**Environment and Climate Change Canada**
**Canada Nature Fund: Community-Nominated Priority Places for Species at Risk**

# Kootenay Connect: Wycliffe Focal Area 6WC SAR Restoration

**March 15, 2025 Final Report**

**Kootenay Connect is a project facilitated by the Kootenay Conservation Program**

Environment and Climate Change Canada | Environnement et Changement climatique Canada

# 1.0 Project Summary and Goal

The Wycliffe Conservation Complex (WCC, Complex) encompasses 1109 hectares (2740 acres) of ecologically significant grasslands and forested habitat in the southern Rocky Mountain Trench, and is conserved and managed in a partnership between the Nature Conservancy of Canada (NCC), The Nature Trust of BC (NTBC), and the Ministry of Water, Land and Resource Stewardship (MWLRS) (the Partners). Throughout the complex, a mosaic of native grassland, open forest and closed forest provide a variety of habitat types to a suite of wildlife, including several species at risk (SAR). The goal of this project was to implement habitat restoration prescriptions that were developed in 2020 to enhance dry open forest habitats which benefit at-risk species on the Complex.

The focal SAR on the Complex include American badger (*Taxidea taxus jeffersonii*, Endangered, COSEWIC 2012), Lewis's woodpecker (*Melanerpes lewis*, Threatened, COSEWIC 2024), and Williamson's sapsucker (*Sphyrapicus thyroideus*, Endangered, COSEWIC, 2017).

As few as 100 mature badgers live in the East Kootenay region where they are vulnerable to increasing threats from roadkill. The loss of open areas to forest succession and urban development threaten badgers by contributing to ongoing habitat decline (COSEWIC 2012).

In Canada, the Lewis's woodpecker breeds only in British Columbia. Its population is small, with fewer than 1000 individuals, and there is evidence of ongoing declines in parts of its Canadian range where it has been monitored over time. Threats include habitat loss and degradation from increasing urban and agriculture development, and fire suppression (COSEWIC 2024).

The Williamson's sapsucker is a migratory woodpecker that depends on old-growth coniferous and mixed forests in the Southern Interior of British Columbia, with fewer than 1000 individuals breeding in two Canadian subpopulations. Its distribution is largely limited by the availability of large nest-trees, mostly several hundred years old. The main threat to this species is logging and forest harvesting, including the removal of dangerous trees for worker safety and in wildfire suppression (COSEWIC 2017).

At the Complex, changes to the natural fire regime caused by decades of wildfire suppression efforts have been the main reason for the reduction of high-quality habitat for the focal SAR. Grassland and open range conditions are gradually transitioning into conifer forests through in-growth and encroachment processes. With this change, many habitat attributes necessary to sustain populations of Lewis's woodpecker, American badger, and Williamson's sapsucker are being impaired. In Wycliffe, it has become clear that one of the most effective ways to improve habitat for these species is to reduce young forest densities and promote the transition to mature open forest stands.

The prescriptions for American badger (TATA) and Lewis's woodpecker (LEWO) include reducing conifer stem density through forest thinning. Based on previous prescriptions for Williamson's sapsucker (WISA), habitat enhancements include reducing tree density through thinning and creation of suitable colonial ant nest habitat by increasing downed woody debris levels.

This final report provides an update for projects that The Nature Conservancy of Canada (NCC) is leading on behalf of the Partners at the WCC in 2024-25, as part of the Kootenay Connect initiative.

# 2.0 Results

**1. Wycliffe Recreation Management and Communications in Year 6**

In 2019-2020, the Partners agreed to develop a Recreation Management Plan, intended to be used as a document to provide high-level guidance recommendations for management of public recreation on the Complex. In January 2024, Cordillera Technical Services provided the Partners with the completed working version of the Recreation Management Plan, as well as corresponding spatial data. This was reported on in Year 5 **yet is still confidential at this time**.

Work in Year 6 focused on advancing towards implementation of the high priority strategies and actions from the Recreation Management Plan. One of the recommendations (Action 1.3) was the development of educational signage at trailheads and along trails at zone boundaries. We are working to complete this with Fuse Consulting Ltd. They were contracted in May 2024 to design a suite of interpretive signs to provide education and guidance around how to recreate responsibly in the Wycliffe Conservation Complex. These signs are being developed for installation at the MWLRS Potato Butte Conservation Lands. This area experiences high recreation pressure which impacts wildlife, including species at risk. Ungulate use of the area has decreased as recreation has increased, and there have been reported incidents of recreators disturbing badgers around natal dens. Effective messaging and clear guidance are required to reduce impacts on wildlife. In addition, these signs will guide recreators on which trails to take through the Complex, so that extraneous trails can be rehabilitated or reserved for wildlife movement.

