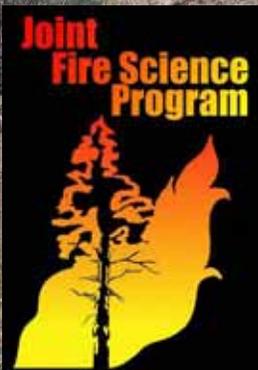


Issues, Concerns, and Challenges Related to Fire In Intermountain Sagebrush

Rick Miller, Professor Emeritus Oregon State University

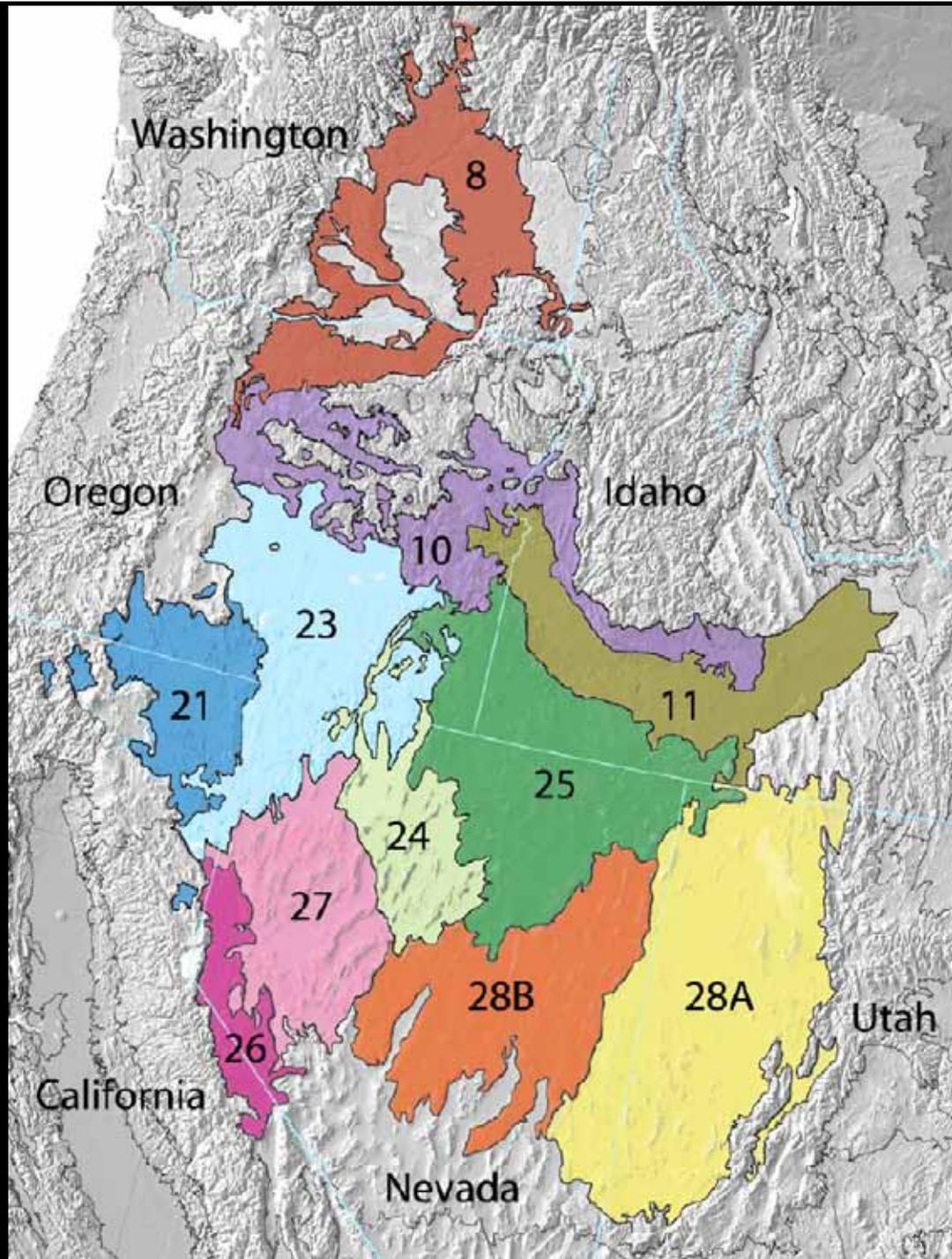




