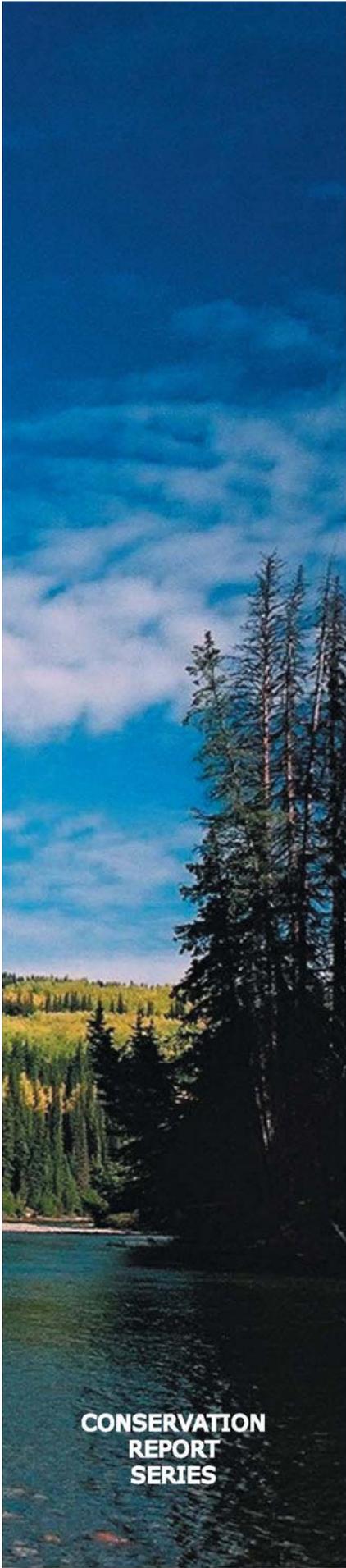


# Greater Sage Grouse Project 2014 – 2017



**CONSERVATION  
REPORT  
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## Greater Sage Grouse Project 2014 – 2017

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## EXECUTIVE SUMMARY

The greater sage grouse is an iconic symbol of sagebrush habitat, which is a component of the native grasslands in southeastern Alberta. Large reductions in sage grouse populations in Canada from a variety of factors led Environment and Climate Change Canada to implement an Environmental Protection Order (EPO) to protect sage grouse habitat on federal and public lands across Canada. Alberta Conservation Association (ACA) worked collaboratively with Alberta Environment and Parks (AEP) to identify key areas and willing participants (agricultural producers) within the EPO area to implement wildlife-friendly fencing and supply wind breaks in compensation for loss of other structures. Key areas included overwintering, breeding, and nesting habitat near known lek sites. Producers interested in implementing beneficial management practices had their enhancements paid for using funds from Environment and Climate Change Canada to prevent burdening them with any additional expenses. Between 2014 and 2017, 17 miles (27.4 km) of page-wire fencing was removed along the Canadian Pacific Railway line and replaced with wildlife-friendly fence lines consisting of a double-stranded, smooth bottom wire located 18 inches (ca. 45 cm) from the ground; fence reflectors on the top two wires; and perch deterrents on top of fence posts. Wind breaks were also provided to one producer who agreed to have an old farmstead removed, which eliminated denning and nesting sites for predators of greater sage grouse. Feedback from producers involved with the project has been positive, and producers have felt that they received significant benefits for their operations. Success of this project is due to 1) collaborative partnerships between ACA, AEP, and local producers; 2) secure funding from Environment and Climate Change Canada; and 3) open and honest communication with producers.

**Key words:** greater sage grouse, ranching, wildlife-friendly fencing, reflectors, perch deterrents, collaboration.

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## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	ii
ACKNOWLEDGEMENTS.....	iii
TABLE OF CONTENTS .....	iv
LIST OF FIGURES.....	v
1.0 INTRODUCTION .....	1
2.0 STUDY AREA.....	1
3.0 MATERIALS AND METHODS .....	3
4.0 RESULTS .....	3
5.0 DISCUSSION .....	3
6.0 SUMMARY .....	4
7.0 LITERATURE CITED .....	5

## LIST OF FIGURES

Figure 1. Townships wholly or partially identified by the greater sage grouse Environmental Protection Order. ....	2
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## **1.0 INTRODUCTION**