Marty Williams was contracted to support with sign development as a Ktunaxa culture, language and history expert. Handspun Consulting was contracted to support with communicating the Recreation Management Plan to the public, sign review and development, and has been instrumental in coordinating further sign review and input from the ʔaq̓am Knowledge Holders and Language Speakers Committee and the ʔaq̓am Language Authority.

On June 10, 2024, the sign development process kicked off when the Partners, Marty, and a Science Communicator and Illustrator from Fuse met on the land to walk the existing trails and discuss the stories, animals, and plants that should be highlighted. From this meeting, Fuse developed a signage plan which served as a workplan for sign development. Through the summer, Fuse, Marty Willams, Handspun, and the Partners worked to draft signage text as well as choose illustrations to be included. The sign text was presented to the ʔaq̓am Knowledge Holders and Language Speakers Committee in September 2024 for their feedback.

In October 2024, Fuse delivered drafts of 95% complete signs for review. The completion of these signs required further input from the ʔaq̓am Knowledge Holders and Language Speakers Committee, and support from the ʔaq̓am Language Authority before they could be finalized. Additionally, one of Marty's suggestions was to incorporate Ktunaxa artwork into the main trailhead kiosk. Marisa Phillips (ʔaq̓amnik̓ Ktunaxa artist) was contracted in fall 2024 to design Ktunaxa artwork to be featured on the main trailhead kiosk. This artwork was completed and received in February 2025.

In February 2025, Virginia Hermanson (NCC) and Becky Pelkonen (Handspun Consulting) met with the ʔaq̓am Language Authority to present the signage work and finalize Ktunaxa language to be included in the signs. The ʔaq̓am Language Authority verified and provided Ktunaxa language to be included in the signage. On March 4, 2025, the sign drafts including Ktunaxa language and artwork were presented to the ʔaq̓am Knowledge Holders and Language Speakers Committee for their review. The Committee was supportive of the work and provided corrections and edits to be incorporated into the final draft of the signs.

The Partners and Fuse will be completing the sign drafts in spring 2025, with plans to fabricate and install them once internal review and approvals are complete.

The development of signage was seen as a key first step to implementing the Recreation Management Plan recommendations on the land, however, there has been other work taking place over Year 6. Handspun Consulting has

been drafting a Recreation Management Communication Plan, as well as an FAQ document to be used as a communications tool. This work has been heavily informed by the sign development process in that the messaging utilized for the signage will be consistent through the FAQ document and through how information is shared via the Communications Plan. This work is anticipated to be completed in spring 2025, with communication efforts beginning in Year 7. The Open House to present this work and provide information about recreation guidelines at the WCC will also be held in 2025 with the support of Handspun Consulting.

Cordillera Technical Services was contracted in summer 2024 to support with other actions related to implementation of the Recreation Management Plan. This included development of a Monitoring Plan to acquire data on visitor use, as well as the installation of trail counters and wildlife cameras to initiate monitoring. Unfortunately, due to technical issues with the monitoring equipment, this work was not completed this year. We anticipate the equipment will be ready for the contractor to initiate this work in the coming year.

Cordillera Technical Services did provide updated mapping of trails and recreation zones on MWLRS Conservation Lands in the WCC, based on field work completed by the Partners in 2024. Part of this process included public engagement with neighbouring private landowners regarding trail use and access points.

NCC installed 60 visitor-use management signs in fall 2024 to guide appropriate recreation in Luke Creek Wildlife Corridor. The signs outline permitted and restricted activities throughout the property, as well as clarify which areas are open to non-motorized hunting. We anticipate developing and installing an informational kiosk at the parking area for Luke Creek Wildlife Corridor in the coming years.

