



Transmission Line 55L Blaketown to Clarkes Pond Rebuild Project

***Environmental Assessment Registration
Pursuant to the Newfoundland and Labrador Environmental Protection Act***

***Submitted by:
Newfoundland Power Inc.***

September 2022

Environmental Assessment Registration Document
Transmission Line 55L Blaketown to Clarkes Pond Rebuild Project
Newfoundland Power

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EXECUTIVE SUMMARY

Newfoundland Power (referred to as The Company or NP throughout the document) is proposing to rebuild their 55L Transmission Line between Blaketown and Clarkes Pond, Newfoundland (the Project or the Undertaking). Sections of the transmission line have reached the point where continued maintenance is no longer feasible and a section of line must be rebuilt to continue the provision of safe and reliable service to customers in the area.

The project will begin with a 24.1 km section of the line from Blaketown to a point near Dunville in 2023. The project will continue in 2024 with a section extending the line 21.2 km to the Clarkes Pond Substation. The transmission line right of way (RoW) departs from the Blaketown substation, and travels along the north side of the Trans-Canada Highway before joining the Route 100 (known as the Argentia Access Road) RoW. The transmission line RoW follows route 100 as far as Dunville where the transmission line RoW diverts north of the road to a rural area for approximately 9 km returning to the route 100 RoW. The project crosses or passes within 200m buffer of a watercourse that is a scheduled salmon river under the fisheries act. An assessment of the sources of pollution and implementation of various mitigation measures, the Project is not expected to have any significant impacts on key environmental features

The Project represents an undertaking requiring registration under the Environmental Assessment (EA) Regulations of the NL Environmental Protection Act (NL EPA) since it “will occur within 200 m of the high-water mark of a river that is a scheduled salmon river under the Fisheries Act (Canada)”. This Registration document is being submitted to the EA Division of the Department of Environment and Climate Change (DOECC) for review.

Construction activities will be conducted in accordance with a project specific Environmental Protection Plan (EPP). The EPP will include erosion and sediment control plans (ESCP), as well as a Spill Contingency Plan. Construction will adhere to best management practices and mitigation measures presented in these Plans, as well as applicable regulatory requirements. Operations will abide by NP’s existing standard operating procedures.

The project intersects the range of fauna and flora species protected by the Newfoundland and Labrador’s Endangered Species Act (NLESA). Measures will be taken to mitigate interference of the project with protected species.

NP is committed to continuing to supply reliable services to customers in the region through the reconstruction of Transmission Line 55L in a manner which meets regulatory requirements and minimizes adverse effects on the surrounding environment.

ABBREVIATIONS

ACCDC	Atlantic Canada Conservation Data Centre
CCA	Chromated Copper Arsenate
COSEWIC	Committee on the Status of Endangered Wildlife Species in Canada
DOECC	Department of Environment and Climate Change
EPP	Environmental Protection Plan
DFO	Fisheries and Oceans Canada
EA	Environmental Assessment
ESCP	Erosion and Sediment Control Plans
ESC	Erosion and Sediment Control
km	Kilometre
kV	KiloVolt
m	Meter
MBCA	Migratory Birds Convention Act, 1994
NL	Newfoundland and Labrador
NL EPA	Newfoundland and Labrador Environmental Protection Act
NLESA	Newfoundland and Labrador <i>Endangered Species Act</i>
NP	Newfoundland Power
RoW	Right of Way
SARA	Species at Risk Act
SSAC	Species Status Advisory Committee
DOECC – WRMD	Department of Environment and Climate Change – Water Resources Management Division
55L	Transmission Line 55L Blaketown to Clarkes Pond

1.0 INTRODUCTION


1.1 Name of Undertaking

Transmission Line 55L (55L) Blaketown to Clarkes Pond Rebuild Project (the Project)

1.2 Proponent Information

Newfoundland Power (NP) operates an integrated electricity generation, transmission, and distribution system throughout the island portion of Newfoundland and Labrador. As the primary distributor of electricity on the island, we operate 12,850 km of transmission and distribution lines on the island, providing service to over 273,000 customers.

Table 1 Proponent information

PROPONENT	
Name	Newfoundland Power Inc
Address	55 Kenmount Road, PO Box 8910 St. John's, NL A1B 4P2
CEO	Gary Murray, President and CEO
Signature	
Website	https://newfoundlandpower.com/
PRINCIPAL PROPONENT CONTACT	
Name	Kathleen Fillier
Official Title	Environment Analyst
Address	55 Kenmount Road, PO Box 8910 St. John's, NL A1B 4P2
Cell	(709) 691-3808

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Office	(709) 737-6127
Email	kfillier@newfoundlandpower.com
ENVIRONMENTAL CONSULTANT CONTACT	
Name	Jason Dalton
Title	Environment and Sustainability Manager
Address	55 Kenmount Road, PO Box 8910 St. John's, NL A1B 4P2
Cell	(709) 691-4631
Office	(709) 737-2868
Email	jdalton@newfoundlandpower.com

1.3 Project Overview

NP (the Proponent) proposes to rebuild Transmission line 55L (the Project, 55L, or the Undertaking). Transmission Line 55L is a 66 kV H-Frame radial line running between the Blaketown (“BLK”) Substation on the Trans-Canada Highway near Whitbourne, and Clarkes Pond (“CLK”) Substation located near Freshwater. The line was originally constructed in 1971, except for a small section constructed in 1968. The Quartz Substation tap on this line was constructed in 1981. The new line includes approximately 43.3 kilometers of original construction consisting of 54 two pole H-Frame structures and 372 single pole structures. As a radial line, this line provides the only source of supply for Clarkes Pond, Dunville, Quartzite/Newlite Enterprises, and Placentia Junction substations. In total, the 4 substations serve approximately 3,419 customers. Pending approvals, Transmission Line 55L is proposed to be rebuilt over the course of two years starting in 2023.

Transmission Line 55L currently lies within a 15m RoW. The new transmission line will be built in a new RoW that will be approximately 20m wide, narrowing in sections of single pole infrastructure. This new RoW will follow the route outlined in this document. Following the project, any areas of the previous RoW that were not rebuilt will be allowed to revegetate. H-frame transmission structures will be located on average 150m apart and single pole structures will be on average 60m apart with specific locations varying based on topography. Transmission Line 55L runs near a scheduled salmon river for roughly 9km, at several instances coming within the 200m buffer required around scheduled salmon rivers with possible vegetation clearing in some of these areas. To date, NP has submitted

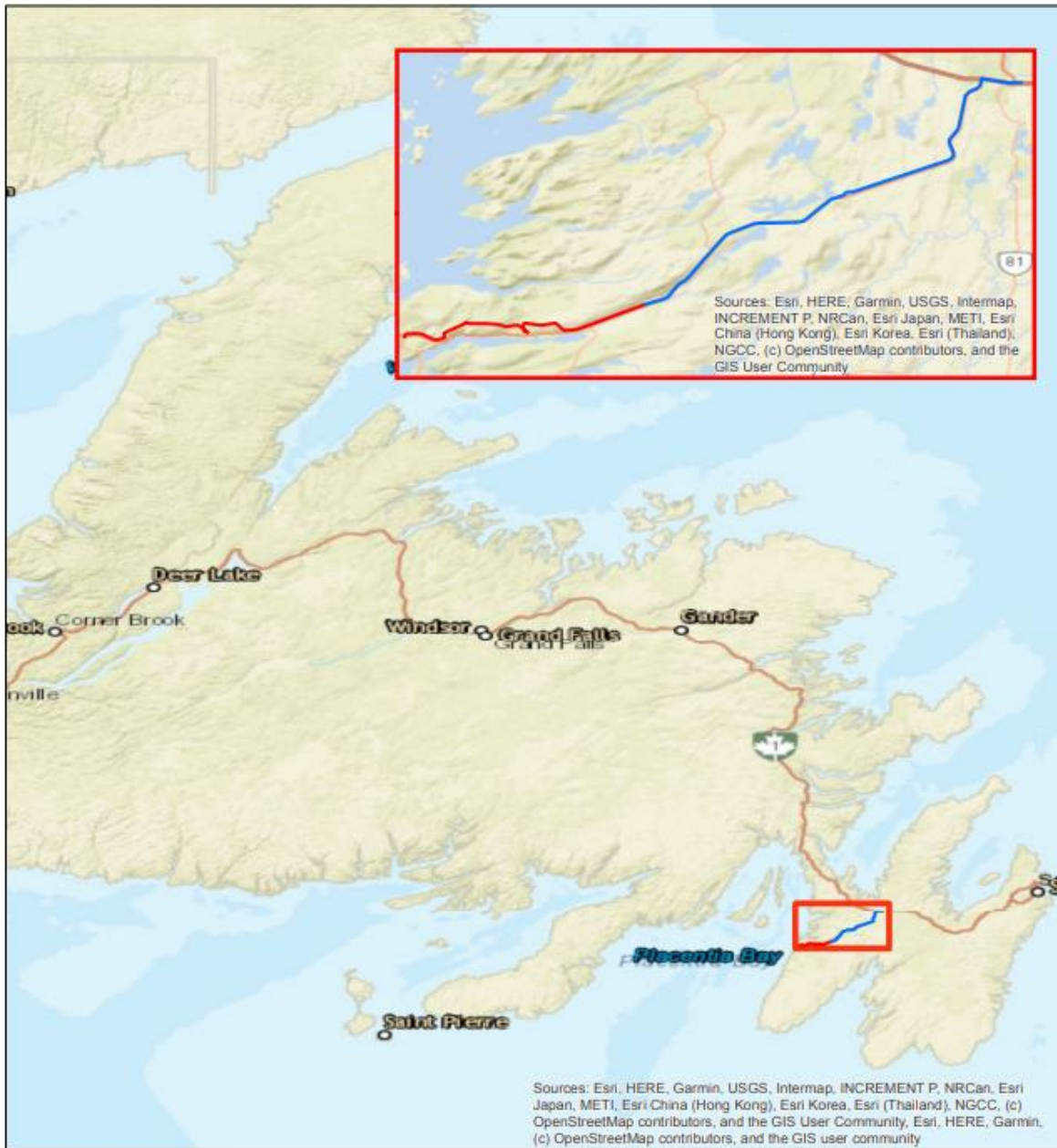
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two Crown Lands applications associated with the new RoW for this project. The first is Crown Lands application 159822, and the second is Crown Land Application 159630. The replacement of this line is necessary based on the physical condition of the line, risk of failure, and customer impact in the event of a failure. As this is a radial line with no alternate source of supply, its deteriorated condition exposes customers in Dunville, Placentia, Argentia, Ship Harbour, Fox Harbour, Placentia Junction, Patrick's Cove, St. Brides, Point Lance, Cape St. Mary's and multiple other rural areas to potential for more frequent and extended unplanned outages. Additionally, a line in this condition poses environmental and safety risks such as forest fire, spillage of deleterious material, or electrical hazards. Continued maintenance is not feasible for this transmission line, and for this reason the rebuild is critical to the reliability of NP services.

