Planning Initiatives for Northern Caribou Herds in North-Central BC

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ABSTRACT

A work plan is developed which guides activities of a Recovery Implementation Group in their deliberations about the required management actions to enable recovery of selected herds of northern caribou in north-central British Columbia. The group first met officially in December of 2003 and had an organizational meeting in January of 2004. This work plan is used to:

- Provide a terms-of-reference for the group,
- Address membership, and
- Determine the boundary for the planning area.

The activities described in this work plan include 3 more workshops in 2004:

1) March –
   a) to report out on a variety of technical projects begun April 2003
   b) to establish recovery goals
   c) to establish seasonal-range work groups that compose management policy, and
   d) to define a process to establish recovery and survival habitats;

2) April –
   a) to review recovery and survival habitats and seasonal range management policy;

3) August –
   a) to review documentation of proposed recovery actions.

The primary deliverable from this work is a draft recovery action plan available for review by the Northern Caribou Technical Advisory Committee. Ratification of the recovery action plan, socio-economic assessments, and implementation is expected to occur in 2005. Funding is anticipated from a variety of potential sources where background technical work will fall under proposals to establish continued FIA funding from the forest industry.
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INTRODUCTION

Background

This work plan focuses on strategic objectives established by, the Northern Caribou Technical Advisory Committee (NCTAC) and in particular, how these objectives may be implemented at a local level to prepare a recovery action plan for herds of northern caribou inhabiting north-central British Columbia (BC). NCTAC was formed in response to the Council On the Status of Endangered Wildlife in Canada (COSEWIC 2000) proclaiming woodland caribou as threatened of becoming extirpated within the Southern Mountains National Ecological Area (SMNEA) (Figure 1). This proclamation requires signatories of the National Accord for the Protection of Species at Risk in Canada (BC being a signatory), to construct and implement recovery plans for threatened and endangered wildlife. Provincial committees were formed to advance the necessary recovery planning for the two ecotypes of woodland caribou (Heard and Vagt 1998) that occur within the SMNEA: one for mountain caribou (arboreal lichen foragers) and one for northern caribou (terrestrial lichen foragers). Both of these committees report to a national committee that co-ordinates recovery of woodland caribou nation wide. The strategies for recovery of caribou developed by these committees (MCTAC 2002, NCTAC In Prep.\(^1\)) recommend the formation of Recovery Implementation Groups to derive “operational level” planning for the recovery of groups of caribou herds where those groups have been arbitrarily defined by NCTAC based on ecological and geographical similarities among herds. Work at the local level for northern caribou is conducted under the auspices of the NCTAC by the Recovery Implementation Group (RIG). Terms of reference for the RIG in north-central BC is presented in Appendix A, group members are listed in Appendix B, and the planning area boundaries for the local herds are presented in Appendix C.

Project purpose: intended use of outcomes

The purpose of this project is to fulfil a strategic objective of NCTAC (NCTAC In Prep.) stated as follows:

- Establish local Recovery Implementation Groups (RIGs) to develop Recovery Action Plans that consider:
  - Socio-economic impacts of recovery (e.g., impacts to the forest industry, commercial recreation operators, backcountry recreational users and local communities\(^2\));
  - Probability of successful recovery; and


\(^2\) NCTAC note: The forum for assessing socio-economic impacts of protecting caribou habitat (e.g., lost AAC) and regulating backcountry recreation within caribou habitat should continue to be regional and sub-regional land use planning processes. Until recently, backcountry recreation has not been included in many of these plans, although it should be. Land use decisions that are already made by Cabinet as HLPs must be recognized.
Figure 1. Identified herds of woodland caribou located within the province of British Columbia showing their ecotype (Boreal, Northern, or Mountain), geographic range of historic populations (Extinct, Extirpated, Trace), and spatial location relative to the jurisdiction where caribou are proclaimed threatened of extirpation (Southern Mountain National Ecological Area) (MCTAC 2002).
The contribution of the recovered local populations to maintaining the two viable meta-populations of Northern Caribou in the SMNEA. The NC RIG for NC-BC recognizes the mandate for recovery planning in the SMNEA as it's top priority and management planning for herds of “special concern” in the Northern Mountain National Ecological Area (NMNEA) as a secondary priority. Outcomes from these planning initiatives have clear relations with enabling recovery of caribou, implementation of strategic objectives from many Land and Resource Management Plans (e.g., BCGovt 2000), and sustainable forest management in general, which can aid forest certification efforts and provide an evidentiary basis to meet regulations of the Forest and Range Practices Act.

