RARE PLANT AND RARE LICHEN PROTECTION AND ENVIRONMENTAL EFFECTS MONITORING PLAN

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FIGURE

1 PURPOSE

The purpose of this Rare Plant and Rare Lichen Protection and Environmental Effects Monitoring Plan (RPRLPEEMP) is to demonstrate how any adverse environmental effects will be mitigated, and to set out a program for monitoring the effectiveness of mitigation measures, and to comply with commitments made in the Environmental Assessment Registration Document (NL Hydro, 2015) and the conditions of environmental assessment release.

The RPRLPEEMP focuses on two listed lichen species that have been identified to occur within five kilometres of the proposed TL 267 centreline – the Boreal Felt Lichen (*Erioderma pedicellatum*) and the Blue Felt Lichen (*Degelia plumbea*). In addition, it should be noted that although Graceful Felt Lichen (*Erioderma mollissimum*) has not been recorded within five kilometres of the project study area, because the habitat requirements of this species is very similar to Boreal Felt Lichen, this species has also been included in this RPRLPEEMP.

As a part of environmental assessment registration for the project, an assessment of the occurrence of rare plants was also completed. The results of that assessment concluded that Water Pygmyweed (*Tillaea aquatic*) based on the available ACCDC (2015) data, have not been reported near the project footprint. Occurrences are known to occur in Placentia Bay, which is located approximately 500 m from the TL 267 centerline, and is therefore not discussed further in this RPRLEEMP.

2 SCOPE

This plan addresses the required aspects of rare lichen protection and effects monitoring for the design, construction, and operation phases of TL 267 (described in Section 3).

3 TL 267 PROJECT DESCRIPTION

The Project includes the construction and operation / maintenance of the following primary elements:

- A 188 km, 230 kV transmission line between the BDE and WAV terminal stations (Figure 3-1), comprised of steel towers with both Overhead Ground Wire (OHGW) and Optical Ground Wire (OPGW) which includes optical fibre for communication along its entire length;

- Required modifications and upgrades to the existing BDE and WAV terminal stations; and

- Project construction and maintenance infrastructure requirements (camps, access, marshalling yards, laydown areas and other infrastructure as required).

