TAKLA NATION

HEALTH ▪ PROSPERITY ▪ TRADITION

CHUNDOO NU RESTORATIVE PLANNING

Takla Nation

Summary Report on Activities 2023-2025

(CAP-00000000020)



2025

TAKLA NATION
510 Carney St. Prince George BC

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Acknowledgements

This community-led project was made possible through the invaluable support of the Habitat Conservation Trust Foundation and Environment and Climate Change Canada. We are deeply grateful for their commitment to advancing Indigenous-led stewardship initiatives. Without their contributions, the success of this project would not have been possible.

Their support enabled Takla Nation to integrate training and capacity-building opportunities with meaningful engagement at multiple levels. Internally, the project created space for community members to strengthen their skills and knowledge while contributing directly to stewardship activities. Externally, it fostered constructive dialogue and collaboration with Licensees operating within Takla Territory, ensuring that diverse perspectives were included in decision-making.

This combination of capacity development, community engagement, and external collaboration reflects the strength of Indigenous-led approaches and highlights the importance of sustained investment in such initiatives. This report was authored by Lea French and Brianna Pinche, two Takla Nation Summer Students and supervised by Krista Sittler.

HABITAT CONSERVATION TRUST FOUNDATION

Environment and Climate Change Canada

Introduction

The Chundoo Nu is a culturally and ecologically significant valley located between the Wolverine Lakes and the Wolverine Mountain Range, approximately 150 kilometres northwest of Mackenzie, British Columbia (BC). In the Sustudene language, *Chundoo* translates to "pine tree" and *Nu* to "island", referring to an island of pine. Historically, prior to large-scale logging and the occurrence of major wildfires, the landscape was predominantly characterized by lodgepole pine (*Pinus contorta*) forests, with wetter lowland areas supporting stands of Engelmann spruce (*Picea engelmannii*).

Prior to large-scale industrial logging and the occurrence of major wildfires, the Chundoo Nu was dominated by lodgepole pine (*Pinus contorta*) forests, with Engelmann spruce (*Picea engelmannii*) occupying wetter lowland areas. These intact forest systems provided critical seasonal refuge and migration corridors for caribou (*Rangifer taradus*).

The Chundoo Nu lies within the Wolverine Caribou herd's range, and the Wolverine range is recognized as a well-documented high-use wintering area. Historically, caribou frequently moved from the Wolverine range through this valley during seasonal migrations, using it to access traditional calving grounds and summer ranges (). The area's intact habitat conditions once played a vital role in supporting the survival and health of this herd.

