

ENVIRONMENTAL ASSESSMENT COMMITMENTS FOR LOWER CHURCHILL PROJECT LABRADOR ISLAND TRANSMISSION LINK

Status Update and High Level Description of Supporting Documentator
June 2019

Commitment	Phase	Status	High Level Description of Supporting Documentation
	C - Construction; O&M - Operations		
As illustrated throughout this EIS, the EA process, including its associated governmental, Aboriginal and stakeholder consultation, has been and will continue to be a key aspect of Project planning and design to further understand any sites of cultural-historical importance or other historic and heritage resources that may be located within or near planned Project activities.	C	Completed	Historic Resources Assessment (Stage 2) – Labrador-Island Transmission Link (Newfoundland Segment); Historic Resources Impact Assessment, Labrador-Island Link – Labrador Segment; Historic Resources Permits; Research conducted at L’Anse au Diable (permit and report); 2011 Historic and Heritage Resources Assessment and Potential Mapping: Strait of Belle Isle Cable Landing Sites and Shore Electrode Locations
The company must meet any current environmental regulations laid out in both provincial and federal legislation and will consider potential new environmental legislation.	C	Completed	Regulatory Compliance Plan (LCP-PT-MD-0000-EV-PL-0021-01)
Alternative clearing methods, including mechanical and manual clearing: - Right-of-way (ROW) clearing will be carried out in accordance with standard utility practices and procedures, and will involve the removal of all vegetation that exceeds 2 m at maturity. - Vegetation will be removed primarily by mechanical harvesters, with chain saws or other hand-held equipment potentially used in small areas (e.g., along watercourses).	C	Completed	The following permits were obtained and adhered to: LCP-00384 (Commercial Clearing/Operating Permit - 2018 HVdc Line - District 9 and 12), SLI-00486 (Commercial Clearing/Operating Permit - 2018 Clearing HVdc Line - Section 1, Segments 1 and 2 - Labrador), SLI-00762 (Commercial Clearing/Operating Permit - 2018 HVdc Line - District 16 - Pasadena), SLI-00763 (Commercial Clearing/Operating Permit - 2018 HVdc Line - District 17 - Port Saunders), SLI-00773 (Commercial Clearing/Operating Permit - 2018 HVdc Line - District 18), SLI-00855 (2018 Commercial Cutting/Operating Permit - Sunnyside to Soldiers Pond - District 1), SLI-00995 (Commercial Clearing/Operating Permit - 2018 HVdc Line - Districts 10 and 11), SLI-00997 (Commercial Clearing/Operating Permit - 2018 HVdc Line - District 06), SLI-01071 (Commercial Clearing/Operating Permit - 2018 HVdc Line - District 4), SLI-01435 (Commercial Clearing/Operating Permit - 2018 H Vdc Line - District 2) Monitoring was conducted by onsite environmental monitors

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<p>Construction labour force accommodation:</p> <ul style="list-style-type: none"> - The construction workforce will be housed in a series of work camps located throughout the province at strategic locations along and near the transmission line ROW. - All camps will be established and operated in accordance with all applicable regulations and permits, including those related to environmental and human (health and hygiene) considerations. 	C	Completed	<p>Twenty camps were established along the route and that all required permits. (Valard DC1 - Eagle Camp Valard DC2 - Temporary St. Paul's River Camp Valard DC2 - Final St. Paul's River Camp Valard DC3 - L'Anse Au Loup Camp Valard DC4 - Plum Point Camp Valard DC5 - Hawkes Bay Camp Valard DC6 - Birchy Narrows Camp Valard DC7 - Grand Falls Windsor Camp Valard DC8 - Gambo / Mint Brook Camp Valard Clarenville Camp Valard Arnolds Cove Camp Valard - Long Range Mountains Taylors Brook Camp</p> <p>Mike Kelly & Sons - Long Range Mountains Bateau Barrons Camp Mike Kelly & Sons - Long Range Mountains Taylors Brook Camp</p> <p>Labrador Straits Rental (C&T) - KM 94 Camp Forteau</p> <p>Springdale Forestay - Taylor's Brook Camp</p> <p>JCL - Daniels Harbour Camp JCL - Eagle Mountain Camp JCL - St. Pauls River Camp JCL - Terra Nova Camp) All permits were obtained in accordance with the Project's Regulatory Compliance Plan</p>
<p>Alternative means of controlling vegetation within the right of way, including both mechanical and chemical means: - Nalcor will incorporate the HVdc transmission line into its integrated vegetation management program for its transmission and distribution systems.</p> <ul style="list-style-type: none"> - Vegetation will be controlled manually / mechanically, as well as through the selective application of vegetation-control agents in certain areas. - Any and all such herbicide use will be subject to approval from the Department of Environment and Conservation, and will be undertaken in full compliance with the Pesticides Control Regulations. - As is standard practice, there will be a public notification and an evaluation of any environmental sensitivities wherever herbicides are to be used. Vegetation control personnel will be appropriately trained and qualified. 	O&M	Ongoing	<p>Vegetation management plan developed by Operations. All permits and approvals to be obtained and conditions of permits to be complied with in accordance with the Pesticide Control Regulations.</p>
<p>Once identified, and prior to final Project design and construction, Nalcor will conduct public consultations to present these transmission line routing(s) to the interested public and stakeholders.</p>	C	Completed	<p>EIS Addendum provided the final route and advertisements placed in local papers for feedback (LCP - Public Notice Dec 2012)</p>

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Nalcor and / or its contractors will identify, apply for and adhere to all require permits and other authorizations that are required for Project Construction and / or Operations and Maintenance.	C, O&M	Ongoing	Regulatory Compliance Plan (LCP-PT-MD-0000-EV-PL-0021-01)
Nalcor and its contractors and sub-contractors will follow the Benefits Strategy, which outlines activities and protocols regarding employment and business benefits to ensure that work is performed in the province for the benefit of industry and employees	C	Completed	Lower Churchill Construction Projects Benefits Strategy
Nalcor will attempt to use existing disturbances (e.g., clear cuts) to the extent practical, and will also attempt to use parallel (or otherwise) existing disturbance corridors (e.g. roads, transmission line ROWs) to reduce the amount of new access that is required, and thus the amount of clearing. In addition, the amount and type of equipment required for the clearing process will be determined by the vegetation types within the areas that require clearing.	C	Completed	Existing disturbances followed as shown in the final route presented in the EIS Addendum; Design Philosophy for HVdc Transmission Lines; LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; 350 kV HVdc Line Right of Way Clearing Section 1; 350kV HVdc Line Right of Way Clearing Section 2 Access and Clearing Study
The EPP, the SHERP and the OHSP will be field-useable documents that address prevention measures and incident response procedures for unplanned safety, health and environmental events.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan, LCP Strait of Belle Isle Marine Crossing Environmental Protection Plan, Lower Churchill Project Health and Safety Management Plan
Nalcor will implement Health and Safety, Environment, and Quality (HSEQ) Management Systems to meet the requirements of ISO14001:2004 (Environment), CAN Z1000-06 (Health and Safety), and ISO 9001:2000 (Quality). Existing systems within the Nalcor HSEQ Management System will be used for the Project, as appropriate, for these common elements: - document and records control; - communication; - incident preparedness and response; - compliance and management system auditing; - management review; and - existing systems within the Nalcor HSEQ Management System will be used for the Project	C	Completed	Environmental Management Plan; Lower Churchill Project Health and Safety Management Plan; Overarching Quality Management Plan; Project Wide Emergency Response Plan
The transmission towers will be constructed in accordance with CSA standards and guidelines, and with the principle of Good Utility Practice.	C	Completed	350 kV HVdc Line Tower Design Criteria
The transmission towers for the Project will meet Nalcor's current ice load standard and are designed for a 50-year return period meteorological event.	C	Completed	350 kV HVdc Line Tower Design Criteria
Nalcor will ensure that all Project field personnel are trained in the use of fire-fighting equipment and that trained personnel are available to respond immediately to an incident.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; Project Wide Emergency Response Plan
Simultaneous Operations (SIMOPS) procedures will be developed by Nalcor to ensure safe and efficient operations of multiple vessels while working in the Strait of Belle Isle.	C	Completed	MCT Vessel Traffic Management Plan; LCP Strait of Belle Isle Marine Crossing Environmental Protection Plan

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Nalcor and / or its contractor(s) will provide full and regular briefings to DND authorities regarding its planned and ongoing construction activities, particularly those involving aircraft activity in Labrador to ensure coordinated planning and communication around Project Construction activities.	C	Completed	Lower Churchill Falls Project Update Presentation provided to DND in 2014.
Nalcor will comply with the monitoring requirements (including details such as scheduling, sampling design, frequency, and reporting) stipulated by the regulators in the eventual Project permits.	C, O&M	Ongoing	Project has met conditions of permits. Project had the following Plans in place: LCP Integrated Regulatory Compliance Plan; Lower Churchill Project Permit Registry; LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Nalcor has committed to working with the regulators and other stakeholders to finalize the details of many of the follow-up programs outlined in this EIS.	C	Completed	LITL Outfitters Environmental Effects Monitoring Plan; LITL Avifauna Protection and Environmental Effects Monitoring Plan; LITL Caribou Protection and Environmental Effects Monitoring Plan; LITL Vegetation Protection and Environmental Effects Monitoring Plan; LITL Freshwater Fish Protection and Environmental Effects Monitoring Plan; LITL Furbearers and Small Mammals Protection and Environmental Effects Monitoring Plan; LITL Long's Braya and Fernald's Braya Shoal Cove IMMP; LITL ESA Listed Plants IMMP; LITL ESA Listed Species IMMP
If unforeseen adverse environmental effects are identified during any of the monitoring or follow-up programs, Nalcor will, as part of their ongoing adaptive management process, adjust the existing mitigation measures or, if necessary, develop new mitigation or compensation measures to address those effects.	C, O&M	Ongoing	As stated in EEMPs, "If unforeseen adverse environmental effects are identified during any of the monitoring or follow-up programs, Nalcor will, as part of their ongoing adaptive management process, adjust the existing mitigation measures or, develop new mitigation." This could result in Nalcor refining or modifying the design and implementation of management plans, mitigation measures and Project operations, with the final approach selected depending on the issue identified. An example of this has been the continuation of the Island Caribou EEM Program when the results of the initial study indicated a change in caribou movement. An extension to the study was added to study the effects over an extended study period.
Nalcor will not burn slash or other debris during Construction.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Nalcor will conduct construction activities in accordance with municipal by-laws regarding noise.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; LCP Strait of Belle Isle Marine Crossing Environmental Protection Plan
During the drilling activity at Forteau Point and Shoal Cove, Nalcor will evaluate and apply the appropriate mitigation with respect to noise control.	C	Completed	There have been no noise complaints. LCP Strait of Belle Isle Marine Crossing Environmental Protection Plan; LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Nalcor will employ a complaint driven process to address the generation of excessive airborne dust during any phase of the Project. The validity of the complaint will be ascertained by Nalcor and corrective actions implemented as warranted and appropriate	C	Completed	Stakeholders expressing concern or an impact related to the project can contact Nalcor via phone, email or in person at the Project office. Contact information is available on the project website, social media and all public information produced for the p

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Nalcor will avoid environmental sensitivities (e.g., known occurrences of listed plants, regionally uncommon plants and their associated habitat) to the extent practical during final ROW routing, or employ appropriate mitigation measures.	C	Completed	The following plans were developed: Labrador-Island Transmission Link Endangered Species Act - Listed Plants Impacts Mitigation and Monitoring Plan; LCP Strait of Belle Isle Marine Crossing Environmental Protection Plan; EIS Addendum; Regulatory Compliance – Newfoundland Island Listed Plant Survey; Regulatory Compliance – Island Regionally Uncommon Plant Survey; Labrador Uncommon Plant Survey; 350 kV HVdc Route Selection Criteria; 350 kV HVdc Route Map Construction Segment 1; 350 kV HVdc Route Map Construction Segment 2; 350 kV HVdc Route Map Construction Segment 3; 350 kV HVdc Route Map Construction Segment 4; 350 kV HVdc Route Map Construction Segment 5
All Nalcor mitigation requirements referencing setbacks and buffers for waterbodies will also be applied to wetlands, as appropriate.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; LCP Strait of Belle Isle Marine Crossing Environmental Protection Plan
Nalcor will adhere to federal and provincial guidelines or management plans relating to listed or regionally uncommon plants (e.g., NL Species at Risk Policy, COSEWIC Status Reports, SARA) Recovery Strategies), unless otherwise approved by regul.agencies	C	Completed	LCP Strait of Belle Isle Marine Crossing Environmental Protection Plan; Regulatory Compliance – Newfoundland Island Listed Plant Survey; Regulatory Compliance – Island Regionally Uncommon Plant Survey; Labrador Uncommon Plant Survey; Labrador-Island Transmission Link Endangered Species Act - Listed Plants Impacts Mitigation and Monitoring Plan
Nalcor will consult with NL DOEC, Wildlife Division regarding siting, routing or mitigation strategies for Project infrastructure in the vicinity of known listed plants or species of concern.	C	Completed	Labrador-Island Transmission Link Endangered Species Act - Listed Plants Impacts Mitigation and Monitoring Plan; LIL Long’s Braya and Fernald’s Braya Shoal Cove IMMP
Where avoidance is not possible, Nalcor, in consultation with federal and provincial regulators, will develop protection measures and env mgmt techniques for listed or regionally uncommon plant species based on site-specific conditions and sp. sensitivity	C	Completed	Labrador-Island Transmission Link Endangered Species Act - Listed Plants Impacts Mitigation and Monitoring Plan; LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; Regulatory Compliance – Newfoundland Island Listed Plant Survey; Regulatory Compliance – Island Regionally Uncommon Plant Survey; Regulatory Compliance – Labrador Uncommon Plant Survey

