

2017 Smoke Management Review Committee

“Smoke Management Plan – Policy Discussion”

November 2, 2017

Presented by:

David Collier, - Air Planning

Oregon Department of Environmental Quality

&

Doug Grafe, Chief - Fire Protection

Oregon Department of Forestry

&

Kirsten Aird

Chronic Disease Programs Manager

Oregon Health Authority



Environmental
Quality
Commission

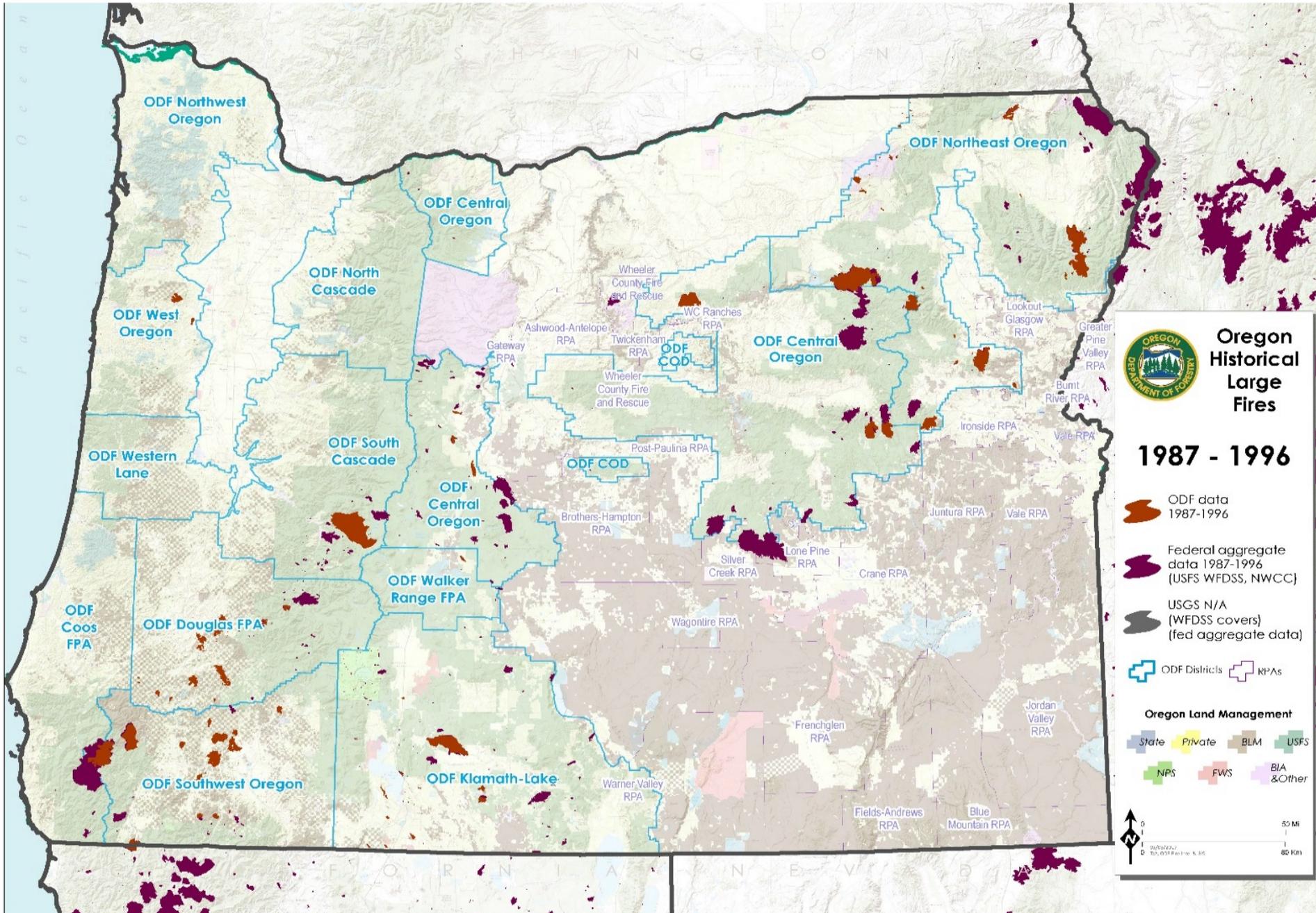


Board of
Forestry

Smoke Management

“Policy Discussion - Indicators”

- Pole Creek Fire – *Legislative Report (February 2014)*
- Deschutes County - *Letter to State Forester (July 2014)*
“Calling for Policy Changes”
- 2013-15 & 2015-19 Biennial Budgets - *State investments in*
“Pace and Scale of Restoration on Federal Lands”
- Extreme Fire Seasons - *2013 through 2015*
- 2016 Fire Program Review - *Smoke Management Recommendations*
- 2016 Secretary of State audit - *Smoke management Recommendations*