RECOVERY GOALS, THREATS, AND MANAGEMENT TOOLS

Recovery goals

The vision of the Recovery Strategy is “the maintenance of caribou and their habitat in perpetuity throughout British Columbia’s Northern Caribou range in the Southern Mountains National Ecological Area.” This vision reflects the social, cultural and economic values associated with Northern Caribou - including people and caribou living in harmony. Goals and objectives have been formed in light of this vision but tempered with the reality of the current demands of an expanding human populace and the resource-based economy that sustains it.

Goals have been set with the major purpose of eventually down-listing Woodland Caribou in the SMNEA from Threatened to Special Concern. For COSEWIC down-listing, the decline in animal numbers must be stopped and populations must remain stable for at least 3 animal generations (~20 years in the case of caribou).

For population goals and conservation assessment, the Northern Caribou local populations in the SMNEA are divided into two meta-populations, the West-central meta-population, and the North-central meta-population. Status of local populations in the West-central meta-population is moderately well documented; however, very little is known about the status of many local populations in the North-central meta-population. Although it appears that most of the local populations contain over 100 caribou, reliable population estimates, population trends, and extent of seasonal use patterns are currently not available. Therefore threats and recovery goals for those local populations cannot be properly evaluated.

Although the two Northern Caribou meta-populations in the SMNEA are not in imminent danger of extinction, efforts are required to reverse current downward trends for some local populations. Two local populations consisting of less than 50 caribou (Telkwa, Charlotte Alplands) could become extirpated in the near future unless specific recovery measures are implemented. Three other local populations of about 100 caribou (Rainbows, Kennedy-Siding, Takla) are in danger of declining due to the current level of threats or isolation from other local populations.
**Recovery Goals:** (from NCTAC in prep.):

GOAL #1: Northern Caribou distributed throughout their current range in the Southern Mountains National Ecological Area in B.C. with all of the following criteria achieved:

- Stable local populations with a minimum density of 50 adult caribou/1000 km² or a minimum of 100 adult caribou (whichever is greater) in each local population;
- A minimum of 2500 adult caribou in the West-central meta-population distributed across all 5 local populations and connectivity between local populations;
- Maintain the Itcha-Ilgachuz local population at or above its current population level;
- Viable local populations in the North-central meta-population within their current known range and connectivity between local populations;
- A minimum population goal to be set for the North-central meta-population when better local population estimates and trends are available; and,
- Sufficient critical habitat to support local population goals in the long term.

GOAL #2: Recovery of identified local populations at risk.

GOAL #3: Public support for the recovery of Northern Caribou and their habitats in the Southern Mountains National Ecological Area.

**Key threats to recovery**

**Threats:** (from NCTAC in prep.)

- Loss of space in which to avoid predators (increased predation) due to:
- Fragmentation of habitats by human (forestry and mining – roads and forest harvesting) activities
- Improved access and mobility for predators due to an increase of the amount of roads on the landscape for industrial activities and increases in use by recreational users.
- Loss of winter food supply on winter habitats; due to human activities that reduce lichen abundance
- Loss of alternative habitats that become essential when natural disturbances (fire, beetles) reduce the value of current habitats
- Illegal human kill of caribou; due to increased access made possible by roads and technology (ATVs, snow machines and river boats)
- Disturbance / displacement; due to human commercial and recreational activities

**Key management tools**

**Management tools available to combat threats:** (from NCTAC in prep.):

- Predator Management:
  - Increasing hunting bag limits for wolves
  - Extending the wolf trapping season
  - Extending the general open hunting season for wolves
  - Wolf control
- Management of other species:
  - Reduction in numbers of alternative prey for predators via hunting management (moose and deer)
Caribou harvest management (legal and illegal):
  o Hunting regulations
  o Increased enforcement action regarding illegal kill
  o Access management

Habitat Management:
  o Forage availability
    ▪ Control methods and timing of industrial activities to maintain lichen supply
  o Displacement
    ▪ Control timing of human activities (both industrial and recreational)
    ▪ Access management controls including use closures and barriers
  o Predation
    ▪ Large patch management – roads and cutblocks managed to ensure large, contiguous areas of habitat are available (predator avoidance)
    ▪ Access rehabilitation to increase the rate of vegetation re-growth inhibiting use by wolves and recreational users.