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Wetland habitat will be avoided by Nalcor to the extent practical, and where effects occur, appropriate mitigation will be employed in a proactive manner. Nalcor will limit the alteration / loss of wetland habitat by avoidance ROW routing. This wetland habitat will be avoided by Nalcor to the extent practical, and where effects occur, appropriate mitigation will be employed in a proactive manner. Nalcor will limit the alteration / loss of wetland habitat to the extent practical by routing of the ROW to avoid wetlands where feasible, with particular attention given to large wetland complexes or those that are known to be important for waterfowl. If construction is required in wetland areas, Nalcor will conduct the work in winter, fall, late summer, summer, spring (in order of preference), to the extent practical.	C	Completed	EIS Addendum - wetlands avoided during routing; LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Nalcor will limit the amount of riparian shoreline alteration to the extent practical by routing of the ROW to avoid large waterbodies and rivers (and their associated shoreline)	C	Completed	EIS Addendum - addressed during routing to the extent possible;
Nalcor will avoid known occurrences of listed plants and / or important habitat during the final routing and siting of the Project ROW and associated Project components, where possible.	C	Completed	EIS Addendum; Regulatory Compliance – Newfoundland Island Listed Plant Survey; Regulatory Compliance – Island Regionally Uncommon Plant Survey; Regulatory Compliance – Labrador Uncommon Plant Survey; Labrador-Island Transmission Link Endangered Species Act - Listed Plants Impacts Mitigation and Monitoring Plan
When routing or siting of Project components cannot avoid known occurrences of listed plants and / or important habitat, Nalcor will conduct pre-construction floristic listed plant surveys of important habitat for listed plants affected by the Project components cannot avoid known occurrences of listed plants and / or important habitat, Nalcor will conduct pre-construction floristic listed plant surveys of important habitat for listed plants affected by the final Project component location or alignment. Should any individual listed plant species be located, Nalcor will retain a qualified botanist to assist in the development and implementation of an appropriate mitigation strategy, in consultation with the appropriate regulatory agencies, as discussed above.	C	Completed	EIS Addendum; Regulatory Compliance – Newfoundland Island Listed Plant Survey; Regulatory Compliance – Island Regionally Uncommon Plant Survey; Regulatory Compliance – Labrador Uncommon Plant Survey; Labrador-Island Transmission Link Endangered Species Act - Listed Plants Impacts Mitigation and Monitoring Plan
Nalcor’s commitment to consult with NLDEC Wildlife Division once the ROW has been selected allows for a more precise identification of areas with high potential habitat for regionally uncommon plants.	C	Completed	EIS Addendum
Nalcor has committed to re-run the Regionally Uncommon Plant model once a ROW has been selected, based on input and advice from the NLDEC Wildlife Division.	C	Completed	EIS Addendum
Nalcor will not use sterilants as a means of vegetation control, but will rely on non-residual herbicides (i.e., Tordon 101 with Sylgard 309 as a surfactant) and mechanical methods, where practical.	O&M	Ongoing	Vegetation management plan developed by Operations. All permits and approvals to be obtained and conditions of permits to be complied with in accordance with the Pesticide Control Regulations.

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Based on the nature of the Project, compliance with fed. and prov. regulatory requirements and public concerns during the consultation process, Nalcor is proposing to monitor the effects on listed plants or induced effects resulting from improved access.	O&M	Ongoing	A follow up study of the effects of improved access on listed plants at Shoal Cove is being planned by operations.
Nalcor will use the data on caribou core areas provided by the NLDEC Wildlife Division during final ROW alignment selection to avoid Primary Core area, to the extent feasible.	C	Completed	EIS Addendum
Nalcor will continue its participation on the Labrador Woodland Caribou Recovery Team (LWCRT) and support of related research, such as the telemetry monitoring program.	C, O&M	Ongoing	Boreal Caribou Recovery Team Membership; Labrador-Island Transmission Link Species at Risk Impacts Mitigation and Monitoring Plan; 2015 Annual Caribou Report — Mealy Mountain Herd; 2015 Annual Caribou Report — Red Wine Mountain Herd; 2016 Annual Caribou Report — Mealy Mountain Herd; 2016 Red Wine Mountains Caribou Herd 2016 Aerial Survey; 2017 Annual Caribou Report — Red Wine Mountain Herd; 2017 Annual Caribou Report — Mealy Mountain Herd
Nalcor will develop access control measures to monitor and manage public off highway vehicle (OHV) use of corridor roads and trails; they will be applied during the Construction and the Operations and Maintenance phases of the Project.	C, O&M	Ongoing	Consideration of access control will be considered by operations.
Nalcor will implement a policy of no wildlife harvesting during working hours, no feeding, and no possession of firearms or pets by transmission line maintenance and repair personnel.	C, O&M	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan included a "No Harvesting Policy" as well as the LCP Handbook Standard Operating Procedure to be developed by Operations
Nalcor will avoid conducting non-essential activity in caribou Primary Core area in Newfoundland during the sensitive calving and post-calving season, to the extent feasible.	C	Completed	L-ITL Caribou Protection and Environmental Effects Monitoring Plan;
In specific areas where identified Newfoundland marten habitat overlaps the transmission corridor, Nalcor will consult with the NLDEC Wildlife Division to identify the most suitable route for the ROW.	C	Completed	EIS Addendum
Nalcor will consult with the NLDEC Wildlife Division to identify the most suitable alignment for the final ROW and the amount of primary marten habitat that would be affected.	C	Completed	EIS Addendum
Nalcor may consider modifying the vegetation management program to maintain the habitat connectivity created during construction in core marten areas in Newfoundland.	C	Completed	Labrador-Island Transmission Link Species at Risk Impacts Mitigation and Monitoring Plan
Nalcor personnel and contractors will not interfere with traplines or associated equipment.	O&M	Ongoing	Standard Operating Procedure to be developed by Operations
Nalcor will work with the NLDEC Wildlife Division to design a study to investigate the effects of ROW Construction and Operations on marten habitat use in the Main River core area, utilizing a before-after-control-impact experimental design.	C	Completed	Labrador-Island Transmission Link Species at Risk Impacts Mitigation and Monitoring Plan

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<p>Nalcor will survey relevant portions of rivers known to support breeding Harlequin Duck pairs (i.e., 5 km upstream and downstream) during the appropriate season before construction activities commence to determine the extent of breeding activities. In Labrador, this will involve the Traverspine and St. Paul rivers and on the Island, particularly rivers on the Northern Peninsula (e.g., Torrent River). The information collected will be used by Nalcor for consideration in the identification of final alignment across these rivers in consultation with the Canadian Wildlife Service.</p>	C	Completed	<p>2011-2012 Wildlife Reconnaissance Surveys, 2013-2015 Avifauna Report; Labrador-Island Transmission Link Species at Risk Impacts Mitigation and Monitoring Plan</p>
<p>Nalcor will conduct Harlequin Duck surveys along rivers crossed by the Project that are known to support breeding populations, immediately following Project Construction and for a period of two years following commencement of Operations and Maintenance, to document the abundance and distribution of Harlequin Duck and determine the Project effects on breeding pairs.</p>	O&M	Completed	<p>Variance Obtained from Wildlife Department Section 19 Labrador-Island Transmission Link Species at Risk Impacts Mitigation and Monitoring Plan; Request for an Environmental Assessment Commitment Variance – Harlequin Duck; NE-LCP-MEMO-000111, Annual Report on the Implementation of the Avifauna Management Plan - Torrent River Harlequin Duck Survey</p>
<p>Nalcor will note any observations of Red Knot or other avian species of conservation status during Project Construction activities.</p>	C	Completed	<p>Labrador-Island Transmission Link Species at Risk Impacts Mitigation and Monitoring Plan; LCP Avifauna Management Plan; LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; 2013-2015 Avifauna Report; 2016 Avifauna Report; 2014 Wildlife Sightings Report for the Lower Churchill Project; 2015 Wildlife Sightings Report for the Lower Churchill Project; 2016 Wildlife Sightings Report for the Lower Churchill Project; 2017 Wildlife Sightings Report for the Lower Churchill Project; 2018 Wildlife Sightings Report for the Lower Churchill Project.</p>
<p>Nalcor will conduct aerial surveys to identify Osprey and Bald Eagle nests and nesting activity within the Local Study Area (LSA) prior to Project Construction.</p>	C	Completed	<p>LCP Avifauna Management Plan; 2013-2015 Avifauna Report, 2016 Avifauna Report</p>
<p>During Nalcor’s routine inspection of the ROW and other Project components (e.g., access) throughout the life of the Project, the inspectors will maintain a log of observations or evidence of avifauna involved with vehicle collisions or interactions with the transmission line (i.e., collisions or electrocutions), note the presence of nests on transmission towers or poles, and note any areas of environmental concern related to avifauna within or adjacent to the Project components.</p>	O&M	Ongoing	<p>Standard Operating Procedure to be developed by Operations</p>
<p>Nalcor will note public OHV use of transmission corridor roads and trails observed during maintenance and inspections, as part of the access control measures.</p>	O&M	Ongoing	<p>Standard Operating Procedure to be developed by Operations</p>
<p>All discharges of run-off from Construction activities will conform to the Environmental Control Water and Sewage Regulations, 2003 under the Water Resources Act (O.C. 2003-231).</p>	C	Completed	<p>LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; Permit Applications and Approvals, Permit to Alter a Body of Water - Soldiers Pond Substation</p>

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Nalcor will conduct the appropriate site evaluations during the final routing of the Project so that, to the extent practical, the selected crossing locations will have the least possible adverse effects on the watercourse.	C	Completed	EIS Addendum; LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
As required by provincial authorities, Nalcor will undertake a pre-examination of the watercourse crossing (stream’s morphology, substrate, water velocity, depth, and bank slope at the proposed crossing location) to select the preferred crossing location.	C	Completed	Project Obtained the following permits: Blanket DFO Notification - Water Use and Stream Crossings; Blanket DOEC Permit to Alter a Body of Water – Section 1, Segments 1 and 2 – Labrador; Blanket DOEC Permit to Alter a Body of Water – Section 1, Segment 3 and Section 2 – Newfoundland; Blanket DOEC Permit to Alter a Body of Water – Permanent Stream Crossings on HVdc Line in Remote Labrador Corridor (km140 to km400)
Nalcor will include mitigation such as a minimum 20 m buffer on all watercourses, and a reduced ROW of 3 m width at stream crossings.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Nalcor is committed to adhere to the associated legislation, Newfoundland and Labrador Operational Statements (NLOS) and standard mitigation from both industry and gov't (where feasible), and any permit conditions.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; Regulatory Compliance Plan
Nalcor will conduct monitoring as required to comply with permit conditions or regulatory requirements, and data collected will be entered into Nalcor’s International Standards Organization (ISO) documentation.	O&M	Ongoing	One of Nalcor’s corporate goals is to be an environmental leader; as a result we have developed and solidified our commitment to the environment through our Environmental Policy and Guiding Principles. Along with these commitments Nalcor has developed its own Environmental Management System which has been certified to the ISO 14001:2015 standard in 2018. All assets that are turned over will fall under the EMS.

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<p>Other mitigation measures of the Project construction phase that Nalcor will employ to minimize effects on the Marine Fish and Fish Habitat:</p> <ul style="list-style-type: none"> - cable corridor will not be swept prior to cable installation; - chemically-benign rock will be used for berm construction to minimize the effect on seawater and surficial sediment chemistry; - construction time will be minimized to decrease the amount of exposure to vessel noise by invertebrates and fishes; - drill mud will be recovered from the bore holes and conduit to the extent possible; - drill mud will be recycled and the cuttings will be disposed of on land; - biodegradable lubricants and hydraulic fluids will be used where practical, when working near waterbodies; - proper protocols will be implemented to avoid accidental introduction of potentially deleterious substances to the marine environment including all applicable regulations to minimize effect on seawater and surficial sediment chemistry; - spill kits and trained personnel will be present on-site at all times, allowing for prompt containment; - a spill response team will be formed and trained; - spills will be reported to the appropriate authority; - fuelling or serving or mobile equipment on-land will not be permitted within 50 m of a waterbody; - the SHERP (Safety, Health and Environment Emergency Response Plan) will contain spill prevention and response plan; and - the EPP (Environmental Protection Plan) will contain conditions for fuel handling and storage, including procedures for spill response. 	C	Completed	LCP Strait of Belle Isle Marine Crossing Environmental Protection Plan; Master Spill Response Plan; Project Wide Emergency Response Plan
<p>screen / armouring of the cable is on the same electric potential as the outside ambient so that the electric field is confined to the inside of the cable;</p>	O&M	Ongoing	Armouring was installed. Marine Emissions EEMP
<p>A follow-up program will be conducted by Nalcor to evaluate the electromagnetic fields (EMFs) that will be generated by the operating submarine cable and electrodes.</p>	O&M	Ongoing	Marine Emissions EEM Plan under development
<p>During Project construction and routine inspections during Operations and Maintenance, Nalcor will note any incidents related to effects to seabirds (e.g., stranding) and address these issues appropriately through their adaptive management process.</p>	C, O&M	Ongoing	LCP Avifauna Management Plan; SOP to be drafted for Operations
<p>Nalcor will consult with the Provincial Archaeology Office (PAO) on known Historic and Heritage Resources during the detailed Project design and final transmission line ROW selection.</p>	C	Completed	EIS Addendum
<p>Once the transmission line ROW is defined, Nalcor will conduct an historic resources field survey of those sections of the ROW that cross through areas identified high potential for undiscovered Historic and Heritage Resources.</p>	C	Completed	Historic Resources Impact Assessment Report - LCP LIL (Nfld Segments); 2013 Historic Resources Assessment and Recovery Program (Labrador Segments); Historic Resources Assessment L'Anse Au Diable Electrode Facility Infrastructure

