Restoring Oak Resilience Through a Collaborative Cross Boundary All-Lands Initiative In Southern Oregon/Northern California

Oak Woodland Ecology and Management Symposium

November 12, 2015

Marko Bey- Executive Director, Lomakatsi Restoration Project

LOMAKATSI
RESTORATION PROJECT

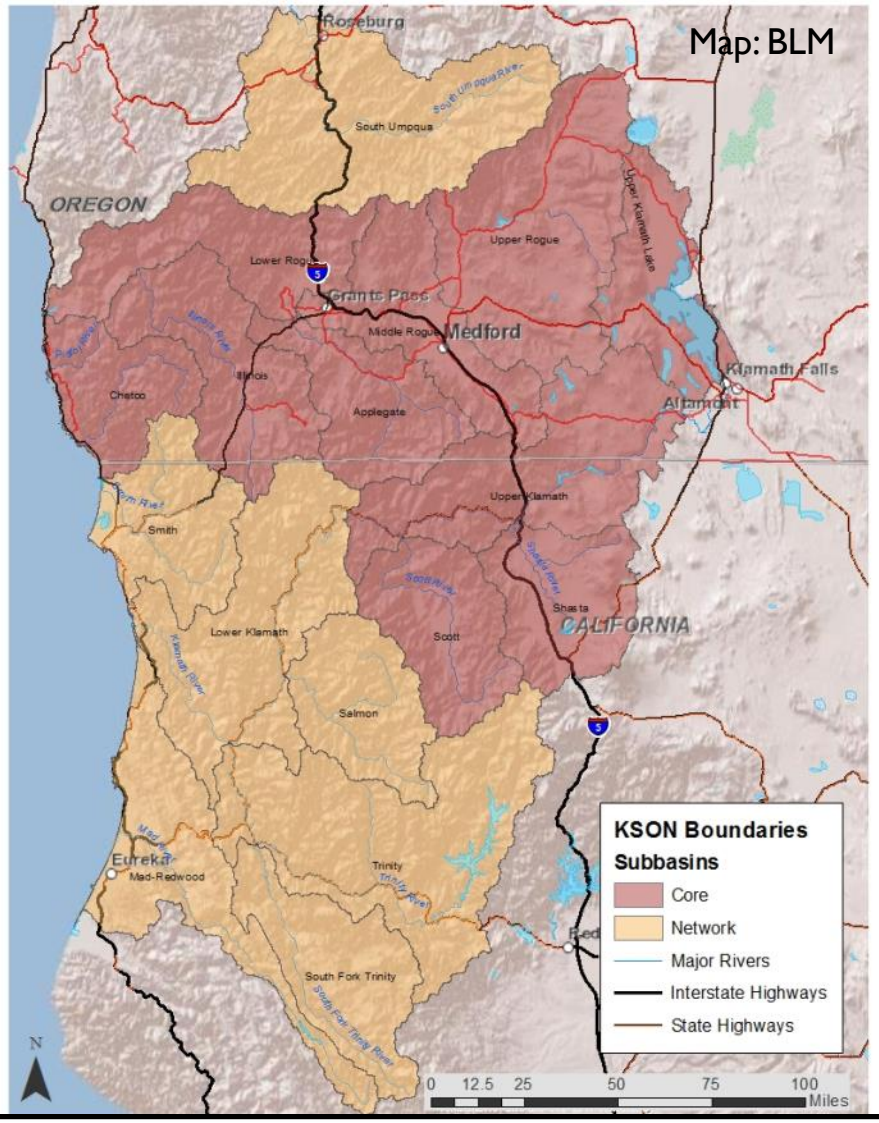
Restoring Ecosystems, Sustaining Communities

Klamath-Siskiyou Oak Network

Mission Statement

KSON is a collaborative regional partnership.

Our mission is to conserve oak habitats on private and public lands in southern Oregon and northern California.



Tribal Partners

CONFEDERATED TRIBES OF SILETZ INDIANS

THE CONFEDERATED TRIBES OF GRAND RONDE

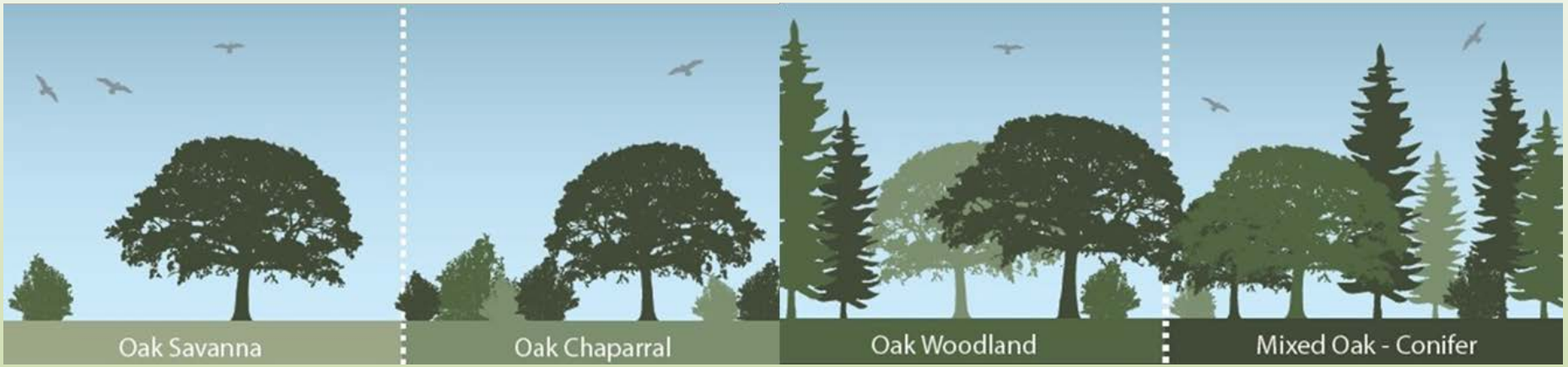
COW CREEK BAND OF UMPQUA TRIBE OF INDIANS 1853-1982