PLANNING AREA

The proposed recovery planning area will focus on the Taka, Wolverine, Scott, and Chase caribou herds and the management planning area will focus on the Finlay, Gataga, and Fox caribou herds (Appendix C), for a total planning area of >600 km². The planning area is simply the Resource Management Zones or Landscape Units that completely enclose herd areas as depicted by NCTAC (In Prep.). These areas also enclose all relocations of radio-collared caribou collected on these herds since 1991 (n = 64,907).

PROJECT MANAGEMENT PLAN

Project design and analytical methods

Fundamental to the design and function of the northern caribou RIG are four key elements:
1. The engagement of local stakeholders and client groups in a forum of operational planning;
2. Guidance from the NCTAC and other RIGs (e.g., Kinley 2001 or the more recent work on the Hart and North Cariboo Mountains populations);
3. Standards associated with recovery planning (RENEW 2003); and

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4 See http://www.forrex.org/publications/hosted/RAG_Caribou_lowres.pdf
4. A variety of ongoing and recent research and inventory that forwards relevant information (Terry and Wood 1999, Johnson 2000, Poole et al. 2000, the Omineca Northern Caribou Project\(^5\)) and tools (McNay et al. 2003b) that facilitate the development of technically sound and scientifically defendable recovery plans.

With these elements as guidance, a Terms of Reference for the BC RIG for NC-BC was constructed (Appendix A). The development of a habitat supply model for caribou in north-central BC (McNay et al. 2003b) has enabled analyses for long-run habitat supply within the context of sustainable forest practices. Preliminary results of this model have shown sustainability of pine-lichen winter range but also that predation risk to caribou is likely to seriously undermine the likelihood of ever realizing that sustainability. Modeling results like these from past analysis and current focus on the issue of integrated management tactics (McNay and Giguere 2003, McNay et al. 2003a) could directly aid recovery planning. Specific examples of recent work in this regard are as follows:

- Adaptive management of terrestrial lichens (Sulyma and Wawryszyn 2001);
- Adaptive management of predation risk (McNay and Giguere 2003, McNay et al. 2003a);
- Habitat supply model testing (Doucette and McNay 2003, McNay and Doucette 2003);
- Habitat supply analyses (McNay et al. 2003b, McNay et al. In Prep.6);
- Use of habitat supply forecasts in assessing efficacy of conservation policy (McNay et al. 2003c);
- Use of habitat supply modeling to identify ungulate winter ranges for caribou (Schmidt and McNay 2002); and
- Development of an effectiveness-monitoring plan for caribou as an indicator of sustainable forest management (see Appendix I in McNay et al. 2003a).

Proposed activities and deliverables

The activities described in this work plan include 3 more workshops in 2004: 1) March – to report out on a variety of technical projects underway through Slocan Forest Products’ Forest Investment Account Funding initiatives begun April 2003, to establish recovery goals, to establish seasonal-range work groups that compose management policy, and to define a process to establish recovery and survival habitats; 2) April – to review recovery and survival habitats and seasonal range management policy; 3) August – to review documentation of proposed recovery actions. Together, the following list of activities (deliverables are bracketed) form the Recovery Action Plan for the recovery planning area:

- Ratify Terms Of Reference, planning areas, goals, and general work activities (Work Plan - 1);
- Summarize population information from:
  - historical population surveys (Census Reports - 2) and

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\(^5\) See [www.slocan.com/irm](http://www.slocan.com/irm)

Establish use of CHASE as a way to aid decisions:
  o Review model methods (*Model Report - 4*);
  o Identify seasonal habitat values spatially (*Maps - 5*);
  o Forecast habitat and population indicators through time to:
    ▪ Identify indicator thresholds and limiting constraints (*Indicators Report - 6*), and
    ▪ Identify sensitive habitat and/or population factors and relationships lacking certainty (*Sensitivity Report - 7*);
    ▪ Define survival and recovery habitat (*SAR Habitat Report - 8*);
    ▪ Assess current UWR policy effectiveness (*UWR Policy Report - 9*);
  ❖ Define population threats and management options for all aspects of habitat (e.g., predation risk [*Predation Risk Report - 10*], food [*AM Lichen Report - 11*], and displacing activities) including, but not limited to, discussion on topics such as control of predation risk and minimizing displacing activities by humans (*Policy Backgrounder - 12*);
  ❖ Formulation and documentation of policy rules to achieve recovery (*Recovery Management Plan - 13*);
  ❖ Use of CHASE to establish policy forecasts and effectiveness monitoring benchmarks (*Effectiveness Monitoring Plan - 14*);
  ❖ Assessment of policy operability (operational ability to implement) (*Operability Assessments by Seasonal Range - 16*);
  ❖ Analysis and documentation of socio-economic considerations (*Socio-economic Implications - 17*);
  ❖ Set priority for proposed implementation activities (*Implementation Plan - 18*) including but not limited to:
    o A census of caribou within the planning area; and
    o Adaptive management plans as required for novel or untested management actions.