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Nalcor or its contractors will identify any known Historic and Heritage Resources within 100 m of planned Project activities, and these will be made known to supervisory personnel. A 50 m radius “no work” buffer will be maintained around all known sites to avoid interactions of Project activities with the known resources.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
The orientation and training programs provided to construction personnel will include briefings related to Historic and Heritage Resources.	C	Completed	Included in mandatory Site Orientation
In the event that unregistered Historic and Heritage Resources are discovered, work will be halted immediately at that location, the PAO will be notified, and a Stage 1 Historic Resources Overview Assessment will be initiated in accordance with Provincial Guidelines	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan - Contingency Plan
Where Project components are constructed in any area which is known to have high potential to contain palaeontological resources, periodic inspections of disturbed areas by qualified palaeontologists will be undertaken to limit the potential for disturbance of fossils and the loss of any information they may provide.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; Historic Resources Impact Assessment Report; Historic Resources Permits; Historic Resources Assessment L’Anse Au Diable Electrode Facility Infrastructure
Nalcor will have full-time OSEMs at various construction sites. These individuals will continually inspect worksites and activities for conformance with the EPP and mitigation measures required by design, and compliance with government regs and permits	C	Completed	636 Environmental Reports have been submitted by On Site Environmental Monitors for C3, and 7,211 for C4. Regulatory Compliance Plan
Nalcor will continue to consult regularly with various authorities such as the Department of Transportation and Works and the Town of Happy Valley-Goose Bay, to reduce any adverse socioeconomic effects of additional road traffic within the community.	C	Completed	Nalcor consulted regularly with authorities and the public regarding the use of roads. Public notices were issued when shipments were being transported from the Port of Goose Bay to the Labrador marshalling yard. All safety regulations were adhered to. Shipments were scheduled so not to have an effect on peak traffic times. Advanced notice of shipments to the Port was communicated to the town, and it was an agenda item at the Community Liaison Committee meetings.
Nalcor will liaise with the responsible authority (provincial Department of Transportation and Works) and local stakeholders and communities to explore ways to minimize and address issues relating to Route 510 road conditions.	C	Completed	Public Service Announcement Construction Activity Rte 510 South of MF; Public Notice Blasting - Rte 510; Obtained Protected Road Zone Permit Application
Nalcor will liaise with provincial and local authorities to provide them with the necessary information to plan and manage the expected traffic volumes.	C	Completed	Public Service Announcement Construction Activity Rte 510 South of MF; Public Notice Blasting - Rte 510; Obtained Protected Road Zone Permit Application. The road conditions of route 510 is the responsibility of provincial government as it is a provincial highway. Nalcor's use of the highway would be mainly light vehicle traffic. Heavy equipment is mobilized to a site where it stays until the work is complete and then demobbed. There has been minimal impact on the road.
All traffic operations will be conducted in accordance with provincial legislation, including the Uniform Highway Transport Vehicle Regulations, which regulate both the weight and dimensions of highway vehicles operating in Atlantic Canada.	C	Completed	Contractors are required to be compliant and audited to ensure compliance.

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Nalcor will dispose of Project waste in accordance with regulatory requirements and with the approval of local and regional waste management authorities.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; Waste Management Plan
Nalcor will discuss with private property owners any issues related to intrusion on their property.	C	Completed	Property owners are contacted (letters and meetings, phone) when we are aware our right of way etc will be crossing over private property. However, there are times when a property owner will contacts us, mainly because we have impacted their property in some manner. For example, if our contractor crushes a water supply line to a cabin, the property owner will advise us of the incident and members of the Real Properties group investigates the claim, and if required, we will pay for any necessary remediation work etc.
Nalcor has adopted criteria of 50 dBA at the edge of the ROW, as recommended by the Electric Power Research Institute (EPRI) in the United States for HVdc transmission lines (EPRI 2008).	O&M	Completed	Lower Churchill Project HVdc Conductor Optimization
Nalcor will implement commitments made in any executed Impacts and Benefits Agreement (IBA), followed by first consideration for employment of qualified Newfoundland and Labrador residents, considering gender equity and diversity provisions.	C	Completed	Monthly Benefits Reports
Prior to sanction, Nalcor will engage in consultation with relevant stakeholder organizations and provincial departments and agencies to develop and implement a Gender Equity Program and a Diversity Program for the Project.	C	Completed	Gender Equity and Diversity Program
The Gender Equity Program will include a Women’s Employment Plan (WEP) and Business Access Strategy, in which Nalcor will establish goals for the employment of women based on Statistics Canada’s Employment Equity Data Report.	C	Completed	Gender Equity and Diversity Program
Nalcor has worked, and will continue to work, with governments, Aboriginal groups, women’s organizations, training institutions and labour organizations to discuss Project labour requirements, to identify existing or anticipated gaps in the labour supply pool, and will explore and discuss potential approaches to address gaps.	C	Completed	Lower Churchill Project Gender Equity and Diversity Program; Monthly Benefits Reports
Nalcor will encourage pre-construction training initiatives to enable people in the province to participate fully in the Project.	C	Completed	Monthly Project Reports; Labour Acquisition Strategy
Nalcor will work with successful contractors to provide adequate workplace training (including health and safety, cultural awareness, gender sensitivity, environmental awareness, respectful workplace programs, specialized skills training for employees.	C	Completed	Site Orientation Presentation (provided to all contractors); LCP Site Handbook;
Nalcor will work with contractors who have the responsibility to develop and implement apprenticeship programs for the Project.	C	Completed	Innu apprenticeship support supplied by training coordinator

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Nalcor will work with training institutions and government agencies throughout the province to offer technical advice and expertise where appropriate and to assist in coordinating training for Project-related work with relevant stakeholders.	C	Completed	Nalcor worked with the College of the North Atlantic to provide training for Project-related work (e.g., (Tower Steel Assembly training programs). As well, there has been ongoing discussions with CONA's Apprenticeship Officer, who meets with apprentices, and offers information sessions. Monthly Benefits Reports
Nalcor will engage employees and potential employees through a variety of programs and practices to maintain a work environment that facilitates the achievement of their career goals and provides the training and support to meet Nalcor's business objectives	C	Ongoing	Nalcor Corporate Policies and Procedures: Apprentice, Graduate and Student Employment (TM8) Examples include: LCP hires 25 to 30+ work term students per term in a number of different career studies that are found at the Lower Churchill Project. Work terms are generally 3 - 4 months in length.
Nalcor will engage employees and potential employees through a variety of programs and practices to encourage employed journeypersons to participate in post-journeyperson training;	C	Completed	Nalcor Corporate Policies and Procedures: Apprentice, Graduate and Student Employment (TM8)
Nalcor will support initiatives to increase the number of women who have skills required to support the Project, including supporting post-secondary education institution efforts that encourage their participation in trades/occupations req'd by the LCP	C	Completed	Gender Equity and Diversity Program
Nalcor will engage employees and potential employees through a variety of programs and practices to: Provide or encourage contractors and sub-contractors to provide on-the-job-training opportunities for qualified participants during the construction phase	C	Completed	LCP has been in a partnership with the LATP (Labrador Aboriginal Training Partnership) to provide training opportunities for aboriginal people in Labrador focused on employment for the Muskrat Falls project, many of which included on the job training opportunities. Additionally, LCP has worked closely with the Apprenticeship officer in Goose Bay to ensure he has access to site on a regular basis to meet with existing apprentices on site as well as promoting the trades. The Muskrat Falls Employers Association (MFEA) meet every two weeks. Employment and training are part of the agenda. LCP Trainers meet regularly with contractors to determine where the aboriginal apprentices are in their plan of training.
Nalcor will engage employees and potential employees through a variety of programs and practices to - Communicate with school staff and students about career options, participating in career fairs and supporting training efforts;	C	Completed	Communications and Stakeholder Relations Management Plan; Monthly Benefits Reports; Labour Acquisition Strategy included career fairs
Nalcor will contribute to and participate in activities and initiatives designed to help students become aware of and interested in the skilled trades in general, upcoming Project employment opportunities, and associated training opportunities and req'mts	C	Completed	Communications and Stakeholder Relations Strategy; Monthly Benefits Report; Labour Acquisition Strategy; Participation in career fairs and delivery of operations jobs presentations to Innu schools
Nalcor will engage employees and potential employees through a variety of programs and practices to - Contribute to student achievement awards and provide summer student employment opportunities and work-term placement opportunities on the Project;	C	Completed	Several work term and summer students hired every semester.

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Nalcor and Innu Nation have agreed to co-operate to develop a specific Innu Training Plan to help encourage and assist Innu to participate in and become qualified for employment on the Project.	C	Completed	October 2014 Monthly Benefits Report; Original Innu Training Plan An Innu training plan has been developed on a number of occasions in conjunction with LAMP training proposals, dating back to 2009-10. We worked with Innu Nation reps on these training plans, which were ultimately funded by federal and provincial funds, as well as in-kind and cash from Nalcor and Innu Nation.
Nalcor will support employees through: Access to an Employee Assistance Program (EAP), which will provide counselling for employees and their families who are experiencing problems in their work or personal lives.	C	Completed	inConfidence® Employee and Family Assistance Program
Establishment of a workplace committee that serves as a discussion forum for identifying and discussing perceived or potential workplace issues and makes recommendations to Nalcor and its contractors on any requirements and measures for improvement.	C	Completed	Feedback has been sought from workers in underrepresented groups, in keeping with the continuous improvement commitment. LCP Human Resources has also solicited feedback from workers at all sites for consideration and improvement.
Goods and services will be acquired on a Best Value basis, which is defined as a blend of total cost, quality, technical suitability, credit worthiness, delivery and continuity of supply and services, and where total cost comprises initial purchase price plus Operations and Maintenance costs as deemed applicable by Nalcor.	C	Completed	Procurement Management Plan
Nalcor will follow its Contracting and Purchasing policy for the Lower Churchill Project.	C	Completed	Procurement Management Plan
During Project construction Nalcor will establish a Business Opportunities Committee with representation from Nalcor, key Project contractors and representatives of the provincial business community, to encourage dialogue on its Industrial Benefits Planning activities and help provincial businesses effectively pursue Project opportunities.	C	Completed	A Business Opportunities Committee has been established and includes participation from Nalcor, Department of Innovation, Business and Rural Dev, St. John's Board of Trade and the Labrador North Chamber of Commerce. These organizations meet regularly.
Nalcor's contracting and purchasing practices will apply to the Project Ops and Maintenance, with full and fair opportunity given to all suppliers, goods and services being acquired on a Best Value basis and with NL/Lab benefits incl. in contract awards	O&M	Ongoing	Public Procurement Act

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<p>Under the terms of the Benefits Strategy (GNL 2010, internet site), Nalcor will, on a monthly basis from the date of sanction of the Project and throughout construction, provide information to the provincial gov't on the following (broken out by National Occupational Classification Code, location, contractor, Aboriginal affiliation and gender relating to the Project for the period):</p> <ul style="list-style-type: none"> - total number of person-hours of all work on the Project in that month and to date; - number of person-hours of Project management in the province in that month and to date; - number of person-hours of engineering design work in the province in that month and to date; - number of person-hours of construction and assembly in the province in that month and to date; - number of residents hired for the Project Team and the percentage of Project Team members who are residents; - number of residents hired for engineering design work and the percentage of engineering design workers who are residents; - number of residents hired for construction and the percentage of construction workers who are residents; and - number of person-hours of specialized engineering performed outside the province (if any) by component. 	C	Ongoing	Monthly Benefits Reports
<p>Nalcor will report to the Government of Newfoundland and Labrador monthly, providing information on the:</p> <ul style="list-style-type: none"> - total value of goods and services purchased; - total value of services purchased from businesses in the province by geographic location; - total value of purchases by industry category (e.g., transportation, fuel, equipment); - cumulative total value of goods and services referred to above for the year to date; and - details of contracts awarded in that month. 	C	Ongoing	Monthly Benefits Reports
<p>Nalcor will report to the Government of Newfoundland and Labrador on a quarterly basis on hiring and employment objectives and targets. In addition, quarterly reports will be provided on:</p> <ul style="list-style-type: none"> - the level of compliance with the Benefits Strategy over the reporting period; - information regarding supplier development workshops performed during the reporting period; - report of activities carried out pursuant to the Gender Equity Program; - report of activities carried out pursuant to the Diversity Program; and - procurement forecasts. 	C	Ongoing	Monthly Benefits Reports

