



# PROCEDURE MANUAL

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Caribou Recovery Program – Interim Aerial Wolf Reduction Procedure			

## Caribou Recovery Program Interim Aerial Wolf Reduction Procedure (2021)

### This Procedure Replaces:

None

### Staff and Organizations Affected:

1. The BC Caribou Recovery Program, responsible for identifying caribou herds where aerial wolf reduction would support caribou recovery.
2. Directors, Regional Managers, and wildlife management staff responsible for:
  - (a) the management and conservation of wildlife, and/or
  - (b) the issuance of permits under the *Wildlife Act*.
3. Regional First Nations Relations staff.
4. Regional Managers with BC Parks responsible for letters of authorization under BC Parks Policy: Control of Native Wildlife Species for the Recovery of Species or Ecological Communities at Risk (2020).
5. Any individual or group working on behalf of the B.C. Government requesting a permit for the aerial reduction of wolves to benefit at-risk caribou herds.


### Reason for this Procedure:

The Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) has established this procedure to implement the Control of Species Policy (4-7-04.01.3) where it applies to aerial wolf reduction for caribou recovery. There are four sections to this procedure:

1. Decision Path
2. Statutory Decision Maker
3. Monitoring and Reporting
4. Discontinuing Aerial Wolf Reduction for Caribou Recovery

### Purpose:

It is the responsibility of the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD), and the Ministry of Environment and Climate Change Strategy (ENV) to:

PREPARED BY		AUTHORIZATION	
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POSITION Conservation Policy Analyst	POSITION Director – Wildlife and Habitat		
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1. Address the management and conservation of caribou (*Rangifer tarandus caribou*), as a species at risk, in British Columbia (B.C.).
2. Set recovery objectives for caribou herds, as well as population objectives for any other species that could be managed to achieve caribou recovery outcomes.
3. Identify candidate caribou herds for wolf reduction based on wolf densities in identified caribou habitat and associated predation risk to caribou herds.
4. For candidate caribou herds, consider reductions of grey wolf (*Canis lupus*) populations according to recommended caribou management thresholds (<3 wolves/1000 km<sup>2</sup>) to support caribou recovery.
5. Recognizing the rights of Indigenous Peoples rights, which are affirmed, fulfil obligations to consult potentially impacted First Nations on wolf reduction for caribou recovery.
6. Engage on wolf reduction for caribou recovery with potentially impacted tenure holders and organizations representing potentially affected user groups.
7. Issue necessary exemptions via permits under the *Wildlife Act* for the specific purpose of aerial wolf reduction for caribou recovery.
8. Ensure methods of wolf reduction are humane and consistent with current guidelines for euthanasia of wildlife. Provide monitoring to ensure guidelines and standards are followed.
9. Monitor wolf, primary prey populations, and caribou populations relative to species-specific population objectives, and regularly report on the effectiveness of wolf reduction activities for caribou recovery.
10. Apply principles of adaptive management to wolf reduction objectives to continuously adjust or improve management practices to support caribou recovery.
11. Monitor the effects of wolf reduction for caribou recovery and to ensure long-term objectives are met for other species or ecosystem processes.

## Background and Rationale:

Despite significant investments aimed to increase the population of many woodland caribou herds in B.C., caribou populations have declined over the past few decades.

The reasons for caribou population declines are complex, with multiple factors (e.g., habitat loss, predators, natural disturbance, nutrition, climate change, etc) interacting and that differ somewhat across the province. Not surprisingly, evidence collected through research and monitoring in B.C. suggest the best results for caribou recovery are achieved when multiple management actions are taken (e.g., some combination of habitat protection and restoration, predation management, maternal penning, etc). Long-term success for caribou recovery will depend on landscape-scale habitat management, however, it may be decades before the benefits of such measures are realized. In the short-term, removing predators has shown the most rapid, positive effect. That said,

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predator control cannot be the long-term solution for caribou recovery given the important ecological role predators play in maintaining and contributing to biologically diverse ecosystems, as well the costs of effective implementation – the overarching objective of the Caribou Recovery Program is to ensure self-sustaining herds.

FLNRORD has established this procedure to provide guidance on direct reduction of wolf populations by aerial shooting (“wolf reduction”) for the purpose of caribou recovery. This procedure applies to all ecotypes and all herds of caribou in B.C., and excludes all other predator species.

