

Report on the Progress of the Recovery Strategy Implementation (Period 2017-2022) and the Action Plan Implementation (Period 2018-2023) for Caribou (*Rangifer tarandus*), Boreal Population, in Canada

Caribou, Boreal population



2024



Government
of Canada

Gouvernement
du Canada

Canada

Recommended citation:

Environment and Climate Change Canada. 2024. Report on the Progress of the Recovery Strategy Implementation (Period 2017-2022) and the Action Plan Implementation (Period 2018-2023) for Caribou (*Rangifer tarandus*), Boreal Population, in Canada. *Species at Risk Act Recovery Strategy Report Series*. Environment and Climate Change Canada, Ottawa. xii + 125 pp.

Official version

The official version of recovery documents is the one published in PDF. All hyperlinks were valid as of date of publication.

Non-official version

The non-official version of recovery documents is published in HTML format and all hyperlinks were valid as of date of publication.

For copies of the progress report, or for additional information on species at risk, including Committee on the Status of Endangered Wildlife in Canada (COSEWIC) Status Reports, recovery strategies, residence descriptions, action plans, and other related recovery documents, please visit the [Species at Risk \(SAR\) Public Registry](#)¹.

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Également disponible en français sous le titre
« Rapport sur les progrès de la mise en œuvre du programme de rétablissement
(période 2017-2022) et du plan d'action (période 2018-2023) du caribou (*Rangifer
tarandus*), population boréale, au Canada »

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ISBN: 978-0-660-71541-4

Catalogue no.: En3-4/140-1-2024E-PDF
EC24132

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Note: Caribou, Boreal population is referred to as “boreal caribou” in this document.

¹ <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html>

Acknowledgments

This Progress Report was prepared by Environment and Climate Change Canada. Environment and Climate Change Canada thanks the following organizations for their contributions: Natural Resources Canada, the Parks Canada Agency, the governments of British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Newfoundland and Labrador, Northwest Territories, and the Yukon, and Fuse Consulting Ltd. for their preparation of infographics. Environment and Climate Change Canada would also like to express its appreciation to all individuals, communities and organizations who have contributed to the implementation of recovery measures for boreal caribou in Canada.

Executive Summary

The boreal caribou is an icon of Canada's boreal forests and is culturally significant to Indigenous peoples and other Canadians. The boreal caribou relies on large areas of mature and old-growth coniferous forests and peatlands to access lichens and avoid predators. Human activity and wildfire have disturbed caribou habitat and created conditions favouring predators in many boreal caribou ranges, leading to significant population declines.

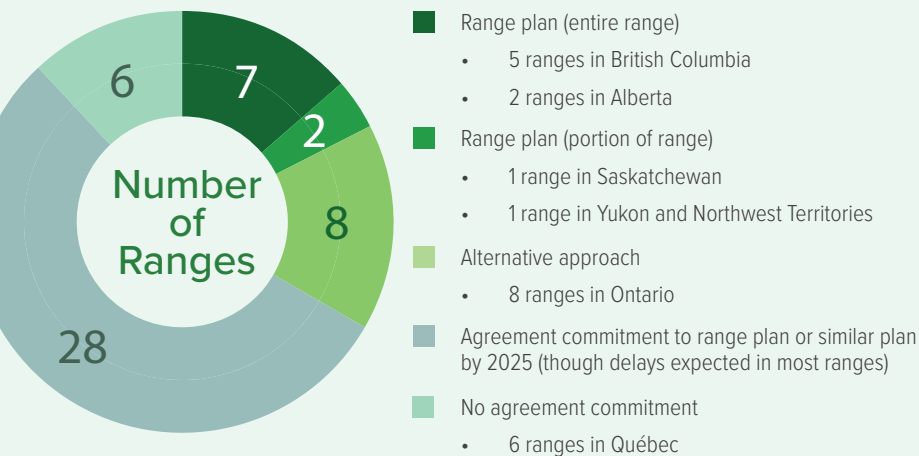
To support recovery, the federal government finalized a Recovery Strategy in 2012 (amended in 2020) and an Action Plan in 2018. This report provides a summary of the progress made towards implementing the Recovery Strategy (from 2017-2022) and the Action Plan (from 2018-2023).

The recovery goal for boreal caribou is to achieve self-sustaining local populations in all 51 ranges across Canada to the extent possible. Achieving this goal for all local populations will take decades and require commitment, collaboration, and cooperation.

Recovery Strategy Implementation

Range Planning is Underway:

Range plans outline how range-specific land and/or resource activities will be managed over space and time to ensure protection of critical habitat. Conservation agreements have helped to increase momentum on range planning since 2017 though delays have occurred, in part due to COVID-19 and engagement requirements.



Population:

Since 2017, more local populations have required intensive management actions; others experienced short-term (measured over 5 or fewer years) stabilization or increases.



Since 2017, one local population (Coastal (ON6)) fell below 100 animals.

Habitat:

Total disturbance increased in 30 ranges, decreased in 14, and remained stable in 7.

Critical habitat identification is now complete for all ranges

Additional research on the unique disturbance regime (high wildfire and very low human disturbance) in Saskatchewan's Boreal Shield range (SK1) allowed identification of critical habitat for SK1 in the amended Recovery Strategy (2020).

21 ranges meet or exceed the undisturbed habitat threshold

A minimum of 65% (or 40% in SK1) undisturbed habitat in each range is a key component of the species' critical habitat and important for supporting self-sustaining local populations.

1 additional range above threshold since 2017



Minimum threshold



1 caribou icon = 1 caribou range



Over 10,030,000 hectares of new protected and conserved areas within boreal caribou distribution since 2017.

Action Plan Implementation

Most commitments are completed or ongoing



18 complete or ongoing
5 initiated
1 not initiated

The **National Boreal Caribou Knowledge Consortium (NBCKC)** and the **Indigenous Knowledge Circle (IKC)** were established in 2018 to support knowledge sharing, generation and mobilization, and collaborations across multiple partners.

- In addition to a knowledge sharing portal (cclmportal.ca), NBCKC working groups and the IKC developed a suite of tools and resources to support population monitoring, habitat restoration, and respectful collaboration with Indigenous peoples.

From 2018-2023, the **federal government committed \$117 million** in support of habitat protection and restoration, population management, Indigenous engagement and capacity building, monitoring, and research.

- \$55 million to provinces and territories
- \$56 million to Indigenous governments and organizations
- \$6 million to stakeholders

\$326 million

Partners committed \$209 million in matching funds (cash and in-kind).

An order finalized in 2019 protects approximately **1,450,000 hectares of boreal caribou critical habitat** on federally-administered lands.

Federal scientists are exploring **key knowledge gaps** to inform recovery measures with research completed/underway to better understand: genetic population structure, response to habitat disturbance and climate change, and efficacy of habitat restoration.



Conservation agreements have been signed with Alberta, Saskatchewan, Manitoba, Ontario, Newfoundland and Labrador, Northwest Territories, and Yukon (along with Gwich'in Tribal Council and the First Nation of Na-cho Nyäk Dun), as well as Athabasca Chipewyan First Nation and Mikisew Cree First Nation, and Cold Lake First Nations.

These agreements include commitments to range planning and/or other caribou recovery measures such as monitoring, population and habitat management, and Indigenous engagement.



Next Steps:

Over the next five years, ECCC intends to:

- Continue supporting the leadership of provinces and territories in managing boreal caribou and their habitat, including through stronger, new or renewed conservation agreements and/or nature agreements.
- Continue supporting meaningful engagement with Indigenous peoples and Indigenous-led stewardship for boreal caribou conservation.
- Leverage and support other biodiversity, nature, sustainable jobs, reconciliation, and climate goals, e.g., NRCan's 2 Billion Trees, conserving 30% of Canada's land and water by 2030, and the Kunming-Montreal Global Biodiversity Framework targets.
- Update *Species at Risk Act* recovery planning documents for boreal caribou to incorporate new information, improve guidance, and increase alignment with Canada's broader policies.
- Continue monitoring implementation of the recovery strategy and the progress towards meeting its objectives.

For more details, see the full [Progress Report](#).

British Columbia Overview

Federal-Provincial Agreement:

While B.C. and Canada do not have a conservation agreement for boreal caribou, in November 2023 (outside reporting period) they signed the *Tripartite Framework Agreement on Nature Conservation between Canada, British Columbia, and the First Nations Leadership Council* to advance shared priorities for nature conservation, including boreal caribou.



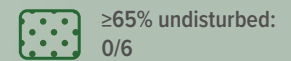
Population trend since 2017



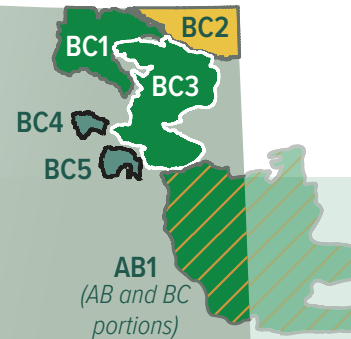
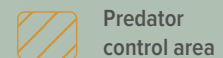
Population size



Habitat condition



Intensive management



*Population data at other scales or prior to 2017 may be available – see Appendix A.

Range Plans or Similar Plans:



Completed

The *Boreal Caribou Protection and Recovery Plan* (BCPRP) provides management recommendations to support recovery of five of the six federal ranges in B.C. (Chinchaga (AB1) is not included). It was endorsed by B.C. in summer 2023 (outside reporting period).

Initiated

Management of the B.C. portion of the Chinchaga range has been initiated and will continue through regional landscape planning tables.

Key Recovery Measures Since 2017:

95 km of legacy linear features received Indigenous-led restoration treatments, and restoration prioritization criteria were developed.

Annual caribou monitoring in all ranges through collaring and aerial surveys.

A five-year predator reduction plan that determined predator control is only required in the Chinchaga boreal caribou range at this time (ongoing since 2018-19).

ECCC committed \$3 million for projects in B.C.:

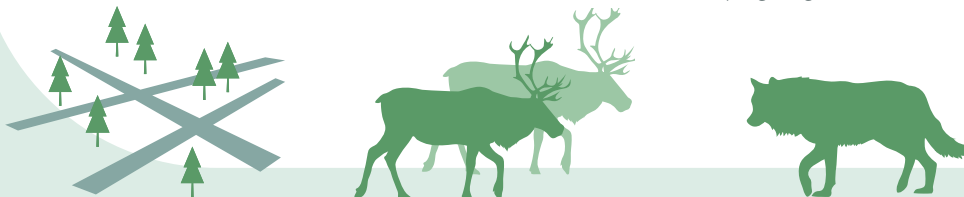
\$1 million to Indigenous governments and organizations

\$1 million to the province

\$1 million to stakeholders

Partners committed

\$4 million in matching funds.



Further details on boreal caribou status and recovery progress since 2017 can be found in this [Progress Report](#).

Alberta Overview

Federal-Provincial Agreement:

Alberta and Canada signed a five-year conservation agreement in 2020 to support the conservation and recovery of boreal and southern mountain caribou to naturally self-sustaining status within 50-100 years.



Agreement commitments support achieving and maintaining **at least 65% undisturbed habitat.**

Commitments Include



Annual monitoring and public reporting of population trends and habitat condition.



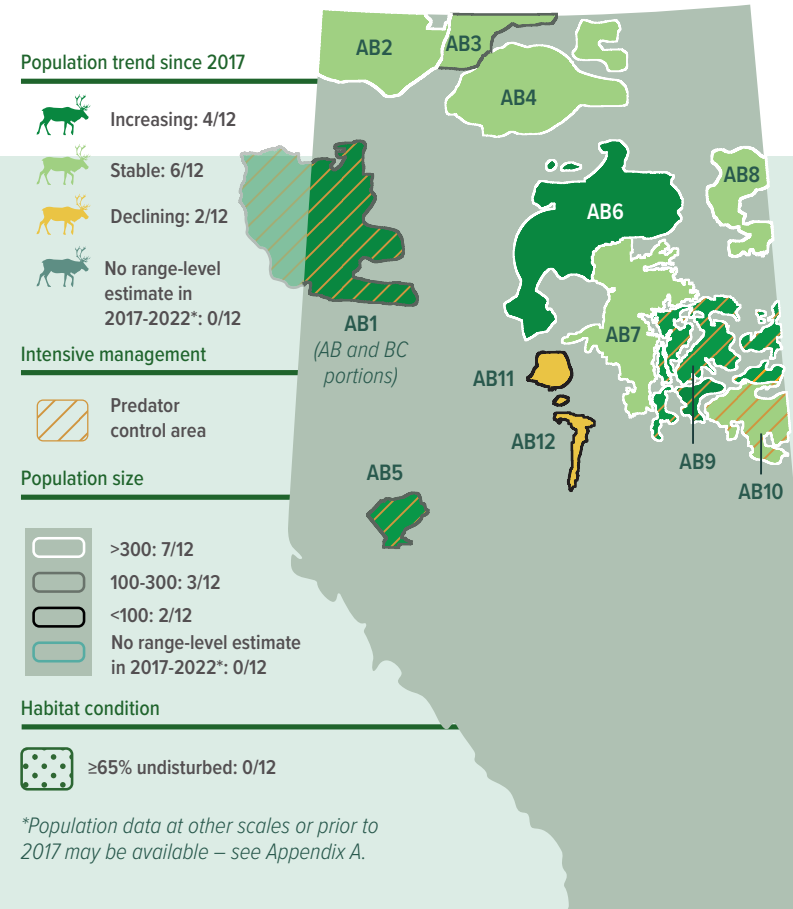
Continue and scale up provincial restoration programs and avoid disturbing treated areas.



Landscape-level planning, including final sub-regional plans for all ranges by 2021-2025.



Align access management plans and harvesting operations with caribou critical habitat outcomes.



Range Plans or Similar Plans:



Completed

Cold Lake (AB10)
Bistcho (AB2)

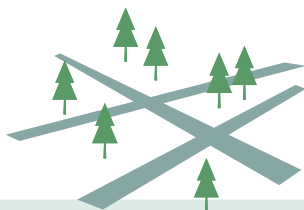
Final sub-regional plans in all ranges are expected by 2027.

Key Recovery Measures Since 2017:

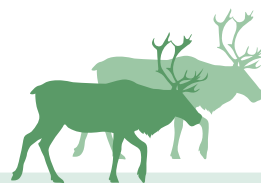
818,658 ha included in the designation of protected areas.



~500 km of seismic lines received provincially-led restoration treatments.



Caribou monitoring including population trend (in all ranges), size (in two ranges), distribution, and health.



ECCC committed \$33 million for projects in Alberta:

- \$12 million** to Indigenous governments and organizations
 - \$18 million** to the province
 - \$3 million** to stakeholders
- Partners committed **\$117 million** in matching funds.

Further details on boreal caribou status and recovery progress since 2017 can be found in this [Progress Report](#).



Environment and Climate Change Canada

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Canada

Saskatchewan Overview

Federal-Provincial Agreement:

Saskatchewan and Canada signed a five-year conservation agreement in 2019 to support the conservation and recovery of boreal caribou to self-sustaining status in the medium-term.



Agreement commitments support achieving and maintaining at least **40% undisturbed habitat in the Boreal Shield range (SK1)** and **65% in the Boreal Plain range (SK2) within 80 years.**

Commitments Include



Establish population size and trend estimates.



Landscape-level planning, including final range plans by 2021 and habitat protection.



Annually monitor anthropogenic and natural disturbance.



A habitat restoration program including partner collaboration opportunities.

Key Recovery Measures Since 2017:

191,649 ha included in the designation of protected areas.

A 20-year harvest deferral within Tier 1 caribou habitat management areas in SK2.

Draft best management practices for industry permits to help minimize project footprints, new linear features, and sensory disturbance.

Caribou population assessments via fecal DNA collections in SK2 and via radio-collared individuals and aerial surveys in SK1.

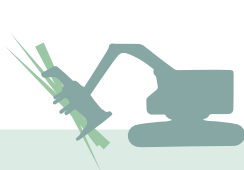
ECCC committed \$12 million for projects in Saskatchewan:

\$7 million to Indigenous governments and organizations

\$4 million to the province

\$330,000 to stakeholders

Partners committed **\$7 million** in matching funds.



Further details on boreal caribou status and recovery progress since 2017 can be found in this [Progress Report](#).

Population trend since 2017

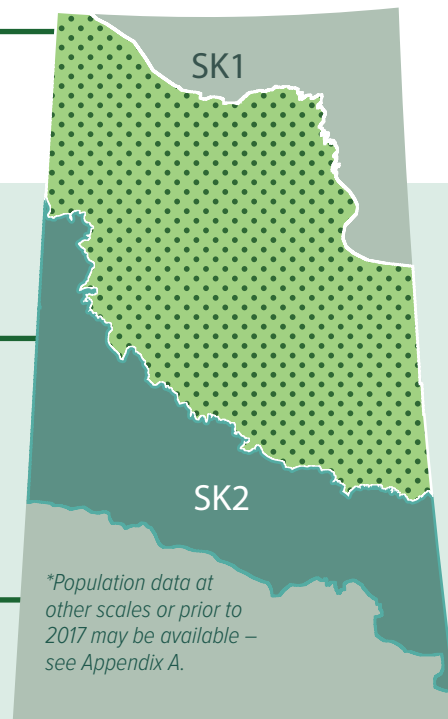
- Increasing: 0/2
- Stable: 1/2
- Declining: 0/2
- No range-level estimate in 2017-2022*: 1/2

Population size

- >300: 1/2
- 100-300: 0/2
- <100: 0/2
- No range-level estimate in 2017-2022*: 1/2

Habitat condition

- ≥65% undisturbed (or ≥40% for SK1): 1/2



Range Plans or Similar Plans:

Saskatchewan has divided SK2 into three caribou administrative units for planning and managing boreal caribou: East, Central and West.

Completed

SK2 Central and SK2 West.



Draft

SK2 East (final expected 2024).



Range planning for SK1 began in 2023.



Manitoba Overview

Federal-Provincial Agreement:

Outside of the reporting period, Manitoba and Canada signed a three-year conservation agreement in 2023 to support the conservation and recovery of boreal caribou to naturally self-sustaining status within 50 years or more.



Agreement commitments support achieving and maintaining **at least 65% undisturbed habitat within 30 years.**

Commitments Include



Population monitoring, including development of a framework to standardize data acquisition and public reporting.



Habitat monitoring and reporting.



Landscape-level planning, including final range plans for all management units by 2025, habitat protection, and range boundary updates.

Population trend since 2017

- Increasing: 1/13
- Stable: 1/13
- Declining: 2/13
- No range-level estimates in 2017-2022*: 9/13

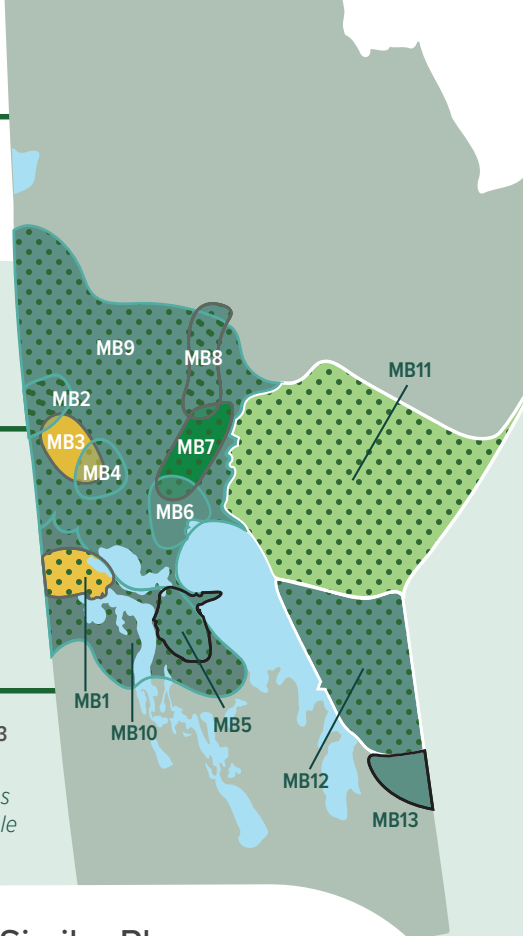
Population size

- >300: 2/13
- 100-300: 4/13
- <100: 2/13
- No range-level estimates in 2017-2022*: 5/13

Habitat condition

- ≥65% undisturbed: 10/13

*Population data at other scales or prior to 2017 may be available – see Appendix A.



Range Plans or Similar Plans:

Manitoba is developing a framework for managing boreal caribou within the nine management units identified in the 2015 provincial recovery strategy and expects range planning timelines to follow the conservation agreement timelines:



2025

Final plans expected for all management units.

Key Recovery Measures Since 2017:

Developed new land cover classification datasets for all nine management units to support range planning.

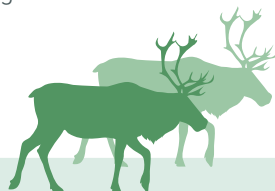
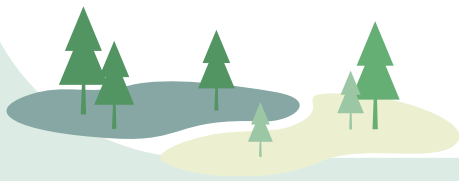
Completed population data analyses in 2018 and 2020 for all management units and **radio-collaring and survey activities** in three management units.

ECCC committed \$3 million for projects in Manitoba:

\$2 million to Indigenous governments and organizations

\$1 million to the province

Partners committed **\$3 million** in matching funds.



Further details on boreal caribou status and recovery progress since 2017 can be found in this [Progress Report](#).



Ontario Overview

Federal-Provincial Agreement:

Ontario and Canada signed a five-year conservation agreement in 2022 to work collaboratively to sustain or improve the environmental conditions necessary for the recovery of boreal caribou at the range scale.



The conservation agreement commits Ontario and Canada to reviewing and refining evidence-based approaches to managing for **self-sustaining local populations**.

Commitments Include



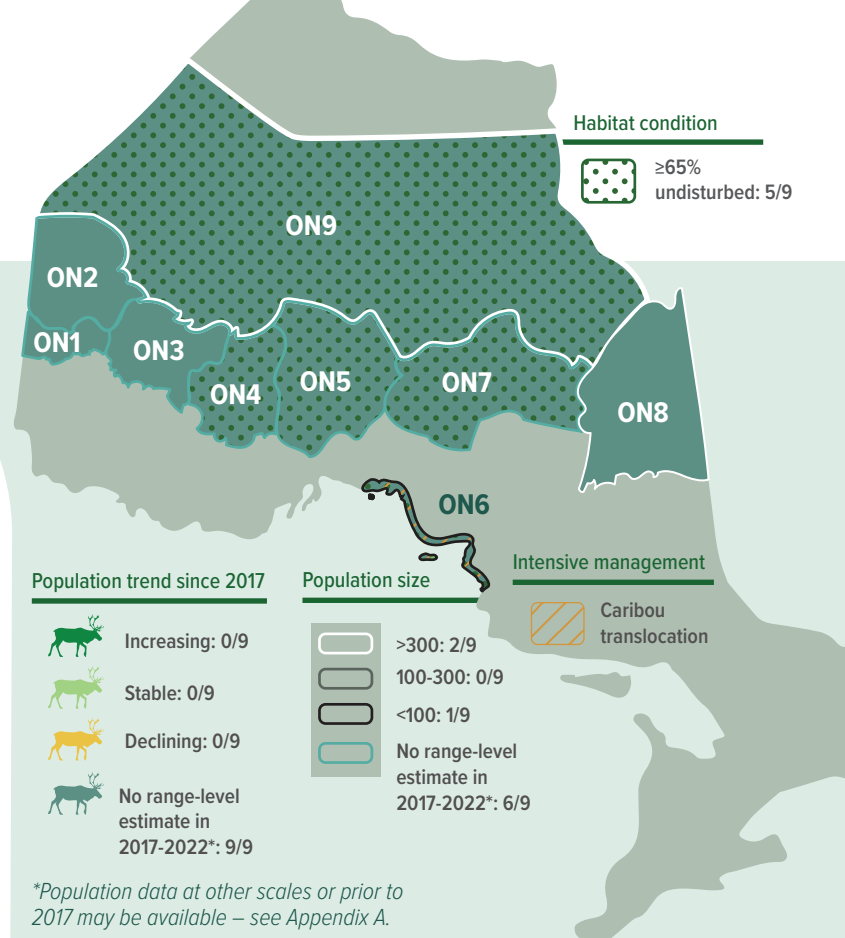
Increase habitat protection and assess, plan, and implement habitat restoration activities.



Collaborate and implement conservation actions with Indigenous communities and organizations, independent experts, and stakeholders.



Consult on, finalize, and implement a management approach for the Coastal range (ON6).



Range Plans or Alternative Approach:

Ontario's *Range Management Policy in Support of Woodland Caribou Conservation and Recovery (2014)* supports the implementation of the range management approach described in Ontario's *Woodland Caribou Conservation Plan (2009)*.

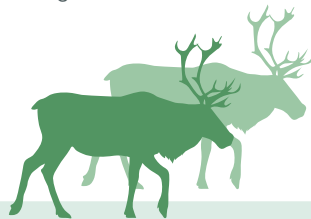


Key Recovery Measures Since 2017:

Collaborative research projects with universities on caribou genomics.



Ongoing development of caribou population dynamics models in the Far North (ON9) to identify important habitat and inform future planning.



Initiated development of a monitoring program and review of evidence-based conservation approaches.



ECCC committed \$9 million for projects in Ontario:

- \$3 million** to Indigenous governments and organizations
- \$5 million** to the province
- \$600,000** to stakeholders
- Partners committed **\$12 million** in matching funds.

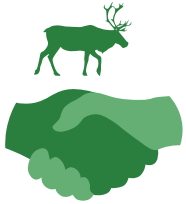
Further details on boreal caribou status and recovery progress since 2017 can be found in this [Progress Report](#).



Québec Overview

Federal-Provincial Agreements:

Québec and Canada signed two agreements under the *Cooperation agreement for the protection and recovery of species at risk in Québec* (2012-2022) in 2018 (1-year agreement) and in 2019 (3-year agreement) to support the conservation and recovery of boreal caribou. Both are expired; **negotiations for a new agreement are currently on hold.**



Population trend since 2017

- Increasing: 0/6
- Stable: 0/6
- Declining: 3/6
- No range-level estimate in 2017-2022*: 3/6

Population size

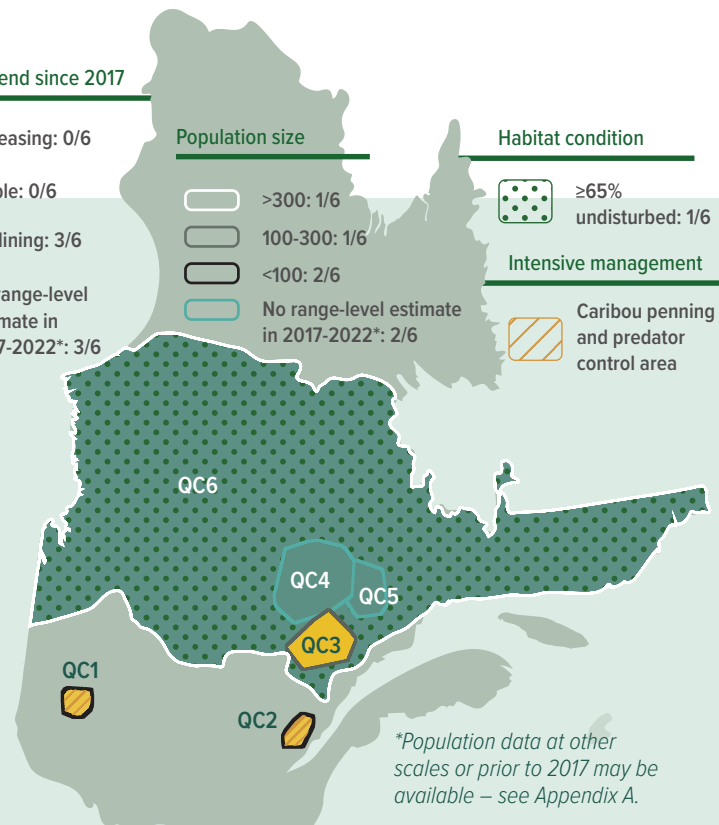
- >300: 1/6
- 100-300: 1/6
- <100: 2/6
- No range-level estimate in 2017-2022*: 2/6

Habitat condition

- ≥65% undisturbed: 1/6

Intensive management

- Caribou penning and predator control area



*Population data at other scales or prior to 2017 may be available – see Appendix A.

Range Plans or Similar Plans:

In 2021, Québec appointed an independent commission on boreal and Atlantic-Gaspésie caribou. In 2022, the commission undertook public hearings on proposed options for managing boreal caribou within the province and published its recommendations to the Government of Québec.



Following several delays, the Province has committed to publishing its *Stratégie pour les caribous forestiers et montagnards* (i.e., a provincial strategy for the management of boreal and Atlantic-Gaspésie caribou) in early 2024 (not released as of publication of this report).

Key Recovery Measures Since 2017:

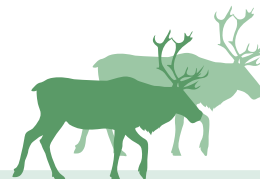
6,331,389 ha included in the designation of protected areas.



Transfer of remaining individuals of Val d'Or (QC1) and Charlevoix (QC2) herds to enclosures in 2020 and 2022, respectively, to prevent local extirpation.



Increased caribou monitoring including the adoption of a standardized approach in 2020.



ECCC committed \$21 million for projects in Québec:

\$12 million to Indigenous governments and organizations

\$8 million to the province

\$880,000 to stakeholders

Partners committed

\$31 million in matching funds.

Further details on boreal caribou status and recovery progress since 2017 can be found in this [Progress Report](#).



Newfoundland and Labrador Overview

Federal-Provincial Agreement:

Newfoundland and Labrador and Canada signed a four-year conservation agreement in 2019 to articulate how they would collaboratively support the recovery of boreal caribou in Labrador.



Agreement commitments include maintaining **over 65% undisturbed habitat**.

Other Commitments Include



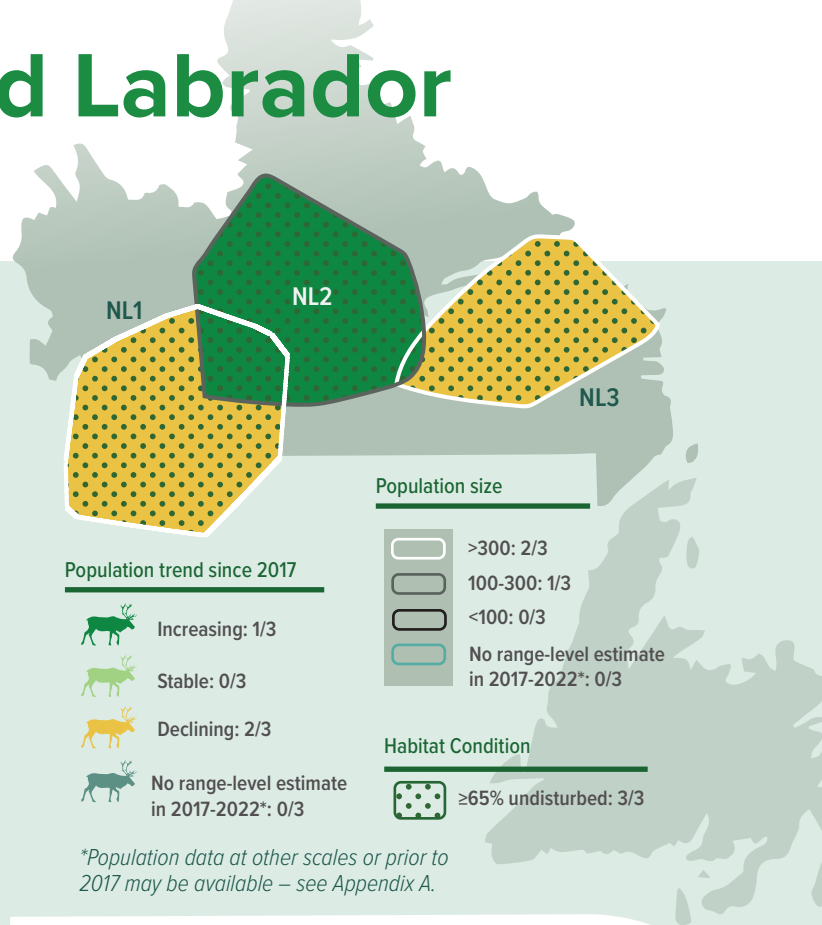
Improving knowledge through monitoring of caribou, alternate prey, and predators.



Indigenous engagement and caribou guardianship.



Final range plans by 2023.



Range Plans or Similar Plans:

A framework to inform range planning was developed in June 2022. One plan (covering all ranges) is currently being drafted in collaboration with Indigenous partners.



March 2024

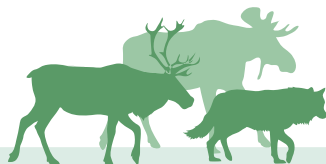
Final range plan expected.

Key Recovery Measures Since 2017:

Implemented Indigenous Guardians programs to build community support and actions to deter harvest of boreal caribou.



Monitored caribou annually since 2019 through collaring and aerial surveys, as well as moose and wolf populations.



Initiated development of a co-management framework with Indigenous partners.



ECCC committed \$8 million for projects in Labrador:

\$2 million to Indigenous governments and organizations

\$6 million to the province

Partners committed **\$12 million** in matching funds.

Further details on boreal caribou status and recovery progress since 2017 can be found in this [Progress Report](#).



Northwest Territories (NWT) and Yukon Overview

Federal-Territorial Agreements:

Yukon, Canada, First Nation of Na-cho Nyäk Dun, and Gwich'in Tribal Council signed a five-year agreement in 2019 to support boreal caribou conservation in Yukon and to maintain the species' **self-sustaining status over the long term.**



Commitments Include



Habitat protection, in alignment with the *Peel Watershed Regional Land Use Plan.*



Population monitoring and mapping both fire risk and lichen.

NWT and Canada signed a five-year agreement in 2019. Agreement commitments support achieving and maintaining **at least 65% undisturbed habitat and self-sustaining status.**



Commitments Include







Final range plans for all regions by 2023.



Caribou harvest management, including investigating and defining sustainable harvest levels.


Population trend since 2017

-  Increasing: 0/1
-  Stable: 0/1
-  Declining: 0/1
-  No range-level estimate in 2017-2022*: 1/1

Population size

-  >300: 1/1
-  100-300: 0/1
-  <100: 0/1
-  No range-level estimate in 2017-2022*: 0/1

Habitat condition

-  ≥65% undisturbed: 1/1

*Population data at other scales or prior to 2017 may be available – see Appendix A.



Range Plans or Similar Plans:

Completed

Yukon portion. Wek'èezhìi region (interim plan).



Initiated

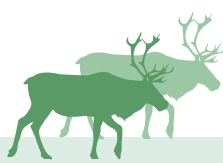
Plans are expected to be finalized by 2025-2027 for all five planning regions identified in NWT's A Framework for Boreal Caribou Range Planning (2019), i.e., Inuvialuit, Gwich'in, Sahtú, Wek'èezhìi (a final plan will replace interim plan), and the Southern NWT.

Key Recovery Measures Since 2017:

(Both): **324,482 ha (Yukon) and 2,364,111 ha (NWT)** included in the designation of protected areas.



(Both): **Caribou monitoring** to determine density in the Yukon and population trend in six study areas in NWT.



