Mountain Caribou Recovery Implementation Plan Progress Board

Annual Report on Activities and Accomplishments of the Mountain Caribou Recovery 2011-12

Prepared by:
Mountain Caribou Recovery Implementation Plan
Progress Board
April , 2012

Background

On October 16, 2007, government announced the Mountain Caribou Recovery Implementation Plan (MCRIP), which had the support of the forest industry, commercial and public recreation sectors, environmental sector representatives, and First Nations. The goal of the MCRIP is to halt the decline of the mountain caribou population within seven years for each planning unit and to recover mountain caribou to 1995 population levels (2500 animals) across the mountain caribou range within 20 years in those planning units with more than 10 animals.

One of the management actions to successfully implement the MCRIP was to institute a cross-sector progress board to monitor the effectiveness of recovery actions. The Progress Board meets annually to provide comments and recommendations on government delivery of actions necessary to achieve government's MCRIP recovery objectives.

The Progress Board met March 20, 2012 in Vancouver for a briefing on MCRIP management activities undertaken in 2011/12. The meeting was attended by Archie MacDonald (Council of Forest Industries), Joe Scott (Mountain Caribou Project), John Bergenske (Wildsight), John Dunford, Al Martin (BC Wildlife Federation) and on the phone by Dave Butler (Heli-Cat Canada) and Angie Threatful (BC Snowmobile Federation). A copy of the briefing report is attached. This report summarizes comments and recommendations from the Progress Board at that meeting.

RECOVERY ACTION #1: PROTECT 2.2 MILLION HECTARES OF MOUNTAIN CARIBOU RANGE FROM LOGGING AND ROAD BUILDING

Government Actions Regulation Amendments

Feedback from forest industry consultation indicates that there has been little need for exemptions to the current General Wildlife Measures (GWMs) and the exemption process has worked where they have been needed.

Comments from Progress Board: even if there is little urgency to finalize a GWMs that address forest health issues in protected mountain caribou habitat areas, some work should occur to advance it. When the issue does arise, there will be less haste to get revised measures in place.

PROGRESS BOARD RECOMMENDATION:

1. MCRIP staff should work with COFI, ILMA and interested Progress Board representatives to develop a strategic vision for how to manage forest health in advance of any major outbreaks (including review of applications of the current GWMs).

RECOVERY ACTION #2: MANAGE HUMAN RECREATIONAL ACTIVITIES

Public Recreation

Comments from Progress Board: effective communication (ie an understandable message to the correct audience in a time and place where it is helpful) is key to achieving compliance with measures to reduce impacts from snowmobile riding on caribou.

PROGRESS BOARD RECOMMENDATION:

1. The provincial government should implement a registration and licensing program for snowmobiles to enable more effective management of this sector. A portion of the fees collected from this program could be dedicated to supporting education, environmental stewardship initiatives associated with managing snowmobile use in mountain caribou habitat."

2. MCRIP staff should work with interested snowmobile clubs and the Association of BC Snowmobile Clubs (Association) and the Snowmobile Federation of BC (Federation) to review the design, content, production and placement of signs/maps/brochures to ensure effective use is made of resources.

3. MCRIP staff should discuss the conversion of voluntary closure areas with significant non-compliance to legal closures with snowmobile clubs administering these voluntary closure areas. The Federation and Association should be included in those discussions.

4. MCRIP staff involved in compliance monitoring patrols should contact local clubs, and the Association and Federation, with the results of those patrols including evidence of non-compliance with closures in their area as soon as possible.

5. MCRIP staff should work with the Conservation Officer Service, and other enforcement agencies as warranted, and the Association and Federation to develop a Comprehensive Compliance Strategy for the snowmobile sector in caribou habitat. The strategy should include education, communication, compliance monitoring and enforcement.

Commercial Recreation

Comments from Progress Board: any decisions on tenure renewal should ensure that renewal does not have an adverse change in the material impact on caribou. Research or adaptive management projects involving the sector (e.g. on sightability) are necessary to improve the evaluation on the nature and severity of impacts on caribou

PROGRESS BOARD RECOMMENDATION:

1. MCRIP staff should initiate work to develop a third party audit for the heli-ski sector to be in place before the 2012-2013 ski season.

2. MCRIP staff should engage with tenure holders not members of Heli-Cat Canada (HCC) or Mike Wieglie Heli-ski (MWHS) to develop Memoranda of Understanding(s) similar to those in place with MWHS or HCC.

3. Government should develop a plan to manage new tenure applications in caribou habitat when the current moratorium expires in 2013. This should include a means to evaluate the contribution of the moratorium to MCRIP recovery objectives based on risk reduction for mountain caribou recovery.

RECOVERY ACTION #3: MANAGE PREDATOR POPULATIONS

Comments from Progress Board: any measures taken for wolf control need to have a demonstrable effect towards achieving the MCRIP recovery objectives.

PROGRESS BOARD RECOMMENDATION:

1. Government should approve the use of aerial removal of wolves in select situations as the most humane and effective means to achieve MCRIP recovery objective.

2. Any measures taken to affect predator management should be based on peer-reviewed science and data that is widely available for review or use.

3. Any measures taken to affect predator management should be on an "area-based" approach to ensure that the measure is appropriate to that area (ie not "one size fits all") and undertaken at a scale to be effective.

RECOVERY ACTION #4: MANAGE THE PRIMARY PREY OF CARIBOU PREDATORS

PROGRESS BOARD RECOMMENDATION:

1. Any measures taken to effect primary prey should be on an "area-based" approach to ensure that the measure is appropriate to that area (ie not one size fits all) and at a scale to be effective.

2. Prey management implemented to date should be reviewed and evaluated by MCRIP staff and qualified professionals and provided to Progress Board for comment, before further actions are initiated.

RECOVERY ACTION #5: BOOST CARIBOU NUMBERS IN THREATENED HERDS

Purcells South Transplant

PROGRESS BOARD RECOMMENDATION:

1. MCRIP staff should complete the second phase of the South Purcell transplant, using the results of a retrospective review of the 2011-12 event and monitoring of initial results of the transplant to refine the project design. All aspects of the project (e.g. including predator management) should be implemented.

Captive breeding

Comments from Progress Board: Recognize the value of having knowledge and insight on tools that may be effective at achieving recovery objectives, but be careful about expanding the scope of MCRIP. Starting new initiatives should not strain financial or partner support such that it compromises completion of existing projects.