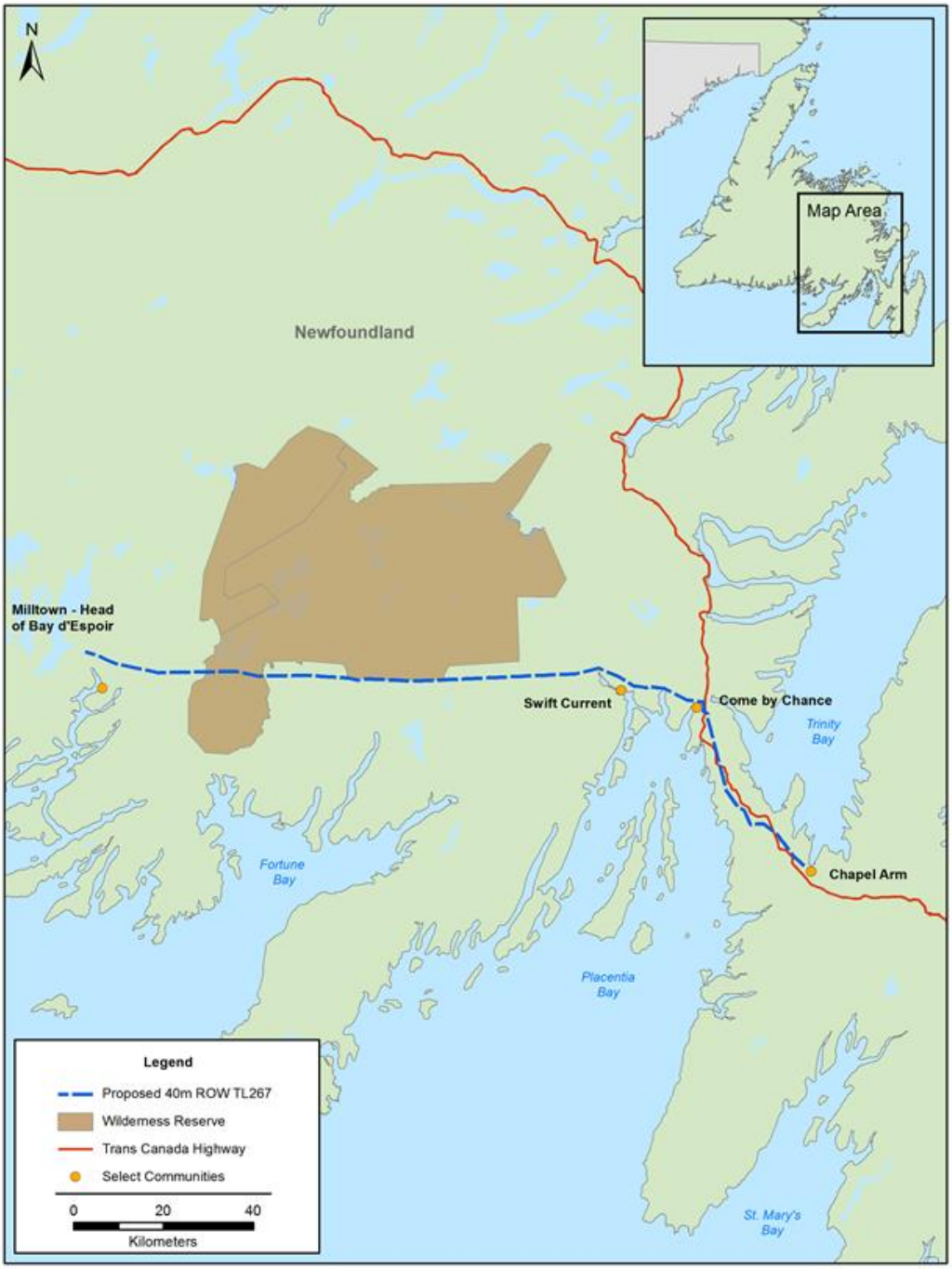

Figure 3-1 The Proposed Bay D'Espoir To Western Avalon Transmission Line (TL 267)

3.1 OVERVIEW OF COMPONENTS

The following section provides an overview description of TL 267's key components, based on previous and ongoing engineering studies and reflecting the current stage of planning and design. As described above, TL 267 is the subject of ongoing engineering design, and as with any development project, this will be subject to continued refinement and optimization.

A proposed 230 kV transmission line (TL 267) will be established between BDE and WAV. The new transmission line will leave the BDE terminal station and travel east for a distance of approximately 144 km until it reaches CbC where the transmission line turns southeast and crosses the TransCanada Highway (Figure 3-1). At this point, TL 267 meets the existing 230 kV woodpole line (TL 203) and follows it, and eventually the existing TL 237, south for approximately 44 km until it reaches the WAV terminal station.

The proposed transmission line will be located adjacent to existing 230 kV transmission lines between the BDE and WAV terminal stations. The proposed transmission line will occupy a cleared ROW approximately 40 m wide, which is governed primarily by its electrical voltage, required conductor clearances and proximity to existing transmission lines.

A number of possible transmission tower structure types are being considered and evaluated for the TL 267. One option would see the use of guyed-Y lattice steel structures for tangential structures with free-standing lattice structures where angles and dead-ends are required (see Figures 3-2 and 3-3). The guyed-Y structure uses a galvanized steel grillage foundation (approximately 2 m by 2 m in size) for the centre mast, and has four supporting guy wires. Rock foundations will be used in the presence of sound bedrock. The towers and any associated foundations will be contained entirely within the transmission line ROW.

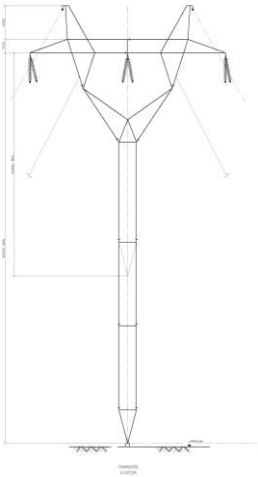

Figure 3-2 Typical Guyed Tower

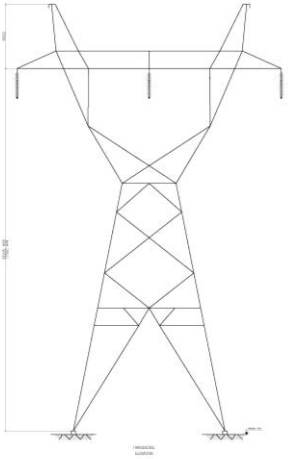

Figure 3-3 Typical Dead-end Tower

The transmission tower structures will be spaced approximately 400 m apart from BDE to Piper's Hole and approximately 300 m apart from Piper's Hole to the WAV terminal station. Based on this spacing, approximately 550 tower structures will be erected across the length of the preferred transmission line routing. Tower heights for the line will be governed by ground clearance depending on the terrain at particular sites along the route but will generally average approximately 105 feet (32 m). Under the current development concept, the transmission line towers will carry three phases, each of which will be comprised of a single 804 kcmil, 54/19, AACSR/TW conductor. The transmission towers will carry two overhead shield wires to provide protection from lightning strikes, one of which will include a fibre optic cable for communications.

The centre line for the TL 267 will be located approximately 40 m south of the centre line of the existing TL 206 from BDE to CbC, follow 40 m to the west of TL 203 and TL 237 centerline with few deviations from CbC to WAV.

