitigation will be employed such as flagging the area and avoidance of nests until the young have fledged.	6.7.2.2
35.	Terrestrial Environment	Approved noise arrest mufflers will be used on equipment to reduce potential environmental interactions between noise and wildlife.	6.7.2.2
36.	Terrestrial Environment	The HDD method will be used instead of the OCT method for landfall construction wherever possible to minimize the area of surface disturbance.	6.7.2.2
37.	Terrestrial Environment	Any construction wastes that could attract wildlife will be properly stored and disposed of.	6.7.2.2
38.	Terrestrial Environment	Full cut-off lighting (i.e., where no illumination is visible above an angle of 90°) will be used during construction to reduce attraction to migrating birds.	6.7.2.2
39.	Terrestrial Environment	LED lights will be used instead of other types of lights where possible.	6.7.2.2

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
40.	Terrestrial Environment	If OCT method is used, removed soil will be placed adjacent to construction area, soil piles will be covered for the duration of construction, and soil layers will be replaced from where they were removed.	6.7.2.2
41.	Terrestrial Environment	Vegetation management will be restricted to the minimum area required and conducted outside of the normal breeding season for migratory birds (April to August).	6.7.2.2
42.	Terrestrial Environment	Proposed access road upgrades that extend beyond 30 m of the riser stations should be surveyed for vascular plants prior to construction. If any vascular plant SAR or SOCC are encountered within the PDA of the road upgrades, specific mitigation would be developed at that time.	6.7.2.2
43.	Terrestrial Environment	If decommissioning of the existing cables will require removal of terrestrial portions of the cable, these areas will be resurveyed for vascular plants prior to (but within a year of) their removal. If any vascular plant SAR or SOCC are encountered within the PDA of the existing cables, specific mitigation will be developed at that time.	6.7.2.2
44.	Terrestrial Environment	If decommissioning of the existing cables will require removal of terrestrial portions of the cables, this work will occur outside of the normal breeding season for migratory birds (April to August) where possible.	6.7.2.2
45.	Marine Environment	All marine Project activities will be conducted in accordance with the requirements of the Canadian Coast Guard Marine Communication and Traffic Services (CCG-MCTS).	7.7.2.2
46.	Marine Environment	Timing of in-water work will be conducted in consideration of sensitive biological periods (e.g., reproductive life stages), where practical, for CRA species, as determined through discussions with fishers, DFO, and other regulators.	7.7.2.2
47.	Marine Environment	Erosion and sediment control measures will be included in the PSEMP for works around sensitive areas, such as shorelines or areas with steep slopes.	7.7.2.2
48.	Marine Environment	HDD may be used to bury the submarine cables at landfall sites and thereby avoid mortality and disturbance in the nearshore marine environment.	7.7.2.2

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
49.	Marine Environment	Breaching of the seabed with HDD borehole exits may result in a small release of drilling mud. Mitigation options will be determined in detailed design phase with more geotechnical information. The loss of drilling fluids is unavoidable; however, the effect will be localized and best practices with proper contingency planning will minimize the fluid loss. Good mud system control and bit locational controls through accurate telemetry technology is paramount in mitigating drilling fluid loss. Depending on the geology, options may be available to alter the mud composition near the exit location. The use of divers and suction equipment may also be an option depending on safety conditions	7.7.2.2
50.	Marine Environment	Project related vessel traffic will be restricted to the PDA, where possible.	7.7.2.2
51.	Marine Environment	Construction vessels will operate at reduced speeds, to reduce the amount of underwater noise created and the risk of vessel strikes with marine wildlife.	7.7.2.2
52.	Marine Environment	Routine effluents and operational discharges produced by cable-laying and support vessels (e.g., grey and black water, bilge water, deck drainage, discharges from machinery, and non-hazardous waste material) will be managed in accordance with the *International Convention for the Prevention of Pollution from Ships* (MARPOL) and International Maritime Organization (IMO) guidelines, of which Canada has incorporated provisions under various sections of the *Canada Shipping Act*.	7.7.2.2
53.	Marine Environment	Project vessels will comply with applicable legislation, codes, and standards of practice for shipping, including the *Ballast Water Control and Management Regulations* under the *Canada Shipping Act* and the *Canadian Ballast Water Management Guidelines*, to reduce risk of introduction of marine invasive species.	7.7.2.2
54.	Marine Environment	Project vessel port of call history and/or records and proof of hull cleaning will be provided prior to entering the Bay of Fundy. Vessel hulls will be cleaned and/or inspected prior to entering the Bay of Fundy, where necessary.	7.7.2.2
55.	Marine Environment	All marine-based work undertaken by foreign vessels must be undertaken pursuant to a Coasting Trade Permit issued under the *Coasting Trade Act*, and will comply with applicable regulations IMO guidelines and international conventions, including MARPOL.	7.7.2.2

