Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Utilizing a Geospatial Framework to Delineate the Extent and Timing of Drought Related Impacts in Semi-Arid Woodland Ecosystems

Discipline: Natural
Type of Project: Technical Assistance
Funding Agency: USGS
Other Partners/Cooperators: Colorado State University
Effective Dates: 9/1/2014 – 8/31/2019
Funding Amount: $7,000

Investigators and Agency Representative:
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Project Abstract: The goal of this project is to develop a geospatial modeling framework to enable quantitative investigation of the long term dynamics and persistence of dominant woodland three species, directly assisting managers in prioritizing limited resources for conservation and management. The modeling framework will serve as a long-term monitoring tool to understand the extent, timing and impact of drought on woodland productivity. Given the availability of satellite imagery this modeling framework could be transported, modified, and applied to similar ecosystems through the western US. The results of this assessment can be used to identify ecosystem response to disturbance and climate variability, and to contribute to the literature of recent ecosystem change.

Specific objectives are to:

1) Map the extent of deciduous and conifer forest type in the study area.

2) Establish seasonal phenology of semi-arid woodlands.

3) Estimate drought impact on woodland canopy productivity on an interannual time-scale.

Outcomes with completions dates: August 31, 2019

Keywords: a geospatial modeling framework, semi-arid woodland, management, conservation, USGS, Colorado State University