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<p>Nalcor will continue to provide information and updates on Project activities and effects related to Economy, Employment and Business on a regular basis as part of its ongoing governmental, Aboriginal, stakeholder and public consultation activities throughout the Project. Such information and consultation will also be used, as necessary, to facilitate planning and continuous improvement through modification of Nalcor strategies to optimize Project benefits to Newfoundland and Labrador.</p>	C	Ongoing	Monthly Benefits Reports
<p>The avoidance of known land and resource use components and activities where possible during Project planning to date, including in the selection of the proposed transmission corridor, and in the identification of locations for other key project component (e.g., electrodes, submarine cable landing sites, converter stations).</p>	C	Completed	EIS Addendum
<p>This planning approach will be carried forward into the detailed route selection process for the transmission line ROW within this corridor, which will also involve additional and future consultation with government departments, Aboriginal and stakeholder groups and the public.</p>	C	Completed	EIS Addendum; Nalcor LCP Public Notice – Dec 2012
<p>Designing, planning and scheduling Project-related elements and activities in specific areas to avoid interactions with land and resources users to the extent practical, as well as regular communication and consultation with relevant agencies, organizations and representatives as part of such planning and eventual implementation.</p>	C	Completed	Outfitters Environmental Effects Monitoring Plan; LIL Construction Notices; Weekly Environmental Reports (issued to regulators) Bi-weekly construction updates were provided on https://muskratfalls.nalcorenergy.com/constructionactivities/
<p>Nalcor will continue to consult appropriately with relevant Aboriginal communities and organizations in Labrador and Québec, particularly those with demonstrated contemporary land use near the Project. This will include the provision of Project information and updates on ongoing and planned activities, and discussion of any issues and potential means to address them.</p>	C	Completed	LCP Integrated Regulatory Compliance Plan; Stakeholder Relations Strategy
<p>Nalcor will work directly with any commercial outfitter with an existing, active hunting and / or fishing camp located within the proposed transmission corridor, or within 5 km of the corridor or of the location of any other planned permanent Project component. This will include consultation during detailed design and planning for sections of the proposed transmission line within these areas (e.g., ROW selection, tower design and placement, scheduling), to seek to avoid or reduce any potential issues or interactions during construction and / or operations. It will also include exploring possible routing approaches to help minimize the eventual use of the ROW by ATVs and snowmobiles in areas that are currently remote and inaccessible.</p>	C	Completed	EIS Addendum; Outfitters Environmental Effects Monitoring Plan; Letters to Outfitters; LIL Construction Notices; Weekly Environmental Reports (issued to regulators) Bi-weekly construction updates were provided on https://muskratfalls.nalcorenergy.com/constructionactivities/
<p>Nalcor will meet and consult generally with the Newfoundland and Labrador Outfitters Association (NLOA) and / or other industry representatives to discuss general issues and potential effect management measures.</p>	C	Completed	EIS Addendum; Outfitters Environmental Effects Monitoring Plan; Letters to Outfitters; Consultation with the NLOA; LIL Construction Notices; Weekly Environmental Reports (issued to regulators) Bi-weekly construction updates were provided on https://muskratfalls.nalcorenergy.com/constructionactivities/

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When seeking to acquire required property rights, Nalcor will follow its Property Acquisition Policy to conduct negotiations and provide a fair balance between the needs of property owners, Nalcor and the ratepayers and citizens of the province. The objective is to secure voluntary property settlements in a timely manner at a reasonable cost.	C	Completed	Part II of the Muskrat Falls Project Land Use and Expropriation Act; Real Property Acquisition Strategy
Nalcor will exercise its rights to secure land interests for public projects through the process of expropriation only when all other avenues are exhausted. An expropriation and the required property owner compensation follow specific procedures as set out in provincial legislation. Even after an expropriation is filed, Nalcor will continue to attempt to secure a negotiated settlement with affected property owners.	C	Completed	Part II of the Muskrat Falls Project Land Use and Expropriation Act; Real Property Acquisition Strategy
Nalcor will work directly with the GNL Natural Heritage Branch, Parks and Natural Areas Division (and other organizations as applicable) during detailed engineering design and planning (e.g., for ROW selection, tower design and placement, and scheduling) for those sections of the proposed transmission line that will occur within 1 km of the boundaries of an existing protected area, to seek to avoid or reduce any potential visual or other such interactions.	C	Completed	EIS Addendum; C&U Permit – Nalcor – Badger & East Renewal; TVA – Nalcor Dowden’s Point PND were consulted as per the following: <ul style="list-style-type: none"> • Gov NL Environmental Monitor • Powerline Access • Weekly Reports • Permit Applications • Permit referrals (land acquisition, quarry permits) • Personal communications
While conducting any construction activities within Protected Public Water Supply Areas, Nalcor will follow relevant environmental protection and regulatory requirements.	C	Completed	Permits to work within Protected Public Water Supply Area were obtained and adhered to; LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Nalcor will work directly with Transport Canada, DND and other relevant authorities to ensure that the presence and characteristics of any transmission towers in the general vicinity of these facilities are in keeping with required guidelines and regulatory standards, so as to not interfere with the operations and safety of aircraft. Nalcor will cooperate to include Project infrastructure on maps and navigational charts, and coordinate and communicate regarding any Project-related aircraft activities in these areas during construction.	C	Completed	NAV CANADA Aeronautical Information Services Land Use Proposal (SLI-00971)
Nalcor will provide Project information and updates to provincial forest planners and managers so that future operational plans (5 year or annual) can fully incorporate the Project ROW and any associated forest clearing.	C	Completed	Regulatory Compliance Plan Annual meeting with regulators, consultation with Forestry Branch during the permitting process
During detailed routing for the transmission line ROW and during construction, Nalcor will consult with adjacent operators and land owners (e.g., those with existing quarries, staked claims, oil and gas exploration parcels, impost land, mining leases, agricultural areas and Crown titles) as required, to provide up to date information on planned construction activities and to optimize planning and scheduling.	C	Completed	Nalcor LCP Public Notice – Dec 2012 The detailed route was made publically available at http://weather.amec.com/nalcor-LCPTR and included ads in relevant papers. Consultation was conducted with adjacent land owners, cabin associations, adjacent businesses such as CBPPL, sod farm, quarry owners, outfitters, fishers, etc.

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Nalcor will provide advanced notice of planned construction work in the Strait of Belle Isle through mechanisms such as the Canadian Coast Guard's (CCG) Notices to Shipping and the Canadian Broadcasting Corporation's Fisheries Broadcast.	C	Completed	LCP Strait of Belle Isle Marine Crossing Environmental Protection Plan; Notice to Shipping Request Nexans; Public Notice Broadcast – Cable Laying in the Strait; Marine Crossing Mailout June 2016
In the event that Nalcor has to acquire a recreational property (i.e., a cabin), Nalcor will follow its Property Acquisition Policy to conduct negotiations and provide a fair balance between the needs of property owners, Nalcor and the ratepayers and citizens of the province.	C	Completed	Part II of the Muskrat Falls Project Land Use and Expropriation Act
Nalcor will continue to use information collected during past and ongoing discussions with potentially affected Aboriginal groups and communities to avoid conflicts with contemporary land use for traditional purposes to the extent practical.	C	Completed	All feedback received is considered. All permits are sent to the various aboriginal groups for review as per the Aboriginal Consultation Guidelines.
Nalcor has a continued commitment to undertake and finalize land and resource use studies under the current community engagement agreements with NunatuKavut Community Council, Pakua Shipu and Unamen Shipu. Nalcor will consider and incorporate information where relevant, including the potential for mitigation and adaptive management during detailed design and routing, and will assess any new relevant information regarding contemporary traditional land use.	C	Completed	EIS Addendum LCP has continued to keep this commitment open under the current community engagement agreements. Requests for additional funds were not granted in 2015 as the work to date had not been completed. The detailed route was made publically available at http://weather.amec.com/nalcor-LCPTTR and included ads in relevant papers.
Nalcor will continue to work and consult with the NL Parks and Natural Areas Division and other relevant organizations as it proceeds with Project planning, in order to seek to incorporate any available information regarding proposed protected areas into its planning, design and implementation of the Project.	C	Completed	EIS Addendum; C&U Permit – Nalcor – Badger & East Renewal; TVA – Dowdens Point
Nalcor will continue to meet with the International Appalachian Trail - Newfoundland and Labrador (IATNL) to discuss the specific routing and tower placement for the Project as engineering progresses, to reduce visual issues in key areas where technical and cost considerations facilitate this.	C	Completed	No feedback has been received from the IATNL since the EA. EIS Addendum; Nalcor LCP Public Notice – Dec 2012
Nalcor will consult with government departments, Aboriginal groups, outfitters and other groups and individuals to explore possible transmission line routing approaches in currently remote and identified sensitive areas to help minimize the eventual use of the ROW by ATVs and other public.	C	Completed	EIS Addendum
Nalcor will assess any new relevant information regarding contemporary traditional land use activities of the Quebec Innu of Uashat mak Mani-Utenam, Matimekush-Lac John, Nutashkuan, Ekuanitshit and the Naskapi Nation of Kawawachikamach become available, in relation to the Project-related components.	C, O&M	Ongoing	All new information is reviewed and considered. All environmental effects management plans and permits are provided to indigenous groups as prescribed in the Aboriginal Consultation Guidelines.
Nalcor will establish a Fisheries Liaison Committee (FLC) for the Project construction period to facilitate its ongoing fisheries consultation and advisory process during Construction and Operations and Maintenance.	C, O&M	Completed	Fisheries Liaison Committee was established and continued until the installation campaign was completed. Operations is aware of this requirement if a major maintenance program is required.

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Nalcor will establish a Safety Zone, in accordance with Rule 43 of the Collision Regulations under the Canadian Shipping Act, around all active construction areas within the marine environment.	C	Completed	LCP Strait of Belle Isle Marine Crossing Environmental Protection Plan This commitment was met during SOBI work scope (i.e. marine cable installation by Nexans and rock protection installation by Tideway) by completing the following: - Notice to Mariners - Monitoring completed via visual observations and vessel radar systems for other vessels. - No issues regarding other vessels entering the safety zone occurred during the SOBI work scopes.
Nalcor will consult with relevant Transport Canada personnel to determine the most appropriate means for boundary demarcation and communication.	C	Completed	Navigable Waters Protection Act Request for Work Approval – Dowdens Point - Shoreline Electrodes; Navigable Waters Protection Act Request for Work Approval - L'Anse au Diable - Shoreline Electrodes; Navigable Waters Protection Act Request for Work Approval - SOBI Cable Crossing
Nalcor will develop a Vessel Traffic Management Plan (VTMP) before Project construction activities commence in the Strait of Belle Isle, in consultation with applicable agencies and organizations, including advice and guidance from experts with the Ship Safety Branch of Transport Canada and the CCG.	C	Completed	NE-LCP-MEMO-001979 Memo sent to Clement Murphy - Transport Canada, Regarding Vessel Traffic Management Plan - SOBI Cable Installation
Nalcor will make available Fishing Gear Loss or Damage Compensation to cover any damage to commercial fishing gear or other equipment if an incident occurs during the Project Construction phase that involves contact with a Project vessel outside the Safety Zone. This will be similar to programs currently in use within the province's offshore area for petroleum exploration and development.	C	Completed	No compensation provided for gear loss or damage as Nalcor reached compensation agreement with scallop harvesters on January 31, 2014.
Nalcor will provide economic compensation for any Strait of Belle Isle commercial fishing enterprise that experiences a loss of fishing income as a result of marine construction activities. This compensation will be available to licence holders who have been actively involved in harvesting scallop in the relevant area in recent years, and will compensate for any demonstrated actual loss of net commercial fishing income.	C	Completed	Nalcor reached compensation agreement with scallop harvesters on January 31, 2014.
Prior to the start of electrode construction activities in Conception Bay, Nalcor representatives will meet with local fishers and other interested and applicable parties, particularly those who use any fishing grounds along the shoreline near the Dowden's Point shoreline electrode site.	C	Completed	Dowden's Point Open House took place in 2013. Four open houses held in CBS (Sept 29/11; May 3/12; Nov 5/13 and Apr 20/11). Key stakeholder meeting including FFAW Feb 22/11. Extensive consultation with the Dowden's Point Concerned Citizens Action Committee during 2015. Consultation with local lobster fish - Clyde Jefford Jun/15.
Nalcor will consult and address any issues related to commercial fisheries in the Strait of Belle Isle that result from Project activities.	O&M	Ongoing	Operations is aware of this requirement if a major maintenance program is required. Nalcor reached compensation agreement with scallop harvesters on January 31, 2014 and therefore this is not expected.