Oregon Historical Large Fires

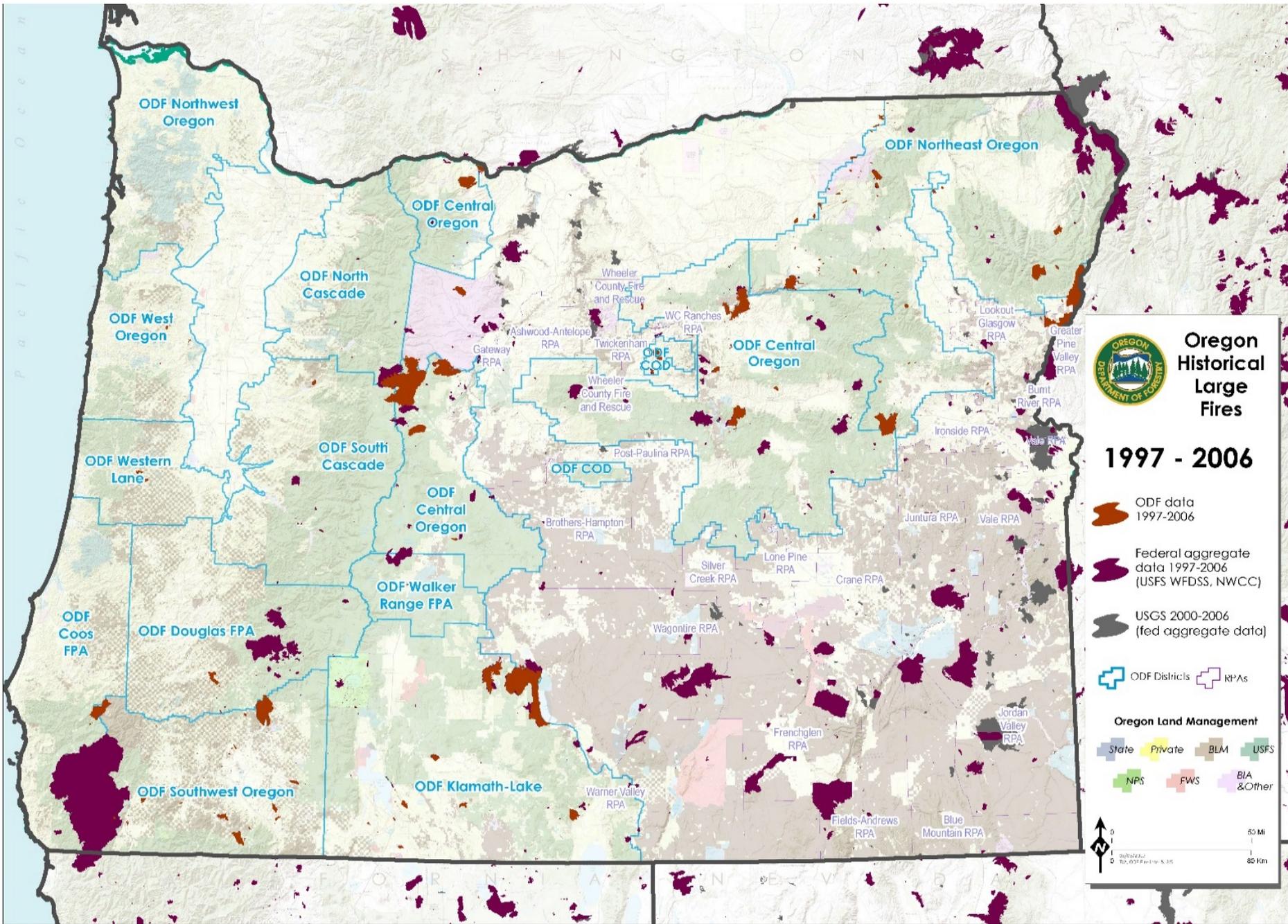
1987 - 1996

- ODF data 1987-1996
- Federal aggregate data 1987-1996 (USFS WFDSS, NWCC)
- USGS N/A (WFDSS covers) (fed aggregate data)

- ODF Districts
- RPA's

- Oregon Land Management**
- State
 - Private
 - BLM
 - USFS
 - NPS
 - FWS
 - BIA & Other



