

Forest Restoration, Controlled Ecological Burning, and Smoke Management in Oregon



To Restore or Not to Restore?

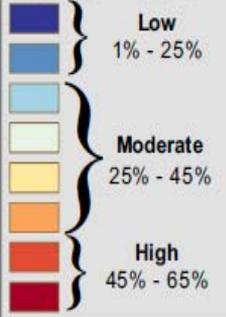


VS.

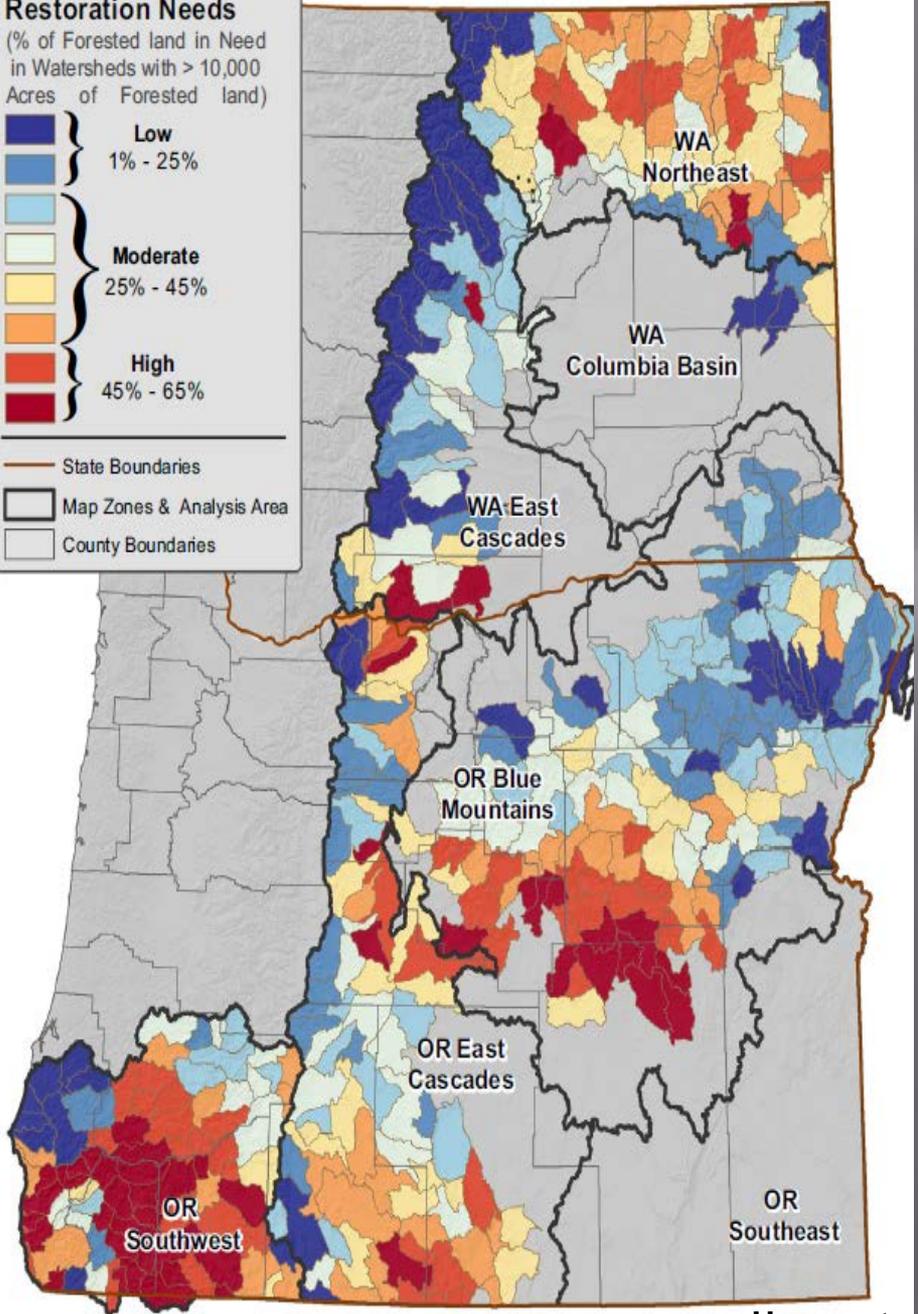


**Disturbance
Restoration Needs**

(% of Forested land in Need
in Watersheds with > 10,000
Acres of Forested land)



— State Boundaries
 □ Map Zones & Analysis Area
 □ County Boundaries

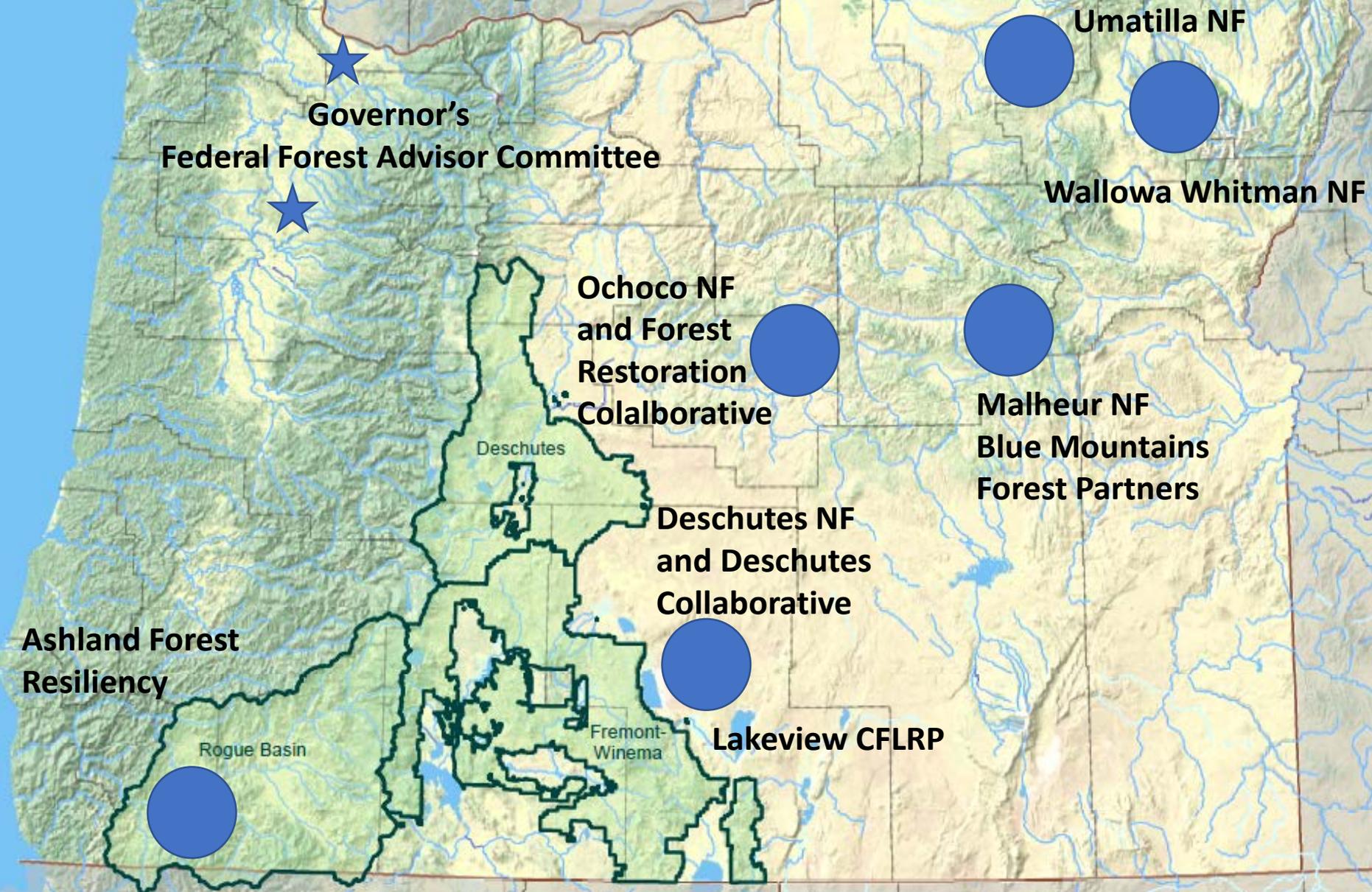


4.2 million acres at risk in Oregon and Washington

900,000 acres currently *planned* for prescribed burning on fire-adapted USFS lands in Oregon