Measurable Outcomes:

- Completed suite of interpretive signs for fabrication and installation on the Complex. (In-Progress, anticipated May 2025)
- Completion of a WCC Recreation Management Communication Plan. (In-Progress, anticipated April 2025)
- Completion of a WCC Recreation Management FAQ document. (In-Progress, anticipated April 2025)
- Completion of one community open house in 2024. (Planned for 2025)
- Completion of a WCC Recreation Management Monitoring Plan. (In-Progress, anticipated September 2025)
- Installation of trail counters and wildlife cameras. (In-Progress, anticipated September 2025)

**2. Forest Thinning Treatments to Benefit Species at Risk in Year 6**

The WCC project manager initiated the thinning, pruning, or slashing of over 48 hectares of forest ingrowth on MWLRS, NCC, and NTBC lands in fall 2024. These treatment units were chosen based on their suitability for this type of habitat enhancement treatment, and the projected costs for their completion. Five contractors attended a site viewing in September 2024, and provided bids for the proposed work. Two forestry contractors were hired to conduct vegetation treatments in coordination with the WCC project manager. Strategic Fire Control was contracted to complete 40 hectares of thinning and slashing according to prescriptions developed by Red Dot Ranch for MWLRS lands. Momentum Mountain Solutions was contracted to complete 8.6 hectares of thinning, slashing, and pruning on NCC's Luke Creek Wildlife Corridor and NTBC conservation lands, according to prescriptions developed by DWB Consulting.

The locations of the treatment units are illustrated in Figures 1, 2 and 3.

Treatment objectives included:

- Restore and maintain ungulate winter range and mid-seral ecosystems
- Increase line of sight for predator detection and increase forage abundance in winter range areas

- Reduce canopy cover, stand density, and encroachment of Interior Douglas-Fir and suppressed Ponderosa Pine to create an Open Forest type forest to benefit focal Species at Risk
- Maintain wildlife travel corridor identified in the Wycliffe Management Plan (2021)
- Maintain broadleaf species and dryland aspen stands within the Treatment Units

The Measurable Outcome for Forest Thinning in Year 6 was the completion of thinning treatments in approximately 15 hectares of dry open forest. In Year 6, we completed the **treatment of 48 hectares** of forest thinning, pruning and slashing in the WCC.

