

TRANSPORT AND PARTICULATES

PM10 and PM2.5 exceedances of the ambient air quality standards appear to be generated locally by woodstoves, open burning, vehicle traffic induced dust entrainment and windblown dust. The exception to this is the transport of smoke from wildfires and agricultural burning in the Sacramento Valley during late summer and fall days. Smoke from the Sacramento Valley has consistently contributed to elevated particulate levels measured on the formerly operated TEOM PM10 sampler located in Grass Valley during the agricultural burning season. It is difficult to quantitatively determine the exact extent of that contribution, but it is believed to be significant. An additional source of particulate is from prescribed fires. Smoke from prescribed fires can travel long distances. For example, on October 19, 1997 smoke from a USFS control burn inundated the western slope of the Sierras from Stanislaus County northward as far as Butte County. One-hour values as high as 105 $\mu\text{g}/\text{m}^3$ were recorded in Grass Valley. The NSAQMD received 15 smoke complaints and the California Department of Forestry Command Center received dozens of smoke complaints within an 8-hour period. Local pilots observed smoke at altitudes as high as 8000 feet. An especially egregious incident occurred in Portola in early December of 2005. Smoke from a USFS underburn inundated the city of Portola, resulting in PM2.5 levels so high as to be almost 3 times the National standard. On December 5 the 24-hour average was 180 $\mu\text{g}/\text{m}^3$ and the 6 A.M. value was a mind-boggling, lung-clogging 386 $\mu\text{g}/\text{m}^3$. (*Note: the USFS has denied culpability in this incident.*) Additionally, smoke from woodstoves in the high mountain communities tends to stay within their various small valleys during stagnant conditions.