4 EXISTING INFORMATION

4.1 BOREAL FELT LICHEN

Boreal Felt Lichen is an epiphytic species which grows on the trunks and branches of coniferous trees (NLDEC 2015). This species usually prefers Balsam Fir (*Abies balsamea*) trees but has also been recorded on other tree species such as Black Spruce (*Picea mariana*) and Trembling Aspen (*Populus tremuloides*). It is typically found in moist coniferous forests, close to the coast where the local topography provides suitable microclimate such as near the base of northern slopes

and at the edges of wetlands. In Newfoundland this species is concentrated in two major areas including the central Avalon Peninsula and Bay d'Espoir (NLDEC 2015). Boreal Felt Lichen is listed and protected under the *Newfoundland and Labrador Endangered Species Act* (NLESA) as vulnerable and by the federal *Species at Risk Act* (SARA) as special concern (Government of Canada 2015).

4.2 GRACEFUL FELT LICHEN

Graceful Felt Lichen is found in similar habitat as Boreal Felt Lichen consisting of cool humid coniferous forests, close to the coast. On the Island of Newfoundland, this species primarily occurs on the trunks of Baslam Fir trees but has been found on Red Maple (*Acer rubrum*), and Yellow Birch (*Betula alleghaniensis*) in Nova Scotia (Government of Canada 2015). Graceful Felt Lichen is listed by SARA as endangered. Graceful Felt Lichen has been designated as endangered under NLESA.

4.3 BLUE FELT LICHEN

Blue Felt Lichen is also found on the branches and trunks of trees; however, this species tends to prefer hardwood species such as Yellow Birch (*Betula alleghaniensis*). In Newfoundland it also has been recorded growing on Trembling Aspen, rocks and some non-native tree species, although to a much lesser extent (NLDEC 2015). The preferred habitat for Blue Felt Lichen is mature hardwood stands and with the majority of recordings in Newfoundland occurring in the Bay d'Espoir area, central Avalon Peninsula, Terra Nova National Park and southwest Newfoundland. Blue Felt Lichen is listed by the NLESA as vulnerable and is not currently listed by SARA.

5 ENVIRONMENTAL EFFECTS MANAGEMENT

Mitigation and monitoring for rare lichens are outlined in Section 5.1 and Section 5.2, respectively.

5.1 MITIGATION MEASURES

5.1.1 Field Surveys

The first steps and mitigation for the protection of rare lichens involves habitat modeling followed by field surveys in areas that provide suitable habitat for Boreal Felt Lichen, Graceful Felt Lichen, and Blue Felt Lichen.

Habitat modeling for the two listed lichen species was carried out for the environmental assessment using information on:

1. Known occurrences of these plants within the Study Area and Regional Area; and
2. Known habitat requirements for specific plant species.

As a result, two plant habitat potential models were developed for the Project. Atlantic Canada Conservation Data Centre (ACCDC) provided a database of the known occurrences of listed and rare plant species within the overall Regional Area (ACCDC 2015). The first model was created using these known occurrences within this area, and is based on the premise that as the number of known occurrences within a particular area increases, the likelihood of encountering another such plant within that particular area also increases. The categories and associated criteria for this "occurrence based" plant habitat model were identified as:

- Low Potential Greater than 500 m from a known listed / rare plant occurrence.
- Moderate Potential 250 - 500 m from a known listed / rare plant occurrence.
- High Potential 0 - 250 m from a known listed / rare plant occurrence.

Due to the relatively limited number of plant surveys that have been conducted in parts of the Study Area and the resulting limited number of known listed / rare plant occurrences, particular habitat requirements that are important for select plant species were also considered and evaluated as part of this Study. Specifically, the known habitat requirements for Boreal Felt Lichen and Blue Felt Lichen, listed species that are known to occur in the Study Area and regional area respectively, were considered and used to create a "species specific model".

The categories and associated criteria for the species specific model were identified as:

- Boreal Felt Lichen Habitat: Softwood forests, within 18 km of the coastline, and within 80 m of a wetland.
- Blue Felt Lichen: Hardwood forest within proximity to known occurrences (from Bay d'Espoir Terminal Station to the eastern extent of Bay Du Nord Wilderness Reserve boundary).

Results of the habitat modelling were used to identify high potential polygons within the 40 m wide ROW for which to conduct field surveys. Upon discussions with Newfoundland Department of Environment and Conservation - Wildlife Division (NLDEC-WD)it was agreed to also include all softwood forests within the 40m ROW as a medium potential habitat to be field assessed. If deemed to provide suitable habitat, these medium potential areas were also surveyed (see Figures 1-9).

Field surveys of each identified area (high and medium potential) took place between November 7, 2015 and November 17, 2015. Surveys consisted of experienced team members

conducting active searches for both lichen species in areas of identified suitable habitat within the Project Area (ROW). The areas of potential habitat were dispersed along the extent of the transmission line Study Area including within the Bay Du Nord Wilderness Reserve.

Surveys within the identified habitat polygons were conducted by foot in order to visually assess the entire polygon. Each tree (trunk and branches) was examined on all sides from base to approximately 4 meters (as high as could be visually assessed by surveyors from the ground, acknowledging that at a height of 4 m some lichens may not be easy to detect due to poor visibility).

Balsam Fir trees received higher effort than other species of tree but Black Spruce trees were also examined during the surveys.

