Nalcor Energy – Lower Churchill Project

L-ITL FRESHWATER FISH PROTECTION AND ENVIRONMENTAL EFFECTS MONITORING PLAN

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Inter-Departmental / Discipline Approval (where required)

Department	Department Manager Approval	Date
	Name	
	Name	
	Name	
	Name	

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1 PURPOSE

The purpose of this Labrador-Island Transmission Link (L-ITL) (the Project) Freshwater Fish Protection and Environmental Effects Monitoring Plan (FFPEEMP) is to demonstrate how any adverse environmental effects will be mitigated, and to set out a program for monitoring the effectiveness of mitigation measures. To comply with regulatory requirements and commitments made in the L-ITL Environmental Impact Statement (EIS), the L-ITL's FFPEEMP approach includes consideration of:

- Mitigation objectives – performance objectives with respect to each adverse environmental effect;
- Mitigation – measures planned to achieve the mitigation objectives;
- Metrics and targets – specific, quantifiable, relevant and time constrained;
- Follow-up or Monitoring Programs – how the Project will include follow-up or monitoring surveys to confirm that mitigation strategies are meeting the mitigation objectives; and
- Contingency plan to be implemented should monitoring reveal that mitigation measures have not been successful.

The L-ITL's FFPEEMP relates to fish and fish habitat. The FFPEEMP builds on existing information and commitments made in the EIS (Nalcor 2012), and conditions of permits and licenses for the Project.

2 SCOPE

This plan addresses the required aspects of freshwater fish protection and effects monitoring for the design, construction, and operation phases for the Labrador-Island Transmission Link (described in Section 6.0).

3 DEFINITIONS

Environmental Assessment: An evaluation of a project's potential environmental risks and effects before it is carried out and identification of ways to improve project design and

implementation to prevent, minimize, mitigate, or compensate for adverse environmental effects and to enhance positive effects.

Environmental Management: The management of human interactions with the environment (air, water and land and all species that occupy these habitats including humans).

Environmental Protection Plan: Document outlining the specific mitigation measures, contingency plans and emergency response procedures to be implemented during the construction or operations of a facility.

Environmental Effects Monitoring: Monitoring of overall Project effects to confirm the predictions of EA and to fulfill EA commitments.

Environmental Compliance Monitoring: Monitoring of Project activities to confirm compliance with regulatory requirements and commitments made through the EA process.

4 ABBREVIATIONS & ACRONYMS

CEAA	Canadian Environmental Assessment Act
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CWS	Canadian Wildlife Service
EA	Environmental Assessment
EEMP	Environmental Effects Monitoring Plan
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EPP	Environmental Protection Plan
ERC	Environment and Regulatory Compliance
LCP	Lower Churchill Project
L-ITL	Labrador-Island Transmission Link
NE	Nalcor Energy
NL	Newfoundland and Labrador
NLDEC	Newfoundland and Labrador Department of Environment and Conservation
NLDEC-WD	Newfoundland and Labrador Department of Environment and Conservation – Wildlife Division
PEEMP	Protection and Environmental Effects Monitoring Plan
RCP	Regulatory Compliance Plan
SARA	Species at Risk Act

5 REFERENCE DOCUMENTS

LCP-PT-MD-0000-PM-PL-0001-01	LCP Project Execution Plan
LCP-PT-MD-0000-PM-CH-0001-01	LCP Project Charter
LCP-PT-MD-0000-EA-PL-0001-01	LCP Generation Environmental Assessment Commitment Management Plan
LCP-PT-ED-0000-EA-SY-0002-01	Environmental Impact Statement and Supporting Documentation for the Labrador-Island Transmission Link
LCP-PT-MD-0000-SM-ST-0001-01	Post Environmental Assessment Release
LCP-PT-MD-0000-EV-PL-0009-01	LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan
LCP-PT-MD-0000-RT-PL-0001-01	Regulatory Compliance Plan
LCP-PT-MD-0000-HS-PL-0001-01	Health and Safety Plan
LCP-PT-MD-0000-HS-PL-0004-01.	LCP Emergency Response Plan
LCP-PT-MD-0000-EV-PY-0001-01	LCP No Harvesting Policy

