

A photograph of a forest fire. The scene is dominated by tall, dark evergreen trees in the foreground and middle ground. In the background, a bright, intense fire is burning, with large plumes of white smoke rising into the sky. The fire is concentrated in the lower right and center of the frame, with bright orange and yellow flames. The overall atmosphere is one of a significant wildfire event.

# **Oregon's 2012 Wildfires: Predictable & Preventable**

**By Dr. Bob Zybach**

**Association for Fire Ecology  
5<sup>th</sup> International Fire Ecology & Management Congress  
Oregon Convention Center,  
Portland, Oregon USA  
December 5, 2012**

# **Oregon Large-Scale Forest Wildfire Predictive Criteria**

## **1. Historical Weather and Wildfire Patterns**

*Appear to be about the same for past 235 years.*

## **2. Land Ownership Patterns**

*Federal vs. State vs. Industrial vs. Tribal vs. Private.*

## **3. Current Fuel Loads, Structures, and Locations**

*Strong correlations to federal land management policies.*

*NOTE: There is no evidence that climate change during historical time has had an effect on wildfire seasonality; however the wildfires of the 1930s took place during a period of widespread drought.*

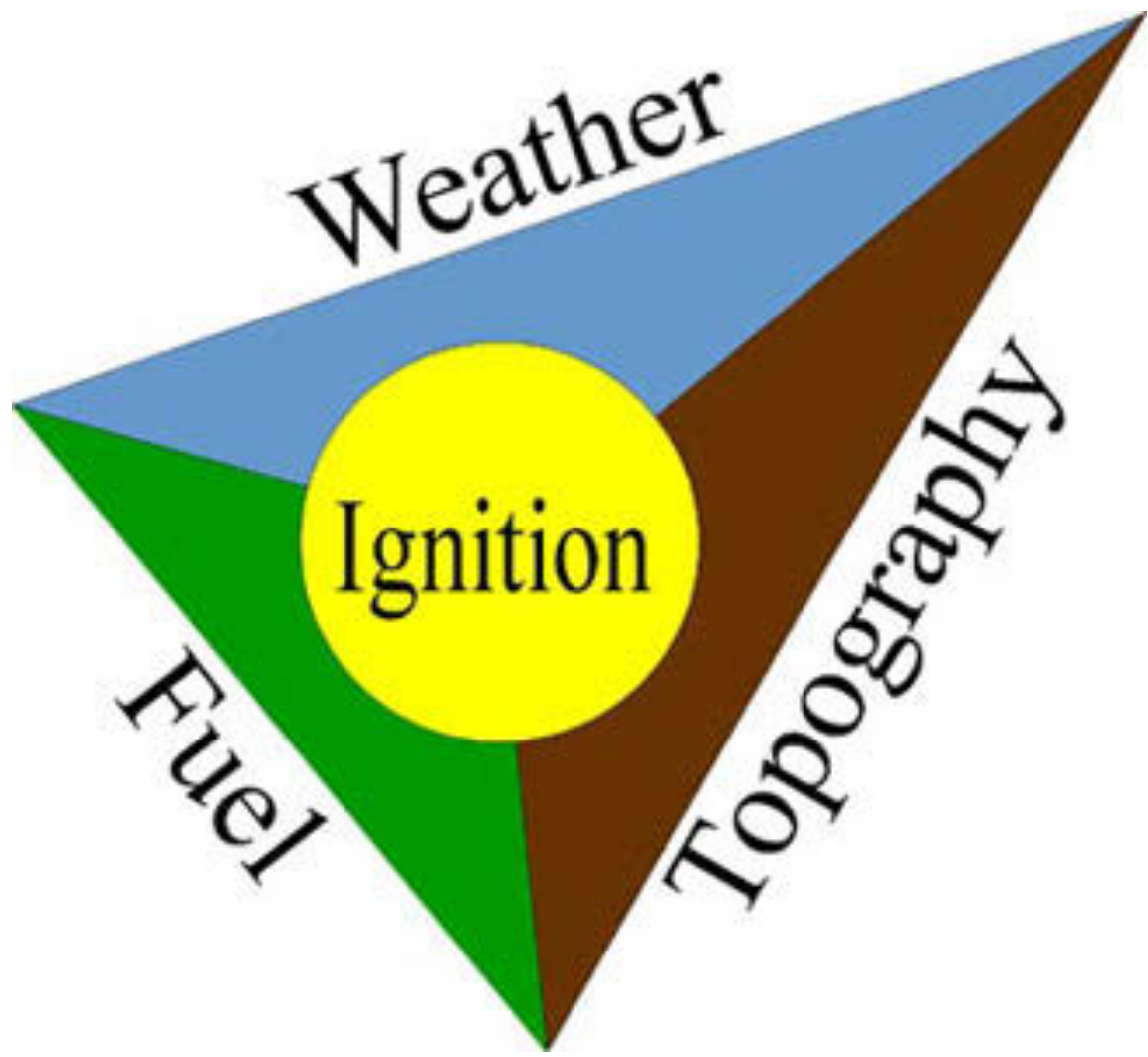
# Fire History







09/22/2009



# Lightning

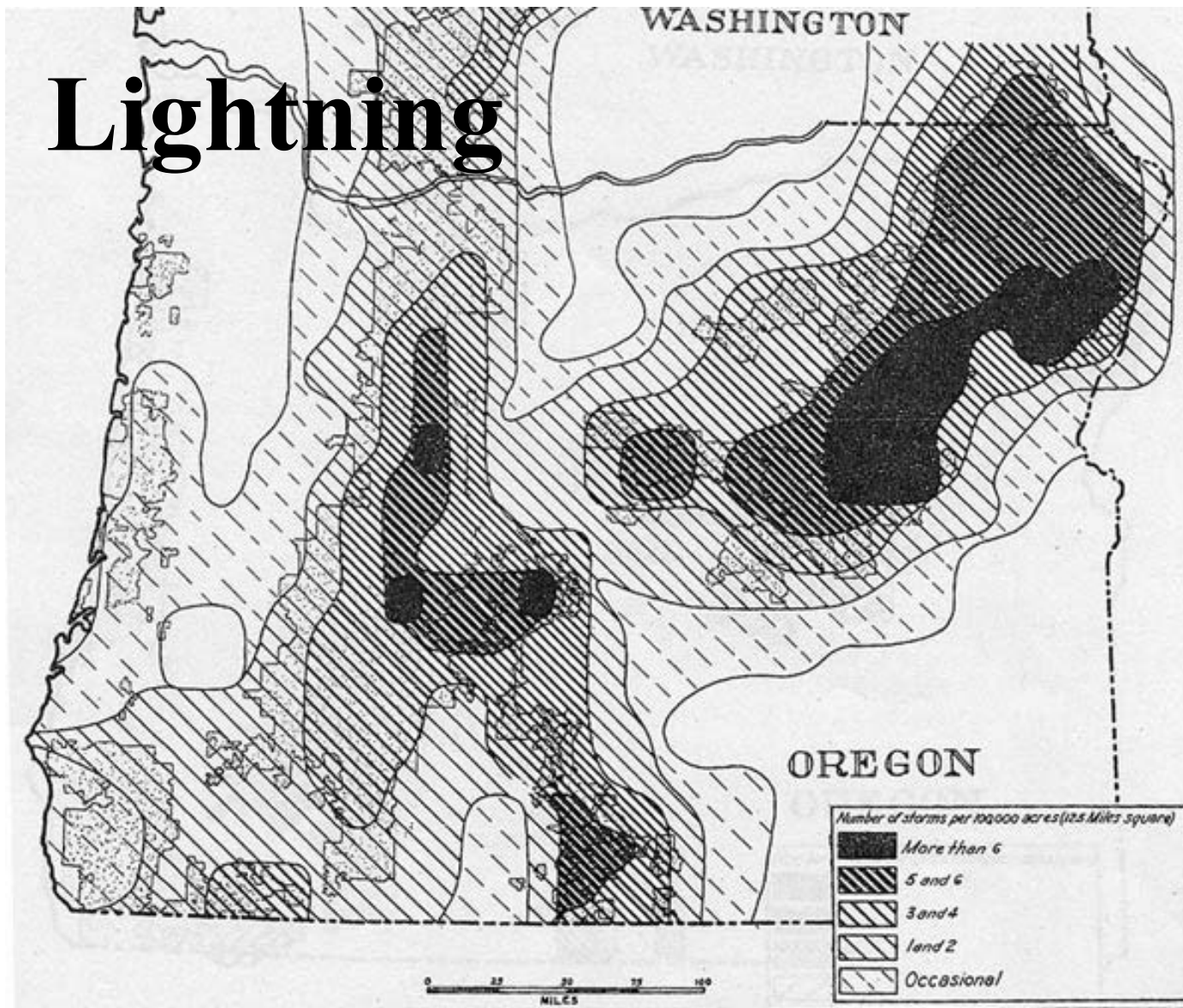


FIGURE 13.--Zones of average yearly lightning storm distribution in the vicinity of the national forests of Oregon and Washington as determined from more than 2600 storms reported by national forest fire lookouts during the 7-year period from 1925 to 1931.

