Wildfire in the Great Basin and Challenges for the Future
Dr. Rick Miller, Professor Emeritus of Range Ecology and Management, 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?
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Fire Size
New Steady States?
Species of Concern/Habitat Loss

Avian Photos by: Peter LaTourrette

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Post-Fire Grazing
Restoration

Crested Wheatgrass

Natives
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Recovery Potential

- Warm-Dry
- Cool Sagebrush
- Cold Mt Shrub

Elevation Productivity

- Low
- High

Modified by soils: depth + texture + structure

Climate Change & Fire

North aspect

South aspect
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, Resistance to Invasive Annual Grasses, and Predicting Vegetation Response

Richard F. Miller, Jeanne C. Chamberlin, and Mike Potter

**Post-fire guide**


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

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Sign up at this booth to receive these and other fire and fuels information from Great Basin Fire Science Delivery! [www.gbfiresci.org](http://www.gbfiresci.org)