

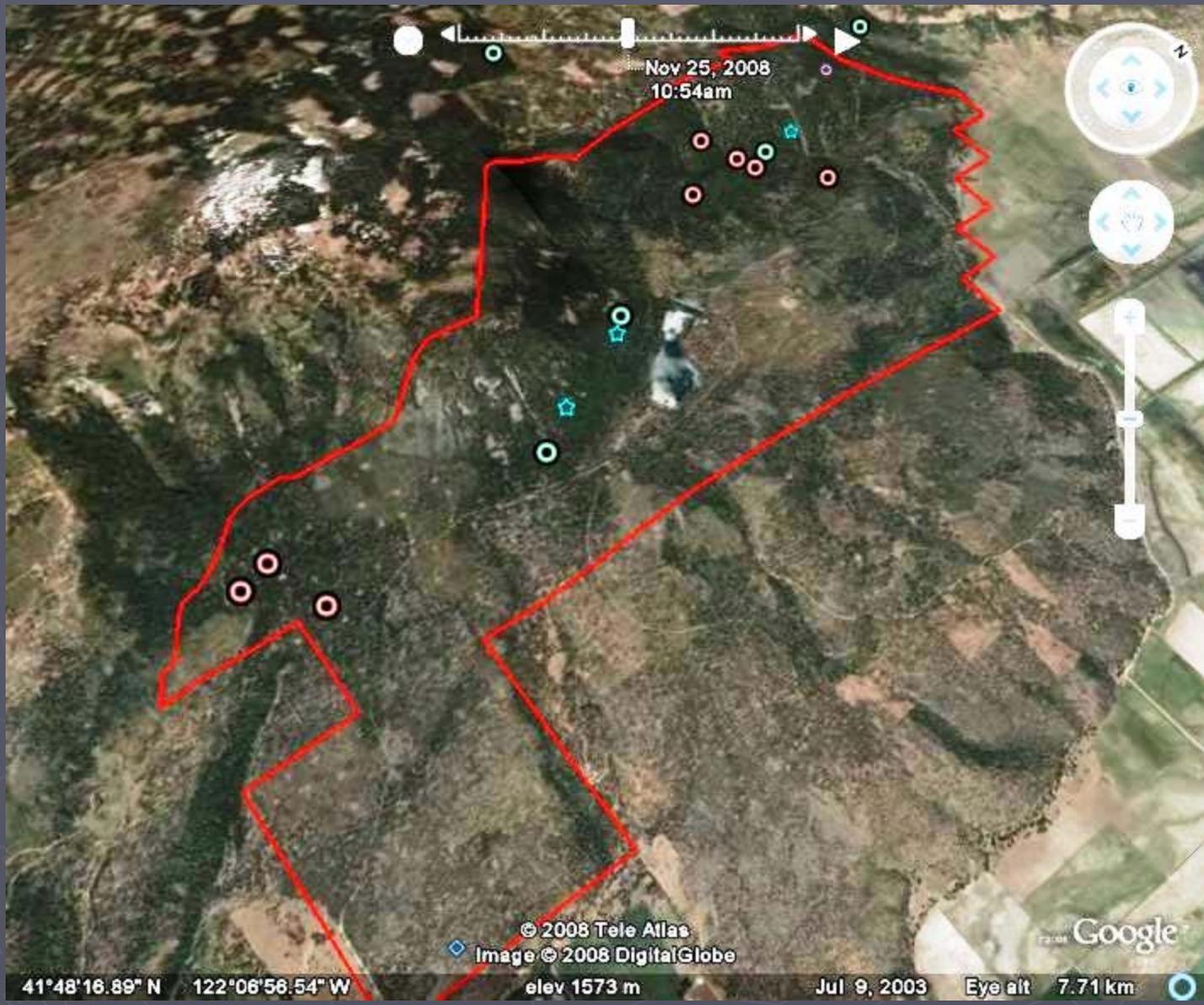
# Fuels Reduction and Wildlife Habitat Restoration in a Late Successional Reserve



Klamath National Forest, Goosenest Ranger District







# Background

- ▶ Gooseneck LSR Project conception early 1990s
- ▶ Habitat for listed species declining rapidly
- ▶ Conflicts with Critical Habitat Rx
- ▶ Collaboration with local FWS biologists