(NWT): NWT published a **Boreal Caribou Sustainable Harvest Assessment Report.**



(NWT): Launched the **NWT Species and Habitat Viewer**, where users can calculate the habitat disturbance impact of a proposed development.



ECCC committed \$27 million for projects in NT1:

\$16 million to Indigenous governments and organizations

\$10 million to NWT

\$1.4 million to Yukon

Partners committed **\$24 million** in matching funds.

Further details on boreal caribou status and recovery progress since 2017 can be found in this [Progress Report](#).



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1 Introduction

The [Amended Recovery Strategy for the Woodland Caribou \(*Rangifer tarandus caribou*\), Boreal Population in Canada](#)² (“the Recovery Strategy”; Environment and Climate Change Canada (ECCC) 2020) was posted on the Species at Risk Public Registry on December 22, 2020, replacing an earlier version of the Recovery Strategy that was posted on October 5, 2012 (Environment Canada 2012). The Minister of the Environment and Climate Change and the Minister responsible for the Parks Canada Agency are the competent ministers under the *Species at Risk Act* (SARA) for Caribou, Boreal population³ (“boreal caribou”). SARA section 46 states that the competent ministers are responsible for reporting on the implementation of the Recovery Strategy and on the progress towards meeting its objectives within five years after it is included in the Species at Risk Public Registry and in every subsequent five-year period, until its objectives have been achieved or the species’ recovery is no longer feasible. The [Report on the Progress of Recovery Strategy Implementation for the Woodland Caribou \(*Rangifer tarandus caribou*\), Boreal population in Canada for the Period 2012 to 2017](#)⁴ (herein referred to as “the 2017 Progress Report”; ECCC 2017), which covers the first five-year period following the publication of the Recovery Strategy, was published on October 31, 2017.

The [Action Plan for the Woodland Caribou, Boreal population in Canada: Federal Actions](#)⁵ (“the Action Plan”, ECCC 2018) was posted on the Species at Risk Public Registry on February 13, 2018. SARA section 55 states that the competent ministers must monitor the implementation of an action plan and the progress towards meeting its objectives and assess and report on its implementation and its ecological and socio-economic impacts five years after the plan comes into effect.

The purpose of this Progress Report is to fulfill these legal obligations by providing Canadians with a summary of the progress made toward implementing 1) the Recovery Strategy for the period of approximately October 2017 to September 2022, and 2) the Action Plan for the period of approximately February 2018 to January 2023.

This Progress Report should be considered as one of a linked series of documents, including: the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) status reports (COSEWIC 2002 & 2014), the Recovery Strategy, the Action Plan, and the [Multi-species Action Plan for Pukaskwa National Park of Canada](#) (Parks Canada 2017) and its corresponding [implementation report](#) (Parks Canada 2022).

² <https://species-registry.canada.ca/index-en.html#/consultations/2253>

³ In February 2022, through publication in the *Canada Gazette*, Part II, the species name was changed from “Woodland Caribou, Boreal population (*Rangifer tarandus caribou*)” to the current “Caribou, Boreal population (*Rangifer tarandus*)”, in alignment with COSEWIC’s 2011 report titled Designatable Units for Caribou (*Rangifer tarandus*) in Canada.

⁴ <https://species-registry.canada.ca/index-en.html#/documents/3199>

⁵ <https://species-registry.canada.ca/index-en.html#/consultations/407>

2 Background

2.1 Species Information

Boreal caribou was listed as a threatened species in Canada when SARA came into force in 2003. This listing was based on an assessment by COSEWIC in 2002. The status was re-examined and confirmed by COSEWIC in November 2014. The main reason for this designation is range-wide declines, loss of local populations over the past century, and range contraction up to 50% of their historical range in some areas.

2.2 Threats

The Recovery Strategy identified the primary threat to most boreal caribou local populations as unnaturally high predation rates due to human-caused habitat loss, degradation, and fragmentation. The detailed threat assessment for boreal caribou can be found in section 4 of the Recovery Strategy.

2.3 Population and Distribution

The Canadian distribution of boreal caribou stretches from the northeast corner of Yukon east to Labrador, and extends as far south as Lake Superior. The Recovery Strategy recognizes 51 local population ranges (see Figure 1) based on the best available information provided by the provinces and territories at the time of publication. Ranges are the geographic area occupied by a group of boreal caribou that are subject to similar factors affecting their demography and used to satisfy their life history processes (e.g., calving, rutting, wintering) over a defined timeframe.

Since the Recovery Strategy was published in October 2012, some provinces and territories have updated the range boundaries for boreal caribou in their jurisdiction based on new or refined evidence, or management considerations (see Figures B-1 to B-6 in Appendix B for maps depicting these new or adjusted provincial or territorial range boundaries, in contrast to the ranges described in the Recovery Strategy). Where possible, this Progress Report refers to both the ranges as identified in the Recovery Strategy, as well as the updated ranges used by provinces and territories. As range boundaries are one component of the identification of critical habitat for the species, amendments to federal range boundaries can only be made in an amended recovery strategy or action plan. ECCC will consider updating range boundaries, based on sound science, to improve alignment between federal and provincial/territorial monitoring, planning, and assessment processes when it initiates development of a future amended Recovery Strategy.

2.4 Recovery Goal and Objectives

As outlined in the Recovery Strategy, the recovery goal for boreal caribou is to achieve self-sustaining local populations in all 51 boreal caribou ranges throughout their current distribution in Canada, to the extent possible.

To guide recovery efforts, the Recovery Strategy identified population and distribution objectives for boreal caribou across their distribution in Canada. They are, to the extent possible, to:

- Maintain the current status of the 15 existing self-sustaining local populations; and,
- Stabilize and achieve self-sustaining status for the 36 not self-sustaining local populations.

Across most of the boreal caribou distribution, habitat has been managed for priorities other than caribou conservation over many years, which has led to extensive anthropogenic disturbances. These disturbances have contributed to long-term declines across the species distribution. Some actions implemented within the past five to ten years (e.g., the management of caribou mortality and sensory disturbances) are likely to have provided some positive, short-term outcomes for caribou. However, as boreal caribou's natural habitat is mature boreal forest ecosystems, demonstration of the effectiveness of the measures needed to achieve self-sustaining status for all local populations – specifically, landscape level habitat management and habitat restoration – will take decades. Recovery actions and investments to halt further habitat loss and regenerate disturbed areas must be implemented now, and continued into the future, to ensure achievement of the recovery goal.

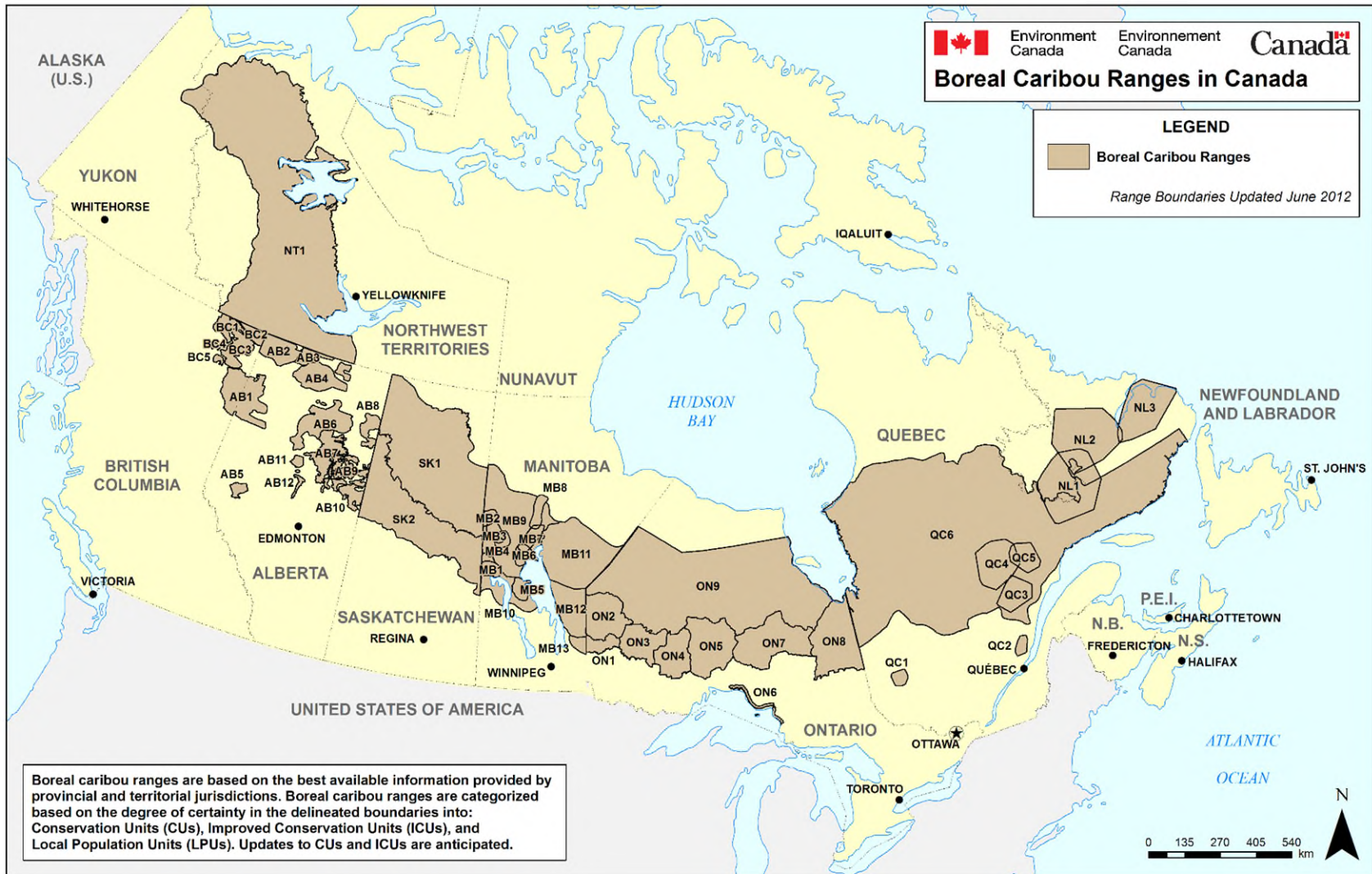


Figure 1. Geographic distribution of the 51 ranges of boreal caribou in Canada as presented in the Recovery Strategy (ECCC 2020)

3 Progress Toward Implementing the Recovery Strategy

3.1 Measures Supporting Identification of Critical Habitat

The 2012 Recovery Strategy (section 7) identified critical habitat for all boreal caribou ranges, except for Saskatchewan’s Boreal Shield (SK1). SK1 is characterized by high fire and very low anthropogenic disturbance, a unique situation that was not well represented in the data available for the meta-analysis in ECCC’s [Scientific Assessment to Support the Identification of Critical Habitat for Woodland Caribou \(*Rangifer tarandus caribou*\), Boreal Population, in Canada](#)⁶ (Environment Canada 2011; “the 2011 Scientific Assessment”) that was the basis for the identification of critical habitat in the other ranges. As such, the identification of critical habitat in SK1 was deferred until more information was available. The Recovery Strategy included a schedule of studies (section 7.2) required to complete the critical habitat identification for SK1, which has since been completed (see Table 1). Critical habitat in SK1 was identified in the Amended Recovery Strategy that was finalized on December 22, 2020. Additional details describing the work that was undertaken to support the identification of critical habitat in SK1 can be found in the [Boreal Caribou Science to Inform Recovery Science Summary Sheet #1](#)⁷.

Table 1. Schedule of studies required to complete the identification of critical habitat in the Boreal Shield (SK1) in northern Saskatchewan

Description of Activity (Environment Canada, 2012)	Activity Outcomes	Completion Date
Collect population information (size, trend, etc.) for a minimum of 2 years in SK1 where population condition is unknown.	As reported in the 2017 Report on Implementation, the University of Saskatchewan led the collection of population information (size, trend, adult female survival and calf recruitment) over the period of 2014-2017 (McLoughlin et al., 2019).	2017
Update disturbance model in the Department’s 2011 Scientific Assessment by including population information for SK1 to incorporate situations of high fire and very low anthropogenic disturbance.	ECCC updated the disturbance model by including the new population information for SK1 and additional data from several study areas with high fire and low anthropogenic disturbance. This analysis placed the SK1 data into a broader national context.	2017
Identification of critical habitat in SK1.	ECCC used the information generated above to complete the identification of critical habitat in SK1 through the finalization of the Amended Recovery Strategy in December 2020.	2020

⁶ <https://species-registry.canada.ca/index-en.html#/documents/2248>

⁷ <https://species-registry.canada.ca/index-en.html#/documents/1437>

3.2 Recovery Measures

The Recovery Strategy (section 6.2) describes, at a national level, the broad strategies and general approaches to be taken and the research and management activities needed to address the threats to boreal caribou and achieve the population and distribution objectives. These strategies and approaches fall under the categories of landscape level planning (including range planning), habitat management, mortality and population management, and population monitoring. Many strategies and approaches are interrelated and details on their implementation and their level of priority will differ across the country and by local population and habitat conditions.

Provinces and territories have the primary responsibility for management of lands, natural resources and wildlife within boreal caribou ranges as the majority of these ranges fall on non-federal land. The federal government also has an important leadership role to play in caribou recovery. In addition to the measures captured below, information on ECCC and Natural Resources Canada's (NRCan) implementation of commitments related to boreal caribou recovery can be found in section 4: Progress Toward Implementing the Action Plan. Parks Canada has the lead responsibility for species at risk within national parks. As Parks Canada publishes its own action plans and action plan implementation reports under SARA section 55 on the Species at Risk Public Registry, detailed information on Parks Canada-led recovery measures are not included within this report.

Boreal caribou is of great importance to many Indigenous peoples. Indigenous governments, Wildlife Management Boards, and individual communities and organizations have actively led and supported work that is crucial to the successful recovery of boreal caribou in Canada. In addition, stakeholders, such as environmental non-government organizations (ENGOS) and industry, have also participated in or implemented collaborative projects and research efforts for boreal caribou.

A summary of new and ongoing actions in each province and territory from approximately October 2017 to September 2022 to address the broad strategies outlined in the Recovery Strategy is found in sections 3.2.1 to 3.2.9 of this report (regulatory measures existing prior to 2017 are excluded). Due to the sheer number of projects across the species' distribution, it is not possible to capture every effort implemented by all parties to benefit boreal caribou within this report. Instead, this report primarily focuses on recovery efforts applicable at the provincial and territorial scale, with examples of actions taken by other parties (e.g., Indigenous peoples, ENGOS, industry associations, etc.). Additional information on recovery measures can be found in ECCC's progress reports on unprotected portions of critical habitat under SARA section 63, the [Boreal Caribou Knowledge Portal](https://www.cclmportal.ca/portal/boreal-caribou)⁸ of the Canadian Conservation and Land Management Knowledge Network, and webpages of relevant provinces, territories, wildlife management boards, Indigenous nations, and stakeholders.

⁸ <https://www.cclmportal.ca/portal/boreal-caribou>

It is acknowledged that the reporting period overlaps with the COVID-19 pandemic. As a result, many jurisdictions experienced delays in planning and implementing conservation measures due to difficulties carrying out engagement and implementation of on-the-ground actions due to social distancing restrictions, and redirection of efforts and capacity to dealing with the pandemic.

The information presented below includes the funding that ECCC committed to each province and territory, and the co-investments from partners, to implement boreal caribou conservation measures under their respective SARA section 11 conservation agreements or other types of agreements. However, the amount of funding committed is in many cases higher than the amount spent by the recipient due to issues resulting from the COVID-19 pandemic and other challenges with implementing large-scale conservation projects.

3.2.1 British Columbia

The Government of British Columbia (BC) announced an investment in 2017 of \$27 million over three years for a provincial Caribou Recovery Program (CRP) to transform caribou management through a comprehensive, collaborative and accountable provincial program. In 2019, the Government of BC extended its initial investment by a further \$20 million and two years with additional commitment to maintain CRP spending indefinitely moving forward. ECCC has committed \$5.505 million over four years (2022-23 to 2025-26; outside of the reporting period) to support BC-led conservation, protection and recovery measures for boreal caribou, including but not limited to measures identified in the draft [Boreal Caribou Protection and Recovery Plan \(BCPRP\)](#)⁹, with a matching \$7.063 million commitment (cash and in-kind) from the province.

While the Government of Canada and the Government of BC do not have a conservation agreement for boreal caribou, on November 3rd, 2023, the Government of Canada, the Government of British Columbia, and the First Nations Leadership Council announced the Tripartite Framework Agreement on Nature Conservation (the Framework Agreement) to strengthen conservation efforts provincewide. The Framework Agreement will advance federal and provincial priorities for nature conservation, and achieve more ambitious outcomes for species at risk protection and recovery, habitat and ecosystem conservation and protection, habitat enhancement and restoration, and data and information sharing.

As described in the [Boreal Caribou \(*Rangifer tarandus*\) in British Columbia: 2017 Science Review](#)¹⁰, in February 2015, BC re-delineated its boreal caribou range boundaries, resulting in changes to the boundaries of all ranges, in addition to the creation of a new range: the Westside Fort Nelson range incorporates the Parker (BC4) range, Prophet (BC5) range, and a new Fort Nelson Core Area. The Government of BC made further adjustments over 2017-2022 to boreal caribou range and core habitat boundaries as part of the BCPRP development through collaborative planning, incorporating Indigenous Knowledge and observations from Fort Nelson First Nation (FNFN), as well as updated telemetry and habitat suitability data, and a separate process for the Chinchaga range (see Figure B-1). BC uses these revised boreal caribou ranges as the basis for monitoring and managing boreal caribou and their habitat.

In 2017, engagement on a provincially drafted Boreal Caribou Recovery Implementation Plan (BCRIP), intended to replace the [Implementation plan for the ongoing management of Boreal Caribou \(*Rangifer tarandus caribou pop. 14*\) in](#)

⁹ https://engage.gov.bc.ca/app/uploads/sites/373/2022/04/BCPRP_DRAFT_MAR2022.pdf

¹⁰ <https://engage.gov.bc.ca/app/uploads/sites/121/2017/03/Boreal-Caribou-Science-Review-Mar-20-2017-Final.pdf>

British Columbia¹¹, was met with limited support from regional First Nations and stakeholders and was never endorsed for implementation. In 2018, the BC Research and Effectiveness Monitoring Board – established to support research, monitoring, and management of boreal caribou in the province – was dissolved and a commitment for collaborative planning was made. As a result of the response to the BCRIP, the Government of BC partnered with FNFN to co-develop the BCPRP. The parties collaborated with the Northern Rockies Regional Municipality and released a draft version for public comment in 2022. The BCPRP was officially endorsed by the Government of BC in summer 2023. The Framework Agreement includes the following objective: “B.C. will continue to work in partnership with Canada and First Nations to implement the co-developed Boreal Caribou Protection and Recovery Plan in a manner that meets federal and provincial requirements by 2024, subject to agreement by First Nations.”

The BCPRP is a landscape level plan that provides direction for boreal caribou recovery for four of the five boreal caribou ranges in BC: Calendar, Maxhamish, Snake-Sahtahneh, and Westside Fort Nelson. This plan defines a management goal to recover boreal caribou populations across their ranges to self-sustaining status and to a level capable of supporting an Indigenous sustenance harvest. It sets management objectives and outlines management actions to achieve the goal and objectives, and details an adaptive management framework to inform evaluation and future decisions. Implementation of the BCPRP, including new habitat protections, will be completed in a co-management approach with FNFN and other interested BC Treaty 8 Nations in alignment with the Liard Collaborative Stewardship Forum and broader collaborative land and resource management commitments within the 2023 Consensus Agreement. No additional range plans are expected for the local populations included in the BCPRP.

On June 29, 2021, a ruling by the BC Supreme Court found that the Treaty 8 rights of Blueberry River First Nations have been breached as a result of the cumulative effects of natural resource development on their territory over many years. BC Treaty 8 Nations and the Government of BC initiated collaborative efforts following the decision to co-develop a set of initiatives which will evolve the management of lands and resources together, which include a new approach to wildlife co-management, new land protection and restoration measures, and commitments to shared decision-making on land-use planning and stewardship activities. The outcomes of these initiatives will influence caribou conservation efforts moving forward, as all boreal caribou ranges in BC fall within Treaty 8 territory.

ECCC committed approximately \$3.2 million between 2018-19 and 2022-23 to projects for which some or all activities helped support boreal caribou recovery within British Columbia. Of this amount, \$1.1 million was committed to the

¹¹ https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/species-ecosystems-at-risk/recovery-planning/boreal_caribou_implementation_plan_final_12aug2011.pdf

provincial government, \$1.0 to Indigenous governments and organizations and \$1.1 million to stakeholders. Partners committed \$4.3 million in matching funds to these projects.

ECCC is encouraged by the progress made by the Government of BC, FNFN and other partners to finalize the BCPRP, and is eager to review the final plan and see it fully implemented. A landscape-level plan for the BC portion of the Chinchaga (AB1) range is urgently needed to outline how habitat will be managed and protected without relying upon long-term predator management. Very high levels of habitat disturbance in all boreal caribou ranges in BC indicates the need for accelerated implementation of restoration activities in combination with other habitat protection and management strategies to reverse the rate of habitat disturbance without delay.

A summary of the actions taken in British Columbia over the reporting period to address the broad strategies outlined in the Recovery Strategy (section 6.2, Table 5) is found below in Table 2a.

Table 2a. Summary of the recovery measures undertaken during the reporting period in British Columbia

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations
Broad Strategy to Recovery: Landscape Level Planning			
Undertake landscape level planning that considers current and future boreal caribou habitat requirements			
The BCPRP was endorsed by the Government of BC in summer 2023, following a release of the draft plan for public comment in April 2022. The BCPRP outlines a recovery path for areas including Calendar (BC2), Maxhamish (BC1), Snake-Sahtahneh (BC3), and Westside Fort Nelson (BC4, BC5).	Maxhamish (BC1), Calendar (BC2), Snake-Sahtahneh (BC3) and Westside Fort Nelson (comprises Parker (BC4) and Prophet (BC5))	Complete (summer 2023; final plan not yet published)	Government of BC FNFN Northern Rockies Regional Municipality

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations
<p>Landscape level planning for the BC portion of Chinchaga (AB1) was initiated through the Fort St. John Land and Resource Management Plan (LRMP) Update Project¹². Other non-boreal caribou ranges including the Graham (Southern Mountain population) and Pink Mountain (Northern Mountain population) ranges were also included within the scope of the LRMP update. To support herd planning, a technical working group was formed with interested Treaty 8 Nations and preliminary work advancing management planning was undertaken but adjourned in fall 2021 on account of evolving BC and Treaty 8 Nation government negotiations pertaining to Treaty 8 rights and natural resource management.</p>	<p>BC portion of Chinchaga (AB1)</p>	<p>In progress. Collaborative planning anticipated to be renewed in 2024.</p>	<p>Government of BC Doig River First Nation Blueberry River First Nation Prophet River First Nation</p>
<p>Broad Strategy to Recovery: Habitat Management</p>			
<p>Manage habitat to meet current and future habitat requirements of boreal caribou</p>			
<p>A draft Boreal Caribou Habitat Restoration Framework was released by the BC Oil and Gas Research Innovation Society in 2017, followed by further multi-party workshops in 2018 and 2019 to confirm restoration prioritization criteria between and within ranges. These criteria will inform planning and implementation of boreal caribou habitat restoration in BC.</p>	<p>All boreal caribou ranges in BC</p>	<p>In progress. Habitat restoration guidance anticipated to be released in 2024 as an appendix to the BCPRP.</p>	<p>BC Oil and Gas Research Innovation Society Government of BC</p>
<p>A Regional Strategic Environmental Assessment disturbance dataset¹³ was published to provide a comprehensive disturbance dataset for conducting cumulative effects analyses in northeastern BC. This dataset is now managed and updated as part of BC's Cumulative Effects Framework.</p>	<p>Northeastern BC (including all boreal caribou ranges in BC)</p>	<p>Complete (2018)</p>	<p>Partnership between Government of BC and Treaty 8 First Nations (Blueberry River, Doig River, Halfway River, Prophet River, Sauteau, West Moberly, McLeod Lake)</p>

¹² <https://landuseplanning.gov.bc.ca/p/5deeb36ce7c4150024a5ac33/project-details;currentPage=1;pageSize=10;sortBy=-dateAdded;ms=1676074951468>

¹³ <https://catalogue.data.gov.bc.ca/dataset/c6f4ba25-115f-4d25-bca6-a6704baf4a13>

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations
<p>Functional and ecological restoration treatments on legacy linear features were undertaken by First Nations, with funding support from the Government of BC, the BC Oil and Gas Research Innovation Society and NRCan. Since 2017, FNFN has applied restoration treatments to ~20 km in the Kotcho Lake Restoration Area and ~75 km in the Medzih'tene Area within Snake-Sahtahneh (BC3). Effectiveness monitoring of treatment sites is ongoing.</p> <p>Other restoration projects being undertaken within boreal caribou ranges include Doig River First Nation's McMillan Creek Restoration Project with ~20 km of linear features identified for treatment and Blueberry River First Nation's Nig Creek Project with ~15 km of linear features identified for treatment, both within Chinchaga (AB1).</p>	<p>Snake-Sahtahneh (BC3)</p> <p>BC portion of Chinchaga (AB1)</p>	<p>In progress. Habitat restoration planning, implementation and monitoring are ongoing.</p>	<p>Fort Nelson First Nation Doig River First Nation Blueberry River First Nation Government of BC via Habitat Conservation Trust Foundation/ Forest Employment Program BC Oil and Gas Research Innovation Society NRCan</p>
<p>Broad Strategy to Recovery: Mortality and Population Management</p>			
<p>Manage predators and alternate prey</p>			
<p>The Government of BC has implemented wolf control to support caribou recovery within Chinchaga since 2018-19, as described in a summary document¹⁴ published in May 2022.</p>	<p>BC portion of Chinchaga (AB1)</p>	<p>In progress (started winter 2018-19; program has been approved until 2025-26).</p>	<p>Government of BC</p>
<p>The Government of BC released the Wildlife Procedure 4-7-04.06 - Caribou Recovery Program - Interim Aerial Wolf Reduction Procedure¹⁵, which provides guidance to inform the implementation of the wolf control program in the specific context of caribou recovery.</p>	<p>All BC caribou ranges, including boreal caribou</p>	<p>Complete (2022)</p>	<p>Government of BC</p>

¹⁴ https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/wildlife-wildlife-habitat/caribou/predator_reduction_to_support_caribou_recovery_2021-2022.pdf

¹⁵ https://www2.gov.bc.ca/assets/gov/environment/natural-resource-policy-legislation/fish-and-wildlife-policy/4-7-0406_-_aerial_wolf_reduction_procedure_-_september_16_2021.pdf

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations
The Government of BC developed and approved a provincial five-year plan (2021-22 to 2026-27) for predator reduction in support of caribou recovery, including a decision not to implement predator control within boreal caribou ranges, except Chinchaga (AB1), at this time. More information can be found on BC's Caribou Recovery Actions web page ¹⁶ .	All BC caribou ranges, including boreal caribou	Complete (fall 2021)	Government of BC
The Government of BC has implemented wolf monitoring, in collaboration with FNFN, to inform future predator management planning in the BCPRP area.	Maxhamish (BC1), Snake-Sahtahneh (BC3), Westside Fort Nelson (corresponds to BC4 and BC5)	In progress (initiated winter 2022)	Government of BC FNFN
Manage direct human-caused mortality of boreal caribou			
No new actions since 2017 reported.			
Broad Strategy to Recovery: Population Monitoring			
Conduct population studies to better understand population structure, trends and distribution			
The Government of BC developed a caribou monitoring schedule ¹⁷ that identifies the province's population monitoring approach within each range over a ten year period (2021-2031).	All caribou ranges in BC, including boreal caribou	Complete (2021)	Government of BC
The Government of BC deploys caribou collars annually with an aim to increase and maintain the number of active collars within the boreal caribou ranges to 10% of the estimated population size up to 30 per range, with a minimum of 100 collars across all ranges.	All boreal caribou ranges in BC	Complete (winter 2022). Yearly collar maintenance is ongoing.	Government of BC FNFN
Recruitment surveys are conducted annually to collect data on calf survival, cow:calf ratios, and	All boreal caribou ranges in BC	Ongoing annually (since 2012-13)	Government of BC

¹⁶ <https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/wildlife/wildlife-conservation/caribou/management-activities>

¹⁷ https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/wildlife-wildlife-habitat/caribou/caribou_monitoring_schedule_2021-2031.pdf

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations
cow:bull ratios, as well as a minimum population count. This information is used to monitor population structure and trends on an annual basis.			
A fecal pellet DNA survey was conducted in winter 2022 to collect more accurate information on caribou population and demographics. These surveys are planned to continue on a rotational basis (one range per year), in accordance with the 2021-2031 caribou monitoring schedule.	Westside Fort Nelson (corresponds to BC4 and BC5)	Complete (2022)	Government of BC FNFN (support)
Monitor boreal caribou health and condition			
Biological samples are collected in the course of collaring and DNA investigations. Samples (hair, blood, fecal, bone) are analyzed at the BC health lab to create a herd health profile.	All boreal caribou ranges in BC	Ongoing	Government of BC
Mortality sites of collared caribou are investigated opportunistically to collect data on cause of mortality, and to collect samples for analysis on health and condition (when possible).	All boreal caribou ranges in BC	Ongoing	Government of BC
Monitor and manage sensory disturbance of boreal caribou			
No new actions since 2017 reported.			

3.2.2 Alberta

The Government of Alberta and the Government of Canada signed a five-year *Agreement for the Conservation and Recovery of the Woodland Caribou in Alberta* under SARA section 11 in October 2020 to facilitate the conservation and recovery of woodland caribou in Alberta, following a 30-day consultation from August 8 to September 7, 2019. The agreement includes commitments to landscape (sub-regional) planning for Cold Lake (AB10) and Bistcho (AB2) by 2021, East Side Athabasca River (AB9) by 2022, Chinchaga (AB1), Little Smoky (AB5), Nipisi (AB11) and Slave Lake (AB12) by 2023, Richardson (AB8) and West Side Athabasca River (AB7) by 2024, and Yates (AB3), Caribou Mountains (AB4) and Red Earth (AB6) by 2025. Additional agreement commitments include measures to support habitat conservation, management and recovery; caribou mortality and population management; population and habitat monitoring, and achievement and maintenance of a minimum 65% undisturbed habitat in each range. The Government of Alberta has

committed to publicly reporting annual progress updates as part of the implementation of the Canada-Alberta section 11 agreement; the [first such report](#)¹⁸ was published on January 19, 2024 for implementation over the 2021 calendar year. Implementation of the agreement to date is supported by a \$28.87 million commitment from ECCC over three years (2021-22 to 2023-24) through the Canada Nature Fund (\$18.867 million) and Low Carbon Economy Fund (\$10 million), and by a \$41,570,000 commitment in cash and in-kind from the Government of Alberta over the same period.

The Government of Alberta is using a sub-regional planning approach to advance caribou conservation and recovery. Sub-regional plans maintain or re-establish ecological processes, including landscape and habitat intactness. In addition to addressing caribou recovery and habitat intactness, sub-regional plans consider a broad range of land uses to support environmental and conservation outcomes, Indigenous traditional use, recreation, and economic development. Since 2019, caribou sub-regional task forces have advised the Government of Alberta on land-use planning including caribou recovery actions. To date, two sub-regional plans for boreal caribou have been completed and three more are in progress; planning has not yet been initiated for the seven remaining boreal ranges.

Approximately 818,658 ha of boreal caribou habitat across three ranges has been included in the designation of protected areas in Alberta since 2017 (see Figure C-1).

The Government of Alberta is currently updating the policy for Provincial Restoration and Establishment Framework for Legacy Seismic Lines in Alberta. In 2021, restoration planning was undertaken under the Caribou Habitat Recovery Program (CHRP) for approximately 5,000 km of legacy seismic lines within southern mountain and boreal caribou ranges. Various habitat restoration-related activities (e.g., vegetation surveys, restoration treatments, seedling survival assessments) are in planning or implementation stages across 10 ranges. This restoration planning is being informed by Traditional Land Use information from Indigenous communities.

ECCC committed approximately \$32.9 million between 2018-19 and 2022-23 to projects for which some or all activities helped support boreal caribou recovery within Alberta. Of this amount, \$18.3 million was committed to the provincial government, \$11.5 million to Indigenous governments and organizations and \$3.1 million to stakeholders. Partners committed \$116.5 million in matching funds to these projects.

ECCC is encouraged by the progress made by the Government of Alberta in finalizing two sub-regional plans, establishing task forces to provide recommendations for development of four additional sub-regional plans, creating and expanding protected areas, and undertaking restoration activities. ECCC is eager to see full implementation of the existing

¹⁸ <https://open.alberta.ca/publications/first-report-implementation-section-11-agreement-conservation-recovery-woodland-caribou-in-alberta>

sub-regional plans, and completion of the remaining plans that are delayed relative to timelines committed to in the Canada-Alberta section 11 agreement. ECCC also expects timely publication of annual implementation reports of the Canada-Alberta section 11 agreement, including providing details of on-the-ground recovery activities, to demonstrate transparency and accountability to Indigenous peoples, the public, and stakeholders. Very high habitat disturbance levels in all boreal caribou ranges in Alberta emphasizes the need for accelerated implementation of restoration activities in combination with other habitat protection and management strategies to reverse the rate of habitat disturbance without delay. This is especially critical in ranges where predator management is being relied upon to prevent local extirpations.

A summary of the actions taken in Alberta over the reporting period to address the broad strategies outlined in the Recovery Strategy (section 6.2, Table 5) is found below in Table 2b.

Table 2b. Summary of the recovery measures undertaken during the reporting period in Alberta

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ¹⁹
Broad Strategy to Recovery: Landscape Level Planning			
Undertake landscape level planning that considers current and future boreal caribou habitat requirements			
The final Cold Lake Sub-regional Plan ²⁰ was posted April 8, 2022.	Cold Lake (AB10), and Christina portion of East Side Athabasca River (AB9)	Completed (April 2022)	Government of Alberta
The final Bistcho Sub-regional Plan ²¹ was posted April 8, 2022.	Bistcho (AB2)	Completed (April 2022)	Government of Alberta
The Wandering River task force stage of the planning process has been completed. The task force recommendations report was completed, and drafting of the sub-regional plan is underway.	East Side Athabasca River (AB9)	In progress (anticipated sub-regional plan finalization in 2023)	Government of Alberta

¹⁹ Although not necessarily listed as a supporting organization, ECCC provided funding to many of the recovery measures in this table.