2016 Oregon Prescribed Burning		
Burn Type	Acres Burned	Percent
Broadcast Activity	4,097	4%
Broadcast Natural	4,397	4%
Grapple Pile	17,776	17%
Hand Pile	15,223	15%
Landing Only	26,327	26%
Rangeland	3,252	3%
Tractor Pile	5,812	6%
Underburn Activity	5,729	6%
Underburn Natural	20,407	20%
(blank)		
Grand Total	103,020	

Priority Landscapes in Oregon





Low - FRG 1

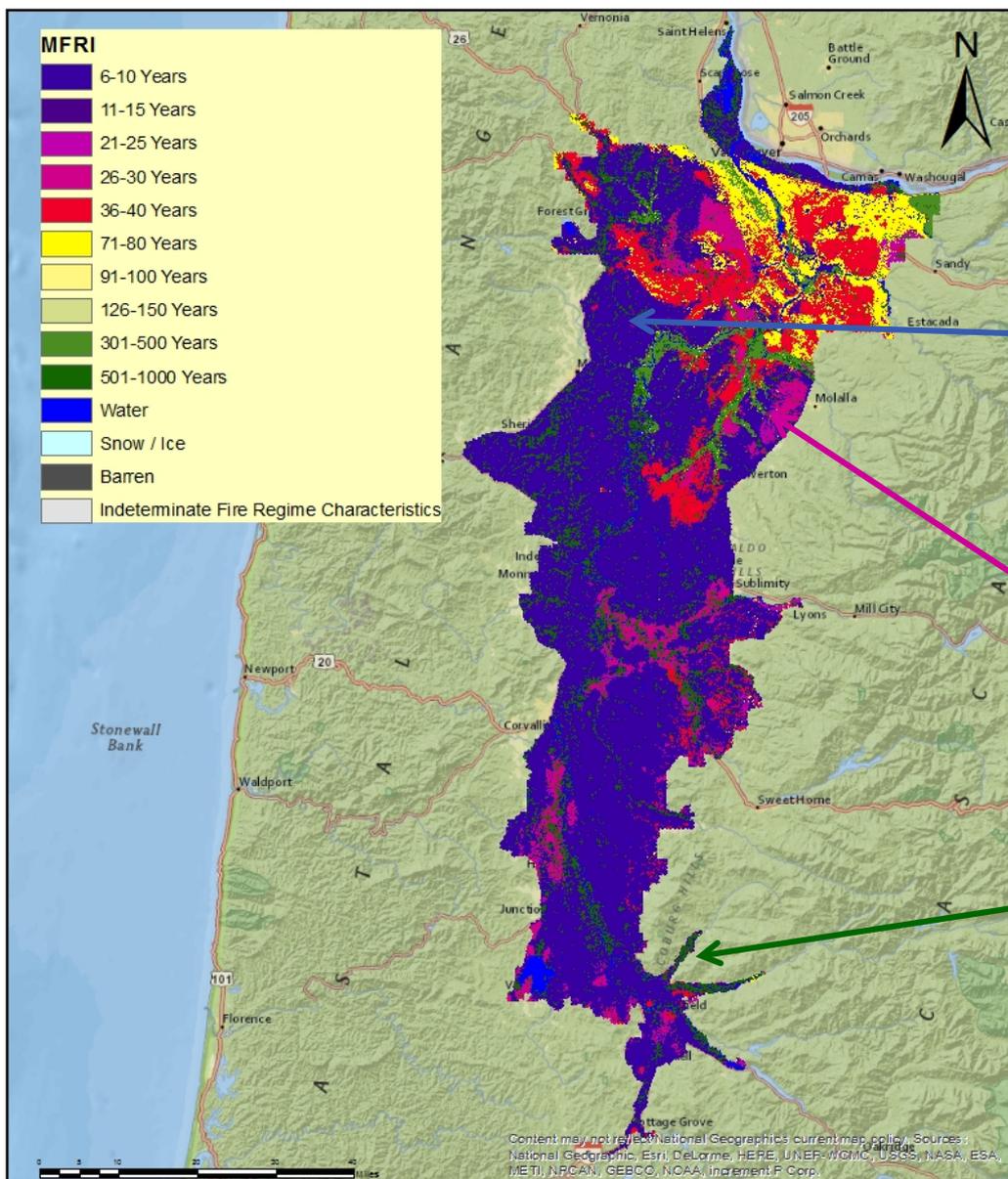
Historic Fire Regime Groups (FRG)