PROGRESS BOARD RECOMMENDATION:

2. Continue development of operational aspects of captive breeding protocols if it does not compromise financial or partner support to existing projects.

Maternal penning

Comments from Progress Board: recognize the value about having knowledge and insight on tools that may be effective at achieving recovery objectives, but be careful about expanding the

scope of MCRIP. Continue to explore the feasibility of maternal penning both generically and with site specific applications. Starting new initiatives should not strain financial or partner support such that it compromises finishing existing projects.

PROGRESS BOARD RECOMMENDATION:

3. Continue development of operational aspects of maternal penning trial if it does not compromise financial or partner support to existing projects

RECOVERY ACTION #6: SUPPORT ADAPTIVE MANAGEMENT AND RESEARCH AND IMPLEMENT EFFECTIVE MONITORING PLANS

PROGRESS BOARD RECOMMENDATION:

1. MCRIP staff should complete a herd- by-herd analysis to determine which recovery management tools are most likely to be successful towards a herd achieving the MCRIP recovery objectives.

2. MCRIP should complete a herd- by-herd analysis to illustrate where adaptive management or research projects are underway or proposed. This analysis will confirm that tools are being tested in locations where they are expected to be effective and on which other herd areas the results are applicable.

RECOVERY ACTION #7: INSTITUTE A CROSS-SECTOR PROGRESS BOARD TO MONITOR THE EFFECTIVENESS OF RECOVERY ACTIONS

Comments from Progress Board: Progress Board members feel the Board is an effective tool to enable open communication between sectors with a significant stake or interest in mountain caribou. It allows the groups to work on problems together towards a common end of mountain caribou recovery.

PROGRESS BOARD RECOMMENDATION:

1. Government should continue to support the Progress Board as an effective means to provided informed feedback on MCRIP progress.

MCRIP Progress Board 2011/12 Annual Report - Attachments

April 18, 2012

Mountain Caribou Recovery Implementation Plan Progress Board
c/o 4051 18th Avenue
Prince George BC V2N 1B3

The Honourable Terry Lake,
Minister of Environment
PO Box 9047
Victoria BC V8W 9E2

The Honourable Steve Thomson,
Minister of Forests, Lands and Natural Resource Operations
PO Box 9049
Victoria BC V8W 9E2

Dear Ministers:

RE: Support for Mountain Caribou Recovery Efforts

The Mountain Caribou Recovery Implementation Plan Progress Board wishes to congratulate you on government's successful translocation of Caribou into the Purcells-South Area and to thank you for helping to make this happen. We acknowledge the complexity of this initiative and appreciate all the time and effort that has gone into making it a success.

The Purcells-South herd is one of several mountain caribou herds where augmentation is necessary to ensure the herd achieves critical mass for self-sufficiency. As you are aware, augmentation was identified by the science team and within the Mountain Caribou Recovery Implementation Plan as one of the 6 key recovery actions necessary to halt the decline of Mountain Caribou and recovery is dependent on all actions being implemented.

The Augmentation Plan prepared for the Purcells-South recommended that 40 animals be translocated into the area over a 2 year period. This year's work represented year 1 of the Plan. We look forward to the translocation of another 20 Caribou into this area next year. We will once again be counting on your support to help make this happen.

Yours truly,

Chris Ritchie
Progress Board Chair

cc: Andrew Wilson, Director, Fish Wildlife and Habitat Management Branch
Alec Dale, a/ Executive Director, Ecosystems Protection and Sustainability Branch

Report on Activities and Accomplishments of the Mountain Caribou Recovery Effort (March 2012)

Prepared by:
Chris Ritchie, Chris Pasztor, Darcy Peel, Steve Gordon
Mountain Caribou Recovery Implementation Plan
March 20, 2012

Background

On October 16, 2007, government announced the Mountain Caribou Recovery Implementation Plan (MCRIP), which had the support of the forest industry, commercial and public recreation sectors, environmental sector representatives, and First Nations.

The goal of the MCRIP is to halt the decline of the mountain caribou population within seven years for each planning unit and to recover mountain caribou to 1995 population levels (2500 animals) across the mountain caribou range within 20 years in those planning units with more than 10 animals.

The goals of the MCRIP will be achieved by implementing the following management actions:

1. Protect 2.2 million hectares of mountain caribou range from logging and road building, capturing 95% of the caribou's high suitability winter habitat.
2. Manage human recreational activities in mountain caribou habitat to minimize the disturbance and displacement of caribou from their preferred habitat.
3. Manage predator populations of wolves and cougar where they are preventing the recovery of mountain caribou populations.
4. Manage the primary prey of predators of mountain caribou.
5. Increase caribou numbers in threatened herds with animals transplanted from elsewhere to ensure that herds achieve critical mass for self-sufficiency.
6. Support adaptive management and research, and implement effective monitoring plans for habitat, recreation, and predator–prey management.
7. Institute a cross-sector progress board in spring 2008 to monitor the effectiveness of recovery actions.

This report updates the accomplishments reported in the March 2011 report entitled "Update on Activities and Accomplishments of the Mountain Caribou Recovery Effort". An interim report was presented to the Progress Board in December 2011.

Management Activity Update

RECOVERY ACTION #1: PROTECT 2.2 MILLION HECTARES OF MOUNTAIN CARIBOU RANGE FROM LOGGING AND ROAD BUILDING

Government Actions Regulation Amendments

Draft general wildlife measures (GWMs) were developed to address forest health issues in protected mountain caribou habitat areas under Government Actions Regulation (GAR). In the past two years since the mountain caribou Orders came into effect, very few forest health exemption requests have been brought forward. In those instances where an exemption has been required, the exemption process has worked well given the site-specific issues being addressed.

Approval of the Forest Health GWMs included a commitment to review their implementation. Regional staff have consulted with forest companies to assess the merit implementing the GWMs. Forest companies are currently generally supportive of the exemption approach, but have raised concerns that this approach may not work well in the future in anticipation of increases in forest health issues. Government will need to consider the concerns raised by this sector. Development of improved guidance documents on the management of forest health in mountain caribou areas will improve management of forest health issues

NEXT STEPS:

- Develop forest health management guidelines.
- Continue to monitor and record resource development footprint

RECOVERY ACTION #2: MANAGE HUMAN RECREATIONAL ACTIVITIES

Public Recreation

Monitoring snowmobiling activity continues to be high priority for the MCRIP team. Efforts have been spread across the recovery area. We have made progress on each of the action items which were raised in the last Progress Board report, namely: increased compliance monitoring in priority areas; continued outreach with snowmobile clubs and shops; and publicize enforcement efforts. A major enforcement event took place in February in coordination with the COS, C and E staff, and the MCRIP team. Although few tickets have been issued this winter those in the field report that their presence is making an obvious difference. However, when the “eyes” are not on, there continue to be issues with non-compliance in every region.

