NORTHERN MOUNTAIN CARIBOU POST FIRE HABITAT RESTORATION EXTENSION
FINAL REPORT
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PREPARED FOR: THE SOCIETY FOR ECOSYSTEM RESTORATION IN NORTH CENTRAL BRITISH COLUMBIA
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STUDY PERIOD: FALL 2016 – WINTER 2017

Tsay Keh Dene, BC, V0J 3N0
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# TABLE OF CONTENTS

1.0 PROJECT SUMMARY .................................................................................................................. 2

2.0 SERVICES DELIVERED ............................................................................................................. 3

2.1 EDUCATIONAL SIGNAGE PRINTED ........................................................................................ 3

2.2 NORTHERN MOUNTAIN CARIBOU CONSERVATION EXTENSION IN TSAY KEY DENE, BRITISH COLUMBIA ................................................................................................. 3

2.3 ACADEMIC PUBLICATION ..................................................................................................... 4

3.0 RECOMMENDATIONS .............................................................................................................. 5

4.0 ACKNOWLEDGEMENTS .......................................................................................................... 6

5.0 REFERENCES .............................................................................................................................. 7

6.0 APPENDIX .................................................................................................................................. 8
1.0 Project Summary

The northern mountain caribou is a blue listed, species of special concern (S3) (COSEWIC, 2002; COSEWIC, 2014; B.C. Conservation Data Centre, 2017). This means that if steps are not taken to address the factors threatening this species they are likely to become endangered in British Columbia. One reason for the decline of this species is the reduction or alteration of critical habitat.

Northern mountain caribou are specialists, relying on pine lichen habitats for forage during the winter months (Cichowski, 1993; B.C. Conservation Data Centre, 2017a). In 2014, the Mesilinka wild-fire eliminated a large area of pine lichen habitat for the Chase herd of northern mountain caribou. The intensity of this fire, coupled with industrial pressures and pine beetle kill has reduced the winter forage for this herd. The Northern Mountain Caribou Post Fire Habitat Restoration Program was initiated in 2014 by Tsay Keh Dene Nation in response to this wildfire. The program is a partnership between Tsay Keh Dene Lands, Resources and Treaty Operations, Chu Cho Environmental and the British Columbia Ministry of Forests, Lands and Natural Resource Operations. In July of 2016, the project team seeded the Mesilinka fire boundary with approximately 3,000 litres of forage lichen (Cladonia mitis, C. stygia and C. uncialis). This work is expected to enable lichen to colonize areas that are distant from source populations and accelerate the return of the area to high quality caribou winter range. A detailed project report is available through the Fish and Wildlife Compensation Program (fwcp.ca project PEA-F17-W-1223).

In September 2016, Chu Cho Environmental received funding from SERNbc to expand the extension component of this restoration program. Ongoing monitoring and extension is a critical component of all restoration programs, and we are thankful for SERNbc’s recognition of this need. Details regarding the delivery of the extension component of this habitat restoration program are detailed in Section 2.0.
2.0 Services Delivered

2.1 Educational Signage Printed

Educational signs will be installed at the field site along the West Main Forest Service Road near the Mesilinka River in spring of 2017. The large ‘poster style’ sign (see Appendix 1) has been printed, and 2 of the “Scientific Research in Progress” signs (Appendix 1) have been printed with the support of SERNbc. The signs include information on the project background, methods, contact information, and project supporters. The goal is to inform land users in the area of the scientific research in progress, and direct those interested on where they can learn more about the project.

2.2 Northern Mountain Caribou Conservation Extension in Tsay Key Dene, British Columbia

Chu Cho Environmental and Tsay Keh Dene Lands, Resources and Treaty Operations hosted community engagement sessions in Tsay Keh Dene, British Columbia on November 29 and 30, 2016. Discussions and presentations at this open house provided information to membership on the conservation status and threats to woodland caribou in the region, and across Canada. Our project team estimates that upwards of 15 individuals from Tsay Keh Dene were engaged directly in one-on-one power point presentations focusing on caribou conservation and habitat restoration with the project coordinator. SERNbc provided funding for the project coordinator to attend the open house and carry out these presentations. This one-on-one format allows for a process of knowledge sharing and discussion that is rarely attainable through formal power point presentations to large groups.