Mixed - FRG 3



High - FRG 4 & 5



Fire Return Intervals in the Willamette Valley

Wet and Upland Prairie and Savanna 6-15 Year MFRI

Oak Woodland 21-40 Year MFRI

Riparian and Conifer Forest 71-1000 Year MFRI

Presumed Historic Mean Fire Return Intervals Willamette Valley

The Natural Role of Fire

With Frequent Fire

Year 0



The Natural Role of Fire

With Frequent Fire

Year 20



The Natural Role of Fire

With Frequent Fire

Year 40



The Natural Role of Fire

With Frequent Fire

Year 60



The Natural Role of Fire

With Frequent Fire

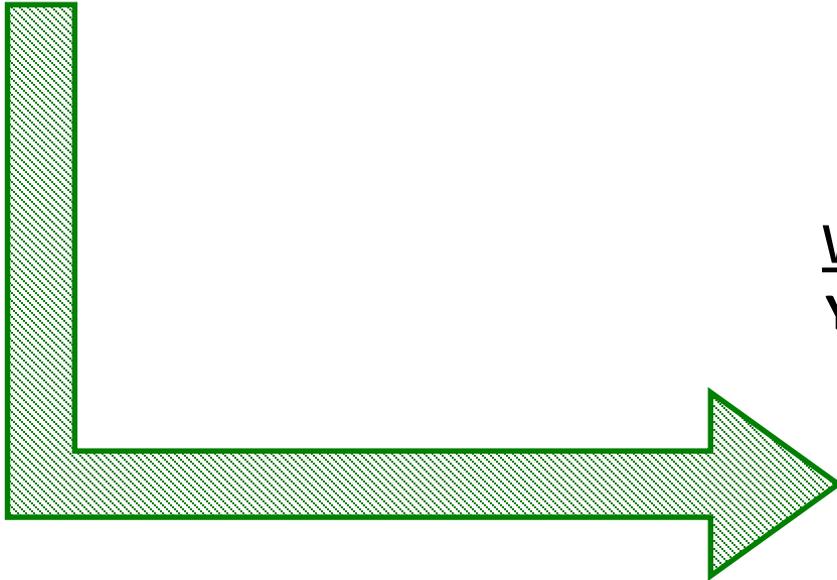
Year 80



Graphics by R. Van Pelt

The Natural Role of Fire

Year 0



With Frequent Fire
Year 80



Graphics by R. Van Pelt

The Natural Role of Fire

Year 0



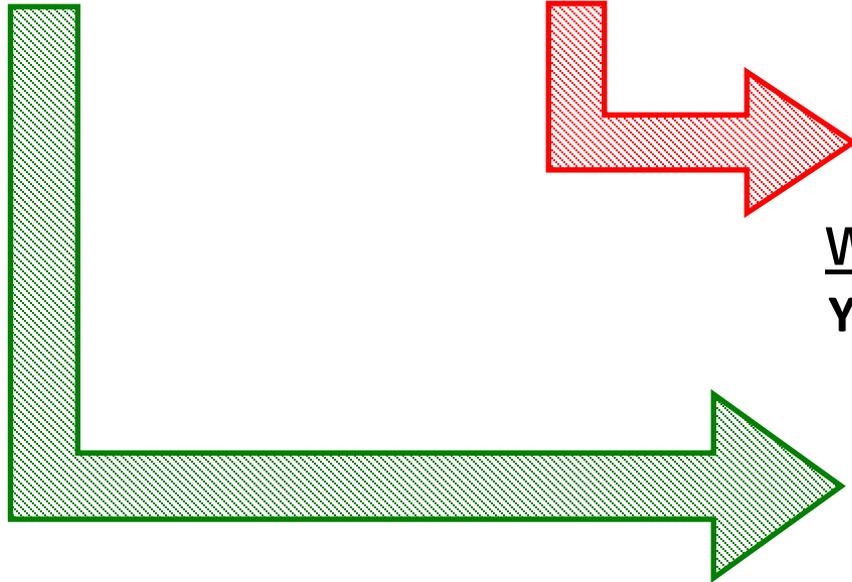
Without Frequent Fire

Year 80

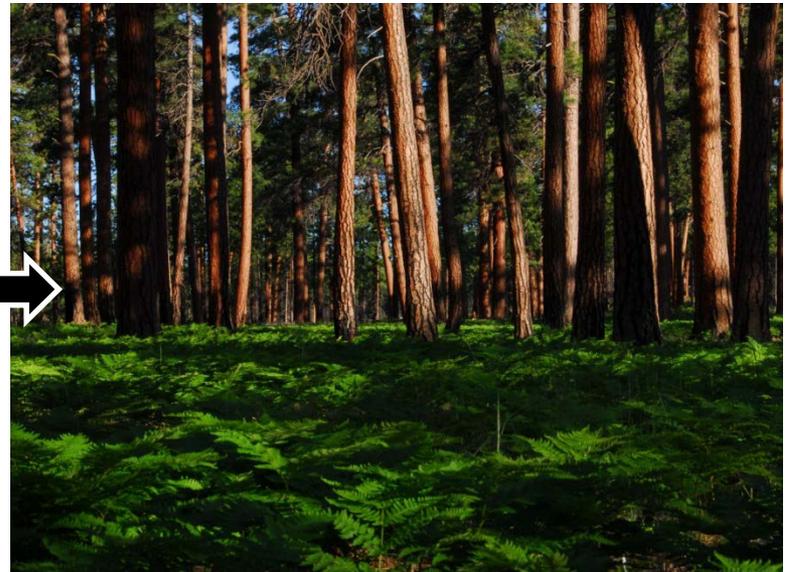


With Frequent Fire

Year 80



The Natural Role of Fire



The Natural Role of Fire



425 acres TNC led
Baskett Butte Preserve, Finley National Wildlife Refuge, Willow Creek Preserve, Willamette Confluence Preserve, and Privately Owned Lands under NRCS WRP
Funded by USFWS, TNC, BPA, and NRCS

280 acres TNC led
Juniper Hills Preserve
Funded by Oregon Watershed Enhancement Board Grant

232 acres assists
Rogue-Siskiyou National Forest, Medford BLM, City of Ashland
Funded by Fire Learning Network

2030 acres assists
Deschutes and Ochoco National Forests
Juniper Hills Preserve
Funded by Fire Learning Network

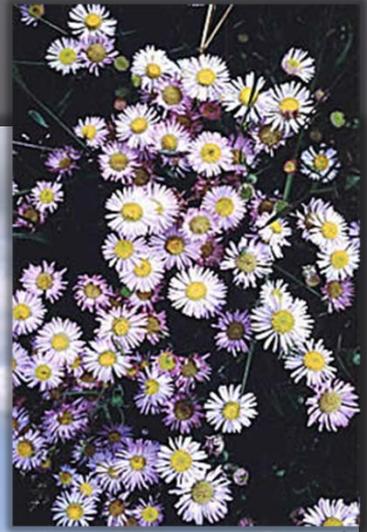
2017 Controlled ecological burning in Oregon
1830 acres led by TNC
2500 acres TNC assists

120 acres TNC led
Agate Desert Preserve and Privately Owned Small Woodlands
Funded by TNC and the Fire Learning Network