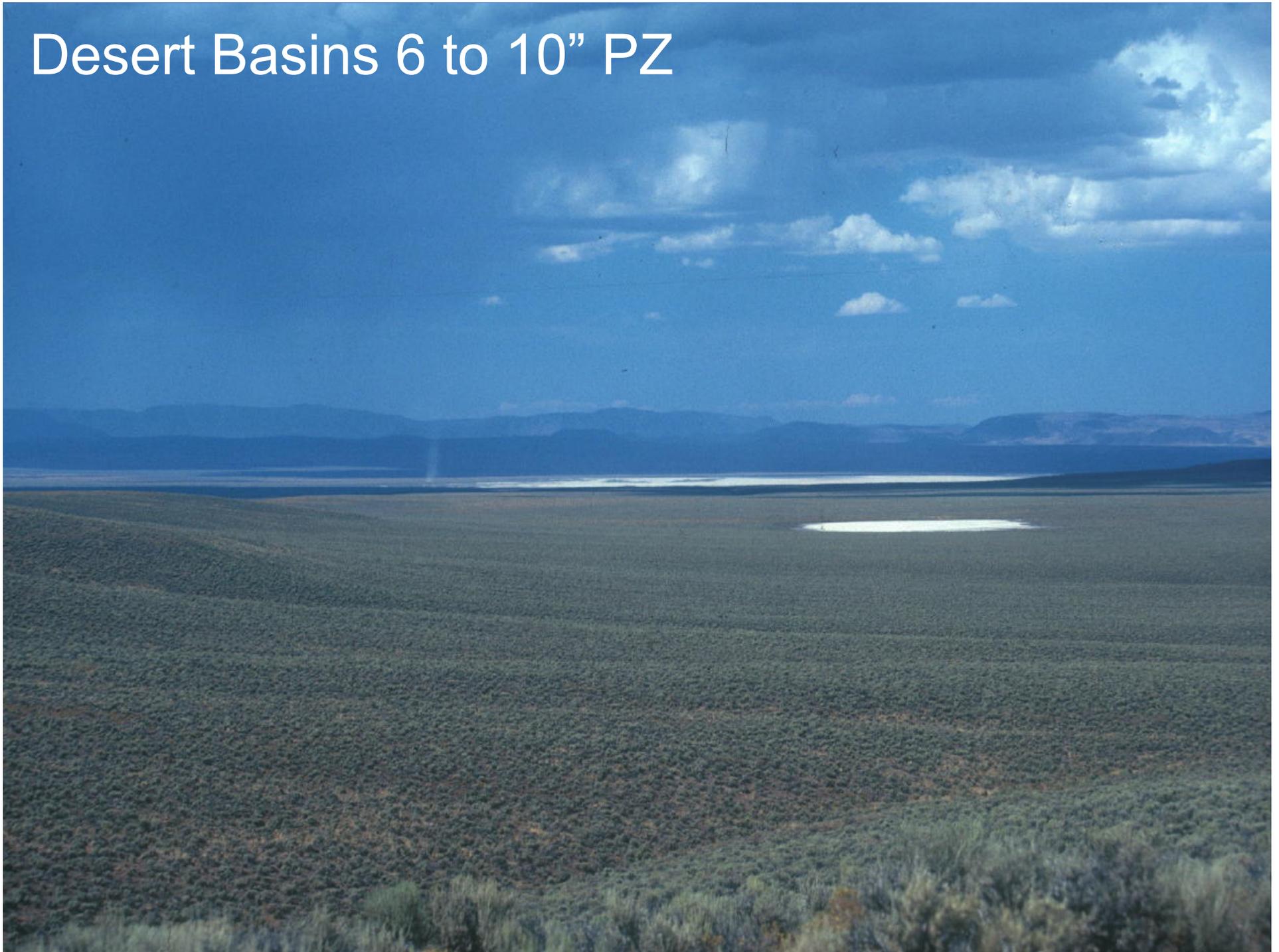
Intermountain Sagebrush-steppe, is a semi-arid region composed of highly complex landscapes that vary in both time and space and are constantly impacted by the intertwining of natural and human caused disturbances.