PIT RIVER TRIBE

THE KLAMATH TRIBES KLAMATH · MODOC · YAHOOSKIN

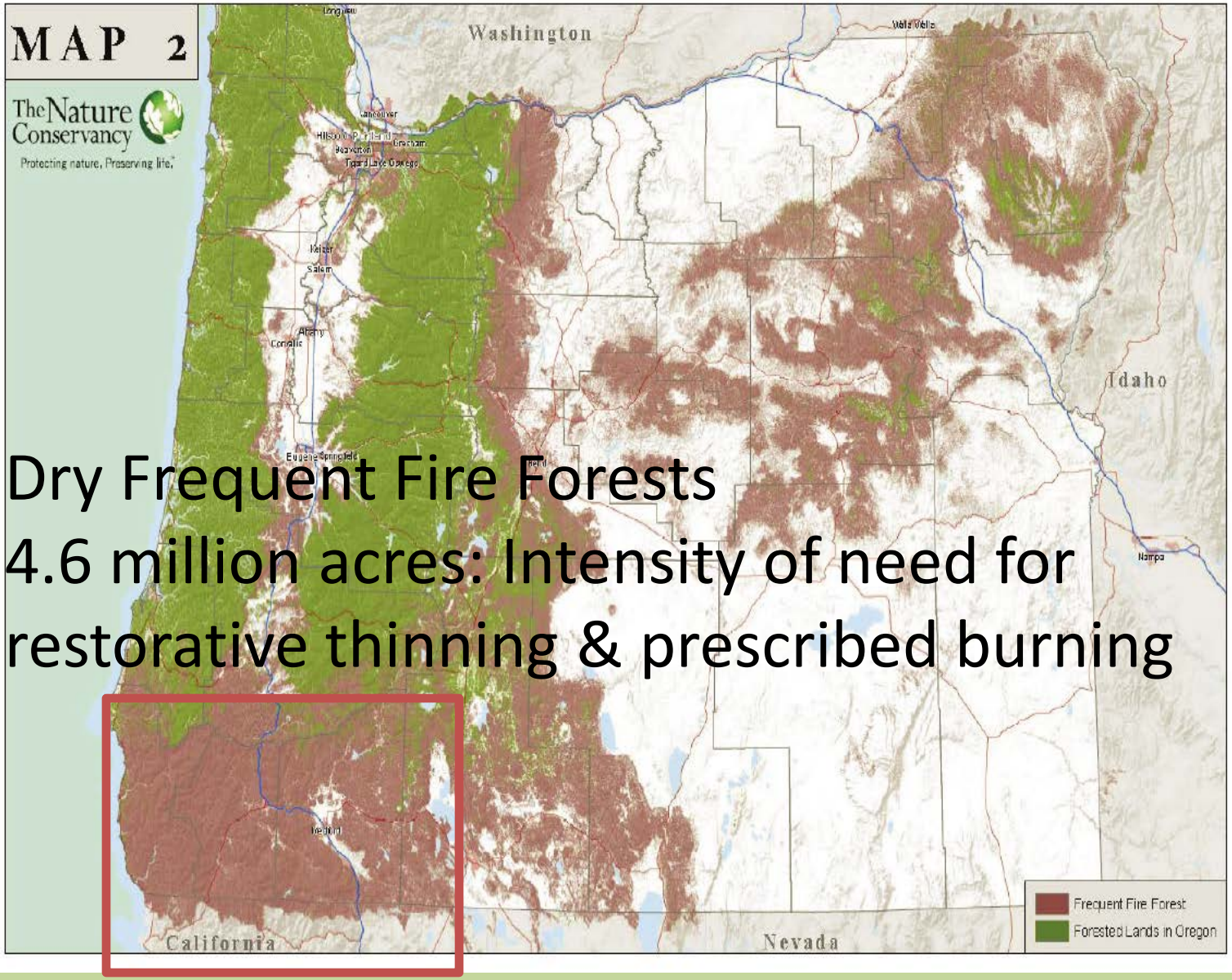
Oaks in the Klamath-Siskiyou

- Diversity of vegetation types, including woodland, chaparral, mixed oak/conifer.



Klamath Bird Observatory

Oaks in the Klamath-Siskiyou



Dry Frequent Fire Forests
4.6 million acres: Intensity of need for restorative thinning & prescribed burning

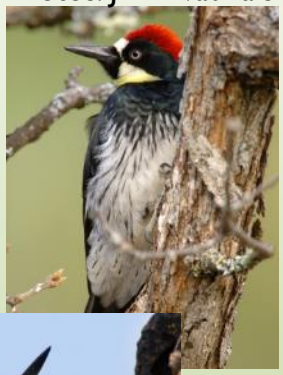
Oaks in the Klamath-Siskiyou

- Contain some of the most biodiverse habitat in southern Oregon and northern California (many endemic plants, >300 vertebrate species).
- Oak woodlands are an Oregon Conservation Strategy Habitat (ODFW 2006).

Photos: BLM.gov

Photo: backyardnature.net

Photos: Jim Livaudais



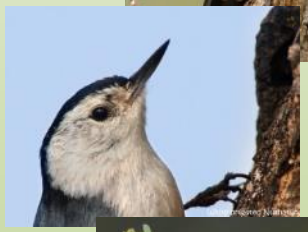
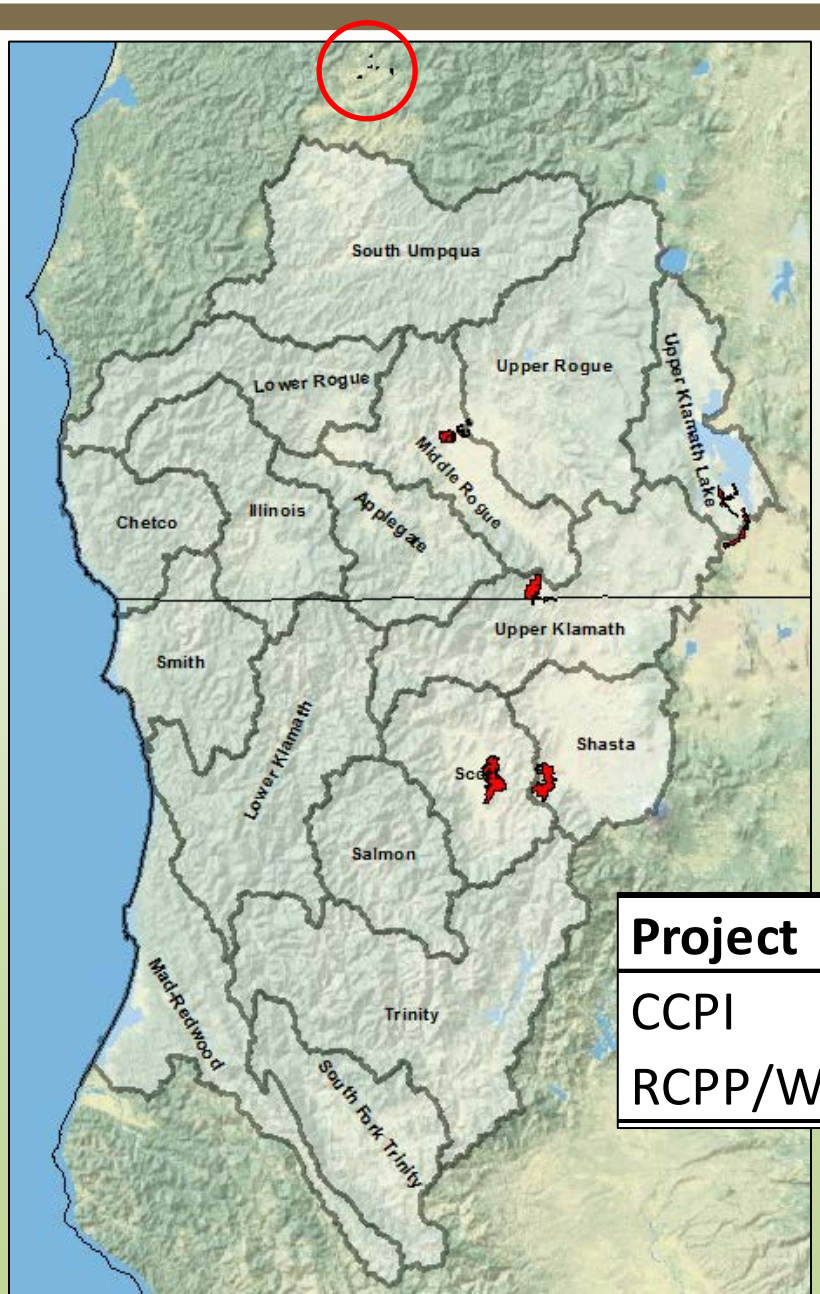