6 LABRADOR-ISLAND TRANSMISSION LINK PROJECT DESCRIPTION

As described in the L-ITL EIS, the Project consists of the Construction and Operations of a ± 350 kilovolt (kV) High Voltage direct current (HVdc) electricity transmission system from Central Labrador to the Avalon Peninsula on the Island of Newfoundland (the Island) (Figure 6-1).

The transmission system will include the following key components:

- An alternating current (ac) to direct current (dc) converter station at Muskrat Falls;
- Approximately 400 km overhead HVdc transmission line from Muskrat Falls to Forteau Point;
- A 60 m wide right of way (ROW);

- Three, approximately 35 km long, submarine cables across the Strait of Belle Isle (SOBI) (i.e., between Forteau Point and Shoal Cove), with associated onshore infrastructure (transition compounds and land cables at both cable landings);
- Approximately 700 km of overhead HVdc transmission line from Shoal Cove to the Avalon Peninsula;
- A dc to ac converter station at Soldiers Pond;
- Shoreline electrodes at L'Anse au Diable and Dowden's Point,
- An overhead, wood pole electrode line
    - Near Forteau Point and L'Anse au Diable; and
    - Between Soldiers Pond and Dowden's Point.

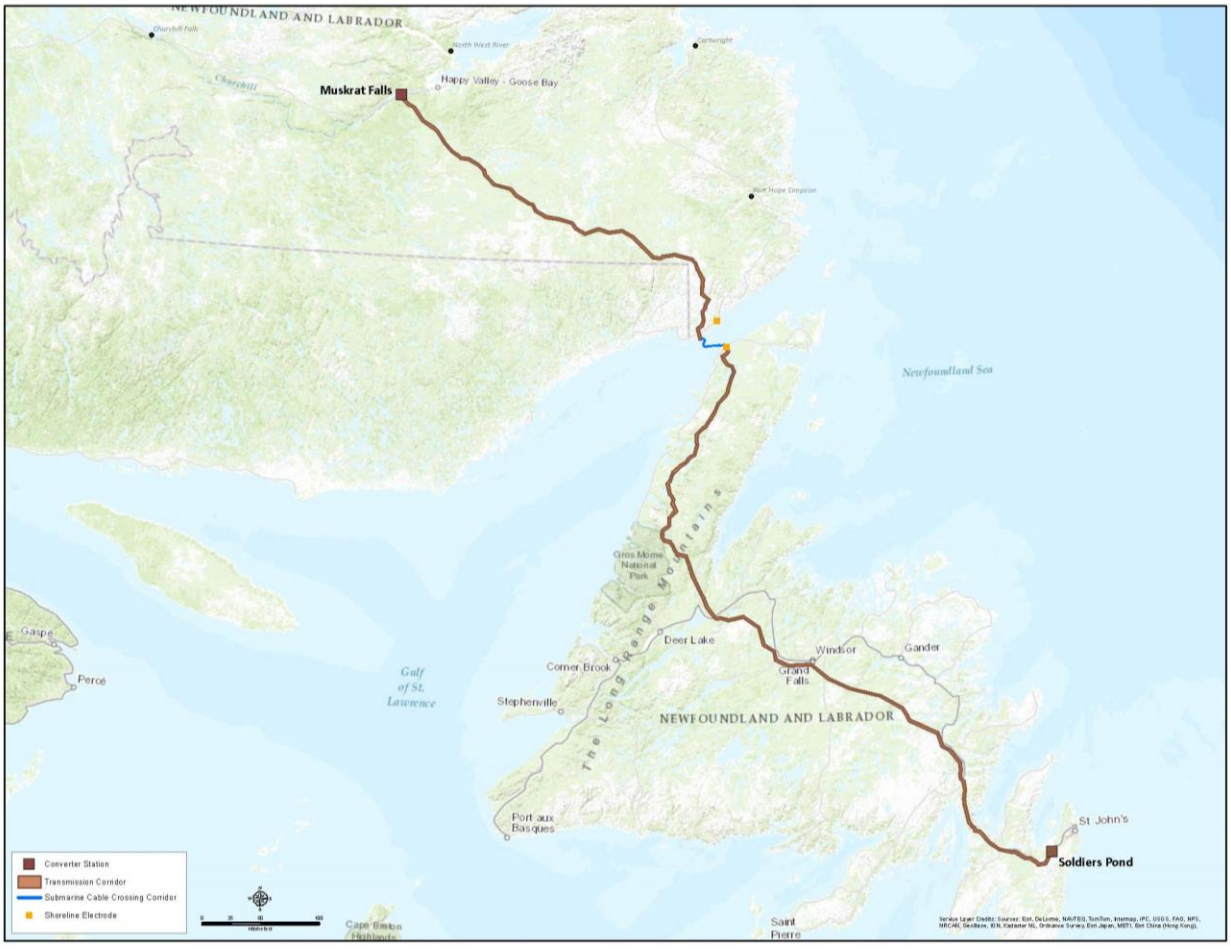

Figure 6-1 Labrador-Island Transmission Link (Nalcor 2012)

7 EXISTING INFORMATION

Fish and Fish Habitat includes all species of fish that inhabit the freshwater environment, as well as physical habitat characteristics of the waterbody, and the adjacent riparian zone. Elements of fish habitat include substrate composition, bed stability, degree of substrate embeddedness with fine material, water depth, water velocity and the amount of overhead and lateral cover.

