



**Registration Pursuant to the
Environmental Assessment Regulations 2003**

**Under the
Environmental Protection Act**

**For the Proposed
94L Transmission Line Rebuild**

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Executive Summary

Newfoundland Power is proposing to rebuild a section of their 94L Transmission Line between Blaketown and Riverhead, 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 21.4 km section of the line from Riverhead to St. Catherines in 2022. The project will continue in 2023 with a section extending from St. Catherines for approximately 15 kilometers toward the Blaketown substation, followed by the 2024 phase extending this line to the Blaketown substation. The project crosses or passes within 200m buffer of numerous watercourses that are scheduled salmon rivers 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.

1.0 Introduction

Newfoundland Power (the Proponent) proposes to rebuild transmission line 94L, which extends 58km from Blaketown to Riverhead, Newfoundland. 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 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 NL Power services.


The project requires registration under the following sections of the Environmental Assessment 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): The proponent is considering an alternate route near the Blaketown Substation which will require the construction of new transmission line corridor more than 500m from the existing right of way.

1.1 Proponent Information

Newfoundland Power 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 12,500 km of transmission and distribution lines on the island, providing service to over 271,000 customers.

Table 1 Proponent and consultant information

PROPONENT	
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Signature	
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1.2 The Undertaking

Name of the Undertaking: 94L Transmission Line Rebuild (the Project)

Location of the Undertaking: Blaketown to Riverhead, Newfoundland and Labrador

1.3 Description of the Undertaking

Newfoundland Power is proposing to rebuild Transmission line 94L (the Project, 94L, or the Undertaking). Transmission Line 94L is a 66 kV H-Frame radial line running between Blaketown ("BLK") Substation on the Trans-Canada Highway near Whitbourne, and Riverhead ("RVH") Substation located in Riverhead, St. Mary's Bay. The line was originally constructed in 1969 by Newfoundland and Labrador Hydro. The new line includes approximately 58 kilometers of original construction consisting of 290 two pole H-Frame structures and 32 single pole structures, with both 559.9 AASC and 477 ASC transmission line conductor. This line provides the only source of supply for St. Catherine's and Riverhead substations along with Trepassy Substation via Transmission Line 95L. In total, the 3 substations serve approximately 2,500 customers.

Deterioration of this line primarily relates to deteriorated poles, cribs, cross braces, and predominance of deteriorated Flexall clamps (see Appendix A). Flexall clamps attach the conductor to the underside of the suspension insulator. These clamps were installed on some transmission lines in the late 1960's. Recent

inspections have found that after over 50 years in service the clevis pins are wearing through the clamp due to line vibration. In some cases, the pin has worn through the underside of the suspension clamp damaging the conductor. Figure 1 shows images of a worn clamp and the damage it caused to the conductor.

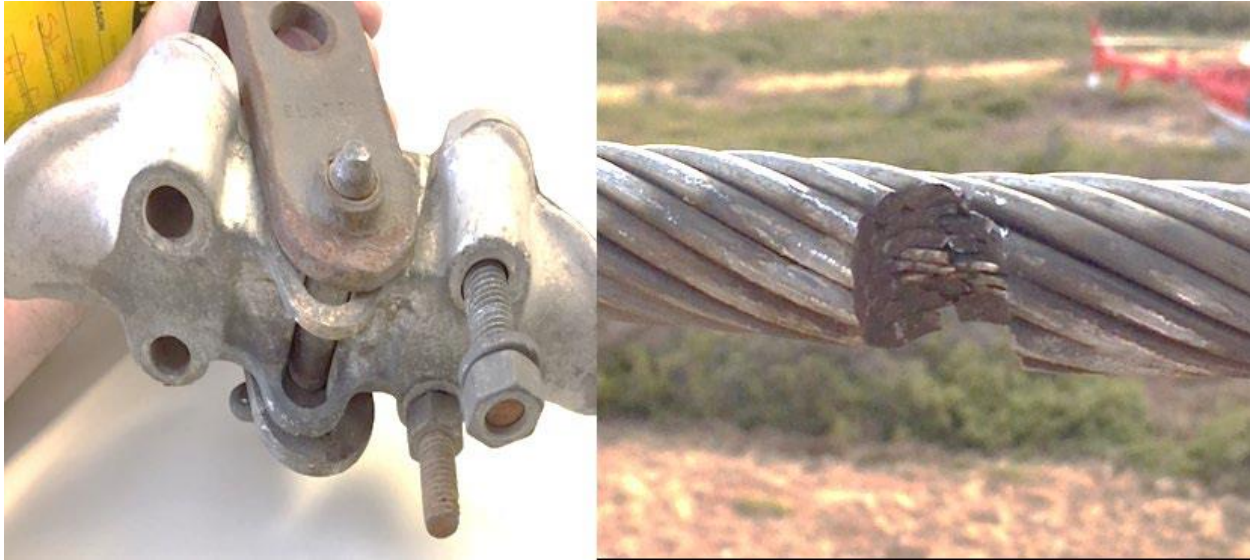


Figure 1 Worn FlexAll Clamp and Associated Damaged Conductor

Approximately 62% of poles on this line are deteriorated. Noted deterioration includes decay, shell separation and splits in the poles. Approximately 68% of structures that include cross braces are deteriorated. Noted deterioration includes decay and cracks. Approximately 54% of the FlexAll clamps show visible wear.

In addition to deteriorated components, this line does not meet current design standards. This includes conductor, guying and framing. For example, approximately 51% of structures on this line were framed without cross braces.

The project will be built in three phases, with the first phase being construction of a 21.5 km section of the line from Riverhead to St. Catherine's in 2022. The second phase, to be constructed in 2023, will see the line being rebuilt from the St. Catherine's substation to a point roughly 15km away headed towards the final destination of the Blaketown substation. The third phase will complete the Project in 2024, and finalize the rebuild of 94L by tying into the Blaketown substation. As a part of this project, the existing 94L transmission line infrastructure will be decommissioned.

Transmission Line 94L currently lies within a 15m right of way (RoW). The new transmission line will mostly run parallel with the original 94L transmission line infrastructure within a new RoW that will be approximately 20m wide throughout spans of H-Frame infrastructure, narrowing slightly in areas of single pole transmission line. This new RoW will follow the route outlined in this document. So far, NL Power has

submitted two Crown Lands applications associated with the new RoW for this project. The first is Crown Land Application 159029 and the second is Crown Land Application 159169.