Intermountain Sagebrush Region

200,000 mi²



Desert Basins 6 to 10" PZ



Mid elevations 10 to 14" PZ



Sagebrush Desert Mountains

Upper elevations > 16" PZ



Pinyon and Juniper Woodlands



Weeds *(annual grasses)*

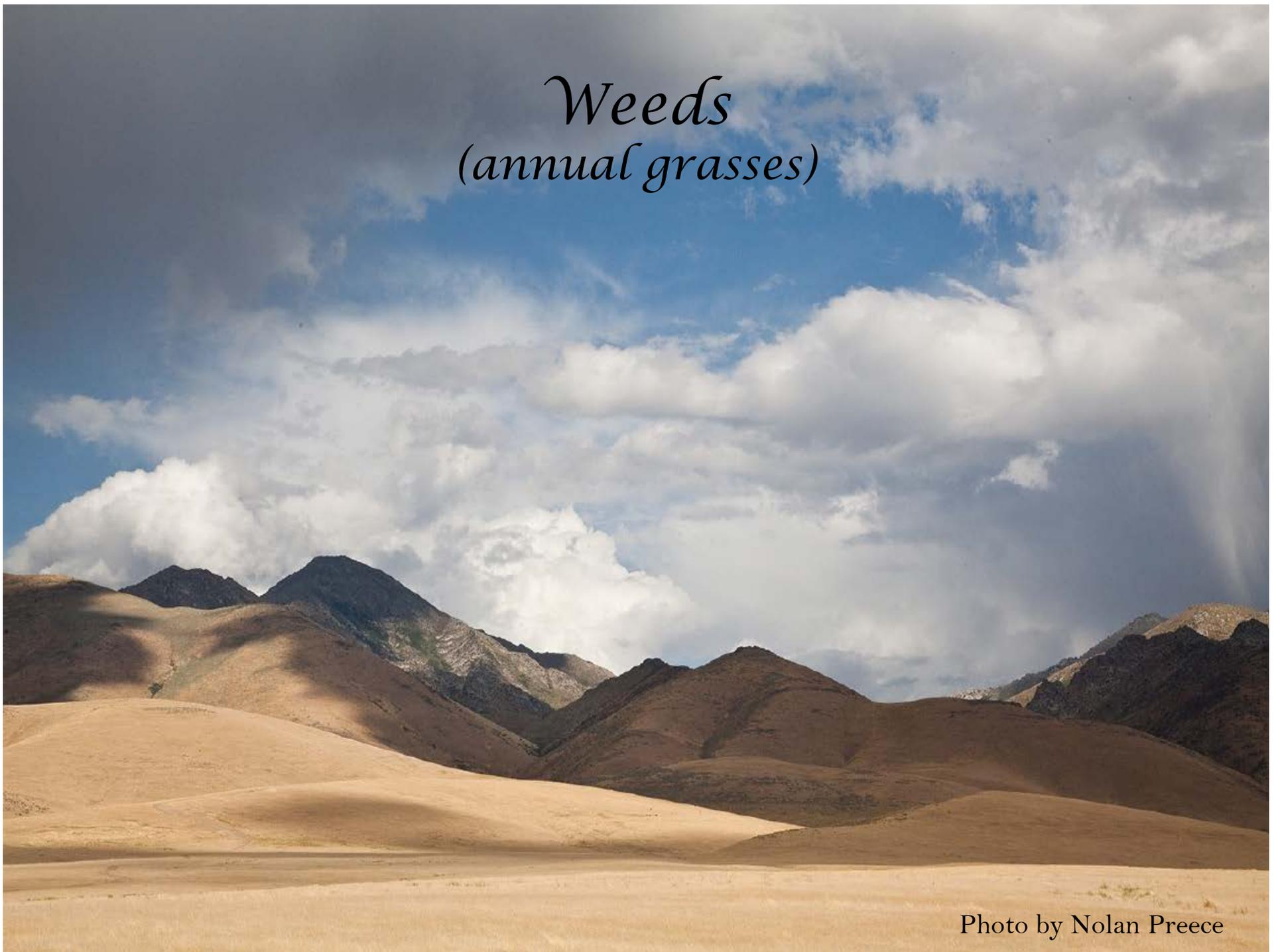


Photo by Nolan Preece

What is the general condition and status of the Great Basin's sagebrush-steppe ecosystem?