Literature reviews provided information on the fish species known to occur (i.e., using the habitat on a seasonal or year-round basis) within the various watersheds crossed by the Project. Baseline data collection that included determination of fish species presence was completed for 53 representative watercourses within the Study Area (AMEC 2010). The literature review identified a total of 20 fish species as occurring within watercourses in the four regions of the Project. A list of the fish species that were identified in the literature search as likely to occur within the regions, their preferred habitat and whether they were collected during the electrofishing program, is presented in Table 7-1. The highest diversity of species occurred within Central and Southeastern Labrador (AMEC 2010).

Habitat Association

A total of 586 streams are crossed by the transmission corridor throughout four land-based regions within the province (194 streams in Central and Southeastern Labrador, 123 in the Northern Peninsula, 170 in Central and Eastern Newfoundland and 99 in the Avalon Peninsula). The watershed areas of these watercourses range in size from less than 2.6 km^2 to greater than 10,000 km^2 (AMEC 2010). All streams that intersect with the centreline of the transmission corridor have been characterized based on satellite and air photo interpretation and supplemented by field surveys/sampling (AMEC 2010). Dominant habitat types of the field-surveyed watercourses were riffle, steady and run. The most commonly recorded species during baseline field surveys were brook trout and Atlantic salmon (AMEC 2011; AMEC 2010).

Approximately 6% (229 km) of total Riparian Shoreline within the Study Area is intersected by the centre line ROW. A total of 101 km of scheduled salmon river shoreline is intersected in each region of the Study Area, 5% of which is intersected by the centre line ROW. The Central and Eastern Newfoundland region has the most scheduled salmon river shoreline (4 km or 5%) in the Study Area. The Northern Pensinsula region has approximately 7% scheduled salmon river shoreline affected however, this represents 1 km.

Table 7-1 Fish Species Identified in the Literature Review, Captured during the Electrofishing Program, and their Preferred Habitats.