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
56.	Marine Environment	Should it be determined that construction activities will result in serious harm to CRA fish or supporting fish species as defined under the *Fisheries Act* and policies, a habitat offsetting plan will be prepared for DFO approval and implemented.	7.7.2.2
57.	Marine Environment	Scheduling of Project activities will be coordinated through consultation with local fish harvesters and other stakeholders and best-efforts will be made to schedule activities to minimize interference with fisheries and other activities.	7.7.2.2
58.	Marine Environment	To avoid attracting birds and other wildlife, deck lighting will be reduced whenever it is practical to do so and the use of unnecessary lighting will be avoided.	7.7.2.2
59.	Marine Environment	Inspection and maintenance support vessels during Project operation will operate at reduced speeds when possible, to reduce the amount of underwater noise created and the risk of vessel strikes with marine wildlife.	7.7.2.2
60.	Marine Environment	A permit to handle storm-petrels will be obtained by the Canadian Wildlife Service (CWS) and held onboard Project vessels to cover personnel involved in bird collision and stranding incidents. These designated crew members will conduct routine checks of Project vessels for stranded seabirds. If any Leach's storm-petrel becomes stranded on a Project vessel, it will be handled and released in accordance with the procedures outlined in *The Leach's Storm-Petrel: General Information and Handling Instructions* (Williams and Chardine n.d.).	7.7.2.2
61.	Marine Environment	The potential for collisions with marine wildlife will be reduced by the slow speed of the cable ship, which will be operate at a speed of approximately 5 knots while engaged in cable burial and will have a maximum speed of 10 knots during transit. No high- speed manoeuvers will be conducted by any Project vessels during cable installation.	7.7.2.2

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
62.	Marine Environment	Project vessels will adhere to the general guidelines for vessels operating in the vicinity of marine mammals that are specified in section A2 of the 2017 annual edition of Notices to Mariners (DFO 2016d). Adherence to these guidelines includes, but is not limited to, the following measures: • Project vessels will approach areas of known or suspected marine wildlife activity with extreme caution. • Project vessels will reduce their speeds to less than 7 knots when within 400 m of the nearest marine mammal. • Project vessels will not approach any marine mammals and will maintain a distance of at least 100 m from the nearest marine mammal.	7.7.2.2
63.	Marine Environment	Marine-based Project activities will temporarily halt if a marine mammal or sea turtle is observed within 100 m of Project vessels or equipment.	7.7.2.2
64.	Water Resources	Proper handling, transfer, and storage of on-site fuels and chemicals.	8.7.2.2
65.	Water Resources	Proper handling, storage, and disposal of drilling fluids.	8.7.2.2
66.	Water Resources	Conduct a pre-construction water well survey for wells located within 500 m of HDD or OCT and dewatering activities.	8.7.2.2
67.	Water Resources	Establishment of a home-owner reporting and response procedure in the unlikely event of a well damage claim.	8.7.2.2
68.	Socioeconomic Environment	Mitigation described in the atmospheric environment VC (Section 5.0) will be used to reduce nuisance effects associated with dust, emissions, noise and vibration. These include limiting noise emitting construction activities to daytime hours (i.e., between the hours of 7:00 am and 7:00 pm).	9.7.2.2
69.	Socioeconomic Environment	Use of water sprays during dry periods will be considered to minimize undue dust at land-based sites.	9.7.2.2
70.	Socioeconomic Environment	Access restrictions will be defined in advance and access restrictions will be limited in size to reduce the interactions with land and resource use.	9.7.2.2
71.	Socioeconomic Environment	Information on the location of the cables will be provided to the Canadian Hydrographic Service to update navigation charts.	9.7.2.2
72.	Socioeconomic Environment	NB Power will follow its existing practice of encouraging local and Aboriginal content and will, where possible and relevant, work toward a hire-local-first practice.	9.7.3.2
73.	Socioeconomic Environment	Workers will be paid wages consistent with the Eastern Canadian labour market.	9.7.3.2

