

Wildlife Team: Bird Use of Reclaimed Wellsites

Scott J. Wilson, MSc

University of Alberta, Department of Biology
sjw@ualberta.ca

Research Team:

Erin Bayne
University of Alberta, Department of Biology

Project Summary

The objective of this project was to understand how Ovenbirds, and songbird communities as a whole, respond to wellsite regeneration in aspen-dominated forests. Wellsites are small, so determining the behavioural response of songbirds to their regeneration requires spatially accurate data. Sound localization was used to determine accurate bird locations, based on the time of arrival difference of songs to different microphones in an array autonomous recording units (ARUs). We set up grids of 25 acoustic recording units (ARUs) at 20 reclaimed wellsites in aspen dominated forests. Reclamation age ranged from 4 to 49 years with an average of 22 years. Songbird communities near reclaimed wellsites became more similar to communities in mature forests as canopy cover increased. While canopy cover was correlated with age the relationship was not particularly strong. Individual Ovenbirds would sing from wellsites more frequently with increasing tree cover on wellsites.



Management Implications and Lessons Learned

Wellsite reclamation practices are resulting in recovery of shrubs and trees that are used by some boreal songbird species. While birds react to wellsites much like they do to areas harvested by forestry, the time it takes for a wellsite to recover tree density and height relative to a cutblock differ considerably. More research on the success of reclamation practices on the long-term regeneration of wellsites in different forest types, and subsequent impact on songbird communities is required to assess more effective strategies to reclaiming wellsites more quickly.

Publication(s)

- Wilson SJ and EM Bayne. 2019. Songbird community response to regeneration of reclaimed wellsites in the boreal forest of Alberta. *Journal of Ecoacoustics* 3(1).
- Wilson SJ and EM Bayne. 2018. Use of an acoustic location system to understand how presence of conspecifics and canopy cover influence Ovenbird (*Seiurus aurocapilla*) space use near reclaimed wellsites in the boreal forest of Alberta. *Avian Conservation and Ecology* 13(2):4.
- Wilson SJ. 2017. Use of an acoustic location system to understand songbird response to vegetation regeneration on reclaimed wellsites in the boreal forest of Alberta. University of Alberta. Master's thesis.