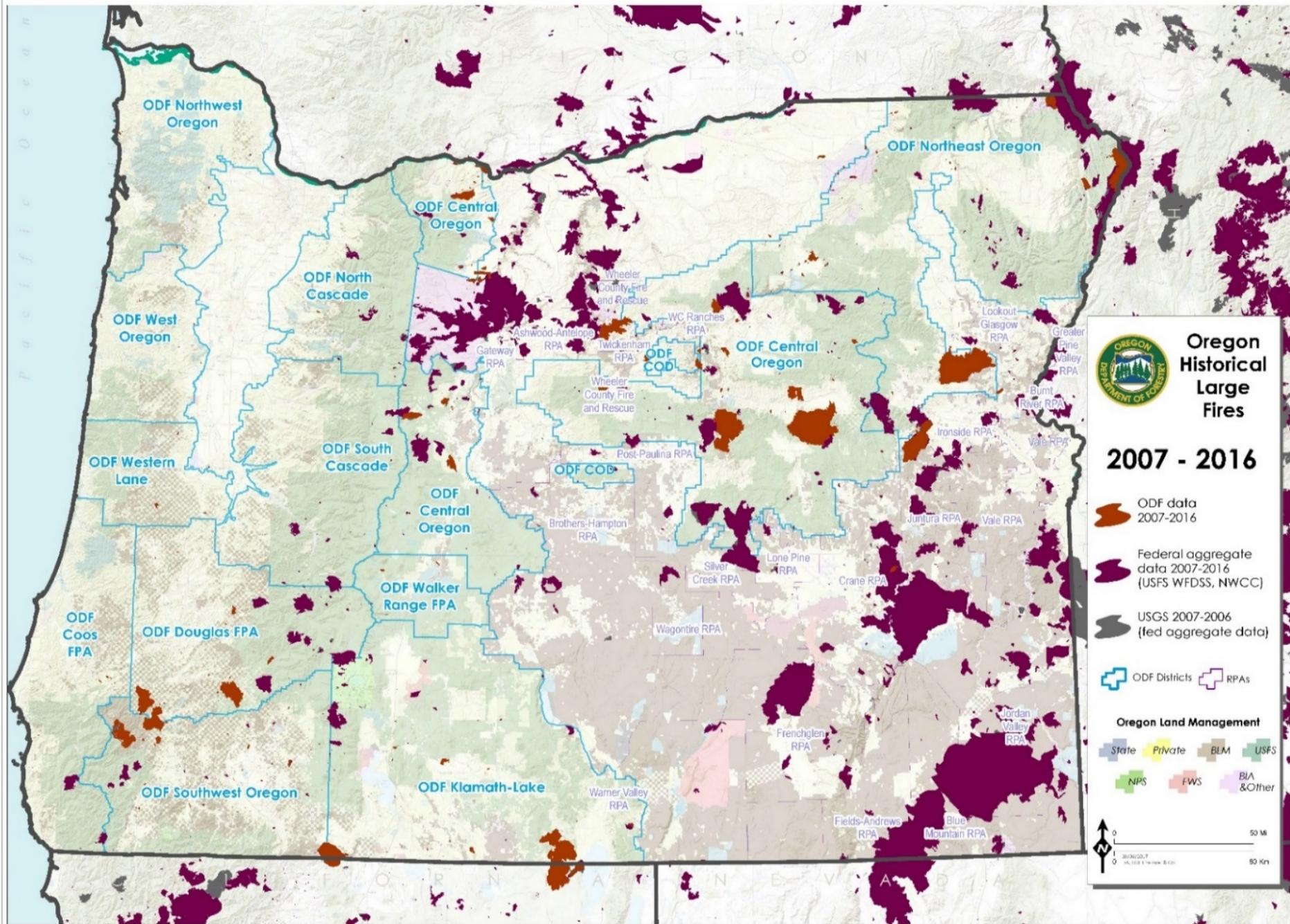


Oregon Historical Large Fires

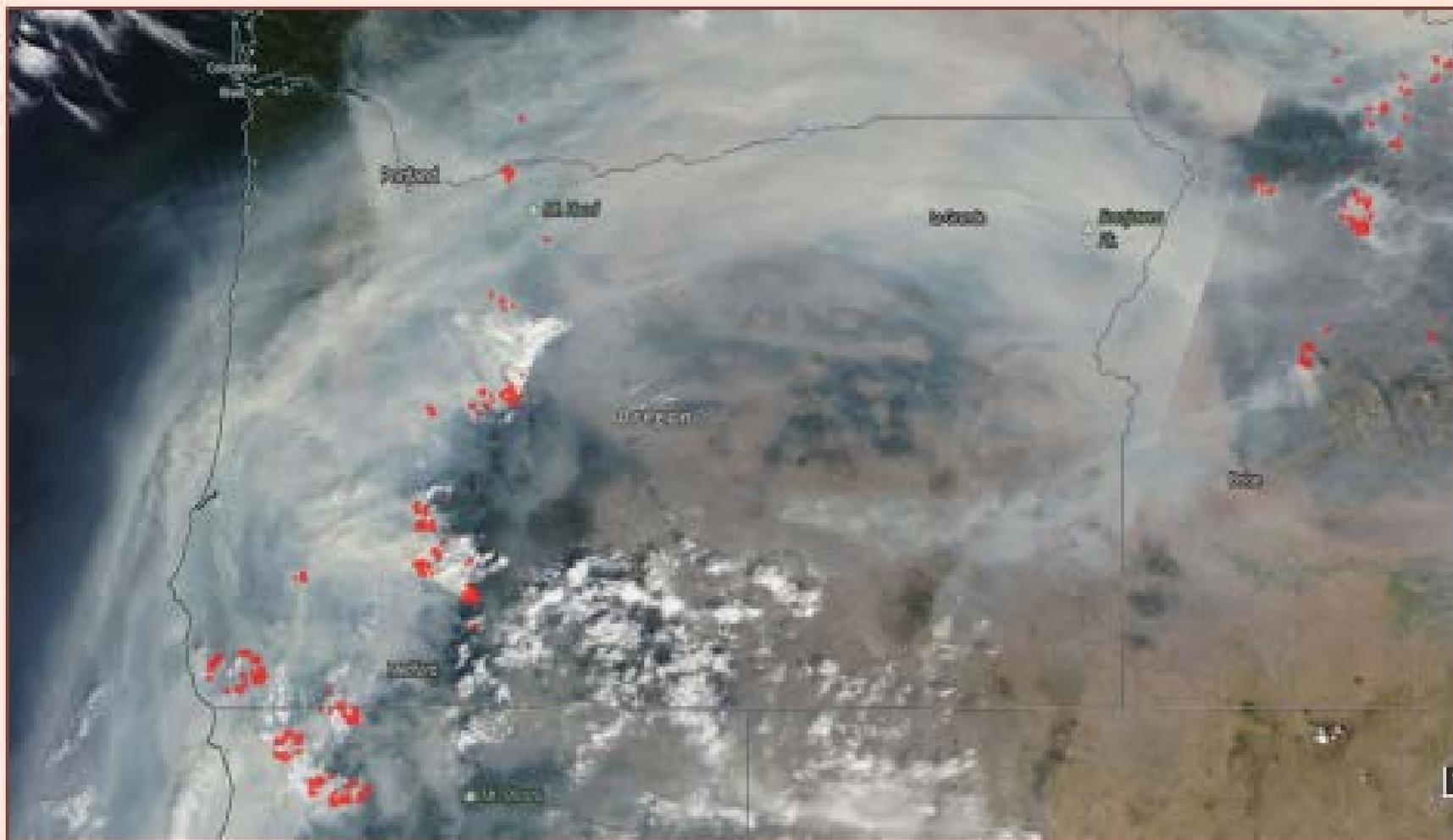
1997 - 2006

- ODF data 1997-2006
- Federal aggregate data 1997-2006 (USFS WFDSS, NWCC)
- USGS 2000-2006 (fed aggregate data)
- ODF Districts
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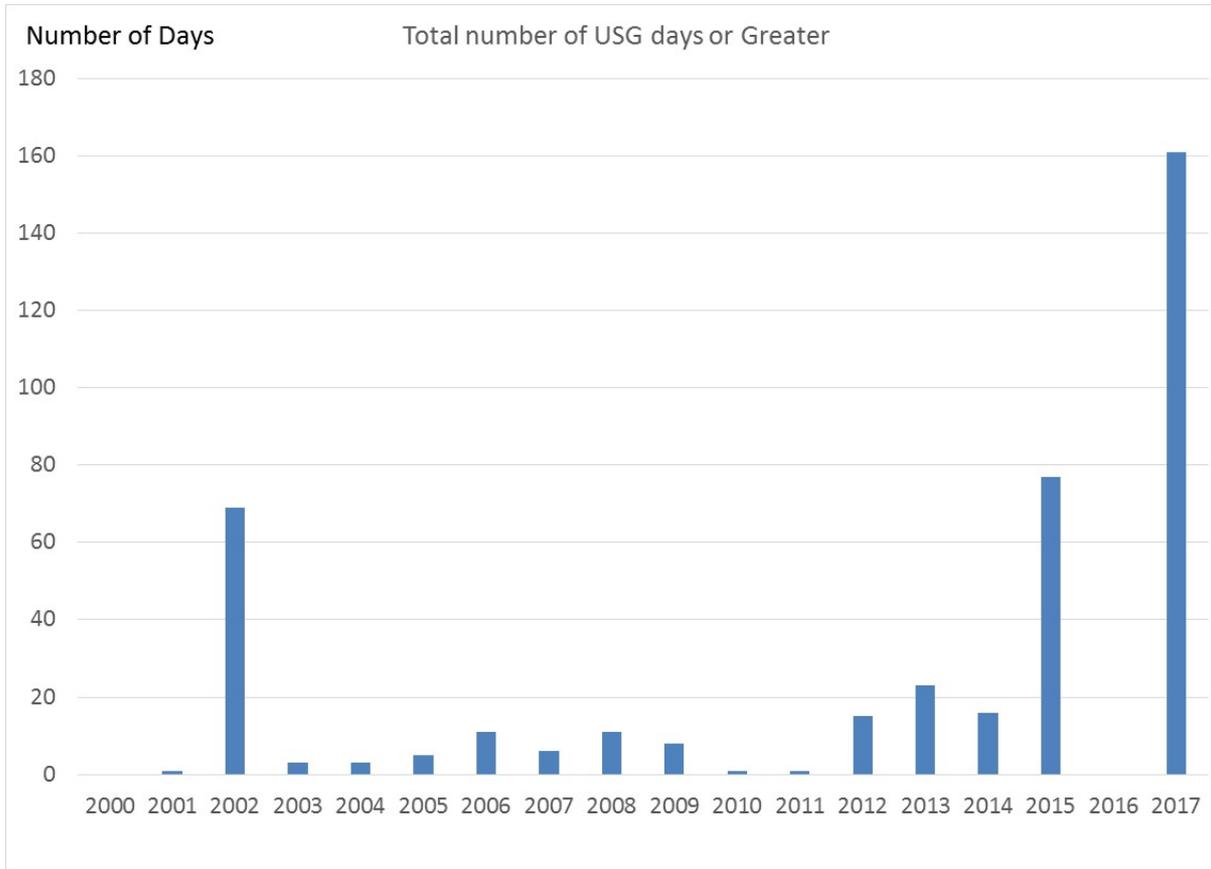




Smoke Impacts – 9/04/2017



Oregon Forest Fire Smoke in 2017



Cities Included in Graph	
NW	Portland
Willamette Valley	Salem
	Eugene/ Springfield
SW	Roseburg
	Grants Pass
	Medford
SE	Klamath Falls
	Lakeview
Central	Bend
East	Burns
	John Day
	Baker City
NE	La Grande
	Enterprise
	Pendleton
N Central	The Dalles



USG = Unhealthy for Sensitive Groups

Vulnerable Populations

People with asthma, COPD, other lung disorders, or heart disease

Acute smoke exposure can trigger or worsen these conditions.