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
74.	Socioeconomic Environment	Where available, NB Power will procure goods and services from local and Aboriginal businesses in accordance with its existing purchasing policies and procedures.	9.7.3.2
75.	Socioeconomic Environment	Consider a phased construction sequence that minimizes the number of workers required during peak tourism season, where possible.	9.7.4.2
76.	Socioeconomic Environment	Evaluate the potential for providing accommodations for construction workers on mainland New Brunswick rather than on the Fundy Isles, particularly during peak tourism periods. A transportation strategy for transporting workers from mainland accommodations to the jobsite would need to be developed.	9.7.4.2
77.	Socioeconomic Environment	Workers on the marine vessel laying the marine cable will generally live on the ship rather than in land-based accommodations.	9.7.4.2
78.	Socioeconomic Environment	Communicate with community officials where workers are accommodated, as a means of responding to potential community grievances.	9.7.4.2
79.	Socioeconomic Environment	All large-sized vehicles will obtain appropriate weight and size permits and the moving of large equipment involved in road closures will be conducted at low traffic times.	9.7.5.2
80.	Socioeconomic Environment	The public will be notified about long delays and disruptions to the transportation network.	9.7.5.2
81.	Socioeconomic Environment	Construction traffic will be avoided where feasible during daily peak traffic periods.	9.7.5.2
82.	Socioeconomic Environment	Ongoing dialogue will take place with government agencies to ensure that the Project does not adversely affect service levels.	9.7.5.2
83.	Socioeconomic Environment	Weight restrictions will be followed on all roads, any applicable permits related to transportation will be obtained.	9.7.5.2
84.	Heritage Resources	If the locations of the proposed Project features are altered from those reviewed during the 2016 and 2017 AIAs and palaeontology assessment, NB Power will undertake additional assessments of the new locations, and implement any recommended mitigation prior to the initiation of ground breaking construction activities.	10.7.2.2
85.	Heritage Resources	Archaeological monitoring during the on-land construction phase may be required, which will be determined after the additional assessments fo the new locations is completed.	10.7.2.2

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
86.	Heritage Resources	The Project-specific environmental management plan (PSEMP) to be developed for the Project will include a heritage resources discovery response plan that will include a chance find protocol for the unanticipated discovery of heritage resources during construction.	10.7.2.2
87.	Commercial, Recreational and Aboriginal (CRA) Fisheries	For safety purposes, guard boats will temporarily establish a temporary PEZ with a 1-NM radius around Project vessels engaged in laying submarine cables. Fishing will be temporarily excluded from this active Project working area and cannot resume until Project vessels/equipment have left the PEZ. This measure will be enforced to protect towed cabling gear and Project vessels, as well as fishing vessels and fishing gear, from collision and entanglement.	11.7.2.2
88.	CRA Fisheries	Liaison and communications will continue with local fishing associations and commercial and Aboriginal fishery licensees to keep fishers informed of planned Project activities, the Project schedule, and potential Project-fishing interactions. The associations representing potentially affected fisheries (in particular the Fundy North Fishermens' Association) will be directly contacted and notified of the timing of planned route clearance and cable installation before these Project activities begin. Initial notification of scheduled Project activities will be given at least one month in advance so that the fishing associations have adequate time to contact their membership and confirm that all fixed fishing gear within one nautical mile of the PDA can be retrieved and/or relocated for the brief period (i.e., in the order of one to three days) that Project vessels are operating in an area. Follow-up reminders will be communicated to the fishing associations as the Project work start-date approaches. Other communications outreach to CRA fishers will include issuance of Notices to Mariners and/or Shipping and communication with individual fish harvesters if necessary for small-scale fisheries.	11.7.2.2
89.	CRA Fisheries	To the extent feasible, efforts will be made to schedule marine-based construction activities to avoid overlap with commercial fishing seasons in the LAA by attempting to complete these Project activities within the commercial fishing off-seasons.	11.7.2.2
90.	CRA Fisheries	If construction activities must be scheduled during commercial fishing seasons, liaison and communication will continue to manage and reduce conflicts with commercial fishers in the LAA.	11.7.2.2