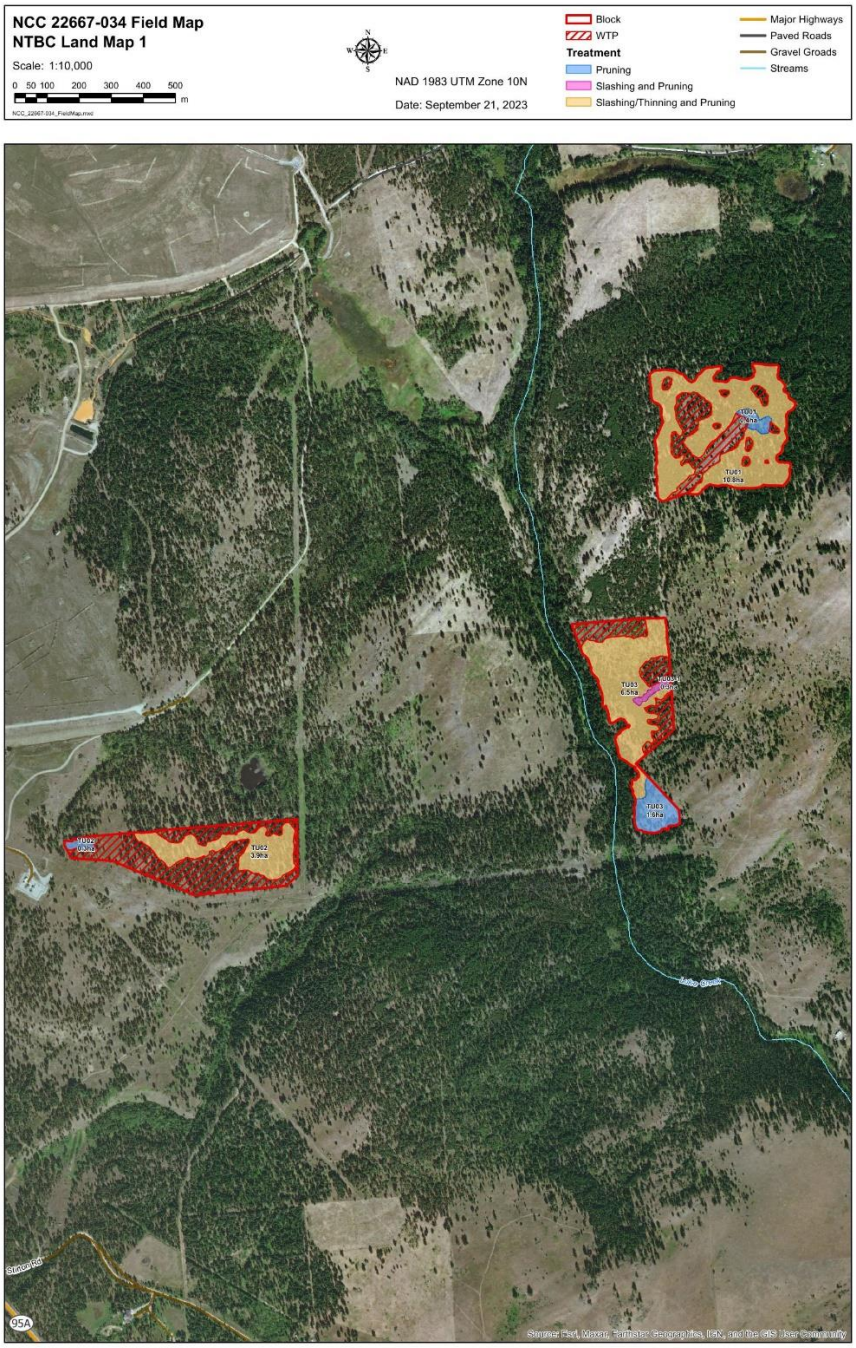


Figure 1: Map of hand thinning treatment units TU 02-Pruning (0.3 ha), TU 02-Thinning (3.9 ha) NTBC conservation lands in the WCC.