“One of the most endangered ecosystems in the United States”, Noss et al. 1995

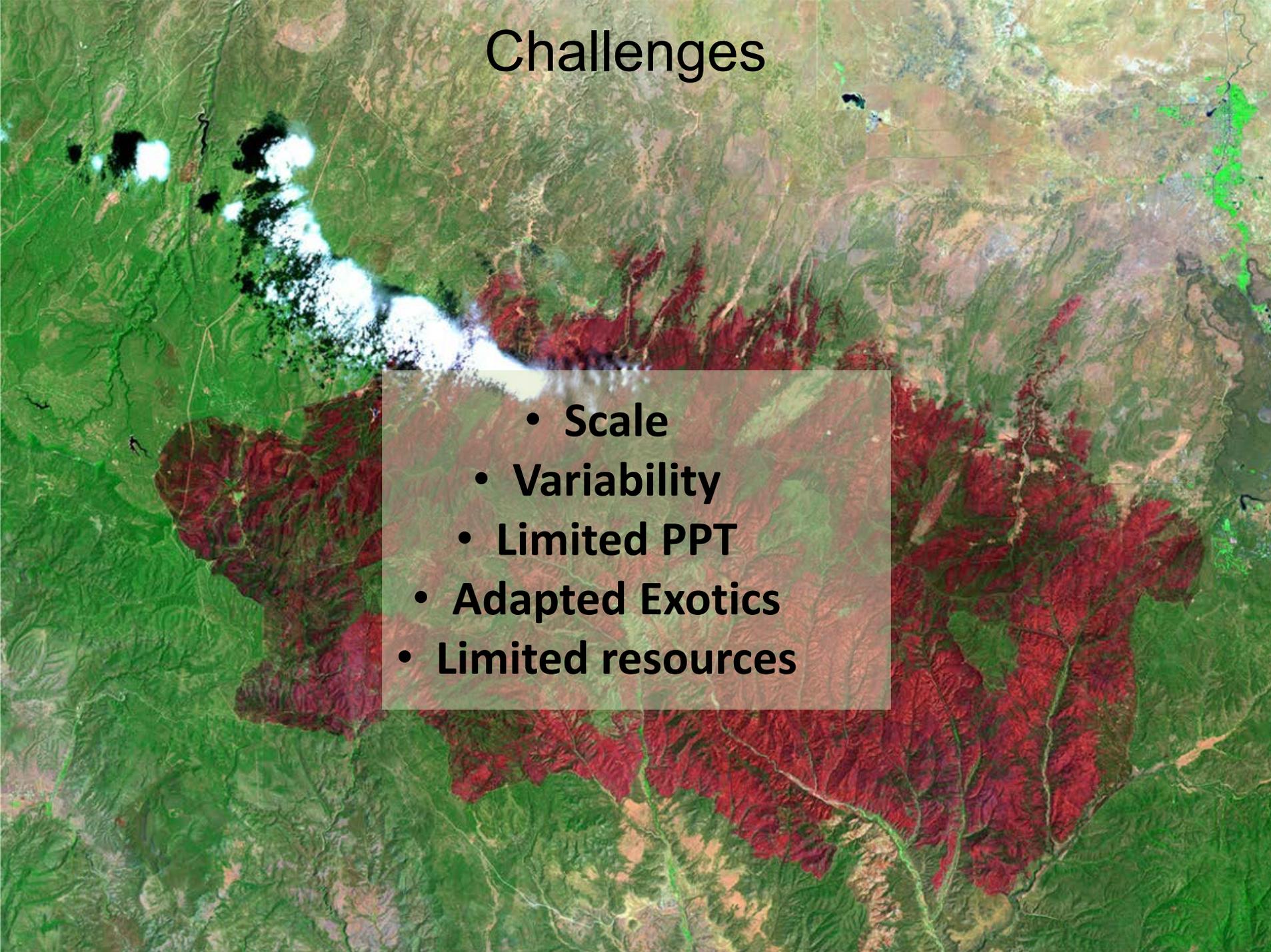




Key Issues

- Weed & woodland encroachment
- Grazing
- Habitat loss
- Watershed
- Restoration
- Climate Change