²⁰ <https://open.alberta.ca/publications/cold-lake-sub-regional-plan>

²¹ <https://open.alberta.ca/publications/bistcho-lake-sub-regional-plan>

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ¹⁹
The Berland task force stage of the planning process has been completed. Drafting of the task force recommendations report is underway, and drafting of the sub-regional plan is anticipated to begin in 2023.	Little Smoky (AB5) and A la Peche (southern mountain caribou range)	In progress (anticipated sub-regional plan finalization in 2024)	Government of Alberta
The Chinchaga (AB1) task force recommendations report has been completed and drafting of the sub-regional plan is anticipated to begin in 2023.	Alberta portion of Chinchaga (AB1)	In progress (anticipated sub-regional plan finalization in 2024)	Government of Alberta
The Indigenous knowledge-based Tâdzié-Sagow Atihk (Caribou) Stewardship Plan was developed and publicly released in December 2022. Next steps include engaging with other First Nations and the Government of Alberta, as well as developing a restoration offsets standard and an Indigenous Guardians program to monitor caribou and their habitat. This work is in alignment with a SARA s.11 agreement between the Government of Canada, Athabasca Chipewyan First Nation and Mikisew Cree First Nation.	Red Earth (AB6), Richardson (AB8), East Side Athabasca River (AB9), West Side Athabasca River (AB7)	Completed (December 2022)	Athabasca Chipewyan First Nation and Mikisew Cree First Nation
Broad Strategy to Recovery: Habitat Management			
Manage habitat to meet current and future habitat requirements of boreal caribou			
818,658 ha within boreal caribou distribution in Alberta have been protected since the 2017 Report on Implementation. This includes: <ul style="list-style-type: none"> 232,158 ha in Red Earth (AB6) and Richardson (AB8) through the March 2019 establishment and January 2022 expansion of the Kitaskino Nuwenëné Wildland Provincial Park under Alberta's <i>Provincial Parks Act</i>, following collaboration with Mikisew Cree First Nation and other Indigenous communities. 	Red Earth (AB6), Richardson (AB8), East Side Athabasca River (AB9)	Complete	Government of Alberta Mikisew Cree First Nation Tall Cree First Nation ECCC Syncrude Nature Conservancy of Canada

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ¹⁹
<ul style="list-style-type: none"> 586,500 ha in Red Earth (AB6), Richardson (AB8), and East side of the Athabasca (AB9) through a 2018 partnership between the Government of Alberta, the Government of Canada, Tall Cree First Nation, Syncrude and the Nature Conservancy of Canada (NCC), to establish and expand the Richardson, Dillon River, Birch Mountains, and Birch River wildland provincial parks under Alberta's <i>Provincial Parks Act</i>. 			
<p>Three Cold Lake Habitat Restoration projects were initiated in January 2019 and completed in March 2022 for a total of 457.6 km treated seismic lines and 537,470 trees planted.</p> <p>Following the above restoration treatments, two seedling survival assessment projects were initiated in May 2022.</p>	Cold Lake (AB10)	<p>Restoration treatments completed (March 2022)</p> <p>Seedling survival assessments in progress (estimated completion in Fall 2022)</p>	<p>Government of Alberta Forest Resource Improvement Association of Alberta</p>
<p>Approximately 44 km of 6 m wide seismic lines received restoration treatments using the Provincial Restoration and Establishment Framework for Legacy Seismic lines in Alberta within Richardson Wildland Provincial Park and Marguerite River Wildland Provincial Park in Richardson (AB8).</p>	Richardson (AB8)	Completed (August 2021)	<p>Alberta Energy Regulator Canadian Forest Service Alberta InnoTech Government of Alberta</p>
<p>Legacy seismic line restoration treatments within Little Smoky (AB5), including mechanical site preparation, tree felling deactivation and tree planting, is underway for an expected total of approximately 763 km and 849,000 seedlings to be planted.</p>	Little Smoky (AB5)	In Progress (estimated completion in Fall 2022)	<p>Government of Alberta Forest Resource Improvement Association of Alberta</p>
<p>Inventories of the current vegetation state of seismic lines for restoration have been completed within Bistcho (AB2), and are underway in Richardson (AB8), Yates (AB3), Caribou Mountains (AB4),</p>	<p>Alberta portion of Chinchaga (AB1)</p> <p>Bistcho (AB2)</p> <p>Yates (AB3)</p>	<p>Completed (February 2022; Bistcho and Yates)</p> <p>In Progress (Richardson, and Caribou Mountains)</p>	<p>Government of Alberta Forest Resource Improvement Association of Alberta</p>

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ¹⁹
Chinchaga (AB1) and West Side Athabasca River (AB7).	Caribou Mountains (AB4) West Side Athabasca River (AB7) Richardson (AB8)	initiated in August 2021 and expected to be completed 2023; West Side Athabasca initiated May 2022 and expected to be completed 2023; Chinchaga initiated in May 2022 and expected to be completed 2024.)	
<p>A seed-collection project in Red Earth (AB6) collected 2.32 kg of black spruce seeds and 7.81 kg of Jack Pine seeds to provide native seeds for habitat restoration work.</p> <p>Another seed collection project is ongoing in Little Smoky (AB5) for black spruce, Engelmann spruce and tamarack/larch.</p>	Red Earth (AB6) Little Smoky (AB5)	Completed (September 2022; Red Earth) In progress (Little Smoky; initiated September 2020)	Government of Alberta Forest Resource Improvement Association of Alberta
Planning is underway to implement restoration treatments on up to 800 km of seismic lines in Cold Lake (AB10), up 530 km in East Side Athabasca (AB9), and up to 1,300 km in Red Earth (AB6).	Cold Lake (AB10) East Side Athabasca River (AB9) Red Earth (AB6)	In progress (completion of operational planning in Cold Lake and East Side Athabasca River expected Spring 2023. Completion of restoration work in Red Earth expected in Fall 2023)	Government of Alberta Forest Resource Improvement Association of Alberta
The Site Rehabilitation Program was launched in May 2021 to provide grants to oil field service contractors to perform well, pipeline, and oil and gas site closure and reclamation work in specific geographic areas, including within caribou ranges. Under period 8 of the program, \$100 million in funding was available for closure work in greater sage-grouse, native trout and caribou habitat in specific geographic areas.	Priority boreal caribou ranges: <ul style="list-style-type: none"> • Bistcho (AB2), • Chinchaga (AB1), • Alberta portion of Cold Lake (AB10), • Little Smoky (AB5) 	Completed (March 2023)	Government of Alberta Oil field service contractors

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ¹⁹
<p>A Moose Lake Access Management Plan was approved by Alberta on February 8, 2021 that will provide resource development direction intended to limit landscape fragmentation and disturbance by setting limits on allowable resource development footprint, restoring legacy seismic disturbance, and supporting Indigenous traditional uses and Section 35 rights. The planning area encompasses a 10 km perimeter adjacent to the Fort McKay First Nation Moose Lake reserves and overlaps ~85,000 ha of Red Earth (AB6).</p>	<p>Red Earth (AB6)</p>	<p>Completed (February 8, 2021)</p>	<p>Government of Alberta</p>
<p>A number of adjustments were made to the Master Schedule of Standards and Conditions in January 2021, including modifications to approval standards, conditions and wildlife sensitivity layers for woodland caribou. The designation of caribou range zones provides the general public, industrial operators and government departments with information on areas where land-use activities could pose higher (zone A) and lower (zone B) risk to caribou populations. This dataset delineates areas within caribou range where specified conditions apply to support species conservation and recovery while still accommodating land-use activities.</p>	<p>All boreal caribou ranges in Alberta</p>	<p>Completed (January 2021)</p>	<p>Government of Alberta</p>
<p>A development agreement was negotiated by Ovintiv and Alberta and signed on October 25, 2019. The agreement includes tenure extensions on a portion of Ovintiv's holdings within Little Smoky (AB5) with the commitment to no future land disturbance for eight years in ~8,000 ha within the range. This agreement also provides a 10-year financial contribution to restoration of legacy seismic lines.</p>	<p>Little Smoky (AB5)</p>	<p>Completed (October 25, 2019)</p>	<p>Government of Alberta Kiwetinohek Resources Corp. (transferred from Ovintiv March 22, 2022)</p>
<p>Approximately 1,361,925 ha of surface land, in eleven boreal caribou ranges, have been vacated by sub-surface agreements and returned to the Crown</p>	<p>Areas within all boreal caribou ranges in</p>	<p>Ongoing (no end date has been determined for the moratorium)</p>	<p>Government of Alberta</p>

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ¹⁹
<p>since June 2017 under the moratorium on sub-surface resource sales within caribou ranges.</p> <p>Calculations of sub-surface agreement area are not a true indication of actual areas of surface disturbance that would be precluded, since the area of surface footprint required to develop a given area of subsurface holdings is unknown. Future activity will be guided by individual sub-regional plans.</p>	<p>Alberta, except Caribou Mountains (AB4)</p>		
Broad Strategy to Recovery: Mortality and Population Management			
Manage predators and alternate prey			
<p>Alberta is annually delivering wolf population reduction programs within and adjacent to four boreal caribou population ranges to enable caribou population persistence. Annual wolf population reductions are primarily achieved through government-led actions during the winter season. Alberta also initiated a program with the Alberta Trappers Association to provide incentives for wolf harvesting by Registered Fur Management Area (RFMA) holders.</p>	<p>East Side Athabasca River (AB9) Cold Lake (AB10) Little Smoky (AB5) Alberta portion of Chinchaga (AB1)</p>	<p>Ongoing (Little Smoky initiated 2006; East Side Athabasca River and Cold Lake initiated 2017; Chinchaga initiated 2019)</p>	<p>Government of Alberta (lead) Alberta Trappers Association (grant recipient)</p>
<p>Alberta currently provides increased opportunities for licensed hunting of alternative ungulate prey species (i.e., moose, elk and deer) in Wildlife Management Units overlapping with caribou ranges (additional moose opportunities to support caribou recovery are only available in Little Smoky). The intent of these actions is to manage the increased population growth of these species resulting from wolf population reductions and reduce expansion of white-tailed deer into caribou range.</p>	<p>All ranges in whole or in part on provincial land</p>	<p>Ongoing</p>	<p>Government of Alberta</p>
<p>A strategy for alternate prey (i.e., ungulates and beaver) management activities in the Cold Lake Air Weapons Range was developed in 2021. Implementation, which was delayed due to access</p>	<p>Cold Lake (AB10)</p>	<p>In Progress (strategy completed 2021; implementation began 2023)</p>	<p>Cold Lake First Nations</p>

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ¹⁹
issues, began in 2023. This work is in alignment with a SARA s.11 agreement between the Government of Canada and Cold Lake First Nations.			
Manage direct human-caused mortality of boreal caribou			
No new actions since 2017 reported.			
Broad Strategy to Recovery: Population Monitoring			
Conduct population studies to better understand population structure, trends and distribution			
Alberta's ongoing caribou population monitoring program monitors movement, distribution, habitat use and vital rates of caribou. Vital rate monitoring includes estimating annual rates for adult female survival and calf recruitment within local populations, which together allow for the estimation of annual caribou population growth for each boreal caribou local population under provincial management.	All ranges in whole or in part on provincial land	Ongoing	Government of Alberta
Alberta has estimated population size for selected caribou populations using a capture-mark-recapture sampling procedure, based on collection of fecal DNA. Selected ranges are surveyed multiple times in a single winter to collect caribou fecal pellets within and adjacent to caribou ranges. Alberta continues to undertake caribou population estimation surveys, based on fecal DNA collections and since 2017 has completed an additional two caribou local populations.	Nipisi (AB11); 2018/19 Slave Lake (AB12); 2018/19	Completed in 2 ranges between 2017 and 2022	Government of Alberta
Monitor boreal caribou health and condition			
When possible, mortalities of radio-collared adult female caribou are visited to assess cause of death, and various samples are collected for health, body condition and disease monitoring (e.g., Slater et al., 2022). Cold Lake First Nations provides support when mortalities occur within the Cold Lake Air Weapons Range.	All ranges in whole or in part on provincial lands	Ongoing	Government of Alberta Cold Lake First Nations

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ¹⁹
Monitor and manage sensory disturbance of boreal caribou			
No new actions since 2017 reported.			

3.2.3 Saskatchewan

The Government of Canada and the Government of Saskatchewan finalized a four and a half-year *Agreement for the Conservation of the Woodland Caribou, Boreal Population (Woodland Caribou) in Saskatchewan* under SARA section 11 on June 19, 2019, following a 45-day public comment period from December 18, 2018 to February 1, 2019. The agreement includes commitments to range planning for sub-units of the Boreal Plain (SK2) by 2019-2020, and for the Boreal Shield (SK1) by 2021. Additional agreement commitments include habitat restoration, monitoring, and short and long-term habitat and population goals, including achieving undisturbed habitat levels consistent with critical habitat thresholds as identified in the Recovery Strategy (i.e., 65% undisturbed in the Boreal Plain (SK2) and 40% undisturbed in the Boreal Shield (SK1)) and that includes biophysical attributes within 80 years. The agreement is supported by a \$5.5 million commitment over six years (2018-19 to 2023-24) from ECCC and equal matching funds (in cash and in-kind) over the same period from the Government of Saskatchewan.

The Government of Saskatchewan has developed range plans for two Caribou Administrative Units (i.e., Boreal Plain Central (SK2 Central) and Boreal Plain West (SK2 West)) and a draft range plan for one Caribou Administrative Unit (i.e., Boreal Plain East (SK2 East)) (see Figure B-2). During development of the Boreal Plain (SK2) range plans, the province held broad engagement with First Nations and Métis communities, industry, and stakeholders. In addition, the province held two workshops in 2022 to review engagement approaches and discuss priority range plan implementation activities: one with industry and other stakeholders, and one with First Nation and Métis communities.

The Government of Saskatchewan has established two new protected areas and has put in place interim protections in a third area – totaling over 191,649 ha – within the distribution of boreal caribou since 2017 and is working toward the designation of additional protected and conserved areas with potential overlap with the Boreal Shield (SK1) and Boreal Plain (SK2) ranges (see Figure C-1).

The province continues to support First Nation and Metis-led caribou recovery efforts through provincial grants. Since 2019, nine grants totaling \$221,950 have been awarded to seven communities or organizations. Grants were used to support community-led knowledge gathering and mapping studies; population/occupancy surveys; development/hosting of

community and engagement meetings, information exchanges and educational initiatives relating to caribou conservation, recovery and range planning.

ECCC committed approximately \$11.8 million between 2018-19 and 2022-23 to projects for which some or all activities helped support boreal caribou recovery within Saskatchewan. Of this amount, \$4.4 million was committed to the provincial government, \$7.0 million to Indigenous governments and organizations and \$330,000 to stakeholders. Partners committed \$6.7 million in matching funds to these projects.

The progress made by Saskatchewan on range planning, despite delays relative to the committed timelines in the section 11 agreement, is an important first step in managing boreal caribou habitat. ECCC would like to see expeditious finalization and implementation of remaining range plans, including habitat restoration in SK2 where disturbance is above the 35% maximum disturbance threshold, and increased ambition in range plan habitat management targets, coupled with implementation and monitoring, to support self-sustaining local populations.

A summary of the actions taken in Saskatchewan over the reporting period to address the broad strategies outlined in the Recovery Strategy (section 6.2, Table 5) is found below in Table 2c.

Table 2c. Summary of the recovery measures undertaken during the reporting period in Saskatchewan

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²²
Broad Strategy to Recovery: Landscape Level Planning			
Undertake landscape level planning that considers current and future boreal caribou habitat requirements			
The final Range Plan for Woodland Caribou in Saskatchewan - Boreal Plain Ecozone - SK2 Central ²³ ("SK2 Central Range Plan") was released in July 2019, following a 60-day review period from October 30, 2017 to December 30, 2017.	The Central administrative unit of the Boreal Plain (SK2)	Completed (July 2019)	Government of Saskatchewan

²² Although not necessarily listed as a supporting organization, ECCC provided funding to many of the recovery measures in this table.

²³ <https://publications.saskatchewan.ca/api/v1/products/101694/formats/112399/download>

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²²
The final Range Plan for Woodland Caribou in Saskatchewan - Boreal Plain Ecozone - SK2 West Administrative Unit ²⁴ ("SK2 West range plan") was released in October 2021, following a 60-day review period from December 10, 2019 to February 8, 2020.	The West administrative unit of the Boreal Plain (SK2)	Completed (October 2021)	Government of Saskatchewan
The draft Range Plan for Woodland Caribou in Saskatchewan - Boreal Plain Ecozone - SK2 East ²⁵ ("SK2 East Range Plan") was released on October 27, 2021. The public review period was open from October 27, 2021 to January 13, 2022.	The East administrative unit of the Boreal Plain (SK2)	In progress (estimated completion of final plan in 2024)	Government of Saskatchewan
Engagement events with Indigenous communities, industry and other stakeholders were held through summer and fall 2022 to raise awareness and prepare for the start of the SK1 range planning process, which began in 2023.	Boreal Shield (SK1)	In progress (a final plan for SK1 may take up to three years)	Government of Saskatchewan
Caribou habitat management areas defined through the range planning process have been posted on the Province's Hunting, Angling and Biodiversity Information of Saskatchewan (HABISask) website and are available to be downloaded as spatial files from the provincial GeoHub.	Boreal Plain (SK2)	In progress (SK2 Central and SK2 West completed; final caribou habitat management areas for the East administrative unit are anticipated in 2024)	Government of Saskatchewan
Broad Strategy to Recovery: Habitat Management			
Manage habitat to meet current and future habitat requirements of boreal caribou			
191,649 ha within boreal caribou distribution in Saskatchewan have been protected since the 2017 Report on Implementation. The largest areas include: <ul style="list-style-type: none"> 98,580 ha in the SK2 East administrative unit of the Boreal Plain (SK2) through the October 2021 establishment of Lobstick Lake Ecological Reserve under the <i>Ecological Reserves Act</i> and the <i>Representative Area Ecological Reserves Regulations</i>. 60,610 ha in the Boreal Shield (SK1) through the 2019 implementation of interim protection measures 	The East administrative unit of the Boreal Plain (SK2) Boreal Shield (SK1)	Completed	Government of Saskatchewan Cumberland House Cree Nation

²⁴ <https://publications.saskatchewan.ca/api/v1/products/103593/formats/114947/download>

²⁵ <https://pubsaskdev.blob.core.windows.net/pubsask-prod/130171/Draft%252BRange%252BPlan%252Bfor%252BWoodland%252BCaribou%252Bin%252BSK%252BSK2%252BEast.pdf>

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²²
<p>including a Crown mineral reserve while the designation of the Tazin Lake Ecological Reserve under the <i>Ecological Reserves Act</i> and the <i>Representative Area Ecological Reserves Regulations</i> undergoes finalization.</p> <ul style="list-style-type: none"> 23,177 ha in the Boreal Shield (SK1) through the 2018 establishment of Lower Foster Lake Representative Area Ecological Reserve under the <i>Ecological Reserves Act</i> and the <i>Representative Area Ecological Reserves Regulations</i>. Discussions are ongoing with Cumberland House Cree Nation to develop a management plan. 			
<p>The Forest Operating Plan Standard, a Chapter in the Saskatchewan Environmental Code, was amended in June 2022 to require harvest event planning, as well as mapping to identify caribou habitat management areas in annually submitted operating plans.</p> <p>Harvest event planning aims to aggregate harvest disturbance and minimize road networks with an overall objective of more closely emulating natural disturbance patterns and reducing total human disturbance.</p>	All ranges in Saskatchewan, commercial forest zone	Completed (June 2022)	Government of Saskatchewan
<p>The Forest Management Plan in the area of the SK2 Central Range Plan was amended in May 2021 to include a commitment to defer harvest within Tier 1 caribou habitat management areas for a minimum of 20 years, in alignment with the range plan.</p>	Central administrative unit of Boreal Plain (SK2)	Completed (May 2021)	Government of Saskatchewan
<p>The approval of the SK2 West Range Plan triggered an approval condition in the Mistik Management Ltd. and Tolko Industries Ltd. Forest Management Plans to align with the range plan.</p>	West administrative unit of Boreal Plain (SK2)	Completed (April 2023)	Government of Saskatchewan
<p>The Crown Resource Land Regulations were revised in March 2019 to ensure reclamation following use, identify additional conditions when authorizing activities, including provisions for mitigation, and to promote compliance. The goal is to reduce the overall footprint of authorized activities.</p>	All ranges in Saskatchewan	Completed (March 2019)	Government of Saskatchewan

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²²
<p>A draft boreal habitat offset protocol and in-lieu fees calculator have been developed and are undergoing internal review. The protocol and calculator will ultimately support consistent application of offset requirements to major industrial developments occurring in boreal caribou range.</p> <p>Woodland caribou mitigation and offset plans have been completed for three projects as part of provincial environmental assessment requirements.</p> <p>A new mitigation fund is being developed within the Fish and Wildlife Development Fund to accept in lieu fees for offsets until suitable sites for restoration can be identified.</p>	All ranges in Saskatchewan	Ongoing	Government of Saskatchewan
<p>Collaboration with ECCC on acceptable measures for management of boreal caribou critical habitat in the Primrose Lake Air Weapons Range resulted in a draft Memorandum of Agreement between the Department of National Defence (DND) and the Government of Saskatchewan.</p> <p>The draft Memorandum of Agreement has provisions for DND to offset disturbance to boreal caribou habitat. Field work is underway to identify restoration sites and develop prescriptions.</p>	Primrose Lake Air Weapons Range within the West administrative unit of Boreal Plain (SK2)	In progress (anticipated completion in 2025)	Government of Canada and Government of Saskatchewan
<p>In 2022, the province prepared draft best management practices (BMPs) for boreal caribou in the Boreal Plain (SK2) and draft guidelines for integrating BMPs and mitigation planning into existing permitting processes. Draft BMPs and new draft permit conditions include considerations for minimizing project footprints and limiting the development of new access and other linear features. Saskatchewan is continuing engagement with industry stakeholders on the draft BMPs, new draft permit conditions and mitigation plan guidelines. These documents will inform similar guidelines for the Boreal Shield (SK1).</p>	Boreal Plain (SK2)	In progress (drafts completed in 2022; finalization of BMPs, new permit conditions, and mitigation guidelines expected in coming years)	Government of Saskatchewan
<p>High-resolution LIDAR data in 633,930 ha of priority areas in the Boreal Plain (SK2) was acquired and analyzed to support</p>	Priority areas in Boreal Plain (SK2)	Ongoing	Government of Saskatchewan

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²²
<p>assessment of linear features for restoration potential, as part of the development of a disturbance restoration program.</p> <p>Preliminary analysis of remote sensing data and additional analysis supported by ground-truthing data collected in summer 2022 is complete.</p>			
<p>A geospatial prioritization decision support tool for habitat management and restoration planning was developed that combines boreal caribou habitat potential and modelled habitat connectivity.</p>	Boreal Plain (SK2)	In progress (anticipated results in 2024)	Government of Saskatchewan
<p>Disturbance mapping is being updated, incorporating new information from forest harvest blocks, roads and other developments, as it becomes available, and reported at the viewing scale used by ECCC of 1:50,000.</p>	All ranges in Saskatchewan	In progress	Government of Saskatchewan
<p>A pilot disturbance mapping project was initiated in the Boreal Shield (SK1) using remote sensing data to understand the amount and distribution of human disturbance. Preliminary results indicate the method has potential for application to broader areas of the Boreal Shield. Currently engaging with industry and other stakeholders and potential partners to determine next steps.</p>	Pilot area in Boreal Shield (SK1)	Completed (2022)	Government of Saskatchewan
<p>A Fire Management Plan, based on replicating natural fire disturbance regime, was developed for Prince Albert National Park (PANP) in 2018. The plan was devised to allow for a mosaic of multi-aged forest stands throughout the park, based on the historical 100-year fire-cycle of the local region. With the intent on maintaining a diversity of forest habitat throughout the park, this plan allows for a fire response based on human safety and protecting ecological habitat as directed. When planning prescribed fires or responding to wildfire ignition, woodland caribou habitat protection is a consideration as part of the decision process.</p>	Prince Albert National Park area within Boreal Plain (SK2)	Complete (2018)	Parks Canada
Broad Strategy to Recovery: Mortality and Population Management			
Manage predators and alternate prey			
No new actions reported.			

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²²
Manage direct human-caused mortality of boreal caribou			
No new actions reported.			
Broad Strategy to Recovery: Population Monitoring			
Conduct population studies to better understand population structure, trends and distribution			
The population within the SK2 Central administrative unit was assessed via fecal DNA collections. The population size estimate declined from 181 in 2017 to 125 caribou in 2019 in the sample area. Females showed a statistically non-significant increase from 2017 to 2018 ($\Lambda = 1.2$) followed by a significant decrease between 2018 and 2019 ($\Lambda = 0.7$). Males showed a steady decline in abundance over the 3 years ($\Lambda = 0.66$). (Manseau et al., 2021).	Sample area in the Central administrative unit of the Boreal Plain (SK2)	Completed (2017-2019)	Government of Saskatchewan Trent University University of Manitoba
The population within the SK2 East and West administrative units were assessed via fecal DNA collections. Results are anticipated in early 2024.	Sample areas in the East and West administrative units of the Boreal Plain (SK2)	In progress (collections completed in 2019-2021, results anticipated in early 2024).	Government of Saskatchewan Trent University University of Manitoba
Assessments of the population size, trend, and distribution of the SK1 population based on boreal caribou collaring and aerial surveys were completed in 2019. Over 16 surveys conducted between 2008 and 2014 (including surveys where no caribou were observed), the average density was 36.9 boreal caribou/1000 km ² (95% CI: 26.7–47.2 caribou/1000 km ²), corresponding to an estimate of 3,380 caribou in the study area. The population was characterized by high adult female survival and moderate recruitment from collar data between 2014 and 2017. The population was assessed as stable across the three years of study. Fecal pellet collections were done in early 2023 to continue assessment of the SK1 boreal caribou local population.	Study area in the Boreal Shield (SK1)	Completed (2019)	University of Saskatchewan, Saskatchewan Mining Association, Cameco, SaskPower, Government of Saskatchewan Trent University
Research into familial networks identified individuals with different fitness levels and short- and long-distance dispersal across the range, assisting with population monitoring and recovery efforts.	All ranges in Saskatchewan	Completed (2021)	Government of Saskatchewan Trent University
Monitor boreal caribou health and condition			

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²²
A surveillance program for chronic wasting disease (CWD) in hunter-harvested ungulates is ongoing. In 2021-22 CWD, was detected in white-tailed deer in the southern boreal region, overlapping the Boreal Plain (SK2). CWD has not been detected in boreal caribou.	Boreal Plain (SK2)	Ongoing (annual program)	Government of Saskatchewan, Canadian Wildlife Health Cooperative
Fecal samples from boreal caribou collected during 2014-2020 population surveys in SK2 East and SK2 Central administrative units were tested for CWD in 2021. No CWD was detected (0/43).	Boreal Plain (SK2)	Completed (2021)	Government of Saskatchewan University of Calgary
Fecal pellets collected for population assessments are also being used to: <ul style="list-style-type: none"> • Characterize caribou microbiomes (through NRCan, Trent University, ECCC and Genome Canada); • Monitor for parasites (through the University of Saskatchewan); and, • Test for pregnancy hormones to better understand productivity potential (through Trent University and the Toronto Zoo). 	All ranges in Saskatchewan	Ongoing	Government of Saskatchewan Trent University Genome Canada University of Saskatchewan Toronto Zoo NRCan ECCC
Monitor and manage sensory disturbance of boreal caribou			
Saskatchewan's draft BMPs include: avoiding high disturbance project activities during the sensitive period of April 1 - July 31 (late winter, calving and post-calving) where possible; and delaying start-up or idling down heavy equipment and vehicles when caribou are observed within 500 m of an active work area.	Boreal Plain (SK2)	In progress (see information on draft BMPs under Habitat Management section)	Government of Saskatchewan

3.2.4 Manitoba

Outside of the reporting period of this report, the Government of Canada and the Government of Manitoba finalized a three-year bilateral *Agreement for the Conservation and Recovery of the Woodland Caribou, Boreal Population, in Manitoba* under SARA section 11 on March 1, 2023, following a 30-day public comment period from May 6, 2022 to June 5, 2022 and a 45-day Indigenous peoples comment period from May 6, 2022 to June 21, 2022. The agreement includes commitments to implement recovery measures identified under two categories: 1) landscape level planning, including

developing and implementing range plans for all nine provincial management units in the province by 2025; and 2) population and habitat monitoring. The conservation agreement commits the Government of Manitoba to achieving undisturbed habitat levels consistent with critical habitat thresholds as identified in the Recovery Strategy (i.e., minimum 65%) and that includes appropriate biophysical attributes over 30 years or less. The agreement is supported by a \$1.3 million commitment from ECCC over six years (2019-20 to 2024-25), and a \$2.3 million commitment (in cash and in-kind) from the Government of Manitoba and other partners over the same period.

The Government of Manitoba's provincial 2015 recovery strategy formed the starting point of boreal caribou recovery planning. As mentioned in the 2017 report, the provincial recovery strategy delineated nine boreal caribou management units that represented geographic areas within which one or more of the 15 provincially identified local caribou populations exist (see Figure B-3). Manitoba continues to use boreal caribou management units and ranges as the basis for identifying and evaluating habitat conditions and assessing caribou local population conditions.

The Government of Manitoba is committed to a long-term, comprehensive approach to protect boreal caribou populations and habitat, including the development landscape level management strategies that provide habitat over space and time, achieving and maintaining a minimum of 65% undisturbed habitat within management units and providing the biophysical habitat attributes necessary for caribou recovery. Management unit plans will provide guidance on how to evaluate whether boreal caribou habitat protection is effective to ensure that management actions result in self-sustaining local populations. These plans will establish an information baseline for all boreal caribou local populations regarding their current status, distribution and important habitat. In an effort to provide a dynamic state of suitable caribou habitat, the focus will be on reducing human-caused disturbance, altering the pattern of disturbance and maintaining adequately sized patches of undisturbed and connected high-value caribou habitat across and between boreal caribou management units.

ECCC committed approximately \$3.0 million between 2018-19 and 2022-23 to projects for which some or all activities helped support boreal caribou recovery within Manitoba. Of this amount, \$1.0 million was committed to the provincial government and \$2.0 million to Indigenous governments and organizations. Partners committed \$2.9 million in matching funds to these projects.

ECCC is pleased by the Government of Manitoba's commitment to boreal caribou recovery through the signing of the conservation agreement one year ago. Acceleration of range plan development – which is delayed relative to agreement timelines – and implementation to maintain or achieve habitat targets will be key to supporting self-sustaining local populations across the province. ECCC also expects timely publication of annual reports on the implementation of the

conservation agreement, including providing details of on-the-ground recovery activities, to demonstrate transparency and accountability to Indigenous peoples, the public, and stakeholders.

A summary of the actions taken in Manitoba over the reporting period to address the broad strategies outlined in the Recovery Strategy (section 6.2, Table 5) is found below in Table 2d.

Table 2d. Summary of the recovery measures undertaken during the reporting period in Manitoba

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²⁶
Broad Strategy to Recovery: Landscape Level Planning			
Undertake landscape level planning that considers current and future boreal caribou habitat requirements			
Consistent with the SARA section 11 conservation agreement, in 2019 Manitoba initiated development of a provincial action plan that outlines a management unit framework approach. This framework approach will provide direction on the integration of management unit condition (i.e., population and habitat) into landscape planning and direction to industry and government with respect to the management initiatives, and population/habitat targets that will be implemented through management unit range plans. The framework will provide for a measurable and transparent assessment to report on progress being made on boreal caribou conservation and recovery outcomes.	All boreal caribou management units in Manitoba	In progress (initiated in 2019; targeting completion of a draft action plan by December 2023)	Government of Manitoba
Consistent with the SARA section 11 conservation agreement, Manitoba initiated development of management unit range plans in 2021.	All boreal caribou management units in Manitoba	In progress (initiated in 2021; targeting finalization of all range plans by March 2025)	Government of Manitoba

²⁶ Although not necessarily listed as a supporting organization, ECCC provided funding to many of the recovery measures in this table.

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²⁶
<p>The Government of Manitoba is working with the forest industry to develop a 20-year forest management plan (FMP) for Forest Management License 2 (FML-02) over the next two years. The plan will incorporate measures that incorporates landscape planning that will protect caribou habitat. The FMP will include the development of a caribou habitat protection plan that will address an assessment of conditions at the start of the plan and projected future conditions. Parameters include age-class distribution, forest type distribution, patch size distribution, road density and spatial distribution of human disturbance. FML-02 incorporates an area of 8,777,685 ha within Manitoba's provincial caribou management units: Naosap, Partridge Crop, The Bog, Wabowden and North Interlake.</p>	<p>Areas within The Bog (MB1), Kississing (MB2), Naosap (MB3), Reed (MB4), North Interlake (MB5), William Lake (MB6, Wabowden (MB7), Wapisu (MB8), Manitoba North (MB9), and Manitoba South (MB10)</p>	<p>In progress (initiated in 2022; targeted completion date 2025)</p>	<p>Government of Manitoba</p>
Broad Strategy to Recovery: Habitat Management			
Manage habitat to meet current and future habitat requirements of boreal caribou			
<p>Existing protected areas under local Indigenous community land use plans that have been enshrined in legislation under <i>The Eastside Traditional Lands Planning and Special Protected Areas Act</i> in Atikaki-Berens (MB12) received additional levels of protection through the July 2018 designation of Pimachiowin Aki as an official World Heritage Site.</p>	<p>Atikaki-Berens (MB12)</p>	<p>Completed (July 2018)</p>	<p>Pimachiowin Aki Corporation, a collaboration between: Bloodvein River First Nation Little Grand Rapids First Nation Pauingassi First Nation Poplar River First Nation Government of Manitoba Government of Ontario</p>
<p>The Government of Manitoba has completed development of new land cover classification datasets for all nine boreal caribou management units to inform the development of management unit range plans.</p>	<p>All boreal caribou management units in Manitoba</p>	<p>Complete (2023)</p>	<p>Government of Manitoba</p>
<p>In October 2020, the Government of Manitoba completed an analysis of their population and habitat data, including a disturbance assessment,</p>	<p>All boreal caribou management units in Manitoba</p>	<p>Completed (October 2020)</p>	<p>Government of Manitoba</p>

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²⁶
for all boreal caribou management units. The results will form the basis for describing the current state of habitat for boreal caribou within individual boreal caribou management unit range plans.			
The Government of Manitoba is completing a natural range of variation analysis to understand the amount and arrangement of caribou habitat under natural conditions. The results will help inform the development of management unit range plans.	All boreal caribou management units in Manitoba	In Progress (targeting completion by 2025)	Government of Manitoba
Broad Strategy to Recovery: Mortality and Population Management			
Manage predators and alternate prey			
No new actions since 2017 reported.			
Manage direct human-caused mortality of boreal caribou			
No new actions since 2017 reported.			
Broad Strategy to Recovery: Population Monitoring			
Conduct population studies to better understand population structure, trends and distribution			
<p>In alignment with the SARA section 11 conservation agreement, Manitoba implemented collaring and survey activities in three management units, which contributed to new or updated information on core use areas that are important habitats for boreal caribou:</p> <ul style="list-style-type: none"> • One aerial survey was completed and four caribou were collared in the Interlake Management Unit in 2020. • One aerial survey was completed in the Kamuchawie Management Unit in 2020, and pellet collections were completed in 2019-20 and 2021-22, with additional surveys and collaring planned over the project's timeline. • Two aerial surveys were completed in Owl-Flintstone in 2019 and 2020, and pellet 	<p>Interlake Management Unit (corresponds to portions of North Interlake (MB5) and Manitoba South (MB10))</p> <p>Kamuchawie Management Unit (corresponds to Manitoba North (MB9))</p> <p>Owl-Flintstone Management Unit (corresponds to Owl-Flintstone (MB13))</p>	<p>Complete (2022; Interlake and Owl-Flintstone Management Units)</p> <p>In Progress (Initiated 2019, expected completion 2024; Kamuchawie Management Unit)</p>	Government of Manitoba

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²⁶
<p>collections were completed in 2019-20 and 2021-22. Due to low sample size, a robust population size was not unattainable, but a minimum population count was produced.</p> <p>This information will improve the ability to effectively mitigate impacts to the boreal caribou local population and help protect caribou habitat by enabling the incorporation of targets to maintain or increase recovery habitat into range planning and land management processes.</p>			
<p>The Government of Manitoba completed population data analysis for all management units in October 2018 and again in December 2020. The analysis included population trend, habitat disturbance, adult female survival, habitat suitability modeling and home range data from 2005 to 2020. The results will form the basis for describing the current state of populations within individual boreal caribou management unit range plans.</p>	<p>All boreal caribou management units in Manitoba</p>	<p>Completed (October 2018 and December 2020)</p>	<p>Government of Manitoba</p>
<p>Monitor boreal caribou health and condition</p>			
<p>No new actions since 2017 reported.</p>			
<p>Monitor and manage sensory disturbance of boreal caribou</p>			
<p>No new actions since 2017 reported.</p>			

3.2.5 Ontario

On April 21, 2022, the Government Canada and the Government Ontario signed a five-year *Agreement for the Conservation of Caribou, Boreal Population in Ontario* (“Ontario conservation agreement”) under SARA sections 10 and 11, following a 45-day public comment period from February 4 to March 21, 2022. The agreement includes commitments for: planning and implementing habitat restoration activities; refining evidence-based approaches to manage for self-sustaining local populations; monitoring and reporting on current and projected future population and habitat condition; increasing protection through protected areas and other effective area-based conservation measures; and collaborative

implementation of conservation measures that are informed by independent experts, Indigenous communities and organizations, and stakeholders. ECCC and the Government of Ontario have each committed \$34.66 million towards implementation of the agreement. Year one targets were achieved, including completion of monitoring in four ranges and ongoing Indigenous and stakeholder engagement. Annual progress reports will be made publicly available; the first such report was released on March 22, 2024 for implementation over the agreement's first year (April 2022 to April 2023).