The project requires registration under the following sections of the EA Regulations, 2003:

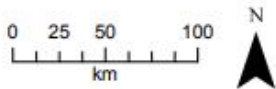
- Section 28: The transmission line crosses several watercourses that are scheduled salmon rivers under the *Fisheries Act* that cannot be spanned outside of their 200m buffer.
- Section 34 (2): Relocation of the line near Barrow's Pond will require the construction of new transmission line corridor more than 500m from the existing RoW.

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Legend

- Proposed Phase 1
- Proposed Phase 2



55L Transmission Line Rebuild - Environmental Features



Project Location:
 Eastern Avalon, Newfoundland

Figure 1 Project Location

1.4 Purpose/Need/Rationale for The Project

The replacement of this line is necessary based on the physical condition of the line, risk of failure, and potential customer impact in the event of a failure. As this is a radial line with no alternate source of supply, its deteriorated condition exposes customers in Dunville, Placentia, Argentia, Ship Harbour, Fox Harbour, Placentia Junction, Patrick’s Cove, St. Brides, Point Lance, Cape St. Mary’s and multiple other rural areas to potential for more frequent and extended unplanned outages. Additionally, a line in this condition poses environmental and safety risks such as forest fire, spillage of deleterious material, or electrical hazards. Continued maintenance is not feasible for this transmission line, and for this reason the rebuild is critical to the reliability of NP services.

Customers served by this line have been subject to outages due to significant weather systems over the last five years. Due to a wind storm in 2017, customers experienced an outage of approximately 4.5 hours, which resulted in approximately 891,00 customer outage minutes. In total over the last two decades, customers served by Transmission Line 55L have experienced over 10 million customer outage minutes.

An inspection of Transmission Line 55L in 2022 identified that 253 of the 490 poles on the line have deteriorated and require replacement. Additionally, 61 structures were identified as having deteriorated insulators, deteriorated crossarms, or hardware deficiencies (figures 2 and 3).



Figure 2 FleXall Clamp split from wear



Figure 3 Deteriorated pole with horizontal split

2.0 PROJECT DESCRIPTION

2.1 Location

NP is proposing to rebuild Transmission line 55L (the Project). Transmission Line 55L is a 66 kV H-Frame radial line running between Blaketown Substation on the Trans-Canada Highway near Whitbourne, and Clarkes Pond Substation located near Freshwater. The line was originally constructed in 1971, except for a small section constructed in 1968. The tap to Quartz Substation was constructed in 1981. The new line includes approximately 43.3 kilometers of original construction consisting of 54 two pole H-Frame structures and 372 single pole structures. As a radial line, this line provides the only source of supply for Clarkes Pond, Dunville, Quartzite/Newlite Enterprises, and Placentia Junction substations. In total, the 4 substations serve approximately 3,419 customers. Pending approvals, Transmission Line 55L is proposed to be rebuilt over the course of two years starting in 2023.

Transmission Line 55L currently lies within a 15m RoW. The new transmission line will be built in a new RoW that will be approximately 20m wide, narrowing in sections of single pole infrastructure. This new RoW will follow the route outlined in this document. Following the project, any areas of the previous RoW that were not rebuilt will be allowed to revegetate. H-frame transmission structures will be located on average 150m apart and single pole structures will be on average 60m apart with specific locations varying based on topography. Transmission Line 55L runs near a scheduled salmon river for roughly 9km, at several instances coming within the 200m buffer required around scheduled salmon rivers with possible vegetation clearing in some of these areas.

The project will be completed over two years. A 21.4 kilometer section of Transmission Line 55L will be rebuilt in 2023. A 21.2 kilometer section of Transmission Line 55L will be rebuilt in 2024. During both years, material procurement and brush clearing will be completed during the first quarter, followed by design work during the second quarter and construction during the third and fourth quarters.

2.2 Physical Features

2.2.1 Key Environmental Features

Newfoundland is part of the Boreal Shield Ecozone which covers much of Canada. Boreal forests are characterized by stands of Black spruce (*Picea mariana*), White spruce (*Picea glauca*), Jack pine (*Pinus banksiana*), and Balsam fir (*Abies balsamea*) mixed with bogs and other wetlands. As a result of glacial scouring, areas of bare rocky outcrops support lichen and low shrubs. The Project is located within the Newfoundland Ecoprovince of the Boreal Shield Ecozone. Its forests are dominated by closed, intermediate to low stands of Balsam fir and Black spruce on steep, moist, upland slopes. White birch (*Betula papyrifera*), Aspen (*Populus sp.*), and Black spruce are typical of disturbed sites and exposed nutrient poor sites are characterized by Black spruce, ericaceous shrubs, such as Lambkill (*Kalmia angustifolia*), Labrador tea (*Rhododendron groenlandicum*), and lichens. Open

stands of dwarfed Black spruce and Eastern larch (*Larix laricina*) with ericaceous shrubs are found on raised dome bogs.

The project site is located within the Southeastern Barrens sub region of the Maritime Barrens Ecoregion. Like the rest of the ecoregion, the Southeastern Barrens is characterized by exposed bedrock and extensive barrens – especially on the northern half of the Burin Peninsula and the islands of Placentia Bay – with balsam fir dominated tree growth often limited to protected valleys and coves. Summers in this subregion are typically cool – marked by frequent fog and strong southerly winds – and winters are relatively mild, considering the area’s northern latitude. Slope bogs, basin bogs, and fens are scattered throughout the barrens, reflecting the poor drainage and wet climate of this ecoregion.

Most of the area is covered by gently rolling ground moraine, but scattered throughout are gigantic boulders left by retreating glaciers (erratic’s), and hundreds of lakes and ponds created by glacial gouging of the earth’s surface. Forests are scarcer in the Southeastern Barrens sub region than in the two more northerly sub regions of this ecoregion, due to more fog and the lower summer temperatures that come with prevailing winds off the ocean. A scattering of yellow birch, which favors moist woodlands, is found in the forested areas, which also helps set this subregion apart from its northern subregion counterparts (Department of Environment and Climate Change, 2008).

The Project primarily follows the developed highway RoW, crossing watercourses and wetlands. The landscape in the Project area is punctuated by numerous ponds and lakes. The Project intersects multiple waterbodies associated with the Northeast River as well as numerous river crossings (section 2.2.1.1).

2.2.1.1 Scheduled Waters Within 200 meters of Project Site

The proposed Project crosses or passes within 200 m of the following scheduled salmon bearing rivers (Schedule 1, Newfoundland and Labrador Fishery Regulations SOR178-443) at 12 locations (Appendix B):

- Northeast River & Tributaries (8 crossing locations)
- Tributary of Rocky River (1 crossing location)

Northeast River empties into Placentia Gut, a sheltered harbour of Placentia Bay, near Placentia and is within Salmon Fishing Area (SFA) 10. This narrow arm reaches approximately 10,000m inland from the larger body of Placentia Bay, distinguished by the 95 m wide entrance to the gut where a lift bridge connects local communities. Near the outflow of Northeast River, Transmission Line 55L is within the 200m buffer zone of the scheduled salmon river. The transmission line RoW lies largely within this buffer zone until a point near Healey’s pond (see Appendix B). The recently rebuilt fishway on this river recorded a total of 544 salmon in 2021, and most recently recorded a total of 418 in 2022 (DFO, 2022). The fishway is located near Brennan’s Falls on the Northeast river, at which point

the project RoW is within 200m of the river. Northeast river and its tributaries originate from several large waterbodies including Healey's Pond, Sparrow's Pond, Naked Man Brook, Naked Man Ponds, Island Pond, Fitzgeralds Pond, Rhodies Pond, Station Pond, and Junction Pond. The project exists within the 200m buffer zone of Northeast river on multiple instances, and crosses tributaries of the river at 8 locations.

The Rocky River empties into the northwestern arm of Saint Mary's Bay, approximately 500 m from the mouth of the Colinet River. The river was seeded with salmon fry in the mid-1980s. Due to an impassible waterfall near the river mouth, a fishway was installed and became operational in 1987. In 2021 the Rocky River fishway recorded 379 fish, in 2022 the fishway recorded 228 (DFO, 2022). Rocky River and its tributaries contain several large waterbodies, including Island Pond, St. Shore's Pond, White Hearts Pond. Its headwaters originate from the Markland region, specifically Bullrush Pond, Third Pond, Second Pond, and Junction Pond, as well as the Placentia Junction area near Nine Island Pond. The Project crosses a tributary of this river one time.