The greater sage grouse is the largest species of grouse in North America and an iconic symbol of sagebrush habitat, which is a component of the native grasslands in southeastern Alberta. Large reductions in sage grouse populations in Canada over the past decades from a variety of factors led Environment and Climate Change Canada to implement an Environmental Protection Order (EPO) to protect sage grouse habitat on federal and public lands across Canada (Government of Canada 2017). Along with this EPO came uncertainties in the ranching industry about how this new protection could negatively impact ranching operations and result in unintended consequences for day-to-day operations. To assist producers affected by the EPO, Environment and Climate Change Canada provided funding for on-the-ground enhancements to implement recommendations identified in the EPO in key areas. Alberta Conservation Association (ACA) worked collaboratively with Alberta Environment and Parks (AEP) to engage producers, discuss potential enhancements, and gauge producers' interest to implement beneficial management practices in sage grouse habitat. Producers interested in implementing beneficial management practices had these enhancements paid for using funds from Environment and Climate Change Canada to prevent burdening them with any additional expenses. These enhancements focused on replacing page-wire fence lines with wildlife-friendly fencing and adding fence reflectors and perch deterrents to the fence lines. Reflectors on the top two fence line wires reduce the risk of sage grouse colliding with the fence by increasing the visibility of the fence lines (Stevens et al. 2012; Van Lanen et al. 2016). Similarly, perch deterrents on fence posts in key breeding and wintering habitats reduce the number of perching locations for raptors that may prey on sage grouse.

## **2.0 STUDY AREA**

Enhancements were implemented in an area of southeastern Alberta about 80 kilometres south of Medicine Hat where the EPO came into effect. This area encompasses 31 township that are wholly or partially identified in the EPO (Figure 1). These lands are located in the Dry Mixed Grassland Natural Sub-region, where the predominant land use is cattle ranching. Eligible lands for enhancements included all provincial Crown land affected by the EPO and any adjacent private lands. Sage grouse habitat consists of loamy and blowout plant communities with sporadic sagebrush habitat, overflow sites inundated with sagebrush, and saline lowlands used for leks and breeding (Adams et al. 2004). A dominant feature in this area is the old Canadian Pacific Railway (CPR) line, which bisects the region and is bordered on either side by page-wire

fencing. This fence line may provide significant perching locations for raptors in an otherwise open landscape and could create a significant barrier for other wildlife, such as pronghorn. Several producers have already taken steps to modify these page-wire fence lines to benefit wildlife and their own operations.

