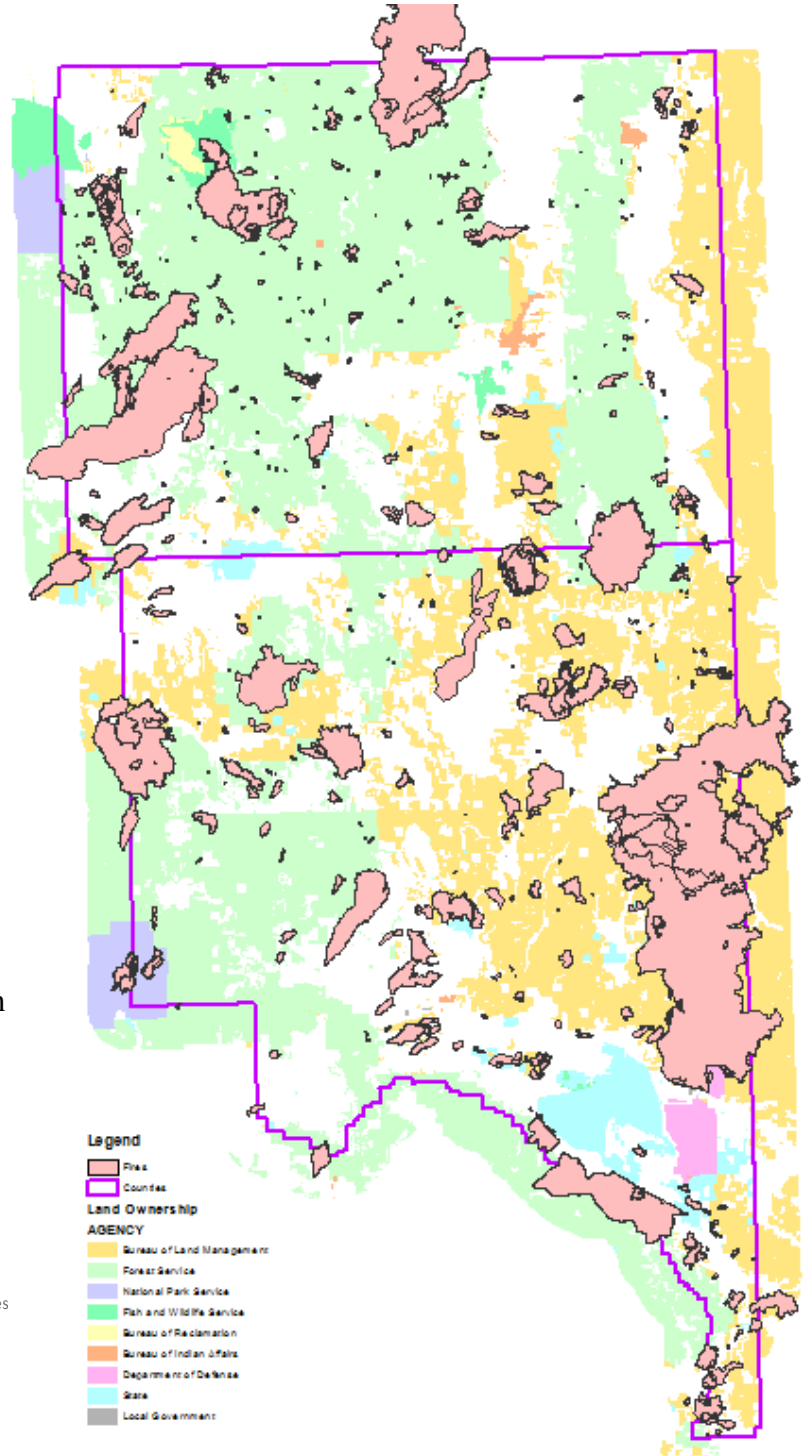


Fire History of Lassen and Modoc Counties

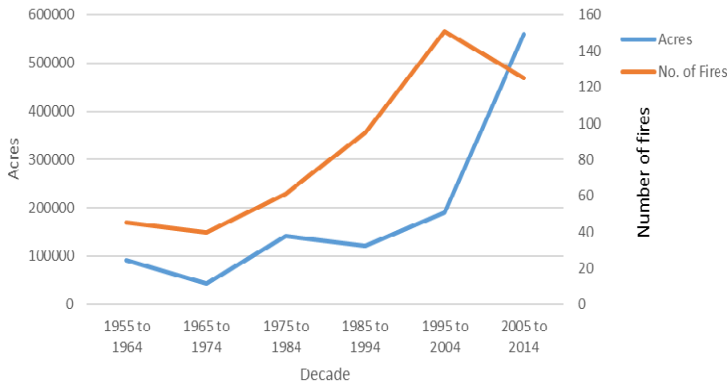
The frequency and severity of wildfires is increasing, and given current heavy fuel loads compounded by drought and climate change, such trends are expected to continue. In recent years there have been several large wildfires impacting public grazing allotments administered by the US Forest Service (USFS) and US Bureau of Land Management (BLM).

A typical current approach to post-wildfire grazing policy is to issue a blanket requirement for 2 years of complete rest from grazing (BLM, 1999) following the burn. Some have argued for longer rest time frames (up to 10 years), while some argue for no rest to reduce weed invasion and suppress fuel accrual. However, there is little to no scientific data to support either proposal (Kern, 2011; Roselle, 2010; Bruce et al, 2007). Some research has been conducted on grazing after relatively low severity, prescribed fire (Bates et al, 2014; Kern, 2011), but little research has addressed grazing impacts after wildfire. Wildfires commonly burn with much greater severity and during different seasons compared to managed prescribed fires (Bruce et al, 2007). There are likely fundamental short and long-term trade-offs between the decision to graze versus rest that policy makers and managers must consider (Roselle, 2010).