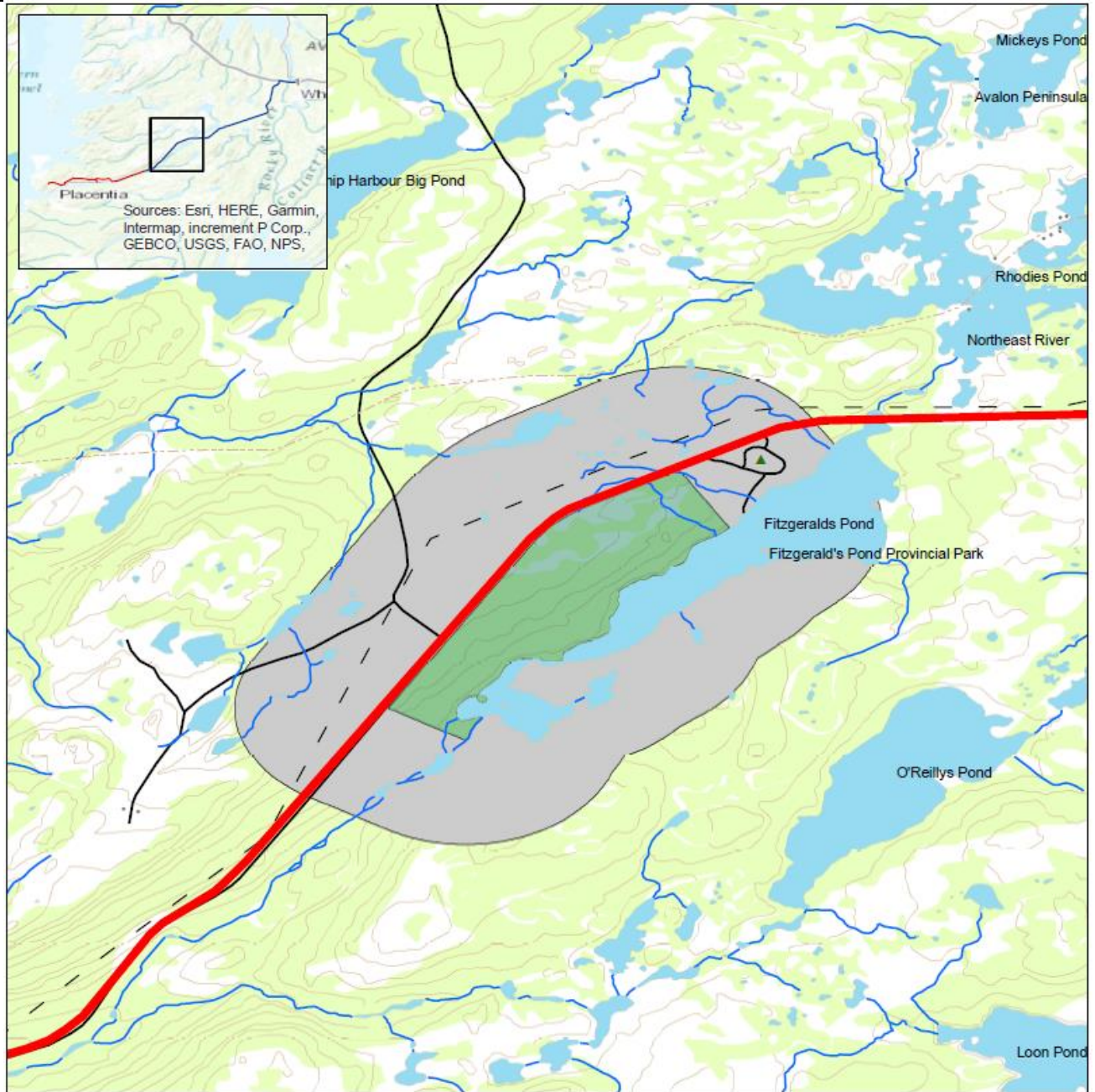
Installation of conductor will be completed using tension stringing techniques and no disturbances to waterbodies are anticipated. If necessary, watercourses associated with scheduled salmon bearing rivers and their listed tributaries may be forded. If fording is required, all commissioning and/or decommissioning activities shall adhere to measures and guidelines outlined in the NP operating procedure OPR200.07 – Forging of Water Bodies, the project specific EPP, permits issued by DOECC and documents available from DOECC.

Poles will be installed as far away from high water marks as standards allow. This distance will vary between rivers.









2.2.1.2 Fitzgerald's Pond Provincial Park Buffer Zone

Fitzgeralds Pond Provincial Park is an area designated to protect a population of globally rare lichen *Erioderma pedicellatum* or the boreal felt lichen. This reserve protects 1.63 km² of habitat. Outside the protected area a 1km buffer zone exists to mitigate impact from activity in surrounding areas (see figure 4). Transmission Line 55L runs through this buffer zone for approximately 5km between the points (47°18'54.66"N, 53°45'59.70"W) and (47°20'50.82"N, 53°43'20.79"W). Although Boreal Felt Lichen is the species of concern for which this protected area was established, it is likely that other rare and protected lichen species exist in this area. A rare lichen survey shall be completed in appropriate habitats along the proposed RoW, including the Fitzgerald's Pond Provincial Park Buffer Zone. See Appendix E – Rare Lichen Management Plan.

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Legend

-  55L Proposed RoW
-  River
-  Campground
-  Track
-  Road
-  Fitzgerald's Pond Provincial Park
-  Provincial Park Buffer Zone
-  Utility Line

**Fitzgeralds Pond
 Provincial Park
 and 1km Buffer Zone**

**55L Transmission
 Line Rebuild -
 Environmental Features**



N
 Aug. 2022
 1:50,000
 0 0.5 1 2
 km

- Notes:
 1. Data Source: NTDB NRCan
 2. Projection: NAD83 UTM Zone 21 North
 3. Created by K. Fillion

Figure 4 Buffer zone surrounding Fitzgerald's Pond Provincial Park with a 1km radius.

2.3 CONSTRUCTION TIMING AND APPROACH

Construction of each Phase of the Project will consist of the following three components:

Brush clearing

Brush clearing is planned to begin in early 2023 upon the release of the EA and after ensuring all recommendations from the EA review are met. To minimize impact to Migratory Birds any vegetation clearing will be planned to be completed outside the migratory bird brood rearing, breeding and staging period. (April 15th – August 15th). RoW clearing will include a combination of hand cutting, mechanical harvesting, and mechanical mulching depending on permitted requirements for the area. All harvested timber will be processed in accordance with provincial regulations.

Construction

Construction of Phase 1 will occur in 2023 following the completion of the brush clearing, construction of Phase 2 will occur in 2024. Construction will involve the installation of poles and anchors; cribbing; framing of structures; conductor stringing and sagging, as well as the installation of vibration dampers on applicable sections.

Dismantling

Dismantling of the existing 55L will be completed after the new line is constructed. Dismantling and removal of the existing transmission line will involve the dismantling, removal, and disposal of the existing line, including poles, anchors, insulators, guys, conductors, and hardware.

Construction will be completed by line truck/pickups, tension stringers, excavators, pickup trucks, Nodwell (flatdeck), Nodwell (boom), rock buster, stringing equipment, muskeg, and tractor/trailer/flatbed.

Construction and brush clearing will primarily be completed by contractors, with NP crews to assist with distribution crossings and substation connections. A NP site supervisor will monitor the site periodically throughout clearing and construction activities.

2.3.1 Access Trails

Specific upgrades required for access trails vary by location. However, typical practice would be to place additional material on the current trails as to provide construction equipment the ability to access the transmission corridor with minimal ground disturbance. Given the proximity of the transmission line to existing roads along much of the preferred route, the need for access road development will be limited. Additionally, travelling over bogs or wetland areas would be avoided as much as possible, but if needed, bog mats would be used to help traverse those areas. If required, widening of the trails would be minimized as much as possible, with turn around or laydown areas being located on the ROW to avoid the need to further expand the footprint of existing access trails to allow for two-way traffic.

The types of equipment that would be using the access trails for this project are mainly tracked, slow moving machines, such as excavators, nodwells, argos and muskegs, along with some pick-up trucks to move workers each day. Due to the short usage window for these trails by NP's construction equipment, significant upgrades to the existing trails would not be required.

2.3.2 Potential Sources of Pollution

Potential sources of pollutants into environmental features that may result from construction activities include:

- Sedimentation and siltation from soil disturbance;
- Sedimentation and siltation in small watercourses due to fording;
- Accidental spills from construction equipment; and
- Disturbance of wildlife and vegetation.

Construction activities will involve brush clearing and soil disturbance within the 200 m buffer of the watercourse during installation of transmission structures which may cause sedimentation and siltation into the scheduled salmon rivers, negatively impacting water quality. Accidental release of deleterious substances, including fuel and lubricants, from construction machinery may also negatively impact water quality.

This project occurs in an area with extensive watercourses, streams, and wetlands. When working within 15m of a wetland, watercourse, or waterbody, necessary permits shall be obtained from DOECC-WRMD. In order to mitigate adverse effects on waterbodies as a result of project activity, work in these areas shall be conducted in accordance with permit guidelines, as well as the guidelines of the Project Specific EPP. Due to the sensitivity of the watercourses in the vicinity of the Project, there are no in-water works proposed in Scheduled Salmon Rivers. However, smaller watercourses and streams that are not salmon rivers may be forded during Project construction. Fording may result in alteration to the watercourse substrate as well as the release of fine sediments from the substrate and shoreline which may negatively impact water quality. As required by DFO an Application will be made to DFO for all work involving fording of all water bodies.

Vegetation clearing and construction activities may also disrupt wildlife within the vicinity of the transmission line. Disruption may occur from vegetation clearing, as well as the noise and activity associated with construction equipment. NP has operating procedures in place to guide employees if wildlife is encountered on the job site. To minimize impact to Migratory Birds any vegetation clearing will be planned to be completed outside the migratory bird brood rearing, breeding and staging period. (April 15th – August 15th). Vegetative management during migratory bird season will be completed in accordance with NP's migratory birds operating procedure.

NP will implement a project specific EPP prior to construction, including an ESCP, wildlife management plan, spill prevention plan, and contingency plan (as necessary). Following the completion of construction activities, the areas adversely affected by this project must be restored to a state that resembles natural conditions. Additionally, the environmental management measures outlined in Section 2.3.2 will be implemented to minimize the risk of release of sediment.