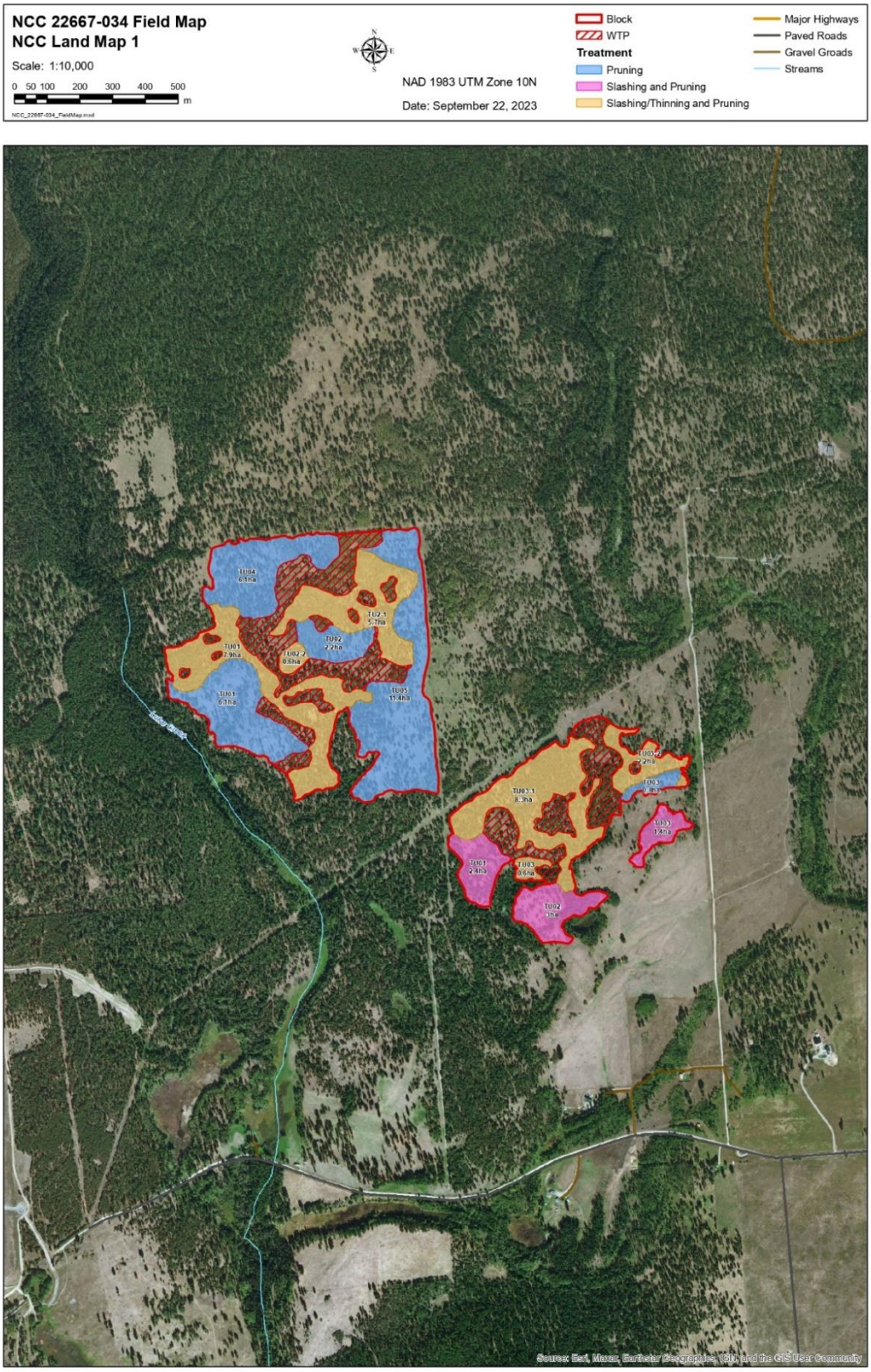


Figure 2: Map of hand thinning treatment units TU 03-02 Thinning (2.2 ha), TU 03-Pruning (0.8 ha), and TU 03 Slash/Prune (1.4 ha) on NCC's Luke Creek Wildlife Corridor.

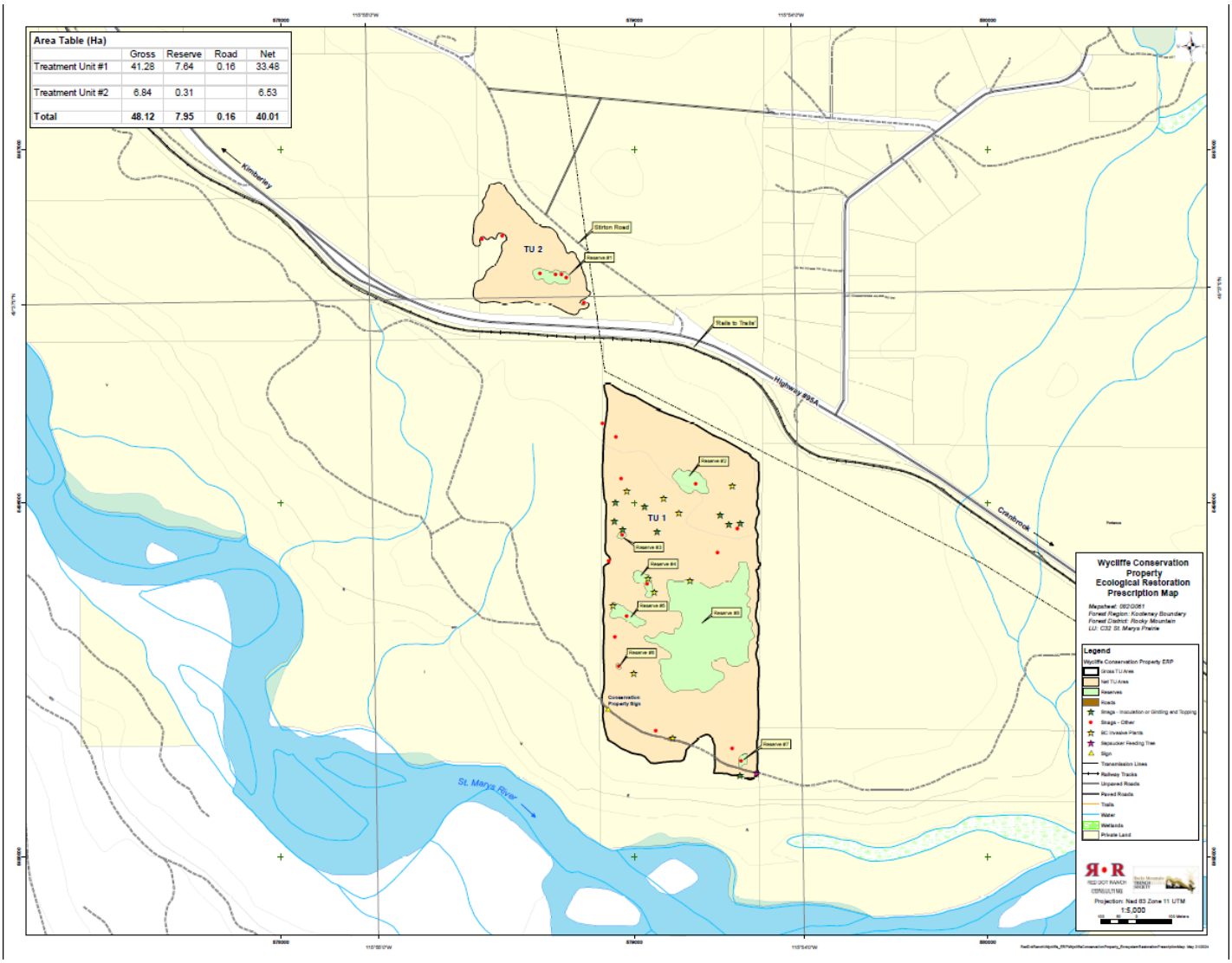


Figure 3: Map of hand thinning treatment units 1 (33.5 hectares) and 2 (6.5 hectares) on MWLRS Conservation Lands in the WCC. The two treatment units are bisected by Highway 95A.