In February 2023, the Minister formed the opinion that some portions of boreal caribou critical habitat on non-federal lands in Ontario are not effectively protected. At the same time, the Minister formed the opinion that individuals of the species are protected in Ontario. As required under subsection 61(4) of SARA, the Minister recommended the making of an order to protect all unprotected portions of boreal caribou critical habitat on non-federal lands in Ontario. The Government of Canada declined the making of a protection order, at this time. As described in the [Statement](#)²⁷ (published July 2023), a collaborative stewardship-based approach respects the province's role in the protection of species at risk and encourages greater collaboration with Ontario in implementing ambitious measures for boreal caribou. Further, this approach seeks to support the continued participation of Indigenous nations and organizations, local communities, and stakeholders in caribou recovery. The Minister will closely monitor the implementation of each of the measures under the Ontario conservation agreement and will consider pursuing actions under SARA if there is a lack of progress.

As mentioned in the 2017 Progress Report, in 2013, Ontario re-delineated the Far North (ON9) range into six ranges: Swan, Spirit, Ozhiski, James Bay, Missisa and Kinloch (see Figure B-4). The Ontario conservation agreement includes a commitment to, over five years, further review and, as appropriate, adjust boreal caribou range boundaries based on existing and new science, including Indigenous Traditional Knowledge and community knowledge, and consideration of relevant factors including climate change.

The province is continuing to implement Ontario's *Range Management Policy in Support of Woodland Caribou Conservation and Recovery* (2014), conducting detailed assessments of potential adverse effects of proposed activities/developments on caribou and their habitat and the identification of avoidance, mitigation and conditions of authorization under the *Endangered Species Act, 2007*. The Range Management Policy supports the implementation of the range management approach described in *Ontario's Woodland Caribou Conservation Plan* (2009). Ontario considers the implementation of its Range Management Approach to constitute range plans for boreal caribou in Ontario, for all provincial ranges except the Coastal Range (ON6).

²⁷ <https://species-registry.canada.ca/index-en.html#/documents/487>

Since 2017, the Government of Ontario has funded five projects with Indigenous peoples, industry, ENGOs and academics, totaling approximately \$160,000, through the Species at Risk Stewardship Fund that have implemented or supported stewardship and recovery actions for caribou. Additionally, the Government of Ontario has invested \$2.4 million since 2018 in its Northern Mammal Ecology Program, as well as \$330,000 for caribou translocations in the Lake Superior Coast Range. Over \$1.2 million was committed to stewardship activities beginning in 2022-23 as part of the funding under the Ontario conservation agreement.

ECCC committed approximately \$9.2 million between 2018-19 and 2022-23 to projects for which some or all activities helped support boreal caribou recovery within Ontario. Of this amount, \$5.3 million was committed to the provincial government, \$3.2 million to Indigenous governments and organizations and \$660,000 to stakeholders. Partners committed \$11.8 million in matching funds to these projects.

ECCC is encouraged by recent collaboration with the province through the signing of the Ontario conservation agreement, including progress made to review and refine existing and alternative evidence-based approaches to maintain or achieve self-sustaining local populations. The population monitoring work initiated as a result of the agreement will help address some important knowledge gaps regarding local population condition. ECCC expects Ontario to continue to collaborate on timely publication of annual reports on conservation agreement implementation, including providing details of on-the-ground recovery activities, to demonstrate transparency and accountability to Indigenous peoples, the public, and stakeholders. ECCC welcomes transformation of necessary planning and program development into implementation of habitat protection and restoration actions that will support maintenance of existing undisturbed habitat and provide new habitat in ranges where disturbance levels are high.

A summary of the actions taken in Ontario over the reporting period to address the broad strategies outlined in the Recovery Strategy (section 6.2, Table 5) is found below in Table 2e.

Table 2e. Summary of the recovery measures undertaken during the reporting period in Ontario

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²⁸
Broad Strategy to Recovery: Landscape Level Planning			
Undertake landscape level planning that considers current and future boreal caribou habitat requirements			

²⁸ Although not necessarily listed as a supporting organization, ECCC provided funding to some recovery measures in this table.

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²⁸
<p>In 2018, the Government of Ontario initiated a broad public discussion on the future of boreal caribou in the Lake Superior Coast Range (LSCR; corresponds to Coastal (ON6)) and Discontinuous Distribution (DD; the provincially identified area separating the LSCR from the ranges to the north), with the intent of developing a management approach for the area. These areas are not covered by the Range Management Policy. This broad public discussion included a discussion paper entitled “Seeking Advice on the Future of Caribou in the Lake Superior Coast Range” that was released in March 2018, and a workshop with Indigenous communities and stakeholders held in March 2019. A decision on the long-term approach has not yet been made.</p>	<p>Coastal (ON6) and the provincial DD</p>	<p>Initiated (the Ontario conservation agreement commits Ontario to finalizing a management approach for the LSCR and DD by 2023-24, with subsequent implementation)</p>	<p>Government of Ontario</p>
Broad Strategy to Recovery: Habitat Management			
Manage habitat to meet current and future habitat requirements of boreal caribou			
<p>Ontario’s Forest Management Guide for Boreal Landscapes (2014) (“Landscape Guide”) directs forest management planning teams to manage the amount and arrangement of habitat in areas where forest management units overlap the continuous caribou distribution. Within these areas, forest management plans (FMPs) are required to have a Dynamic Caribou Habitat Schedule (DCHS). A DCHS is a long-term plan for providing year-round caribou habitat in large, interconnected landscape patches. A DCHS is intended to support the achievement of management objectives (e.g., maintain caribou habitat within an estimated natural range) through the application of long-term strategies and operational plans for roads, forest harvesting and forest renewal. Calving and nursery areas, and related conditions on forest operations, are considered during the development of an FMP.</p>	<p>All ranges in Ontario that overlap with forest management units (except ON6).</p>	<p>Ongoing (the Ontario conservation agreement commits Ontario to integrating the Landscape Guide into all FMPs that intersect with boreal caribou ranges by 2026-27 and to assess the effectiveness of existing direction in supporting self-sustaining local populations)</p>	<p>Government of Ontario</p>

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²⁸
Currently, all forest management units within Sydney (ON1), Berens (ON2), Churchill (ON3), Brightsand (ON4), Nipigon (ON5), Pagwachuan (ON7), and Kesagami (ON8) include a DCHS in their FMPs.			
In the Far North planning area, the province continues to work jointly with interested First Nation communities to develop community-based land use plans under the <i>Far North Act</i> (2010). When completed, each plan will include at least one Dedicated Protected Area. Establishment of Dedicated Protected Areas will result in enhanced protection of significant areas of the Far North from human disturbance.	Far North (ON9)	Ongoing (since 2010)	Government of Ontario Deer Lake First Nation Eabametoong and Mishkeegogamang First Nations Marten Falls First Nation Constance Lake First Nation Webequie First Nation McDowell Lake First Nation Kashechewan First Nation Weenusk First Nation North Spirit Lake First Nation Moose Cree First Nation
Broad Strategy to Recovery: Mortality and Population Management			
Manage predators and alternate prey			
In 2018, following the movement of wolves over an ice bridge to Michipicoten Island, caribou were moved from Michipicoten to the wolf-free Slate Islands and Caribou Island. Nine caribou were successfully translocated to the Slate Islands while six caribou were successfully translocated to Caribou Island.	Coastal (ON6)	Completed (2018)	Government of Ontario
Manage direct human-caused mortality of boreal caribou			
No new actions reported.			
Broad Strategy to Recovery: Population Monitoring			
Conduct population studies to better understand population structure, trends and distribution			

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²⁸
A survey was conducted in 2020 on the caribou translocated in 2018 from Michipicoten Island to the Slate Islands to estimate population recovery and growth. The most recent estimate is 45 animals on the Slate Islands (2021). Additionally, a 2022 estimate by external parties indicates that there are 22-26 caribou on Caribou Island.	Coastal (ON6)	Ongoing, 2020; targeting next survey prior to the conclusion of the Ontario conservation agreement (2026-27)	Government of Ontario
Collars were deployed in Ozhiski in March 2019 and Missisa in March 2020 to further understand population structure, trends and distribution in relation to habitat condition and disturbance. Between 2020 and 2022, efforts were undertaken annually to deploy additional collars to maintain the sample size within each range.	Ozhiski and Missisa provincial ranges within the Far North (ON9)	Ongoing (since 2019-20)	Government of Ontario
In the Far North (ON9), work is ongoing to develop population dynamics models for caribou to facilitate regional cumulative effects assessment. These models may assist in the identification of boreal caribou critical habitat in the Far North and may help to inform future planning and resource development decisions in this region. Preliminary results from multi-species 'Moose-Wolf-Caribou' population dynamics were published in Rempel 2021 and an associated Technical Report is in preparation. Model components can be revisited and updated once additional information becomes available	Far North (ON9)	Ongoing (since 2018)	Government of Ontario
Ongoing development of a spatially explicit Population Viability Assessment model to assess caribou persistence is ongoing and will incorporate climate change and forest management planning.	All ranges, except Coastal (ON6)	Ongoing (since 2019)	Government of Ontario
Research on using whole genome sequences to develop a simple genetic test to distinguish between boreal and eastern migratory caribou ecotypes and better delineate their ranges, and to investigate fine scale genomic structure of boreal caribou to	Ozhiski and Missisa provincial ranges within the Far North (ON9)	Ongoing (since 2020)	Trent University Government of Ontario ECCC

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²⁸
delineate local populations and assess connectivity is underway.			
Research on conservation genomics of Lake Superior caribou is ongoing to investigate evolutionary origins, inbreeding, and adaption, and will support identification of priorities for habitat connectivity between the Lake Superior caribou and the continuous range.	Coastal (ON6)	Ongoing (since 2020)	Trent University Government of Ontario ECCC
Caribou population and habitat monitoring has been undertaken in the context of two environmental assessment projects. This includes winter aerial surveys in 2018 and 2019, a Caribou Nursery Habitat Survey in 2019, and deployment of a total of 59 GPS radio-collars. This information is intended to provide baseline data within and near the proposed projects.	Missisa provincial range within the Far North (ON9)	The winter aerial surveys and nursery habitat surveys are complete (2018-19). The collaring studies are ongoing (since 2021).	Webequie First Nation Marten Falls First Nation AtkinsRéalis (previously SNC-Lavalin) AECOM Canada Ltd. WSP
ECCC conducted regional-scale, non-invasive fecal DNA study across Missisa and Ozhiski in 2021 and 2022, respectively. Data will provide baseline information to help inform the review of potential future developments in the area. Planning occurred in 2022 for surveying James Bay in 2023.	Missisa, Ozhiski, and James Bay provincial ranges within the Far North (ON9)	Sample collection complete (2021-22); project ongoing	ECCC Trent University
Planning began in 2022 to develop an ongoing range-scale caribou monitoring program and to monitor key ranges in winter 2023 (Brightsand (ON4), Churchill (ON3), Kesagami (ON8) and Kinloch (part of Far North (ON9)).	All ranges	Ongoing (since 2022; The Ontario conservation agreement commits Ontario to develop an ongoing monitoring program by 2023-24 and to monitor all ranges by 2026-27, starting with key ranges in 2022-23)	Government of Ontario
Fecal DNA mark-recapture surveys of caribou were carried out in Brightsand (ON4) in 2020 to estimate population genetic diversity statistics and population size.	Brightsand (ON4)	Completed (2023)	Lakehead University ECCC Government of Ontario Resolute Forest Products

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ²⁸
			Weyerhaeuser Company Ltd EACOM Timber Corporation Forest Products Association of Canada
Aerial survey of caribou was carried out in a portion of the Kesagami (ON8) range and the adjoining Detour range in Quebec in 2022.	Kesagami (ON8)	Completed (2023)	Government of Québec ECCC GreenFirst Forest Products Agnico Eagle Mining Ltd. Hecla Quebec Abitibiwinni First Nation Council
Monitor boreal caribou health and condition			
Condition of caribou captured during deployment of collars in Ozhiski and Missisa was estimated using a qualitative score and analysis of blood samples (hematocrit, pregnancy-specific protein B). When possible, bone marrow fat is determined from long bones collected during mortality assessments.	Ozhiski and Missisa provincial ranges within the Far North (ON9)	Ongoing (since 2019-20)	Government of Ontario
Monitor and manage sensory disturbance of boreal caribou			
No new actions since 2017 reported.			

3.2.6 Quebec

The Government of Quebec declined ECCC’s requests for input and validation of the draft report, citing expiry of the *Entente de collaboration Canada-Québec pour la protection et le rétablissement des espèces en péril au Québec* (Cooperation Agreement for the Protection and Recovery of Species at Risk in Quebec). The following section was prepared by ECCC based on information previously communicated by Quebec and/or available online, and therefore may be incomplete.

On August 18, 2018, the Government of Canada and the Government of Quebec signed a one-year agreement for boreal caribou under the Cooperation Agreement for the Protection and Recovery of Species at Risk in Quebec. This one-year (2018-19) agreement included a \$1.3 million commitment from the Government of Canada and a \$5.9 million commitment

in cash and in-kind from Quebec. In September 2019, the Government of Canada and the Government of Quebec signed the three-year *Accord de partage des coûts relatifs à la mise en œuvre de l'Entente de collaboration pour la protection et le rétablissement des espèces en péril au Québec appliqué au caribou boréal et à son habitat* (Cost-Sharing Understanding Concerning the Implementation of the Cooperation Agreement for the Protection and Recovery of Species at Risk in Quebec Applied to Boreal Caribou and its Habitat; “three-year bilateral cost-sharing agreement”), which included commitments to habitat protection, restoration and management, population management and monitoring. The three-year (2019-20 to 2021-22) bilateral cost-sharing agreement was supported by a \$7 million commitment from ECCC and a matching commitment of \$21.6 million in cash and in-kind from Quebec, and expired on March 31, 2022. The Government of Canada and the Government of Quebec initiated negotiations for a new agreement for boreal caribou recovery in 2022, however, these negotiations are currently on hold.

Both the one-year agreement and the three-year bilateral cost-sharing agreement were signed as interim measures with the understanding that, within the term of the agreements, the Government of Quebec would be publishing a strategy for the recovery of caribou (“the Caribou Strategy”). The Caribou Strategy was first announced in April 2016 and has since been delayed three times. In November 2021, the Government of Quebec announced the creation of the *Commission indépendante sur les caribous forestiers et montagnards* (Independent Commission on Woodland and Mountain Caribou; “the Commission”), which was mandated to consult on caribou conservation to inform the Caribou Strategy. The Commission sought opinions on two scenarios, the first having no additional impact on the forest industry while the second included more ambitious habitat protection and restoration measures for caribou. The Commission released its [final report](#)²⁹, including recommendations to the Government of Quebec, on August 22, 2022. In summary, the Commission recommended that the Government of Quebec not move forward with the ‘no additional impact’ scenario and provided suggestions to further strengthen the second scenario with additional caribou measures. As noted in an August 22, 2022 joint [press release](#)³⁰, Quebec committed to release the Caribou Strategy by June 2023, and to achieving self-sustaining local populations in the long term, by applying range-specific measures to reduce the rate of disturbance within boreal caribou habitat, in order to achieve 65% undisturbed habitat in each range.

In January 2023, the Minister formed the opinion that almost all boreal caribou critical habitat located on non-federal lands in Quebec is not effectively protected. At the same time, the Minister formed the opinion that individuals of the species are protected in Quebec. As required under subsection 61(4) of SARA, the Minister recommended the making of an order to protect all unprotected portions of boreal caribou critical habitat on non-federal lands in Quebec. The Government of

²⁹ <https://consultation.quebec.ca/processes/caribous/f/109/>

³⁰ <https://www.canada.ca/en/environment-climate-change/news/2022/08/significant-progress-made-in-discussions-between-canada-and-quebec-on-the-management-protection-and-recovery-of-boreal-and-gaspesie-caribou.html>

Canada declined the making of a protection order, at this time, choosing instead to seek a collaborative approach with the Government of Quebec. As described in the [Statement](#)³¹ (published July 2023), the Minister will closely monitor progress made by Quebec over the coming months, including an evaluation of the Caribou Strategy once it is released, and will consider pursuing actions under SARA if there is a lack of progress.

The 2023 wildfire season resulted in further delays to the publication of the Caribou Strategy. A June 15, 2023 [press release](#)³² from the Government of Canada acknowledged the need to prioritize wildfire response and provided limited additional time on a potential critical habitat protection order to allow the Government of Quebec to come forward with its plan to protect 65% of each local population. In August 2023, the Government of Quebec committed to publishing the Strategy before the end of the year. ECCC's understanding as of February 2024 is that the Government of Quebec plans to release the Strategy in early 2024.

While the federal Recovery Strategy recognized six boreal caribou ranges in the province, Quebec's 2021 [Revue de littérature sur les facteurs impliqués dans le déclin des populations de caribous forestiers au Québec et de caribous montagnards de la Gaspésie](#)³³ (Literature Review on the Factors Involved in the Decline of Forest-dwelling Caribou Populations in Quebec and of Mountain Caribou in Gaspésie; "2021 Literature Review") notes that the ranges for boreal caribou in the province were updated in 2020 by including telemetry data available in Quebec between 2004 and 2020. Ten provincial ranges (Detour, Nottaway, Assinica, Temiscamie, Caniapiscau, Outardes, Manicouagan, Pipmuacan, Val d'Or and Charlevoix) were identified, as well as two areas (Baie-James and Basse-Cote-Nord) requiring additional population monitoring work in order to delineate one or more ranges (see Figure B-5).

Approximately 6,331,389 ha of boreal caribou habitat has been included in the designation of protected areas in Quebec since 2017 (see Figure C-1).

ECCC committed approximately \$21.1 million between 2018-19 and 2022-23 to projects for which some or all activities helped support boreal caribou recovery within Quebec. Of this amount, \$8.3 million was committed to the provincial government, \$11.9 million to Indigenous governments and organizations, and \$880,000 to stakeholders. Partners committed \$30.6 million in matching funds to these projects.

³¹ <https://species-registry.canada.ca/index-en.html#/documents/487>

³² <https://www.canada.ca/en/environment-climate-change/news/2023/06/government-of-canada-sets-timeline-for-quebec-protection-plans-on-boreal-caribou.html>

³³ https://consultation.quebec.ca/uploads/decidim/attachment/file/122/RevueLitterature_CaribouVF.pdf

The designation of new protected areas and the efforts made to better understand local populations in Quebec through monitoring are both important actions in support of boreal caribou recovery. However, a comprehensive Caribou Strategy is urgently needed to outline landscape-level approaches to managing habitat in a way that supports self-sustaining local populations, especially in ranges with very high levels of habitat disturbance. Further, long-term plans are needed for the conservation and recovery of the Val d’Or and Charlevoix local populations that look beyond the permanent use of enclosures or other predator control measures and include near and medium-term actions that improve habitat condition in those ranges (e.g., habitat restoration and protection). ECCC remains hopeful that a new Canada-Quebec collaborative agreement outlining ambitious commitments for the protection and recovery of boreal caribou, that involves First Nations, can be achieved when a science-based Caribou Strategy including near, medium, and long-term measures that support the recovery of the species is available.

A summary of the actions taken in Quebec over the reporting period to address the broad strategies outlined in the Recovery Strategy (section 6.2, Table 5) is found below in Table 2f.

Table 2f. Summary of the recovery measures undertaken during the reporting period in Quebec

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ³⁴
Broad Strategy to Recovery: Landscape Level Planning			
Undertake landscape level planning that considers current and future boreal caribou habitat requirements			
A draft Caribou Strategy that outlines the measures to be put in place to reduce the disturbance rate of the habitat used by boreal caribou in order to achieve 65% undisturbed habitat in each range, based on measurements and timelines adapted to each population, is expected imminently.	All boreal caribou ranges in Quebec	In progress	Government of Quebec
Broad Strategy to Recovery: Habitat Management			
Manage habitat to meet current and future habitat requirements of boreal caribou			

³⁴ Although not necessarily listed as a supporting organization, ECCC provided funding to many of the recovery measures in this table.

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ³⁴
<p>Since the 2017 Report on Implementation, 6,331,389 ha have been included in the designation of protected areas in Quebec ranges. The majority of these areas fall within Quebec (QC6). The largest protected areas are:</p> <ul style="list-style-type: none"> • Over 1,000,000 ha in Manouane (QC4), Manicouagan (QC5) and Quebec (QC6) through the 2020 establishment of the <i>Réserve de territoire aux fins d'aire protégée des Caribous-Forestiers-de-Manouane-Manicouagan</i> (Caribous-Forestiers-de-Manouane-Manicouagan Territorial reserve for protected area purposes) and the 2021 designation of the adjacent <i>Réserve de biodiversité projetée des Caribous-Forestiers-de-Manouane-Manicouagan</i> (Caribous-Forestiers-de-Manouane-Manicouagan proposed biodiversity reserve) under Quebec's <i>Natural Heritage Conservation Act</i> (NHCA). These protected areas are also in alignment with the three-year bilateral cost-sharing agreement; • 584,300 ha in Quebec (QC6) through the 2018 designation of the <i>Réserve de biodiversité projetée de Chisesaakahikan-et-de-la-Rivière-Broadback</i> (Proposed Chisesaakahikan-et-de-la-Rivière-Broadback Biodiversity Reserve) under the NHCA and the 2020 establishment of the adjacent <i>Réserve de territoire aux fins d'aire protégée Chisesaakahikan</i> (Chisesaakahiikan Territorial reserve for protected area purposes); • 571,900 ha in Quebec (QC6) through the 2020 establishment of the <i>Réserve de territoire aux fins d'aire protégée Rivière-</i> 	<p>Val d'Or (QC1) Pipmuacan (QC3) Manouane (QC4) Manicouagan (QC5) Quebec (QC6)</p>	<p>Completed</p>	<p>Government of Quebec</p>

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ³⁴
<p><i>Kanaaupscow-et-Lac-Kukamawa</i> (Rivière-Kanaaupscow-et-Lac-Kukamaw Territorial reserve) for protected area purposes under the NHCA;</p> <ul style="list-style-type: none"> 508,600 ha in Quebec (QC6) through the 2020 establishment of the <i>Réserve de territoire aux fins d'aire protégée Pipunishiwini-Saahkamiishtiku</i> (Pipunishiwini Saahkamiishtiku Territorial reserve for protected area purposes) under the NHCA. 			
<p>On April 1, 2018, the Québec Regulation Respecting the Sustainable Development of Forests in the Domain of the State came into effect. It provides for specific regulatory measures for the benefit of boreal caribou in Québec, for example, no forestry activity may be carried out in calving habitats north of the 52nd parallel, or in blocks of certain lichen ecological types.</p>	All boreal caribou ranges in Quebec, in whole or in part	Completed (April 2018)	Government of Quebec
<p>The Government of Quebec dismantled 157 km of road between 2017 and March 2022.</p>	South of Val d'Or (QC1), Manouane (QC4) and Charlevoix (QC2)	Completed (2022)	Government of Quebec Société des établissements de plein air du Québec
Broad Strategy to Recovery: Mortality and Population Management			
Manage predators and alternate prey			
<p>The Government of Quebec captured and penned the seven remaining caribou from the Val d'Or (QC1) local population in winter 2020, and the 16 remaining caribou from the Charlevoix (QC2) local population in winter 2022, to prevent their extirpation by protecting the local populations from predators until long-term measures are implemented.</p>	Val-d'Or (QC1) and Charlevoix (QC2)	Ongoing (Penning initiated in February 2020 for Val-d'Or and February 2022 for the Charlevoix herd)	Government of Quebec
<p>Predator control measures were undertaken in Val d'Or (QC1) and Charlevoix (QC2) beginning in 2019. In both ranges, the province tracked wolves through telemetry and aerial surveys, and conducted aerial</p>	Val-d'Or (QC1) and Charlevoix (QC2)	Initiated in 2019	Government of Quebec Huron-Wendat First Nation Lac Simon First Nation

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ³⁴
<p>and on-the-ground wolf culls since 2019, however these programs were halted following penning of the remaining caribou.</p> <p>In addition to provincial efforts, the Huron-Wendat Nation conducted bear control in Charlevoix (QC2) in 2021-22, and the Lac Simon, Kitcisakik and Long Point First Nations participated in wolf control efforts within Val d'Or (QC1) in 2018-2020.</p>			<p>Kitcisakik First Nation Long Point First Nation</p>
Manage direct human-caused mortality of boreal caribou			
No new actions since 2017 reported.			
Broad Strategy to Recovery: Population Monitoring			
Conduct population studies to better understand population structure, trends and distribution			
<p>17 aerial surveys were conducted by the Government of Quebec across eight federal or provincial ranges as well as the Baie James and Basse Côte-Nord areas since 2017. Results and methods of the population surveys have been published on the Government of Quebec's website³⁵.</p>	<p>Val d'Or (QC1) Charlevoix (QC2) Pipmuacan (QC3) Provincial ranges: Caniapiscau, Nottaway, Témiscamie, Manicouagan, Outardes Provincially identified areas: Baie James, Basse Côte-Nord and Moyenne-Côte-Nord</p>	<p>Completed: 2017 – Charlevoix 2018 – Caniapiscau 2019 – Basse Côte-Nord, Charlevoix and Témiscamie 2020 – Val d'Or, Charlevoix, Baie James, Manicouagan, Moyenne-Côte-Nord, Pipmuacan 2021 – Charlevoix, Caniapiscau, Manicouagan 2022 – Caniapiscau, Nottaway, Outardes</p>	<p>Government of Quebec In collaboration with the Cree Nation Government and the Anishnabe community of Lac-Simon</p>
<p>During the reporting period, telemetric data was collected on caribou local populations within ten</p>	Val d'Or (QC1)	Ongoing	Government of Quebec

³⁵ <https://mffp.gouv.qc.ca/nos-publications/rapports-inventaires-populations-caribous/>

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ³⁴
federal or provincial ranges as well as the Basse Côte-Nord area.	Charlevoix (QC2) Pipmuacan (QC3) Provincial ranges : Detour, Caniapiscau, Nottaway, Assinica, Témiscamie, Manicouagan, Outardes Provincially identified area: Basse Côte-Nord		
Monitor boreal caribou health and condition			
No new actions since 2017 reported.			
Monitor and manage sensory disturbance of boreal caribou			
No new actions since 2017 reported.			

3.2.7 Newfoundland and Labrador

The Government of Canada and the Government of Newfoundland and Labrador signed a four-year *Conservation Agreement for the Conservation of the Woodland Caribou, Boreal Population ("Boreal Caribou") in Labrador* under SARA section 11 on September 26, 2019, following a 30-day consultation period from June 28 to July 28, 2019. The agreement includes commitments to range planning (by March 2023) and recovery measures identified under three focal areas: Habitat Protection, Improving Knowledge, Indigenous Engagement and Caribou Guardianship. The agreement commits to developing range plans that will provide guidance to preserve undisturbed habitat at levels that exceed the 65% outlined in the 2012 Recovery Strategy. The agreement is supported by a \$5.65 million commitment from ECCC over five years (2019-20 to 2023-24), and a \$6.16 million commitment (in cash and in kind) from the Government of Newfoundland and Labrador over seven years (2017-18 to 2023-24).

The Government of Newfoundland and Labrador revisited the identification of boreal caribou local population units and boundary delineations following an increase in population monitoring efforts during the reporting period. The province concluded that boreal caribou in Labrador consist of five local populations re-delineated from the three local populations currently identified in the 2012 Recovery Strategy. The revised local populations are Lac Joseph, Red Wine Mountain,

Mealy Mountain, Joir River and Dominion Lake (see Figure B-6). Moving forward, the province will be monitoring caribou populations and their habitat within the ranges of the five local populations.

The Government of Newfoundland and Labrador spent \$3,655,274 on boreal caribou protection and recovery between 2017-2022 (part of the province’s \$6.16 million commitment in support of the conservation agreement).

ECCC committed approximately \$7.9 million between 2018-19 and 2022-23 to projects for which some or all activities helped support boreal caribou recovery within Newfoundland and Labrador. Of this amount, \$6.0 million was committed to the provincial government and \$2.0 million to Indigenous governments and organizations. Partners committed \$11.7 million in matching funds to these projects.

Despite a one-year delay relative to the timeline commitment in the section 11 agreement, ECCC is encouraged by the efforts taken by the Government of Newfoundland and Labrador and Indigenous partners towards a range plan for all boreal caribou ranges. ECCC is eager to see the plan finalized by March 2024 and implemented without delay to maintain the relatively low levels of habitat disturbance in the province.

A summary of the actions taken in Newfoundland and Labrador over the reporting period to address the broad strategies outlined in the Recovery Strategy (section 6.2, Table 5) is found below in Table 2g.

Table 2g. Summary of the recovery measures undertaken during the reporting period in Newfoundland and Labrador

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ³⁶
Broad Strategy to Recovery: Landscape Level Planning			
Undertake landscape level planning that considers current and future boreal caribou habitat requirements			

³⁶ Although not necessarily listed as a supporting organization, ECCC provided funding to many of the recovery measures in this table.

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ³⁶
<p>The Government of Newfoundland and Labrador developed a work plan and drafted a framework to initiate range planning in June 2022. A range plan (covering all ranges) is currently being drafted in collaboration with Indigenous groups in Labrador. Work to date has included updating local populations ranges in Labrador, as well as identifying priority areas for conservation through a GIS analysis. Next steps are to work with Indigenous governments and organizations to refine these areas, and to examine potential protection mechanisms.</p>	<p>All boreal caribou ranges in Labrador</p>	<p>In progress (final range plan expected in March 2024)</p>	<p>Government of Newfoundland and Labrador Innu Nation Nunatsiavut Government NunatuKavut Community Council ECCC</p>
<p>The province has initiated engagement towards collaborative management planning for boreal caribou with Indigenous governments and organizations, as well as other management agencies (i.e., Canadian Wildlife Service, Parks Canada).</p>	<p>All boreal caribou ranges in Labrador</p>	<p>In progress, (expecting to commence team meetings in 2024)</p>	<p>Government of Newfoundland and Labrador Innu Nation Nunatsiavut Government NunatuKavut Community Council Torngat Secretariat ECCC</p>
<p>Broad Strategy to Recovery: Habitat Management</p>			
<p>Manage habitat to meet current and future habitat requirements of boreal caribou</p>			
<p>Continued coordinated forestry planning with the Innu Nation has resulted in the renewal of a reserve for the 2018 to 2022 forestry planning cycle, in which silviculture, road building and commercial forestry activities are prohibited, with only small-scale domestic harvest permitted. This reserve, totaling over 450,000 ha, overlaps with Red Wine Mountain (NL2).</p>	<p>Red Wine Mountain (NL2)</p>	<p>Completed (2018-2022)</p>	<p>Government of Newfoundland and Labrador Innu Nation</p>
<p>Broad Strategy to Recovery: Mortality and Population Management</p>			
<p>Manage predators and alternate prey</p>			
<p>High predation pressure and alternate prey have not been identified as a current threat/issue for boreal</p>	<p>All boreal caribou ranges in Labrador</p>	<p>Ongoing (since 2019)</p>	<p>Government of Newfoundland and Labrador</p>

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ³⁶
caribou in Labrador. However, in alignment with the SARA section 11 conservation agreement, the province has initiated a monitoring program to collect baseline information on moose and wolf populations in relation to boreal caribou distribution and demography in Southern Labrador. These surveys are complemented by ongoing moose survey work by partners.			DND Torngat Secretariat
Manage direct human-caused mortality of boreal caribou			
The Indigenous Guardian programs by NunatuKavut Community Council and Nunatsiavut Government to deter harvesting of boreal caribou have been enhanced through the conservation agreement.	Mealy Mountain (NL3)	Ongoing (since 2019)	Government of Newfoundland and Labrador Nunatsiavut Government NunatuKavut Community Council ECCC
Increased surveillance and enforcement patrols in collaboration with Indigenous Guardians has supported increased information collection on boreal caribou harvest.	All boreal caribou ranges in Labrador	Ongoing (since 2021)	Government of Newfoundland and Labrador ECCC Nunatsiavut Government NunatuKavut Community Council
Broad Strategy to Recovery: Population Monitoring			
Conduct population studies to better understand population structure, trends and distribution			
Increased collar-based population monitoring and collaboration with Quebec on transboundary ranges allowed re-evaluation of caribou local population identification and boundary delineation.	All boreal caribou ranges in Labrador	Completed 2022	Government of Newfoundland and Labrador Government of Québec
A sample of adult female caribou were collared in all local population ranges to better understand survival rates, mortality causes and population distribution.	All boreal caribou ranges in Labrador	Ongoing annually since 2019	Government of Newfoundland and Labrador
Stratified aerial fixed-strip transect surveys in winter 2019 and 2022 were conducted to estimate population size and demographics of the Mealy Mountain (NL3) local population.	Mealy Mountain (NL3)	Completed (2019 and 2022)	Government of Newfoundland and Labrador Parks Canada

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ³⁶
			With support from Nunatsiavut Government, Innu Nation, NunatuKavut Community Council and the Torngat Secretariat
Annual aerial classification surveys (i.e., proportion of males, females and calves) of caribou groups with collared females, and any other groups found during the survey, were conducted to estimate calf recruitment.	All boreal caribou ranges in Labrador	Ongoing annually since 2019	Government of Newfoundland and Labrador Parks Canada (in NL3 only)
Monitor boreal caribou health and condition			
Pregnancy rates, stress and reproductive hormones, exposure to parasites and pathogens, and body condition were monitored using samples (fecal, hair, blood, bones) and body condition data collected during capture for collaring or during mortality investigations.	All boreal caribou ranges in Labrador	Ongoing (Initiated in 2019; Sample analysis for 2019-2022 and synthesis of findings completed in 2024. New samples collected and analyzed annually)	Government of Newfoundland and Labrador ECCC
Monitor and manage sensory disturbance of boreal caribou			
No new actions since 2017 reported.			