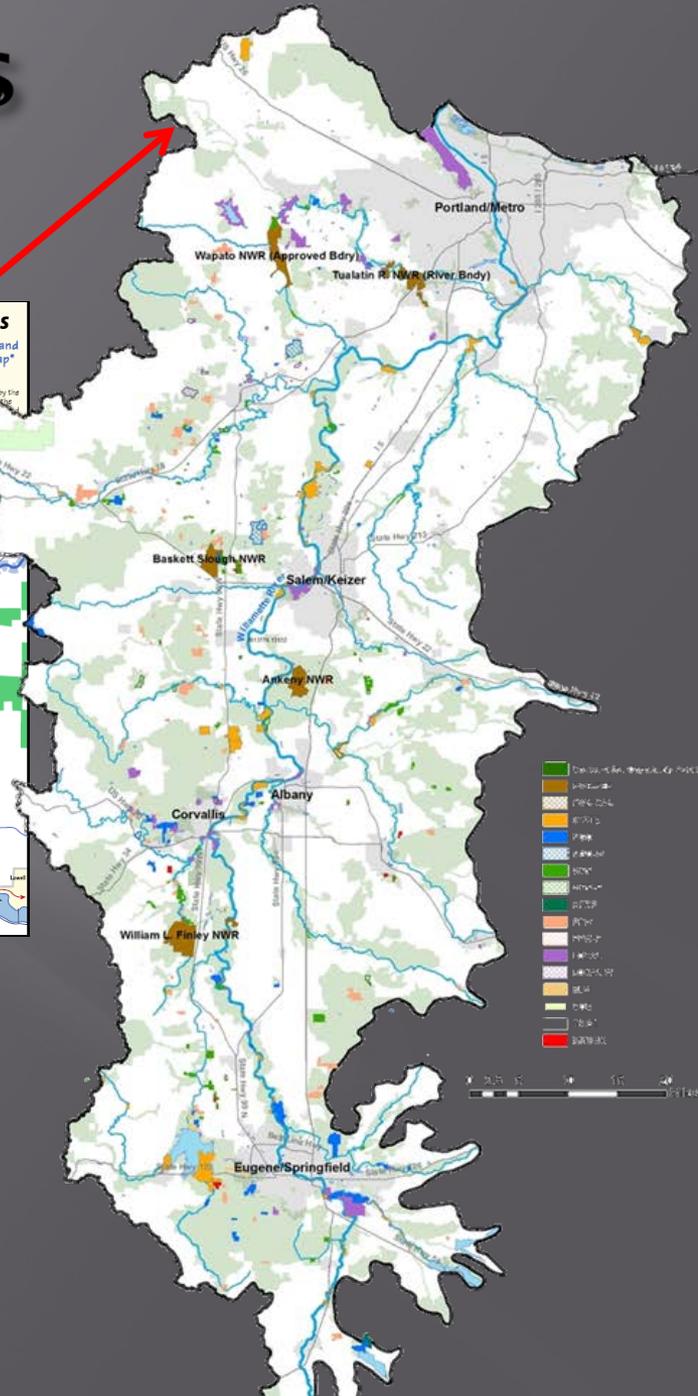
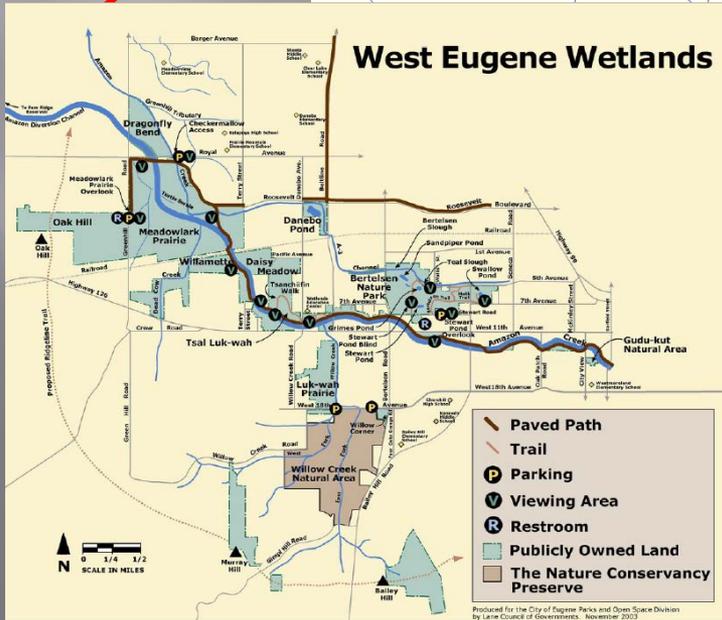
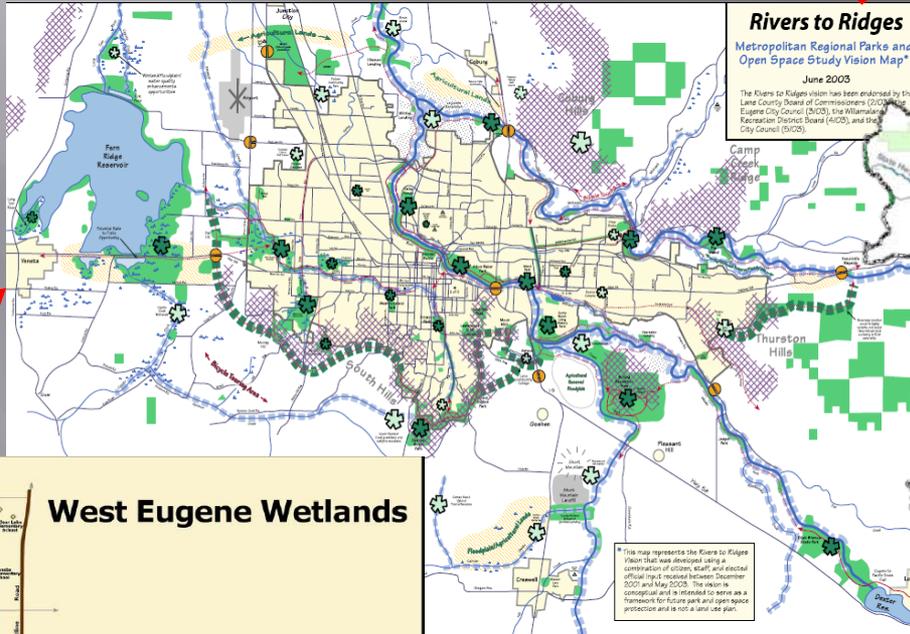
1040 acres TNC led, 300 acres assists
Sycan Marsh Preserve
Fremont-Winema National Forest
Funded by USFS State & Private Forestry with TNC match



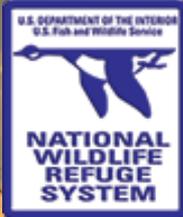
Prairie and Oak Habitat



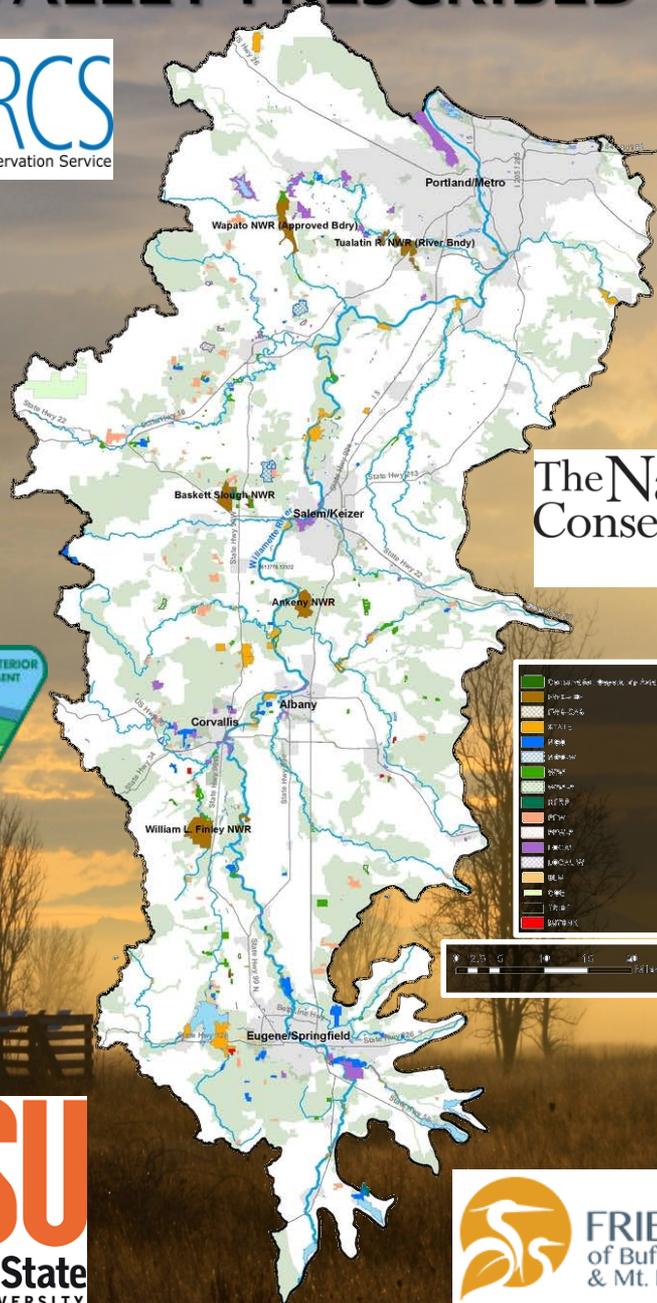
Growth of partnerships and prescribed fire