Older adults

They may be more likely to have heart or lung diseases.

Children

They are still developing, spend more time being active outside, and have a higher breathing rate than adults.

Pregnant Women

Women have a higher breathing rate during pregnancy. Some evidence suggests smoke exposure is associated with decreased birthweight babies.

Vulnerable Populations in Oregon

Number of Oregonians

	Rural counties	Urban counties
Asthma (adults)	77,000	252,000
Heart disease	37,000	89,000
COPD	59,000	131,000
Children (age 0-14)	151,750	566,613
Adults age 65+	182,038	450,718

US Office of Management and Budget classification of Counties. Rural counties: Baker, Clatsop, Coos, Crook, Curry, Douglas, Gilliam, Grant, Harney, Hood River, Jefferson, Josephine, Klamath, Lake, Lincoln, Linn, Malheur, Morrow, Sherman, Tillamook, Umatilla, Union, Wasco, Wallowa, Wheeler. Urban counties: Benton, Clackamas, Columbia, Deschutes, Jackson, Lane, Marion, Multnomah, Polk, Washington, Yamhill.



Environmental Quality Commission

Smoke Management Program

Authorized by Environmental Quality Commission and Board of Forestry



Board of Forestry

State Smoke Management Policy

"No smoke intrusion into SSRA (populated area)"

No Intrusions

Intrusions

7 Intrusions per 3000 Ignitions (10yr avg)

National Ambient Air Quality Standard PM2.5

No NAAQS Violation

NAAQS Violation

Policy Decision Space



12,790 Tons Emissions

21,430 Tons Emissions (estimated)

162,000 Acres Burned

271,000 Registered Acres (planned to burn)

Prescribed Fire 10 Year Averages

Policy Tradeoffs

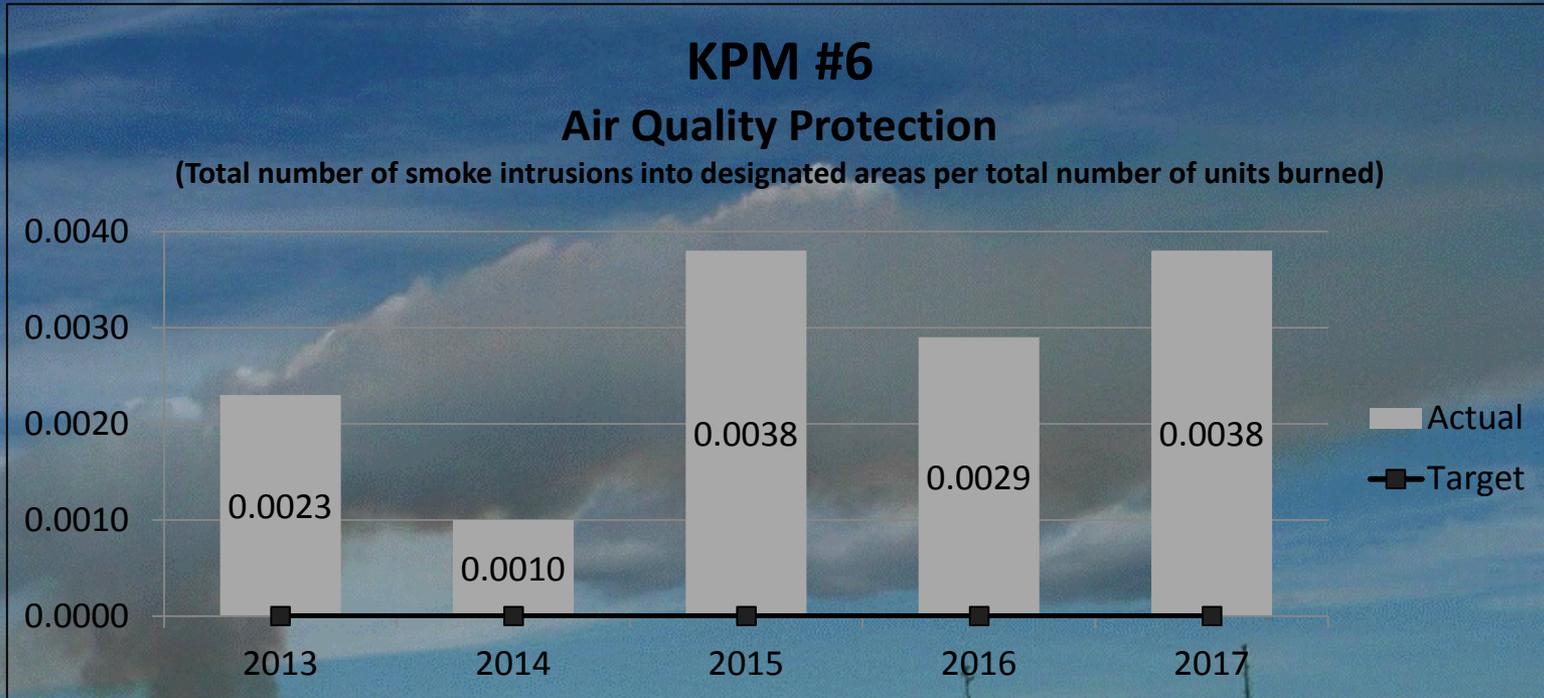
496,000 Acres Burned in Oregon (10 year average)

