

Alberta Conservation Association 2016/17 Project Summary Report

Project Name: Restoring Natural Habitat for Wildlife

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Partnerships

Alberta Agriculture and Forestry
Alberta Environment and Parks

Key Findings

- An article we co-authored on prescribed burning was published in the Canadian Institute of Forestry publication *Success Stories from Canadian Forests*, March 2016 edition.
- In April 2016, we provided third-party support to implement a prescribed burn of about 280 ha within the Wapiabi Capping Units, located about 120 km west of Rocky Mountain House.
- We will publish a post-fire evaluation of vegetation response to prescribed fire in the Upper North Saskatchewan River and Hutton Creek drainages in our Conservation Report Series on our website.
- Along with ACA Land Management staff, we identified two ACA-managed Conservation Sites to be pursued for habitat treatments: Fawcett 6 and Flatbush 5.
- We initiated hand-cut tree clearing enhancements on 160 acres of ACA managed land (Leddy Conservation Site, Northwest Region) with the help of wildland firefighters from Alberta Agriculture and Forestry.

Introduction

Over time, anthropogenic 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 and 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 continued our work with Alberta Environment and Parks and Alberta Agriculture and Forestry in 2016/17 to incorporate species, ecosystem and landscape values into habitat treatments, such as prescribed burns on public lands. We also continue to work with our Land Management Program to identify locations and design habitat treatments to enhance habitat to benefit wildlife on Conservation Sites to which ACA holds title. We also continued to provide third-party support for prescription burning in habitats that would support bighorn mountain sheep and other ungulates.

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 GIS-based exercises. Our species objectives are measured on the ground to identify how treatments have provided for forage and escape or winter cover for wildlife.

Following six years (ended 2015/16) of collecting post-burn data in the Upper North Saskatchewan River (NSR) drainage (Cline River sub-basin), we hired a contractor to analyze these data and draft reports that summarize findings of both the upper NSR and Hutton Creek prescribed fires and evaluate whether our treatments are adequately contributing to our species objectives for wildlife.

Results

Spring 2016 conditions allowed for the controlled burning of approximately 280 ha within the Wapiabi Capping Units, located about 120 km west of Rocky Mountain House, helping to contribute to forest protection and habitat enhancement. We provided third-party support to implement this burn. No prescribed burns took place in our Northwest Region because of early green up and the rapid onset of wildfire conditions.

In the fall of 2016, a contractor completed and submitted draft reports that evaluated vegetation response to prescribed fire in the upper NSR and Hutton Creek drainages. These documents are currently being revised and will be published in our Conservation Report Series in spring 2017.

We initiated a planned series of hand cuts of trees on our Leddy Conservation Site in our Northwest Region in an effort to benefit wildlife habitat. Five single-hectare plots were targeted for treatment within a quarter section of land. Hand cutting was initiated by Alberta Agriculture and Forestry wildland firefighters but had to be suspended after only a small number of trees were cut because of the early onset of wildfire season, requiring firefighters elsewhere. If a low fire hazard exists in early spring of 2017, habitat enhancement will continue. Along with ACA Land Management staff, we also identified two Conservation Sites to be pursued for habitat treatments—Fawcett 6 and Flatbush 5.

Conclusions

Prescribed burning is a habitat management tool that can effectively reintroduce natural variability and diversity into landscapes where natural uncontrolled burns have been suppressed. We will continue our incremental approach to restoring the ecological role of natural disturbance in important habitats in several focal areas through collaboration and partnership with the Alberta government. We will also continue working with our Land Management Program to undertake habitat enhancement on Conservation Sites to which ACA holds title; these enhancements help fulfill conditions of land purchase agreements and activities specified in existing habitat management plans.

Communications

- We co-authored an article on prescribed burns that was published in the March 2016 edition of the Canadian Institute of Forestry publication *Success Stories from Canadian Forests*. This article should help to further spread the message that prescribed fire can be safely carried out to achieve a variety of objectives, which should help validate such practices.
- We met with Alberta Environment and Parks and Alberta Agriculture and Forestry staff in our Northwest and Central regions to maintain and enhance partnership relations.
- We continued discussions with Alberta Agriculture and Forestry staff in our Northwest Region that resulted in wildfire firefighters initiating habitat enhancement treatments on ACA lands. Having achieved such an agreement may help pave the way for future co-operative habitat enhancement efforts on ACA titled properties.
- 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



Results of a prescribed fire within Alberta's East Slopes in spring 2016. The fire was conducted as part of the Alberta government's R11 Management Plan for reasons including habitat enhancement and forest protection. Photo: Margriet Berkhout, Alberta Agriculture and Forestry



Aspen on a site in our Northeast Region; this site is being considered for habitat manipulation (aspen cuttings) to benefit ruffed grouse and other species. Photo: Roy Schmelzeisen