Great efforts were made in the early part of the season by Regional Staff in Revelstoke to produce a series of pamphlets which are tailored to their riding areas. These pamphlets are now in circulation and have been generally well received by the snowmobiling community.

As highlighted later in this report, the first transplant of caribou from the Level-Kawdy herd to the Purcell-South herd has occurred. This component of the MCRIP has received significant

media attention recently and during some of those reports the need for continued monitoring and management of backcountry recreation has been highlighted.

Discussions with COS staff indicate that actual compliance effort may be under-reported. The details of why this may be occurring are related to staff management and work scheduling but some C and E staff report MCRIP snowmobile work being mixed into their regular day to day routines without reporting that this work is taking place. Examples of this include stopping and discussing details of closures with snowmobilers during routine patrols, conversations taking place with back country users during hunting season patrols, etc.

MCRIP staff in the Thompson Okanagan Region are currently working with the ABCSC and the Blue River Powder Packers Snowmobile club on a voluntary closure of the Groundhog Riding area. This effort is in response to declining numbers of caribou in this area and is dependent on a detailed plan which continues to be worked on. There are outstanding issues regarding an alternate riding area and access points as well as a delay in collaring a caribou in the remaining group within the Groundhog Herd. As this project evolves there will be more details to report.

NEXT STEPS:

- Work toward expanding our enforcement base by delegation of portions of the Wildlife Act to a broader group of Compliance and Enforcement staff.
- Annual meetings with Snowmobile clubs to discus/report on SMA performance.

Commercial Recreation

Commercial recreation operators (heli and cat-ski) submitted wildlife sighting data and compliance forms to government in spring 2011 as per the established sector compliance and effectiveness monitoring strategy. The process to submit this information is identified under a Memorandum of Understanding (MOU). Twelve operators are currently identified as operating in mountain caribou habitat that are signatory to the MOU. The information submitted in spring was compiled and analyzed by government staff. Compliance with submitting information and results of interactions between operator activities and mountain caribou were identified in a monitoring report. The report entitled “Mountain Caribou Compliance Monitoring: Interactions between Mountain Caribou and Heli-ski and Snow-cat skiing Operations during the 2010-11 Skiing Season” is posted on the mountain caribou webpage. Components of the report, data reporting, and information sharing were discussed with operators this fall at a face-to-face meeting in Revelstoke. Then intent of the meeting was to identify issues and benefits of following and using the current approach of reporting, to ensure continuous improvement in sector activities to support mountain caribou recovery. Individual operators were informed of their performance separately from this meeting. Overall, 67% of operators submited wildlife sightings for the 2010-11 skiing season, suggesting that there is room for improvement for the upcoming skiing season.

A process is being developed to engage other operators not associated with these businesses Heli-Cat Canada (HCC) , Mike Wieigle Heli Ski (MWHS) to ensure they too will be monitored for compliance with best practices and effectiveness. Associated with this process will be determining if other operators will sign a Memorandum of Understanding (MOU) with government.

NEXT STEPS:

- Complete process to develop MOUs with tenure holders outside HCC and MWHS
- Initiate development of a third party audit.

RECOVERY ACTION #3: MANAGE PREDATOR POPULATIONS

Wolf control

Wolf management remains a controversial component of the MCRIP. A technical rationale in support of aerial wolf removal in specified circumstances (see Appendix A) was presented to senior government officials in the fall of 2011. Information to support a final request for clarification is nearing conclusion. In the interim, Government Communication and Public Education (GCPE) has developed a comprehensive communication strategy, which includes stakeholder engagement to complement potential options to respond to wolf control. Senior officials continue to assess the social, political and ecological consequences of various approaches or situations for wolf control. A full description of wolf control under the MCRIP is attached. (Attachment A)

Wolf and cougar management

The draft provincial wolf management plan remains in internal review stage.

Currently, radio-collaring and monitoring of wolves is occurring in two regions. Weather conditions in the Thompson region effectively shut down wolf monitoring in that region. However, in the Kootenays, associated with the Purcells South herd area, information on overlap between wolves and mountain caribou home ranges will help form the basis for any discussions on intensive wolf removal. As part of the Purcells-South transplant, the University of Victoria is conducting research and monitoring of predator-prey relationships through use of state-of-the-art GPS radio collar data on caribou, cougars and wolf movements, and spatial analysis of those data. Understanding these relationships will help make scientifically-informed decisions in the best interests of the South Purcells caribou, and inform future decisions around other possible herd augmentations. A project update is attached (Attachment B)

The target is to have 8 radio-collared wolves in 4-5 packs near the Purcells South herd; 3 wolves in two packs are currently collared in the study area and both ground-based an aerial-based trapping methods will be employed to attempt to capture additional wolves prior to the end of

March 2012. Over the year, eight wolves have been collared with five lost either because of a manufacturing defect (now rectified) or killed by natural or human induced means. One University of Victoria graduate student has started examining habitat selection by wolves in or near the Purcell South caribou herd to help characterize the risk of wolf predation to that herd. At least two Master's students will be working on this project and the data it generates.

This same project is examining predation risk from cougars. A target of 8 GPS-collared cougars is set for the area near the Purcells South herd. Six cougar are currently collared and conditions are favourable for collaring of an additional 2 cougars in the near future.

Wolf removal by registered trappers and legal hunting seasons continued this year on a limited basis.

A wolf sterilization project continues in the Cariboo region. Constraints posed by budget uncertainty, weather conditions and personnel availability curtailed the project. A truncated sterilization and removal program continued in 2011 in the Quesnel Highlands. The goal remains to determine the effectiveness and operational applicability of the method, including resource implications.

NEXT STEPS:

- We will continue to pursue approval from senior officials to conduct aerial wolf removal in specified circumstances.
- Continue to maintain GPS collars on 8 wolves and 8 cougars in the Purcellls South herd area to enable the UVic research project and enable rapid response to predation events.
- Conduct a retrospective analysis of results to date from the Cariboo wolf sterilization trial to assess the effectiveness of the technique and future application.

