

# Smoke Impact Report – Meadow Wildfire, Yosemite NP

Saturday September 14, 2014

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**Weather and Smoke Dispersion Outlook:** The high pressure continues to influence slightly warmer seasonal temperatures and drier air. This again is coupled with instability, Haines Index 6, and increasing wind speeds as a low pressure system approaches. In all, this combination of weather conditions creates good smoke dispersion. It also creates opportunities for fire growth and increased smoke production. Yet it also helps to disperse smoke. During the day smoke will disperse to NE while return to the Merced River Canyon at night. The fire’s smoke produces haze through the Sierra foothills in the afternoon and more concentrated smoke and haze in Yosemite Valley and surrounding canyons at night.



Fig. 1 View from Sentinel Dome 0800 Sept. 13

Fig.2 View from Sentinel Dome 0800 Sept. 14

**Fire Operations:** Yesterday, September 13<sup>th</sup>, estimated fire growth was about 6 acres. This was accomplished through very positive fire suppression action. This has resulted in further decrease in smoke production. Yet, the North and South sides of the Meadow Fire are still a concern. These areas still have intense heat. However, those areas continue to shrink daily. With today’s increasing wind speeds these sides of the fire can torch and spot beyond the perimeter and still provide a means for fire growth and increased smoke production.

**Current Smoke Impacts:** Yosemite Valley is in the Moderate AQI range for PM2.5 using a 24-hr. rolling average, and is in the Good range for the 3-hr. average. Mariposa, La Grange, Devil’s Postpile and Tuolumne Meadows were in the Moderate AQI range using a 24-hr average, reflecting general haze in the fire area. Using the 3-hr. rolling average, all stations including Yosemite Valley are in the Good AQI range.

**Forecast and Likely Smoke Impacts:** Hot dry weather, instability, and increasing winds still can contribute to increasing fire behavior. Smoke impacts will continue to trend down with fire growth being checked by natural barriers and suppression actions. Some nearby stations may remain in the Moderate 24-hr AQI range, reflecting regional haze/normal background. Degraded air quality, will be more confined locally in Yosemite Valley and the Merced River canyon, which will continue to lift out midday possibly impacting some foothill locations. Please review the table below to review the current and projected impacts.

9/14/2014 0800, AQ Monitoring Summary By Site	Current Daily Average (Rolling 24-hr)	Current hourly Average (3-hr Rolling)	Likely AQI during the best time of day (3-hr average, next 24 hrs)	Likely AQI during the worst time of day (3-hr average, next 24 hrs)	Overall Air Quality Trend
Yosemite Valley	Moderate	Good	Good (late afternoon)	Moderate (early morning)	Improving
El Portal	Good	Good	Good (early morning)	Good (late morning)	Improving
Mariposa	Moderate	Good	Good (Morning)	Good	Improving
Greeley Hill	Good	Good	Good (Morning)	Good	Improving
La Grange	Moderate	Good	Good (Morning)	Good (midday/noon)	Improving
Ponderosa Basin	Good	Good	Good (Morning)	Good (midday/noon)	Improving
Lee Vining	Good	Good	Good (Morning)	Good (midday/noon)	Improving
Devil's Postpile	Moderate	Good	Good (Afternoon)	Good (afternoon)	Improving
Oakhurst	Insuff. Data	Insuff. Data	Good (Morning)	Good (midday/noon)	Improving
Tuolumne Meadows	Moderate	Good	Good (Morning)	Moderate (late evening)	Improving

Table 1. Daily averages, current conditions, and our best estimation for conditions at the best and worst time of day for the next 24 hrs. For more detail on the Air Quality Index, go to <http://airnow.gov/index.cfm?action=aqbasics.aqi>. For a map of the monitoring sites, go to: <http://californiasmokeinfo.blogspot.com>.