# Human Ignitions





# Fuel Loads & Structure

Dead Wood



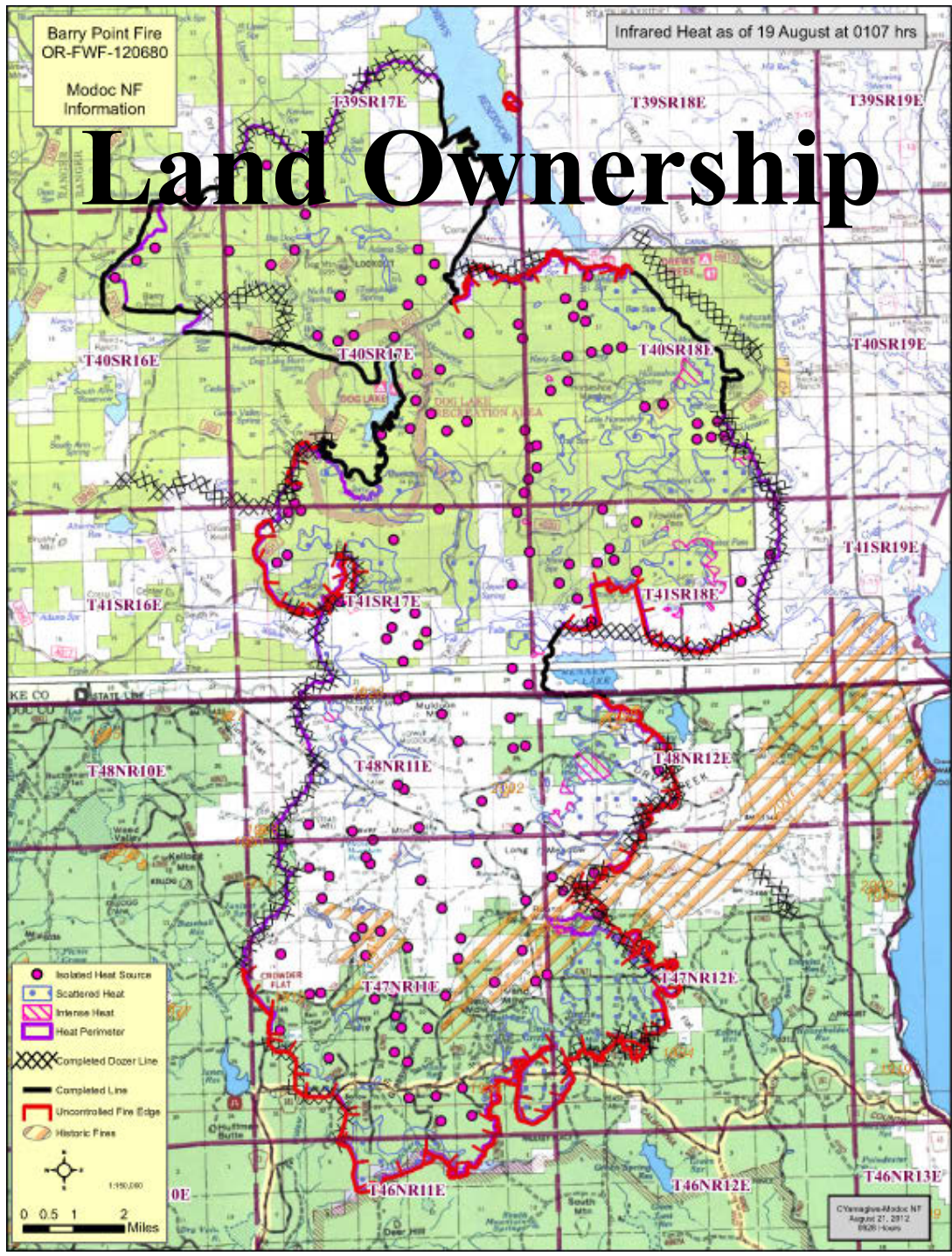




Barry Point Fire  
OR-FWF-120680  
Modoc NF  
Information

Infrared Heat as of 19 August at 0107 hrs

# Land Ownership





Wildfire Protection

## ***Zybach's Annual Oregon Large-Scale Wildfire Prediction***

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- 1. Large-scale wildfires are most likely to occur in August and September in western Oregon.**
- 2. Large-scale wildfires are most likely to occur from July through October in eastern Oregon.**
- 3. Large-scale wildfires are most likely to occur on federal lands.**
- 4. Wildfire risk and spread are greatest during east wind events.**
- 5. Wildfire severity is directly proportionate to the type, condition, continuity and volume of fuels involved.**