Data recorded at each listed lichen location included:

- GPS location (Easting and Northing);
- tree species;
- tree breast height diameter (DBH);
- location of lichen on tree (e.g., height above ground, side of tree, branch vs. trunk);
- habitat description;
- photographs;
- lichen species; and
- location flagged using pink flagging tape in the field.

A total of 113 ha of forest habitat was identified during the desktop component of the study as either high or medium potential to contain listed lichens (see Figures 1-9). During field work, it was determined that both the high potential polygons and medium potential polygons both had the potential to provide suitable habitat for Boreal Felt Lichen and Graceful Felt Lichen and that the presence of Boreal Felt Lichen seemed to be more influenced by the dominance of mature Balsam Fir trees rather than the proximity to a wetland. It was also noted that some of the high potential polygons turned out to be dominated by Black Spruce where Boreal Felt Lichen is not known to occur.

Therefore each polygon regardless of initial potential assessment was re-evaluated from the air prior to conducting the actual surveys on the ground. Following the visual assessment, the majority of polygons (89 ha) did appear to provide potential habitat for Boreal Felt Lichen (i.e., presence of Balsam Fir in a relatively undisturbed, mature forest) and as such was surveyed on the ground using methods described above. The remaining 24 ha was assessed from the air as not providing suitable habitat for the two listed plant species. Polygons determined to provide unsuitable habitat for Boreal Felt Lichen consisted of:

- dense Black Spruce forest with no or very little presence of Balsam Fir;
- regenerating forest (early successional);
- highly disturbed forest;
- sparse forest dominated by Black Spruce and Larch (*Larix laracina*); or
- fragmented forest patches, offering only edge habitat.

The 2015 field surveys resulted in locating a total of 242 individual thalli of Boreal Felt Lichen on 80 trees within the Project Study Area. No Blue Felt Lichen or Graceful Felt Lichen individuals were recorded during the 2015 surveys. The majority of Boreal Felt Lichen individuals were recorded within Balsam Fir forests on Balsam Fir trees; however, one location did report a Boreal Felt Lichen on a Black Spruce tree (see Figures 1-9).

Prior to construction, in areas immediately adjacent to the Reserve and other areas with expected occurrence of rare lichens, NL Hydro will conduct a lichen survey in the area of the roads, trails and quarries. In advance of the survey, NL Hydro will provide to NLDEC-WD and Department of Environment and Conservation - Parks and Natural Areas Division (NLDEC-PNAD) maps of potential lichen habitat in those areas planned for clearing outside of the right-of-way (ROW). These maps will be used to determine areas that may require lichen surveys. Potential survey areas are to be approved by NLDEC-WD and NLDEC-PNAD, and must target rare lichen species. The surveys, like the surveys conducted in the fall of 2015 of the right-of-way, will be conducted by an independent third party whose qualifications and methodology have been approved by NLDEC-WD.

If *Erioderma mollissimum* is found at any point during harvesting/construction a 250 m buffer will be placed around the site and further discussions with the Wildlife Division are required. Construction activities are not to occur within this 250 m buffer until mitigations are discussed and approved by NLDEC-WD and NLDEC-PNAD. If *Degelia plumbea* is found, the Wildlife Division will be notified and transplantation can occur.

5.1.2 Lichen Relocations

The second step in protecting rare lichens is translocation in the case of Boreal Felt Lichen. Prior to clearing activities commencing, NL Hydro will hire a third party consultant with experience conducting lichen translocations to remove known occurrences of Boreal Felt Lichen from the host trees by carefully excising the thalli from the bark substrate. The thalli will be removed in one piece. The specimens will then be placed between sterile wipes moistened with distilled water and placed in labelled paper bags. Paper bags will be kept in aerated plastic containers for storage, and kept cool until transported to recipient transplant sites. Care will be taken to ensure lichens removed from trees not get too warm or dry out too much. If the lichens are dry, they will be made wet before taking them off the tree so they are less likely to

have fragments break off. Measurements, attachment rank, necrotic rank and browsing damage rank will be recorded before the thallus is removed and once the thalli have been transplanted. High-quality close-up photos must be taken before removal, immediately after transplanting.

If additional thalli are found during translocations these occurrences will be reported and transplanted. If there are any thalli found within the 20-100 m zone from the new right-of-way, these occurrence will be monitored. During the first monitoring session the distance and direction to the ROW clearing and other large openings in the canopy will be recorded.