Fish Species	Central and Southeastern Labrador		Northern Peninsula		Central and Eastern Newfoundland		Avalon Peninsula		Preferred Habitat
	Identified in Literature	Captured during Electrofishing Program	Identified in Literature	Captured during Electrofishing Program	Identified in Literature	Captured during Electrofishing Program	Identified in Literature	Captured during Electrofishing Program	
Alewife (*Alosa pseduoherengus*)	–	–	●[(a)]	–	●	–	–	–	Marine and estuarine waters, occasionally freshwater during spawning in December and January.
American eel (*Anguilla rostrata*)	●	–	●	♦[(b)]	●	–	–	–	Wide ranging habitats due to an ability to withstand poor water quality. Often found in muddy or silt-bottomed streams, rivers and lakes.
Arctic char (*Salvelinus alpines*)	–	–	●	–	●	–	–	–	Will use a wide range of substrates for spawning but prefer gravel / cobble. More commonly found in lakes rather than streams.
Atlantic salmon (*Salmo salar*)	●	–	●	♦	●	♦	●	♦	Spawning in gravel / cobble substrates. Parr prefer steam habitats with rapid water.
Atlantic sturgeon (*Acipenser oxyrinchus*)	●	–	–	–	–	–	–	–	Use freshwater for spawning in areas of fast moving water with high dissolved oxygen and hard bottom.
Brook trout (*Salvenlinus fontinalis*)	●	♦	●	♦	●	♦	●	♦	Clear, cold, spring-fed streams with a silt-free rocky substrate in riffle to run areas. Areas of well vegetated stream banks, abundant instream cover, and relatively stable water flow.

Fish Species	Central and Southeastern Labrador		Northern Peninsula		Central and Eastern Newfoundland		Avalon Peninsula		Preferred Habitat
	Identified in Literature	Captured during Electrofishing Program	Identified in Literature	Captured during Electrofishing Program	Identified in Literature	Captured during Electrofishing Program	Identified in Literature	Captured during Electrofishing Program	
Brown trout (*Salmo trutta*)	–	–	–	–	–	–	•	♦	Clear, cool, well-oxygenated streams and lakes. Spawning substrate is generally shallow gravel sections of streams.
Burbot (*Lota lota*)	•	–	–	–	–	–	–	–	Frequent cool waters of large rivers, lower reaches of tributaries, and large lakes. Prefer substrates of gravel, rock, or cobble and often use undercut banks, roots of trees, and dense vegetation as cover.
Fourspine stickleback (*Apeltes quadracus*)	•	–	–	–	–	–	•	–	Brackish water and estuarine waters; sometimes use shorelines in freshwater for spawning.
Lake whitefish (*Coregorus clupeformis*)	•	–	–	–	–	–	–	–	Freshwater spawners in fall. Generally use shallow riffles or rapids with a gravel / cobble substrate (streams) or sandy substrates (lakes).
Longnose sucker (C*atostomus catostomus*)	•	–	–	–	–	–	–	–	Juveniles prefer sand / gravel substrate but can occur over silt, sand, gravel, cobble, and rubble. Adults prefer a gravel, cobble or boulder substrate.
Ninespine stickleback (*Pungitius pungitius*)	–	–	–	–	•	–	–	–	Move to streams to spawn in shallow areas of low water velocity, dense aquatic vegetation with substrates consisting of mud and silt; but can occur over sparsely vegetated areas with sand, gravel, or rocky substrates.