Reduce Wildfire Potential and Emissions

Vulnerable Population Health Risk

NAAQS Violation Potential

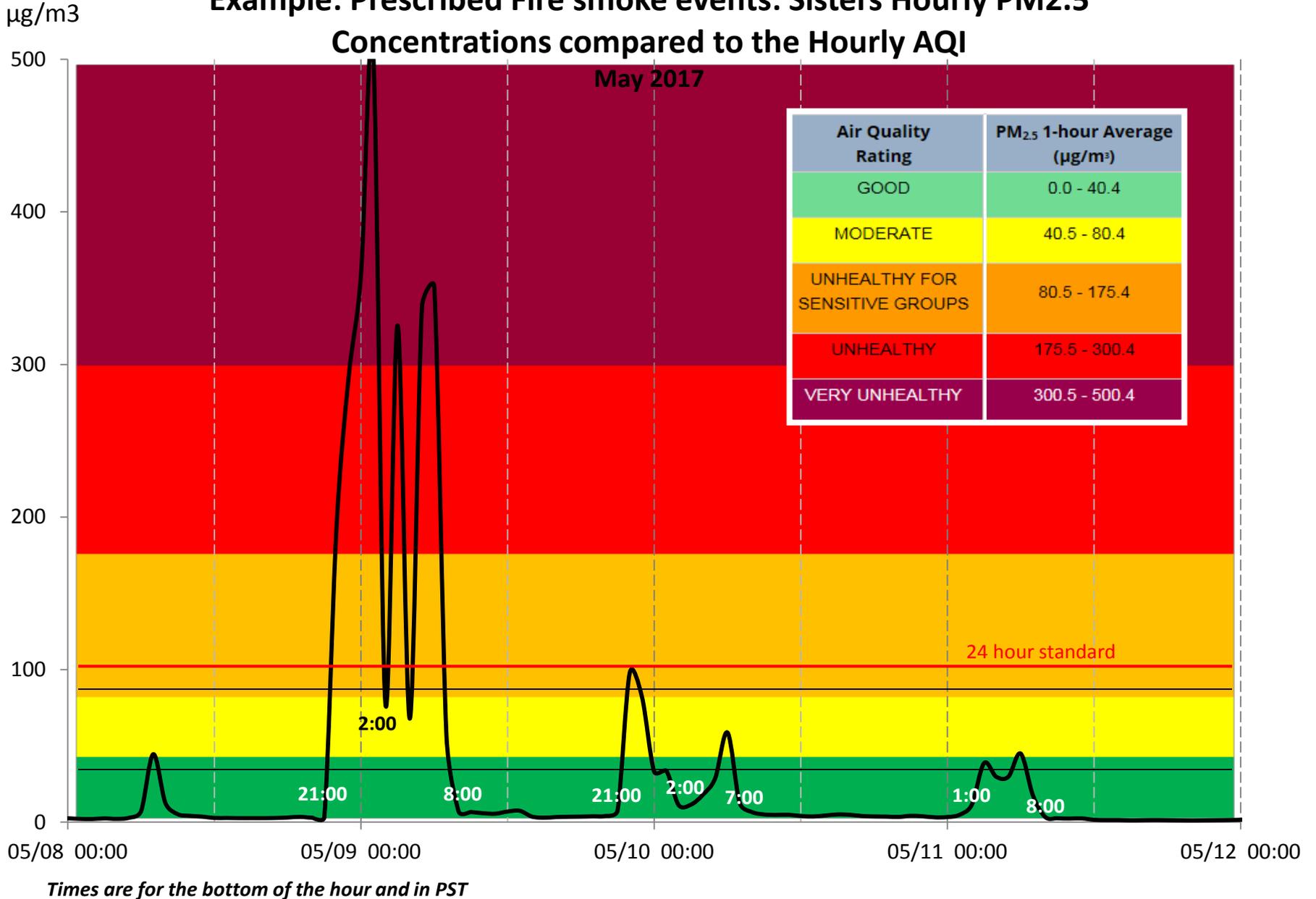
Intrusions



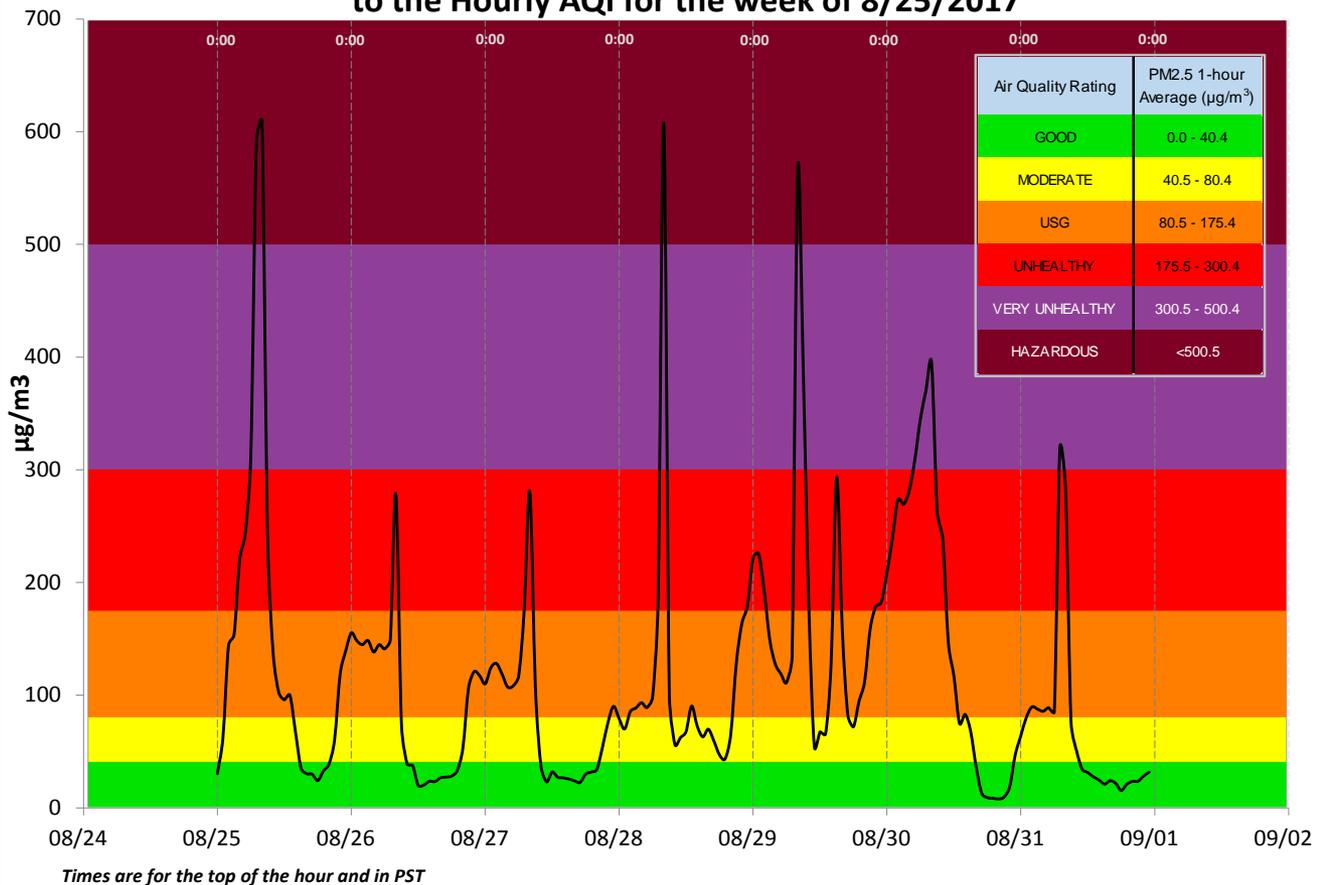
How Are We Doing

The Smoke Management Program is doing a good job of protecting Oregon's air quality while, at the same time, allowing forest landowners to dispose of unwanted accumulations of forest fuel. Intrusions have increased in recent years due to an increase in forest restoration burning near Smoke Sensitive Receptor Areas east of the Cascades.