Successful post-wildfire recovery of rangeland health is based heavily on reestablishment of desirable native plant communities (e.g., native perennial grasses), which in-turn provide the basis for a number of ecosystem services, including forage, habitat, resistance to weed invasion, soil stability and hydrologic function.



Fires in Lassen and Modoc Counties
1955-2014



Bates, J. D. and K. W. Davies. 2014. Cattle grazing and vegetation succession in burned sagebrush steppe. *Rangeland Ecology and Management* 67:412-422.

BLM. 1999. Emergency fire rehabilitation handbook. BLM Manual, US Bureau of Land Management, Washington, DC.

Bruce, L. B., B. Perryman, K. Conley, and K. McAdoo. 2007. Grazing management on seeded and unseeded post-fire public rangelands. *Professional Animal Scientist* 23:285-290.

Kern, B. K., M. Buonopane, W. G. Thies, and C. Niwa. 2011. Reintroducing fire into a ponderosa pine forest with and without cattle grazing: understory vegetation response. *Ecosphere* 2.

Roselle, L., S. S. Seefeldt, and K. Launchbaugh. 2010. Delaying sheep grazing after wildfire in sagebrush steppe may

Post Fire Research

Not much research has been done on the effects of grazing post-fire. Since 1900, there have been 12 peer reviewed papers on wildfire and grazing. None of these studies have been conducted in California and most are at scales inappropriate to management.

This year, UCCE in collaboration with BLM and USFS have begun a study that will try to answer some of the questions land owners and managers have about this issue.

Objectives:

- Develop key indicators to assess rangeland readiness following wildfire
- Survey existing wildfire burned areas to estimate recovery trajectories
- Establish long-term study sites in new wildfire areas to directly measure site-specific trends

We have selected sites on 26 fires in northeast California that have occurred within the last 15 years. After avoiding seeded or salvage logged areas, unburned areas, and overlapping fires, we took into account:

- 1) Year from fire (1-5, 6-10, 1-15 years)
- 2) Grazing management (rest, regular grazing)
- 3) Fire intensity (low, moderate-high)
- 4) Resistance/resilience (3 classes)
- 5) Broad vegetation communities (scrub, forest)

The project currently includes 160 sites, 24 of these being long term monitoring sites on recent fires, specifically the Dodge, Frog, and Bald fires. There are 6 monitoring sites on the Blue fire. This research is funded by the Russell L. Rustici Rangeland and Cattle Research

For Additional Information:

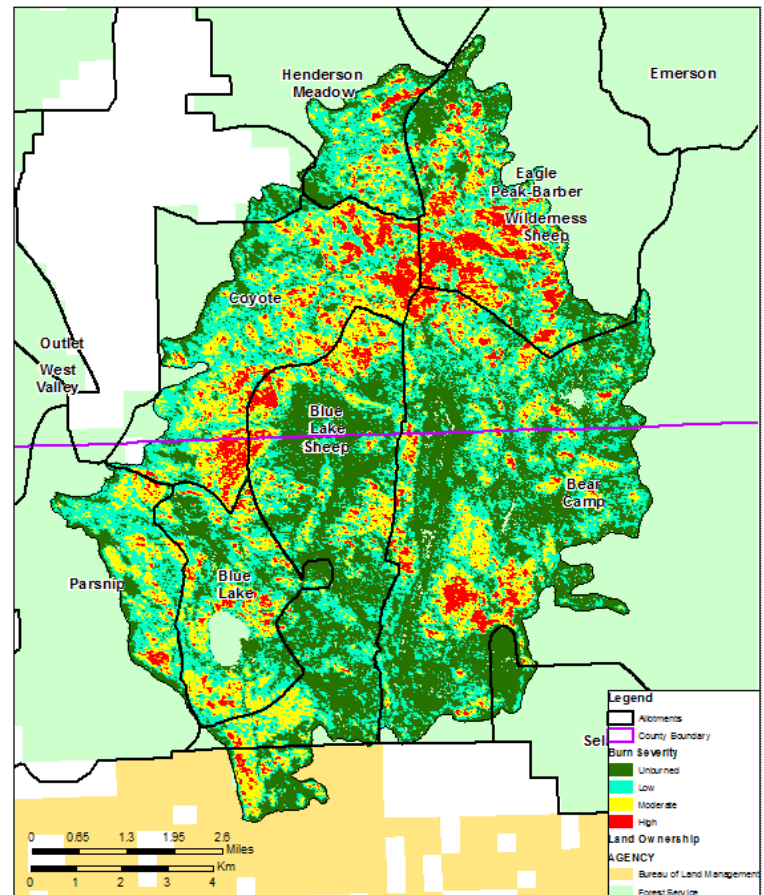
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Blue Fire Burn Severity



Blue Fire Facts

In 2001, the Blue fire burned a total of 34,425 acres affecting USFS, BLM, and private land in Modoc and Lassen Counties.

The fire affected 8 allotments in the Warner Mountain Range District. 68% of the fire was moderate to high severity resulting in a stand replacing event where 75% or more of the basal area was killed. Standing dead trees were expected to stand for 15-25 years and would contribute 108 tons of fuel to the forest floor.

The Blue Fire Recovery Project Environmental Impact Statement (EIS) was completed January 2003.

