

Smoke Impact Report – Meadow Wildfire, Yosemite NP

Monday, September 15, 2014

Prepared by Mike Beasley (ARA Trainee) & Gary Curcio

Weather and Smoke Dispersion Outlook: The high pressure ridge over the fire area will begin to break down, as low pressure moves closer to the California Coast. Increasing south to southwest wind will help scour accumulated smoke and haze from both the Sierras and the San Joaquin Valley. Stronger southerly flow will also bring increasing humidity. During the day smoke from the Meadow Fire will disperse to NE and return to the Merced River Canyon at night. Minimal smoke production is expected on the Meadow Fire, though smoke from the nearby Courtney Fire by Bass Lake may impact Yosemite National Park.



Fig. 1 View from Sentinel Dome 0743 Sept. 14



Fig.2 View from Sentinel Dome 0743 Sept. 15

Fire Operations: No IR imagery was received last night, so acreage gain is unknown, but likely negligible. This has resulted in further decrease in smoke production. The North side of the Meadow Fire is still a concern with stronger south winds. This is the last day for the Type 2 IMT on the fire. The park will be assuming responsibility with a Type 3 IMT tomorrow.

Current Smoke Impacts: Yosemite Valley is in the Good AQI range this morning for PM2.5 using both 3- and 24-hr. rolling averages. This is the first time, since the large fire growth days of Sept. 7-8th that the 24-hr. average in Yosemite Valley was in the Good range. Devil’s Postpile was the only nearby station in the Moderate AQI range using a 24-hr average this morning, though Oakhurst and Mariposa sites were not reporting data. Using the 3-hr. rolling average, all stations except those not reporting were in the Good AQI range. It is possible the Courtney Fire by Bass Lake impacted Oakhurst and higher elevation sites along the Sierra Crest.

Forecast and Likely Smoke Impacts: Increasing winds will continue to test containment, but smoke impacts should continue to trend down, unless smoke from the Courtney Fire impacts the monitoring network. 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.

9/15/2014 06:30 hrs., 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	Good	Good	Good (late afternoon)	Good (after midnight)	Improving
El Portal	Good	Good	Good (early morning)	Good (late morning)	Improving
Mariposa	Insuff. Data	Insuff. Data	Good (Morning)	Good (midday/noon)	Improving
Greeley Hill	Good	Good	Good (Morning)	Good (midday/noon)	Improving
La Grange	Good	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)	Stable
Devil's Postpile	Moderate	Good	Good (Afternoon)	Good (midday/noon)	Improving**
Oakhurst	Insuff. Data	Insuff. Data	Insuff. Data	Insuff. Data	Improving**
Tuolumne Meadows	Good	Good	Good (Morning)	Good (midday/noon)	Improving**

** Unless impacted by Courtney Fire outside Oakhurst

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>.