2.3.3 Environmental Management Measures

Mitigative measures to minimize the environmental effects of the Project include:

- Implementation of the EPP, including the ESCP, spill prevention plan, and contingency plans (as necessary prior to construction);
- ESC structures will be maintained and inspected regularly with particular emphasis before and after forecasted heavy rain events, and with consideration of the timing and types of activities involved;
- Where necessary, ESC measures will remain in place after work is completed until areas have stabilized and natural re-vegetation occurs;
- All overburden will be removed during the excavation phase and will be stored according to provincial regulations and best practice guidelines;
- Exposed soils and stockpiles capable of producing sediment laden-runoff will continue to be stabilized and/or will be covered;
- A complete oil spill clean-up kit must be on the site at all times when gasoline or fuel powered equipment is being used or refueled;
- Refueling will not be completed within 30 m of a watercourse or waterbody edge;
- Disturbed soils will be re-vegetated after construction is completed;
- Stream banks at fording sites that contain loose or erodible material must be adequately stabilized before crossing to minimize any siltation of stream;
- Fording will be carried out during periods of low water levels;
- The natural course of the stream will not be altered during fording;
- Fording site will be located at shallow sections of channels where there are low approach grades and the channel consists of stable substrate; and
- The fording sites will be restored to their original condition once construction is complete.

2.4 OPERATION

The Project will be constructed with structures and equipment intended for an operating life of 60 years. Work on the Project during operation will consist of emergency repair.

Vegetation management below the transmission line will be completed manually, no herbicides will be applied. An annual inspection will be completed during the winter months. To provide for a thorough inspection of poles, anchors, and guys at the groundline, at least one of every four ground inspections shall be carried out with no snow cover present.

2.4.1 Climate Change Adaptation Measures in Project Design

This line is designed to CSA standards. The hardening measures incorporated into this project design will reduce the level of impact to transmission line infrastructure under the influence of the changing climate. Transmission line infrastructure will be subject to the projected climate trend of more frequent and intense storms, wind events, flooding, ice loading, as well as precipitation. Without adaptation measures more frequent maintenance activities would be required, increasing traffic along the RoW as well as access roads. This would attribute to a greater environmental risk. By hardening infrastructure to meet CSA national standards, this risk will be reduced.

2.4.2 Potential Sources of Pollution

Potential sources of pollutants into environmental features that may result from operation of the Project include:

- Sedimentation and siltation from soil disturbance; and
- Accidental spills from construction equipment.

Operation of the Project will have no potential sources of pollutants into the environment on a daily basis. In the event of emergency repairs, activities may result in sources of pollution similar to construction activities, including sedimentation and siltation from soil disturbance and accidental spills from construction equipment. Environmental management measures outlined for construction activities in Section 2.3.2 also apply to operation activities.

2.5 LOCAL RECEPTORS

The Project RoW departs the Blaketown Substation and follows the TCH for a distance before turning to follow Route 100, known as the Argentia Access Road. The nearest communities to the RoW include Whitbourne, Placentia Junction, Dunville, Jerseyside, and Freshwater. Other receptors include Fitzgerald's Pond Provincial Park and the privately-owned Fitzgerald's Pond Park adjacent to the provincial park. The RoW travels through Dunville for approximately 1km¹ before diverting to travel behind the community of Dunville. Residential and commercial receptors in the area located along the highway in the area shared with the proposed RoW could be subject to short term minor disturbances through the creation of noise and dust from construction equipment. The Project also passes through and/or in proximity to numerous watercourses that are used for recreational purposes, particularly fishing.

This project will intersect the Newfoundland T'Railway Provincial Park once near Whitbourne. Communication with the Newfoundland T'Railway Council shall be maintained during project

¹ Measured from the intersection of Long Hill Rd

planning in this area to minimize the impact of Project activities to the provincial park. Permits shall be obtained for construction activity within the T’Railway Provincial Park.

Construction activities have the potential to cause minor disturbances to nearby residences and recreational users though the creation of noise and dust from construction equipment, as well as increased traffic on nearby roads. NP has operating procedures in place to guide employees in terms of limiting disturbance during vegetation management (OPR 200.05— Vegetation Management) and vehicular disruptions (OPR 112.14 — Traffic Control). In addition, NP will minimize the impact of Project activities on local receptors through the implementation of the following mitigation measures:

- Implementing a Project specific EPP, including detailed identification of impacts to receptors and management plans for noise and air quality;
- Construction activities will be completed during regular daylight working hours;
- Vehicular traffic coming to and from the site will kept at a required minimum; Maintain equipment in good working order and properly muffed; and
- Minimize idling of equipment and vehicles.

2.6 OCCUPATIONS

The project has been estimated to require a maximum of 35 crew members on site at any given time, including both contractors and NP Employees. Construction of the Project will require the following occupations (with National Occupational Classification code breakdown) from both NP and Contractor staff:

Engineering Technicians:

- 2212 Geological and Mineral Technologists and Technicians
- 2231 Civil Engineering Technologists and Technicians
- 2241 Electrical and Electronics Engineering Technologists and Technicians
- 2253 Drafting Technologists and Technicians
- 2254 Land Survey Technologists and Technicians

Heavy Equipment Operators:

- 7312 Heavy-Duty Equipment Mechanics
- 7412 Heavy Equipment Operators

Line Workers:

- 7212 Contractors and Supervisors, Electrical Trades and Telecommunications Occupations
- 7244 Electrical Power Line and Cable Workers

Ground Workers:

- 0711 Construction Managers
- 7217 Contractors and Supervisors, Heavy Construction Equipment Crews
- 7611 Construction Trades Helpers and Laborers
- 7612 Other Trades Helpers and Laborers

Construction and brush clearing will primarily be completed by contractors, with Newfoundland Power crews to assist with distribution crossings and substation connections.

3.0 APPROVAL OF THE UNDERTAKING

Other permits and authorizations are listed in table 2.

Table 2 Permits and authorizations potentially required by this Project.

Permit	Responsible Authority
Federal	
Compliance Standard pursuant to Migratory Birds Convention Act and Regulations	Environment Canada
Compliance Standard pursuant to Fisheries Act, Section 36(3), Deleterious Substances	DFO
Permit for Construction Within Navigable Water	Transport Canada
Permits Authorizing an Activity Affecting Listed Wildlife Species Regulations	SARA
DFO Blanket Permit	DFO
Provincial	
DOECC Blanket Permit	Department of Environment and Climate Change
Access to Highway Permit	Department of Transportation and Works and/or Service NL
Cutting Permit Operating Permit	Department of Natural Resources
T 'Railway Provincial Park Permit	Department of Tourism, Culture, Industry and Innovation
Commercial Cutting Permit	Fisheries, Forestry, and Agriculture

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Certificates of Approval for any Instream Activity	NL Department of Environment and Climate Change, Water Resources Division
Development Permit under the Protected Road Zoning Regulations	Government Service Center
Certificate of Approval for Storing and Handling Gasoline and Associated Products	Engineering Services Division, Service NL
Compliance Standard pursuant to the Fire Prevention Act	Engineering Services Division, Service NL
Compliance Standard pursuant to Environmental Control Water and Sewage Regulation under the Water Resources Act	Pollution Prevention Division, Department of Environment and Climate Change
Compliance Standard pursuant to Environmental Protection Act, Air Pollution Control Regulations	Pollution Prevention Division, Department of Environment and Climate Change
Compliance Standard pursuant to Workplace Hazardous Materials Information System (WHMIS) Regulations, under the Occupational Health and Safety Act	Operations Division, Service NL
Compliance Standard pursuant to Occupational Health and Safety Act and Regulations	Service NL
Water Use License	NL Department of Environment and Climate Change, Water Resources Division
Permit for Alterations of a Body of Water (including wetlands)	NL Department of Environment and Climate Change, Water Resources Division
Certificate of Approval for a waste Management System	Department of Environment and Climate Change

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Registration as required in Section 13 of the Storage and Handling of gasoline and associated Products Regulations, 2003	Department of Environment and Climate Change
Release of the Undertaking under the EA Regulations	Department of Environment and Climate Change
Crown Lands Application for new Right of Way	Department of Fisheries, Forest and Agriculture
Municipal	
Approval for Waste Disposal pursuant to the Urban and Rural Planning Act, 2000	Community Council
Permit for Development	The Town of Whitbourne
Permit for Development	The Town of Placentia

3.1 TREATED POLES IN SENSITIVE HABITATS

The type of poles used within sensitive habitats will adhere to NP's OPR 200.03 Chemically Treated Poles and Timbers. When working within environmentally sensitive areas permits shall be obtained from DOECC (see Table3).

Table 3 Restrictions for Sensitive Sites

Type of Treated Wood	Surface Well	Drilled Artesian Well	Rivers, Ponds, Brooks, Lakes and Streams (Outside PPWSA)	Rivers, Ponds, Brooks, Lakes and Streams (Inside PPWSA)
PCP	15m	10m	15m Subject to Regulatory Approval – see notes below	Not Permitted
CCA	5m	3m	5m Subject to Regulatory Approval – see notes below	In Accordance With Table 2

The minimum distances in Table 3 have been established to address concerns as they relate to contamination of water due to the leaching of preservatives. In cases where it is desirable to install closer than 15 meters of a river, pond, brook, lake, stream or ocean, appropriate approvals must be obtained from the regulatory bodies in advance of the work proceeding.

In areas where the buffer zone cannot be maintained in accordance with Table 4, approval for exceptions must be obtained in writing by the Manager responsible for the project from DOECC, Water Resources Division.

