

## School of Natural Resources and the Environment

Seminar Series: Fall 2018

### DRYLAND RESPONSES TO GLOBAL CHANGE: A BIOGEOCHEMICAL PERSPECTIVE FROM A WOMAN IN SCIENCE

SPEAKER: **Sasha C. Reed**, *US Geological  
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DATE: **Wednesday, October 24th, 2018**

TIME: **3:00-4:00 pm**

LOCATION: **ENR2, Room S107**



**ABSTRACT:** Dryland ecosystems represent our planet's largest biome and are home to billions of people, yet, our understanding of the importance of drylands in global functions and climate feedbacks is still relatively poor. Further, while we know arid and semiarid ecosystems can be affected by a host of anthropogenic changes – such as climate change, increasing atmospheric CO<sub>2</sub> concentrations, land use change, and nutrient deposition – a synthetic understanding of the mechanisms and larger-scale consequences of these changes remains elusive. In this talk, I will use a biogeochemical lens to examine how dryland plants and soils are affecting and affected by environmental change. I will address questions of how drylands work and how they are responding to our rapidly changing world, covering topics such as drought and temperature effects in warm biomes, the potential for mass mortality events, unexpected consequences of nitrogen deposition, and emerging tools to support improved understanding and decision making. I hope to leave you with a biogeochemical appreciation for the importance and complicated connections of these spectacular, dynamic, and dry systems. I will also discuss my experience as a woman in federal science, including sharing my work on federal task forces to retain women at all levels and to reduce occurrences of harassment and exclusion. I will end with suggestions for our next generation of scientists as they build their community of practice.