Challenges

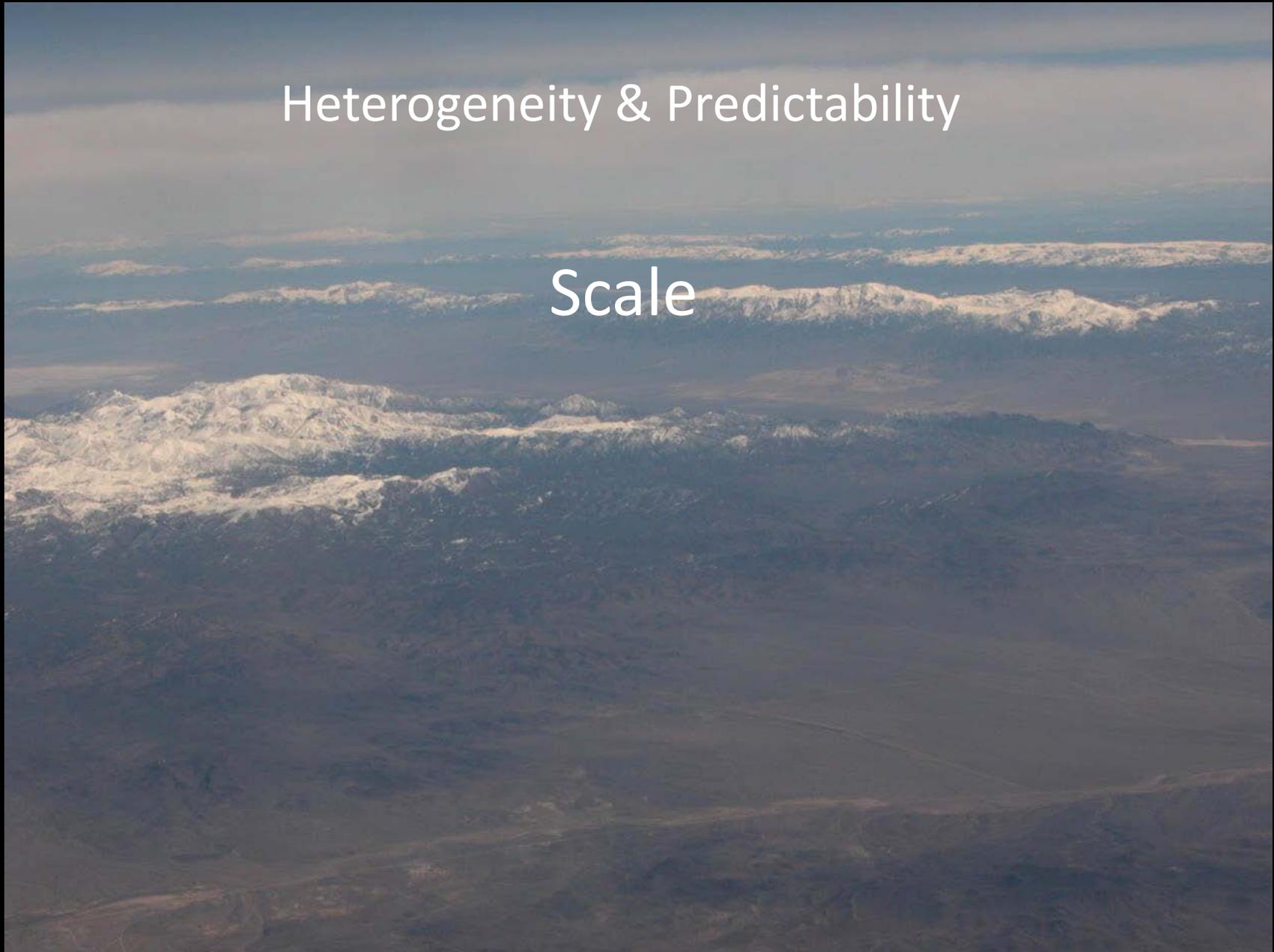


- **Scale**
- **Variability**
- **Limited PPT**
- **Adapted Exotics**
- **Limited resources**