Photo: Kate Halstead

Photo: BLM.gov

Photo: wikipedia.org

Achievements: Oak Restoration Project Areas



KSON watersheds

KSON partner project areas

Project	Acres treated	Funds leveraged
CCPI	3,000	3,000,000
RCPP/WCS	3,400 (proposed)	4,650,000

Oak Restoration Implementation

1) Thinning, Weed Control

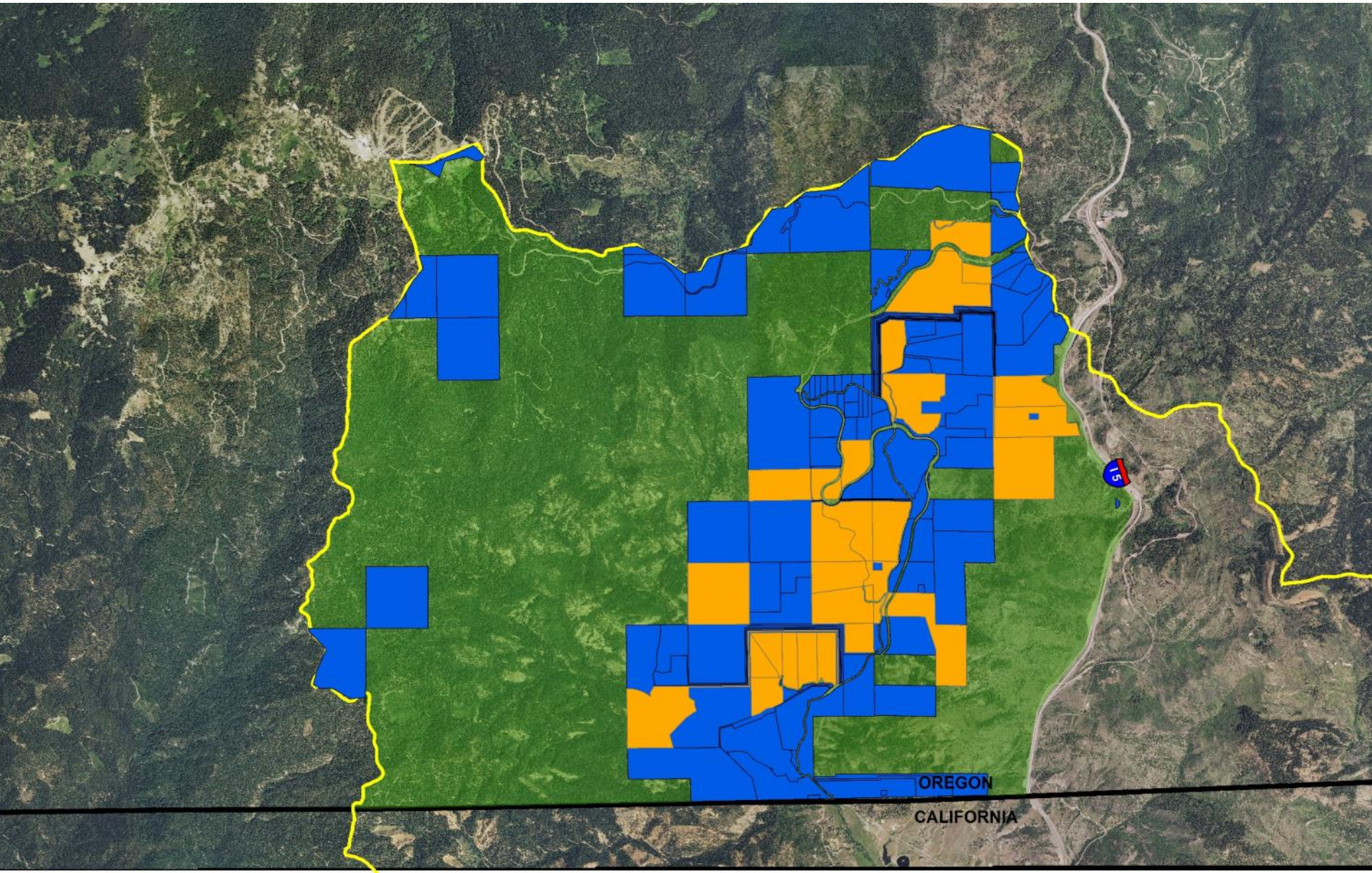
2) Slash Treatment

3) Prescribed Underburning

4) Herbaceous Recovery

Lomakatsi Restoration Project

Oak Project Highlight: Colestin Valley



Legacy Tree Conservation /Protection

Oak Restoration Implementation

Photos: Lomakatsi Restoration Project

Before

After

Oak Restoration Implementation

Restoration By-product Utilization:

- saw logs
- biomass
- firewood
- special forest products

Photos: Lomakatsi Restoration Project

Oak Restoration Implementation

Workforce Training & Employment

Oak Restoration Jobs

- 80 personnel employed
- 6 contractors hired
- 5 counties served
- $6 million infused into communities