3.2.8 Yukon

The Government of Canada, the Government of Yukon, the First Nation of Na-cho Nyäk Dun, and the Gwich'in Tribal Council finalized a five-year *Conservation Agreement for the Conservation of Boreal Caribou* under SARA section 11, on June 28, 2019. The agreement includes commitments to habitat protection, in alignment with the Peel Watershed Regional Land Use Plan, population monitoring, habitat monitoring and protection of individuals if declining population trends are detected. It is supported by a \$188,350 commitment from ECCC over five years (2018-19 to 2022-23), and a \$188,500 commitment (in cash and in-kind) from the Yukon Government over the same period.

Consistent with Chapter 11 of First Nation Final Agreements, the process to develop the Peel Watershed Regional Land Use Plan (PWRLUP) began in 2004, and the plan was finalized in 2019. The PWRLUP provides direction about the management of land and resources in the Yukon's Peel Watershed Planning region. Ninety-nine percent of the boreal

caribou range in the Yukon falls within the larger area covered by the PWRLUP, making up about 13% of the region. The PWRLUP provides land use zoning, caribou protection measures, and development thresholds (allowable surface disturbance) within the Yukon portion of Northwest Territories (NT1). Along with related land management assessment and regulatory tools, the PWRLUP prescribes zoning for protecting boreal caribou critical habitat in the territory, including permanent protection for 324,482 ha (see Figure C-1). The parties to the plan are now working within existing legislation (e.g. Yukon *Parks and Land Certainty Act*) to enable park/protected area planning and formal designation of protected areas. Following this designation process, some permanent protection from new industrial land-use dispositions and new surface access will be achieved.

ECCC committed approximately \$1.6 million between 2018-19 and 2022-23 to projects for which some or all activities helped support boreal caribou recovery within the Yukon. Of this amount, \$1.4 million was committed to the territorial government and \$220,000 to Indigenous governments and organizations. Partners committed \$2.5 million in matching funds to these projects.

Finalization of the PWRLUP was a significant step in protecting boreal caribou habitat in the Yukon. Legal designation of protected areas and management planning, and improved data collection and reporting on habitat condition and important areas for caribou will help ensure that the plan is implemented in a way that supports a self-sustaining status of boreal caribou in the region.

A summary of the actions taken in Yukon over the reporting period to address the broad strategies outlined in the Recovery Strategy (section 6.2, Table 5) is found below in Table 2h.

Table 2h. Summary of the recovery measures undertaken during the reporting period in Yukon

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ³⁷
Broad Strategy to Recovery: Landscape Level Planning			
Undertake landscape level planning that considers current and future boreal caribou habitat requirements			
The final PWRLUP was posted on August 22, 2019.	Yukon portion of Northwest Territories (NT1)	Completed (August 2019)	Government of Yukon First Nation of Na-cho Nyäk Dun Gwich'in Tribal Council

³⁷ Although not necessarily listed as a supporting organization, ECCC provided funding to many of the recovery measures in this table.

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ³⁷
Broad Strategy to Recovery: Habitat Management			
Manage habitat to meet current and future habitat requirements of boreal caribou			
<p>Under the PWRLUP, a total of 650,200 ha of the Yukon portion of NT1 (approximately 72%) have been identified for designation as conservation areas, where new industrial land-use dispositions, as well as any new surface access, are not allowed:</p> <ul style="list-style-type: none"> • Land Management Unit (LMU) 10 is zoned as a Wilderness Area, and is subject to an interim withdrawal for 10 years or until review of the plan. The overlap of LMU 10 with the Yukon portion of NT1 totals 132,400 ha. • LMUs 11, 12 and 14 are zoned as Special Management Areas and have been permanently withdrawn. Legal designations and management plans are to be developed. The overlap of these areas with the Yukon portion of NT1 totals 324,500 ha. • LMUs 15 and 16 are zoned as Wilderness Areas – Boreal Caribou, and are subject to an interim withdrawal for 10 years or until review of the plan. Legal designations and management plans are to be developed. The overlap of these areas with the Yukon portion of NT1 totals 193,300 ha. 	Yukon portion of Northwest Territories (NT1)	Designation of areas under existing legislation in progress; withdrawals from industrial land use completed within Wilderness and Special Management Areas	Government of Yukon First Nation of Na-cho Nyäk Dun Gwich'in Tribal Council
Consistent with commitments made in the boreal caribou conservation agreement, lichen mapping was conducted to inform the identification of high priority areas for critical habitat protection.	Yukon portion of Northwest Territories (NT1)	Completed (2020)	Government of Yukon
A fire risk model was developed to better understand the probability of fire occurrence within the range. This knowledge will enable managers to predict fire dynamics to assess disturbance levels into the future.	Yukon portion of Northwest Territories (NT1)	Completed (fiscal 2020-21)	Government of Yukon

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ³⁷
Broad Strategy to Recovery: Mortality and Population Management			
Manage predators and alternate prey			
No new actions since 2017 reported.			
Manage direct human-caused mortality of boreal caribou			
No new actions since 2017 reported.			
Broad Strategy to Recovery: Population Monitoring			
Conduct population studies to better understand population structure, trends and distribution			
Collars were deployed in 2020 to evaluate distribution and estimate population density within the study area to develop a baseline of boreal caribou density in the Yukon in winter.	Yukon portion of Northwest Territories (NT1)	Completed (fiscal 2022-23)	Government of Yukon
Monitor boreal caribou health and condition			
Health and condition sampling, including for diseases and parasites, pregnancy status, body condition, etc., was conducted on animals captured for collar deployment.	Yukon portion of Northwest Territories (NT1)	Completed (2020)	Government of Yukon
Monitor and manage sensory disturbance of boreal caribou			
No new actions since 2017 reported.			

3.2.9 Northwest Territories

The Government of Canada and the Government of Northwest Territories (GNWT) signed a five-year agreement for boreal caribou under SARA section 11 on March 14, 2019. The agreement includes commitments to range planning by 2022 and harvest management, and is supported by a commitment of up to \$5.182 million from ECCC, and \$7.439 million (in-cash and in-kind) from the GNWT over six years (2018-19 to 2023-24).

In August 2019, GNWT released its final [A Framework for Boreal Caribou Range Planning](#)³⁸ to guide the development, between 2019 and 2023, of five regional boreal caribou range plans that will determine how habitat for boreal caribou will be managed for the Inuvialuit, Gwich'in, Sahtú, Wek'èezhìi and southern Northwest Territories portions of the NT1 range. It does not apply to the Yukon portion of the range, which is managed by the Yukon Government. The Wek'èezhìi Interim Boreal Caribou Range Plan was finalized during this reporting period.

Approximately 2,364,111 ha have been included in the designation of protected areas in Northwest Territories (NT1) since 2017 (see Figure C-1). GNWT is working in partnership with Indigenous governments and organizations towards the establishment of another candidate protected area (Dìnàgà Wek'èhodi).

The GNWT provides funding for boreal caribou-related work through the NWT Species Conservation and Recovery Fund (SCARF), the NWT Environmental Studies Research Fund and the NWT Cumulative Impact Monitoring Program, as well as other directed funding (e.g., implementation of the *Wildlife Act*, 2014).

The status of boreal caribou under the *Species at Risk (NWT) Act* was re-assessed in 2022, based on the [Species Status Report for Boreal Caribou \(*Rangifer tarandus caribou*\) in the Northwest Territories](#)³⁹ ("NWT Species Status Report"). The NWT Species at Risk Committee determined that the status of boreal caribou in the NWT should remain as Threatened.

ECCC committed approximately \$26.0 million between 2018-19 and 2022-23 to projects for which some or all activities helped support boreal caribou recovery within the Northwest Territories. Of this amount, \$9.9 million was committed to the territorial government, \$16.0 million to Indigenous governments and organizations, and \$25,000 to stakeholders. Partners committed \$22.7 million in matching funds to these projects.

ECCC is encouraged by the completion of the interim range plan for the Wek'èezhìi region, and the collaborative efforts by GNWT, wildlife management boards, Indigenous governments and organizations, and other partners in the development of range plans and establishment of new protected areas, among other conservation and recovery actions in NT1. However, based on current estimates, finalization of all range plans is delayed relative to the committed timelines in the section 11 agreement. Avoidance of additional delays to range plan finalization, and expeditious implementation of final plans, will be critical to maintaining less than 35% disturbed habitat in support of a self-sustaining local population.

³⁸ https://www.gov.nt.ca/ecc/sites/ecc/files/resources/boreal_caribou_range_planning_framework_2019_-_cadre_de_planification_de_laire_de_repartition_du_caribou_boreal_2019.pdf

³⁹ https://www.nwtspeciesatrisk.ca/sites/enr-species-at-risk/files/boreal_caribou_status_report_final_23may2022.pdf

A summary of the actions taken in Northwest Territories over the reporting period to address the broad strategies outlined in the Recovery Strategy (section 6.2, Table 5) is found below in Table 2i. Additional information can be found in the [Progress Report on the Conservation and Recovery of Boreal Caribou \(*Rangifer tarandus caribou*\) in the Northwest Territories \(2017-2021\)](#)⁴⁰ (“NWT Progress Report”), published by GNWT in November 2022.

Table 2i. Summary of the recovery measures undertaken during the reporting period in Northwest Territories

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ⁴¹
Broad Strategy to Recovery: Landscape Level Planning			
Undertake landscape level planning that considers current and future boreal caribou habitat requirements			
In August 2019, the final <i>A Framework for Boreal Caribou Range Planning</i> was released following a public comment period from February 8, 2017 to March 31, 2018.	Northwest Territories (NT1)	Completed (August 2019)	GNWT First Nations, Métis, and Indigenous governments and organizations within the Southern region of NT1. ECCC Parks Canada Indigenous and Northern Affairs Canada Canadian Association of Petroleum Producers NWT/NU Chamber of Mines Canadian Parks and Wilderness Society (CPAWS) NWT
The Wek'èezhì Interim Boreal Caribou Range Plan was finalized in December 2021 and published on March 22, 2022, following a public comment period from August to October 2021. It was developed as a commitment under the environmental assessment for the Tłı̄chǫ All-Season Road and is currently in effect. The interim plan will eventually be replaced by the final range plan once it is completed.	Wek'èezhì region of Northwest Territories (NT1)	In progress (Interim plan completed December 2021; final plan expected in first quarter of 2025)	GNWT Tłı̄chǫ Government North Slave Métis Alliance Yellowknives Dene First Nation Wek'èezhì Renewable Resources Board (WRRB) ECCC Mountain Island Métis

⁴⁰ https://www.nwt-species-at-risk.ca/sites/enr-species-at-risk/files/final_boreal_caribou_progress_report_09nov2022_0.pdf

⁴¹ Although not necessarily listed as a supporting organization, ECCC provided funding to many of the recovery measures in this table.

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ⁴¹
<p>The Southern Northwest Territories range planning working group has met six times since being formed in 2019. In addition, two rounds of community mapping workshops were held in 2015-16 and 2020-21, and six sub-regional workshops took place in fall 2022 to document, record, review and verify local and Indigenous Knowledge relating to boreal caribou habitat, to understand community perspectives on economic development opportunities and land use interests, and to produce regional management class maps.</p> <p>This regional range planning is being coordinated across jurisdictions (in collaboration with representatives from British Columbia and Alberta).</p>	<p>Southern region of Northwest Territories (NT1)</p>	<p>In progress (final plan expected in first quarter of 2025)</p>	<p>GNWT First Nations, Métis, and Indigenous Governments and organizations within the Southern region of NT1. ECCC CPAWS NWT Parks Canada</p>
<p>The Gwich'in region range planning working group was formed in 2020 and has met twice. Community information sessions were held in Aklavik and Inuvik in 2021-22. Two habitat classification workshops were conducted in 2022 and Indigenous Knowledge interviews and mapping are ongoing. Regional range planning is being coordinated across jurisdictions (in collaboration with representatives from Yukon).</p>	<p>Gwich'in region of Northwest Territories (NT1)</p>	<p>In progress (final plan expected in third quarter of 2025)</p>	<p>GNWT First Nations, wildlife management boards and Indigenous Governments and organizations within the Gwich'in region of NT1. ECCC</p>
<p>The range planning working group was formed for the Inuvialuit region in 2020, and community information sessions were held in Aklavik and Inuvik in 2021.</p>	<p>Inuvialuit region of Northwest Territories (NT1)</p>	<p>In progress (final plan expected in third quarter of 2026)</p>	<p>GNWT First Nations, wildlife management boards and Indigenous Governments and organizations within the Inuvialuit region of NT1. ECCC</p>
<p>In 2021, the GNWT worked with the Sahtú Renewable Resources Board (SRRB) and Sahtú Secretariat Incorporated (SSI) to discuss the process for community/regional engagement and development of the Sahtú regional range plan.</p>	<p>Sahtú region of Northwest Territories (NT1)</p>	<p>In progress (final plan expected in third quarter of 2027)</p>	<p>GNWT First Nations, wildlife management boards and Indigenous governments and organizations within the Sahtú region of NT1. ECCC</p>
<p>Broad Strategy to Recovery: Habitat Management</p>			

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ⁴¹
Manage habitat to meet current and future habitat requirements of boreal caribou			
<p>2,364,111 ha within the boreal caribou distribution in the Northwest Territories have been protected since the 2017 report. This includes:</p> <ul style="list-style-type: none"> Nearly 942,000 ha through the establishment of the Ts'udé Niljné Tuyeta Indigenous Protected Area under K'asho Got'ine Law in 2019 and Territorial Protected Area under the <i>Protected Areas Act</i> in January 2022; Approximately 1,422,000 ha through the establishment of the Edézhie National Wildlife Area and Dehcho Protected Area under the <i>Dehcho Protected Area Law</i> in July 2018 and under the <i>Canada Wildlife Act</i> in May 2022. 	Northwest Territories (NT1)	Completed (2022)	Fort Good Hope Dene First Nation Yamoga Lands Corporation Fort Good Hope Metis Nation Local #54 Land Corporation Ayoni Keh Land Corporation Behdzi Ahda First Nation Dehcho First Nations Łídlıı Kúę First Nation Fort Simpson Metis Local 52 Deh Gáh Got'ie First Nation Fort Providence Metis Local 57 Pehdzeh Ki First Nation Tthets'ék'edélj First Nation Tjichq Government GNWT ECCC
<p>The GNWT completed the development of a new <i>Protected Areas Act</i> in the NWT in collaboration with Indigenous governments and Indigenous organizations, regulatory boards, stakeholders and the public. The Act came into force in June 2019. The legislation enables collaboration with Indigenous governments and organizations to establish and manage protected areas in a way that protects biodiversity, ecological integrity, and cultural continuity.</p>	Northwest Territories (NT1)	Completed (June 2019)	GNWT
<p>The GNWT finalized a five-year work plan for conservation network planning in the territory, Healthy Land Healthy People: Government of the Northwest Territories Priorities for the Territorial Conservation Network 2023-2028⁴², following a public review⁴³ of the proposed draft from February to</p>	Northwest Territories (NT1)	Completed (October 2023)	GNWT

⁴² <https://www.gov.nt.ca/ecc/en/services/conservation-network-planning/healthy-land-healthy-people>

⁴³ <https://haveyoursay.nwt-tno.ca/healthy-land-healthy-people-renewal-2022>

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ⁴¹
September, 2022. This updated work plan will guide conservation network establishment, planning, management, and operations priorities in collaboration with Indigenous governments, Indigenous organizations, and other partners.			
Phase II regulatory amendments came into force on July 1, 2019, under the <i>Northwest Territories Wildlife Act</i> . These amendments enable the GNWT to require and enforce Wildlife Management and Monitoring Plans (WMMPs), when appropriate, to demonstrate how developments will minimize impacts on boreal caribou and its habitat. Guidelines for WMMPs were finalized in June 2019. As of January 2024, 12 WMMPs have been determined to be required by the GNWT and of those, seven have been approved and are being implemented. The GNWT encourages all developers, and considers it a best practice, to submit a basic WMMP with their application for authorizations.	Northwest Territories (NT1)	Complete (2019)	GNWT
Following an external review in 2020, the GNWT released the draft “Guidelines for Exploration and Development in NWT Boreal Caribou Habitat” in March 2022 for public review until April 30, 2022. This guidance supports proponents in following best management practices for mitigating the impacts of development on boreal caribou habitat.	Northwest Territories (NT1)	In progress (draft guidelines released March 2022; finalization expected fall 2024)	GNWT
The GNWT developed a Boreal Caribou Project Screening Tool (available on the NWT Species and Habitat Viewer ⁴⁴) for project applications that provides a real-time assessment of boreal caribou habitat supply and how the proposed development would affect habitat disturbance levels, relative to critical habitat thresholds. It helps developers and regulators identify, avoid, minimize and mitigate	Northwest Territories (NT1)	Completed (2022)	GNWT

⁴⁴ https://www.maps.geomatics.gov.nt.ca/Html5Viewer/index.html?viewer=NWT_SHV

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ⁴¹
impacts of proposed development projects on boreal caribou habitat.			
Broad Strategy to Recovery: Mortality and Population Management			
Manage predators and alternate prey			
No new actions since 2017 reported.			
Manage direct human-caused mortality of boreal caribou			
The GNWT provides support and funding for interested Indigenous governments, Indigenous organizations and other partners to help facilitate the collection of Indigenous harvest information, and continues to estimate harvest levels of resident hunters through the annual Resident Harvest Survey. The GNWT encourages harvesting practices that minimize negative impacts on caribou populations through annual education and awareness programs and campaigns and the NWT Hunter Education Program in collaboration with SRRB and GRRB.	Northwest Territories (NT1)	Ongoing	GNWT and partners
The GNWT published a Boreal Caribou Sustainable Harvest Assessment Report in October 2021 to address community concerns about levels of boreal caribou harvesting in the southern NWT (Dehcho, South Slave and North Slave regions), and began meeting with Indigenous governments and Indigenous organizations in the southern NWT to discuss the findings of the report and whether any new management actions should be taken.	Northwest Territories (NT1)	Ongoing (since 2021; meetings delayed due to the COVID-19 pandemic are being rescheduled)	GNWT and partners
The GNWT amended the <i>Wildlife Act</i> Big Game Hunting Regulations (Phase 2 <i>Wildlife Act</i> regulation amendments in July 2019 to include a shortened hunting season, tag requirements and harvest conditions.	Northwest Territories (NT1)	Completed (July 2019)	GNWT
Broad Strategy to Recovery: Population Monitoring			
Conduct population studies to better understand population structure, trends and distribution			

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ⁴¹
<p>The GNWT continued to actively monitor boreal caribou population trend and movements via GPS collars in six study areas (Dehcho South, Dehcho North, Hay River Lowlands, Pine Point/Buffalo Lakes, Mackenzie, and North Slave). Monitoring was also expanded into the Sahtú through the 2020 deployment of collars to collect baseline data for the Mackenzie Valley Highway project.</p> <p>Aerial surveys were also conducted in 2019 by Parks Canada in the Buffalo Lake area inside and outside of the Wood Buffalo National Park (WBNP) boundary, and in 2020 by GNWT in the North Slave region, to enable regional population abundance estimates.</p> <p>Long-term population data available for the Dehcho and Hay River Lowlands study areas, dating back to 2005-06 and 2003-04 respectively, suggest an overall decline since the early to mid-2000s. In these study areas as well as all other study areas with available data, population growth rates have generally been positive in the last three-five years. Details on population monitoring results can be found in the <i>NWT Species Status Report</i>.</p>	Northwest Territories (NT1)	Ongoing (varying start dates in each study area, beginning as early as 2003-04)	GNWT Government of Yukon Parks Canada
<p>Multiple community monitoring programs have been completed or are ongoing, with funding support from GNWT (e.g., the Kátł'odeeche First Nation community-based monitoring program ‘Watching the Land’: Knowing the Impacts of Change⁴⁵, and the Tłıchq Government-led monitoring program for boreal caribou, habitat condition and harvest along the new Tłıchq Highway corridor).</p>	Northwest Territories (NT1)	Ongoing	Various Indigenous partners, with support from GNWT

⁴⁵ https://www.gov.nt.ca/sites/ecc/files/resources/128-cimp_bulletin_36_en_proof.pdf

Measures implemented to support recovery	Geographic Scope	Status and timeline	Lead and Supporting Organizations ⁴¹
From 2019-20, Kátl'odeeche First Nation Lands Crews deployed 25 cameras to create a wildlife camera grid in boreal caribou habitat in the Buffalo Lake area of WBNP. Preliminary analyses are underway and will provide data on habitat use.	Buffalo Lake area of Northwest Territories (NT1)	In progress	K'at'l'odeeche First Nation Parks Canada
Researchers from various organizations have investigated relationships among different populations of caribou and whether the NT1 local population has subpopulation structure (e.g. using genetics and traditional knowledge). See the NWT Progress Report for specifics.	Northwest Territories (NT1)	Ongoing	Various
Monitor boreal caribou health and condition			
The GNWT collects and analyzes biological samples from harvested and collared caribou to assess pregnancy rates and health/disease.	Northwest Territories (NT1)	Ongoing	GNWT
Monitor and manage sensory disturbance of boreal caribou			
The draft "Guidelines for Exploration and Development in NWT Boreal Caribou Habitat" supports proponents in following best management practices for mitigating the impacts of sensory disturbance on boreal caribou, including avoidance of development activities during the high risk late winter and calving/post-calving periods.	Northwest Territories (NT1)	In progress (draft guidelines released March 2022; finalization expected fall 2024)	GNWT
As described under the Broad Strategy: Habitat Management section of this table, the 2019 Phase II regulatory amendments under the <i>Northwest Territories Wildlife Act</i> enable the GNWT to require and enforce WMMPs, when appropriate, to demonstrate how developments will minimize impacts on boreal caribou (including sensory disturbances) and its habitat.	Northwest Territories (NT1)	Completed (2019)	GNWT

3.3 Performance Indicators

The Recovery Strategy presented performance indicators as a way to define and measure progress toward achieving the population and distribution objectives (section 8 – Measuring Progress). Monitoring of local populations based on performance indicators allows for the evaluation of the effectiveness of management actions and enables adjustments through adaptive management over time.

The ultimate performance indicator for the boreal caribou recovery is self-sustaining local populations throughout the entirety of its distribution in Canada.

The performance indicators for boreal caribou as outlined in section 8 of the Recovery Strategy are reproduced below, with an assessment of status for each measure.

3.3.1 General

a) *Complete range plans for each range within 3-5 years of the posting of the 2012 Recovery Strategy.*

The 2017 Progress Report noted that none of the provinces or territories fully met the October 5, 2017 deadline for range planning set in the Recovery Strategy, though most had made some progress on the development of range plans or other similar landscape level documents.

Since the 2017 Progress Report and up until September 2022, five range plans or similar landscape level documents were published:

- the [Peel Watershed Regional Land Use Plan \(PWRLUP\)](https://yukon.ca/peel-watershed-regional-land-use-plan)⁴⁶, which covers 99% of the Yukon portion of the Northwest Territories (NT1) range;
- the [Bistcho Lake Sub-regional Plan](https://open.alberta.ca/publications/bistcho-lake-sub-regional-plan)⁴⁷, which covers the Bistcho (AB2) range;
- the [Cold Lake Sub-regional Plan](https://open.alberta.ca/publications/cold-lake-sub-regional-plan)⁴⁸, which covers the Cold Lake (AB10) range;
- the [Range Plan for Woodland Caribou in Saskatchewan - Boreal Plain Ecozone - SK2 Central Caribou Administrative Unit](https://publications.saskatchewan.ca/api/v1/products/101694/formats/112399/download)⁴⁹, which covers the central administrative unit of the Boreal Plain (SK2) range;
- the [Range Plan for Woodland Caribou in Saskatchewan - Boreal Plain Ecozone - SK2 West Caribou Administrative Unit](https://publications.saskatchewan.ca/api/v1/products/103593/formats/114947/download)⁵⁰, which covers the west administrative unit of the Boreal Plain (SK2) range.

⁴⁶ <https://yukon.ca/peel-watershed-regional-land-use-plan>

⁴⁷ <https://open.alberta.ca/publications/bistcho-lake-sub-regional-plan>

⁴⁸ <https://open.alberta.ca/publications/cold-lake-sub-regional-plan>

⁴⁹ <https://publications.saskatchewan.ca/api/v1/products/101694/formats/112399/download>

⁵⁰ <https://publications.saskatchewan.ca/api/v1/products/103593/formats/114947/download>

In addition, the [draft Range Plan for Woodland Caribou in Saskatchewan - Boreal Plain Ecozone - SK2 East Caribou Administrative Unit](#)⁵¹ was published, which covers the east administrative unit of the Boreal Plain (SK2) range.

The [Wek'èezhì Interim Boreal Caribou Range Plan](#)⁵², which covers the Wek'èezhì sub-region of the Northwest Territories (NT1) range, was developed as a commitment under the environmental assessment for the Tłı̄chų All-Season Road and published in March 2022. The interim plan is currently in effect until the final boreal caribou range plan for the Wek'èezhì region is completed (targeting first quarter of 2025).

Outside of the reporting period, in summer 2023, the Government of BC endorsed the Boreal Caribou Protection and Recovery Plan (BCPRP), which covers four of the five provincially re-delineated ranges corresponding to the Maxhamish (BC1), Calendar (BC2), Snake-Sahtahneh (BC3), Parker (BC4) and Prophet (BC5) ranges. The [draft BCPRP](#)⁵³ was published for consultations in 2022, however the final plan is yet to be released.

Ontario considers the implementation of its Range Management Approach to constitute range planning for boreal caribou in the province, for all of Ontario's provincial 14 ranges excluding the Coastal (ON6) range. The Ontario conservation agreement commits the province to finalizing a management plan for the Coastal range by March 2024.

ECCC has secured commitments from provinces and territories to range plans or alternative landscape level approaches by 2025 for all but six ranges (in Quebec). Significant efforts have been taken to implement these commitments, however, delays have occurred across the country due to capacity issues, complications resulting from the COVID-19 pandemic, and other challenges. Additional draft and final range plans are expected in Alberta, Saskatchewan and Labrador over the coming year.

b) for SK1 complete the range plan by June 2021

The 2020 amendment to the Recovery Strategy identified critical habitat within the Boreal Shield (SK1) range and introduced this performance indicator to provide a timeline for development of a range plan. The SK1 range planning process was initiated in 2023 and is not yet complete; see section 3.2.3 for details on the status of range planning in Saskatchewan.

⁵¹ <https://pubsaskdev.blob.core.windows.net/pubsask-prod/130171/Draft%252BRange%252BPlan%252Bfor%252BWoodland%252BCaribou%252Bin%252BK%252BSK2%252BEast.pdf>

⁵²

https://www.enr.gov.nt.ca/sites/enr/files/resources/wekeezhii_interim_boreal_caribou_range_plan_aug_2021.pdf

⁵³ <https://engage.gov.bc.ca/caribou/boreal-caribou/>

3.3.2 Population Condition (population size and trend)

Information reported on distribution and population condition for boreal caribou is the best available information provided by provincial and territorial jurisdictions for the purposes of this report. Information sources may include, but are not restricted to, genetics research, observational and telemetry data, and Indigenous Knowledge.

Boreal caribou population monitoring is conducted primarily by the provinces and territories. Caribou monitoring approaches and the intensity of monitoring varies across ranges. The certainty in estimates of population size and trend varies depending on the monitoring technique used and the number of years the population has been monitored. Population monitoring techniques have different strengths and limitations that influence robustness and accuracy. Precise enumeration of the size of a boreal caribou local population is a challenge due to the large areas that boreal caribou occupy (often over thousands of square kilometres), the low densities at which they occur (making survey from aircraft challenging), and their relatively solitary habits (Environment Canada, 2008; Callaghan et al., 2010).

To account for differences in estimate types (minimum animal count or population size estimate), precision and certainty across ranges, this Progress Report indicates whether a given local population is estimated to have >300 animals, 100–300 animals, or <100 animals, based on the best available information provided by the provinces and territories. This is an increase in precision compared to the 2017 Progress Report, which indicated whether a given local population was estimated to have 100 or more animals, or less than 100 animals, at which point a local population is considered to be vulnerable to extinction from stochastic events due to small size (ECCC 2011). >300 animals was chosen as the upper size estimation, as an analysis done by ECCC in 2008 showed that local populations with more than 300 caribou can persist indefinitely when range conditions support average adult female and calf survival (Environment Canada, 2008). An effort was made to adjust the population size estimates in previous reporting periods to the new size categories where possible.

The following describes local population condition based on the range boundaries within the Recovery Strategy. Population data was submitted by provinces and territories. Some provinces and territories are monitoring boreal caribou at the non-federal range level (e.g., sub-regions within a range, or based on updated range boundaries – see Appendix B for maps); it is not always possible to use results from those monitoring efforts to make estimates about local populations in the ranges identified in the Recovery Strategy. Appendix A provides boreal caribou population condition information at the federal range level as well as within new ranges or administrative boundaries used by provinces or territories, where available. No population data was received from the Government of Quebec for this report. However, ECCC used publicly available population survey information for Quebec to populate Table A7 in Appendix A.

a) Maintain current distribution of boreal caribou across Canada.

Since the 2017 Progress Report, boreal caribou continue to occur in all 51 local population ranges across Canada. However, there are several small local populations, some of which are isolated, that continue to be at greater risk of extirpation or of not achieving or maintaining self-sustaining status. Direct or indirect predator management measures were implemented over the reporting period to prevent the extirpation of these seven local populations:

- The few remaining caribou in Val d'Or (QC1; seven caribou) and Charlevoix (QC2; 16 caribou) were captured and put in pens in 2020 and 2022, respectively. From 2019 until penning, the Government of Quebec undertook wolf population reductions in both ranges.
- Caribou in the Coastal (ON6) range were translocated from Michipicoten Island to the wolf-free Slate Islands and Caribou Island in 2018.
- Annual wolf population reductions were undertaken within and adjacent to the BC and Alberta portions of Chinchaga (AB1), Little Smoky (AB5), East Side Athabasca River (AB9) and Cold Lake (AB10).

Intensive population management measures alone are insufficient to achieve boreal caribou recovery. The need for these measures indicates that range conditions are below those needed to support self-sustaining local populations. Recovery efforts should focus on managing ranges to ensure the maintenance of an adequate amount and quality of habitat, with connectivity within and between ranges. Where range conditions are currently inadequate to support self-sustaining local populations, recognizing that habitat takes time to recover, these population management measures should be considered as interim actions while habitat restoration and management actions are implemented.

b) Achieve and/or maintain a stable to increasing population trend as measured over five years (i.e. $\lambda \geq \text{stable}$) or other empirical data that indicates population trend is stable or increasing.

This section reports on population trends, over a maximum of five-years (2017-2022), though there is variability in data availability across ranges. While these shorter-term trends provide important information on the status of a population, they may not provide a complete picture of the long-term health and sustainability of local caribou populations. It is necessary to consider longer-term population trends (e.g., over 20 or more years), other population metrics (e.g., sex and age structure, calf recruitment rate) and range-specific factors (e.g., habitat condition, predator-prey dynamics, caribou harvest levels) to provide a more fulsome understanding of the state of a local population. Short-term trends should, therefore, be interpreted within the context of broader, long-term population monitoring efforts.

Population trend estimates are available for 26 of the 51 local populations. Trend information is not available for the remaining 25 local populations because minimal or no monitoring was carried out over the reporting period, circumstances during monitoring activities (e.g., weather) generated limited data, or monitoring was carried out within areas that do not align with the ranges in the Recovery Strategy. Information

on population condition for each range is presented in Appendix A and reflected in the infographics that make up this Progress Report's executive summary.

Seven local populations experienced province-led intensive population management actions. Of the local populations under wolf reduction measures, three are increasing and one is stable. The two local populations that were penned were declining over the reporting period. The trend status of the local population that experienced translocation of caribou is unknown.

Of the 44 ranges without predator management programs, five local populations are considered increasing, seven local populations are stable, eight are declining and 24 are unknown.

- Of the six local populations that were reported as stable in the 2017 Progress Report, three remain stable and three are unknown.
- Of the 18 local populations that were reported as declining in 2017, three continue to decline, three are stable, three are increasing and nine are unknown.
- Of the 20 local populations for which trend was unknown in 2017, five are declining, one is stable, two are increasing, and twelve remain unknown.

c) Achieve a minimum of 100 animals for boreal caribou ranges with population estimates of less than 100 animals, or show progress towards this goal every five years.

In 2022, data availability and expert opinion allowed for population size estimates for 37 of the 51 local populations. Population size information is not available for the remaining 14 local populations because either minimal or no monitoring was carried out over the reporting period, or monitoring was carried out within areas that do not align with the ranges in the Recovery Strategy.

There are nine local populations that have fewer than 100 animals and 28 that have greater than or equal to 100 animals. Of those 28 local populations, 17 are estimated to have more than 300 animals. One local population, the Coastal range (ON6), fell from 100-300 in 2017 to less than 100 animals in 2022.

Information on population estimates for each range is presented in Appendix A and reflected in the infographics that make up this Progress Report's executive summary.

3.3.3 Habitat Condition (amount and type of undisturbed habitat)

The Recovery Strategy identifies a minimum of 65% undisturbed habitat in boreal caribou ranges (40% in SK1) as one component of critical habitat for the species. These minimum undisturbed habitat thresholds are policy decisions, informed by a science-based model developed by ECCC that considered anthropogenic disturbance, natural disturbance and population data to model the likelihood of a local population to be self-sustaining at varying levels of total disturbance. The model indicates that at 65% (or 40% in SK1) undisturbed habitat, there is a 60% (or 71% for SK1) probability that a local population will be self-sustaining. These are considered minimum undisturbed habitat thresholds because there remains a significant risk (40%, or 29% for SK1) of a local

population to not be self-sustaining. Managing a range to support more than the minimum threshold of undisturbed habitat will reduce this risk, and may be necessary to achieve self-sustaining local populations in some ranges.

In the 2012 Recovery Strategy, ECCC mapped the total amount of disturbance within boreal caribou ranges across their distribution in Canada. The total disturbance footprint was measured as the combined, non-overlapping area of:

1. any fires that have occurred in the previous 40 years; and
2. anthropogenic disturbance, defined as the area of any human-caused disturbance on the landscape that could be visually identified from Landsat imagery at a scale of 1:50,000 and the area within 500 m of the disturbance.

Data for fire disturbances were derived from the provincial and territorial jurisdictions through the Canadian National Fire Database (maintained by NRCan). Anthropogenic features were identified using 2010 Landsat imagery at a 30m resolution (ECCC 2011; Pasher et al., 2013).

In the 2017 Progress Report, updated habitat disturbance mapping followed the same methodology and data sources as the 2012 Recovery Strategy but used data current to 2015.

This Progress Report provides the second five-year update on habitat condition since the 2012 Recovery Strategy using Landsat imagery and fire data updated to 2020. Methodology for identification of anthropogenic disturbance in this report differs from that used previously in two ways:

1. Instead of mapping all visible anthropogenic disturbances using the 2020 Landsat data, the previously mapped anthropogenic disturbances from the 2015 analysis were used as the starting point and 2020 Landsat imagery was analysed to add any new anthropogenic disturbances. Therefore, while total non-overlapping disturbance within a range could decrease due to the removal of fires older than 40 years old from the fire disturbance index, the habitat disturbance analysis will not show any decreases to anthropogenic disturbance within a particular range. The decision to use this modified methodology was based on feasibility in terms of SARA reporting timelines and resources.
2. Forest harvest polygons from the Canadian Forest Service's National Terrestrial Ecosystem Monitoring System were added into the database and validated for authenticity during interpretation.

