

## **Alberta Conservation Association 2010/11 Project Summary Report**

**Project Name:** *Suncor Sustainable Grasslands Program*

**Wildlife Program Manager:** Doug Manzer

**Project Leader:** Paul Jones

**Primary ACA staff on project:**

Paul Jones and Mike Verhage

### **Partnerships**

Petro-Canada (a Suncor Energy Company)  
University of Calgary

### **Key Findings**

- Delivered four projects as part of the Petro-Canada Sustainable Grasslands Program including one focused on the displacement of grassland by shrub and tree encroachment, one on sage grouse conservation planning, one on silver sagebrush reclamation, and one on cumulative human impacts on pronghorn.
- Grass cover has decreased by 10% over the last 57 years as a result of displacement by shrub and trees in all three study areas within the Foothills project area.
- University of Calgary graduate student defended her project and completed her thesis on reclamation of silver sagebrush communities.

### **Introduction**

Grassland conservation, and sustaining the species, ecosystems, cultures and economies that depend on them, is of common interest to wildlife and land management organizations. This program focused on innovations in sustainable land use management in Alberta's Grassland Natural Region. In 2009/10, Petro-Canada merged with Suncor to form Suncor Energy Inc. Internal to Alberta Conservation Association (ACA) for 2010/11 the project was called Suncor Sustainable Grasslands Program, but externally we refer to the program as the Petro-Canada Sustainable Grasslands Program (PCSGP), as per the agreement between all partners. Through the PCSGP, ACA delivered a project measuring displacement of grasslands by shrub and tree encroachment over the last 57 years in the foothills fescue natural subregion. In addition to the project delivered by ACA, graduate students at the University of Calgary (U of C) delivered three projects in the dry mixedgrass natural subregion - one on sage grouse, one on silver sagebrush reclamation and one on pronghorn.

We presented results compiled from projects that were initiated between 2007 and 2010, and completed the final project report for the tree and shrub encroachment project.

## Methods

Alberta Conservation Association and the U of C promoted the accomplishments of the PCSGP, achieved between 2007 and 2010, through presentations, reports and a graduate thesis.

## Results

We presented the results of the shrub and tree encroachment project at the Society for Conservation Biology conference and the Foothills Fescue Restoration Forum winter meeting. Grass cover has decreased by 10% over the last 57 years as a result of displacement by shrub and trees in all three study areas within the Foothills project area. From ground truthing the polygons, we have an 83% confidence level in the accuracy of the original classification from the images. ACA also completed the project report entitled *Petro-Canada Sustainable Grasslands Program: Examining Tree and Shrub Encroachment and their Potential Effect on Grassland Loss in the Foothills of Southwestern Alberta 2009/2010 Final Report*.

University of Calgary graduate student, Laura Hickman, successfully defended her thesis entitled *Reclamation Outcomes on Energy Disturbances in Silver Sagebrush Communities* and provided a copy to ACA for distribution to our partners. The PCSGP was also acknowledged by the Miistakis Institute of the Rockies in their report entitled *Alces©-based habitat simulation modeling for greater sage-grouse in southeastern Alberta*, a component under the Sage Grouse project of the PCSGP.

## Conclusions

In 2010/11 we were able to wrap up all aspects of the PCSGP. The accomplishments achieved were successfully promoted by ACA and graduate students at the U of C, both in written and presentation form. Throughout the three years of the program we were able to achieve the goals set out by the original terms of reference in 2007.

## Communications

ACA:

- Presentation – Does Alberta have landscape amnesia? The loss of montane grasslands. Society for Conservation Biology Conference, Edmonton, Alberta, August, 2010. (D. Manzer).
- Presentation – Changing landscapes; one shrub at a time. Alberta Foothills Fescue Restoration Forum winter meeting in Cowley, Alberta. (M. Verhage).
- Report – Didkowsky, M., M. Verhage and P. F. Jones. 2011. Petro-Canada Sustainable Grasslands Program: Examining Tree and Shrub Encroachment and their Potential Effect on Grassland Loss in the Foothills of Southwestern Alberta 2009/2010. Technical Report, produced by Alberta Conservation Association, Lethbridge, Alberta, Canada. (Submitted).

University of Calgary:

- Presentation – Reclamation outcomes on energy disturbance in silver sagebrush communities. Alberta Foothills Fescue Restoration Forum winter meeting in Cowley, Alberta. (L. Hickman).
- Presentation – Cumulative effects of development on pronghorn distribution and movements across the Northern Sagebrush Steppe. 24<sup>th</sup> Biennial Pronghorn Workshop in May in Laramie, Wyoming. (A. Jakes).
- Poster – Effects of fence type on pronghorn movement in north-central Montana. 24<sup>th</sup> Biennial Pronghorn Workshop in May in Laramie, Wyoming. (A. Jakes).
- Thesis, University of Calgary – Reclamation outcomes on energy disturbances in silver sagebrush communities. (L.K. Hickman).
- Report – Alces©-based habitat simulation modeling for greater sage-grouse in southeastern Alberta. (G. Chernoff, B. Stelfox and G. Greenaway).

### **Literature Cited**

none

### **Photos:**

Alberta Conservation Association staff member, Mike Verhage, presenting on the displacement of grasslands by shrub and tree encroachment onto foothills fescue grasslands. (Photo: Paul Jones)

Mike Verhage completing edits to the *Petro-Canada Sustainable Grasslands Program: Examining Tree and Shrub Encroachment and their Potential Effect on Grassland Loss in the Foothills of Southwestern Alberta 2009/2010 Final Report*. (Photo: Paul Jones)

Young aspen trees encroaching onto grasslands within the Porcupine Hills. (Photo: Mike Verhage)

Shrub encroachment onto grass slope in the Porcupine Hills. (Photo: Mike Verhage)