This procedure focuses on the reduction of wolf populations through aerial shooting, which is deemed humane and a proven effective method for wolf reduction to support caribou recovery in B.C.

This procedure does not apply to the management of wolf populations through licenced hunting, trapping, and/or management of their primary prey populations which may be addressed through standard *Wildlife Act* management and regulation processes.

B.C. has adopted the maximum recommended threshold for caribou recovery of <3 wolves/1000 km<sup>2</sup> as stated in the Recovery Strategy for the Woodland Caribou, Southern Mountain population (*Rangifer tarandus caribou*) in Canada (2014). The objective of aerial wolf reduction in B.C. is to reduce wolf populations to below the maximum recommended threshold for caribou recovery (<3 wolves/1000 km<sup>2</sup>) annually within identified caribou herd boundaries.

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### 1 Decision Path

#### 1.1 BC Caribou Recovery Program Science Team: Identification of Caribou Herds

- (a) The BC Caribou Recovery Program Science Team has the authority to identify candidate caribou herds for wolf reduction, and to recommend wolf reduction as a tool to support stabilization and ultimate recovery of the caribou herd.
- (b) For a caribou herd to be considered for wolf reduction, the following conditions should be met regarding the relevant caribou herd and wolf population (refer to Figure 1 - Decision Matrix).
  - i) The caribou herd is not open to licensed hunting;
  - ii) The caribou herd is at or below demographic objectives;
  - iii) The caribou herd is at high risk of extirpation regardless of wolf reduction;
  - iv) There is reasonable evidence (including empirical data and/or Indigenous Knowledge) that wolf predation is a limiting factor on the caribou herd;

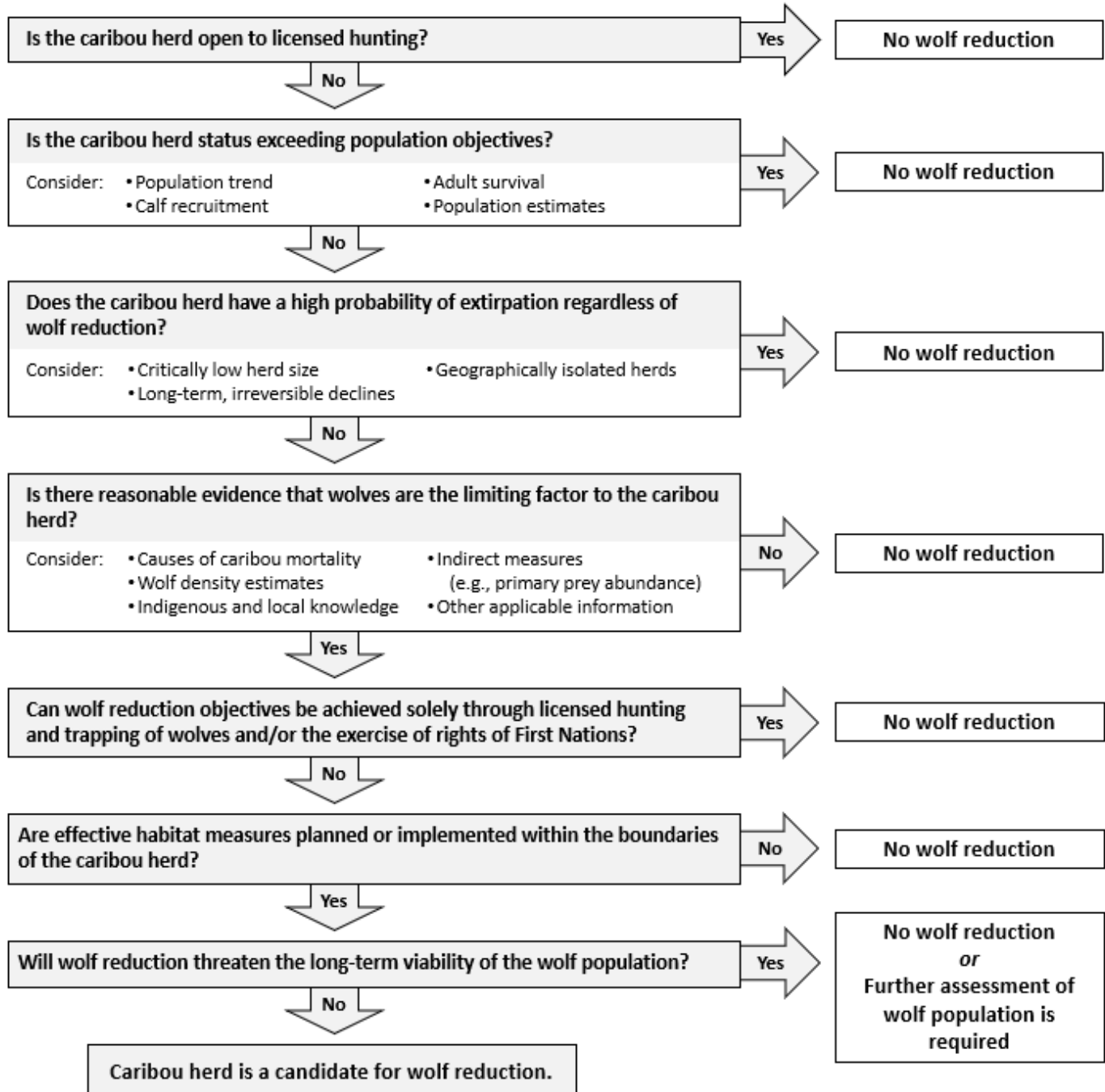
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Figure 1. Decision matrix to identify candidate caribou herds for wolf reduction.