Table 4 Go-Forward Policy - DOECC

Water Body	Width of Buffer Zone
Intake pond or lake	Minimum of 150 meters
River Intake	Minimum of 150 metres for a distance of one kilometer upstream and 100 metres downstream
Main river channel	Minimum of 75 metres
Major tributaries, lakes, or ponds	Minimum of 50 metres
Other water bodies	Minimum of 30 metres

3.1.1 Protected Public Water Supply Areas

The proposed RoW runs within the Clarkes Pond PPWSA, and Wyse Pond PPWSA. During replacements inside a PPWSA, either a CCA, untreated, or steel pole will be installed. CCA poles may be installed providing that the previously outlined buffer zones (see table 3) are maintained, and written permission has been received from the appropriate regulatory agencies.

3.2 SPECIES OF SPECIAL CONCERN

The project intersects the range of numerous fauna and flora species protected by the Newfoundland and Labrador’s Endangered Species Act (NLESA), Canada’s Migratory Birds Convention Act (MBCA), the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), and/or Canada’s Species at Risk Act (SARA).

The Atlantic Canada Conservation Data Centre (ACDC) has observation records for 42 flora species of conservational interest within 5km of the proposed RoW, 4 of which are recognized by the NLESA and 3 by COSEWIC. 20 fauna species of conservational interest have been observed within 5km of the proposed RoW, 10 of which are listed under the NLESA and 9 by COSEWIC and SARA. Additionally, the Gray Cheeked Thrush (listed under the NLESA) is a Mid Priority Candidate for protected status under COSEWIC. This report provides insight to the species observed in the project area, however, the report is not an exhaustive inventory of taxa in an area. The non-occupancy of a species cannot be inferred by its absence in the data report (ACDC, 2020). All observed and potentially occurring Species at Risk and Species of Special Concern occurring in this area are listed in Table 5. Measures will be taken to mitigate interference of the project with protected species.

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Table 5 Flora and Fauna species of Special Concern observed within 5 km of the Project or with the potential to occur within the project area.

Common Name	Scientific Name	General Status
Avifauna		
American Golden-Plover	<i>Pluvialis dominica</i>	Vulnerable (ACCDC)
Barrow's Goldeneye	<i>Bucephala islandica</i>	Vulnerable (NLESA, SARA)
Bank Swallow	<i>Riparia riparia</i>	Threatened (MBCA, SARA) Imperiled/Critically Imperiled (ACCDC)
Barn Swallow	<i>Hirundo rustica</i>	Threatened (SARA)
Black-Headed Gull	<i>Chroicocephalus ridibundus</i>	Sensitive (MBCA)
Black-Bellied Plover	<i>Pluvialis squatarola</i>	Secure (MBCA) Vulnerable (ACCDC)
Blue-Headed Vireo	<i>Vireo solitarius</i>	Secure (MBCA)
Bobolink	<i>Dolichonyx oryzivorus</i>	Threatened (NLESA, SARA)
Chimney Swift	<i>Chaetura pelagica</i>	Threatened (NLESA)
Common Nighthawk	<i>Chordeiles minor</i>	Threatened (SARA)
Eskimo Curlew	<i>Numenius borealis</i>	Endangered (NLESA, SARA)
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Special Concern (SARA) Apparently Secure (ACCDC) Vulnerable (NLESA)
Greater Yellowlegs	<i>Tringa melanoleuca</i>	Secure (ACCDC)
Harlequin Duck	<i>Histrionicus histrionicus</i>	Vulnerable (NLESA) Special Concern (SARA)
Horned Lark	<i>Eremophila alpestris</i>	Vulnerable (ACCDC)
Lesser Yellowlegs	<i>Tringa flavipes</i>	Secure (MBCA) Threatened (COSEWIC)

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		Vulnerable (ACCDC)
Newfoundland Gray-cheeked Thrush	<i>Catharus minimus minimus</i>	Threatened (NLESA) Imperiled (ACCDC)
Northern Bluet	<i>Enallagma civile</i>	Imperiled (ACCDC)
Northern Goshawk	<i>Accipiter gentilis</i>	Vulnerable (ACCDC)
Northern Harrier	<i>Circus cyaneus</i>	Vulnerable (ACCDC)
Peregrine Falcon	<i>Falco peregrinus subsp. anatum</i>	Special Concern (SARA) Vulnerable (NLESA) Vulnerable/Imperiled (ACCDC)
Piping Plover, melodus subspecies	<i>Charadrius melodus melodus</i>	Endangered (SARA)
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Threatened (NLESA)
Ovenbird	<i>Seiurus aurocapilla</i>	Secure (MBCA)
Red Crossbill	<i>Loxia curvirostra percna</i>	Threatened (NLESA) Imperiled/Critically Imperiled (ACCDC)
Red Knot, rufa subspecies	<i>Calidris canutus rufa</i>	Endangered (NLESA, SARA) Imperiled (ACCDC)
Red-necked Phalarope	<i>Phalaropus lobatus</i>	Special Concern (SARA)
Ruddy Turnstone	<i>Arenaria interpres</i>	Secure (MBCA)
Rusty Blackbird	<i>Euphagus carolinus</i>	Vulnerable (NLESA, SARA)
Sanderling	<i>Calidris alba</i>	Vulnerable (ACCDC)
Short-eared Owl	<i>Asio flammeus</i>	Vulnerable (NLESA, SARA) Special Concern (SARA)
Mammals		
Newfoundland Marten	<i>Martes americana</i>	Threatened (NLESA, SARA)
Little Brown Bat	<i>Myotis lucifugus</i>	Endangered (SARA)

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Northern Long-Eared Bat	<i>Myotis septentrionalis</i>	Endangered (SARA)
Tri-colored Bat	<i>Perimyotis subflavus</i>	Endangered (SARA)
Aquatic Species		
American Eel	<i>Anguilla rostrata</i>	Vulnerable (NLESA)
Banded Killifish	<i>Fundulus diaphanus</i>	Vulnerable (NLESA)
Flora		
Acadian Quillwort	<i>Isoetes acadensis</i>	Imperiled (ACCDC)
American Bugleweed	<i>Lycopus americanus</i>	Vulnerable (ACCDC)
American Bur-Reed	<i>Sparganium americanum</i>	Imperiled/ Vulnerable (ACCDC)
American Shore-grass	<i>Littorella americana</i>	Vulnerable/Apparently Secure (ACCDC)
Bayonet Rush	<i>Juncus militaris</i>	Vulnerable (ACCDC)
Berchtold's pondweed, Slender Pondweed	<i>Potamogeton pusillus</i> <i>subsp. tenuissimus</i>	Vulnerable/Apparently Secure (ACCDC)
Blue Felt Lichen	<i>Degelia plumbea</i>	Vulnerable (NLESA)
Blue Jellyskin	<i>Leptogium cyanescens</i>	Vulnerable/Apparently Secure (ACCDC)
Boreal Felt Lichen	<i>Erioderma</i> <i>pedicellatum</i>	Vulnerable (NLESA)
Brown-eyed Shingle Lichen	<i>Pannaria rubiginosa</i>	Vulnerable (NLESA)
Corrugated Shingles Lichen	<i>Fuscopannaria ahlneri</i>	Vulnerable/Apparently Secure (ACCDC)
Crested Wood Fern	<i>Dryopteris cristata</i>	Vulnerable/Apparently Secure (ACCDC)
Dotted Line Lichen	<i>Ramalina farinacea</i>	Unranked (ACCDC)

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Electrified Horsehair Lichen	<i>Bryoria bicolor</i>	Vulnerable/Apparently Secure (ACCDC)
Field Sedge	<i>Carex conoidea</i>	Imperiled (ACCDC)
Finger Foam Lichen	<i>Stereocaulon dactylophyllum</i>	Unranked (ACCDC)
Floating Bur-Reed	<i>Sparganium fluctuans</i>	Imperiled (ACCDC)
Floating-Heart	<i>Nymphoides cordata</i>	Imperiled (ACCDC)
Goldie's roundleaf orchid	<i>Platanthera macrophylla</i>	Imperiled (ACCDC)
Grass-leaf Arrowhead; Grassy Arrowhead;	<i>Sagittaria graminea</i>	Vulnerable (ACCDC)
Hemlock Water-parsnip	<i>Sium suave</i>	Vulnerable (ACCDC)
Herb-Robert	<i>Geranium robertianum</i>	Unranked (ACCDC)
Lake Quillwort	<i>Isoetes lacustris</i>	Apparently Secure (ACCDC)
Maritime Sea-blite	<i>Suaeda maritima</i>	Vulnerable (ACCDC)
Marsh Fern	<i>Thelypteris palustris</i> <i>var. pubescens</i>	Vulnerable (ACCDC)
Mustard Kidney Lichen	<i>Nephroma laevigatum</i>	Vulnerable/Apparently Secure (ACCDC)
Northern Coral Lichen	<i>Sphaerophorus globosus</i>	Unranked (ACCDC)
Parasitic Velvet Lichen	<i>Lichinodium sirosiphoideum</i>	Vulnerable/Apparently Secure (ACCDC)
Powdery Kidney Lichen	<i>Nephroma parile</i>	Vulnerable/Apparently Secure (ACCDC)
Sago Pondweed	<i>Stuckenia pectinata</i>	Imperiled (ACCDC)

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Small Water-Wort	<i>Elatine minima</i>	Imperiled (ACCDC)
Smooth Lungwort	<i>Lobaria quercizans</i>	Vulnerable/Apparently Secure (ACCDC)
Southern Running-Pine	<i>Diphasiastrum digitatum</i>	Imperiled (ACCDC)
Trailing Stitchwort	<i>Stellaria alsine</i>	Apparently Secure/ Secure (ACCDC)
Tuckerman's Quillwort	<i>Isoetes tuckermanii</i>	Vulnerable (ACCDC)
Graceful Felt Lichen	<i>Erioderma mollissimum</i>	Endangered (NLESA)
Vole Ears Lichen	<i>Erioderma mollissimum</i>	Endangered (SARA)
Water Pygmyweed	<i>Tillaea aquatica</i>	Vulnerable (NLESA)
Water Smartweed	<i>Persicaria amphibia</i>	Imperiled (ACCDC)
Waterside Rockshag Lichen	<i>Ephebe lanata</i>	Unranked (ACCDC)
White-Stem Pondweed	<i>Potamogeton praelongus</i>	Vulnerable/ Imperiled (ACCDC)
Woodland Agrimony	<i>Agrimonia striata</i>	Vulnerable/ Imperiled (ACCDC)
Yellow Birch	<i>Betula alleghaniensis</i>	Vulnerable (ACCDC)

Additionally, to listed species of special concern, Caribou (*Rangifer tarandus*) on the island are of conservational concern. Although not listed, encounters with this species will be handled with caution as per the Caribou Management Plan (see appendix D) and measures of impact mitigation will be implemented to minimize any potential impact on the species as a result of the undertaking.