# Project objectives

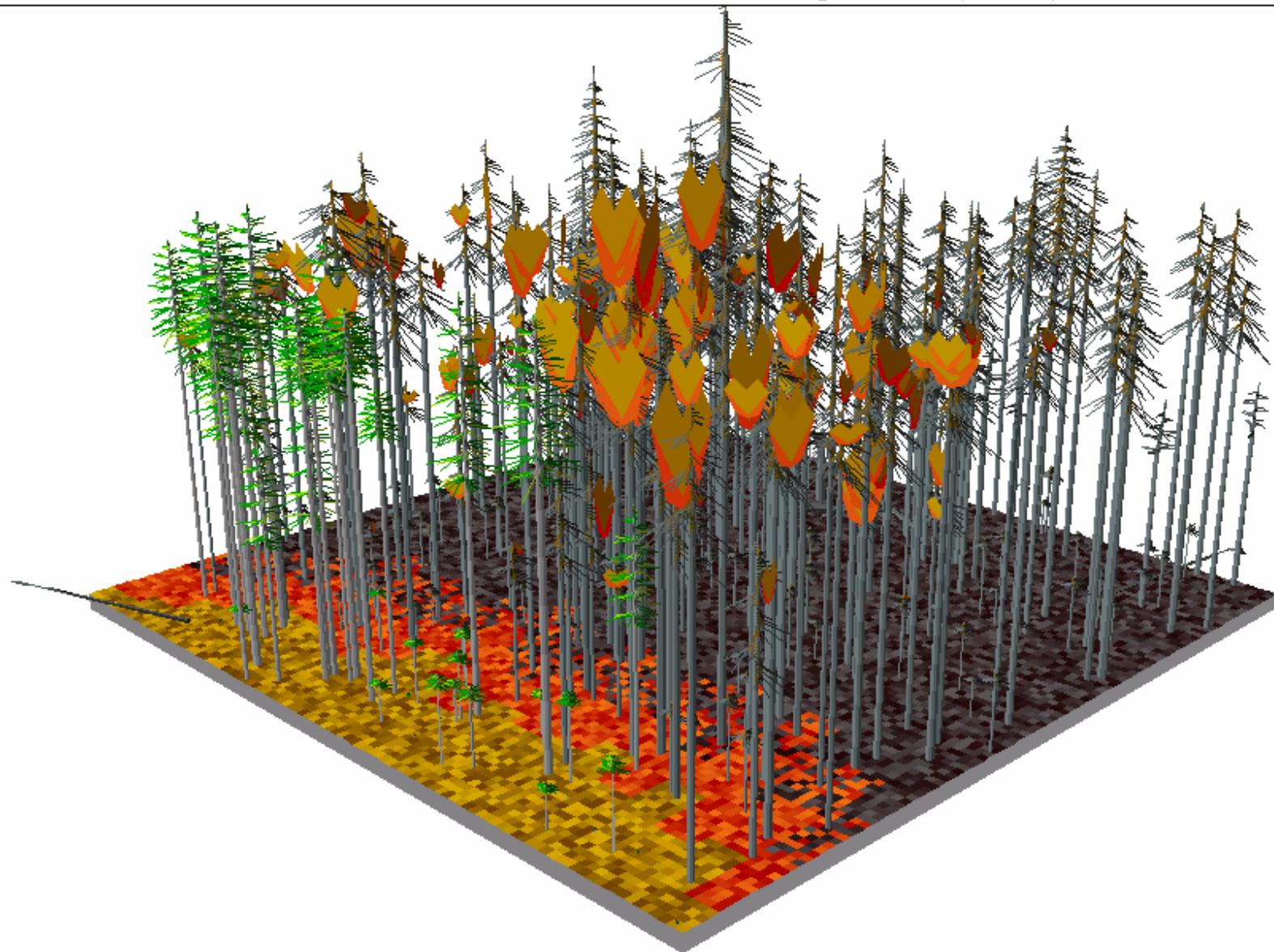
- ▶ Reduce fuel ladder and ground fuels
- ▶ Increase growth of large trees
- ▶ Develop large limb structure and long crowns
- ▶ Variable density stocking
- ▶ Decrease relative amount of white fir
- ▶ Reduce density related mortality
- ▶ Develop and maintain habitat



# Can't meet all objectives in each stand



Stand=7140904 Year=2005 During the fire (02/03)