Environmental Gradients

Heterogeneity & Predictability

Scale



Scale

Buzzard Complex Fire = 400,000+ acres



Fire effects in the future?

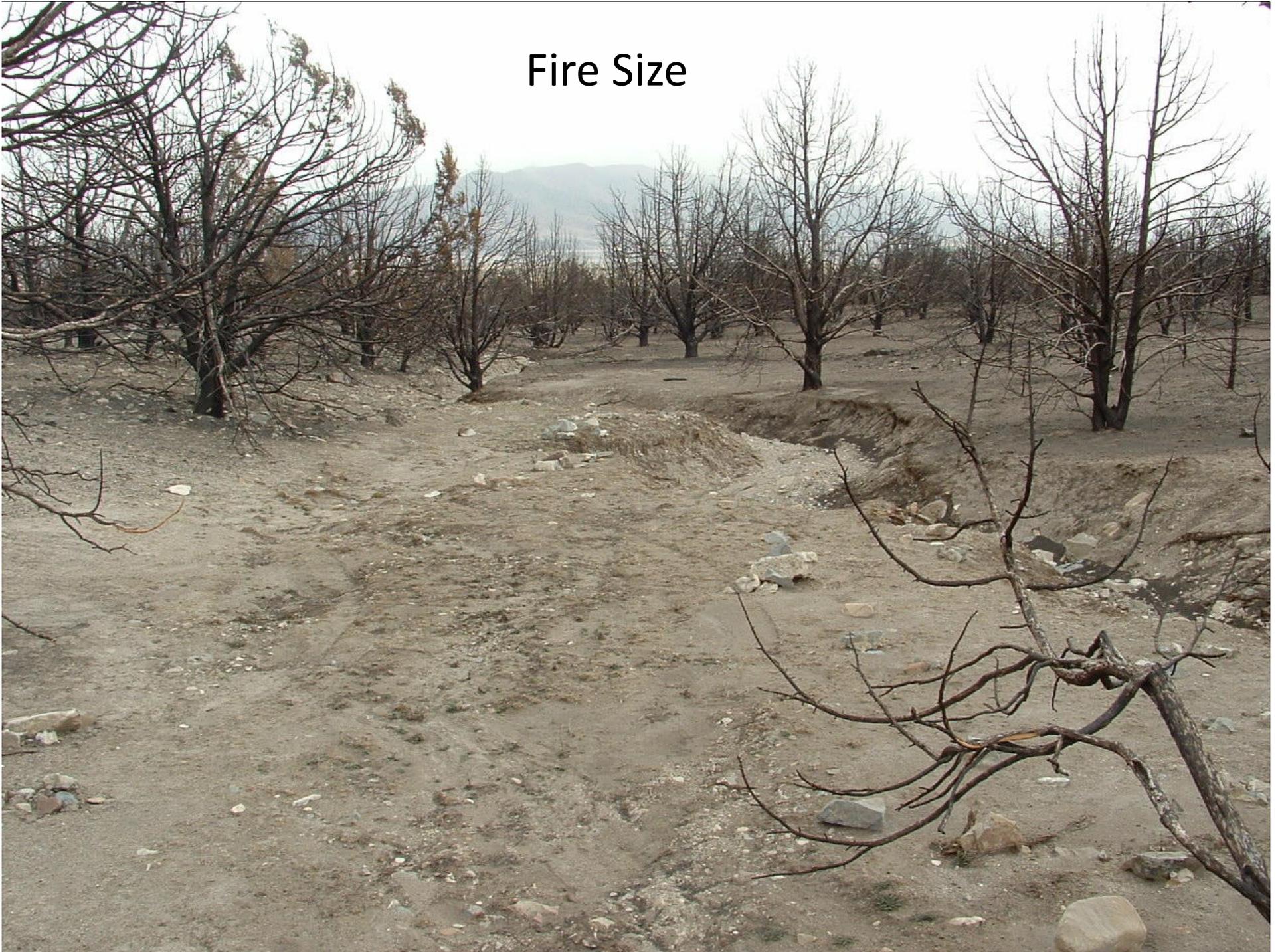


2009 Year-3





Fire Size



New Steady States?