Fish Species	Central and Southeastern Labrador		Northern Peninsula		Central and Eastern Newfoundland		Avalon Peninsula		Preferred Habitat
	Identified in Literature	Captured during Electrofishing Program	Identified in Literature	Captured during Electrofishing Program	Identified in Literature	Captured during Electrofishing Program	Identified in Literature	Captured during Electrofishing Program	
Northern redhorse (*Moxostoma aureouim*)	•	–	–	–	–	–	–	–	Inhabit both streams and lakes, preferring fast, clear to slightly turbid water and are generally found in the deeper portions of channels over sand or gravel substrates.
Ouananiche (Landlocked form of *Salmo salar*)	–	–	•	–	•	–	–	–	Spawning generally takes place within streams, with adults moving back to lakes for the remainder of the year.
Rainbow smelt (*Osmerus mordax*)	•	–	•	–	•	–	–	–	Spawns in lakes and rivers over a variety of substrates although gravel is preferred.
Rainbow trout (*Oncorhynchus mykiss*)	–	–	–	–	–	–	•	–	Spawn in clear, cold water with a silt free rocky substrate in riffle or run areas, well vegetated stream banks and abundant instream cover.
Round whitefish (*Prosopium cylindraceum*)	•	–	–	–	–	–	–	–	Spawn in cool ponds, streams, and rivers. Juveniles prefer slow steady water and backwater habitat while adults prefer faster flowing sections.
Threespine stickleback (*Gasterosteus aculeatus*)	•	–	•	♦	•	♦	•	♦	Generally inhabit vegetated areas, usually over mud and sand; can be found at a wide variety of depths.

Fish Species	Central and Southeastern Labrador		Northern Peninsula		Central and Eastern Newfoundland		Avalon Peninsula		Preferred Habitat
	Identified in Literature	Captured during Electrofishing Program	Identified in Literature	Captured during Electrofishing Program	Identified in Literature	Captured during Electrofishing Program	Identified in Literature	Captured during Electrofishing Program	
Tomcod (*Microgadus tomcod*)	–	–	•	–	•	–	–	–	Sand, gravel, or boulder substrate is used when spawning in late fall and early winter.
White sucker (*Catostomus commersonii*)	•	♦	–	–	–	–	–	–	Occur mainly over gravel, sand, silt, and rubble substrates and tend to be closely associated with riparian and instream cover such as submerged logs, roots, macrophytes, undercut banks, and large boulders.

Source: AMEC (2010a).

Note: "–" indicates no data available or not applicable.

(a) • The literature indicates the presence of this species.

(b) ♦ This species was collected during the sampling program (AMEC 2010a).

8 REGULATORY COMPLIANCE

Three fish species identified as being in the province have designations under the *SARA* (EC 2010k, internet site), COSEWIC and / or the *NLESA* (COSEWIC 2011, internet site). The American eel is listed as a Species of Special Concern by COSEWIC and Vulnerable under the *NLESA*. The South Newfoundland population of Atlantic salmon is listed as Threatened by COSEWIC. The Newfoundland population of the banded killifish (*Fundulus diaphanous*) is listed as a Species of Special Concern under Schedule 1 of the *SARA* and Vulnerable under the *NLESA* (NLDEC 2010, internet site; EC 2010k, internet site). The American eel was reported within the Project footprint during baselines surveys within the Northern Peninsula region. The distribution of the banded killifish and the Atlantic salmon (South Newfoundland population) do not overlap with the Project footprint.

The NLR 87/13, also referred to as the Labrador-Island Transmission Link Undertaking Release Order under the Environmental Protection Act releases the Project form environmental assessment and sets conditions for this release that Nalcor must meet. The release of the Labrador-Island Transmission Link from environmental assessment under Section 3 is subject to the following terms and conditions:

(a) Nalcor Energy shall adhere to all mitigation, monitoring and commitments stated in the Environmental Impact Statement submitted April 12, 2012 and the additional Environmental Impact Statement information submitted December 10, 2012;

(f) the proponent shall prepare environmental effects monitoring plans, EEMs, in consultation with the applicable government divisions, and submit them to the Minister of Environment and Conservation for approval before the start of any site specific construction;

(g) the environmental effects monitoring plans referred to in paragraph (f) shall address the following project valued ecosystem components, VECs, and will be developed to monitor effects as a result of the project and to ensure that any changes to existing baseline as a result of project effects are documented and mitigated:

(v) freshwater fish

Submission of this EEMP satisfies the condition/requirement in NL Reg 87/13 (f) and (g) under Section 3.