4.0 SCHEDULE

The proposed schedule for the Project is outlined in Table 6.

Table 6 Proposed schedule for the project broken down by phase.

Project Component		Proposed Date
Registration of EA		2022
Phase 1	Brush Clearing	2023
	Construction	2023
Phase 2	Brush Clearing	2024
	Construction	2024
	Dismantling	2024

5.0 EXTERNAL FUNDING

External funding is not required for this project.

REFERENCES

ACCDC. (2020). Atlantic Conservation Data Centre. *Data Request RQ0813*.

Department of Environment and Climate Change. (2008). *Maritime Barrens Southeastern Barrens Subregion*. Retrieved from Provincial Park Reserves: <https://www.parksnl.ca/files/natural-areas-pdf-island-6b-southeast-barrens.pdf>

DFO. (2022, August 9). *Atlantic Salmon Fishway Counts*. Retrieved from Fisheries and Oceans Canada: <https://www.nfl.dfo-mpo.gc.ca/en/atlantic-salmon-fishway-counts>

APPENDIX A

Transmission Line Condition



Figure A-1 Split Crossarm



Figure A-2: Split Pole



Figure A-3: Split Pole



Figure A-4: Chipped Porcelain Insulator



Figure A-5: Leaning Pole missing Crib



Figure A-6: Split FlexAll Clamp



Figure A-7: Worn Ball Link Eye Bolt



Figure A-8: Split Pole Top



Figure A-9: Deteriorated Pole with Horizontal Split

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APPENDIX B

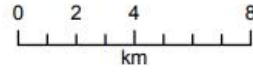
Proposed RoW Drawings

Legend

- Proposed Phase 1
- Proposed Phase 2

55L Transmission Line Rebuild - Environmental Features

Drawing 1-1



1:200,000

Aug. 2022

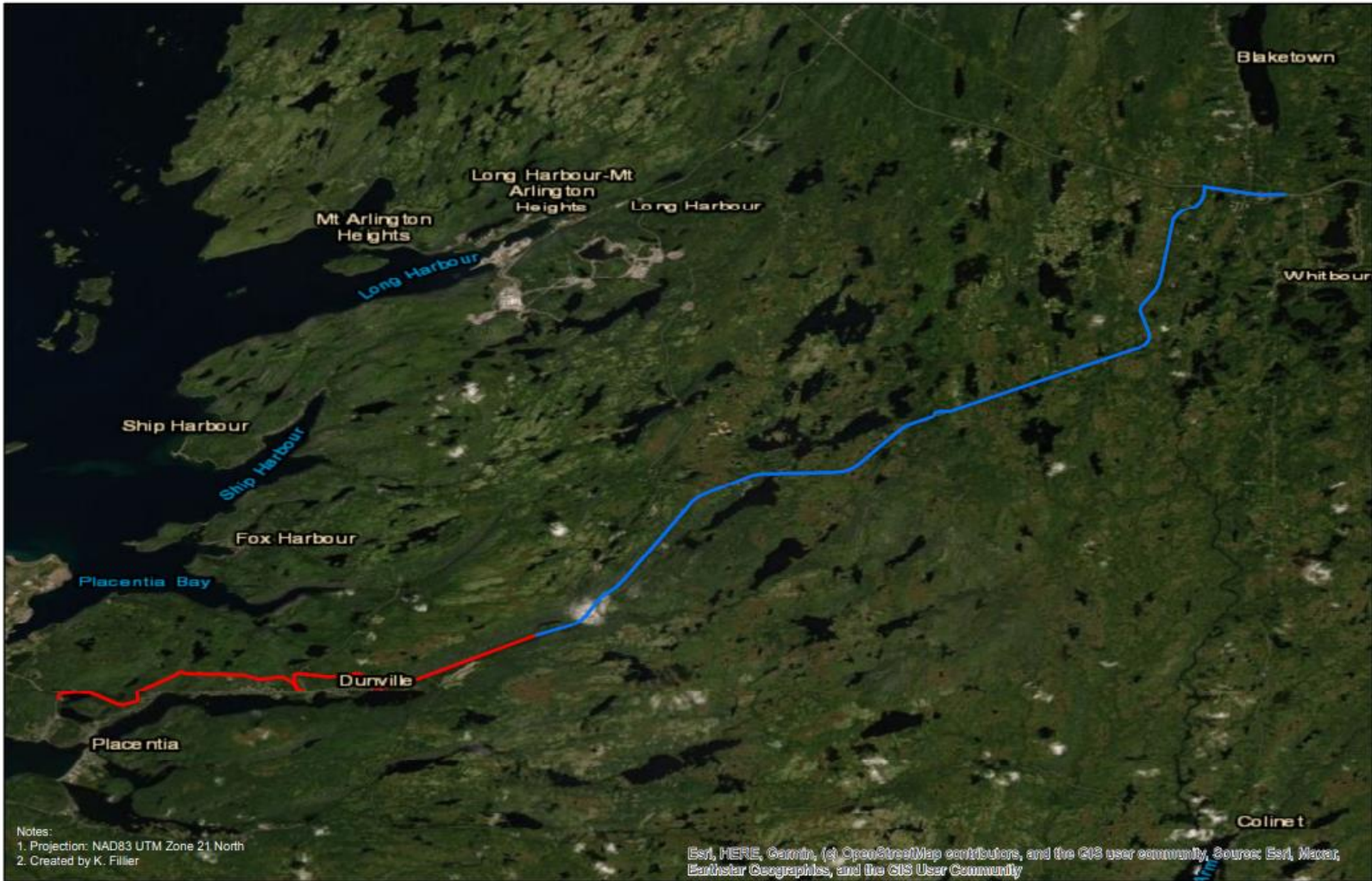


Figure B-1: Map of 55L rebuild Proposed Route.



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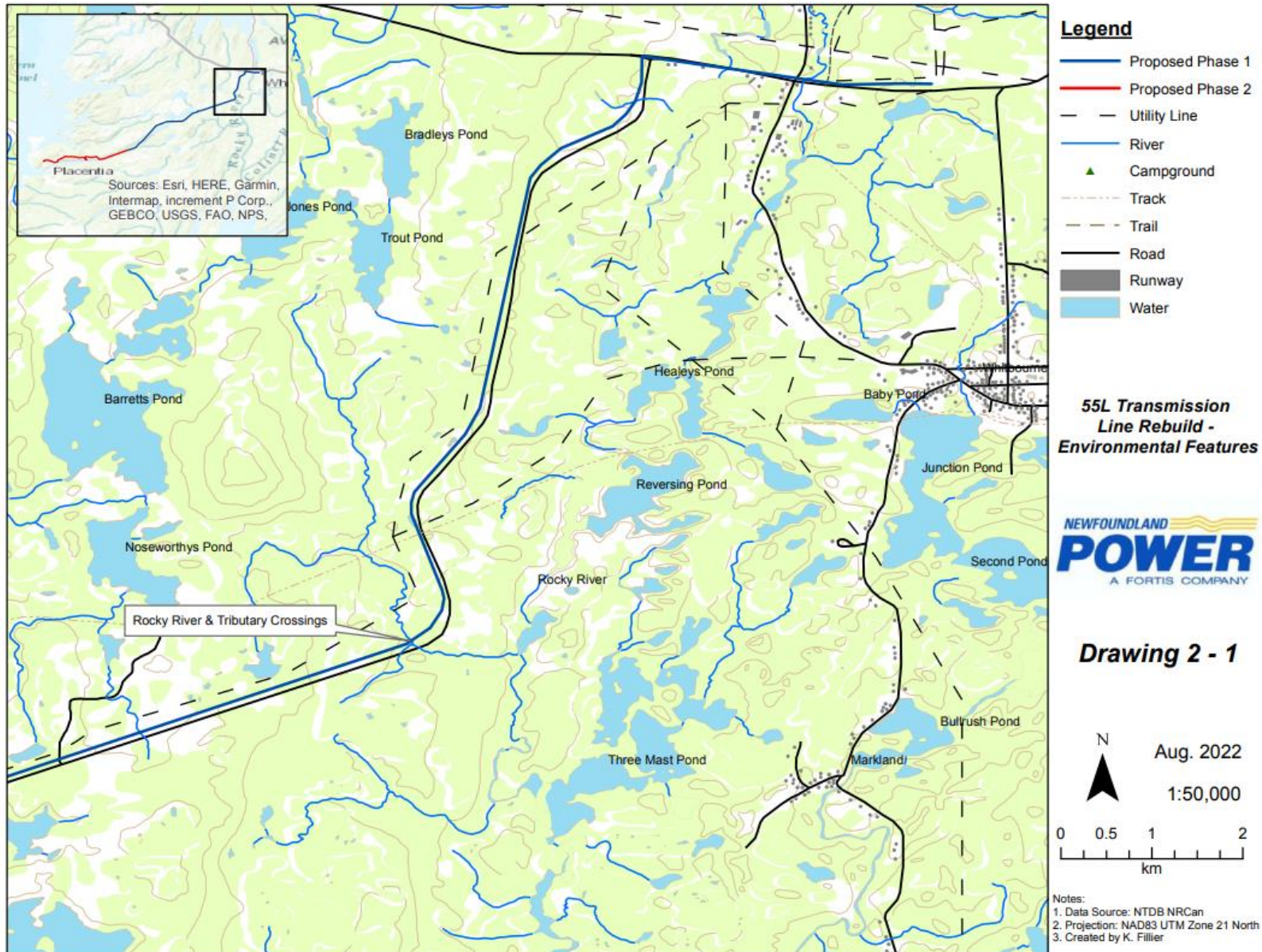


Figure B-2: Phase 1 (2023) section of Transmission Line 55L proposed RoW beginning at Blaketown substation.

