
**** EFFECTS OF LIVESTOCK GRAZING MANAGEMENT ON GRASSLAND
BIRD ABUNDANCE IN THE NORTHERN MIXED-GRASS PRAIRIE
(POSTER)**

Skyler T. Vold*, Department of Animal and Range Sciences, Montana State University, Bozeman
Lance B. McNew, Department of Animal and Range Sciences, Montana State University, Bozeman
Lorelle I. Berkeley, Montana Fish Wildlife and Parks, Helena

Grassland bird populations have been declining throughout a majority of their range in the United States and Canada over the past 40 years, and currently have the most accelerated declines of any guild of terrestrial birds in this region. Rangelands used for domestic cattle grazing are important for maintaining large tracts of native grassland that may otherwise be converted to agricultural use or other human development. In addition, grassland birds respond well to livestock grazing systems that increase habitat heterogeneity by mimicking

historic grassland disturbance, such as fire and bison grazing. Montana Department of Fish, Wildlife, and Parks (FWP) implements a rest-rotation grazing system within conservation easements to increase structural heterogeneity of grassland vegetation on the landscape. However, the rest-rotation grazing system administered by Montana FWP was developed for more arid, bunchgrass-dominated rangelands and has not been evaluated as a management tool for creating structurally diverse wildlife habitat in the northern mixed-grass prairie. This study examines the effect of a rest-rotation grazing system on breeding season habitat selection and abundance of four native grassland songbird species, Baird's sparrow (*Ammodramus bairdii*), grasshopper sparrow (*Ammodramus savannarum*), vesper sparrow (*Pooecetes gramineus*), and western meadowlark (*Sturnella neglecta*), relative to traditional season-long or rotational grazing systems on a Montana FWP conservation easement in eastern Montana. Our objectives for the study are: 1) evaluate how abundance and space-use of four focal grassland bird species are affected by grazing treatment; 2) estimate the importance of habitat and vegetation characteristics for focal species within pasture treatments; 3) offer management recommendations to agencies and private landowners for improving grassland bird abundance and habitat quality.