RECOVERY ACTION #4: MANAGE THE PRIMARY PREY OF CARIBOU PREDATORS

Two pilot moose-reduction projects are underway, in the Parsnip (Region 7) and Revelstoke (Region 4) areas to assess the effectiveness of reducing moose densities to reduce wolf densities.

The Master's Student (Robin Steenweg) on the Parsnip project has completed and defended his thesis. Robin's thesis is entitled "Interactions of wolves, mountain caribou and an increased moose-hunting quota -primary-prey management as an approach to caribou recovery" and is available from UNBC at:

http://web.unbc.ca/~michael/Pubs/Steenweg%202011.pdf

The conclusions he reached are:

"Our data do not indicate that an increase in the number of moose hunting permits has led to a decline in wolf predation on caribou and greater caribou survival. The high frequency of wolf-killed caribou in 2009 and 2010 suggests that wolf predation on caribou may have increased, but because the overall caribou survival rate remained high and showed no trend over time and because sample sizes were so small, we were unwilling to conclude that the reduction in the

moose population caused wolves to increase their predation on caribou. We hope to resolve that uncertainty through our continued monitoring of caribou survival."

The caribou herd in the Parsnip will be surveyed in March 2012 and be re-evaluated in 2012.

On the Revelstoke pilot, the caribou herd census was not completed in 2010 due to poor winter conditions, but was successfully complete in 2011. However, moose are reduced from a high of 1650 in 2003 to approximately 475 in 2011. Sport hunting tags increased from 2003-05 to 2009/10 to help achieve this reduction. Wolf numbers have declined by about 70% in response to this moose reduction and remain unchanged based on 2010 survey results. There are indications that in 1 of 3 caribou herds, with a larger population size, the decline has been less severe and may have stabilized."

Rob Serrouya, the project lead, is scheduled to complete his PhD in late spring 2012 which will result in reporting out on this project. In the meantime, several papers are available and an easy 20 min video presentation from a recent conference is available at: http://www.landusekn.ca/resource/video-columbia-mountain-caribou-field-testing-recovery-options-presentation-rob-serrouya

NEXT STEPS:

- Continue to conduct caribou, wolf, and cougar surveys in the moose reduction treatment areas to measure response to moose and wolf reduction.
- Cooperate with NGO in Revelstoke to complete planning and development of maternal penning project in Revelstoke area.

RECOVERY ACTION #5: BOOST CARIBOU NUMBERS IN THREATENED HERDS

Purcells South Transplant

A transplant to the Purcell South is being implemented for March 2012. A Transplant Team is functioning well and project is progressing well. Tasks completed or under way include:

- 20 caribou captured in the Level-Kawdy herd fitted with GPS collars February 29 – March 1, 2012.
- Collared Level-Kawdy caribou transported by road to the Kootenay region and released into alpine habitat in the South Purcell mountains March 3, 2012.
- In addition to MFLNRO and MOE staff, First Nations, Wildsight, Parks Canada, University of Victoria, University of Calgary, Montana Fish & Game, and the BC Hydro Compensation program were directly involved in the transplant.
- Funding proposals have been submitted to the Habitat Conservation Trust Foundation, Habitat Stewardship program and others.
- $10,000 received from the Columbia Basin Trust through Wildsight in support of the project

- 6 cougars have been collared in the study area and houndsmen are actively attempting to capture 2 more
- Wolf collaring efforts are awaiting suitable weather conditions for ground-based methods. Bighorn helicopters has been contracted to net-gun additional wolves if ground-based methods are ineffective prior to March 31, 2012
- Several media interviews have been conducted related to the transplant, including the Vancouver Sun, CBC radio.
- A News Release was issued soon after release of caribou into the South Purcell mountains. CBC TV included a human interest piece on the evening news after the caribou were released in the Purcell Mountains
- Additional media attention is expected subsequent to the transplant.

A more complete description of the transplant project is attached (Attachment C).

Next Steps:

- Continue outreach with media to raise project profile.
- Continue to monitor caribou and wolf/ cougar movements
- Conduct calf survival inventory flights in late spring (June) of 2012.
- Continue monitoring caribou movements and survival in both the Level-Kawdy (donor) herd and South Purcells (recipient) herd
- Plan for 2nd transplant event in 2013
- Continue outreach and engagement with First Nations in the donor and recipient herd areas.
- Review results of 2012 transplant to identify opportunities for improvement/ refinement

Captive breeding

In November 2011, Parks Canada and the Calgary Zoo lead the signing of a Memorandum of Understanding with the Government of British Columbia to agree in principle to work collaboratively on a mountain caribou captive breeding program (Attachment D). This agreement is part of Parks Canada's Conservation Strategy to recover mountain caribou in National Parks through the Rocky Mountains in British Columbia and Alberta. . The goal is to contribute to maintaining a healthy population of Southern Mountain woodland caribou on the landscape in Canada. British Columbia's role in this program is to provide the source mountain caribou population in return for captive breed caribou to augment existing herds to support achieving the MCRIP goal. In the captive breeding program, a limited number of source animals are taken from large, wild populations in BC and bred in captivity at a facility operated by the Calgary Zoo. Offspring are strategically released into wild areas where they will have the greatest conservation value and the optimum chances for survival.

A more formal partnership in the form of a Conservation Agreement is expected to be signed by the partners in 2012.

NEXT STEPS:

- continue development of operational aspects of captive breeding protocols.

Maternal penning

In concert with a NGO group in Revelstoke, discussion has started to develop a operational trial of maternal penning designed to assist the Columbia N (Revelstoke) herd. There is broad scale support from provincial agencies, Parks Canada and First Nations. This project is currently targeted for implementation in winter 12/13. If successful, it will be a tool to complement captive breeding, transplants and wolf control.

NEXT STEPS:

- continue development of operational trial for maternal penning with NGO group based in Revelstoke.

RECOVERY ACTION #6: SUPPORT ADAPTIVE MANAGEMENT AND RESEARCH AND IMPLEMENT EFFECTIVE MONITORING PLANS

In spring, an analysis on caribou use of habitat under the Government Actions Regulation (GAR) was conducted. The results of this analysis demonstrated that > 80% of mountain caribou used habitat under GAR during the study period (see Paige et al. 2012). The report is currently under manager review for approval and expected to be published as part of the Forest and Range Evaluation Program. This result will not lead to any modifications of GAR boundaries to increase caribou use at this point in time.