Photos: Lomakatsi Restoration Project

Brewer's Oak Prescribed Fire Treatments

Brewer's Oak Prescribed Fire Treatments

Colestin Valley, Fall 2011
Cottonwood Creek
Mid Klamath Watershed
60 acres

Brewer's Oak Prescribed Fire Treatments 2011

High

Low

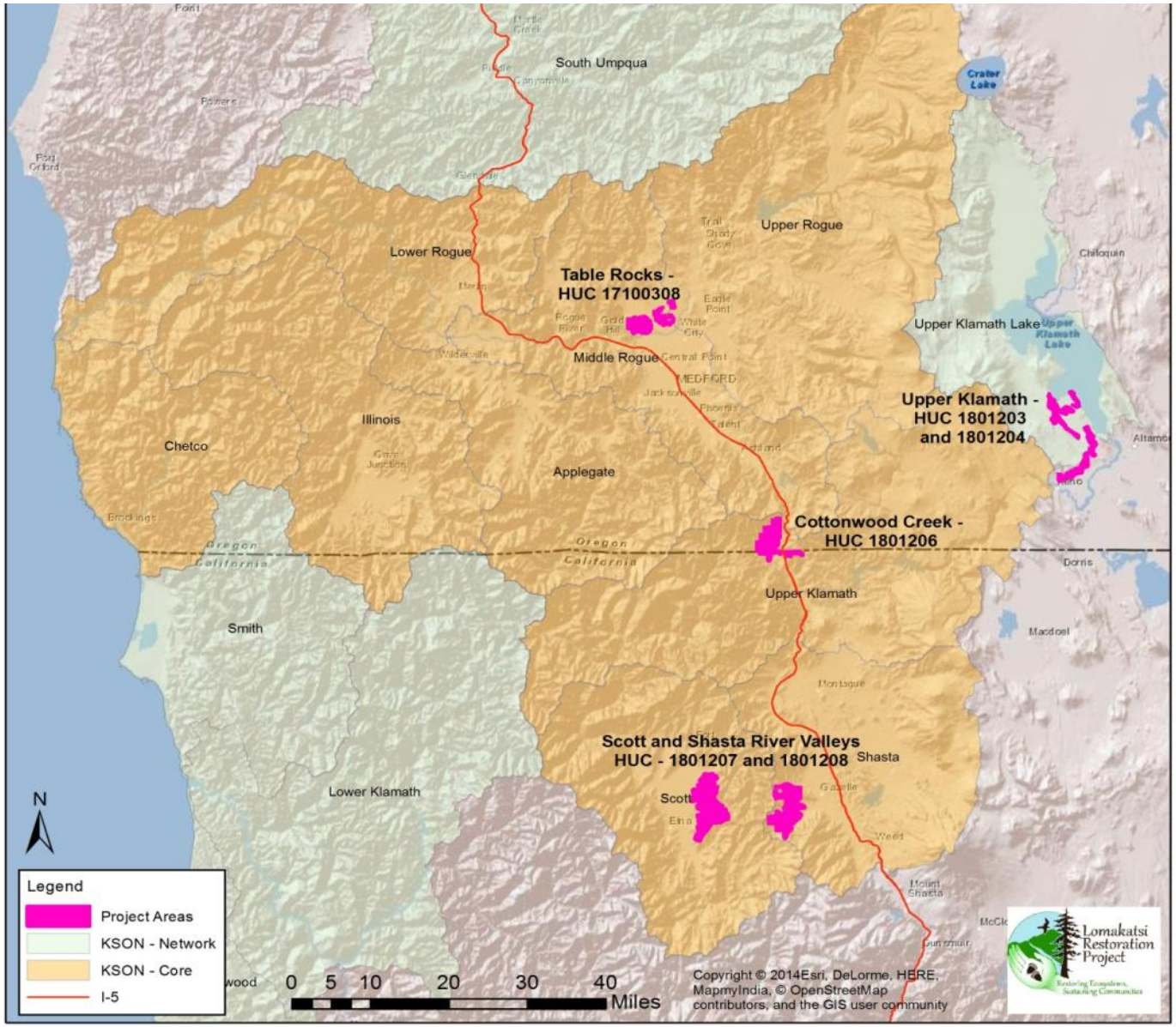
Reintroducing the Eco-cultural fire process

Photo: Lomakatsi Restoration Project

Ecological Prescribed Fire

Emphasis on conserving wildlife trees, leave Islands, & large down logs.

OAK WOODLAND HEALTH AND HABITAT CONSERVATION
Conservation Implementation Strategy



Restoring Oak Resilience at the Table Rocks

Photos: Lomakatsi Restoration Project

An All-Lands Approach 2014-2019

- Funding acquired to conduct oak restoration across 1,400 acres of federal and private lands.

- Winter / Spring 2015:
  200 acres implemented


Oregon
101
Crater Lake NP
Table Rocks
Medford
97
5
Redwood NP
California
Image Landsat
© 2014 Google
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Google earth
395
Imagery Date: 4/9/2013
42°22'43.28" N 122°36'14.97" W elev 2668 ft
Eye alt 177.17 mi

Table Rocks Natural Area

- Designated Area of Critical Environmental Concern in 1984
- America's Great Outdoors site hosting 50,000 visitors annually