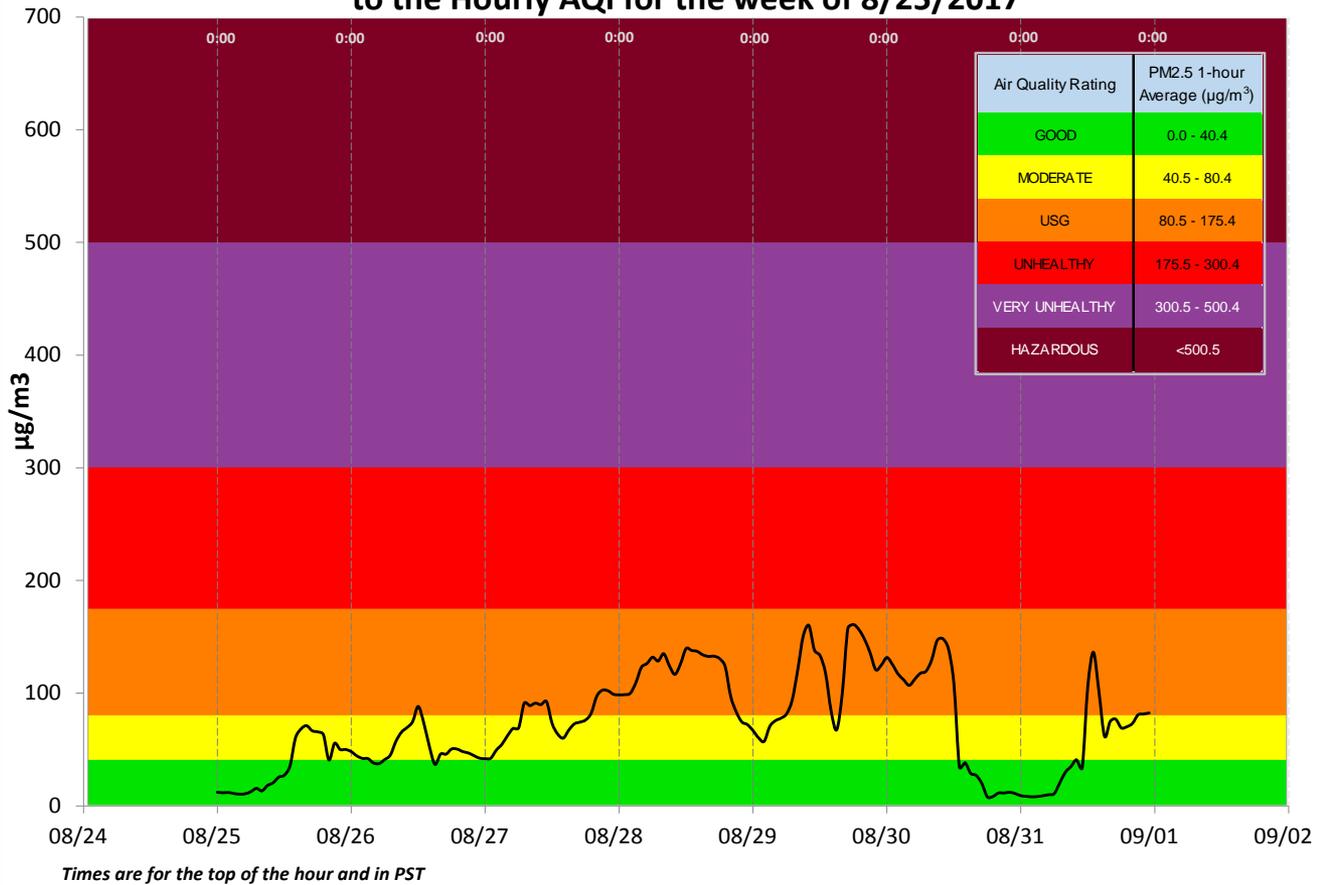
Example: Prescribed Fire smoke events: Sisters Hourly PM2.5 Concentrations compared to the Hourly AQI



Sisters Hourly PM2.5 Forest Fire Smoke Concentrations compared to the Hourly AQI for the week of 8/25/2017



Medford Hourly PM2.5 Forest Fire Smoke Concentrations compared to the Hourly AQI for the week of 8/25/2017