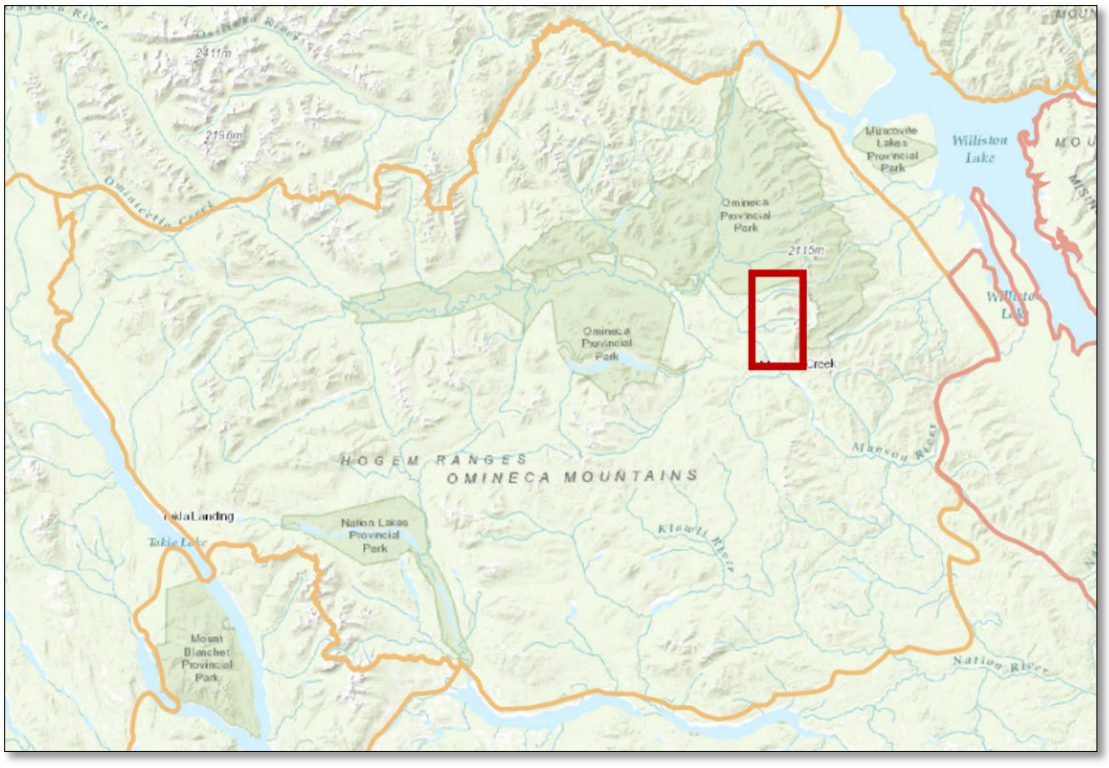

Figure 1. The Chundoo Nu (red box) within the Wolverine caribou herd range. The focus area is 150km northwest of Mackenzie, BC.

The Chundoo Nu lies within the Wolverine Caribou herd's range, and the Wolverine range is recognized as a well-documented high-use wintering area (Klazecez 2019). Historically, caribou frequently moved from the Wolverine range through this valley during seasonal migrations, using it to access traditional calving grounds and summer ranges. The area's intact habitat conditions once played a vital role in supporting the survival and health of this herd.

Over the recent decade, wildfire and industrial-scale logging have dramatically altered the habitat composition of the Chundoo Nu. Extensive tracts of early seral vegetation have replaced the mature forests that once characterized the area. These early successional stages provide high-quality forage for moose (*Alces alces*) and elk (*Cervus canadensis*), whose populations have expanded in response to the habitat change.

While these shifts may be favourable to other ungulates, they pose challenges for caribou conservation. Moose and elk are primary prey for wolves (*Canis lupus*), and their increased abundance supports higher predator densities. Compounding this dynamic is the expansion of industrial roads, which improve predator access and increase hunting efficiency. Together, these changes have disrupted the natural predator–prey balance within the Chundoo Nu.

The cumulative effects of early seral habitat creation, increased prey abundance, and elevated road density have intensified predation risks for caribou. Elevated wolf predation is widely recognized as a proximate driver of population declines in woodland caribou across British Columbia. Consistent with that, the primary proximate cause of mortality in the wolverine herd has been wolves (Klaczek 2019). As the Wolverine Caribou herd continues adapts to these altered conditions, the likelihood of increased mortality threatens the herd's long-term viability.

Effective recovery and management planning will require strategies that address these intersecting pressures. This includes considering habitat restoration, road deactivation, predator–prey management, and the integration of Indigenous knowledge to guide stewardship decisions. Sustaining the ecological integrity of the Chundoo Nu is essential not only for the recovery of the Wolverine Caribou herd but also for upholding the cultural and spiritual connections of the Sustudene people to their lands.

Forest Harvesting and Wildfire

Between 2016 and 2019, CANFOR harvested a total of 17 cutblocks within the Chundoo Nu Valley (Figure 2). The cutblocks ranged in size from 43 ha to 275 ha, with 13 exceeding 60 ha in size. In total, approximately 1,479 ha were harvested during this period.