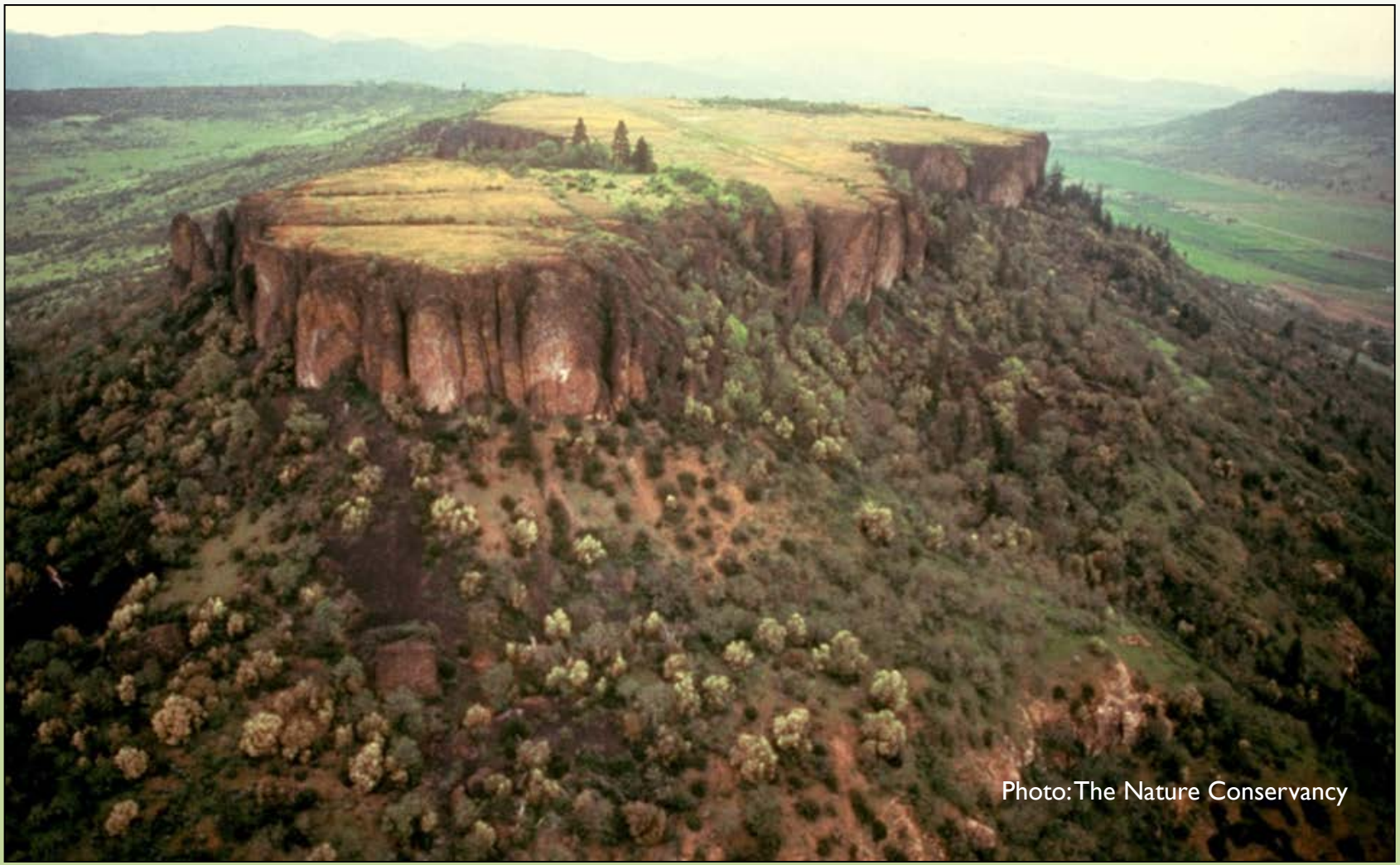
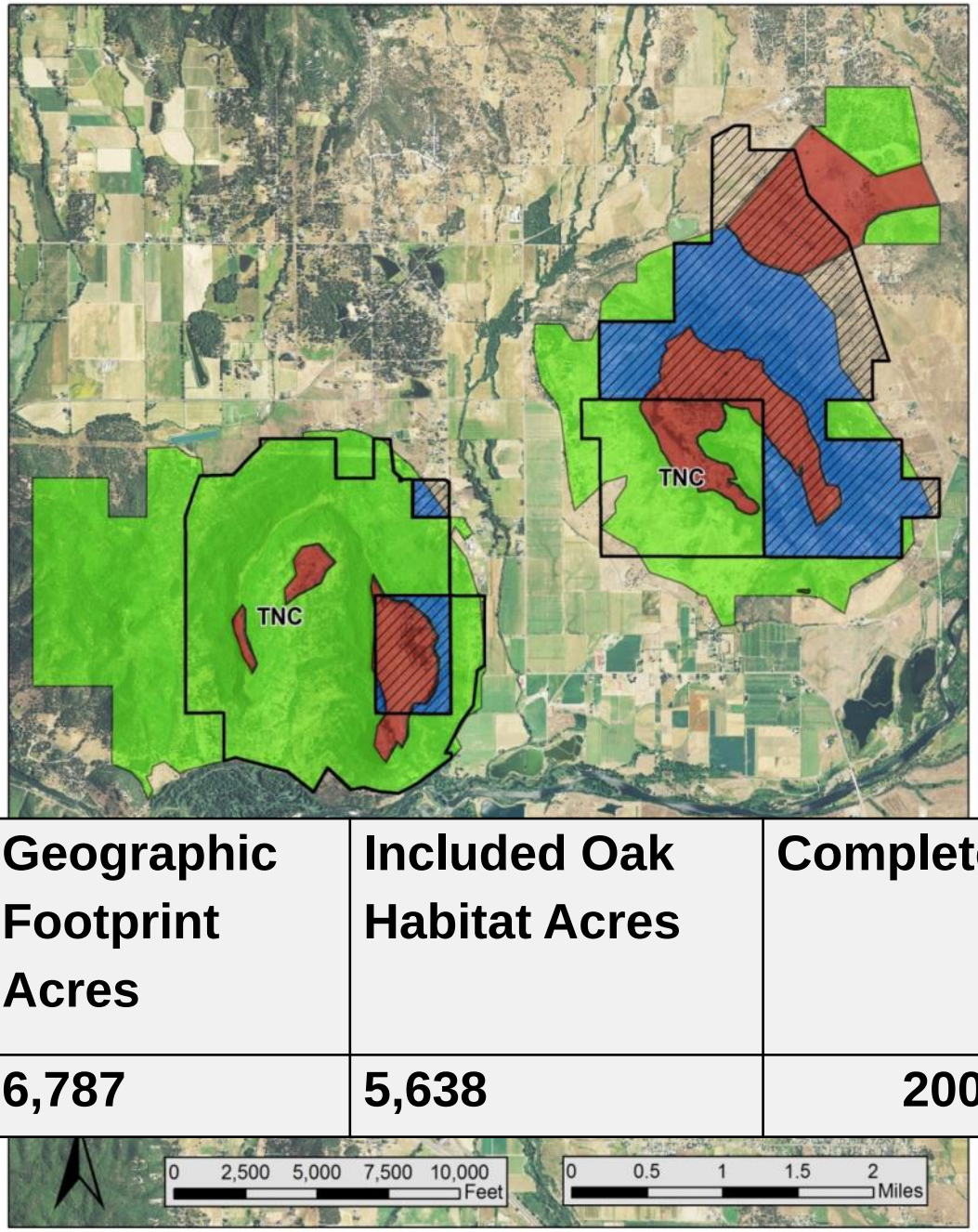
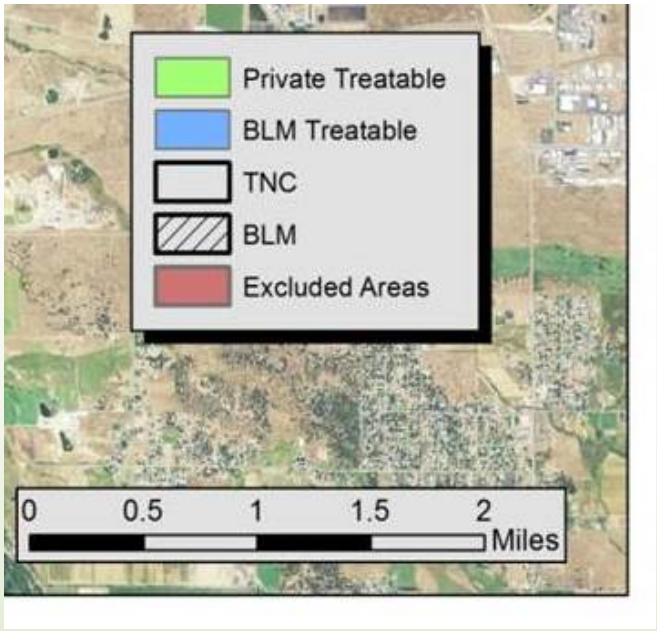