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
91.	CRA Fisheries	The Canadian Coast Guard will be informed of submarine cable associated work and Notices to Mariners and/or Shipping may be issued to alert vessel traffic of any changes within the region such as exclusion zones around Project vessels to allow for safe navigation of vessel traffic.	11.7.2.2
92.	CRA Fisheries	Activities with potential to generate high levels of noise and/or vibration during landfall construction (e.g., HDD operations) will be conducted only during daylight hours to avoid disrupting the nighttime herring fishery.	11.7.2.2
93.	CRA Fisheries	Once HDD is complete and capped, the end will be marked to reduce the risk of entanglement with fishing gear.	11.7.2.2
94.	CRA Fisheries	The cable will be buried to a depth of approximately 0.6 m below the seafloor on a “best efforts” basis in the Grand Manan Channel and will be protected by double helical armour along the entire marine PDA. These measures will help protect the cable against damage from external sources, such as anchor penetration or interaction with fishing gear.	11.7.2.2
95.	CRA Fisheries	In accordance with the 2017 annual edition of Notices to Mariners issued by the Canadian Coast Guard (DFO 2017c), vessels that can prove that they have sacrificed an anchor, a net or other fishing gear, to avoid injury to a submarine cable, may receive compensation from the owner of the cable.	11.7.2.2
96.	CRA Fisheries	The Canadian Coast Guard will be informed of submarine cable associated work and a Notices to Mariners and/or Shipping may be issued to alert vessel traffic within the region.	11.7.2.2
97.	CRA Fisheries	The final as-built cable easement will be included on official navigational charts and in Notices to Mariners.	11.7.2.2
98.	CRA Fisheries	The mitigation measures outlined above that address potential Project interactions with anchors and fishing gear during the construction and operation phases of the Project are also applicable with respect to the decommissioning phase of the cable.	11.7.2.2
99.	Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons	If construction activities must be scheduled during peak or commercial fishing seasons, or during lobster spawning seasons liaison, and communication will continue to manage and reduce conflicts with Aboriginal fishers in the LAA, including communication with Wolastoqey Fisheries Directors.	12.7.3
100.	Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons	Liaison and communications will continue with Aboriginal fishery licensees to keep fishers informed of planned Project activities, the Project schedule, and potential Project-fishing interactions.	12.7.3

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
101.	Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons	The associations representing potentially affected fisheries, including communal commercial and FSC fishers, will be directly contacted and notified of the timing of planned route clearance and cable installation before these Project activities begin. Initial notification of scheduled Project activities will be given at least one month in advance so that the fishing associations have adequate time to contact their membership and confirm that all fixed fishing gear within one nautical mile of the marine PDA can be retrieved and/or relocated for the brief period (i.e., in the order of one to three days) that Project vessels are operating in an area. Follow-up reminders will be communicated to the fishing associations as the Project work start-date approaches. Other communications outreach to CRA fishers will include issuance of Notices to Shipping and communication with individual fish harvesters if necessary for small-scale fisheries.	12.7.3
102.	Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons	To the extent feasible, efforts will be made to schedule marine-based construction activities so as to avoid overlap with commercial fishing seasons in the LAA.	12.7.3
103.	Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons	The Canadian Coast Guard will be informed of submarine cable associated work and a Notices to Mariners and/or a Notice to Shipping may be issued to alert vessel traffic of any changes within the region such as exclusion zones around Project vessels to allow for safe navigation of vessel traffic.	12.7.3
104.	Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons	The final as-built cable easement will be included on official navigational charts and in Notices to Mariners.	12.7.3
105.	Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons	If requested, Aboriginal communities or individuals will be provided with the opportunity to harvest and gather species of importance to traditional activities on land that will otherwise be lost or removed as a result of the Project prior to construction. It is recommended that these opportunities to conduct harvesting and gathering activities be timed to coincide with the seasonality of the species of interest.	12.7.3
106.	Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons	Upon receiving the IK study for the Project conducted by the Mi'kmaq First Nation, any potential additional interactions will be reviewed and, as warranted, additional mitigation measures will be developed and implemented.	12.7.3
107.	Effects of the Environment on the Project	Careful and considered design in accordance with factors of safety, best engineering practice, and adherence with standards and codes (e.g., Canadian Standards Association Standards (CSA C22.3 NO.1-10))	13.6.1.2

