

Sage Grouse Protection



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Introduction:

The Wilson ranch is in Big Grouse, Montana. Ms. Wilson is a 4th generation rancher. She and her family have ranched for decades while maintaining robust sage grouse population on their property. Her land is filled with grassland, and alfalfa field. As a traditional Montana ranch it is used for cattle, and traditional agriculture.

The sage grouse is a type of chicken like bird. Males are bigger than the females with large air sacs that are puffed out for mating displays. Sage grouse require sagebrush for their cover and food. They stay around the same general region year round, meaning they don't really migrate. Sage grouse only live for about 13 years.



Purpose:

The **purpose** of this project is to find a way for Mrs. Wilson to protect sage grouse on her family ranch. Her ranch is located in Big Grouse, Montana and she is tha 4 generation farmer at the ranch. She is interested in making her ranch into a conservation easement. The easement would protect the ranch from future threats to sage grouse habitat and provide public access to the ranch for recreational purposes. **Our goal** is to be able to allow her to ranch, as it is her income, while also giving the sage grouse a safe habitat without changing the environment where they live too much.



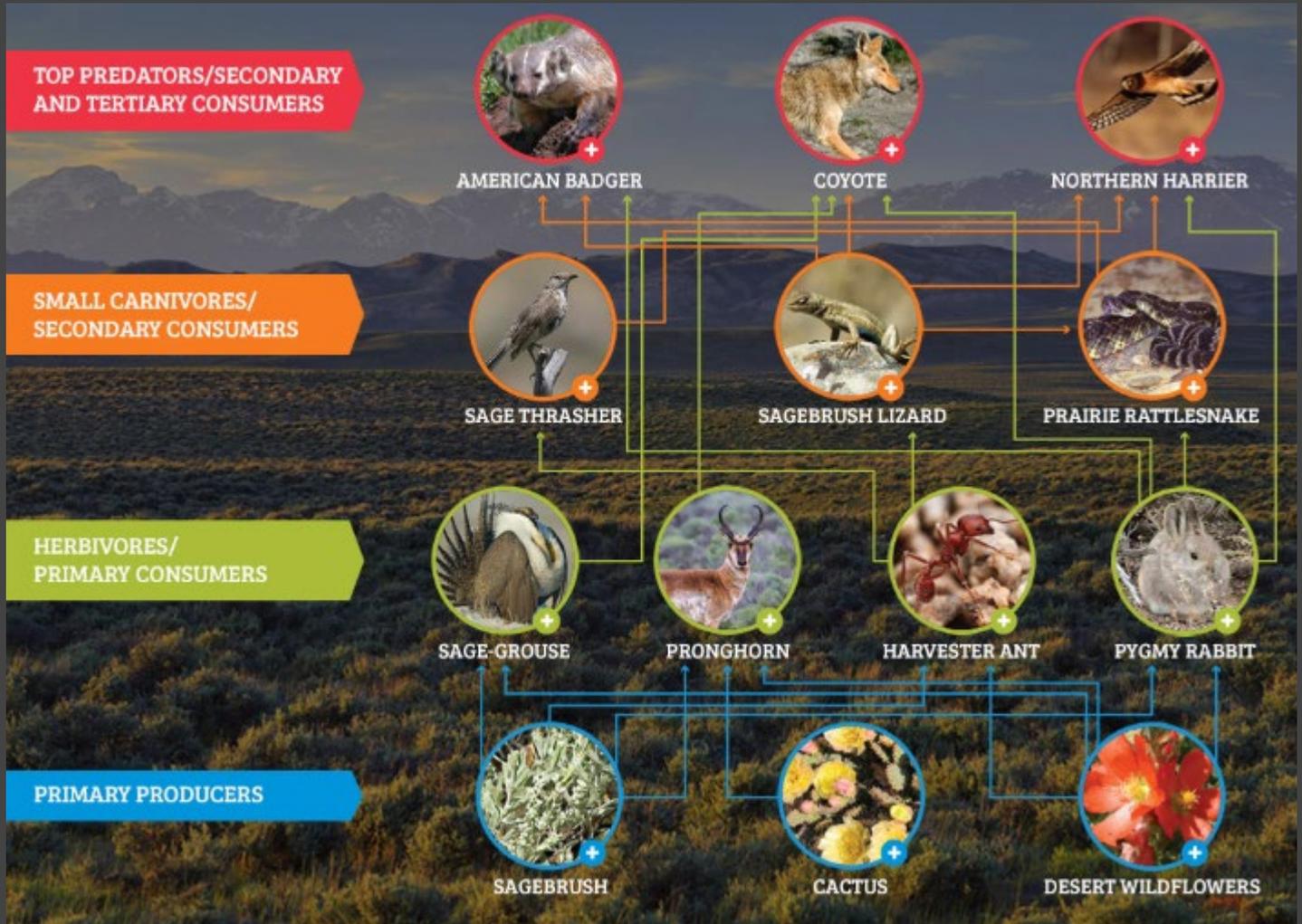
Sage grouse on the ranch:

Sage grouse have specific seasonal needs and many other needs to survive in their habitat. In the winter the sage grouse's main food source is the sagebrush so they need a plentiful amount of that to survive the winter. Another example would be in the summer the sage grouse needs to find their way to a good water source, which can be difficult with roads being in the way and predators. Sage grouse find a spot usually in the sagebrush to lay their eggs and have their nest. When they hatch they have to try to protect and keep their young safe from predators like foxes and eagles who may try to eat them also even before that hatching period the eggs are eaten if found by a predator.

Sage grouse have a very big impact on the area they live at since they are food for a lot of predators in their habitat like eagles, golden eagles, and coyotes. They are also an umbrella species, meaning if you protect them, many other species get indirectly protected. The sage grouse also can eat abundance of different species of plants. They also eat insects like ants for example, but their main food source is sagebrush.

Food Web

This food web shows the transfer of energy within the sage grouse ecosystem.



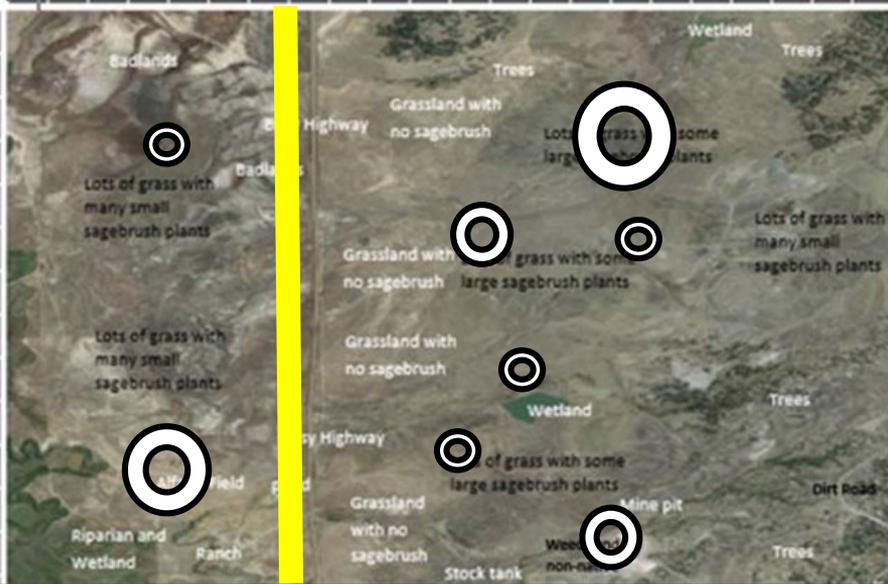
Sage Grouse Data Points



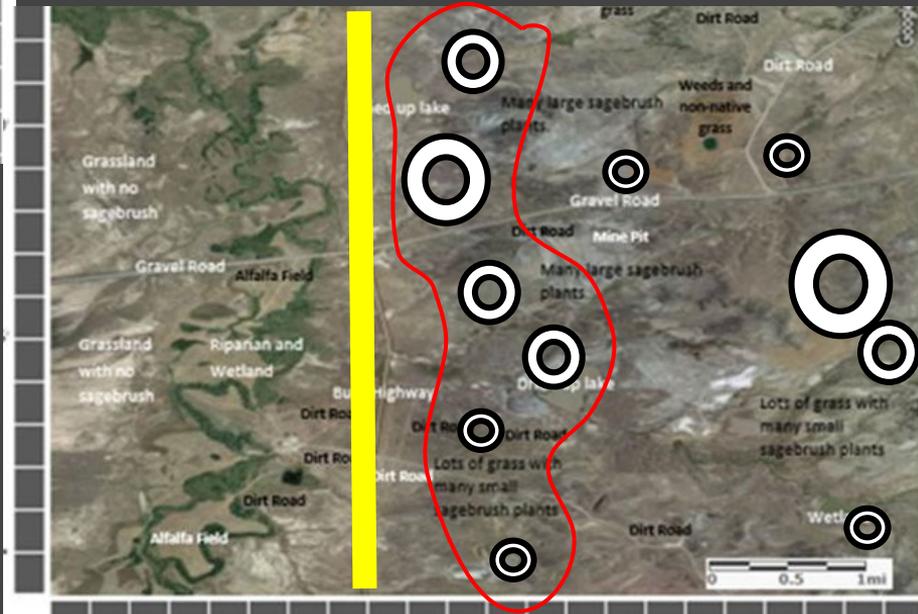
The rings on the map determine the spotting of the sage grouse. The size of the rings gauge whether the density in the area.