Table Rocks Oak Habitat





OAK CONSERVATION IMPLEMENTATION STRATEGY

Geographic Footprint Acres	Included Oak Habitat Acres	Completed	Minimum Desired (20%)	Optimal Desired (50%)
6,787	5,638	200	1,128	2,819

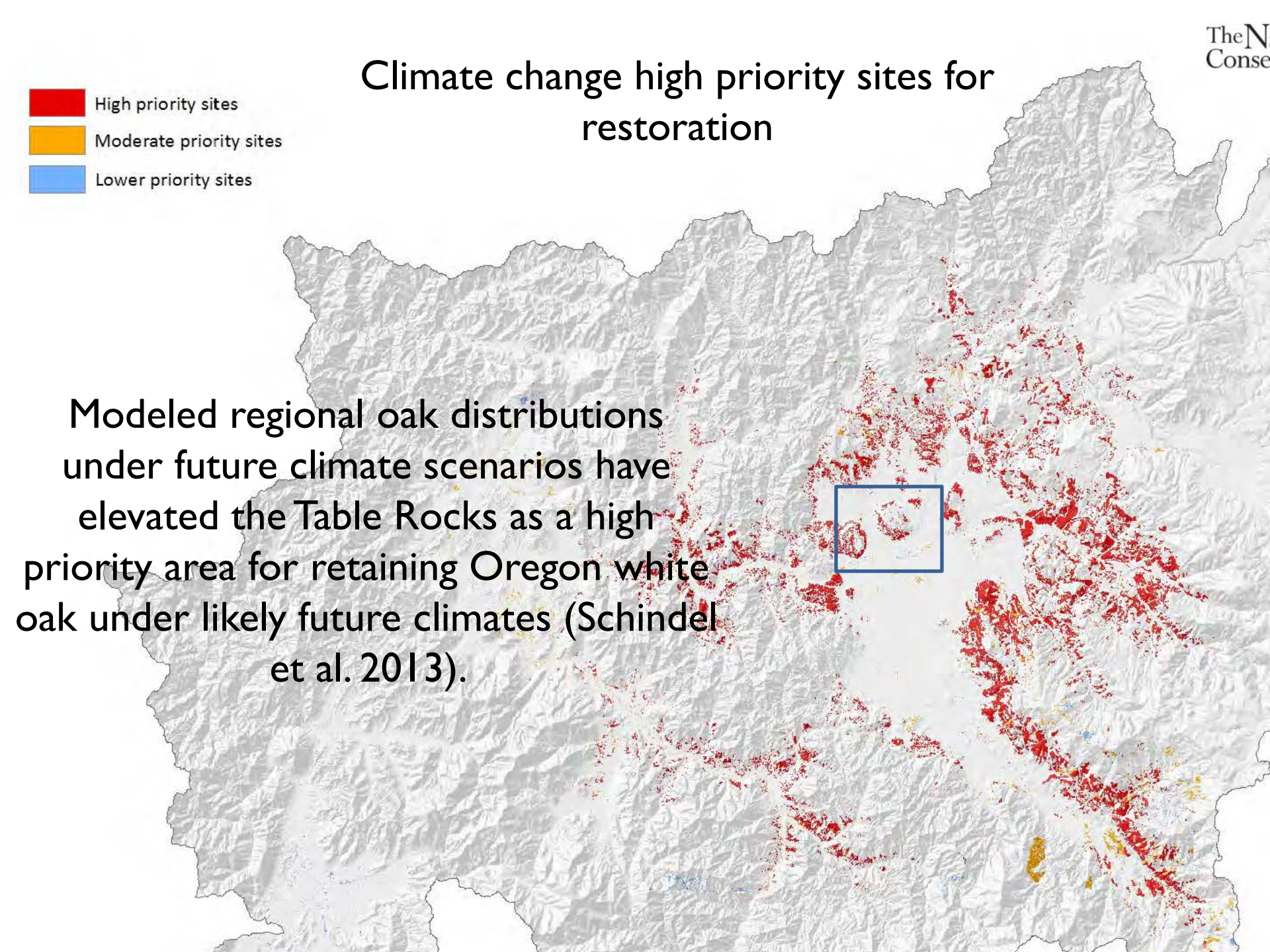
Restoration Planning

The Nature Conservancy

Table Rocks Vegetation

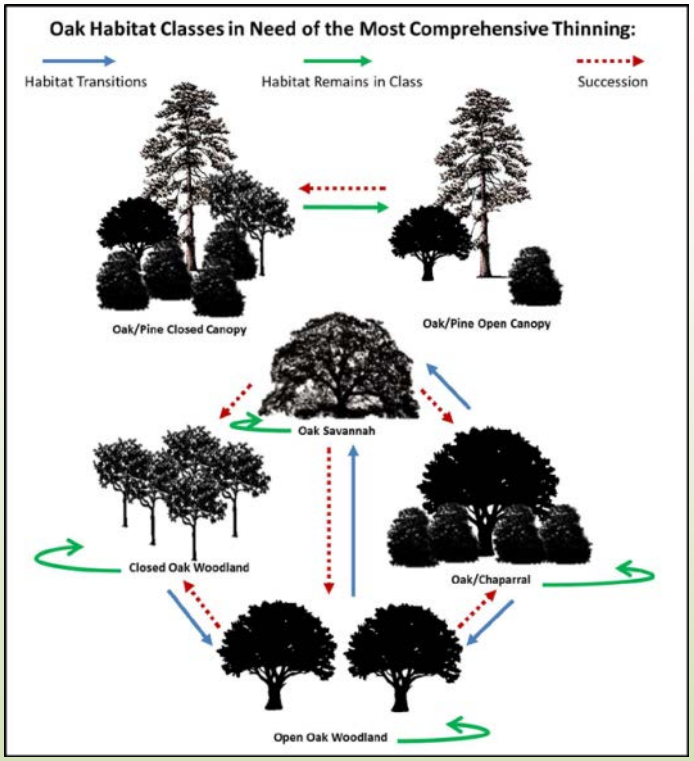
Tree	Scientific name	Shrub	Scientific name
Oregon white oak	Quercus garryana	Buckbrush	Ceanothus cuneatus
Pacific Madrone	Arbutus menziesii	Mountain mahogany	Cercocarpus betuloides
California black oak	Quercus kelloggii	Whiteleaf manzanita	Arctostaphylos viscida
Ponderosa pine	Pinus ponderosa	Poison oak	Toxicodendron diversilobum
Douglas-fir	Pseudotsuga menziesii	Deerbrush	Ceanothus integerrimus