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<p>Project construction workers will be housed in temporary construction camps rather than in local hotels, B&Bs and other accommodations, so as to avoid placing demands on these services, especially during peak tourism seasons.</p>	<p>C</p>	<p>Completed</p>	<p>Twenty camps were established along the route and that all required permits. (Valard DC1 - Eagle Camp Valard DC2 - Temporary St. Paul's River Camp Valard DC2 - Final St. Paul's River Camp Valard DC3 - L'Anse Au Loup Camp Valard DC4 - Plum Point Camp Valard DC5 - Hawkes Bay Camp Valard DC6 - Birchy Narrows Camp Valard DC7 - Grand Falls Windsor Camp Valard DC8 - Gambo / Mint Brook Camp Valard Clarenville Camp Valard Arnolds Cove Camp Valard - Long Range Mountains Taylors Brook Camp</p> <p>Mike Kelly & Sons - Long Range Mountains Bateau Barrons Camp Mike Kelly & Sons - Long Range Mountains Taylors Brook Camp</p> <p>Labrador Straits Rental (C&T) - KM 94 Camp Forteau</p> <p>Springdale Forestay - Taylor's Brook Camp</p> <p>JCL - Daniels Harbour Camp JCL - Eagle Mountain Camp JCL - St. Pauls River Camp JCL - Terra Nova Camp)</p>
<p>Nalcor will coordinate and schedule Project-related transportation of large equipment and materials to avoid heavy seasonal tourism traffic to the extent practical, and communicate and consult regularly with relevant agencies and tourism industry organizations and representatives as part of Project planning.</p>	<p>C</p>	<p>Completed</p>	<p>There are numerous applications and approvals for relocation of large equipment on Nalcor's Aconex Permits. Nalcor consulted with stakeholders to understand the potential impacts of transporting large equipment and materials, and worked to find ways to mitigate those impacts. The transport of equipment and materials were scheduled to minimize the impact on public roads, ferries, and snowmobile trails during peak use, where possible. Nalcor provided advance communication to the public, RCMP, government agencies and other relevant stakeholders of transports that had the potential to cause delays. This included direct communication with key stakeholders, as well as public advisories and social media campaigns.</p>

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<p>Nalcor will schedule certain Project-related movements and presence of personnel, equipment and materials to accommodate heavy seasonal tourism traffic, and will communicate with their sub-contractors about alternate travel and living arrangements during high tourism season.</p>	<p>C</p>	<p>Completed</p>	<p>Permit Registry - appropriate permits obtained e.g., Highway Traffic Act LIL Construction Notices; Twenty camps were established along the route and that all required permits. (Valard DC1 - Eagle Camp Valard DC2 - Temporary St. Paul's River Camp Valard DC2 - Final St. Paul's River Camp Valard DC3 - L'Anse Au Loup Camp Valard DC4 - Plum Point Camp Valard DC5 - Hawkes Bay Camp Valard DC6 - Birchy Narrows Camp Valard DC7 - Grand Falls Windsor Camp Valard DC8 - Gambo / Mint Brook Camp Valard Clarenville Camp Valard Arnolds Cove Camp Valard - Long Range Mountains Taylors Brook Camp</p> <p>Mike Kelly & Sons - Long Range Mountains Bateau Barrons Camp Mike Kelly & Sons - Long Range Mountains Taylors Brook Camp</p> <p>Labrador Straits Rental (C&T) - KM 94 Camp Forteau</p> <p>Springdale Forestay - Taylor's Brook Camp</p> <p>JCL - Daniels Harbour Camp JCL - Eagle Mountain Camp JCL - St. Pauls River Camp JCL - Terra Nova Camp)</p>
<p>Nalcor will communicate to the public, the RCMP and appropriate government departments and agencies when non-routine Project-related movement and presence of personnel, equipment and materials will occur in sufficient time for these departments and agencies to take appropriate action and / or for the public to make alternative arrangements.</p>	<p>C</p>	<p>Completed</p>	<p>Nalcor consulted with stakeholders to understand the potential impacts of transporting large equipment and materials, and worked to find ways to mitigate those impacts. The transport of equipment and materials were scheduled to minimize the impact on public roads, ferries, and snowmobile trails during peak use, where possible. Nalcor provided advance communication to the public, RCMP, government agencies and other relevant stakeholders of transports that had the potential to cause delays. This included direct communication with key stakeholders, as well as public advisories and social media campaigns.</p>
<p>Nalcor will also ensure that if large numbers of Operations and Maintenance personnel are required, that appropriate travel and accommodations arrangements are made during the high tourist season that would not unduly interfere with travel and accommodation needs of tourists.</p>	<p>O&M</p>	<p>Ongoing</p>	<p>Operations is aware of this commitment</p>

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<p>As a part of ongoing engineering and detailed design for the Project, Nalcor has studied in detail wave climate and extremes for the shoreline pond electrode permeable berms at L'Anse au Diable and Dowden's Point. The results of this detailed study will be used to establish the design of the permeable berms and the electrode pond that will provide protection and technical design requirements for the shoreline pond electrodes at L'Anse au Diable and Dowden's Point. The design of the Dowden's Point electrode will consider all relevant environmental conditions at the site selected, including ongoing erosion of the coastal bluffs.</p>	C	Completed	<p>Wave Climate and Extremes at L'Anse au Diable; Wave Climate and Extremes at Dowden's Point; Lower Churchill Project - Design Study Report - HVDC Shoreline Beach Electrode; Lower Churchill Project Shoreline Pond Electrodes Civil/Marine Design Criteria; Shoreline Pond Electrodes - Civil/Marine Design Criteria</p>
<p>Nalcor confirms that seismic effects on structure design will be incorporated into detailed engineering design for the Project.</p>	C	Completed	350 kV HVdc Line Tower Design Criteria
<p>Nalcor will assess all proposed works to be installed in, on, over, under, through, or across waterways against the Minor Works and Waters Order.</p>	C	Completed	LCP Integrated Regulatory Compliance Plan
<p>Nalcor will submit a completed "Request for Work Approval" for all works installed in, on, over, under, through, or across a navigable waterway that do not meet the criteria outlined in the Minor Works and Waters Orders.</p>	C	Completed	Request for Work Approval Submitted (Aconex IDs: SLI-00851, SLI-00852, SLI-01011)
<p>Nalcor will comply with the Navigable Waters Protection Act and Regulations, and will obtain all appropriate permits.</p>	C	Completed	LCP Integrated Regulatory Compliance Plan; Navigable Waters Protection Act Permits and Approvals
<p>Construction work associated with the L'Anse au Diable electrode will be limited to shore areas, and as indicated in Figure 3.3.4-1, Volume 1 of the EIS, the constructed electrode generally follows the existing shoreline.</p>	C	Completed	L'Anse au Diable Electrode Station Breakwater Plan
<p>All international Project vessels will apply for a Coasting Trade Permit issued under the Coasting Trade Act. This means that the vessel would comply with all applicable regulations under International Maritime Organization (IMO) Conventions, including but not limited to:</p> <ul style="list-style-type: none"> • International Convention for the Safety of Life at Sea (SOLAS) • International Convention for the Prevention of Pollution from Ships (MARPOL) • International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers (STCW) • International Convention on Load Lines (LL) • International Convention on Tonnage Measurement of Ships (TONNAGE) • International Convention on the Control of Harmful Anti-Fouling Systems on Ships (AFS) • International Convention on Civil Liability Damage for Oil Pollution Damage (CLC). 	C	Completed	Nexan's Environmental Protection Plan
<p>Nalcor will provide Transport Canada – Marine Safety with an opportunity to review the completed Vessel Traffic Management Plan by sending it to the address provided.</p>	C	Completed	Vessel Traffic Management Plan provided to Transport Canada.

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Nalcor will evaluate and apply the appropriate mitigation with respect to noise control once the drilling equipment is selected. A noise attenuating berm may be constructed on-site if required, on the side of the activity facing residential receptors.	C	Completed	No noise complaints were received during the drilling campaign.
Final design load cases will include adjusted wind loads that take into account the average tower heights of 35 to 45 m, and the subsequent conductor sag, which is higher than the 10 m reference height.	C	Completed	350 kV HVdc Line Tower Design Criteria
The shoreline electrode berms will be designed to withstand pack ice conditions, the potential force of a collision with icebergs, and freezing inside the shoreline pond. The depth of the shoreline pond will account for changes in the water level due to ice formation.	C	Completed	Shoreline Pond Electrodes - Design Brief; Shoreline Pond Electrodes - Civil/Marine Design Criteria
Nalcor has currently undertaken an iceberg monitoring program in the Strait for a minimum of two years that will record iceberg frequency, characteristics (size), and behavior in the vicinity of the cable route. Data collected from the program will be used to refine the C-CORE study model, as the initial model utilized conservative assumptions.	C	Completed	Iceberg Detection and Tracking Program completed
During Nalcor’s detailed Project engineering design, the best available data regarding sea ice will be considered. "Based on the 1971-2000 and1981-2010 Atlases, when ice is present in Conception Bay it is predominantly new to grey ice with some grey-white ice near the entrance to the Bay before the middle of March." -Environment Canada Nalcor acknowledges Environment Canada’s input and will consider this additional detail as the design process continues for the Project. "Median ice concentrations in the Strait of Belle Isle are typically greater than 70% by the first (1971-2000 Atlas) or second week of January (1981-2010 Atlas). They are greater than 90% from the second week of January (1971-2000 Atlas) or mid-January (1981-2010 Atlas) onwards. In a normal year, >90% ice concentrations over the whole Strait of Belle Isle can last up to 10-14 weeks, and even longer (up to 17 weeks) along the southern shore of the strait. On average, spring break-up starts in the second half of March."	C	Completed	Strait of Belle Isle Sea Ice Conditions; Shoreline Pond Electrodes – Design Brief
Handling and fuelling procedures will comply with the Storage and Handling of Gasoline and Associated Products Regulations (CNR 775/96) and any additional requirements set forth by the NLDEC. During construction, hydrocarbon supplies will be transported by tanker trucks and in drums or other approved containers. Fuelling stations will be established along the ROW, with self-dyked steel storage tanks and the largest fuel storage tank on-site will hold no more than 125,000 litres (L).	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; Master Spill Response Plan - All Components
Construction of the submarine cable crossing and shoreline electrodes will be scheduled to avoid in-water works when sea ice or icebergs are present or likely.	C	Completed	Cable installation completed between June and November, 2016. Electrodes completed in fall 2016.

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Nalcor agrees to report all spills in water to the Spill Line operated by the Canadian Coast Guard. Immediate reporting of spills on land will also be conducted, if a spill or leak is greater than 70 litres, or a spill or leak, regardless of quantity has the potential to contaminate a nearby property, or enter a watercourse or sewer.	C, O&M	Ongoing	Master Spill Response Plan - All Components; LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; Nalcor will develop a Standard Operating Procedure for Operations.
Detailed study of storm surges and extreme events is part of Nalcor’s on-going engineering design for the coastal infrastructure of the Project at L’Anse au Diable and Dowden’s Point. These studies also include the use of MSC50 as baseline data and derived both climatic and extreme values for the studied area.	C	Completed	Wave Climate and Extremes at L’Anse au Diable; Wave Climate and Extremes at Dowden’s Point
Nalcor will continue to engage Environment Canada in the application of The Federal Policy on Wetland Conservation as appropriate to the Project.	C	Completed	The policy was not applicable to the project as wetlands were avoided to the extent possible during the design phase and mitigations were put in place to minimize impact to wetlands.
Project components and the final ROW alignment will be sited and routed to avoid, to the extent practical, vegetation communities that are identified as sensitive to disturbance (e.g., wetlands), and the minimum practical footprint will be used for construction activities.	C	Completed	EIS Addendum
Construction site drainage features, such as ditches, will be designed such that wetland hydrology is maintained, to the extent practical. Discharge storm water, or diversion of surface water during construction will be directed away from wetlands, where practical, unless it is intended to maintain pre-construction hydrology	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Nalcor will construct swamp mats (logs strapped together in mats of manageable lengths) from locally obtained logs, to facilitate removal, as and where appropriate. (Clarification: The intent of our response/commitment was that we don't normally remove the corduroy but if we were to remove it we would construct a swamp mat.)	C	Completed	Wooden panels, (also called swamp mats or rig mats) are used at our workfronts in Labrador and Newfoundland for clear-span temporary stream crossings, bridge abutments, and occasionally to cross wetlands or boggy areas if suitable corduroy is not available, and the area cannot be avoided.
Sediment control measures such as silt fences will be installed and properly maintained for the duration of construction. Following the completion of construction, sediment control measures will be removed. If, and as required, sediment control measures will remain in place and be properly maintained as part of routine operations.	C, O&M	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; If sediment control measure required during operations, a standard operating procedure is required to ensure it is properly maintained.
Natural regeneration of vegetation will be used in wetlands without non-native or invasive plant species.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Riparian habitat near applicable waterbodies and watercourses will be protected in accordance with the recommended buffer width of 20 m.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
In areas where the right-of-way is located parallel to a waterbody/watercourse, a 20 m riparian habitat area will be maintained.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan

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During detailed route selection riparian areas will be avoided as much as possible and where avoidance is not technically feasible the riparian area within the ROW will not be cleared but rather a 20 metre buffer along the riparian shoreline will be maintained, except for a narrow access trail required to cross the buffer.	C	Completed	EIS Addendum; LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Equipment maintenance will be conducted in accordance with manufacturer's requirements and will be completed on-site. All maintenance and repair activities will be undertaken in compliance with environmental rules and regulations and as per the Project Environmental Protection Plan (EPP). Any field servicing will be conducted a minimum of 50 m from any watercourse or wetland, unless otherwise approved or in the event of an emergency. Waste oil will be collected and stored in drums (clearly marked as waste oil) inside a dyked area and will be regularly shipped for disposal. Waste oils, lubricants and other used oil will be disposed of at approved disposal sites.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
During construction, fuel will be transported by tanker trucks, in drums or other approved containers. Fuelling stations will be established along the ROW, with self-dyked steel storage tanks. The largest fuel storage tank on-site will hold ...	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Fuelling stations at marshalling yards and camps will include concrete pads and drainage controls. Drainage will be retained in a sump where hydrocarbons can be captured and separated prior to release of any rainwater run-off, as appropriate. Equipment with reduced mobility, such as heavy lift cranes and excavators, will have fuel delivered by a mobile tank and re-fuelling will take place on-site. All fuel transfers will follow safety procedures to prevent leaks and drips, and spill response kits will be available on all vehicles used to transport fuel. Fuelling of mobile equipment will not be permitted within 50 m of a waterbody. Handling and fuelling procedures will comply with the Storage and Handling of Gasoline and Associated Products Regulations and any additional requirements set forth by the NLDEC."	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Prior to the commencement of Construction, equipment will be inspected for the presence of soil that could contain seeds and/or propagules of invasive and non-native species. Equipment found to have soil attached will be cleaned (e.g., pressure washed) to remove this potential seed source prior to the commencement of Construction.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Nalcor has committed to a follow-up program for the Vegetation VEC to confirm effective mitigation measures and address areas of concern that are identified through follow-up programs or routine inspection of the Project ROW and sites, including the success of mitigation efforts undertaken to protect listed plants during Project Construction and the increase in off-highway vehicle use facilitated by the Project, and developing a reclamation strategy or other mitigation as appropriate to address unresolved issues.	O&M	Ongoing	Follow up report to be prepared during operations re listed plant locations and effects of the proejct.

