

WHAT I DID

PROJECT INTRODUCTION

Established in 1905 the Routt National Forest spans 1,125,4378 acres and is managed by the US Forest Service whose goal is to create and carry out sustainable and healthy management plans for national forests, to meet the needs of the public. Part of this management includes rangelands that are grazed by either cattle or sheep in specific allotments. A project lead by the Range Department in the Hahns Peak Bears Ears district is using targeted livestock grazing implemented through virtual fencing to reduce vegetation degradation and to improve ecological resistance.



Started in 2023 virtual fencing uses GPS collars to track and guide cattle movements. The combination of GPS collars and base stations helped to reduce the use of physical barriers that can negatively impact wildlife in the area. 2024 was a transformative year for the virtual fencing project with over 700 collars deployed over multiple allotments and 10 base stations covering thousands of acres.



Virtual Fencing: During my time at this internship the virtual fencing project had already been set up and was actively running so my duties were pretty simple and mostly included doing range monitoring or water development surveys. That being said the base stations for the GPS collars occasionally need to be serviced and one of my days consisted of me heading up to Hahns Peak to asses a base station and paint it.

Noxious Weed Management:The range department in addition to virtual fencing also manages noxious weeds, so at the beginning of my internship I went out and sprayed herbicides on noxious weeds such as White-top and Dalmatian toad flax, which are highly invasive plant species.

Plant Monitoring: I was also able to do some plant monitoring where we went out to see the effects of cattle grazing and to see how much/what species of plant the cattle are eating. To do this we would take clipping from both outside of a prebuilt cage and identify the plant species and the weight.

Water Development Surveys: Water development surveys consisted of me heading out to known locations of water developments or wildlife pits, which are just man-made pits that hold water, and assessing if they were holding water or not. These water development surveys help wildlife and livestock to have access to water in places were water might be scarce.

WHAT I LEARNED

As a result of this project there have been many benefits. One benefit being that cattle were better distributed throughout the allotment, reducing overgrazing and relieving grazing pressure where other wildlife like to graze, allowing more, and better quality forage for wildlife. Little livestock conflict was another noticeable benefit with virtual fencing as well as a helping to reduce the spread of wildfire by proving to be a sufficient way for fuel reduction.

Outside of the virtual fencing there was so much I learned during this internship. I became knowledgeable about plant identification specifically weeds and how to best get rid of them. I was trained to use a ATV and a trailer, both of which were extremely helpful during my time as a range tech and will continue to be helpful as I continue in my career. Wildlife and water surveys were frequently done during my internship which helped me understand the interconnectedness of so many different disciplines in the forest service.



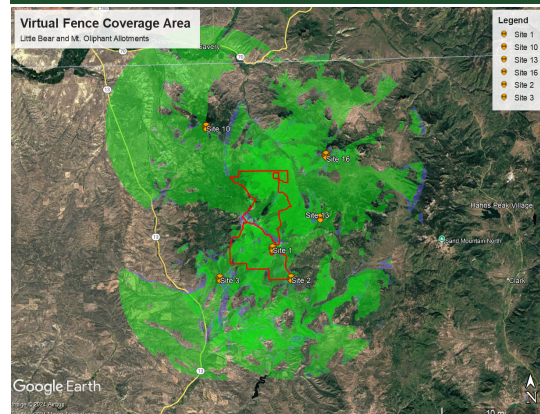
INTERNSHIP GOALS

- Understand how this virtual fencing project can improve grazing rotation of cattle in the Hahns Peak Bears Ears district
- Gain experience working with ranchers and interacting with the public in a professional manner
- Practice plant identification, field survey experience, increased knowledge on the inner workings of the forest service

HOW DOES THIS APPLY TO YOUR EDUCATION

As a Wildlife Biology major this experience has enhanced my knowledge by allowing me to witness real-life management plans in actions, engage in field surveying, practice understanding adaptive management and so many more skills I will carry with me into the classroom and beyond. Having taken a rangeland class it was nice to truly witness first hand how targeted grazing can help not only livestock but also wildlife and their habitats.

Virtual Fence Coverage



NEXT STEPS



For me this internship has opened my eyes to the world of range and allowed me a step forward in my endeavors as a wildlife biologist. As for Hahns Peak Bears Ear Range Department next steps would likely include expanding virtual fencing and increasing data collection to better refine seasonal grazing plans.