Incense cedar	Calocedrus decurrens	Klamath plum	Prunus subcordata
		Silk tassel	Garrya fremontii
		Oregon grape	Berberis aquifolium
		Cascara	Rhamnus purshiana
		Western viburnum	Viburnum ellipticum

Climate change high priority sites for restoration



Modeled regional oak distributions under future climate scenarios have elevated the Table Rocks as a high priority area for retaining Oregon white oak under likely future climates (Schindel et al. 2013).

Table Rocks Oak and Vernal Pool Habitats Assessment, 2015



- Kerry Metlen, PhD, Forest Ecologist
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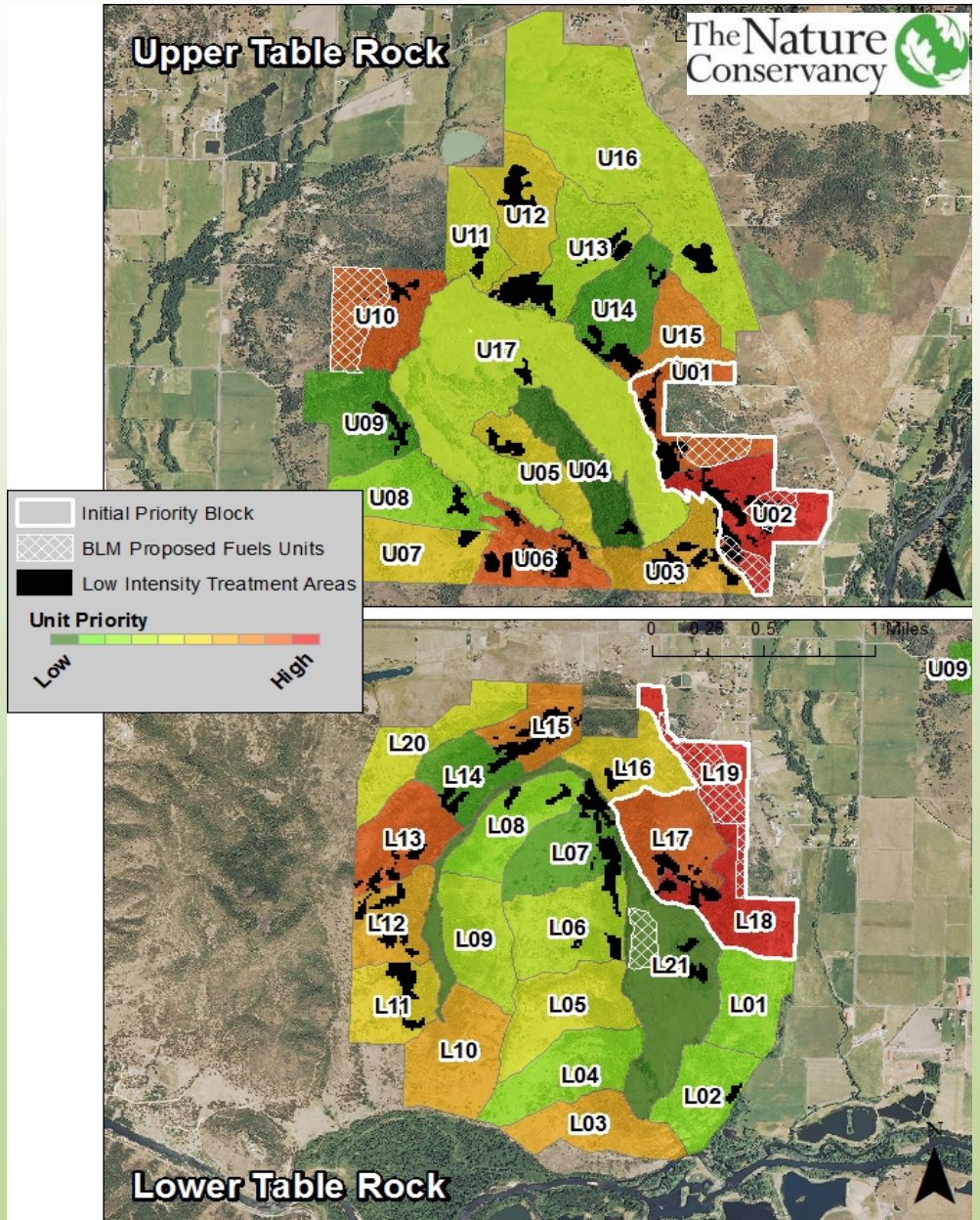
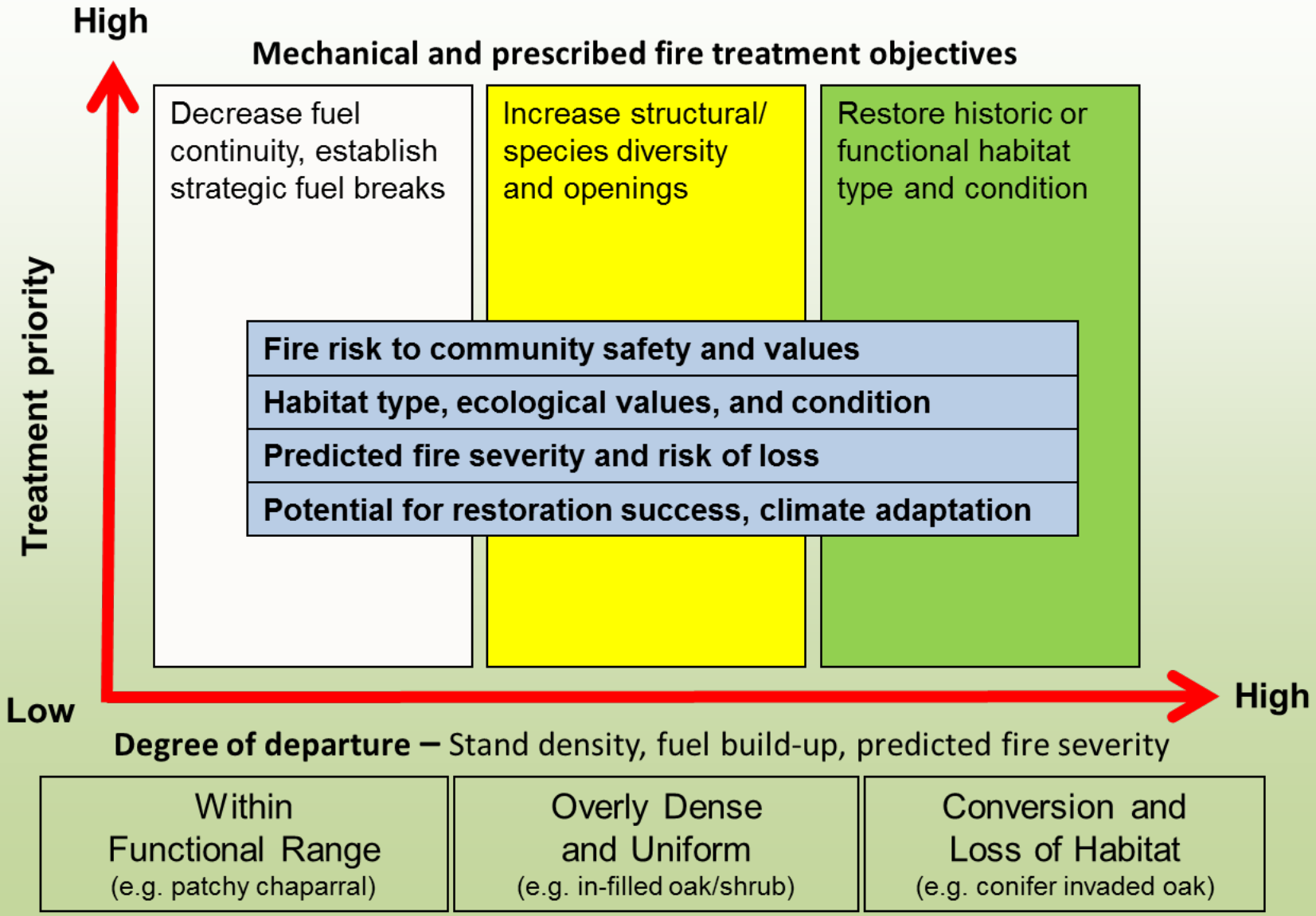
- Keith Perchemlides, Field Ecologist
- Molly Morison, Stewardship Coordinator
- Darren Borgias, Program Director