- Recipient habitat will be identified before lichens are removed from trees and then immediately transplanted to recipient habitat locations.
- Each thallus will remain intact to attach to a recipient tree at the transplant site. If a thallus does become broken it will be attached as separate “pieces” as long as they are labelled and recorded as a part of a donor thallus.
- Potential transplant sites will be deemed favourable based on the following criteria:
    - Occurrence of Boreal Felt Lichen on receptor tree or within stand. However not all transplants will occur to trees with Boreal Felt Lichen.
    - Rare lichen habitat model described in Section 5.1 which was revised based on input received from NLDEC-WD
    - The transplants will be attached to slower-growing trees with rougher bark to increase the possibility that the transplants will attach themselves to the tree. At the same time heavily flaking or loose bark should be avoided. Natural *Erioderma pedicellatum* sometimes grow there but they tend to disappear when the loose substrate falls off and recipient trees must be living.
    - The size similarity of donor and recipient trees will be based on a population basis, not an individual tree basis, i.e., a thallus from a small tree does not need to be transplanted to a small tree, but the recipient trees should generally fall within the same size classes as the donor trees. This also applies for the height of the tree from the forest floor. The recipient tree should be selected to provide the optimum light level. For recipient trees close to a clearing, the transplants should face away from the clearing; for trees more toward the centre of the stand (and if it is darker there), transplants should face towards the clearing.
    - If it is obvious from looking at a thallus which is the ”right side up”, the thallus will be attached to the recipient tree in the same orientation.

- At a minimum, a 100-250 m buffer will be used to separate the recipient host tree from the TL 267 right-of-way
- Maximum number of relocations per receptor tree will be five
- Receptor trees have to be alive and not close to death.
- Translocations will only occur to the trunk of receptor tress regardless of whether the host location was on branches. It will be noted which of the removed thalli were originally attached to branches. The transplants will be numbered so the information can be traced where they came from (location of attachment, size of tree, whether it was dead/alive, etc).
- Transplant sites will be selected in relatively close proximity to the host location See Figures 1-9 for indication of the 12 monitoring sites to be established.

Hand-made no.18 gauge stainless steel wire staples fashioned from a larger roll using wire-cutters will be used to attach the thalli directly to the bark of the recipient trees. For smaller thalli one or two staples may be sufficient, but larger thalli should be kept intact if at all possible and may require the use of more staples. Using forceps to hold thalli in place, the transplants will be 'mounted' with stainless steel wire ‘staples’ using needle-nosed pliers by slipping the wire under the bark of the recipient tree, and over the surface of the thalli. The more common application results in a criss-cross arrangement of the wires. Care will be taken not to puncture the sapwood. Properly placed, the stainless steel wire inserts between the inner bark layer but on the outside surface of the sapwood. An additional important precaution is that the wire staples will not insert into the bark above the thalli as this can result in sap flow downward over the transplant.

Following each transplant a unique ID will be assigned, and a permanent forestry tag will be attached with wire and high-quality forestry grade flagging tape will be deployed and a pin locator placed near the thallus. Boeal Felt Lichen morphometric data and digital photographs will be collected. Habitat descriptions for each transplant site will also be recorded, and it will be noted if the transplant occurred on areas of tree bark containing thin mats of the epiphytic bryophyte (*Frullania asagrayana*). (This is not a requirement for transplantation but will be noted.)

Data to be collected before and after each transplantation includes the following:

<u>Site level</u> (both donor and recipient sites)

- Forest type
- Stand conditions (e.g., age/condition, tree species present, rank of canopy cover, slope, site orientation, bogs/clearings nearby, tree regeneration, moose browsing of tree regen)
- Soil moisture

<u>Tree level</u> (both donor and recipient trees, also trees with natural thalli on the recipient sites)

- Location (GPS coordinates)
- Tree species
- Diameter at breast height
- Tree condition (eg. dead/alive, leaning, overmature, etc.)

Thallus level (individual lichens, recorded prior to transplanting and afterwards, also for natural thalli on the recipient sites)

- Location on the tree (cardinal orientation and height above the ground, if on a branch the distance from the trunk and branch diameter on the tree side of the lichen)
- Development state (juvenile 1, juvenile 2, adult, necrotic, necrotic and loose, necrotic with regeneration, dying/dead)
- Necrotic rank
- Length and width
- Number of apothecia
- Degree of attachment of the lichen
- Herbivore damage (mites or slugs)
- Overgrowth by *Frullannia*, mosses or other lichens (1-1-33%, 2-34-66%, 3-66-100%)
- Attachment of the substrate (3- well attached, 2- somewhat loose, 1-ready to fall off, could be detached by blowing at it)
- If a thallus is dead, the cause of death if it can be determined

590000
592000
5316000
594000
5316000
5314000
594000

N

Newfoundland

KM-0
KM-5

Relocation grouping #1

Legend

Proposed TL267
Study Area (40m ROW)
1 km wide corridor
Boreal Felt Lichen Location

Survey Type
Ground Survey
Air Survey

Class
High
Medium
Existing Transmission Line
Existing Road

0 0.25 0.5
Kilometres

Figure 1

PROPOSED BAY D'ESPOIR TO WESTERN AVALON TRANSMISSION LINE (TL 267) – LICHEN SURVEYS

596000
598000
5314000
600000
5314000
600000
5312000
N
Newfoundland
KM-10
Relocation grouping #2
Relocation grouping #3
Legend
Proposed TL267
Study Area (40m ROW)
1 km wide corridor
Boreal Felt Lichen Location
Survey Type
Ground Survey
Air Survey
Class
High
Medium
Existing Transmission Line
Existing Road
0
0.25
0.5
Kilometres