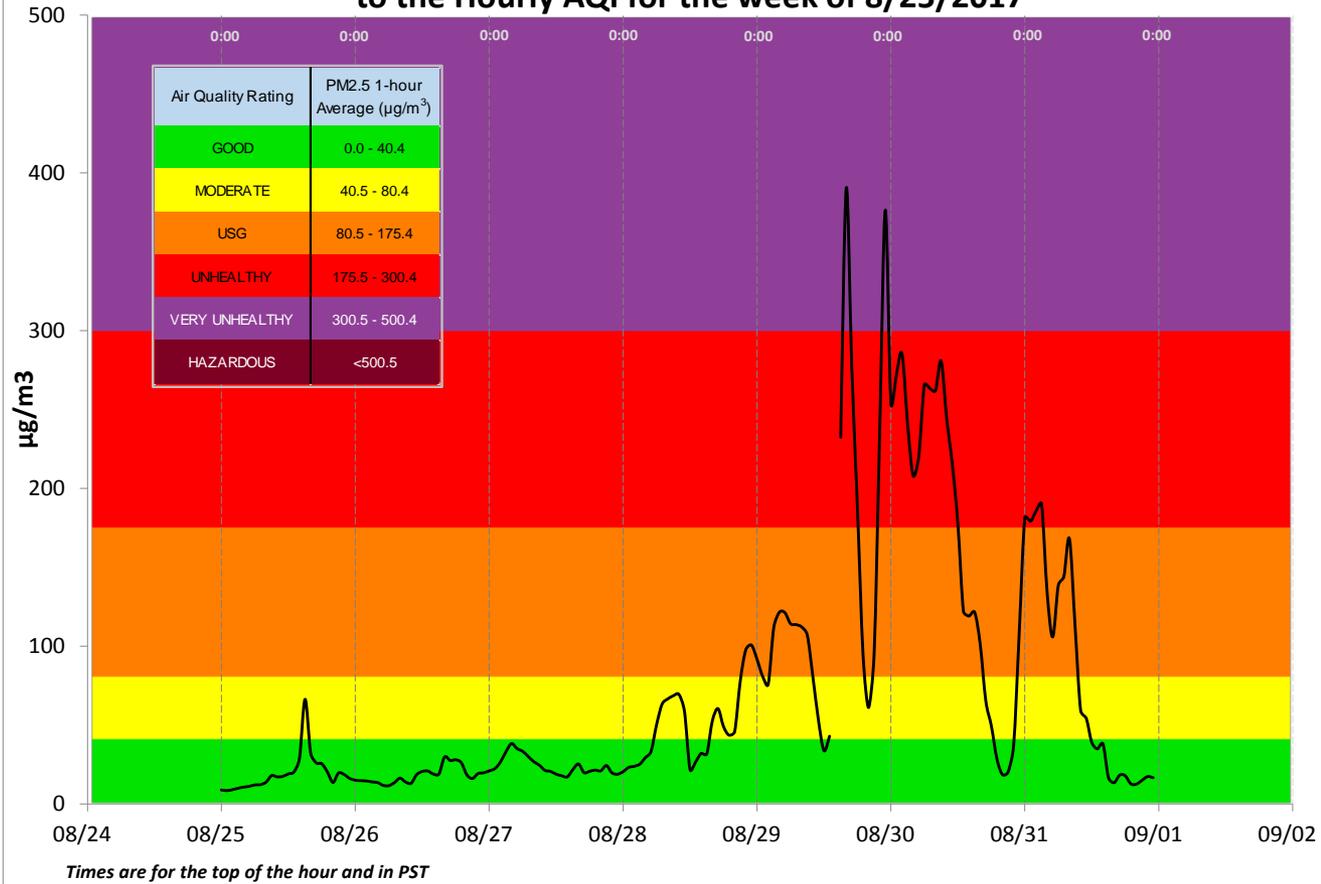
Next Steps

- Smoke Management Review Committee – January 2018
- ODF / DEQ – (Guided by both SMAC and Review Process)
- BOF / EQC – (November 2017, Returning spring 2018)

<http://www.oregon.gov/ODF/Board/Pages/SmokeReviewCommittee.aspx>

Questions?

Bend Hourly PM2.5 Forest Fire Smoke Concentrations compared to the Hourly AQI for the week of 8/25/2017





DEQ

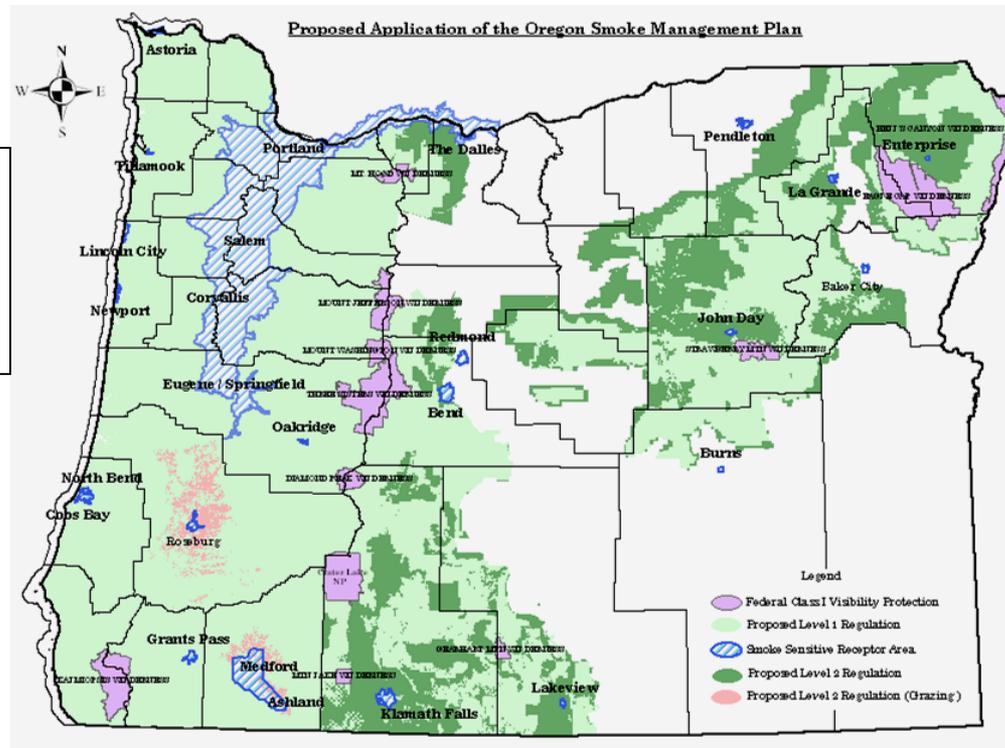
Smoke Protected Areas

Smoke Sensitive Receptor Areas (SSRAs)

