

## Smoke Impact Summary – Klamath NF, August 05, 2014

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*The statements below are those of the authors and do not represent official USFS announcements, views, or policy. They are meant as a discussion/summary of dispersion models, collected air monitor observations and forecast data. All monitored data presented is preliminary and has not been quality assured.*

### A) Key Points for consideration:

- **AS OF 530AM THIS MORNING & FOR ALL FIRES, MODIS SATELLITE DID NOT PICK UP NEW HEAT SIGNATURES.**
- **DURING THE NIGHT THERE WAS LIGHTNING STRIKE ACTIVITY ACROSS NORTHERN CA WITH 10% BEING DRY. PROVIDING OPPORTUNITY FOR NEW FIRE STARTS.**
- **THIS MORNING AIR CONDITIONS WERE CLEANER, HOWEVER, SIMILAR SMOKE CONDITIONS ARE STILL EXPECTED FOR TODAY TUESDAY AS LARGE FUELS CONTINUE TO SMOLDER & SMOKE FROM OREGON FIRES WILL ENTER THE AREA TODAY.**
- **LIGHT WINDS, HIGHER RH, CLOUD COVER & COOLER TEMPS TRANSLATE INTO EXCELLENT CONDITIONS FOR PERSISTENT SMOLDERING COMBUSTION**
- **FIRE SMOKES ARE EXPECTED TO FOLLOW DRAINAGES AND FAN, DRIFT TOWARDS THE SOUTHEAST AT THE SURFACE AND THROUGH THE MIX LAYER**
- **BECAUSE OF THE SHIFT IN WIND DIRECTION, KNF WILL NOW RECEIVE DRIFT SMOKE FROM OREGON FIRES**

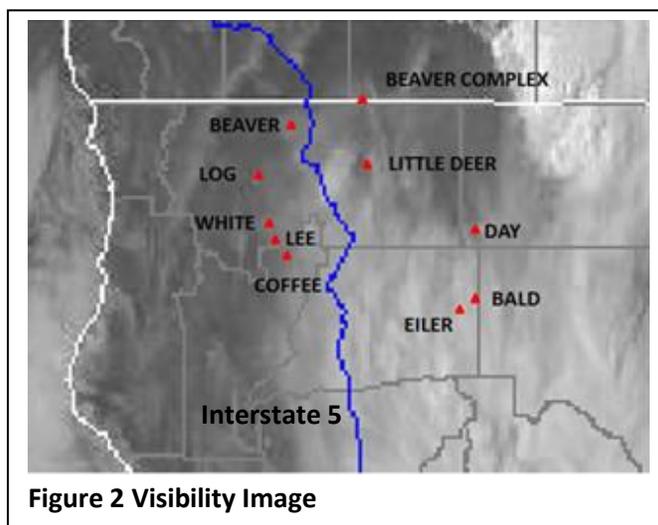
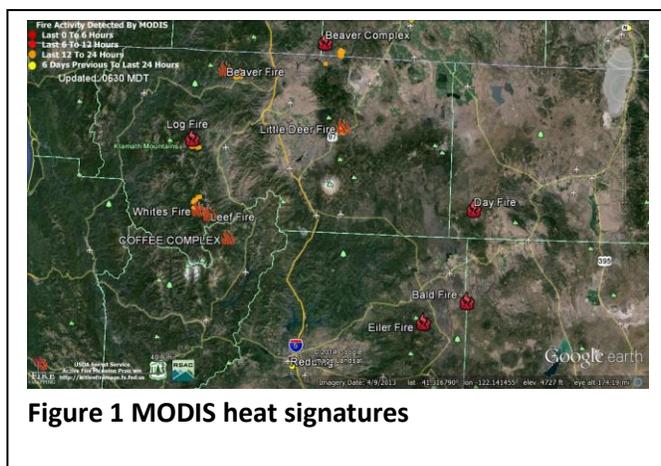


Figure 1 & 2: No new Modis heat signatures detected for the KNF area. Most recent signatures were 6 to 12 hours old as of 5:30 am 05 August. Visibility imagery at 5:00 pm 04 August, displayed incoming cloud cover and moisture for both sides of I-5. With a much

stronger impact zone east of I-5. These conditions are conducive for smoldering combustion and thereby potentially propagating higher PM 2.5 levels throughout the KNF fire area.

**B) Past and Current Conditions:**

Yesterday's smoke concentrations were consistent throughout the day with highest peaks in the afternoon to early evenings. Incoming moisture helped clean-out the atmosphere yesterday evening and current smoke levels are the lowest in the past few days. Yesterday's timing of peak smoke:

- Yreka smoke concentrations peaked at 5pm.
- Ft. Jones smoke concentrations peaked at 2pm.
- Etna smoke concentrations peaked at 12pm.