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An On Site Environmental Monitor will be on-site during Project Construction to monitor the implementation of planned mitigation measures in accordance with the Environmental Protection Plan, and routine inspections during Operations and Maintenance will be designed to identify areas of concern that need to be addressed when they arise.	C, O&M	Ongoing	Regulatory Compliance Plan; 636 Environmental Reports have been submitted by On Site Environmental Monitors for C3, and 7,211 for C4.
Develop an Avifauna Management Plan that includes: • Level I - designed to reduce the likelihood of interaction during clearing and other construction activities; • Level II - considerations personnel should be aware of that may identify an active nest; and • Level III – protocols for aerial and ground avifauna surveys that should be completed by ornithologists in areas of potential habitat within or near the Project footprint. Nest searches will be conducted prior to clearing if clearing activities are conducted during breeding season of migratory birds and a 30 m buffer around active nests will be maintained during project construction.	C	Completed	LCP Avifauna Management Plan; 2013-2015 Avifauna Report; 2016 Avifauna Report; LITL Avifauna Protection and Environmental Effects Monitoring Plan
Effects management measures will be implemented such as providing notice to communities and Aboriginal groups of locations of the ROW where vegetation management will be undertaken. Notification would include correspondence with municipal governments prior to commencing the transmission line program within municipal boundaries, and advertising in a regional newspaper at least one week prior to vegetation management activities occurring, and signage posted in the ROW upon treatment, stating the date of application and product used.	O&M	Ongoing	Operations has a vegetation management plan that complies with provincial regulations, specifically those outlines in the Pesticide Control Regulations. Signage and notification is also outlined under the conditions.
If appropriate, artificial nests will be implemented in consultation with the NLDEC-WD	C	Completed	LCP Avifauna Management Plan No artificial nests were required for the construction of the project.
If additional observations of Harlequin Duck become available for Doctor's Brook, Nalcor will consider these as a part of its adaptive management plan which would include implementing mitigation and monitoring for Harlequin Ducks.	C	Completed	Labrador-Island Transmission Link Species at Risk Impacts Mitigation and Monitoring Plan
The ROW will avoid known native red pine stands on the island during the construction of the Labrador – Island Transmission Link.	C	Completed	EIS Addendum
Nalcor will implement protocols for daily, systematic searches of birds that may become stranded on all appropriate Project vessels during construction and recording of environmental conditions at the time of recovery, i.e., visibility, cloud cover, precipitation and moon. Recovered birds will be released in accordance with standard protocols described by Williams and Chardine (1999). Application will also be made to EC for a marine bird salvage and release permit under the authority of the Federal Migratory Bird Permit. Data recorded during this daily monitoring regime will be reported to EC.	C	Completed	Marine Mammal Observation Form; LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; Application for a Permit to Salvage Live Seabirds for Release – SOBI Marine Crossing

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During the Project Construction, if despite the implementation of Nalcor’s proposed mitigation measures there are any incidents related to effects on migratory birds or species at risk, Nalcor will provide details of such incidents to the Canadian Wildlife Service of Environment Canada, as per the conditions noted in the information request.	C	Completed	Labrador-Island Transmission Link Species at Risk Impacts Mitigation and Monitoring Plan; L-ITL Avifauna Protection and Environmental Effects Monitoring Plan; Wildlife Sightings Reports (2014 Wildlife Sightings Report for the Lower Churchill Project, 2015 Wildlife Sightings Report for the Lower Churchill Project, 2016 Wildlife Sightings Report for the Lower Churchill Project, 2017 Wildlife Sightings Report for the Lower Churchill Project, 2018 Wildlife Sightings Report for the Lower Churchill Project)
As per the Guidelines for the Protection of Freshwater Fish Habitat in Newfoundland, if the slope is greater than 30%, the formula $20\text{ m} + 1.5 \times \text{slope} (\%)$ will be used to determine the appropriate buffer.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
During stream crossing design, Nalcor will consider clear span bridges as DFO’s preference for water course crossings, followed by bottomless arch culverts, then cylindrical culverts and, lastly, one-time fording events.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; DFO Blanket Notification - Water Use and Stream Crossing
Nalcor also acknowledges that DFO has a National Operational Statement for Clear Span Bridges. During construction, if there is a potential issue regarding compliance with the operational statement, Nalcor will contact DFO for advice.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; DFO Blanket Notification – Water Use and Stream Crossings
Nalcor will contact DFO for specific advice regarding water withdrawal activities, and will adhere to the DFO’s “Freshwater Intake End-of-Pipe Fish Screen Guideline” (DFO 1995).	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
During detailed engineering design, the potential effect of the predicted sea level rise over the useful lives of the electrodes will be considered, and incorporated into the electrode design appropriately.	C	Completed	Lower Churchill Project - Design Study Report - HVDC Shoreline Beach Electrode; Shoreline Pond Electrodes - Civil/Marine Design Criteria
Fording will be subject to stipulations contained in Certificates of Approval obtained from the Newfoundland and Labrador Department of Environment and Conservation (NLDEC) and authorizations obtained from Fisheries and Oceans Canada (DFO). Crossings will be restricted to a single location and will be conducted at right angles to the waterbody, where possible. All equipment will be inspected for leaks of oil, fuel and hydraulic fluids prior to crossing, and the number of crossings will be kept to a minimum. Where possible, fording locations will be chosen where the banks and substrate are not sensitive to erosion.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; Stream Crossing Blanket Permit; LITL Freshwater Fish Protection and Environmental Effects Monitoring Plan
If fording must occur where the banks of the waterbody are sensitive to erosion, the bank will be modified to minimize the potential for erosion. This may be accomplished through the placement of a vegetation mat or by sloping and diverting drainage flow. Where bank material is highly erodible, riprap may be required. If banks are sloped for stabilization, no material will be deposited in the waterbody. Sloping will be accomplished by back -blading above the high water mark. If fording must occur where the substrate of the waterbody is sensitive to erosion, the substrate will be modified to minimize the potential for erosion. A temporary timber bridge may also be installed to minimize the siltation of the waterbody.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan

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Fording activities will be conducted such that the depth of the waterbody is not decreased to less than 20 cm. Where the existing depth is less than 20 cm, that depth will be maintained. Temporary silt traps will be installed in highly sensitive areas near waterbodies, as required, and approaches to ford sites will be stabilized to avoid rutting, thereby avoiding the potential for water build-up that is pushed into the watercourse by the equipment.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Bridges will be built entirely above the high water mark.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; Blanket Stream Crossing Permit
In the event there are aspects of an operational statement that are impractical in a particular situation, Nalcor will develop alternate approaches to comply with applicable legislation and regulation in consultation with DFO.	O&M	Ongoing	Operations will comply with all regulatory requirements from provincial and federal regulators, as outlined in the EMS.
Blasting operations near a watercourse will be conducted in accordance with the Guidelines for Protection of Freshwater Fish Habitat in Newfoundland and Labrador (Gosse et al. 1998).	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Fuelling stations will be established along the ROW, with self-dyked steel storage tanks. The largest fuel storage tank on-site will hold no more than 125,000 L. When the locations of and requirements for fuel storage are, all mobile storage tanks will be registered under, and in compliance with, the Storage and Handling of Gasoline and Associated Products Regulations under the Newfoundland and Labrador Environmental Protection Act (NLEPA). Records will be maintained of all storage tank contents to reconcile inventories as a check against any undetected leakage. All transport vehicles will be licensed and maintained according to safety requirements.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Should blasting take place in or near water (fresh or marine), Nalcor will follow all applicable provincial and federal legislation and regulations. Guidance documents (e.g., Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters (Wright and Hopky 1998)), applicable standard practices, and mitigation measures will be followed, where possible and practical. Where required, DFO will be consulted for advice and recommended mitigation measures towards the blasting activities in or near water.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; SOBI Environmental Protection Plan; DFO Letter of Advice Electrode Blasting

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<p>Nalcor will consider the practicality of using silt curtains in these harsh and exposed environments, and if it is deemed appropriate and practical, the use of silt curtains will be implemented.</p>	C	Completed	<p>Dowden's Point and LAD</p> <ul style="list-style-type: none"> - Contractor deployed a turbidity curtain at Dowden's Point in 2015, however, it was destroyed due to it not being suitable for marine environments, even though the Agreement specified the type required. - LCP agreed with the Contractor to only deploy a marine turbidity curtain at both work sites if warranted. - Sedimentation was observed but generally did not migrate from the work area. - Regulator was informed of the progress on site via the weekly report.
<p>Nalcor will complete a survey of the electrode sites to determine whether fish are trapped in the electrode ponds, and, based on the results of the survey, implement an appropriate fish capture and relocation plan. Nalcor will consult with DFO regarding the development and implementation of the plan.</p>	C	Completed	<p>The design at Dowden's Point was changed to not include an electrode pond, therefore this commitment would only apply to the Grounding Station at L'anse au Diable, as it is the only one with open water inside the breakwater. An in water survey for fish presence was not completed, however, On Site Environmental Monitors, the HVdc Specialties Environmental Coordinator, or the Construction Coordinators who were present during the civil works period and the electrical work period did not observe any fish present.</p>
<p>If the anticipated operational situation changes and the bipole operational scenario accounts for significantly less than the predicted 99.8% operational time, Nalcor will consider an adaptive management approach.</p>	O&M	Ongoing	<p>Marine Emissions EEM Plan under development</p>
<p>Nalcor accepts the advice provided by DFO and incorporate a marine mammal observation program in the development of its environmental protection plan for the Strait of Belle Isle cable crossing.</p>	C	Completed	<p>LCP Strait of Belle Isle Marine Crossing Environmental Protection Plan</p>
<p>In order to mitigate potential effects on the Red Wine Mountains caribou arising from increased access, Nalcor will realign the transmission line to follow the access road to the Muskrat Falls site and then along the Trans Labrador Highway, Phase 3.</p>	C	Completed	<p>EIS Addendum included the revised route</p>
<p>Chemical vegetation management will be used when mechanical vegetation management is not practical. The herbicide used is considered to be non-residual and non-toxic to wildlife or humans in the doses that would be applied and will be applied by certified personal in compliance with all provincial regulations. Buffers will be established around watercourses in accordance with provincial permit requirements.</p>	O&M	Ongoing	<p>Operations has a vegetation management plan that complies with provincial regulations, specifically those outlines in the Pesticide Control Regulations.</p>
<p>Treatment of compatible species (e.g., berry shrubs, Labrador tea, Kalmia, trailing juniper, dwarf birch) found on the right-of-way is avoided or minimized.</p>	O&M	Ongoing	<p>Operations has a vegetation management plan</p>
<p>If Unexploded Explosive Ordnance (UXO) are encountered during project activities, Nalcor will not disturb or manipulate the UXO, and will immediately contact the Coast Guard and the UXO Program</p>	C	Completed	<p>UXO avoided</p>

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Electrode line activities be avoided from the end of February to mid-July to prevent breeding disruptions and kitting/weaning/cannibalism issues for the construction of the LAD electrode line within the identified buffer for the nearby mink farm.	C	Completed	Clearing was completed in Dec 2015.
The rock required for the construction of the converter station will be obtained from existing quarries located in the Muskrat Falls area. The rock required for the electrode sites at L'Anse au Diable and Dowden's Point will use existing quarries.	C	Completed	All rock required for the construction of the converter station and electrode sites was obtained from existing quarries. CD0501/0502 Muskrat Falls: Initial grade of the switchyard needed to be leveled, materials from blasting powerhouse/spillway were used to level the area. When excavation for building foundations started, material was brought in from the company GreyRock which is located in Goose Bay. CD0508-001 Dowden's Point Electrode: Materials sourced by contractor to Farrell's in CBS as well as a small amount from Soldiers Pond which came from excavation/civil works for the Soldiers Pond Switchyard. CD0508-001 L'anse au Diable Electrode: Crown land quarry directly on site.
All borrow pits will be established within the ROW, and will be rehabilitated as work is completed in that area. Rehabilitation will include the replacement of unused excavated material, grading to a stable slope, grading to re-establish natural drainage patterns, replacement of topsoil, and installation of erosion control structures, as appropriate.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Following the federal guidance (CEA Agency 2003, internet site), the Project will be completed in a manner that will be sensitive to the minimization of air contaminant and GHG emissions, where feasible. While the overall GHG emissions from the Project will be completed in a manner that will be sensitive to the minimization of air contaminant and GHG emissions, where feasible. The following measures will be implemented wherever technically and economically feasible: <ul style="list-style-type: none"> • vehicles and equipment must comply with the relevant federal vehicle emissions and energy efficiency standards that are applicable at that time; • engine idling will be minimized and environmental awareness training with key contract personnel will be conducted on this topic; • dust suppressants (e.g., water or crushed gravel) will be applied where required; (SEE REGISTER FOR COMPLETE MEASURES)	C	Completed	Anti-Idling Policy