There are two main deviations where the new route does not run parallel to the existing RoW. In the first phase of the project, as the new transmission line leaves the Riverhead substation, it will follow the Route 90 road RoW for approximately 10km before rejoining with the existing RoW and running parallel until tying into the St. Catherine's substation. Additionally, the third phase of the project deviates from the existing RoW in some areas as well. In this phase, the new RoW will follow along Route 81 roadside for roughly 5 kilometers before heading North-West and continuing until it intersects with Route 100. The line will then follow Route 100 roadside for roughly 4 kilometers at which point it will follow an existing RoW into the Blaketown substation (see Appendix B, Figure B-6 to B-8). Making this change to the transmission line routing improves accessibility, decreases construction and future maintenance costs, and allows for faster response from NL Power in the event of a future outage caused by damage in the area.

Following the project, any areas of the previous RoW that were not rebuilt will be allowed to revegetate. Two pole 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. There are several Salmon River crossings along the Project route that are unable to be spanned outside the 200m buffer required around scheduled salmon rivers with possible vegetation clearing in some of these areas.

2.0 Project Description

2.1 Project Location

The project will be completed on the entire length of the 94L Transmission line, running between Blaketown ("BLK") Substation on the Trans-Canada Highway near Whitbourne, and Riverhead ("RVH") Substation located in Riverhead, St. Mary's Bay (Appendix B). The majority of the new transmission line will run parallel with the original 94L transmission line infrastructure with an additional offset of 7.5m-10m from the previous RoW to accommodate new infrastructure.

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 passes through primarily undeveloped habitat, crossing numerous watercourses and expansive wetlands. Wetlands in the area consist primarily of open bogs and fens, with treed swamps and riparian floodplains, dominated by Black spruce, ericaceous shrubs, and herbaceous species that thrive in nutrient poor and acidic conditions. Substrates in the bogs are comprised of deep accumulations of peat, deepest in the center of bogs and shallower around granite outcropping and wetland edges.

The landscape in the Project area is punctuated by numerous ponds and lakes. The Project intersects multiple waterbodies associated with the Rocky 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):

- Tributaries of Salmonier River (4 locations)
- Colinet River & tributaries (2 locations)
- Rocky River & tributaries (6 locations)

Salmonier River empties into the northeastern arm of Saint Mary's Bay near St. Catherine's, and is within Salmon Fishing Area (SFA) 9. This narrow arm reaches approximately 14000m inland from the larger body of Saint Mary's Bay, distinguished by the 100 m wide channel branching from the bay. Approximately 3000m downstream from the outflow of the Salmonier River, Transmission Line 94L crosses Saint Mary's Bay at a 300m width. Significant tributaries include Rattling Brook, Mitchells Brook, Duggans River, and two unnamed streams. The project intersects Saint Mary's Bay near the outflow of the Salmonier River at one location and crosses tributaries at four locations.

Colinet River discharges into the northwestern arm of Saint Mary's Bay in the town of Colinet, and is within SFA 9. Waterbodies in the watershed include Gull Pond, Little Gull Pond, Third Pond, Fourth Pond, and Little Northwest Pond. Additionally, Colinet River's catchment area has a high proportion of fens and other wetlands which feed into the watercourse. The Project crosses the Colinet River at one location, and a tributary of the river at one location, for a total of two waterbody crossings.

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. According to a Fisheries and Oceans Canada report on Atlantic Salmon Fishway counts in Newfoundland and Labrador, the salmon fence is no longer in operation (DFO, 2021). 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 runs parallel with Rocky River for approximately 11000m and therefore has multiple tributary crossings.

2.3 Construction

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

- **Brush clearing:** Brush clearing is planned to begin in early 2022 upon the release of the EA and after ensuring all recommendations from the EA review are met.
- **Construction:** Construction of Phase 1 will occur in 2022 following the completion of the brush clearing, construction of Phase 2 will occur in 2023, and construction of Phase 3 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 94L 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.

Equipment to be used during construction includes line trucks, tension stringers, excavators, pickup trucks, Nodwells (flatdeck), Nodwells (boom), rock busters, stringing equipment, muskegs, and tractor/trailer/flatbed.

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

2.3.1 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.

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 Fisheries and Oceans Canada 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. Newfoundland Power has operating procedures in place to guide employees if wildlife is encountered on the job site. Vegetative management during migratory bird season will be completed in accordance with Newfoundland Power's migratory birds operating procedure.

Newfoundland Power will implement a project specific Environmental Protection Plan (EPP) prior to construction, including an erosion and sedimentation control plan (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.

2.3.2 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);
- Erosion and Sediment Control 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 construction of 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. Once in operation, the line will have a detailed ground inspection completed at least once a year to ensure all of the components remain in good working order.

2.4.1 Climate Change Adaptation Measures in Project Design

This line is designed to a minimum of 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 runs primarily through primarily uninhabited, remote landscape, with a portion of the project running along route 100, and route 81. The nearest communities to the Project are Whitbourne, Markland, Nuggetville, Mt Carmel-Mitchell's Brook-St. Catherine's, and Riverhead where the nearest residential properties are located approximately 70 m from the Project. The Project also passes through 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 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. Newfoundland Power 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, Newfoundland Power 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 Newfoundland Power Employees. Construction of the Project will require the following occupations (with NOC code breakdown) from both Newfoundland Power 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 Labourers
- 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	Fisheries and Oceans Canada
Permit for Construction Within Navigable Water	Transport Canada
Permits Authorizing an Activity Affecting Listed Wildlife Species Regulations	SARA
DFO Blanket Permit	Fisheries and Oceans Canada
Provincial	
DOECC Blanket Permit	Department of Environment and Climate Change
Access to Highway Permit	Department of Transportation and Infrastructure and/or Digital Government and Service NL
Cutting Permit Operating Permit	Department of Industry, Energy and Technology
T' Railway Provincial Park Permit	Department of Tourism, Culture, Arts and Recreation
Commercial Cutting Permit	Fisheries, Forestry, and Agriculture
Certificates of Approval for any Instream Activity	Department of Environment and Climate Change
Development Permit under the Protected Road Zoning Regulations	Digital Government and Service NL
Certificate of Approval for Storing and Handling Gasoline and Associated Products	Engineering Services Division, Digital Government and Service NL
Compliance Standard pursuant to the Fire Prevention Act	Engineering Services Division, Digital Government and 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, Digital Government and Service NL

Compliance Standard pursuant to Occupational Health and Safety Act and Regulations	Digital Government and Service NL
Water Use License	Department of Environment and Climate Change
Permit for Alterations of a Body of Water	Department of Environment and Climate Change
Certificate of Approval for a waste Management System	Department of Environment and Climate Change
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 Environmental Assessment Regulations	Department of Environment and Climate Change
Crown Lands Application for new Right of Way	Department of Fisheries, Forestry 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	Town of St. Josephs
Municipal Recommendation	Town of Riverhead
Permit for Development for the Town of Mount Carmel-Mitchell's Brook-St. Catherine's ¹	Interim Development Regulations

¹ The municipality of Mount Carmel-Mitchell's Brook-St. Catherine's has a municipal planning area established under the Urban and Rural Planning Act, 2000, but does not yet have a municipal plan in place. In the interim the planning area is subject to the [Province's Interim Development Regulations, 2003](#)

3.1 Treated Poles in Sensitive Habitats

The type of poles used within sensitive habitats will adhere to Newfoundland Power’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 plant 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

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 14 fauna and 4 flora species protected by the Newfoundland and Labrador’s Endangered Species Act (NLESA). Additionally, the Atlantic Canada Conservation Data Centre (ACCDC) has observation records for 18 fauna and 31 flora species of conservational interest in the southeastern region of the Avalon Peninsula (ACCDC, 2020). These species are listed in Table 5. Measures will be taken to mitigate interference of the project with protected species.