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- v) It is not practicable to achieve the wolf reduction objectives solely through licensed hunting and trapping of wolves and/or the exercise of rights of First Nations;
  - vi) Effective habitat measures are planned or implemented within the boundaries of the caribou herd.
  - vii) Proposed wolf reduction will not threaten long-term viability of wolves in the area.
- (c) The BC Caribou Recovery Program Science Team will provide a list of candidate caribou herds for wolf reduction to the Director of the BC Caribou Recovery Program.

## 1.2 Caribou Recovery Program Director: Endorsement

- (a) The Director of the BC Caribou Recovery Program will review the list of candidate caribou herds for wolf reduction, considering:
- i) What is the current state of the caribou herd, including desired outcomes, recovery actions being employed and additional recovery actions planned?
  - ii) What is the feasibility of concurrent habitat recovery actions for caribou (habitat restoration, habitat protection, industry best management practices, access management, climate change, and recreation and tourism management)?
  - iii) What is the feasibility of concurrent population recovery actions for caribou (primary prey management, maternal penning, conservation breeding, supplemental feeding, and translocation)?
  - iv) Will principles of adaptive management be applied to continuously adjust or improve recovery actions?
  - v) What is the length of time needed for wolf reduction?
  - vi) Are resourcing commitments in place?
- (b) The Director of the BC Caribou Recovery Program will endorse the final list of caribou herds for wolf reduction.

## 1.3 Director of Wildlife: Approval

- (a) The Director of Wildlife will review the draft list of caribou herds for wolf reduction to move forward for engagement and consultation, considering:
- i) Implementing wolf reduction for caribou recovery in a manner that mitigates risks to long-term viability and conservation of native wildlife and ecosystems.
  - ii) Implementing wolf reduction for caribou recovery in an adaptive management framework, acknowledging that wolf reduction activities will likely be necessary



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for many years to remedy existing landscape conditions which result in wolf densities higher than the recommended threshold of 3 wolves/1000 km<sup>2</sup>.

- iii) Budget, operational constraints and relative priorities.
- (b) Once a final list of proposed caribou herds for wolf reduction is approved, engagement and consultation can commence.

## 1.4 Engagement and Consultation

- (a) In collaboration with FLNRORD Regional First Nations Advisors, the BC Caribou Recovery Program will meaningfully engage and consult with Indigenous Government Organizations that are potentially impacted by aerial wolf reduction. Resulting information should support the Statutory Decision Maker's consideration of Indigenous interests, and to determine whether consultation is adequate. Statutory Decision Makers will clearly document how interests and potential impacts were considered and will specify accommodation measures in their decision rationales.
- (b) The BC Caribou Recovery Program will engage with tenure holders within the boundaries of the final list of proposed caribou herds for wolf reduction. Resulting feedback will be considered by the Statutory Decision Maker.
- (c) The BC Caribou Recovery Program may provide opportunity for the general public to provide comments on the final list of caribou herds for wolf reduction. Resulting information will identify regional opinions on wolf reduction, which may inform government-to-government discussions regarding caribou recovery.

