



2022 Project Progress Report:

Grouse and Grazing Project

By Courtney Conway

PRELIMINARY RESULTS for 2022:

TITLE: Grouse and Grazing: How Does Spring Livestock Grazing Influence Sage-Grouse Populations?

PERSONNEL: Dr. Courtney Conway, Cody Tisdale, Nolan Helmstetter, Jason Karl,, Karen Launchbaugh, Sanford Eigenbrode, Ty Styhl, Grace Overlie

ACCOMPLISHMENTS or RESULTS: We completed the 9th year of field work on the Grouse & Grazing Project. In 2022, we conducted field work at 4 study sites: Big Butte, Brown's Bench, Pahsimeroi Valley, and Sheep Creek. We did not conduct any field work at the Jim Sage study site. We had 26 technicians, crew leaders, and students that worked on the project in 2022, including 4 graduate students. We conducted field work in 16 BLM grazing pastures that are part of the grazing experiment, and numerous other pastures adjacent to the 16 BLM grazing pastures. We deployed and maintained 9 segments of temporary electric fences (~43.5 km total) on experimental pastures to implement experimental grazing treatments. We captured and marked an additional 137 female sage-grouse in 2022 and we followed 63 females that were captured in previous years and returned to our sites (200 radio-collared hens in 2022). We documented 68 mortalities of radio-marked hens in 2022. We located and monitored 176 sage-grouse nests and 42 sage-grouse broods. Apparent nesting success across all 4 study sites was 24% in 2022. Nesting propensity was 100% and re-nesting propensity was 41% in 2022. Among the 42 broods, apparent survival was 43%. We conducted vegetation measurements at 471 plots in 2022 (119 nest plots, 320 random plots, and 32 brood plots). We measured grass height, percent biomass removed, and other metrics on 31,212 grass plants within those 471 plots. We also walked 201 utilization transects throughout the 16 experimental pastures to estimate utilization, and we measured grass metrics at 2,946 sampling points along the 549 km of transects. In addition, we collected 1,280 biomass measurements and 720 samples across our 320 random plots used in our vegetation measurement surveys. We collected the 7th year of post-treatment data at the Brown's Bench study site, the 6th year of post-treatment data at the Sheep Creek study site, the 5th year of post-treatment data at the Big Butte study site, and the 4th year of post-treatment data at the Pahsimeroi Valley site. We did not collect any data at the Jim Sage study site in 2022.

PUBLICATIONS or OUTPUTS: Data collection will continue for 2023, the final year of the project.