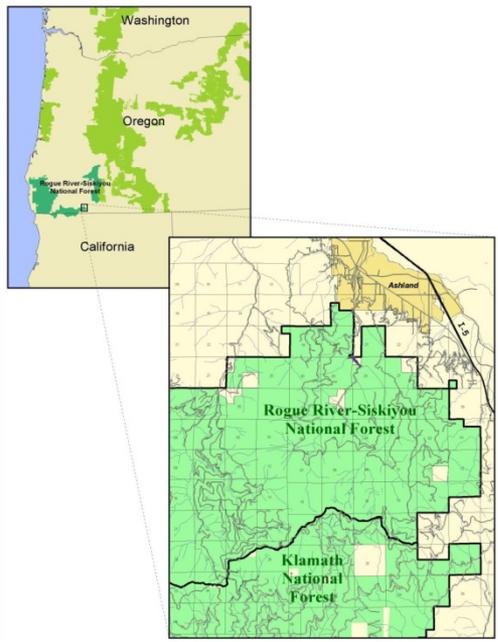
WILLAMETTE VALLEY PRESCRIBED FIRE PARTNERSHIP



EUGENE
SPRINGFIELD

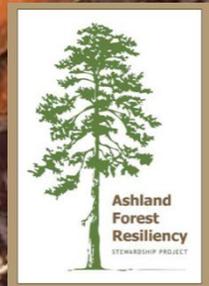


Southern Oregon Forest Restoration Collaborative Ashland Forest Resiliency Project

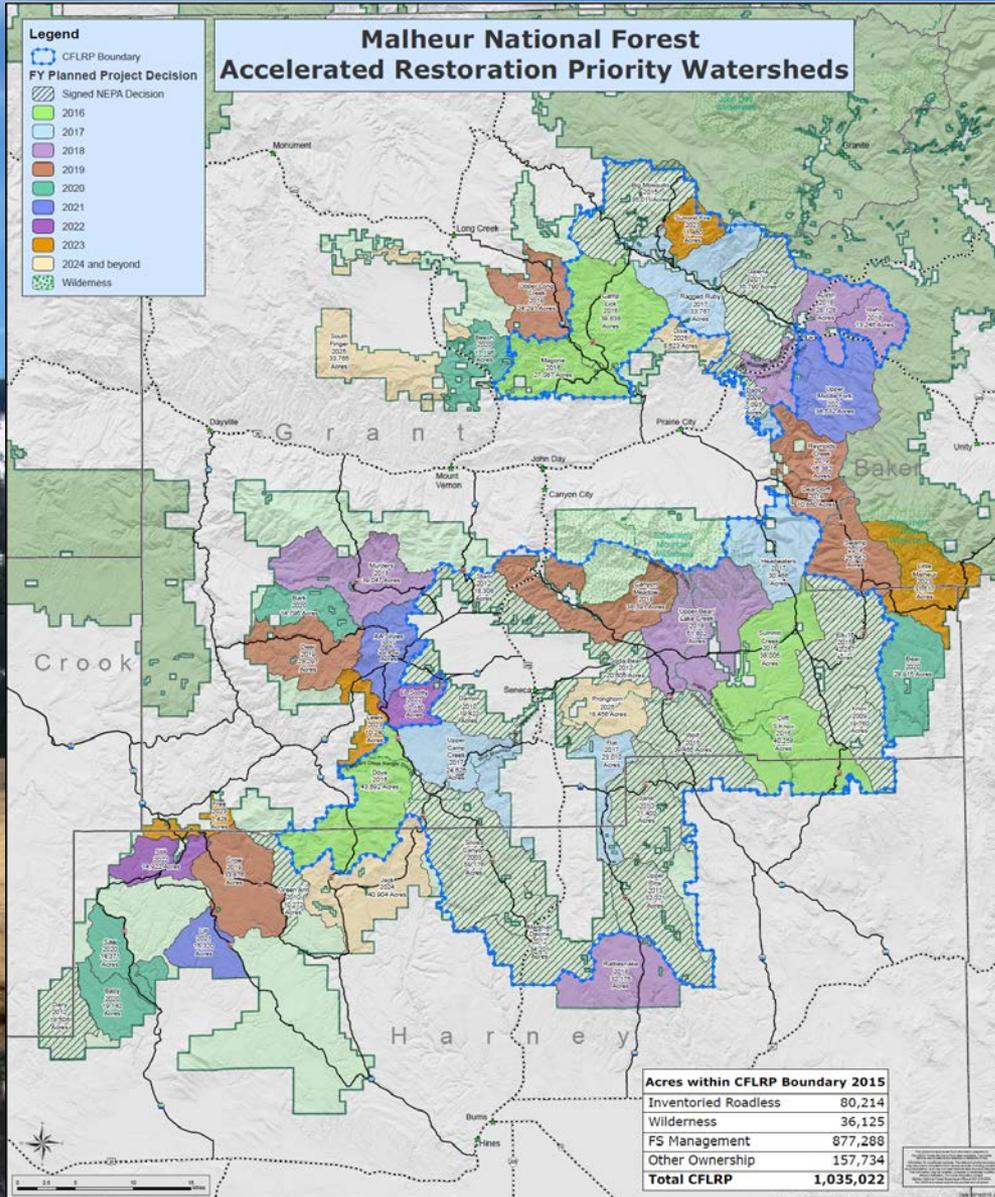


WHAT IS AFR?

- A 10 year, 7,600 acre stewardship project that includes:
 - Non-commercial surface and ladder fuel treatments
 - Commercial density management
 - Prescribed burning



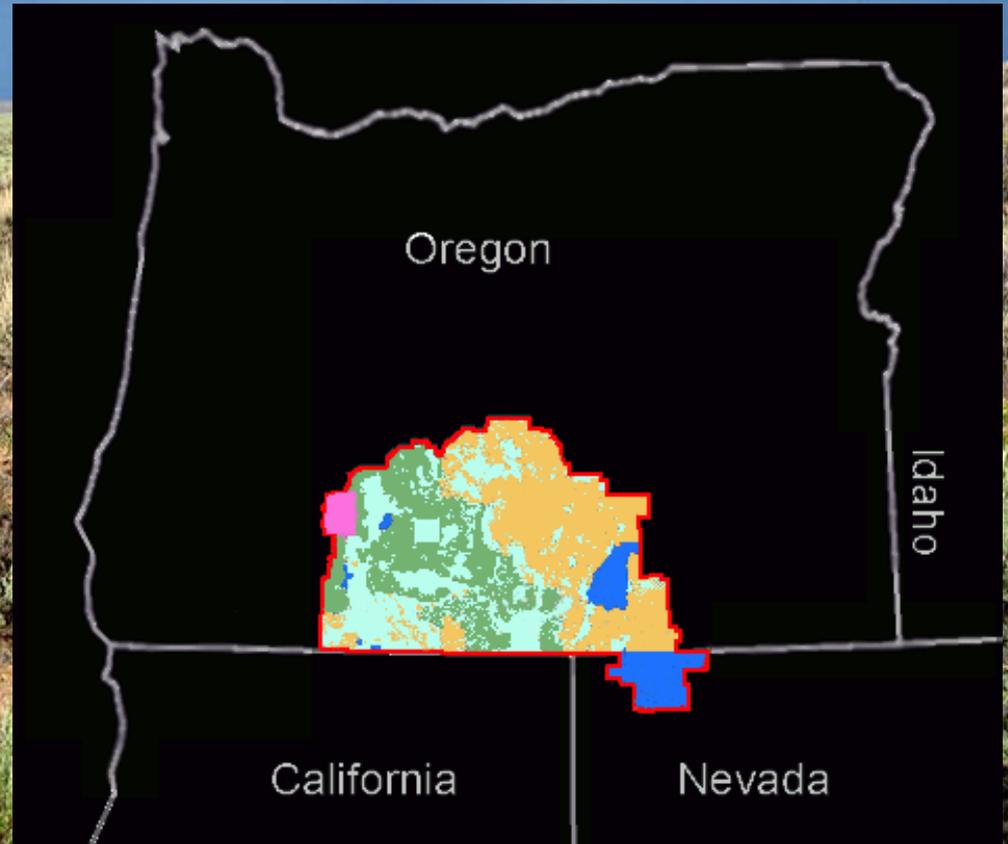
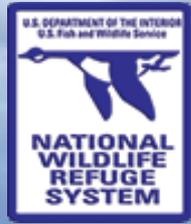
Eastside Restoration Strategy Blue Mountain Forest Partnership



