Caribou Landscape Management Association
Quicknote # 4

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Introduction

The Caribou Landscape Management Association (CLMA) was formed in June 2005. The members of the CLMA seek collaborative solutions to caribou conservation, often resulting in small steps that contribute to integrated land management. The work-plan of the CLMA focuses its efforts and resources on projects that:

1. Minimize the impact of industrial activities on caribou habitat;
2. Support government programs to recover caribou populations.

Two projects summarized in this quicknote are the Integrated Industry Access Plan and the collection of inventories of linear disturbances found within west central caribou ranges using remote sensing.

Integrated Industry Access Plan

Since November 2005, the CLMA has been working with the Government of Alberta on its Integrated Industry Access Plan (IIAP). The IIAP encompasses the habitat of the Little Smoky and A la Peche caribou herds which is approximately 5 000 square kilometres. The CLMA believes that this approach, where road corridors are identified before development and in collaboration with all companies who will be exploring or developing resources within a defined area, will reduce the industrial footprint. Often road development takes a "plan as you go" approach and is not coordinated between companies. Members in the CLMA access the plan through the internet. This best ensures that all members use current and accurate maps and information.

In June 2006, the Government of Alberta endorsed the IIAP as a guiding document for development. In October 2007, the CLMA released its third iteration of the plan. This version is being used as a baseline for a monitoring report and a road reclamation / deactivation plan is included. The CLMA IIAP is annually resubmitted and is a "living" document that has evolved into a continuous improvement industrial footprint plan. It is the intent of the CLMA that roads will be reclaimed to create future caribou habitat once they are no longer required.

A key to the success of the IIAP is to maintain the road inventory. This activity is critical because it provides resource managers with the "best available data" to use in resource management planning. The Foothills Model Forest is continually updating the road data within the CLMA boundary. Once again, these data are served to CLMA members through a secure website.

Collecting inventories of linear disturbances found within west central caribou ranges using remote sensing

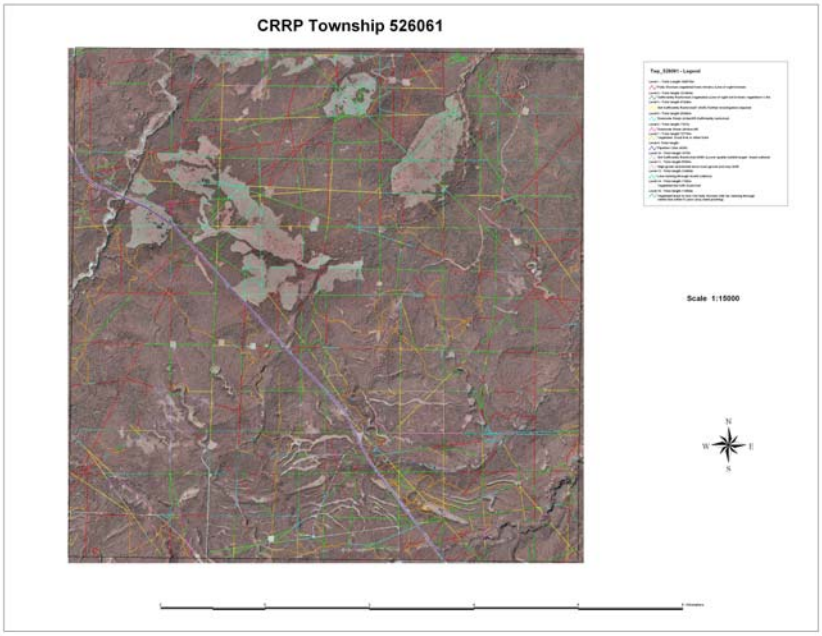
The current industrial footprint in the CLMA area that are available for restoration include: seismic lines, roads, pipelines and well sites. However, the actual impact has been more difficult to identify because there has been a lack of inventory and limited natural vegetation response monitoring. The West Central Caribou Landscape Planning Team has agreed, through modeling and tactical planning endeavors, that restoration of linear disturbance, prioritized by range and intactness maps, can be beneficial to the long-term maintenance and improvement of the west central caribou populations.

For more information on the CLMA, please contact: Chantelle Bambrick, Foothills Model Forest @ (780) 817-3794 or email: chantelle.bambrick@gov.ab.ca OR Wayne Thorp, Director @ (780) 625-1732 or email: wthorp@telus.net or visit www.fmf.ab.ca .

However, before a landscape level restoration plan can be developed, an inventory of the re-vegetation status of the linear corridors needs to be done. The CLMA decided to explore the use of aerial imagery and / or LiDAR to assess whether or not inventories can be accurately collected in the office, as opposed to costly and sometimes intrusive ground truthing by helicopter or ATV.

The CLMA awarded a contract to Greenlink Forestry Inc. to conduct a pilot of a township within the Canfor FMA that was within the Little Smoky Caribou Range. CanFor already had a product (1:30,000 Color IR leaf-on aerial photography) that showed a lot of promise from preliminary viewing. Aerial imagery was analysed using softcopy photogrammetry. Softcopy photogrammetry is a relatively new technology (1998) that takes conventional aerial photography (uncontrolled / unrectified), and through a series of advanced computer manipulations, converts the aerial photographs into digital models that are geometrically correct. Using the DiAP, Datem or Purview Viewer systems (specialized software packages), these digital photographs can be viewed in three dimension (3-D) on-screen in Microstation SE, V8 or ArcMap environments. This application allows all classification and digitizing to be completed on-screen. Linear corridors were classified using a specially designed (client specific) "hot key" classification system as developed by Brian Coupal, Manager of the Caribou Range Restoration Project (CRRP). The project was very successful in developing a cost effective means of collecting an inventory with a high degree of confidence.

Plans are now underway to secure funding to complete more inventory and/or research into random sampling of township by ecosite to develop predictive response curves as a first step for the development of a comprehensive landscape level restoration plan for caribou ranges in the west central region of Alberta. The CLMA believes that using this process of inventorying vegetation on linear disturbances will provide invaluable digital and spatial data for resource managers to make strategic, tactical and operational plans. In addition, it can be used for land managers to determine the appropriateness of using "existing" clearing vs. new to mitigate impacts on other values.



Pilot township showing the specially designed "hot key" classification system as developed by Brian Coupal, CRRP and Greenlink Forestry Inc.

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