With the first phase of the Purcell-South caribou transplant completed in March 2012, monitoring flights are scheduled to determine the number of caribou calves born, caribou calf survival and adult survival until spring 2013 when the next phase of the transplant if initiated and completed. In addition, the spatial and temporal movements of adult caribou will be monitored between all 3 sub groups to determine the effectiveness of transplanting caribou into areas with existing caribou herds. The results of this work will inform future transplants and help determine how transplanted caribou are contributing to the survival and recovery of caribou in the South Purcells, which is a key adaptive management question.

NEXT STEPS:

- Continue to assess the degree of non-compliance of snowmobile activity in closed areas
- Begin to design an approach to assess the effectiveness of habitat protection measures
- Continue monitoring caribou movements and survival in support of the Purcells South transplant
- Assess success of the Purcells South transplant and review the applicability to other areas
- Develop funding proposals in support of additional translocations if deemed viable.

RECOVERY ACTION #7: INSTITUTE A CROSS-SECTOR PROGRESS BOARD TO MONITOR THE EFFECTIVENESS OF RECOVERY ACTIONS

Work was completed to refresh and revise the Progress Board ToR. A suggestion to have the Board chaired by a non-government member was discussed by the Progress Board but not supported.

NEXT STEPS:

- Continue regular communications with Progress Board
- Finalize commitment by members for an additional 2 year term

ADDITIONAL KEY ACCOMPLISHMENTS ASSOCIATED WITH THE MCRIP

A budget of approximately $830k was submitted to government to support delivery of the MCRIP in 2011/12. This is a significant increase from previous years due to the logistics of the proposed Purcells transplant. Funds necessary for the majority of the MCRIP tasks and projects were secured and the broad program delivery was achieved for the balance of the fiscal year.

MCRIP Progress Board Annual Meeting March 2012 Update – Attachments

Attachment A. Wolf Control Measures in BC (December 2011)

Background for Context

- Wolves are common throughout much of BC, are expanding their distribution and are at a low conservation risk.
- Management of wolves in BC is designed to address human safety issues, reduce livestock predation, promote recovery of species at risk, and provide recreational/commercial harvest.
- Most wolf management objectives, including for livestock or human conflicts, can be accomplished with ground based methods using current management tools (i.e. changes to hunting/trapping regulations; and direct control of wolves via permitted contractors or MFLNRO/MOE staff).
- In 2007, the Mountain Caribou Recovery Implementation Plan (MCRIP) committed government to manage wolves to support caribou recovery.
- The Cabinet Submission (2006) informing the decision on MCRIP anticipated the following actions for wolf management:
    - Changing hunting allocations to encourage removal of wolves;
    - Encourage trapping to remove wolves;
    - Continue funding and operating non-lethal wolf sterilization pilot project ;
    - Remove 2-wolf packs (8-10 wolves/pack) in the Revelstoke and Thompson-Wells Gray- Quesnel Highlands planning units known to prey on mountain caribou using highly skill experts using traditional hunting methods.
- MCRIP has produced Interim (2007) and Final (2009) Predator Management Strategies which have received peer review and been posted on the public website.
- The scientific recommendation to effectively recover caribou is to reduce wolf densities by 80%.

Traditional methods: Trapping and Hunting

- The trapping season for wolves was liberalized in 2006 for registered traplines overlapping or adjacent to mountain caribou habitat.
- In the Kootenay Region, direct government trapping and snaring actions have been undertaken. This program includes contracted trappers, wolf trapping training for registered trapline holders, provision of wolf snares and instituting a wolf carcass recovery program to enable biological sampling.
- Hunting seasons for wolves were liberalized by MoE in 2007 over the entire range of mountain caribou. Seasons were lengthen and bag limits increased or removed.
- Approximately 260 wolves occupy the range of mountain caribou (2008 estimate).
- Over the past 3 years, an average of 50 wolves (12-25%) have been removed using existing wolf management tools.
- Hunting and trapping can be used in conjunction with more effective methods or in areas of low wolf density in order to maintain wolf populations at a desired level.

- There are no examples in the scientific literature that hunting and trapping of wolves in forested habitats can reach even close to the required 80% reduction to attain a positive, predicted response in caribou survival.
- **These existing BC's existing traditional wolf management tools have not been successful in meeting mountain caribou recovery objectives.**

Innovation - Sterilization and Prey (Moose) reduction

- A pilot project was started in 2001 to sterilize dominant wolves within packs in the Quesnel Highland (Region 5).
- The objective is to decrease wolf reproductive rates by sterilizing dominant animals, removing other pack members which will eventually reduce the size of wolf populations.
- Sterilization techniques have successfully reduced wolf recruitment in many packs since 2004. Reduced, sterilized packs have maintained their previous territories in all cases when the dominant pair remained intact.
- However, the current degree and extent of wolf reduction due to sterilization has not resulted in increased calf or adult caribou survival. A correlation between reduced wolf densities and caribou recovery cannot be substantiated.
- The MCRIP is conducting two pilot moose-reduction projects in the Parsnip (region 7) and Revelstoke (region 4) areas.
- The objectives is to reduce moose numbers by increasing the number of hunting permits and determine if reduced moose densities reduces wolf densities.
- On the Parsnip pilot, moose population appears to have declined by about half since 2005.
- Wolf density appears to have declined but there is still a high wolf: moose ratio.
- The caribou herd size seems to be stable and possible increasing slightly, but with stable spring calf recruitment.
- On the Revelstoke pilot, moose have been reduced from a high of 1650 in 2003 to approximately 475 in 2009.
- Wolf numbers have declined by about 50% in response to this moose reduction.
- However, neither caribou herd size nor spring calf recruitment has increased.
- The effectiveness of moose reduction on caribou recovery remains uncertain.
- **These innovative wolf management tools have not been demonstrated to meet mountain caribou recovery objectives.**

Effective Wolf Removal Methods for caribou recovery

- A review by the Canadian Cooperative Wildlife Health Centre (CCWHC) concluded that no available poison for wolf control (i.e. Compound 1080, strychnine) can be considered humane and use of poison for wolf control in BC was discontinued in 1998. Alberta is currently the only Canadian jurisdiction using poison (to reduce wolf numbers to support caribou recovery.

