

BRFN Legacy Seismic Line Restoration – Nig Creek

Integrating TEK and ecological restoration to restart successional processes

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Restoration Division, BRFN Lands Department

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Executive Summary

Legacy Sites Restoration Program funding supported Phase 2 of Blueberry River First Nations' Nig Creek Seismic Line Restoration project. Phase 1, "pre-treatment inventory and planning" was completed in 2020 after a desktop review then identifying, ground truthing, characterizing, and planning for implementation of legacy seismic line restoration to benefit the Chinchaga caribou herd. For Phase 2, we grouped the required tasks under three activities:

1. Engagement, outreach, and planning;
2. Restoration treatment; and
3. Information management and reporting.

A lack of availability of materials (i.e., native trees and shrubs) required us to revise the project scope under this funding envelope in December 2021. Delays in the permitting process and out-of-date stakeholder data resulted in a delay completing Activity 1; however, technical review of the submitted permit applications was completed in November 2022. We successfully applied for all requisite permits and sent pre-engagement letters to industry stakeholders, as well as ordering trees and shrubs for Activity 2. We will complete stakeholder and rights-holder engagement along with Activities 2 and 3 under another funding envelope.

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Table of Revisions

Revision No.	Date	Reason/Type of Revision

1. Introduction

Our Nation, Blueberry River First Nations (BRFN), is a signatory of Treaty 8, under which we have the right to practice our traditional mode of life, including hunting, trapping, and fishing, and numerous other activities as if we had never entered into treaty. In order to practice our traditional mode of life, we need healthy ecosystems and landscapes. Our lands have been heavily impacted by resource development to the point where unchecked cumulative impacts have impacted our way of life which is protected by Section 35(1) of the Constitution. Implementing ecological restoration to return lands to pre-disturbance reference conditions is critical to revising industrial impacts. BRFN practices reciprocal restoration *sensu* Kimmerer: biocultural restoration of altered ecosystems that (re)establishes embodied reciprocal relationships.

All work within our traditional territory requires a high standard of reciprocal restoration, which involves incorporating cultural restoration into the framework to increase long term land stewardship and management as well as increasing the ecological integrity of restorative actions. This project combines Traditional Ecological Knowledge (TEK) with functional and ecological restoration techniques to restore Chinchaga boreal caribou habitat at 10 key sites within the herd's range. Restoration treatments will target ground-truthed legacy seismic lines that have a low likelihood of re-disturbance. Restoration treatments will reduce predator movement and kick-start ecological recovery.

2. Background Information

The project will restore habitat within the Chinchaga herd range at 10 key legacy seismic lines that are between 20 to 40 years old. Candidate sites in this area have been identified near the confluence of Nig Creek and the Beaton River, approximately 55 km north of the BRFN community and 115 km north of Fort St. John. The total restoration area is 17.53 ha.

These areas were identified in 2019 based on discussions with BRFN knowledge holders and desktop analysis of satellite imagery, industry tenures, caribou telemetry data, and access roads. BRFN identified 94 preliminary candidate seismic lines for consideration. Candidate sites were shared with the regional biologist (Scott Schilds) and tenure holders in the area (Chinook Energy and CNRL) for their feedback. Site characterization surveys were conducted from August 21-23, 2019. Field surveys included helicopter overflights of 64 candidate seismic lines and ground-based site characterization surveys for 10 priority sites to collect pre-restoration baseline data and inform the development of site-specific prescriptions. Wildlife cameras were deployed at each site and collected data from August 2019 through March 2021. A site characterization report was developed and finalized in 2020, summarizing the results of site characterization surveys and wildlife camera data collected in Year 1 of the project. An implementation plan was also developed, outlining restoration prescriptions for each of the 10 sites, including plant, equipment, and material requirements, workplan activities, access, and regulatory authorizations.

Habitat restoration may also benefit northern mountain and southern mountain caribou, belonging to the Pink Mountain and Graham herds, respectively. Based on BRFN knowledge, northern mountain and boreal caribou used to mix frequently in the lowland areas to the east of Pink Mountain. A BRFN member

sighted a migratory herd of caribou off Tommy Lakes Rd. in October 2021, and indicated they had not been seen in the area for 20 years.

Predator control may be one reason for renewed activity along the aforementioned migratory corridor, however, habitat restoration is critical throughout the region to assist with population recovery, including areas where caribou used to mix. These connections between northern mountain and boreal caribou populations are viewed as critically important to both ecotypes.

Legacy Sites Restoration Program funding supported Activity 1 and 2 under Phase 2 of this project (Table 1):

Table 1. Timelines for activities supporting reciprocal restoration at select Nig Creek sites.

Phase 2 (2021-2022)	1. Engagement, outreach, and planning Notes: - Permits: BC FLNRORD Special Use Permit, BC FLNRORD Licence to Cut (Submitted December 2020)	December 2021 – June 2022
	2. Restoration treatment	March - August 2022
	3. Information management and reporting	February - October 2022

BRFN submitted the Special Use Permit Application and Management plan to the Province along with a Wildlife Habitat Area (WHA) & Ungulate Winter Range (UWR) General Wildlife Measure Exemption Request, Occupant Licence to Cut, and Water Sustainability Act Change Notification. Pre-engagement letters were sent to additional industry stakeholders and woody species seeds were released from Seed Planning and Registry Application (SPAR) and sent to Woodmere Nursery in Fairview, AB for germination and growth in their nursery.