Table 5 Flora and Fauna species of Special Concern within 5 km of the Project and/or listed under Newfoundland and Labrador’s Endangered Species Act in the region of the project.

Common Name	Scientific Name	General Status
Avifauna		
Barrow’s Goldeneye	<i>Bucephala islandica</i>	Vulnerable (NLESA)
Black-Headed Gull	<i>Chroicocephalus ridibundus</i>	Sensitive
Black-Bellied Plover	<i>Pluvialis squatarola</i>	Secure
Blue-Headed Vireo	<i>Vireo solitarius</i>	Secure
Bobolink	<i>Dolichonyx oryzivorus</i>	Vulnerable (SSAC) Threatened (COSEWIC)
Chimney Swift	<i>Chaetura pelagica</i>	Threatened (NLESA)
Eskimo Curlew	<i>Numenius borealis</i>	Endangered (NLESA)
Harlequin Duck	<i>Histrionicus histrionicus</i>	Vulnerable (NLESA)
Lesser Yellowlegs	<i>Tringa flavipes</i>	Secure
Newfoundland Gray cheeked Thrush	<i>Catharus minimus minimus</i>	Threatened (NLESA)
Northern Goshawk	<i>Accipiter gentilis</i>	Secure (NLESA)
Northern Hawk Owl	<i>Surnia ulula</i>	Secure

Northern Harrier	<i>Circus cyaneus</i>	Secure
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Threatened (NLESA)
Ovenbird	<i>Seiurus aurocapilla</i>	Secure
Red Crossbill	<i>Loxia curvirostra percna</i>	Endangered (NLESA)
Red Knot	<i>Calidris canutus rufa</i>	Endangered (NLESA)
Ruddy Turnstone	<i>Arenaria interpres</i>	Secure
Rusty Blackbird	<i>Euphagus carolinus</i>	Vulnerable (NLESA)
Short-eared Owl	<i>Asio flammeus</i>	Vulnerable (NLESA)
Mammals		
Newfoundland Marten	<i>Martes americana</i>	Threatened (NLESA)
Canada Lynx	<i>Lynx canadensis</i>	Secure
Invertebrates		
Cherry-faced Meadow hawk/ Common Skimmer	<i>Sympetrum Internum</i>	Undetermined
Aquatic Species		
American Eel	<i>Anguilla rostrata</i>	Vulnerable (NLESA)
Banded Killifish	<i>Fundulus diaphanus</i>	Vulnerable (NLESA)
Flora		
Algae-like Pondweed	<i>Potamogeton confervoides</i>	Undetermined (ACCDC)
Alpine Foam Lichen	<i>Stereocaulon alpinum</i>	Vulnerable (ACCDC)
American moor rush	<i>Juncus stygius subsp. americanus</i>	Critically imperiled (ACCDC)

Berchtold's pondweed, slender pondweed	<i>Potamogeton pusillus</i> <i>subsp. tenuissimus</i>	Imperiled (ACCDC)
Blue Felt Lichen	<i>Degelia plumbea</i>	Vulnerable (NLESA)
Boreal Felt Lichen	<i>Erioderma pedicellatum</i>	Vulnerable (NLESA)
Crowded Sedge	<i>Carex adusta</i>	Imperiled (ACCDC)
Curly-Grass Fern	<i>Schizaea pusilla</i>	Undetermined (ACCDC)
Eyed Chestnut Wrinkle Lichen	<i>Tuckermannopsis</i> <i>sepincola</i>	Imperiled (ACCDC)
Finger Foam Lichen	<i>Stereocaulon</i> <i>dactylophyllum</i>	Undetermined (ACCDC)
Fox Sedge	<i>Carex vulpinoidea</i>	Vulnerable (ACCDC)
Graceful Felt Lichen	<i>Erioderma mollissimum</i>	Endangered (NLESA)
Grassy Arrowhead	<i>Sagittaria graminea</i> <i>subsp. graminea</i>	Vulnerable (ACCDC)
Greater Sulphur-cup Lichen	<i>Cladonia sulphurina</i>	Undetermined (ACCDC)
Green Adders Mouth	<i>Malaxis unifolia</i>	Undetermined (ACCDC)
Lance-Leaf Violet	<i>Viola lanceolata</i>	Undetermined (ACCDC)
Mad Dog Skullcap	<i>Scutellaria lateriflora</i>	Vulnerable (ACCDC)
Methuselah's Beard Lichen	<i>Usnea longissima</i>	Undetermined (ACCDC)
Northern Pondweed	<i>Potamogeton alpinus</i>	Undetermined (ACCDC)
Northern Shorthusk	<i>Brachyelytrum</i> <i>aristosum</i>	Undetermined (ACCDC)
Petalled Rocktripe Lichen	<i>Umbilicaria polyphylla</i>	Undetermined (ACCDC)
Pod Grass	<i>Scheuchzeria alustris</i>	Undetermined (ACCDC)

Powdered Sunshine Lichen	<i>Vulpicida pinastri</i>	Undetermined (ACCDC)
Red Pine	<i>Pinus resinosa</i>	Critically Imperiled (ACCDC)
Rock Polypody	<i>Polypodium virginianum</i>	Critically Imperiled (ACCDC)
Sea-Wrack	<i>Zostera marina</i>	Critically Imperiled (ACCDC)
Shaved Sedge	<i>Carex tonsa</i>	Imperiled (ACCDC)
Small WaterWort	<i>Elatine minima</i>	Critically Imperiled (ACCDC)
Spiny Heath Lichen	<i>Cetraria muricata</i>	Undetermined (ACCDC)
Tuckerman's Quillwort	<i>Isoetes tuckermanii</i>	Undetermined (ACCDC)
Twin-Stemmed Bladderwort	<i>Utricularia geminiscapa</i>	Undetermined (ACCDC)
Variiegated Foam Lichen	<i>Stereocaulon vesuvianum</i>	Undetermined (ACCDC)
Water Pygmyweed	<i>Tillaea aquatica</i>	Vulnerable (NLESA)

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 Environmental Assessment		2022
Phase 1	Brush Clearing	2022
	Construction/Dismantling	2022
	Commissioning	2022
Phase 2	Brush Clearing	2023
	Construction/Dismantling	2023
	Commissioning	2023
Phase 3	Brush Clearing	2024
	Construction/Dismantling	2024
	Commissioning	2024

5.0 External Funding

External funding is not required for this project.