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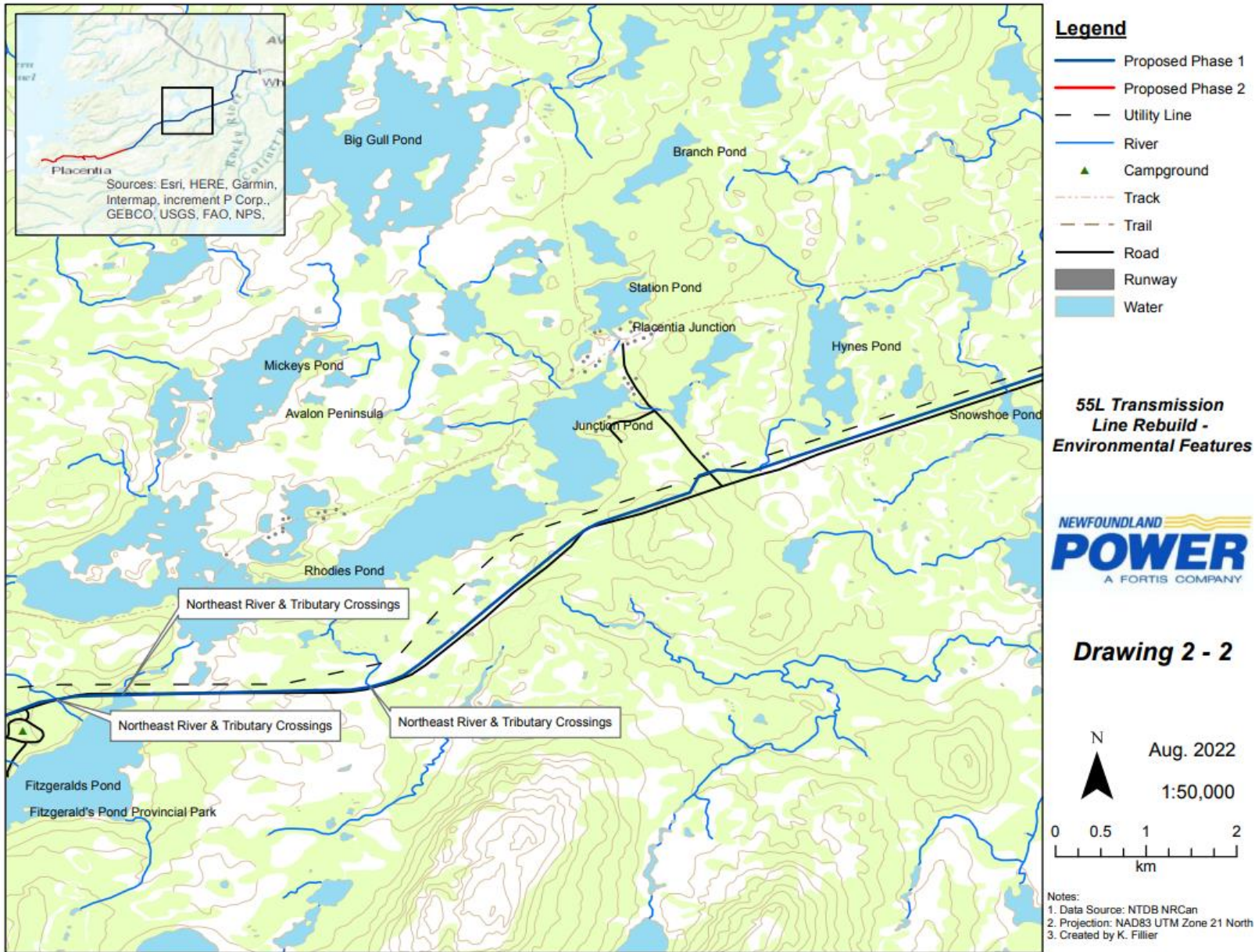


Figure B-3: Phase 1 (2023) section of Transmission Line 55L proposed RoW.

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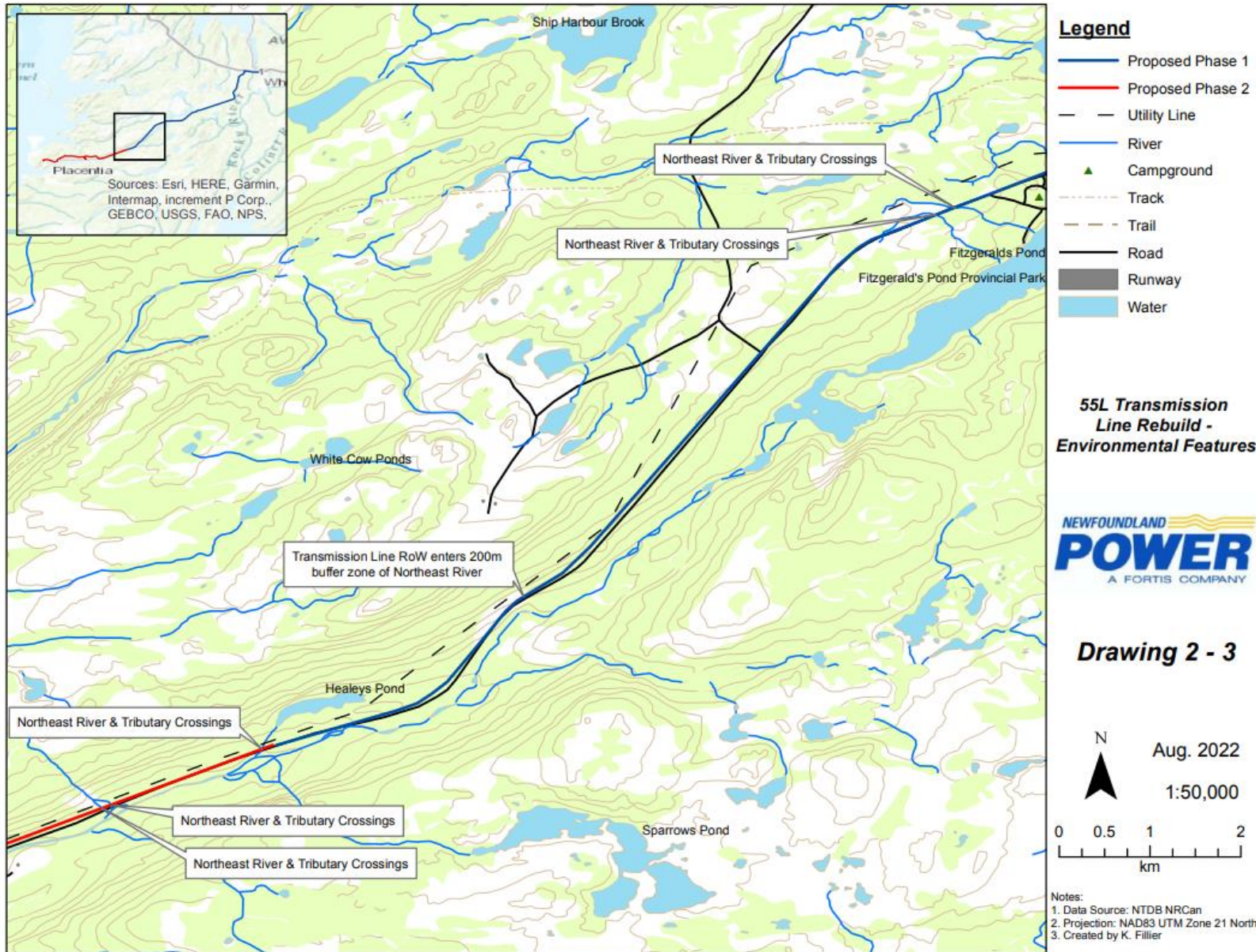


Figure B-4: Phase 1 (2023) section of Transission Line 55L proposed RoW leading into phase 2 (2024) section at 47°17'23.39"N, 53°48'10.10"W.