9 LIKELY RESIDUAL PREDICTED PROJECT EFFECTS

9.1 FISH HABITAT

The likely residual effects of the Project construction on Fish Habitat are as follows:

- Adverse, as there will be increase in sedimentation during fording events, installation of stream crossings, and the clearing of riparian vegetation will remove cover and increase the potential for erosion, and there is a potential for the accidental release of hydrocarbons;
- Of low magnitude, as the suspension of fine material or a leak from equipment during fording is not likely to result in a change that will be measurable, but within the normal range of variability;
- Of local to regional geographic extent, as effects are likely to occur at the crossing location (physical habitat changes) and downstream (changes to water quality); and
- Of short to far-future duration, as suspended sediments would settle out and accidental hydrocarbon releases would be contained in a matter of hours, the effects of hypoxia would last for months, and the effects of vegetation removal and physical changes to habitat at fording and stream crossings locations would persist for the life of the Project (i.e., far-future duration).

There is a high degree of confidence that the level of effect will not be greater than predicted because potential effects of these types of Project activities on Fish Habitat are well understood, and allowed under the appropriate permits. Nalcor's commitment to, and experience in, applying proven and accepted mitigation measures to Construction activities near freshwater resources adds confidence to the prediction.

The likely residual effects of Project Operations and Maintenance on Fish Habitat are as follows:

- Adverse, since there will be increase in sedimentation during fording events and use or maintenance of stream crossings, clearing / disturbance of riparian vegetation will remove cover and increase the potential for erosion, and there is a potential for the accidental release of hydrocarbons;
- Of low magnitude, since effects will result in a change that will be evident, but within the normal range of variability;
- Of local to regional geographic extent, since effects are predicted to occur at the crossing location (physical habitat changes) and downstream within the RSA (changes to water quality); and
- Of short-term to far-future duration, since suspended sediments would settle out and accidental hydrocarbon releases would be contained in a matter of hours, the effects of eutrophication

would last for months, and the effects of vegetation removal and physical changes to habitat at fording and stream crossing locations would be far-future in duration.

There is a high degree of confidence that the level of effect will not be greater than predicted because potential effects of these types of Project activities on Fish Habitat are well understood, and allowed under the appropriate permit. Nalcor's commitment to, and experience with applying proven and accepted mitigation measures for Operations and Maintenance activities near freshwater resources adds confidence to the prediction.

9.2 FISH ABUNDANCE AND SPECIES ASSEMBLAGE

The likely residual effects of Project Construction on Fish Abundance and Species Assemblage are as follows:

- Adverse, since Fish Abundance and Species Assemblage may change due to changes in habitat and water quality, temporary scattering of fish in the area, the injury or death of young fish due to crushing as they retreat to their home territory, angling pressure and increased vulnerability to raptors;
- Of low to moderate magnitude, since most effects will result in a change in fish abundance and Species Assemblage that will be evident, but within the normal range of variability; however, increase in access could have an effect on the populations of sport fish species;
- Of local to regional extent, since effects are predicted to occur at the crossing location and downstream; and
- Of short-term to far-future duration, since effects due to noise disturbance and suspended sediments would be short-term, the effects of eutrophication would last for months, the effects of vegetation removal, increased predation pressure and physical changes to habitat at fording and stream crossing locations would be of far-future in duration.

There is a high degree of confidence that the level of effect will not be greater than predicted because potential effects of these types of Project activities on Fish Abundance and Species Assemblage are well understood, and allowed under the appropriate permit. In addition, Nalcor's commitment to, and experience in, applying proven and accepted mitigation measures to Construction activities near freshwater resources adds confidence to the prediction.