6.0 REFERENCES

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

DFO. (2021, November 12). *Government of Canada*. Retrieved from Atlantic Salmon Fishway Counts:
<https://inter-l01-uat.dfo-mpo.gc.ca/nfl-tnl/en/atlantic-salmon-fishway-counts>

Reddin, D. G., Poole, R. J., Clarke, G., & Cochrane, N. (2009). *Salmon Rivers of Newfoundland and St. John's*: Canadian Science Advisory Secretariat.

Appendix A



Figure A-1 Deteriorated Pole Top

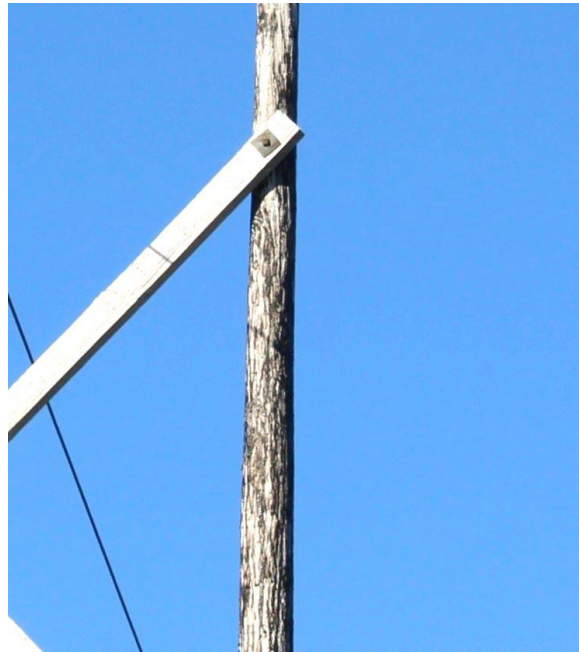


Figure A-2: Deteriorated Pole – Shell Separation

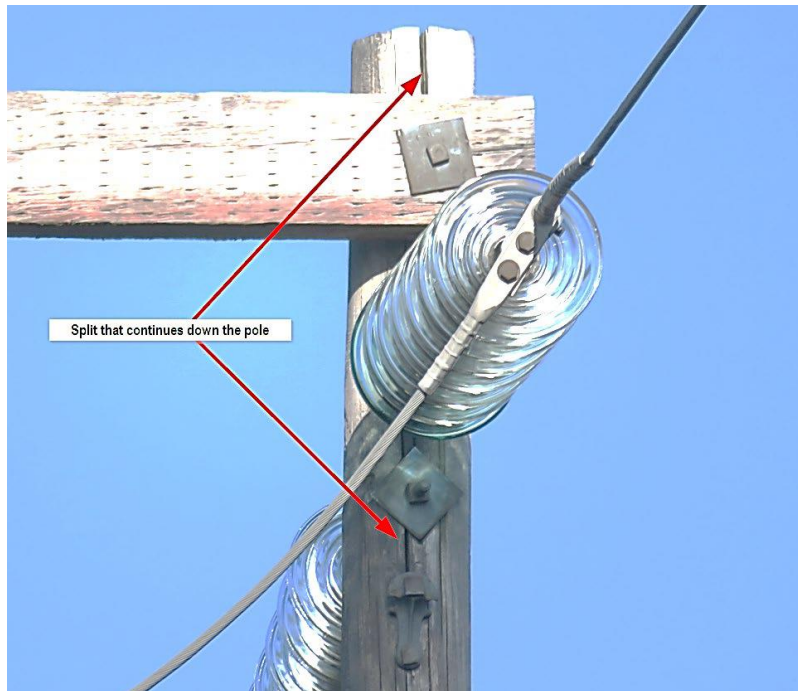


Figure A-3: Split Pole

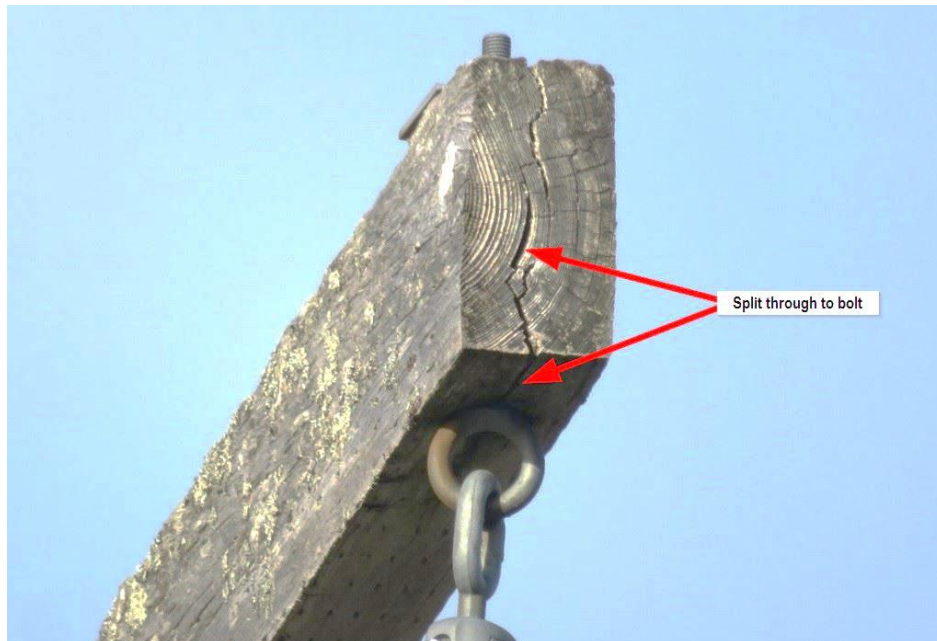


Figure A-4: Split Cross Arm

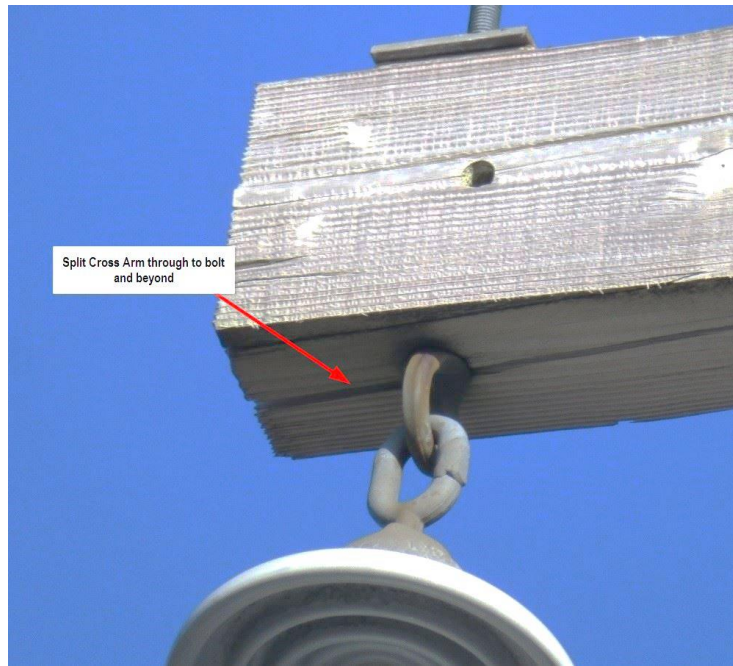


Figure A-5: Split Cross Arm

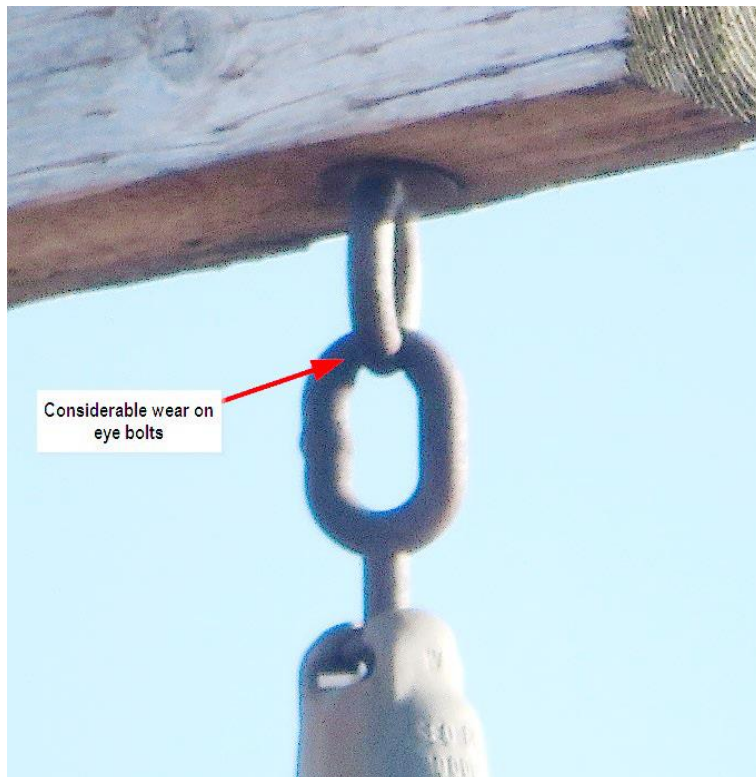


Figure A-6: Worn Ball Link Eye Bolt