The associated activity schedule is depicted by timelines in figure 2 which covers the time period through the 2004 calendar year and activities up to, but not including, deliverable 14 through 18. These latter deliverables are proposed as activities to take place in 2005.

**Forecasted cost**

Workshop costs, to cover logistics, facilitation, minutes, and production of background materials (reports, maps, etc.), are expected to be $2,000.00/day. Total budget for 2004: $7,000.00

Technical support (reporting, data collection and editing, map preparation, policy evaluation, etc.) is expected to cost $60,000.00. Publication costs may run an additional $10,000.00.

While a census of caribou was conducted for the Wolverine and Takla areas during February of 2003, no census has been conducted in the Chase area since 2002. This would be a high priority, inventory activity for late-winter of 2004/2005.
Figure 2. A schematic of activities and outputs resulting from work of the Northern Caribou Recovery Implementation Group for North-central British Columbia.

**Extension**

It is expected that Forrex can deliver extension\(^7\) support given their involvement in the past. Extension materials are expected to be workshop-meeting minutes and a draft recovery action plan.

**CONTINUOUS IMPROVEMENT AND MANAGEMENT IMPLICATIONS**

Work of the NC RIG for NC-BC will undoubtedly lead to numerous implications for management of both caribou and forests in north-central BC generally. Management policy and the overarching recovery action plan, are expected to set context for legal objectives under the BC Forest Practices Code at a variety of planning levels (e.g., Landscape Unit Planning, Ungulate Winter Ranges, Sustainable Forest Management

\(^7\) [http://www.forrex.org](http://www.forrex.org)
Plans, or Forest Stewardship Plans). Having stated this however, the clear philosophy guiding the most recent work on caribou in north-central BC (McNay et al. 2003a), and the philosophy that will be fundamental to recovery planning, will be that of science-based decision making using modeling to link policy development through adaptive management and back to policy assessments. Such a link provides a framework for continuous improvement in the recovery of caribou populations and the sustainability of forest management.

ACKNOWLEDGEMENTS

The author wishes to express gratitude to co-members of the Northern Caribou Technical Advisory Committee for their input to the construction of local Recovery Implementation Groups and in particular to Dale Seip and Ian Hatter for leading the way. Slocan Forest Products-Mackenzie Division provided funding to develop this work plan and many of the background technical projects that enabled the RIG to launch quickly into recovery actions.

LITERATURE CITED


APPENDIX A. PROPOSED TERMS OF REFERENCE FOR NORTHERN CARIBOU RECOVERY IMPLEMENTATION GROUP FOR NORTH-CENTRAL BC

Organizational Framework

The Northern Caribou Recovery Implementation Group for North-central British Columbia (NC RIG for NC-BC) will work under the auspices of the Joint Steering Committee (JSC) for recovery of caribou within the Southern Mountains National Ecological Area (SMNEA). This JSC is composed of three subcommittees (Figure 1), which provide technical advice to government and others on recovery of woodland caribou:

- The Terrestrial Lichen - Winter Feeding Ecotype technical advisory committee in BC - currently known as the Northern Caribou Technical Advisory Committee or NCTAC;
- The Arboreal Lichen - Winter Feeding Ecotype technical advisory committee in BC – currently known as the Mountain Caribou Technical Advisory Committee or MCTAC; and
- The Terrestrial Lichen - Winter Feeding Ecotype technical advisory committee in Alberta.

Figure 3. Organizational structure of teams associated with the recovery of woodland caribou in the Southern Mountain National Ecological Area (SMNEA).
Figure 4. Identified herds of woodland caribou located within the province of British Columbia showing their ecotype (Boreal, Northern, or Mountain), geographic range of historic populations (Extinct, Extirpated, Trace), and spatial location relative to the jurisdiction where caribou are proclaimed threatened of extirpation (Southern Mountain National Ecological Area) (MCTAC 2002).
Each technical subcommittee is supported by Recovery Implementation Groups (RIG’s). The NC RIG for NC-BC covers the most northern local populations of the terrestrial lichen-feeding ecotype of woodland caribou within the SMNEA in central BC, including the Wolverine, Takla, and Chase populations (Figure 2). Five other RIG’s work under the auspices of the JSC (Figure 1). The JSC-SMNEA coordinates the activities of all RIG’s, provides technical advice to RIG’s, and performs a number of other activities outlined in “A Strategy for the Recovery of Northern Caribou in the Southern Mountain National Ecological Area in British Columbia” (NCTAC in prep.8).