Before the next Progress Report, ECCC will be considering how best to continue monitoring habitat disturbance at a national scale that is meaningful, comparable and feasible under SARA reporting timelines.

The Recovery Strategy calls for provinces and territories to develop range plans or other similar documents that outline measures and steps that will be taken within the range to manage the interaction between human disturbance and natural disturbance in order to maintain or establish the minimum undisturbed habitat threshold.

The Recovery Strategy and the [Range Plan Guidance for Woodland Caribou, Boreal Population](#)⁵⁴ outline suggested components of a range plan. These include:

- Habitat condition and important areas:
 - Description, amount and maps of existing undisturbed and disturbed habitat;
 - Description and maps of important areas using current/historical western science and Indigenous Knowledge of biophysical attributes, caribou habitat use patterns and the need for connectivity within and between ranges.
- Demonstration of a path to maintain or achieve, over reasonable timelines, a minimum 65% undisturbed habitat (40% for SK1):
 - Identification and maps of areas that will be restored to/maintained at an undisturbed condition and that possess biophysical attributes for caribou;
 - Description of habitat restoration/management measures or activities.
- Demonstration of measurable progress on improving habitat condition:
 - Amount of forecasted habitat condition (% and/or ha undisturbed or disturbed areas) over reasonable, gradual increments every five years (for ranges <65% undisturbed habitat).
- Description of legally binding instruments, laws and/or conservation measures that are in place, with an explanation of how they protect boreal caribou critical habitat; and
- Proposals for monitoring and reporting on the implementation of range plans:
 - Habitat condition and application of protection measures/legally binding instruments;
 - Caribou population trends to ensure positive responses to management techniques.

High-level summaries of range plans according to these components are provided under habitat performance indicator a) in ranges with overall habitat condition that meets or exceeds the minimum undisturbed habitat threshold; and in b) for ranges for which habitat condition is below the threshold. The summaries provide a broad overview of current progress on range planning but are not a commentary on the ecological robustness of management measures in the plans. ECCC continues to work with provinces and territories and provide detailed feedback on range plans as they are developed.

a) Provide measurements of disturbance for each range that reflect the best available information, as provided by the provinces and territories, to update the recovery strategy accordingly every five years.

From 2010 to 2015, the number of ranges that met or exceeded the minimum undisturbed habitat threshold (i.e., at least 65% undisturbed, or 40% for SK1)

⁵⁴ <https://species-registry.canada.ca/index-en.html#/documents/2993>

decreased from 22 to 20⁵⁵. In 2020, 21 of the 51 ranges meet or exceed the undisturbed habitat threshold and the remaining 30 have less than 65% undisturbed habitat (see Figure 2).

Total non-overlapping habitat disturbance (anthropogenic and fire):

- increased in 30 caribou ranges in BC, Alberta, Manitoba, Ontario and Quebec by 1-8%. 21 of these ranges were already below the minimum undisturbed habitat threshold in 2015, and an increase in total disturbance in Churchill (ON3) caused the range to fall below the minimum threshold between 2015 and 2020.
- decreased in 14 ranges in Northwest Territories, Alberta, Saskatchewan, Manitoba, Ontario, Quebec and Labrador by 1-21% (due to the removal of fires over 40 years old). Undisturbed habitat rose to or above the minimum threshold between 2015 and 2020 in Kississing (MB2) and Brightsand (ON4).
- remained stable in 7 ranges in BC, Alberta, Manitoba and Labrador.

Anthropogenic disturbance increased in 35 ranges (i.e., over two thirds of ranges) by 1-5%, and remained stable in 16 ranges.

Fire disturbance increased in 10 ranges by 1-28%, decreased in 19 ranges by 1-20%, and remained stable in 22 ranges. Note that this analysis does not consider the significant wildfire seasons in 2021-2023, which saw burns to large areas within several boreal caribou ranges; these years will be included in the next habitat disturbance analysis.

Information on habitat condition for each range is presented in Appendix A.

⁵⁵ The 2017 Progress Report reported 21 and 19 ranges meeting or exceeding the undisturbed habitat threshold in 2010 and 2015, respectively, because they assessed the disturbance in the Boreal Shield (SK1) against the 65% undisturbed threshold. These numbers have been corrected in this Progress Report to assess SK1 against the minimum undisturbed habitat threshold of 40%, as identified in the 2020 amendment to the Recovery Strategy.

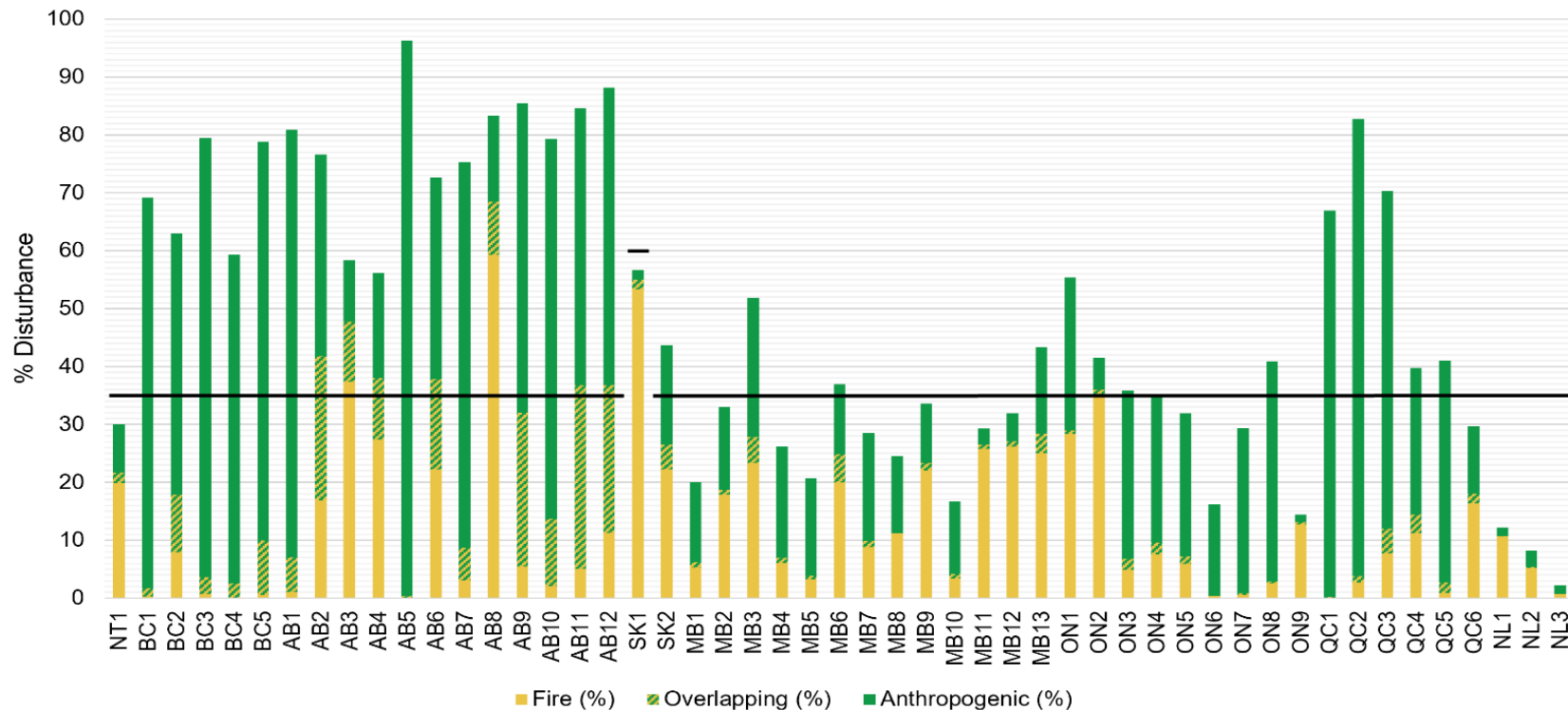


Figure 2. Disturbance in boreal caribou ranges as of 2020, relative to the disturbance threshold.

b) for ranges that meet or exceed the undisturbed habitat threshold, maintain the undisturbed habitat that includes the biophysical attributes needed for boreal caribou to carry out life processes at a minimum of 65% (40% for SK1) of the total range

See Appendix A for disturbance calculations by local population and Habitat Condition performance indicator c) for a summary of changes to habitat disturbance between 2015 and 2020.

The percentage of undisturbed habitat within a range only partially addresses this performance indicator, as it does not consider the presence of biophysical attributes. Therefore, range plans are needed to identify the province or territory’s

plan to maintain the undisturbed habitat needed for boreal caribou to carry out life processes at a minimum of 65% (40% for SK1) of the total range, and that considers maintenance of biophysical attributes.

Of the 21 ranges that are above the undisturbed habitat threshold in 2020, landscape level plans were developed for portions of one range: Northwest Territories (NT1). Table 3a, below, provides summaries of both plans with considerations to the key components outlined in the Recovery Strategy and Range Plan Guidance.

Table 3a: Summary of range plans in ranges that exceed the minimum undisturbed habitat threshold.

Key Components as Outlined in Range Plan Guidance				
Current habitat condition and important areas	Managing 65% undisturbed habitat	Measurable progress at five-year intervals	Legally binding instruments and conservation measures	Monitoring and reporting on habitat and population condition
Final Plans				
YT: Landscape level plan – Peel Watershed Regional Land Use Plan				
Includes descriptions and maps of some existing and potential development activities in each of 16 Landscape Management Units (LMU) (of which seven overlap with the Yukon portion of the NT1 range); Identifies total amount (%) of undisturbed/ disturbed areas in the region, but not specifically within the	Commits to maintaining and conserving 65% undisturbed boreal caribou critical habitat. However, does not include maps or descriptions to spatially and temporally identify areas that are contributing to 65% undisturbed habitat; Identifies management intent for each LMU through a land use designation system. This system identifies areas for interim (to be reviewed periodically as part of plan implementation) or permanent protection from new industrial land-use dispositions and any new surface access, as well as areas with new development potential, to maintain 65% undisturbed habitat.	Does not include projected disturbance levels (i.e. if/how undisturbed habitat will be maintained in the future).	Identifies regulatory options for the legal designation of ‘Wilderness Areas – Boreal Caribou’ (LMUs 15 and 16). The legal instrument to provide protection to Special Management Areas (LMUs 11, 12, 14) will be determined at a later date by the	Plan to periodically (timeline undefined) monitor and report on cumulative effects indicators, including disturbance (baseline not yet mapped as of publication), within Integrated Management Areas (LMU 13).

<p>Yukon portion of the NT1 range or each LMU;</p> <p>Does not include maps of existing total undisturbed and disturbed areas, nor maps and descriptions of important areas for boreal caribou based on biophysical attributes and habitat use patterns.</p>	<p>Does not project anticipated wildfire impacts, nor outline how potential wildfire impacts will be managed.</p>		<p>Parties to the PWRLUP. 'Wilderness Areas' (LMU 10) do not require legal designation.</p> <p>Does not include timelines for legal designation and management planning of LMUs.</p>	<p>Does not include a detailed monitoring or reporting plan.</p>
<p>Interim Plans</p>				
<p>NWT: Wek'èezhì Interim Boreal Caribou Range Plan</p>				
<p>Includes descriptions, amount (ha, %) and mapping of disturbed and undisturbed habitat and of important areas based on traditional knowledge, habitat selection (in relation to landcover types/refined biophysical attributes) and habitat use.</p>	<p>Sets the regional management limits to a maximum of 40% total disturbance (or maintaining at least 60% undisturbed habitat) and 4.5-11% anthropogenic disturbance in the Wek'èezhì Region⁵⁶, while maintaining at least 65% undisturbed habitat across the entire Northwest Territories portion of the NT1 range;</p> <p>Describes and maps three management classes that were spatially assigned with consideration to important areas, traditional knowledge, connectivity and cost, and in which management requirements range from status quo to more stringent;</p> <p>Describes management actions within each management class to avoid, minimize, offset,</p>	<p>Includes projected recovery of fire disturbance (% , ha) over the next 5 and 10 years, but not projected recovery of existing anthropogenic disturbance nor future anthropogenic and fire disturbance (anticipated in</p>	<p>Identifies legally binding instruments to support implementation of management and protection actions, incl. the Tłı̄chq Land Use Plan (under review) and other territorially and federally administered legislation;</p>	<p>Plan to monitor disturbance (fire and new anthropogenic) annually;</p> <p>Plan to report on range plan implementation annually to the Conference of Management Authorities in NWT and two other bodies.</p>

⁵⁶ According to the interim plan, the baseline habitat condition in the Wek'èezhì region is 32% disturbed (total non-overlapping fire and anthropogenic) and 0.9% anthropogenically disturbed.

	<p>or restore disturbances from primary development sectors: oil and gas, forestry, linear infrastructure, and mineral exploration and mining;</p> <p>Does not identify priority areas for habitat restoration (anticipated in final range plan), but requires functional and ecological restoration (the latter type to result in biophysical habitat) of disturbances within the two more stringent management classes;</p> <p>Describes how some important or at-risk caribou habitat may be considered in wildfire responses.</p>	<p>final range plan).</p>	<p>Does not include timelines for finalization or expected implementation of these tools and management actions.</p>	
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c) for ranges below the 65% undisturbed habitat threshold (40% for SK1), identify in a range and/or action plan specific areas of existing undisturbed habitat, as well as those areas where future habitat is to be restored to an undisturbed condition over reasonable, gradual increments every five years

Provinces and territories finalized or drafted five range plans or other landscape level plans for 8 of the 30 ranges below the minimum undisturbed habitat threshold since 2017. Table 3b, provides a high-level summary of each plan with considerations to the key components suggested by the Recovery Strategy and Range Plan Guidance.

The disturbance levels reported in the range plans captured in the below table were calculated by the provinces using different methodologies and/or finer-scale data than those used by ECCC. Therefore, they may not align with the disturbance indices reported in Appendix A and may overestimate disturbance compared to federal values.

Table 3b: Summary of range plans in ranges below the minimum undisturbed habitat threshold

Key Components as Outlined in Range Plan Guidance				
Current habitat condition and important areas	Managing 65% undisturbed habitat	Measurable progress at five-year intervals	Legally binding instruments and conservation measures	Monitoring and reporting on habitat and population condition
Final Plans				
SK: Range Plan for Woodland Caribou in Saskatchewan – SK2 West and SK2 Central				
<p>Include descriptions, amount (km², %) and mapping of undisturbed and disturbed habitat, and of important areas based on habitat potential (identified from biophysical attributes), habitat suitability, traditional knowledge and habitat use.</p>	<p>Set goals to reduce anthropogenic disturbance, maintain low anthropogenic disturbance in high potential habitat, and maintain connectivity with other ranges and administrative units. However, 65% undisturbed habitat is not projected to be reached within the 50-year horizon of either plan;</p> <p><u>SK2 West:</u> Total undisturbed areas projected to increase from 39% baseline to 52-55% over 50 years, depending on different habitat reclamation scenarios;</p> <p><u>SK2 Central:</u> Total undisturbed areas projected to decrease from 57% baseline to 53% (i.e., total and anthropogenic disturbance will increase) over 50 years based on the most likely land use management scenarios;</p> <p><u>Both:</u> Describe management strategies to reduce landscape disturbance, including increasing forest harvest block sizes to emulate natural forest patterns, and reducing non-permanent linear features;</p>	<p>Include projections of disturbance over 50 years in 10-year increments and under different scenarios but do not include specific timelines with incremental steps or targets for proposed reclamation and restoration activities.</p>	<p>Provide lists of current regulations that provide environmental protection measures and upcoming tools and policies to support implementation of the management strategies, with suggested timelines.</p>	<p>Plan to monitor habitat disturbance and protection measures (no indication of timing);</p> <p>Plan to report on a five-year basis to ECCC and the public on range plan implementation, including habitat condition and protection measures.</p>

Key Components as Outlined in Range Plan Guidance				
Current habitat condition and important areas	Managing 65% undisturbed habitat	Measurable progress at five-year intervals	Legally binding instruments and conservation measures	Monitoring and reporting on habitat and population condition
	<p>Potential wildfire disturbance was projected into the future, but plans to manage fire impacts are not specifically outlined (no change in fire suppression activities expected);</p> <p>Identify three tiers of caribou habitat management areas (CHMAs) that prioritize different management objectives and actions, selected with consideration of habitat potential, amount of habitat disturbance, and habitat use. Forest harvesting is deferred for a minimum of 20-years in SK2 Central and West Tier 1 CHMAs (20,479 km², 24% of total area). CHMAs will be in place for a maximum 20 years, after which they will be re-evaluated;</p> <p>Tier 2 CHMAs are prioritized for habitat restoration but specific areas within the CHMAs to be restored to an undisturbed state are not currently identified, nor is it confirmed whether future undisturbed habitats will possess biophysical attributes. Point to the future development of a decision support tool to identify areas that would enhance/maintain connectivity with other ranges or administrative units, and to prioritize landscape areas for mitigation and reclamation.</p>			

Key Components as Outlined in Range Plan Guidance				
Current habitat condition and important areas	Managing 65% undisturbed habitat	Measurable progress at five-year intervals	Legally binding instruments and conservation measures	Monitoring and reporting on habitat and population condition
AB: Bistcho Lake and Cold Lake Sub-regional Plans				
<p>Include the description, amount (% , km, km²) and mapping of current and future disturbance (e.g. roads, forest harvest, peat applications). Maps and amount (%) of undisturbed habitat, as well as identification and maps of important areas based on habitat use patterns and biophysical attributes, are included in the Caribou Habitat Recovery Analysis (CHRA) associated with each respective plan⁵⁷.</p>	<p>Set goal to recover a minimum of 65% undisturbed habitat within 50-100 years, ensuring habitat will possess sufficient biophysical attributes for boreal caribou;</p> <p><u>Bistcho Lake:</u> The CHRA does not project an increase in total undisturbed habitat before year 80;</p> <p><u>Cold Lake:</u> The CHRA does not project an increase in total undisturbed habitat before year 50;</p> <p><u>Both:</u> Spatially identify areas to be restored to an undisturbed state and projections of habitat containing biophysical attributes in the CHRAs; identify timelines for habitat restoration activities, but do not include any spatially explicit information on priority restoration;</p> <p>Identify some medium-term (<40 years) management targets (e.g. restoration of legacy lines);</p> <p>Describe management strategies to reduce impacts of various land-use/industrial activities</p>	<p>Include incremental targets for some (but not all) restoration efforts: % of legacy lines receiving restoration treatments over 40 years in 5-10-year increments; closure quotas for PNG wells in 5-year increments; and, (Cold Lake only) % disturbance in oil sand project areas over 100 years in 10-year increments.</p>	<p>Outline regulations that will direct and guide decision-makers and project proponents, but content is reflected as concepts that require further drafting. Additional steps are required for measures to become legally binding instruments that will prevent destruction of critical habitat;</p> <p>Do not include timelines for finalization of legal requirements.</p>	<p>Plan to track and report on various performance indicators (including disturbance, biophysical attributes, and land-use changes) at least every five years.</p>

⁵⁷ Caribou Habitat Recovery Analysis (CHRA) is not publicly available.

Key Components as Outlined in Range Plan Guidance				
Current habitat condition and important areas	Managing 65% undisturbed habitat	Measurable progress at five-year intervals	Legally binding instruments and conservation measures	Monitoring and reporting on habitat and population condition
	<p>on boreal caribou habitat (e.g. access management plans to reduce linear features, revegetation in pipeline project areas and transmission lines, adaptive forestry practices, aggregated forest harvest patterns, and decrease of petroleum and natural gas (PNG) activities);</p> <p>Do not project anticipated wildfire impacts, but indicate that an adaptive management approach will be used to integrate wildfire impacts as they occur.</p>			
Draft Plans				
SK: Draft Range Plan for Woodland Caribou in Saskatchewan – SK2 East				
Includes descriptions, amount (km ² , %) and mapping of undisturbed and disturbed habitat, and of important areas based on habitat potential (identified from biophysical attributes), habitat suitability, traditional knowledge and habitat use.	<p>Sets goals to maintain total disturbance below 35%, reduce anthropogenic disturbance in high-potential habitat and the highly disturbed portion of the Tier 3 caribou habitat management area (CHMA), and maintain connectivity between and within range and administrative units;</p> <p>Currently, 70% of habitat is undisturbed – projected to range between 65-72% over 50 years (depending on habitat-reclamation scenario);</p> <p>Describes management strategies to reduce landscape disturbance, including increasing</p>	Includes projections of reduction in disturbance over 50 years in 10-year increments and under different scenarios, but does not include specific timelines with incremental steps or targets for proposed	Provide a list of current regulations that provide environmental protection measures and upcoming tools and policies to support implementation of the management strategies, with suggested timelines.	<p>Plan to monitor habitat disturbance and protection measures (no indication of timing);</p> <p>Plan to report on a five-year basis to ECCC and the public on range plan implementation, including habitat</p>

Key Components as Outlined in Range Plan Guidance				
Current habitat condition and important areas	Managing 65% undisturbed habitat	Measurable progress at five-year intervals	Legally binding instruments and conservation measures	Monitoring and reporting on habitat and population condition
	<p>forest harvest block sizes to emulate natural forest patterns, maintaining/reducing disturbance in some CHMAs, and reducing non-permanent linear features in other CHMAs;</p> <p>Potential wildfire disturbance was projected into the future, but plans to manage fire impacts are not specifically outlined (no change in fire suppression activities expected);</p> <p>Identifies three tiers of CHMAs that prioritize different management objectives and actions, selected with consideration of habitat potential based on biophysical attributes, amount of habitat disturbance, and habitat use. CHMAs will be in place for maximum 20 years, after which they will be re-evaluated;</p> <p>Tier 2 CHMAs are prioritized for habitat restoration but specific areas within the CHMAs are not currently identified, nor is it confirmed whether future undisturbed habitats will possess biophysical attributes.</p>	reclamation and restoration activities.		condition and protection measures.
BC: Draft Boreal Caribou Protection and Recovery Plan ⁵⁸				
Plan (and/or StoryMaps accompanying the	Sets goal to recover boreal caribou to self-sustaining status, and to a level supporting Indigenous sustenance harvest. Includes a	Includes projected % of undisturbed	Includes descriptions of – but not expected	Includes plan to monitor various indicators of

⁵⁸ ECCC has not yet seen the version of the BCPRP that was endorsed by the Government of BC in summer 2023, therefore can only summarize the contents of the draft plan.

Key Components as Outlined in Range Plan Guidance				
Current habitat condition and important areas	Managing 65% undisturbed habitat	Measurable progress at five-year intervals	Legally binding instruments and conservation measures	Monitoring and reporting on habitat and population condition
<p>plan) includes descriptions and maps of habitat composition, description of amount and type of disturbance (including amount of undisturbed habitat; but no maps of undisturbed vs. disturbed areas), and description and maps of seasonal habitat selection.</p> <p>Includes identification, descriptions and maps of core habitat, defined as the most important areas within ranges (based on habitat use and biophysical attributes).</p>	<p>target to increase undisturbed habitat from 9% to >63% in the entire area within a 40-year timeframe, with targets of between >52% and >65% undisturbed habitat for each range;</p> <p>Describes and maps four proposed habitat management types, ranging from full habitat protection to conditional forest harvest & petroleum and natural gas development;</p> <p>Outlines high level habitat restoration and offsetting priorities;</p> <p>Does not spatially and temporally identify areas that are going to be restored, nor confirm whether future undisturbed habitats will possess biophysical attributes;</p> <p>Does not project anticipated wildfire impacts, nor account for how the likelihood of significant wildfire will affect short-term progress (but caribou habitat and protection information will inform regional wildfire response plans).</p>	<p>habitat for each range over 40 years, with focus on core areas (vs. entire range); but does not include incremental, short-term progress of habitat restoration/ projected decrease in undisturbed habitat.</p>	<p>implementation timelines for – management measures, protection tools, and enabling legislation that may be used to restrict industrial activity, with links between management measures, habitat conservation tools and legislation or policy.</p>	<p>implementation (e.g. amount of area protected, restoration planning), and effectiveness (e.g., % habitat undisturbed, linear feature density), and publicly report (no indication of exact timing).</p>

Ontario’s Range Management Approach is applied to all Ontario ranges (with the exception of the Coastal (ON6) range), and is outlined in the *Range Management Policy in Support of Woodland Caribou Conservation and Recovery* (“Range Management Policy”, MNRF 2014a), *Ontario’s Woodland Caribou Conservation Plan* (MNR 2009), the Integrated Range Assessment Reports (IRAR; MNRF 2014b-i), the *General Habitat Description for the Forest-dwelling Woodland Caribou* (*Rangifer tarandus caribou*) (GHD; MNR 2013a) and the Best Management Practices Series (MNR 2013b-d). A number of

additional policy pieces provide further direction or support to boreal caribou habitat conservation in Ontario (MNR 2012a; MNR 2014j; OMNR 2014; MNR 2015; Elkie et al. 2016). A summary of the Range Management Approach is provided in Table 3c. The Ontario conservation agreement includes commitments to refine evidence-based approaches to managing for self-sustaining local populations and update policy frameworks where appropriate. The Ontario conservation agreement also commits Canada and Ontario to report yearly on activities, including the creation of the management plan for the Coastal Range (ON6).

Table 3c: Summary of alternative approaches

Key Components as Outlined in Range Plan Guidance				
Current habitat condition and important areas	Managing 65% undisturbed habitat	Measurable progress at five-year intervals	Legally binding instruments and conservation measures	Monitoring and reporting on habitat and population condition
Final Plans				
ON: Range Management Approach				
The GHD describes the entire range as habitat and categorizes sub-range habitat features: 1) nursery areas, winter use areas and travel corridors; 2) seasonal ranges; and 3) remaining areas within the range. Delineation of category 1 habitat was informed by observation and collaring data, while categories 2 and 3 used a range and season specific	Does not set a goal to maintain or achieve an explicit, range-scale minimum threshold of undisturbed habitat; The Range Management Policy aims to maintain or move toward range conditions sufficient to support self-sustaining caribou populations by considering range condition in activity review and assessment, and the collective implementation of three principles (related to cumulative disturbance, habitat amount and arrangement, and sub-range habitat features) in planning and decision-making; Does not include habitat restoration strategies.	Does not include range-level projected disturbance levels (i.e. if/how undisturbed habitat will be maintained in the future).	The Range Management Policy is intended to align with the <i>Endangered Species Act</i> and mentions some of Ontario's other legal tools that support implementation of the Range Management Approach, such as the <i>Crown Forest Sustainability Act</i> .	The Range Management Policy identifies the use of IRARs to evaluate implementation success by monitoring caribou population and habitat states, but does not commit to timelines for completing them;

<p>resource selection probability function;</p> <p>For all ranges aside from the Coastal Range (ON6), IRARs provide descriptions, amounts (% , ha) and mapping of undisturbed and disturbed habitat, descriptions of connectivity, and descriptions (but not maps) of important areas based on habitat use.</p>				<p>Ontario has not published updated IRARs since their initial release in 2014.</p>
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4 Progress Toward Implementing the Action Plan

The 2018 Action Plan described the measures the federal government, specifically ECCC and NRCan, was taking or planning to take to help achieve the recovery goal and population and distribution objectives, as identified in the Recovery Strategy. Twenty-four recovery measures were organized into three key pillars:

1. knowledge to support recovery,
2. recovery and protection, and
3. reporting on progress.

Together, the measures identified in the Action Plan were intended to improve decision-making and outcomes for boreal caribou by deepening our understanding of how human activities affect local populations, and by enabling collaboration and knowledge sharing. The leadership of ECCC and NRCan, in collaboration with various partners, resulted in the initiation of 23 of the 24 measures; 18 have been completed or are ongoing, and five are in progress. Key outcomes of each recovery measure are described at a high level below in Tables 4a-c. Note that some recovery measures evolved over the five years since the Action Plan was published; in some cases, additional research beyond what had been originally planned was undertaken to address a knowledge gap, or changing circumstances may have required a modified approach to achieve the intent of the recovery measure.

In the status column of tables 4a-c, “initiated” refers to measures for which work has started, but the desired deliverable has not yet been achieved, whereas “ongoing” refers to measures for which there is not a well-defined final deliverable. For example, the status of many research measures will be noted as “ongoing” because the pursuit of knowledge in a certain area is a continuing process.

The 2018 Action Plan did not include an evaluation of the socio-economic costs of the action plan and the benefits to be derived from its implementation. Given the complex and collaborative approach required to achieve Boreal Caribou recovery, all parties involved must participate in the assessment of associated socio-economic impacts. For example, specific provinces are best placed to assess the conservation costs and benefits of implementing their own range plans or similar landscape level plans. Similarly, the socio-economic impacts of protecting boreal caribou critical habitat on federally administered lands under section 58 of SARA were analyzed and presented in the Regulatory Impact Analysis Statement associated with the order. The federal government will continue to assess the socio-economic impacts of portions of action plan implementation for this species that are within federal jurisdiction, e.g., where SARA regulations are applied.

Parks Canada publishes site-specific action plans that address boreal caribou conservation and recovery efforts on lands administered by the Agency. These action plans, and reports on their implementation, can be found on the Species at Risk Public Registry.

Table 4a. Implementation of Pillar 1, Knowledge to Support Recovery

#	Recovery measure	Lead and Priority ⁵⁹	Status	Key Outcomes
1	Engage with Wildlife Management Boards, Indigenous peoples, other federal departments, provincial and territorial governments, academics, industry and ENGOs to design and establish a National Boreal Caribou Knowledge Consortium to share lessons learned, and pool capacity and capabilities to address key knowledge gaps.	ECCC; High	Complete	The National Boreal Caribou Knowledge Consortium (NBCKC) was established in June 2018. Total membership stands at approximately 275, with representatives from federal, provincial, and territorial governments, Indigenous communities and organizations, industry, ENGOs, academia, and co-management boards. Since its launch, the NBCKC Secretariat has worked to create and successfully maintain multiple groups/platforms aimed to deliver topic specific knowledge sharing, generation, and mobilization to support and build capacity for boreal caribou recovery at a national scale. These include: <ul style="list-style-type: none"> - The Indigenous Knowledge Circle - Monitoring Working Group - Habitat Restoration Working Group - Population Management Working Group - Caribou Health Knowledge Network - Caribou Projects Interactive Map - The Canadian Conservation and Land Management Knowledge Portal (CCLM⁶⁰) (collaboratively developed with Ducks Unlimited Canada, NRCan, NAIT Center for Boreal Research, Innotech Alberta and FUSE Consulting Inc.) - Caribou Ecology & Recovery Webinar Series (co-hosted with the Alberta Biodiversity Monitoring Institute)

⁵⁹ “Priority” reflects the degree to which the measure contributes directly to the recovery of the species or is an essential precursor to a measure that contributes to the recovery of the species. High priority measures are considered those most likely to have an immediate and/or direct influence on attaining the population and distribution objectives for the species. Medium priority measures may have a less immediate or less direct influence on reaching the population and distribution objectives, but are still important for the recovery of the population. Low priority recovery measures will likely have an indirect or gradual influence on reaching the population and distribution objectives, but are considered important contributions to the knowledge base and/or public involvement and acceptance of the species.

⁶⁰ <https://www.cclmportal.ca/>

#	Recovery measure	Lead and Priority ⁵⁹	Status	Key Outcomes
				To see a complete list of NBCKC accomplishments refer to the table here: https://www.cclmportal.ca/nbckc-accomplishments Additional outcomes include: new partnerships formed between members, greater knowledge of and access to funding opportunities by Indigenous members, increased trust and transparency between diverse organizations, agreement on a collaborative vision for boreal caribou conservation and scoping of coordinated actions/next steps via a Theory of Change exercise and more rapid sharing of lessons learned across sectors and regions.
2	Establish a network of designated adaptive management ranges and pilot areas where experimentation will be encouraged and carefully monitored, and where results will be shared broadly.	ECCC; High	Initiated	The Population Management Working Group was established in September 2020 under the NBCKC (see Item 1) to provide a forum for members to coordinate, share, and generate new knowledge regarding population-based management actions for boreal caribou and southern mountain caribou local populations across Canada. The core group consists of federal, provincial and territorial governments, and Indigenous caribou management practitioners who are actively trying new experimental and operational measures and sharing their results and experiences with each other. Knowledge is also periodically shared with a broader extension group with interest in caribou conservation (e.g., individuals from Indigenous organizations, academia, industry, and non-governmental organizations).
3	Conduct research to enhance understanding of the relationship between disturbance and boreal caribou population response to inform range and action planning.	ECCC and NRCan; High	Ongoing	ECCC, in partnership with the University of Saskatchewan and Wildlife Infometrics Inc., investigated the potential different effects of fire and anthropogenic disturbance on boreal caribou demography and evaluated new data from SK1 in the context of the national models that predict recruitment as a function of disturbance (Johnson et al., 2020). An investigation of the potential differential effects of anthropogenic disturbance types on boreal caribou demography is ongoing. Studies are ongoing to better understand how risk avoidance changes with age (experience) to influence caribou response to disturbance, notably reaction to risk caused by predation. See Item 7 for notes on Western Boreal Initiative and Ring of Fire cumulative effects modelling projects under multi-species conservation and recovery. NRCan is attempting to use caribou as an indicator for forest ecosystem health and integrity, and to develop tools, such as a boreal caribou interactive map sub-portal, data and economic models, and a Wilderness Quality Index, to better understand and mitigate the impacts of cumulative effects on caribou populations and habitats. Key outcomes include 1) improved caribou habitat

#	Recovery measure	Lead and Priority ⁵⁹	Status	Key Outcomes
				<p>forecasting and recovery, and 2) a strategic framework for defining, protecting, and recovering habitats for species at risk in forested areas of Canada.</p> <p>NRCan researchers have developed an approach that uses science and Indigenous Knowledge to predict changes in caribou habitat and develop sustainable practices to ensure resiliency. Fieldwork has enabled a refined understanding of the biodiversity on the Pessamit First Nation territory, including identification of important caribou habitats. These outcomes could contribute to the development of caribou recovery plans at the national, provincial, and local levels.</p>
4	Conduct scientific analysis to inform a national risk management approach to secure recovery outcomes for boreal caribou ranges in Canada.	ECCC; High	Initiated	<p>A suite of projects to address knowledge gaps (e.g. relative benefits of different conservation actions, mapping of relative habitat quality for caribou, mapping of relative risk of human-caused habitat degradation) are ongoing. Work is ongoing to develop and parameterize an optimization tool to support identification of priority areas for protection of boreal caribou habitat at the range level.</p> <p>ECCC, in conjunction with the NBCTC, is developing a new statistical approach to update the Integrated Risk Assessment for all boreal caribou ranges based on new available population data and updated disturbance, for publication in an updated federal Recovery Strategy. The new approach will update the existing 2011 model used to inform critical habitat with the models developed in Johnson et al. (2020) (see Items 3 and 22).</p>
5	Conduct research to develop robust approaches and standards for identification of local population ranges.	ECCC; High	Ongoing	Through a collaboration between ECCC, provinces and territories, Indigenous organizations and the private sector, a comprehensive genetic dataset has been produced and different analytical methods applied to develop robust approaches and standards for the identification of population structure across the distribution (e.g. Priadka et al., 2019; Thompson et al., 2019).
6	Conduct research to increase our understanding of the current and predicted impacts of climate change on boreal caribou critical habitat and population status. Assess implications of projected impacts and identify adaptive strategies to support conservation and recovery.	ECCC and NRCan; Medium	Ongoing	<p>Several studies by ECCC and other partners have been completed or are ongoing using predictions to assess future impacts of climate change, in combination with habitat disturbance (e.g., Leblond et al., 2022). Another study is ongoing to better understand the mechanistic link between microclimate and caribou, for better prediction purposes.</p> <p>Genomics research was initiated in April 2022 under the Genomics Research and Development Initiative to help understand the ability of caribou populations to respond to current and future climate and environmental conditions.</p>

#	Recovery measure	Lead and Priority ⁵⁹	Status	Key Outcomes
				<p>See Item 7 for notes on Western Boreal Initiative and Ring of Fire cumulative effects modelling projects under multi-species conservation and recovery.</p> <p>NRCan is helping assess changes in the use of land over the last 40 years by better understanding and mitigating impacts of climate change on caribou where possible. For example, modelling changes in forest cover in caribou ranges under historical and projected fire regimes. NRCan is also assessing the availability and connectivity of caribou habitat in different climate change scenarios planning for future developments and developing climate change adaptation strategies. These initiatives will ultimately help incorporate inputs for long-range monitoring programs on a continuous basis.</p> <p>NRCan is estimating caribou habitat quality as a function of climate risks, thereby providing information for optimizing recovery actions for working landscapes. The department is investigating how biogeographical context affects the vulnerability of various recovery actions in order to optimize region-specific measures for maximizing boreal caribou recovery and minimizing impacts to forestry activities such as fibre supply.</p> <p>NRCan and ECCC are collaborating to measure boreal caribou vulnerability to a changing climate and linking boreal caribou habitat to population density to predict viability under a changing climate. A first study has showed that climate change impacts affecting the boreal caribou distribution were mostly indirect, impacting caribou habitat, and those effects were found to be an important indirect driver of changes in the species distribution after human disturbance (Neilson et al., 2022). A manuscript showing that climate is an important predictor of boreal caribou distribution and that they use a limited, common set of climate domains, is in development. Maps of future climate scenarios have been prepared and the next step of projecting boreal caribou distribution is underway. Initial analysis points to a positive correlation of boreal caribou density and peat or older forest at the national scale.</p>
7	Conduct research to inform boreal caribou recovery in the context of multi-species conservation and recovery.	ECCC; Medium	Ongoing	The Western Boreal Initiative aims to project impacts of climate change and anthropogenic disturbance on caribou, landbirds, and carbon. In the context of this initiative, ECCC research scientists contributed to models of caribou demography and caribou habitat selection (Stewart et al. 2023), and road network projection.