The likely residual effects of Project Operations and Maintenance on Fish Abundance and Species Assemblage are as follows:

- Adverse, since fish abundance or species assemblage may change due to changes in habitat and water quality, temporary scattering of fish in the area, the injury or death of young fish due to

crushing as they retreat to their home territory, angling pressure and increased vulnerability to raptors;

- Of low to moderate magnitude, since most effects will result in a change in fish abundance and Species Assemblage that will be evident, but within the normal range of variability; however, increase in access could have an effect on the populations of sport fish species;
- Of local to regional geographic extent, since effects are predicted to occur at the crossing location and downstream; and

Of short-term to far-future duration, since effects due to noise disturbance and suspended sediments would be short-term, the effects of hypoxia could last for months, and the effects of vegetation removal, increased natural predation and angling related mortality of fish as well as physical changes to habitat at fording and stream crossing locations would be far-future in duration.

There is a high degree of confidence that the level of effect will not be greater than predicted because potential effects of these types of Project activities on Fish Abundance and Species Assemblage are well understood, and allowed under the appropriate permit. Nalcor's commitment to, and experience in, applying proven and accepted mitigation measures for Operations and Maintenance activities near freshwater resources adds confidence to the prediction.

9.3 DETERMINATION OF SIGNIFICANCE

A significant effect on Fish and Fish Habitat is one which could alter, disrupt or destroy Fish Habitat and / or affect Fish Abundance and Species Assemblage such that the aquatic environment is unable to recover. An environmental effect that does not meet these criteria is not significant. Effective mitigation and proper location of fording and / or stream crossings will minimize disturbance. Fish disturbance from noise and vibration, and increases in suspended sediment and nutrient levels from Project activities will be transient in nature. Changes to physical Fish Habitat will be localized to only a small section of each watercourse (i.e., at the stream crossing location). Any accidental releases of hydrocarbons that may occur will be responded to in a timely manner.

Therefore, changes to Fish and Fish Habitat (i.e., changes in Fish Habitat or Fish Abundance and Species Assemblage such that the Freshwater environment is unable to recover) are not predicted to occur as a result of the Project. In addition, the LCP is committed to adhere to the associated legislation and standard mitigation from both industry and government where feasible, and any permit conditions. Considering this, the effects to Fish and Fish Habitat are predicted to be not significant.

10 ENVIRONMENTAL EFFECTS MANAGEMENT

The effects management plans (i.e., mitigation measures outlined in the EIS [Nalcor 2012] and the LCP HVdc Overland Transmission and HVdc Specialties Environmental Protection Plan (EPP) (LCP, 2013) and the commitments made by the LCP in the EIS ensure regulatory compliance of the above regulations.

10.1 MITIGATION MEASURES

Mitigation measures relating to freshwater resources, fish and fish habitat include:

- Site evaluations of selected watercourse crossing locations will be conducted during final route selection, and the information provided to obtain required permits;
- Bridges or culverts will be installed on larger and / or steeper-banked watercourses, where possible, and will be sized and installed appropriately;
- A permit will be obtained for all construction activity that is located within 15 m of the high water mark of a waterbody if appropriate;
- Biodegradable lubricants and hydraulic fluids will be used where practical, when working near waterbodies;
- Restrict crossings to a single location and cross at right angles to the waterbody where possible;
- Minimize disturbance within the waterbody by minimizing the number of crossings;
- Where possible, crossing locations (including fording, culverts and bridges) will be chosen where the banks and substrate are not sensitive to erosion. If a crossing must occur where the banks of the watercourse or waterbody are sensitive to erosion, the bank will be modified to minimize the potential for erosion. This includes directing natural drainage around areas of disturbed soil and erosion control techniques (i.e., riprap, filter fabric, and placement of gravel or wood chips) and / or revegetation, as appropriate;
- At watercourse crossings, the width of the cleared ROW will be reduced to 3 m for a minimum 20 m distance away from the shoreline. Where practical, the reduced ROW width will apply for the entire buffer zone if greater than 20 m. This could include selective cutting in these areas;
- To the extent practical, construction activities in waterbodies or watercourses will be scheduled to occur during low flow or frozen conditions, to avoid sensitive periods / habitat for fish, and will be shut down during heavy precipitation events;
- Sediment traps / siltation control structures (i.e., silt curtains, sediment fences) and drainage collectors will be installed and maintained at appropriate locations, and any defects or non-functioning structures identified will be corrected immediately to ensure functionality;