Restoration Planning



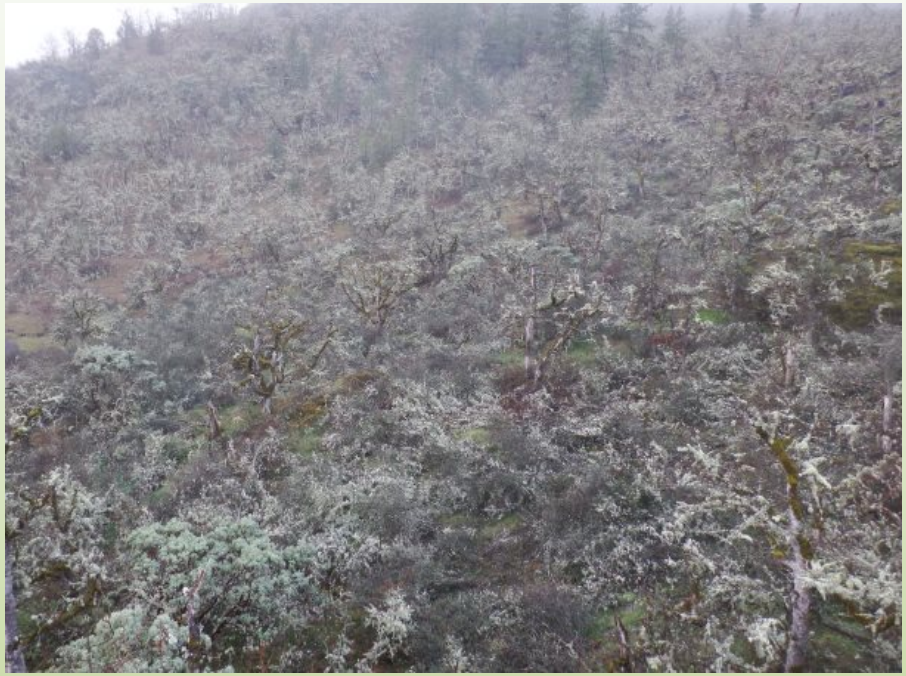
BLM Table Rocks Unit 1-1

N

0 200 400 600 800 1,000 Feet

Lomakatsi Restoration Project
Table Rocks Unit 1-1
25 Acres Total
Skips - 5.1 Acres
Mountain Mahogany Zone - 2 Acres
January 28, 2015

Oak Restoration Implementation

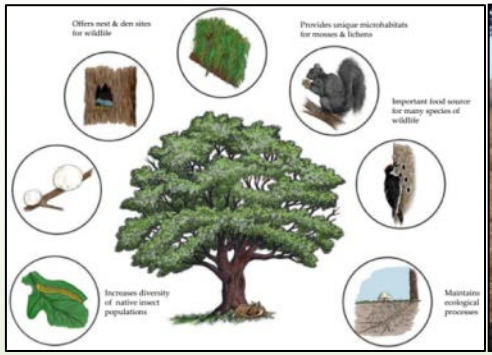


Before

After

Science and Monitoring

Figures: Vesley and Tucker 2004



Restoration alters forest structure and composition

Benefits include

- Habitat value
- Fire resistance
- Climate resilience
- Ecosystem function

?

Vegetation monitoring

Bird monitoring

Klamath Bird Observatory

Bird and plant symbols: Integration and Application Network (ian.umces.edu)

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Photo: Lomakatsi Restoration Project


Questions?