

REQUEST FOR EXPRESSIONS OF INTEREST

The Alberta Regional Caribou Knowledge Partnership (ARCKP) is inviting members of the research and consulting communities to submit *Expressions of Interest (EOI)* in response to three opportunities identified by the partnership. Details of these are outlined in this document.

EOIs will be reviewed by the ARCKP Technical Subcommittee and selected submissions will be contacted and asked to submit a full proposal (details to be provided).

Submission Requirements:

- Submit to ARCKP Coordinator, Kristy Burke (kristy@fuseconsulting.ca) by 5:00 pm (MDT), **December 23, 2020** (extended from Dec. 18). Please also send any questions to Kristy Burke by Dec. 14, 2020 to allow for a response time.
- Maximum of 4 pages with a minimum of a 10-pt. font.
- Provide an overview of your ideas around the topic and questions of interest.
- Provide clear objectives for your proposed project.
- Describe the approach and methodology you would use to achieve your objectives. Recognizing the page limit, proponents are encouraged to focus on clearly demonstrating their proposed approach and any unique or innovative aspects of their proposed approach.
- Describe deliverables and timelines for the project. Note, that at minimum, all ARCKP projects must include an interim report, a final report and a 2-page brief to summarize the project. Multi-year projects cannot go beyond April 30, 2025.
- Include the names, qualifications and experience of the individuals who will be involved in the project (you may attach individual or team profiles as an appendix beyond the 4-page maximum). Please note any proposed collaborations.
- Provide a project budget (including GST and any anticipated administration fees). Budgets should be considerate of the ARCKP's annual funding limitations and demonstrate strong value to the ARCKP.

Evaluation Criteria:

Criteria	Weight
Experience and qualifications of the consultant/consultant team	20%
Clearly defined, innovative approach to completing the proposed work	35%
Clearly defined and appropriate project timeline and clear deliverables that contribute to ARCKP objectives	25%
Cost estimate	20%

Background on Alberta Regional Caribou Knowledge Partnership

Supporting caribou conservation while sustaining a working landscape is a difficult balancing act that involves a variety of stakeholders. This balancing act is made even more challenging by the ecological differences between regional ecosystems. Current thresholds and criteria for woodland caribou recovery offer an important starting point for land-use planning. To achieve these goals, there is still a significant need for knowledge sharing between regions of the province, and for the development of on-the-ground actions to balance the needs of woodland caribou and industrial activities. Furthermore, to ensure forestry activities can contribute to woodland caribou conservation objectives, there is a need to explore how regionalized knowledge and solutions can provide management direction for woodland caribou conservation on working landscapes.

To make this vision a reality, stakeholders from across Alberta established the Alberta Regional Caribou Knowledge Partnership (ARCKP), a collaboration between Alberta's forestry sector and the provincial government. This multi-faceted initiative addresses key knowledge gaps in region-specific woodland caribou ecology. The ARCKP draws on expert knowledge to identify important knowledge gaps and allocates resources to research projects, synthesis projects, modelling projects, and knowledge exchange efforts that are best suited to fill these gaps. The partnership is committed to knowledge sharing and making project outcomes easily accessible to all stakeholders.

The ARCKP is an association of fRI Research and funded by the Forest Resource Improvement Association of Alberta (FRIAA) and a range of forestry companies in Alberta, for a cumulative contribution of \$1 million per year for five years. More information about the ARCKP can be found at <http://arckp.friresearch.ca>.

Key Themes

Projects funded by the ARCKP explore innovation in the context of research, applications, policy and knowledge exchange related to forestry practices within Alberta's woodland caribou ranges. Currently, four themes guide the work of the partnership:

1. *Silviculture and Harvest Systems*
2. *Harvest Planning*
3. *Integrated Land Management*
4. *Restoration*

Additional details on these can be viewed at <http://arckp.friresearch.ca/content/research-opportunities>.

Opportunities beyond these four themes are explored on a case-by-case basis and at the recommendation of the experts who comprise our multi-sector technical committee.

CURRENT OPPORTUNITIES

The ARCKP is requesting expressions of interest for three opportunities:

- 1) **Understanding options for, and value of, alternative harvesting and silvicultural approaches for promoting woodland caribou habitat within coniferous forests and deciduous/mixedwood forests.**
- 2) **Exploring the implementation of aggregated harvest in woodland caribou ranges compared to current and other potential harvesting approaches on: ecological outcomes for woodland caribou, other species/values and socio-economic and operational considerations.**
- 3) **An evaluation of the feasibility of terrestrial lichen seeding and/or transplantation.**

Please note, the intent of the Expression of Interest is not to submit a full proposal, but rather to provide a brief overview of your ideas on how you would address the topics and questions outlined by the ARCKP. Our goal is to leverage the expertise of the research and consulting community to achieve outcomes that provide Alberta's forest sector and Provincial Government with new knowledge and information to support woodland caribou conservation on working landscapes. We encourage proponents to bring forward creative and innovative ideas that contribute to tangible, on-the-ground solutions.

Inclusion of Indigenous knowledge and learning systems is an important aspect to advancing Alberta's forestry operations and woodland caribou management. Where appropriate, we encourage proposers to incorporate Indigenous perspectives into their proposed approach.

Details of each project opportunity are included in the following sections.

OPPORTUNITY #1

ARCKP Theme: Silviculture and Harvest Systems

Topic: Understanding options for, and value of, alternative harvesting and silvicultural approaches for promoting woodland caribou habitat within coniferous forests and deciduous/mixedwood forests.