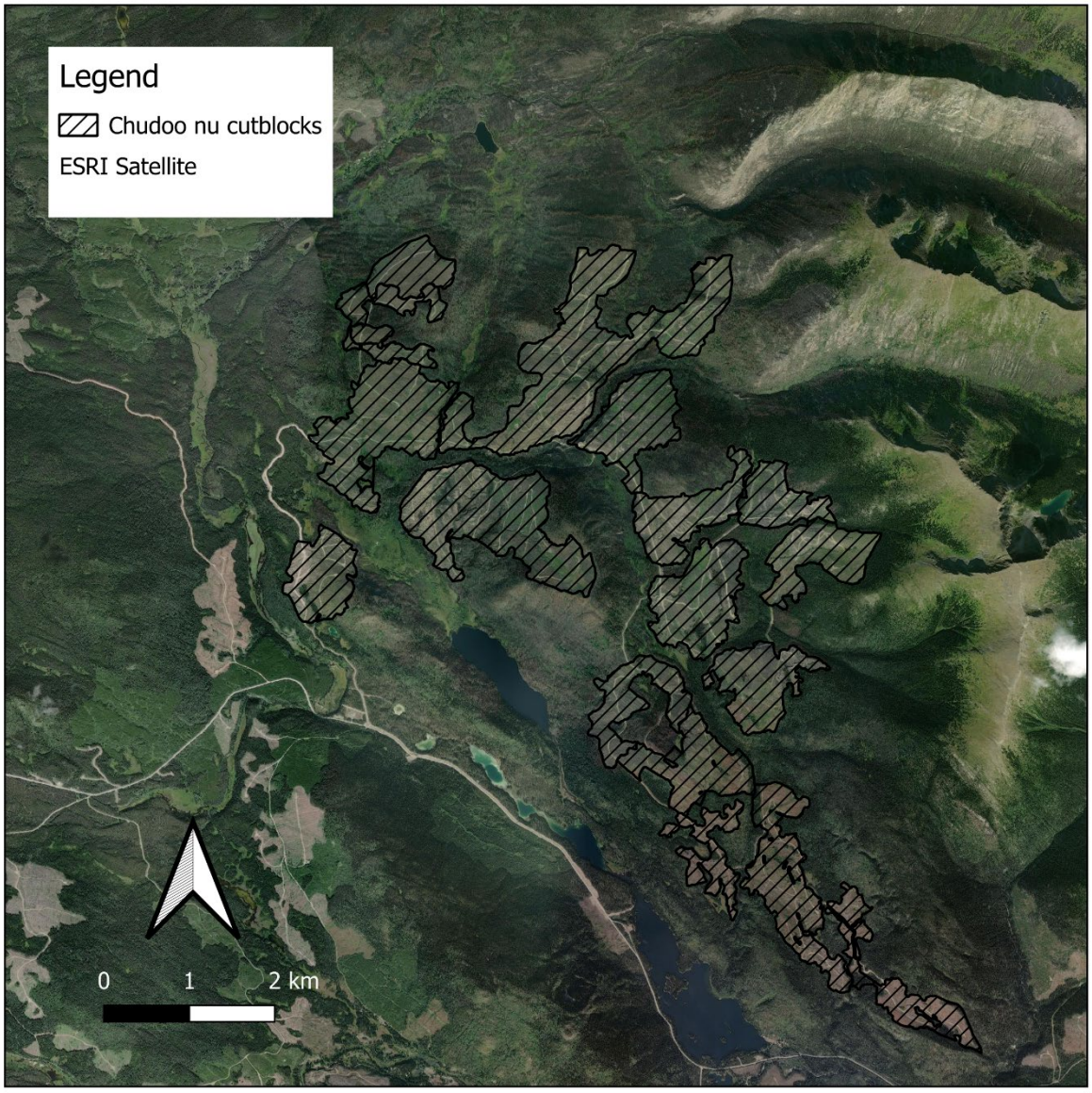

Figure 2. Location of the 17 cutblocks completed by CANFOR between 2016-2019 within the Chundoo nu valley in northcentral BC.

In 2021, wildfire G61192, ignited by lightning, burned approximately 13,700 ha within the project area. Burn severity ranged from low to high, with several intermittent unburned patches (Figure 3). Thirteen of the seventeen harvested cutblocks in the valley were either partially or completely burned, resulting in high mortality of previously planted trees. Consequently, CANFOR was required to replant many of these areas (pers. comm. Phil Smith, CANFOR Community Forester). At the request of a Takla family residing in the area, one cutblock was left unplanted. This site will be revisited in 2026 to compare natural regeneration rates with those of planted sites.