## 1.5 Alignment with Existing Policy and Agreements

- (a) The Director of the BC Caribou Recovery Program is responsible for ensuring alignment with existing policy and agreements.
- (b) Wolf Reduction for Caribou Recovery in Parks and Protected Areas
  - i) Wolf reduction for caribou recovery within the boundaries of provincial Parks and Protected Areas require a Letter of Authorization from the BC Parks Regional Manager (Park Act, s.9; Park, Conservancy and Recreation Area Regulation, s. 28-29).
  - ii) Guidance outlining conditions and expectations for Letters of Authorization are provided in BC Parks Policy: Control of Native Wildlife Species for the Recovery of Species or Ecological Communities at Risk (2020).
- (c) Wolf reduction for caribou recovery should be consistent with recovery actions and obligations documented in:
  - i) Recovery Strategy for the Woodland Caribou, Southern Mountain population (*Rangifer tarandus caribou*) in Canada (2014).

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- ii) Canada British Columbia Conservation Agreement for Southern Mountain Caribou in British Columbia (February 21, 2020).
- iii) Intergovernmental Partnership Agreement for the Conservation of the Central Group of the Southern Mountain Caribou (February 21, 2020).
- (d) Any inconsistency with recovery actions and obligations will be noted with reasonings for those inconsistencies.
- (e) Wolf reduction for caribou recovery involving trans-jurisdictional herds should be coordinated with those jurisdictions.

## 2 Statutory Decision Maker

### 2.1 Permitted Exemptions

- (a) The Statutory Decision Maker is the FLNRORD Regional Manager in each region where candidate caribou herds are identified for wolf reduction.
- (b) Regional Managers may consider issuing exemptions via permit under *Wildlife Act* Permit Regulation s. 3.1 (BC Reg 19/2021) as required.

### 2.2 Permit Requirements for Aerial Wolf Reduction

- (a) Regional Managers are responsible to ensure the completeness of permit requirements for aerial wolf reduction.
- (b) Permit requests for aerial shooting will document how the activity is consistent with the American Veterinary Medical Association Guidelines for the Euthanasia of Animals and other existing animal care standards/guidelines.
- (c) Operators engaged in aerial wolf reduction for caribou recovery will provide proof of the following in their permit application:
  - i) Approved Animal Care Application (see [FrontCounterBC](#) for BC Animal Care Application Form).
  - ii) Exemptions under the Canadian Aviation Security Regulations and Transportation of Dangerous Goods Regulations to transport firearms and ammunition and discharge loaded firearms from an aircraft.
  - iii) Exemption from a Chief Firearms Officer to use prohibited firearms, if necessary, as per the *Firearms Act*.

### 2.3 Alignment with Policy and Procedures

- (a) Regional Managers will consider guidance outlined in the following policies and procedures to inform their decisions:
  - i) 4-7-04.01.3 Control of Species Policy





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- ii) 4-7-04.01.3 Protecting Species at Risk from Other Species Procedure
- iii) 4-7-04.13.07 Evaluating Sufficient Skill Under the Permit Regulation
- iv) Other applicable policies and procedures relating to wildlife hunting and trapping, and to disposition of dead wildlife.

## 2.4 Decision Documentation

- (a) For each decision, the Statutory Decision Maker will provide a completed record of decision to the Director of the Caribou Recovery Program.
- (b) The Director of the BC Caribou Recovery Program will maintain all records of decision.

## 3 Monitoring and Reporting

### 3.1 Monitoring

- (a) To assess the effectiveness of wolf reduction for caribou recovery, the following is strongly recommended:
  - i) Caribou populations to be regularly monitored per B.C.'s Caribou Recovery Monitoring and Inventory schedule for adult and calf survival, and/or total estimated population size.
  - ii) Wolf populations to be monitored by annual or semi-annual density estimates, and rates of immigration/reproduction of wolf populations during and following annual wolf reduction.
  - iii) Primary prey populations to be assessed to measure primary prey response and inform management considerations. Alternatively, population trend may be estimated using an Integrated Population Model or similar quantitative process.
- (b) Population monitoring should be conducted according to Resources Information Standards Committee standards by qualified biologists (i.e. government staff or contractors). Variance from standard will be documented.
- (c) Indigenous Knowledge will be considered with western science as an important and complementary source of evidence throughout the term of the wolf reduction program.