#	Recovery measure	Lead and Priority ⁵⁹	Status	Key Outcomes
				<p>An ECCC research team led a collaborative effort (with NRCan and academic partners) to adapt forecasting tools from the Western Boreal Initiative for use in the Ontario Far North, and assess the utility of available tools and data for projecting impacts of anticipated Ring of Fire development. Efforts to adapt and assess forecasting tools for use in the central Hudson Bay Lowlands highlighted important uncertainties and baseline data gaps in the region. Ongoing efforts to begin addressing these deficits include development of a method for integrating local demographic data and national demographic-disturbance relationships to reduce uncertainty in demographic projections, and co-located sampling of birds (acoustic recording units), mammals (camera traps), soil properties (peat cores), and vegetation across a network of sites.</p> <p>Two related papers were recently published evaluating whether protection of boreal caribou habitat can help conserve biodiversity, other species at risk, and safeguard large quantities of soil carbon. The first examines the co-benefits of protecting boreal caribou critical habitat for climate change, ecosystem services and biodiversity (Johnson et al., 2022), and the second builds on the same datasets to demonstrate how better conservation outcomes are achieved when multiple objectives are considered simultaneously from the onset of planning compared to ad hoc approaches attempting to combine assessments posteriori (Martin et al., 2022).</p>
8	Conduct strategic research on space-based earth observation technology and approaches to improve efficiency and accuracy of mapping and monitoring natural and anthropogenic disturbance, habitat quality of undisturbed areas and habitat recovery.	ECCC; High	Ongoing	<p>ECCC continues to work on developing updated methods to improve the efficiency and accuracy of mapping anthropogenic disturbances across boreal caribou local populations in order to provide long term monitoring data. New methods are utilizing existing NRCan Canadian Forest Service harvest databases to help drive the mapping update.</p> <p>ECCC worked with a geomatics consultant company Hatfield, along with the Canadian Space Agency, to investigate using high resolution satellite imagery along with artificial intelligence methods for rapid/automated mapping of anthropogenic disturbances. This work will lead to further internal research and is being done with the hope that high resolution imagery will be more affordable and available in the future. Moderate resolution imagery (30 m Landsat-5) is freely available nationally, and has been used for the ongoing federal disturbance mapping to date, including for this report.</p>
9	Conduct research to optimize habitat recovery through forest	ECCC and	Ongoing	ECCC worked with researchers at the University du Québec à Rimouski and Essipit First Nation to understand how different restoration treatment types on

#	Recovery measure	Lead and Priority ⁵⁹	Status	Key Outcomes
	<p>landscape restoration approaches and the development of tools and practices to support restoration success at the site level.</p>	<p>NRCan; High</p>		<p>decommissioned forest roads affected 1) vegetation regeneration, including black spruce growth (Lacerte et al., 2021) and 2) habitat use by boreal caribou, moose and their predators (Lacerte et al., 2022).</p> <p>ECCC is currently conducting research to develop an approach to optimize identification of priorities for restoration that takes into account the zone of influence for human land-use features.</p> <p>The NBCKC Habitat Restoration Working Group⁶¹, comprised of experts, knowledge holders and leading practitioners in the field of caribou habitat restoration and representative of the NBCKC’s diverse membership (see Item 1), has developed an ecological model to support restoration success (see associated Infographic⁶² and Technical Report⁶³). Working group members are currently reviewing a Boreal Caribou Habitat Restoration Practices: Applications and Outcomes Report.</p> <p>NRCan is providing direct evidence of how various seismic restoration techniques can increase the sustainability of caribou populations in disturbed ranges. Estimating the effectiveness of restoration techniques will facilitate the prioritization of restoration efforts throughout Alberta’s caribou ranges and beyond. Further, the focus on predator movement through caribou habitat will inform recovery planning for how to target restoration efforts, both spatially and economically, within a caribou range. These insights could inform policy for caribou range planning as well as project approvals moving forward. The results will also inform companies in the forestry and oil and gas sectors, and Indigenous communities, who are already proactively completing restoration of their footprint.</p> <p>NRCan has contributed funding to FNFN’s seismic line restoration work in the Medzih’tene Restoration Area, within Snake-Sahtaneh (BC3). FNFN has established 76 long-term vegetation monitoring plots and deployed 23 camera traps to determine whether the restoration of vegetation is enough to change animal behaviours. FNFN is currently evaluating restoration outcomes over</p>

⁶¹ <https://www.cclmportal.ca/nbckc-habitat-restoration-working-group-hrwg>

⁶² <https://www.cclmportal.ca/resource/boreal-caribou-ecological-model-infographic>

⁶³ <https://www.cclmportal.ca/resource/boreal-caribou-ecological-model-technical-report>

#	Recovery measure	Lead and Priority ⁵⁹	Status	Key Outcomes
				several growing seasons and comparing efficacy and outcomes between summer and winter transplanted hummocks; they have determined that treatment “failures” transition to successes after multiple growing seasons.
10	Lead the organization of the 17 th North American Caribou Workshop as a key mechanism for sharing knowledge and lessons learned, reporting on the status of recovery activities, and discussion approaches to address key challenges to caribou conservation and recovery.	ECCC with support from NRCan; Medium	Complete	ECCC, with support from NRCan, led the organization of the five-day conference, which was attended by around 550 delegates from federal, provincial, and territorial governments, Indigenous communities and organizations, industry, non-government organizations, and academia. The theme of the conference was ‘Working Together’, and it included a one-day pre-conference workshop on climate change and concurrent Indigenous Talking Circle, core conference activities, and post conference field trips.

Table 4b. Implementation of Pillar 2, Recovery and Protection

#	Recovery measure	Lead and Priority ⁵⁹	Status	Key Outcomes
11	Undertake protection assessments of critical habitat on non-federal lands.	ECCC; High	Complete	<p>ECCC completed critical habitat protection assessments for boreal caribou in early 2018. In April 2018, the Progress Report on Unprotected Critical Habitat for the Woodland Caribou (<i>Rangifer tarandus caribou</i>), Boreal Population, in Canada⁶⁴ was published on the Species at Risk Public Registry. This report provided a summary of the protection assessments on federal and non-federal lands in each province and territory, as well as steps taken and to be taken in the near future to protect boreal caribou critical habitat.</p> <p>ECCC reassessed the protection of boreal caribou critical habitat on non-federal lands in Quebec and Ontario in fall 2022/winter 2023; the assessments, along with a Statement on the Government of Canada approach to addressing the protection of critical habitat for boreal caribou in both provinces, were published on the Species at Risk Public Registry⁶⁵ on July 21, 2023.</p>

⁶⁴ https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/reports/Chr-WoodlandCaribouBoreal-v00-2019April-Eng.pdf

⁶⁵ <https://species-registry.canada.ca/index-en.html#/documents/487>

#	Recovery measure	Lead and Priority ⁵⁹	Status	Key Outcomes
12	Explore the establishment of conservation agreements with each province and territory, and other parties where appropriate, to formalize the commitments each party is making to protect and recover boreal caribou.	ECCC; High	Complete	<p>ECCC explored the establishment of conservation agreements with each province and territory to formalize their measures to protect and recover boreal caribou populations and critical habitat.</p> <p>The Government of Canada has signed final conservation agreements with the Government of Alberta, Government of Saskatchewan, Government of Manitoba (outside the reporting period), Government of Ontario, Government of Newfoundland and Labrador, GNWT and the Government of Yukon (along with Gwich'in Tribal Council and the First Nation of Na-cho Nyäk Dun). The Government of Canada, the Government of British Columbia, and the First Nations Leadership Council have signed a broader nature agreement that includes boreal caribou. A collaborative agreement for boreal caribou in Quebec expired in March 2022; negotiations for a new agreement are currently on hold.</p> <p>The Government of Canada also signed a conservation agreement with Cold Lake First Nations in 2019, and another with Athabasca Chipewyan First Nation and Mikisew Cree First Nation in 2022 to undertake conservation measures for boreal caribou within certain ranges in Alberta.</p> <p>The Government of Canada's primary goal in negotiating conservation agreements with provinces and territories has been to secure commitments to complete range plans or similar landscape level planning documents that outline how critical habitat will be managed and protected to maintain or achieve at least 65% undisturbed habitat in each range, to enable self-sustaining local populations. Conservation agreements also include other recovery measures, such as habitat protection, restoration, management and monitoring, population monitoring and management, Indigenous engagement, and science. Additional information on conservation agreements can be found in section 3.2 Recovery Measures of this report. All draft and final conservation agreements can be found on the Species at Risk Public Registry.</p>
13	Protect critical habitat on federally-administered lands through SARA section 58.	ECCC; High	Complete	<p>A proposed order was published in the Canada Gazette in 2018 to protect boreal caribou critical habitat on federally administered lands. ECCC consulted with other affected federal and territorial ministers, Wildlife Management Boards and Indigenous peoples, as appropriate, and also engaged provincial and territorial governments. The final order⁶⁶ came into force on June 7, 2019, and applies to</p>

⁶⁶ <https://www.gazette.gc.ca/rp-pr/p2/2019/2019-06-26/html/sor-dors188-eng.html?wbdisable=true>

#	Recovery measure	Lead and Priority ⁵⁹	Status	Key Outcomes
				the portions of critical habitat found on over 300 federally administered lands with a combined area of approximately 14,500 km ² .
14	Work with Indigenous governments, Wildlife Management Boards, and provincial and territorial governments, as required under land claims agreements to collaboratively develop a path forward for the protection of critical habitat on Indian Act lands and lands held by Indigenous peoples under land claims agreements.	ECCC; High	Not initiated	ECCC has not initiated this work to date. ECCC's focus has been on encouraging collaboration between Indigenous peoples and provincial and territorial governments on land management decisions, as well as supporting Indigenous-led stewardship actions.
15	Collaboratively develop a path forward for the protection of critical habitat on devolved lands.	ECCC; High	Complete	<p>The conservation agreement between the Government of Canada, Government of Yukon, Gwich'in Tribal Council and the First Nation of Na-Cho Nyak Dun and the conservation agreement between the Government of Canada and the GNWT provide paths forward to protect critical habitat on devolved lands. These agreements under SARA section 11 can be found on the Species at Risk Public Registry.</p> <p>99% (8,891 km²) of Yukon's portion of the NT1 range is contained within the area managed under the Peel Watershed Regional Land Use Plan, which was approved in August 2019 by Tr'ondëk Hwëch'in, First Nation of Na-cho Nyäk Dun, Vuntut Gwitchin Government, Gwich'in Tribal Council and the Government of Yukon. The other 1% (92 km²) falls within the North Yukon Regional Land Use Plan⁶⁷.</p> <p>The NWT section 11 conservation agreement commits the territorial government to developing region-specific range plans, which are currently in development. Additional information on the range plans within NT1 can be found in section 3.2 of this report.</p>
16	Identify critical habitat for SK1 in a proposed amendment to the Recovery Strategy.	ECCC; High	Complete	<p>As described in section 3.1 of this report, critical habitat in SK1 was identified in the 2020 amendment to the Recovery Strategy as:</p> <ul style="list-style-type: none"> the area within the boundary of the SK1 boreal caribou range that provides an overall ecological condition that will allow for an ongoing recruitment and

⁶⁷ <https://yukon.ca/en/north-yukon-regional-land-use-plan>

#	Recovery measure	Lead and Priority ⁵⁹	Status	Key Outcomes
				retirement cycle of habitat, which maintains a perpetual state of a minimum of 40% of the area as undisturbed habitat; and <ul style="list-style-type: none"> • biophysical attributes required by boreal caribou to carry out life processes.
17	Consult and work with provinces and territories and Wildlife Management Boards to assess the best available information to determine whether the species is effectively protected on non-federal lands in the provinces and on lands not under the authority of the Minister of ECCC or the Parks Canada in the territories.	ECCC; High	Initiated	ECCC assessed the protection of individuals in Ontario and Quebec in fall 2022/winter 2023; based on these assessments, the Minister formed the opinion that caribou are protected (as individuals) in both provinces. The assessments, along with a Statement on the Government of Canada approach to improving conservation outcomes for boreal caribou in both provinces, were published on the Species at Risk Public Registry ⁶⁸ on July 21, 2023. Habitat disturbance remains the more immediate threat to boreal caribou in most ranges. As such, ECCC has focused its efforts on supporting habitat protection and management, including encouraging provinces and territories to develop range plans.
18	Continue to support and undertake stewardship actions, including funding stewardship projects for boreal caribou that are strategic in nature and have the potential to advance recovery.	ECCC; High	Ongoing	The Government of Canada has invested significant efforts into supporting partner-led boreal caribou recovery efforts. Over 2018-19 to 2022-23, ECCC committed \$116.3 million in boreal caribou related projects to over 90 recipients from provincial, territorial, and Indigenous governments, co-management boards, Indigenous communities and organizations, ENGOS, industry organizations and academic institutions. Over the same period, ECCC leveraged an expected \$209.1 million of matching funds from partners, in cash and in kind. Of the total amounts, ECCC committed \$55.3 million to provinces and territories (leveraging an expected match of \$96.3 million), \$54.9 million to Indigenous governments, organizations and co-management boards (leveraging \$98.1 million), and the remaining \$6.1 million to other recipient types (leveraging \$14.7 million). The majority of ECCC's funding in support of boreal caribou projects was sourced from Canada Nature Fund and Enhanced Nature Legacy, in particular the Pathway to Canada Target 1 Challenge and Species at Risk Stream. Of ECCC's total funding, \$1.3 million was provided through the NBCKC to support 39 caribou projects (Indigenous-led projects represented \$1.16 million and 36 of the projects) related to knowledge sharing, monitoring and restoration. ECCC collaborated with Athabasca Chipewyan First Nation and Mikisew Cree First Nation to complete a conservation agreement in 2022. ECCC also

⁶⁸ <https://species-registry.canada.ca/index-en.html#/documents/487>

#	Recovery measure	Lead and Priority ⁵⁹	Status	Key Outcomes
				<p>collaborated with Cold Lake First Nations to complete a conservation agreement in 2019.</p> <p>Between 2018-19 and 2022-23, NRCan contributed \$1.2 million to eight Indigenous-led projects in support of boreal caribou recovery that addressed several topics/themes including:</p> <ol style="list-style-type: none"> 1. Inclusion of Traditional Knowledge into decision making processes for boreal caribou conservation, including monitoring, restoration and recovery efforts, range planning and adaptive land management principles; 2. Prioritization of forest restoration and recovery efforts to improve boreal caribou critical habitat; and, 3. Increasing research on silviculture practices that reduce the impact on caribou habitat and support caribou recovery by involving local communities to determine more sustainable land management options. <p>All projects provided the opportunity to First Nations and Indigenous governments to create employment for their community members while participating in the comprehensive community resource planning and management processes. Existing partnerships with industry and other stakeholders were enhanced, and Indigenous and non-Indigenous stakeholders have shared benefits of this work.</p> <p>NRCan contributed a further \$700,000 to forest habitat restoration for boreal caribou through the 2 Billion Trees program. Projects took place in Alberta and Ontario, applying restoration treatments to a total of 207 ha.</p>
19	When planning and implementing recovery measures for boreal caribou, the federal government will continue to look for associated benefits and to minimize any potential adverse impacts to other species and take those into consideration.	ECCC; Medium	Ongoing	<p>ECCC has provided G&C funding to Lakehead University to support the Benchmarking and modelling caribou and multi-species adaptive management in Northwest Ontario project. This project represents a collaboration between the private sector, Lakehead University, the provincial government, and the federal government and was developed to investigate caribou-related land management strategies in the Brightsand and Churchill boreal caribou ranges through a multi-indicator lens (social, economic, and ecological), including consideration for other species.</p> <p>See Item 7 for Western Boreal Caribou Initiative and Ring of Fire Cumulative Effects and the boreal caribou co-benefits papers that demonstrate the value of boreal caribou habitat to other species at risk and conservation values.</p>

Table 4c. Implementation of Pillar 3, Reporting on Progress

#	Recovery measure	Lead and Priority ⁵⁹	Status	Key Outcomes
20	Complete assessment to inform collaborative development of national caribou monitoring standards building on the NBCTC report on caribou monitoring methods and integrating new technology.	ECCC; Medium	Initiated	<p>In 2021-22, on behalf of the NBCTC, ECCC commissioned a literature review (Pearson et al., 2022) of current and historical data collection and analysis methods used to estimate boreal caribou survival, recruitment, and population growth rate (lambda), as well as the development of an R package and Shiny app, informed by the literature review, to provide provinces and territories with a standardized approach to estimate lambda from collaring data. The approach is continuing to be refined, with financial support from the Government of Alberta, and will allow increased comparability of reported growth rates between provinces and territories.</p> <p>The NBCKC Monitoring Working Group⁶⁹ is comprised of experts, knowledge holders and leading practitioners in the field of caribou monitoring and representative of the NBCKC's diverse membership (see Item 1). Since its establishment in 2018, the working group has prepared a series of monitoring guidelines and best practices recognizing the different constraints and needs across regions and organizations. This community of practice roundtable has built a Boreal Caribou Monitoring Methods Toolkit⁷⁰, including an interactive decision tree, best practices guidance documents and infographics related to aerial, telemetry-based, indirect and local and harvester-based monitoring.</p>
21	Monitor and assess habitat disturbance and recovery across 51 ranges by completing the five-year update to the 2010 disturbance mapping using 2015 Landsat imagery at both 30 m and 15 m resolutions.	ECCC; High	Complete	ECCC's Science and Technology Branch previously updated and mapped human disturbance information using satellite imagery and data (Landsat-5 data from 2008-2010, and Landsat-8 data from 2015). Coarser-resolution (30 m) information is available for 2010 and 2015 mapping on Environment Canada Data Catalog, and ECCC published finer-resolution (15 m) information for the 2015 period in May 2019.
22	Update range boundaries and status of self-sustainability of local populations, based on new or more refined evidence provided by the provincial and	ECCC; High	Initiated	The status of self-sustainability of the SK1 local population was updated in 2020 in the Recovery Strategy. In 2022, ECCC updated the Integrated Risk Assessment methodology used for determining self-sustainability of a local population to better incorporate uncertainties in data, as well as updated data. ECCC is targeting publication of a proposed amended Recovery Strategy that

⁶⁹ <https://www.cclmportal.ca/about/monitoring-working-group-mwg-nbckc>

⁷⁰ <https://www.cclmportal.ca/resource/boreal-caribou-monitoring-toolkit>

#	Recovery measure	Lead and Priority ⁵⁹	Status	Key Outcomes
	territorial jurisdictions, as well as the results of ECCC's updated disturbance mapping, in a proposed amendment to the Recovery Strategy.			includes updates to range boundaries and the self-sustainability status of all local populations (among other updates) by 2025. ECCC is in the process of reviewing new range boundaries submitted by provinces and territories.
23	Publish the first five-year Report on the Implementation of the Recovery Strategy for boreal caribou.	ECCC; N/A	Complete	As noted in the 2018 Action Plan, the first five-year report was published on October 31, 2017. The current report is the second report on implementation of the boreal caribou Recovery Strategy.
24	If the Minister determines that any portion of critical habitat is unprotected, prepare a report on steps being taken to protect critical habitat.	ECCC; High	Ongoing	Reports on steps taken to protect portions of boreal caribou critical habitat, as required under SARA section 63, were published in April 2018, December 2018 and June 2019. Since December 2019, reporting on boreal caribou critical habitat protection steps has been wrapped up into a multi-species report. This multi-species reporting continues for every six-month period.

5 Next Steps

Some important advancements in support of boreal caribou recovery were made over this reporting period. ECCC was successful in securing increased federal funding to support boreal caribou initiatives through the Canada Nature Fund and later Enhanced Nature Legacy, and in leveraging broader nature-related funding from NRCan through the 2 Billion Trees Program. Considerable time and effort was dedicated to finalizing and implementing conservation agreements with provinces and territories, especially in terms of engaging with Indigenous peoples, stakeholders and the public on range planning or other landscape level planning. The COVID-19 pandemic complicated this already complex process by requiring a shift in focus to more immediate human health concerns, as well as putting on hold travel, meetings and on-the-ground actions. While progress on range planning has been slower than anticipated across the country, it is ECCC's expectation that work to date provides the necessary foundations to complete the development of remaining range plans and the associated regulations required to implement their measures, within timelines that are reflective of the conservation urgency.

In addition to delays around range planning, there have also been delays in public reporting on conservation agreement implementation. Timely publication of reports is essential for transparency and public accountability. Furthermore, none of the range plans published to date fully address every component outlined in ECCC's Range Plan Guidance, and targets for some plans do not meet the minimum undisturbed habitat threshold of 65%. More frequent and severe wildfire seasons as a result of climate change have emphasized the need for jurisdictions to outline how they will respond following significant wildfire events and how they account for increased fire disturbance in overall disturbance targets. Habitat disturbance has continued to climb in the majority of boreal caribou ranges, including many that were already more than 35% disturbed in 2015. This trend must be halted and active restoration activities taken to reverse it without delay. This is especially critical in ranges where predator management is being relied upon to prevent the extirpation of local populations.

Over the next five years, ECCC will continue actively leveraging investments from partners to maintain and further build momentum in caribou recovery actions by all relevant parties. ECCC will work toward strengthening forthcoming and renewed conservation agreements for boreal caribou, as recommended by the Commissioner of the Environment and Sustainable Development's audit on Discretionary Powers to Protect Species at Risk. Specifically, ECCC will assess the progress made towards the conservation and recovery of boreal caribou and identify gaps in implementation of the conservation measures committed to within conservation agreements, to inform renewal of agreements with increased ambition to meaningfully advance recovery outcomes for the species and emphasize transparency through public reporting. ECCC will also provide updates to the Minister on the implementation of conservation agreements. The Minister maintains the authority to make recommendations to the Governor in Council for regulatory action to protect the species and/or its habitat under SARA in certain situations and may include these annual updates in his considerations.

ECCC will continue to work with provinces, territories and Indigenous governments and organizations to develop nature agreements as a mechanism for achieving shared outcomes for nature conservation. These agreements are intended to provide a framework for collaboration and early commitments in multiple subject areas, including addressing biodiversity loss, protecting critical habitat, supporting opportunities for Indigenous leadership in conservation and stewardship, facilitating data and information sharing, and mitigating effects of climate change. ECCC will continue to explore how nature agreements can further contribute to the conservation and recovery of boreal caribou with interested provinces and territories, either in addition to, or instead of, conservation agreements.

ECCC recognizes the significant contributions that non-government partners, including Indigenous peoples, stakeholders and academics, have made for boreal caribou. The Government of Canada will continue supporting the recovery efforts of government and non-government partners through its various species at risk-focused funding programs, including the Enhanced Nature Legacy, and by leveraging additional funding from programs such as the 2 Billion Trees program, Nature Smart Climate Solutions Fund, and Low Carbon Economy Fund. In doing so, ECCC will maximize co-benefits by ensuring the money spent on boreal caribou is also supporting the achievement of multiple and overlapping goals for biodiversity, nature, sustainable jobs, climate and reconciliation, including those agreed to under the Kunming-Montreal Global Biodiversity Framework at the fifteenth meeting of the Conference of the Parties in December 2022.

ECCC is in the early stages of preparing for updates to SARA recovery planning documents and improving guidance to support boreal caribou conservation.

ECCC will continue to monitor the implementation of the Recovery Strategy, and the progress towards meeting its objectives, and publish its findings every five years until its objectives have been achieved or the recovery of the species is no longer feasible.

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Appendix A: Boreal Caribou Population and Habitat Condition Information

To address the different scales at which the federal, provincial and territorial governments may be monitoring and reporting on boreal caribou population and habitat condition, the following tables provide this information for the ranges as described in the 2020 Amended Recovery Strategy, and where applicable, other boreal caribou ranges or administrative units used by provinces and territories. In these cases, data on federal range boundaries are reported first, followed by data for other range boundaries. For maps depicting the differences between range and administrative boundaries currently used by provinces and territories, and those in the 2020 Amended Recovery Strategy, see Appendix B.

Population size and trend estimates in the 2024 Progress Report column are based on expert opinion and/or data collected over one or more years between 2017 and 2022, unless specified otherwise. Population size estimates are reported as a size category (i.e., <100, 100-300 or >300) to account for differences in estimate types (minimum animal count or population size estimate), precision and certainty across ranges. See section 3.3 for more information on why these size categories were chosen.

The habitat disturbance data in the 2012 Recovery Strategy, 2017 Progress Report and 2024 Progress Report columns are based on Landsat imagery from 2010, 2015, and 2020, respectively, all at 30m resolution (ECCC 2011; Pasher et al., 2013; 2024 methodology to be published on the Open Government Portal). Fire disturbance is any area where a fire has occurred in the past 40 years (without buffer). For anthropogenic disturbance, a 500 m buffer is applied to all linear and polygonal disturbances. For total disturbance, both anthropogenic and fire disturbances that overlap are not counted twice in the total. Methodology changes since 2015, as described in section 3.3, should be considered when interpreting changes to anthropogenic disturbance (and its contribution to total non-overlapping disturbance) in 2020.

Quebec did not contribute population condition data to this report. Therefore, for Table A7, ECCC updated the population condition information in Quebec ranges to the best of its abilities using publicly available information (Heppell et al., 2013; Heppell and Boissonneault, 2021; Brodeur et al., 2022; Szor and Gingras, 2022; Szor et al., 2023).

Table A1. Northwest Territories

Range ID	Range Name	2012 Recovery Strategy					2017 Progress Report					2024 Progress Report				
		Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)		
				Fire	Anthro	Total			Fire	Anthro	Total			Fire	Anthro	Total
Based on the range boundaries in the Recovery Strategy																
NT1	Northwest Territories	> 300	not available	24	8	31	> 300	not available	28	9	35	> 300 ¹	not available ²	22	10	30

¹ The estimated population size reported in the May 2022 *Species Status Report for Boreal Caribou (Rangifer tarandus caribou) in the Northwest Territories* was 7409 individuals across the territory, however, an updated and more reliable estimate is needed.

² Sub-regional collar-based monitoring programs, and traditional and community knowledge, suggests that boreal caribou population trends differ in various part of NT1. Generally speaking, population trends seem to be stable or increasing in southern NT1 over the period of 2017-18 to 2019-20. Annual population growth rates (lambda) were estimated based on adult female survival and calf:cow ratios as follows for five study areas in NWT: Dehcho North and South – 1.07 (2020-21); North Slave – 1.11 (2020-21); Mackenzie – 0.99 (2021-22); Hay River Lowlands – 0.96 (2021-22); Pine Point and Buffalo Lake – 1.12 (2021-22). More information is available in the May 2022 *Species Status Report for Boreal Caribou (Rangifer tarandus caribou) in the Northwest Territories*.

Table A2. British Columbia

Range ID	Range Name	2012 Recovery Strategy					2017 Progress Report					2024 Progress Report				
		Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)		
				Fire	Anthro	Total			Fire	Anthro	Total			Fire	Anthro	Total
Based on the range boundaries in the Recovery Strategy																
BC1	Maxhamish	100–300	not available	0.5	57	58	100–300	declining ¹	2	67	68	100–300	increasing	2	69	69
BC2	Calendar	100–300	not available	8	58	61	100–300	declining ¹	16	53	61	100–300	declining	18	55	63
BC3	Snake-Sahtahneh	> 300	declining	6	86	87	100–300	declining ¹	5	77	79	> 300	increasing	4	79	79
BC4	Parker	< 100	not available	1	57	58	< 100	declining	3	57	57	< 100	not available	3	59	59
BC5	Prophet	< 100	not available	1	77	77	< 100	declining	10	78	78	< 100	not available	10	78	79
Based on provincial boundaries as outlined in British Columbia’s draft Boreal Caribou Protection and Recovery Plan (BCPRP), published in 2022 (note: the Recovery Strategy has not been amended to reflect these new range boundaries)																
N/A	Maxhamish	–	–	–	–	–	–	–	–	–	–	100–300	increasing	1	67	68
N/A	Calendar	–	–	–	–	–	–	–	–	–	–	100–300	declining	16	57	64
N/A	Snake Sahtahneh	–	–	–	–	–	–	–	–	–	–	> 300	increasing	4	79	79
N/A	Westside Fort Nelson	–	–	–	–	–	–	–	–	–	–	100–300	increasing	3	67	67

¹ Population trends for the Maxhamish, Calendar and Snake-Sahtahneh ranges in the 2017 Progress Report column have been corrected from those published in the 2017 Progress Report, which indicated at the time that they were stable.

Table A3. Alberta

Range ID	Range Name	2012 Recovery Strategy					2017 Progress Report					2024 Progress Report				
		Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)		
				Fire	Anthro	Total			Fire	Anthro	Total			Fire	Anthro	Total
Based on the range boundaries in the Recovery Strategy																
AB1	Chinchaga (including BC portion)	100–300	declining	8	74	76	100–300	declining	9	79	80	100–300	increasing ¹	7	80	81
AB2	Bistcho	100–300	declining	20	61	71	> 300	declining	40	58	75	> 300	stable	42	60	77
AB3	Yates	> 300	stable	43	21	61	100–300	stable	42	20	55	100–300	stable	48	21	58
AB4	Caribou Mountains	> 300	declining	44	23	57	> 300	declining	46	27	62	> 300	stable	38	29	56
AB5	Little Smoky	< 100	declining	0.2	95	95	100–300	stable	0.4	96	96	100–300	increasing ¹	0.4	96	96
AB6	Red Earth	100–300	declining	30	44	62	100–300	declining	40	48	72	> 300	increasing	38	50	73
AB7	West Side Athabasca River	100–300	declining	4	68	69	> 300	declining	5	70	72	> 300	stable	9	72	75
AB8	Richardson	100–300	not available	67	22	82	> 300	stable	74	23	88	> 300	stable	68	24	83
AB9	East Side Athabasca River	100–300	declining	26	77	81	> 300	declining	28	78	84	> 300	increasing ¹	32	80	85
AB10	Cold Lake	100–300	declining	32	72	85	> 300	declining	33	76	87	> 300	stable ¹	14	77	79
AB11	Nipisi	< 100	not available	6	66	68	< 100	not available	9	75	77	< 100	declining	37	80	85
AB12	Slave Lake	< 100	not available	37	63	80	< 100	not available	39	74	87	< 100	declining	37	77	88

¹ Annual predator control programs in the Chinchaga (Alberta and BC portions), Little Smoky, East Side Athabasca River and Cold Lake ranges were in place during the reporting period.

Table A4. Saskatchewan

Range ID	Range Name	2012 Recovery Strategy					2017 Progress Report					2024 Progress Report					
		Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			
				Fire	Anthro	Total			Fire	Anthro	Total			Fire	Anthro	Total	
Based on the range boundaries in the Recovery Strategy																	
SK1	Boreal Shield	not available	not available	55	3	57	> 300 ¹	stable	58	3	60	> 300	stable	55	3	57	
SK2	Boreal Plain	not available	not available	26	20	42	> 300	not available	30	20	45	not available	not available	26	22	44	
Based on provincial administration units as outlined in Saskatchewan’s Hunting, Angling and Biodiversity Information (HABISask) web application (note: the Recovery Strategy has not been amended to reflect these administrative boundaries)																	
N/A	West Administrative Unit of the Boreal Plain	–	–	–	–	–	–	–	–	–	–	–	not available	not available	44	17	56
N/A	Central Administrative Unit of the Boreal Plain	–	–	–	–	–	–	–	–	–	–	100–300	declining	19	27	42	
N/A	East Administrative Unit of the Boreal Plain	–	–	–	–	–	–	–	–	–	–	not available	not available	4	19	22	

¹ The population size estimate for SK1 was reported as >5000 individuals in the 2017 Progress Report.

Table A5. Manitoba

Range ID	Range Name	2012 Recovery Strategy					2017 Progress Report					2024 Progress Report				
		Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)		
				Fire	Anthro	Total			Fire	Anthro	Total			Fire	Anthro	Total
Based on the range boundaries in the Recovery Strategy																
MB1	The Bog	< 100	stable	4	12	16	100–300 ¹	not available	6	14	19	100–300	declining	6	15	20
MB2	Kississing	< 100	stable	39	13	51	100–300 ¹	not available	39	15	54	not available	not available	19	15	33
MB3	Naosap	100–300	stable	28	26	50	not available	not available	28	28	52	100–300	declining	28	29	52
MB4	Reed	100–300	stable	7	20	26	not available	not available	7	20	26	not available	not available	7	20	26
MB5	North Interlake	< 100	stable	4	14	17	< 100	not available	4	14	18	< 100	not available	4	17	21
MB6	William Lake	< 100	stable	24	14	34	< 100	not available	25	17	36	not available	not available	25	17	37
MB7	Wabowden	100–300	stable	10	19	28	100–300	not available	10	20	28	100–300	increasing	10	20	28
MB8	Wapisu	100–300	stable	10	14	24	not available	not available	11	13	24	100–300	not available	11	13	25
MB9	Manitoba North	not available	not available	23	10	32	not available	not available	23	11	33	not available	not available	23	12	34
MB10	Manitoba South	not available	not available	4	11	15	not available	not available	4	12	16	not available	not available	4	13	17
MB11	Manitoba East	not available	not available	26	3	29	not available	not available	26	3	29	> 300	stable	26	3	29

¹ The increase from <100 in 2012 to 100-300 in 2017 reflects an increased survey effort and does not necessarily indicate an improvement in overall status.