Note: All RIG’s report to and take direction from the NCTAC – including direction on such topics as how to address socio-economic impacts and guidelines for identification of critical habitat.

Role of the Northern Caribou RIG for North-central British Columbia

The overriding goal of the NC RIG for NC-BC is to effect recovery of the most northern local populations of terrestrial lichen-feeding ecotype of woodland caribou within the SMNEA in central BC. For the purposes of this Terms of Reference the relevant populations are the Wolverine, Takla, and Chase populations including a remnant herd locally known as the Scott herd; all populations are henceforth referred to as the Herds. The NC RIG for NC-BC will provide to NCTAC, the best available scientific advice on the measures required to recover the Herds where this advise will be in the form of one or more action plans. The NC RIG for NC-BC will operate: in accordance with the most recent draft of the RENEW Recovery Operations Manual, under direction from the NCTAC, and under the following terms of reference.

Responsibilities of the Northern Caribou RIG for North-central British Columbia

✓ To produce Recovery Action Plans for an area that encompasses the Herds. These Recovery Action Plans will be consistent with the objectives approaches and priorities outlined in A Strategy for the Recovery of Northern Caribou in the Southern Mountain National Ecological Area in British Columbia and will follow the template suggested in the Recovery Operations Manual.
✓ To provide advice regarding socio-economic considerations affecting recovery and on evolving issues related to recovery or conservation of the Herds.
✓ To recommend, coordinate and/or facilitate the implementation of the Recovery Action Plans, ensuring that affected parties are consulted with and involved as appropriate.
✓ To build public support for, and understanding about, recovery of woodland caribou by extending the activities of the RIG to general public and stakeholders.
✓ To document activities and report regularly to the NCTAC.
✓ To integrate activities with those of other RIG’s under the JCS and with RIG’s on other teams operating in the same ecosystem or geographic area.

RIG Composition

- Members will normally be from government agencies, resource industries, the public, and First Nations.
- Members will have a minimum 2-year term reviewed annually.
- Members should be knowledgeable about Northern Caribou technical information and/or land-use planning and management in the relevant area of British Columbia (i.e., RIG members must provide biological or management expertise relevant to caribou recovery, and/or must have a role to play in the implementation of the Recovery Action Plans).
- Maximum number: 20
- Members must be willing to participate in a team environment.
- Members must be able to commit to at least a minimum amount of time required for effective RIG function and be available, or have an alternate available, for each RIG meeting.
- The RIG will provide regional representation across the geographical area.
- The RIG will allow for attendance at meetings by, or for participation by, expertise external to the regular RIG membership as required.

RIG Chair

1. The RIG Chair is a member of NCTAC.
2. The RIG should choose the RIG Chair and may elect a co-chair.
3. The RIG Chair has the following responsibilities:
   a) Attend recovery team meetings (i.e., NCTAC) on a regular basis;
   b) Ensure information flow between the recovery team and the RIG;
   c) Coordinate work of the RIG;
   d) Prepare agenda, chair meetings, ensure minutes are produced;
   e) Ensure maintenance of recovery team files and provide copies to NCTAC as appropriate;
   f) Provide information to NCTAC at least on an annual basis, or more often if required by funding or other agreements or government (i.e., RENEW), on the following:
      i) Funding contributions (monetary, in-kind, person-years, volunteer);
      ii) Public contact and consultation activities;
      iii) Progress of action program;
      iv) Financial expenditures;
      v) Other as appropriate or defined by the recovery team.

RIG Operating Principles

1. RIG members (Table 2) must be committed to the recovery and conservation of northern caribou in a timely manner.
2. Non-RIG members can attend RIG meetings and will be provided with discussion opportunities during a regulated, and pre-determined time-period at each meeting.
3. Members responsibilities:

9 General guidelines: Two to three meetings from January through March, 2004 and a further three meetings before the end of 2004 with additional work between meetings.
a) Members, or their alternates, will endeavour to participate in all meetings.
b) Members are expected to contribute their knowledge and expertise to the work of
the recovery team, and to carefully review and provide comments on draft
documents
c) Members, other than the chair, will not represent the opinion of the RIG
(including press etc.)