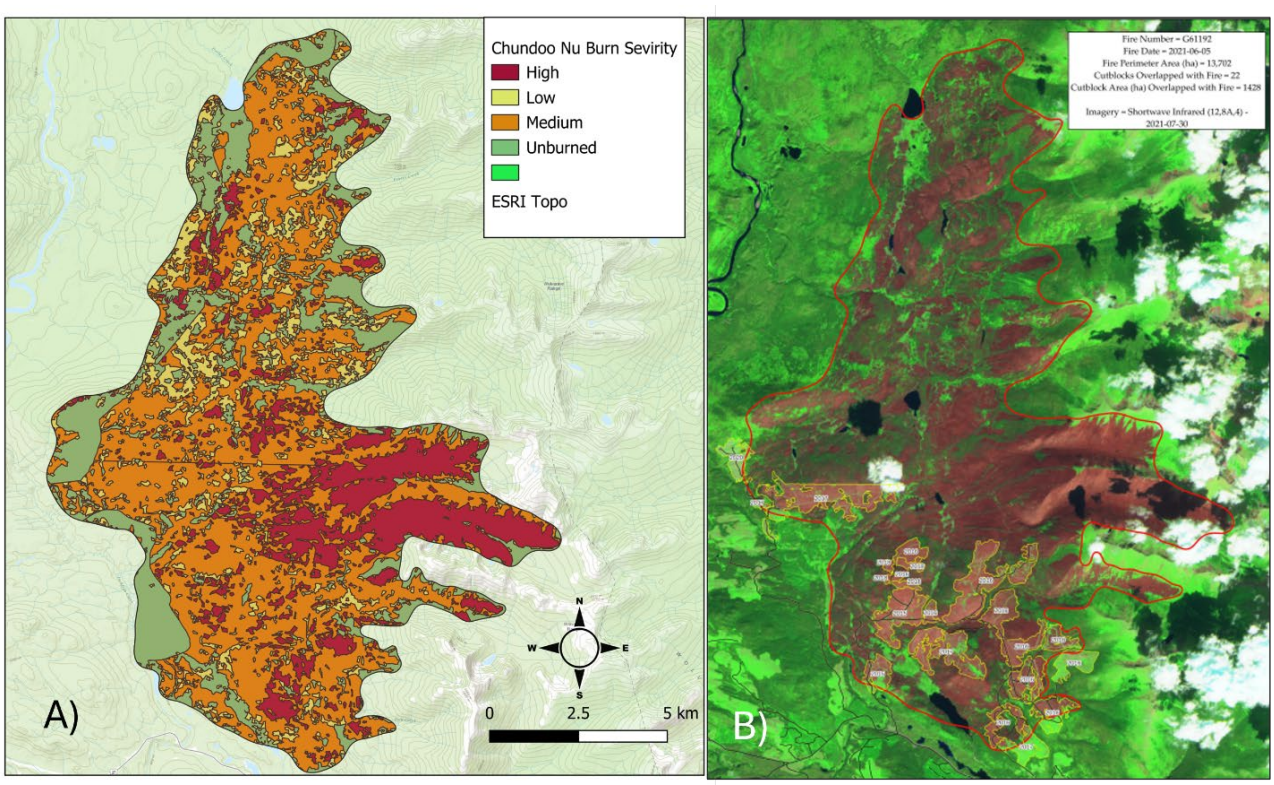

Figure 3. A) Boundary of the Chundoo Nu wildfire of 2021and relative burn severity (red = high, orange = moderate, yellow – low and green = unburned). B) Satelite imagery of 2021 wildfire and the 2017 forestry cut blocks within the Chundoo nu.

Community Engagement and Identification of Restoration Priorities

A meeting was organized with the Noostel Family of Takla Nation, who maintain significant ties to the Chudoo Nu area and have experienced direct impacts from industrial activities there. The event took place in Fort St. James, selected for its central location and accessibility for all attendees. Participants traveled from Prince George, Takla Landing, and Germansen Landing, resulting in a total attendance of 18 family members.

The meeting served multiple purposes: to provide an update on the status of caribou in the Chudoo Nu area, to review and discuss the scope of the proposed project, and to consider opportunities for a potential moose enhancement initiative (see Appendix A). This in-person dialogue created space for family members to share lived experience, observations, and concerns related to ongoing ecological change and industrial impacts.

