**Repeated herbicide use causes greater changes in rangeland biodiversity and function than the invader**

Erin Malis, Bobbi Helgason, John Paul Wasan, Lysandra Pyle, Jonathan Bennett

**Data Files**

Malis et al. Plant Cover

* Plant species composition and cover for 2020, 2021, and 2022
* Sum cover of native grasses, exotic grass, forbs and shrubs for 2020, 2021, and 2022
* Broadleaf species richness for 2020, 2021, and 2022
* Biomass data for grass, forbs, shrubs and leafy spurge in 2020 and 2021.
* Leafy spurge stem density for 2020, 2021, and 2022.

Malis et al. PLFA Abundance

* Phospholipid fatty acid analysis (PLFA) abundance (nmolg-) data for general, gram positive, and gram negative bacteria, actinobacteria, fungi, AMF, two bacterial stress indicators, and total PLFA abundance for 2020 and 2021.

Malis et al. PLFA community structure

* Microbial biomarkers (mol%) from PLFA to represent microbial composition for 2020 and 2021.

Malis et al. Soil Nutrients

* Data for total carbon and nitrogen, inorganic nitrogen (NO3- & NH4+), and water extractable organic carbon (WEOC) for 2020 and 2021.