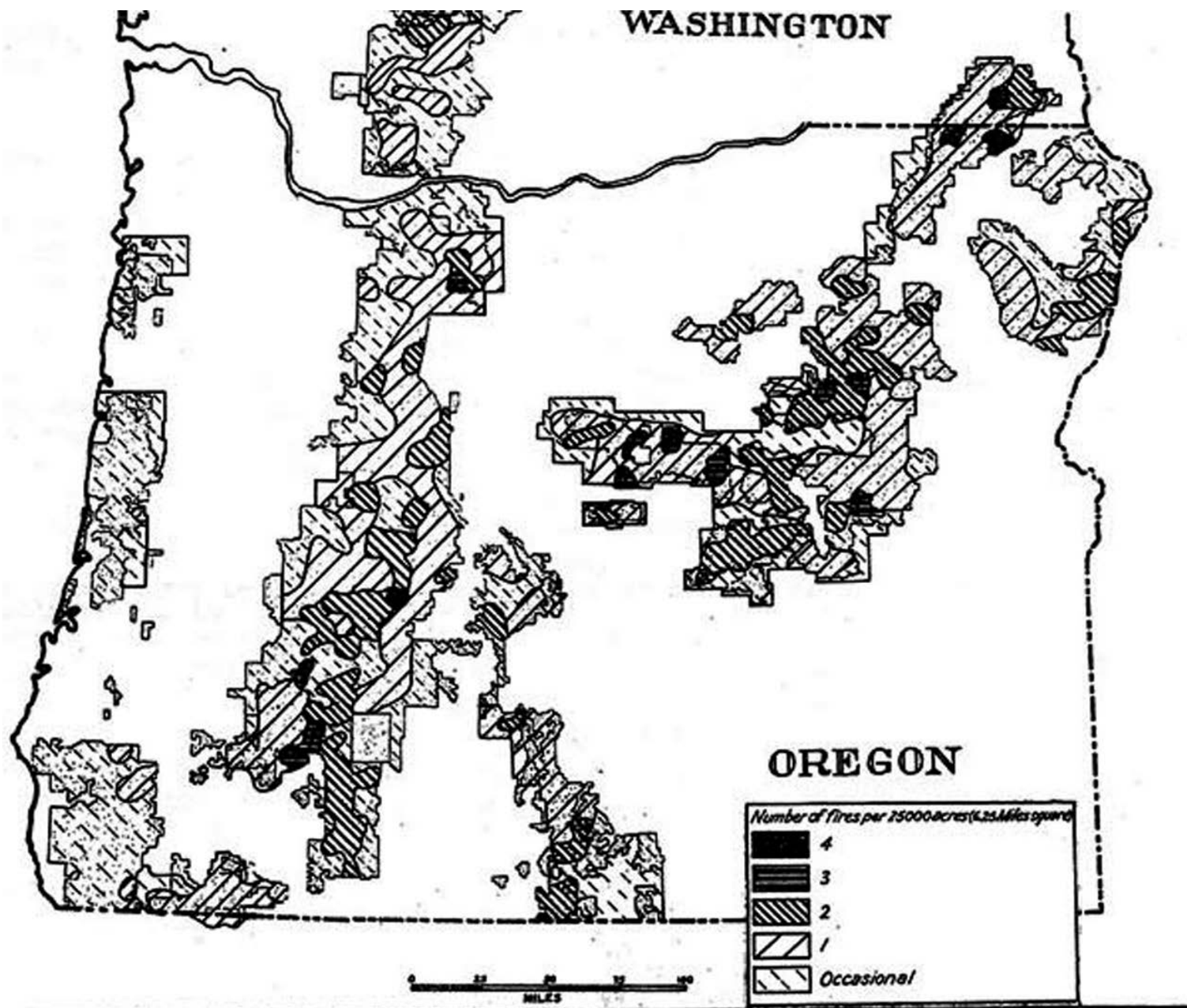
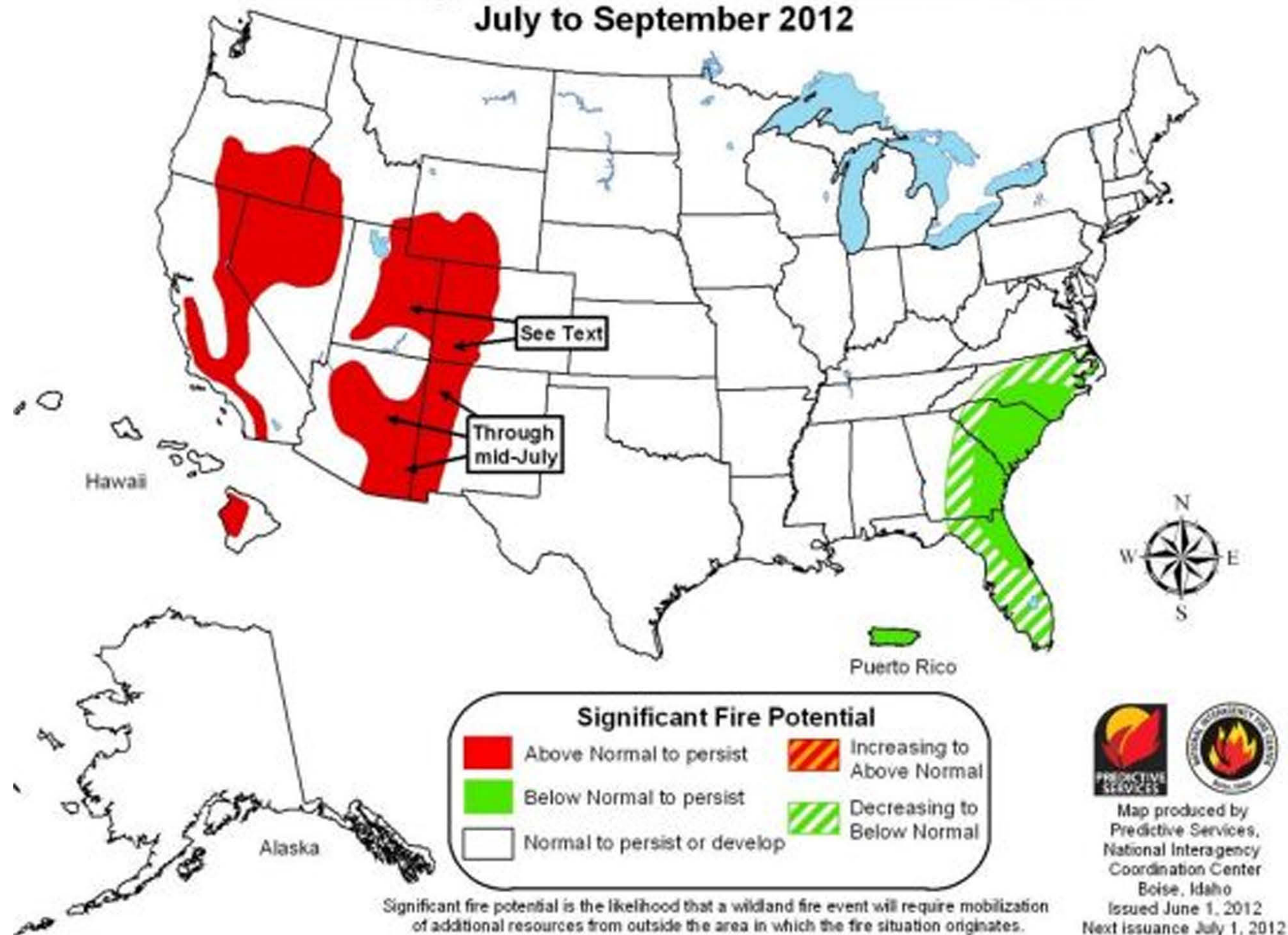


