

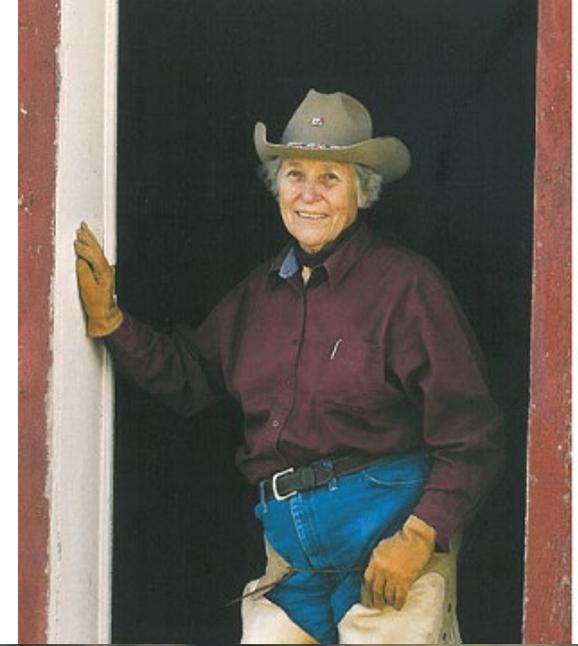
A close-up photograph of a grouse, likely a spruce grouse, sitting on a nest. The bird's tail feathers are fanned out in a large, circular display. The nest is made of twigs and contains two large, green, oval-shaped eggs. The bird has a white breast and a dark head with yellow markings. The background is a blurred, golden-brown field of grass.

# Grouse Proposal

By: Caleb Heil, Connor Sullivan, and Will Deardorff

Mrs. Wilson, a 4<sup>th</sup> generation rancher in Big Grouse is looking into the future of her farm. She is a common Montana farmer and her and her family have maintained the large group of Sage Grouse on their property for as long as they have lived there .

The Sage Grouse is the largest North American grouse species. During the spring breeding season the male birds will gather together to perform a display on Leks to impress females. Sage Grouse typically live between 3 and 6 years. They often are being hunted by animals such as coyotes, hawks, falcons, badger, and the bobcat. They stay protected from these predators by the Sage Grass, and often travel to the Wetlands during the summer.



# Proposal

In our opinion, the best solution to helping preserve the Sage Grouse on the ranch is to create several small reserves in areas that are necessary for the Sage Grouse. With loss of habitat being the biggest problem for Sage Grouse, this solution could help to stop the destruction of important lands to the Sage Grouse. These areas would include wetlands, leks, migration routes, and sagebrush areas.



# Where are the Sage Grouse Located!

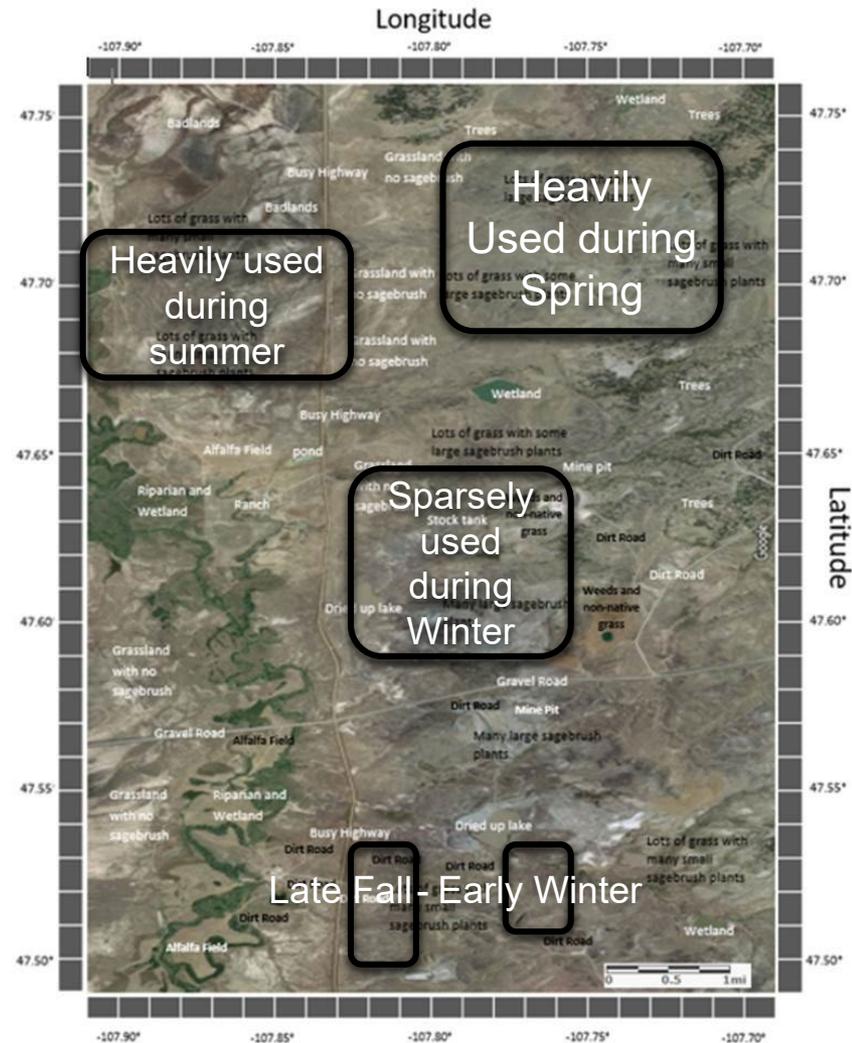
## Grouses Niche:

Winter: Most of their time is spent near sage brush for this is their main source of food during the winter.

Spring: Male grouse perform at leks and therefore need an open “stage” for performing. Females need a good sagebrush plant to stay and nurture her eggs.

Summer: The Sage Grouses diet consists of mostly insects that are found in the sagebrush during this time.

The Sage Grouse relies on the sagebrush for almost everything they do and therefore it is extremely important that the sage grass get protected.



# Current Management

- Groups have been working on adding Sage Grouse to the endangered species list
- FWP helps ranchers create ways to ranch efficiently along while protecting Sage Grouse through conservation easements and leases
- FWP conducts experiments and provides information to the public to inform them about what we need to do to save Sage Grouse
- FWP collaborated with other groups to create a state management plan that helps to protect the Sage Grouse and sagebrush and will hopefully continue to help in gathering information and research on the grouse.

Currently, the primary cause of concern for Sage Grouse is loss and fragmentation of their habitat and although some groups are doing things to prevent this, more action is still necessary to save the Sage Grouse.

## Importance of Grouse

Tourism: In 2013, over 100 people visited Craig, Colorado paying to stay in hotels, buying expensive food, and gas as a result of Conservation Colorado's grouse tours.

These grouse are also an important food source for many animals in the sage grass area and without grouse the predators would be forced to find their food elsewhere and the loss of grouse could ultimately lead to the decline of other predatory species causing a rise in prey animal populations. The loss of Sage Grouse could end up destroying the whole balance of the sagebrush ecosystem.

## How would protecting Sage Grouse affect other species?

When we protect habitat for Sage Grouse, we protect habitat for hundreds of other animals including elk, deer, and antelope. These animals specifically need the Sage grass to survive during the winter, and getting rid of that could hurt them.

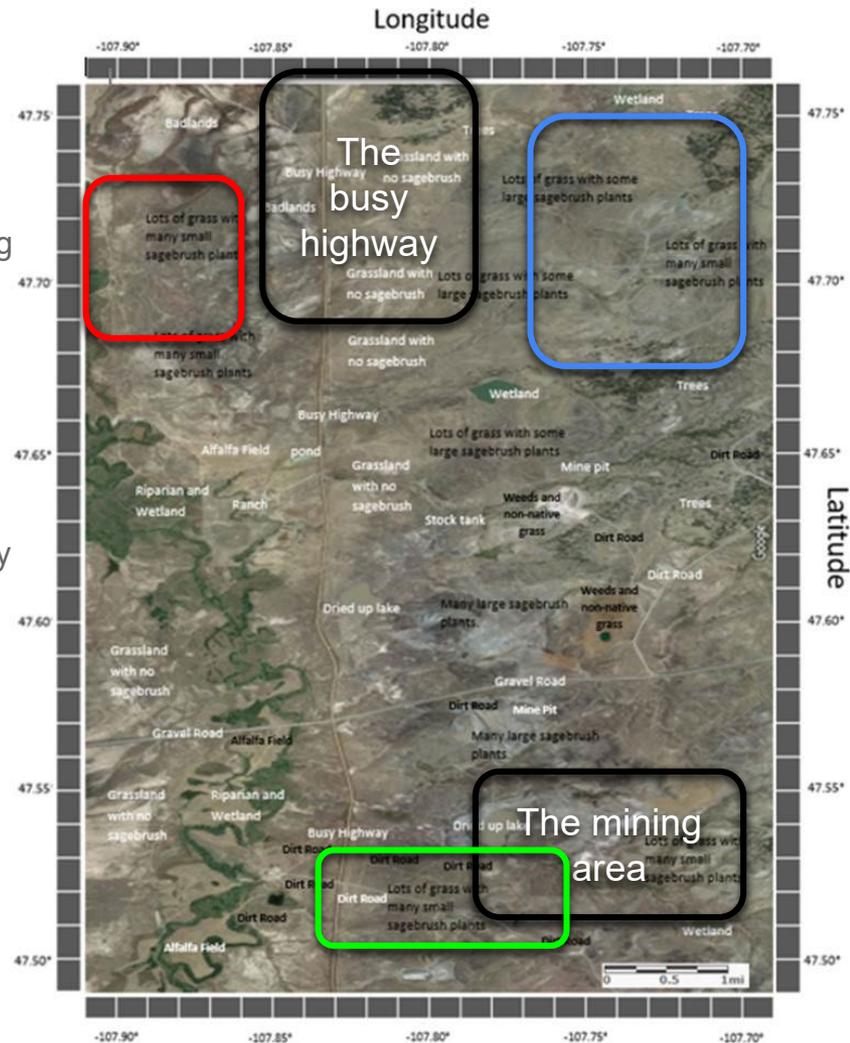
It's also important for the consumers, because they could eat the Sage Grouse, and some animals rely on the grouse to survive.