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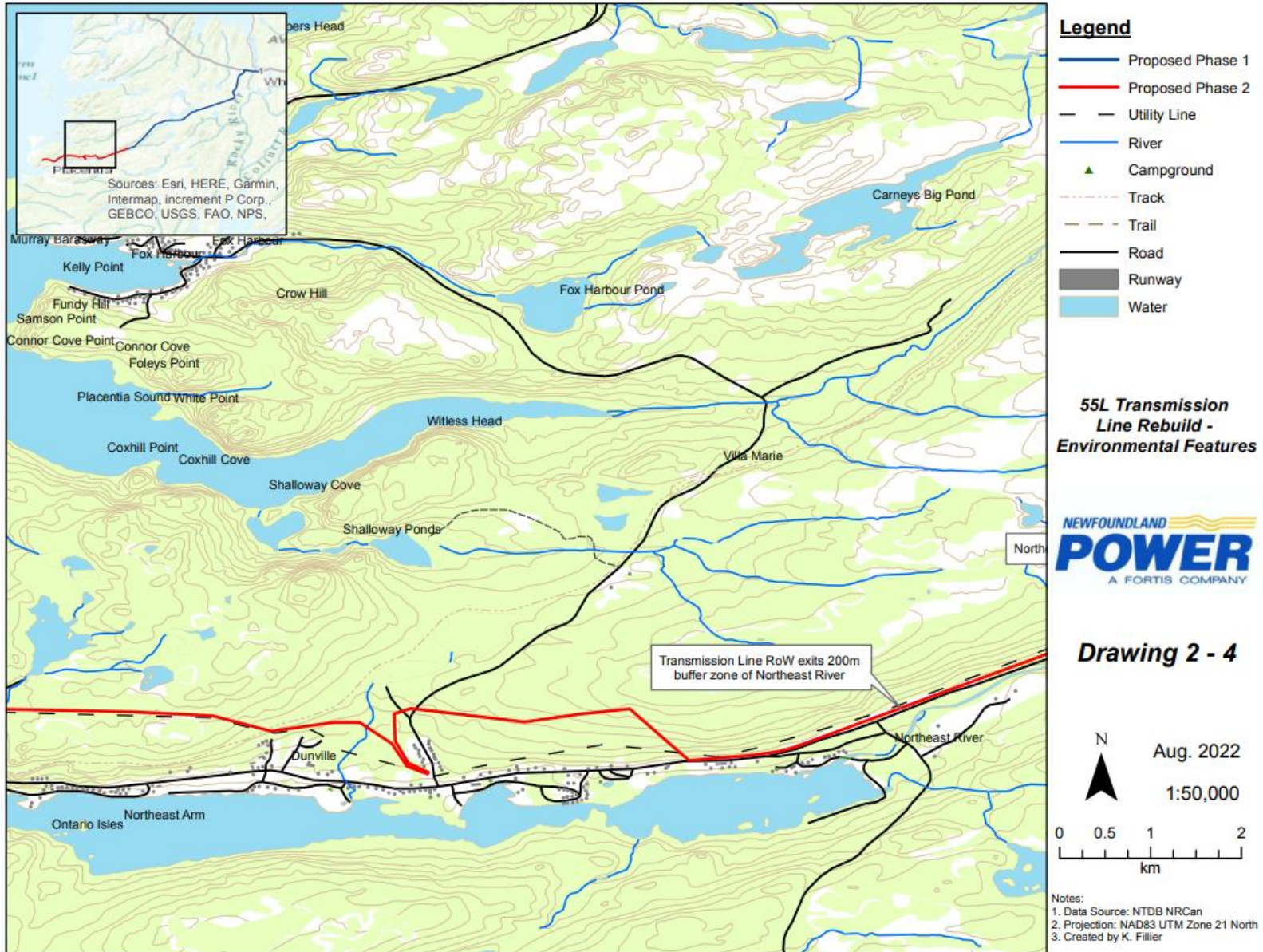


Figure B-5: Phase 2 (2024) section of Transmission Line 55L proposed RoW.

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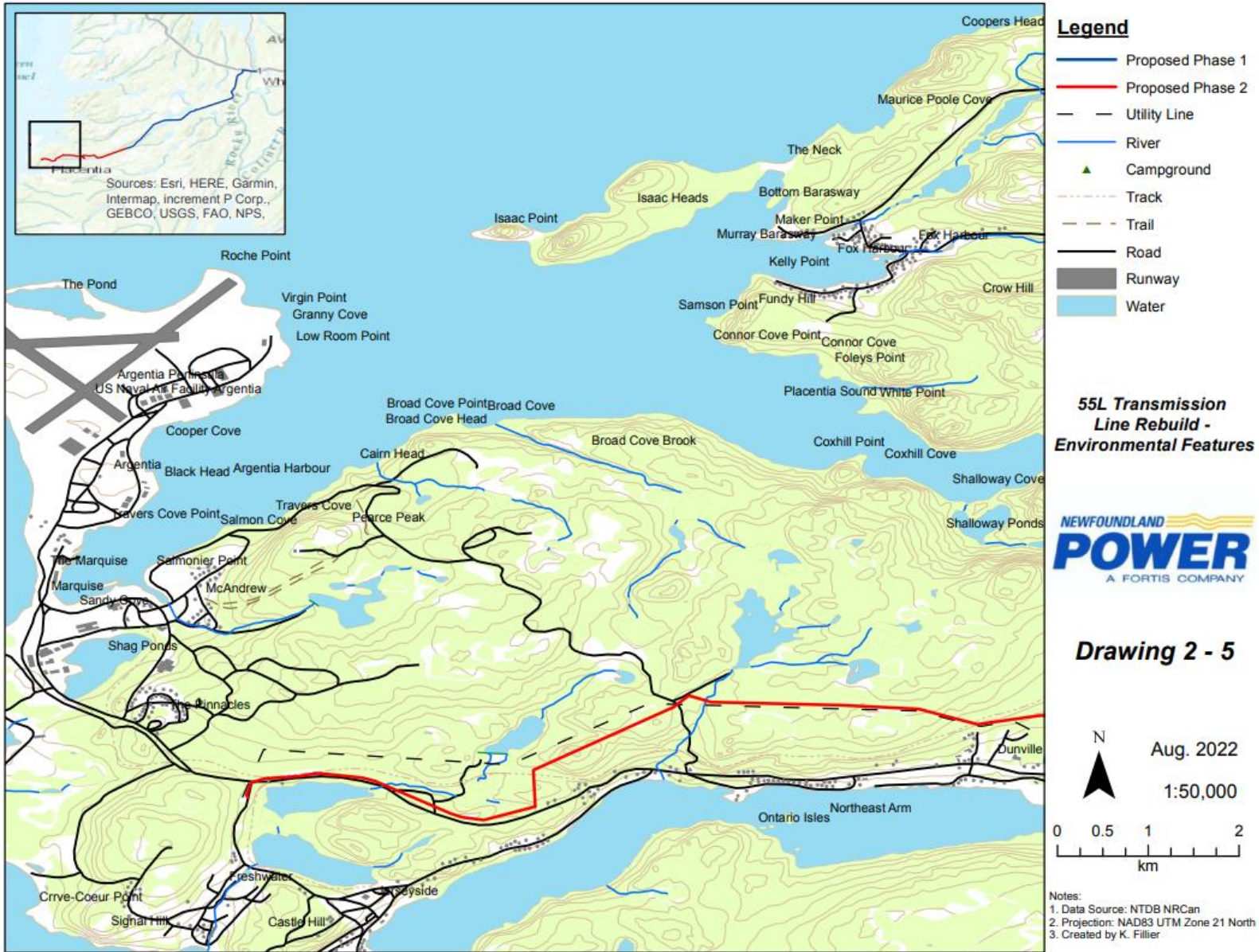


Figure B-6: Phase 2 (2024) section of Transmission Line 55L proposed RoW extending to Clarkes Pond substation.

APPENDIX C

Scheduled Salmon Rivers within 200m of the Project

Table C-1 Salmon Rivers within 200 meters of project activity.

River	Longitude	Latitude	Scheduled
North East River	53°50'45.93"W	47°16'15.80"N	Yes
Rocky River	53°34'3.15"W	47°13'31.85"N	Yes

APPENDIX D

Caribou Management Plan

Caribou on the Island are of conservation concern to the Wildlife Division. The Newfoundland Population of Woodland Caribou is not currently listed under SAR or the NL ESA. However, the status of Newfoundland caribou has been identified as Special Concern by COSEWIC, which is a precursor to potential listing under SARA. Additionally, the Government of NL has developed a Caribou Strategy to address caribou population declines.

Although this project is not within a core caribou habitat zone, they are a mobile species and there is still potential that caribou will be encountered. Industrial activity introduces potential for impacts to change in habitat including direct and/or indirect loss or alteration of habitat arising from vegetation clearing and/or sensory disturbance. Change in movement paths or patterns can also arise from change in habitat and/or sensory disturbance. Change in mortality risk can be directly impacted as a result of vegetation clearing vehicular collisions, and indirectly impacted through increased predation. This is not expected to have a significant impact on island herds as the project does not occur within a core habitat zone.

Environmental Protection Procedures

- Snow clearing is required during decommissioning, snowbanks will be less than 1m tall to facilitate caribou crossing, and breaks in snowbanks will be provided at approximately 200m intervals, to the extent practicable to provide wildlife crossing opportunities;
- Project vehicles will be required to adhere to posted speed limits;
- To reduce the risk of caribou-vehicle collisions, speeds will be reduced and the vehicle stopped (if necessary) to allow caribou to leave the road;
- Caribou-vehicle collisions, near misses, or observations of road mortality will be reported to the NP Environment Department and the NL Department of Fisheries, Forestry and Agriculture – Wildlife Division;
- The Environment manager will be notified if caribou are observed within 500m of Project activities to determine if the activity should be reduced or delayed (in consultation with the NL Department of Fisheries, Forestry and Agriculture -Wildlife Division will be reduced or delayed when caribou are observed within 500 meters of project activity, as applicable);
- Personal pets (domestic or wild) will be prohibited on site during construction;
- Project contractors and staff will be prohibited from fishing, hunting, or otherwise interacting (e.g. harassment, feeding) with wildlife at the site while working on the Project.

APPENDIX E

Rare Lichen Management Plan

To reduce impacts to rare lichen species, the 2010 Management Plan for the Boreal Felt Lichen, and the 2020 Management Plan for the Blue Felt Lichen (*Degelia plumbea*) in Canada [Proposed] have been consulted in development of mitigation and monitoring strategies to avoid direct and indirect impacts to rare and protected lichen species.

This Project runs within the buffer zone of Fitzgerald's Pond Provincial Park, a conservation area that protects a population of rare lichen. As listed species, Boreal Felt lichen, Graceful Lichen, Vole Ears Lichen and Blue Felt Lichen will be treated with the extreme caution in all areas. As this Buffer Zone exists for a reserve in which Rare Lichen species are known to be present, a rare lichen survey will be completed within the buffer zone, as well as other appropriate habitats along the proposed RoW by a qualified botanist prior to tree trimming. Any occurrences of rare lichen species will be flagged, and the proponent will consult with the Province of Newfoundland and Labrador's Fisheries, Forestry and Agriculture – Wildlife Division regarding SARA-listed lichen to determine next steps.

Determination of permit requirements will be discussed with the Department of Wildlife prior to vegetation being removed