Species of Concern/Habitat Loss



Avian Photos by: Peter LaTourrette

Post-Fire Grazing



Restoration

Crested Wheatgrass



Natives



Climate Change & Fire

High

Recovery Potential

Low

North aspect

South aspect

modified by soils:
depth + texture + structure

Desert Basins

Cool Sagebrush

Cold Mt Shrub

Warm-Dry

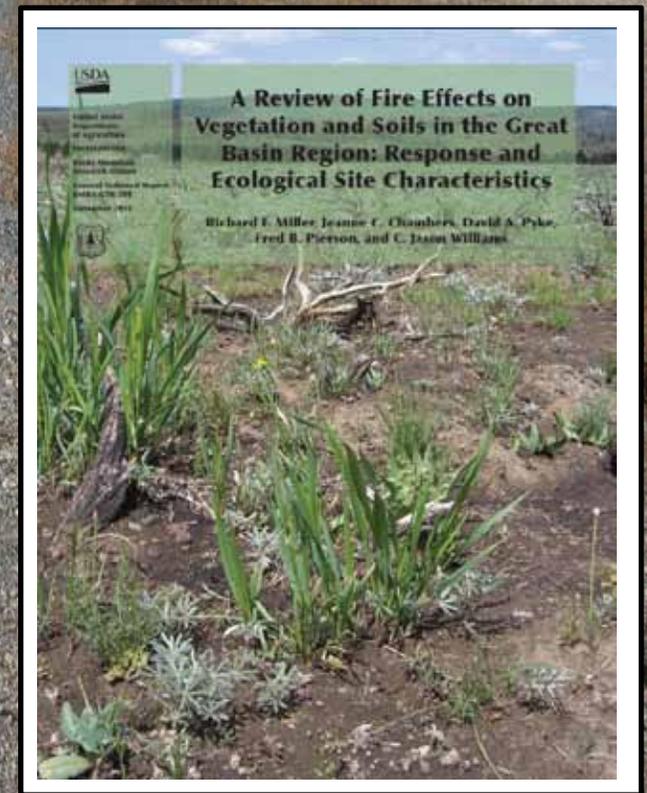
Cold-Moist

Elevation
Productivity



Science?

- Long-term measurements
- Conditions following the study
 - Repeated fires
 - Reseeding





Two new field guides including treatment area score sheets will be published this year:

Pre-treatment guide

A Field Guide for Selecting the Most Appropriate Treatment in Sagebrush and Piñon-Juniper Ecosystems in the Great Basin

Evaluating Resilience to Disturbance and Resistance to Invasive Annual Grasses
Predicting Vegetation Response

Richard F. Miller, Jeanne C. Chambers, and Mike

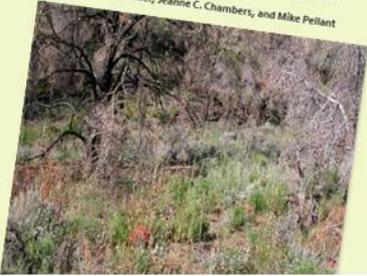


Post-fire guide

A Field Guide for Rapid Assessment of Post-Wildfire Recovery Potential in Sagebrush and Piñon-Juniper Ecosystems in the Great Basin

Evaluating Resilience to Disturbance and Resistance to Invasive Annual Grasses, and Predicting Vegetation Response

Richard F. Miller, Jeanne C. Chambers, and Mike Pellant



Sign up at this booth to receive these and other fire and fuels information from Great Basin Fire Science Delivery! www.gbfiresci.org