Figure 2

PROPOSED BAY D'ESPOIR TO WESTERN AVALON TRANSMISSION LINE (TL 267) – LICHEN SURVEYS

602000
604000
606000
606000
600000
5312000
5310000
N
Newfoundland
KM-15
Relocation grouping #3
Relocation grouping #4
Relocation grouping #5
Whiskey Brook
Legend
Proposed TL267
Study Area (40m ROW)
1 km wide corridor
Boreal Felt Lichen Location
Survey Type
Ground Survey
Air Survey
Class
High
Medium
Existing Transmission Line
Existing Road
0
0.25
0.5
Kilometres

Figure 3

PROPOSED BAY D'ESPOIR TO WESTERN AVALON TRANSMISSION LINE (TL 267) – LICHEN SURVEYS

606000

608000

610000

5312000

5310000

N

Newfoundland

KM-20

Relocation grouping #6 and #7depending on site conditions and nearby suitable habitat

Legend

Proposed TL267

Study Area (40m ROW)

1 km wide corridor

Boreal Felt Lichen Location

Survey Type

Ground Survey

Air Survey

Class

High

Medium

Existing Transmission Line

Existing Road

0 0.25 0.5

Kilometres

Pond

Figure 4

PROPOSED BAY D'ESPOIR TO WESTERN AVALON TRANSMISSION LINE (TL 267) – LICHEN SURVEYS

612000
614000
616000
5312000
5310000
N
KM-25
Relocation grouping #8
Newfoundland
Legend
Proposed TL267
Study Area (40m ROW)
1 km wide corridor
Boreal Felt Lichen Location
Survey Type
Ground Survey
Air Survey
Class
High
Medium
Existing Transmission Line
Existing Road
0
0.25
0.5
Kilometres

Figure 5

PROPOSED BAY D'ESPOIR TO WESTERN AVALON TRANSMISSION LINE (TL 267) – LICHEN SURVEYS

newfoundland labrador hydro
a nalcor energy company
amec foster wheeler

618000
620000
622000
5312000
5310000
N
KM-30
Newfoundland
Relocation grouping #9
Legend
Proposed TL267
Study Area (40m ROW)
1 km wide corridor
Boreal Felt Lichen Location
Survey Type
Ground Survey
Air Survey
Class
High
Medium
Existing Transmission Line
Existing Road
0
0.25
0.5
Kilometres