Following the initial family meeting, Takla Nation organized a series of three online meetings to build on the momentum and ensure that all voices within the community were heard. These virtual sessions created additional opportunities for family members who were unable to attend the in-person event to participate actively in the ongoing dialogue.

The online format facilitated broader involvement, allowing participants to provide feedback, seek clarification on outstanding questions, and engage more deeply in the discussion of next steps. By accommodating diverse schedules and locations, these sessions ensured inclusivity and enhanced the collective understanding of project objectives and concerns.

Overall, the series of virtual meetings played a critical role in strengthening community involvement. They reinforced the importance of integrating family and community perspectives into both project planning and decision-making processes, further supporting a collaborative approach to stewardship and recovery initiatives in the Chudoo Nu area.

Road Deactivation and Restoration Priorities

Throughout the community engagement sessions, participants reached consensus regarding the urgent need to prioritize the deactivation and restoration of roads within the Chudoo Nu area. It was highlighted that the presence of industrial road networks has significantly increased predator access and improved sightlines, which in turn has reduced habitat security for caribou populations. The discussions underscored that restoration efforts should begin with a phased approach, targeting the highest-risk zones first. Specifically, roads that grant access to high-elevation caribou habitats were identified as initial priorities for intervention.

Integrated Restoration Strategy

The recommended restoration approach includes both functional and ecological components to address immediate and long-term concerns. Functional restoration activities include road deactivation, the installation of physical barriers, and effective drainage management. These measures are designed to limit access and mitigate the direct impacts of existing infrastructure. In parallel, ecological restoration efforts such as soil rehabilitation, reforestation, and the seeding of native plants will be implemented to promote the recovery of natural habitats.

This integrated approach reflects the Noostel Family's commitment to restoring ecological integrity, while also respecting cultural values and supporting the ongoing recovery of the Wolverine Caribou herd. By combining practical on-the-ground actions with broader habitat restoration, the strategy aims to enhance both immediate habitat security and the long-term vitality of caribou populations within the Chudoo Nu area.

Training

On May 11–12, 2025, a joint trail camera training session was hosted for Land Guardians representing three neighbouring Nations: Takla Nation, Nak'azdli Whut'en, and Tl'azt'en Nation. The course was led by PhD candidate **Alexia Constantia** and was designed to build both technical skills and applied knowledge to support Indigenous-led wildlife monitoring programs.

The two-day training was structured to combine classroom-based learning with hands-on field application (Figure 4). The first day focused on theory and planning, delivered in an office setting, while the second day involved practical field exercises to apply newly acquired skills in a real-world environment.

Key training modules included:

- **The role of trail cameras in wildlife ecology and conservation** – understanding applications for population monitoring, predator–prey dynamics, and habitat use.
- **Equipment and technology** – review of camera types, specifications, and technical considerations.
- **Project design and sampling strategies** – designing effective surveys, establishing grids and transects, and ensuring unbiased sampling.
- **Field deployment techniques** – best practices for placement, orientation, and security of cameras.
- **Data management and processing** – organizing, labeling, and preparing large datasets for analysis.
- **Troubleshooting and problem-solving** – addressing common field and equipment challenges (Figure 5).

By combining in-class instruction with practical fieldwork, the training strengthened the technical capacity of guardians while fostering inter-Nation collaboration on wildlife monitoring. The session laid the groundwork for consistent data collection across territories and contributed to a growing network of Indigenous-led stewardship initiatives.



Figure 4. Classroom session of the trail camera training hosted by Nak'azdli Whut'en in Fort St James in May 2025.



Figure 5. Trouble shooting trail cameras and practising deploying then and filling out the data form.

Camera Trapping

Between November 11 and 12, 2023, seven trail cameras were deployed within the study area. Initial site access was achieved by truck, and the area was systematically mapped using an iPad prior to hiking into deactivated road segments to establish camera locations. During the subsequent field visit in summer 2024, the bridge at the 3-km mark had been removed, preventing access by truck. The field crew therefore used dirt bikes to access the site and conduct maintenance, including replacement of SD cards and batteries. In summer 2025, the site was revisited using an ATV to complete a full maintenance cycle. At that time, all batteries and SD cards were replaced, and four additional cameras were installed, resulting in a total deployment of eleven cameras across the study area. (Figure 6).