- A temporary timber bridge will be installed where practical to minimize siltation of watercourses or waterbodies;
- Equipment will be inspected to confirm it is in proper working order prior to each ford.
- Fuelling of mobile equipment (with the exception of water pumps) will not be permitted within 50 m of a watercourse or waterbody;
- Spill kit and trained personnel will be present on-site at all times, allowing for prompt containment;
- Appropriate storage and handling of fuels and hazardous or controlled products including storing fuels and oils at least 100 m away from any surface water;
- Compliance with regulations regarding discharge of run-off from construction activities;
- Nalcor will enforce a 'no-harvesting' policy during working hours for all Project personnel;
- Nalcor will use non-residual herbicides and mechanical methods, where practical. Nalcor currently uses Escort and Banvel VM for its vegetation control programs.
- The requirements of the applicable regulations will be met or exceeded. All herbicide applications will be conducted by qualified, trained personnel in a careful manner, following the manufacturers' instructions and as per the *Pesticides Control Regulations 1996* (plus amendments) under the *Environmental Protection Act* SNL 2002;
- Nalcor will obtain all required permits associated with its vegetation control program from the relevant regulatory bodies (e.g., DEC – Pollution Prevention Division);
- Equipment will be maintained in good working order;
- Adherence to the specifications in the DFO NLOS document "Maintenance of Riparian Vegetation in Existing Rights of Way" where possible;
- Natural mitigation - crossing locations required for maintenance will become increasingly established and relatively stabilized; and
- Compliance with regulations regarding discharge of run-off from construction activities required during Operations and Maintenance.

10.2 MONITORING

During operations, residual water quality testing, post-herbicide application, as may be required by the Department of Environment and Consevation, will be undertaken by Nalcor to confirm the predictions made in the EIS.

10.3 REPORTING

Reports will be submitted to the NLDEC – Water Resources Management (WRM) Division for the following areas:

10.3.1 Monthly Water Quality Report

This report will be submitted to the WRM Division and will include a monthly summary of the sample analysis at site locations of various water chemistry parameters such as nitrates, ammonia, pH and total suspended solids (TSS). Data will be provided in tabular format to show minimum, maximum and average values, and if any exceedances have occurred. Action items for site construction are also included in the report, and may involve details such as installation, or maintenance of various sedimentation and erosion control measures and monitoring.

10.3.2 Quarterly and Annual Stream Crossing Reports

Stream crossing reports will be submitted quarterly and annually to the NLDEC-WMD to meet requirements of permit conditions. 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. Any incidents or issues arising at the time of work will be reported immediately to WRMD and also included in quarterly and annual reports.

10.3.3 Annual Water Use Report

Water usage data is provided to the NLDEC-WD as per the reporting requirements for Water Use Licenses (WULs) issued for the Project. Project water will be withdrawn from numerous bodies of water within the Project footprint. Detailed monthly usage and purpose are provided in a "Water Use Report to Department of Environmental and Conservation." 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. The total water usage for each individual WUL is summarized, and comments, description and categorization of the monthly water use is included.

10.4 CONTINGENCY PLAN

At this time, contingency plans are not anticipated for freshwater fish and any changes to the LCP's procedures or mitigation plans would be addressed through the adaptive management approach, if and as appropriate.

11 REFERENCES

AMEC (AMEC Earth and Environmental). 2010. Labrador – Island Transmission Link: Freshwater Environment – Fish and Fish Habitat and Water Resources. Prepared for Nalcor Energy, St. John's, NL.

AMEC. 2011. Labrador – Island Transmission Link: Freshwater Environment – Fish and Fish Habitat and Water Resources Component Study: Supplementary Report. Prepared for Nalcor Energy, St. John's, NL.

Nalcor. 2012. Labrador-Island Transmission Link. Environmental Impact Stateement. April 2012.