FIGURE 14.--Zones of average yearly lightning fire distribution on the national forests of Oregon and Washington obtained by plotting the locations of the 5300 lightning fires reported from 1925 to 1931.

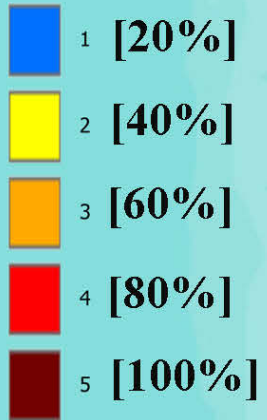
## Seasonal Significant Wildland Fire Potential Outlook July to September 2012



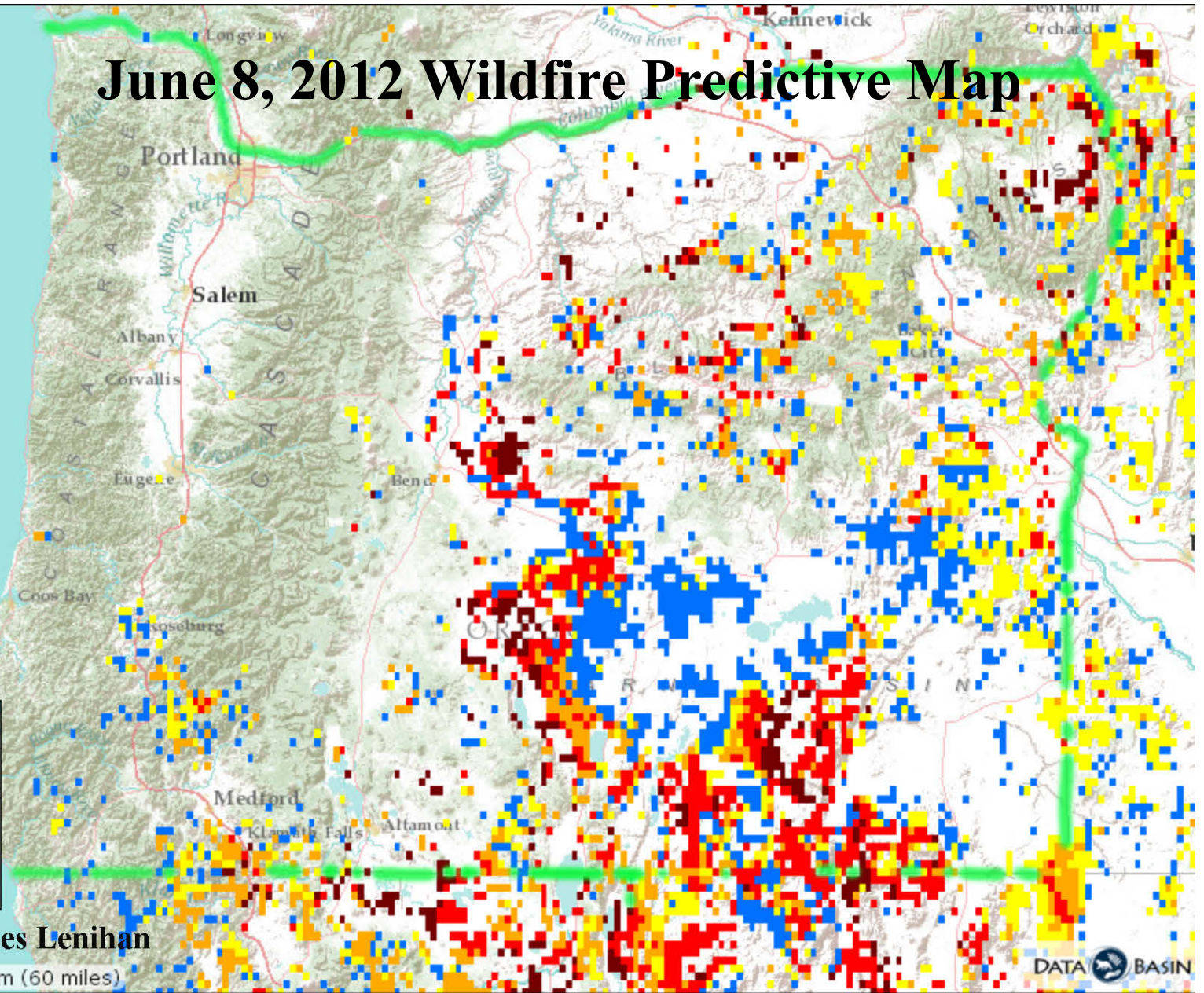


# OREGON

MC1 DGVM fire potential consensus forecast January-September 2012 (number of weather forecasts resulting in high potential)