4. The Northern Caribou RIG for North-central British Columbia will work under the
auspices of NCTAC. NCTAC will provide guidance to the RIG. All activities,
communications, and documents are to be consistent with NCTAC decisions and
policy. The Recovery Action Plan will be submitted to, and reviewed by, NCTAC.

5. Consensus: Decisions will be made by consensus if possible.
a) Consensus means everyone feels that the decision is technically sound and
supported by the best available information, with the view to reaching the overall
vision of recovering caribou.
b) Consensus decisions will be reached by the group, with individual concerns and
dissenting opinions with rationales clearly acknowledged and recorded in the
plan and the minutes, as appropriate.
c) If consensus cannot be achieved, there will a mechanism for recording the
dissenting opinion(s) with rationales within the Recovery Action Plan.

6. Decision-making will be transparent:
a) Agendas, minutes, reports and other documents will be made available to
NCTAC and/or the public as appropriate.
b) Regular reporting to NCTAC meetings as required.

7. Members of the RIG will:
a) Be sensitive to, and address, potential conflicts of interest.
b) Track funding contributions (monetary, in-kind, person-years, volunteer);
c) Incorporate and track public consultation activities
d) Seek outside peer review and evaluation
e) Track progress of action plan (as per performance evaluation measures)
f) Work with partners to raise and administer funds for RIG activities, in
   collaboration with other RIG’s, the NCTAC, the JSC, and others.

Recovery Action Plans

✓ First complete version of the Recovery Action Plan(s) vetted by NCTAC and
   completed by December 31, 2004 (covers 5-year period from January 01, 2005).
✓ The Recovery Action Plan will be revisited on a minimum 5-year time frame, or
   as necessary.
✓ The Recovery Action Plan will generally be consistent with the existing recovery
   strategy, although alterations are possible through discussion with the NCTAC
✓ The Recovery Action Plan should follow the template suggested in latest
✓ Establish performance evaluation measures which are linked to goals of the
✓ Include detailed descriptions of actions, priorities, timelines, and cost estimates
✓ Include the following information:
   o Current status, by herd, and rationale; list threats
   o Goals for recovery
   o Identification of the species’ critical habitat
   o Identification of threats to the species or critical habitat
- Identification of knowledge gaps
- Measures proposed to protect the species’ critical habitat
- Identification of any portions of the critical habitat that have not been protected
- Statement of measures to be taken to implement the recovery strategy and when they are to take place

✓ Identify social, economic and ecological consequences (including costs where possible) of implementing the action plan and the benefits to be derived from its implementation.
Table 1. Current members of the Northern Caribou Recovery Implementation Group for North-central British Columbia.

<table>
<thead>
<tr>
<th>Contact</th>
<th>Organization</th>
<th>Phone Number</th>
<th>Email</th>
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<tbody>
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<td><a href="mailto:philipsmith@mail.canfor.ca">philipsmith@mail.canfor.ca</a></td>
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<td><a href="mailto:jim.reid@Gems5.gov.bc.ca">jim.reid@Gems5.gov.bc.ca</a></td>
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<td>Mail &amp; cc <a href="mailto:info@bctrapppers.bc.ca">info@bctrapppers.bc.ca</a></td>
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<tr>
<td><strong>Recovery Implementation Group (Technical Working Group):</strong></td>
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<td></td>
<td></td>
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<td><strong>Recovery Implementation Group (Facilitation):</strong></td>
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<td>R. Ellis and Associates</td>
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<td><strong>Woodland Caribou Recovery Team:</strong></td>
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APPENDIX C. PROPOSED PLANNING AREA BOUNDARIES TO ENCOMPASS HERDS OF CARIBOU IN NORTH-CENTRAL BC

Figure 5. A depiction of the proposed boundaries for two types of planning conducted by the Northern Caribou Recovery Implementation Group for North-central British Columbia: 1) recovery planning for “threatened” herds of caribou and 2) management planning for caribou herds “of special concern”. Areas were constructed by choosing Resource Management Zones that completely encompass herd boundaries as depicted by NCTAC (In prep).
Table 2. Size of areas receiving two types of planning conducted by the Northern Caribou Recovery Implementation Group for North-central British Columbia: 1) recovery planning for “threatened” herds of caribou (Chase, Scott, Takla, and Wolverine) and 2) management planning for caribou herds “of special concern” (Finlay and Frog-Gataga). Areas were constructed by choosing Resource Management Zones that completely encompass herd boundaries as depicted by NCTAC (In prep).

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