- Aerial shooting of wolves is the most humane and effective method of wolf removal. Entire packs are normally shot during winter when they are travelling as a pack. Snow assists in locating wolves, slows their escape, and limits dispersal at contact.
- Shooting an entire pack during one attempt requires experienced pilots and shooters.
- Alberta is currently the only Canadian jurisdiction using helicopters (in addition to poison) to reduce wolf numbers to support caribou recovery.
- Aerial wolf control is the only option accepted by the scientific community that can produce a predictable response in caribou survival but it must follow 3 principles:
    - Minimum of 80% reduction
    - Over a long time 5+ years
    - Over a large area – account for all packs spatially overlapping the caribou herd plus peripheral packs
- MCRIP staff have solicited feedback from the MCST, the MCRIP PB, FN and other sources about acceptability of aerial wolf removal methods.
- There are 3 specific applications where aerial killing of wolves have been proposed within mountain caribou range in order to meet government's 2014 goal of halting the decline of the mountain caribou population.

1) Significant Population Increase

Project Purpose: Conduct an aerial removal program on one large herd for at least three years to produce a large increase in calf and adult survival. This herd has the potential to serve as a donor population to transplant caribou to other herds that require caribou within mountain caribou range. Transplanting caribou from a healthy mountain caribou population helps to reduce the loss of genetic integrity.

Project deliverables and expected outcomes:

- Location: in the North Cariboo Mountains near Prince George;
- When: within 1-2 years;
- Duration: 3-5 years;
- Estimated wolves to be killed: 30 to 60 wolves;
- Estimated local caribou population before program: 250 caribou;
- Estimated local caribou population after three years of running this program: 340 caribou;
- After 5 years, population would return to 1990's numbers and could begin to provide an annual supply of 30 caribou/year for transplant to other herds; and,
- Outcome: increased in herd size to reach population goal; potential transplant source

2) Safeguard Transplant Investment

Project Purpose: Conduct an aerial removal program to protect transplanted caribou by using helicopters to shoot individual wolves and/or pack.

Project deliverables and expected outcomes:

- Location: the Purcell South herd east of Cranbrook or any other herd area that is augmented with caribou in the future;

- When: a responsive approach to a mortality event caused by a wolf. A mortality signal from a GPS caribou and recent encounter with a GPS wolf and/or pack will dictate the exact timing;
- Duration: 1 time response to predation incidence;
- Estimated wolves to be killed: one or pack of 2 to 6 individuals; and
- Outcome: increased survival and resilience of herd to reach population goal.

3) Avoid Extirpation

Project Purpose: Conduct an aerial removal program when there is an immediate risk of herds becoming extirpated.

Project deliverables and expected outcomes:

- Where: Groundhog herd south of Revelstoke or any other herd where a rapid caribou population decline due to wolf predation forces a herd population below 10 animals;
- When: after intensive trapping has not been effective in reducing the risk of extirpation and the confirmation of a mortality signal from a GPS caribou and recent encounter with a GPS wolf and/or pack;
- Estimated wolves to be killed: one or pack of 2 to 6 individuals; and
- Outcome: avoid extirpation and range contraction; increased survival and resilience of herd to reach population goal.

- The strongest support for these applications is to protect investments of caribou (eg transplants), but even that is not complete (eg Ktunaxa FN).
- Political support is pending on use of aerial removal for any of the applications listed.

Conclusion

- A recent review by the Mountain Caribou Science Team (MCST) indicated that current predator control efforts are ineffective and costly.
- Other jurisdictions have required helicopter-shooting (e.g., Alberta, Yukon) and/or poisoning (e.g., Alberta) in addition to hunting/trapping of wolves to meet their caribou recovery goals.
- If wolf management continues to be a recommended recovery tool to support caribou recovery in BC, a more effective suite of wolf management tools will be required to meet recovery goals.
- Hunting and trapping can be used in conjunction with aerial removals or in areas of low wolf density in order to maintain wolf populations at a desired level.

Attachment B. Purcells-South Mountain Caribou Herd Augmentation

Background

The Mountain Caribou Recovery Implementation Plan (MCRIP) committed government to several management actions including augmenting smaller herds with caribou from larger herds. It is believed that augmentations of ungulates have a higher probability of success when new animals unfamiliar with the area can join existing groups and share habitat knowledge, hence the need for multiple translocation events and urgency to conduct transplants while caribou remain in the recipient herds.

The Purcells-South mountain caribou herd in the Kootenay Region has a current population of only 15 animals and has been identified as a priority for augmentation. Failure to implement an effective translocation in the short-term will jeopardize the long-term viability of the Purcells-South herd. Discussion on a transplant to the Purcells-South herd area has been on-going for many years. It has generated considerable interest and concern among the MCRIP Progress Board, First Nations and agency staff. This project requires a significant investment of MCRIP budget and agency staff to be successful.

Methods

The Ministry caribou herd specialists recommend that 40 caribou be translocated to the Purcells-South herd over 2 years with the sex structure heavily biased toward females and capture and transport during late winter (mid-March). The population goal is approximately 100 caribou in Purcells-South, 15 years after the first release. Monitoring of translocated caribou is critical to assess mortality patterns and other demographic and distribution trends.

After much deliberation, the best available source herd has been determined to be the Level-Kawdy herd in NE BC. The preferred capture method is to net-gun animals from helicopters. Captured caribou will be transported to a staging area for collaring, inspection and sampling, and transported as quickly as possible to the release location. The method of transport will require flexibility due to weather and circumstances, however the principles to be applied will use the highest standards of animal care for handling and transport. Options being considered include the use of individual crates and immediate truck or air transport to Purcells-South, however circumstances may require the caribou to be held temporarily in corrals prior to transport. On arrival at the release site, caribou will be flown to late-winter range and released near residents.

All transplanted caribou and several resident caribou will be collared. The GPS collars used will transmit to a website via satellite. Collars will be fitted in the fall prior to transplant, enabling collection of data on movements of the Level-Kawdy herd prior to translocation of animals from the donor herd, and providing information which will benefit management of both caribou populations.
Several wolf packs (n=4-5) and cougars (n=8) in the recipient area will also be collared, allowing a rapid response to any predation events.