The response from Tsay Keh Dene membership to the presentations was warm. Several individuals expressed their understanding of the complex interaction and effect of habitat fragmentation, habitat loss and predation on caribou. While no individuals provided specific recommendations on how caribou conservation and habitat restoration activities could be directly improved within Tsay Keh Dene Nation, many individuals spoke of their desire to help implement and incorporate their own knowledge of the region into future initiatives. The potential for further collaboration with Tsay Keh Dene membership is perhaps the most rewarding and valuable component of this extension program. We expect that this will ensure that Tsay Keh Dene Lands, Resources and Treaty Operations and Chu Cho Environmental can continue to deliver high quality collaborative projects relating to caribou in the future.
2.3 **Academic Publication**

A large component of the project extension has been the writing and submission of a manuscript to the academic journal ‘Restoration Ecology.’ This journal is published on behalf of the Society for Ecological Restoration and is the preeminent academic journal for the field of ecological restoration. Specifically,

“*Restoration Ecology* fosters the exchange of ideas among the many disciplines involved in the process of ecological restoration. Addressing global concerns and communicating them to the international scientific community, the journal is at the forefront of a vital new direction in science and ecology. Original papers describe experimental, observational, and theoretical studies on terrestrial, marine, and freshwater systems, and are considered without taxonomic bias.” – *Restoration Ecology*

The manuscript provides a clear analysis of our program, with lessons learned, accurate costs and time estimates for academics, ecological restoration practitioners and forest workers alike looking to implement a progressive restoration project such as this. To our knowledge, this would be the first academic publication to detail the steps to implement a woodland caribou habitat restoration program, thus providing high value to practitioners of restoration ecology.

The manuscript was submitted on January 28, 2017. The authors have not yet received a response from the journal, but are anticipating a response this spring. If successful, SERNbc will be notified immediately. If unsuccessful, the manuscript will be prepared for submission to the Forestry Chronicle. Upon publication, a copy of the article will be provided to SERNbc by our project team. Due to the uncertainty regarding the publication of the manuscript, and the uniqueness of the work, we are unable to share the manuscript at this time. We trust that SERNbc will understand why we are unable to circulate the manuscript.
3.0 Recommendations

While much of the community engagement to date has been focused in Tsay Keh Dene, our team intends to extend our public engagement efforts in the future. One such opportunity is in the form of a feature article in the Fish and Wildlife Compensation Program newsletter. This article is currently in press, and is expected to raise awareness of the project, and provide information on how to contact the project proponents to learn more. As the project matures, it is our ultimate goal to engage with communities, restoration practitioners and scientists alike who are looking to incorporate these methods in restoration programs.

Chu Cho Environmental is grateful for the financial support from SERNbc for extension work related to the Northern Mountain Caribou Post Fire Habitat Restoration Program. SERNbc has been recognized for its support of this extension component in the final report submitted to the FWCP, and will continue to be recognized in all reports that result from this project.
4.0 Acknowledgements

Chu Cho Environmental gratefully acknowledges the in-kind support from Tsay Keh Dene Nation and the financial support of SERNbc in carrying out this program. Our project team would also like to acknowledge the financial support of the Fish and Wildlife Compensation Program (FWCP) www.fwcp.ca. The FWCP is a partnership between BC Hydro, the Province of B.C., Fisheries and Oceans Canada, First Nations and public stakeholders to conserve and enhance fish and wildlife impacted by the construction of BC Hydro dams.
5.0 REFERENCES


Cichowski, D. 1993. Seasonal movements, habitat use and winter feeding ecology of woodland caribou in west-central British Columbia. Land Management Report. no. 79
6.0 Appendix

Appendix 1: Educational signs that have been printed with financial support from SERNbc, and will be installed at the field site in spring 2017.