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
108.	Effects of the Environment on the Project	Engineering design practices that will consider predictions for climate and climate change (e.g., the Public Infrastructure Engineering Vulnerability Committee (PIEVC) "Engineering Protocol for Infrastructure Vulnerability Assessment and Adaptation to a Changing Climate" (PIEVC 2014)).	13.6.1.2
109.	Effects of the Environment on the Project	Inspection and maintenance programs that will reduce the deterioration of the infrastructure and will help to maintain compliance with applicable design criteria and reliability of the transmission system.	13.6.1.2
110.	Effects of the Environment on the Project	The selection of materials that withstand potential environmental stressors related to climate will include engineering specifications of the CSA Standards and other construction standards that contain design specific provisions, such as: • critical structures (e.g., cable riser station structures) that will be constructed with resilient materials to prevent brittle fracture at low ambient temperature conditions; and • critical structures (e.g., cable riser station structures) that will be constructed to withstand the structural loading expected with high winds and weight associated with ice and snow.	13.6.1.2
111.	Effects of the Environment on the Project	Flooding and erosion at the existing landfall sites have long been a factor of consideration, adaptation, and mitigation for NB Power. By continuing to develop ongoing adaptive and mitigation strategies, environmental stressors such as flooding will be inherently addressed	13.6.2.1
112.	Effects of the Environment on the Project	If a forest fire were to break out in direct proximity to the Project, emergency measures would be in place to quickly control and extinguish the flames prior to any contact to flammable structures (i.e., wood).	13.6.3.2
113.	Effects of the Environment on the Project	A cleared buffer will be maintained around Project infrastructure, where feasible, to reduce the potential for a fire to affect the structures (which given the nature of the materials they contain are inherently fire resistant).	13.6.3.2
114.	Effects of the Environment on the Project	Safety and security programs will be in place in conjunction with facility, community, and provincial emergency response crews to provide for rapid detection and response to any fire threat. This includes fires that could start within the cable riser station perimeter, as well as fires approaching from outside the cable riser stations (i.e., forest fires).	13.6.3.2

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
115.	Effects of the Environment on the Project	The Project and related facilities and infrastructure will be designed according to the Canadian Standards Association and other applicable standards and guidelines for earthquakes in this area.	13.6.1.2
116.	Accidents and Malfunctions	During the operation phase of the Project, Project components will be inspected periodically and repaired as required.	14.3.1.1
117.	Accidents and Malfunctions	Safe operating procedures will be established for all work activities, both during the construction and operation phases of the Project.	14.3.1.1
118.	Accidents and Malfunctions	NB Power's safety and environmental policies will be followed.	14.3.1.1
119.	Accidents and Malfunctions	Proper signage and public warning will be installed around project land-based components/facilities (e.g., "High Voltage").	14.3.1.1
120.	Accidents and Malfunctions	Access to the work site during construction and energizing activities will be limited to NB Power and their consultants and required contractor crews.	14.3.1.1
121.	Accidents and Malfunctions	Physical safeguards such as security fences surrounding facilities will be implemented.	14.3.1.1
122.	Accidents and Malfunctions	Access to facilities will be restricted to authorized personnel only.	14.3.1.1
123.	Accidents and Malfunctions	Vehicles traveling to and from the work site will adhere to posted speed limits, weight restrictions, and highway signage, and adjust to driving conditions (e.g., fog)	14.3.2.1
124.	Accidents and Malfunctions	On vessels, deck lighting will be minimized whenever it is safe and practical to do so, and the use of unnecessary lighting will be avoided, to reduce the risk of attracting marine wildlife.	14.3.2.1
125.	Accidents and Malfunctions	Due to the nature of the work, submarine cable vessels will move slowly. Support vessels will operate at reduced speeds when possible, to reduce the risk of vessel-to-vessel collision and vessel collisions with marine wildlife.	14.3.2.1
126.	Accidents and Malfunctions	Safety zones will be identified around work areas.	14.3.2.1
127.	Accidents and Malfunctions	High speed vessel maneuvers are not to be conducted by any Project vessel during marine-based Project activities.	14.3.2.1
128.	Accidents and Malfunctions	Vessel-to-vessel and vessel-to-land communication systems will be in place and functioning. Vessel operators will adhere to all applicable Acts and Regulations administered by or in conjunction with Transport Canada, including the *Collision Regulations.*	14.3.2.1