## June 8, 2012 Wildfire Predictive Map



Data Analyst: James Lenihan

0 96 km (60 miles)



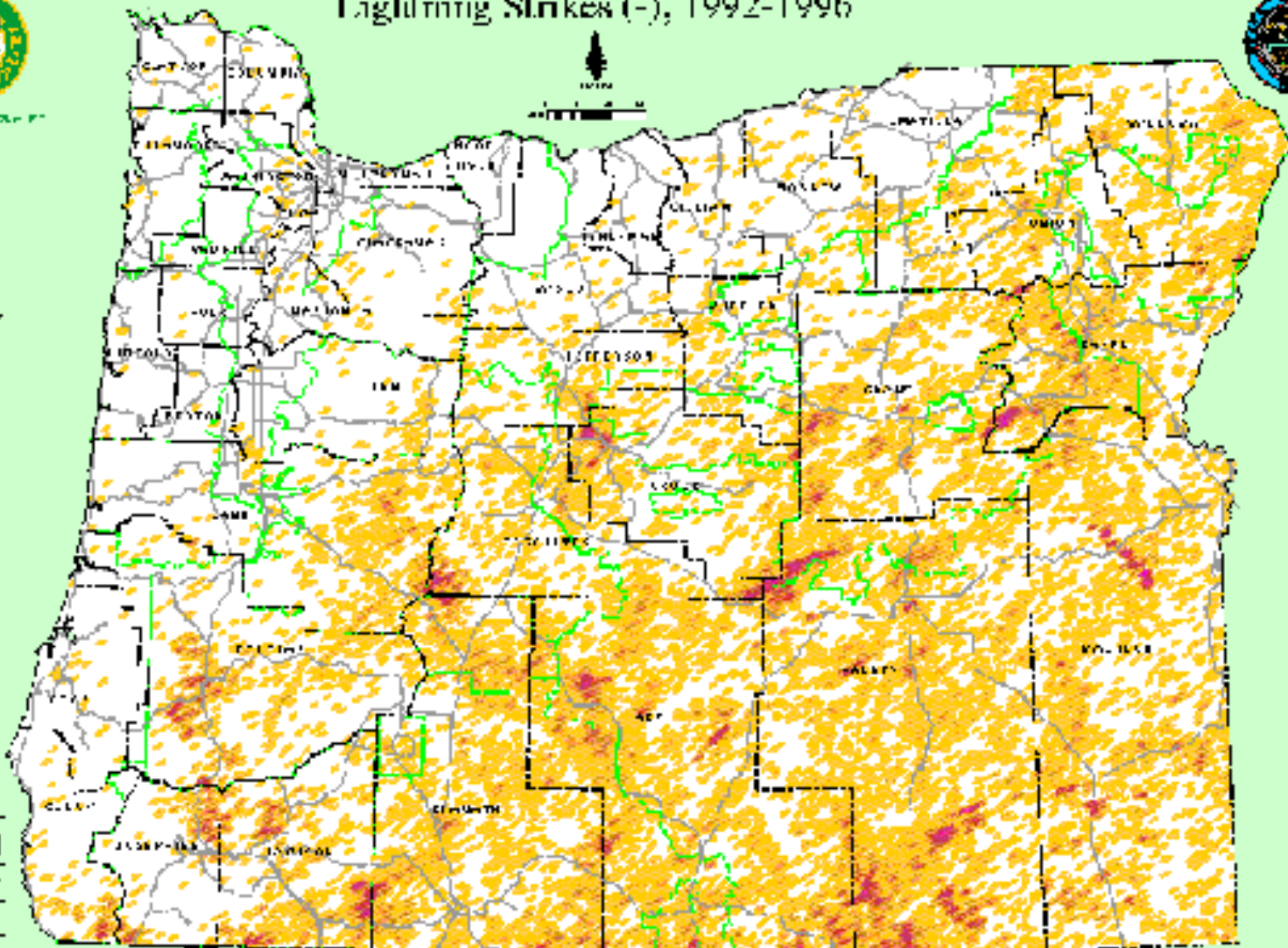
Created by: Dominique Bachelet, 2012



OREGON DEPARTMENT OF FORESTRY

- 0 strikes/year
- 1 strike/year
- 2 strikes/year
- 3 strikes/year
- 4 strikes/year
- 5 strikes/year
- 6 strikes/year
- ODF firebreak system