The yellow line is showing where the highway runs through the ranch

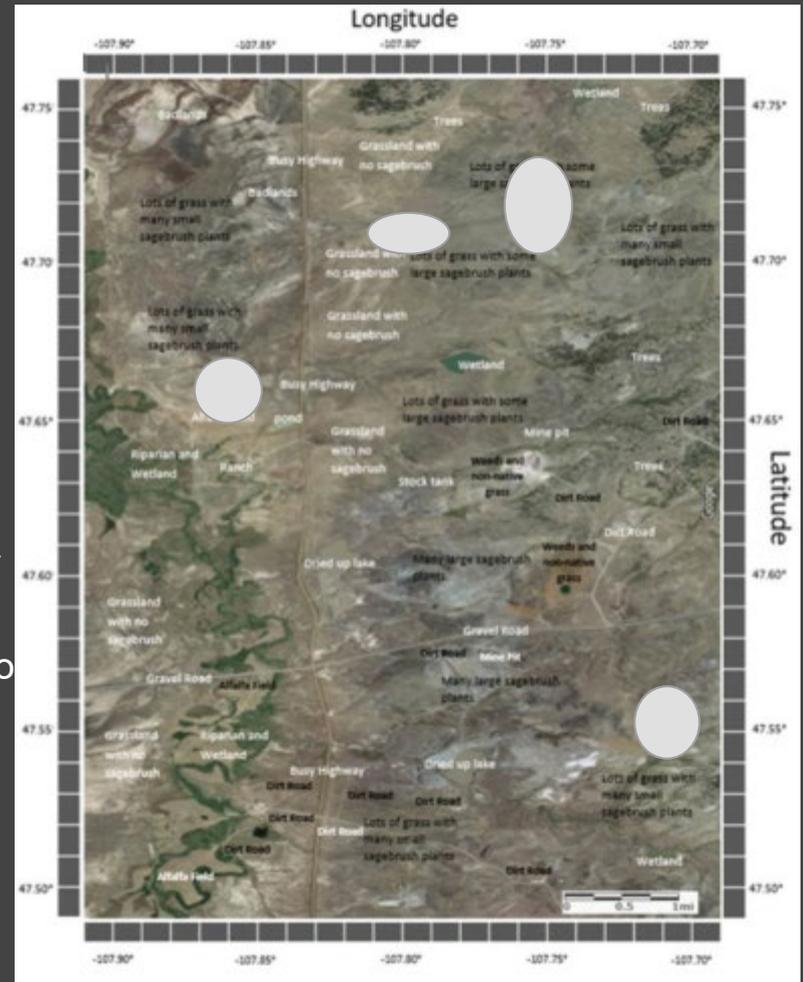


A problem that we are seeing through the map is there are a lot of breeding/living spots for the sage grouse right along the highway. At the high speed of the highway, it causes sagegrouse to be hit and killed by cars.



Problem:

- Threats to the sage grouse are predators like eagles
- Another threat is when people build and take out the sage brush to do so
- Roads are another threat due to the fact people who go to fast run them over and kill them
- In the summer another threat is getting to a water source safely
- Since the males have to protect a certain area for their mate to want to mate and have to fight off other males
- The booming sounds the male sage grouse makes to attract the female sage grouse can be heard from a mile away and is very loud so it could attract predators to not just females
- The white circles show where there are the most interactions with the grouse



Conservation Easement

We decided to change the ranch into a conservation easement. We would approach Montana Fish Wildlife & Parks in hopes of them agreeing to pay for 40-45 percent of the ranch, while Ms. Wilson's land would be conserved and used safely for the protection of the sage grouse. Doing so would help the sage grouse with raising their young and would help the survival of sage grouse. Since sage grouse don't move around way to much and go far away from their nesting spot it wouldn't be too inconvenient to do.



Hunting

On the easement there would be a no car policy, meaning if hunters were to come they would have to walk in. There would be regulations for the hunters, for example, only a 2 parties a week would be allowed to hunt. There would be a single-access gate somewhere near the highway where the hunting area where the hunters would be able to sign in. This would keep the numbers of the sage grouse up and protected even though people would still be hunting them, there wouldn't be as many predators as there would be in the wild.



Livestock

To help Sage Grouse we could have less livestock on the land and will not make any unnecessary developments or extra changes to the landscape. The restrictions of the use of the land will benefit the sage grouse due to the fact that they will have a safer place to live without people taking away their habitat and or destroying it. The Sage Grouse population will be managed by the hunters that we mentioned in the previous slide. Our plan would keep Ms. Wilson's ranch running, and would give her a little bit of cash. Also due to our plan Ms. Wilson would be able to have cattle on her ranch, and all of this would benefit sage grouse and make sure they don't get hurt.



Works Cited

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