Alberta Conservation Association
2017/18 Project Summary Report

Project Name: Restoring Natural Habitat for Wildlife

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Primary ACA staff on project: Corey Rasmussen and Robb Stavne

Partnerships

Alberta Environment and Parks

Key Findings

- We wrote an article "Friendly Forest Fire" providing a public-friendly summary of the Upper North Saskatchewan River prescribed fire published in our 20th anniversary issue of *Conservation Magazine*.
- We provided third-party support to Alberta Environment and Parks for the implementation of prescribed burns (~2,256 hectares) within the Blackstone Capping Units, approximately 135 kilometres west of Rocky Mountain House.
- Along with Land Management staff, we visited a few Alberta Conservation Association conservation sites in the Central Region and provided input into habitat enhancement pursuits.

Introduction

Over time, human activities and land management decisions have slowly altered the natural state of many wildlife habitats across Alberta. For example, in some areas of Alberta, wildfire control has had serious ecological implications on vegetation patterns and stand age, resulting in incremental habitat loss for a diverse group of species ranging from alpine butterflies to elk to grizzly bears (Andison 2000; Smith 2000; Pengelly and Rogeau 2001; White et al. 2003). The primary focus of the Restoring Natural Habitat project is to restore natural ecosystem patterns and wildlife habitat values within landscape units (e.g., watershed sub-basins) and focal areas (e.g. public lands and Alberta Conservation Association [ACA] conservation sites) that have aged beyond the natural range of variability.

Methods

Using an ecosystem-management approach, we maintained third-party support for Alberta Environment and Parks, Agriculture and Forestry initiatives in 2017/18 to incorporate species, ecosystem, and landscape values into habitat treatments, such as prescribed burns on public lands. We also continued to work with our Land Management Program to identify locations (through site visits) and design habitat treatments to enhance habitat to benefit wildlife on conservation sites to which ACA holds title.

Data analysis and draft report compilation was contracted out for the Upper North Saskatchewan River and Hutton Creek prescribed burns. Our landscape objectives relate to bringing forest age-classes within their natural range of variability, and our ecosystem objectives relate to emulating disturbance patterns within similar ecosystems. These two objectives are primarily informed by Geographic Information System-based (digital mapping) exercises. Our species objectives are measured on the ground to identify how treatments have provided for forage and escape or winter cover for wildlife. Completed draft reports were reviewed and edited for final report completion.

Results

We provided third-party support to Alberta Environment and Parks to assist with implementation of prescribed burns (~2,256 hectares) within the Blackstone Capping Units, approximately 135 kilometres west of Rocky Mountain House. Goals with this treatment were to create a fire break (prevent potential wildfire from blazing through) and wildlife habitat enhancement. Outside of prescribed fire, managed wildfire created an additional 1,470 hectares of burn in the Coral Creek and South Ram areas of the Bighorn Backcountry. No prescribed burns took place in our Northwest Region as environmental conditions were not favourable.

Over the fall and winter of 2017/18, we produced drafts of two post-burn reports for the Upper North Saskatchewan River basin and the Hutton Creek prescribed fires. These documents are undergoing edits and will be included in ACA's final report series. Numerous ungulate habitat resource values were enhanced with these treatments. For the upper North Saskatchewan River, more open habitat has been created thus allowing for greater grass and forb forage abundance and availability for bighorn sheep, elk, and mule deer. More open habitat is suspected to have enhanced the ability of bighorn sheep to see and thus avoid predators. Elk are predicted to be able to escape to forest cover while in new open foraging habitat. Analysis of the Upper North Saskatchewan prescribed burn revealed this treatment did a decent job emulating a natural fire event. Hutton Creek prescribed fire conclusions are still being assessed.

Along with ACA Land Management staff, we visited a NE Region conservation site, Fawcett 6, to check for use of the site by sharp-tailed grouse. No sharp-tailed grouse were observed, but an interesting observation of thousands of sandhill cranes flying overhead was made. We also visited the Central Region Scheerschmidt, Larch, and Drake properties, and provided input on potential habitat enhancement and monitoring efforts.

Conclusions

Prescribed burning is a habitat management tool that can effectively reintroduce diversity into landscapes where natural fire has been supressed and timber cutting limited. Data analysis from the Upper North Saskatchewan River prescribed fire has demonstrated success in achieving habitat goals within the treatment area, and a positive step towards achieving goals at the subbasin level. Alberta Environment and Parks continues to plan and apply prescribed fire in such low disturbance zones. We recommend more treatments within the Cline River Subbasin to continue along the path to achieving subbasin-level goals identified within our Cline River Ungulate Winter Range Restoration Plan which compliment AEP's R11 forestry management plan.

Working along with the Land Management team to provide input from the wildlife perspective on ACA managed sites has been a good exercise in having the wildlife and lands programs work together in pursuit of healthier habitat on deeded lands.

Anthropogenic interference on both public and deeded lands has resulted in habitat alterations that can take considerable effort to bring back to a more natural state. Such initiatives will benefit from inter- and intra-organizational collaboration in order to invoke positive on the ground habitat enhancement.

Communications

- We authored an article in the 20th anniversary edition (Fall/Winter 2017) of our C*onservation Magazine*, summarizing some of the results of the 2009 Upper North Saskatchewan prescribed fire data collection. This article should help to further spread the message that prescribed fire can be an effective tool to enhance habitat values and ecological health in areas that have seen protection from natural and anthropogenic disturbance.
- We met with Alberta Environment and Parks staff in our Northwest and Central regions to maintain and enhance partnership relations.
- We engaged in further discussions and conducted site visits with ACA Land Management Program staff to coordinate efforts in planning habitat enhancements on ACA titled lands. A list of properties that could benefit from habitat enhancements was developed to guide future work.

Literature Cited

Andison, D.W. 2000. Landscape-level fire activity on foothills and mountain landscape of Alberta. Alberta Foothills Disturbance Ecology Research Series, Report No. 2, Foothills Model Forest, Hinton, Alberta, Canada.

Pengelly, I., and M.-P. Rogeau. 2001. Banff field unit fire management plan. Banff National Park, Banff, Alberta, Canada. 132 pp.

Smith, J.K., ed. 2000. Wildland fire in ecosystems: effects of fire on fauna. General Technical Report RMRS-GTR-42-vol. 1, U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Ogden, Utah, USA. 83 pp.

White, C.A, I.R. Pengelly, and D. Zell. 2003. Landscape fire regimes and vegetation restoration in Banff National Park, Alberta. Occasional Paper BNP-2003-01, Parks Canada, Banff, Alberta, Canada.

Photos

Staff Recording Habitat Data in Upper NSR Prescribed Burn Study Area.
Photo: Corey Rasmussen

Aerial of Alberta Conservation Association property previously under livestock and crop agriculture slated for inter-organizational habitat rehabilitation. Photo: Mandy Couve