Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Fergus Triangle Prescribed Burn Assessment

Discipline: Natural
Type of Project: Technical Assistance/Research
Funding Agency: Bureau of Land Management
Other Partners/Cooperators: Montana State University
Student Participation:
Effective Dates: 9/01/2016 - 08/31/2021
Funding Amount: $ 109,971.00

Investigators and Agency Representative:
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Project Abstract: Objective(s): This project will support an increased public knowledge for fire management of forested conifer breaks, upland and riparian habitats. Multiple prescribed burns over the last decade on nearly 20,000 acres under various conditions has resulted in a wide range of habitat changes. Additional research on prescribed fires, wildfires and desired habitat conditions would support fi re management across all ownerships (BLM, FWS, State and Private) in the Missouri and Musselshell Breaks. Additional research would also support understanding of the physical processes that link plant composition and density to groundwater levels and surface water discharge. Further 1ore, the non-linear relationship between tree density and hydro logic response indicates that there may be more complicated & an interrelated biotic/abiotic process that influences the relationship between tree density and hydro logic response. A mechanistic understanding of these eco-hydrologic processes could improve forest, riparian-wetland, and water resource management by informing site selection and treatment decisions. Consequently, a study that relates the biotic/abiotic processes associated with stand density to specific hydrologic pathway would improve upon previous studies and help land managers to improve the efficiency and productivity of forest management treatments.

Keywords: Fergus Triangle, prescribed burn, assessment, BLM, Montana State University