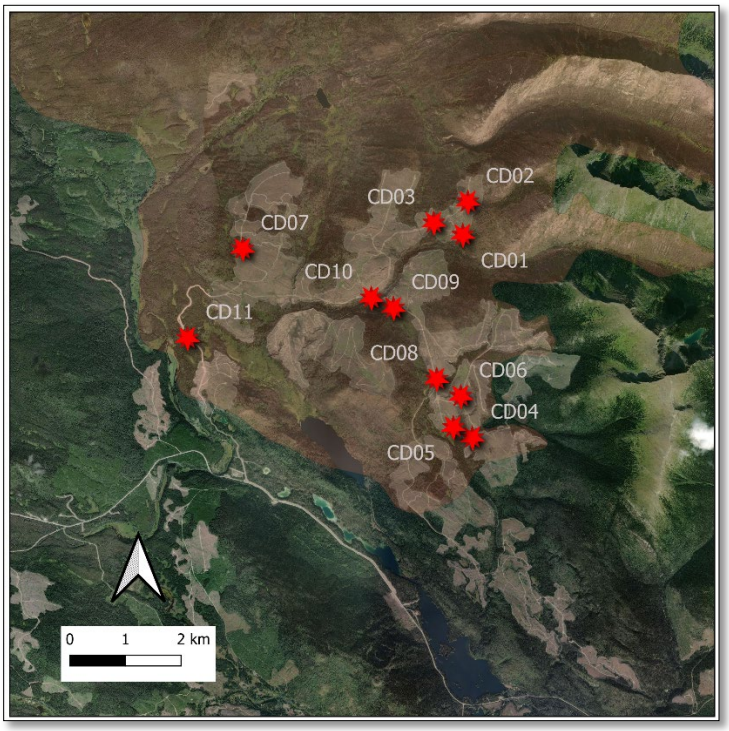

Figure 6. Location (red star) of the 11 trail cameras deployed in the Chundoo nu. Cameras have been deployed since November 2023.

Preliminary Results from Camera Trapping

A total of 11 cameras were deployed over the two-year monitoring period (November 2023 to present). Overall, the cameras functioned effectively. Six cameras reached full SD card capacity prior to retrieval, and one camera—mounted on a tree that fell approximately two months after deployment—resulted in a corresponding data gap during that period. Across all units, the monitoring effort totaled approximately 2,769 trap-nights.

During the first year, a combination of time-lapse settings in open areas and motion-triggered photo captures was tested. In the second year, all cameras were replaced and standardized to a motion-triggered photo mode with a one-second delay between sequential images. This configuration provided the optimal balance between battery life and SD card capacity.

Over the two-year period, cameras recorded 236 unique wildlife observations representing 14 species: black bear (*Ursus americanus*), grizzly bear (*Ursus arctos*), moose (*Alces alces*), snowshoe hare (*Lepus americanus*), caribou (*Rangifer tarandus*), coyote (*Canis latrans*), red fox (*Vulpes vulpes*), Canada lynx (*Lynx canadensis*), northern flying squirrel (*Glaucomys sabrinus*), American marten (*Martes americana*), North American porcupine (*Erethizon dorsatum*), striped skunk (*Mephitis mephitis*), wolf (*Canis lupus*), and an unidentified rodent species.

As summarized in Table 1, wolves were the most frequently detected species (n = 81), followed by moose (n = 59), fox (n = 27), and caribou (n = 23). Moose and wolves were observed throughout the year (Figure 7), whereas caribou detections occurred primarily during spring and fall, likely corresponding to seasonal migration between wintering and calving grounds.

Table 1. Summary of total observations on roads captured on the 11 trail cameras from November 2023 until June 2025 by species.