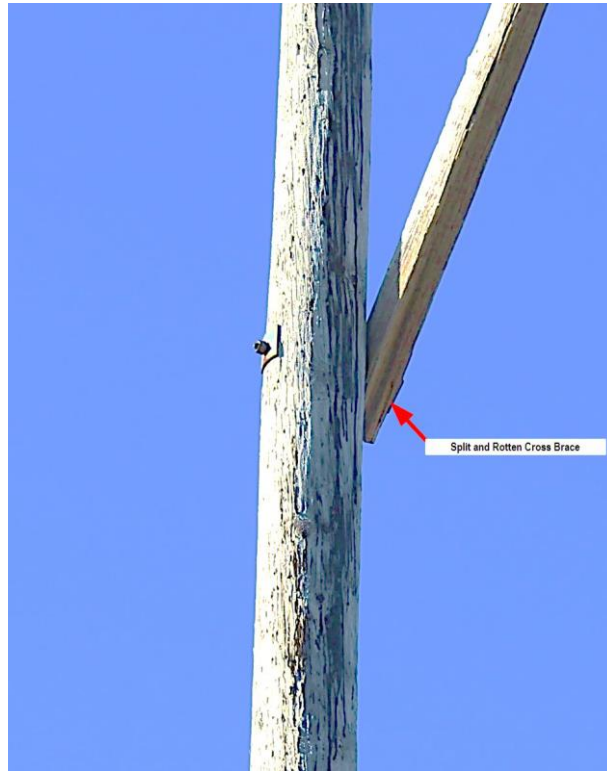


Figure A-7: Deteriorated Cross Brace

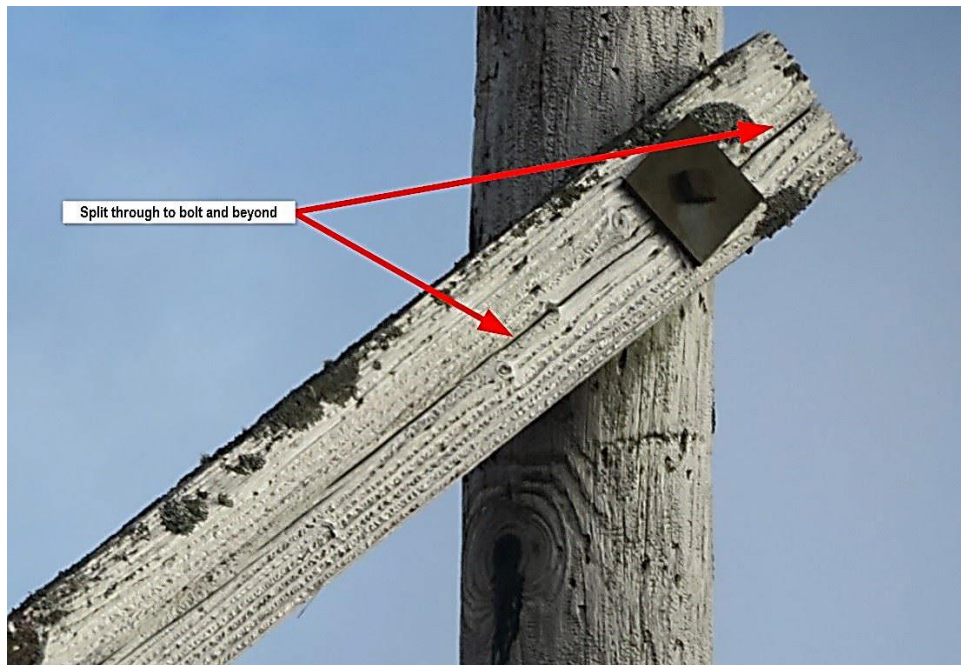


Figure A-8: Cracked, Rotten Cross Brace



Figure A-9: Missing Cribs

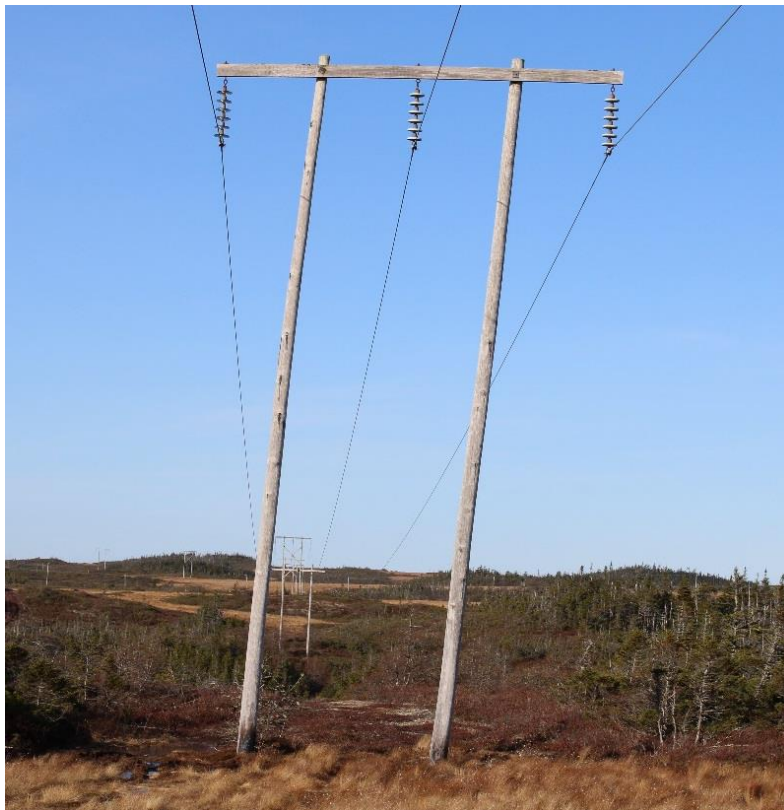


Figure A-10: Leaning Structure – Substandard Construction

Appendix B

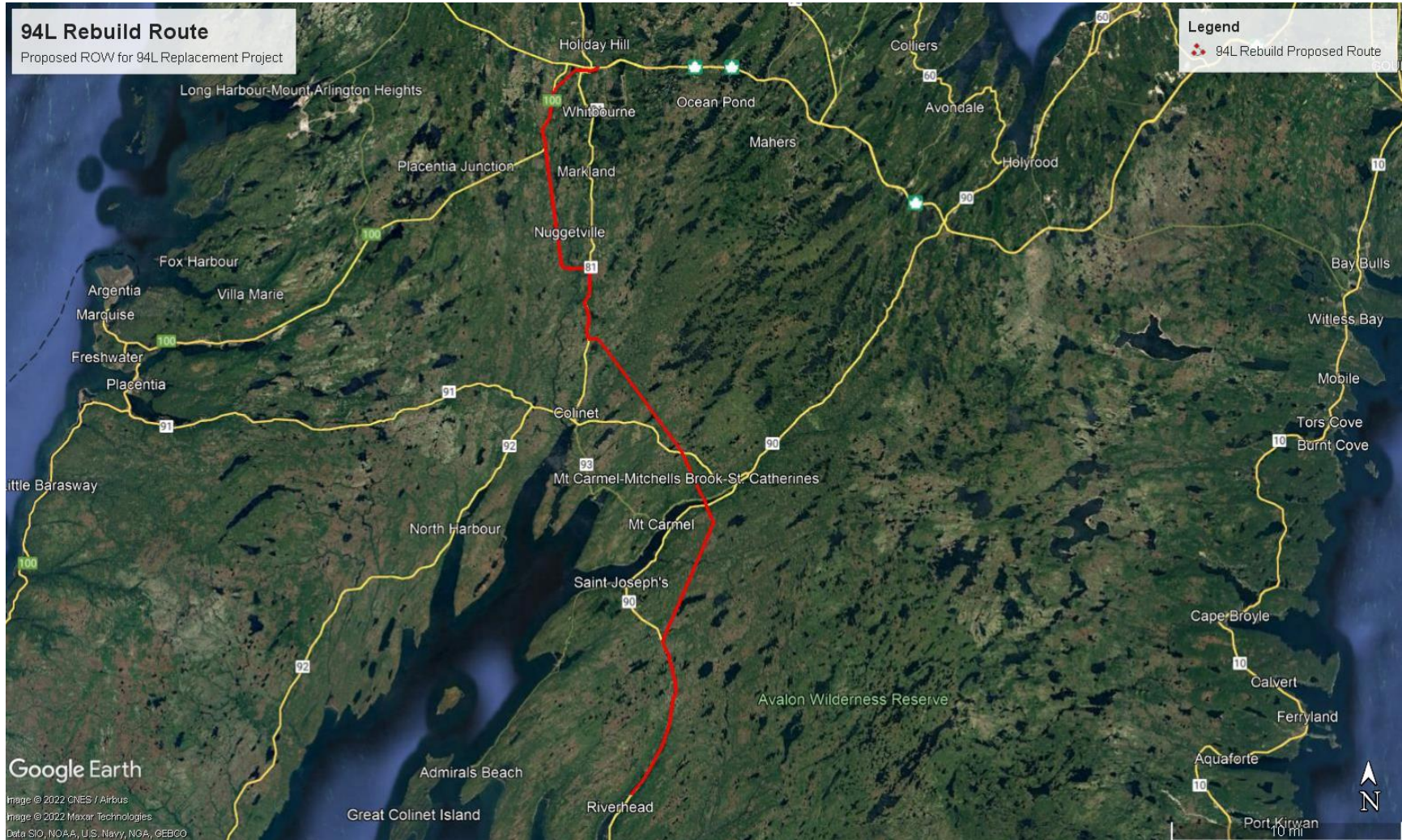


Figure B-1: Map of 94L rebuild Proposed Route.