Confederated Tribes of the Warm Springs
Indian Reservation of Oregon

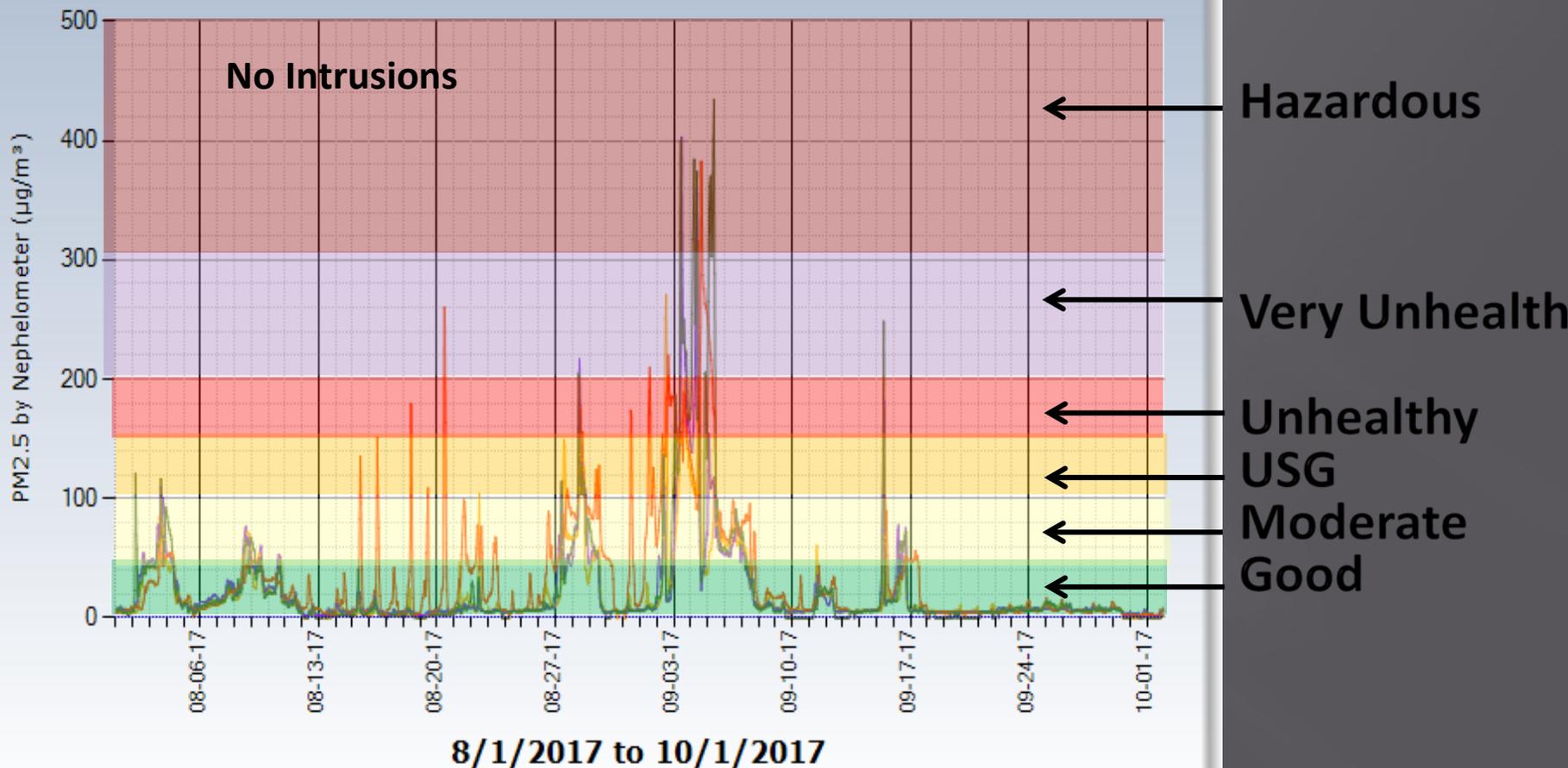


South Central Oregon Fire Management Partnership



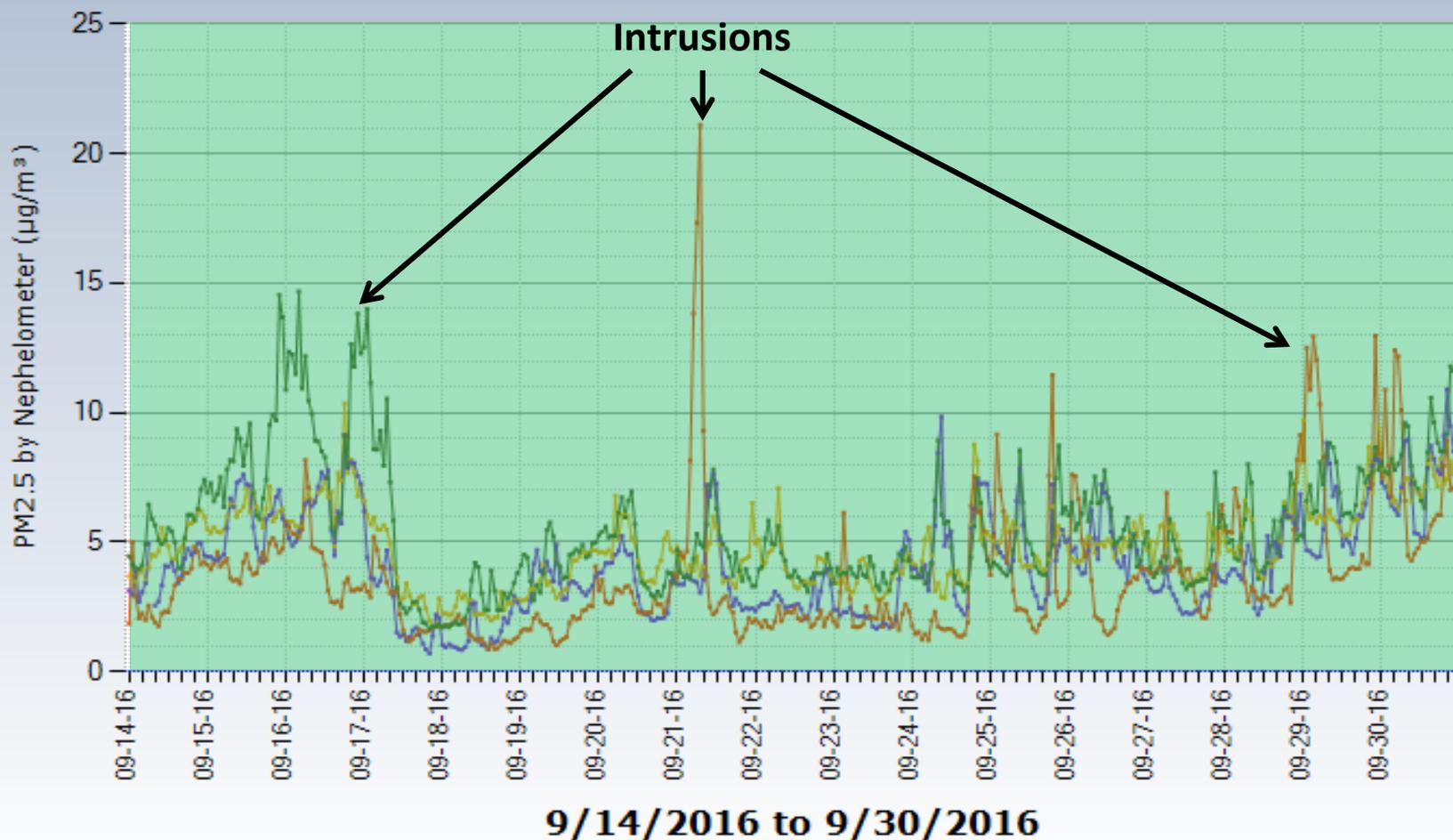
LRAPA Air Quality Monitoring in Eugene, Cottage Grove, Oakridge, and Springfield Wildfire Season 2017