Photo 1: Photo of thinned unit on MWLRS conservation land. Thinning debris was piled for burning by Strategic Fire Control.

Photo 2: Photo from site visit to Strategic Fire Control thinning work site on MWLRS Conservation Lands. Pictured in photo is Camille Roberge (MWLRS) and Marc Trudeau (Project Manager).

Photo 3: Before completion of Thinning Treatment Unit 03-2 on NCC's LCWC.

Photo 4: After completion of Thinning Treatment Unit 03-2 on NCC's LCWC.

Photo 5: Before completion of Thinning Treatment Unit 03-2 on NCC's LCWC.

Photo 6: After completion of Thinning Treatment Unit 03-2 on NCC's LCWC.

**3. Monitoring and Maintenance**

Monitoring and Maintenance was conducted for fencing work and forest thinning in Year 6.

Red Dot Ranch was hired in fall 2024 to support the WCC Partners with monitoring previously completed forest thinning units. Table 1 summarizes the units that were surveyed by Red Dot Ranch, which were completed between 2021 and 2024. The 101.9 hectares of treatment areas were surveyed to determine stand density by species and tree layer. Figure 4 shows the WCC properties and completed thinning units with the GPS traverse lines from this work overlayed. Using this data along with pre-treatment data contained in the thinning prescriptions, the contractor determined the percent change in stand density. The contractor also provided suggestions for potential maintenance treatments and suggested future monitoring.

Based on the results, all thinning treatments completed were successful in reducing the stand density of the areas assessed and moving the stands towards an "open forest" stand structure. In some cases, the percent change in stand density showed an increased percent change in the layer 4 stems. These stems were most likely germinants at the time of prescription development and treatment and should not be interpreted as high levels of conifer ingress. Overall, conifer ingress to date has been minimal in the treated units.

Table 1: Summary of treatment units surveyed by Red Dot Ranch to determine efficacy of thinning treatments completed around the WCC.

| **Completed Treatment Area/Units** | **Land Manager** | **Approximate Size (hectares)** | **Year** |
|---|---|---|---|
| Gunrange Unit B | NTBC | 27.5 | 2021-2022 |
| Luke Creek Wildlife Corridor Units A, D, and F | NCC | 32 | 2021-2022 |
| MWLRS Butte Units B and C | MWLRS | 20 | 2022-2023 |
| Luke Creek Wildlife Corridor Units 01, 02, 03, 03-1 | NCC | 14 | 2023-2024 |
| NTBC Units 03, 03, 03-1 | NTBC | 8.4 | 2023-2024 |
| | | **Total hectares** = 101.9 | |