The prevailing winds have shifted to a northerly flow. This will likely cause smoke travel south into the Sacramento Valley. Areas to the west of the fires, such as Hoopa, should experience less smoke today than previous days unless smoke from fires in Oregon reach the area. By tomorrow morning, smoke will reach southerly into most of the San Joaquin Valley. Several additional monitors are being installed today in communities surrounding the Klamath National Forest. Future reports will include monitoring summaries from more communities. Smoke forecasting model results can be found on the following pages. The outputs are modeled concentrations of Particulate Matter 2.5 (PM2.5) and are displayed in shades of pink/red.

**Figure 1: A summary yesterday's smoke conditions from monitoring stations.**

| <b>3-Hour Peak Smoke Exposure (Rolling Average)</b> |                       |                         |  |  |
|---|-----------------------|-------------------------|--|--|
| <b>Location</b>                                     | <b>3-hr Max PM2.5</b> | <b>Level of Concern</b> | <b>Meaning</b>   | <b>Actions to Protect Yourself</b>   |
| Yreka   | 69                    | Moderate                | Air Quality is acceptable for most. There may be moderate health concern for a small number of sensitive people. | Unusually Sensitive people should consider reducing prolonged or heavy outdoor recreation. |
| Etna  | 86                    |                         |  |  |
| Ft. Jones   | 73                    |                         |  |  |

| 24 Hour Smoke Exposure (Midnight to Midnight) |                       |                                |   |  |
|---|-----------------------|--------------------------------|---|--|
| Location                                      | 24-hour PM2.5 Average | Level of Concern               | Meaning   | Actions to Protect Yourself  |
| Yreka   | 32                    | Moderate                       | Unusually sensitive people should consider reducing prolonged or heavy exertion.  |  |
| Etna<br>Ft. Jones                             | 63<br>49              | Unhealthy for sensitive groups | Increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly. | People with heart or lung disease, older adults, and children should reduce prolonged or heavy exertion. |

Figure 3: Modeling results predicting today's smoke dispersion at 12pm.

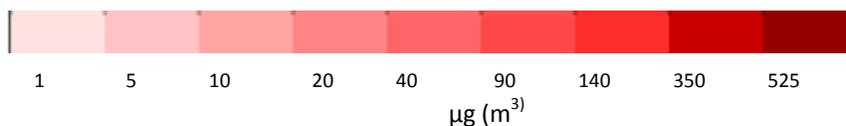
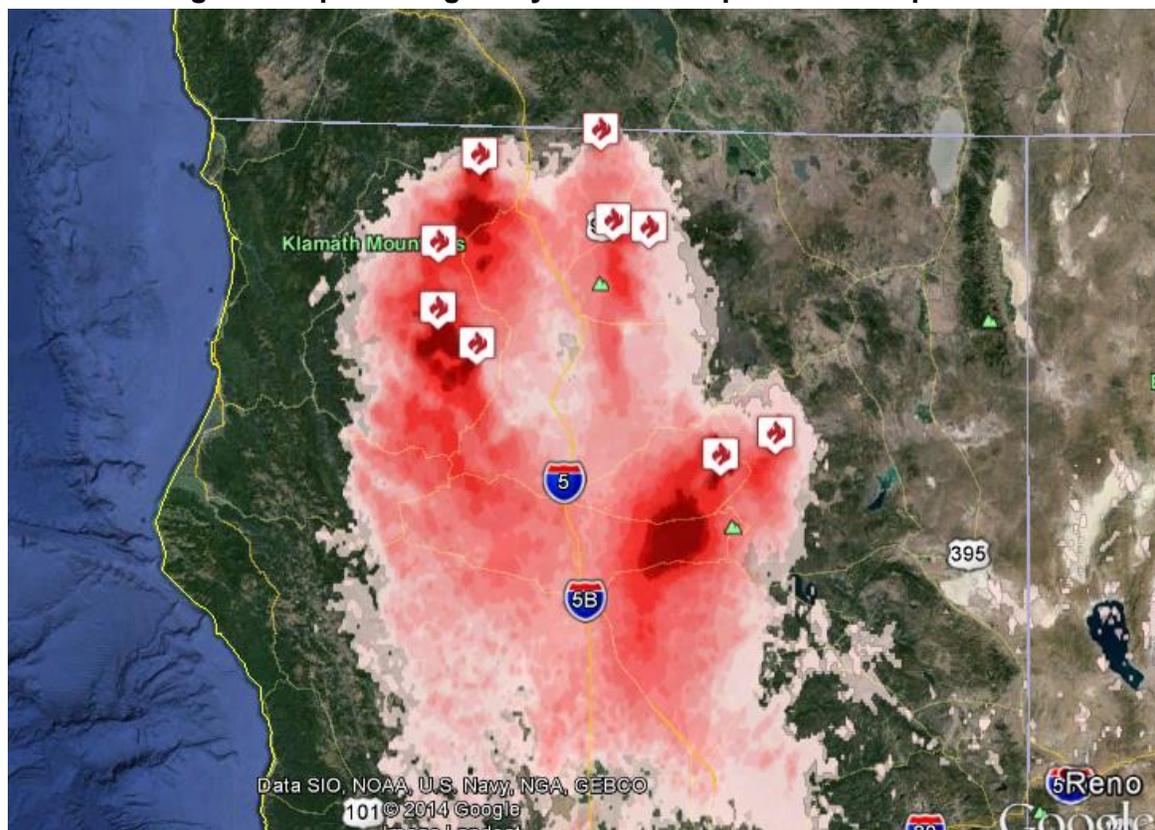