Figure 6

PROPOSED BAY D'ESPOIR TO WESTERN AVALON TRANSMISSION LINE (TL 267) – LICHEN SURVEYS

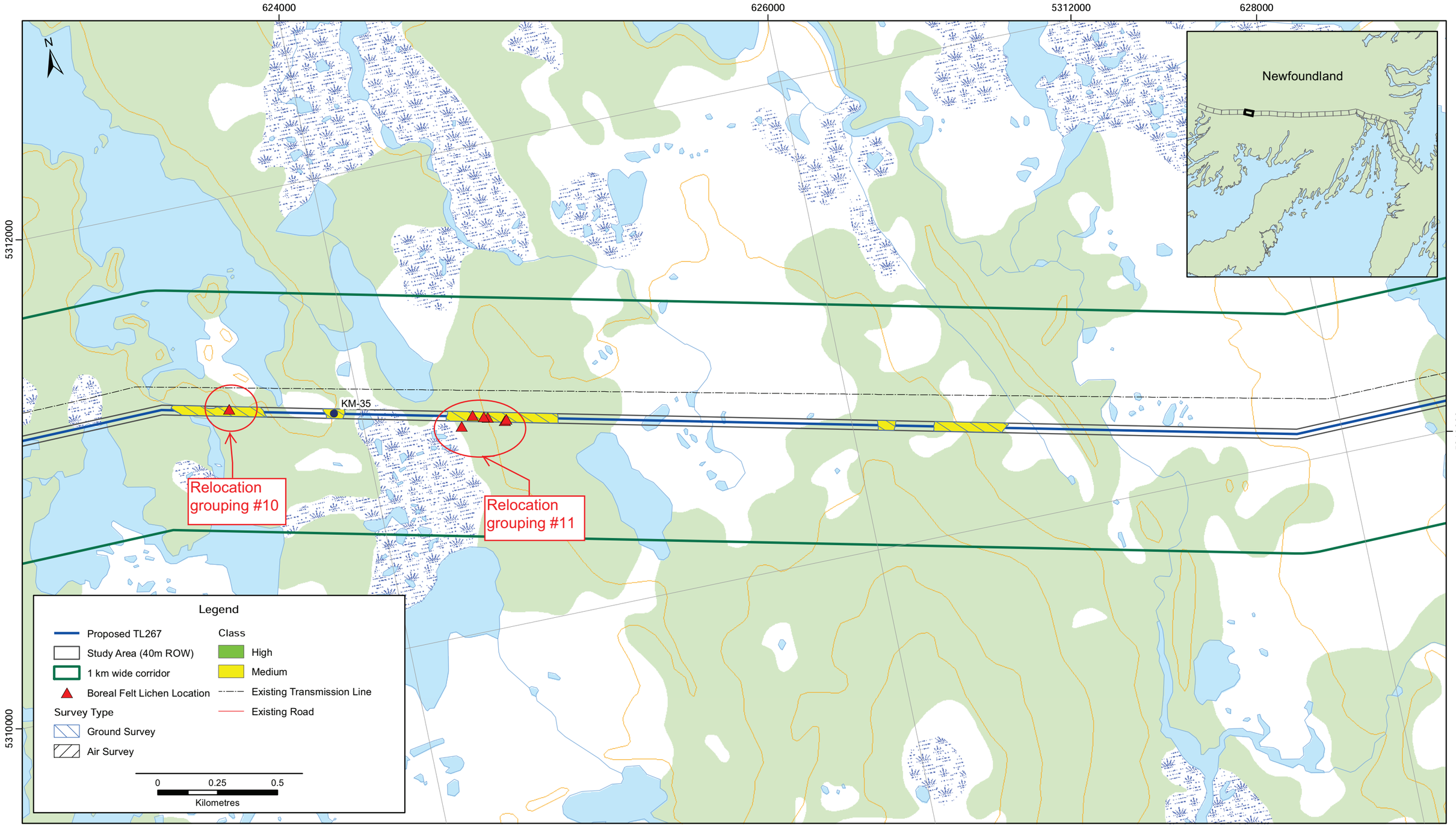

Figure 7

PROPOSED BAY D'ESPOIR TO WESTERN AVALON TRANSMISSION LINE (TL 267) – LICHEN SURVEYS

630000
632000
634000
5310000
5310000
N
Newfoundland
KM-40
KM-45
Relocation grouping #12
Legend
Proposed TL267
Study Area (40m ROW)
1 km wide corridor
Boreal Felt Lichen Location
Survey Type
Ground Survey
Air Survey
Class
High
Medium
Existing Transmission Line
Existing Road
0
0.25
0.5
Kilometres