### 3.2 Reporting

- (a) Monitoring results will be reported to ENV Knowledge Management Branch within six months of survey completion.
- (b) Results of wolf reduction for caribou recovery will be summarized annually in technical reports and/or BC Caribou Recovery Program annual reports, and should

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include information regarding study area, timing, pre- and post-wolf reduction estimates, reduction locations and totals, costs, and recommendations.

## 4 Discontinuing Aerial Wolf Reduction for Caribou Recovery

### 4.1 Considerations

- (a) In order to discontinue wolf reduction, the effectiveness of concurrent recovery actions addressing the underlying causes of high wolf densities and high caribou predation should be considered, specifically:
  - i) Status and effectiveness of caribou habitat recovery actions (including habitat restoration, habitat protection, industry best management practices, access management, and recreation and tourism management).
  - ii) Status and effectiveness of caribou population management actions (including primary prey management, maternal penning, conservation breeding, supplemental feeding, and translocation).
- (b) Aerial wolf reduction may end when the identified caribou herd has met the recovery objective (self-sustaining or considered stabilized with alternate recovery actions in place to reach self-sustaining status).
- (c) Aerial wolf reduction may be discontinued when it is apparent that the recovery action will not achieve the recovery objective, for example:
  - i) No beneficial response in the identified caribou herd is observed after five years of achieving the annual wolf reduction objective (<3 wolves/1000 km<sup>2</sup>).
  - ii) Wolf reduction has not achieved the annual wolf reduction objective (<3 wolves/1000 km<sup>2</sup>), after five years of implementation.

### Policy Manual Cross-References:

4-7-04.01.3 Control of Species Policy

4-7 – Other relevant wildlife policies on allocation and hunting licences, fur management, wildlife conflict & carnivore management, uses of wildlife, etc.

### Procedure Manual Cross-References:

4-7-04.01.3 Protecting Species at Risk from Other Species (2006)

4-7-04.13.07 Evaluating Sufficient Skill Under the Permit Regulation (2021)

4-7 – Other relevant wildlife procedures on allocation and hunting licences, fur management, wildlife conflict & carnivore management, uses of wildlife, etc.

### Other Cross-References:

B.C. Legislation and Regulations:

- *Wildlife Act* (RSBC 1996 c.448)

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- Permit Regulation (BC Reg 19/2021)
- Hunting Regulation (BC Reg 220/2020)
- Wildlife Act General Regulation (BC Reg 340/82)
- *Park Act* (RSBC 1996 c.344)
  - Park, Conservancy and Recreation Area Regulation (BC Reg 180/1990)
- *Declaration on the Rights of Indigenous Peoples Act* (SBC 2019 c.44)

## Federal Legislation and Regulations:

- *Species at Risk Act (SARA)* (SC 2002, c.29)
  - Related documents:
    - Recovery Strategy for the Woodland Caribou, Southern Mountain population (*Rangifer tarandus caribou*) in Canada (2014)
    - Canada British Columbia Conservation Agreement for Southern Mountain Caribou in British Columbia (February 21, 2020)
    - Intergovernmental Partnership Agreement for the Conservation of the Central Group of the Southern Mountain Caribou (February 21, 2020)
- *Firearms Act* (SC 1995, c.39)
- *Transportation Act* (SC 1992 c.34)
  - Transportation of Dangerous Goods Regulations (SOR/2001-286)
- *Aeronautics Act* (RSC 1985, c.A-2)
  - Canadian Aviation Security Regulations (SOR/2011-318)

## B.C. Policy, Procedures, Management Plans, and other guidance:

- BC Parks Policy:
  - 5.3.2. Native Wildlife Species Control Policy: Control of Native Wildlife Species for the Recovery of Species or Ecological Communities at Risk (2020)
- Species and Ecosystems Data and Information Security Policy and Procedures (2015)
- Mountain Caribou Recovery Implementation Plan (MCRIP) (2008)
- Grey Wolf Management Plan (2014)
- Caribou Recovery Program Operational Procedures (in devt 2021)
- Resources Information Standards Committee standards

## Other guidelines:

- American Veterinary Medical Association Guidelines for the Euthanasia of Animals (2020)