The Laboratory for Landscape and Ecosystem Ecology at the University of Victoria is collaborating with the BC government in this endeavour to ensure transplant success. One graduate student is presently working on the project assessing caribou risk of predation to both

the resident caribou and the newly translocated caribou. Additional highly-motivated graduate students (PhD. and MSc.) are being sought to provide rigorous scientific analysis of the predation risk to caribou when transplanted into a diverse multi-predator/multi-prey system.

Progress

First Nations:

There has been extensive conversation with First Nations in the donor (Tahltan) and recipient (Ktunaxa) ends of the transplant.

Skeena staff met with Tahltan representatives who are also currently in G2G negotiations and seeking dedicated wildlife funding. They indicated that their support is contingent on a commitment to predator control in the Purcells South. However, they also desire more predator management in the level-Kawdy if this area is to be considered a long-term donor herd.

A formal response was received from Ktunaxa in December following a meeting of their Land & Resource Council meeting. They support the first year of the transplant, but do not support aerial removal of wolves.

This seems to put the 2 FN groups at odds in terms of supporting the transplant and what are seen as necessary if responsive conditions. We will be trying to get the 2 FN to discuss if there is a middle ground in the near future.

Wolves collaring

The intension was to have all wolf packs in the Purcells South herd range with 2 or more GPS radio collars per pack. This would contribute to a UVic project to assess predation risk from wolves. Wolf collaring was initiated in February 2011 and carried on periodically through the year as opportunities rose for netgunning for ground-based capture. There were technological problems with the initial collars which the manufacturer has fixed. In recognition of the set-back they caused the project, the manufacturer supported installation of re-furbished wolf collars in November and is forgoing data charges for the life of the collars. There are currently three collared wolves in 2 wolf packs. A fixed wing flight was conducted November 28th to determine the location of the wolf packs. Pack 266 had 3 animals were seen and Pack 270 had 6 animals seen. Both showed limited movement and hid when the aircraft passed over. Flight results indicated minimum wolf #s in these packs.

A Master's graduate student has started and will provide rigorous scientific analysis of the predation risk to caribou when transplanted into a diverse multi-predator/multi-prey system.

Cougar Collaring:

To complete our understanding of the predator prey dynamics (excepting bears), BC Hydro's Compensation Program staff will capture and collar 8 cougar in the herd range. This work started in early December on the East (Cranbrook) after fresh snow has arrived.

Caribou Collaring:

Three caribou in the Purcells South herd had GPS collars installed in February 2011. These collars will provide range and habitat use information, will provide insight into the predation risk from wolves, and help guide release of the transplanted caribou in March 2012. UVic currently monitors these caribou on a daily basis.

To provide information on the Level-Kawdy caribou herd, 20 GPS collars were installed on caribou 5 months prior to transplant, in mid-November. The collaring crew found the caribou in the same locations (approx. 65km from Dease Lake) where they were spotted during the fixed wing inventory. Caribou were in ideal locations for capture (soft ground, no trees, snow cover) and as a result no injuries or mortalities occurred due to capture. Caribou were captured from 2 groups: Level mountain and Kawdy Plateau. 6 captured in northern group, 14 in southern. Just prior to the translocation, 15 of the original 20 collared caribou. Two collars prematurely fell off and two animals were preyed upon and one collar quit reporting.

Blood serum and faeces samples taken from all captured animals. The gov't wildlife vet indicated this will be used to create a database to enable a health risk assessment of the donor herd by University of Calgary vet students.

Some experimentation has occurred with remotely changing the fix rates on the collars deployed in Level-Kawdy. It seems to be working fine. A 1 fix/ day rate is considered adequate for the period prior to the translocation to extend battery life. This will return to base frequency to enable analyses once animals moved to Purcells South. One caribou collar started to generating a mortality signal. After some delays due to poor weather, the collar has now been retrieved. It slipped off the animal. It appears the collar self-detached or else the locking mechanism broke and if fell off. They found the collar in about 6 inches of snow, approx. 100 feet from the GPS location. This is good news, despite losing the opportunity for one animal-year of movement data, because it means no capture-induced mortality has occurred and the collars are functioning as they should.

Caribou transport:

The BC government wrote to the Canadian government to assess the appetite for the Department of National Defence (DND) to assist in the transplant. On the basis of a "not no" response, staff met with DND staff to discuss support for the project, specifically air transport. This would expedite movement of the caribou and reduce holding time. Business case was submitted to

DND for review. DND responded to the Business Case and indicated that no aircraft are available and they will not be offering direct support for the project.

The experts are leaning towards ground-based transport. This transport will reduce both transport costs and stress to animals. Another advantage is that it is not as weather-dependant as air transport (which could be a real issue at both the capture & release sites in Feb. – Mar). The wildlife vet has had discussions with animal haulers with experience moving wildlife in Elk Island National Park. Currently two 24 foot goose-necked trailers (possible 3) are proposed to be used. Caribou will be transported in groups of 3-4 in a single "pen" using partitions in each trailer. Bulls will have antlers removed. 3rd trailer will be available as well for contingencies and gear. Mature bulls will have dropped antlers. A supply of lichen is needed to be available to the caribou during transport. Lichen collection at donor herd location needed. Hard to get ground lichen due to snow – arboreal lichen may be viable substitute. Need minimum of 6-8 garbage bags full. Also need snow for water during transit. Prefer to have local food source (lichens) collected in advance

External Funding:

Habitat Conservation Trust Fund proposal submitted for ~130K. Letters of support indicating direct involvement/ support from U. Victoria, U. Calgary and Wildsight included. U. Victoria submitted a proposal for ~50K/yr. for 3 years for predation risk research.

Habitat Stewardship Program proposal submitted to the Federal Habitat Stewardship program for ~ 80K in support of the transplant. Unclear whether the project qualifies, but appears that inventory aspects do.

Media/ Communications:

A communication plan to inform project champions, elected officials, regional staff, stakeholders and media/ PAB on objectives and progress of project has been produced and signed off by the Project sponsors. There have been several queries from photographers/ videographers. Preference is to use in-house capacity. Animal and crew safety take precedence, unlikely to be able to accommodate external participants. Staff have contacted the Daily Planet to discuss including the project in their programming.

Future translocations will be considered in the Purcells South and other high-priority herds, dependent on the continued viability of the donor herd and availability of funding.

