Lick Creek Demonstration-Research Forest: 25-year fire and cutting effects on vegetation and fuels

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INTRODUCTION

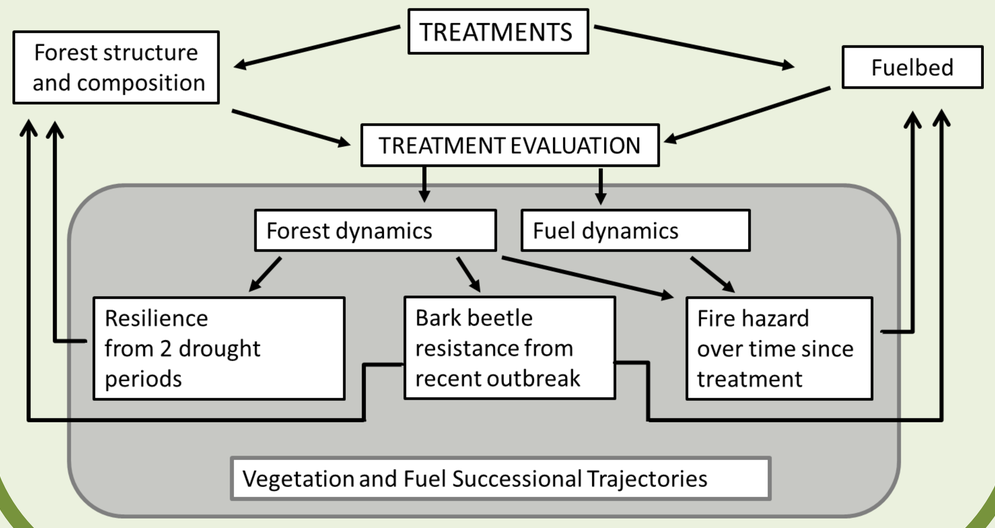
Knowledge of forest vegetation and fuel dynamics following restoration treatments is essential for managers to understand and prescribe treatments. However, studies of long-term treatment effects in ponderosa pine forests of the Northern Rockies are limited. We are renewing research at the Lick Creek Demonstration/Research Forest on the Bitterroot National Forest, Montana to assess 25-year-effects of burning and cutting restoration treatments in a ponderosa pine-dominated forest. In addition, this area has a photo-series dating from 1909.

OBJECTIVES

(1) How have restoration burning and cutting treatments affected vegetation dynamics?

(2) How have restoration burning and cutting treatments affected fuel dynamics?

(3) How have restoration burning and cutting treatments affected ponderosa pine forest resilience to drought, fire hazard, and mountain pine beetles?



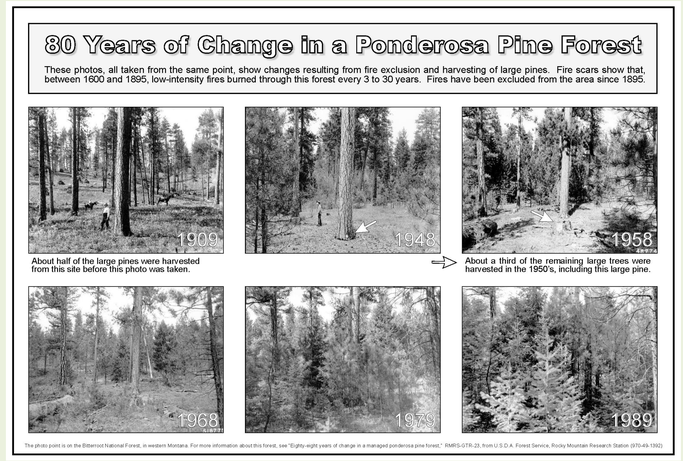
ANTICIPATED PRODUCTS:

(1) Complete 25-year (1991-2016) effects of seven silvicultural cutting and burning treatments on fuels and vegetation

(2) Archived FFI database

(3) Demonstration site

(4) Updated photo-history of the effects of fire exclusion and restoration treatments from 1909 – 2016.



TREATMENTS

- Control
- Shelterwood
- Shelterwood + wet prescribed burn
- Shelterwood + dry prescribed burn
- Commercial thin
- Thin + Fall prescribed burn
- Thin + Spring prescribed burn

Shelterwood + wet prescribed burn treatment 24 years later.

IMPLICATIONS

This project will provide land managers with long-term effects of restoration treatments in Northern Rockies ponderosa pine /Douglas-fir forest to help guide future forest restoration efforts, including:

- Treatment longevity
- Resilience to drought
- Resilience to bark beetles
- Fire Hazard
- Forest and fuel dynamics

Commercial thin + fall prescribed burn treatment 24 years later.