3. First Nations Participation

This project is led by the BRFN Lands Department with the support and approval of Leadership. BRFN Lands Department staff have kept Chief and Council apprised of the project's objectives, activities, and progress. BRFN knowledge holders will continue to be engaged in the implementation of restoration treatments.

Contracting needs were discussed with the BRFN Economic Development Officer, including heavy equipment operators, rentals, observers, and field technicians. Procurement and employment opportunities would have been awarded to BRFN-owned companies and joint-ventures in a transparent process for all groups who have been identified and choose to participate. If contracting opportunities cannot be sourced by BRFN community businesses, sourcing of contractors, rentals and materials will occur within the local community of Fort St John and local businesses, to the extent possible.

Total BRFN staff and knowledge holders were estimated to be between 5-10. There were four dedicated BRFN Lands staff working on this project, for approximately 35% of the personnel project hours, plus support from other departments. The proposed budget included honoraria for up to 104 BRFN knowledge holder/field technician days. Contractor work, such as machinery operation where necessary, will be preferentially awarded to BRFN businesses.

4. Methods

BRFN has been in communication with tenure holders in the vicinity of restoration sites. These communications have included a summary of project objectives and site locations. BRFN will continue to communicate upcoming project activities with affected tenure holders and seek opportunities to collaborate on restoration objectives. Although funding is completed, we are continuing to notify and engage with known users on the landscape. Additional stakeholders may be identified by FLNRORD through the Special Use Permit and Licence to Cut application process. This stakeholder consultation will be directed by FLNRORD.

BRFN has applied for

- Special Use Permit (SUP)
- Wildlife Habitat Area (WHA) & Ungulate Winter Range (UWR) General Wildlife Measure Exemption
- Occupant Licence to Cut, and (OLTC)
- Water Sustainability Act Change Notification (WSA)

No public engagement has been conducted to date, given the low likelihood of project interaction with the public. Public outreach will include the preparation of project communications (e.g., newspaper article and/or radio announcements) prior to the implementation of treatments, as well as the installation of signage at restoration sites.

5. Results

5.1 Location & Timing of the Completed Activities

We did not visit the sites as part of Phase 2 work completed under this funding.

Phase 1: Pre-treatment Inventory and Planning

Not applicable – Phase 1 was completed in 2020.

Phase 2: Treatment Implementation

Although we did not implement restoration prescriptions on the 10 sites, we completed additional permit applications, stakeholder engagement, (Activity 1) and ordered trees and shrubs to support implementation (Activity 2). Plants were lifted by the nursery; however, seedling transportation and

restoration treatments will be covered under a different funding envelope as the timeline is outside the scope of LSRP funds.

Phase 3: Restoration Activity Performance Monitoring

Not applicable – Phase 3 will begin 2023-2024

5.2 Project Training Initiatives

No specific training was funded by the LSRP. However, BRFN members and companies will be prioritized to gain on-the-job experience doing the restoration activities, as required. BRFN technicians with restoration training funded through RFP RMC_2002_01 will be given first offer for additional field-based, experiential learning and hands-on practice in functional and ecological restoration for this project.

5.3 Employment Information

Existing Lands staff completed one-third of the work on this Phase of the project, with efforts supplemented by contractors due to capacity constraints (Table 2).

Table 2. Employment Summary for Nig Creek Legacy Seismic Line Restoration Project

Category	Actuals
Number of Team Staff Employed in Project Execution (including any personnel who received an honorarium for participation or whose work was provided in-kind)	5
Number of Contractors Employed in Project Execution (including any personnel who received an honorarium for participation or whose work was provided in-kind)	7
Total hours of work created for all staff, including contractors and time covered through honorarium and/or in-kind donation	150 Q4 2021-2022: 71.5 hours Q1 2022-2023: 56.5 hours Q2 2022-2023 + October 2022: 20.0 hours

6. Discussion & Conclusion

Although our internal capacity challenges caused delays on the project, the greatest inefficiency has been the permitting process. Notably, the data layers used in review and the process itself are anachronistic and represent a barrier to First Nations’ meaningful participation in restoration actions. For instance, the conflicts document provided by the provincial permitting office included a number of mining tenures for oil and gas that are no longer active, or in several cases for companies that no longer exist. We were also advised to apply for a Water Sustainability Act change notification by the permitting office, and had a consultant review the watersheds in our area of interest. As per FrontCounter BC, however, our WSA

change notification request was already covered under the Special Use Permit. Removing inaccurate information from data sets and procedures will streamline future efforts.

A more streamlined process to apply for habitat enhancement and other restoration works on the landscape is necessary to begin the reciprocal restoration process. This could be facilitated through a governmental oversight committee along with increased interagency and interdepartmental communication and collaboration. However, Indigenous communities' full participation in reciprocal restoration requires community members' oversight and approval for legislation, policy, and guideline development.

The timeline for this project was insufficient for the proposed scope in both material and permit acquisitions; in future, we will allot more time for Activity 1 under Phase 2.

As the project did not proceed to Activity 2 in Phase 2, there are no photos or maps of implementation. An overview map of location is appended.

Appendix A: Map of Project Area

