



# Effectiveness monitoring of restoration treatments for seismic lines in treed peatlands



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## Introduction

Reclamation laws currently do not require seismic lines to be reclaimed. However, significant efforts have been made to restore seismic lines in caribou ranges. One restoration project, the Linear Deactivation project (LiDea) by Cenovus Energy, specifically aims to restore woodland caribou habitat by using intensive silviculture on seismic lines to stimulate survival and growth of seedlings.

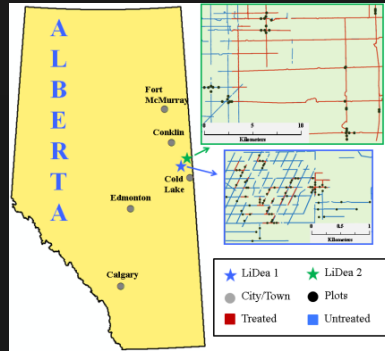


Figure 1. Study locations (LiDea 1 & LiDea 2) within the province of Alberta.

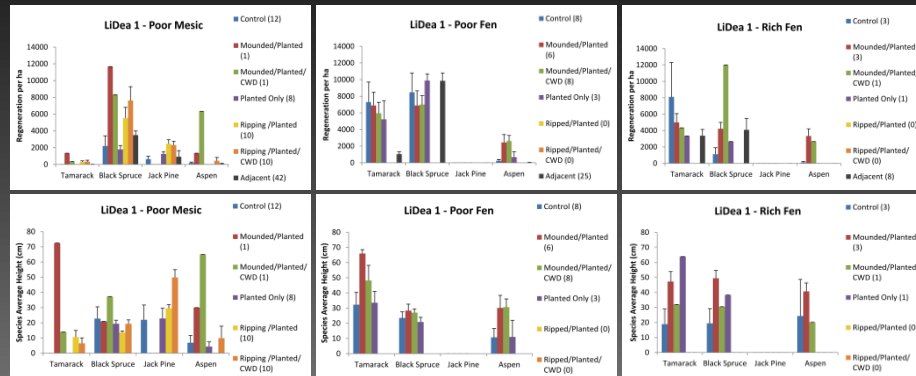
## Methods

Each sites consists of 2 paired plots each representing a 30 m transect (one seismic line, one 25 m into the adjacent forest). Tree regeneration and forest stand conditions were measured in 1 x 30 m 'belt' quadrats & trees ( $\geq 1$  cm DBH) in 2 x 30 m belt quadrats. Additional stand information was collected in the adjacent forest, such as stand basal area by species, stand age of representative mature trees in the plot, and representative tree height.

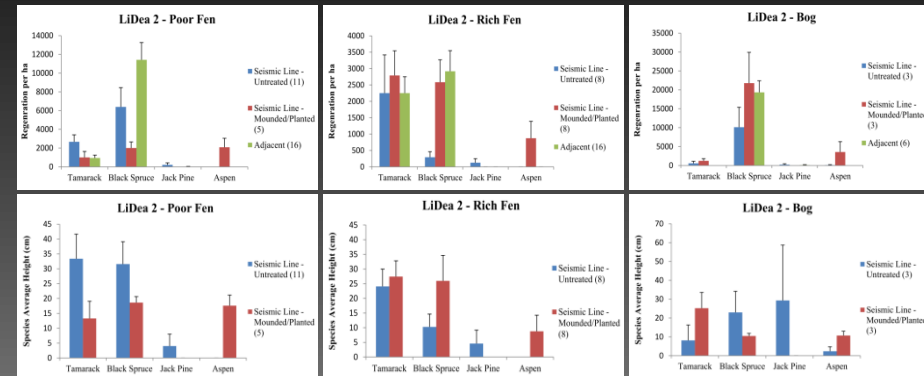
## Results

- Ecosite differences (results vary)
- Bogs regenerate well
- LiDea1 treatments in poor-mesic sites benefit black spruce & to a lesser degree jack pine
- Treated rich fens seem to only benefit black spruce
- Seismic lines in fens substitute black spruce for tamarack
- Aspen is recruited on any treated seismic line regardless of ecosite

### LiDea 1



### LiDea 2



## Acknowledgements

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