Figure 8

PROPOSED BAY D'ESPOIR TO WESTERN AVALON TRANSMISSION LINE (TL 267) – LICHEN SURVEYS

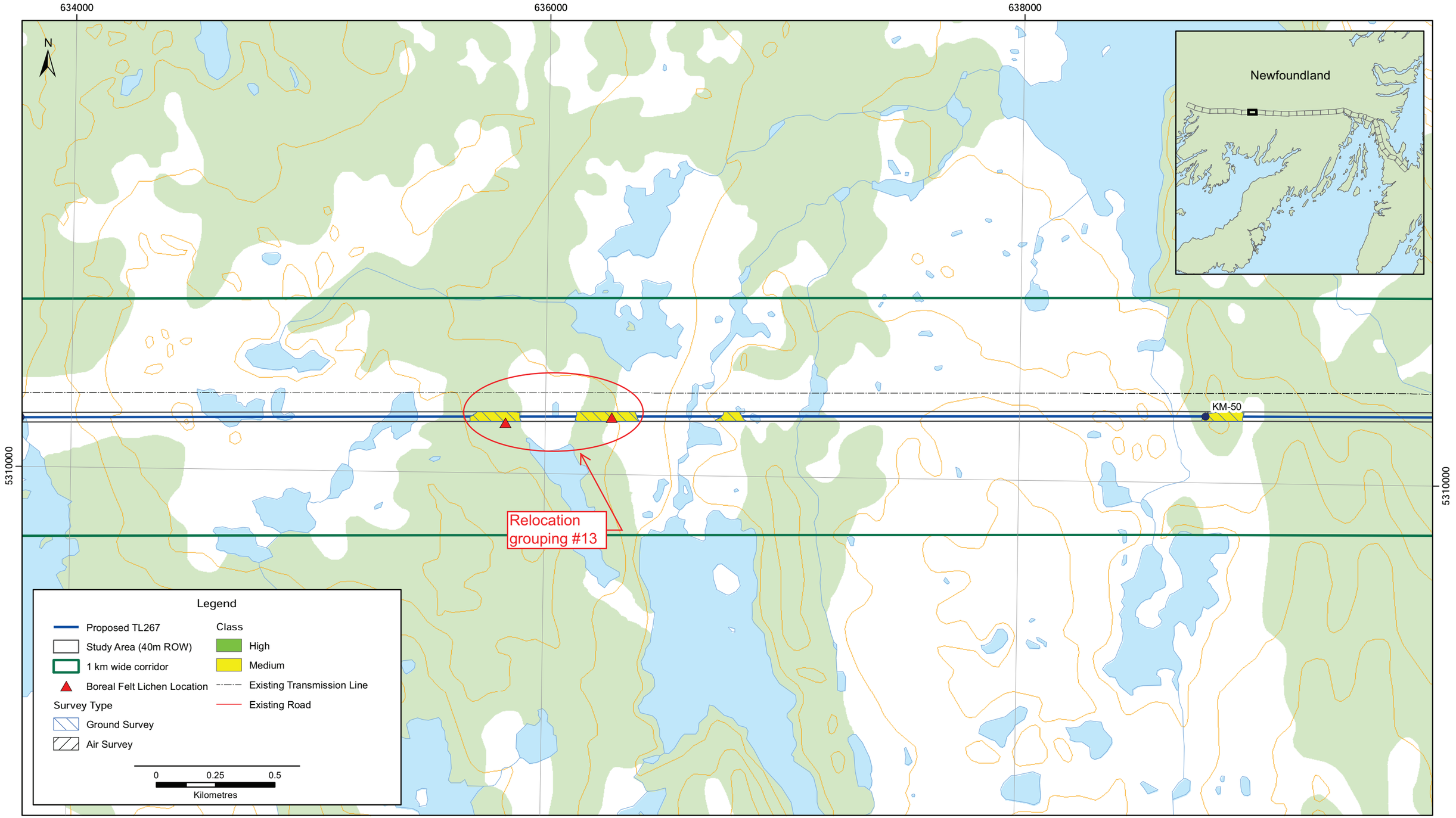

Figure 9

PROPOSED BAY D'ESPOIR TO WESTERN AVALON TRANSMISSION LINE (TL 267) – LICHEN SURVEYS

5.2 MONITORING

Monitoring will occur once a year in the summer and will include a comparative analysis of survival of transplanted thalli. All thalli will be reassessed relative to their status recorded when initially transplanted to detect positive, neutral (no change), or negative rates of survival for each transplant site. Morphometric data and high quality digital photographs will be collected during each monitoring year.

Specific data to be collected during monitoring includes:

Site level (recipient sites)

- Forest type
- Stand conditions (e.g., age/condition, tree species present, rank of canopy cover, slope, site orientation, bogs/clearings nearby, tree regeneration, moose browsing of tree regen)
- Soil moisture

Tree level (recipient trees, also trees with natural thalli on the recipient sites)

- Location (GPS coordinates)
- Tree species
- Diameter at breast height
- Tree condition (eg. dead/alive, leaning, overmature, etc.)

Thallus level

- Location on the tree (cardinal orientation and height above the ground, if on a branch the distance from the trunk and branch diameter on the tree side of the lichen)
- Development state (juvenile 1, juvenile 2, adult, necrotic, necrotic and loose, necrotic with regeneration, dying/dead)
- Necrotic rank
- Length and width
- Number of apothecia
- Degree of attachment of the lichen
- Herbivore damage (mites or slugs)
- Overgrowth by *Frullannia*, mosses or other lichens (1-1-33%, 2-34-66%, 3-66-100%)
- Attachment of the substrate (3- well attached, 2- somewhat loose, 1-ready to fall off, could be detached by blowing at it)
- If a thallus is dead, the cause of death if it can be determined

Monitoring will occur for five years post transplantation. In locations where occurrences of Boreal Felt Lichen already occur, monitoring data will include natural thalli at the receiving site. If the number of natural thalli exceeds the number of transplants +20, then the closest ones to the transplants will be monitored. The "extra" thalli will have their tree flagged, and the Wildlife Division should be notified that there is a substantial Boreal Felt Lichen site present that has been only partially enumerated.

Following Year 5, a review of the results of the program will be evaluated to determine if additional monitoring years is warranted.

All monitoring data will be reported on annually. See Section 5.3.

Site access for future monitoring has not been determined at this point in time. Any entry into the Bay du Nord Wilderness Reserve will follow all applicable regulatory requirments.

5.3 REPORTING

A report will be submitted to NLDEC-WD and NLDEC-PNAD annually that will present the results of the monitoring program described in Section 5.2.

The annual report will document field activities and present tabular information collected during the monitoring program of transplanted Boreal Felt Lichen thalli. The report will include details on the comparative annual survival of transplanted thalli of the Boreal Felt Lichen relocation program. All digital data products including all photos taken during conduct of the field program will accompany annual reports.

5.4 CONTINGENCY PLAN

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

6 REFERENCES

ACCDC. 2015. Search Results Data Report for Transmission Line (TL 267) Project located in South-Central and Eastern Newfoundland, October, 2015.

Government of Canada. 2015. Species at Risk Public Registry. Available online:

http://www.sararegistry.gc.ca/sar/index/default_e.cfm?stype=species&lng=e&index=1&common=&scientific=&population=&taxid=11&locid=7&desid=0&schid=0&desid2=0&. Accessed on 20 October, 2015.

Newfoundland and Labrador Department of Environment and Conservation (NLDEC). 2015. Species at Risk – Plants. Available online: http://www.env.gov.nl.ca/env/wildlife/endangeredspecies/plants.html#13. Accessed on 20 October, 2015