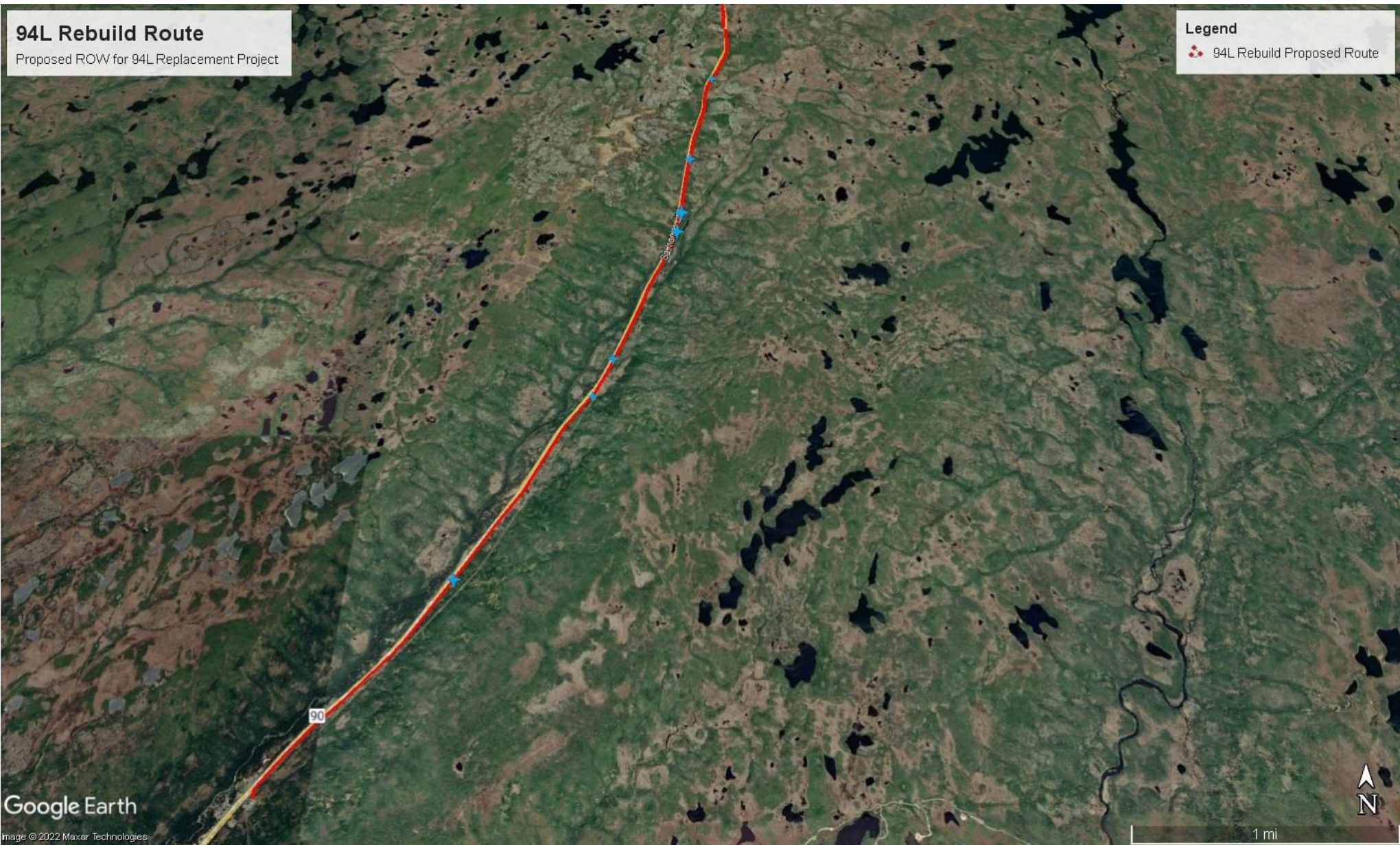


Figure B-2: Phase 1 (2022) extending from Riverhead Substation to St.Catherine's Substation. Crossing sites of rivers identified on 1:50 000 mapping are identified by a blue marker. Crossings of Salmon rivers and tributaries identified on 1:50 000 mapping are identified by a yellow marker.



Figure B-3: Phase 1 (2022) extending from Riverhead Substation to St. Catherine's Substation. Crossing sites of rivers identified on 1:50 000 mapping are identified by a blue marker. Crossings of Salmon rivers and tributaries identified on 1:50 000 mapping are identified by a yellow marker.



Figure B-4: Phase 1 (2022) extending from Riverhead Substation to St.Catherine’s Substation. Crossing sites of rivers identified on 1:50 000 mapping are identified by a blue marker. Crossings of Salmon rivers and tributaries identified on 1:50 000 mapping are identified by a yellow marker.



Figure B-5: Phase 2 (2023) extending from St.Catherine's Substation approximately halfway to Blaketown Substation. Crossing sites of rivers identified on 1:50 000 mapping are identified by a blue marker. Crossings of Salmon rivers and tributaries identified on 1:50 000 mapping are identified by a yellow marker.