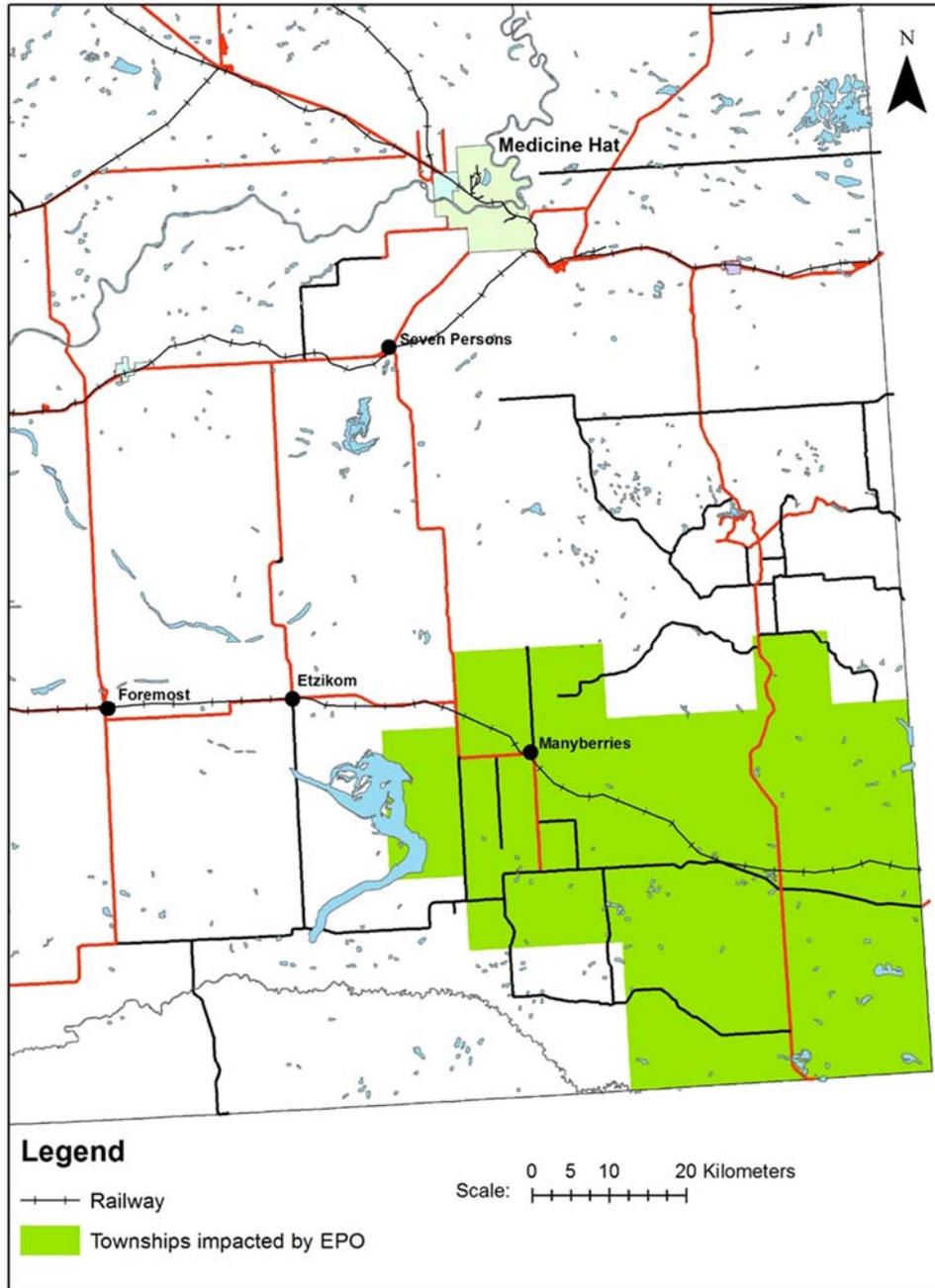


Figure 1. Townships wholly or partially identified by the greater sage grouse Environmental Protection Order.

### **3.0 MATERIALS AND METHODS**

Working collaboratively with AEP, we identified key areas within the EPO for habitat enhancement and willing participants to implement these enhancements, including replacing page-wire fencing with wildlife-friendly fencing and using portable wind breaks in compensation for loss of other structures that could act as denning or nesting sites for predators of sage grouse. Key areas included overwintering, breeding, and nesting habitat near known leks. Producers interested in collaborating in the project signed an enhancement agreement that outlined the intended actions that would occur on the landscape relating to fencing and wind-break installation. Contractors were hired to remove the existing page-wire fence and install the wildlife-friendly fence. Once enhancements were installed, a representative from ACA or AEP inspected the sites to confirm the enhancements were installed per the agreement.

### **4.0 RESULTS**

Between 2014 and 2017, 17 miles (27.4 km) of page-wire fence lines were removed along the CPR line and replaced with wildlife-friendly fence lines consisting of a double-stranded, smooth bottom wire located 18 inches (ca. 45 cm) from the ground; fence reflectors on the top two wires; and perch deterrents on top of fence posts. Wind breaks were also provided to one producer who agreed to have an old farmstead removed, which eliminated denning and nesting sites for predators of greater sage grouse. Feedback from producers involved with the project has been positive, and producers have felt that enhancements have significantly benefited their operations and recovery efforts for greater sage grouse.

### **5.0 DISCUSSION**

Enhancements directed at greater sage grouse habitat, especially those specified in the EPO, should continue to receive funding support from Environment and Climate Change Canada or other funding sources so the local community is not burdened with expenses required to meet the expectations of the EPO. This approach will help producers view sage grouse as an asset on the land, rather than a liability, and will encourage uptake of beneficial management practices for sage grouse. Continued assistance with the removal of page-wire fence lines and installation of wildlife-friendly fence lines will have a positive impact not only on sage grouse but also on a variety of wildlife that occurs in the area. However, further study is needed regarding the impact of fence reflectors on pronghorn movement, specifically whether large expanses of fence lines

with reflectors negatively impact pronghorn migration. It is important to confirm that enhancements are not benefiting one species at the expense of another. Studies completed by Van Lanen et al. (2016) suggest that only specific fence lines need to be marked, which would reduce the number of reflectors needed and the impacts to pronghorn migration, if they exist.

Producers should continue to receive compensation for the loss of buildings and sheds used by predators of sage grouse; these structures can be replaced with wind breaks or portable calf shelters. None of these enhancements are possible without the continued funding support of collaborative stewardship programs and community-based initiatives to implement sage grouse initiatives on the ground.

## **6.0 SUMMARY**

The success of this project, which installed 17 miles (27.4 km) of wildlife-friendly fence lines and removed denning and nesting sites for predators of sage grouse, is due to 1) collaborative partnerships between ACA, AEP, and local producers; 2) secure funding from Environment and Climate Change Canada; and 3) open and honest communication with producers.

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