Before Rx

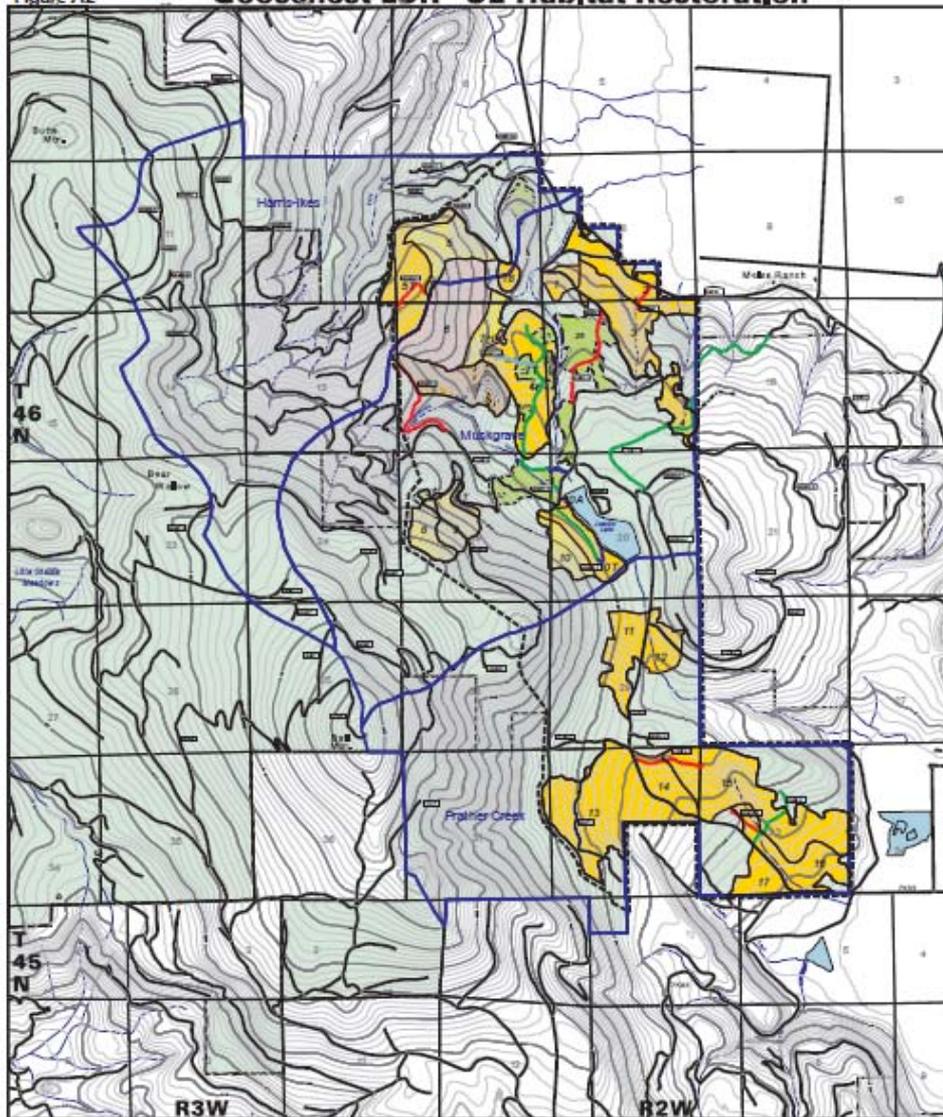


After Rx



Figure A2

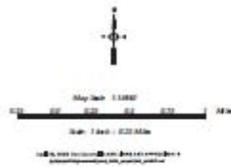
### Gooseneck LSR - SE Habitat Restoration



#### GOOSENECK RANGER DISTRICT KLAMATH NATIONAL FOREST

#### LEGEND

- Project Boundary
  - T16 Fuel Waterline Boundary
  - Other Ownership
  - LSR Boundary
  - T16 Tractor and Other Fuel Treatments
  - Small Fuel Treatment
  - T16 Helicopter and Other Fuel Treatments
  - Restoration T16 and Other Fuel Treatments
  - Special Habitat Area (SHE) for T16 Helicopter and Other Fuel Treatments
  - Waterline
- #### Transportation System
- Forest Service Road Number
  - County Road
  - Forest and Private Roads
  - Unimproved road, planned for improvement (used to general public after project ends)
  - Unimproved road, use as temporary road then decommission
  - Unimproved road, decommission
  - Road reconstruction, reconstruct intersection
  - New temporary road construction, use then decommission



Map Scale: 1:62,500  
Date: 7/2011





Take  
advantage of  
opportunities

Annosis  
pockets



# Examples of implementation issues



- 1) Implementing prescriptions in northern spotted owl habitat -1174 acres
- 2) Helicopter logging slash creation-450 acres

# Implementation

## Northern Spotted Owl Habitat



- ▶ Inherent conflicts in fuels reduction, forest health and wildlife habitat retention
- ▶ Collaboration between FWS, fuels specialists, wildlife biologists, silviculturists, and environmental groups

# Dry Forest vs Owl Habitat

- ▶ Conflicting resource objectives
  - Reducing stand density for tree vigor and growth
  - Maintaining owl habitat structure



# Short term vs long term

- ▶ Difficult to apply Rx meeting all objectives
- ▶ Units with conflict averaged 100 acres
- ▶ Variability in Rx essential



# Bald Eagle/NSO Habitat Helicopter Units

- Before logging-high levels of coarse woody debris



# Snags above Klamath NF Standard and Guidelines



# OSHA Guidelines

- ▶ OSHA requires snag removal before helicopter logging to protect employees from snags





**Dead legacy trees in eagle nest stand**

# Helicopter slash-post logging



# Helicopter generated slash



# Pre treatment slash



Photo  
Point  
5

# Post piling



Photo  
Point  
5

# Before logging, after and post piling

Before



After logging



After piling



# Nest core area-hand treatment only 38 acres



Pre



Post

# Goshawk Habitat Unit

## 261 acres





# Success