Range ID	Range Name	2012 Recovery Strategy					2017 Progress Report					2024 Progress Report				
		Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)		
				Fire	Anthro	Total			Fire	Anthro	Total			Fire	Anthro	Total
MB12	Atikaki-Berens	> 300	stable	31	6	35	not available	not available	29	6	34	> 300	not available ²	27	6	32
MB13	Owl-Flinstone	< 100	stable	25	18	39	< 100	not available	25	18	39	< 100	not available ³	28	18	43
Based on provincial management units as outlined in Manitoba's Boreal Woodland Caribou Recovery Strategy published in 2015 (note: the Recovery Strategy has not been amended to reflect these new range boundaries)																
N/A	The Bog	–	–	–	–	–	not available	not available	–	–	–	100–300	declining	6	19	24
N/A	Naosap	–	–	–	–	–	not available	not available	–	–	–	100–300	declining	23	24	45
N/A	Partridge Crop	–	–	–	–	–	not available	not available	–	–	–	> 300	not available ²	29	8	36
N/A	Wabowden	–	–	–	–	–	not available	not available	–	–	–	100–300	stable	13	18	29
N/A	Molson	–	–	–	–	–	not available	not available	–	–	–	> 300	stable	27	3	30
N/A	Atikaki-Berens	–	–	–	–	–	not available	not available	–	–	–	> 300	not available ²	26	6	32
N/A	Owl-Flintstone	–	–	–	–	–	not available	not available	–	–	–	< 100	not available ³	31	22	47
N/A	Interlake	–	–	–	–	–	not available	not available	–	–	–	< 100	not available	4	15	18
N/A	Kamuchawie	–	–	–	–	–	not available	not available	–	–	–	not available	not available	36	6	40

² There are insufficient data for Atikaki-Berens (both the federal range MB12 and the provincial management unit) and provincial management unit Partridge Crop to draw a conclusion that the local populations may be declining; confidence in the estimates are low, making them unreliable.

³ There are insufficient data for Owl-Flintstone (both the federal range MB13 and the provincial management unit) to draw a conclusion that the local population may be stable; confidence in the estimate is low, making it unreliable.

Table A6. Ontario

Range ID	Range Name	2012 Recovery Strategy					2017 Progress Report					2024 Progress Report				
		Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)		
				Fire	Anthro	Total			Fire	Anthro	Total			Fire	Anthro	Total
Based on the range boundaries in the Recovery Strategy																
ON1	Sydney	not available	stable	28	33	58	< 100	declining	27	25	49	not available	not available	29	27	55
ON2	Berens	not available	not available	34	7	39	100–300 ¹	declining	31	6	37	not available	not available	36	7	42
ON3	Churchill	not available	not available	6	28	31	100–300	declining	8	28	34	not available ²	not available	7	31	36
ON4	Brightsand	not available	not available	18	28	42	100–300	declining	19	26	41	not available ²	not available	10	28	35
ON5	Nipigon	100–300	stable	7	25	31	100–300	declining	7	25	30	not available	not available	7	26	32
ON6	Coastal	> 300	not available	0	16	16	100–300	declining	0	15	15	< 100 ³	not available	0.4	16	16
ON7	Pagwachuan	not available	not available	0.9	26	27	100–300	stable	0.7	27	27	not available	not available	0.8	29	29
ON8	Kesagami	> 300	declining	3	36	38	100–300 ¹	declining	3	37	40	> 300 ^{2,4}	not available	3	38	41
ON9	Far North	> 300	not available	14	1	15	> 300	declining	15	1	16	> 300	not available	13	2	14

¹ The population estimates under the 2017 Progress Report column for the Berens, Kesagami and Kinloch ranges are based on the minimum animal counts reported in Ontario's 2014 Integrated Range Assessment Reports (IRAR) for these ranges. However, available information, also reflected in the IRARs, suggests that these populations were likely >300 at the time of their publication.

² Aerial surveys were conducted for the Churchill, Brightsand, Kesagami and Kinloch ranges in winter 2023. Ontario anticipates updated population estimates will be available in fall/winter 2023-24.

³ Ontario estimates there are likely 50-100 caribou in the Coastal range.

⁴ The population size estimate for Kesagami was based on results of monitoring efforts led by the Government of Quebec on what they refer to as the Detour range. Kesagami and Detour describe the same local population of caribou.

Range ID	Range Name	2012 Recovery Strategy					2017 Progress Report					2024 Progress Report				
		Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)		
				Fire	Anthro	Total			Fire	Anthro	Total			Fire	Anthro	Total
Based on provincial range boundaries for Ontario's Far North ranges, as outlined in Ontario's 2014 Range Management Policy (note: the Recovery Strategy has not been amended to reflect these new range boundaries)																
ON9	Swan	–	–	–	–	–	> 300	declining	–	–	–	not available	not available	14	1	15
ON9	Spirit	–	–	–	–	–	> 300	declining	–	–	–	not available	not available	29	2	31
ON9	Kinloch	–	–	–	–	–	100–300 ¹	declining	–	–	–	not available ²	not available	16	3	18
ON9	Ozhiski	–	–	–	–	–	100–300	not available	–	–	–	> 300	not available	23	3	26
ON9	Missisa	–	–	–	–	–	> 300	declining	–	–	–	not available	not available	6	0.6	6
ON9	James Bay	–	–	–	–	–	100–300	declining	–	–	–	not available	not available	3	1	4

Table A7. Quebec

Range ID	Range Name	2012 Recovery Strategy					2017 Progress Report					2024 Progress Report				
		Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)		
				Fire	Anthro	Total			Fire	Anthro	Total			Fire	Anthro	Total
Based on the range boundaries in the Recovery Strategy																
QC1	Val d'Or	< 100	declining	0.1	60	60	< 100	declining	0.2	65	65	< 100	declining ¹	0.2	67	67
QC2	Charlevoix	< 100	stable	4	77	80	< 100	declining	4	80	82	< 100	declining ¹	4	80	83
QC3	Pipmuacan	100–300	stable	11	51	59	100–300	declining	11	60	68	100–300	declining	12	63	70
QC4	Manouane	> 300	stable	18	23	39	≥ 100 ²	stable	18	26	41	not available	not available	14	29	40
QC5	Manicouagan	100–300	increasing	3	32	33	≥ 100 ²	stable	3	36	37	not available	not available	3	40	41
QC6	Quebec	> 300	stable	20	12	30	> 300	not available	20	13	32	> 300	not available	18	13	30
Based on range boundaries published by the Government of Quebec on the public consultation website of the Commission indépendante sur les caribous forestiers et montagnards (note: the Recovery Strategy has not been amended to reflect these new range boundaries)																
N/A	Val d'Or	< 100	declining	–	–	–	< 100	declining	–	–	–	< 100	declining ¹	0.6	60	61
N/A	Charlevoix	< 100	stable	–	–	–	< 100	declining	–	–	–	< 100	declining ¹	2	75	76
N/A	Pipmuacan	100–300	stable	–	–	–	100–300	declining	–	–	–	100–300	declining	11	64	72
N/A	Detour	–	–	–	–	–	≥ 100 ²	not available	–	–	–	> 300	not available	4	30	33
N/A	Nottaway	–	–	–	–	–	> 300	declining	–	–	–	100–300	declining	14	16	28
N/A	Assinica	–	–	–	–	–	> 300	stable	–	–	–	not available	declining	22	39	57

¹ All remaining caribou in Val d'Or and Charlevoix ranges were captured and penned to protect them from predators in winter 2020 and winter 2022, respectively.

² As Quebec declined to provide input or comment on this report, ECCC does not have the data to specify whether the population sizes for Manouane (QC4), Manicouagan (QC5) and the provincial Detour and Manicouagan ranges could have been estimated as 100-300 or > 300 in the 2017 Progress Report reporting period.

Range ID	Range Name	2012 Recovery Strategy					2017 Progress Report					2024 Progress Report				
		Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)		
				Fire	Anthro	Total			Fire	Anthro	Total			Fire	Anthro	Total
N/A	Témiscamie	–	–	–	–	–	> 300	declining	–	–	–	> 300	declining	18	30	44
N/A	Baie-James ³	–	–	–	–	–	N/A	N/A	–	–	–	> 300	not available	33	4	36
N/A	Outardes	–	–	–	–	–	N/A	N/A	–	–	–	> 300	declining	7	23	28
N/A	Manicouagan ⁴	–	–	–	–	–	≥ 100 ²	stable	–	–	–	> 300	declining	7	23	29
N/A	Caniapiscou	–	–	–	–	–	N/A	N/A	–	–	–	> 300	increasing	8	1	9
N/A	Basse-Côte Nord ³	–	–	–	–	–	> 300	declining	–	–	–	> 300	declining	7	1	9

³ Baie-James and Basse-Cote Nord are not designated as ranges by Quebec, but areas where additional monitoring is needed to allow for clear delineations of one or several ranges.

⁴ While they share the same name, the Manicouagan range identified by Quebec has little overlap with the range identified as Manicouagan (QC5) in the federal Recovery Strategy, therefore population data across time may not be comparable between the two delineations.

Table A8. Newfoundland and Labrador

Range ID	Range Name	2012 Recovery Strategy					2017 Progress Report					2024 Progress Report				
		Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)			Population Size (< 100, 100–300, or > 300)	Population Trend	Disturbed Habitat (%)		
				Fire	Anthro	Total			Fire	Anthro	Total			Fire	Anthro	Total
Based on the range boundaries in the Recovery Strategy																
NL1	Lac Joseph	> 300	declining	7	1	8	> 300	declining ¹	12	2	14	> 300	declining	11	2	12
NL2	Red Wine Mountain ²	< 100	declining	5	3	8	100–300 ³	not available ⁴	7	3	9	100–300	increasing	5	3	8
NL3	Mealy Mountain	> 300	declining	0.4	1	2	> 300	not available	1	1	2	> 300 ⁵	declining	0.8	1	2
Based on the range boundaries submitted by the Government of Newfoundland and Labrador to ECCC in 2022 (note: the Recovery Strategy has not been amended to reflect these new range boundaries)																
N/A	Lac Joseph	–	–	–	–	–	–	–	–	–	–	> 300	declining	11	2	13
N/A	Red Wine Mountain ²	–	–	–	–	–	–	–	–	–	–	< 100	increasing	6	3	9
N/A	Dominion Lake ²	–	–	–	–	–	–	–	–	–	–	< 100	increasing	6	0.1	6
N/A	Joir River ⁶	–	–	–	–	–	–	–	–	–	–	< 100	not available	3	0.1	3
N/A	Mealy Mountain	–	–	–	–	–	–	–	–	–	–	> 300 ⁵	declining	0.7	2	3

¹ The 2017 population trend for Lac Joseph was updated from “not available” to “declining” based on survey results that were analyzed after the publication of the 2017 Progress Report.
² Following increased monitoring efforts, the Government of Newfoundland and Labrador divided the Red Wine Mountain (NL2) range into two ranges: Red Wine Mountain and Dominion Lake.
³ The increase in population size from <100 to 100-300 between 2012 and 2017 in the Red Wine Mountain range was due to a shift from minimum population counts (associated with collar deployment and other field activities) to systematic surveys in portions of the range.
⁴ The 2017 Progress Report noted that preliminary data and expert opinion suggested that population trends in NL2 were generally increasing in the southern part of the range and declining in the northern part of the range.
⁵ The most recent [estimate](#) of the Mealy Mountains herd is 1,289 caribou in 2022.
⁶ Joir River is a new range delineated by the Government of Newfoundland and Labrador following increased monitoring efforts.

Appendix B: Maps of Boreal Caribou Range Boundaries Used by Federal, Provincial and Territorial Governments

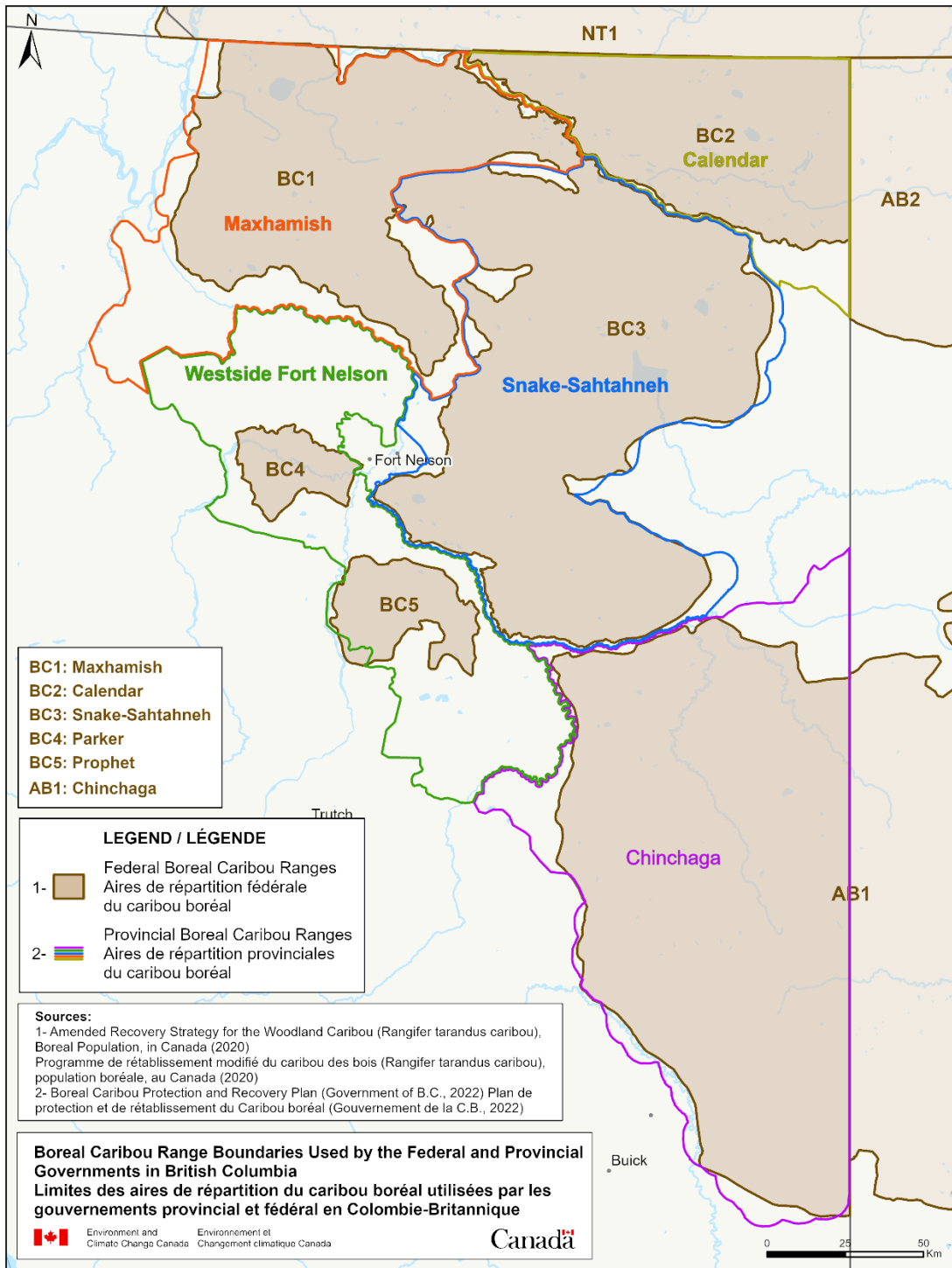


Figure B-1. Boreal caribou range boundaries used by the Federal and Provincial Governments in British Columbia.

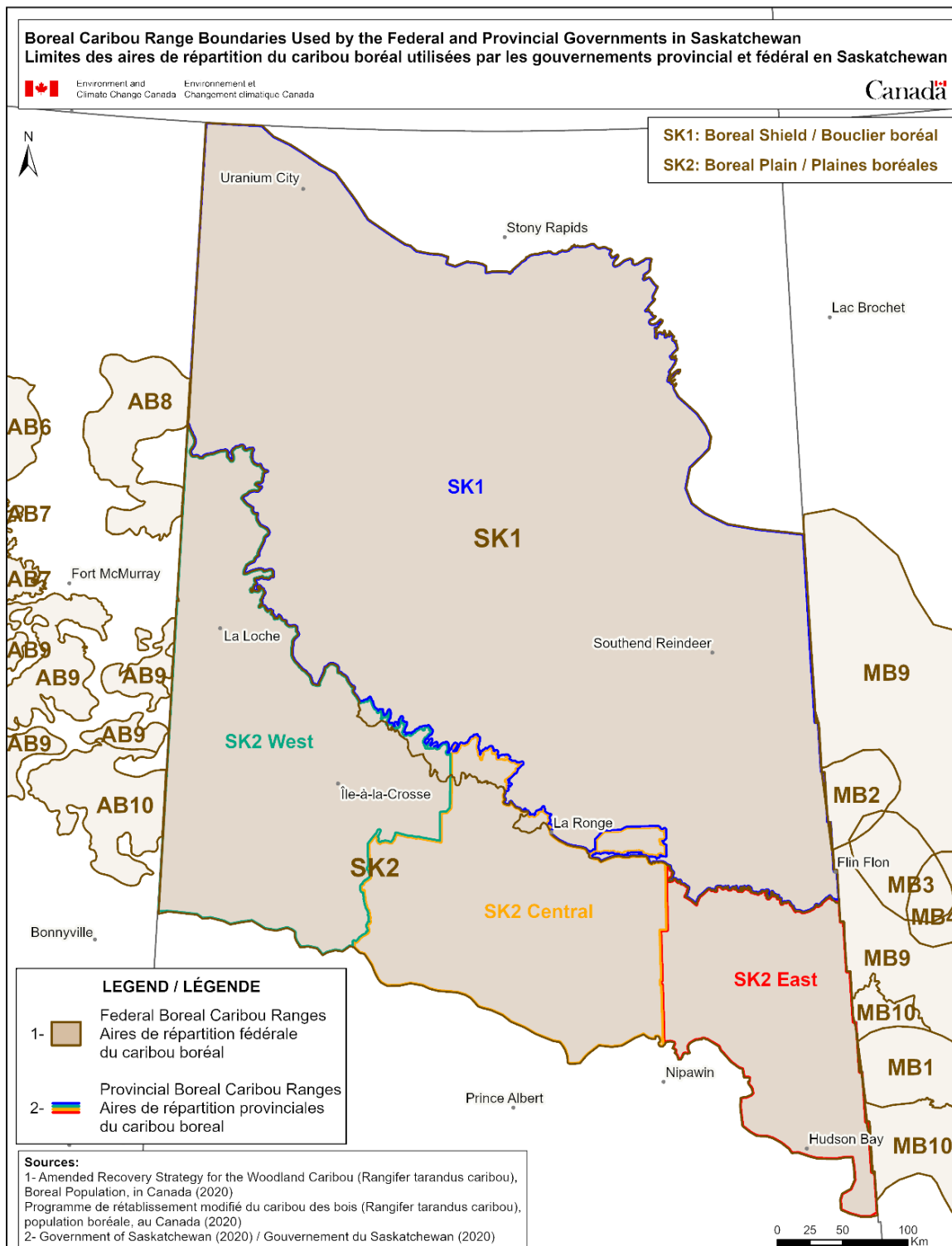


Figure B-2. Boreal caribou range boundaries used by the Federal and Provincial Governments in Saskatchewan.

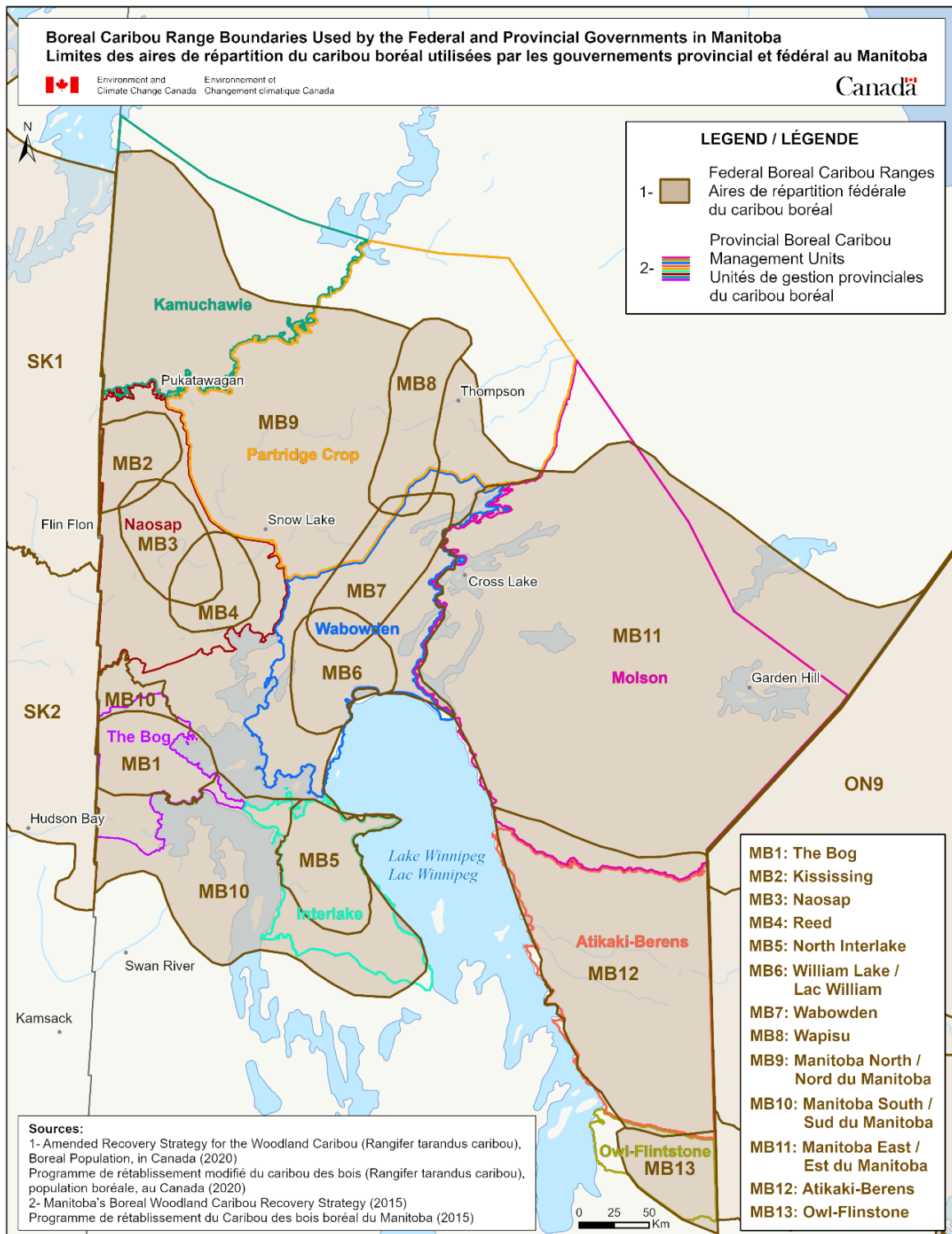


Figure B-3. Boreal caribou range boundaries used by the Federal and Provincial Governments in Manitoba.



Figure B-4. Boreal caribou range boundaries used by the Federal and Provincial Governments in Ontario.

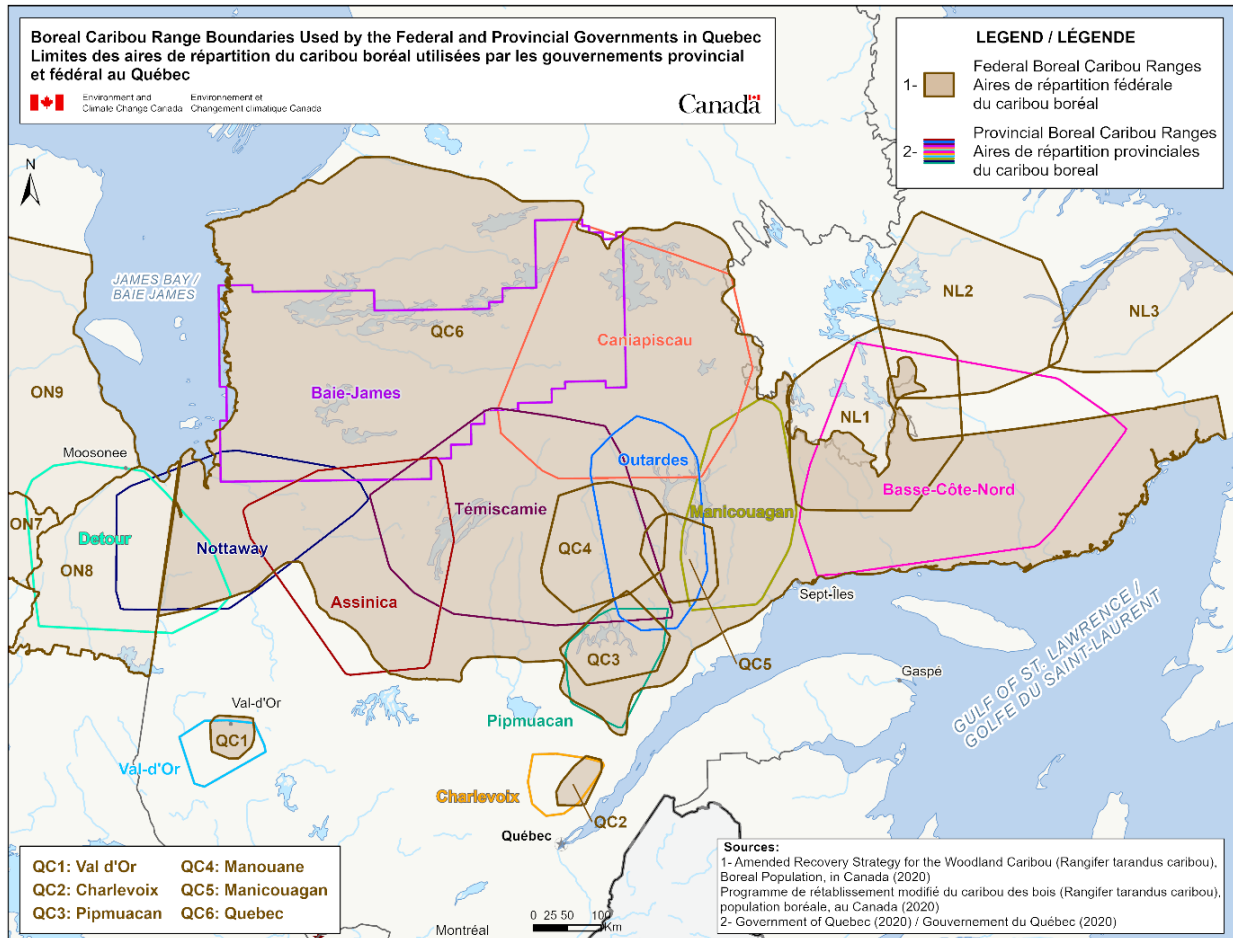


Figure B-5. Boreal caribou range boundaries used by the Federal and Provincial Governments in Quebec.

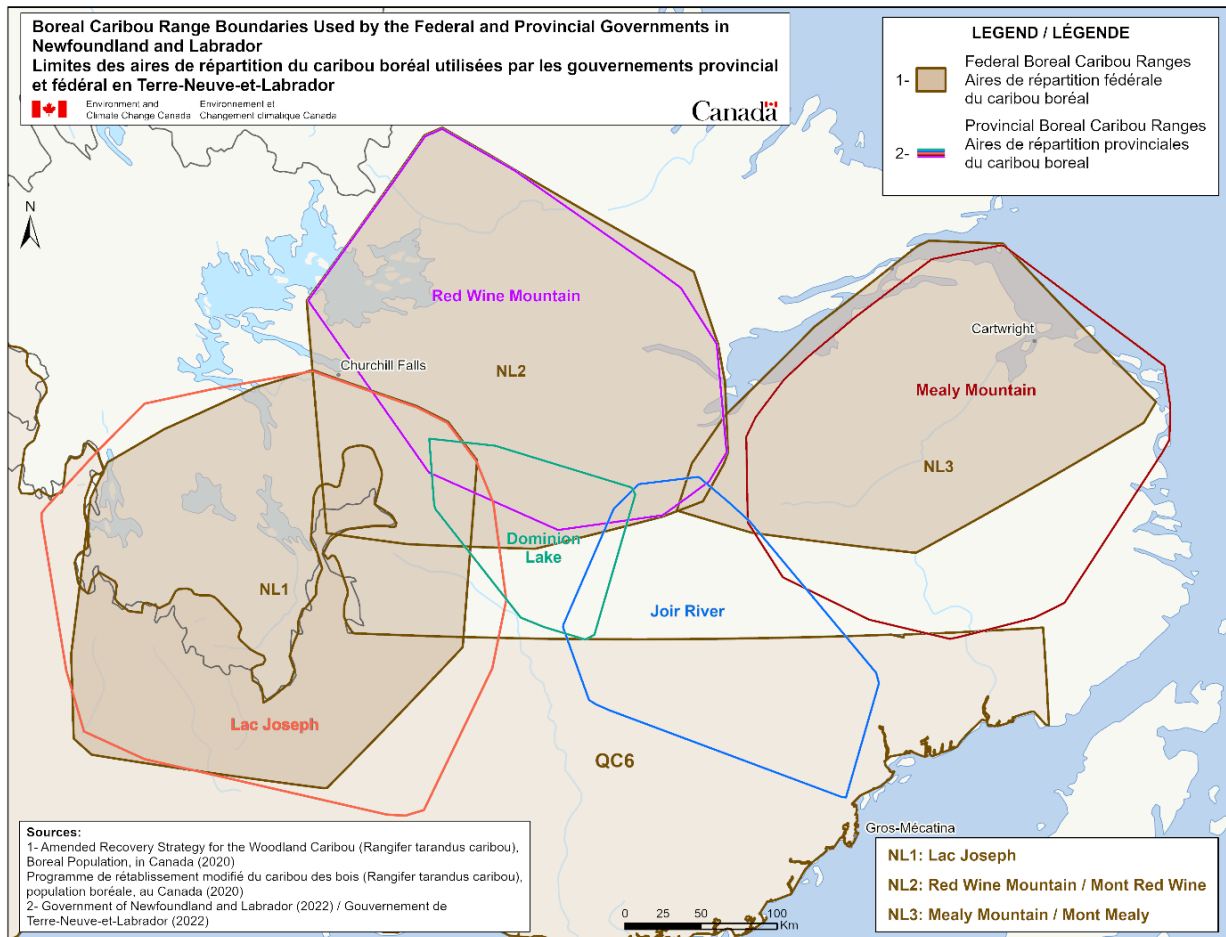


Figure B-6. Boreal caribou range boundaries used by the Federal and Provincial Governments in Newfoundland and Labrador.

Appendix C: Maps of Existing and New Protected and Conserved Areas Since 2017

According to the Canadian Protected and Conserved Areas Database (CPCAD) and the Conservation Areas Reporting and Tracking System (CARTS), which rely on provinces and territories to input data based on ECCC guidelines, over 10 million ha across the boreal caribou distribution were included in the designation of protected and conserved areas within the reporting period (between 2018 and 2022) of this Progress Report (see Figure C-1). The total of new and existing protected and conserved areas within the boreal caribou distribution is 31.7 M ha, or approximately 13%.

The establishment of protected and conserved areas within boreal caribou distribution provides benefits to the species and contributes to the federal government’s broader goal of conserving 30% of Canada’s land and water by 2030. However, many other tools are available to protect and manage boreal caribou habitat, including range planning.

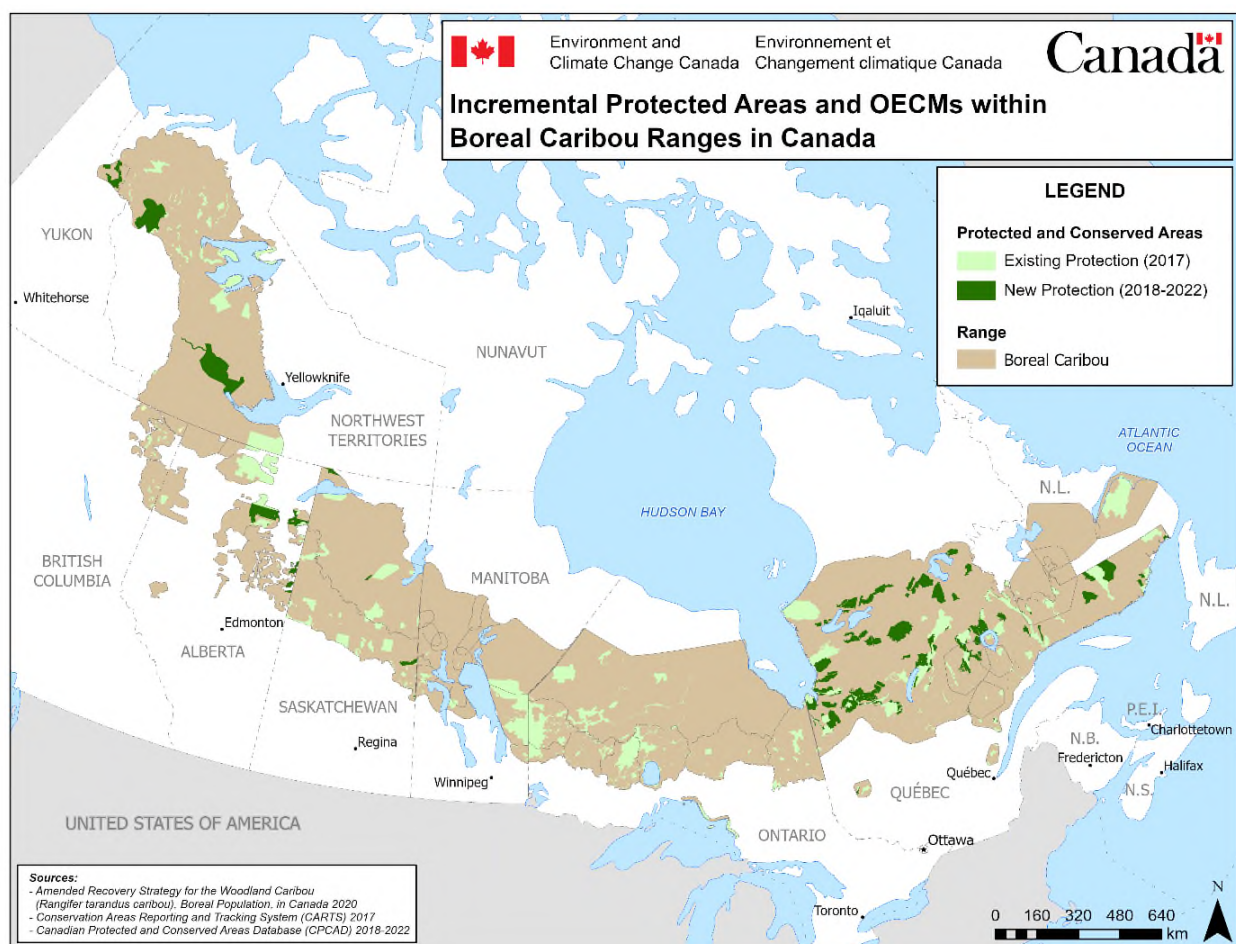


Figure C-1. New and existing protected and conserved areas within boreal caribou distribution.