Figure 4: Modeling results predicting today's smoke dispeartion around 6pm.

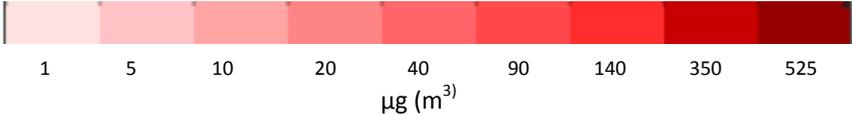
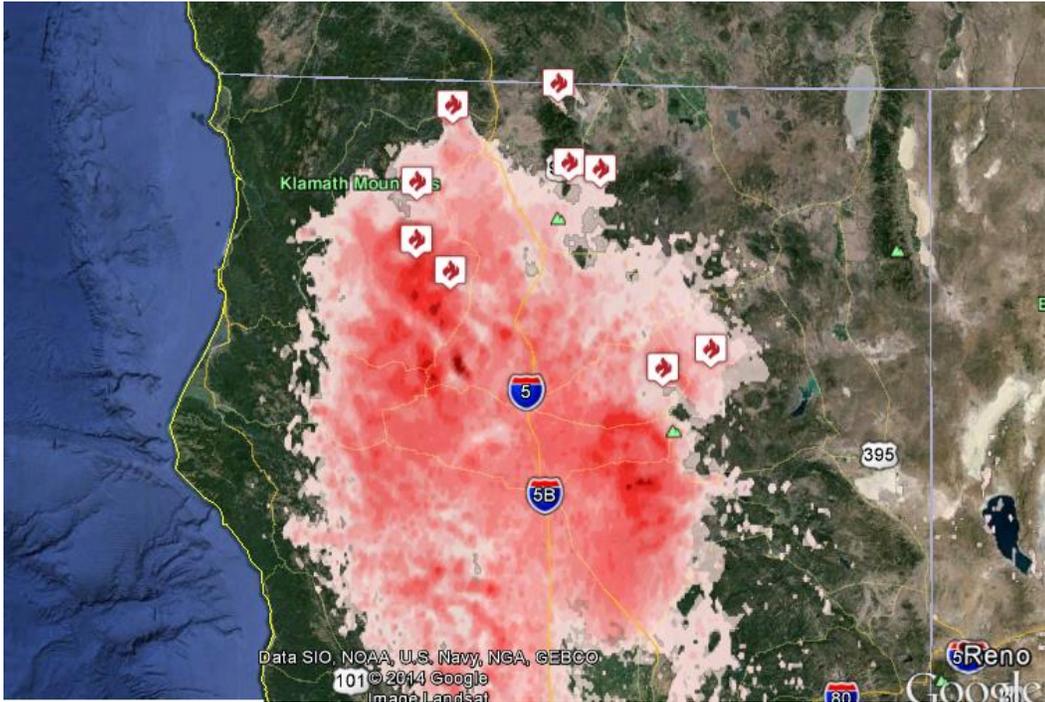