# Problem

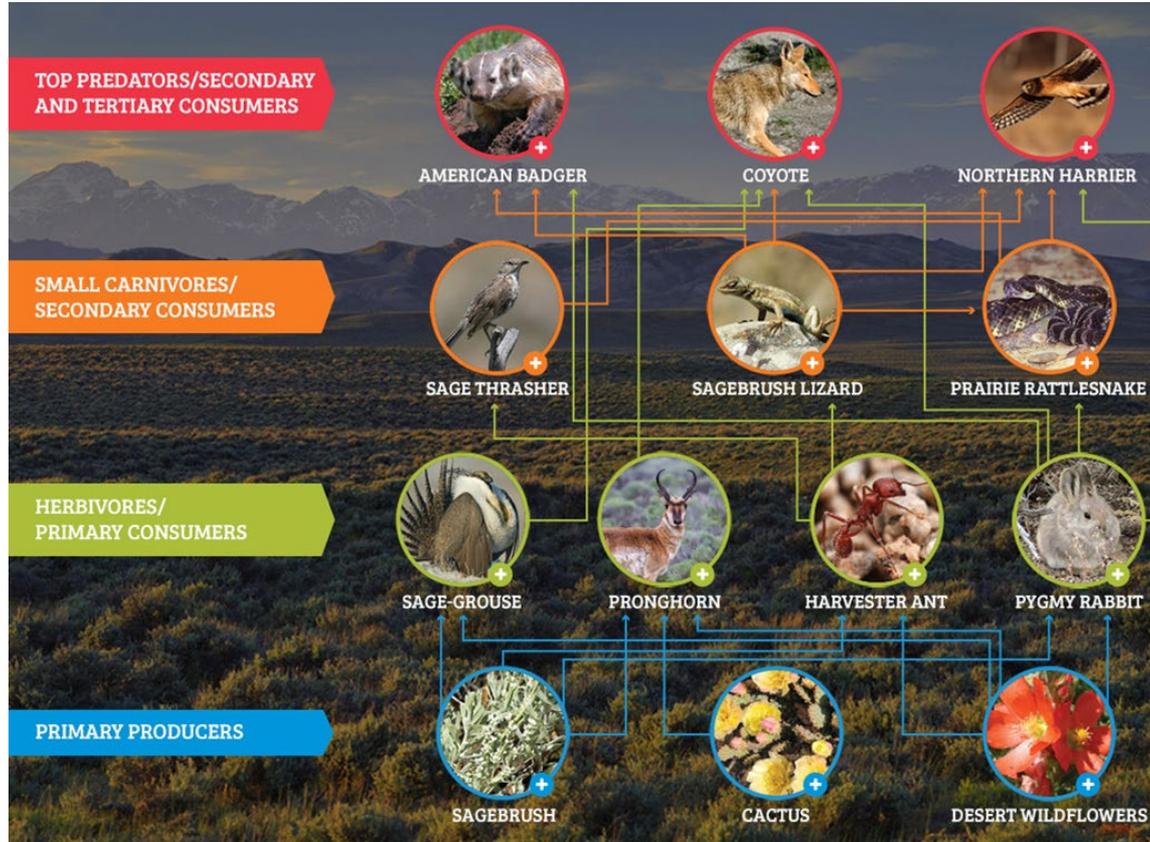
Sage Grouse during the spring often hang out in the blue area, and migrate over during the summer into the red area. However one of the big problems, is the road in between those two locations. This is a hazard because the grouse could die crossing the highway, making their numbers smaller and smaller.

