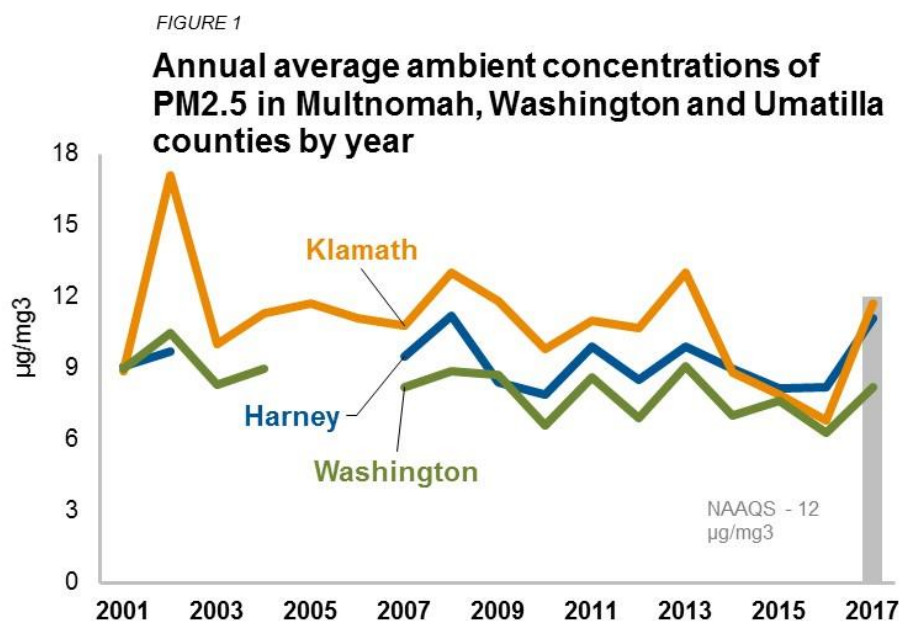


Environmental Health

Air quality: Particulate matter concentration

Fine particulate matter (PM2.5) consists of air-borne particles such as dust, dirt, soot, smoke and droplets. Wood stoves, forest fires, motor vehicles, factories and construction sites produce particle pollution. Interventions to lower PM2.5 levels include replacing inefficient wood burning stoves and limiting outdoor burning during winter months.

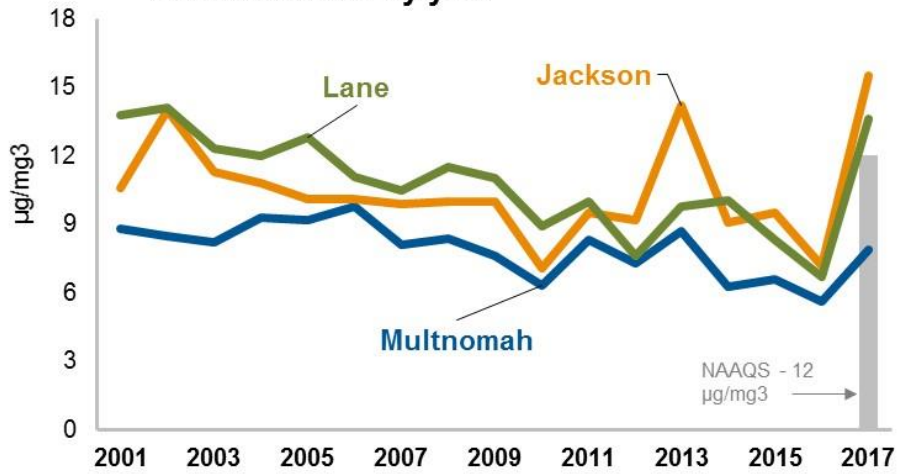
Long-term exposure to PM2.5 has been associated with adverse health outcomes such as reduced lung function, the development of chronic bronchitis, heart disease and premature death. The EPA has set standards, the National Ambient Air Quality Standards (NAAQS), to indicate when air quality levels can be harmful to human health. In 2013, the EPA lowered the NAAQS for long-term PM2.5 exposure to 12 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) from 15 $\mu\text{g}/\text{m}^3$. In 2014, 2015 and 2016, all monitored counties were below the NAAQS. In 2017, the annual average concentrations of PM2.5 increased in all monitored counties from 2016. Jackson, Josephine and Lane counties exceeded the NAAQS in 2017 (Figures 1, 2 and 3).



Source: EPA Air Quality System Monitoring Data, State Air Monitoring Data

FIGURE 2

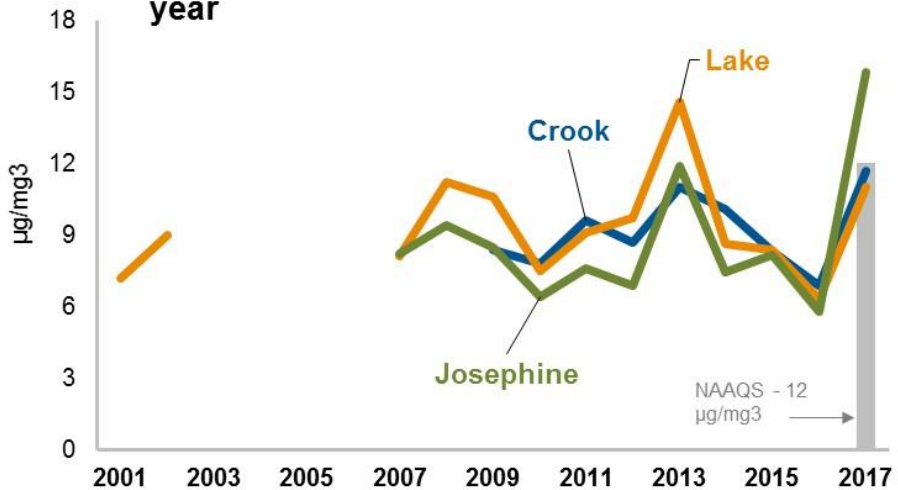
Annual average ambient concentrations of PM2.5 in Jackson, Josephine, Klamath and Lane counties by year



Source: EPA Air Quality System Monitoring Data, State Air Monitoring Data

FIGURE 3

Annual average ambient concentrations of PM2.5 in Crook, Harney and Lake counties by year



Source: EPA Air Quality System Monitoring Data, State Air Monitoring Data

Additional Resources:

[Centers for Disease Control and Prevention - Air Quality](#)

[Environmental Protection Agency – AirNow](#)

[Environmental Protection Agency - Particulate Matter Pollution](#)

[National Institute of Environmental Health Sciences – Air Pollution](#)

[Oregon Department of Environmental Quality – Particulate Matter](#)

About the Data: Data source is EPA Air Quality System Monitoring Data, State Air Monitoring Data. Annual average of particulate matter 2.5 (PM2.5) in counties that have complete air monitoring data (1-in-3 day reporting —120 days). The Environmental Protection Agency has developed National Ambient Air Quality Standards (NAAQS) that designate air quality levels which may pose a potential health risk, especially to sensitive populations. The annual NAAQS can be used in the evaluation of long-term exposure. The applicable NAAQS for all years of available air quality data in Oregon was 15 µg/m³. In 2013, the NAAQS for PM2.5 annual average was lowered to 12 µg/m³. All air quality data collected after the change in the standard will be compared to the new standard. It is possible that more counties will exceed the NAAQS in the future, not because of increased PM2.5 concentrations, but because the NAAQS decreased.

For More Information Contact: Mary Dinsdale, Mary.P.Dinsdale@state.or.us

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