PM2.5 by Nephelometer



LRAPA Air Quality Monitoring in Eugene, Cottage Grove, Oakridge, and Springfield Prescribed Fire Season 2016

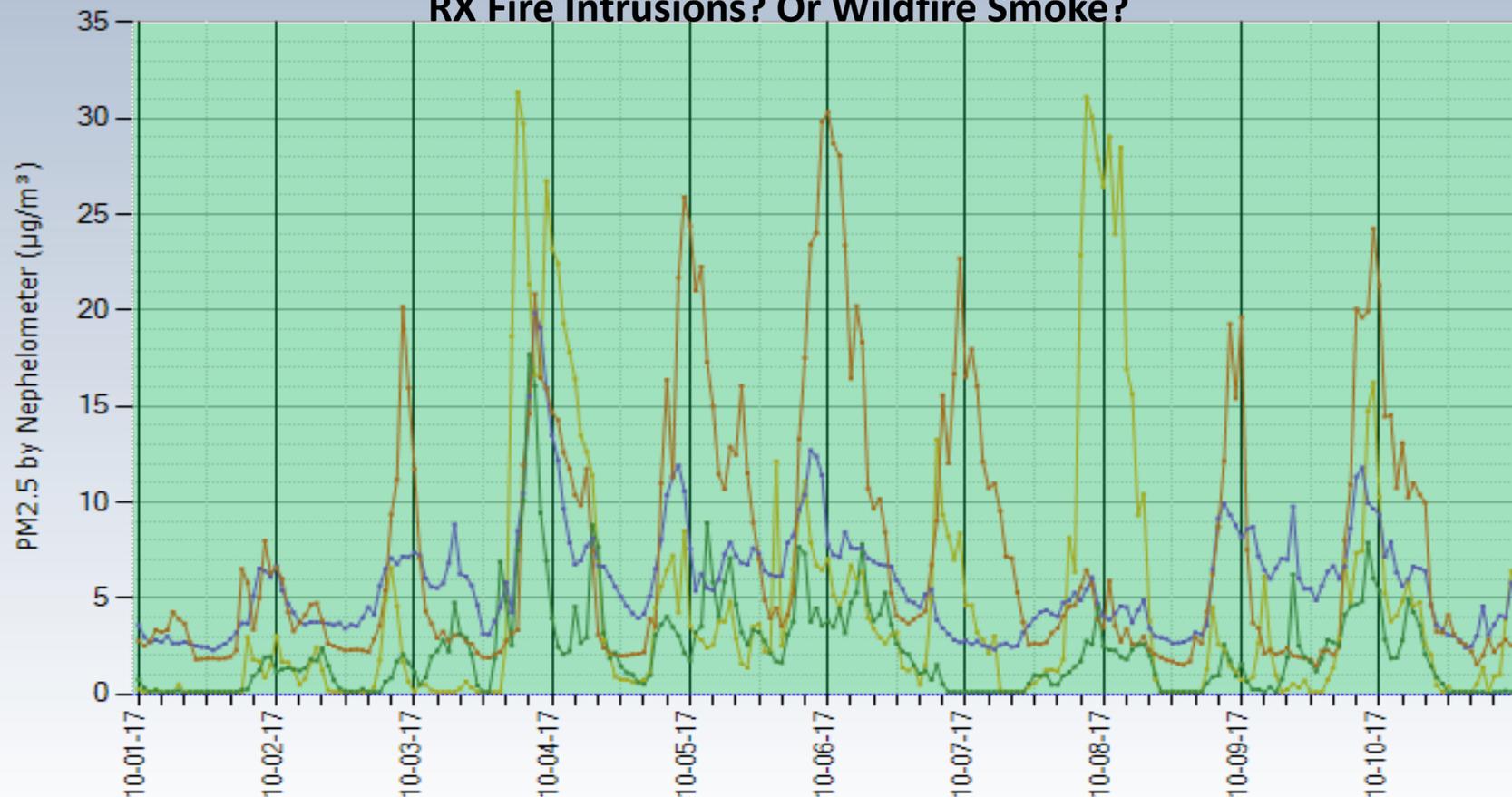
PM2.5 by Nephelometer



LRAPA Air Quality Monitoring in Eugene, Cottage Grove, Oakridge, and Springfield Prescribed Fire Season 2017

PM2.5 by Nephelometer

RX Fire Intrusions? Or Wildfire Smoke?