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<p>A combination of mitigation measures will be employed for the Project, especially those activities undertaken within 150 m of residences, schools, medical facilities, retirement homes and places of spiritual importance, so that the Health Canada (2009) noise limits are met inside these facilities. These measures will be incorporated into Project and include:</p> <ul style="list-style-type: none"> • high noise-producing Project equipment will be strategically placed as far away as practical from receptors; • all equipment will have appropriate mufflers and will be well maintained; • blasting activities will be designed and undertaken in compliance with provincial and federal regulations; • blasting mats will be used in environmentally sensitive areas; • the size of explosive charges will be limited during blasting activities; • sound barriers or berms may be used to minimize sound pressure levels, if warranted; <p>(SEE REGISTER FOR COMPLETE MEASURES)</p>	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
<p>Fugitive dust emissions can be controlled by use of best practices that include limiting the extent of clearing (i.e., limited disturbance of soil and vegetation roots) and applying dust suppressants (such as water or crushed rock) at specific locations during periods of heavy activity or dry periods to minimize airborne dust concentrations, if required.</p>	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
<p>Because of the potential for components of the Project to be near human settlements, Nalcor will evaluate and apply the appropriate mitigation with respect to noise control (see Section 1.1.3 above or Volume 2B, Chapter 11, Section 11.2.5.1), such that Health Canada noise guidelines will not be exceeded. It is currently not expected that blasting would occur at nighttime, however, if it were required, Nalcor would implement the required mitigation such that Health Canada noise guidelines will not be exceeded.</p>	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
<p>Measures will be implemented to reduce likelihood of electrocution during Project Construction, and O&M: "High voltage" signage will be posted on High Voltage direct current (HVdc) towers, the converter stations, transition compounds and electrode sites.</p>	C, O&M	Completed	Included in technical specs. Electrode site is surrounded by a barbed wire fence with locking gate. High voltage danger signs are posted on all sides of the fence. Access to breakwater structure at the grounding stations are blocked by a locked gate. Transition compounds at Shoal Cove and Forteau are entirely surrounded by barbed wire fence and locking gate along with high voltage danger signs. All HVdc towers have High Voltage signage.
<p>"High voltage" signage will be posted where power lines are buried (e.g., between the transition compounds and their respective landing points) to ensure that there is no excavation or development in the cable areas.</p>	C, O&M	Completed	Included in technical specs; standard practice for buried cables. Transition compounds at Shoal Cove and Forteau are entirely surrounded by barbed wire fence and locking gate along with high voltage danger signs.
<p>Public access to the converter stations will be restricted by galvanized steel security fences and locked gates.</p>	C, O&M	Completed	Health and Safety Management Plan Included in technical specs - this is a standard practice.

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The electrode sites will be enclosed by locked, chain-link fences to prevent public access from the land and sea sides. Sea side fencing will be installed on the electrode berm crest.	C, O&M	Ongoing	Lower Churchill Project - Design Study Report - HVDC Shoreline Beach Electrode Outside the electrode terminal yard, it has been determined there is no hazard to the public, therefore fences on the sea side are not required. Electrode site pole structures are surrounded by a barbed wire fence with locking gate. High voltage danger signs are posted on all sides of the fence. Access to breakwater structure at the grounding stations are blocked by a locked gate
Avian-safe separation of the energized and / or grounded parts of the power line will be incorporated into the transmission line design.	C	Completed	350 kV HVdc Line Design Criteria
The submarine cable will be protected from interaction with fishing activity by horizontal directional drilling (HDD) and the rock berm.	C	Completed	HDD was completed on both sides of the SOBI, and the cables were covered by a rock berm, as described in the EIS.
Submarine cable armour and protective rock berm will minimize electric fields; and rock will serve as a partial barrier to the EMF generated by the cable	C	Completed	Design Basis Report – Overall; Marine Emissions EEMP
While conducting any maintenance activities within Protected Public Water Supply Areas, Nalcor will follow relevant environmental protection and regulatory requirements.	O&M	Ongoing	Standard Operating Procedure to be developed by Operations for work within protected public water supply areas
Nalcor will develop and implement a fish habitat compensation plan to offset impacts predicted to occur as a result of the Project (pursuant to the Fisheries Act [Section 35(2)]).	O&M	Ongoing	DFO Request for Project Review Completed. Offset features created and will be monitored.
Buffer zones for foliar treatment would be applied to all water bodies, private land, wells and human habitation (temporary or permanent).	O&M	Ongoing	Standard Operating Procedure to be developed by Operations as part of its vegetation management program
A follow-up program will be conducted to investigate the effect of ROW construction on marten habitat use in the Main River core area. If modified vegetation management techniques are adopted to help facilitate marten movement across the ROW, the program would investigate their efficacy. Another study will be conducted to assess the degree of public access afforded by the ROW and access roads during the first winter following construction. Resulting information would be used in an adaptive management framework to adjust access control measures and help minimize potential effects on furbearers.	C	Completed	Labrador-Island Transmission Link Species at Risk Impacts Mitigation and Monitoring Plan; Newfoundland Marten Hair Snag Trapping and Off Highway Vehicle Surveys - Final Report
In addition to the follow-up proposed by Nalcor, the Agency recommends that, at a minimum, follow up related to the RWMH and MMH, include monitoring of: *off-highway vehicle use within the ranges of the RWMH and MMH in Labrador; *caribou use of the Project area within the ranges of the RWMH and MMH in Labrador; and *caribou crossing of the project ROW in Labrador.	O&M	Completed	Labrador-Island Transmission Link Species at Risk Impacts Mitigation and Monitoring Plan; 2015 Annual Caribou Report — Mealy Mountain Herd; 2015 Annual Caribou Report — Red Wine Mountain Herd; 2016 Annual Caribou Report — Mealy Mountain Herd; 2016 Red Wine Mountains Caribou Herd 2016 Aerial Survey; 2017 Annual Caribou Report — Red Wine Mountain Herd; 2017 Annual Caribou Report — Mealy Mountain Herd

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The follow-up program related to caribou should be acceptable to NLDEC - WD. Based on the outcomes of the follow-up program, Nalcor should implement adaptive management measures, as appropriate and recommended by the province (e.g., access control)	O&M	Completed	2015 Annual Caribou Report – Mealy Mountain Herd; 2015 Annual Caribou Report – Red Wine Mountain Herd; 2016 Annual Caribou Report – Mealy Mountain Herd; Nalcor Energy Lower Churchill Project, Environmental Effects Monitoring Program – 2016 Red Wine Mountains Caribou Herd, 2016 Aerial Survey; Nalcor Energy Lower Churchill Project, Environmental Effects Monitoring Program – 2017 Mealy Mountains Caribou Herd; 2017 Annual Caribou Report – Mealy Mountain Herd; 2017 Annual Caribou Report – Red Wine Mountain Herd Consideration of access control will be considered by operations.
Construction activities near waterbodies and water courses will be scheduled to occur during low flow or frozen conditions to avoid sensitive periods and habitat for fish and will be shut down during heavy precipitation to the extent practical.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Regular testing of total suspended solids will be conducted during construction activities to ensure that the Canadian Council of the Ministers of the Environment Protection of Aquatic Life Guidelines are not exceeded. Activities would be modified based on test results to avoid guideline exceedences. If mitigation measures for sediment run-off are proven to be effective, regular testing for nutrients will not be conducted.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; Water Quality Reports – Soldiers Pond
Construction time will be minimized to decrease exposure to noise	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Construction time will be minimized to decrease interactions with seabirds	C	Completed	Installation of the submarine cable and rock protection was completed during the ice free periods (June – November 2016)
Nalcor will conduct a follow-up program to evaluate the level of production of electrolysis products at electrode sites. Monitoring and follow-up programs will be designed in consultation with DFO and other regulators, as appropriate	O&M	Ongoing	Marine Emissions EEM Plan under development
DFO recommended that Nalcor consider the timing of construction in the Strait of Belle Isle to avoid sensitive periods for key species.	C	Completed	Ice-free period was the only option. The Marine Mammal Observation Program was executed during the campaign to mitigate effects for key species, as per the LCP Strait of Belle Isle Marine Crossing Environmental Protection Plan
In areas of high potential, Nalcor will conduct a Stage 2 Historic Resources Assessments prior to construction.	C	Completed	Historic Resources Assessment – LIL Newfoundland Segment; Historic Resources Assessment Report (Labrador Segments)
Spill response kits and fire-fighting equipment would be located on-site and that the spill response team would engage in mock responses.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; Lower Churchill Project Health and Safety Management Plan; LCP Strait of Belle Isle Marine Crossing Environmental Protection Plan; Master Spill Response Plan
If the type(s) of pesticides to be used differ from those that have been identified by Nalcor, Health Canada would be available to re-evaluate the potential for adverse health effects.	O&M	Completed	Nalcor will obtain all required permits and approvals prior to pesticide application, and any pesticides used will have been approved by provincial regulators.
Do not grub within 2 m of standing timber	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan

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Wash equipment being moved along the ROW from areas north or west of where the line crosses the TransCanada Highway at Birchy Lake to areas east or south of the TransCanada Highway (i.e., to Central and Eastern Newfoundland)	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Do not clear hardwood vegetation within 30 m of waterbodies occupied by beaver, unless clearing is required for electrical line clearance	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan; LITL Furbearers and Small Mammals Protection and Environmental Effects Monitoring Plan
Do not clear within 800 m of an active raptor nest during the nesting period unless clearing is delayed until the nest is no longer occupied; and, do not conduct clearing within 200 m of an active raptor nest during non-nesting season	C	Completed	LCP Avifauna Management Plan; Surveys were completed; No relocations were necessary. Consultation with Wildlife Division to work within buffers of active nests.
Schedule annual maintenance activities that would be located within 200m of a known active raptor nest to avoid the sensitive period for that species. Work within 200m of an active raptor nest is to be preceeded by discussion with provincial authori	O&M	Ongoing	Operations has avifauna management procedures.
Design the ground potential rise gradient on the seaside of the electrode breakwater to be less than 1.25 V/m	C	Completed	Lower Churchill Project - Design Study Report - HVDC Shoreline Beach Electrode
Ensure that Project vessels maintain constant course and speed whenever possible and detour around marine mammals and sea turtles, as technically and economically feasible.		Completed	LCP Strait of Belle Isle Marine Crossing Environmental Protection Plan
Prepare frac-out response plan	C	Completed	Frac-Out Response Plan
Any field servicing will be conducted a minimum of 50 m from any watercourse or wetland, unless otherwise approved or in the event of an emergency.	C	Completed	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
Nalcor will consider the potential effect of the predicted sea level rise over the next 90 years will be considered in the design and siting of the electrode.	C	Completed	Lower Churchill Project - Design Study Report - HVDC Shoreline Beach Electrode; Shoreline Pond Electrodes - Civil/Marine Design Criteria
PEEMP Reporting Requirements - Freshwater Fish, Construction, Monthly. Monthly Water Quality Report.	C	Completed	Water Quality Reports prepared and submitted to the regulator.
PEEMP Reporting Requirements - Freshwater Fish, Construction, Quarterly. Quarterly Stream Crossing Report - These reports identify streams and waterbodies that were crossed in that time frame, and provide information on stream locations, crossing types, details on construction and a photo log.	C	Completed	LCP Stream Crossing 2014-2017 Reports
PEEMP Reporting Requirements - Freshwater Fish, Construction, Annually. Annual Stream Crossing Report - These reports identify streams and waterbodies that were crossed in that time frame, and provide information on stream locations, crossing types, details on construction and a photo log	C	Completed	LCP Stream Crossing 2014-2017 Reports
PEEMP Reporting Requirements - Freshwater Fish, Construction, Annually. Annual Water Use Report - Detailed monthly usage and purpose are provided. As fresh water is required by contractors for multiple Project activities outlined in the WULs, the project activities are described and categorized as either domestic or non-domestic activities.	C	Completed	Annual Water Use Reports - Water Use Annual Report DOEC - 2013 - Water Use Annual Report DOEC - 2014 - Water Use Annual Report DOEC - 2015 - Water Use Annual Report DOEC - 2016 - Water Use Annual Report DOEC - 2017

