

Project Profile

Project Name:	Zone 1 Habitat Restoration Implementation Vegetation Monitoring Program - Seedling Survival
Project Number:	BCIP-2018-02
Proponent:	Golder Associates Ltd.
Funding Envelope:	Boreal Caribou
Timeframe:	July 1, 2017 to January 31, 2018

Project Background and Objectives

The Boreal Caribou (Parker Range) Habitat Restoration Pilot Program Plan (the Program Plan; Golder 2016) was initiated in April 2015 by the Research and Effectiveness Monitoring Board (REMB) of the BCIP initiative, with funding for the Program Plan provided by the BC Oil and Gas Research and Innovation Society (BC OGRIS). The Program Plan is the first plan to propose application of restoration techniques over an entire boreal caribou range in Canada. The Program Plan was developed to guide a multi-year, range scale, restoration program, with field implementation kick-off in January 2017 (Golder 2015a, 2016). Zone 1 restoration was implemented between January and March of 2017 with various restoration techniques, designed to speed the recovery of existing linear features that are not re-vegetating well naturally. A total of 56 kilometers of legacy seismic lines were restored/deactivated with 20 monitoring plots established.

The objectives of the Zone 1 Habitat Restoration Implementation Vegetation Monitoring Program - Seedling Survival Project are to:

- 1) Assess if access management treatments are impeding access (any signs of human or wildlife use);
- 2) Assess the health of the 2017 winter planted seedlings at 20 pre-determined monitoring plots. Identify any immediate issues such as seedling mortality due to poor seedling stock or desiccation (chlorosis), poor seed germination, or browsing.
- 3) Identify any immediate issues with invasive species in the monitoring plots;
- 4) Confirm density of targeted live vegetation within treatment plots;
- 5) Document wildlife usage in the monitoring plots.

Project description

The Zone 1 Restoration Implementation Vegetation Monitoring Program is the first year for vegetation monitoring in the Parker Caribou Range, to be implemented one growing season following implementation of habitat restoration treatments in January 2017 to mid-March 2017. A team will

determine planted seedling survival and health, naturally occurring vegetation community composition, as well as human and wildlife use at 20 pre-determined plots, following the Boreal Caribou Habitat Restoration Monitoring Framework (Golder 2015c). The team will also determine if access management has deterred motorized vehicles. The results of the vegetation monitoring will inform future planting initiatives in Zones 2, 3 and 4, the learnings may inform future planting programs as a result of learnings from the data analysis, and provide an indication of treatment effectiveness of the mounding after one summer regarding reducing wildlife usage of the linear corridors. Access management results will provide learnings on if the techniques were implemented correctly and learnings for future access management areas.

Project approach

The project involves:

1. Ground-truthing 20 pre-established restoration treatment monitoring plots to determine planted seedling survival and health, naturally occurring vegetation community composition, as well as human and wildlife use along the treated line.
2. Field-truthing access management sites to determine motor vehicle use.
3. Summarizing the field-truthed data into a technical memo.

Project deliverables

The deliverables from this project include the following:

1. A project profile;
2. Field data including photographs and shapefiles of the monitoring plot locations;
3. An executive summary and technical memo with the field findings; and
4. A presentation (either in person or remote) will be prepared and presented to BC OGRIS as part of their Boreal Caribou Research and Effectiveness Monitoring (REMB) Webinar Series.

References

Golder. 2016. Parker Caribou Range: Boreal Caribou Restoration Pilot Program Plan. Submitted to the British Columbia Oil and Gas Research and Innovation Society's Research and Environmental Monitoring Board. January, 2016.

Golder. 2015a. Parker Caribou Range: Parker Range Restoration: Zone 1 Implementation Plan. Plan prepared by Golder and submitted to BC OGRIS REMB. December 31, 2015.

Golder. 2015c. Boreal Caribou Habitat Restoration Monitoring Framework. Submitted to the British Columbia Oil and Gas Research and Innovation Society's Research and Environmental Monitoring Board. December 31, 2015.