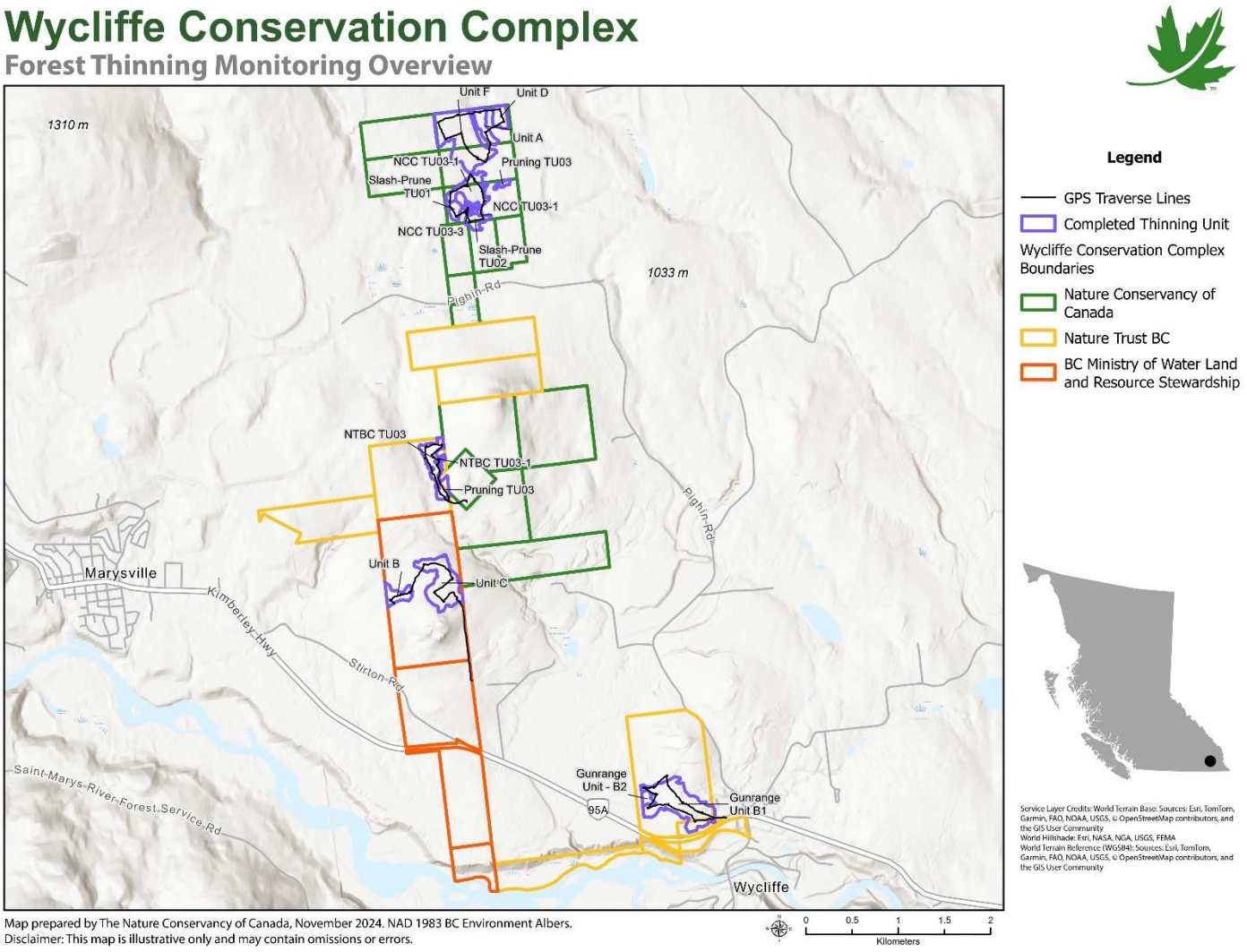


Figure 4: Map of the Wycliffe Conservation Complex with completed thinning units identified along with the GPS traverse lines used to survey the completed units.

Bootleg Contracting was hired to complete monitoring and maintenance of fences that have been constructed or repaired as a part of this project. Eleven stretches of fence were monitored and reported on by the contractor (identified in Figure 5), all of which were classified as being in good or very good condition. These fence lines were prioritized for monitoring because they were repaired or built in Years 1-5 as a part of this project. Minor fence repairs (i.e. wire breaks, small tree removal, dropper/staple replacement, etc.) were completed during assessments. Three locations requiring major repairs - primarily involving large trees down - were georeferenced and recommended for future work. Table 2 shows an example of one of the locations requiring major repairs.

In addition to this work, annual monitoring of invasive plant treatment efficacy is completed by the East Kootenay Invasive Species Council. This work was coordinated and reported on by The Nature Trust of BC.

Measurable Outcomes:

- Completion of fence inventory and corresponding maintenance work. (Complete)
- Completion of open forest stand surveys. (Complete)