Legend

SSRA's

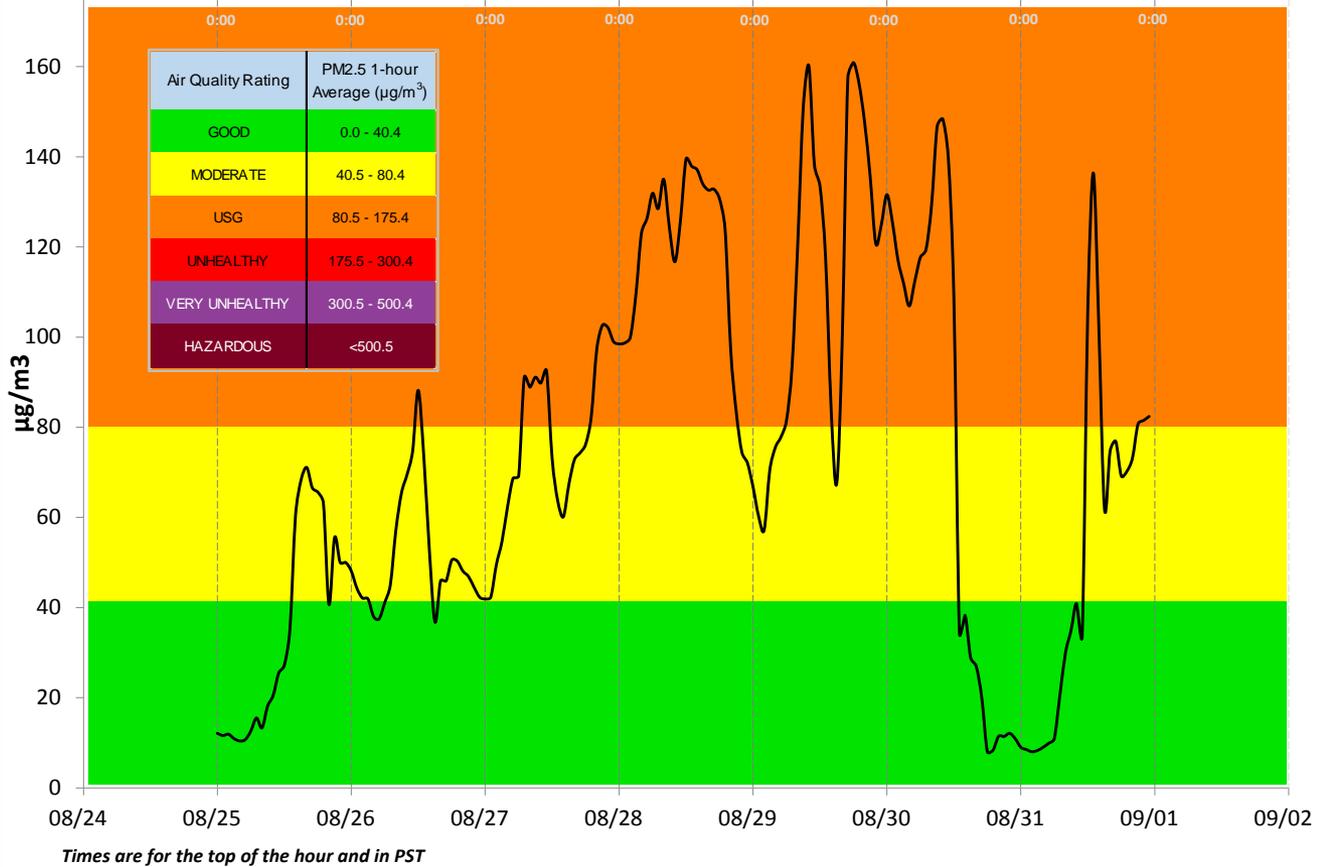
Class I
Areas





DEQ

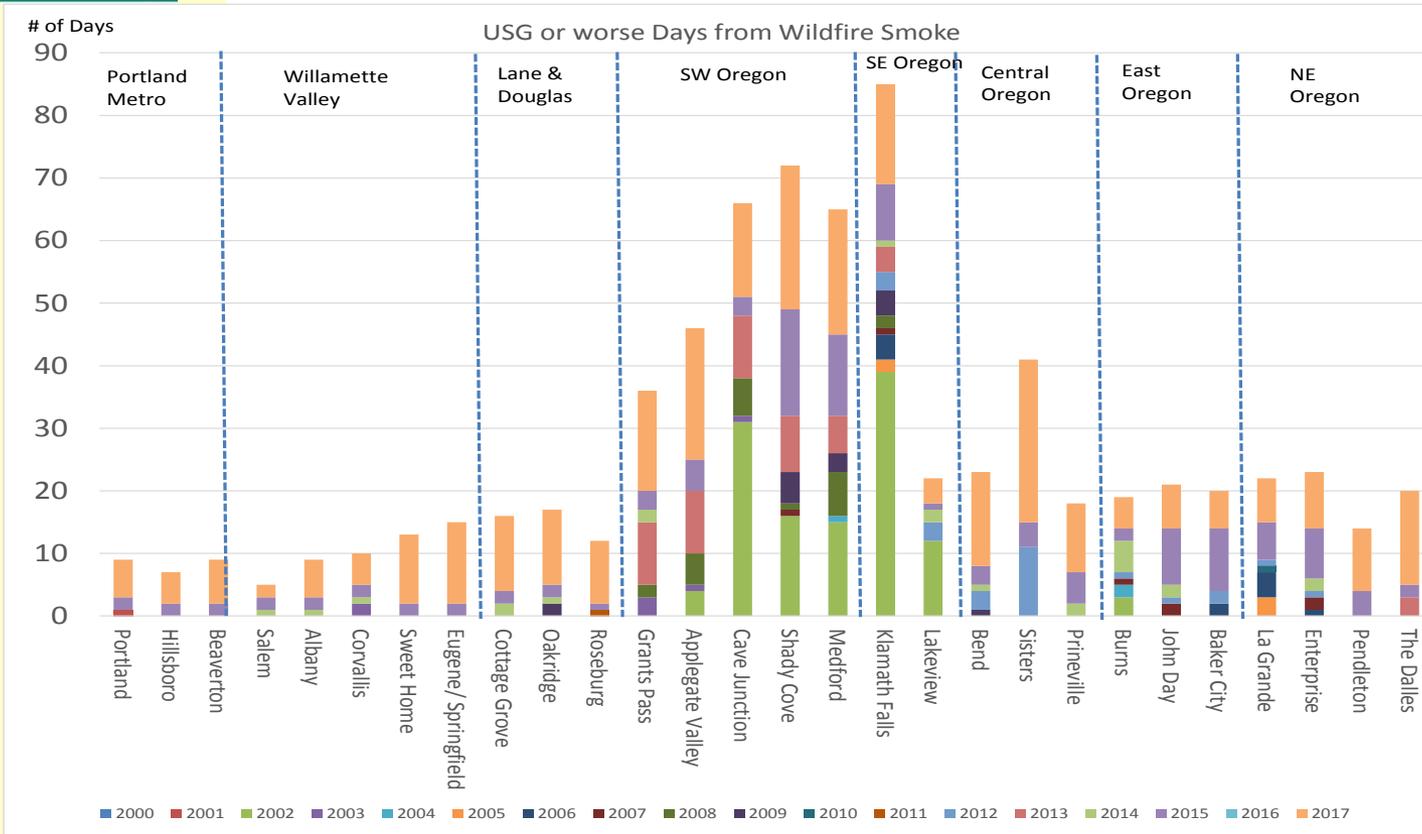
Medford Hourly PM2.5 Forest Fire Smoke Concentrations compared to the Hourly AQI for the week of 8/25/2017





DEQ

Forest Fire Smoke in 2017



Population age 65 and over in 2000

Percent

Population age 65 and over in 2016

Percent

Adult asthma prevalence, 2012-2015

Percent

Data source: Oregon Behavioral Risk Factors Surveillance System, 2012-2015

Reliability is based on the number of people surveyed. Counties with small numbers of adults surveyed will result in a warning that the prevalence may be unreliable or being suppressed because the prevalence is unreliable.

Adult chronic obstructive pulmonary disease prevalence, 2012-2015

Percent

Data source: Oregon Behavioral Risk Factors Surveillance System, 2012-2015

Reliability is based on the number of people surveyed. Counties with small numbers of adults surveyed will result in a warning that the prevalence may be unreliable or being suppressed because the prevalence is unreliable.

Adult heart attack prevalence, 2012-2015

Percent

Data source: Oregon Behavioral Risk Factors Surveillance System, 2012-2015

Reliability is based on the number of people surveyed. Counties with small numbers of adults surveyed will result in a warning that the prevalence may be unreliable or being suppressed because the prevalence is unreliable.

Health Concerns

- Vulnerable populations
 - Older folks, children, people already health compromised (asthma, heart and respiratory disease)
 - Includes people who work outside
- How do we limit exposure to communities

Wildfire Smoke Response Protocol

Multi-agency Response Team

- State protocol developed in 2012-13 to provide guidance for state and federal agencies in Oregon who respond to severe smoke episodes caused by large or long-duration wildfires. Ensures a coordinated response in order to mitigate impacts on public health.
- The protocol also identifies other organizations, partners, and other governmental entities (county, city, and tribal) that state and federal responders need to coordinate with during these episodes.
- Protocol is focused specifically on air quality impacts.
 - DEQ main role, air quality monitoring, coordinating outreach to the media and public
 - ODF main role, smoke forecasting
 - OHA main role, advising agencies, local governments, county/city health officials on health risks and mitigation
- Daily team calls during major fire events. Participants include many state and federal agencies, emergency response agencies, local city & county health departments.
- Protocol available at :<http://www.oregon.gov/deq/air/Pages/Wildfires.aspx>