The careful selection and implementation of alternative harvesting and silviculture practices can potentially contribute to balancing the needs of Alberta's working landscape with the need for future woodland caribou habitat. However, to achieve this, industry and government managers must better understand the range of potential harvesting and silvicultural tools available to achieve woodland caribou goals. They must also better understand how these applications can potentially work together to produce not only habitat desirable to woodland caribou, but habitat less desirable to primary prey species like deer and moose. The potential outcomes of implementing these new tools would create conditions that enable continued use of areas by woodland caribou, with a lower risk of predation from wolves. However, managers also need to consider the economic implications of alternative harvesting and silviculture approaches to their current and future fibre needs.

The ARCKP is interested in exploring how alternate harvesting and silviculture approaches can be applied across different forest types to achieve vegetation characteristics desirable to woodland caribou and less desirable to primary prey. This includes an examination of potential approaches for both conifer-dominated landscapes and mixedwood-dominated landscapes.

To explore this topic further, the ARCKP has developed the following critical question of interest for proponents to address in their Expression of Interest:

In the context of coniferous forests:

- *Could alternate harvesting and silvicultural techniques be implemented which result in vegetation characteristics enabling the continued use of areas by woodland caribou?*
- *Could alternate harvesting and silvicultural techniques be implemented which result in a more rapid return of vegetation characteristic of woodland caribou habitat and lower use by primary prey?*
- *What are the economic implications of implementing alternate harvesting and silvicultural practices (e.g., harvesting, reforestation, long-term fibre flow etc.)?*

In the context of deciduous/mixedwood forests:

- *Could alternate harvesting and silvicultural techniques be implemented which results in lower use by primary prey in deciduous and/or mixedwood landscapes?*
- *What are the economic implications of implementing alternate harvesting and silvicultural practices (e.g., harvesting, reforestation, long-term fibre flow etc.)?*

Though the focus of this study should be on the questions posed above, we are also interested in learning how a range of climate scenarios might impact the alternative harvesting and silviculture approaches recommended throughout this project (i.e., identify potential tradeoffs, potential mitigation options, etc).

Dec. 2, 2020 amendment -Proponents are also asked to identify ways in which suggested alternatives, or outcomes from this work, might impact other values (e.g., watershed values, other species etc.).

OPPORTUNITY #2

ARCKP Theme: Harvest Planning

Topic: Exploring the implementation of aggregated harvest in woodland caribou ranges compared to current and other potential harvesting approaches and their impact on: ecological outcomes for woodland caribou, other species/values and socio-economic and operational considerations.

Aggregated harvest is the recommended harvest approach in Alberta's Provincial Woodland Caribou Range Plan. It consolidates forest harvest operations to a predefined area over a given timeframe, therefore, reducing fragmentation of woodland caribou habitat. Furthermore, by leaving larger patches of intact forest, aggregated harvest can potentially help minimize disturbance in Alberta's caribou ranges and promote more sustainable woodland caribou populations. In moving towards an aggregated harvest approach to benefit woodland caribou, it's important to also understand its impact on other species and environmental, social and economic values.

As such, the ARCKP is interested in exploring how the implementation of aggregated harvest in woodland caribou ranges compares to the business as usual (BAU) approaches currently used in Alberta, and to other potential approaches that might not have yet been considered. Additionally, the ARCKP would like to understand how various harvest approaches impact other variables of interest and how these might vary in different regions of the province. Proponents interested in exploring this topic are asked to consider the following critical questions:

- *How is aggregated harvest anticipated to affect woodland caribou and other species or values compared to current BAU and other potential harvesting approaches?*
- *Are there other potential creative harvesting approaches that should be considered and if yes, how do these impact variables of interest?*
- *What are the socio-economic and operational considerations of implementing aggregated harvesting compared to current BAU and other potential harvesting approaches?*

Please note that we would like this project to consider the impact of different harvest scenarios (e.g., levels, rates, re-entry timing and location) for each harvesting approach being evaluated (e.g., aggregated harvest, BAU approaches, other potential approaches identified by the proponent). It is also important to assess how these analyses vary by region of the province.

OPPORTUNITY #3

ARCKP Theme: An additional opportunity identified by ARCKP

Topic: An evaluation of the feasibility of terrestrial lichen seeding and/or transplantation.

Alberta's industry and government managers are continuously evaluating ways to return harvested areas to usable woodland caribou habitat sooner. This includes restoring terrestrial lichens, an important source of winter forage for woodland caribou. Lichen seeding and fragment transplanting are two strategies that have been tested in various parts of the boreal for their potential to speed the reestablishment of lichen species. However, the efficacy of these methods, and the site conditions that best promote their success, still need to be better understood. Furthermore, the ARCKP needs to understand how optimal site conditions and the best corresponding seeding and transplant techniques might vary between ecologically different regions of the province. We are also interested in exploring how the logistical and economical challenges of implementing these techniques can be overcome.

To learn more about this topic, the ARCKP is interested in a thorough literature review and a possible study that evaluates the efficacy of lichen seeding and transplantation in Alberta. This could potentially be done by evaluating/monitoring historical seeding and transplantation sites from previous studies in Alberta or similar sites in British Columbia (if available). Expressions of interest can include both a literature review and study, or a literature review and recommendations for a future study.

Proponents interested in exploring this topic further are asked to consider the following critical questions in their Expression of Interest:

- *Does terrestrial lichen seeding and/or transplantation have efficacy?*
- *What is required to achieve successful lichen growth from seeding or transplantation?*
- *What is the best time to do lichen transplantation?*
- *Which locations would make the most success for transplantation?*
- *How can these techniques be implemented in an economical way?*
- *Is there the potential to explore historical lichen transplantation locations to assess efficacy?*