Figure 5: Modeling results predicting today's smoke dispeartion at midnight

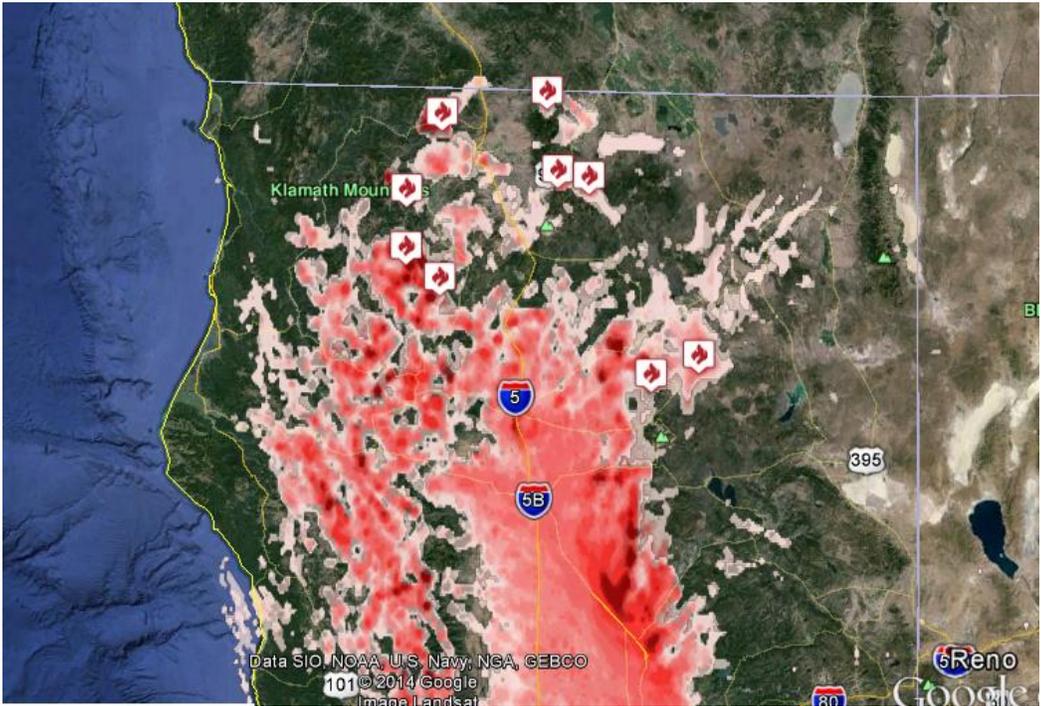
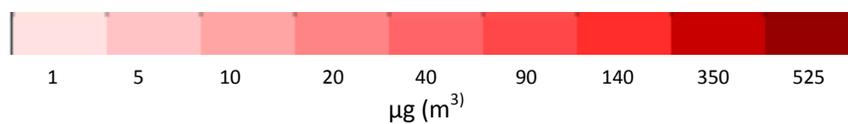
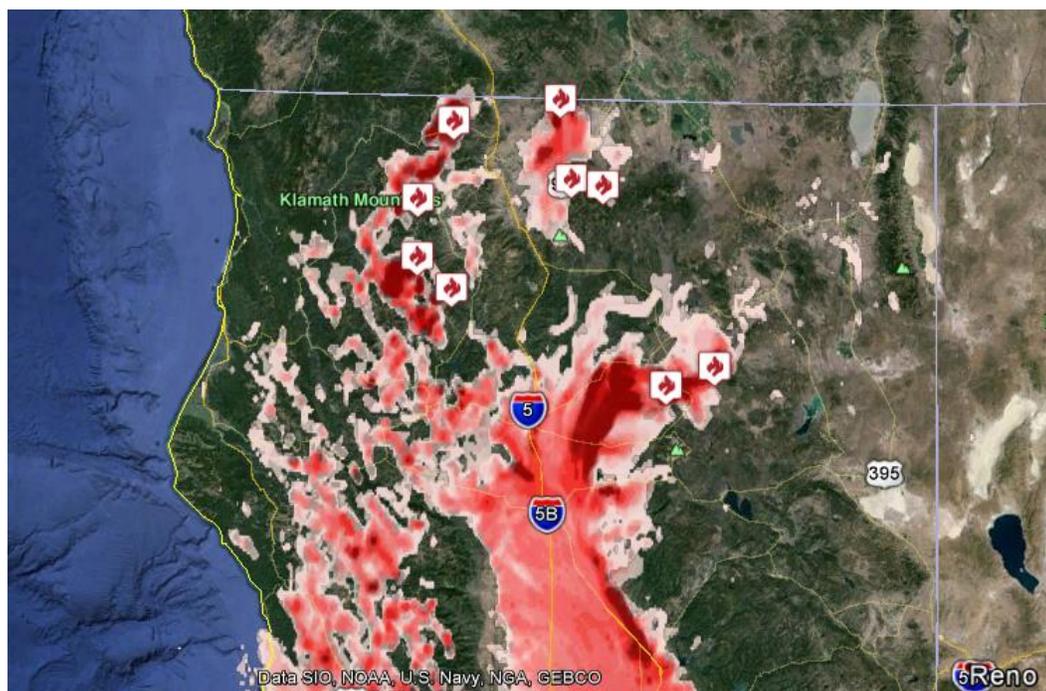


Figure 6: Modeling results predicting tomorrow's smoke dispersion at 6am.



**Check out the California Smoke Blog**

<http://californiasmokeinfo.blogspot.com/>

### Questions?

Feel free to contact us:

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