Species	Total Observed
black bear	2
caribou	23
coyote	4
fox	27
grizzly bear	8
Canadian lynx	7
American marten	3
moose	59
North American porcupine	12
snowshoe hare	4
rodent	1
skunk	5
wolves	81
Total	**236**

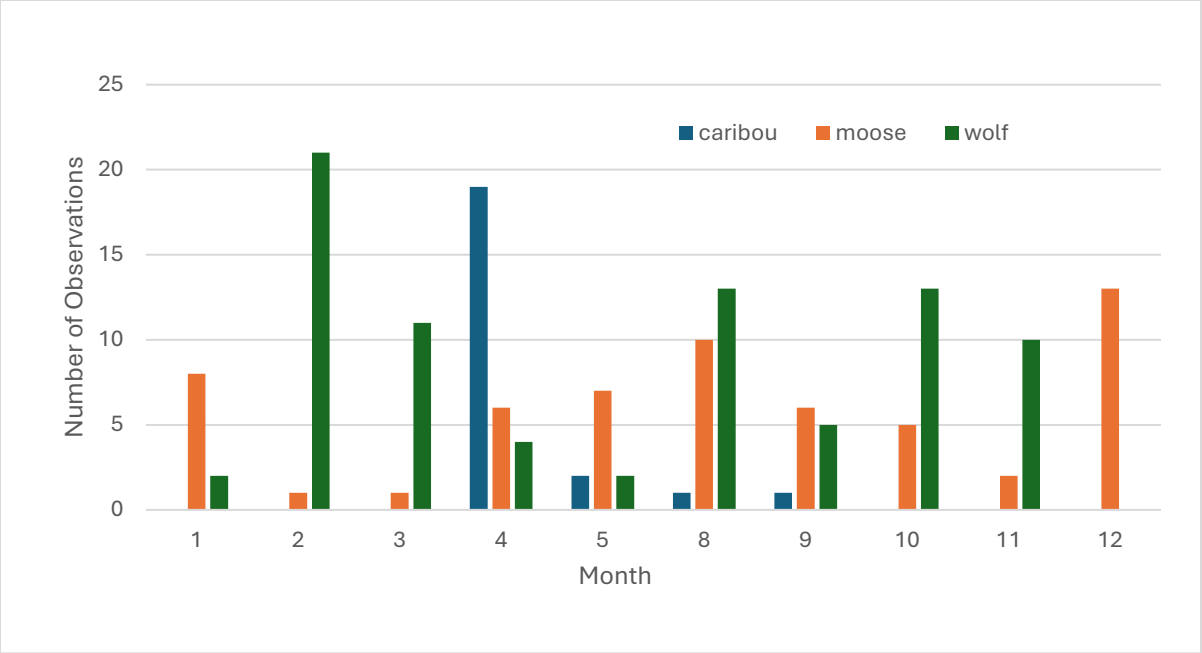

Figure 7. Timing (by month [Jan =1…Dec=12]) of the number of caribou (blue line), moose (orange) and wolves (green line) detections on trail cameras installed in the Chundoo Nu.

On April 1, 2025, a group of nine caribou -six adults and three calves- were recorded walking by camera CD03 (Figure 8 A). Approximately 20 mins later the six adults were running rapidly back past the camera in the opposite direction (Figure 8 B). No calves were observed in this subsequent sequence, nor was the source of disturbance detected, suggesting a possible predation event. Previous research on the Wolverine caribou herd, found the leading cause of adult female mortality were wolves (Klaczek 2019). Additional known predators for caribou in the area are grizzly bear, wolves, wolverine and lynx (McNay et al. 2008). Based on concurrent research led by Nak'azdli Whut'en, at least two wolf packs are known to use the Chudoo Nu area (Sittler and Birch 2025).

External Collaborations and Next Steps

We met on several occasions with Canfor Forester Phil Smith to discuss this project. He is supportive and took several of the Takla members on a flight to view the area. Canfor holds the road tenure and has free to grow obligations in the area. They have commitments for road deactivations in the area and are willing to work with Takla Nation on developing, implementing and where possible supporting financial, a phased approached to restoring the area. We will be searching for additional funding to support this work and will continue the wildlife camera monitoring program as on of the tools to monitor the effectiveness of the work.



Figure 8 A) Image of nine caribou (six adults and three calves) walking along a road heading down elevation. B) Twenty minutes later six

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Appendix - Invitation to the Noostel Wildlife Day