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
129.	Accidents and Malfunctions	Communication and liaison with commercial and Aboriginal fishers will be ongoing during construction, as necessary.	14.3.2.1
130.	Accidents and Malfunctions	Access routes will be identified prior to construction.	14.3.2.1
131.	Accidents and Malfunctions	Signage identifying areas as 'high risk' will be implemented for the land-based elements of the Project.	14.3.2.1
132.	Accidents and Malfunctions	Signage to delineate work areas will be implemented for the land-based elements of the Project.	14.3.2.1
133.	Accidents and Malfunctions	A communication plan for engagement with communities affected by traffic will be developed and implemented, if necessary.	14.3.2.1
134.	Accidents and Malfunctions	Project-related equipment will follow traffic regulations and posted speed limits for the land-based elements of the Project.	14.3.2.1
135.	Accidents and Malfunctions	Speed in construction areas will be limited based on site conditions.	14.3.2.1
136.	Accidents and Malfunctions	Routine preventative maintenance and inspection of hydraulic equipment is to be undertaken to avoid a hazardous material release.	14.3.3.1
137.	Accidents and Malfunctions	Hazardous materials will not be stored in large quantities on vessels or onshore, and secondary containment (e.g., drip trays) will be used in areas of storage and transfer.	14.3.3.1
138.	Accidents and Malfunctions	Relevant Project staff will be trained in the appropriate and safe handling of hazardous materials and fuels, in the prevention of spills as well as the timely and efficient response to a hazardous material spill.	14.3.3.1
139.	Accidents and Malfunctions	Project vehicles are to be equipped with appropriately sized spill kits equipped to handle the quantity and type(s) of hazardous materials that are onsite.	14.3.3.1
140.	Accidents and Malfunctions	Vessels are to be equipped with appropriately sized spill kits equipped to handle the quantity and type(s) of hazardous materials onboard (excluding fuel). Vessel fueling stations will be equipped to handle fuel spills.	14.3.3.1
141.	Accidents and Malfunctions	Communication systems will be in place and functioning.	14.3.3.1
142.	Accidents and Malfunctions	Any spill near or in water will immediately be reported to the Canadian Coast Guard Environmental Response number (1-800-565-1633, available 24 hours). Marine incidents may be reported by contacting a Marine Communications and Traffic Services Centre (1-800-686-8676) or by calling VHF Channel 16.	14.3.3.1
143.	Accidents and Malfunctions	Vessel operators must adhere to applicable Acts and Regulations administered by or in conjunction with Transport Canada.	14.3.3.1