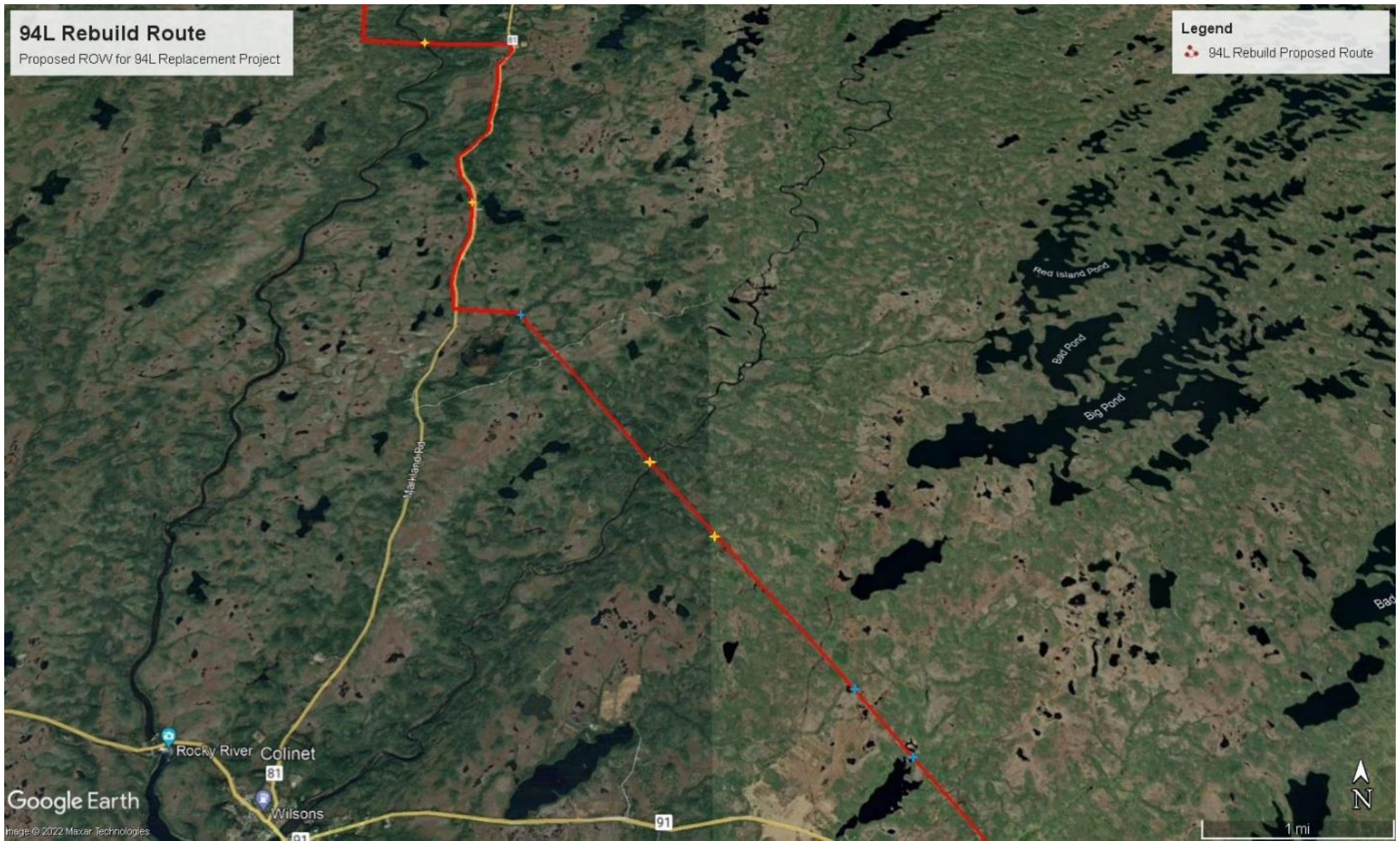


Figure B-6: Phase 2 (2023) extending from St.Catherine’s Substation approximately halfway to Blaketown Substation. Crossing sites of rivers identified on 1:50 000 mapping are identified by a blue marker. Crossings of Salmon rivers and tributaries identified on 1:50 000 mapping are identified by a yellow marker.

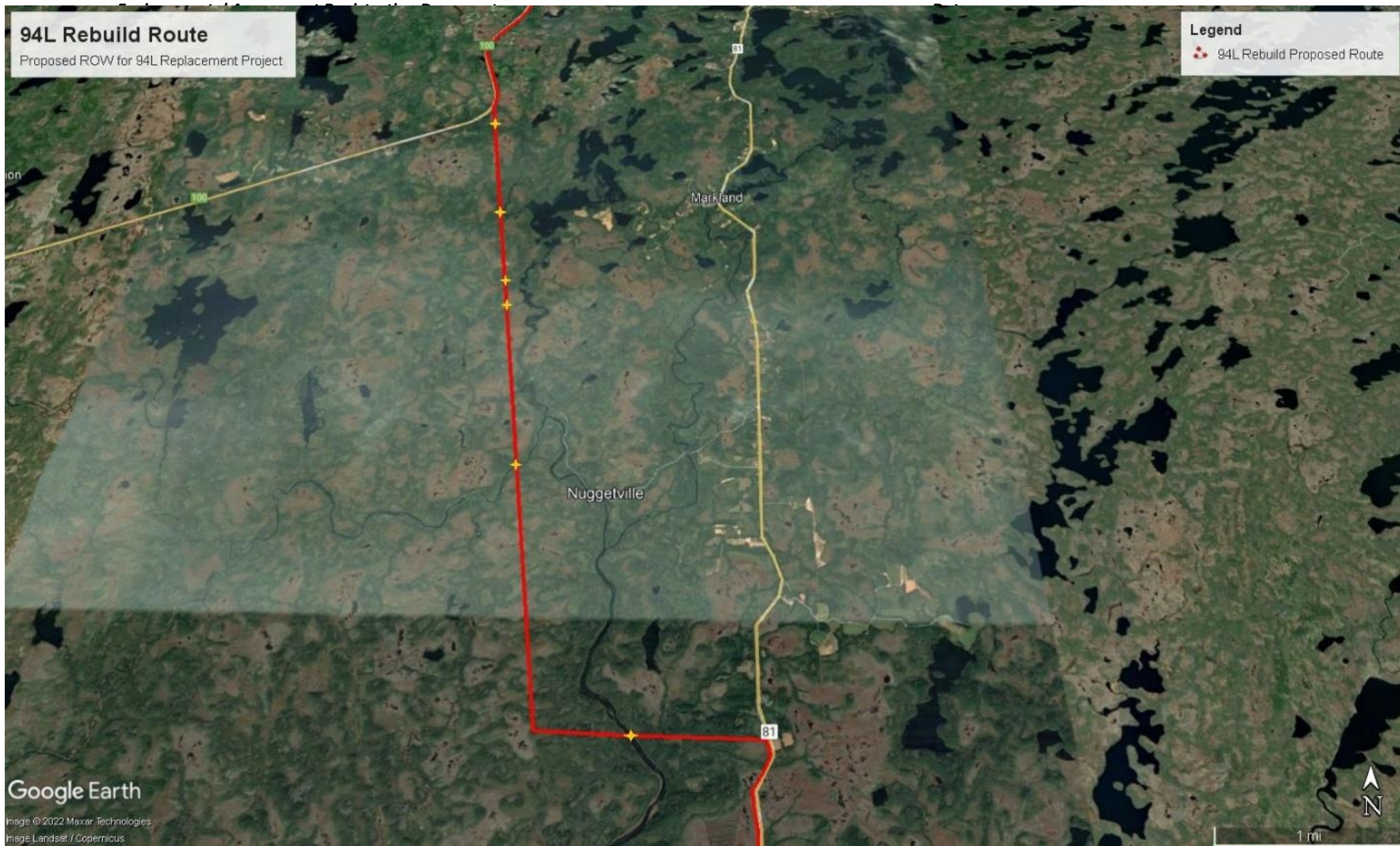


Figure B-7: Phase 3 (2024) completing line from halfway point to Blaketown Substation. Crossing sites of rivers identified on 1:50 000 mapping are identified by a blue marker. Crossings of Salmon rivers and tributaries identified on 1:50 000 mapping are identified by a yellow marker.



Figure B-8: Phase 3 (2024) completing line from halfway point to Blaketown Substation. Crossing sites of rivers identified on 1:50 000 mapping are identified by a blue marker. Crossings of Salmon rivers and tributaries identified on 1:50 000 mapping are identified by a yellow marker.

Appendix C

Scheduled Salmon Rivers within 200m of the Project

Table D-1 Salmon Rivers within 200 meters of project activity (Reddin, Poole, Clarke, & Cochrane, 2009)

River	Longitude (D° .xx)	Lattitude (D° .xx)	Scheduled
Salmonier River	-53.4512	47.1657	Yes
Colinet River	-53.5539	47.2166	Yes
Rocky River	-53.5667	47.2236	Yes