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PEEMP Reporting Requirements - Vegetation, Construction, Annually. Data Collection during Construction - The LCP will compile results of daily environmental reports that reference any new occurrences of regionally uncommon plants	C	Completed	Wildlife Sightings Reports: 2014 Wildlife Sightings Report for the Lower Churchill Project; 2015 Wildlife Sightings Report for the Lower Churchill Project; 2016 Wildlife Sightings Report for the Lower Churchill Project; 2017 Wildlife Sightings Report for the Lower Churchill Project; 2018 Wildlife Sightings Report for the Lower Churchill Project;
PEEMP Reporting Requirements - Vegetation, Operations, Annually. Data Collection during Operations - The LCP will compile results of daily environmental reports that reference any new occurrences of regionally uncommon plants.	O&M	Ongoing	To be collected and reported on during operations
PEEMP Reporting Requirements - Avifauna, Construction, Weekly. Weekly Report - A compilation of daily reports. This report will provide a synopsis of completed activities, any new mapping or data plots, photographs as well as a weekly look-ahead.	C	Completed	Weekly Environmental Reports were compiled and provided to various government department.
PEEMP Reporting Requirements - Avifauna, Construction, Annually. Annual Report - summarizes the monitoring activities described in the APEEMP and any associated environmental effects monitoring conducted for the Project.	C	Completed	Wildlife Sightings Reports • 2014 Wildlife Sightings Report for the Lower Churchill Project • 2015 Wildlife Sightings Report for the Lower Churchill Project • 2016 Wildlife Sightings Report for the Lower Churchill Project • 2017 Wildlife Sightings Report for the Lower Churchill Project • 2018 Wildlife Sightings Report for the Lower Churchill Project
PEEMP Reporting Requirements - Furbearers, Construction, Weekly. Furbearer Sightings and Interactions - The results of the On-Site Environmental Monitors' reports that reference sightings, interactions and consequences that relate to furbearer and small mammal encounters during construction, and will include regulatory compliance tracking. A compilation of daily reports will be submitted to the NLDEC-WD on a weekly basis which will document wildlife encounters	C	Completed	Wildlife Sightings Reports (2014-2018); Weekly Environmental Reports compiled and provided to various government departments.
PEEMP Reporting Requirements - Furbearers, Construction, Annually. Annual Furberer Sightings and Interactions - The data from the weekly report will be compiled by the LCP's EA/EEM Commitments Coordinators once a year during construction (December) and the data evaluated to determine if the observed effects of the Project on furbearers and small mammals would require changes to the mitigation through the LCP's adaptive management approach.	C	Completed	Wildlife Sightings Reports • 2014 Wildlife Sightings Report for the Lower Churchill Project • 2015 Wildlife Sightings Report for the Lower Churchill Project • 2016 Wildlife Sightings Report for the Lower Churchill Project • 2017 Wildlife Sightings Report for the Lower Churchill Project • 2018 Wildlife Sightings Report for the Lower Churchill Project
PEEMP Reporting Requirements - Furbearers, Operations, Annually. Annual Furberer Sightings and Interactions - The data from the weekly report will be compiled by the LCP's EA/EEM Commitments Coordinators once a year during construction (December) and the data evaluated to determine if the observed effects of the Project on furbearers and small mammals would require changes to the mitigation through the LCP's adaptive management approach.	O&M	Ongoing	An Environmental Management Plan is currently under development.

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<p>PEEMP Reporting Requirements - Furbearers, Post-Operations, Single Report. Furbearer Follow-up and Monitoring - A final Follow-up and Monitoring Report will be generated that contains a section that compiles the information collected on Project interactions with furbearers and small mammals as outlined above to address Follow-up (i.e., verification of EIS predictions) and a section to address Monitoring (i.e., regulatory compliance), as discussed in the following subsections.</p>	O&M	Ongoing	<p>An Environmental Management Plan is currently under development.</p>
<p>PEEMP Reporting Requirements - Caribou, Construction, Bi-annual. Bi-annual Update on Monitoring Program - provide an update on the monitoring program described in Section 10.2 of the Caribou EEMP. Observations of caribou reported by the OSEM during construction will be compiled . This report will include observations and/or interactions of island caribou. Results will be used to inform Project construction activities where possible.</p>	C	Completed	<p>Environmental Effects Monitoring Program 2015 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Interim Report 1; Environmental Effects Monitoring Program 2015 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Interim Report 2; Environmental Effects Monitoring Program 2016 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Interim Report 1; Environmental Effects Monitoring Program 2016 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Interim Report 2; Environmental Effects Monitoring Program 2016 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Annual Report; Environmental Effects Monitoring Program 2017 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Interim Report 1; Environmental Effects Monitoring Program 2017 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Interim Report 2; Environmental Effects Monitoring Program 2017 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Final Report; Wildlife Sightings Reports: 2014 Wildlife Sightings Report for the Lower Churchill Project; 2015 Wildlife Sightings Report for the Lower Churchill Project; 2016 Wildlife Sightings Report for the Lower Churchill Project; 2017 Wildlife Sightings Report for the Lower Churchill Project; 2018 Wildlife Sightings Report for the Lower Churchill Project;</p>

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PEEMP Reporting Requirements - Caribou, Construction, Annually. Annual Update on Monitoring Program - present the results of the monitoring program described in Section 10.2 of the Caribou EEMP.	C	Completed	Environmental Effects Monitoring Program 2015 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Interim Report 1; Environmental Effects Monitoring Program 2015 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Interim Report 2; Environmental Effects Monitoring Program 2016 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Interim Report 1; Environmental Effects Monitoring Program 2016 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Interim Report 2; Environmental Effects Monitoring Program 2016 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Annual Report; Environmental Effects Monitoring Program 2017 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Interim Report 1; Environmental Effects Monitoring Program 2017 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Interim Report 2; Environmental Effects Monitoring Program 2017 - Woodland Caribou (Rangifer tarandus - Newfoundland Population) - Final Report
In areas of identified critical habitat, clearing activities will take place outside the marten denning season, to avoid potential disturbance or destruction of marten dens and individuals (breeding season is early April – June 30)	C	Completed	Marten Critical Habitat Clearing avoided this time period.
LCP will compile the results of the OSEM’s reports that reference observations of Graceful Felt Lichen and Boreal Felt Lichen and will submit this information to NLDEC-WD. The data collected during operations of the Project will be the same as collected during the construction period, but will be collected by LCP’s Inspection Crews, Maintenance Crews and other operations staff during the first five years of operation.	O&M	Ongoing	An environmental management plan around sightings is being prepared by Operations.
The results of all surveys conducted in the Shoal Cove area and the areas surveyed for regionally uncommon plants will be submitted to NLDEC-WD.	C	Completed	Labrador Regionally Uncommon Plant Survey, Newfoundland Regionally Uncommon Plant Survey, Listed Plant Survey at Shoal Cove provided to Wildlife Division.
In addition, in the growing season following construction, known locations of listed plant species identified within, or adjacent to the Project components will be revisited to evaluate the health and extent of the population. This will include evaluating the success of mitigation efforts undertaken. The report will also include consideration of any increase in OHV use in the vicinity of the plants. As a part of the monitoring program, potential weed colonization will be monitored and weeds removed as required for at least three years along the north side of Route 430.	O&M	Ongoing	Planning is underway by Operations to fulfill this commitment

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<p>LCP will provide in-kind and monetary support for the Sandy Cove restoration initiative. The in-kind support includes moving native material from Shoal Cove to Sandy Cove, including the overburden that was stored along the trench, and the excess stockpiled limestone that was removed for the creation of the drill pad. LCP will deliver the material to the site. LCP will not be assisting or managing the restoration initiative beyond delivery of material. LCP will also provide \$10K in support of the Limestone Barren Species at Risk Recovery Team as compensation for the trench at Shoal Cove.</p>	C	Completed	<p>Following removal and storage of the overburden, as committed, it was determined by the researcher responsible for the initiative to be unsuitable, and therefore the material and the initiative did not proceed.</p>
<p>A follow-up program will be conducted to investigate the effect of ROW operation on marten habitat use in the Main River core area. If modified vegetation management techniques are adopted to help facilitate marten movement across the ROW, the program would investigate their efficacy. Another study will be conducted to assess the degree of public access afforded by the ROW and access roads during the first winter following construction. Resulting information would be used in an adaptive management framework to adjust access control measures and help minimize potential effects on furbearers.</p>	O&M	Completed	<p>Section 19 Labrador-Island Transmission Link Species at Risk Impacts Mitigation and Monitoring Plan; Environmental Effects Monitoring Program – Newfoundland Marten Hair Snag Trapping and Off Highway Vehicle Surveys – Final Report; Environmental Effects Monitoring Program – American Marten Component, Final Report</p>
<p>During routine inspections during Operations and Maintenance, if despite the implementation of Nalcor’s proposed mitigation measures there are any incidents related to effects on migratory birds or species at risk, Nalcor will provide details of such incidents to the Canadian Wildlife Service of Environment Canada, as per the conditions noted in the information request.</p>	O&M	Ongoing	<p>An environmental management plan around sightings and incidents with wildlife is being prepared by Operations. Incidents will be reported to the regulator.</p>
<p>Outfitters PEEMP - Further monitoring will be undertaken after construction is complete during the fall hunting season in order to confirm the extent that access constructed for the transmission line is used by road vehicles and all terrain vehicles. This monitoring will confirm the extent to which the access constructed for the transmission line facilitates land use by others in currently inaccessible areas during the fall hunting season.</p>	O&M	Ongoing	<p>Outfitters Environmental Effects Monitoring Plan; Cameras installed along the section that previously had reduced access.</p>
<p>Outfitters PEEMP - To help determine Project effects on the success rates of hunters, both outfitters and the general population, LCP will monitor the success rates of all outfitting operations that are located within 5 km of the ROW 5 years into operations and in big game management areas in proximity to the Project.</p> <p>The data will be obtained from the Newfoundland and Labrador Department of Environment and Conservation – Wildlife Division (NLDEC-WD).</p>	O&M	Ongoing	<p>Outfitters Environmental Effects Monitoring Plan;</p>
<p>Nalcor is to prepare and submit a post-construction report to DFO describing mitigations implemented during construction to avoid impacts to marine species at risk and their effectiveness.</p>	O&M	Ongoing	<p>This report is under preparation and will be submitted to DFO.</p>
<p>Nalcor is to prepare and submit a post-construction report to DFO confirming (including by video) that berms were constructed as designed.</p>	O&M	Ongoing	<p>As built confirmation to be provided to DFO.</p>

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Nalcor is to prepare and submit a post-construction report to DFO estimating/assessing the extent to which the berms on the cables provide habitat for fish and other marine life.	O&M	Ongoing	Planning is underway to collect video during the Marine Emissions Monitoring Program
Nalcor is to prepare and submit a post-construction report to DFO measuring the strength of the electromagnetic field generated by the submarine cables during its various operational modes in a manner that enables confirmation of the related predictions in the Environmental Impact Statement for this project.	O&M	Ongoing	Planning is underway to this data during operations as a part of the Marine Emissions Monitoring Program.
An aerial survey will be conducted each winter during the construction period to provide a general understanding of the location of the RWMH and the MMH caribou relative to Project components and planned Project construction areas	C	Completed	Nalcor Energy Lower Churchill Project, Environmental Effects Monitoring Program - 2014 Red Wine Mountains Caribou Herd, 2014 Aerial Survey and Collar Deployment; 2015 Annual Caribou Report – Red Wine Mountain Herd (includes Aerial survey); Nalcor Energy Lower Churchill Project, Environmental Effects Monitoring Program - 2016 Red Wine Mountains Caribou Herd, 2016 Aerial Survey; 2015 Annual Caribou Report – Mealy Mountain Herd (includes Aerial Survey); 2016 Annual Caribou Report – Mealy Mountain Herd (includes Aerial Survey); 2017 Annual Caribou Report – Mealy Mountain Herd (includes Aerial Survey)
Each year an annual report will be submitted to NLDEC-WD that will include the following components: <ul style="list-style-type: none"> • Analysis of woodland caribou distribution, movement and habitat selection in the range of the RWMH and MMH, based on telemetry collar data. • Discussion of any mortality events involving collared caribou. • Georeferenced information on all caribou sightings (from this program and other programs or sources) and monitoring of established buffers, as they related to ground and aerial-based surveys within 20 km of the Project area. 	C	Completed	2014 Annual Caribou Report – Red Wine Mountain Herd ; 2015 Annual Caribou Report – Red Wine Mountain Herd; 2016 Annual Caribou Report – Red Wine Mountain Herd ; 2017 Annual Caribou Report – Red Wine Mountain Herd; Nalcor Energy, Labrador-Island Transmission Link – Environmental Effects Monitoring Program – Red Wine Mountains Caribou Herd - 2014-2017 Winter and Calving/Post-Calving Ranges; 2015 Annual Caribou Report – Mealy Mountain Herd; 2016 Annual Caribou Report – Mealy Mountain Herd; 2017 Annual Caribou Report – Mealy Mountain Herd; Nalcor Energy, Labrador-Island Transmission Link – Environmental Effects Monitoring Program – Mealy Mountains Caribou Herd - 2014- 2017 Winter and Calving/Post-Calving Ranges
As illustrated throughout this EIS, the EA process, including its associated governmental, Aboriginal and stakeholder consultation, has been and will continue to be a key aspect of Project planning and design.	C	Completed	Chapters 7 & 8 of the Labrador-Island Transmission Link Environmental Impact Statement; Stakeholder Relations Strategy
PEEMP Reporting Requirements - Freshwater Fish, Construction, Monthly. Monthly Water Quality Report - monthly summary of the sample analysis at site locations of various water chemistry parameters such as nitrates, ammonia, pH and total suspended solids (TSS).	C	Completed	Monthly Water Quality Reports: NE-LCP-MEMO-001785, NE-LCP-MEMO-001773, NE-LCP-MEMO-001872, NE-LCP-MEMO-001899, NE-LCP-MEMO-002026, NE-LCP-MEMO-002086, NE-LCP-MEMO-002217, NE-LCP-MEMO-002283, NE-LCP-MEMO-002363, NE-LCP-MEMO-002442, NE-LCP-MEMO-002510, NE-LCP-MEMO-002577, NE-LCP-MEMO-002640, NE-LCP-MEMO-002703, NE-LCP-MEMO-002784, NE-LCP-MEMO-002825, NE-LCP-MEMO-002885, NE-LCP-MEMO-002957, NE-LCP-MEMO-003010, NE-LCP-MEMO-003054, NE-LCP-MEMO-003126, NE-LCP-MEMO-003255