Pre-Burn Mechanical Treatments

Fuel (and Smoke) Reduction Techniques

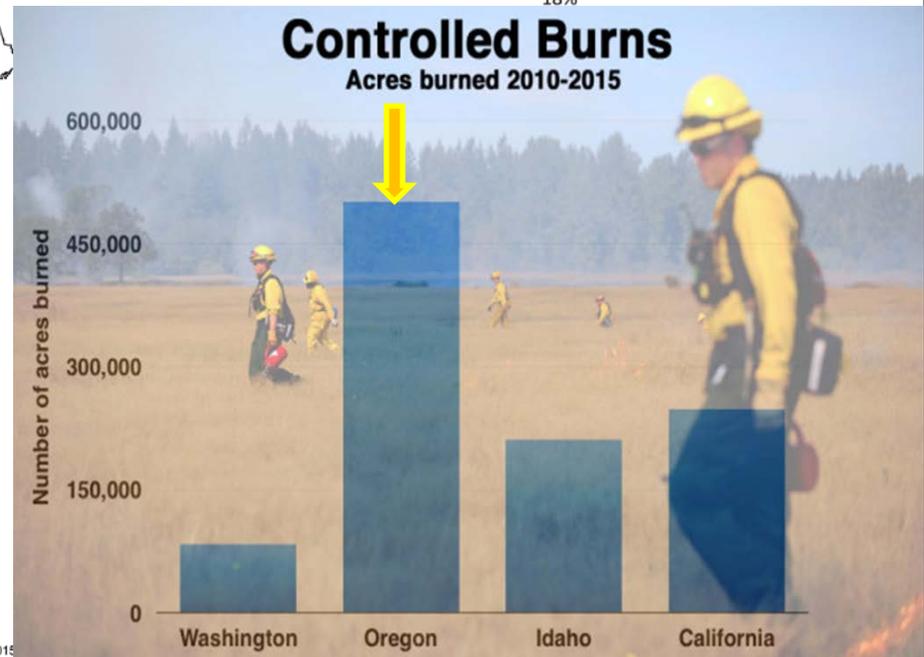
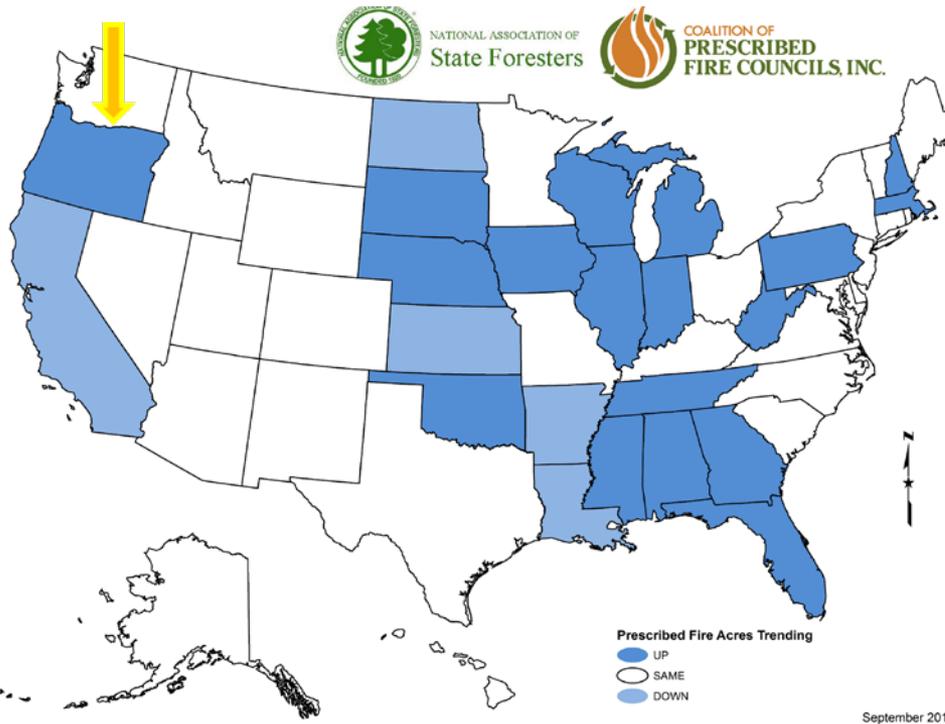
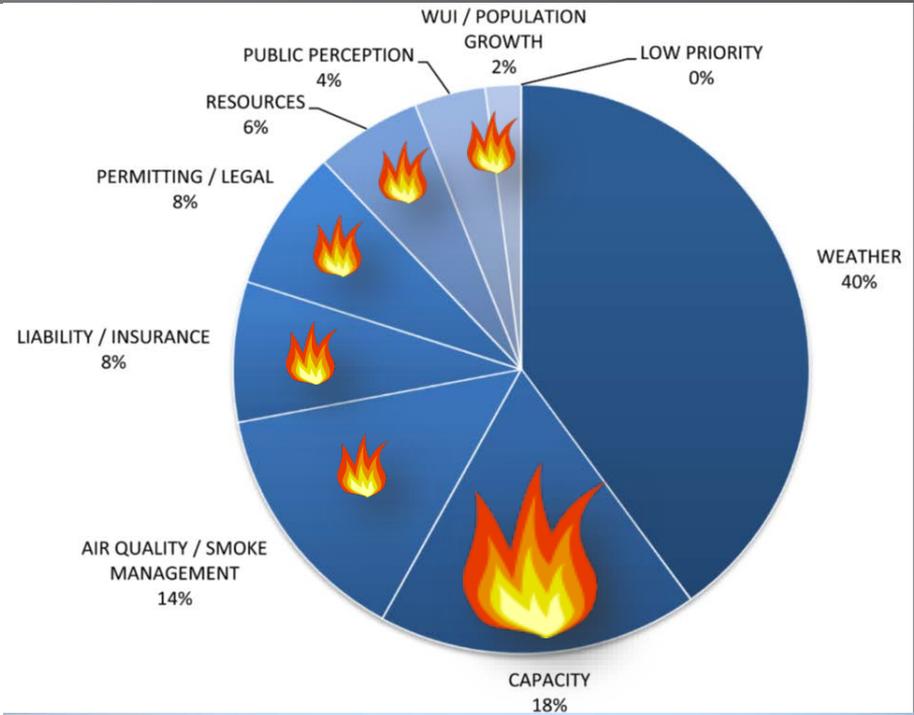
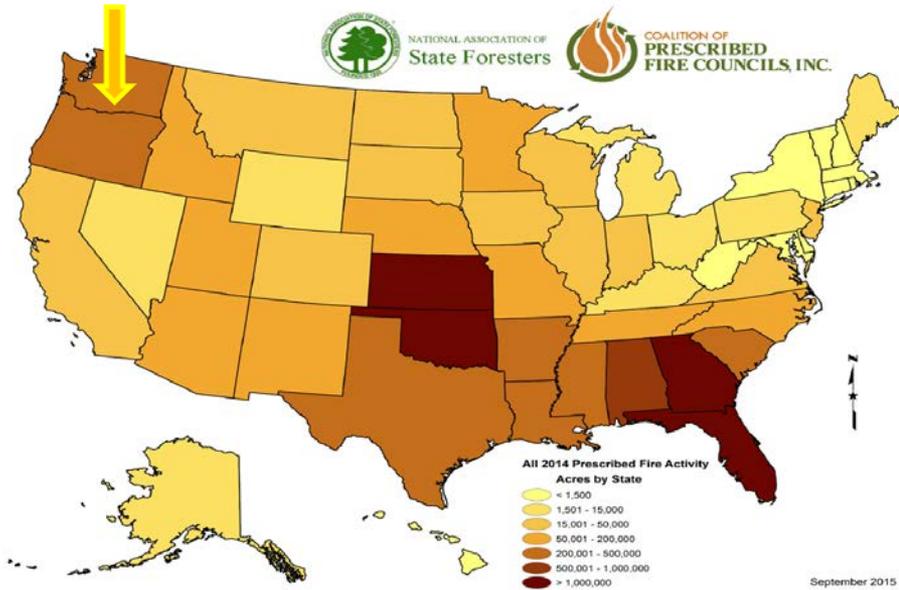
- Hand-felling
- Pile Burning
- Harvester Processor
- Helicopter Logging











Challenges and Opportunities

- Expanding partnerships
- Public education and outreach.
- Capitalize on burn windows throughout the year
- Engagement in Oregon's Smoke Management Plan Revision
- Working with regulatory entities, local partners, Oregon Department of Forestry, and other agencies

Video

Prescribed Fire: a multi-purpose tool

https://www.youtube.com/watch?v=s_Fj00_4n6Q