### Lightning Strikes (-), 1992-1996



**Oregon**  
 DEPARTMENT OF  
 FORESTRY

1000 NE Oregon Street  
 Salem, Oregon 97331

Map Source: Oregon Department of Forestry, Oregon Lightning

July 21, 2007  
 ODF Forestry Information System

# Oregon 2012 Large-Scale Wildfire Summary

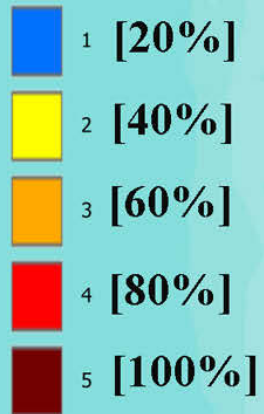
| Wildfire Name    | Cause     | Location           | Started     | Total Acres |
|------------------|-----------|--------------------|-------------|-------------|
| Miller Homestead | Lightning | Burns BLM          | July 8      | 160,853     |
| Long Draw        | Lightning | Vale BLM           | July 8      | 557,648     |
| Bonita Complex   | Lightning | Vale BLM           | July 9      | 18,188      |
| Lava             | Lightning | Lakeview BLM       | July 23     | 21,300      |
| Waterfalls 2     | Lightning | Warm Springs Res.  | August 4    | 12,265      |
| Holloway         | Lightning | Winnemucca BLM     | August 5    | 461,047     |
| Barry Point      | Lightning | Fremont-Winema NF  | August 6    | 93,071      |
| Geneva 12        | Lightning | Ochoco NF          | August 6    | 1,337       |
| Ten Mile Complex | Lightning | Vale BLM           | August 10   | 14,036      |
| Cache Creek      | Lightning | Wallowa-Whitman NF | August 20   | 73,697      |
| Parish Cabin     | Human     | Malheur NF         | August 28   | 6,481       |
| Pole Creek       | Unknown   | Deschutes NF       | September 9 | 24,392      |

- SUMMARY:**
- 1) Oregon experienced 12 large-scale wildfires in 2012.
  - 2) Lightning caused 10 (or 11) of these fires; people caused 1 (or 2).
  - 3) Six fires started on US Forest Service land; five on BLM land.
  - 4) BLM fires averaged 205,000 acres; USFS fires averaged 40,000 acres.
  - 5) A total of 1,400,000 acres burned; all in July, August, & September.

# OREGON

## MC1 DGVM fire potential consensus forecast January-September 2012

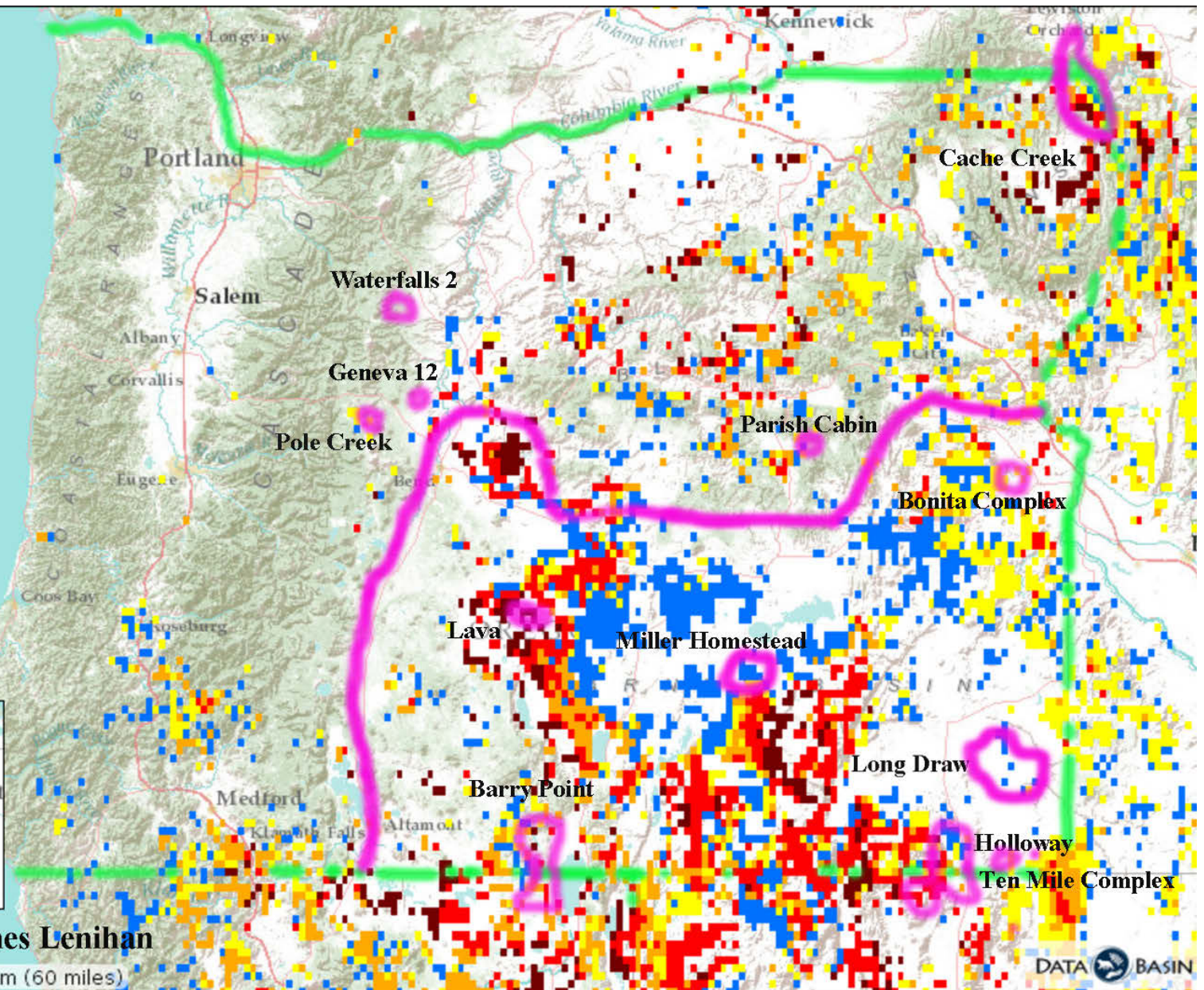
(number of weather forecasts resulting in high potential)