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
144.	Accidents and Malfunctions	Storage of all dangerous goods will comply with the Workplace Hazardous Materials Information System (WHMIS) requirements.	14.3.3.1
145.	Accidents and Malfunctions	Transportation of dangerous goods will comply with Transport Canada's *Transportation of Dangerous Goods Act*.	14.3.3.1
146.	Accidents and Malfunctions	Pre-construction surveys by the cable installation contractor will provide detailed information about the cable route.	14.3.4.1
147.	Accidents and Malfunctions	The DND UXO database will be consulted when the cable route has been finalized; DND will advise if a site-specific risk assessment is required.	14.3.4.1
148.	Accidents and Malfunctions	The PSEMP will include emergency response protocols and worker training requirements.	14.3.4.1
149.	Accidents and Malfunctions	Develop and implement an erosion and sediment control plan for all land-based areas where construction activities may expose erodible soils	14.3.5.1
150.	Accidents and Malfunctions	Minimize areas of exposed soils on site to only those absolutely necessary to facilitate construction activities.	14.3.5.1
151.	Accidents and Malfunctions	Re-vegetate or re-seed exposed areas with native seed mixes following the completion of construction activities in each location.	14.3.5.1
152.	Accidents and Malfunctions	Implement appropriate erosion and sediment control measures in all exposed areas until vegetation is established.	14.3.5.1
153.	Accidents and Malfunctions	Install silt fencing along contours of exposed land to capture sediment contained in runoff.	14.3.5.1
154.	Accidents and Malfunctions	Erosion and sediment structures will be monitored, inspected periodically, maintained, and repaired as warranted until disturbed areas have been re-vegetated and stabilized.	14.3.5.1
155.	Accidents and Malfunctions	Project-related marine vessels will be equipped with fire detection and suppression equipment in accordance with the *Transport Canada Fire Detection and Extinguishing Equipment Regulations* (2007) made under the *Canada Shipping Act* (2001)	14.3.6.1
156.	Accidents and Malfunctions	Project staff working on vessels will be trained in marine fire suppression.	14.3.6.1
157.	Accidents and Malfunctions	Vessel-to-vessel and vessel-to-land communication systems will be in place and functioning.	14.3.6.1
158.	Accidents and Malfunctions	Vessel operators will be required to provide appropriate certification to operate including fire suppression plans.	14.3.6.1

Table 16.1 Summary of Proposed Mitigation

#	Section/Valued Component	Proposed Mitigation/Compensation Measure	Location within EIA Registration Document where Mitigation Measure is Identified
159.	Accidents and Malfunctions	Vessel operators must adhere to applicable Acts and Regulations administered by or in conjunction with Transport Canada.	14.3.6.1
160.	Accidents and Malfunctions	Land-based vehicles and equipment on-site will be equipped with fire extinguishers sized and rated as appropriate.	14.3.6.1
161.	Accidents and Malfunctions	Project staff will be trained in the use of fire extinguishers and will be familiar with the location of the nearest extinguisher.	14.3.6.1
162.	Accidents and Malfunctions	Vehicles are to avoid parking in areas with long grass to minimize the risk of fire caused by the heated vehicle undercarriage, and vehicles will not be allowed to idle when not in use (except for periods of extreme cold weather).	14.3.6.1
163.	Accidents and Malfunctions	Waste that may be soaked with flammable materials (i.e., oily rags) will be stored in appropriate containers, kept away from flammable materials, and disposed of in an appropriate and timely manner.	14.3.6.1
164.	Accidents and Malfunctions	NB Power will monitor forest fire conditions during construction and implement additional measures as warranted, if conditions become excessively dry.	14.3.6.1
165.	Accidents and Malfunctions	Geotechnical assessments will be conducted to inform HDD borehole design.	14.3.7.1
166.	Accidents and Malfunctions	Specialized trucks will be used at the entry borehole to vacuum the drilling fluid from the drilled hole, thereby preventing a release of drilling fluid into the marine environment.	14.3.7.1
167.	Accidents and Malfunctions	An emergency response plan will be part of the PSEMP and will outline the protocol to monitor, contain, and clean-up HDD drilling fluid releases.	14.3.7.1
168.	Accidents and Malfunctions	The conditions laid out in the DFO Statement ‘High-Pressure Directional Drilling’ (DFO 2007) to protect fish and fish habitat, will be followed.	14.3.7.1
169.	Accidents and Malfunctions	Drilling fluid returns will be monitored during drilling to detect for leaks and mitigation will be implemented to manage this, such as increasing the viscosity of the drilling fluid as warranted.	14.3.7.1