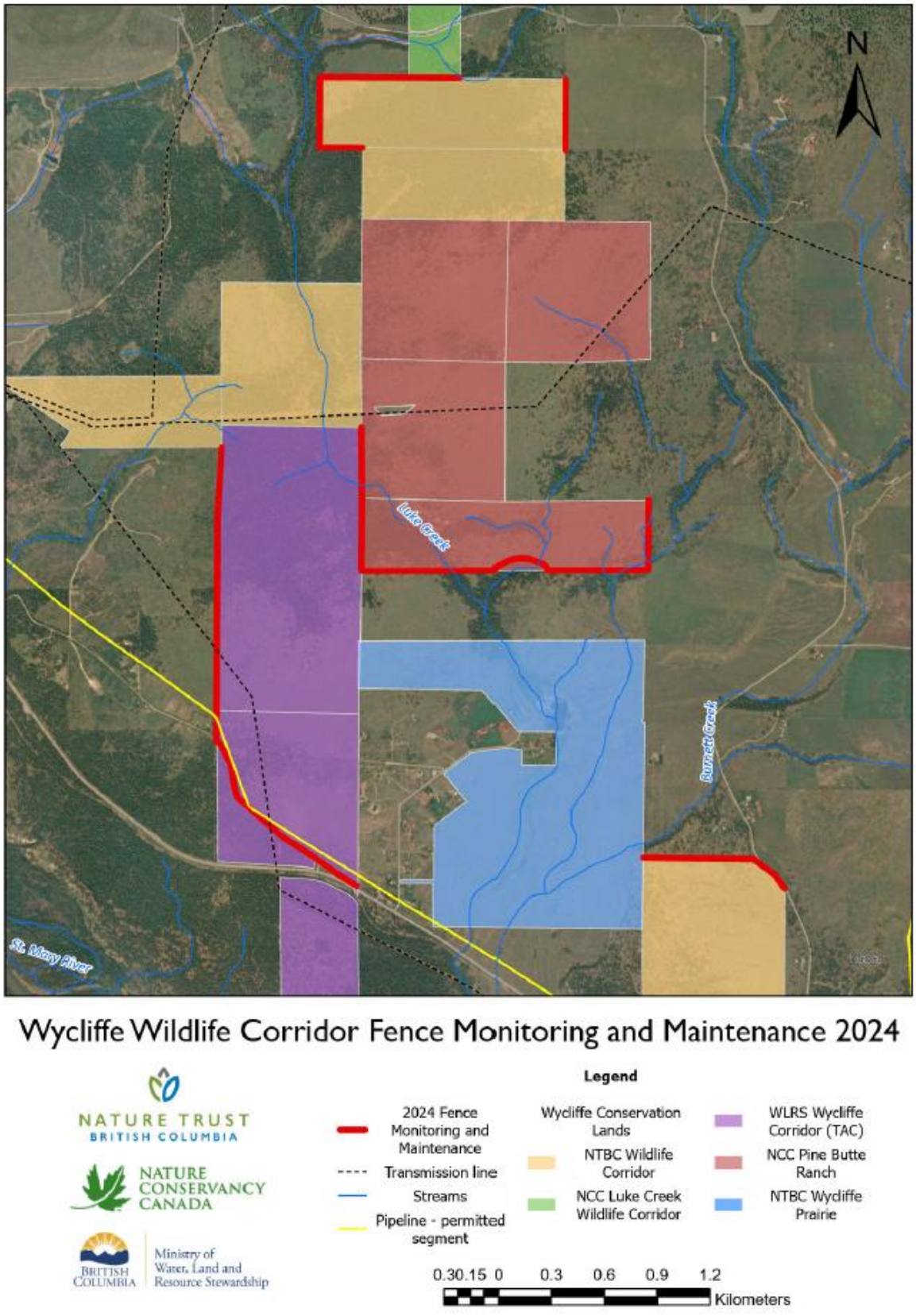


Figure 5: Map of Wycliffe Conservation Complex showing fence lines monitored and maintained in Year 6.

Table 2: Example of table row from Bootleg Contracting Fence Assessment Report, showing details regarding major fence repair.

| Fenceline Desc. (PID/Direction) | Follow Up Items | Location | Description/Recommendations |
|---|---|---|---|
| 008-406-823 South Boundary NCC | Tree removal with chainsaw | 49.630726N 115.893343W | Chainsaw is required to remove large trees that are down on the fence. Location is where the fence crosses Luke Creek. Estimated 2 hours for 2 people to repair.  |

## 3.0 Summary of Measurable Outcomes

The key measurable outcomes of Year 6 are as follows:

- Treated **48 hectares of dry forest habitat** for conifer ingrowth and recruitment of coarse woody debris
- Monitored **8.5km** (11 lengths) of fence and completed maintenance work where required
- Monitored **101.9 hectares** of completed open forest restoration units
- Presented Recreation Management material and sign drafts to ʔaq̓am Committees over three meetings

## 4.0 References


COSEWIC 2024: Lewis's Woodpecker (Melanerpes lewis) - Species search - Species at risk registry

COSEWIC 2012: American Badger jeffersonii subspecies (Taxidea taxus jeffersonii), Eastern population - Species search - Species at risk registry

COSEWIC 2017: https://wildlife-species.canada.ca/species-risk-registry/species/speciesDetails_e.cfm?sid=869