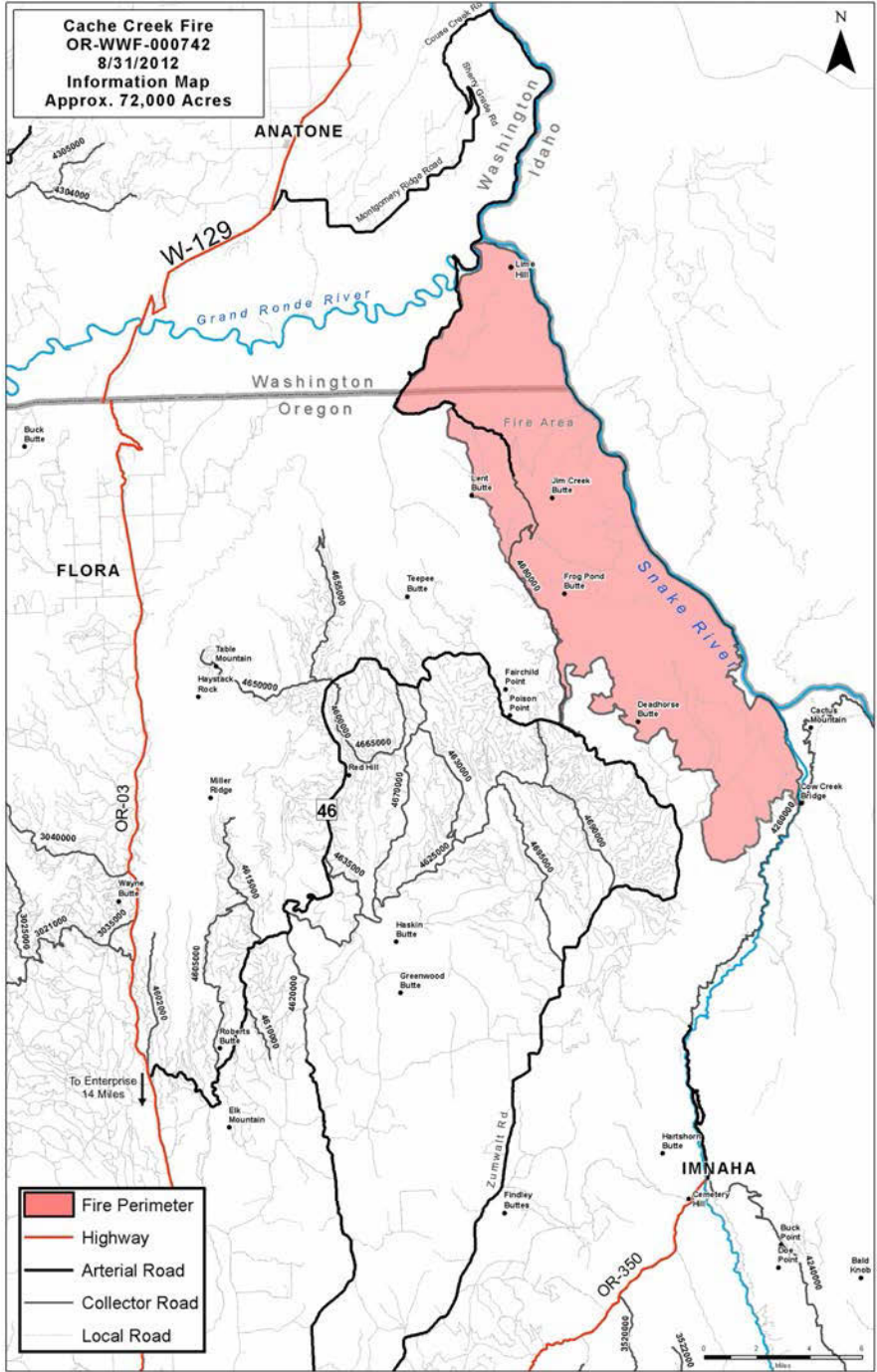
Data Analyst: James Lenihan



Created by: Dominique Bachelet, 2012



DATA BASIN





Vision for the Future

# Oregon Websites and Watersheds Project, Inc.



[www.ORWW.org](http://www.ORWW.org)

# ***RECOMMENDATIONS***

***“If wildfire can be predicted, it can be prevented.”***

- 1. Restore active management of our nations’ resources on our federal lands, including salvage logging, thinning, mining, grazing, road maintenance, recreation, hunting, fishing, trapping, and food gathering;**
- 2. Restore regular use of prescribed fire on our managed forest, woodland, shrubland, and grassland landscapes.**
- 3. Restore people to the land.**