Another problem for the Sage Grouse is the mining field, that Mrs. Wilson can't stop due to the Mineral right policy. The Sage Grouse are often here in the late fall or early winter. The mine takes away the sage grass making the birds helpless. This can also lead to other animals killing them such as the badger, coyote, hawks and other large birds. These are the biggest problems for the grouse when on the farm.

Finally the most dangerous problem for the Sage Grouse is the new homes that could be built around the whole farm. This could get rid of the sage grass causing the Sage Grouse to go extinct.



# Sage Grouse Food Webs



This is the food web for the Sage Grouse. It consists of Primary Producers, and consumers, also secondary and tertiary consumers. <http://www.pbs.org/xmef/nature/sagebrush-sea-food-web/12265/>

# Solution

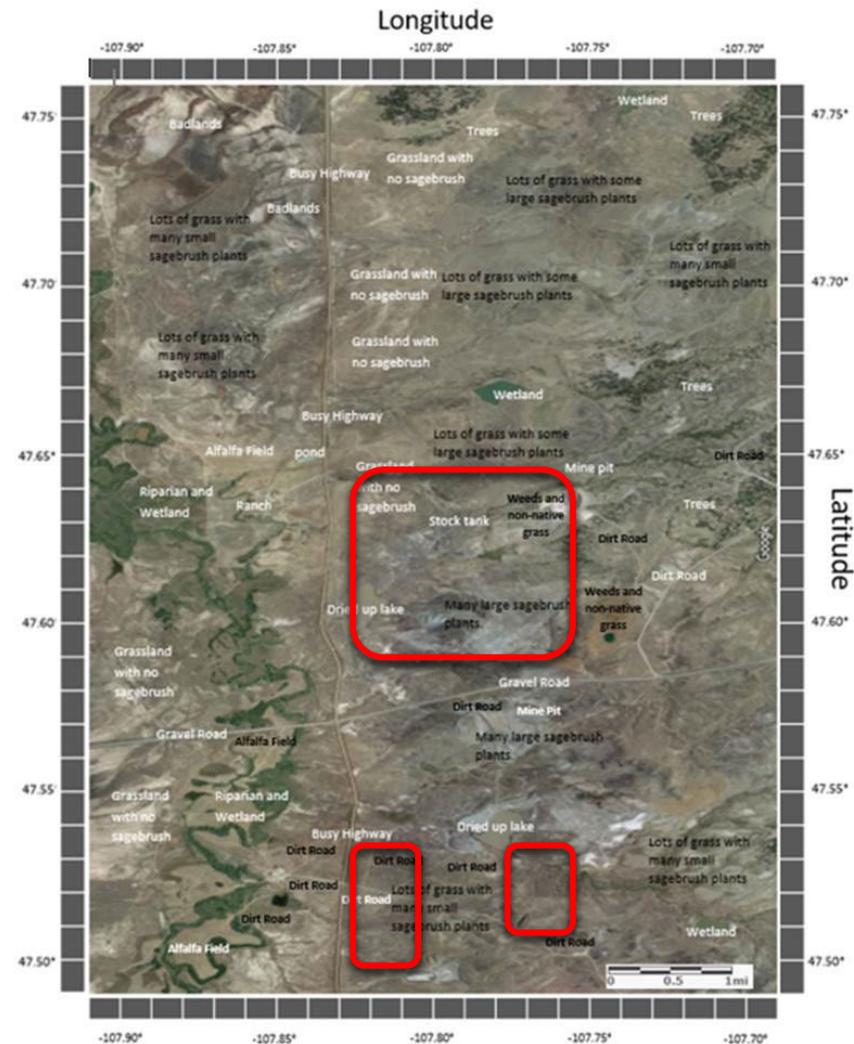
Our plan for saving the Sage Grouse is to create reserves on the areas that are important to the Sage Grouse for the seasons that they are there.

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These red areas are used during the late fall and winter months and will be blocked off for all ranching, farming and mining operations. During the winter the Sage Grouse tend to stay in one area with a lot of sagebrush for food and therefore it is very important that the grouse are not affected and forced to move. Due to the fact that mining and ranching is very disturbing these things would need to be stopped during these months.



## In conclusion...

The Sage Grouse is a very important species to the sage ecosystem and their species is getting dangerously close to extinction. It is necessary that something is done to protect the grouse and reserves on the Wilson ranch could be just what they need. These reserves would protect the grouse from all human activity that could harm them and once the grouse are out of the area Ms. Wilson could go back to her normal routine on that area. Hopefully these reserves are able to provide grouse with the help they need to combat extinction

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