Strictly speaking, predator management is out of the scope of the transplant project, however, the project team is recommending that "responsive"2 predator management occur if a collared caribou is killed by predators, in light of the very low numbers of caribou remaining in this herd and the need to recruit new members into the population.

Attachment C. University of Victoria Predation Risk Project - Update – March 2, 2012

Dr. Dennis E. Jelinski (Laboratory for Landscape and Wildlife Ecology, UVic) first began work on the South Purcells caribou project in the summer of 2010. Working closely with Gerry Kuzyk and Leo Degroot (MFLNRO) initially the main focus of the work was research around understanding caribou risk of predation by wolves, though that work has now expanded to include cougars. UVic purchased 11 radio collars in early 2011, and in February 2011 three mountain caribou (in two subherds) were captured and fitted with GPS collars that report positional fixes 4-6 times daily. Those caribou now have a year + record of movements. At the same time, a campaign was begun to similarly radio-collar wolves. To date, some eight wolves have been collared, though only three (in two packs) are currently collared. The remaining five wolves had collars that prematurely malfunctioned or the wolves were killed. There was a manufacturing defect in the wolf collars (now rectified) and UVic negotiated with ATS to forgo data costs for the life of all 11 collars in lieu of the costs incurred associated with lost data etc. Those monies (~$15K) were redirected to additional collaring that took place in the fall/early winter of 2011.

Earlier this winter a campaign began to collar cougars, of which six are successfully now sending back daily data. UVic developed a computer program that takes the GPS daily data for the most recent ten-day period and maps those locations on Google Earth to display visually movements of all collared animals , and identify GPS-clustered kill sites by cougars and wolves.

One graduate student is currently working on the project, conducting spatial analysis of caribou, wolf and cougar movements, including those of the translocated caribou (n=~20), with a proposal adding at least one more student either next September or January, and possibly two. One of these theses projects would likely concern identification of prey at wolf/cougar kill sites. Last fall an HCTF proposal seeking financial support for the PS caribou project was submitted with Jelinski as the lead proponent for $149,500 ($49,500 for year one). If successful, the majority of the funds will go to support the graduate student, cover field costs, and some wolf capture/collar work (we wish to have eight wolves in 4-5 packs collared plus we expect there will be continued turnover owing to natural and human-caused mortality). A major focus of next year of research is to monitor and geo-spatially analyze the habitat use and movement patterns of the translocated caribou relative to the resident caribou, and evaluate these in terms of predation risk.

Attachment D. Captive Breeding MOU

Government of Canada Announces
Woodland Caribou Captive Breeding Partnering Arrangement
between Parks Canada, BC Government and Calgary Zoo
Innovative project a cornerstone of Parks Canada's
Conservation Strategy for Southern Mountain Caribou in Canada's National Parks

Calgary, Alberta – November 25, 2011 –On behalf of the Honourable Peter Kent, Canada's Environment Minister and Minister responsible for Parks Canada, Michelle Rempel, Member of Parliament for Calgary Centre-North and Parliamentary Secretary to the Minister of the Environment announced today an important partnership between Parks Canada, the British Columbia Government and the Calgary Zoo to implement a woodland caribou captive breeding program supporting protection of this species at risk in the mountain national parks.

"The Government of Canada is committed to the recovery of species at risk," said Michelle Rempel. "The Conservation Strategy for Southern Mountain Caribou is a critical first step to protecting this species. Captive rearing shows promise to reinforce and augment herds, helping to ensure that this iconic species remains on the landscape for future generations."

Twenty-five years ago, more than 800 caribou ranged in the mountain national parks. Today, fewer than 250 remain. Parks Canada is committed to ensuring the survival and recovery of woodland caribou to help maintain the ecological integrity in the mountain national parks. The captive breeding program, a key element of a *Conservation Strategy for Southern Mountain Caribou in Canada's National Parks* developed by Parks Canada, will provide source animals to supplement critically small herds in Jasper, Mount Revelstoke and Glacier national parks and in the Province of British Columbia, as well as to reintroduce caribou to Banff National Park.

"The Government of Canada is proud to work with our conservation partners to encourage a healthy, sustainable population of Southern Mountain woodland caribou in their traditional home ranges," said Minister Kent. "By sharing expertise and pooling resources, we will work toward building a better future for woodland caribou."

"British Columbia is proud to participate in this important program by providing donor animals and access to our northern caribou and our regional staff expertise," said Steve Thomson, BC Minister of Forests, Lands and Natural Resource Operations. "This will help promote the genetic diversity of the species and support our commitment to recover woodland caribou in both our provinces."

"Recovery of sensitive species such as woodland caribou is challenging, multifaceted work that involves many partners," said Frank Oberle, Minister of Alberta Sustainable Resource Development. "We will provide appropriate administrative permits and consider what new perspectives can be gained for caribou conservation as we continue habitat retention, reclamation and predator management on our landscape."

"The Calgary Zoo has a long history of participating in recovery projects for species considered at risk in our own country and globally," said Dr. Clément Lanthier, President and CEO for the Calgary Zoo. "Our expertise in reintroduction science and captive breeding for release has been developed over several decades and we are very pleased to be part of this initiative for woodland caribou – such an iconic and important Canadian species."

Canada

The Parks Canada *Conservation Strategy for Southern Mountain Caribou in Canada's National Parks* will guide conservation actions in Banff, Jasper, Mount Revelstoke and Glacier national parks. Through the strategy, Parks Canada is exploring methods to reverse the decline of woodland caribou using a range of measures. These include seasonal trail and area closures and managing the density of alternate prey species for caribou predators. Current research and ongoing monitoring are contributing to the sound science used to identify important caribou habitat on national park lands and identify potential conservation actions.

Parks Canada is inviting comment from First Nations, stakeholders and interested members of the public to refine and improve this strategy until January 31, 2012. Members of the public are encouraged to review the Conservation Strategy at www.parkscanada.gc.ca/caribou.

Parks Canada works to ensure that Canada's historic and natural heritage is presented and protected for the enjoyment, education and appreciation of all Canadians, today and in the future. Through a network of 42 national parks, 167 national historic sites, and four national marine conservation areas, Parks Canada invites Canadians, and people from around the world, to experience Canada's treasured natural and historic places.

For additional information, please see the accompanying backgrounder at www.parkscanada.gc.ca under **Media Room**.

-30-

Information:

Suzy Whitty
Media Relations
Jasper National Park
780-852-6109

www.twitter.com/parkscanada