2014 Project Progress Report:

Distribution of Fuel Components in Sagebrush Steppe targeted grazing applied to reduce wildfire spread.

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Background

Large and frequent wildfires have plagued southern Idaho over the past decade, many of those fires are several 100,000 acres in size. These fires reduce wildlife habitat in sagebrush steppe, contribute to the expansion of invasive grasses such as cheatgrass, and reduce the amount of forage that is available for livestock grazing. Our project is researching the impact of targeted cattle grazing in the dormant versus peak biomass season on fuel load and rangeland integrity. We will examine how the timing and intensity of grazing affects the plant community and the impact on fire behavior

Hypotheses and Objectives

The overarching objective is to quantify the effect of peak biomass versus dormant season grazing on fuel loads, spatial distribution of fuels, and species composition.

- We hypothesize that cattle grazing during the peak biomass season will reduce overall fuel load, measured at peak fire season, more than cattle grazing in the dormant season.
- We hypothesize that grazing in either season, will reduce fuel loads and continuity to the point that it reduces fire behavior as the fire moves through the grazed areas.

Site locations

Two sites in the Reynolds Creek area in Owyhee County were selected based on the willingness of three ranchers, Jerry Hoagland, Brad Huff, and Theron Hoopes to participate. Proximity of the sites was also a decision criteria because animals must be moved from one site to the other. The first site is near the Reynolds Creed ARS station at an elevation of 4000 ft in a Wyoming big sagebrush steppe (300 pounds herbaceous biomass per acre). The second site is higher up the creek at 5250 ft elevation in a mountain big sagebrush steppe (800 pounds herbaceous biomass per acre). Each site has three replicates of five treatments. Each treatment is duplicated within the replicate and only one of the duplicates will be burned, resulting in a total of 60 plots.

Changes in Methods

At the time of submission of our 2014 proposal, our project was just beginning to develop. In the past year we have [illegible] (Figure 1). The two sites have differences in production, plant commun